PHYLOGENETIC RELATIONSHIPS IN THE FAMILY AMARYLLIDACEAE

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LIST OF ABBREVIATIONS

A	adenine
bp	base pair
BS	bootstrap
C	cytosine
ºC	degree Celsius
CI	consistency index
CL	chromosome length
cont.	continued
CTAB	hexadecyl-trimethyl-ammonium bromide
DMSO	dimethyl sulfoxide
DNA	deoxyribonucleic acid
dNTP	deoxynucleotide triphosphate
EDTA	ethylenediamine tetra-acetic acid
ethanol	ethylalcohol
Fig.	figure
G	guanine
g.	gravitational force
HCl	hydrochloric acid
IGS	intergenic spacer
ITS	internal transcribed spacer region
JK	jackknife
km^2	square kilometer
M	molar
matK	maturase
min.	minute
$MgCl_2$	magnesium chloride
mM	millimolar
mmol	millimoles
m/m	mass per mass
m/v	mass per volume
n	gametic chromosome number

2n	somatic chromosome number
NaCl	sodium chloride
p	length of short chromosome arm
PAUP	phylogenetic analysis using parsimony
PCR	polymerase chain reaction
pmol	picomoles
RC	rescaled consistency index
rDNA	ribosomal DNA
RI	retention index
s	second
SNL	signal to noise
sp.	species
subsp.	subspecies
T	thymine
TAE	tris-acetic acid-EDTA
Taq DNA Pol	*Thermus aquaticus* DNA polymerase
TCL	total chromosome length
Tris	2-amino-2-(hydroxymethyl)-1,3-propanediol
trnC	transfer RNA gene for cysteine
trnF	transfer RNA gene for phenylalanine
trnK	transfer RNA gene for lysine
trnL	transfer RNA gene for leucine
u	units
µl	microliter
UV	ultraviolet
V	volt
v/v	volume per volume
x	basic chromosome number
%	percentage

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CHAPTER ONE

INTRODUCTION

1.1 History

During prehistoric times bulbs were used as a source of food and water. Ancient Egyptians cultivated bulbs for their medicinal value. However, bulbous plants have also been cultivated for their beauty. Explorers took foreign plants home from far-away places as these were easy to transport, required no water during their dormant season and they have their own food reserves (Barnhoorn 1995, Hessayon 1995).

The classical Greeks recorded the first cultivation of hyacinth (Family Liliaceae), narcissi (Family Amaryllidaceae), ranunculi (Family Ranunculaceae) and gladioli (Family Iridaceae) bulbs during the third century BC. They used floral designs to decorate their vases and other artworks (Barnhoorn 1995, Hessayon 1995). However, bulbs were less popular after the fall of the Roman Empire and were cultivated mainly in monasteries.

In 1574, Sultan Selim II issued an order to the Sheriff of Aziz to plant tulip (Family Liliaceae) bulbs in the royal gardens. During the reign of the Sultan Ahmed III in 1702-30 Sheikh Mohammed Lalizare listed the different cultivars grown, naming no less than 1 323 varieties (Barnhoorn 1995).

Carolus Clusius, attached to the court of Emperor Maximillian II in Vienna introduced tulips and other bulbs to Western Europe. Clusius was in charge of the Imperial Medicinal Gardens and was a pharmacist who cultivated a collection of many unusual herbs, roots and bulbs to make his concoctions. A friend of Clusius, named Ogier Ghislam de Busbecq (1522-92), was Consul at the court of Sultan Süleyman I in Constantinople and supplied Clusius with many tulip bulbs for his collection. Clusius was dismissed when the Emporer ded in 1573. He moved to Holland and took many of his horticultural collection with him. Clusius became the head botanist at the Leiden Hortus Medicus, or medicinal botanical gardens. He displayed his collection of tulips at the botanical gardens but was jealous of this collection and would not part with a single bulb. One morning Clusius found most of his collection missing and soon many people in the district were growing tulips. This was the start of the Dutch flower bulb industry (Barnhoorn 1995, Hessayon 1995).

Tulip mania gripped Holland during the 17th century. The main attraction was the development of streaked or variegated tulips, which was largely due to a virus infection and was unknown at the time. Speculation with tulip bulbs reached great heights in the 1630s. Bulbs were sold, unseen and still in the ground. Promissory notes were sold from one investor to another. A single bulb was often sold or swapped for the equivalent of a large house. But in February 1637 the Dutch Government decreed that all Tulip Notes had to be honoured with bulbs and causing the market to crash (Barnhoorn 1995, Hessayon 1995).

Clusius, who started the tulip industry in Holland, also received some hyacinth bulbs from Istanbul. Tulips and hyacinths were grown in Holland at the same time, but tulips were the hot fashion item and hyacinths were forgotten during the tulip mania. However, the time of the hyacinth came a century later. It reigned supreme as the queen of exotic bulbs during the 18th century. Hundreds of hyacinths were ordered daily from florists in Holland by the court of Louis XVI of France to decorate the palaces and fill the royal bedchambers with perfume. About 2 000 different hyacinth cultivars were being traded in the 1720s. Some varieties were sold for the equivalent of the price of a mansion (Barnhoorn 1995, Hessayon 1995).

In 1715, Isaac Staaltjes discovered a method of fast propagation using basal cuttings. He kept the method a secret for many years and became wealthy by propagating expensive varieties and reselling the offspring. Although the prices of bulbs decreased during the 1820s the market grew (Barnhoorn 1995).

Haemanthus L. (Family Amaryllidaceae) were amongst the first bulbous plants gathered at the Cape of Good Hope and subsequently cultivated in the gardens of Europe (Snijman 1984). The earliest known description of *Haemanthus* is in de l'Obel (1605). The plants are given the phrase name *Narcissus Africanus sive Narcissus exoticus*. The accompanying illustrations suggest that the bulbs probably belonged to the species *H. coccineus* L. and *H. sanguineus* Jacq. In 1687, the name *Haemanthus* was first proposed by Hermann and thereafter appeared in many publications in the form of *Haemanthus africanus* Tourn. (Snijman 1984).

In 1753, the first edition of Linnaeus' *Species Plantarum* appeared and *Haemanthus coccineus* was recognised. Few additions were made to this genus prior to 1797 (Snijman 1984). Linnaeus also described *Crinum latifolium* L., *C. asiaticum* L., *C. americanum* and *C. africanum* (Family Amaryllidaceae). Three of these species belong to the genus as defined today, but *C. africanum* is now classified as *Agapanthus* L'Hérit (Verdoorn 1973). In 1789,

Aiton established the genus *Cyrtanthus* (Family Amaryllidaceae) which was based on *C. angustifolius* (L.) Ait. and *C. obliquus* (L.) Ait. (Nordal 1979). The publication of Jacquin's illustrated volumes of *Plantarum rariorum horti caesari Schoenbrunnensis* in 1797 and 1804 added 12 new species to *Haemanthus* (Snijman 1984). During 1815, William J. Burcell has been the first person to make a scientific collection of *Clivia nobilis* Lindl. (Family Amaryllidaceae) in the wild, near the mouth of the Great Fish River in the Eastern Cape (Koopowitz 2002).

In 1837, Herbert described seven new species of *Haemanthus* (Snijman 1984). During the early 1850s *Clivia miniata* Regel was discovered in Kwazulu-Natal (Koopowitz 2002). In 1888 and 1896, Baker was the last single author to add more species to *Haemanthus*. These were based upon collections from the previously unexplored interior regions of southern Africa. Since then only six additional taxa have been added to the genus, all from the South-western Cape, Northern Cape and Namibia (Snijman 1984). The generic concept of *Cyrtanthus* varied, until Baker (1888) founded the modern concept of the genus. He divided the genus into three subgenera, based on different flower and leaf shape: *Cyrtanthus*, *Monella* and *Gastronema*. In 1940, Dyer reviewed the genus and argued against subgeneric division. He stated that new species described since Baker (1888) filled the morphological gap between the subgenera (Nordal 1979).

Since 1767 the extensive hybridisation of *Hippeastrum* Herb. (Family Amaryllidaceae), mainly in the Netherlands, has produced large blooms in a variety of colours. In England, hyacinths became the rage between 1860 and 1890, and many exhibitions were staged. In the 17th and 18th centuries explorers and collectors were ecstatic over the wealth of bulbs found in southern Africa. Bulbs of gladiolus, freesia and sparaxis (all Family Iridaceae), for example, were transported back to Holland. These bulbous plants were hybridised and are today's exotics (Barnhoorn 1995). In 1888, Baker's *Handbook of Amaryllidaceae* appeared. He recognized 79 *Crinum* species and is also responsible for the revision of this genus in the *Flora Capensis* (1896) and *Flora of Tropical Africa* (1898).

Eventually during much of the 19th century, there were only ten wholesale growers of hyacinths, situated in the Haarlem district of Holland. During 1910, Nicholaas Dames discovered temperature manipulation to make hyacinth bulbs bloom earlier. This gave a boost to hyacinth sales. During the wartime famine in the winter of 1942-43 Dutch people baked bread made from tulip bulbs. In southern Africa, many bulbs, roots and tubers are used traditionally as a source of food, for medicinal purposes and for the extraction of poisons

(Barnhoorn 1995). In 1943, *Clivia caulescens* R.A. Dyer was described by Dr. R.A. Dyer (Duncan 1999, Koopowitz 2002). *Clivia mirabilis* Rourke was discovered in the Niewoudtville area of the Northern Cape (Rourke 2002). A new species, *C. robusta* B.G. Murray, de Lange, Hammett, Truter *et* Swanevelder, endemic to the Pondoland Centre of Endemism, South Africa, has been reported by Murray *et al.* (2004).

Today potted hyacinths are very popular in Europe as a Christmas plant. An arrangement is often made of a bowl of plants containing amarillis, hyacinths, African violets and primulas. Such arrangements decorate living rooms, hotel foyers and offices during the Christmas season. Approximately 180 million hyacinths are exported from Holland every year (Barnhoorn 1995). Many bulbous plants cultivated today have their origins in southern Africa. Explorers and collectors were ecstatic over the wealth of bulbs they found. The commercial production of bulbs and cut flowers is a huge industry worldwide, leading to the hybridization of favourites into today's exotics.

1.2 Habitat and distribution

The floral wealth of southern Africa becomes evident when one compares the number of species indigenous to this region with those of other regions (Du Plessis & Duncan 1989). Southern Africa, which includes South Africa, Lesotho, Swaziland, Botswana and Namibia, contains 18 532 indigenous species in an area of 2 573 000 km^2. Eastern North America, with an area about one and a quarter times the size, has less than 25% of this number of species; Europe, nearly four times the size, has only 56% and tropical West Africa, about one and three-quarter times as large, has 40%. Within South Africa, the province of Kwazulu-Natal has 4 826 indigenous species in an area of 91 000 km^2, whereas the Cape region, which is slightly smaller, has 8 550 indigenous species. The British Isles has 1 443 species on an area three times larger (308 000 km^2). Within the Cape region the Cape Peninsula has 2 256 species in an area of 470 km^2, which is more than 650 times smaller than the British Isles. The number of indigenous species in the Cape Peninsula also exceeds that of New Zealand (1 996 species on 268 000 km^2) and Hawaii (1 897 species on 16 600 km^2).

About 80% of the species of southern Africa are endemic (Du Plessis & Duncan 1989). The corresponding figure for Europe is 33%. This high level of endemism for southern Africa suggests that the flora of this region forms a coherent whole and supports the

idea that it developed in relative isolation for a considerable period. Southern Africa is divided into six floristic regions, according to Goldblatt (1978) (Figure 1.1).

The Zambezian Region:

The northern border of southern Africa consists of a strip of the vast Zambezian Region that occupies nearly all of Angola, southern Zaire, southern Tanzania and the whole of Zambia, Zimbabwe and Mozambique. This is a tropical region of grassland and open woodland. The area falling within southern Africa is relatively poor of indigenous plant species.

The Kalahari-Highveld Transition Zone:

This is the largest floristic region of southern Africa but it is relatively poor in plant species. This region is predominantly grassland, sparsely wooded, and it contains very few endemic species – a sign of its transitional nature.

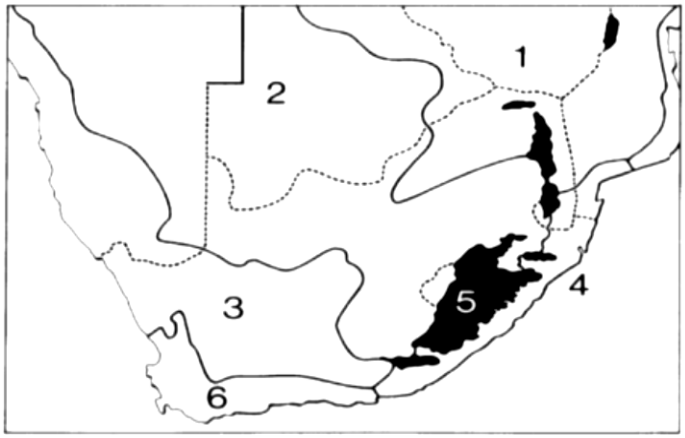

Figure 1.1 The phytogeographic regions of southern Africa: (1) Zambezian Region, (2) Kalahari-Highveld Transition Zone, (3) Karoo-Namib Region, (4) Tongaland-Pondoland Region, (5) Afromontane Region and (6) Cape Region (Goldblatt 1978).

The Karoo-Namib Region:

This arid region is desert or semi-desert and has a wealth of succulents. It occupies the interior of the Northern Cape (including Namaqualand), the west coast of Namibia and extends into south-western Angola. It has a high level of endemism and Namaqualand is rich in geophytes.

The Tongaland-Pondoland Region:

This area occupies the coastal strip along the east coast of southern Africa and includes the southern extremity of Mozambique. It is a subtropical forest zone, has a considerable number of endemic species and provides a habitat for many geophytes.

The Afromontane Region:

This discontinuous region consists of a series of discrete highland areas stretching from eastern southern Africa along the eastern half of Africa up to Ethiopia. In southern Africa it is centred on the Drakensberg Mountains which lie mainly in the eastern Free State, Lesotho and western Kwazulu-Natal. Northwards it extends to Mpumalanga and southwards to the Eastern Cape. High altitude makes an alpine flora possible. This region has a high level of endemism and many geophytes are also found here. In Kwazulu-Natal it interlocks with the Pondoland-Tongaland Region in the east.

The Cape Region:

This area includes the south-western corner and the southern coastal strip of Western and Eastern Cape. Although it accounts for only 4% of the area of southern Africa, this region ranks as one of the six Floral Kingdoms of the world. The vegetation is the maquis-like fynbos that resembles the vegetation of other regions with a Mediterranean type of climate. Geophytes occur in abundance in this area. A wide range of environmental conditions prevails in this region. There are summer and winter rainfall areas, and diverse soil types and topography. Of the three conditions, climate is the most variable and also the most difficult to control or simulate. Both summer and winter rainfall areas have particular significance for geophytes. Geophytes are well adapted to survive a cycle of drought followed by rain because they can go dormant when conditions are unfavourable. The foremost bulb-growing regions of the world have a Mediterranean climate with cool, wet winters and hot, dry summers, like the Cape region, and that the next richest are the regions with hot, wet summers and cool, dry winters, like most of the summer rainfall area of southern Africa.

The large-scale climatic factors that determine the gross features of plant growth are the seasonal changes in temperature, daily sunshine duration and rainfall (Du Plessis & Duncan 1989). The major climatic regions of southern Africa are the winter rainfall region, the summer rainfall region and the small region of all year or uniform rainfall (Figure 1.2). The boundaries between these fluctuate from year to year and during the dry seasons of both

winter and summer rainfall regions there is some precipitation (Du Plessis & Duncan 1989). The subcontinent, on the whole, is arid to semi-arid except for the south-western Cape, the southern and eastern coastal regions, Kwazulu-Natal, the Highveld and Mpumalanga. The geophytic plants growing in the winter and summer rainfall areas are predominantly deciduous. Many of the geophytes from the coastal part of the uniform rainfall area and the subtropical eastern coast are evergreen.

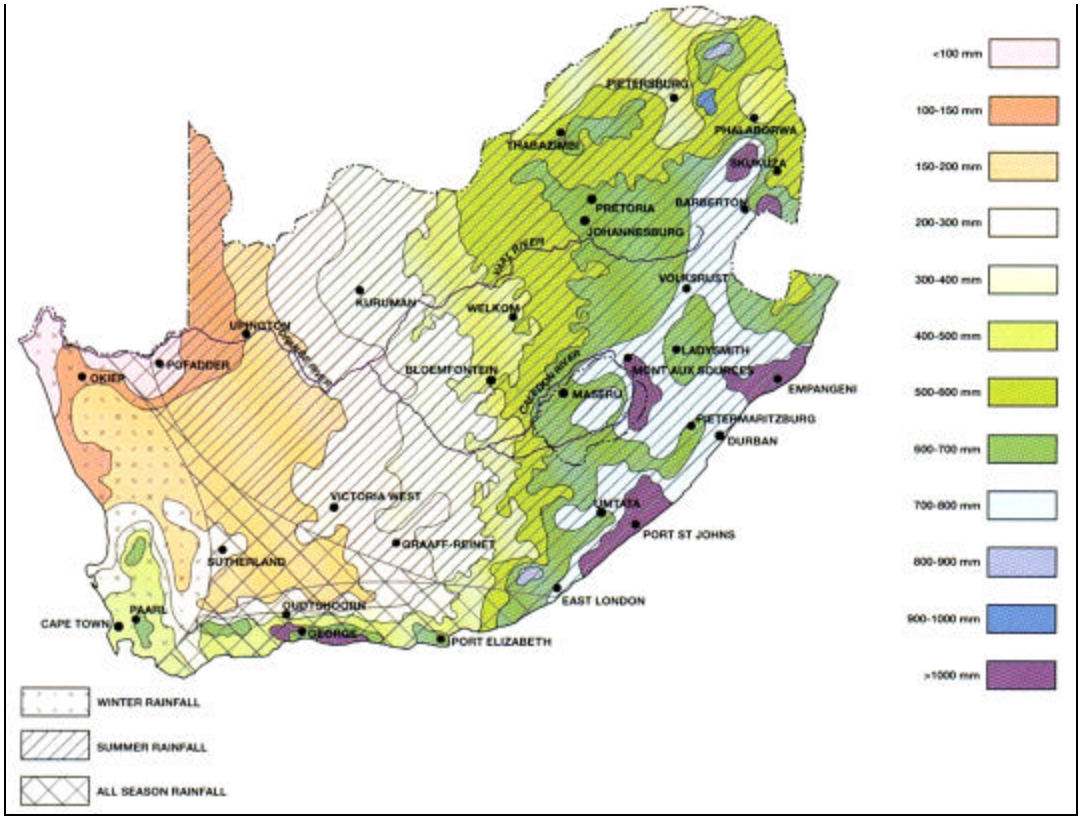

Figure 1.2 The rainfall zones of South Africa (Barnhoorn 1995).

1.3 Taxonomy

Dahlgren & Clifford (1982) gave a historical account of monocotyledon classification. The following table indicates the classification of the three plant families: the Liliaceae, the Amaryllidaceae and the Iridaceae from 1853-1983.

Table 1.1 The previous classification of the Liliaceae, the Amaryllidaceae and the Iridaceae (Dahlgren & Clifford 1982).

Author (year)	Classification
Lindley (1853)	*Class Endogens* *Narcissales*: Amaryllidaceae, Iridaceae *Liliales*: Liliaceae (*sensu lato*)
Bentham & Hooker (1883)	Series II. *Epigynae*: Iridae, Amaryllidae Series III. *Coronariae*: Liliaceae
Van Tieghem (1891)	Order Liliinées: Family Liliacées Order Iridinées: Amaryllidées, Iridées
Engler (1892), Rendle (1930)	Order *Liliiflorae*: Liliaceae, Amaryllidaceae, Iridaceae
Wettstein (1901)	Order *Liliiflorae*: Liliaceae *sensu lato*, Amaryllidaceae, Iridaceae
Lotsy (1911)	Family *Liliiflorae*: Liliaceae (split into smaller groups), Amaryllidaceae, Iridaceae
Hallier (1903, 1905, 1912)	Order *Liliiflorae*: Liliaceae, Amaryllidaceae Order *Ensatae*: Iridaceae
Bessey (1915)	Class *Alterniflorae* (*Monocotyledons*) Subclass *Strobiloideae - Liliales*: Liliaceae Subclass *Cotyloideae - Iridales*: Amaryllidaceae, Iridaceae
Ankermann (1927)	Liliaceae: Iridaceae, Amaryllidaceae
Calestani (1933)	Series I. *Lirianthae* 3. Scillinae: Liliaceae, Amaryllidaceae, Iridaceae
Skottsberg (1940)	Order *Liliiflorae*: Liliaceae (*sensu lato*), Amaryllidaceae, Iridaceae
Hutchinson (1934, 1959)	*Division 2. Corolliferae*

Soó (1953, 1961, 1965, 1975)	Series E:43. Liliiflorae – Liliales
Novák (1954)	*Liliales*: 1. Liliineae: Liliaceae, Amaryllidaceae 2. Iridineae: Iridaceae
Deyl (1955)	*Liliales*: Iridaceae, Amaryllidaceae, Liliaceae
Kimura (1956)	II. *Syncarpae* *II: 1 Subsyncarpae* B. *Liliiflorae*: 7. *Liliales*: Liliaceae *II: 2 Coenocarpae* G. *Epigynae*: 24. *Amaryllidales*: Amaryllidaceae 25. *Iridales*: Iridaceae
Takhtajan (1959, 1969)	Class LILIATAE (= Monocotyledones) Subclass LILIIDAE: Superorder Lilianae *Liliales*: Liliaceae, Amaryllidaceae *Iridales*: Iridaceae
Emberger (1960)	*Phylum IV. Liliiflores* *Liliales*: Liliaceae, Amaryllidaceae, Iridaceae
Hamann (1961)	Order *Liliales*: Liliaceae, Amaryllidaceae, Iridaceae
Faulks (1964)	13. *Liliales*: Liliaceae 17. *Amaryllidales*: Amaryllidaceae 18. *Iridales*: Iridaceae
Melchior *et al.* (1964)	Order 2. *Liliiflorae*: Liliaceae *sensu lato*, Amaryllidaceae, Iridaceae
Cronquist (1968)	Class LILIATAE (Monocotylodoneae) Subclass LILIIDAE: *Liliales*: Liliaceae (incl. Amaryllidaceae), Iridaceae
Thorne (1968, 1976)	Superorder Liliiflorae *Liliales*: Liliaceae (with the subfamily Amaryllidoideae), Iridaceae
Huber (1969, 1977)	*Asparagales*: Amaryllidaceae *Liliales*: Iridaceae, Liliaceae

Stebbins (1974)	Subclass MONOCOTYLEDONES Superorder Liliidae: *Liliales*: Liliaceae (incl. Amaryllidaceae), Iridaceae
Dahlgren (1975)	*Lilianae* *Asparagales*: Amaryllidaceae *Liliales*: Iridaceae, Liliaceae
Ehrendorfer (1978)	Class MONOCOTYLEDONEAE Subclass LILIIDAE: *Lilianae*: *Liliales*: Liliaceae, Amaryllidaceae, Iridaceae
Dahlgren (1982)	Superorder LILIIFLORAE
Dahlgren & Rasmussen (1983)	Order Asparagales: Amaryllidaceae Order Liliales: Iridaceae, Liliaceae

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Until recently most bulbous plants were placed taxonomically in the Liliaceae, the Amaryllidaceae and the Iridaceae (Doutt 1994). These three families are distinguished by differences in the reproductive structures of their flowers.

The subject of this study is the family Amaryllidaceae (Snijman & Archer 2003) with emphasis on fourteen genera namely *Amaryllis* L., *Ammocharis* Herb., *Boophone* Herb., *Brunsvigia* Heist., *Clivia* Lindl., *Crinum* L., *Crossyne* Salisb., *Cyrtanthus* Aiton, *Gethyllis* L., *Haemanthus*, *Hippeastrum*, *Narcissus* L., *Scadoxus* Raf. and *Strumaria* Jacq. *ex* Willd. (Table 2.1). Amaryllidaceae are monocotyledonous perennial or biennial herbs with bulbs (Dahlgren *et al.* 1985). Little anatomical work has been done on the family in recent years. Arroyo & Cutler (1984) studied the vegetative anatomy of genera from South America and southern Africa. They investigated the relationships between genera from the two continents and compared current classifications, based on floral morphology, using the taxonomic implications arising from anatomical data. The Amaryllidaceae form one of the climax groups in the Asparagales (Dahlgren *et al.* 1985, Fay & Chase 1996). They are probably more closely related to Alliaceae and Hyacinthaceae. They are not closely related to the Hypoxidaceae, the Agavaceae, the Haemodoraceae or the Alstroemeriaceae, with which they have formerly been united.

According to Meerow & Snijman (1998), the Amaryllidaceae is a large group consisting of about 860 species in 59 genera. Its centre of diversity is especially in Africa (19 genera) and South America (28 genera). Some genera also occur in the Mediterranean (8 genera) and temperate regions of Asia. Only one genus, *Crinum* L., is represented in both the Old and New Worlds because of seeds well adapted for dispersal over water.

The most recent intrafamilial classifications of Amaryllidaceae are those of Traub (1963), Dahlgren *et al.* (1985), Meerow (1995), and Müller-Doblies & Müller-Doblies (1996). Traub's classification included Alliaceae, Hemerocallidaceae and Ixioliriaceae as subfamilies. He erected two informal taxa, "infrafamilies" Amarylloidinae and Pancratioidinae, within his subfamily Amarylloideae. Dahlgren dispensed with any subfamlial classification above the tribe level and treated as Amaryllidaceae only those genera in Traub's Amarylloideae. Meerow resurrected Eustephieae from Dahlgren's submergence in Stenomesseae and suggested that two new tribes, Calostemmateae and Hymenocallideae, may need to be recognised. Müller-Doblies and Müller-Doblies recognised 10 tribes and 19 subtribes. For this study, the classification of Meerow & Snijman (1998, 2001) and Meerow *et al.* (2000b) was used as referral (Table 1.2).

Table 1.2 Classification of the tribes of Amaryllidaceae according to Meerow & Snijman (1998, 2001) and Meerow *et al.* (2000b).

1. Tribe Amaryllideae J. St.-Hil. (1805)	
a. Subtribe Amaryllidinae Pax (1887)	1. *Amaryllis* L.
b. Subtribe Boophoninae D. & U. Müll.-Doblies (1996)	2. *Boophone* Herb.
c. Subtribe Crininae Pax (1887)	3. *Crinum* L.
	4. *Cybistetes* Milne-Redh. & Schweick.
	5. *Ammocharis* Herb.
d. Subtribe Strumariinae Traub ex Müll.-Doblies & Müll.-Doblies (1985)	6. *Crossyne* Salisb.
	7. *Strumaria* Jacq.
	8. *Nerine* Herb.
	9. *Hessea* Herb.
	10. *Namaquanula* D. & U. Müll.-Doblies
	11. *Brunsvigia* Heist.
	12. *Carpolyza* Salisb.
2. Tribe Cyrtantheae Salisb. (1866)	13. *Cyrtanthus* Aiton

3. Tribe Haemantheae (Pax) Hutchinson (1934)	14. *Clivia* Lindl.
	15. *Cryptostephanus* Welw. ex Baker
	16. *Scadoxus* Raf
	17. *Haemanthus* L.
4. Tribe Calostemmateae D. & U. M -D. (1996)	18. *Calostemma* R. Br.
	19. *Proiphys* Herb.
5. Tribe Gethyllideae Dumort. (1829)	20. *Apodolirion* Baker
	21. *Gethyllis* L.
6. Tribe Lycorideae Traub (1963)	22. *Lycoris* Herb.
	23. *Ungernia* Bunge
7. Tribe Pancratieae Salisb. (1866)	24. *Pancratium* L.
	25. *Vagaria* Herb.
8. Tribe Narcisseae Endl. (1836)	26. *Narcissus* L.
	27. *Sternbergia* Walst. & Kit.
9. Tribe Galant heae Salisb. (1866)	28. *Galanthus* L.
	29. *Leucojum* L.
	30. *Lapiedra* Lag.
	31. *Hannonia* Braun -Blanq. & Maire
10. Tribe Hippeastreae (Pax & Hoffmann) Hutch. (1931)	32. *Hippeastrum* Herb.
	33. *Worsleya* Traub
	34. *Griffinia* Ker Gawler
	35. *Rhodophiala* Presl
	36. *Zephyranthes* Herb.
	37. *Habranthus* Herb.
	38. *Sprekelia* Heist.
	39. *Pyrolirion* Herb.
	40. *Placea* Miers ex Lindley
	41. *Traubia* Moldenke
	42. *Phycella* Lindley
11. Tribe Eu charideae (Pax) Hutch. (1934)	43. *Eucharis* Planchon & Linden
	44. *Caliphruria* Herb.
	45. *Plagiliorion* Baker

	46. *Urceolina* Reichb., nom. cons.
12. Tribe Hymenocallideae (D. & U.M-D.) Meerow (1998)	47. *Hymenocallis* Salisb.
	48. *Leptochiton* Sealy
	49. *Ismene* Salisb.
13. Tribe Stenomesseae Traub (1963)	50. *Stenomesson* Herb.
	51. *Phaedranassa* Herb.
	52. *Rauhia* Traub
	53. *Eucrosia* Ker Gawler
	54. *Mathieua* Klotzsch
14. Tribe Clinantheae Meerow (2000)	55. *Clinanthus* Herb.
	56. *Paramongaia* Velarde
	57. *Pamianthe* Stapf
	58. *Pucara* Ravenna
15. Tribe Eustephieae (Pax) Hutch. (1934)	59. *Chlidanthus* Herb.
	60. *Eustephia* Cav.
	61. *Hieronymiella* Pax

1.4 Description of genera

In this study, the following fourteen genera will be used, representing 6 of the fifteen tribes of Amaryllidaceae (Table 1.2).

Amaryllis (Figure 1.6.1) of the tribe Amaryllideae and subtribe Amaryllidinae (Table 1.2) comprises two species in southern Africa (Arnold & De Wet 1993, Snijman & Archer 2003). Its distribution extends from the Northern to the Southern Cape (Du Plessis & Duncan 1989, Snijman & Archer 2003). The plants are deciduous, winter-growing and dormant in summer. The bulbs are large. The foliage is strap-shaped and appears after flowering is over. The flowers vary from white to many shades of pink. The fruit is a capsule of large, fleshy, round seeds. Propagation is by offsets and seed. The American genus *Hippeastrum* is often wrongly referred to as *Amaryllis*.

Brunsvigia (Figure 1.6.4) of the tribe Amaryllideae and subtribe Amaryllidinae (Table 1.2) comprises 17 species in southern Africa (Arnold & De Wet 1993, Snijman & Archer 2003). This genus has a distribution that ranges from the Northern and Western Cape, Kwazulu-Natal, Free State, Lesotho, Swaziland, Gauteng, Mpumalanga and Botswana (Du

Plessis & Duncan 1989, Meerow & Snijman 1998, Snijman & Archer 2003). The genus is deciduous and either winter- or summer-growing. The bulbs are usually large. The foliage varies from very broad and prostrate to oblong and erect. Flowers vary from white to shades of pink and red. The fruit consists of a capsule containing rounded, fleshy seeds. The seeds are green and may germinate in situ. *Brunsvigia* is the only genus of Amaryllideae in which several species have flowers that are adapted to bird pollination.

Strumaria (Figure 1.6.41 & 42) of the tribe Amaryllideae and subtribe Amaryllidinae (Table 1.2) has 28 species in southern Africa (Arnold & De Wet 1993, Snijman & Archer 2003). This genus is endemic to the winter rainfall area, extending from south-western Namibia to the Northern and Western Cape (Du Plessis & Duncan 1989, Meerow & Snijman 1998, Snijman & Archer 2003). It is winter-growing with a dormant period in summer. Plants are deciduous herbs. Foliage is two or more erect, spreading or prostrate leaves. Flower colour ranges from white or shades of pale pink to deep rose-pink. Propagation is by seed.

Ammocharis (Figure 1.6.2) of the tribe Amaryllideae and subtribe Crininae (Table 1.2) comprises five species in southern Africa (Arnold & De Wet 1993, Snijman & Archer 2003). Distribution ranges from the Northern and Western Cape, Namibia, Botswana, Free State, Lesotho, Kwazulu-Natal, Mpumalanga, Limpopo, Zimbabwe and Angola (Du Plessis & Duncan 1989, Meerow & Snijman 1998, Snijman & Archer 2003). The plants are summer-growing geophytes with a dormant period in winter. The bulbs are large and the leaves are prostrate. The flowers are fragrant and vary in colour from shades of pink to pinkish copper-brown and dull purplish-red. The fruit is a capsule of fleshy seeds. Propagation is by seed. Traditionally, the paste of the cooked bulb is used to repair cracks in clay pots.

Boophone (Figure 1.6.3) of the tribe Amaryllideae and subtribe Boophoninae (Table 1.2) has two species in southern Africa (Arnold & De Wet 1993, Snijman & Archer 2003). Distribution ranges from the Northern, Western and Eastern Cape, Kwazulu-Natal, Swaziland, Free State, Gauteng and Mpumalanga (Du Plessis & Duncan 1989, Meerow & Snijman 1998, Snijman & Archer 2003). The genus is deciduous, winter- or summer-growing. The bulbs are large. The foliage varies in shape and position from ovate and prostrate. The flowers are small to medium star-shaped, ranging from pale yellow to many shades of pink and red, to blackish-maroon. The fruit is a capsule of rounded fleshy seeds. Propagation is by seed. Bulbs of *Boophone disticha* (L.f.) Herb. are a source of medicine and poison to many African people.

Crinum (Figure 1.6.7-11) of the tribe Amaryllideae and subtribe Crininae (Table 1.2) is described in detail by Booysen (2003).

Crossyne of the tribe Amaryllideae and subtribe Strumariinae has two species (Meerow & Snijman 1998, 2001; Snijman & Archer 2003). Distribution ranges from the Northern to Western Cape. Both species are perennials. The bulb is large with prostate leaves. Flowers are many and zygomorphic. The seeds are ovoid and reddish green.

Cyrtanthus (Figure 1.6.12-26) of the tribe Cyrtantheae (Table 1.2) is the largest Amaryllid genus in southern Africa, with 56 species (Arnold & De Wet 1993, Snijman & Archer 2003). The centre of distribution is the south-eastern Cape with smaller centres in the Western and Eastern Cape, Gauteng, Mpumalanga and Kwazulu-Natal (Du Plessis & Duncan 1989, Meerow & Snijman 1998, Snijman & Archer 2003). The genus may be evergreen, winter-growing or summer-growing. The foliage varies among the species, from very narrow and spreading to strap-shaped and erect. The flowers vary from tubular and pendulous to widely bell-shaped, spreading or erect. The colours of the flowers range from white and cream to numerous shades of pink, red, orange and dark maroon. The fruit is a capsule of black, flattened, winged seeds. This genus is highly valued horticulturally. Species differ greatly in the colour, size, shape and position of the flowers.

Clivia (Figure 1.6.5 & 6) of the tribe Haemantheae (Table 1.2) is also described in detail by Booysen (2003).

Haemanthus (Figure 1.6.27-33) of the tribe Haemantheae (Table 1.2) has 27 species in southern Africa (Arnold & De Wet 1993, Snijman & Archer 2003). Distribution extends from central Namibia to Northern and Western Cape, and up to Gauteng, Mpumalanga and Limpopo. Most of the species are concentrated in the Northern Cape (Du Plessis & Duncan 1989, Meerow & Snijman 1998, Snijman & Archer 2003). Plants may be winter-growing, summer-growing or evergreen. Bulbs are large and fleshy. Leaf shape and position vary from lance-shaped and erect to very broad and prostate. The flowers are produced before the leaves develop. Flower colour ranges from white or pink to red. Propagation is by offsets, bulb cuttings, leaf cuttings and seed.

Scadoxus (Figure 1.6.39 & 40) of the tribe Haemantheae (Table 1.2) comprises four species in southern Africa (Arnold & De Wet 1993, Snijman & Archer 2003). The genus ranges from the Northern and Western Cape, often in coastal areas, to Gauteng, Mpumalanga, Limpopo and into tropical Africa and Arabia (Du Plessis & Duncan 1989, Snijman & Archer 2003). This is an evergreen or summer-growing genus. The foliage is thin-textured with a

distinct midrib, nine lance-shaped or oval leaves. Flower colour ranges from orange to pinkish-orange and red. Propagation is by offsets and seed.

The genus *Gethyllis* of the tribe Gethyllidaea (Table 1.2) has 36 species in southern Africa (Arnold & De Wet 1993, Snijman & Archer 2003). This genus is widely distributed from southern Namibia to the Northern and Western Cape. Most of the species grow in the Vanrhynsdorp-Nieuwoudtville area but other species also occur in Gauteng, Mpumalanga and Limpopo (Du Plessis & Duncan 1989, Snijman & Archer 2003). *Gethyllis* species are winter growers. Most species has three phases during their growth cycle: a leafing phase, a flowering phase and a fruiting phase. *Gethyllis* is proteranthous, i.e. the leaves die down before the flowers appear. Some species have broad leaves covered in thick white hairs. The flowers are fragile and in shades of white and light pink. The size, shape and colouring of the fruits vary between species. The colour of the fruit ranges from creamy white to shades of yellow, which may be spotted and flushed red near the tips, to a rich burgundy-red. Propagation is by seed.

Narcissus (Figure 1.6.36-38) of the tribe Narcisseae (Table 1.2) has about 50 species from southern Europe and the Mediterranean, including North Africa, across Asia, including China and Japan (Barnhoorn 1995). The plants are decidous, winter-growing and summer-dormant. Foliage is narrow and dark green. The flowers are mostly yellow but combinations of yellow, white, cream, pink and russet occur in various types. *Narcissus* does not grow easily from seed and generally the offspring will be inferior to the original clone.

Hippeastrum (Figure 1.6.34 & 35) of the tribe Hippeastreae (Table 1.2) has approximately 80 species from Central America, South America and the West Indies (Barnhoorn 1995). This bulbous plant is summer-growing, winter-dormant and flowers in spring or summer. The leaves are strap-shaped and erect. Flower colours range from pure white to soft rose, pink, magenta, salmon, orange, red, mahogany and red and white striped. Propagation is by offsets but *Hippeastrum* is also grown from seed. The application of the name "*Amaryllis*" to this genus persists in horticultural circles (Dahlgren *et al*. 1985).

1.5 *matK, trnL-F* and ITS

For this study a chloroplast gene and DNA region: *matK* and *trnL-F*, and a nuclear DNA region: ITS, were used in phylogenetic reconstruction. All three give DNA sequences that are useful for comparing species and closely related genera (Soltis *et al.* 1998).

1.5.1 *matK*

The *matK* (Figure 1.3) gene is located in the large single-copy region of the chloroplast genome (Soltis *et al.* 1998). The gene is approximately 1 550 bp in length and encodes a maturase involved in splicing type II introns from RNA transcripts.

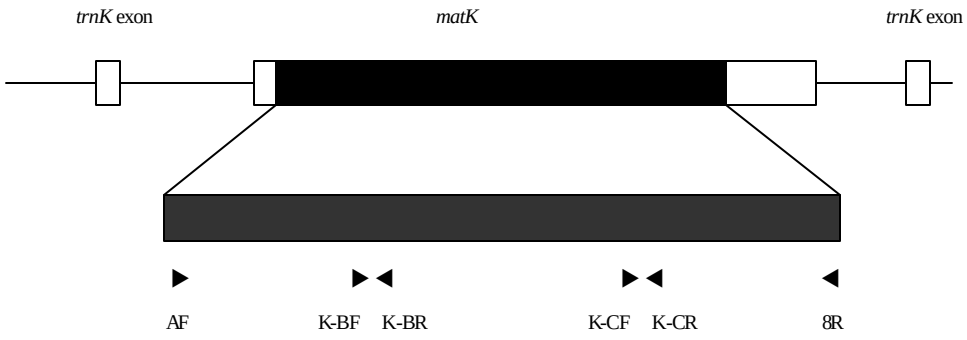


Figure 1.3 Position of the *matK* gene and location of primers (Ito *et al.* 1999).

The evolution rate of *matK* makes it appropriate for resolving intergeneric or interspecific relationships in plants. The information content of this gene is similar to or greater than that of ITS. However, given that *matK* is 3.1 times longer, *matK* sequences may be informative at the generic and species levels (Chat *et al.* 2004, Järvinen *et al.* 2004, Lledó *et al.* 2004, Barfuss *et al.* 2005, Samuel *et al.* 2005, Shaw *et al.* 2005), and even familial level (Ito *et al.* 1999, Freudenstein *et al.* 2004, Wojciechowski *et al.* 2004). The upper limits of the phylogenetic utility of *matK* are still being explored as seen from mentioned reports.

The retrieving of phylogeny within families and genera of land plants has great potential when comparing sequences of *matK* (Soltis *et al.* 1998). Well resolved phylogenies have been obtained in most studies by using approximately two-thirds of the 1 550 bp gene. Some studies have used considerably less. In several plant families, *matK* data has been

combined with data of other genes or DNA regions, providing enhanced resolution, shortened run times and increased internal support for clades when compared to the separate data sets.

1.5.2 *trnL-F*

Noncoding sequences that include the *trnL* (UAA) intron (Figure 1.4) and the intergenic spacer between the *trnL* (UAA) 3' exon and the *trnF* (GAA) gene also has phylogenetic potential (Soltis *et al.* 1998). These DNA regions are easily amplified and sequenced. They are relatively small, with the *trnL* intron ranging from 350-600 bp and the *trnL-F* spacer ranging from approximately 120-350 bp.

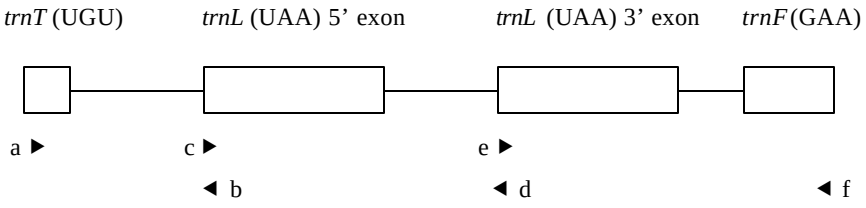


Figure 1.4 Schematic representation of the *trnL-F* region and location of primers (Taberlet *et al.* 1991).

Sequences of the *trnL-F* region may be informative at the generic and species levels (Gielly & Taberlet 1996, Meerow *et al.* 2003, Chat *et al.* 2004, Graham & Barrett 2004, Lihová *et al.* 2004, Mansion & Zeltner 2004, Mayuzumi & Ohba 2004, Alejandro *et al.* 2005, Barfuss *et al.* 2005, Shaw *et al.* 2005), and even familial level (Meerow *et al.* 1999, Pfosser & Speta 1999, Wojciechowski *et al.* 2004). Data sets of this DNA region have been readily combined with other chloroplast or nuclear genes as seen from mentioned reports. The combination of the data sets can be useful in the analysis of very large data sets.

1.5.3 ITS

The small size of the ITS region (Figure 1.5), approximately 600-700 bp, and the presence of highly conserved sequences flanking each of the two spacers make this region easy to amplify (Baldwin *et al.* 1995).

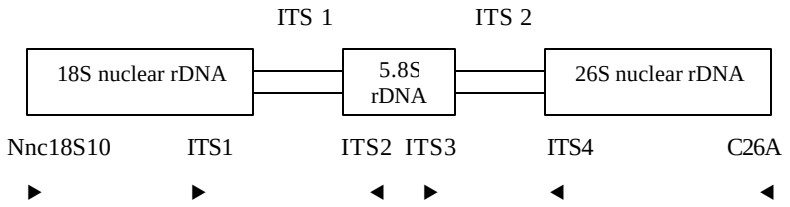


Figure 1.5 Organization of the ITS region and approximate position of primer sites (Soltis *et al.* 1998).

ITS regions have become a major focus of comparative sequencing at the generic and species levels (Baldwin 1993, Suh *et al.* 1993, Baldwin *et al.* 1995, Bogler & Simpson 1996, Wen & Zimmer 1996, Douzery *et al.* 1999, Meerow *et al.* 2000b, Meerow & Snijman 2001, Ran *et al.* 2001, Meerow *et al.* 2003, Dobeš *et al.* 2004, Lihová *et al.* 2004, Mansion & Zeltner 2004, Mayuzumi & Ohba 2004, Meerow & Van der Werff 2004, Alejandro *et al.* 2005, Muellner *et al.* 2005, Oh & Potter 2005).

Sequencing of these regions can be difficult because it is G + C rich and prone to secondary structure (Soltis *et al.* 1998).

1.6 Phylogeny

Phylogenetic analysis may contain molecular data from nucleotide sequences to evaluate the classification of the Family Amaryllidaceae into various tribes. According to Meerow *et al.* (1999), the Amaryllidaceae is a cosmopolitan, predominantly pantropical, family of petaloid monocots. Despite a lack of consensus on generic limits and tribal delimitation within the Amaryllidaceae, cladistic analysis has only rarely been applied to problems in the family such as by Nordal & Duncan (1984) for *Haemanthus* and *Scadoxus*, Meerow (1987, 1989) for *Eucrosia* Ker Gawl., *Eucharis* Planch. & Linden and *Caliphruria* Herb., respectively, Snijman (1994), Snijman & Linder (1996) and Meerow & Snijman (2001) for various taxa of the tribe Amaryllideae, Ran *et al.* (2001) for *Clivia*, Meerow *et al.* (2003) for *Crinum*, Graham & Barrett (2004) for *Narcissus*, Lledó *et al.* (2004) for *Leucojum* L. and *Galanthus* L. and Meerow & Van der Werff (2004) for *Stenomesson* Herb. Homoplasy for many conspicuous characters within this group impedes the application of phylogenetic studies for the entire family (Meerow 1987, 1989, 1995).

A study of Ito *et al.* (1999) was based on *matK* sequence data and addressed the systematic position of Amaryllidaceae, the intrafamilial relationships and the centre of origin of this family. A total of 31 species representing 31 genera of the 59 genera in the Amaryllidaceae were examined in their study. Results were compared with the system advocated by Dahlgren *et al.* (1985). In the trees obtained, the Amaryllidaceae *sensu* Dahlgren *et al.* (1985) formed a well-supported monophyletic clade with 100% bootstrap support. Amaryllidaceae were included in the Asparagales but its phylogenetic position within the Asparagales was not resolved. The result from character-state mapping supported the hypothesis that the family evolved in Africa and subsequently spread to other continents, which suggested that South America is the centre of secondary diversification.

Phylogenetic analyses were done by Lledó *et al.* (2004) on the genera *Leucojum* and *Galanthus* using *matK* and ITS sequences. These analyses showed the two to be closely related to *Lapiedra* Lag., *Narcissus*, *Vagaria* Herb., *Pancratium* L. and *Sternbergia* Walst. & Kit. Plastid, nuclear and morphological data were analysed independently and in combination, showing that the boundaries between these two genera are not appropriate. *Galanthus* is monophyletic, but *Leucojum* is paraphyletic to *Galanthus*. An alternative classification for *Leucojum* was proposed. A single genus would accommodate *Leucojum* subgenera *Acis* (Salisb.) Baker and *Ruminia* (Parl.) Baker. *Galanthus* would remain as it is. The name *Leucojum* would be applied to only *L. vernum* L. and *L. aestivum* L. *Galanthus*, *Leucojum* and *Acis* exhibit different biogeographical patterns. The whole group has a Mediterranean distribution. The genera have overlapping distributions, which could be explained by re-colonization after the clades were established in isolation.

Cladistic analyses of plastid DNA sequences *rbc*L and *trn*L-F were done by Meerow *et al.* (1999), representing 48 genera of Amaryllidaceae and 29 genera of related asparagalean families. Their analysis provided good support for the monophyly of Amaryllidaceae and indicated Agapanthaceae as Amaryllidaceae's sister family. Alliaceae in turn is sister to the Amaryllidaceae/Agapanthaceae clade. Fay & Chase (1996) argued for the inclusion of *Agapanthus* L'Hér. as a monotypic subfamily within Amaryllidaceae. The sister-group status of *Agapanthus* to Amaryllidaceae *sensu stricto* was weakly supported by Meerow *et al.*'s combined matrix with a bootstrap of 60%. Based on their data, it would be possible to argue for recognising Amaryllidaceae in a modified Hutchinsonian (1934) sense, that is, with three subfamilies, Allioideae, Agapanthoideae and Amarylloideae. Monophyly was maximised by either treating *Agapanthus* as a monogeneric family or accepting Amaryllidaceae in the

Hutchinsonian sense. According to Meerow *et al.* (1999), the support for a broad concept of Amaryllidaceae (including Alliaceae and Agapanthaceae) was only moderate with a bootstrap of 79% and jackknife of 77%. The combined analysis supported most of the other relationships argued by Fay & Chase (1996). Within Amaryllidaceae s.s., several groups were well supported within all of Meerow *et al.*'s analyses, some of which corresponded to traditionally accepted tribes of the family. The tribe Amaryllideae, with much of its generic diversity in South Africa was sister to the rest of the Amaryllidaceae and had high bootstrap and jackknife support.

Combined analysis of three plastid DNA (*rbc*L, *trn*L intron and *trn*L-F spacer) sequences by Meerow *et al.* (2000a) resolved Agapanthaceae as sister to Amaryllidaceae with weak support and placed *Agaphanthus*-Amaryllidaceae as a sister clade to a monophyletic Alliaceae. Their analyses of nuclear ITS rDNA sequences showed greater resolving power than analyses of plastid DNA within the major clades of the family and suggested that certain genera are polyphyletic. The recognised tribes, Amaryllideae, Haemantheae, Calostemmateae, Galantheae and Hippeatreae were consistently resolved by their plastid DNA sequences and all received strong bootstrap support. The origins of the family Amaryllidaceae are African. The tribe Amaryllideae is primarily South African and this was well supported by numerous morphological synapomorphies. The remaining two African tribes, Haemantheae and Cyrtantheae, were well supported. The Eurasian elements of the family and the American genera are monophyletic sister clades. The analysed plastid DNA *mat*K sequences by Ito *et al.* (1999) resolved a topology that is highly similar to Meerow *et al.*'s (2000a) plastid sequence phylogeny.

Graham & Barrett (2004) investigated the origin of stylar polymorphisms in *Narcissus* by using sequences of the *ndhF* and *trnL-F* regions. Reconstruction of evolutionary change was complicated by incomplete resolution of trees inferred from the two chloroplast regions. But reconstructions were bracketed by considering all possible resolutions of polytomies on the shortest trees.

Meerow *et al.* (2000b) presented cladistic analyses of the internal transcribed spacer region (ITS) of nuclear rDNA for 76 species of American Amaryllidaceae. The ITS resolved two groups, an Andean tetraploid clade and a primarily extra-Andean hippeastroid clade. The Andean clades were all partially supported by plastid sequence data. They inferred from their data that many of the diversity of the family in the Americas were recent. Also, that the American Amaryllidaceae may have been reduced to peripheral isolates some time after its

initial entry and spread through the Americas. But the early origins of the family in America remain ambiguous. A new tribe, Clinantheae Meerow, is described.

Phylogenetic relationships of five *Clivia* taxa and three outgroup species were studied by Ran *et al.* (2001) by using sequences of the nuclear ribosomal 5S non-transcribed spacer and ITS of 45S rDNA. Analysis of the data sets separately resulted in some well-supported groupings and congruent phylogenies. *Clivia miniata* Regel and *C. gardenii* Hooker are closely related. *C. robusta*, the new species, is a sister clade of this group and *C. nobilis* Lindl. is distantly related to these three taxa. *C. caulescens* Dyer is intermediate to the two groups.

Meerow & Snijman (2001) presented the results of cladistic analyses of morphology, rDNA ITS sequences, and a combination of the two for tribe Amaryllideae. The morphologically based analysis supported *Amaryllis* as sister to two major clades. The consensus of the combined analysis was highly resolved and similar to the sequence topology. The major clades were recognized as subtribes due to the results of the combined analyses. A brief synopsis of the emended subtribes (Amaryllidinae, Boophoninae, Crininae and Strumariinae) was provided.

Phylogenetic and biographical analyses of ITS and *trn*L-F sequences for all continental groups of the genus *Crinum* and related African genera are presented by Meerow *et al.* (2003). ITS sequences resolved three clades in *Crinum s.s.* The *trnL-F* phylogeny resolved an American and an Asian/Madagascar clade. Biogeographical analyses placed the origin of this genus in southern Africa.

Meerow & Van der Werff (2004) reported that the sole species of *Pucara* Rav., *P. leucantha* Rav., is reduced to synonymy with *Stenomesson* on the basis of *atpß-rbc*L and ITS sequences. *P. leucantha* is transferred as *Stenomesson leucanthum* (Rav.) Meerow & van der Werff.

1.7 Cytogenetics

The fourteen genera of this study represent the tribes: Amaryllideae, Cyrtantheae, Gethyllideae, Haemantheae, Hippeastreae and Narcisseae (Table 1.2). Amaryllideae has 12 genera and basic chromosome numbers (*x*) of 10 and 11 (Meerow 1995, Meerow & Snijman 1998, 2001). Genera representing this tribe in this study are *Amaryllis*, *Ammocharis*, *Boophone, Brunsvigia*, *Crinum*, *Crossyne* and *Strumaria*. Cyrtantheae comprises one genus

and basic chromosome numbers of 6, 8 and 11. Gethyllideae has two genera and a basic chromosome number of 6. The genus *Gethyllis* is included in this study. Haemantheae comprises four genera and basic chromosome numbers of 6, 8, 9, 11 and 12 have been described. Genera in this tribe include *Clivia*, *Haemanthus* and *Scadoxis*. Hippeastreae has 11 genera and basic chromosome numbers of 6, 8, 9, 10, 11 and 12. The genus *Hippeastrum* is included. Narcisseae has two genera and basic chromosome numbers of 7, 10 and 11. The genus included is *Narcissus.*

The most common basic chromosome number occurring in Amaryllidaceae is x = 11 (Flory 1977, Meerow 1995). The next most frequently encountered basic chromosome number is 6 found in at least 62 species (Flory 1977). Amaryllidaceous karyotype evolution is characterised by two major trends (Meerow 1995). Certain genera have great karyotypic stability, with a low frequency of polyploidy, e.g. *Crinum* and *Hippeastrum.* Similar chromosome morphology occurs among the species of such genera and their polyploids tend to be autoploid in origin. A genus may exhibit great variation in both chromosome number (Table 1.3) and morphology. In such genera, both allopolyploidy and Robertsonian translocations may occur. A positive correlation exists between chromosome number and flower size (Flory 1977). Selection for superior size and attractiveness in flowers has been derived from the present polyploidy. There are a number of amaryllidaceous genera in which interspecific hybrids have been found or have been developed under controlled conditions, for example, *Narcissus, Crinum* and *Hippeastrum.*

Table 1.3 Reported somatic chromosome numbers of several genera in the family Amaryllidaceae.

TRIBE	GENERA	2n	AUTHORS
Amaryllideae	*Amaryllis*	12	Satô 1938
		18	Satô 1942, Ficker 1951
		20	Fernandes 1929, 1930, 1931
		22	Inariyama 1937, Satô 1938, 1942, Neto 1948, Gouws 1949, Ficker 1951, Traub 1953[a,b,c,d], Mookerjea 1955, Sharma 1956, Sharma & Jash 1958, Traub 1958, Larsen 1960, Kapoor & Tandon 1963, Nelson & Traub 1963, Flory *et al.* 1976, Flory & Smith 1976, Narain 1977, Vij *et al.*

		1978, Guha 1979, Flory & Coulthard 1981, Arroyo 1982, Williams 1982[b], Naranjo & Poggio 1988, Brandham & Bhandol 1997
	24	Flory 1980, Flory & Coulthard 1981
	32	Satô 1938, 1942
	33	Neto 1948, Lakshmi & Prasada Murthy 1984
	42	Bapat & Narayanaswamy 1976
	44	Satô 1938, Neto 1948, Mookerjea 1955, Sharma 1956, Traub 1958, Vij *et al.* 1978, Guha 1979, Flory & Coulthard 1981, Williams 1982[a], Vijayavalli & Mathew 1990, Khaleel *et al.* 1991, Brandham & Bhandol 1997
	49	Mookerjea 1955, Traub 1958
	66	Traub 1953[a,b,c,d], Mookerjea 1955, Sharma 1956, Traub 1958
	77	Satô 1938, Traub 1958
Ammocharis	22	Gouws 1949, Auquier & Renard 1975
Boophone	22	Gouws 1949, Fernandes & Neves 1962
Brunsvigia	22	Gouws 1949, Traub 1961, Goldblatt 1972
Crinum	18	Sugiura 1931
	19	Subramanian 1979
	20	Kammacher & Ake-Assi 1975, Subramanian 1979, Vijayavalli & Mathew 1990, Vijayavalli & Mathew 1992
	20+1B	Subramanian 1979
	22	Nagao & Takusagawa 1932, Matsuura & Satô 1935, Inariyama 1937, Suita 1937, Satô 1938, 1942, Delay 1947, Gouws 1949, D'Amato 1950, Dolcher 1950, Snoad 1952, Sharma & Ghosh 1954, Sharma & Bhattacharyya 1956, Sharma 1956, Mangenot & Mangenot 1958, Sharma & Bhattacharyya 1960, Mangenot & Mangenot 1962, Bose 1965[a], Jones & Smith 1967, Khoshoo & Raina 1967, Lee 1967, Sharma 1970, Raicu *et al.* 1971, Gadella 1972, Fujishima 1975, Kammacher & Ake-Assi 1975, Gadella 1977,

		Nordal *et al.* 1977, Zaman *et al.* 1977, Raina 1978, Subramanian 1979, Wahlstrom & Laane 1979, Lakshmi 1980, Patwary & Zaman 1981, Flory 1982, Nordal & Wahlstrom 1982, Vij *et al.* 1982, Ugborogho 1983, Nwankiti 1985, Guerra 1986, Sinha & Roy 1986, Fici *et al.* 1988, Ge *et al.* 1988, Sveshnikova & Zemskova 1988, Vijayavalli & Mathew 1990, Vijayavalli & Mathew 1992
	22+f	Satô 1938, 1942
	22+1s	Raymúndez *et al.* 1993
	22+B	Kootin-sanwu 1969, Wahlstrom & Laane 1979
	22+1-2B	Jones & Smith 1967, Fujishi ma 1975
	22+2B	Inariyama 1937
	22+3-4B	Jones & Smith 1967, Fujishima 1975
	22+6B	Fujishima 1975
	24	Svensson-Stenar 1925, Sugiura 1936[a,b], Jones & Smith 1967, Subramanian 1979, Nwankiti 1985
	30	Sharma 1970, Nordal *et al.* 1977, Subramanian 1979, Wahlstrom & Laane 1979, Nordal & Wahlstrom 1982
	32	Miège 1962
	33	Satô 1938, 1942, Tjio & Levan 1950, Miège 1962, Bose 1965[a], Jones & Smith 1967, Fujishima 1975, Mehra & Sachdeva 1976, Ponnamma & Ninan 1978, Wahlstrom & Laane 1979, Nordal & Wahlstrom 1982, Vijayavalli & Mathew 1990, Vijayavalli & Mathew 1992
	44	Jones & Smith 1967, Nordal *et al.* 1977, Raina 1978, Sveshnikova & Zemskova 1988
	44+1B	Jones & Smith 1967, Wahlstrom & Laane 1979
	44+2B	Jones & Smith 1967
	50	Subramanian 1979
	60	Subramanian 1979
	66	Fernandes & Neves 1962, Jones & Smith 1967
	66+1B	Jones & Smith 1967
	72	Gouws 1949
	87	Jones & Smith 1967
Crossyne	22	Meerow & Snijman 1998

	Strumaria	20	Goldblatt 1976, Snijman 1992, 1994
		20+1B	Goldblatt 1976, Snijman 1994
		20+2-3B	Snijman 1992, 1994
		22	Wilsenach 1965, Goldblatt 1976, Snijman 1994
Cyrtantheae	*Cyrtanthus*	14	Bose 1965[b]
		16	Taylor 1925, Gouws 1949, Tjio & Levan 1950, Flory 1955, Ising 1962, Wilsenach 1963, Bose 1965[b], Ising 1966, Ising 1970, Nandi 1973, Venkateswarlu & Lakshmi 1976, Lakshmi 1980
		18	Mookerjea 1955, Bose 1965[b]
		22	Satô 1938, 1942
Gethyllideae	*Gethyllis*	12	Wilsenach 1965, Vosa 1986
Haemantheae	*Clivia*	18	Wittlake 1940
		22	Inariyama 1937, Flory 1943, Gouws 1949, Nandi 1973, Yang & Zhu 1985, Niu *et al.* 1986, Sveshnikova & Zemskova 1988, He & Deng 1989
		44	Satô 1938, 1942
	Haemanthus	16	Heitz 1926, Inariyama 1937, Satô 1938, 1942, Gouws 1949, Tjio & Levan 1950, Gouws 1964, Björnstad & Friss 1972, Müller-Doblies & Müller-Doblies 1975, Vosa & Marchi 1980, Vosa 1984, Sveshnikova & Zemskova 1988
		16+2f	Bronckers 1961
		16+2B	Satô 1938, 1942
		18	Satô 1942, Gouws 1949, Snoad 1952, Sharma 1956, Bronckers 1961, Gouws 1964, Björnstad & Friis 1972, Lakshmi 1977, Ponnamma & Ninan 1978, Lakshmi 1980, Vijayavalli & Mathew 1990
		18+f	Sharma 1956
		24	Svensson-Stenar 1925
		36	Nwankiti 1984
	Scadoxus	18	Vosa & Marchi 1980, Morton 1993
		20	Morton 1993

Hippeastreae	*Hippeastrum*	16	Fernandez 1970
		18	Satô 1942
		20	Arroyo 1982, Jee *et al.* 1995
		22	Baldwin & Speese 1947, Snoad 1952, Mookerjea 1955, Sharma 1956, Sharma & Jash 1958, Hunziker & Cocucci 1959, Darlington 1963, Naranjo 1969, Naranjo & Andrada 1975, Lakshmi 1980, Arroyo 1982, Guerra 1986, Naranjo & Poggio 1988, Sveshnikova & Zemskova 1988, Dutilh 1989, Vijayavalli & Mathew 1990, Jee *et al.* 1995, Brandham & Bhandol 1997
		22+f	Mookerjea 1955
		22+B	Arroyo 1982
		24	Heitz 1926, Williams & Dudley 1984, Dutilh 1989, Jee *et al.* 1995
		33	Snoad 1952, Lakshmi & Murthy 1980, Arroyo 1982, Beltrão & Guerra 1990, Zou & Qin 1994
		41	Vijayavalli & Mathew 1990
		43	Snoad 1955, Vijayavalli & Mathew 1990
		44	Inariyama 1937, Satô 1938, 1942, Mookerjea 1955, Sharma 1956, Naranjo & Andrada 1975, Arroyo 1982, Karihaloo 1985, Sveshnikova & Zemskova 1988, Brandham & Bhandol 1997
		45	Vijayavalli & Mathew 1990
		46	Nagao & Takusagawa 1932, Vijayavalli & Mathew 1990
		49	Mookerjea 1955, Sharma 1956
		55	Naranjo 1969, Arroyo 1982
		88	Karihaloo 1985
Narcisseae	*Narcissus*	10	Fernandes 1931, Fernandes 1967-1968
		12	Fernandes 1929, 1930, 1931
		14	Stomps 1919, de Mol 1923, 1925, 1926, Heitz 1926, Fernandes 1929, 1930, 1931, Nagao 1929, Nagao 1933, Pugsley 1933, Fernandes 1934, Philp 1934, Fernandes 1935, Geitler 1935, Nagao 1935, Fernandes 1936[a,b], de Mol 1937, Fernandes 1937[a], Satô 1938, Fernandes 1939[b], Pereira 1940, Fernandes & Neves 1941, Fernandes 1942, Satô 1942, Fernandes 1943[a], Fernandes & Serra 1944,

	Fernandes & Fernandes 1945, Fernandes & Fernandes 1946, Fernandes *et al.* 1948, Fernandes 1949[a,b], Fernandes 1950, Fernandes 1951, Wylie 1952, Fernandes 1953, Kurita 1955[a,b], Fernandes 1959[a], Maugini 1962, Fernandes 1966[a], Meyer 1966, Fernandes 1967-1968, Fernandes & Queiros 1970, Garbari & Tornadore 1970, Sharma 1970, Tarnavarshci & Lungeanu 1970[a,b], Cesca 1972, Fernandez & Franca 1974, Ruiz Rejon & Sanudo 1976, Fernandes 1977, Natarajan 1979[a,b], Brito & Talavera 1980, Karihaloo & Koul 1980, Valdes-Bermejo 1980[a], Loza Fernandez *et al.* 1981, Moreno Guerrero *et al.* 1981, Pajarón Sotomayor 1982, Fernández Casas 1982, Van Loon & Oudemans 1982, Dorda Alcaraz 1983, Karihaloo & Koul 1983[a], Pajarón Sotomayor 1983, Barra & López González 1984, Sañudo 1984, Sañudo *et al.* 1984, Tseng & Chen 1984, Krichfalushij & Sveshnikova 1985, Ruiz Rejón & Ruiz Rejón 1985, Sañudo 1985, Brandham & Kirton 1987, Fernandes 1987, Galland 1988, González Aguilera *et al.* 1988, Wetschnig 1988, Karihaloo & Koul 1989, Díaz *et al.* 1990, González Aguilera *et al.* 1990, Nakata *et al.* 1990, Montserrat Martí & Vives 1991, Brandham 1992
14+1B	Fernandes 1939[a,b], Wylie 1952, Barra & López González 1984, Sañudo 1984, Sañudo *et al.* 1984, Krichfalushij & Sveshnikova 1985, Sañudo 1985, Brandham & Kirton 1987, Fernandes 1991, Montserrat Martí & Vives 1991, Druskovic & Lovka 1995
14+1-2B	Wylie 1952, Sañudo 1984, Sañudo *et al.* 1984, Krichfalushij & Sveshnikova 1985, Sañudo 1985, Molero & Montserrat Martí 1986
14+0-3B	Brandham & Kirton 1987
14+1-4B	Fernandes 1949[a]
14+2-4B	Fernandes 1950, Krichfalushij & Sveshnikova 1985
15	Pugsley 1933, Fernandes 1934, Philp 1934,

	Fernandes & Serra 1944, Fernandes & Fernandes 1946, Meyer 1966, Fernandes & Franca 1974, Fernández Casas 1977[a], Moreno Guerrero *et al.* 1981
16	Fernandes & Serra 1944, Fernandez & Franca 1974
17	Nagao 1933, Fernandes 1934, 1942, Fernandes & Franca 1974, Brandham & Kirton 1987, Brandham 1992
18	Fernandes & Franca 1974, Brandham & Kirton 1987
20	de Mol 1923, Nagao 1929, 1930[a,b], 1933, 1935, Fernandes 1942, 1943[b], Maugini 1953, Fernandes 1966[b], Meyer 1966, Fernandes 1967-1968, Weitz & Feinbrun 1972, Hong 1982, Koul *et al.* 1985, Brandham & Kirton 1987, Lu *et al.* 1989, Baldini 1990, Lü 1990
20+1B	Baldini 1995
21	de Mol 1923, Nagao 1929, 1933, Pugsley 1933, Fernandes 1934, Philp 1934, Nagao 1935, Fernandes 1937[a,b], Satô 1938, Fernandes 1939[b,c], Pereira 1940, Fernandes 1942, Satô 1942, Fernandes & Fernandes 1946, Wylie 1952, Kurita 1955[b], Meyer 1966, Fernandes 1967-1968, Fernandes & Queiros 1970, Mehra & Sachdeva 1976, Karihaloo & Koul 1983[a], Karihaloo & Koul 1985[b], Brandham & Kirton 1987, Diosdado *et al.* 1993
21+0+1B	Karihaloo & Koul 1989
21+1-5B	Fernandes 1943[a]
22	Heitz 1926, Nagao 1929, 1930[a,b], 1933, Fernandes 1934, Nagao 1935, Fernandes 1937[a,b], Satô 1938, Fernandes 1940, 1942, Satô 1942, Wylie 1952, Maugini 1952, 1953, Kurita 1955[b], Meyer 1966, Fernandes 1967-1968, Weitz & Feinbrun 1972, Valdes-Bermejo & Gomez Garcia 1976, Fernández Casas 1977[b], Fernández Casas 1978, Fernández Casas *et al.* 1979, Talavera 1979, Brito & Talavera 1980, Fernández Casas 1980[b], Valdes-Bermejo 1980[a], Moreno Guerrero *et al.* 1981,

	Pajarón Sotomayor 1986, Brandham & Kirton 1987, Lu *et al.* 1989, Lü 1990, Montserrat Martí & Vives 1991, Brandham 1992, Baldini 1995, Talavera *et al.* 1995
24	Stomps 1919, Nagao 1933, Sharma & Sharma 1961, Brandham & Kirton 1987, Brandham 1992
26	Fernandes 1934, Fernandes & Neves 1941, Fernandes 1967-1968, Tarnavarschi & Lungeanu 1970, Brandham & Kirton 1987, Brandham 1992
27	Kurita 1955[b], Yokouchi 1964
28	de Mol 1923, Heitz 1926, Fernandes 1929, Nagao 1929, Fernandes 1930, 1931, Nagao 1933, Fernandes 1934[b], Fernandes & Neves 1941, Fernandes 1942, 1943, Fernandes 1950, Kurita 1955[b], Fernandes 1959[a,b], Sharma & Sharma 1961, Fernandes 1966[a], Meyer 1966, Fernandes 1967-1968, Zakharyeva & Makushenko 1969, Devesa 1980, Fernández Casas 1980[b], Valdes-Bermejo 1980[b], Loza Fernandez *et al.* 1981, Dorda Alcaraz 1983, Barra & López González 1984, Sañudo 1984, Sañudo *et al.* 1984, Valdés *et al.* 1984, Sañudo 1985, Brandham & Kirton 1987, Fernandes 1987, Karihaloo & Koul 1989, Díaz *et al.* 1990, Fernandes 1991
28+0-2B	Sañudo 1985
29	Wylie 1952, Valdés *et al.* 1984, Karihaloo & Koul 1989
29+1B	Wylie 1952
30	Nagao 1929, 1930[a,b], 1933, Fernandes 1934, Nagao 1935, Fernandes 1937[a,b], 1942, 1943[b], Maugini 1953, Fernandes 1959[b], Sharma & Sharma 1961, Meyer 1966, Fernandes 1967-1968, Scrugli 1974, Koul *et al.* 1976, Valdes-Bermejo *et al.* 1978, Vij *et al.* 1978, Karihaloo & Koul 1983[b], Frizzi 1984, Valdés *et al.* 1984, Karihaloo & Koul 1985[a], Koul *et al.* 1985, Zhu *et al.* 1986, Karihaloo 1987, Lu *et al.* 1989, Xu *et al.* 1992
30+2B	Fernandes 1959[a,b]
31	Brandham & Kirton 1987
32	Nagao 1929, 1930[a,b], 1933, 1935, Satô 1938,

	1942, Sharma & Sharma 1961, Vij *et al.* 1978, Fernández Casas 1983, Lu *et al.* 1989
33	Maugini 1953, Brandham & Kirton 1987
34	Brandham & Kirton 1987
35	Fernandes 1942, Meyer 1966
36	Romero *et al.* 1983
37	Brandham 1992
39	Fernandes 1967-1968
41	Fernandes 1967-1968, Brandham & Kirton 1987, Wang, Y.-X. *et al.* 1996
42	Heitz 1926, Nagao 1929, 1933, Fernandes 1942, Satô 1942, Fernandes *et al.* 1948, Meyer 1966, Fernandes 1967-1968, Fernández Casas 1980[a], Sañudo *et al.* 1984, Sañudo 1985, Brandham & Kirton 1987, Fernandes 1987, Fernandes 1991, Montserrat Martí & Vives 1991
42+0-2B	Sañudo 1985
43	Brandham & Kirton 1987, Brandham 1992
44	Fernandes 1966[b], Fernandes 1967-1968
45	Fernandes 1942, Meyer 1966, Brandham 1992
46	Brandham 1992
49	Fernandes 1967-1968, Sañudo *et al.* 1984
50	Fernandes 1937[a], 1942, Wylie 1952
54	Fernández Casas 1980[a]
56	Fernandes 1967-1968, Loza Fernandez *et al.* 1981

The variation in ploidy levels within *Amaryllis*, *Crinum*, *Hippeastrum* and *Narcissus* (Table 1.3) is indicative of hybridization of these genera. According to the data in Table 1.3 the appearance of B chromosomes has been reported in *Crinum*, *Strumaria* , *Haemanthus*, *Hippeastrum* and *Narcissus*. The smallest somatic chromosome number of 10 has only been reported in Narcisseae. The somatic chromosome number of 12 occurs in the tribes Amaryllideae, Gethyllideae and Narcisseae. The somatic chromosome number of 14 occurs in the tribes Cyrtantheae and Narcisseae, whereas 2n = 16 occurs in Cyrtantheae, Haemantheae, Hippeastreae and Narcisseae. The somatic chromosome number of 18 has been reported in the tribes Amaryllideae, Cyrtantheae, Haemantheae, Hippeastreae and Narcisseae. The range of somatic chromosome numbers in the tribe Amaryllideae is very similar to those in the tribes Hippeastreae and Narcisseae.

As seen from the reported data, variation between somatic chromosome numbers in each tribe is not high, except where hybridization may occur. Most of these somatic chromosome numbers agree with the given basic chromosome numbers that may occur in each tribe. As more becomes known of the southern African species in the family Amaryllidaceae, the lack of knowledge regarding chromosome morphology and behaviour becomes more apparent.

In this study, the results of a cytogenetic study on some *Cyrtanthus* species are included. Chromosomes in this genus are large, as in the rest of the Amaryllidaceae (Wilsenach 1963). Variations in their karyotypes have been described (Wilsenach 1963, Ising 1970).

1.8 A phylogenetic overview: the past and the future

Palmer *et al.* (2004) provide a brief overview on the plant tree of life, describing its history and the general nature of the following articles by Burleigh & Mathews (2004), Chase (2004), Crane *et al.* (2004), Friedman *et al.* (2004), Judd & Olmstead (2004), Keeling (2004), Kellogg & Bennetzen (2004), Linder & Rieseberg (2004), Sanderson *et al.* (2004) and Soltis & Soltis (2004). Several major controversies and unsolved problems in resolving portions of this tree are discussed. The overview concludes with a few thoughts about the prospects for obtaining a comprehensive, robustly resolved, and accurately dated plant tree of life and the importance thereof.

Burleigh & Mathews (2004) reported on seed plant phylogeny. They establish a seemingly robust frameword tree for gymnosperms and provide important evidence for the single most controversial and revolutionary hypothesis generated from molecular analyses of any group of plants, namely, that conifers are paraphyletic, with Gnetales sister to Pinaceae to the exclusion of all other conifers. They also state that it is likely that extinct taxa would attach to the branch leading to angiosperms. According to them incomplete knowledge of the branching order and identity of the fossil taxa diverging along this branch obscures their understanding of angiosperm origins and limits their ability to test the rooting of the seed plant tree implied by molecular trees.

An overview of monocot relationships is given by Chase (2004), stating that in ten years the monocots have gone from being one of the least studied and most phylogenetically misunderstood groups of the angiosperms to one of the best characterized. The clades have high bootstrap support resulting from morphological data, but some results are unique to the

trees created from DNA sequence data. According to molecular clock studies, monocots have been shown to be least 140 million years old. The positions of some orders, such as Asparagles and Liliales, are uncertain and more data are necessary for clarification. The plastid genome is the most sampled for sequence data but it is also important to incorporate information from both the mitochondrial and nuclear genomes.

The article by Crane *et al.* (2004) on fossils and plant phylogeny emphasizes the importance of integrating fossil evidence with both morphological and molecular data from extant plants for a better understanding of plant evolution. It also stresses that a comprehensive understanding of some groups, for example seed plants, will require a thorough reassessment of available fossils. The amount of paleobotanical information available is limited by preservation.

Friedman *et al.* (2004) provide a review of the evolution of plant development, a topic of rapidly growing interest in plant biology. In the last decade, the study of the evolution of plant development has combined investigations in systematics, developmental morphology, molecular development genetics, and molecular evolution. The integration of phylogenetic studies, structural analyses of fossil and extant taxa, and molecular developmental genetic data facilitates the formulation of hypotheses for the evolution of morphological characters.

A survey of tricolpate (eudicot) phylogenetic relationships was done by Judd & Olmstead (2004). The classification of the Angiosperm Phylogeny Group (APG II) expresses the current state of their knowledge. Many of the major tricolpate clades can be diagnosed morphologically. There are still numerous unresolved relationships among the tricolpates. Other major problems involve interfamilial relationships within many of the tricolpate orders.

Keeling (2004) describes the tree of eukaryotes by reviewing the diversity and evolutionary history of plastids and their hosts. According to the article, this tree is composed of five supergroups. Plants and algae are scattered among four of the five supergroups.

Kellogg & Bennetzen (2004) review the evolution of nuclear genome structure in seed plants. Extensive structural variation in size, chromosome number, number and arrangement of genes, and number of genome copies per nucleus is exhibited by plant nuclear genomes. This variation is the outcome of a set of processes, such as gene duplication and deletion, chromosomal duplication or genome rearrangement. The latter often follows hybridization and/or polyploidy. Some of these changes are fixed evolutionarily and mark major clades. Hybrids or novel combinations of genomes may be a driving force in evolution by changing patterns of gene expression and triggering genome rearrangements.

Reconstructing patterns of reticulate evolution in plants is discussed by Linder & Rieseberg (2004). The development of multiple nuclear markers and new methods for reconstructing reticulate evolution should make the reconstruction of the many hybrid speciation events more practical. A much greater incorporation of population genetics into phylogenetic reconstruction is necessary. Current models and methods allowing hybrid speciation to be detected and reconstructed are discussed, including a focus on how lineage sorting and meiotic and sexual recombination influence network reconstruction.

Sanderson *et al.* (2004) reported that recent analyses are converging on similar and reasonable age estimates of angiosperms despite the limitations of methods for estimating divergence times. Available methods for estimating divergence times are reviewed, particularly those geared toward handling the widespread variation in rates of molecular evolution observed among lineages. The literature applying these methods to key divergence times in plant evolution is also reviewed.

Soltis & Soltis (2004) review the origin and diversification of angiosperms. Despite rapid progress during the past ten years in resolving angiosperm relationships, several problems remain: relationships among the monocots, Chloranthaceae, magnoliids and eudicots; branching order among basal eudicots; relationships among the major clades of core eudicots; relationships within rosids; relationships of the many lineages of parasitic plants; and integration of fossils with extant taxa into a comprehensive tree of angiosperm phylogeny.

1.9 Aim of study

The aim of this study is

- to determine and compare the phylogenetic relationships derived from molecular systematics of indigenous and foreign tribes in the Amaryllidaceae,
- to compare the phylogenetic analyses of the fourteen southern African genera in this study to those of previous studies,
- to examine the classification of the southern African species in the family Amaryllidaceae,
- to determine whether the indigenous tribes are monophyletic or not,
- to determine which of the DNA regions (*trnL-F*, *matK* or ITS) provide the best resolution,

- to determine whether the sequences of the different DNA regions are more informative separately or combined,
- to determine the chromosome numbers and compare the karyotypes of some *Cyrtanthus* species, and
- to present any suggestions for further research on Amaryllidaceae.

1. *Amaryllis belladonna* (Manning *et al*. 2002)

2. *Ammocharis coranica* (Manning *et al*. 2002)

3. *Boophone disticha* (Manning *et al*. 2002)

4. *Brunsvigia bosmaniae* (Manning *et al*. 2002)

5. *Clivia miniata*

6. *Clivia nobilis* (Pienaar 1987)

7. *Crinum bulbispermum* (Pienaar 1987)

8. *Crinum campanulatum* (Pienaar 1987)

Figure 1.6 Pictures of some of the plant species mentioned in this study.

9. *Crinum macowanii* (Pienaar 1987)

10. *Crinum moorei* (Pienaar 1987)

11. *Crinum variable* (Manning *et al*. 2002)

12. *Cyrtanthus brachyscyphus* (*Spies 7406*)

13. *Cyrtanthus breviflorus* (*Spies 7634*)

14. *Cyrtanthus elatus* (*Spies 7198*)

15. *Cyrtanthus elatus* (Manning *et al*. 2002)

16. *Cyrtanthus falcatus* (Pienaar 1987)

17. *Cyrtanthus labiatus* (Manning *et al*. 2002)

Figure 1.6 (cont.) Pictures of some of the plant species mentioned in this study.

18. *Cyrtanthus loddigesianus* (Manning *et al*. 2002)

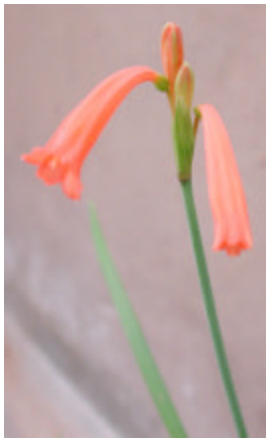
19. *Cyrtanthus mackenii* (Pienaar 1987)

20. *Cyrtanthus macowanii* (*Spies 7201*)

21. *Cyrtanthus montanus* (*Spies 7209*)

22. *Cyrtanthus montanus* (*Spies 7638*)

23. *Cyrtanthus obliquus* (Manning *et al*. 2002)



24. *Cyrtanthus obrienii* (*Spies 7193*)

25. *Cyrtanthus spesiosus* (*Spies 7640*)

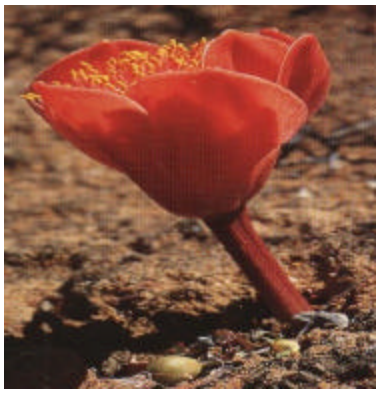
26. *Cyrtanthus wellandii* (Manning *et al*. 2002)

Figure 1.6 (cont.) Pictures of some of the plant species mentioned in this study.

27. *Haemanthus albiflos* (Manning *et al*. 2002)

28. *Haemanthus albiflos* (*Spies 7517*)

29. *Haemanthus coccineus* (*AMV 632*)



30. *Haemanthus crispus* (Manning *et al.* 2002)

31. *Haemanthus humilis* (Barnhoorn 1995)

32. *Haemanthus paucilifolius* (*Spies 7925*)

33. *Haemanthus sanguineus* (*Spies 7253*)

Figure 1.6 (cont.) Pictures of some of the plant species mentioned in this study.

34. *Hippeastrum* sp. (*Spies 7446*)

35. *Hippeastrum* sp. (*Spies 7447*)

36. *Narcissus* sp. (*Spies 7521*)

37. *Narcissus* sp. (*Spies 7607*)

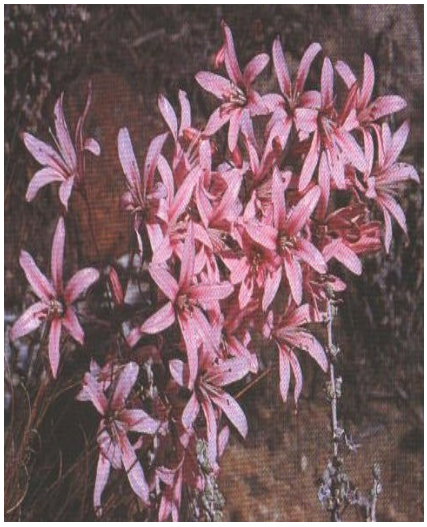
38. *Narcissus* sp. (*Spies 7608*)

39. *Scadoxus membranaceus* (Pienaar 1987)

40. *Scadoxus puniceus* (Manning *et al.* 2002)

Figure 1.6 (cont.) Pictures of some of the plant species mentioned in this study.

41. *Strumaria salteri* (*Spies 7245*)



42. *Strumaria salteri* (Manning *et al.* 2002)

Figure 1.6 (cont.) Pictures of some of the plant species mentioned in this study.

CHAPTER TWO

MATERIALS AND METHODS

2.1 Materials

Specimens were donated by Dr. Andor Venter (Department of Plant Sciences, UFS), Dr. Robert Archer (SANBI, Pretoria), ARC-Roodeplaat and Kirstenbosch botanical garden. Some voucher herbarium specimens were collected in the veld and stored in the Geo Potts Herbarium, Bloemfontein (BLFU). Plants collected are listed in Table 2.1.

Super Therm DNA polymerase (*Taq*) from *Thermus aquaticus* with 10X Buffer (Southern Cross Biotechnology LPI-801, LPI-455), sequencing primers (Whitehead Scientific) and the DNA sequencing kit (ABI PRISM, Applied Biosystems, Part. No. 4390242) were used. All other chemicals used during this study were of either analytical or electrophoretic grade.

Data on *trn*L-F, *mat*K and *ITS* sequences of species representing the genera investigated in this study were obtained from Genbank and are listed in Appendix A. Sequences of species representing genera of Amaryllidaceae not investigated in this study were also obtained from Genbank. This was done to observe the classification of Amaryllidaceae with all the represented tribes.

Table 2.1 List of localities and voucher herbarium numbers of specimens investigated in this study. Species are listed alphabetically.

Species	Voucher no.	Localities
Amaryllis belladonna L.	*RHA 28*	Western Cape
	Spies 7920	Cultivated
Ammocharis coranica (Ker Gawl.) Herb.	*Spies 7164*	Eastern Cape
A. nerinoides (Baker) Lehmiller	*RHA 32*	Namibia
Boophone disticha (L.f.) Herb.	*Spies 7172*	Eastern Cape

Brunsvigia bosmaniae F.M.Leight.	*Spies 7251*	Western Cape
B. gregaria R.A.Dyer	*Spies 7157*	Eastern Cape
B. radulosa Herb./*natalensis* Baker	*Spies 7629*	Mpumalanga
B radulosa Herb.	*Spies 7440*	Free State
Clivia caulescens R.A.Dyer	*Spies 8092*	Cultivated
C. caulescens R.A.Dyer	*RHA+CA 10b*	Mpumalanga
C. x *cyrtanthiflora*	*Spies 8094*	Cultivated
C. gardenia Hook.	*Spies 8093*	Cultivated
C. miniata (Lindl.) Regel var. *citrina* Watson	*RHA+CA 14*	Unknown
C. miniata (Lindl.) Regel var. *miniata*	*Spies 8095*	Cultivated
C. nobilis Lindl.	*Spies 8091*	Cultivated
C. nobilis Lindl.	*RHA+CA 6b*	Eastern Cape
Crinum acaule Baker	*RHA+CA 38*	Kwazulu-Natal
C. acaule glaucous (*C. acaule* x dark green)	*RHA+CA 105*	Kwazulu-Natal
C. acaule light green	*RHA+CA 106*	Kwazulu-Natal
C. bulbispermum (Burm.f.) Milne-Redh. & Schweick.	*RHA+CA 95*	Mpumalanga
C. buphanoides Welw. ex Baker	*Spies 7631*	Unknown
C. buphanoides Welw. ex Baker	*RHA+CA 102*	Namibia
C. campanulatum Herb.	*Spies 7167*	Eastern Cape
C. carolo-schmidtii Dinter	*RHA+CA 97*	Unknown
C. euchrophyllum I. Verd.	*RHA+CA 96*	Angola
C. foetidum I. Verd.	*RHA+CA 98*	Unknown
C. graminicola I. Verd.	*Spies 7630*	Mpumalanga
C. lineare L.f.	*RHA+CA 99*	Eastern Cape
C. lugardiae N.E.Br.	*Spies 7632*	Unknown
C. macowanii Baker	*Spies 7168*	Eastern Cape
C. minimum Milne-Redh.	*RHA+CA 37*	Limpopo
C. moorei Hook.f.	*Spies 7921*	Unknown
C. near *macowanii*	*RHA+CA 100*	Angola
C. paludosum I. Verd.	*RHA+CA 41*	Limpopo
C. variabile (Jacq.) Herb.	*RHA+CA 44*	Northern Cape
Crossyne flava (W.F.Barker ex Snijman) D.Müll.-Doblies & U.Müll.-Doblies	*Spies 7256*	Western Cape

Cyrtanthus attenuatus R.A.Dyer	*RHA+CA 81*	Eastern Cape
C. bicolor R.A. Dyer	*Spies 7185*	Unknown
C. brachyscyphus Baker	*Spies 7186*	Kwazulu-Natal
	Spies 7187	Unknown
	Spies 7272	Unknown
	Spies 7204	Gauteng
	Spies 7406	Western Cape
	RHA+CA 90	Cultivated
C. breviflorus Harv.	*Spies 7188*	Gauteng
	Spies 7189	Mpumalanga
	Spies 7278	Unknown
	Spies 7366	Unknown
	Spies 7634	Cultivated
	RHA+CA 88	Free State
C. contractus N.E.Br.	*Spies 7190*	Mpumalanga
	Spies 7199	Mpumalanga
C. elatus (Jacq.) Traub	*Spies 7192*	Western Cape
	Spies 7193	Western Cape
	Spies 7194	Mpumalanga
	Spies 7195	Western Cape
	Spies 7196	Unknown
	Spies 7197	Western Cape
	Spies 7198	Western Cape
	Spies 7202	Western Cape
	Spies 7367	Unknown
	Spies 7636	Cultivated
	RHA+CA 93	Gauteng
C. epiphyticus J.M.Wood	*Spies 7200*	Eastern Cape
	Spies 7368	Unknown
C. eucallus R.A.Dyer	*Spies 7218*	Mpumalanga
	Spies 7262	Unknown
	RHA+CA 78	Mpumalanga
	RHA+CA 79	Mpumalanga
C. falcatus R.A.Dyer	*Spies 7208*	Unknown
	Spies 7263	Unknown
	Spies 7264	Unknown
	Spies 7637	Cultivated
	RHA+CA 82	Kwazulu-Natal
C. galpinii Baker	*Spies 7265*	Kwazulu-Natal

C. herrei (F.M.Leight) R.A.Dyer	*Spies 7194*	Gauteng
	Spies 7217	Gauteng
	Spies 7267	Unknown
	RHA+CA 86	Northern Cape
C. huttoni Baker	*Spies 7206*	Mpumalanga
C. labiatus R.A.Dyer	*Spies 7258*	Western Cape
	Spies 7212	Gauteng
C. loddigesianus (Herb.) R.A.Dyer	*Spies 7203*	Eastern Cape
C. mackenii Hook.f.	*Spies 7179*	Eastern Cape
	RHA+CA 87	Cultivated
C. mackenii Hook.f.	*Spies 7211*	Unknown
var. *cooperi* (Baker) R.A.Dyer	*Spies 7273*	Kwazulu-Natal
	Spies 7373	Unknown
C. mackenii Hook.f. var. *mackenii*	*Spies 7268*	Unknown
	Spies 7269	Kwazulu-Natal
	Spies 7270	Namibia
	Spies 7271	Unknown
	Spies 7272	Unknown
	Spies 7274	Unknown
	Spies 7369	Unknown
	Spies 7370	Unknown
	Spies 7371	Unknown
	Spies 7372	Unknown
	Spies 7374	Unknown
C. macowanii Baker	*Spies 7201*	Mpumalanga
C. montanus R.A.Dyer	*Spies 7209*	Gauteng
	Spies 7275	Unknown
	Spies 7375	Unknown
	Spies 7638	Cultivated
C. sp. nova	*Spies 7963*	Eastern Cape
C. obliquus (L.f.) Aiton	*Spies 7180*	Eastern Cape
	Spies 7210	Eastern Cape
	Spies 7276	Unknown
	Spies 7277	Unknown
	Spies 7278	Western Cape
C. obrienii Baker	*Spies 7193*	Gauteng
	Spies 7215	Unknown
	Spies 7279	Unknown
	Spies 7376	Unknown

C. ochroleucus (Herb.) Burch. ex Steud.	*Spies 7639*	Cultivated
C. sanguineus (Lindl.) Walp.	*Spies 7216*	Gauteng
	Spies 7280	Unknown
	Spies 7281	Kwazulu-Natal
	Spies 7282	Unknown
C. sanguineus (Lindl.) Walp. subsp. s*almonoides*	*RHA+CA 94*	Oslo, Norway
C. smithiae Watt ex Harv.	*Spies 7214*	Gauteng
C. spesiosus R.A.Dyer	*Spies 7213*	Gauteng
	RHA+CA 84	Northern Cape
	Spies 7640	Cultivated
C. spiralis Burch. ex Ker Gawl.	*Spies 7219*	Eastern Cape
C. staadensis Schönland	*Spies 7316*	Eastern Cape
C. stenanthus Baker var. *stenanthus*	*Spies 7283*	Unknown
C. suaveolens Schönland	*Spies 7181*	Eastern Cape
C. thorncroftii C.H.Wright	*RHA+CA 80*	Mpumalanga
C. wellandii Snijman	*RHA+CA 83*	Eastern Cape
Gethyllis namaquensis (Schönland) Oberm.	*AMV 642*	Namibia
	AMV 639	Namibia
	AMV 635	Namibia
Haemanthus albiflos Jacq.	*Spies 7517*	Eastern Cape
	Spies 7512	Eastern Cape
H. coccineus L.	*AMV 632*	Namibia
H. crispus Snijman	*Spies 7252*	Northern Cape
	Spies 7260	Northern Cape
H. hirsitus Baker subsp. *humulis*	*Spies 7626*	Kwazulu-Natal
H. humilis Jacq.	*Spies 7254*	Gauteng
H. montanus Baker	*Spies 7163*	Eastern Cape
H. pauculifolius Snijman & A.E.van Wyk	*Spies 7925*	Cultivated
	RHA 21	Mpumalanga
H. sanguineus Jacq.	*Spies 7253*	Gauteng
Hippeastrum sp.	*Spies 7446*	Commercial
	Spies 7447	Commercial
Narcissus sp.	*Spies 7607*	Commercial
	Spies 7608	Commercial
	Spies 7521	Commercial

Nerine laticoma (Ker Gawl.) T.Durand & Schinz	*Spies 8090*	Northern Cape
Scadoxus membranaceus (Baker) Friis & Nordal	*Spies 7246*	Western Cape
	Spies 7917	Cultivated
	RHA 25	Cultivated
S. multiflorus (Martyn) Raf.	*Spies 7919*	Cultivated
S. puniceus (L.) Friis & Nordal	*Spies 7301*	Gauteng
	RHA 26	Kwazulu-Natal
	RHA 27	Gauteng
	Spies 7918	Cultivated
Strumaria salteri W.F.Barker	*Spies 7245*	Gauteng

2.2 Methods

2.2.1 Molecular studies

Leaf material of the different specimens was stored in a saturated sodium chloride and hexadecyl trimethyl ammonium bromide (CTAB) solution (Rogstad 1992). A storing period of at least a month in CTAB before DNA extraction gave better results.

2.2.1.1 DNA extraction

The CTAB method (Rogstad 1992) was used to extract DNA from ± 1 g of leaf material. The leaves were blotted with tissue paper before the extractions were carried out in test tubes. A small amount of sand (BDH, product no. BB330945E), purified by acid, was added to the material that was ground to a paste. A few drops of warm CTAB extraction buffer [2% (m/v) CTAB, 100 mM Tris-HCl (pH 8.0), 25 mM EDTA (pH 8.0), 1.4 M NaCl to which 0.2% of (m/v) 2-merkapto-ethanol had been added just before use] was then added to the paste. The material was incubated at 65°C for one hour in 500 µl of warm CTAB extraction buffer. After one hour 500 µl of chloroform:iso-amylalcohol (24:1) was added, mixed thoroughly and the mixture centrifuged for five minutes at 5 000 g. The supernatant was transferred to a clean tube and to this 500 µl of cold (-20°C) absolute ethanol, containing 3 M sodium acetate (25:1), was added to precipitate the DNA. After one hour of incubation at –20°C, the mixture

was centrifuged at 7 000 g for ten minutes. The supernatant was discarded and the DNA pellet washed with 70% (v/v) ethanol, containing 10 mM ammonium acetate. After decanting the ethanol and evaporating any excess ethanol left, the DNA was dissolved in sterilised, distilled water (100 µl) and stored overnight at 4°C. The DNA solutions were then divided into smaller aliquots of 10 µl and stored at -20°C until further use.

2.2.1.2 Taguchi optimisation

The PCR based sequencing reactions were optimised according to a modified Taguchi method (Cobb & Clarkson 1994). With this optimisation, the optimal conditions for three reaction variables can be achieved, by using only nine reactions. These variables are the primer, magnesium chloride and DNA concentrations. In this optimisation, three concentrations of each reaction component varied in an orthogonal array. The product yield for each reaction is used to estimate the effects that the individual components have on the amplification products. This yield can be calculated by using quadratic loss functions, which are referred to as signal to noise (SNL) ratios by Taguchi (Taguchi & Wu 1980, Taguchi 1986):

$$SNL = -10\log [1/n \Sigma 1/y^2],$$

where SNL is the signal to noise ratio, y is the yield for each amplification reaction and n is the number of levels. For each of the three reaction components the largest SNL value represents the optimal condition.

2.2.1.3 Gel electrophoresis

DNA amplification products were separated by agarose gel electrophoresis. One percent (m/v) agarose gels were prepared in 1X TAE buffer (40 mM Tris-acetate, 1 mM EDTA, pH 8.0) and intercalated with ethidium bromide (10 mg/ml). Loaded reactions (genomic or PCR) were run at 80 V for approximately 40 minutes. The gels were visualised by illumination with UV light.

2.2.1.4 Image documentation

Gel images were scanned into the Molecular Analyst Software Plus program (Bio-rad 1995) for future reference.

2.2.1.5 Sequencing

2.2.1.5.1 PCR fragment amplification

Genomic DNA was used to amplify the *trnL-F*, *matK* and ITS regions. The primers used for *trnL-F* were c and f (Taberlet *et al.* 1991, Gielly & Taberlet 1996):

c 5'- CGA AAT CGG TAG ACG CTA CG-3'

f 5'- ATT TGA ACT GGT GAC ACG AG-3'

MG1 and MG15 were used for *matK* (Hilu *et al*. 1999):

MG1 5'-CTA CTG CAG AAC TAG TCG GAT GGA GTA GAT-3'

MG15 5'-ATC TGG GTT GCT AAC TCA ATG-3'

Primers used for ITS were NNc18s10 (Wen & Zimmer 1996) and C26A (Suh *et al.* 1993):

NNc18s10 5'- AGG AGA AGT CGT AAC AAG -3'

C26A 5'- GTT TCT TTT CCT CCG CT -3'

A total volume of 20 µl was used for each PCR reaction. The reactions were optimised according to Taguchi (2.2.1.2). The reactions were centrifuged and placed in the Perkin Elmer GeneAmp PCR system 9600. An initial denaturation step at 94°C was followed by 'Touchdown' PCR (Don *et al.* 1991), where the annealing temperature decreased with 1°C every second cycle from 58°C to a 'touchdown' of 49°C, where 25 cycles were carried out. 'Step-up' PCR (Hillis *et al.*1996) was used as an alternative method for products which did not amplify with 'touchdown' PCR. The 'step-up' included 10 cycles of 94°C (10 s) - 42°C (10 s) - 72°C (20 s), followed by 25 cycles of 94°C (10 s) - 48°C (10 s) - 72°C (20 s). The amplification products were separated by agarose gel electrophoresis (2.2.1.3).

2.2.1.5.2 Sequencing protocol

Sequencing was based on the dideoxynucleotide method (Sanger *et al.* 1977). Sequencing primers for the *trnL-F* region:

PS1 5'-CTA CGG ACT TAA TTG GAT TGA GC-3'

PS2 5'-GGG GAT AGA GGG ACT TGA AC-3'

PS3 5'-GGT TCA AGT CCC TCT ATC CC-3'

PS4 5'-AGG ATT TTC AGT CCT CTG CTC-3'

Sequencing primers for the *matK* region:

K-BF 5'-TCC CAT CCA TAT GGA AAT CTT GGT-3'

K-BR 5'-GAT ATT CGT GAA GAA AGA ATC GCA-3'

K-CF 5'-GAT CCT TTC ATG CAT TAT GTT CGA-3'

K-CR 5'-TCC TGT ACG GTT GAG ACC AAA AGT-3'

Sequencing primers for the ITS region:

NNc18s10 5' - AGG AGA AGT CGT AAC AAG -3'

C26A 5' - GTT TCT TTT CCT CCG CT -3'

ITS2 5' - GCT GCG TTC TTC ATC GAT GC -3'

ITS3 5' - GCA TCG ATG AAG AAC GCA GC-3'

ITS4 5' - TCC TCC GCT TAT TGA TAT CG -3'

For each template to be sequenced the following were combined:

Sequence reagent pre-mix	2 µl
Primer (0.8 pmol)	4 µl
DNA template (1:10)	6 µl
5X Buffer	3 µl
H_2O	5 µl
Total volume	20 µl

These reactions were placed in the Perkin Elmer thermal cycler with an initial denaturation step at 94°C for one minute, followed by 25 amplification cycles, each consisting of 94°C for 10 seconds, 50°C for five seconds and 60°C for four minutes.

After amplification 2 µl of 3 M sodium acetate ($CH_3COONa.3H_2O$, Merck) or 3 M ammonium acetate ($NH_4C_2H_3O_2$, ACE) and 50 µl of 100% (v/v) ethanol was added to each reaction. These reactions were briefly vortexed and left at room temperature for 15 minutes. The samples were centrifuged for 20 minutes at maximum speed. The supernatants were removed with vacuum suction and 250 µl of 70% (v/v) ethanol added to wash the pellet. The mixtures were centrifuged for 10 minutes at maximum speed and the supernatants were removed with vacuum suction. The pellets were air-dried and stored in this dry state at 4°C until they were loaded on the gel. Samples were loaded on a 6% polyacrylamide gel and separated on an ABI Prism™ 377 fluorescent sequencer.

2.2.1.5.3 Sequence proofreading

Auto Assembler 1.4.0 for the Apple Macintosh was used to compare the sequences for the *trnL-F*, *matK* and ITS regions. The assembly setup of 5 to 20 bases minimum overlap and 30 to 50% error was used. Errors were corrected manually. The boundaries of the *trnL-F*, *matK* and ITS regions were determined by comparison to known sequences.

2.2.1.5.4 Sequence alignment

DNA sequences were aligned with the ClustalX (1.83) software (Thompson *et al.* 1997). Due to the large size of the data sets (205 taxa for *trnL-F*, 118 taxa for *matK* and 183 taxa for ITS) the sequences were divided into smaller groups or profiles. The profile alignments mode was used. Alignments were visually inspected and manually optimized. Edited alignments were saved in ClustalX as NEXUS format files which were suitable for use in PAUP* analyses.

2.2.1.5.5 Phylogenetic analyses

Aligned matrices were analyzed using the parsimony algorithm of PAUP* 4.0b5 (Swofford 2002) for Macintosh. Heuristic searches were made with the following settings: MAXTREES set at 10 000 (due to computer memory limitations), tree construction with stepwise-addition, 200 replications with random taxon addition, tree bisection-reconnection (TBR) branch swapping and all best trees found during branch swapping were saved. All analyses were run with ACCTRAN (Accelerated Transformation) optimization. All

characters were unordered and had equal weight (Fitch 1971). The consistency index (Kluge & Farris 1969) and retention index (Farris 1989), calculated in PAUP*, were used to determine the amount of phylogenetic information in the parsimony analyses.

Gaps were treated as missing. Gapcoder software (Young & Healy 2003) was used to code the indels and add it as characters at the end of the matrix. Nucleotides that were missing because of sequencing failure (N) were coded as uncertain (?) in the gap matrix. Simmons *et al.* (2001) assessed the relative levels of homoplasy of gap and base characters from a selection of published sequence-based matrices. They concluded the following: gap characters can represent a significant portion of the potential phylogenetic information; gap characters have considerably less homoplasy than base characters, but the difference is small and sometimes depends on the type of matrix; including gap characters in matrices frequently changes the topology or resolution of the strict consensus tree; and the inclusion of gap characters in matrices often increases branch support values.

Where more then one parsimonious tree was found, a strict consensus cladogram was computed. When resolution was not good, an Adams consensus was also computed (Adams 1972 & 1986). Unresolved taxa were then removed which resulted in better groupings in these trees. Bootstrap (Felsenstein 1985) and jackknife (Lanyon 1985) analyses were done to evaluate the robustness of the clades. Bootstrap searches were performed with the following settings: 200 replicates using simple taxon addition, TBR branch swapping and maximum trees set at 500. Similar settings were used for jackknife searches, but emulate Jac was also selected. The bootstrap cut-off was 50% (Meerow *et al.* 2003). A bootstrap or jackknife value greater than 75% was considered good support. Values of 65-75% were designated moderate support and less than 65% as weak. An outgroup was added to the sequence data to root the phylogenetic tree (Hall 2001). The outgroup was the designated outsider to the rest of the sequence data. According to Hall (2001) a problem may occur with more distantly related sequences: it is a legitimate outgroup but the resulting alignment may be worse. The opposite is also true: the better the sequence alignment, the less likely it is a legitimate outgroup.

Congruency between the individual data sets was assessed by visual examination of the strict consensus cladograms. For the combined analysis of *trnL-F* and *matK*, all taxa with either *trnL-F* or *matK* data missing were removed. For the combined analysis of *trnL-F*, *matK* and ITS, only taxa with data of all three DNA regions were selected. The outgroups were selected by using the same criteria. The combined sequences were aligned by using the

multiple alignments mode in ClustalX. Alignments were visually inspected and manually optimized. The same settings in 2.2.1.5.5 for the PAUP* analyses were used.

2.2.2 Cytogenetics

2.2.2.1 Mitotic analysis

Root tips were collected between 08h00 and 10h00, placed in glass bottles filled with tap water (4°C) and refrigerated for 24 hours. Subsequent to the cold pre-treatment, the water was replaced with Pienaar's fixative (Pienaar 1955). The root tips were macerated in 1N HCl for 7 minutes at 60°C and stained with 2% propionic-carmine whereby a trace of ferric-acetate was added. Slides were made permanent by freezing them with liquid carbon dioxide (Bowen 1956), subsequent dehydration in ethanol and mounting in Euparal.

All chromosomes in a minimum of twenty well-spread metaphase cells were measured to determine the karyotypes. The following parameters were used for each metaphase plate: (1) chromosome length of each individual chromosome (CL), (2) length of the short arm (p), (3) total chromosome length (TCL), (4) relative chromosome length (CL_x/TCL), and (5) relative short arm length (p_x/TCL). The arithmetic averages of the relative chromosome lengths and relative short arm lengths were used to illustrate the ideograms and to indicate the standard deviation from the mean for each chromosome pair.

2.2.2.2 Microphotography

Permanent slides were analysed under a Nikon Microphot-FXA photomicroscope. Chromosome numbers were determined for each specimen. A digital camera, Nikon Coolpix 990, was used to photograph cells with well-spread chromosomes. Images were directly transferred to the computer.

CHAPTER THREE

RESULTS AND DISCUSSION

A diverse range of molecular approaches is now available to the plant systematist for use in phylogenetic studies, including restriction site analysis, comparative sequencing, analysis of DNA rearrangement and gene and intron loss, and various PCR-based techniques (Soltis *et al.* 1998). Plant molecular systematics has relied mainly on the chloroplast genome, but this is currently changing as researchers turn to nuclear gene sequences. Often nuclear topologies are compared to existing chloroplast-based topologies.

The general structural features, advantages and disadvantages of using the chloroplast genome (cpDNA) have been well reviewed (Soltis *et al.* 1998). The *matK* gene and the *trnL-F* region have been briefly discussed previously (1.5.1 & 1.5.2). The rDNA gene family comprises conserved regions, such as the 18S and 26S genes, as well as more rapidly evolving segments, such as ITS. ITS (1.5.3) represents the nuclear DNA region for this study.

Combining data sets are useful in the analysis of large data sets. The advantages of combining these data sets include: (a) shortened run times, (b) better resolution, (c) increased internal support for clades, and (d) the presence of uniquely supported clades when compared to the individual data sets (Soltis *et al.* 1998). For this study, two combinations of data sets were done. The first combined matrix includes *trnL-F* and *matK*, while the second combination includes *trnL-F*, *matK* and ITS. According to Meerow & Snijman (2001) combining matrices often increases the resolution of the ingroup and the bootstrap support of the internal nodes of the phylogenetic trees.

3.1 *trnL-F*

3.1.1 Results

Heuristic searches were conducted for the *trnL-F* DNA region using 10 000 random addition replicates. The equally parsimonious trees with tree length of 813 had a CI of 0.584, RI of 0.75 and RC of 0.438. A strict consensus (Figure 3.1.1-3.1.3) and Adams consensus cladogram was constructed from these trees. All trees were rooted with an outgroup comprising of *Petronymphe decora* (family Themidaceae). The attempts of the bootstrap

were slow due to the poor resolution. The long running period caused the Macintosh to run out of memory and therefore the bootstrap could not be completed. The phylogenetic tree included two monophyletic clades. The first group comprised of the genera *Crinum*, *Hessea*, *Nerine* and *Strumaria* (all Amaryllideae). The second group consisted of the tribes Hippeastreae, Hymenocallideae, Clinantheae, Stenomesseae, Lycorideae, Pancratieae, Narcisseae, Cyrtantheae and Galantheae.

3.1.2 Discussion

The different tribes of Amaryllidaceae can be divided into the different geographical clades according to Ito *et al.* (1999), namely the African clade I, the African clade II, the *Cyrtanthus* clade, the American clade, the Malaysia-Australian clade, the Asian clade and the Mediterranean clade. The strict consensus cladogram supports the groupings of the different genera into their respective tribes as described by the classification of Meerow & Snijman (1998, 2001).

Possible relationships are indicated between different species from the same genus: *Crinum*: *C. euchrophyllum* and *C. nearmacowanii*, *C. campanulatum* and *C. flaccidum*, *C. baumii* and *C. lineare; Nerine*: *N. bowdenii* and *N. laticoma; Strumaria*: *S. salteri* and *S. truncata*; *Cyrtanthus*: *C. huttonii*, *C. obrienii* and *C. eucallus*; *Narcissus*: *N.* sp. *7608* and *N.* sp. *7521*, *N. calcicola* and *N. scaberulus*, *N. tortifolius* and *N. bulbocodium*, *N. lusitanicus*, *N. pallidulus*, *N. cyclamineus*, *N. poeticus*, *N. pseudonarcissus* and *N. triandrus*. Possible relationships between species of different genera in the same tribe are indicated: *Hessea zeyheri*, *Nerine bowdenii*, *N. laticoma*, *Strumaria salteri* and *S. truncate* (tribe Amaryllideae); *Hannonia hesperidum* and *Leucojum autumnal*; *Galanthus plicatus* and *Lapiedra martinezii* (all four of tribe Galantheae); *Calostemma lutea* and *Proiphys cunninghamii* (tribe Calostemmateae). There is even an indication of a possible relationship between species of different tribes: *Hessea zeyheri*, *Nerine bowdenii*, *N. laticoma* (tribe Amaryllideae) and *Haemanthus crispus*? (tribe Haemantheae); *Leptochiton quitoensis* (tribe Hymenocallideae) and *Pamianthe peruviana* (tribe Clinantheae); *Pancratium canariense* (tribe Pancratieae) and *Narcissus* species *7608* & *7521* (tribe Narcisseae).

Figure 3.1.2

Figure 3.1.1 The strict consensus cladogram of the *trnL-F* DNA region for the tribes Amaryllideae and Gethyllideae. Basic chromosome number (*x*) for each tribe is indicated. (* indicates sequences obtained from Genbank.)

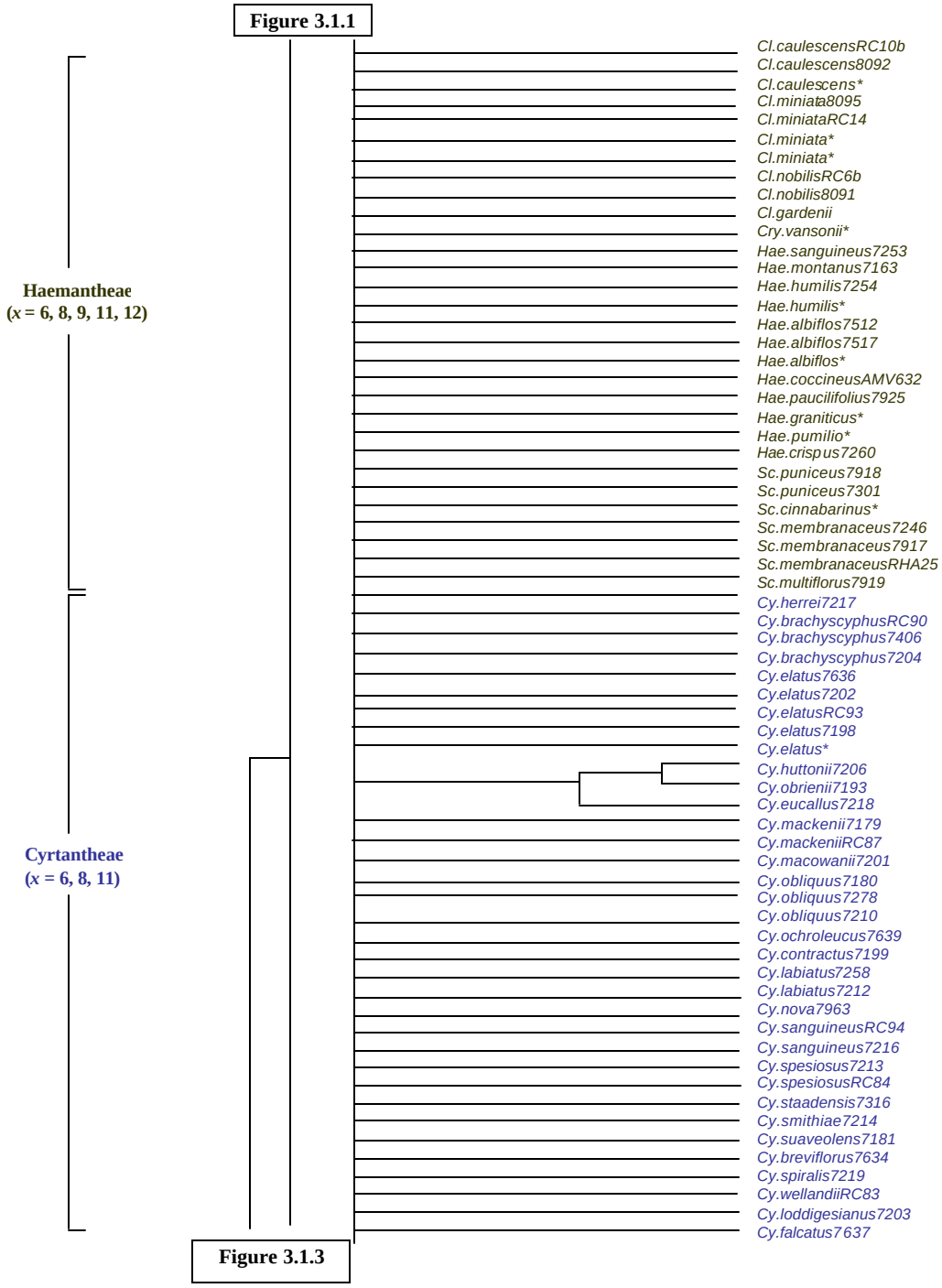


Figure 3.1.2 The strict consensus cladogram of the *trnL-F* DNA region for the tribes Haemantheae and Cyrtantheae. Basic chromosome number (*x*) for each tribe is indicated. (* indicates sequences obtained from Genbank.)

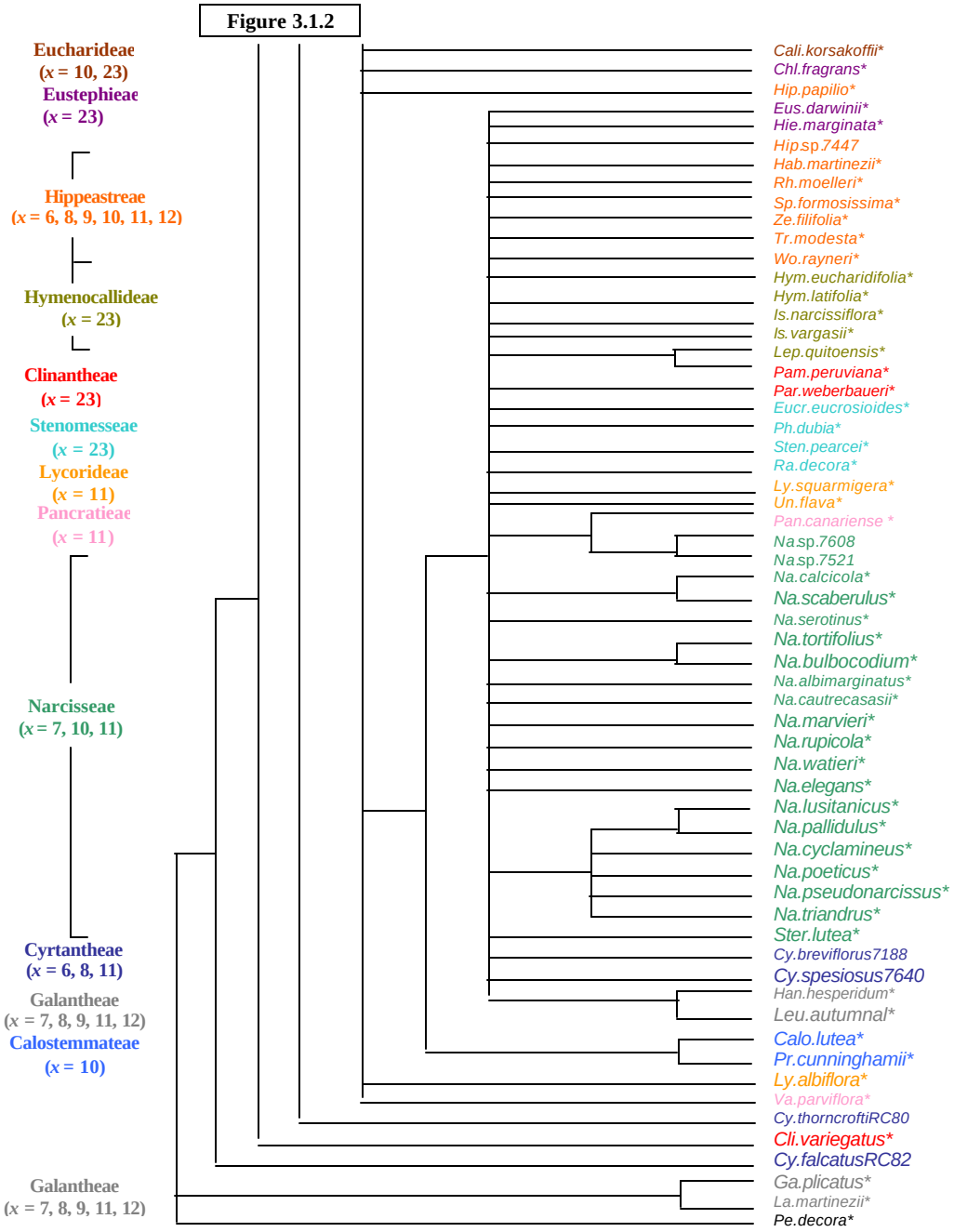


Figure 3.1.3 The strict consensus cladogram of the *trnL-F* DNA region for the rest of the tribes in the Amaryllidaceae. Basic chromosome number (*x*) for each tribe is indicated. (* indicates sequences obtained from Genbank.)

The relevancy of the basic chromosome numbers between the different tribes was excluded from these results because of the poor resolution.

According to Kluge & Farris (1969), the consistency index (CI) is a scaled measure of consistency or fit of an entire set of characters to a phylogenetic tree. The CI value of 0.584 in *trnL-F* is relatively low. The CI and retention index (RI) assesses the relative amount of homoplasy (Farris 1989, Simmons *et al.* 2001) in gap and base characters. The RI value of 0.75 in *trnL-F* indicates some homoplasy.

Due to the poor resolution of the *trnL-F* phylogenetic tree, the results could not be compared to those of Meerow *et al.* (1999) and Graham & Barrett (2004). The lack of resolution is due to low nucleotide variation in the sequences (Lihová *et al.* 2004). Data presented by Shaw *et al.* (2005) indicate that there is phylogenetically significant and predictable rate heterogeneity among noncoding cpDNA regions, such as *trnL-F*, but that these regions consistently yield low levels of variation. Better phylogenetic resolution is obtained by combining sequence data from these regions with other sequence data. Phylogenetic analyses of individual plastid regions done by Barfuss *et al.* (2005) produced congruent, but weakly supported or unresolved clades. Their results of the combined data set however indicated well-supported clades with high bootstrap values.

3.2 *matK*

3.2.1 Results

The phylogenetic analysis for the *matK* gene using the heuristic search option yielded 10 000 equally parsimonious trees with tree length of 1691, and had a CI of 0.656, RI of 0.737 and RC of 0.484. A strict consensus cladogram (Figure 3.2.1 & 3.2.2) was constructed from these trees and rooted with the outgroup *Nolina recurvata* (family Ruscaceae). The bootstrap and jackknife values are shown above the branches.

All the tribes, except Eucharideae and Stenomesseae, are resolved in the strict consensus cladogram. The sequence data of both genera were obtained from Genbank (Appendix A).

The phylogenetic tree includes the following 14 well-supported clades: (1) a clade consisting of all genera for Galantheae (BS 56%, JK 87%) except *Lapiedra*; (2) a clade consisting of Galantheae, Narcisseae and Pancratieae (BS 89%, JK 99%); (3) a clade

consisting of Galantheae, Narcisseae, Pancratieae, Eucharideae, Stenomesseae, Clinantheae, Hymenocallideae, Eustephieae, Hippeastreae and Lycorideae (BS 70%, JK 56%); (4) all the tribes (BS 91%, JK 94%) except *Haemanthus*, *Scadoxus* (both Haemantheae) and Amaryllideae; (5) all the tribes (JK 100%) except Amaryllideae; (6) all the tribes (BS 67%, JK 73%) including outgroup; (7) a clade consisting of Narcisseae and Pancratieae (JK 80%); (8) a clade consisting of Eucharideae, Stenomesseae, Clinantheae and Hymenocallideae (BS 90%, JK 99%); (9) a clade consisting of all genera of Hippeastreae (BS 100%, JK 100%); (10) a clade consisting of all genera of Lycorideae (BS 85%, JK 94%); (11) a clade consisting of all *Cyrtanthus* (JK 67%); (12) a clade consisting of all *Clivia* (BS 93%, JK 100%); (13) a clade consisting of *Haemanthus, Scadoxus* and Gethyllideae (JK 79%); and (14) a clade of all the Amaryllideae (BS 70%, JK 73%).

3.2.2 Discussion

The CI value of 0.656 in *matK* is relatively low. The RI value of 0.737 indicates some homoplasy. Although both these values are low, the reliability of the different groupings in the strict consensus tree is supported by the high bootstrap and jackknife values.

Closer relationships are indicated by the strict consensus tree for some foreign tribes with their inclusion into the same monophyletic group, such as Narcisseae and Pancratieae or Eucharideae, Stenomesseae, Clinantheae and Hymenocallideae. For the southern African tribes, there is a significant indication of a close relationship between *Cyrtanthus* (Cyrtantheae) and *Clivia* (Haemantheae), and between *Gethyllis* (Gethyllideae), *Haemanthus* and *Scadoxus* (both Haemantheae).

Possible relationships are indicated between different species from the same genus: *Strumaria watermeyeri* and *S. salteri* (BS 81%, JK 99%); *Brunsvigia striata* and *B. gregaria* (BS 81%, JK 92%); *Scadoxus multiflorus* and *S. membranaceus* (BS 79%, JK 95%); *Haemanthus crispus* and *H. montanus* (BS 65%, JK 88%); *Cyrtanthus herrei* and *C. staadensis* (BS 84%, JK 99%), *C. loddigesianus*, *C. smithiae* and *C. labiatus* (BS 61%, JK 93%), *C. falcatus* and *C. obliquus* (JK 55%), *C. elatus* and *C. breviflorus* (BS 89%, JK 94%); *Clivia nobilis* and *C. cyrtanthiflora* (BS 83%, JK 96%); *Vagaria parviflorum* and *V. parviflora* (BS 95%, JK 98%), *Narcissus bicolor* and *N.* sp. (BS and JK 100%), *N. tazetta* and *N.* sp. (BS 96%, JK 99%); *Acis tingitana* and *A. trichophylla* (BS 78%, JK 95%), *A. fabrei*

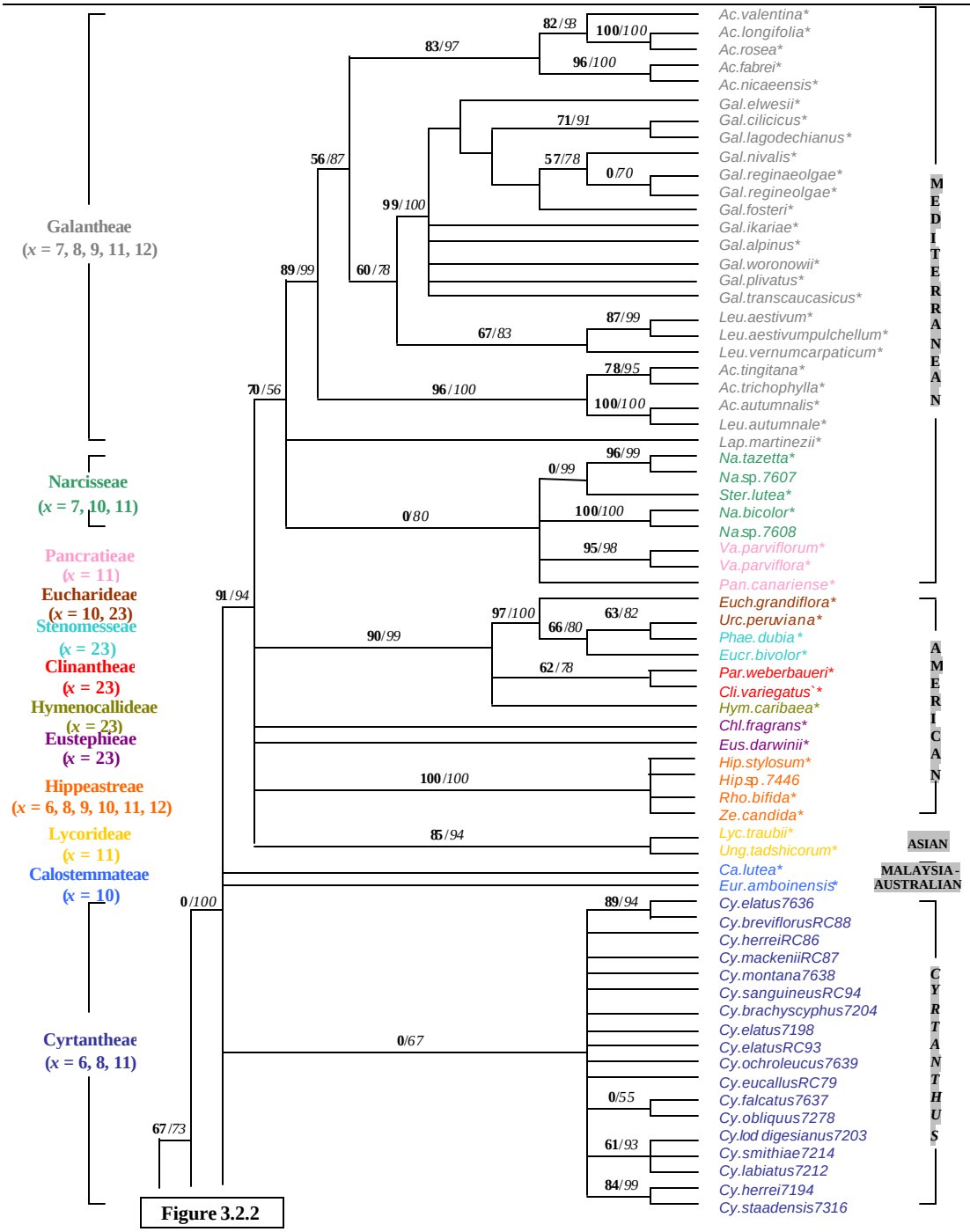


Figure 3.2.1 The strict consensus cladogram of the *matK* gene for all the tribes except Haemantheae, Gethyllideae and Amaryllideae. Bootstrap (bold) and jackknife (italic) values are indicated above the branches. Basic chromosome number (*x*) for each tribe is indicated. (* indicates sequences obtained from Genbank.)

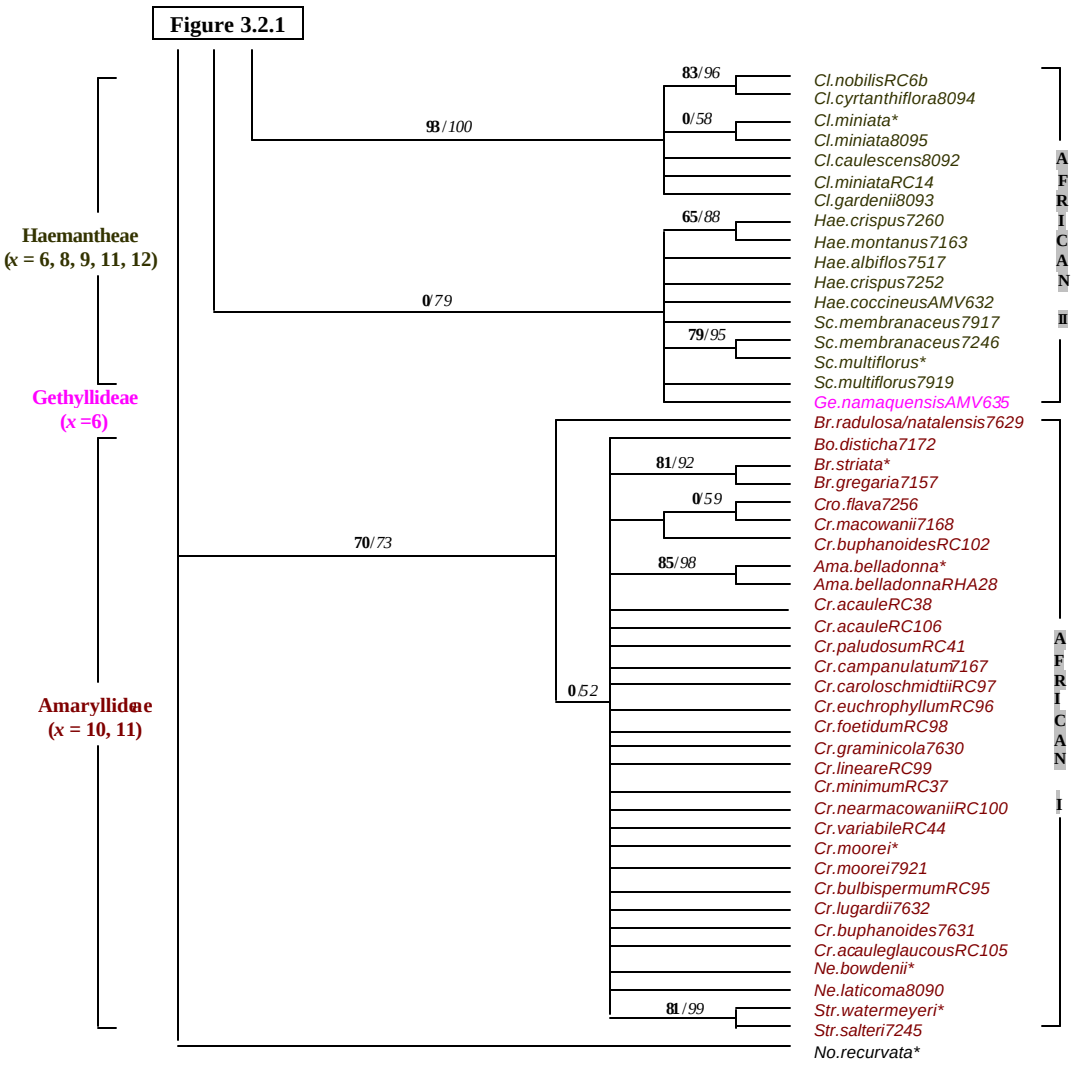


Figure 3.2.2 The strict consensus cladogram of the *matK* gene for the tribes Haemantheae, Gethyllideae and Amaryllideae. Bootstrap (bold) and jackknife (italic) values are indicated above the branches. Basic chromosome number (*x*) for each tribe is indicated. (* indicates sequences obtained from Genbank.)

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and *A. nicaeensis* (BS 96%, JK 100%), *A. longifolia* and *A. rosea* (BS and JK 100%); *Leucojum aestivum* and *L. aestivum* subsp. *pulchellum* (BS 87%, JK 99%); and *Galanthus nivalis*, *G. reginaeolgae* and *G. regianeolgae* (BS 57%, JK 78%); *G. cilicicus* and *G. lagodechianus* (BS 71%, JK 91%). Possible relationships between species of different genera in the same tribe are indicated: *Crossyne flava* and *Crinum macowanii* (JK 59%) in Amaryllideae, *Lycoris traubii* and *Ungernia tadshicorum* (BS 85%, JK 94%) in Lycorideae,

Paramongaia weberbaueri and *Clinanthus variegatus* (BS 62%, JK 78%) in Clinantheae, and *Acis autumnalis* and *Leucojum autumnale* (BS and JK 100%) in Galantheae. There is even an indication of possible relationships between species of different tribes: *Phaedranassa dubia* in Stenomesseae and *Urceolina peruviana* in Eucharideae (BS 63%, JK 82%). The tribe Hippeastreae consists of sister species comprising the *Hippeastrum*, *Rhodophiala* and *Zephyrantes* genera.

The *matK* data for the tribe Galantheae supports the results of Lledó *et al.* (2004), with the formation of the clades by *Acis* (Salisb.) Baker, *Galanthus* and *Leucojum*. These clades are well supported (BS 83%, JK 97% and BS 96%, JK 100% for *Acis*, BS 99%, JK 100% for *Galanthus*, and BS 67%, JK 83% for *Leucojum*, except *L. autumnale*).

Ito *et al.* (1999) divides Amaryllidaceae into geographical clades according to their center of origin. Amaryllidaceae are mainly found in the Southern Hemisphere, especially in South Africa and South America (Meerow & Snijman 1998), and both areas are considered centers of diversification of this family. Results from the strict consensus tree in this study support the groupings of the different geographical clades according to Ito *et al.* (1999). The African clade I consists of the tribe Amaryllideae, which is primarily South African and includes *Amaryllis*, *Boophone*, *Brunsvigia*, *Crinum*, *Crossyne*, *Nerine* and *Strumaria*. Cyrtantheae, just South African, is comprised in the *Cyrtanthus* clade. The African clade II consists of the tribe Haemantheae, also primarily South African, and includes *Clivia*, *Haemanthus* and *Scadoxus*. The Malaysia-Australian clade comprises the tribe Calostemmateae, and includes *Calostemma* R. Br. and *Eurycles*. The tribe Lycorideae with *Lycoris* and *Ungernia* forms the Asian clade. The Mediterranean clade consists of the tribes Galantheae (*Acis*, *Galanthus* and *Leucojum*), Narcisseae (*Narcissus* and *Sternbergia*) and Pancratieae (*Pancratium* and *Vagaria*). The American clade is the largest and consists of the tribes Eucharideae (*Eucharis* and *Urceolina*), Stenomesseae (*Eucrosia*, *Phaedranassa* and *Stenomesson*), Clinantheae (*Paramongaia* and *Clinanthus*), Hymenocallideae (*Hymenocallis*), Eustephieae (*Chlidanthus* and *Eustephia*) and Hippeastreae (*Hippeastrum*, *Rhodophiala* and *Zephyranthes*). The tribe Gethyllideae was not included in the assessment done by Ito *et al.* (1999). In this study Gethyllideae, just South African, is included with Haemantheae in the African clade II.

The results of the *matK* data also support that the indigenous genera, namely *Amaryllis*, *Boophone*, *Brunsvigia*, *Clivia*, *Crinum*, *Crossyne*, *Cyrtanthus*, *Gethyllis*, *Haemanthus*, *Scadoxus* and *Strumaria*, used in this study originated from the Africa continent.

Also, that both the genera *Hippeastrum* and *Narcissus* are foreign and originated from America and the Mediterranean, respectively. The groupings of the different genera into their respective tribes are well-supported by the bootstrap and jackknife values. These groupings support the classification of Meerow & Snijman (1998, 2001), and resolve the relationships between the genera used in this study and genera taken from Genbank.

According to Samuel *et al.* (2005) the utility of *matK* for resolving generic or species level relationships is similar or greater than that of nuclear rDNA ITS. In their analysis *matK* resolved clades well at the tribal and generic levels, and provided high bootstrap values for the different clades. Also, data from *matK* sequences analyzed by Wojciechowski *et al.* (2004) indicated greater resolution and clade support than *rbcL* and *trnL*.

The Mediterranean clade comprises of three different tribes: Galantheae (x = 7, 8, 9, 11, 12), Narcisseae (x = 7, 10, 11) and Pancratieae (x = 11) that includes a wide range of different basic chromosome numbers (Meerow 1995). In this study, Narcisseae is a sister group to Pancratieae and both have the same basic chromosome number of 11. Both these tribes is a sister group to Galantheae, which has the same basic chromosome number of 11 as Narcisseae and Pancratieae. A basic chromosome number of 7 also occurs in Galantheae and Narcisseae. The American clade comprises of six different tribes: Eucharideae (x = 10, 23), Stenomesseae (x = 23), Clinantheae (x = 23), Hymenocallideae (x = 23), Eustephieae (x = 23) and Hippeastreae (x = 6, 8, 9, 10, 11, 12). The strict consensus cladogram indicates that Eucharideae, Stenomesseae, Clinantheae and Hymenocallideae are sister groups and all have the same basic chromosome number of 23. The monophyletic group of Hippeastreae, which does not have this basic chromosome number, is separated from the other tribes. The *Cyrtanthus* clade, just South African, is a monophyletic group in this study with a basic chromosome number of 6, 8 and 11. Both the African clades, primarily South African, comprises of the following tribes: Haemantheae (x = 6, 8, 9, 11, 12), Gethyllideae (x = 6) and Amaryllideae (x = 10, 11). Gethyllideae is a sister group to Haemantheae and have the same basic chromosome number of 6. In this study, the genera *Cyrtanthus* (tribe Cyrtantheae) and *Clivia* (tribe Haemantheae) are each a monophyletic group but are also sister groups to each other. Both tribes have a basic chromosome number of 6, 8 and 11. As a matter of interest, the *Cyrtanthus* and both the African clades, which are primarily South African in this study, have the same basic chromosome number of 11. This basic chromosome number also occurs in the Mediterranean, American and Asian clades.

3.3 ITS

3.3.1 Results

The phylogenetic analysis for the ITS DNA region using the heuristic search option yielded 10 000 equally parsimonious trees with tree length of 1773, and had a CI of 0.389, RI of 0.848 and RC of 0.330. A strict consensus cladogram (Figure 3.3.1-3.3.3) was constructed from these trees with *Agapanthus caulescens* Spreng. (family Agapanthaceae) as outgroup. This species was resolved as a sister to Amaryllidaceae with cpDNA sequence data (Meerow *et al.* 1999). The bootstrap and jackknife values are shown above the branches. All the tribes, except Eucharideae, Stenomesseae, Clinantheae, Galantheae and Pancratieae, are resolved in the strict consensus cladogram. The sequence data of these genera were obtained from Genbank (Appendix A).

The major clades which include the different tribes are well-supported by bootstrap and/or jackknife: Amaryllideae (BS 99%, JK 100%), Gethyllideae (BS <50%, JK 78%), Gethyllideae and Haemantheae (BS <50%, JK 99%), Cyrtantheae (BS 94%, JK 100%), Eucharideae and Stenomesseae (BS 83%, JK 98%), Hymenocallideae (BS 97%, JK 100%), Hymenocallideae, Clinantheae and Stenomesseae (BS 80%, JK 96%), Eustephieae (BS <50%, JK 66%), and Narcisseae (BS and JK 100%). High bootstrap and/or jackknife support are indicated for monophyletic groupings of some genera: *Amaryllis* (BS <50%, JK 99%), *Ammocharis* (BS 82%, JK 97%), *Crinum* (BS <50%, JK 95%), *Brunsvigia* (BS <50%, JK 100%), *Strumaria* (BS <50%, JK 100%), *Crossyne* (BS and JK 100%), *Boophone* (BS and JK 100%), *Gethyllis* (BS <50%, JK 78%), *Haemanthus* (BS and JK 100%), *Scadoxus* (BS 93%, JK 98%), *Clivia* (BS 90%, JK 100%), *Cyrtanthus* (BS 94%, JK 100%), *Hippeastrum* (BS 82%, JK 86%), and *Narcissus* (BS and JK 100%).

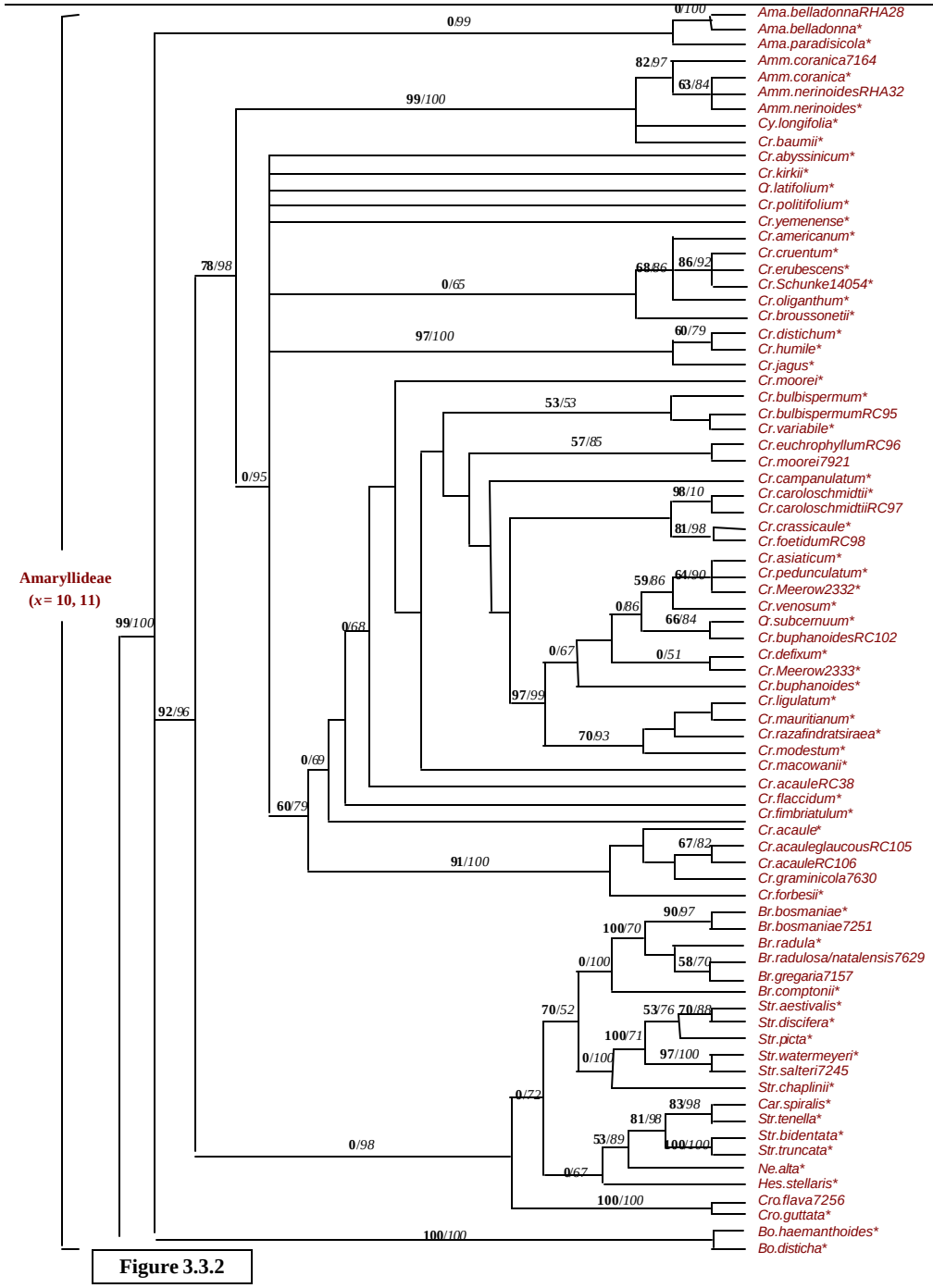


Figure 3.3.2

Figure 3.3.1 The strict consensus cladogram of the ITS DNA region for the tribe Amaryllideae. Bootstrap (bold) and jackknife (italic) values are indicated above the branches. Basic chromosome number (*x*) for each tribe is indicated. (* indicates sequences obtained from Genbank.)

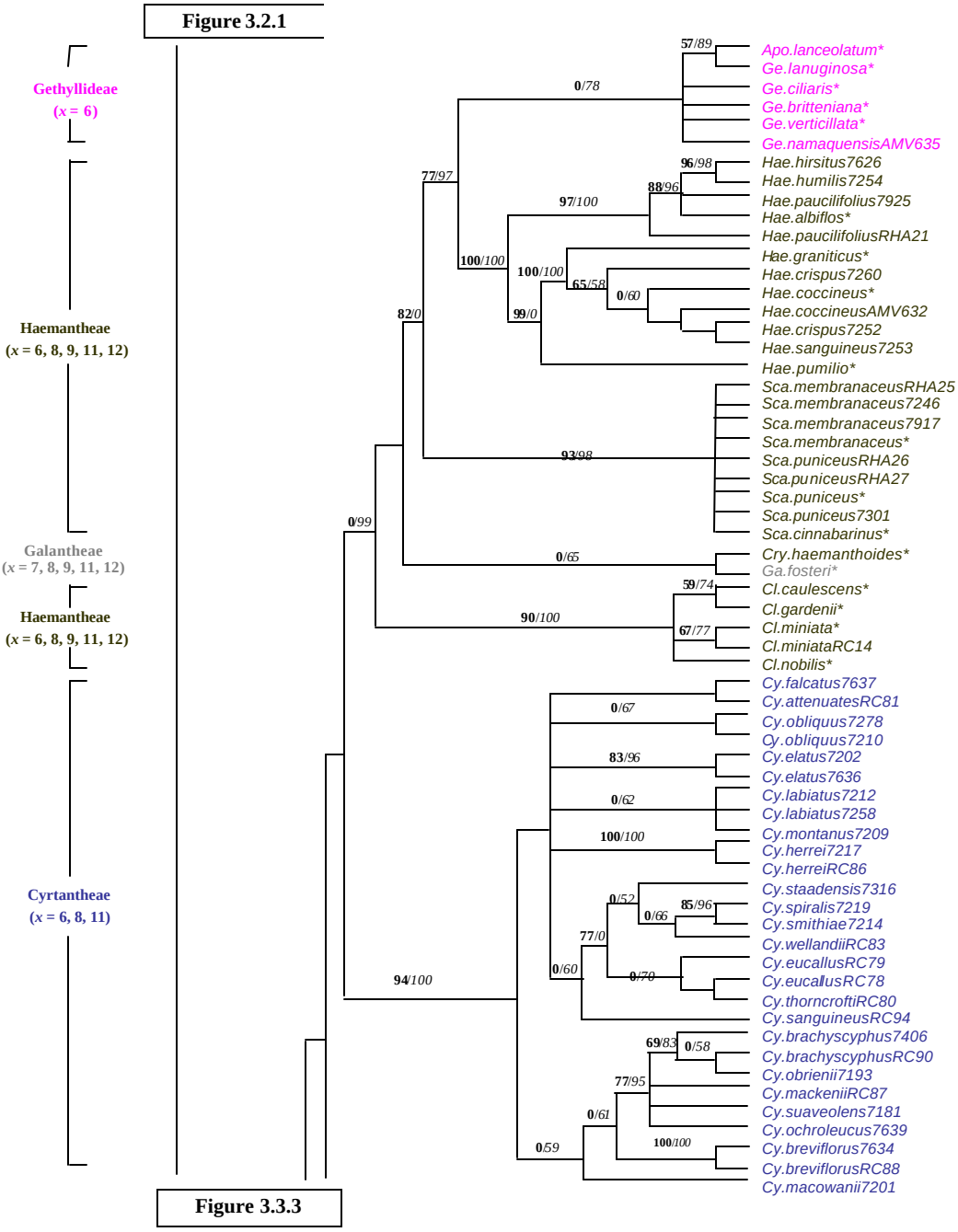


Figure 3.3.2 The strict consensus cladogram of the ITS DNA region for the tribes Gethyllideae, Haemantheae, Galantheae and Cyrtantheae. Bootstrap (bold) and jackknife (italic) values are indicated above the branches. Basic chromosome number (*x*) for each tribe is indicated. (* indicates sequences obtained from Genbank.)

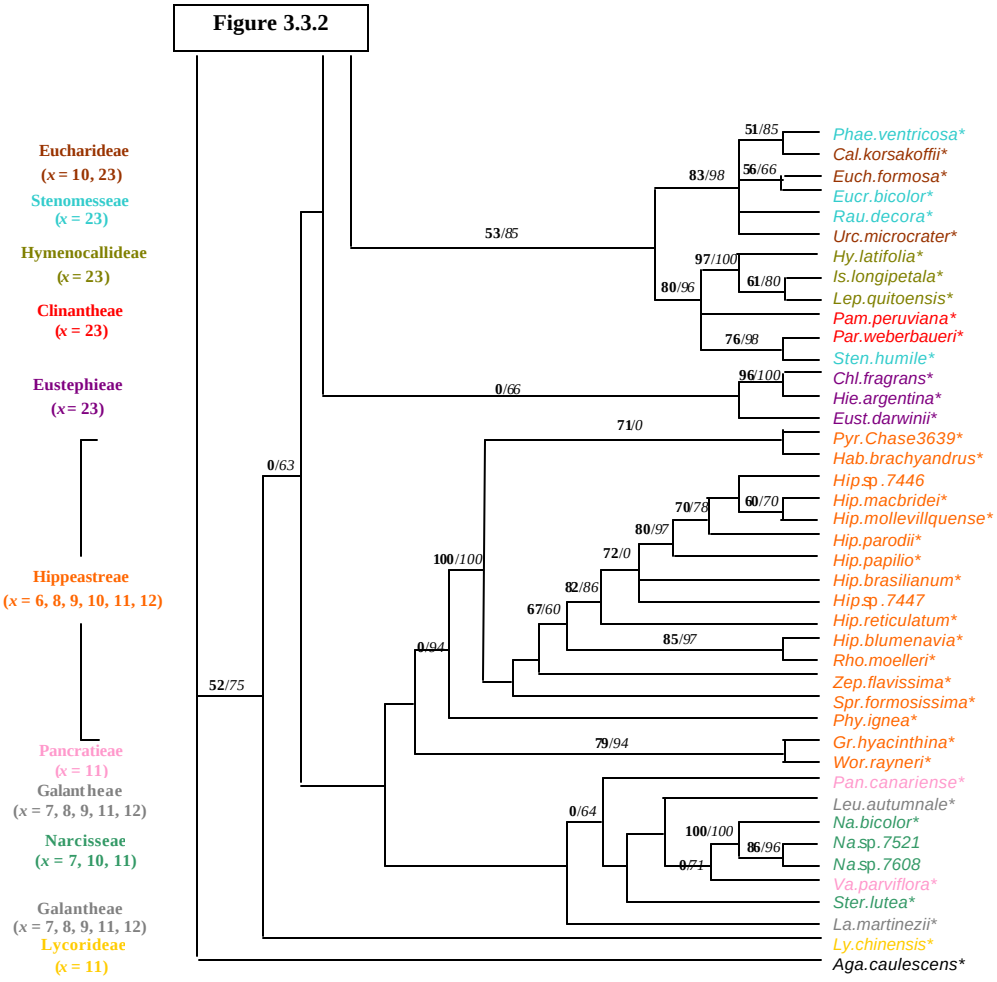


Figure 3.3.3 The strict consensus cladogram of the ITS DNA region for the rest of the tribes in Amaryllidaceae. Bootstrap (bold) and jackknife (italic) values are indicated above the branches. Basic chromosome number (*x*) for each tribe is indicated. (* indicates sequences obtained from Genbank.)

3.3.2 Discussion

The CI value of 0.389 in ITS is low. The RI value of 0.848 indicates little homoplasy. The reliability of the different groupings in the strict consensus tree is supported by the high bootstrap and jackknife values.

The different tribes of Amaryllidaceae represented in this study can also be divided into the different geographical clades according to Ito *et al*. (1999), except the Malaysia-Australian clade. The African clade I consists of the tribe Amaryllideae, which is primarily South African and includes *Amaryllis*, *Ammocharis*, *Boophone*, *Brunsvigia*, *Carpolyza*, *Crinum*, *Crossyne*, *Cybistetes*, *Hessea*, *Nerine* and *Strumaria*. Cyrtantheae, just South African, is comprised in the *Cyrtanthus* clade. The African clade II consists of the tribe Haemantheae, also primarily South African, and includes *Clivia*, *Haemanthus* and *Scadoxus*. The tribe Lycorideae with *Lycoris* forms the Asian clade. The Mediterranean clade consists of the tribes Galantheae (*Galanthus*, *Lapiedra* and *Leucojum*), Narcisseae (*Narcissus* and *Sternbergia*) and Pancratieae (*Pancratium* and *Vagaria*). The American clade is the largest and consists of the tribes Eucharideae (*Caliphruria*, *Eucharis* and *Urceolina*), Stenomesseae (*Phaedranassa, Eucrosia*, *Rauhia* and *Stenomesson*), Hymenocallideae (*Hymenocallis*, *Ismene* and *Leptochiton*), Clinantheae (*Pamianthe* and *Paramongaia*), Eustephieae (*Chlidanthus*, *Eustephia* and *Hieronymiella*) and Hippeastreae (*Griffinia*, *Habranthus*, *Hippeastrum*, *Phycella*, *Pyrolirion*, *Rhodophiala*, *Sprekelia*, *Worsleya* and *Zephyranthes*). The tribe Gethyllideae was not included in the assessment done by Ito *et al.* (1999). The strict consensus cladogram of the ITS region supports the *matK* data that Gethyllideae (*Apodolirion* and *Gethyllis*), primarily South African, is included with Haemantheae in the African clade II.

The results of the ITS data also support the *matK* data that the indigenous genera, namely *Amaryllis*, *Boophone*, *Brunsvigia*, *Clivia*, *Crinum*, *Crossyne*, *Cyrtanthus*, *Gethyllis*, *Haemanthus*, *Scadoxus* and *Strumaria*, used in this study originated from the Africa continent. Similarly, both the genera *Hippeastrum* and *Narcissus* are foreign and originated from America and the Mediterranean, respectively. The groupings of the different genera into their respective tribes support the classification of Meerow & Snijman (1998, 2001). The ITS results resolve the relationships between the genera used in this study and genera taken from Genbank.

Closer relationships are indicated by the strict consensus tree for some foreign tribes with their inclusion into the same monophyletic group, such as Eucharideae and Stenomesseae, Hymenocallideae, Clinantheae and Stenomesseae (all in the American clade) or Pancratieae, Galantheae and Narcisseae (all in the Mediterranean clade). For the Southern African tribes, there is a significant indication of a close relationship between Gethyllideae and Haemantheae, and between Cyrtantheae and Haemantheae. This indication supports the *matK* results.

Possible relationships are indicated between different species from the same genus such as *C. distichum* and *C. humile* (BS 60%, JK 79%); *C. bulbispermum* and *C. variable* (BS and JK 53%); *C. euchrophyllum* and *C. moorei* (BS 57%, JK 85%); *C. crassicaule* and *C. foetidum* (BS 81%, JK 98%); *C. asiaticum*, *C. pedunculatum* and *C.* sp. Meerow2332 (BS 64%, JK 90%); *C. subcernuum* and *C. buphanoides* (BS 66%, JK 84%); *C. defixum* and *C*. sp. Meerow2333 (BS <50%, JK 51%); *C. ligulatum* and *C. mauritianum* (BS and JK <50%); *Brunsvigia radulosanatalensis* and *B. gregaria* (BS 58%, JK 70%); *Strumaria aestivalis* and *S. discifera* (BS 70%, JK 88%); *S. watermeyeri* and *S. salteri* (BS 97%, JK 100%); *S. bidentata* and *S. truncate* (BS and JK 100%); *Boophone haemanthoides* and *B. disticha* (BS and JK 100%); *Haemanthus hirsitus* and *H. humilis* (BS 96%, JK 98%); *H. crispus* and *H. sanguineus* (BS and JK <50%); *Clivia caulescens* and *C. gardenia* (BS 59%, JK 74%); *Cyrtanthus falcatus* and *C. attenuates* (BS and JK <50%); *C. spiralis* and *C. smithiae* (BS 85%, JK 96%); *C. thorncrofti* and *C. eucallus* (BS and JK <50%); *C. brachyscyphus* and *C. obrienii* (BS <50%, JK 58%); and *Hippeastrum macbridei* and *H. mollevillquense* (BS 60%, JK 70%). Possible relationships between species of different genera in the same tribe are indicated: Amaryllideae - *Carpolyza spiralis* and *Strumaria tenella* (BS 83%, JK 98%), Gethyllideae - *Apodolirion lanceolatum* and *Gethyllis lanuginose* (BS 57%, JK 89%); Hymenocallideae – *Ismene longipetala* and *Leptochiton quitoensis* (BS 61%, JK 80%); Eustephieae – *Chlidanthus fragrans* and *Hieronymiella argentina* (BS 96%, JK 100%); and Hippeastreae – *Hippeastrum blumenavia* and *Rhodophiala moelleri* (BS 85%, JK 97%), *Griffinia hyacinthina* and *Worsleya rayneri* (BS 79%, JK 94%). There is even an indication of possible relationships between species of different tribes: *Cryptostephanus haemanthoides* in Haemantheae and *Galanthus fosteri* in Galantheae (BS <50%, JK 65%), *Caliphruria korsakoffii* in Eucharideae and *Phaedranassa ventricosa* in Stenomesseae (BS 51%, JK 85%), *Eucharis formosa* in Eucharideae and *Eucrosia bicolor* in Stenomesseae (BS 56%, JK 66%), and *Paramongaia weberbaueri* in Clinantheae and *Stenomesson humile* in Stenomesseae (BS 76%, JK 98%). Sister species are also indicated in the strict consensus tree: *Ammocharis nerinoides* and *A. coranica* (BS 63%, JK 84%); *Cybistetes longifolia* and *Crinum baumii*; *Crinum abyssinicum*, *C. kirkii*, *C. latifolium*, *C. politifolium* and *C. yemenense*; *C. cruentum*, *C. erubescens* and *C.* sp. Schunke14054 (BS 86%, JK 92%); *C. asiaticum*, *C. pedunculatum* and *C.* sp. Meerow2332 (BS 64%, JK 90%); *Gethyllis ciliaris*, *G. britteniana*, *G. verticillata* and *G. namaquensis*; *Haemanthus paucilifolius* and *H. albiflos*; all the *Scadoxus* species (BS

93%, JK 98%); *Cyrtanthus labiatus* and *C. montanus* (BS <50%, JK 62%); *C. mackenii, C. suaveolens* and *C. ochroleucus*; and *Rauhia decora* and *Urceolina microcrater*.

The strict consensus tree of the ITS sequences supports the results of Meerow *et al.* (2000) for the tribe Hippeastreae, and for some genera in the Eucharideae and Stenomesseae tribes.

The results of the ITS sequences in this study indicating the monophyletic group of *Clivia* (BS 90%, JK 100%) differs from the results obtained by Ran *et al.* (2001). In their study, *C. miniata*, *C. gardenia* and *C. robusta* were grouped into one clade. *C. caulescens* and *C. nobilis* formed a sister clade to the others. They concluded that the sequence variation in *Clivia* is mainly due to point mutation and that their results strongly suggests that concerted evolution of the ITS region occurs in this genus as in many other plants.

Meerow & Snijman (2001) did cladistic analyses on the tribe Amaryllideae based on ITS sequences and their results are supported by this study. The groupings of the different genera in this tribe are well-supported by bootstrap and jackknife: *Amaryllis* (BS <50%, JK 99%), *Ammocharis* (BS 82%, JK 97%), *Crinum* (BS <50%, JK 95%), *Brunsvigia* (BS <50%, JK 100%), *Strumaria* (BS <50%, JK 100%) and *Boophone* (BS and JK 100%). The strict consensus tree of this study also indicates that *Strumaria* has two independent origins as inferred by the results of Meerow & Snijman (2001). One group is sister to the rest of the Strumariinae. Their combined data analyses support the monophyly of *Strumaria* with inclusion of *Carpolyza* as a genus with two well-supported, divergent lineages.

The results on ITS sequence data of *Crinum*, *Ammocharis* and *Cybistetes*, all of the subtribe Crininae, in this study support some of the analysis done by Meerow *et al.* (2003). *Ammocharis* and *Cybistetes* form a sister group to *Crinum*. *Crinum baumii* is sister to *Ammocharis* and *Cybistetes* with a bootstrap value of 99% and jackknife of 100%. Based on the ITS phylogeny, *C. baumii* lies outside of *Crinum s.s.* According to Meerow *et al.* (2003) the taxonomic standing of this species and both *Ammocharis* and *Cybistetes* needs to be re-evaluated due to this relationship. Outside of well-supported sister relationships, the *Crinum* clade is largely unresolved. The cluster of species into the American, African and Australasian groups, respectively, differs from that of Meerow *et al.* (2003). In this study, the groupings overlap and are not easily distinguished.

Baldwin (1993), Álvarez & Wendel (2003) and Bailey *et al.* (2003) reported that the ITS region can prove useful for addressing phylogenetic questions among closely related plant species. Meerow *et al.* (2000) concluded that ITS sequences provide a well-resolved

phylogeny of the monophyletic American Amaryllidaceae, but that the early origins of the family in America remain ambiguous.

In this study, the tribe Amaryllideae (African I clade) forms a sister group to the rest of the tribes in Amaryllidaceae. This tribe has the same basic chromosome number of 11 as the tribes Haemantheae (African II clade), Cyrtantheae (*Cyrtanthus* clade), Hippeastreae (American clade), Pancratieae, Galantheae, Narcisseae (all three Mediterranean clade) and Lycorideae (Asian clade). In the African II clade, the tribe Gethyllideae represents a sister group to the monophyletic *Haemanthus* (Haemantheae) group in the strict consensus cladogram. The monophyletic *Scadoxus* (Haemantheae) group is sister to the Gethyllideae and *Haemanthus* group. This group consisting of Gethyllideae, *Haemanthus* and *Scadoxus* is sister to the monophyletic *Clivia* (Haemantheae) group. The two tribes have the same basic chromosome number of 6 (Meerow 1995). In the *Cyrtanthus* clade, the monophyletic Cyrtantheae group is sister to both Gethyllideae and Haemantheae, x = 6, 8, 11 identical to Haemantheae and x = 6 identical to Gethyllideae. In the American clade, the tribes Eucharideae, Stenomesseae, Hymenocallideae, Clinantheae and Eustephieae represent sister groups to each other and have the same basic chromosome number of 23. Hippeastreae is again separated from the others because it does not have the same basic chromosome number. In the Mediterranean clade, the tribes Pancratieae, Galantheae and Narcisseae indicate sister groups to each other and all three have the same basic chromosome number of 11. Galantheae and Narcisseae have also x = 7. All three tribes represents a sister group to the tribe Hippeastreae. All four these tribes have the same basic chromosome number of 11. Hippeastreae and Narcisseae also have the same basic chromosome number of 10 and 11. Hippeastreae and Galantheae have both x = 8, 9, 11 and 12.

3.4 Combined *trnL-F* and *matK* matrix

3.4.1 Results

For the combined analysis of *trnL-F* region and *matK* gene, all taxa with either *trnL-F* or *matK* data missing were removed. The combined phylogenetic analysis using the heuristic search option yielded 10 000 equally parsimonious trees with tree length of 2435, and had a CI of 0.677, RI of 0.653 and RC of 0.442. A strict consensus cladogram (Figure 3.4.1 & 3.4.2) was constructed from these trees and rooted with the outgroup *Hyacinthus orientalis*

(family Hyacinthaceae). The bootstrap and jackknife values are shown above the branches. All the tribes, except Galantheae and Pancratieae, are resolved in the strict consensus cladogram.

The phylogenetic tree includes two major clades. The first clade consists of the tribe Amaryllideae (BS 93%, JK 100%), which is primarily South African, and the second clade comprises the rest of the tribes (BS <50%, JK 53%). Four well-supported monophyletic groups are indicated by the cladogram: *Clivia* (BS and JK 100%), primarily South African; the tribe Stenomesseae (BS 70%, JK 89%); *Cyrtanthus* (BS 85%, JK 98%), also primarily South African, and the last group consists of *Gethyllis*, *Haemanthus* and *Scadoxus* (BS 69%, JK 95%), which is primarily South African.

3.4.2 Discussion

The CI value of 0.677 for the combined matrix is relatively low. The RI value of 0.653 indicates some homoplasy. Although both these values are low, the reliability of the different groupings in the strict consensus tree is well-supported by the bootstrap and jackknife values. Compared to the indices for the separate data sets of *trnL-F* and *matK*, respectively, there is no significant difference between these indices.

Closer relationships are indicated by the cladogram for some tribes with their inclusion into the same monophyletic group, such as Haemantheae and Calostemmateae; Eustephieae, Stenomesseae and Clinantheae; and Galantheae, Pancratieae and Narcisseae. There is a significant indication of a close relationship between *Gethyllis* (Gethyllideae), *Haemanthus* and *Scadoxus* (both Haemantheae), which are all combined as a sister group.

Possible relationships are indicated between different species from the same genus: *Brunsvigia gregaria* and *B. radulosa/natalensis* (BS 95%, JK 100%), *Crinum euchrophyllum* and *C. nearmacowanii* (BS 51%, JK 76%), *C. acaule* and *C. bulbispermum* (BS and JK <50%), *C. buphanoides* and *C. lineare* (BS <50%, JK 80%), *C. buphanoides* and *C. acaule* (BS and JK <50%), *C. acauleglaucous* and *C. caroloschmidtii* (BS 63%, JK 85%), *Clivia nobilis* and *C. cyrtanthiflora* (BS 88%, JK 99%), *Narcissus* sp. and *N. tazetta* (BS and JK 100%), *Cyrtanthus obliquus* and *C. falcatus* (BS 68%, JK 89%), *C. sanguineus* and *C. smithiae* (BS and JK <50%), *C. labiatus* and *C. loddigesianus* (BS <50%, JK 63%), and *Haemanthus montanus* and *H. crispus* (BS 74%, JK 94%). All the species of the genus *Scadoxus* are combined in a sister group (BS 76%, JK 98%). Possible relationships between

species of different genera in the same tribe are indicated: *Amaryllis*, *Boophone*, *Brunsvigia* and *Crossyne* are combined in a sister group, also *Clinanthus variegatus* and *Paramongaia weberbaueri* (BS 59%, JK 84%). There is even an indication of possible relationships between species of different tribes: *Leucojum autumnale* (Galantheae) and *Vagaria parviflorum* (Pancratieae) (BS <505, JK 80%), and *Narcissus* sp. (Narcisseae) and *Pancratium canariense* (Pancratieae) (BS <50%, JK 69%).

The results of the combined matrix also support the *matK* and ITS data that the indigenous genera, namely *Amaryllis*, *Boophone*, *Brunsvigia*, *Clivia*, *Crinum*, *Crossyne*, *Cyrtanthus*, *Gethyllis*, *Haemanthus*, *Scadoxus* and *Strumaria*, used in this study originated from South Africa. Similarly, that both the genera *Hippeastrum* and *Narcissus* are foreign and originated from America and the Mediterranean, respectively. The groupings of the different genera into their respective tribes support the classification of

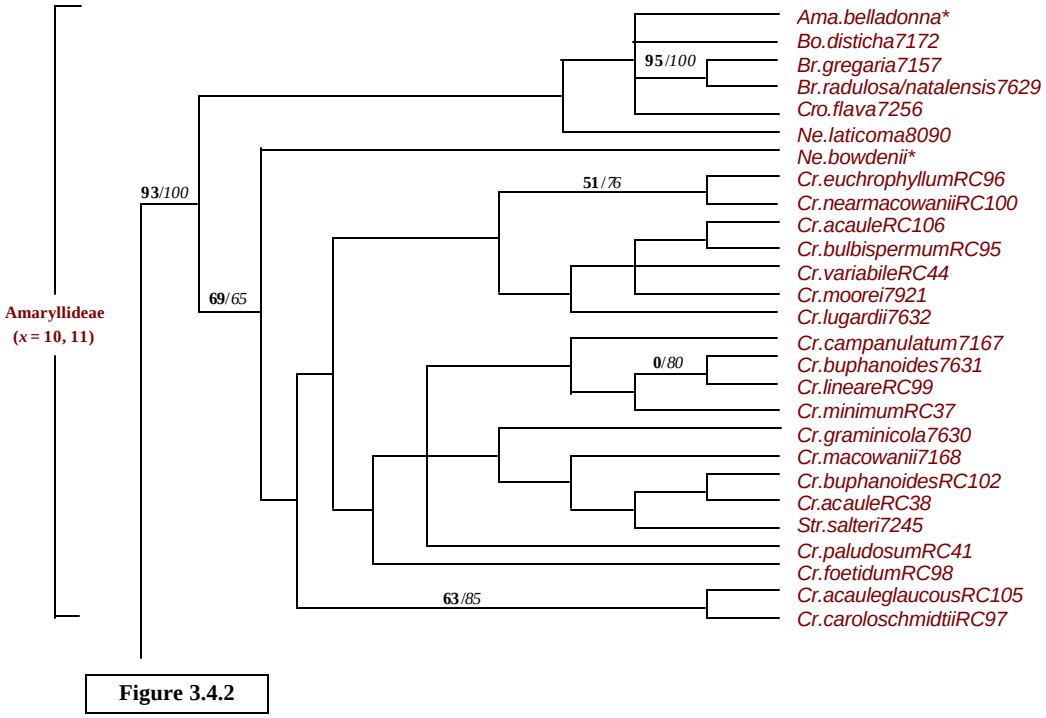


Figure 3.4.2

Figure 3.4.1 The strict consensus cladogram of the combined *trnL-F* and *matK* matrix for the tribe Amaryllideae. Bootstrap (bold) and jackknife (italic) values are indicated above the branches. Basic chromosome number (*x*) for each tribe is indicated. (* indicates sequences obtained from Genbank.)

Meerow & Snijman (1998, 2001). Also, the combined matrix resolves the relationships between the genera used in this study and genera taken from Genbank such as *Clivia miniata* (BS 91%, JK 98%), and the two *Narcissus* species (BS and JK 100%).

The results support the geographical clades of Ito *et al.* (1999), except the Asian clade. The African clade I consists of the tribe Amaryllideae, which is primarily South African and includes *Amaryllis*, *Boophone*, *Brunsvigia*, *Crinum*, *Crossyne*, *Nerine* and *Strumaria*. The African clade II consists of the tribe Haemantheae, also primarily South African, and includes *Clivia*, *Haemanthus* and *Scadoxus*. The Malaysia-Australian clade comprises the tribe Calostemmateae, and includes *Calostemma* R. Br. The Mediterranean clade consists of the tribes Galantheae (*Lapiedra* and *Leucojum*), Narcisseae (*Narcissus* and *Sternbergia*) and Pancratieae (*Pancratium* and *Vagaria*). The American clade consists of the tribes Clinantheae (*Clinanthus* and *Paramongaia*), Stenomesseae (*Phaedranassa*) and Eustephieae (*Chlidanthus* and *Eustephia*). Cyrtantheae, just South African, is comprised in the *Cyrtanthus* clade. The tribe Gethyllideae was not included in the assessment done by Ito *et al.* (1999). In this study Gethyllideae (*Gethyllis*), just South African, is included with Haemantheae in the African clade II. The African I clade, consisting of Amaryllideae, is a monophyletic group and is a sister clade to the rest of Amaryllidaceae. The African II clade (Haemantheae and Gethyllideae), the American clade (Clinantheae, Stenomesseae and Eustephieae), the Mediterranean clade (Galantheae, Pancratieae and Narcisseae) and the *Cyrtanthus* clade are combined into a monophyletic group, each clade representing a sister group to the other.

The cladogram supports the *matK* results in this study for the tribe Galantheae and thus supports the analysis done by Lledó *et al.* (2004). *Lapiedra martinezii* is indicated as sister species to *Leucojum autumnale*.

The analysis done by Graham & Barrett (2004) on *Narcissus* is supported by the combined matrix results, with *Sternbergia lutea* as sister species to *Narcissus tazetta* and the unknown *Narcissus* species.

The cladogram supports the analysis done by Meerow *et al.* (1999). The well-supported Amaryllideae is sister to the rest of Amaryllidaceae, with high bootstrap and jackknife support. Within Amaryllideae, most included genera are resolved and *Crinum* is sister taxa to the rest. The remaining African tribes (Haemantheae, Gethyllideae and Cyrtantheae) and Australasian Calostemmateae form an unresolved polytomy with the American/Eurasian taxa. Gethyllideae resolves as sister to Haemantheae. *Haemanthus* and *Scadoxus* are sister genera. *Cyrtanthus* is a monophyletic group and according to Meerow *et*

al. (1999) should be recognized as a monotypic tribe. The American genera are better resolved compared to the *matK* data alone. The genera in Eustephieae and Stenomesseae are sister groups with well-supported bootstrap (60%) and jackknife (86%) values. In the study done by Meerow *et al.* (1999), Eustephieae had no consensus, bootstrap or jackknife support.

Figure 3.4.1

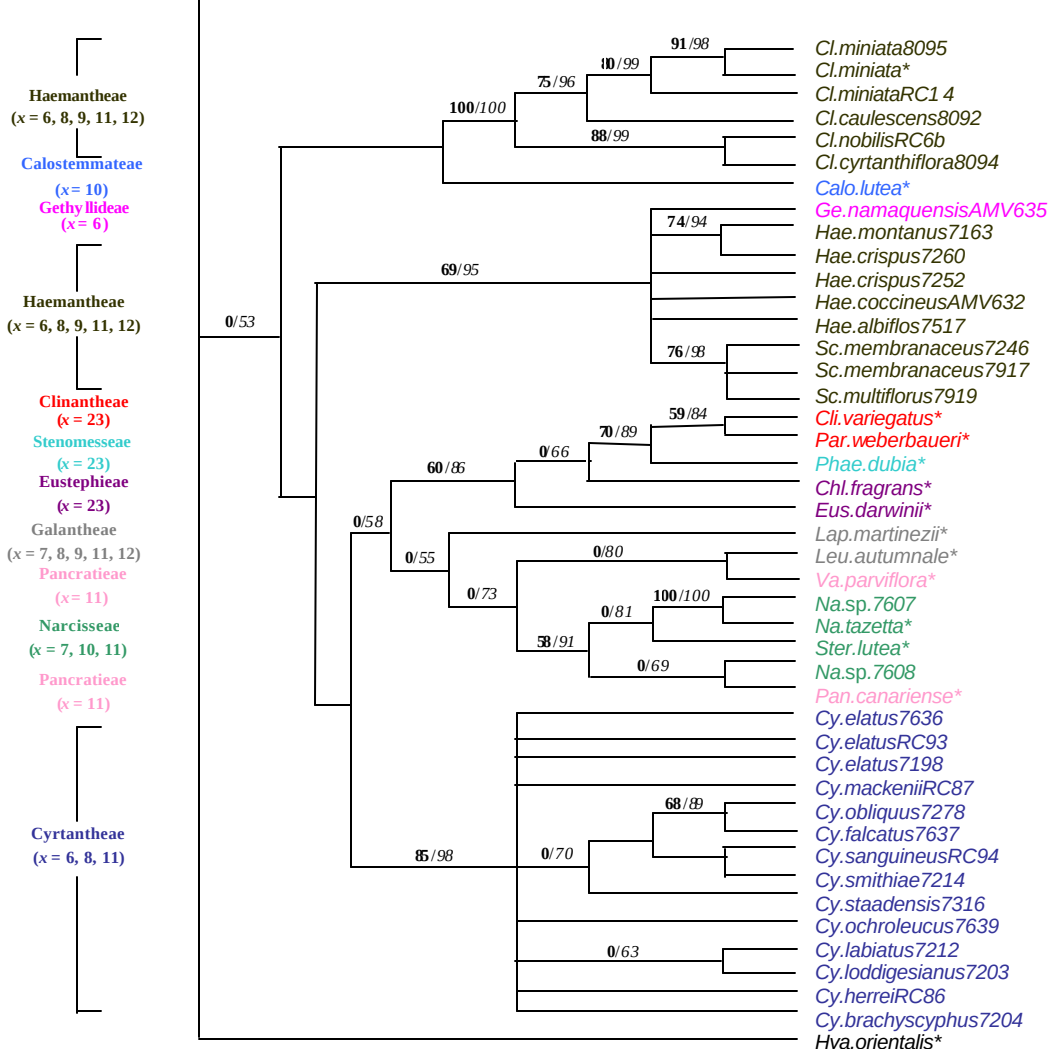


Figure 3.4.2 The strict consensus cladogram of the combined *trnL-F* and *matK* matrix for the rest of the tribes in Amaryllidaceae. Bootstrap (bold) and jackknife (italic) values are indicated above the branches. Basic chromosome number (*x*) for each tribe is indicated. (* indicates sequences obtained from Genbank.)

Within Amaryllidaceae, several groups are well supported within all of the analyses. The resolution of the combined matrix of *trnL-F* and *matK* is better than the separate *trnL-F* analysis. The resolution of both the separate *matK* data analysis and the combined matrix is well-supported. The sister status of the Eurasian/American/Mediterranean clades is better resolved in the separate *matK* data analysis than the combined matrix. The tribes Amaryllideae, Haemantheae, Cyrtantheae and Gethyllideae are resolved, and all receive strong bootstrap and jackknife support in the separate *matK* and combined analysis.

The tribe Amaryllideae (African I clade) represents a sister group to the rest of the tribes, having the same basic chromosome number of 11 as Haemantheae (African II clade), Galantheae, Pancratieae, Narcisseae (all three of Mediterranean clade) and Cyrtantheae (*Cyrtanthus* clade). The monophyletic *Clivia* group is sister to a group consisting of Gethyllideae, the rest of Haemantheae, Clinantheae, Stenomesseae, Eustephieae (latter three of American clade), Galantheae, Pancratieae, Narcisseae and Cyrtantheae. The tribe Haemantheae, which includes the genus *Clivia*, has the same basic chromosome number of 6 as Gethyllideae and Cyrtantheae. Haemantheae and Galantheae have both x = 8, 9, 11 and 12. Haemantheae, Pancratieae and Narcisseae have all x = 11. Haemantheae and Cyrtantheae have also both x = 8 and 11. Although the strict consensus cladogram indicates that the *Clivia* group is sister to Clinantheae, Stenomesseae and Eustephieae, they do not have the same basic chromosome number. This grouping is also not well supported by bootstrap (< 50%). The monophyletic Cyrtantheae group is sister to a group consisting of Clinantheae, Stenomesseae, Eustephieae, Galantheae, Pancratieae and Narcisseae. This sister grouping is not well supported by bootstrap (< 50%). Clinantheae, Stenomesseae and Eustephieae, all of the American clade, have the same basic chromosome number of 23. This clade is sister to Galantheae, Pancratieae and Narcisseae, all of the Mediterranean clade, which does not have the same basic chromosome number. The sister grouping between these two different clades are not well supported by bootstrap (< 50%). Cyrtantheae does have the same basic chromosome number of 8 and 11 as Galantheae but x = 11 is also the same for Pancratieae and Narcisseae.

3.5 Combined *trnL-F*, *matK* and ITS matrix

3.5.1 Results

For the combined analysis of the *trnL-F* region, the *matK* gene and ITS region, only taxa with data of all three DNA regions were selected. The combined phylogenetic analysis using the heuristic search option yielded 10 000 equally parsimonious trees with tree length of 3522, and had a CI of 0.694, RI of 0.721 and RC of 0.501. A strict consensus cladogram (Figure 3.5) was constructed from these trees and rooted with the outgroup *Acorus calamus* (family Araceae). The bootstrap and jackknife values are shown above the branches.

All the tribes, except Pancratieae, are resolved in the strict consensus cladogram. The results of this combined matrix are very similar to the results of the previous combination. The different tribes are however better resolved in the combined matrix of all three DNA regions.

The phylogenetic tree includes two major clades, similar to the previous combined matrix. The first clade consists of the tribe Amaryllideae (BS and JK 100%), which is primarily South African, and the second clade comprises the rest of the tribes (BS 95%, JK 100%). Six strong supported monophyletic genera are indicated by the cladogram: *Brunsvigia* (BS and JK 100%), *Crinum* (BS and JK 100%), *Clivia* (BS and JK 100%), *Haemanthus* (BS and JK 100%), *Scadoxus* (BS and JK 100%), and *Cyrtanthus* (BS and JK 100%). All these genera comprise primarily South African species.

3.5.2 Discussion

The CI value of 0.694 for the combined matrix is relatively low. The RI value of 0.721 indicates some homoplasy. The reliability of the different groupings in the strict consensus tree is strongly supported by the bootstrap and jackknife values. Compared to the indices for the individual data analyses of *trnL-F*, *matK* and ITS, respectively, the combined matrix indicated higher indices. The exception is the RI between the combined matrix and the individual ITS data analysis. The individual ITS analysis indicated a higher RI (0.848).

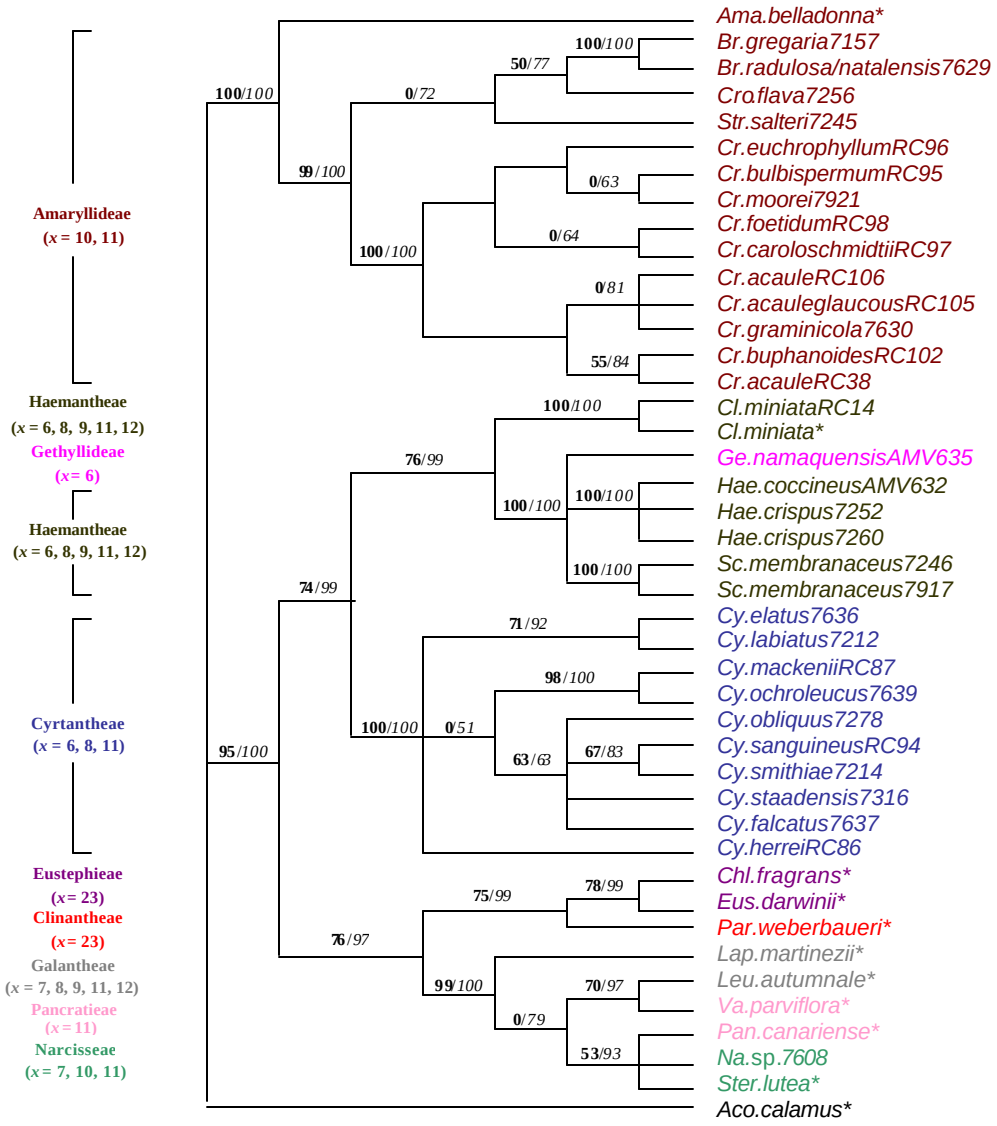


Figure 3.5 The strict consensus cladogram of the combined *trnL-F*, *matK* and ITS matrix for Amaryllidaceae. Bootstrap (bold) and jackknife (italic) values are indicated above the branches. Basic chromosome number (*x*) for each tribe is indicated. (* indicates sequences obtained from Genbank.)

Closer relationships are indicated by the dadogram for some tribes with their inclusion into the same monophyletic group, such as Gethyllideae and Haemantheae (BS and JK 100%); Eustephieae and Clinantheae (BS 75%, JK 99%); and Galantheae, Pancratieae and Narcisseae (BS 99%, JK 100%). There is also a significant indication of a close relationship between

Gethyllis (Gethyllideae), *Haemanthus* and *Scadoxus* (both Haemantheae), which are all combined as a sister group. This supports the results of the separate *matK* and ITS analyses in this study.

Possible relationships are indicated between different species from the same genus: *Brunsvigia gregaria* and *B. radulosa/natalensis* (BS and JK 100%), *Crinum bulbispermum* and *C. moorei* (BS <50%, JK 63%), *C. foetidum* and *C. caroloschmidtii* (BS <50%, JK 64%), *C. acaule* and *C. buphanoides* (BS 55%, JK 84%), *Cyrtanthus elatus* and *C. labiatus* (BS 71%, JK 92%), *C. mackenii* and *C. ochroleucus* (BS 98%, JK 100%), and *C. sanguineus* and *C. smithiae* (BS 67%, JK 83%). *Crinum acaule*, *C. acauleglaucous* and *C. graminicola* are combined as a sister group (BS <50%, JK 81%). Another sister group consists of *Haemanthus coccineus* and *H. crispus* (BS and JK 100%). Possible relationships between species of different genera in the same tribe are indicated: *Chlidanthus fragrans* and *Eustephia darwini* (BS 78%, JK 99%). There is also an indication of possible relationships between species of different tribes: *Leucojum autumnale* (Galantheae) and *Vagaria parviflorum* (Pancratieae) (BS 70%, JK 97%). *Narcissus* sp., *Sternbergia lutea* (both Narcisseae) and *Pancratium canariense* (Pancratieae) (BS 53%, JK 93%) are combined as a sister group.

The results of this combined matrix also support the previous analyses in this study that the indigenous genera, namely *Amaryllis*, *Brunsvigia*, *Clivia*, *Crinum*, *Crossyne*, *Cyrtanthus*, *Gethyllis*, *Haemanthus*, *Scadoxus* and *Strumaria*, used in this study originated from Southern Africa. Similarly, both the genera *Hippeastrum* and *Narcissus* are foreign and originated from America and the Mediterranean, respectively. The groupings of the different genera into their respective tribes again support the classification of Meerow & Snijman (1998, 2001). Also, the combined matrix resolves the relationships between the genera used in this study and genera taken from Genbank such as *Clivia miniata* (BS and JK 100%).
Results found by Ito *et al.* (1999), Meerow *et al.* (1999), Graham & Barrett (2004), and Lledó *et al.* (2004) are supported by the combined matrix cladogram in this study.

The combined matrix indicates that *Chlidantus fragrans* and *Eustephia darwinii* are sister species in the tribe Eustephieae with high bootstrap (78%) and jackknife (99%) support. The tribe Eustephieae is sister to the tribe Clinantheae represented by *Paramongaia weberbaueri*, with also high bootstrap (75%) and jackknife (99%) support. This supports the phylogeny done by Meerow *et al.* (2000).

The strict consensus cladogram indicates that *Amaryllis* is sister to the rest of the genera in the tribe Amaryllideae with strong bootstrap (100%) and jackknife (100%) support. *Brunsvigia*, *Crossyne*, *Strumaria* and *Crinum* are sister groups with high bootstrap (99%) and jackknife (100%) values. These results support the analysis of Meerow & Snijman (2001).

The combined phylogeny in this study does not support the suggestion of Meerow *et al.* (2003) that *Crinum* is not monophyletic. The monophyletic *Crinum* clade is strongly supported by bootstrap (100%) and jackknife (100%). According to Meerow *et al.* (2003) all these species originated from South Africa, except *Crinum buphanoides*, which originated from Namibia.

Combining independent character matrices often increases the resolution of the ingroup, the bootstrap and jackknife support of the internal nodes of the phylogenetic trees (Meerow & Snijman 2001). There is still controversy about whether different data sets should be analyzed separately or together. In this study, the combined data matrices indicated stronger bootstrap and jackknife support than the individual matrices, thus, giving a better resolution of the different tribes. The different indices (RI, CI and RC) are also higher in the combined matrices.

The strict consensus cladogram indicates the following different geographical clades: African I (Amaryllideae), African II (Haemantheae and Gethyllideae), *Cyrtanthus* (Cyrtantheae), American (Eustephieae and Clinantheae) and Mediterranean (Galantheae, Pancratieae and Narcisseae) in distinctive groups. Similar to the previous results in this study, the tribe Amaryllideae is a sister group to the rest of the tribes in the Amaryllidaceae, having the same $x = 10$ as Narcisseae and the same $x = 11$ as Haemantheae, Cyrtantheae, Galantheae, Pancratieae and Narcisseae. The rest of the tribes are combined into one group which is well supported by bootstrap (95%) and jackknife (100%). This group has a wide range of basic chromosome numbers, starting with the smallest of 6 up to the highest of 23. The African II clade represents a sister group to the *Cyrtanthus* clade and both clades have the same basic chromosome numbers of 6, 8 and 11. This grouping is well supported by bootstrap (74%) and jackknife (99%). The American clade is a sister group to the Mediterranean clade but these two clades do not have the same basic chromosome number. Even though there is a major difference between their basic chromosome numbers, the grouping is well supported by bootstrap (76%) and jackknife (97%). The combined group of the African II and *Cyrtanthus* clades is sister to the combined group of the American and Mediterranean clades. This sister grouping is also well supported by bootstrap (95%) and jackknife (100%).

According to these results the close relationship between Haemantheae and Gethyllideae is supported by the same basic chromosome number of 6. The close relationship of these two tribes with Cyrtantheae is also supported by the same basic chromosome number of 6, 8 and 11. However, the close relationship between the American and the Mediterranean clades is puzzling because of the different basic chromosome numbers.

3.6 Chromosome numbers

3.6.1 Results

Sixty-two specimens, representing 19 *Cyrtanthus* species were studied (Table 3.1). A somatic chromosome number of 2n = 2x = 16 was observed in all specimens (Figure 3.6 – 3.8), except two tetraploid *C. mackenii* var. *mackenii* specimens with 2n = 4x = 32, *Spies 7274* (Figure 3.7D) and *Spies 7372*.

Table 3.1 List of *Cyrtanthus* species studied, their voucher numbers and somatic chromosome numbers.

Species	Voucher	2n
C. bicolor	*Spies 7185*	16
C. brachyscyphus	*Spies 7186, 7187, 7204, 7272*	16
C. breviflorus	*Spies 7188, 7189, 7278, 7366*	16
C. contractus	*Spies 7190*	16
C. elatus	*Spies 7192, 7193, 7194, 7195, 7196, 7197, 7198, 7202, 7367*	16
C. epiphyticus	*Spies 7200, 7368*	16
C. eucallus	*Spies 7218, 7262*	16
C. falcatus	*Spies 7208, 7263, 7264*	16
C. galpinii	*Spies 7265*	16
C. herrei	*Spies 7194, 7267*	16
C. loddigesianus	*Spies 7203*	16
C. mackenii var. *cooperi*	*Spies 7211, 7273, 7373*	16

C. mackenii var. *mackenii*	*Spies 7268, 7269, 7270, 7271, 7272,*	
	7369, 7370, 7371, 7374	16
	Spies 7274, 7372	32
C. macowanii	*Spies 7201*	16
C. montanus	*Spies 7209, 7275, 7375*	16
C. obliquus	*Spies 7276, 7277, 7278*	16
C. obrienii	*Spies 7193, 7215, 7279, 7376*	16
C. sanguineus	*Spies 7216, 7280, 7281, 7282*	16
C. stenanthus	*Spies 7283*	16

Metaphase chromosomes of these 19 *Cyrtanthus* species were measured to determine their karyotypes. Ideograms (Figure 3.9) were drawn based on the average of the relative chromosome lengths.

3.6.2 Discussion

The results of this study, namely that 2n = 2x = 16 for *Cyrtanthus* supports previous reports (Table 1.3). This is, to the best of our knowledge, the first chromosome number report of 2n = 4x = 32 as seen in *C. mackenii* var. *mackenii*. Reported chromosome numbers for *Cyrtanthus* indicates 2n = 22 as the previous highest somatic chromosome number. Ising (1970) reported that in *Cyrtanthus*, a great deal of internal structural change in the karyotypes has occurred while preserving the basic chromosome number of 2n = 16.

Previous studies reported that ideograms vary among the different *Cyrtanthus* species and may be used in the identification of certain species (Ising 1970). Chromosome reduction varies greatly between different chromosomes. In a single root tip, different ideograms can be obtained from different cells varying slightly in the time the cell entered mitosis. When a large number of metaphase cells were measured and the average length of a chromosome pair in all cells was used, the variation in ideograms was minimal and cannot be used for identification purposes.

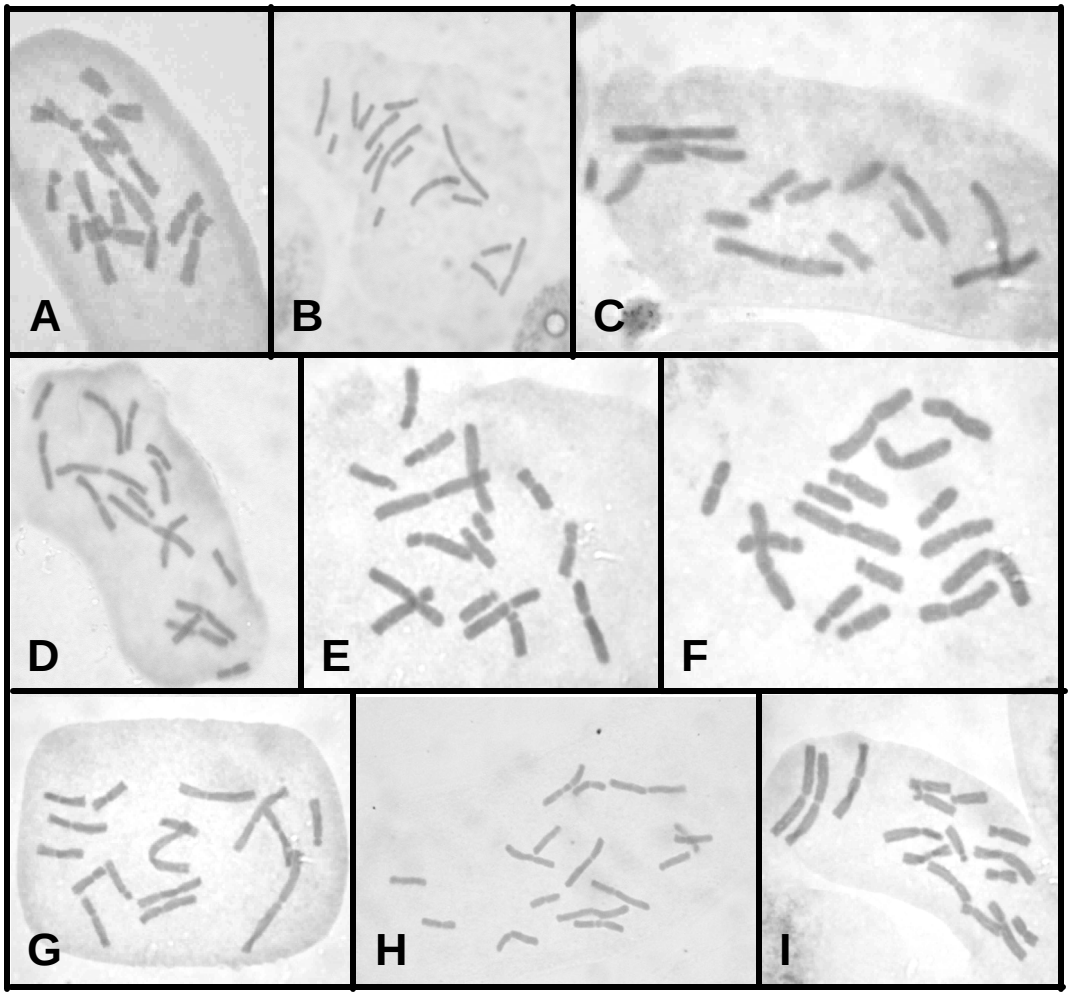


Figure 3.6 Mitotic chromosomes in various *Cyrtanthus* species with 2n = 16. **A.** *C. bicolor, Spies 7185*. **B.** *C. brachyscyphus, Spies 7186*. **C.** *C. breviflorus, Spies 7189*. **D.** *C. elatus, Spies 7193*. **E.** *C. epiphyticus, Spies 7200*. **F.** *C. eucallus, Spies 7262*. **G.** *C. falcatus, Spies 7208*. **H.** *C. herrei, Spies 7267*. **I.** *C. loddigesianus, Spies 7203*.

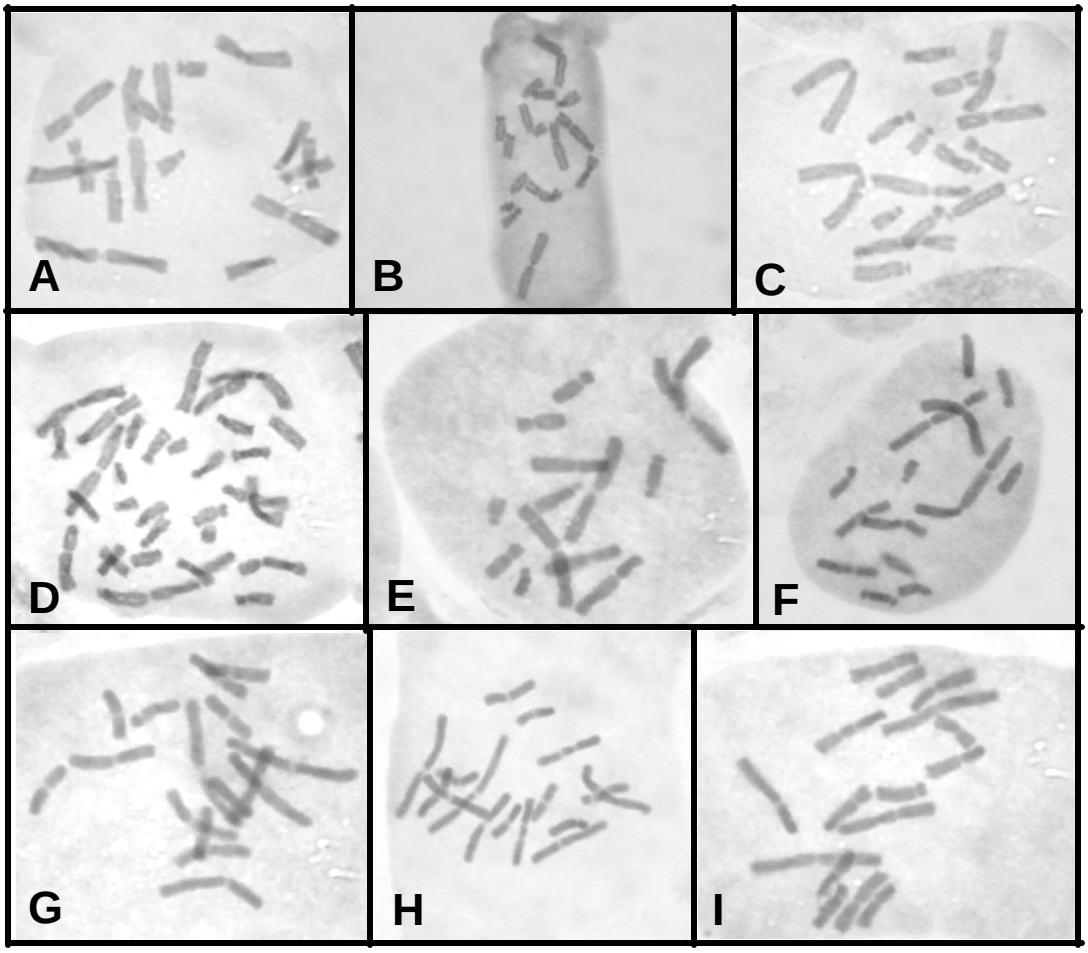


Figure 3.7 Mitotic chromosomes in various *Cyrtanthus* species. **A.** *C. mackenii* var. *cooperi*, *Spies 7211*. **B, C, D.** *C. mackenii* var. *mackenii, Spies 7370, 7268, 7274*. **E, F.** *C. macowanii*, *Spies 7201*. **G, H.** *C. montanus, Spies 7275*. **I.** *C. obliquus, Spies 7276.*

Figure 3.8 Mitotic chromosomes in various *Cyrtanthus* species with 2n = 16. **A.** *C. obrienii*, *Spies 7376*. **B.** *C. sanguineus, Spies 7216*. **C.** *C. tuckii* var. *viridilobus, Spies 7377*.

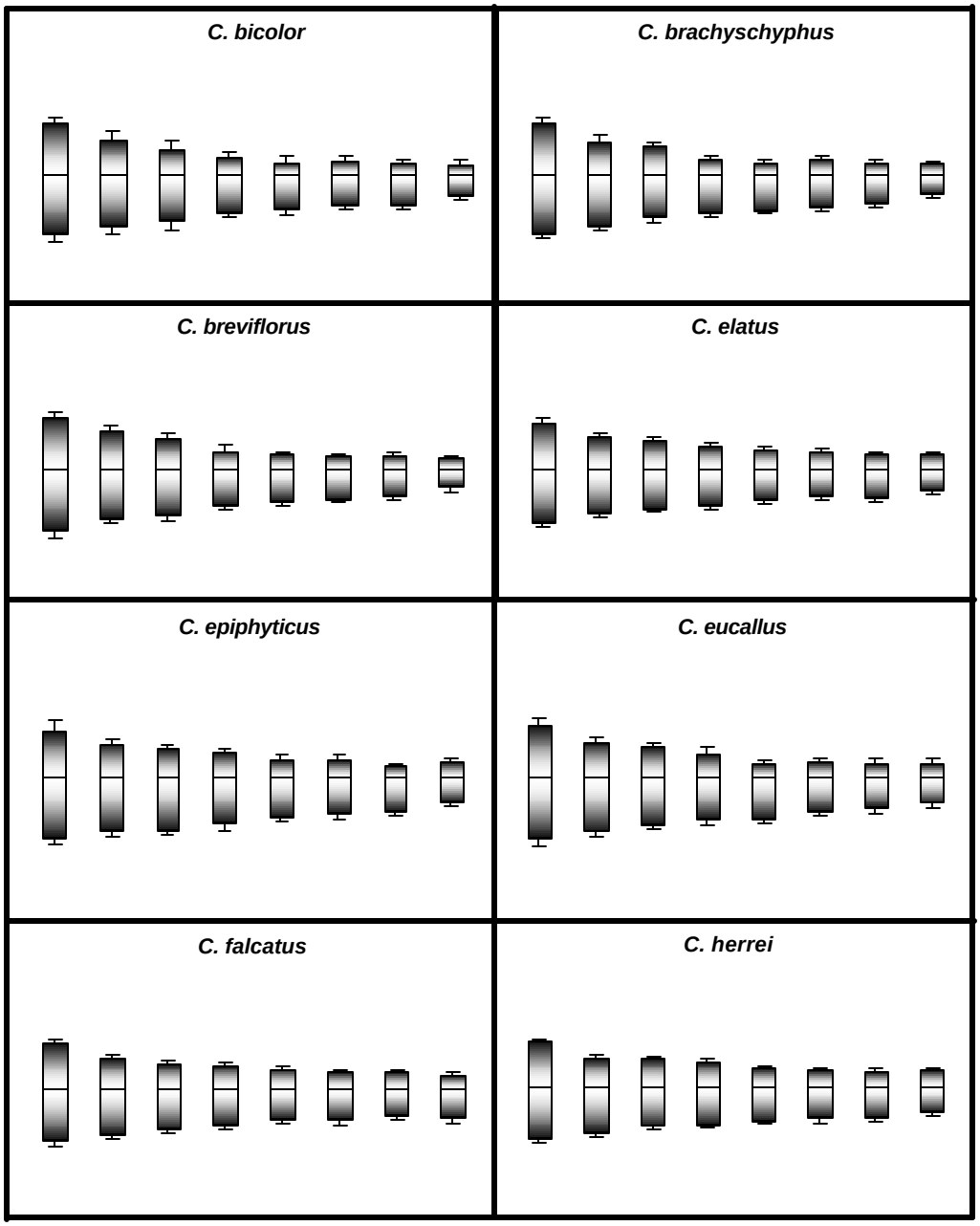


Figure 3.9 Ideograms of some *Cyrtanthus* species.

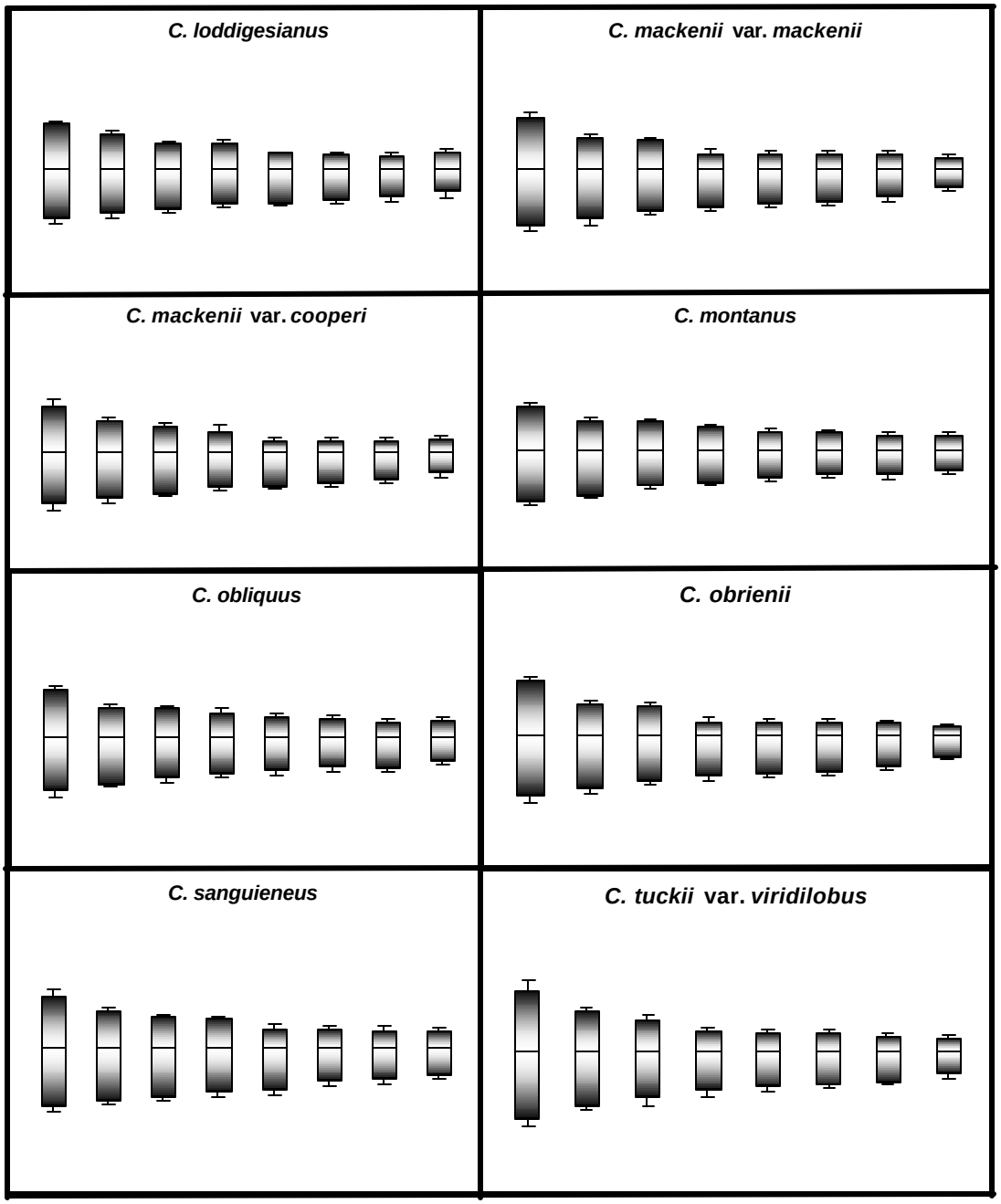
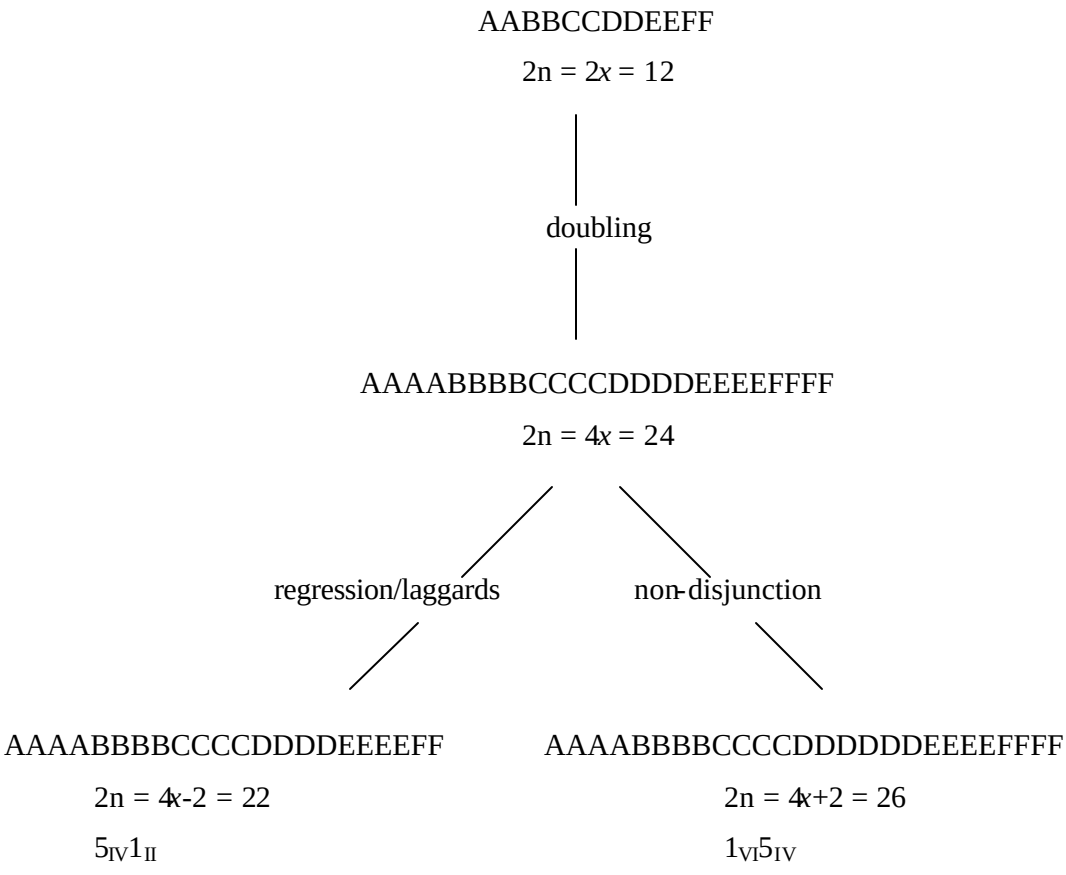


Figure 3.9 (cont.) Ideograms of some *Cyrtanthus* species.

Table 1.3 reflects multiple basic chromosome numbers for some of the tribes through the variation in somatic chromosome numbers. This variation in chromosome number may indicate euploidy and aneuploidy. According to Schulz-Schaeffer (1980), the term euploidy is

used for cells and individuals that have either the basic chromosome number of a genus (*x*) or complete multiples thereof (2*x*, 3*x*, 4*x*, etc.). Some genera have more than one basic chromosome number. In these genera it is more difficult to distinguish euploidy from aneuploidy, which has incomplete multiples of the *x*-number. Aneuploidy can be expressed as an addition of one or more chromosomes to a genomic number or as a loss of such chromosome material. The following schematic representation may explain the formation of aneuploids:



Aneuploids can be caused by any of the following disturbances (Schulz-Schaeffer 1980):

- Loss of chromosomes in mitotic or meiotic cells, often caused by laggards, which are characterized by retarded movement during anaphase. This results in chromosome numbers such as 4*x*-2 or 2*x*-1.
- Non-disjunction of chromosomes or chromatids during mitosis or meiosis. This is a failure of such chromosome material to separate properly and results in their not being

distributed to opposite poles. It can cause chromosome numbers such as $4x-2$ or $4x+2$.

- Irregularities of chromosome distribution during the meiosis of polyploids with uneven numbers of basic genomes such as triploids, pentaploids, etc. In these polyploids, some chromosomes are often present as univalents, which are randomly distributed to either pole or may be lost in anaphase I or anaphase II.
- The appearance of multipolar mitosis, resulting in irregular chromosome distribution in anaphase. Such multiform aneuploidy can result in cells with different aneuploid chromosome numbers, causing chromosome mosaicism.

When comparing the basic chromosome numbers with the somatic chromosome numbers (Table1.3) in these genera, a few questions are asked. How accurate are the somatic chromosome numbers reported in the early 1900s? Why doesn't some of the reported somatic chromosome numbers represent the expected basic chromosome number? According to Darlington & La Cour (1942) the technique for chromosome squashes was adapted during 1921-1940. This makes the chromosome numbers reported during that period questionable due to the accuracy of the squashing technique. Also, many taxonomic changes occurred in the past century with some species being renamed or re-classified. Thus, earlier classifications are not applicable. The most recent reported chromosome numbers as indicated in Table 1.3 represent the expected basic chromosome numbers more accurately. The recent variation in polyploid level, due to increasing hybridization, is also exhibited. The increased hybridization may be indicative of plant mutation, either naturally or through cultivation, or plant speciation.

As mentioned previously in 1.7, the most common basic number occurring in Amaryllidaceae is $x = 11$ (Meerow 1995). A chromosome number of $2n = 22$ is considered plesiomorphic in this family due to the broad occurrence in many of the tribes (Meerow *et al.* 1999). There are two major trends characterising amaryllidaceous karyotype evolution (Meerow 1995). Certain genera show great karyotypic stability, with low frequency of polyploidy. Similar chromosome morphology among the species of these genera is characteristic. Their polyploids have a tendency to be autoploid in origin. A genus may also exhibit great variation in both chromosome number and morphology. Both allopolyploidy and Robertsonian changes have been implicated as important factors in speciation in such genera.

Andean-centered genera in the tribes Eucharideae, Stenomesseae, Clinantheae and Eustephieae are characterised by a somatic chromosome number of 2n = 46 or derivations thereof. This may indicate a monophyletic polyploidy origin for these tribes from an ancestor with 2n = 22 through chromosome fragmentation or duplication and subsequent doubling. Reticulation between an $x = 11$ lineage and one with $x = 12$, followed by doubling, is another possibility. One subgroup of the neotropical tribe Hippeastreae (genera *Zephyranthes* and *Habranthus*) has 2n = 24 chromosomes, as does the African *Cryptostephanus* (Haemantheae) and the Mediterranean genus *Galanthus* (Galantheae). Two African genera, *Apodolirion* and *Gethyllis*, which are baccate-fruited, have 2n = 12 chromosomes. The Andean group appears to represent the only widespread polyploidy lineage within the Amaryllidaceae. When assuming a basic number of $x = 11$, the changes in basic chromosome number have been mainly lowering in the major lineages.

We can also apply the basic chromosome numbers (Meerow 1995, Meerow & Snijman 1998) to the tribes investigated and to the geographical clades represented. For this study, Amaryllideae (African clade I) has $x = 10$ and 11. Cyrtantheae (*Cyrtanthus* clade) has $x = 6$, 8 and 11. Haemantheae and Gethyllideae (African clade II) has $x = 6$, 8, 9, 11, 12 and $x = 6$, respectively. For Narcisseae (Mediterranean clade), $x = 7$, 10 and 11, and for Hippeastreae (American clade), $x = 6$, 8, 9, 10, 11 and 12.

The tribe Amaryllideae is the most robust monophyletic group in the entire Amaryllidaceae. In Haemantheae, *Clivia* is the only genus with 2n = 22, whereas the closely related *Cryptostephanus* has 2n = 24. According to Björnstad & Friis (1972) this tribe is the most primitive in the family, though the baccate fruit cannot be considered plesiomorphic. In Narcisseae, much chromosome evolution has occurred in the genus *Narcissus*. No relationships with any other tribe outside of Galantheae have been proposed for Narcisseae. Hippeastreae is one of the more problematic tribes of neotropical Amaryllidaceae (Meerow 1995). Its relationships with the Asian tribe Lycorideae and the African genus *Cyrtanthus* need to be clarified.

Meerow (1995) asks the following: "Is there an existing basal lineage for Amaryllidaceae?" His answer is yes and no. Remnants of the early diversification of the family can be found in each of several tribes, but to assume that these elements have remained evolutionarily fixed is wrong. The Andean centered tribes Eucharideae, Stenomesseae and Clinantheae indicates patterns of diversification that reflect recent Andean geological history. Both these tribes contain existing or extinct relict, and often monotypic, taxa, some of which

exhibit character state polymorphisms which become fixed in other genera of their respective tribes. The diversity of the tribe Amaryllideae in South Africa reflects the unique biogeographic history of the region. Tribes Hippeastreae and Haemantheae, with the largest variation in basic chromosome number, may represent the most ancient lineages in Amaryllidaceae. Though, taken together, the Laurasian tribes Narcisseae and Galantheae include the same degree of variation in basic chromosome number.

CHAPTER FOUR

CONCLUSIONS

Researchers have become more aware that reliance on a single data set may result in insufficient resolution or a wrong picture of phylogenetic relationships (Soltis & Soltis 2000). Therefore, it is now common practice to use multiple data sets for phylogenetic inference. This feature of systematics has been facilitated by automated DNA sequencing, which has made the quick gaining of multiple molecular data sets relatively straightforward. In fact, several DNA regions representing the nuclear and chloroplast genomes are now routinely utilized for phylogenetic inference in plants and mitochondrial DNA sequence data are being used more regularly.

Three methods have been proposed for handling multiple data sets in phylogenetic analyses: the combined approach, the consensus approach and the conditional combination approach (Soltis & Soltis 2000). There has been considerable debate regarding the advantages and limitations of these approaches. Several researchers have stated that statistical tests for congruence may not provide a definitive answer as to whether it is appropriate to combine data sets. Even if congruence tests reveal low levels of heterogeneity between data sets, the researcher may be justified in combining data sets. Furthermore, analyses of the combined data sets show great improvements in computer run times compared to the separate data sets. The combined data sets also have higher internal support for clades.

The four most recent infrafamilial classifications of Amaryllidaceae are those of Traub (1957, 1963), Dahlgren *et al.* (1985), Müller-Doblies & Müller-Doblies (1996) and Meerow & Snijman (1998, 2001).

Meerow *et al.* (1999, 2000a) presented cladistic analyses of plastid DNA sequences *rbcL* and *trnL-F* alone and in combination for fifty-one genera of Amaryllidaceae and thirty-one genera of related families. Topologies of the respective plastid sequences were highly congruent and thus combined. The combined analysis was the best resolved of the three and provided good support for the monophylly of Amaryllidaceae. Agapanthaceae was indicated as its sister family. Alliaceae were sister to the Amaryllidaceae/Agapanthaceae clade. Based on the phylogenetic relationships, the family originated in western Gondwanaland (Africa) and infra-familial relationships are resolved along biogeographical lines. Tribe Amaryllideae, entirely southern Africa with the exception of pantropical *Crinum*, was sister to the rest of

Amaryllidaceae with high bootstrap support. The remaining two African tribes, Haemantheae (including Gethyllideae) and Cyrtantheae, were well supported, but their position relative to the Australasian Calostemmateae and a large clade comprising the Eurasian and American genera, was not clear. Five recognized tribes, namely, Amaryllideae, Haemantheae, Calostemmateae, Galantheae and Hippeastreae are consistently resolved by the plastid DNA sequences and all receive strong bootstrap support.

Phylogenetic reconstruction of the evolution of stylar polymorphisms in *Narcissus* based on the *trnL-F* region was done by Graham & Barrett (2004). Although not completely resolved, their plastid-based phylogeny provides substantial new insights into the evolutionary history of stylar polymorphisms in this genus.

Ito *et al.* (1999) found a very similar topology to Meerow *et al.* (1999) for a more limited sampling of Amaryllidaceae and related families using plastid *matK* sequences. Amaryllidaceae formed a well-supported monophyletic clade. *Agapanthus* was sister to a diverse clade of Agavaceae, Anthericaceae, Funkiaceae and Hyacinthaceae. There was no bootstrap support for this position of *Agapanthus* in their analyses. Their results support the hypothesis that the family evolved in Africa and subsequently spread to other continents.

Phylogenetic analyses of the genera *Leucojum* and *Galanthus* based on plastid (*trnL-F* and *matK*) and nuclear (ITS) DNA sequences were done by Lledó *et al.* (2004). They compared the results obtained with a combined parsimony analysis of these DNA sequences with that of a matrix of morphological characters. The data was analysed separately and in combination, showing that the boundaries between the two genera are not appropriate. *Galanthus* is monophyletic but embedded in *Leucojum*. An alternative classification is proposed.

Analyses of nuclear ITS DNA sequences show much greater resolving power than do analyses of plastid DNA within the major clades of the Amaryllidaceae (Meerow *et al.* 2000a). The analyses of their ITS data matrix indicate that some re-arrangement of the neotropical genera will be necessary. Their results suggest that certain genera are polyphyletic.

Meerow *et al.* (2000b) reported a phylogenetic analysis on American Amaryllidaceae based on nuclear ITS DNA sequences. Their analysis resolves the American genera of the Amaryllidaceae as a clade that is sister to the Eurasian genera of the family. They infer from their data that a great deal of the diversity of the family in the Americas is recent. The new tribe Clinantheae is described.

Meerow & Snijman (2001) presented the results of phylogenetic analyses of morphology, nuclear ITS DNA sequences, and a combination of the two for the tribe Amaryllideae. The analysis based on morphology supports the recognition of *Amaryllis* as sister to two major clades, Crininae and Amaryllidinae. Within Strumariinae, *Strumaria sensu lato* is resolved as polyphyletic. The monotypic *Carpolyza* is embedded within *Strumaria sensu stricto*. The consensus of the combined analysis is highly resolved. Based on the results of the combined analyses, the major clades are recognized as subtribes. *Carpolyza* is placed into synonymy under *Strumaria*.

Ran *et al.* (2001) reported the phylogenetic analysis and karyotype evolution in *Clivia* based on nuclear ITS DNA sequences. Separate analysis of the data sets generated well-supported groupings and congruent phylogenies. *Clivia miniata* and *C. gardenia* are closely related. The new species, *C. robusta* is a sister clade of this group.

Phylogenetic and biogeographical analyses of nuclear ITS and plastid *trnL-F* DNA sequences for all continental groups of *Crinum* and related African genera were presented by Meerow *et al.* (2003). The genus *Amaryllis* was used as outgroup. The ITS data resolved three clades in *Crinum senso stricto*. One clade unites a monophyletic American group with tropical and North African species. The second includes all southern African species and the Australian endemic *C. flaccidum.* The third clade includes monophyletic Madagascar, Australasian and Sino-Himalayan clades, with southern African species. The *trnL-F* data resolves an American and an Asian/Madagascar clade. It confirms the relationship of *C. flaccidum* with species endemic to southern Africa. Biogeographical analyses place the origin of *Crinum* in southern Africa.

In this study chloroplast (*trnL-F* and *matK*) and nuclear (ITS) DNA sequences have been used to determine and compare the phylogenetic relationships of several southern African species in the Amaryllidaceae. All three give DNA sequences that are useful for comparing species and closely related genera.

The *trnL-F* data resulted in cladograms with poor resolution and all the tribes were unresolved. Due to the poor resolution, the results could not be compared to those of Meerow *et al.* (1999) and Graham & Barrett (2004). Previous studies (Shaw *et al.* 2005) indicated that noncoding chloroplast DNA regions, such as *trnL-F*, consistently yield low levels of variation. Better resolution is obtained by combining the data from these regions with other sequence data.

The *matK* analysis of this study resolved the different clades well at the tribal and generic levels, except Eucharideae and Stenomessea. Resolution was good and the fourteen different clades were well-supported by bootstrap and jackknife values. The tribe Amaryllideae is a well-supported sister clade to the rest of the tribes of Amaryllidaceae. Some foreign tribes indicated a closer relationship with their inclusion into the same monophyletic group, such as Narcissea and Pancratieae (both Mediterranean) or Eucharideae, Stenomesseae and Hymenocallideae (all American). In the southern African tribes there is a significant indication of a close relationship between *Cyrtanthus* (Cyrtantheae) and *Clivia* (Haemantheae), and between *Gethyllis* (Gethyllideae), *Haemanthus* and *Scadoxus* (both Haemantheae). Possible close relationships were indicated between different species from the same genus, between species of different genera in the same tribe, and between species of different tribes. The results of the *matK* data support previous studies done by Ito *et al.* (1999) and Lledó *et al.* (2004). The South African genera used in this study supported the different geographical clades (Ito *et al.* 1999) and represented the *Cyrtanthus,* the African I and the African II clades primarily. The groupings of the different genera into their respective tribes were well-supported in this study and support the classification of Meerow & Snijman (1998, 2001). The analysis supported the classification of the South African genera that were investigated in the family of Amaryllidaceae.

In this study, the ITS analysis resolved the different clades at the tribal and generic levels, except Eucharideae, Stenomesseae, Galantheae and Pancratieae. The classification of the South African genera in the Amaryllidaceae was well-supported by high bootstrap and jackknife values. Amaryllideae again is a well-supported sister clade to the rest of the tribes in Amaryllidaceae. High bootstrap and/or jackknife support were indicated for monophyletic groupings of some southern African genera: *Amaryllis*, *Ammocharis*, *Crinum*, *Brunsvigia*, *Strumaria*, *Crossyne*, *Boophone*, *Gethyllis*, *Haemanthus*, *Scadoxus*, *Clivia*, *Cyrtanthus* and some foreign genera: *Hippeastrum* and *Narcissus*. The results supported the *matK* data that Gethyllideae is included with Haemantheae in a monophyletic group. A close relationship between Cyrtantheae and Haemantheae was indicated which also supported the *matK* results. Closer relationships were indicated for some foreign tribes with their inclusion into the same monophyletic group, such as Eucharideae and Stenomesseae, Hymenocallideae and Stenomesseae (all American) or Pancratieae, Galantheae and Narcisseae (all Mediterranean). Possible relationships were indicated between different species from the same genus, between species of different genera in the same tribe, and between species of different tribes. Similar

to the *matK* analysis, the South African genera supported the geographical clades (Ito *et al.* 1999). These genera represented the *Cyrtanthus*, the African I and the African II clades primarily. The ITS results supported the *matK* results that the indigenous genera used in this study originated from Africa. Similarly, the foreign genera originated from America and the Mediterranean. Furthermore, the ITS results supported previous studies on this DNA region (Meerow *et al.* 2000, Meerow & Snijman 2001, Ran *et al.* 2001, Meerow *et al.* 2003) and the classification of Meerow & Snijman (1998, 2001).

The combined *trnL-F* and *matK* data set of this study resolved all the tribes except Galantheae and Pancratieae. Two major clades were indicated by the phylogenetic tree. A well-supported Amaryllideae comprises one clade, while the rest of the tribes comprise the other clade. Four well-supported monophyletic groups were indicated: the genus *Clivia*, the tribe Stenomesseae, the genus *Cyrtanthus*, and the last group consisted of the genera *Gethyllis*, *Haemanthus* and *Scadoxus*. Monophyletic groups were indicated for Haemantheae and Calostemmateae, Eustephieae and Stenomesseae, and Galantheae, Pancratieae and Narcisseae. The genera *Gethyllis*, *Haemanthus* and *Scadoxus* were all combined as a sister group. Close relationships were indicated between different species from the same genus, between species of different genera in the same tribe, and between species of different tribes. The results supported the *matK* and ITS data that the indigenous genera used in this study originated from southern Africa and that the foreign genera originated from America and the Mediterranean. The classification of Meerow & Snijman (1998, 2001) was well supported by the combined data. Results obtained from previous studies were supported by the combined data (Ito *et al.* 1999, Meerow *et al.* 1999, Graham & Barrett 2004, Lledó *et al.* 2004).

The combined *trnL-F*, *matK* and ITS data set resolved all the tribes except Pancratieae. Two major clades, similar to the previous combined matrix, were indicated. Six strong supported monophyletic genera were indicated: *Brunsvigia*, *Crinum*, *Clivia*, *Haemanthus*, *Scadoxus* and *Cyrtanthus*. All these genera consist primarily of South African species. Some tribes were included into the same monophyletic group: Gethyllideae and Haemantheae, Eustephieae and Stenomesseae, and Galantheae, Pancratieae and Narcisseae. The genera *Gethyllis*, *Haemanthus* and *Scadoxus* were all combined as a sister group, which supported the results of the separate *matK* and ITS analyses in this study. Close relationships were indicated between different species from the same genus, between species of different genera in the same tribe, and between species of different tribes. Results supported the classification of

Meerow & Snijman (1998, 2001) and previous studies (Ito *et al.* 1999, Meerow *et al.* 1999, 2000, 2003, Graham & Barrett 2004, Lledó *et al.* 2004).

The combined *trnL-F* and *matK* matrix gave better results than the separate *trnL-F* analysis. The results of both the *matK* data and the combined matrix were well supported by bootstrap and jackknife. The sister status of the Eurasian/American/ Mediterranean clades are better resolved in the separate *matK* analysis than the combined matrix. The indigenous tribes Amaryllideae, Haemantheae, Cyrtantheae and Gethyllideae were resolved and well supported in the separate *matK* and combined analysis. The results between the two combined matrices were very similar but the different tribes were better resolved in the combined matrix of all three DNA regions. According to Meerow & Snijman (2001), the combined data sets often increase the resolution of the ingroup, the bootstrap and jackknife support of the internal nodes. In this study, the combined matrices indicated stronger bootstrap and jackknife support compared to the separate data sets of *trnL-F*, *matK* and ITS. When combined matrices were aligned, the lack of available sequences on Genbank that consist of all three DNA regions for a specific taxon was realized. Therefore many of the taxa had to be removed because of insufficient data.

In the cytogenetic study of various *Cyrtanthus* species a somatic chromosome number of 2n = 2x = 16 was observed in the most of them except for two specimens of *C. mackenii* var. *mackenii*. A somatic chromosome number of 2n = 4x = 32 was indicated by these specimens. A tetraploid *Cyrtanthus* species has not been previously reported. This higher ploidy level is a good indication of aneuploidy with a doubling of the original chromosome number of 16 to 32. When comparing the cytogenetic results with the phylogenetic analyses in this study for Cyrtantheae, the tribe Cyrtantheae, a monophyletic group, supports a basic chromosome number of 8 and represents a separate group from tribes with a higher basic chromosome number of 9 (Haemantheae and Hippeastreae), 10 (Amaryllideae, Hippeastreae and Narcisseae), 11 (Amaryllideae, Haemantheae, Hippeastreae and Narcisseae) and 12 (Haemantheae and Hippeastreae). However, this study did not support previous studies that ideograms vary among the different *Cyrtanthus* species and may be used in the identification of certain species. The variation in the ideograms was minimal and not sufficient for identification purposes.

In this study the basic chromosome numbers of the different tribes were supported by the resulting groupings in the strict cladograms. The different geographical clades were also supported by the basic chromosome numbers. However, chromosome behaviour of the

different species has to be examined to get a better picture of the hybridization between species and genera. Chromosome studies will also indicate a specific basic chromosome number for these species. Minimal studies on the chromosome morphology and behaviour combined with the molecular systematics of southern African Amaryllidaceae have been reported and further studies are necessary. As more becomes known of the origin of southern African species in this family, the lack of knowledge regarding chromosome morphology and behaviour becomes more apparent. Molecular systematics gives insight into the evolution of plant families. With the combination of systematics and cytogenetics (Ran *et al.* 2001), we may get a better picture of how plant species have originated. DNA regions are utilized to construct phylogenies, which are used to analyse the patterns of chromosome evolution in plant species. Techniques such as, for example, genomic *in situ* hybridization (GISH) could make the visualization of this chromosome evolution possible.

CHAPTER FIVE

SUMMARY

The subject of this study is the family Amaryllidaceae with emphasis on 14 genera which represent six of the 15 tribes in this family. The genera are *Amaryllis* L., *Ammocharis* Herb., *Boophone* Herb., *Brunsvigia* Heist., *Clivia* Lindl., *Crinum* L., *Crossyne* Salisb., *Cyrtanthus* Aiton, *Gethyllis* L., *Haemanthus*, *Hippeastrum*, *Narcissus* L., *Scadoxus* Raf. and *Strumaria* Jacq. *ex* Willd. The Amaryllidaceae is a cosmopolitan, predominantly pantropical, family of petaloid, perennial or biennial monocots. The Amaryllidaceae form one of the climax groups in the Asparagales. They are probably more closely related to Alliaceae and Hyacinthaceae. The Amaryllidaceae is a large group consisting of about 860 species in 59 genera. Its centre of diversity is in Africa (19 genera) and South America (28 genera). Some genera also occur in the Mediterranean (8 genera) and temperate regions of Asia. Only one genus, *Crinum* L., is represented in both the Old and New Worlds because of seeds well adapted for dispersal over water.

For this study a chloroplast gene and DNA region: *matK* and *trnL-F*, respectively, and a nuclear DNA region: ITS, were used in the phylogenetic reconstruction. All three give DNA sequences that are useful for comparing species and closely related genera. Despite a lack of consensus on generic limits and tribal delimitation within the Amaryllidaceae, cladistic analysis has only rarely been applied to problems in the family. Homoplasy for many conspicuous characters within some genera impedes the application of phylogenetic studies for the entire family.

The combined *trnL-F* and *matK* matrix gave better results than the separate *trnL-F* analysis. The results of both the *matK* data and the combined matrix were well supported by bootstrap and jackknife. The sister status of the Eurasian/American/Mediterranean clades were better resolved in the separate *matK* analysis than the combined matrix. The indigenous tribes Amaryllideae, Haemantheae, Cyrtantheae and Gethyllideae were resolved and well supported in the separate *matK* and combined analysis. The results between the two combined matrices were very similar but the different tribes were better resolved in the combined matrix of all three DNA regions. In this study, the combined matrices indicated stronger bootstrap and jackknife support compared to the separate data sets of *trnL-F*, *matK* and ITS.

Reported chromosome numbers of genera in the Amaryllidaceae indicates that variation between somatic chromosome numbers in each tribe is not high, except where hybridization may occur. Most of these somatic chromosome numbers agree with the given basic chromosome numbers that may occur in each tribe. As more becomes known of the southern African species in the family Amaryllidaceae, the lack of knowledge regarding chromosome morphology and behaviour becomes more apparent. In this study, the results of a cytogenetic study on several *Cyrtanthus* species are included. Chromosomes in this genus are large, as in the rest of the Amaryllidaceae. Variations in their karyotypes have been described.

A somatic chromosome number of 2n = 2x = 16 was observed in most of the *Cyrtanthus* species except for two specimens of *C. mackenii* var. *mackenii.* A somatic chromosome number of 2n = 4x = 32 was indicated by these specimens. A tetraploid *Cyrtanthus* species has not been previously reported. However, this study did not support previous studies that ideograms vary among the different *Cyrtanthus* species and may be used in the identification of certain species. The variation in the ideograms was minimal and not sufficient for identification purposes.

The results of this study strongly support those from previous studies and can be used in the classification of Amaryllidaceae.

Keywords: Amaryllidaceae, chromosome numbers, DNA sequencing, ITS region, *matK* gene, phylogenetic relationships, *trnL-F* region

CHAPTER SIX

OPSOMMING

Die onderwerp van hierdie studie behels die familie Amaryllidaceae met klem op 14 genera wat ses van die 15 tribusse verteenwoordig in hierdie familie. Die genera is *Amaryllis* L., *Ammocharis* Herb., *Boophone* Herb., *Brunsvigia* Heist., *Clivia* Lindl., *Crinum* L., *Crossyne* Salisb., *Cyrtanthus* Aiton, *Gethyllis* L., *Haemanthus*, *Hippeastrum*, *Narcissus* L., *Scadoxus* Raf. en *Strumaria* Jacq. *ex* Willd. Die Amaryllidaceae is 'n kosmopolitaanse, oorwegend pantropiese familie van kroonblaarvormige, meerjarige of tweejarige monokotiele. Die Amaryllidaceae vorm een van die klimaksgroepe in die Asparagales. Hulle is moontlik meer naverwant aan Alliaceae en Hyacinthaceae. Die Amaryllidaceae is ? groot groep wat bestaan uit ongeveer 860 spesies in 59 genera. Die middelpunt van diversiteit van hierdie familie is in Afrika (19 genera) en Suid-Amerika (28 genera). Sekere genera kom ook voor in die Mediterreen (8 genera) en matige gebiede van Asië. Net een genus, *Crinum* L., word verteenwoordig in beide die Ou en Nuwe Wêrelde vanweë saad wat goed aangepas is vir verspreiding oor water.

Filogenetiese analise mag molekulêre data van nukleotiedvolgordes bevat om die klassifikasie van Amaryllidaceae tot in verskeie tribusse te evalueer. ? Chloroplastgeen en DNA-streek: *matK* en *trnL-F*, onderskeidelik, asook ? kern DNA-streek: ITS is gebruik in die filogenetiese rekonstruksie vir hierdie studie. Aldrie verskaf DNA-nukleotiedvolgordes wat nuttig is in die vergelyking van spesies en nabyverwante genera. Ongeag ? gebrek aan konsensus oor generiese limiete en tribusafbakening binne die Amaryllidaceae is kladistiese analise nog min toegepas op probleme in die familie. Homoplasie vir baie opvallende karakters binne sommige genera belemmer die toepassing van filogenetiese studies vir die hele familie.

Die gekombineerde *trnL-F* en *matK* matriks het beter resultate gelewer as die aparte *trnL-F* analise. Die resultate van beide die *matK*-data en die gekombineerde matriks is goed ondersteun deur die steekproefhersteekproefnemingswaarde en J-uitsnit. Die susterstatus van die Eurasië/Amerikaanse/Mediterreense takke word beter verklaar in die aparte *matK*-analise as in die gekombineerde matriks. Die inheemse tribusse Amaryllideae, Haemantheae, Cyrtantheae en Gethyllideae word verklaar en goed ondersteun in die aparte *matK*- en gekombineerde analise. Die resultate tussen die twee gekombineerde matrikse was baie

ooreenstemmend, maar die verskillende tribusse is beter verklaar in die gekombineerde matriks bestaande uit aldrie DNA-streke. Die gekombineerde matrikse het sterker steekproefhersteekproefnemingswaarde en J-uitsnit ondersteuning getoon in vergelyking met die aparte datastelle van *trnL-F*, *matK* en ITS in hierdie studie.

Gepubliseerde chromosoomgetalle van genera in die Amaryllidaceae toon dat variasie tussen somatiese chromosoomgetalle in elke tribus nie hoog is nie, behalwe waar verbastering mag plaasgevind het. Meeste van hierdie somatiese chromosoomgetalle stem ooreen met die gegewe basiese chromosoomgetalle wat kan voorkom in elke tribus. Die gebrek aan kennis ten opsigte van chromosoommorfologie en –gedrag word meer opsigtelik soos nog inligting oor die suidelike Afrika-spesies in die familie Amaryllidaceae bekend word. Die resultate van ? sitogenetiese studie op verskeie *Cyrtanthus*-spesies word ingesluit by hierdie projek. Chromosome in hierdie genus is groot soos in die res van die Amaryllidaceae. Variasies in hulle kariotipes is al beskryf.

? Somatiese chromosoomgetal van 2n = 2x = 16 is waargeneem in meeste van die *Cyrtanthus*-spesies behalwe vir twee eksemplare van *C. mackenii* var. *mackenii*. ? Somatiese chromosoomgetal van 2n = 4x = 32 is getoon deur hierdie eksemplare. ? Tetraploïede *Cyrtanthus*-spesie is nog nie voorheen gerapporteer nie. Vorige studies wat aandui dat ideogramme varieer tussen die verskillende *Cyrtanthus*-spesies en gebruik kan word in die identifisering van verskeie spesies, word nietemin nie deur hierdie studie ondersteun nie. Die variasie in die ideogramme was minimaal en nie geskik vir identifikasiedoeleindes nie.

Die resultate verkry in hierdie studie vergelyk baie goed met resultate verkry van vorige studies en kan gebruik word in die klassifikasie van Amaryllidaceae.

Sleutelwoorde: Amaryllidaceae, chromosoomgetalle, DNA-nukleotiedvolgordebepaling, filogenetiese verwantskappe, ITS-gebied, *matK*-geen, *trnL-F* gebied

CHAPTER SEVEN

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APPENDIX A Sequences of *trnL-F*, *matK* and ITS for Amaryllidaceae obtained from Genbank.

Sequences of *trnL-F*:

Species	**Voucher number**
Acorus calamus	AY054742
Amaryllis belladonna	AF104795
Amaryllis belladonna spacer	AF104744
Ammocharis coranica	AY139152
Apodolirion lanceolatum	AF104789
Apodolirion lanceolatum spacer	AF104767
Boophone disticha	AF104801
Boophone disticha spacer	AF104726
Brunsvigia comptonii	AF104813
Brunsvigia comptonii spacer	AF104722
Caliphruria korsakoffii	AF104810
Caliphruria korsakoffii spacer	AF104731
Calostemma lutea	AF104790
Calostemma lutea spacer	AF104740
Chlidanthus fragrans	AF104770
Chlidanthus fragrans spacer	AF104723
Clivia caulescens	AY278973
Clivia caulescens spacer	AY278959
Clivia gardenia	AY278974
Clivia gardenia spacer	AY278960
Clivia miniata	AY278975
Clivia miniata spacer	AY278961
Clivia nobilis	AF104776
Clivia nobilis spacer	AF104763
Crinum abyssinicum	AY139153
Crinum americanum	AY139154
Crinum asiaticum	AY139155
Crinum asiaticum intron	AB090943
Crinum baumii	AY139156
Crinum buphanoides	AY139157
Crinum campanulatum	AY139158
Crinum cruentum	AY139159
Crinum distichum	AY139160
Crinum erubescens	AY139161
Crinum flaccidum	AY139162
Crinum forbesii	AY139163
Crinum jagus	AY139164
Crinum jagus spacer	AJ247487
Crinum jagus intron	X74729
Crinum jagus spacer	X74580

Crinum ligulatum	AY139165
Crinum oliganthum	AY139166
Crinum pedunculatum	AY139167
Crinum pedunculatum spacer	AJ232561
Crinum pedunculatum intron	AJ232438
Crinum yemenense	AF104784
Crinum yemenense spacer	AF104756
Crinum sp. *Meerow2332*	AY139168
Cryptostephanus vansonii	AF104804
Cryptostephanus vansonii spacer	AF104743
Cybistetes longifolia	AF104817
Cybistetes longifolia	AY139169
Cybistetes longifolia spacer	AF104752
Cyrtanthus elatus	AF104818
Cyrtanthus elatus spacer	AF104753
Eucharis castelnaeana	AF104798
Eucharis castelnaeana spacer	AF104766
Eucrosia eucrosioides	AF104788
Eucrosia eucrosioides spacer	AF104742
Eustephia darwinii	AF104794
Eustephia darwinii spacer	AF104727
Galanthus plicatus	AF104799
Galanthus plicatus spacer	AF104730
Gethyllis britteniana spacer	AY278963
Gethyllis ciliaris	AF104816
Gethyllis ciliaris spacer	AF104745
Gethyllis lanuginose spacer	AY278964
Gethyllis verticillata spacer	AY278965
Griffinia hyacinthine	AF104771
Griffinia hyacinthine spacer	AF104736
Habranthus martinezii	AF104772
Habranthus martinezii spacer	AF104738
Haemanthus albiflos spacer	AY278966
Haemanthus graniticus spacer	AY278967
Haemanthus humilis	AF104781
Haemanthus humilis spacer	AF104721
Haemanthus pumilio spacer	AY278968
Hannonia hesperidum	AF104812
Hannonia hesperidum spacer	AF104734
Hessea zeyheri	AF104803
Hessea zeyheri spacer	AF104741
Hieronymiella marginata	AF104807
Hieronymiella marginata spacer	AF104757
Hippeastrum papilio	AF104775
Hyacinthus orientalis	AF117043
Hymenocallis eucharidifolia	AF411078

Hymenocallis eucharidifolia spacer	AF411079
Hymenocallis latifolia	AF104796
Hymenocallis latifolia spacer	AF104719
Ismene narcissiflora	AF104787
Ismene narcissiflora spacer	AF104725
Ismene vargasii	AF104802
Ismene vargasii spacer	AF104732
Jaimehintonia gypsophila	AF508481
Lapiedra martinezii	AF104806
Lapiedra martinezii spacer	AF104750
Leptochiton quitoensis	AF104779
Leptochiton quitoensis spacer	AF104755
Leucojum autumnale	AF104773
Leucojum autumnale spacer	AF104758
Lycoris albiflora intron	AB090944
Lycoris squamigera	AF104780
Lycoris squamigera spacer	AF104733
Narcissus albimarginatus spacer	AY490177
Narcissus bulbocodium var. *nivalis* spacer	AY490181
Narcissus calcicola spacer	AY490185
Narcissus cuatrecasasii spacer	AY490193
Narcissus cyclamineus spacer	AY490179
Narcissus elegans	AF104791
Narcissus elegans spacer	AF104746
Narcissus jonquilla spacer	AY490195
Narcissus lusitanicus spacer	AY490200
Narcissus marvieri spacer	AY490188
Narcissus pallidulus spacer	AY490198
Narcissus poeticus spacer	AY490196
Narcissus pseudonarcissus spacer	AY490180
Narcissus rupicola spacer	AY490190
Narcissus scaberulus spacer	AY490184
Narcissus serotinus spacer	AY490201
Narcissus tazetta intron	AJ232439
Narcissus tazetta spacer	AJ232562
Narcissus tortifolius spacer	AY490202
Narcissus triandrus spacer	AY490199
Narcissus watieri spacer	AY490189
Nerine bowdenii	AF104769
Nerine bowdenii spacer	AF104751
Pabellonia incrassata	AF117026
Pabellonia incrassate spacer	AF117054
Pamianthe peruviana	AF104814
Pamianthe peruviana spacer	AF104759
Pancratium canariense	AF104778
Pancratium cnariense spacer	AF104718

Paramongaia weberbaueri	AF104777
Paramongaia weberbaueri spacer	AF104764
Petronymphe decora	AF508488
Phaedranassa dubia	AF104809
Phaedranassa dubia spacer	AF104729
Proiphys cunninghamii	AF104785
Proiphys cunninghamii spacer	AF104762
Rauhia decora	AF104805
Rauhia decora spacer	AF104735
Rhodophiala moelleri	AF104782
Rhodophiala moelleri spacer	AF104720
Scadoxus cinnabarinus	AF104783
Scadoxus cinnabarinus spacer	AF104754
Scadoxus membranaceus spacer	AY278969
Scadoxus puniceus spacer	AY278970
Sprekelia formosissima	AF104808
Sprekelia formosissima spacer	AF104728
Stenomesson pearcei	AF104800
Stenomesson pearcei spacer	AF104739
Stenomesson variegatum	AF104811
Stenomesson variegatum spacer	AF104724
Sternbergia lutea	AF104793
Sternbergia lutea spacer	AF104747
Strumaria truncata	AF104819
Strumaria truncate spacer	AF104765
Traubia modesta	AF104792
Traubia modesta spacer	AF104748
Ungernia flava	AF104797
Ungernia flava spacer	AF104749
Vagaria parviflora	Af104786
Vagaria parviflora spacer	AF104760
Worsleya rayneri	AF104774
Worsleya rayneri spacer	AF104761
Zephyranthes filifolia	AF104815
Zephyranthes filifolia spacer	AF104737

Sequences of *matK*:

Species	**Voucher number**
Acis autumnalis var. *oporantha*	AY101317
Acis fabrei	AY101318
Acis longifolia	AY101319
Acis nicaeensis	AY101320
Acis rosea	AY101321
Acis tingitana	AY101322
Acis trichophylla	AY101323
Acis valentina	AY101324
Acis valentina	AY101325
Acorus calamus	AB040154
Amaryllis belladonna	AB017274
Brunsvigia striata	AB017275
Calostemma lutea	AB017276
Chlidanthus fragrans	AB017277
Clivia miniata	AB017278
Crinum moorei	AB017279
Cyrtanthus mackenii	AB017280
Eucharis grandiflora	AB017281
Eucrosia bicolor	AB017282
Eurycles amboinensis	AB017283
Eustephia darwinii	AB017284
Galanthus alpinus	AY101327
Galanthus cilicicus	AY101328
Galanthus elwesii	AY101329
Galanthus elwesii	AB017285
Galanthus fosteri	AY101330
Galanthus ikariae	AY101332
Galanthus lagodechianus	AY101334
Galanthus nivalis	AY101335
Galanthus plicatus	AY101337
Galanthus regiane-olgae subsp. *vernalis*	AY101339
Galanthus reginae-olgae	AY101338
Galanthus transcaucasicus	AY101340
Galanthus woronowii	AY101341
Hippeastrum stylosum	AB017287
Hyacinthus orientalis	AB017320
Hymenocallis caribaea	AB017288
Lapiedra martinezii	AY101342
Leucojum aestivum	AB017289
Leucojum aestivum	AY101314
Leucojum aestivum subsp. *pulchellum*	AY101315
Leucojum autumnale	AY101316
Leucojum vernum subsp. *carpaticum*	AY101326

Lycoris traubii	AB017290
Narcissus bicolor	AY101343
Narcissus tazetta	AB017291
Nerine bowdenii	AB017292
Nolina recurvata	AB017330
Pancratium canariense	AY101344
Paramongaia weberbaueri	AB017294
Phaedranassa dubia	AB017295
Rhodophiala bifida	AB017296
Scadoxus multiflorus	AB017297
Stenomesson variegatum	AB017299
Sternbergia lutea	AB017300
Sternbergia lutea	AY101345
Strumaria watermeyeri	AB017301
Urceolina peruviana	AB017303
Ungernia tadshicorum	AB017302
Vagaria parviflora	AY101346
Vagaria parviflorum	AB017293
Zephyranthes candida	AB017304

Sequences of ITS:

Species	**Voucher number**
Acorus calamus	AF209786
Agapanthus caulescens	AF373070
Amaryllis belladonna	AF373084
Amaryllis paradisicola	AF373073
Ammocharis coranica	AF373080
Ammocharis nerinoides	AY139116
Apodolirion lanceolatum	AY280345
Boophone disticha	AF373074
Boophone haemanthoides	AF373071
Brunsvigia bosmaniae	AF373072
Brunsvigia comptonii	AF373098
Brunsvigia radula	AF373083
Caliphruria korsakoffii	AF223529
Carpolyza spiralis	AF373086
Chlidanthus fragrans	AF223524
Clivia caulescens	AY280346
Clivia gardenii	AY280347
Clivia miniata	AY280348
Clivia nobilis	AY280349
Crinum abyssinicum	AY139117
Crinum acaule	AY139118
Crinum americanum	AY139119
Crinum americanum	AF293854
Crinum asiaticum	AY139120
Crinum baumii	AY139121
Crinum broussonetii	AY139122
Crinum bulbispermum	AY139123
Crinum buphanoides	AY139124
Crinum campanulatum	AF373088
Crinum carolo-schmidtii	AY139125
Crinum crassicaule	AY139126
Crinum cruentum	AY139127
Crinum defixum	AY139128
Crinum distichum	AY139129
Crinum erubescens	AY139130
Crinum fimbriatulum	AY139131
Crinum flaccidum	AY139132
Crinum forbesii	AY139133
Crinum humile	AY139134
Crinum jagus	AY139135
Crinum kirkii	AY139136
Crinum latifolium	AY139137
Crinum ligulatum	AY139138

Crinum macowanii	AF373094
Crinum mauritianum	AY139139
Crinum modestum	AY139140
Crinum moorei	AY139141
Crinum oliganthum	AY139142
Crinum pedunculatum	AY139143
Crinum politifolium	AY139144
Crinum razafindratsiraea	AY139145
Crinum sp. *Meerow 2332*	AY139147
Crinum sp. *Meerow 2333*	AY139148
Crinum sp. *Schunke 14054*	AY139149
Crinum subcernuum	AY139150
Crinum variabile	AF373090
Crinum venosum	AY139146
Crinum yemenense	AY139151
Crossyne guttata	AF373089
Cryptostephanus haemanthoides	AY280350
Cybistetes longifolia	AF373093
Eucharis formosa	AF223539
Eucrosia bicolor	AF223511
Eustephia darwinii	AF223543
Galanthus fosteri	AY101297
Gethyllis britteniana	AY280352
Gethyllis ciliaris	AY280353
Gethyllis lanuginosa	AY280354
Gethyllis verticillata	AY280355
Griffinia hyacinthina	AF223473
Habranthus brachyandrus	AF223504
Haemanthus albiflos	AY280356
Haemanthus coccineus	AF324031
Haemanthus graniticus	AY280357
Haemanthus pumilio	AY280358
Hessea stellaris	AF373096
Hieronymiella argentina	AF223541
Hippeastrum blumenavia	AF223501
Hippeastrum brasilianum	AF223479
Hippeastrum macbridei	AF223509
Hippeastrum mollevillquense	AF223489
Hippeastrum parodii	AF223508
Hippeastrum papilio	AF223496
Hippeastrum reticulatum	AF223484
Hymenocallis latifolia	AF223516
Ismene longipetala	AF223520
Lapiedra martinezii	AY101309
Leptochiton quitoensis	AF223521
Leucojum autumnale	AY101283

Lycoris chinensis	AY563135
Narcissus bicolor	AY101310
Nerine alta	AF373068
Pamianthe peruviana	AF223546
Pancratium canariense	AY101311
Paramongaia weberbaueri	AF223536
Phaedranassa ventricosa	AF223528
Phycella ignea	AF223505
Pyrolirion sp. *Chase 3639*	AF223493
Rauhia decora	AF223523
Rhodophiala moelleri	AF223481
Scadoxus cinnabarinus	AY280359
Scadoxus membranaceus	AY280360
Scadoxus puniceus	AY280361
Sprekelia formosissima	AF223483
Stenomesson humile	AF223547
Sternbergia lutea	AY101312
Strumaria aestivalis	AF373082
Strumaria bidentata	AF373081
Strumaria chaplinii	AF373085
Strumaria discifera	AF373075
Strumaria picta	AF373099
Strumaria tenella	AF373097
Strumaria truncata	AF373077
Strumaria watermeyeri	AF373091
Urceolina microcrater	AF223530
Vagaria parviflora	AY101313
Worsleya rayneri	AF223475
Zephyranthes flavissima	AF223510

APPENDIX B Aligned sequences of the *trnL-F* DNA region for Amaryllidaceae.

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                        1                                                  50
Ama.belladonna7920      GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Ama.belladonna          GAAGTTAA------AGGAAGAATCGAA-TATTCG-----GTGATC--AAA
Apo.lanceolatum         GAAGTTTA------AGGAAGAATCGAA-TATTCG-----GTGATC--ACA
Amm.coranica7164        GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATCCAAAT
Amm.nerinoidesRHA32     -------------------------------------------------
Amm.coranicaspacer      GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Bo.disticha             GAAGTTTA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Br.comptonii            GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATA--AAA
Bo.disticha7172         GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Br.gregaria7157         GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATA--AAA
Cro.flava7256           GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GCGATC--AAA
Br.radulosa7440         GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATA--AAA
Br.radulosanata7629     GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GCGATA--AAA
Br.bosmaniae7251        ----------------------------------------ATA--AAA
Cl.caulescensRC9b       GGAGTTAA------GGGAAGAATCGAA-TATTCA-----GGGATC--AAA
Cl.caulescensRC10b      GAAGTTAA------GGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cl.miniata8095          GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GGGATC--AAA
Cl.miniataRC14          GAAGTTAAGTTAA-AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cl.caulescens8092       GAAGTTAA------GGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cl.miniata              GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cl.sp.RC7b              GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cali.korsakoffii        GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cl.cyrtantiflora8094    GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cl.nobilisRC6b          GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cl.caulescens           GAAGTTAA------GGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cl.gardenii             GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cl.miniata              GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cl.nobilis8091          GAAGTTAA------AGGAAGAATCGAA-TATTCA-----G-GATC--AAA
Chl.fragrans            GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GCGATC--AAA
Cl.nobilis              GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Calo.lutea              GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.yemenense            GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.euchrophylluRC96     GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.acauleRC106          GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.acaulglaucRC105      GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.bulbispermumRC95     GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.campanulatum7167     GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.foetidumRC98         GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.graminicola7630      GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.lugardii7632         GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.macowanii7168        GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.nearmacowaniRC100    GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.abyssinicum          GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.buphanoidesRC102     GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.americanum           GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.asiaticum            GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.baumii               GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.acauleRC38           GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.buphanoides          GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.campanulatum         GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.cruentum             GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
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                            1                                                50
Cr.distichum          GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.erubescens         GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.flaccidum          GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.forbesii           GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.jagus              GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.ligulatum          GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.oliganthum         GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.penduncu1atum      GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.Meerow2332         GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.buphanoides7631    GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.carolschmidRC97    GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.lineareRC99        GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.minimumRC37        GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.paludosumRC41      GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.variabileRC44      GAAGTTAA------AGGAAGAATCGAAATATTCA-----GTGATC--AAA
Cr.moorei7921         GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cry.vansonii          --A--TA---------------T---------------------------
Cy.herrei7217         GAAGTTAA------AGGAAGAATCGAA-TATTC------GTGATC--AAA
Cy.brachyscyphuRC90   GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cyb.longifolia        GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.elatus7636         GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.brachyscyphus7406  GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.elatusRC93         GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.huttonii7206       GAAGTTAA------AGGAAGAATCGAA-TATTCT-----GTGATC--AAA
Cy.mackenii7179       GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.mackeniiRC87       GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.macowanii7201      GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.obliquus7180       GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.obliquus7278       GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.ochroleucus7639    GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.contractus7199     GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.labiatus7258       GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC---AA
Cy.nova7963           GAAGTTAA------AGGAAGAATCGAA-TATTCG-----GTGATC--AAA
Cy.sanguineusRC94     GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.spesiosus7213      GAAGTTAA------AGGAAGA-TCGA--TATTCA-----GGGATC--AAA
Cy.staadensis7316     GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC-AAAT
Cy.breviflorus7188    GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GCGATC--AAA
Cy.elatus7202         GAAGTTAA--------GGAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.labiatus7212       GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.obliquus7210       GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.sanguineus7216     GAAGTTAA------AGGAAGAATCGAATATTCCA-----GTGATC--AAA
Cy.smithiae7214       GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.suaveolens7181     GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.breviflorus7634    GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.elatus7198         GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.spesiosus7640      GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.eucallus7218       GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.spesiosusRC84      GAAGTTAA------AGGAAGAATCGAA-TATTCCC----GTGATCA-AAT
Cy.spiralis7219       GAAGTTAA------AGGAAGAATCCGAATATTCCA----GTGATCC-AAA
Cy.wellandiiRC83      GAAGTTAA-------GGAAGAATCTAA-TATTCA-----GTGATC--AAA
Cy.obrienii7193       GAAGTTAA------AGGAAGAATCGAA-TATTCCA----GGGATC--AAA
Cy.herreiRC86         --------------------------------------------------
Cy.brachyscyphus7204  --------------------------------------------------
Cy.thorncroftiRC80    --------------------------------------------------
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Cy.loddigesianus7203 --------------------------------------------------
Cy.falcatus7637      GAAGTTAA------AGGAAGAATCGAA-TATTCCC----GGGATC--AAA
Cy.elatus            GAAGTTAA-------AGGAGAATCGAA-TATTTCA----GTGATC--AGA
Cy.falcatusRC82      ----------------------------------------T--TC-----
Cy.spiralis7964      GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATCCAAAT
Ge.namaquensisAMV642 GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Eus.darwinii         GAAGTTCA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Ga.plicatus          GAAGTTAA------AGGAATAATCAAA-TATTCA-----GTGATC--AAA
Euc.castelnaeana     GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Ge.verticillatspacer --------------------------------------------------
Ge.brittenianaspacer --------------------------------------------------
Ge.lanuginosaspacer  --------------------------------------------------
Gr.hyacinthine       GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Eucr.eucrosioides    GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Ge.ciliaris          GAAGTTTA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Ge.namaquensisAMV635 GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC---AA
Ge.namaquensisAMV639 GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Hes.zeyheri          CAA-TCGAAGTTAAAGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Hip.sp.7447          GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Hym.eucharidifolia   GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Hae.sanguineus7253   GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Hae.montanus7163     GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Hae.humilis7254      GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Hae.albiflos7512     GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Hae.coccineusAMV632  GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GCGATC--AAA
Hae.albiflos7517     GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Hae.paucilifoliu7925 GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Hae.albiflosspacer   --------------------------------------------------
Hae.humilisspacer    --------------------------------------------------
Hae.graniticusspacer --------------------------------------------------
Hae.pumiliospacer    --------------------------------------------------
Hae.crispus7252      ----------------------------------------ATA--AAA
Hie.marginata        GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GCGATC--AAA
Hae.crispus7260      GAAGTTAA------AGGAAGAATCGAA-TATTCCA----GTGATCC-AAA
Hae.humilis          GAAGTTAAA----GGAGAGAGATCGAA-TATTCA-----GTGATC--AAA
Hip.papilio          GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Hab.martinezii       GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Hym.latifolia        GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATCC--AA
Hae.hirsitus7626     ------------------AGAATCGAA-TTTTCA-----GCGATA--AAA
Han.hesperidum       GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
La.martinezii        GAAGTTAA------AGGAAGAATCGAATAGAATATTCA-GTGATC--AAA
Is.narcissiflora     GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--ATA
Is.vargasii          GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Ly.squamigera        GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Lep.quitoensis       GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Leu.autumnale        GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Ly.albifloraintron   GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Ja.gypsophila        GAAGTTGA------CGGAAGAATCGAC-TATTCA-----GTGATC--AAA
Ne.bowdenii          GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Na.calcicolaspacer   --------------------------------------------------
Na.serotinusspacer   --------------------------------------------------
Na.tortifoliusspacer --------------------------------------------------
Na.jonquillaspacer   --------------------------------------------------
Na.albimarginaspacer --------------------------------------------------
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                    1                                                  50
Na.cuatrecasasspacer ---------------------------------------------------
Na.marvierispacer    ---------------------------------------------------
Na.rupicolaspacer    ---------------------------------------------------
Na.watierispacer     ---------------------------------------------------
Na.bulbocodiumspacer ---------------------------------------------------
Na.lusitanicusspacer ---------------------------------------------------
Na.pallidulusspacer  ---------------------------------------------------
Na.cyclamineusspacer ---------------------------------------------------
Na.poeticusspacer    ---------------------------------------------------
Na.pseudonarcispacer ---------------------------------------------------
Na.triandrusspacer   ---------------------------------------------------
Na.scaberulusspacer  ---------------------------------------------------
Ne.laticoma8090      GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Na.sp.7607           GAAGTTAA------AGGAAGAATTGAA-TATTCA-----GTGATC--AAA
Na.sp.7608           GAAGTTAA------AGGAAGAATCGAA-TATTCA-----ATGATC--AAA
Na.sp.7521           GAAGTTAA------AGGAAGAATCCGAATCTTCCA----ATGATCAAATG
Na.elegans           GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Na.tazetta           GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Pan.canariense       GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Pe.decora            GAAGTTGA------CGGAAGAATCGAC-TATTCA-----GTGATC--AAA
Rh.moelleri          GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Sp.formosissima      GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Pab.incrassata       GAAGTTGA------AGGAAGAATCGAA-TATTTA-----GTGATC--AAA
Sten.variegatum      GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Ph.dubia             GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Sten.pearcei         GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC---AA
Pam.peruviana        GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Pr.cunninghamii      GAAGTTTA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Sc.puniceus7918      GAAGTTAA------AGAAAGAATCGAA-TATTCA-----GTGATC--AAA
Par.weberbaueri      GAAGTTAA------AAGAAGAATCGAA-TATTCA-----GTGATC--AAA
Sc.cinnabarinus      GAAGTTAA------AGAAAGAATCGAATATTTCA-----GTGATC--AAA
Ster.lutea           GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Ra.decora            GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Sc.membranaceus7246  GAAGTTAA------AGAAAGAATCGAA-TATTCA-----GTGATC--AAA
Str.salteri7245      GAAGTGAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Sc.puniceusRHA27     ---------------------------------------------------
Str.truncata         GAAGTTAA------AGGGAGAATCGAA-TATTCA-----GCGATC-AAAA
Sc.puniceus7301      GAAGTTAA------AGAAAGAATCCGG-TCCCCC-----GTGATCC-AAA
Sc.puniceusspacer    ---------------------------------------------------
Sc.multiflorus7919   ----------------AAAGAATCGAA-T-TTCA-----GTGATCC-AAA
Sc.membranaceus7917  ----------------AAAGAATCGAA-TATTCA-----GTATC---AAA
Sc.membranaceuspacer ---------------------------------------------------
Sc.membranaceusRHA25 ----------------AAAGAATCGAA-TATTGC----CGTCCC---AAA
Ze.filifolia         GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Tr.modesta           GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Un.flava             GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Wo.rayneri           GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Va.parviflora        GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
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                          51                                                100
Ama.belladonna7920        TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Ama.belladonna            TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Apo.lanceolatum           TCATTCAT--TCCTA-GTGAGTTTGA-TAGACC-TTTCTCTCTGAACTTT
Amm.coranica7164          CCATTCAT--TCCC---AGAGTTTGA-TAGACT-TTTTT----GAA----
Amm.nerinoidesRHA32       --------------------GTTTGA-TAGACT-TTTTTTTTTGAA----
Amm.coranicaspacer        TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Bo.disticha               TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Br.comptonii              TCGTTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Bo.disticha7172           TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Br.gregaria7157           TCGTTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cro.flava7256             TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Br.radulosa7440           TCGTTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Br.radulosanata7629       TCGTTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Br.bosmaniae7251          TCGTTCAT-TCCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cl.caulescensRC9b         TCCATTCCTTTCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cl.caulescensRC10b        TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cl.miniata8095            TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cl.miniataRC14            TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cl.caulescens8092         TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cl.miniata                TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cl.sp.RC7b                TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cali.korsakoffii          TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Cl.cyrtantiflora8094      TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT---AA----
Cl.nobilisRC6b            TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cl.caulescens             TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cl.gardenii               TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cl.miniata                TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTTT--AA----
Cl.nobilis8091            TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Chl.fragrans              TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Cl.nobilis                TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Calo.lutea                TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cr.yemenense              TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.euchrophylluRC96       TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.acauleRC106            TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.acaulglaucRC105        TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.bulbispermumRC95       TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.campanulatum7167       TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.foetidumRC98           TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.graminicola7630        TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.lugardii7632           TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.macowanii7168          TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.nearmacowaniRC100      TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.abyssinicum            TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.buphanoidesRC102       TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.americanum             TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.asiaticum              TCATTCAT--TCTA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.baumii                 TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.acauleRC38             TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.buphanoides            TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.campanulatum           TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.cruentum               TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.distichum              TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.erubescens             TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.flaccidum              TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
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                        51                                                  100
Cr.forbesii             TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.jagus                TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.ligulatum            TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.oliganthum           TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.pendunculatum        TCATTCAT--TCTA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.Meerow2332           TCATTCAT--TCTA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.buphanoides7631      TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.carolschmidRC97      TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.lineareRC99          TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.minimumRC37          TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.paludosumRC41        TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.variabileRC44        TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.moorei7921           TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cry.vansonii            --------------------------------------------------
Cy.herrei7217           TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cy.brachyscyphuRC90     TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTTTTTTGAA--
Cyb.longifolia          TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cy.elatus7636           TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cy.brachyscyphus7406    TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTTTTTTGAA--
Cy.elatusRC93           TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cy.huttonii7206         TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTTTTTTGAA--
Cy.mackenii7179         TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTTTTTTGAA--
Cy.mackeniiRC87         TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTTTTTTGAA--
Cy.macowanii7201        TCATTCAT--TCCA-----AGTTTGA-TAGACC-TTTTTTTTTTTGAA--
Cy.obliquus7180         TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cy.obliquus7278         TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cy.ochroleucus7639      TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTTTTTGAA---
Cy.contractus7199       TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cy.labiatus7258         TCATTCAT-TGCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cy.nova7963             TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTTTTTTGAA--
Cy.sanguineusRC94       TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cy.spesiosus7213        TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Cy.staadensis7316       CCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cy.breviflorus7188      TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Cy.elatus7202           TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cy.labiatus7212         TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cy.obliquus7210         TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cy.sanguineus7216       TCCATTCCATTCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cy.smithiae7214         TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cy.suaveolens7181       TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTTTTTGAA---
Cy.breviflorus7634      TCATTCAT--TC---------TTTGA-TAGACC-TTTTTTTTTTTGAA--
Cy.elatus7198           TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cy.spesiosus7640        TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Cy.eucallus7218         TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cy.spesiosusRC84        CCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cy.spiralis7219         TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cy.wellandiiRC83        TCATTCAT--TCCA----GAGTTTGA-TAGACC-CTTTTTTT-GAA---A
Cy.obrienii7193         TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTTTTTGAA---
Cy.herreiRC86           --------------------------------------------------
Cy.brachyscyphus7204    --------------------------------------------------
Cy.thorncroftiRC80      --------------------------------------------------
Cy.loddigesianus7203    --------------------------------------------------
Cy.falcatus7637         TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cy.elatus               TCATTCAA--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
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                        51                                                  100
Cy.falcatusRC82         -C-TT----TCCCA----GAGTTTGA-TAGAC--TTTTTTTG-GAA----
Cy.spiralis7964         CCATTCAT--TCCA----GAGTTTGGCTAGACC-TTTTTTT--GAA----
Ge.namaquensisAMV642    TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Eus.darwinii            TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Ga.plicatus             TCATTCAT--TCCA----GAGTGTGA-TAGACC-ATTTTT---GAA----
Euc.castelnaeana        TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Ge.verticillatspacer    --------------------------------------------------
Ge.brittenianaspacer    --------------------------------------------------
Ge.lanuginosaspacer     --------------------------------------------------
Gr.hyacinthine          TCATTCAT--TCCA----GAGTTTGA-TAGACACCTTTTTT--GAA----
Eucr.eucrosioides       TCATTCAT--TCCA----GAGTGTG------CT-TTTTT----GAA----
Ge.ciliaris             TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Ge.namaquensisAMV635    TC-TTC-T-TCCCA----GAGTTTGA-TAGACC-TTTTTTTT-GAA----
Ge.namaquensisAMV639    TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Hes.zeyheri             TCATTCAT--TCCA----GAGTTTGA-TAGAC--TTTTTT---GAA----
Hip.sp.7447             TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Hym.eucharidifolia      TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Hae.sanguineus7253      TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTTTT-------
Hae.montanus7163        TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTTTT-------
Hae.humilis7254         TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTTTT-------
Hae.albiflos7512        TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTTTT---------
Hae.coccineusAMV632     TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTTTT-------
Hae.albiflos7517        TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTTTT---------
Hae.paucilifoliu7925    TAATTCAT--TCCA----GAGTTTGA-TAGGCC-TTTTTTTTT-------
Hae.albiflosspacer      --------------------------------------------------
Hae.humilisspacer       --------------------------------------------------
Hae.graniticusspacer    --------------------------------------------------
Hae.pumiliospacer       --------------------------------------------------
Hae.crispus7252         TCGTTCAT-TCCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Hie.marginata           TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Hae.crispus7260         TCATTCCA-TTCCA----GAGTTTGA-TAGACC-TTTTTTTTT-------
Hae.humilis             TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTTTT-------
Hip.papilio             TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Hab.martinezii          TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Hym.latifolia           TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAT----
Hae.hirsitus7626        TCGTTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Han.hesperidum          TCATTCAT--TCCA----GAATTTGA-TATACCCTTTTT----GAA----
La.martinezii           TCATTCAT--TCCA----GAGTTTGA-TAGACCATTTTT----GAA----
Is.narcissiflora        TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Is.vargasii             TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Ly.squamigera           TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Lep.quitoensis          TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Leu.autumnale           TCATTCAT--TCCA----GAGTTTGA-TAGACCATTTTT----GAA----
Ly.albifloraintron      TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Ja.gypsophila           TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Ne.bowdenii             TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Na.calcicolaspacer      --------------------------------------------------
Na.serotinusspacer      --------------------------------------------------
Na.tortifoliusspacer    --------------------------------------------------
Na.jonquillaspacer      --------------------------------------------------
Na.albimarginaspacer    --------------------------------------------------
Na.cuatrecasasspacer    --------------------------------------------------
Na.marvierispacer       --------------------------------------------------
Na.rupicolaspacer       --------------------------------------------------
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                    51                                                  100
Na.watierispacer    --------------------------------------------------
Na.bulbocodiumspacer --------------------------------------------------
Na.lusitanicusspacer --------------------------------------------------
Na.pallidulusspacer  --------------------------------------------------
Na.cyclamineusspacer --------------------------------------------------
Na.poeticusspacer    --------------------------------------------------
Na.pseudonarcispacer --------------------------------------------------
Na.triandrusspacer   --------------------------------------------------
Na.scaberulusspacer  --------------------------------------------------
Ne.laticoma8090      TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTT-----GAA----
Na.sp.7607           TCATTCAT--TCCC----GAGTTTGA-TAGACCATTTTT----GCA----
Na.sp.7608           TCATTCAT--TCCA----GAGTTTGA-TAGACCATTTTT----GCA----
Na.sp.7521           CATTCCAT--TCCA----GAGTTTGA-TAGACCATTTTTT---GCA----
Na.elegans           TCATTCAT--TCCA----GAGTTTGA-TAGACCATTTTT----GCA----
Na.tazetta           TCATTCAT--TCCA----GAGTTTGA-TAGACCATTTT-----GCA----
Pan.canariense       TCATTCAT--TCCA----GAGTTTGA-TAGACCATTTTT----GAA----
Pe.decora            TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Rh.moelleri          TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Sp.formosissima      TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Pab.incrassata       TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTTTT-------
Sten.variegatum      TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Ph.dubia             TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Sten.pearcei         TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Pam.peruviana        TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Pr.cunninghamii      TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Sc.puniceus7918      TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Par.weberbaueri      TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Sc.cinnabarinus      TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTTTTTGGAA----
Ster.lutea           TCATTCAT--TCCA----GAGTTTGA-TAGATCATTTTT----GAA----
Ra.decora            TCATTCAT--TCCA----GAGTTGGA-TAGACC-TTTTTT---GAA----
Sc.membranaceus7246  TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Str.salteri7245      TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Sc.puniceusRHA27     -----C-----CC-----------------C-----------------
Str.truncata         TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Sc.puniceus7301      TCCTTCAT--TCCC----GAGTTTGA-TAGGCC-TTTTTTTTTGAA----
Sc.puniceusspacer    --------------------------------------------------
Sc.multiflorus7919   TCATTCAAT-TCCA----GAGTTTGA-TAGACC-TTTTTTTT-GAA----
Sc.membranaceus7917  TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTTT-GAA----
Sc.membranaceuspacer --------------------------------------------------
Sc.membranaceusRHA25 TCCTTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTTTTGAA----
Ze.filifolia         TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Tr.modesta           TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Un.flava             TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Wo.rayneri           TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Va.parviflora        TCATTCAT--TCCA----GAGTTTGA-TAGACCATTTTT----GAA----
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                        101                                                 150
Ama.belladonna7920      ----AA--AATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Ama.belladonna          ----AA--AATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Apo.lanceolatum         ATATAC--ATTGACTTCC-CGGAC-AAAATCGTC-GAGAGAG--TCCCCT
Amm.coranica7164        ----AA--AATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Amm.nerinoidesRHA32     ----AA--AATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Amm.coranicaspacer      ----AA--AATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Bo.disticha             ----AA--AATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Br.comptonii            ----AA--AATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Bo.disticha7172         ----AA--AATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Br.gregaria7157         ----AA--AATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cro.flava7256           ----AA--AATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Br.radulosa7440         ----AA--AATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Br.radulosanata7629     ----AA--AATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Br.bosmaniae7251        ----AA--AATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cl.caulescensRC9b       ---AAAAAAATGATTAATTCGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cl.caulescensRC10b      ---AAAAAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cl.miniata8095          --AAAAAAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cl.miniataRC14          --AAAAAAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cl.caulescens8092       ---AAAAAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cl.miniata              --AAAAAAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cl.sp.RC7b              ---AAAAAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cali.korsakoffii        ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cl.cyrtantiflora8094    -AAAAAAAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cl.nobilisRC6b          -AAAAAAAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cl.caulescens           ---AAAAAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cl.gardenii             --AAAAAAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cl.miniata              --AAAAAAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cl.nobilis8091          AAAAAAAAAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Chl.fragrans            ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cl.nobilis              ---AAAAAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Calo.lutea              ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.yemenense            ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.euchrophylluRC96     ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.acauleRC106          ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.acaulglaucRC105      ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.bulbispermumRC95     ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.campanulatum7167     ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.foetidumRC98         ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.graminicola7630      ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.lugardii7632         ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.macowanii7168        ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.nearmacowaniRC100    ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.abyssinicum          ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.buphanoidesRC102     ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.americanum           ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.asiaticum            ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.baumii               ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.acauleRC38           ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.buphanoides          ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.campanulatum         ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.cruentum             ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.distichum            ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.erubescens           ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.flaccidum            ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
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                    101                                                 150
Cr.forbesii         ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.jagus            ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.ligulatum        ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.oliganthum       ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.pendunculatum    ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.Meerow2332       ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.buphanoides7631  ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.carolschmidRC97  ------AAAATGATTAATCGGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.lineareRC99      ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.minimumRC37      ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.paludosumRC41    ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.variabileRC44    ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.moorei7921       ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cry.vansonii        ------------------------GAGAATAAA-GAGAGAG--TCCCAT
Cy.herrei7217       ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.brachyscyphuRC90 ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cyb.longifolia      ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.elatus7636       ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.brachyscyphus7406 ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.elatusRC93       ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.huttonii7206     ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.mackenii7179     ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.mackeniiRC87     ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.macowanii7201    ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.obliquus7180     -AAAATGATTAGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.obliquus7278     -AAAATGATTAGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.ochroleucus7639  -------AAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.contractus7199   -AAAATGATTAGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.labiatus7258     ------AAATTGATTAAT-CGGAC-GAGAATAA--GAGAGAG--TCCCAT
Cy.nova7963         ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.sanguineusRC94   -AAAATGATTAGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.spesiosus7213    ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.staadensis7316   -AAAATGATTAGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.breviflorus7188  ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.elatus7202       ------AAAATGATTAAT-CGGAC-GAGAATAA--GAGAGAG--TCCCAT
Cy.labiatus7212     ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.obliquus7210     -AAAATGATTAGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.sanguineus7216   -AAAATGATTAGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.smithiae7214     -AAAATGATTAGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.suaveolens7181   ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.breviflorus7634  ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.elatus7198       ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.spesiosus7640    ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCCT
Cy.eucallus7218     -AAAATGATTAGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.spesiosusRC84    -AAAATGATTAGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.spiralis7219     -AAAATGATTAGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCCA
Cy.wellandiiRC83    AAAATGGATTAGATTAATCGGGACCGAGAATAAAAGAGAGGAG-TCCCCC
Cy.obrienii7193     ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.herreiRC86       ------------------------------------------------CCCT
Cy.brachyscyphus7204 --------------------------------------------------
Cy.thorncroftiRC80  ----------------TCGGGAC-GAGAATAAAAGAGAGAG-TCCCCAT
Cy.loddigesianus7203 --------------------------------------------------
Cy.falcatus7637     -AAAATGATTAGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.elatus           ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
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                        101                                                 150
Cy.falcatusRC82         --AAATGATTAGATTATT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.spiralis7964         -AAAATGATTAGATTAAT-CGGAC-GAGAATAAA-GAGAGAG-TCCCCAT
Ge.namaquensisAMV642    --AAAAAAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Eus.darwinii            ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Ga.plicatus             ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Euc.castelnaeana        ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Ge.verticillatspacer    --------------------------------------------------
Ge.brittenianaspacer    --------------------------------------------------
Ge.lanuginosaspacer     --------------------------------------------------
Gr.hyacinthine          ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Eucr.eucrosioides       ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Ge.ciliaris             --AAAAAAAATGATTTTT-CGGAC-GAAAATAAA-GAGAAAG--TCCC-T
Ge.namaquensisAMV635    AAAAAAAAAATGATTAGT-CGGAC-GAGAATAAA-GAGAGAG-TTCCCAT
Ge.namaquensisAMV639    -AAAATGATTAGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Hes.zeyheri             ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Hip.sp.7447             ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Hym.eucharidifolia      ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Hae.sanguineus7253      --------AATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Hae.montanus7163        --------AATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Hae.humilis7254         --------TATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Hae.albiflos7512        --------TATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Hae.coccineusAMV632     --------AATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Hae.albiflos7517        --------TATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Hae.paucilifoliu7925    --------TATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Hae.albiflosspacer      --------------------------------------------------
Hae.humilisspacer       --------------------------------------------------
Hae.graniticusspacer    --------------------------------------------------
Hae.pumiliospacer       --------------------------------------------------
Hae.crispus7252         ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Hie.marginata           -----AAAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Hae.crispus7260         --------AATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Hae.humilis             --------TATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Hip.papilio             ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Hab.martinezii          ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Hym.latifolia           ----GAAAAAATATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Hae.hirsitus7626        ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Han.hesperidum          ------AAAATGATTTAT-CGGAC-GAGAATAAA-GAGAGAT---CTCAT
La.martinezii           ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG---TCCAT
Is.narcissiflora        ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Is.vargasii             --AAAATGATTGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Ly.squamigera           ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Lep.quitoensis          ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Leu.autumnale           ------AAAATGATTAAT-TGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Ly.albifloraintron      -----AAAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Ja.gypsophila           ------AAACTGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Ne.bowdenii             ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Na.calcicolaspacer      --------------------------------------------------
Na.serotinusspacer      --------------------------------------------------
Na.tortifoliusspacer    --------------------------------------------------
Na.jonquillaspacer      --------------------------------------------------
Na.albimarginaspacer    --------------------------------------------------
Na.cuatrecasaspacer     --------------------------------------------------
Na.marvierispacer       --------------------------------------------------
Na.rupicolaspacer       --------------------------------------------------
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                    101                                                 150
Na.watierispacer    --------------------------------------------------
Na.bulbocodiumspacer --------------------------------------------------
Na.lusitanicusspacer --------------------------------------------------
Na.pallidulusspacer  --------------------------------------------------
Na.cyclamineusspacer --------------------------------------------------
Na.poeticusspacer    --------------------------------------------------
Na.pseudonarcispacer --------------------------------------------------
Na.triandrusspacer   --------------------------------------------------
Na.scaberulusspacer  --------------------------------------------------
Ne.laticoma8090      ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Na.sp.7607           -----AAAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Na.sp.7608           ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Na.sp.7521           -----AAAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCCA
Na.elegans           -----AAAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Na.tazetta           -----AAAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Pan.canariense       ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Pe.decora            ------AAACTGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Rh.moelleri          ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Sp.formosissima      ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Pab.incrassata       --------AATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCGT
Sten.variegatum      ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Ph.dubia             ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Sten.pearcei         ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Pam.peruviana        ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Pr.cunninghamii      ------AAAATGATTAAT-CGGAC-GAGAATTAA-GAGAGAG--TCCCAT
Sc.puniceus7918      -AAAAAAAAATGATTAAT-CGGGC-GAGAATAAA-GAGAGAG--TCCCAT
Par.weberbaueri      ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Sc.cinnabarinus      -AAAAAAAATTGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Ster.lutea           ----AAAAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Ra.decora            ----AAAATGTGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Sc.membranaceus7246  --AAAAAAAATGATTAAT-CGGGC-GAGAATAAA-GAGAGAG--TCCCAT
Str.salteri7245      ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Sc.puniceusRHA27     ---------AT---T--T---G-C------T------------T-----
Str.truncata         ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Sc.puniceus7301      AAAAAAAAAAATGATTAAT-CGGGC-GAGAATAAA-GAGAGAG--TCCCAT
Sc.puniceusspacer    --------------------------------------------------
Sc.multiflorus7919   -AAAAAAAAATGATTAAT-CGGGC-GAGAATAAA-GAGAGAG--TCCCAT
Sc.membranaceus7917  AAAAAAAAAATGATTAAT-CGGGC-GAGAATAAA-GAGAGAG--TCCCAT
Sc.membranaceuspacer --------------------------------------------------
Sc.membranaceusRHA25 -AAAAAAAAATGATTAAT-CGGGC-GAGAATAAA-GAGAGAG--TCCCAT
Ze.filifolia         ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Tr.modesta           ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Un.flava             ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Wo.rayneri           ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Va.parviflora        ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
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                        151                                                 200
Ama.belladonna7920      T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Ama.belladonna          T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Apo.lanceolatum         T-CCTCTC-TTGTCT----AT--CCGAC-AAC-CTTGAATT-TTTTTC--
Amm.coranica7164        T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Amm.nerinoidesRHA32     T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Amm.coranicaspacer      T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Bo.disticha             T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Br.comptonii            T-CTACT---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Bo.disticha7172         T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Br.gregaria7157         T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cro.flava7256           T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Br.radulosa7440         T-CTAAC--ATGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Br.radulosanata7629     T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGGAAA-TTATAG--
Br.bosmaniae7251        TTCTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cl.caulescensRC9b       T-CTACA---TGTCA----ATA-CCGGCCAAC-AATGAAAT-TTATAG--
Cl.caulescensRC10b      T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cl.miniata8095          T-CTAAC--ATGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cl.miniataRC14          T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cl.caulescens8092       T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cl.miniata              T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cl.sp.RC7b              T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cali.korsakoffii        T-CTACA---TGTCT----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cl.cyrtantiflora8094    T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cl.nobilisRC6b          T-TCTAC--ATGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cl.caulescens           T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cl.gardenii             T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cl.miniata              T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cl.nobilis8091          T-CTACA----TGCA----ATA-CCGAC--AC-AATGAAAT-TTATAG--
Chl.fragrans            TTCTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cl.nobilis              T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Calo.lutea              T-CTACA---TGTCT----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.yemenense            T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.euchrophylluRC96     T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.acauleRC106          T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.acaulglaucRC105      T-CTACA--TGTCCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.bulbispermumRC95     T-TCTAC--ATGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.campanulatum7167     T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.foetidumRC98         T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.graminicola7630      T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.lugardii7632         T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.macowanii7168        T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.nearmacowaniRC100    T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.abyssinicum          T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.buphanoidesRC102     T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.americanum           T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.asiaticum            T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.baumii               T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.acauleRC38           T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.buphanoides          T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.campanulatum         T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.cruentum             T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.distichum            T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.erubescens           T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.flaccidum            T-CTACA---TGTCA----ATA-CCCGACAAC-AATGAAAT-TTATAG--
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                        151                                                 200
Cr.forbesii             T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.jagus                T-CTACA---TGTCA----ATA-CCGACAACC-AATGAAAT-TTATAG--
Cr.ligulatum            T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.oliganthum           T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.pendunculatum        T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.Meerow2332           T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.buphanoides7631      T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.carolschmidRC97      T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGGAAATTTATAG--
Cr.lineareRC99          T-CTACA---TGTCA----ATA-CCGACCACC-AATGAAAT-TTATAG--
Cr.minimumRC37          T-CTACA---TGTCA----ATA-CCGAC--AC-AATGAAAT-TTATAG--
Cr.paludosumRC41        T-CTACA---TGTCA----ATA-CCACC--GC-CATGAAAT-TTATAG--
Cr.variabileRC44        T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.moorei7921           T-CTACA---TGTCA----ATA-CCGAC--AC-AATGAAAT-TTATAG--
Cry.vansonii            T-CTACA---TGTCAATTCAATACCGAC-AAC-AATGAAAT-TTATAG--
Cy.herrei7217           T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.brachyscyphuRC90     TTCTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cyb.longifolia          T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.elatus7636           T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.brachyscyphus7406    T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.elatusRC93           T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.huttonii7206         T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.mackenii7179         T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.mackeniiRC87         T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.macowanii7201        T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAACCTTATAG--
Cy.obliquus7180         T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.obliquus7278         T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.ochroleucus7639      T-CTACA---TGTCA----ATA-CCGAC--AC-AATGAAAT-TTATAG--
Cy.contractus7199       T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.labiatus7258         T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGGAAATTTATAG--
Cy.nova7963             T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.sanguineusRC94       T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.spesiosus7213        T-CTACA---TGTCA-----TA--CGAC-AACTCGACGAAT-TTATAG--
Cy.staadensis7316       T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.breviflorus7188      T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.elatus7202           T-CTACA---TGTCA----ATA-CCGAG-GAC-AATGAAAT-TTATAG--
Cy.labiatus7212         T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.obliquus7210         T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.sanguineus7216       TTCTAACA-TGTCCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.smithiae7214         TTCTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.suaveolens7181       TTCTTACA--TGTCA----ATA-CCGAC--AC-AATGAAAT-TTATAG--
Cy.breviflorus7634      T-CTACA---TGTCA----AT----------------------------
Cy.elatus7198           TTCTACA---TGTCCA---ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.spesiosus7640        T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAATGTTATAG--
Cy.eucallus7218         T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.spesiosusRC84        T-CTACA---TGTCA----ATA-CCGAC-AAC-----------------
Cy.spiralis7219         TTCTACA---TGTCCA---ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.wellandiiRC83        TTTTTAACCATGTCCA---ATACCCGACCAACCAATGAAAT-TTAT-G--
Cy.obrienii7193         T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.herreiRC86           TTTTACCA--TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.brachyscyphus7204    ------------------------------------------------
Cy.thorncroftiRC80      T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.loddigesianus7203    ------------------------------------------------
Cy.falcatus7637         TTCTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.elatus               T-ATACA---TGTCA----ATA-CCGAC-AAC-GATGAAAT-ATATAG--
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                        151                                                 200
Cy.falcatusRC82         T-CTACA---TGTCCA---ATA-CCGCC-AACCAATGAAAT-TTATAG--
Cy.spiralis7964         T-CTACA---TGTCCA---ATA-CCGAC-AATCAATGAAATTTTGTAGGT
Ge.namaquensisAMV642 TTCTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Eus.darwinii            T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Ga.plicatus             T-CTGCA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Euc.castelnaeana        T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Ge.verticillatspacer    --------------------------------------------------
Ge.brittenianaspacer    --------------------------------------------------
Ge.lanuginosaspacer     --------------------------------------------------
Gr.hyacinthine          T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Eucr.eucrosioides       T-CTACA---TGTCT----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Ge.ciliaris             T-CTACT---TGTCC----ATA-CCGAC-AAC-AATGAAAT-TTAAGG--
Ge.namaquensisAMV635 TTCTAACA--TGTCCA---ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Ge.namaquensisAMV639 T-CTACA---TGTCA----ATA-CCGAC-AAC-----------------
Hes.zeyheri             T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Hip.sp.7447             T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Hym.eucharidifolia      T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Hae.sanguineus7253      T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Hae.montanus7163        T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTTTATAG
Hae.humilis7254         T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Hae.albiflos7512        T-CTACA---TGTCA----ATA-CCGAC-AAC--ATGAAAT-TTATAG--
Hae.coccineusAMV632     TTCTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Hae.albiflos7517        T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT--TATAG--
Hae.paucilifoliu7925 TTCTAACA--TGTCA----ATATCTGAC-AAC-AATGAAAT-TTATAG--
Hae.albiflosspacer      --------------------------------------------------
Hae.humilisspacer       --------------------------------------------------
Hae.graniticusspacer    --------------------------------------------------
Hae.pumiliospacer       --------------------------------------------------
Hae.crispus7252         TTCTA-CA--TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Hie.marginata           T-CTACA---TGTCA----ATA-CCGAC-AACAGATGAAAT-TTATAG--
Hae.crispus7260         TTCTAACA--TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Hae.humilis             T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Hip.papilio             T-CTACA---TGTCA----ATACGCGAC-AAC-AATGAAAT-TTATAG--
Hab.martinezii          T-TTACA---TGTCA----ATA-CCGAC-AACGAATGAAAT-TTATAG--
Hym.latifolia           T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Hae.hirsitus7626        T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Han.hesperidum          T-CTACA---TGTCC----TTA-CCGAC-AAC-AATGAAAT-TTATAG--
La.martinezii           T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Is.narcissiflora        T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Is.vargasii             T-CTACA---TGTCA----ATACCGGAC-AAC-AATGAAAT-TTATAG--
Ly.squamigera           T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Lep.quitoensis          T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Leu.autumnale           T-CTGCA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Ly.albifloraintron      T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Ja.gypsophila           T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Ne.bowdenii             T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Na.calcicolaspacer      --------------------------------------------------
Na.serotinusspacer      --------------------------------------------------
Na.tortifoliusspacer    --------------------------------------------------
Na.jonquillaspacer      --------------------------------------------------
Na.albimarginaspacer    --------------------------------------------------
Na.cuatrecasasspacer    --------------------------------------------------
Na.marvierispacer       --------------------------------------------------
Na.rupicolaspacer       --------------------------------------------------
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Na.watierispacer    --------------------------------------------------
Na.bulbocodiumspacer --------------------------------------------------
Na.lusitanicusspacer --------------------------------------------------
Na.pallidulusspacer  --------------------------------------------------
Na.cyclamineusspacer --------------------------------------------------
Na.poeticusspacer    --------------------------------------------------
Na.pseudonarcispacer --------------------------------------------------
Na.triandrusspacer   --------------------------------------------------
Na.scaberulusspacer  --------------------------------------------------
Ne.laticoma8090      T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Na.sp.7607           T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT---ATAG--
Na.sp.7608           T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Na.sp.7521           TTCTACA---TGTCA----ATA-CCGACAGAC-AATGAAAT-TTATAG--
Na.elegans           T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Na.tazetta           T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Pan.canariense       T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Pe.decora            T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Rh.moelleri          T-CTACG---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Sp.formosissima      T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Pab.incrassata       T-CTACA---TGTCA----ATA-ACGAC-AAC-AATGAAAT-TTATAG--
Sten.variegatum      T-CTACA---TGTCT----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Ph.dubia             T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Sten.pearcei         T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Pam.peruviana        T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Pr.cunninghamii      T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Sc.puniceus7918      TTCTAACA--TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Par.weberbaueri      T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Sc.cinnabarinus      T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Ster.lutea           T-CTACA---TGTCT----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Ra.decora            T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Sc.membranaceus7246  T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Str.salteri7245      T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Sc.puniceusRHA27     ----ACA---TGTCCA---ATA-CCGAC-AACCAATGAAAATTTATAG--
Str.truncata         T-TTACA---TGTCA----AAA-CCGAC-AAC-AATGAAAT-TTATAG--
Sc.puniceus7301      T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Sc.puniceusspacer    --------------------------------------------------
Sc.multiflorus7919   T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Sc.membranaceus7917  T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Sc.membranaceuspacer --------------------------------------------------
Sc.membranaceusRHA25 TCTTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Ze.filifolia         T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Tr.modesta           T-CTACG---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Un.flava             T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Wo.rayneri           T-TTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Va.parviflora        T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAATT--TATAG--
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                        201                                                 250
Ama.belladonna7920      TAAGAGGAAAATCCTC-GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Ama.belladonna          TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Apo.lanceolatum         TTTAAGGAATTTCC---GTCTACTCTAACCA-CTTTAGGGT----TCGTC
Amm.coranica7164        TAAGAGGAAAATCC----TCGG--------------------------
Amm.nerinoidesRHA32     TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Amm.coranicaspacer      TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Bo.disticha             TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Br.comptonii            TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Bo.disticha7172         TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Br.gregaria7157         TAAGAGGAAAATCCGTCGTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cro.flava7256           TAAGAGGAAAATCCC--GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Br.radulosa7440         TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Br.radulosanata7629     TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Br.bosmaniae7251        TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cl.caulescensRC9b       TAAAGAGGAAAATCC-GTCGACCTTTAGAAA-TCGTGAGGG----TTCAA
Cl.caulescensRC10b      TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cl.miniata8095          TAAGAGGAAAATCC---GTCGACTTTAGAA--TCGTGAGGG----TTCAA
Cl.miniataRC14          TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cl.caulescens8092       TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cl.miniata              TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cl.sp.RC7b              TAAGAGGAAAATCC---GTCGGCTTTAGAAA-TCGTGAGGG----TTCAA
Cali.korsakoffii        TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cl.cyrtantiflora8094    TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cl.nobilisRC6b          TAAGAGGAAAATCCC--GTCGACTTTAGAAAATCGTGGAGGGT--TCCAA
Cl.caulescens           TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cl.gardenii             TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cl.miniata              TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cl.nobilis8091          TAAGAGGAAAATCC--GCTCGACTTTAGAAAATCGCGGAGGG---TTCAA
Chl.fragrans            TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cl.nobilis              TAAGAGGAAATCCG----TCGACTTTAGAAA--TCTGAGGG----TTCAA
Calo.lutea              TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.yemenense            TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.euchrophylluRC96     TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.acauleRC106          TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGGG---TTCAA
Cr.acaulglaucRC105      TAAGAGGAAAATCC--GTCCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.bulbispermumRC95     TA-GGGGAAA-TCC---GTCGACTTAGAA---TCGTGAGGG----TTCAA
Cr.campanulatum7167     TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.foetidumRC98         TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.graminicola7630      TAAGAGGAAAATCCC--GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.lugardii7632         TAAGAGGAAAATCC---GTCGACTTTAGAAATCCGTGAGGG----TTCAA
Cr.macowanii7168        TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.nearmacowaniRC100    TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.abyssinicum          TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.buphanoidesRC102     TAAGAGGAAAATCC---GTCGACT-TAGAAA-TCGTGAGGG---TTCCAA
Cr.americanum           TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.asiaticum            TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.baumii               TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.acauleRC38           TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGGGAGGG----TTCAA
Cr.buphanoides          TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.campanulatum         TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.cruentum             TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.distichum            TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.erubescens           TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.flaccidum            TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
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                        201                                                 250
Cr.forbesii             TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.jagus                TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.ligulatum            TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.oliganthum           TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.pendunculatum        TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.Meerow2332           TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.buphanoides7631      TAAGAGGGAAAATCC--GTCGACTTTAGAAA-TCGTGGAGGGG--TTCAA
Cr.carolschmidRC97      TAAGAGGAAAATCC--GTCCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.lineareRC99          TAAGGAGGAAAAATCCGTCCGACCTTTAGAAATCGTGGAGGGGG-TTCAA
Cr.minimumRC37          TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCA-
Cr.paludosumRC41        TAAGAGGAAAATCC---GTCGATCTTAGAAA-TCGTGAGGG----TTCAA
Cr.variabileRC44        TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TGCAA
Cr.moorei7921           TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cry.vansonii            TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.herrei7217           TAAGAG-AAA-TCC----T-------------------------------
Cy.brachyscyphuRC90     TAAGAG-AAAATCC----T-------------------------------
Cyb.longifolia          TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.elatus7636           TAAGAGGAAA-TCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.brachyscyphus7406    TAAGAGGAAAATCCC--GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.elatusRC93           TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.huttonii7206         TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.mackenii7179         TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.mackeniiRC87         TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.macowanii7201        TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.obliquus7180         TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.obliquus7278         TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.ochroleucus7639      TA-GAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG-----TCAA
Cy.contractus7199       TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.labiatus7258         TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.nova7963             TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.sanguineusRC94       TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.spesiosus7213        TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.staadensis7316       TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.breviflorus7188      TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.elatus7202           TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.labiatus7212         TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.obliquus7210         TAAGAGGAAAATCC---GTCGACCTTTGAAATCCGTGGGGG----TTCAA
Cy.sanguineus7216       TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.smithiae7214         TA-GAGGAAAATCCC--GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.suaveolens7181       TAAGAGGAAATCCG---TCGGCCTTTAGAAA-TCGTGAGGG----TTCAA
Cy.breviflorus7634      ------------------------------------------------
Cy.elatus7198           TAAGAGGAAAATCCC---TCGACTT-AGAA--T----------------
Cy.spesiosus7640        TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG-----TCAA
Cy.eucallus7218         TAAGAG--AAATCC---GTCGACT-TAGAAA-TCGTGAGGG-----TTCA
Cy.spesiosusRC84        ------------------------------------------------
Cy.spiralis7219         TAAGAGGAAAATCC----TCGGAT--AGAA--T----------------
Cy.wellandiiRC83        TAAGAGGAAAATCCC-GTCCGACTTTAGAAA-TCGGTGAGGG--TTCCAA
Cy.obrienii7193         TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.herreiRC86           TAAGAGGAAAATTCC--GTCGAACTTTAGAAATCGTGAGGG----TTCAA
Cy.brachyscyphus7204    ------------------------------------------------
Cy.thorncroftiRC80      TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.loddigesianus7203    ------------------------------------------------
Cy.falcatus7637         TAAGAGGAAAATCC----------------------------------
Cy.elatus               TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGAGAGGG----TTCAA
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                        201                                                250
Cy.falcatusRC82         TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG---TTCCAA
Cy.spiralis7964         AAAGAGGAAAATTCC-GTGCGACTTTAGAAATGCGGGAGGG---TTTCAA
Ge.namaquensisAMV642    TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Eus.darwinii            TAAGAGGAAACTCC---GTCGACTTTAGAATATCGTGAGGG----TTCAA
Ga.plicatus             TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Euc.castelnaeana        TAGCGAGGAAATCC---GTCGACTTTAGAATCTTGGGGGGG----TT-AA
Ge.verticillatspacer    --------------------------------------------------
Ge.brittenianaspacer    --------------------------------------------------
Ge.lanuginosaspacer     --------------------------------------------------
Gr.hyacinthine          TAAGAGGAAAATCC---GTCGACTTTAGAAATTCGGGAGGG----TTCAA
Eucr.eucrosioides       TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Ge.ciliaris             TA-GAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Ge.namaquensisAMV635    TA------------------------------------------------
Ge.namaquensisAMV639    --------------------------------------------------
Hes.zeyheri             TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Hip.sp.7447             TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Hym.eucharidifolia      TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Hae.sanguineus7253      TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Hae.montanus7163        TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Hae.humilis7254         TAAAAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Hae.albiflos7512        --TAAAGAACTTCC--GTCCCACTTTAGAAA-TCGTGGAGG----GTCAA
Hae.coccineusAMV632     TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Hae.albiflos7517        TAAA-GGAAA-TCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Hae.paucilifoliu7925    TAAAAGGAAAATCC---GTCGTCTTTAGAAA-TCGTGAGGG----TTCAA
Hae.albiflosspacer      --------------------------------------------------
Hae.humilisspacer       --------------------------------------------------
Hae.graniticusspacer    --------------------------------------------------
Hae.pumiliospacer       --------------------------------------------------
Hae.crispus7252         TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Hie.marginata           TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Hae.crispus7260         TAAGAGGAAAATCC----TCG------G--------GA------------
Hae.humilis             -TAAAAGGAAATCC---GTCGA-TTTAGAA--TCGTGGAGG----TTCCA
Hip.papilio             TAAGAGGAAAATCGC---TCGACTTTAGAAA-TCGTGAG-----------
Hab.martinezii          TATGAGGAAAATCGC---TCGACTTGAGAA-TTCCTGAG---CAAGTCAA
Hym.latifolia           TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGGAGGG---TTCAA
Hae.hirsitus7626        TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Han.hesperidum          TTAGAGGAAAATCC---GTCCACTTCAGAAA-TCGTGAGGG----TTCAT
La.martinezii           TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Is.narcissiflora        TAAGAGGAAA-TCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Is.vargasii             TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Ly.squamigera           TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Lep.quitoensis          TAAGAGGAAAATCC---GTCGACTTTCGAAA-TCGTGAGGG----TTCAA
Leu.autumnale           TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGGAGGG---GTTAA
Ly.albifloraintron      TAAGAGGAAAATCC-----------------------------------
Ja.gypsophila           TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Ne.bowdenii             TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Na.calcicolaspacer      --------------------------------------------------
Na.serotinusspacer      --------------------------------------------------
Na.tortifoliusspacer    --------------------------------------------------
Na.jonquillaspacer      --------------------------------------------------
Na.albimarginaspacer    --------------------------------------------------
Na.cuatrecasaspacer     --------------------------------------------------
Na.marvierispacer       --------------------------------------------------
Na.rupicolaspacer       --------------------------------------------------
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                    201                                                 250
Na.watierispacer    --------------------------------------------------
Na.bulbocodiumspacer --------------------------------------------------
Na.lusitanicusspacer --------------------------------------------------
Na.pallidulusspacer  --------------------------------------------------
Na.cyclamineusspacer --------------------------------------------------
Na.poeticusspacer    --------------------------------------------------
Na.pseudonarcispacer --------------------------------------------------
Na.triandrusspacer   --------------------------------------------------
Na.scaberulusspacer  --------------------------------------------------
Ne.laticoma8090      TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Na.sp.7607           TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Na.sp.7608           TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Na.sp.7521           TAAGAGGAAATCCGT---CGAGCTTTAGAAATTCGTGAGGG----TTCAA
Na.elegans           TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Na.tazetta           TAAGAGG-----------------------------------------
Pan.canariense       TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Pe.decora            TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Rh.moelleri          TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Sp.formosissima      TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Pab.incrassata       TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Sten.variegatum      TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Ph.dubia             TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Sten.pearcei         TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGGGAGGG----TTCAA
Pam.peruviana        TAAGAGGAAAATCC---GTCGACTTTCGAAA-TCGTGAGGG----TTCAA
Pr.cunninghamii      TAAGAGGAAAATCC---GTCCACTTTAGAAA-TCGTGAGGG----TTCAA
Sc.puniceus7918      TAAGAGGAAAATCC---GTCG----------------------------
Par.weberbaueri      TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Sc.cinnabarinus      TAAGAGGAAAATCC---GCCGACTTTAAAAA-TCGTGAGGG----TTCAA
Ster.lutea           TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Ra.decora            TAAGGGGGAAATCC---GTTGACTTTAGAAA-TTGTGAGGG----TTCAA
Sc.membranaceus7246  TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Str.salteri7245      TAAGAGGAAATCC----GTCGACTTTAGAAA-TCGTGAGGGG---TTCAA
Sc.puniceusRHA27     TAAGAGGAAAATCCC--GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Str.truncata         TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Sc.puniceus7301      TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCCGTGAGGGA--TCCAA
Sc.puniceusspacer    --------------------------------------------------
Sc.multiflorus7919   TAAGAGGAAAATCC---GTCGACATTTAGAAATCGTGAGGG----TTCAA
Sc.membranaceus7917  TAAGAGGAAAATCC----TCGACTTTAGAAA-TCGTGAGGG----TTCAA
Sc.membranaceuspacer --------------------------------------------------
Sc.membranaceusRHA25 TAAGAGGAAAATCC---GTCGGCTTTAGAAA-TCGTGAGGG----TTCAA
Ze.filifolia         TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Tr.modesta           TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Un.flava             TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Wo.rayneri           TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Va.parviflora        TAAGAGAAGAGTGATCCATAAACTGAGAGAA-TCGGGAGGG----TTCA-
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                        251                                                 300
Ama.belladonna7920      GTCCC---TCTATCCCCCA-GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Ama.belladonna          GTCC----TCTATCCCCA-GATAAAAAGCCC-ATTT-C---ACTTCCT-A
Apo.lanceolatum         GTCTC---TCCTTCCCCA--TTAAATT-CC--ATTT-C---A-TTCCT-A
Amm.coranica7164        ------------------------------------------------
Amm.nerinoidesRHA32     GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Amm.coranicaspacer      GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Bo.disticha             GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTC-A
Br.comptonii            GTCCC---TCTATCCCCA--GTAAAAAGCCC-ACTT-T---TCTTCTT-A
Bo.disticha7172         GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Br.gregaria7157         GTCCC---TCTATCCCCA--GTAAAAAGCCC-ACTT-T---TCTTCTT-A
Cro.flava7256           GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Br.radulosa7440         GTCCC---TCTATCCCCA--GTAAAAAGCCC-ACTT-T---TCTTCTT-A
Br.radulosanata7629     GTCCC---TCTATCCCCA--GTAAAAAGCCC-ACTT-T---TCTCCT--A
Br.bosmaniae7251        GTCCC---TCTATCCCCA--GTAAAAAGCCC-ACTT-T---TCTTCTT-A
Cl.caulescensRC9b       GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cl.caulescensRC10b      GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cl.miniata8095          GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cl.miniataRC14          GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cl.caulescens8092       GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cl.miniata              GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cl.sp.RC7b              GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cali.korsakoffii        GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cl.cyrtantiflora8094    GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cl.nobilisRC6b          GTCCC--CTCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cl.caulescens           GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cl.gardenii             GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cl.miniata              GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cl.nobilis8091          GTCCC---TCTGTCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Chl.fragrans            GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTA-A
Cl.nobilis              GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Calo.lutea              GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cr.yemenense            GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.euchrophylluRC96     GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.acauleRC106          GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.acaulglaucRC105      GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.bulbispermumRC95     GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.campanulatum7167     GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-C
Cr.foetidumRC98         GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.graminicola7630      GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.lugardii7632         GTCCC---TCTATCCCCAG-GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.macowanii7168        GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.nearmacowaniRC100    GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.abyssinicum          GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TATTCTT-A
Cr.buphanoidesRC102     GTCCC---TCTATCCCCCA-GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.americanum           GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.asiaticum            GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.baumii               GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.acauleRC38           GTCCC---TCTATCCCCCA-GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.buphanoides          GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.campanulatum         GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-C
Cr.cruentum             GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.distichum            GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.erubescens           GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.flaccidum            GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-C
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                        251                                                 300
Cr.forbesii             GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.jagus                GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.ligulatum            GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.oliganthum           GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.pendunculatum        GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.Meerow2332           GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.buphanoides7631      GTCCC--CTCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.carolschmidRC97      GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.lineareRC99          AGTCCC--TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.minimumRC37          GTCCC---TCTATCCCCA--GTAAAA-GCCC-GTTT-T---TCTTCTC-A
Cr.paludosumRC41        GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.variabileRC44        GTCCC---TCTATCCCCA--G-AAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.moorei7921           GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTCAA
Cry.vansonii            GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-A---ACTTCTT-A
Cy.herrei7217           ---------------------------------------------------
Cy.brachyscyphuRC90     ---------------------------------------------------
Cyb.longifolia          GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cy.elatus7636           GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.brachyscyphus7406    GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTGTA
Cy.elatusRC93           GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.huttonii7206         GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.mackenii7179         GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.mackeniiRC87         GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.macowanii7201        GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.obliquus7180         GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.obliquus7278         GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT--
Cy.ochroleucus7639      GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.contractus7199       GTCC----TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.labiatus7258         GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCT--A
Cy.nova7963             GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.sanguineusRC94       GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.spesiosus7213        GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.staadensis7316       GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.breviflorus7188      GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.elatus7202           GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.labiatus7212         GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.obliquus7210         GTCCC---TCTATCCCCCA-GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.sanguineus7216       GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C--CACTTCTT-A
Cy.smithiae7214         GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.suaveolens7181       GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.breviflorus7634      ---------------------------------------------------
Cy.elatus7198           ---------------------------------------------------
Cy.spesiosus7640        GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.eucallus7218         GTCCC---TCTATCCCCA--GTAAATAAGCC-ATTT-C---ACTTCTT-A
Cy.spesiosusRC84        ---------------------------------------------------
Cy.spiralis7219         ---------------------------------------------------
Cy.wellandiiRC83        GTCCCC-TCCTATCCCCCA-GTAAAAAGCCCCATTT-C--CACTTCTT-A
Cy.obrienii7193         GTCCC---TCTATCCCCA--GTAATAAAGCCCATTT-C---ACTTCTT-A
Cy.herreiRC86           GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.brachyscyphus7204    --------------------GTAAA--GCCC-ATTT-C----CTTCTT-A
Cy.thorncroftiRC80      GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.loddigesianus7203    ----------------------------------------CTTCTT-A
Cy.falcatus7637         ---------------------------------------------------
Cy.elatus               GTCCC---TCTATCCCCA--GTAGAGAAAGCCCATTTC---ACTTCTAGA
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                        251                                                 300
Cy.falcatusRC82         GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTTCC---ACTTCTT-A
Cy.spiralis7964         GTGCCC--TCTGTATCCCA-GTAAAAAGGCCTCATTTCC--ACTTTGT-A
Ge.namaquensisAMV642    GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Eus.darwinii            GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Ga.plicatus             GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTA-A---ACTTCTT-A
Euc.castelnaeana        GTCCC---TTTATCCCCG--GTAAAAATACCCATT--C---ACTTCTT--
Ge.verticillatspacer    -----------------A--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Ge.brittenianaspacer    --------------------------------------------------
Ge.lanuginosaspacer     -----------------A--GTAAAAAGCCC-ATTT-----ACTTCTT-A
Gr.hyacinthine          GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ATTTCTA-A
Eucr.eucrosioides       GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-T
Ge.ciliaris             GTCCC---TTTTTCCCCA--GTTAAAAGCCC-ATTT-C---ACTTCTT-A
Ge.namaquensisAMV635    --------------------------------------------------
Ge.namaquensisAMV639    --------------------------------------------------
Hes.zeyheri             GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---ACTTCTA-A
Hip.sp.7447             GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCGTTA
Hym.eucharidifolia      GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Hae.sanguineus7253      GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Hae.montanus7163        GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ATTTCTTTA
Hae.humilis7254         GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCCT-A
Hae.albiflos7512        GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTTAA
Hae.coccineusAMV632     GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Hae.albiflos7517        GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Hae.paucilifoliu7925    GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---CCTTCTT-A
Hae.albiflosspacer      -----------------A--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Hae.humilisspacer       -----------------A-GATAAAAAGCCC-ATTT-C---ACTTCCT-A
Hae.graniticusspacer    -----------------A--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Hae.pumiliospacer       -----------------A--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Hae.crispus7252         GTCCC---TCTATCCCCA--GTAAAAAGCCCACTTT-T----CTTCTT-A
Hie.marginata           GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTA-A
Hae.crispus7260         --------------------------------------------------
Hae.humilis             GTCCC---TCTATCCCC--------------------------------
Hip.papilio             --------------------------------------------------
Hab.martinezii          GTCCA---ACTATCCCCA--GTAAAAAGCCA--TTT-C---ACTTCTT-A
Hym.latifolia           GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Hae.hirsitus7626        GTCCC---TCTATCCCCA--GTAAAAAGCCC-ACTT-T---TCTTCTT-A
Han.hesperidum          GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
La.martinezii           GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTTTT-A
Is.narcissiflora        GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTG-A
Is.vargasii             GTCCC---TCTATCCCCA--GTAAAGAGCCC-ATTT-C---ACTTCTT-C
Ly.squamigera           GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Lep.quitoensis          GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTG-A
Leu.autumnale           TTCCC---TCTTTCCCCC--GTAAAAACCCCCATTA-A---AATT-TT-A
Ly.albifloraintron      --------------------------------------------------
Ja.gypsophila           GTCCC---TCTATCCCCA--ATAAAAAACCC-ATTTT-ACTTSTTATT-A
Ne.bowdenii             GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Na.calcicolaspacer      --------------------------GCCC-ATTT-C---ACTTCTT-A
Na.serotinusspacer      --------------------------GCCC-ATTT-C---ACTTCTT-A
Na.tortifoliusspacer    --------------------------GCCC-ATTT-C---ACTTCTT--
Na.jonquillaspacer      --------------------------GCCC-ATTT-C--ACATTCTT-A
Na.albimarginaspacer    --------------------------GCCC-ATTT-C---ACTTCTT-A
Na.cuatrecasaspacer     --------------------------GCCC-ATTT-C---ACTTCTT-A
Na.marvierispacer       --------------------------GCCC-ATTT-C---ACTTCTT-A
Na.rupicolaspacer       --------------------------GCCC-ATTT-C---ACTTCTT-A
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                    251                                                300
Na.watierispacer    --------------------------GCCC-ATTT-C----CTTCTT-A
Na.bulbocodiumspacer--------------------------GCCC-ATTT-C---ACTTCTT-A
Na.lusitanicusspacer--------------------------GCCC-ATTT-C---ACTTCTT-A
Na.pallidulusspacer --------------------------GCCC-ATTT-C---ACTTCTT-A
Na.cyclamineusspacer--------------------------GCCC-ATTT-C--ACATTCTT-A
Na.poeticusspacer   --------------------------GCCC-ATTT-C---ACTTCTT-A
Na.pseudonarcispacer--------------------------GCCC-ATTT-C---ACTTCTT-A
Na.triandrusspacer  --------------------------GCCC-ATTT-C---ACTTCTT-A
Na.scaberulusspacer --------------------------GCCC-ATTT-C---ACTTCTT-A
Ne.laticoma8090     GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Na.sp.7607          GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Na.sp.7608          GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Na.sp.7521          GTCCCC--TCTATCCCCA--GTAAAAAGCCC-ATTTCC---ACTTCTT-A
Na.elegans          GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTTCT-A
Na.tazetta          --------------------GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Pan.canariense      GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Pe.decora           GTCCC---TCTATCCCCA--ATAAAAAGCCC-ATTT-T---ACTTCTTAT
Rh.moelleri         GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Sp.formosissima     GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Pab.incrassata      GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---ACTTCTT-A
Sten.variegatum     GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Ph.dubia            GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Sten.pearcei        GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Pam.peruviana       GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTG-A
Pr.cunninghamii     GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Sc.puniceus7918     -------------------------------------------------
Par.weberbaueri     GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Sc.cinnabarinus     GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Ster.lutea          GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Ra.decora           GTCCC---TCTATCCCCA--GCAAAAAGACC-ATCT-C---AATTTAT-A
Sc.membranaceus7246 GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Str.salteri7245     GTCCC---TCTATCCCCG--GTAAAAAGCCC-ATTT-T--TCCTTCTT-A
Sc.puniceusRHA27    GTCCCCCTCCTATCCCCA--GTAAAAAGCCCCATTTTT---CTTCCTT-A
Str.truncata        GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TTTTCTAGA
Sc.puniceus7301     GTGCCC--TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Sc.puniceusspacer   -----------------A--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Sc.multiflorus7919  GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Sc.membranaceus7917 GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Sc.membranaceuspacer-----------------A--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Sc.membranaceusRHA25GTTCCC--TCTATGCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Ze.filifolia        GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTA-A
Tr.modesta          GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Un.flava            GTCC----TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Wo.rayneri          GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Va.parviflora       GTCCC---TCTTTCCCCA-GATTAAAAGCCCATGATTC---ACTTCTT-A
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                        301                                                 350
Ama.belladonna7920      ACTATTTATCTATTTAT---CTTCTTTTTTTT-CAT-AAGCGGT---TCA
Ama.belladonna          ACTATGTATC----------CT-CTTTTTTTT-CAT-AA---------CA
Apo.lanceolatum         GCTATTTA-C----------CT-CTTTTTTTT-CAT-AA---------CA
Amm.coranica7164        --------------------------------------------------
Amm.nerinoidesRHA32     ACTAT--A-CTATCTAT---CCTCTTTTTT---CAT-AAGCGGT---TCA
Amm.coranicaspacer      ACTATTTATCTATTTAT---CTTCTTTTTTTT-CAT-AAGCGGT---TCA
Bo.disticha             ACAATTCATCTATTTAT---CTTCTTTTTTTT-CAT-AAGCGGT---TCA
Br.comptonii            ACTATTTATCTATTTAT---CTTCTTTTTTTT-CAT-AAGCGGT---TCA
Bo.disticha7172         ACTATTTATCTATTTAT---CTTCTTTTTTTT-CAT-AAGCGGT---TCA
Br.gregaria7157         ACTATTTATCTATTTAT---CTTCTTTTTTTTTCAT-AAGCGGT---TCA
Cro.flava7256           ACTATTTATCTATTTAT---CTTCTTTTTTTTTCAT-AAGCGGT---TCA
Br.radulosa7440         ACTATTTATCTATTTAT--CTTCTTTTTTTTTTCAT-AAGCGGT---TCA
Br.radulosanata7629     ACTATTTATCTATT-AT-----CTCTTTTTTTTCAA-AAGCGGT---TCA
Br.bosmaniae7251        ACTATTTATCTATTTAT---CTTCTTTTTTTTTCAT-AAGCGGT---TCA
Cl.caulescensRC9b       ACTATTTATCC-----------TCTTTTTTTTTCAT-AAGCGGT---TCA
Cl.caulescensRC10b      ACTATTTATCC-----------TCTTTTTTTTTCAT-AAGCGGT---TCA
Cl.miniata8095          ACTATTTATCC-----------TCTTTTTTTTTCAT-AAGTGGT---TAA
Cl.miniataRC14          ACTATTTATCC-----------TCTTTTTTTTTCAT-AAGTGGT---TAA
Cl.caulescens8092       ACTATTTATCC-----------TCTTTTTTTTTCAT-AAGCGGT---TCA
Cl.miniata              ACTATTTATCC-----------TCTTTTTTTTTCAT-AAGTGGT---TAA
Cl.sp.RC7b              ACTATTTATCC-----------TCTTTTTTTTTCAT-AAGTGGT---TCA
Cali.korsakoffii        ACTATTTATCT---------TCTTTTTTTTTTTCAT-AAGCAGT---TCA
Cl.cyrtantiflora8094    ACTATTTATCC-----------TCTTTTTTTTTCAT-AAGCGGT---TCA
Cl.nobilisRC6b          ACTATTTATCC-----------TCTTTTTTTTTCAT-AAGCGGT---TCA
Cl.caulescens           ACTATTTATCC-----------TCTTTTTTTTTCAT-AAGCGGT---TCA
Cl.gardenii             ACTATTTATCC-----------TCTTTTTTTTTCAT-AAGCGGT---TCA
Cl.miniata              ACTATTTATCC-----------TCTTTTTTTTTCAT-AAGTGGT---TCA
Cl.nobilis8091          ACTATTTATCC-----------CCCTTTTTTTTCAT-AAGCGGT---TCG
Chl.fragrans            ACTATTTATCT------------TCTTTTTTTTCAT-AAGCAGT---TCA
Cl.nobilis              ACTATTTATCC-----------TCTTTTTTTTTCAT-AAGTGGT---TCA
Calo.lutea              ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGT---TCA
Cr.yemenense            ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.euchrophylluRC96     ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.acauleRC106          ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.acaulglaucRC105      ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.bulbispermumRC95     ACTATTTATCTGGG-ACTA--CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.campanulatum7167     ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.foetidumRC98         ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.graminicola7630      ACTATTTATCTATTATC-----TTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.lugardii7632         ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.macowanii7168        ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.nearmacowaniRC100    ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.abyssinicum          ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.buphanoidesRC102     ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.americanum           ACTATTTATCTATTTAT-----CTTCTTTTTTTCAT-AAGCGGT---TCA
Cr.asiaticum            ACTATTTATCTATTTAT-----CTTCTTTTTTTCAT-AAGCGGG---TCA
Cr.baumii               ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.acauleRC38           ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.buphanoides          ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.campanulatum         ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.cruentum             ACTATTTATCTATTTAT-----CTTCTTTTTTTCAT-AAGCGGT---TCA
Cr.distichum            ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.erubescens           ACTATTTATCTATTTAT-----CTTCTTTTTTTCAT-AAGCGGT---TCA
Cr.flaccidum            ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
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                        301                                                 350
Cr.forbesii             ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.jagus                ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.ligulatum            ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.oliganthum           ACTATTTATCTATTTAT-----CTTCTTTTTTTCAT-AAGCGGT---TCA
Cr.pendunculatum        ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.Meerow2332           ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.buphanoides7631      ACTATTTATCTATTTAT---CTTCTTTTTTTTTCAT-AAGCGGT---TCA
Cr.carolschmidRC97      ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.lineareRC99          ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.minimumRC37          ACCATTTACCTATTAAT----CTTCTTTTCTTTCAT-AAGCGGT---TCA
Cr.paludosumRC41        ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.variabileRC44        ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.moorei7921           ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cry.vansonii            ACTATTTATC-----------CTCTTTTTTTTTCAT-AAGCGGT---TCA
Cy.herrei7217           --------------------------------------------------
Cy.brachyscyphuRC90     --------------------------------------------------
Cyb.longifolia          ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cy.elatus7636           ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGT---TCA
Cy.brachyscyphus7406    ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGT---TCA
Cy.elatusRC93           ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGT---TCA
Cy.huttonii7206         ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGT---TCA
Cy.mackenii7179         ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGT---TCA
Cy.mackeniiRC87         ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGT---TCA
Cy.macowanii7201        ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGT---TCA
Cy.obliquus7180         ACTATTTAT-----------------TTTTTTTCAT-AAGCGGT---TCA
Cy.obliquus7278         ACTATTTAT-----------------TTTTTTTCAT-AAGCGGT---TCA
Cy.ochroleucus7639      ACTATTTATCT-----------TCTTTTTTTTGCAT-AAGCGGT---TCA
Cy.contractus7199       ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGT---TCA
Cy.labiatus7258         ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGT---TCA
Cy.nova7963             ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGT---TCA
Cy.sanguineusRC94       ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGT---TCA
Cy.spesiosus7213        ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGT---TCA
Cy.staadensis7316       ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGT---TCA
Cy.breviflorus7188      ACTATTTATCT------------TCTTTTTTTTCAT-AAGCAGT---TCA
Cy.elatus7202           ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGT---TCA
Cy.labiatus7212         ACTATACTATCTA---------TCCTTTTTTTTCAT-AAGCGGT---TCA
Cy.obliquus7210         ACTATTTAT-----------------TTTTTTTCAT-AAGCGGT---TCA
Cy.sanguineus7216       ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGTA--TCA
Cy.smithiae7214         ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGT---TCA
Cy.suaveolens7181       ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGT---TCA
Cy.breviflorus7634      --------------------------------------------------
Cy.elatus7198           --------------------------------------------------
Cy.spesiosus7640        ACTATTTATCT-----------TCTTTTTTTTTCAT-AAGCGGT---TCA
Cy.eucallus7218         ACTATTTATCT------------TCTTTTTTTTCAT--AGCGGT---TCA
Cy.spesiosusRC84        --------------------------------------------------
Cy.spiralis7219         --------------------------------------------------
Cy.wellandiiRC83        ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGT---TCA
Cy.obrienii7193         ACTATTTATCT-------------TCTTTTTTTCAT-AAGCGGT---TCA
Cy.herreiRC86           ACAATTTATAC-----------TTCTTTTTTTTCAT-AAGCGGT---TCA
Cy.brachyscyphus7204    ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGT--TGCA
Cy.thorncroftiRC80      ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGT---TCA
Cy.loddigesianus7203    ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGT---TCA
Cy.falcatus7637         --------------------------------------------------
Cy.elatus               ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGT---TCA
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                        301                                                 350
Cy.falcatusRC82         ACTATTTATCT-----------TCTTTTTTTTCAT-AAGCGGT---TCA
Cy.spiralis7964         AC-ATTTATGCT---------TTTTTTATTGGTCAT-AAGCGGT---TCA
Ge.namaquensisAMV642    ACTATTTATCC----------TCTTTTTTTTTTCAT-AAGCGGT---TCA
Eus.darwinii            ACTATTTATCT-----------TCTTTTTTTTCAT-AAGCAGT---TCA
Ga.plicatus             ACTATTTATCT------------TATTTTTTTCAT-AAGCGGT---TCA
Euc.castelnaeana        ACTATTTATCT----------TCTTTTTTTTTTCAT-AAGCAGT---TCA
Ge.verticillaspacer     ACTATTTATCC----------TCTTTTTTTTTTCAT-AAGCGGT---TCA
Ge.brittenianaspacer    ----------------------TTTTTTTTTTCAT-AAGCGGT---TCA
Ge.lanuginosaspacer     ACTATTTATCCT---------CTTTTTTTTTTTCAT-AAGCGGT---TCA
Gr.hyacinthine          ACAAATAATCT----------TCTTTTTTTTTCAT-AAGCGGT---TCA
Eucr.eucrosioides       ACTATTTATCT-----------TCTTTTTTTTCAT-AAGCAGT---TCA
Ge.ciliaris             ACTATTTATCCT---------CTTTTTTTTTTTCAT-AAGCGGT---TCA
Ge.namaquensisAMV635    --------------------------------------------------
Ge.namaquensisAMV639    --------------------------------------------------
Hes.zeyheri             ACTATTTATCT----------TCTTTTTTTTTCAT-AAGCGGT---TCA
Hip.sp.7447             ACTATTTATCT----------TCTTTTTTTTTTCAT-AAGCGGT---TCA
Hym.eucharidifolia      ACTATTTATCT----------TCTTTTTTTTTTCAT-AAGCAGT---TCA
Hae.sanguineus7253      ACTATTTATCC------------TCTTTTTTTCAT-AAGCGGT---TCA
Hae.montanus7163        ACTATTTATCC-----------TCTTTTTTTTCAT-AAGCGGT---TCA
Hae.humilis7254         ACTATTTATCC-----------TCTTTTTTTTCAT-AA---------CA
Hae.albiflos7512        CTGATTTATCC----------TCTTTTTTTTTTCAT-AA--------CAA
Hae.coccineusAMV632     ACTATTTATCC---------TCTTTTTTTTTTTCAT-AAGCGGT---TCA
Hae.albiflos7517        ACTATTTATCC----------TCTTTTTTTTTTCAT-AA---------CA
Hae.paucilifoliu7925    ACTATTTATCC----------TCTTTTTTTTTTCAT-AA---------CA
Hae.albiflosspacer      ACTATTTATCC----------TCTTTTTTTTTTCAT-AA---------CA
Hae.humilisspacer       ACTATGTATCC-----------TCTTTTTTTTCAT-AA---------CA
Hae.graniticusspacer    ACTATTTATCC----------TCTTTTTTTTTCAT-AAGCGGT---TCA
Hae.pumiliospacer       ACTATTTATCC------------TCTTTTTTTCAT-AAGCGGT---TCA
Hae.crispus7252         ACTATTTATCTATTTATCT---TCTTTTTTTTTCAT-AAGCGGTT--CAA
Hie.marginata           ACTATATATAT----------CTTCTTTTTTTTCAT-AAGCAGT---TCA
Hae.crispus7260         --------------------------------------------------
Hae.humilis             --------------------------------------------------
Hip.papilio             --------------------------------------------------
Hab.martinezii          ACTATTTATCT-----------TCTTTTTTTTCAT-AAGCGGT---TCA
Hym.latifolia           ACTATTTATCT----------TCTTTTTTTTTCAC-AAGCAGTT--CAA
Hae.hirsitus7626        ACTATTTATCTATTTATCT---TCTTTTTTTTTCAT-AAGCGGT---TCA
Han.hesperidum          ACTAATTATCT----------TCTTTTTTTTTCAT-AAGCGGT---TCA
La.martinezii           ACTATTTATCT----------TCTTTTATTTTCAT-AAGCGGT---TCA
Is.narcissiflora        ACAAATTATCT---------TCTTTTTTTTTCCAT-AAGCAGT---TCA
Is.vargasii             CCTATTTATCT----------TCTTTATATTTCAT-CGCCGTT---TCC
Ly.squamigera           ACTATTTATCT-----------TCTTTTTTTTCAT-AAGCGGT---TCA
Lep.quitoensis          ACTATTTATCT----------TCTTTTTTTTTCAT-AAGCAGT---TCA
Leu.autumnale           AAAATTTTTTTTT---------TTTTTTTTTTTCAA-AGGCGGT---TCA
Ly.albifloraintron      --------------------------------------------------
Ja.gypsophila           ACTATATTATTTATCC---TCTTTTTTTCATAAGTG-AAGTGGTTCAAAA
Ne.bowdenii             ACTATTTATCTACTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Na.calcicolaspacer      ACTATTTATCT----------TCTTTTTTTTTCAT-AAGCGGT---TCA
Na.serotinusspacer      ACTATTTCTCT----------TCTTTTTTTTCAT-AAGCGGT---TCA
Na.tortifoliusspacer    ACTATTTATCT----------TCTTTTTTTTTCAT-AAGCGGT---TCA
Na.jonquillaspacer      ACTATTTATCT----------TCTTTTTTTTTCAT-AAGCGGT---TCA
Na.albimarginaspacer    ACTATTTATCT-----------TCTTTTTTTTCAT-AAGCGGT---TCA
Na.cuatrecasasspacer    ACTATTTATCT-----------TCTTTTTTTTCAT-AAGCGGT---TCA
Na.marvierispacer       ACTATTTATCT----------TCTTTTTTTTTTCAT-AAGCGGT---TCA
Na.rupicolaspacer       ACTATTTATCT----------TCTTTTTTTTTTCAT-AAGCGGT---TCA
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                    301                                                 350
Na.watierispacer    ACTATTTATCT----------TCTTTTTTTTTTCAT-AAGCGGT---TCA
Na.bulbocodiumspacer ACTATTTATCT----------TCTTTTTTTTTTCAT-AAGCGGT---TCA
Na.lusitanicusspacer ACTATTTATCT----------TCTTTTTTTTTTCAT-AAGCGGT---TCA
Na.pallidulusspacer ACTATTTATCT----------TCTTTTTTTTTTCAT-AAGCGGT---TCA
Na.cyclamineusspacer ACTATTTATCT----------TATTTTTTTTTTCAT-AAGCGGT---TCA
Na.poeticusspacer   ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGT---TCA
Na.pseudonarcspacer ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGT---TCA
Na.triandrusspacer  ACTATTTATCT-----------TCTTTTTTTTTCAT-AAGCGGT---TCA
Na.scaberulusspacer ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGT---TCA
Ne.laticoma8090     ACTATTTATCTATTTATCTTCTTTTTTTTTTTTCAT-AAGCGGT---TCA
Na.sp.7607          ACTATTTCTCT-----------TCTTTTTTTTTCAT-AAGCGGT---TCA
Na.sp.7608          ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGT---TCA
Na.sp.7521          ACTATTGTATCC----------TTCTTTTTTTTCAT-AAGCGGT--TCAA
Na.elegans          ACTATTTCTCT-----------TCTTTTTTTTTCAT-AAGCGGT---TCA
Na.tazetta          ACTATTTCTCT-----------TCTTTTTTTTTCAT-AAGCGGT---TCA
Pan.canariense      ACTATTTATCT-----------TCTTTTTTTTTCAG-AAGCGGT---TCA
Pe.decora           TAACTATATTATTTATCC---TCTTTTTTTCATAAGTGAAGTGGTTCAAA
Rh.moelleri         ACTATTTATCT----------TCTTTTTTTTTTCAT-AAGCGGT---TCA
Sp.formosissima     ACTATTTATCT-----------TCTTTTTTTTTCAT-AAGCGGT---TCA
Pab.incrassata      ACTATTTCTCCTCTTAT--CCTCCTTTTTTTTTGAT-AAACGGT---TCA
Sten.variegatum     ACTATTTATCT-------------TCTTTTTTTCAT-AAGCAGT---TCA
Ph.dubia            ACTATTTATCT------------TCTTTTTTTTCAT-AAGCAGT---TCA
Sten.pearcei        ACTATTTATCT------------TCTTTTTTTTCAT-AAGCAGT---TCA
Pam.peruviana       ACTATTTATCT-----------TCTTTTTTTTTCAT-AAGCAGT---TCA
Pr.cunninghamii     ACTATCTATCT------------TCTTTTTTTTCAT-AAGCGGT---TCC
Sc.puniceus7918     -------------------------------------------------
Par.weberbaueri     ACTATTTATCT----------TCTTTTTTTTTTCAT-AAGCAGT---TCA
Sc.cinnabarinus     ACTATTTATCC---------TCTTTTTTTTTTTCAT-AAGCGGT---TCA
Ster.lutea          ACTATTTATCT--------------TCTTTTTTCAT-AAGCGGT---TCA
Ra.decora           ACTATTTATCT---------TTTTTTTTTTTTTCAT-AAGCAGT---TCA
Sc.membranaceus7246 ACTATACTATTTA---------TCCTCTTTTTTCAT-AAGCGGT---TCA
Str.salteri7245     ACTATTTATCT---------TCTTTTTTTTTTTCAT-AAGCGGT---TCA
Sc.puniceusRHA27    ACTATCTTATACTATTTA--TCTTCTTTTTTTTCAT-AAGCGGT---TCA
Str.truncata        ACTATTGATCTAATTA-----TCTTCTTTTTTTCAT-AAGCGGT---TCA
Sc.puniceus7301     ACTATTTATCC-------------TCTTTTTTACAT-AAGCGGT---TCA
Sc.puniceusspacer   ACTATTTATCC--------------TCTTTTTTCAT-AAGCGGT---TCA
Sc.multiflorus7919  ACTATTTATCC--------------TCTTTTTTCAT-AAGCGGT---TCA
Sc.membranaceus7917 ACTATTTATCC--------------TCTTTTTTCAT-AAGCGGT---TCA
Sc.membranaceuspacer ACTATTTATCC--------------TCTTTTTTCAT-AAGCGGT---TCA
Sc.membranaceusRHA25 ACTATTTATGC-------------CTCTTTTTTCAT-AAGCGGT---TCA
Ze.filifolia        ACAATTTATCT-----------TCTTTTTTTTTCAT-AAGCGGT---TCA
Tr.modesta          ACTATTTATCT-----------TCTTTTTTTTTCAT-AAGCGGT---TCA
Un.flava            ACTATTTATCT-------------CCCTTTTTTCAT-AAGCGGT---TCA
Wo.rayneri          ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGT---TCA
Va.parviflora       ACTATGTATCT----------TCTTTTTTTTTTCAT-AAGCGGT---TCA
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                        351                                                 400
Ama.belladonna7920      AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTAC----
Ama.belladonna          AAGAAAATTC-GATATC---TTTCT-CATTC-------ATT-CTACT--T
Apo.lanceolatum         AAGAAAAATTCAATATC---TTTCT-CATTC-------ATT-CTACT--C
Amm.coranica7164        --------------------------------------------------
Amm.nerinoidesRHA32     AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Amm.coranicaspacer      AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Bo.disticha             AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Br.comptonii            AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Bo.disticha7172         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Br.gregaria7157         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cro.flava7256           AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Br.radulosa7440         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Br.radulosanata7629     AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Br.bosmaniae7251        AAGAAAAATTCAATATC---TTTCT-CATTC-------ATT-CTACT--C
Cl.caulescensRC9b       AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cl.caulescensRC10b      AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cl.miniata8095          AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cl.miniataRC14          AATAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cl.caulescens8092       AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cl.miniata              AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cl.sp.RC7b              AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cali.korsakoffii        AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cl.cyrtantiflora8094    AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cl.nobilisRC6b          AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cl.caulescens           AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cl.gardenii             AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cl.miniata              AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cl.nobilis8091          AAAAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Chl.fragrans            AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cl.nobilis              AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Calo.lutea              AAGAAAATTC-AATATC---TTTCT-TATTC-------ATT-CTACT--C
Cr.yemenense            AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.euchrophylluRC96     AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.acauleRC106          AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.acaulglaucRC105      AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.bulbispermumRC95     AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.campanulatum7167     AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.foetidumRC98         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.graminicola7630      AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.lugardii7632         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.macowanii7168        AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.nearmacowaniRC100    AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.abyssinicum          AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.buphanoidesRC102     AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.americanum           AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.asiaticum            AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.baumii               AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.acauleRC38           AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.buphanoides          AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.campanulatum         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.cruentum             AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.distichum            AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.erubescens           AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.flaccidum            AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
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                        351                                                 400
Cr.forbesii             AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.jagus                AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.ligulatum            AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.oliganthum           AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.pendunculatum        AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.Meerow2332           AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.buphanoides7631      AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.carolschmidRC97      AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.lineareRC99          AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.minimumRC37          AAGA-AATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.paludosumRC41        AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.variabileRC44        AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.moorei7921           AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cry.vansonii            AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.herrei7217           --------------------------------------------------
Cy.brachyscyphuRC90     --------------------------------------------------
Cyb.longifolia          AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.elatus7636           AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.brachyscyphus7406    AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.elatusRC93           AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.huttonii7206         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.mackenii7179         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.mackeniiRC87         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.macowanii7201        AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.obliquus7180         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.obliquus7278         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.ochroleucus7639      AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.contractus7199       AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.labiatus7258         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.nova7963             AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.sanguineusRC94       AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.spesiosus7213        AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.staadensis7316       AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.breviflorus7188      AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.elatus7202           AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.labiatus7212         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.obliquus7210         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.sanguineus7216       AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.smithiae7214         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.suaveolens7181       AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.breviflorus7634      --------------------------------------------------
Cy.elatus7198           --------------------------------------------------
Cy.spesiosus7640        AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.eucallus7218         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.spesiosusRC84        --------------------------------------------------
Cy.spiralis7219         --------------------------------------------------
Cy.wellandiiRC83        AAGAAAATTCCAATATCC--TTTCTCCATTC-------ATTGCTACT--C
Cy.obrienii7193         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.herreiRC86           AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.brachyscyphus7204    AAGAAAATTC-AATATC--TTTGCT-CATTC-------ATT-CTACT--C
Cy.thorncroftiRC80      AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.loddigesianus7203    AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.falcatus7637         --------------------------------------------------
Cy.elatus               AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
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                        351                                                 400
Cy.falcatusRC82         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.spiralis7964         AAGAAAATTACAATATC--TTTCATGCATTC----GCTATT-G-ACT-CC
Ge.namaquensisAMV642    AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Eus.darwinii            AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Ga.plicatus             AATAAAATTC-AATATT---TTTCT-CATTC-------ATT-CTACT--C
Euc.castelnaeana        AAGAAAATTC-AATATC---TTTCT-CATCC-------ATT-CTACT--C
Ge.verticillaspacer     AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Ge.brittenianaspacer    AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Ge.lanuginosaspacer     AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Gr.hyacinthine          AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Eucr.eucrosioides       AAGGAAATTC-GATATC---TTTCT-CATTC-------ATC-GTACT--C
Ge.ciliaris             AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Ge.namaquensisAMV635    ----------------------------------------------------
Ge.namaquensisAMV639    ----------------------------------------------------
Hes.zeyheri             AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Hip.sp.7447             AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Hym.eucharidifolia      AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Hae.sanguineus7253      AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Hae.montanus7163        AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Hae.humilis7254         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Hae.albiflos7512        AGAAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Hae.coccineusAMV632     AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Hae.albiflos7517        AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Hae.paucilifoliu7925    AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Hae.albiflosspacer      AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Hae.humilisspacer       AAGAAAATTC-GATATC---TTTCT-CATTC-------ATT-CTACT--T
Hae.graniticusspacer    AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Hae.pumiliospacer       AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Hae.crispus7252         AGAAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Hie.marginata           AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Hae.crispus7260         ----------------------------------------------------
Hae.humilis             ----------------------------------------------------
Hip.papilio             ----------------------------------------------------
Hab.martinezii          AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Hym.latifolia           AAGAAAATTC-AATATC---TTTCT-CATCC-------AT--CTACT--C
Hae.hirsitus7626        AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Han.hesperidum          AAGAAAAATC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
La.martinezii           AAGAAAATTC-AAAATC---TTTCT-CATTC-------ATT-CAACT--C
Is.narcissiflora        AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--T
Is.vargasii             AAGGAATTTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Ly.squamigera           AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Lep.quitoensis          AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CAACT--C
Leu.autumnale           AAGGAAAATC-AAAATT---TTTTT-CATTC-------ATT-TGGGT--T
Ly.albifloraintron      ----------------------------------------------------
Ja.gypsophila           AAAAAAATGC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Ne.bowdenii             AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Na.calcicolaspacer      AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Na.serotinusspacer      AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Na.tortifoliusspacer    AAGAAAATTC-AATATT---TTTCT-CATTC-------ATT-CTACT--C
Na.jonquillaspacer      AAGAAAATTC-AATATT---TTTCT-CATTC-------ATT-CTACT--C
Na.albimarginaspacer    AAGAAAATTT-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Na.cuatrecasaspacer     AAGAAAATTT-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Na.marvierispacer       AAGAAAATTT-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Na.rupicolaspacer       AAGAAAATTT-AATATC---TTTCT-CATTC-------ATT-CTACT--C
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                    351                                                 400
Na.watierispacer    AAGAAAATTT-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Na.bulbocodiumspacer AATAAAATTC-AATATT---TTTCT-CATTC-------ATT-CTACT--C
Na.lusitanicusspacer AAGAAAATTC-AATATC---TTTC--------------------------
Na.pallidulusspacer  AAGAAAATTC-AATATC---TTTC--------------------------
Na.cyclamineusspacer AAGAAAATTC-AATATC---TTTC--------------------------
Na.poeticusspacer    AAGAAAATTC-AATATC---TTTC--------------------------
Na.pseudonarcspacer  AAGAAAATTC-AATATC---TTTC--------------------------
Na.triandrusspacer   AAGAAAATTC-AATATC---TTTC--------------------------
Na.scaberulusspacer  AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Ne.laticoma8090      AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Na.sp.7607           AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Na.sp.7608           AAGAAAATTC-AATATC---TTTC--------------------------
Na.sp.7521           AGCAAAATTC-AATATC---TTTC--------------------------
Na.elegans           AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Na.tazetta           AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Pan.canariense       AAGAAAATTC-AATATC---TTTCT-CATTC-------ATC-CTACT--C
Pe.decora            AAAAAAAATGCAATATC---TTTCT-CATTC-------ATT-CTACT--C
Rh.moelleri          AAGAAAATTC-AATAGC---TTTCT-CATTC-------ATT-CTACT--C
Sp.formosissima      AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Pab.incrassata       AAGAAAATGC-AATATC---TTTCT-CATGC-------ATT-CTACT--C
Sten.variegatum      AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Ph.dubia             AAGAAAATTC-AATATCAATATCTTTCTCATTC-----ATT-CTACT--C
Sten.pearcei         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Pam.peruviana        AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Pr.cunninghamii      AAAAAAATTC-AATATC---TTTCT-TATTC-------ATT-CTACT--C
Sc.puniceus7918      -------------------------------------------------
Par.weberbaueri      AAAGAAAATTCAATATC---TTTCT-CATTC-------ATT-CTACT--C
Sc.cinnabarinus      AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Ster.lutea           AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Ra.decora            AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Sc.membranaceus7246  AAGAAAAATTCAATATC---TTTCT-CATTC-------ATT-CTACT--C
Str.salteri7245      AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Sc.puniceusRHA27     AAGAAAATTCCAATATC---TTTCT-CATTC-------ATT-CTACT--C
Str.truncata         GAGAAAATAG-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Sc.puniceus7301      AAGGCACCTC-AATATC-------------------------------
Sc.puniceusspacer    AAGAAAATTC-AATATC-------------------------------
Sc.multiflorus7919   AAGAAAATTC-AATATC-------------------------------
Sc.membranaceus7917  AAGAAAATTC-AATATC-------------------------------
Sc.membranaceuspacer AAGAAAATTC-AATATC-------------------------------
Sc.membranaceusRHA25 AAGAAAATTGCAATATC-------------------------------
Ze.filifolia         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Tr.modesta           AAGAAAATTC-AATAGC---TTTCT-CATTC-------ATT-CTACT--C
Un.flava             AAGAAAATTC-AATATC---TT-CT-CATTC-------ATT-CCACT--C
Wo.rayneri           AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Va.parviflora        AAGAAAATTC-AATATC---TTTCT-CATCC-------ATT-CTACT--C
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                        401                                                 450
Ama.belladonna7920      --------------------------------------------------
Ama.belladonna          CTTC--ACAAATGG-ATCCGAA---CATAAA---TCTGTTGA-----T-C
Apo.lanceolatum         TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Amm.coranica7164        --------------------------------------------------
Amm.nerinoidesRHA32     TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Amm.coranicaspacer      TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Bo.disticha             TTTC--ACAAATGG-ACCCGAG---CATAAA---TCTTTTGA-----T-C
Br.comptonii            TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Bo.disticha7172         TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Br.gregaria7157         TTTC--ACAAATGG-ACCCGAA---CATAA-------TTGA-----T-C
Cro.flava7256           TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Br.radulosa7440         TTTC--ACAAATGG-ACCCGAA---CATAA-------TTGA-----T-C
Br.radulosanata7629     TTTC--ACAAATGG-ACCCGAA---CATAA-------TTGA-----T-C
Br.bosmaniae7251        TTTC--ACAAATGGGACCCGAA---CATAAA---TCTTTTGA-----T-C
Cl.caulescensRC9b       TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cl.caulescensRC10b      TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cl.miniata8095          TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cl.miniataRC14          TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cl.caulescens8092       TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cl.miniata              TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cl.sp.RC7b              TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cali.korsakoffii        TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cl.cyrtantiflora8094    TTTC--ACAAATCG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cl.nobilisRC6b          TTTC--ACAAATCG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cl.caulescens           TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cl.gardenii             TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cl.miniata              TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cl.nobilis8091          TTTC--ACAAATCG-ATCCGTAA--CATAAA---TCTTTTGGA----T-C
Chl.fragrans            TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cl.nobilis              TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Calo.lutea              TTTC--ACAAAGGG-ATCCGAA---CATAAA---TCTTTGGA-----T-C
Cr.yemenense            TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.euchrophylluRC96     TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.acauleRC106          TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.acaulglaucRC105      TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.bulbispermumRC95     TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.campanulatum7167     TTTC--ACAAATGG-ACCCGAA---CATAA-------TTGA-----T-C
Cr.foetidumRC98         TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.graminicola7630      TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.lugardii7632         TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.macowanii7168        TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.nearmacowaniRC100    TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.abyssinicum          TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.buphanoidesRC102     TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.americanum           TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.asiaticum            TTTC--ACAAATGG--CCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.baumii               TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.acauleRC38           TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.buphanoides          TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.campanulatum         TTTC--ACAAATGG-ACCCGAA---CATAA-------TTGA-----T-C
Cr.cruentum             TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.distichum            TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.erubescens           TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.flaccidum            TTTC--ACAAATGG-ACCCGAA---CATAA-------TTGA-----T-C
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                        401                                                 450
Cr.forbesii             TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.jagus                TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.ligulatum            TTTC--ACAAATGT-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.oliganthum           TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.pendunculatum        TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.Meerow2332           TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.buphanoides7631      TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.carolschmidRC97      TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.lineareRC99          TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.minimumRC37          TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.paludosumRC41        TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.variabileRC44        TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.moorei7921           TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cry.vansonii            TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTGGC-----T-C
Cy.herrei7217           --------------------------------------------------
Cy.brachyscyphuRC90     --------------------------------------------------
Cyb.longifolia          TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cy.elatus7636           TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cy.brachyscyphus7406    TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cy.elatusRC93           TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cy.huttonii7206         TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cy.mackenii7179         TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cy.mackeniiRC87         TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cy.macowanii7201        TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cy.obliquus7180         TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCCTTTGA-----T-C
Cy.obliquus7278         TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCCTTTGA-----T-C
Cy.ochroleucus7639      TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cy.contractus7199       TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCCTTTGA-----T-C
Cy.labiatus7258         TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cy.nova7963             TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cy.sanguineusRC94       TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCCTTTGA-----T-C
Cy.spesiosus7213        TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cy.staadensis7316       TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCCTTTGA-----T-C
Cy.breviflorus7188      TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cy.elatus7202           TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cy.labiatus7212         TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cy.obliquus7210         TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCCTTTGA-----T-C
Cy.sanguineus7216       TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCCTTTGA-----T-C
Cy.smithiae7214         TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCCTTTGA-----T-C
Cy.suaveolens7181       TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cy.breviflorus7634      --------------------------------------------------
Cy.elatus7198           --------------------------------------------------
Cy.spesiosus7640        TTTC--AGAAATGG-ATCCGAA---CATAA-------TTTGA-----T-C
Cy.eucallus7218         TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCCTTTGA-----T-C
Cy.spesiosusRC84        --------------------------------------------------
Cy.spiralis7219         --------------------------------------------------
Cy.wellandiiRC83        TTTCC-ACAAAAGG-ATCCGAA---CATAAA---TCCTTTGA-----T-C
Cy.obrienii7193         TTTC--ACAAAAGGTATCCGAA---CATAAA---TCTTTTGA-----T-C
Cy.herreiRC86           TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cy.brachyscyphus7204    TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cy.thorncroftiRC80      TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCCTTTGA-----T-C
Cy.loddigesianus7203    TTTC-ACAAAAAGG-ATGCCGAA--CATAAA---TCCTTTGA-----T-C
Cy.falcatus7637         --------------------------------------------------
Cy.elatus               TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
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                    401                                                 450
Cy.falcatusRC82     TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCCTTTGA-----T-C
Cy.spiralis7964     TTTGC-ACAAAAGG-ATGCCGAA--CATAAA---TTTTTTGA-----C-C
Ge.namaquensisAMV642 TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Eus.darwinii        TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Ga.plicatus         TTTA--ACAAATGG-ATCCAAA---CATAAA---TCTTTTGA-----T-C
Euc.castelnaeana    TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Ge.verticillaspacer TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Ge.brittenianaspacer TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Ge.lanuginosaspacer TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Gr.hyacinthine      TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Eucr.eucrosioides   TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Ge.ciliaris         TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Ge.namaquensisAMV635 --------------------------------------------------
Ge.namaquensisAMV639 --------------------------------------------------
Hes.zeyheri         TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Hip.sp.7447         TTTC--AGAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Hym.eucharidifolia  TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Hae.sanguineus7253  TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGATCTTAT-C
Hae.montanus7163    TTTC--ACAAATGG-ATCCGAAA--CATAAA---TCTTTTGATCTTATGC
Hae.humilis7254     TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Hae.albiflos7512    TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Hae.coccineusAMV632 TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGATCTTAT-C
Hae.albiflos7517    TTTC--ACAAATGG-ATCCGAAA--CATAAA---TCTTTTGA-----T-C
Hae.paucilifoliu7925 TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Hae.albiflosspacer  TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Hae.humilisspacer   CTTC--ACAAATGG-ATCCGAA---CATAAA---TCTGTTGA-----T-C
Hae.graniticusspacer TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGATCTTAT-C
Hae.pumiliospacer   TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGATCTTAT-C
Hae.crispus7252     TTTC--ACAAATGGGACCCGAA---CATAAA---TCTTTTGA-----T-C
Hie.marginata       TTTCACACACATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Hae.crispus7260     --------------------------------------------------
Hae.humilis         --------------------------------------------------
Hip.papilio         --------------------------------------------------
Hab.martinezii      TTTC--AGAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Hym.latifolia       TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTT-GA-----T-C
Hae.hirsitus7626    TTTC--ACAAATGG-ACCCGAA---CATAA-------TTTGA-----T-C
Han.hesperidum      TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
La.martinezii       GTTC--CCAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Is.narcissiflora    TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Is.vargasii         TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Ly.squamigera       TTTC--ACAAATAG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Lep.quitoensis      TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTGGA-----T-C
Leu.autumnale       TTTC--ACAAACGG-ATCCGGAG--GAAAA----TTTTTGGA-----T-T
Ly.albifloraintron  --------------------------------------------------
Ja.gypsophila       TTTC--GCAAATGG-ATCCGAA---CAGAAA---------------T-C
Ne.bowdenii         TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Na.calcicolaspacer  TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Na.serotinusspacer  TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Na.tortifoliusspacer TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Na.jonquillaspacer  TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Na.albimarginaspacer TTTC--ACAAATAG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Na.cuatrecasaspacer TTTC--ACAAATAG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Na.marvierispacer   TTTC--ACAAATAG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Na.rupicolaspacer   TTTC--ACAAATAG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
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                    401                                                 450
Na.watierispacer    TTTC--ACAAATAG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Na.bulbocodiumspacer TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Na.lusitanicusspacer ------ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Na.pallidulusspacer  ------ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Na.cyclamineusspacer ------ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Na.poeticusspacer    ------ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Na.pseudonarcspacer  ------ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Na.triandrusspacer   ------ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Na.scaberulusspacer  TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Ne.laticoma8090      TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Na.sp.7607           TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Na.sp.7608           ------ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Na.sp.7521           ------ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Na.elegans           TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Na.tazetta           TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Pan.canariense       TTTC--ACAAATGG-ATCCGAA---CATAAG-------TTGA-----T-C
Pe.decora            TTTC--GCAAATGG-ATCCGAA---CAGAAA---------------T-C
Rh.moelleri          TTTC--AGAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Sp.formosissima      TTTC--AGAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Pab.incrassata       TTTC--ACAAATGG-ATCCGAA---CAGAAA---TCTTTTGA-----T-C
Sten.variegatum      TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Ph.dubia             TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Sten.pearcei         TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Pam.peruviana        TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Pr.cunninghamii      TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Sc.puniceus7918      ------------------------------------------------
Par.weberbaueri      TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Sc.cinnabarinus      TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Ster.lutea           TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTGGA-----T-C
Ra.decora            TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Sc.membranaceus7246  TTTC--ACAAATGG-ATCCGAAA--CATAAA---TCTTTTGA-----T-C
Str.salteri7245      TTTC--ACAAATGG--CCCGAA---CATAAA---TCTTTTGA-----T-C
Sc.puniceusRHA27     TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Str.truncata         TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Sc.puniceus7301      ------------------------------------------------
Sc.puniceusspacer    ------------------------------------------------
Sc.multiflorus7919   ------------------------------------------------
Sc.membranaceus7917  ------------------------------------------------
Sc.membranaceuspacer ------------------------------------------------
Sc.membranaceusRHA25 ------------------------------------------------
Ze.filifolia         TTTC--AGAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Tr.modesta           TTTC--AGAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Un.flava             TTTC--ACAAATGG-ATCCGAA---CATAAA---TCCTTTGA-----T-C
Wo.rayneri           TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Va.parviflora        TATC--ACAAATGG-ATCCGAA---CATAAA---TCTTTGGA-----T-C
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                        451                                                 500
Ama.belladonna7920      --------------------------------------------------
Ama.belladonna          TTATACC--AATTTGGTTGGAA-----TAGATATGATACCCGT--ACAAA
Apo.lanceolatum         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Amm.coranica7164        --------------------------------------------------
Amm.nerinoidesRHA32     TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Amm.coranicaspacer      TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Bo.disticha             TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Br.comptonii            TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCAT--ACAAA
Bo.disticha7172         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Br.gregaria7157         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cro.flava7256           TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Br.radulosa7440         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Br.radulosanata7629     TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Br.bosmaniae7251        TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cl.caulescensRC9b       TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cl.caulescensRC10b      TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cl.miniata8095          TTATACC--AATTTGGTTTGAA-----TAGATATGATCCCCGT--ACAAA
Cl.miniataRC14          TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cl.caulescens8092       TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cl.miniata              TTATACC--AATTTGGTTTGAA-----TAGATATGATCCCCGT--ACAAA
Cl.sp.RC7b              TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cali.korsakoffii        TTATACC--AATTTGGTTTGAA-----TAGATATGATAGCCGT--ACAAA
Cl.cyrtantiflora8094    TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cl.nobilisRC6b          TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cl.caulescens           TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cl.gardenii             TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cl.miniata              TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cl.nobilis8091          TTATACC--AATTTGGTTTGCAA----TAGATATGATACCCGT--ACAAA
Chl.fragrans            TTATACC--AATTTGGTTTGAA-----TAGATATGATAGCCGT--ACAAA
Cl.nobilis              TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Calo.lutea              TAATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.yemenense            TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.euchrophylluRC96     TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.acauleRC106          TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.acaulglaucRC105      TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.bulbispermumRC95     TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.campanulatum7167     TTATACC--AATTTGGTTTTCA-----TAGATATGATACCCGT--ACAAA
Cr.foetidumRC98         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.graminicola7630      TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.lugardii7632         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.macowanii7168        TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.nearmacowaniRC100    TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.abyssinicum          TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.buphanoidesRC102     TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.americanum           TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.asiaticum            TTATACC--AATTTGGTTGGAA-----TAGATATGATACCCGT---CCAA
Cr.baumii               TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.acauleRC38           TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.buphanoides          TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.campanulatum         TTATACC--AATTTGGTTTTCA-----TAGATATGATACCCGT--ACAAA
Cr.cruentum             TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.distichum            TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.erubescens           TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.flaccidum            TTATACC--AATTTGGTTTTCA-----TAGATATGATACCCGT--ACAAA
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                        451                                                 500
Cr.forbesii             TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.jagus                TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.ligulatum            TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.oliganthum           TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.pendunculatum        TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.Meerow2332           TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.buphanoides7631      TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.carolschmidRC97      TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.lineareRC99          TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.minimumRC37          TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.paludosumRC41        TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.variabileRC44        TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.moorei7921           TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cry.vansonii            TAATACC--AATTTGGTTGGAA-----TAGATATGATACCCGT--ACAAA
Cy.herrei7217           --------------------------------------------------
Cy.brachyscyphuRC90     --------------------------------------------------
Cyb.longifolia          TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.elatus7636           TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.brachyscyphus7406    TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.elatusRC93           TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.huttonii7206         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.mackenii7179         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.mackeniiRC87         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.macowanii7201        TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.obliquus7180         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGTC-ACAAA
Cy.obliquus7278         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.ochroleucus7639      TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.contractus7199       TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.labiatus7258         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.nova7963             TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.sanguineusRC94       TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.spesiosus7213        TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.staadensis7316       TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.breviflorus7188      TTATACC--AATTTGGTTTGAA-----TAGATATGATAGCCGT--ACAAA
Cy.elatus7202           TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.labiatus7212         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.obliquus7210         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.sanguineus7216       TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.smithiae7214         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.suaveolens7181       TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.breviflorus7634      --------------------------------------------------
Cy.elatus7198           --------------------------------------------------
Cy.spesiosus7640        TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.eucallus7218         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.spesiosusRC84        --------------------------------------------------
Cy.spiralis7219         --------------------------------------------------
Cy.wellandiiRC83        TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.obrienii7193         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.herreiRC86           TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.brachyscyphus7204    TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.thorncroftiRC80      TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.loddigesianus7203    TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.falcatus7637         --------------------------------------------------
Cy.elatus               TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
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                        451                                                 500
Cy.falcatusRC82         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.spiralis7964         TATTACC--AATGTGGTGCGTGAA--TGAGATATGATAGCCGTG-ACAAA
Ge.namaquensisAMV642    TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Eus.darwinii            TTATACC--AATTTGGTTTGAA-----TAGATATGATAGCCGT--ACAAA
Ga.plicatus             TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Euc.castelnaeana        TTATACC--AATTTGGTTTGAA-----TAGATATGATAGCCGT--ACAAA
Ge.verticillaspacer     TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Ge.brittenianaspacer    TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Ge.lanuginosaspacer     TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGG--ACAAA
Gr.hyacinthine          TTATACA--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Eucr.eucrosioides       TTATACC--AATTTGGTTGGAA-----TAGATATGATACCCGT--ACAAA
Ge.ciliaris             TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Ge.namaquensisAMV635    --------------------------------------------------
Ge.namaquensisAMV639    --------------------------------------------------
Hes.zeyheri             TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Hip.sp.7447             TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Hym.eucharidifolia      TTATACC--AATTTGGTTTGAA-----TAGATATGATAGCCGT--ACAAA
Hae.sanguineus7253      TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Hae.montanus7163        TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Hae.humilis7254         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Hae.albiflos7512        TTATACC--AATTTGGTTTGAAA----TAGATATGATACCCGT--ACAAA
Hae.coccineusAMV632     TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Hae.albiflos7517        TTATACC--AATTTGGTTTGAAA----TAGATATGATACCCGT--ACAAA
Hae.paucilifoliu7925    TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Hae.albiflosspacer      TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Hae.humilisspacer       TTATACC--AATTTGGTTGGAA-----TAGATATGATACCCGT--ACAAA
Hae.graniticusspacer    TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Hae.pumiliospacer       TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Hae.crispus7252         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Hie.marginata           TTATACC--AATTTGGTTTGAA-----TAGATATGATAGCCGT--ACAAA
Hae.crispus7260         --------------------------------------------------
Hae.humilis             --------------------------------------------------
Hip.papilio             --------------------------------------------------
Hab.martinezii          TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Hym.latifolia           CTATACC--AATTTGGTTTGAA-----TAGATATGATAGCCGT--ACAAA
Hae.hirsitus7626        TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Han.hesperidum          TTAAACC--AATTTGGTTTGAA-----TAGATATGAAACCCGT--ACAAA
La.martinezii           TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Is.narcissiflora        TTATACC--AATTTGGTTTGAA-----TAGATATGATAGCCGT--ACAAA
Is.vargasii             TTATACC--AATTTGGTTTGAA-----TAGATATGATAGCCGT--ACAAA
Ly.squamigera           TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Lep.quitoensis          TAAAACC--AATTTGGTTGGAA-----TAGATATGATAGCCGT--ACAAA
Leu.autumnale           TTAAATC-AAATTGGTTGGGAA-----AGATATGAAACCCCT--ACAAA
Ly.albifloraintron      --------------------------------------------------
Ja.gypsophila           TTATCCC--AATTTGGTTTGAA-----TAGATACAATACCTGT--ACAAA
Ne.bowdenii             TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Na.calcicolaspacer      TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Na.serotinusspacer      TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Na.tortifoliusspacer    TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Na.jonquillaspacer      TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Na.albimarginaspacer    TTATACC--AATTAATTTGGTTTGAA-TAGATATGATACCCGT--ACAAA
Na.cuatrecasaspacer     TTATACC--AATTAATTTGGTTTGAA-TAGATATGATACCCGT--ACAAA
Na.marvierispacer       TTATACC--AATTAATTTGGTTTGAA-TAGATATGATACCCGT--ACAAA
Na.rupicolaspacer       TTATACC--AATTAATTTGGTTTGAA-TAGATATGATACCCGT--ACAAA
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                    451                                                 500
Na.watierispacer    TTATACC--AATTAATTTGGTTTGAA-TAGATATGATACCCGT--ACAAA
Na.bulbocodiumspacer TTATACA--AATTTGGTTTGAA-----TAGATATGATACCCGT--ATAAA
Na.lusitanicusspacer TTATACC--CATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Na.pallidulusspacer  TTATACC--CATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Na.cyclamineusspacer TTATACC--CATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Na.poeticusspacer    TTATACC--CATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Na.pseudonarcspacer  TTATACC--CATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Na.triandrusspacer   TTATACC--CATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Na.scaberulusspacer  TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Ne.laticoma8090      TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Na.sp.7607           TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Na.sp.7608           TTATACC--CATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Na.sp.7521           TTATACC--CATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Na.elegans           TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Na.tazetta           TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Pan.canariense       TTATACC--AATTTGGTTTGAA-----TAGATATGATACCGTA---C-AA
Pe.decora            TTATCCC--AATTTGGTTTGAA-----TAGATACAATACCTGT--ACAAA
Rh.moelleri          TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Sp.formosissima      TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Pab.incrassata       TTATACC---ATTTAGTTTGAA-----TAAATTTGATACCCGT--ACAAA
Sten.variegatum      TTATACC--AATTTTGTTTGAA-----TAGATATGATAGCCGT--ACAAA
Ph.dubia             TTATACC--AATTTGGTTTGAA-----TAGATATGATAGCCGT--ACAAA
Sten.pearcei         TTATACC--AATTTGGTTTGAA-----TAGATATGATAGCCGT--ACAAA
Pam.peruviana        TTATACC--AATTTGGTTTGAA-----TAGATATGATAGCCGT--ACAAA
Pr.cunninghamii      TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Sc.puniceus7918      --------------------------------------------------
Par.weberbaueri      TTATACC--AATTTGGTTTGAA-----TAGATATGATAGCCGT--ACAAA
Sc.cinnabarinus      TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Ster.lutea           TTATACC--AATTTGGTTGGAA-----TAGATATGATACCCGT--ACAAA
Ra.decora            TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Sc.membranaceus7246  TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Str.salteri7245      TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Sc.puniceusRHA27     TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Str.truncata         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Sc.puniceus7301      --------------------------------------------------
Sc.puniceusspacer    --------------------------------------------------
Sc.multiflorus7919   --------------------------------------------------
Sc.membranaceus7917  --------------------------------------------------
Sc.membranaceuspacer --------------------------------------------------
Sc.membranaceusRHA25 --------------------------------------------------
Ze.filifolia         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Tr.modesta           TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Un.flava             TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Wo.rayneri           TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Va.parviflora        TTATACC--AATTTGGTGGGAA-----TAGATATGATACCCGT--ACAAA
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                          501                                                 550
Ama.belladonna7920        --------------------------------------------------
Ama.belladonna            TGAAC----ATATACGGT-CAAGG-AATTCATTCCCATTGTTG-AATCAC
Apo.lanceolatum           TGAAC----ATATACGGT-CAAGG-AATTCATTCCCATTATTG-AATCAC
Amm.coranica7164          --------------------------------------------------
Amm.nerinoidesRHA32       TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Amm.coranicaspacer        TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Bo.disticha               TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Br.comptonii              TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Bo.disticha7172           TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Br.gregaria7157           TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cro.flava7256             TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Br.radulosa7440           TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Br.radulosanata7629       TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Br.bosmaniae7251          TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cl.caulescensRC9b         TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cl.caulescensRC10b        TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cl.miniata8095            TGAAC----ATATATGGT-CAAGG-----GATTCCCATTATTG-AATCAT
Cl.miniataRC14            TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cl.caulescens8092         TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cl.miniata                TGAAC----ATATATGGT-CAAGG-----GATTCCCATTATTG-AATCAT
Cl.sp.RC7b                TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cali.korsakoffii          TGAAC----ATATATGGT-CATGG-----AATTTCCATTATTG-AATCAT
Cl.cyrtantiflora8094      TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cl.nobilisRC6b            TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cl.caulescens             TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cl.gardenii               TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cl.miniata                TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cl.nobilis8091            TGAAC----ATATATGGT-CAAGGC----AATTCCCATTATTG-AATCAT
Chl.fragrans              TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Cl.nobilis                TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Calo.lutea                TGAAC----ATATATAGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.yemenense              TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.euchrophylluRC96       TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.acauleRC106            TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.acaulglaucRC105        TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.bulbispermumRC95       TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.campanulatum7167       TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.foetidumRC98           TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.graminicola7630        TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.lugardii7632           TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.macowanii7168          TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.nearmacowaniRC100      TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.abyssinicum            TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.buphanoidesRC102       TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.americanum             TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.asiaticum              TGAAC----ATATATGG--CAAGG-----AATTCCCAT-AT-G--ATCAT
Cr.baumii                 TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.acauleRC38             TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.buphanoides            TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.campanulatum           TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.cruentum               TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.distichum              TGAAC----ATATACGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.erubescens             TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.flaccidum              TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
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                        501                                                 550
Cr.forbesii             TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.jagus                TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.ligulatum            TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.oliganthum           TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.pendunculatum        TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.Meerow2332           TGAAC----ATATATGGT-CAAGG-----GATTCCCATTATTG-AATCAT
Cr.buphanoides7631      TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.carolschmidRC97      TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.lineareRC99          TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.minimumRC37          TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.paludosumRC41        TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.variabileRC44        TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.moorei7921           TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cry.vansonii            TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.herrei7217           --------------------------------------------------
Cy.brachyscyphuRC90     --------------------------------------------------
Cyb.longifolia          TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.elatus7636           TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.brachyscyphus7406    TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.elatusRC93           TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.huttonii7206         TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCCA
Cy.mackenii7179         TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.mackeniiRC87         TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.macowanii7201        TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.obliquus7180         TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.obliquus7278         TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.ochroleucus7639      TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.contractus7199       TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.labiatus7258         TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.nova7963             TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.sanguineusRC94       TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.spesiosus7213        TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.staadensis7316       TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.breviflorus7188      TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Cy.elatus7202           TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.labiatus7212         TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.obliquus7210         TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.sanguineus7216       TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.smithiae7214         TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.suaveolens7181       TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.breviflorus7634      --------------------------------------------------
Cy.elatus7198           --------------------------------------------------
Cy.spesiosus7640        TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Cy.eucallus7218         TGAAC----ATATATGGT-CAAGGG----AATTCCCATTATTG-AATCAT
Cy.spesiosusRC84        --------------------------------------------------
Cy.spiralis7219         --------------------------------------------------
Cy.wellandiiRC83        TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.obrienii7193         TGTAAC---ATATATGGT-CAAGGC----AATTCCCATTATTG-AATCAT
Cy.herreiRC86           TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.brachyscyphus7204    TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.thorncroftiRC80      TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.loddigesianus7203    TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.falcatus7637         --------------------------------------------------
Cy.elatus               TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
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                        501                                                 550
Cy.falcatusRC82         TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.spiralis7964         TGAAC----ATATAAGGTACAAGG-----AATTGCCCATTATG-AATCAT
Ge.namaquensisAMV642    TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Eus.darwinii            TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Ga.plicatus             TGACC----ATATATGGC-CATGG-----AATTCCTATTATTG-AATCAT
Euc.castelnaeana        TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Ge.verticillaspacer     TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Ge.brittenianaspacer    TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Ge.lanuginosaspacer     TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATCG-AATCAT
Gr.hyacinthine          TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Eucr.eucrosioides       TGAAC----ATATATGGT-CATGG-----AATTTCCATTATTG-AATCAT
Ge.ciliaris             TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Ge.namaquensisAMV635    --------------------------------------------------
Ge.namaquensisAMV639    --------------------------------------------------
Hes.zeyheri             TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Hip.sp.7447             TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Hym.eucharidifolia      TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Hae.sanguineus7253      TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Hae.montanus7163        TGNAAC---ATATATGGT-CAAGGC----AATTCCCATTATTG-AATCAT
Hae.humilis7254         TGAAC----ATATACGGT-CAAGG-AATTCATTCCCATTATTG-AATCAC
Hae.albiflos7512        TGAAC----ATATACGGT-CAAGG-AATTCATTCCCATTATTG-AATCAC
Hae.coccineusAMV632     TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Hae.albiflos7517        TGAAC----ATATACGGT-CAAGG-AATTCATTCCCATTATTG-AATCAC
Hae.paucilifoliu7925    TGAAC----ATATACGGT-CAAGG-AATTCATTCCCATTATTG-AATCAC
Hae.albiflosspacer      TGAAC----ATATACGGT-CAAGG-AATTCATTCCCATTATTG-AATCAC
Hae.humilisspacer       TGAAC----ATATACGGT-CAAGG-AATTCATTCCCATTGTTG-AATCAC
Hae.graniticusspacer    TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Hae.pumiliospacer       TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Hae.crispus7252         TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Hie.marginata           TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Hae.crispus7260         --------------------------------------------------
Hae.humilis             --------------------------------------------------
Hip.papilio             --------------------------------------------------
Hab.martinezii          TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Hym.latifolia           TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTGAATCCAT
Hae.hirsitus7626        TGAAC----ATATATGGATCAAGGTAATTCATTCCCATTATTG-AATCAT
Han.hesperidum          TGAAC----ATATATGGT-CACGG-----AATTCCCATTATTG-AATCAT
La.martinezii           TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Is.narcissiflora        TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Is.vargasii             TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Ly.squamigera           TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTGAATCCAT
Lep.quitoensis          TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Leu.autumnale           TGAAA----AAAAATGGT-CATGG-----GATTCCCATTATGG-AATCAG
Ly.albifloraintron      --------------------------------------------------
Ja.gypsophila           TGAAC----ATATATAGT-CAAGG-----AATTCCCATTATTG-AATTAT
Ne.bowdenii             TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Na.calcicolaspacer      TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Na.serotinusspacer      TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Na.tortifoliusspacer    TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Na.jonquillaspacer      TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Na.albimarginaspacer    TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Na.cuatrecasaspacer     TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Na.marvierispacer       TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Na.rupicolaspacer       TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
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                        501                                                 550
Na.watierispacer        TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Na.bulbocodiumspacer    TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Na.lusitanicusspacer    TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Na.pallidulusspacer     TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Na.cyclamineusspacer    TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Na.poeticusspacer       TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Na.pseudonarcspacer     TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Na.triandrusspacer      TGAAC----ATATATGGT-CATGG-----AATTCTCATTATTG-AATCAT
Na.scaberulusspacer     TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Ne.laticoma8090         TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Na.sp.7607              TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Na.sp.7608              TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Na.sp.7521              TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Na.elegans              TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Na.tazetta              TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Pan.canariense          TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Pe.decora               TGAAC----ATATATAGT-CAAGG-----AATTCCCATTATTG-AATTAT
Rh.moelleri             TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Sp.formosissima         TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Pab.incrassata          TGAAC----ATATATGGT-CGAGG-----ACTTCCCATTATTG-AATCAT
Sten.variegatum         TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Ph.dubia                TGAAC----ATATATGGT-CATGG-----AATTTCCATTATTG-AATCAT
Sten.pearcei            TGAAC----ATATATGGT-CATGG-----AATTTCCATTATTG-AATCAT
Pam.peruviana           TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Pr.cunninghamii         TGAAC----ATATATGGT-CCAGG-----AATTCCCATTATTG-AGTCCT
Sc.puniceus7918         --------------------------------------------------
Par.weberbaueri         TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Sc.cinnabarinus         TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Ster.lutea              TGAAT----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Ra.decora               TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Sc.membranaceus7246     TGAAAC---ATATATGGT-CAAGGG----AATTCCCATTATTG-AATCAT
Str.salteri7245         TGAGC----ATATATGGT-CAAGT-----AATTCCCATTATTG-AATCAT
Sc.puniceusRHA27        TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Str.truncata            TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Sc.puniceus7301         --------------------------------------------------
Sc.puniceusspacer       --------------------------------------------------
Sc.multiflorus7919      --------------------------------------------------
Sc.membranaceus7917     --------------------------------------------------
Sc.membranaceuspacer    --------------------------------------------------
Sc.membranaceusRHA25    --------------------------------------------------
Ze.filifolia            TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Tr.modesta              TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Un.flava                TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Wo.rayneri              TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Va.parviflora           TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
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                          551                                                600
Ama.belladonna7920        ------------------ATTCTTAC-----ATTCACAAAG-AAAGTCT
Ama.belladonna            TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Apo.lanceolatum           TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Amm.coranica7164          ------------------------------------------------
Amm.nerinoidesRHA32       TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Amm.coranicaspacer        TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Bo.disticha               TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Br.comptonii              TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Bo.disticha7172           TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Br.gregaria7157           TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cro.flava7256             TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Br.radulosa7440           TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Br.radulosanata7629       TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Br.bosmaniae7251          TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cl.caulescensRC9b         TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cl.caulescensRC10b        TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cl.miniata8095            TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cl.miniataRC14            TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cl.caulescens8092         TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cl.miniata                TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cl.sp.RC7b                TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cali.korsakoffii          TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cl.cyrtantiflora8094      TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cl.nobilisRC6b            TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cl.caulescens             TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cl.gardenii               TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cl.miniata                TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cl.nobilis8091            TCACAGCTCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Chl.fragrans              TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cl.nobilis                TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Calo.lutea                TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCC
Cr.yemenense              TCACAG-TCCATATC-ATTATTCTTACTTTACATTCACAAAG-AAAGTCT
Cr.euchrophylluRC96       TTACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.acauleRC106            TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.acaulglaucRC105        TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.bulbispermumRC95       TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.campanulatum7167       TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.foetidumRC98           TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.graminicola7630        TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.lugardii7632           TCACAG-TCCATATC-ATTATTCTTAC-----TTTCACAAAG-AAAGTCT
Cr.macowanii7168          TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.nearmacowaniRC100      TTACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.abyssinicum            TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.buphanoidesRC102       TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.americanum             TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.asiaticum              TCACAG--CCATATC-AT-AT-CT-AC-----AT-CACAA-G-AA-G---
Cr.baumii                 TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.acauleRC38             TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.buphanoides            TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.campanulatum           TCCCAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.cruentum               TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.distichum              TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.erubescens             TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.flaccidum              TCMCAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
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                        551                                                600
Cr.forbesii             TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.jagus                TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.ligulatum            TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.oliganthum           TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.pendunculatum        TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.Meerow2332           TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.buphanoides7631      TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.carolschmidRC97      TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.lineareRC99          TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.minimumRC37          TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.paludosumRC41        TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.variabileRC44        TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.moorei7921           TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cry.vansonii            TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.herrei7217           --------------------------------------------------
Cy.brachyscyphuRC90     --------------------------------------------------
Cyb.longifolia          TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cy.elatus7636           TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.brachyscyphus7406    TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.elatusRC93           TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.huttonii7206         TTCCACAGTCCATATCATTATCCCTTAC----ATTCCACAAAGAAAGTCT
Cy.mackenii7179         TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.mackeniiRC87         TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.macowanii7201        TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.obliquus7180         TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.obliquus7278         TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.ochroleucus7639      TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.contractus7199       TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.labiatus7258         TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.nova7963             TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.sanguineusRC94       TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.spesiosus7213        TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.staadensis7316       TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.breviflorus7188      TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.elatus7202           TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.labiatus7212         TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.obliquus7210         TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.sanguineus7216       TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAGGAAAGTCT
Cy.smithiae7214         TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.suaveolens7181       TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.breviflorus7634      --------------------------------------------------
Cy.elatus7198           --------------------------------------------------
Cy.spesiosus7640        TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.eucallus7218         TCACAG-TCCATATC-ATTATCCTTAC----ATTCCACAAAG-AAAGTCT
Cy.spesiosusRC84        --------------------------------------------------
Cy.spiralis7219         --------------------------------------------------
Cy.wellandiiRC83        TCACAG-TCCATATCCATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.obrienii7193         TCACAGTGCCATATC-ATTATCCTTAC----ATTACACAAAG-AAAGTCT
Cy.herreiRC86           TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.brachyscyphus7204    TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.thorncroftiRC80      TCACAG-CCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.loddigesianus7203    TCACAG-TCCATATC-ATTATCCTTAG----CATTCACAAAG-AAAGTCT
Cy.falcatus7637         --------------------------------------------------
Cy.elatus               TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
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                        551                                                600
Cy.falcatusRC82         TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.spiralis7964         TCTCGG-TCCAT--G-ATACATGTCTAGC---ATTGCACAAG-AAAGTTT
Ge.namaquensisAMV642    TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Eus.darwinii            TCACAG-TCCATATT-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Ga.plicatus             TCACAG-CCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTGT
Euc.castelnaeana        TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGCCT
Ge.verticillaspacer     TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Ge.brittenianaspacer    TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Ge.lanuginosaspacer     TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCC
Gr.hyacinthine          TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Eucr.eucrosioides       TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Ge.ciliaris             TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Ge.namaquensisAMV635    --------------------------------------------------
Ge.namaquensisAMV639    --------------------------------------------------
Hes.zeyheri             TCACAG-TCCATATT-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Hip.sp.7447             TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Hym.eucharidifolia      TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
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Hae.paucilifoliu7925    TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
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Hae.humilisspacer       TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Hae.graniticusspacer    TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Hae.pumiliospacer       TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Hae.crispus7252         TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Hie.marginata           TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Hae.crispus7260         --------------------------------------------------
Hae.humilis             --------------------------------------------------
Hip.papilio             --------------------------------------------------
Hab.martinezii          TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Hym.latifolia           TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Hae.hirsitus7626        TCACCAGTCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Han.hesperidum          TCACAG-TCCATATT-ATTATTTTTCTA---CATTCACAAAG-AAAGTTT
La.martinezii           TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAGAGAGAGTCTT
Is.narcissiflora        TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Is.vargasii             TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG--AAGTCT
Ly.squamigera           TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Lep.quitoensis          TCACAG-TCCATATC-ATTATCTATCCTTAC-ATTCACAAAG-AAAGTCT
Leu.autumnale           TCACAG-CCCAAATC-ATTATCCCAAC-----ATTCACAAAGGAAGTTTT
Ly.albifloraintron      --------------------------------------------------
Ja.gypsophila           TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Ne.bowdenii             TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
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Na.tortifoliusspacer    TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Na.jonquillaspacer      TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Na.albimarginaspacer    TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Na.cuatrecasaspacer     TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Na.marvierispacer       TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Na.rupicolaspacer       TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
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Na.lusitanicusspacer TCACAG-TCCATATC-ATTACCCTTAC-----ATTCACAAAG-AAAGTCT
Na.pallidulusspacer  TCACAG-TCCATATC-ATTACCCTTAC-----ATTCACAAAG-AAAGTCT
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Na.poeticusspacer    TCACAG-TCCATATC-ATTACCCTTAC-----ATTCACAAAG-AAAGTCT
Na.pseudonarcspacer  TCACAG-TCCATATC-ATTACCCTTAC-----ATTCACAAGG-AAAGTCT
Na.triandrusspacer   TCACAG-TCCATATC-ATTACCCTTAC-----ATTCACAAAG-AAAGTCT
Na.scaberulusspacer  TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAA------GTCT
Ne.laticoma8090      TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Na.sp.7607           TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-----TCT
Na.sp.7608           TCACAG-TCCGTATC-ATTACCCTTAC-----ATTCACAAGG-AAAGTCT
Na.sp.7521           TCACAG-TCCATATC-ATTACCCTTAC-----ATTCACAAGG-AAAGTCT
Na.elegans           TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Na.tazetta           TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Pan.canariense       TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAGA--AAGTCT
Pe.decora            TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Rh.moelleri          TCACAG-TCCATATC-ATTATCCCTTAC----ATTCACAAAG--AAGTTT
Sp.formosissima      TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Pab.incrassata       TCACAG-TCCATATC-ATTTTCCTTGC-----ATTCACAAAG-AAAGTCT
Sten.variegatum      TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Ph.dubia             TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Sten.pearcei         TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Pam.peruviana        TCACAG-TCCATATC-ATTATCTATCCTTAC-ATTCACAAAG-AAAGTCT
Pr.cunninghamii      TCACAG-TCCATATC-ATTATCCTTAC-----ATTCCCAAAA-AAAGTCC
Sc.puniceus7918      --------------------------------------------------
Par.weberbaueri      TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Sc.cinnabarinus      TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Ster.lutea           TCACAG-TCCATAGC-ATTATCCTTAC-----ATTCACAAAG-AATGTCT
Ra.decora            TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTTT
Sc.membranaceus7246  TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Str.salteri7245      TCACAA-TCCATATC-ATTATTCTTAAC----ATTCACAAAG-AAAGTCT
Sc.puniceusRHA27     TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Str.truncata         TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Sc.puniceus7301      ----------------------CTTAC----ATTACACAAAG-AAAGTCT
Sc.puniceusspacer    ----------------------CTTAC-----ATTCACAAAG-AAAGTCT
Sc.multiflorus7919   ----------------------CTTAC-----ATTCACAAAG-AAAGTCT
Sc.membranaceus7917  ----------------------CTTAC-----ATTCACAAAG-AAAGTCT
Sc.membranaceuspacer ----------------------CTTAC-----ATTCACAAAG-AAAGTCT
Sc.membranaceusRHA25 ----------------------CTTAC-----ATTGCACAAAGAAAGTCT
Ze.filifolia         TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCG
Tr.modesta           TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Un.flava             TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Wo.rayneri           TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Va.parviflora        TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGCCT
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Apo.lanceolatum         TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAAGT--CCAAATTTTTA
Amm.coranica7164        --------------------------------------------------
Amm.nerinoidesRHA32     TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT--CAAAATTTTTA
Amm.coranicaspacer      TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT--CAAAATTTTGA
Bo.disticha             TCTTTTT-GAAAATCTAAGAAATT-CAGGGACTAGGT--CAAAATTTTTA
Br.comptonii            TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT--CAAAATTTTGA
Bo.disticha7172         TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT--CAAAATTTTTA
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Cro.flava7256           TCTTCTT-AAAAATCTAAGAAATTTCGGGGACTAGGT--CAAAATTTTTA
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Br.bosmaniae7251        TCTTTTT-GAAAATGTAAGAAATT-CGGGGACTAGGT--CAAAATTTGTA
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Cl.miniata8095          TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT--CCAAATTTTTA
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Cl.miniata              TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT--CCAAATTTTTA
Cl.sp.RC7b              TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT--CAAAATTTTTA
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Cl.gardenii             TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT--CCAAATTTTTA
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Cl.nobilis8091          TCTTTTT-GAAAATCTAAGGAAATTCGGGGACTAGGT--CCAAATTTTTA
Chl.fragrans            TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT--CAAAATTTTTA
Cl.nobilis              TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT--CAAAATTTTTA
Calo.lutea              TCCTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT--CAAAATTTTTA
Cr.yemenense            TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT--CCAAATTTTGA
Cr.euchrophylluRC96     TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.acauleRC106          TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
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Cr.bulbispermumRC95     TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.campanulatum7167     TCTTTTT-TAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
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Cr.lugardii7632         TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
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Cr.nearmacowaniRC100    TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
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Cr.americanum           TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.asiaticum            --------------------------------------------------
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Cr.buphanoides          TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.campanulatum         TCTTTTT-TAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.cruentum             TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.distichum            TCTTTGT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.erubescens           TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.flaccidum            TCTTTTT-TAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
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                        601                                                 650
Cr.forbesii             TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
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Cr.ligulatum            TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
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Cry.vansonii            TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CTAAATTTTTAA
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Cy.brachyscyphuRC90     --------------------------------------------------
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Cy.elatus7198           --------------------------------------------------
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Cy.eucallus7218         TCTTTTT-GAAAATCTAAGAAATT-CGGGGATCTAGGTCAAAATTTG-AA
Cy.spesiosusRC84        --------------------------------------------------
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Cy.spiralis7964         TCTTTCCCGAAAATCTAAGAAATTACGGGGCCTAGGTACAAAATT-----
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Eus.darwinii            TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Ga.plicatus             TCTTTGT-GAAAATCTAATAAATT-AGGGGATTAGGTCAAAATTTTTAGA
Euc.castelnaeana        TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
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Ge.ciliaris             TCTTTTT-GAAAATCTAAGAAATT-CGGG-ACTCGGT-CCAAATTTTTAA
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Hae.hirsitus7626        TCTTTTT-GAAAATCTAAGAAATTCGGGGTACTAGGT-CAAAATTTTTAA
Han.hesperidum          TTCTTTTTGAAAATTTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
La.martinezii           CCTTCTTTGAAAATTTAAGAAATATCGGGGACTAGGT-CCAAATATTAAA
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Is.vargasii             TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGTCTACACTTTTGAA
Ly.squamigera           TCTTTTG-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Lep.quitoensis          TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Leu.autumnale           TTTTTTTTTTTTATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Ly.albifloraintron      ----------------------------------------------------
Ja.gypsophila           TCTTTTT-GAAGATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAT
Ne.bowdenii             TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Na.calcicolaspacer      TCTTTTT-GAAAATCTAAGAAATT-AGGGGACTAGGT-CAAAATTTTTAA
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Na.cuatrecasaspacer     TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Na.marvierispacer       TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Na.rupicolaspacer       TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
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                      601                                                 650
Na.watierispacer      TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Na.bulbocodiumspacer TCTTTTT-TAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Na.lusitanicusspacer TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Na.pallidulusspacer  TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Na.cyclamineusspacer TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Na.poeticusspacer    TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Na.pseudonarcspacer  TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Na.triandrusspacer   TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Na.scaberulusspacer  TCTTTTT-GAAAATCTAAGAAATT-AGGGGACTAGGT-CAAAATTTTTAA
Ne.laticoma8090      TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Na.sp.7607           TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Na.sp.7608           TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Na.sp.7521           TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Na.elegans           TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Na.tazetta           TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Pan.canariense       -CTTTT--G-AAATCTAAGAAATT-CGGGGACTAGGT-CAAA--------
Pe.decora            TCTTTTT-GAAGATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTA-
Rh.moelleri          -CTTTTT-GAAAATCTAAGAAATT-CGGGG------T-CAAAATTTTTAA
Sp.formosissima      TCTTTT--GAAAATCTAAGAAATT-CGGGG--T-----CAAAATTTTTAA
Pab.incrassata       TCTTTTT-GAAAATCGAAAAATTC-T-GGGACGGGGT-CAAAATTTTTCA
Sten.variegatum      TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Ph.dubia             TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Sten.pearcei         TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Pam.peruviana        TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Pr.cunninghamii      TCTTTTT-GAAAATCTAAAAAATT-CGGGGACTAAGT-CCAAATTTTTAA
Sc.puniceus7918      ------------------------------------------------
Par.weberbaueri      TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Sc.cinnabarinus      TCTTTTT-GAAAATCTAATAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Ster.lutea           TCTTTTT-AAAAATCTAAGAAATT-TGGGGACTAGGT-CAAAATTTTTAA
Ra.decora            TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Sc.membranaceus7246  TCTTTTT-GAAAATCTAATAAATTTCGGGGACTAGGT-CAAAATTTTTAA
Str.salteri7245      TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Sc.puniceusRHA27     TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Str.truncata         TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Sc.puniceus7301      TCTTTTT---AAATCTAATAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Sc.puniceusspacer    TCTTTTTT-AAAATCTAATAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Sc.multiflorus7919   TCTTTTTT-AAAATCTAATAAATT-CGGGGACTAGGT-AAAAATTTTTAA
Sc.membranaceus7917  TCTTTTTT-AAAATCTAATAAATT-CGGGGACTAGGT-AAAAATTTTTAA
Sc.membranaceuspacer TCTTTTTTT-AAATCTAATAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Sc.membranaceusRHA25 TGCTTTTTTAAAATCTAATAAATTTCGGGGATTAGGT-CAAAATTTTTAA
Ze.filifolia         TCTTTTT-GAAAATCTAAGAAATT-CGGGG--T-----CAAAATTTTTAA
Tr.modesta           TCTTTTT-GAAAATCTAAGAAATT-CGGGG--T-----CAAAATTTTTAA
Un.flava             TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Wo.rayneri           TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Va.parviflora        TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTGGAA
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                          651                                                 700
Ama.belladonna7920        ATACTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Ama.belladonna            AGACCTTTTTTT------------AGT-----CTATTTAATTTACAT--
Apo.lanceolatum           AGACCTTTGTTGT------------AGT-----CTATTTAATTTACAT--
Amm.coranica7164          --------------------------------------------------
Amm.nerinoidesRHA32       AGACCTTTTTTT-----------------AGTCTATTTAATTTACAT--
Amm.coranicaspacer        ATACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Bo.disticha               ATACTTTTTTTG------------AGTTTAGTCTATTTAATTTACAT--
Br.comptonii              ATACTTTTTTTG------------AGTTTAGTCTATTTAATTTACAT--
Bo.disticha7172           ATACTTTTTTTG------------AGTTTAGTCTATTTAATTTACAT--
Br.gregaria7157           ATACTTTTTTTG------------AGTTTAGTCTATTTAATTTACAT--
Cro.flava7256             ATACTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Br.radulosa7440           ATACTTTTTTTG------------AGTTTAGTCTATTTAATTTACAT--
Br.radulosanata7629       ATACTTTTTTTG------------AGTTTAGTCTATTTAATTTACAT--
Br.bosmaniae7251          ATACTTTTTTTG------------AGTTTAGTCTATTTAATTTACAT--
Cl.caulescensRC9b         AGACCTTTTTT-----------------TTAGTCTATTTAATTTACAT--
Cl.caulescensRC10b        AGACCTTTTTT-----------------TTAGTCTATTTAATTTACAT--
Cl.miniata8095            AGACCTTTTTT-----------------TTAGTCTATTTAATTTACAT--
Cl.miniataRC14            AGACCTTTTTT-----------------TTAGTCTATTTAATTTACAT--
Cl.caulescens8092         AGACCTTTTTT-----------------TTAGTCTATTTAATTTACAT--
Cl.miniata                AGACCTTTTTT-----------------TTAGTCTATTTAATTTACAT--
Cl.sp.RC7b                AGACCTTTTTT-----------------TTAGTCTATTTAATTTACAT--
Cali.korsakoffii          ATACTTTTTTT-------------------TGTCTATTTAATTTACAT--
Cl.cyrtantiflora8094      AGACCTTTTTT-------------------TAGTCTATTTAATTTACAT--
Cl.nobilisRC6b            AGACCTTTTTT-----------------TAGTCTATTTAATTTACAT--
Cl.caulescens             AGACCTTTTTT-----------------TTAGTCTATTTAATTTACAT--
Cl.gardenii               AGACCTTTTTT-----------------TTAGTCTATTTAATTTACAT--
Cl.miniata                AGACCTTTTTT-----------------TTAGTCTATTTAATTTACAT--
Cl.nobilis8091            AGACCTTTTTT-----------------TAGTCTATTTAATTTACAT--
Chl.fragrans              ATACTTTTTTT-----------------TAGTCTATTTAATTTAACAT-
Cl.nobilis                AGACCTTTTTT-----------------TAAGTCTATTTAATTTACAT--
Calo.lutea                ATACTTTTTTT-----------------TAGTCTATTTAATTTACAT--
Cr.yemenense              ATACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.euchrophylluRC96       TACTTTTTTTT-------------AGTTTAGTCTATTTAATTTACAT--
Cr.acauleRC106            TACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.acaulglaucRC105        TACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.bulbispermumRC95       TACTTTTTTTT-------------AGTTTAGTCTATTTAATTTACAT--
Cr.campanulatum7167       TACTTTTTTTT-------------AGTTTAGTCTATTTAATTTACAT--
Cr.foetidumRC98           TACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.graminicola7630        TACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.lugardii7632           TACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.macowanii7168          TACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.nearmacowaniRC100      TACTTTTTTTT-------------AGTTTAGTCTATTTAATTTACAT--
Cr.abyssinicum            TACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.buphanoidesRC102       TACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.americanum             TACTTTTTTTT-------------AGTTTAGTCTATTTAATTTACAT--
Cr.asiaticum              --------------------------------------------------
Cr.baumii                 TACTTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.acauleRC38             TACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.buphanoides            TACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.campanulatum           TACTTTTTTTT-------------AGTTTAGTCTATTTAATTTACAT--
Cr.cruentum               TACTTTTTTTT-------------AGTTTAGTCTATTTAATTTACAT--
Cr.distichum              TACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.erubescens             TACTTTTTTTT-------------AGTTTAGTCTATTTAATTTACAT--
Cr.flaccidum              TACTTTTTTTT-------------AGTTTAGTCTATTTAATTTACAT--
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                        651                                                 700
Cr.forbesii             TACTTTTTTTTT-------------AGTTTAGTCTATTTAATTTACAT--
Cr.jagus                TACTTTTTTTTT-------------AGTTTAGTCTATTTAATTTACAT--
Cr.ligulatum            TACTTTTTTTT--------------AGTTTAGTCTATTTAATTTACAT--
Cr.oliganthum           TACTTTTTTTT--------------AGTTTAGTCTATTTAATTTACAT--
Cr.pendunculatum        TACTTTTTTTT--------------AGTTTAGTCTATTTAATTTACAT--
Cr.Meerow2332           TACTTTTTTT---------------AGTTTAGTCTATTTAATTTACAT--
Cr.buphanoides7631      TACTTTTTTTTT-------------AGTTTAGTCTATTTAATTTACAT--
Cr.carolschmidRC97      TACTTTTTTTTT-------------AGTTTAGTCTATTTAATTTACAT--
Cr.lineareRC99          TACTTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.minimumRC37          TACTTTTTTTTT-------------AGTTTAGTCTATTTAATTTACAT--
Cr.paludosumRC41        TACTTTTTTTTT-------------AGTTTAGTCTATTTAATTTACAT--
Cr.variabileRC44        TACTTTTTTTT--------------AGTTTAGTCTATTTAATTTACAT--
Cr.moorei7921           TACTTTTTTTTT-------------AGTTTAGTCTATTTAATTTACAT--
Cry.vansonii            GACCTTTTTT-------------------TTAGTCTATTTAATTTACAT--
Cy.herrei7217           --------------------------------------------------
Cy.brachyscyphuRC90     --------------------------------------------------
Cyb.longifolia          TACTTTTTTTTT-------------AGTTTAGTCTATTTAATTTACAT--
Cy.elatus7636           TACTTTTTTT---------------------AGTCTATTTAATTTACAT--
Cy.brachyscyphus7406    TACTTTTTTT---------------------AGTCTATTTAATTTACAT--
Cy.elatusRC93           TACTTTTTTT---------------------AGTCTATTTAATTTACAT--
Cy.huttonii7206         TACTTTTTTT-------------------AGTCCTATTTAATTTACAT--
Cy.mackenii7179         TACTTTTTTT---------------------AGTCTATTTAATTTACAT--
Cy.mackeniiRC87         TACTTTTTTT---------------------AGTCTATTTAATTTACAT--
Cy.macowanii7201        TACTTTTTTT---------------------AGTCTATTTAATTTACAT--
Cy.obliquus7180         TACTTTTTTT---------------------AGTCTATTTAATTTACAT--
Cy.obliquus7278         TACTTTTTTT---------------------AGTCTATTTAATTTACAT--
Cy.ochroleucus7639      TACTTTTTTT---------------------AGTCTATTTAATTTACAT--
Cy.contractus7199       TACTTTTTTTAGTCTATTTAATTTATTTTTAGTCTATTTAATTTACATTT
Cy.labiatus7258         TACTTTTTTT---------------------AGTCTATTTAATTTACAT--
Cy.nova7963             TACTTTTTTT---------------------AGTCTATTTAATTTACAT--
Cy.sanguineusRC94       TACTTTTTTTAGTCTATTTAATTTATTTTTAGTCTATTTAATTTACATTT
Cy.spesiosus7213        TACTTTTTTT---------------------AGTCTATTTAATTTACAT--
Cy.staadensis7316       TACTTTTTTTAGTCTATTTAATTTATTTTTAGTCTATTTAATTTACATTT
Cy.breviflorus7188      TACTTTTTTT--------------------TAGTCTATTTAATTTACAT--
Cy.elatus7202           TACTTTTTTT---------------------AGTCTATTTAATTTACAT--
Cy.labiatus7212         TACCTTTTTT--------------------TAGTCTATTTAATTTACAT--
Cy.obliquus7210         TACTTTTTTT---------------------AGTCTATTTAATTTACAT--
Cy.sanguineus7216       TACTTTTTTTAGTCTATTTAATTTATTTTTAGTCTATTTAATTTACATTT
Cy.smithiae7214         TACTTTTTTTAGTCTATTTAATTTATTTTTAGTCTATTTAATTTACATTT
Cy.suaveolens7181       TACTTTTTTT---------------------AGTCTATTTAATTTACAT--
Cy.breviflorus7634      --------------------------------------------------
Cy.elatus7198           --------------------------------------------------
Cy.spesiosus7640        TACTTTTTTT---------------------AGTCTATTTAATTTACAT--
Cy.eucallus7218         TACTTTCTTTAGTCATATTTAATTATTTTTAGTCTATTTAATTTACATTT
Cy.spesiosusRC84        --------------------------------------------------
Cy.spiralis7219         --------------------------------------------------
Cy.wellandiiRC83        TACTTTTTTTAGTCTATTTAATTTATTTTTAGTCTATTTAATTTACATTT
Cy.obrienii7193         TACTTTTTTT---------------------AGTCTATTTAATTTACAT--
Cy.herreiRC86           TACTTTTTTTAGTCTATT-------TTTTTACTCTATTTAATTTACAT--
Cy.brachyscyphus7204    TACTTTTTTT---------------------AGTCTATTTAATTTACAT--
Cy.thorncroftiRC80      TACTTTTTTTAGTCTATTTAATTTATTTTTAGTCTATTTAATTTACATTT
Cy.loddigesianus7203    TACTTTTTTTAGTCTATTTAATTTATTTTTAGTCTATTTAATTTACATTT
Cy.falcatus7637         --------------------------------------------------
Cy.elatus               TACTTTTTTT---------------------AGTCTATTTAATTTACAT--
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                        651                                                 700
Cy.falcatusRC82         TACTTCAAAATTTTGAAT-ACTTT--TTTTAGTCTATTTAATTTATTTTT
Cy.spiralis7964         --------------------------------------------------
Ge.namaquensisAMV642    GACCTTTTTT-----------------TTAGTCTATTTAATTTACAT--
Eus.darwinii            TACTTTTTTT-------------------TAGTCTATTTCATTTACAT--
Ga.plicatus             TACTTATGTT---------------TGAGTCTTATTTCTATTTACAT--
Euc.castelnaeana        TACTTTTTTT--------------------AGTCTATTTAATTTACAT--
Ge.verticillaspacer     GACCTTTTTT-----------------TTAGTCTATTTAATTTACAT--
Ge.brittenianaspacer    GACCTTTTTT-------------------TAGTCTATTTAATTTACAT--
Ge.lanuginosaspacer     GACCTTTTTT-------------------TAGTCTATTTAATTTACAT--
Gr.hyacinthine          TACTTTTTTT-------------------TAGTCTATTTAATTTACAT--
Eucr.eucrosioides       TACTTTTTTT-------------------TAGTCTATTTAATTTACAT--
Ge.ciliaris             GACCTTTTTT-----------------TTAGTCTATGTAATTTACAT--
Ge.namaquensisAMV635    --------------------------------------------------
Ge.namaquensisAMV639    --------------------------------------------------
Hes.zeyheri             TACTTTTTTT-------------GAGTTTAGTCTATTTAATTTACAT--
Hip.sp.7447             TACTTTTTTT--------------------AGTCTATTTAATTTACAT--
Hym.eucharidifolia      TACTTTTTTT-------------------TAGTCTATTTAATTTACAT--
Hae.sanguineus7253      GACCTTTTTT-------------------TAGTCTATTTAATTTACAG--
Hae.montanus7163        GACCTTTTTT-----------------TTAGTCTATTTAATTTACAG--
Hae.humilis7254         GACCTTTTTT-----------------TTAGTCTATTTAATTTACAT--
Hae.albiflos7512        GACCTTTTTT-----------------TTAGTCTATTTAATTTACAT--
Hae.coccineusAMV632     GACCTTTTTT-----------------TTAGTCTATTTAATTTACAG--
Hae.albiflos7517        GACCTTTTTT-----------------TTAGTCTATTTAATTTACAT--
Hae.paucilifoliu7925    GACCTTTTTT-----------------TTAGTCTATTTAATTTAGCAT-
Hae.albiflosspacer      GACCTTTTTT-----------------TTAGTCTATTTAATTTACAT--
Hae.humilisspacer       GACCTTTTTT-----------------TTAGTCTATTTAATTTACAT--
Hae.graniticusspacer    GACCTTTTTT-----------------TTAGTCTATTTAATTTACAG--
Hae.pumiliospacer       GACCTTTTTT-----------------TTAGTCTATTTAATTTACAG--
Hae.crispus7252         TACTTTTTTT-------------GAGTTTAGTCTATTTAATTTACAT--
Hie.marginata           TACTTTTTTT-------------------TAGTCTATTTAATTTACAT--
Hae.crispus7260         --------------------------------------------------
Hae.humilis             --------------------------------------------------
Hip.papilio             --------------------------------------------------
Hab.martinezii          TACTTTTTTT--------------------AGTCTATTTAATTTACAT--
Hym.latifolia           TATTTTCTTT-------------------AGTCTATTTAA-ATACAT--
Hae.hirsitus7626        TACTTTTTTT-------------GAGTTTAGTCTATTTAATTTACAT--
Han.hesperidum          TACTTTTTTT----------------TTTAGTCTATTTAATTTACAT--
La.martinezii           TAAT-------------------GATTTGTGGTTTACTAATTAACAT--
Is.narcissiflora        TACTTTTTTT-------------------TAGTCTATTTAATTTACAT--
Is.vargasii             TACTTTTTTT-------------------TAGTCTATTTCATTTACAT--
Ly.squamigera           TACTTTTTTT-------------------TAGTCTATTTAATTTACAT--
Lep.quitoensis          TACTTTTTTT-------------------TAGTCTATTTAATTTACAT--
Leu.autumnale           TACTTTTTTT--------------------AGTCTATTTCATTTATAT--
Ly.albifloraintron      --------------------------------------------------
Ja.gypsophila           TTTTTT--------------------AGTCTATTTTATTTCCATACATAT
Ne.bowdenii             TACTTTTTTT-------------GAGTTTAGTCTATTTAATTTACAT--
Na.calcicolaspacer      TACTTTTTTT-------------------TAGTCTATTTAATTTACAT--
Na.serotinusspacer      TACTTTTTTT-------------------TAGTCTATTTCATTTACAT--
Na.tortifoliusspacer    TACTTTTTTT-------------------TAGTCTATTTAATTTACAT--
Na.jonquillaspacer      TACTTTTTTT-------------------TAGTCTATTTAATTTACAT--
Na.albimarginaspacer    TACTTTTTTT-------------------TAGTCTATTTAATTTACAT--
Na.cuatrecasaspacer     TACTTTTTTT-------------------TAGTCTATTTAATTTACAT--
Na.marvierispacer       TACTTTTTTT-------------------TAGTCTATTTAATTTACAT--
Na.rupicolaspacer       TACTTTTTTT-------------------TAGTCTATTTAATTTACAT--
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                    651                                                 700
Na.watierispacer    TACTTTTTTT-------------------TAGTCTATTTAATTTACAT--
Na.bulbocodiumspacer TACTTTTTTT-------------------TAGTCTATTTAATTTACAT--
Na.lusitanicusspacer TACTTTTTTT--------------------AGTCTATTTAATTTACAT--
Na.pallidulusspacer  TACTTTTTTT--------------------AGTCTATTTAATTTACAT--
Na.cyclamineusspacer TACTTTTTTT-------------------TAGTCTATTTAATTTACAT--
Na.poeticusspacer    TACTTTTTTT-------------------TAGTCTATTTAATTTACAT--
Na.pseudonarcspacer  TACTTTTTTT-------------------TAGTCTATTTAATTTACAT--
Na.triandrusspacer   TACTTTTTTT-------------------TAGTCTATTTAATTTACAT--
Na.scaberulusspacer  TACTTTTTTT-------------------TAGTCTATTTAATTTACAT--
Ne.laticoma8090      TACTTTTTTT--------------GAGTTTAGTCTATTTAATTTACAT--
Na.sp.7607           TACTTTATTT-------------------TGAGTCTATTTCATTTACAT--
Na.sp.7608           TACTTTTTTT-------------------TAGTCTATTTAATTTACAT--
Na.sp.7521           TACTTTTTTT-------------------TAGTCTATTTAATTTACATA-
Na.elegans           TACTTTTTTT-------------------TAGTCTATTTCATTTACAT--
Na.tazetta           TACTTTTTTT-------------------TAGTCTATTTCATTTACAT--
Pan.canariense       --------------------------------------------------
Pe.decora            T--TTTTTT-----------------AGTCTATTTTATTTCCATACATAT
Rh.moelleri          TAATTTTTTT--------------------AGTCTATTTAATTTACAT--
Sp.formosissima      TACTTTTTTT--------------------AGTCTATTTAATTTACAT--
Pab.incrassata       TACTTTTTTT------------------TTAGTCTATATCATTTACAT--
Sten.variegatum      TACTTTTTTT-------------------TAGTCTATTTAATTTACAT--
Ph.dubia             TACTTTTTTT-------------------TAGTCTATTTAATTTACAT--
Sten.pearcei         TACTTTTTTT--------------------AGTCTATTTAATTTACAT--
Pam.peruviana        TACTTTTTTT-------------------TAGTCTATTTAATTTACAT--
Pr.cunninghamii      TAATTTTTTT-------------------TAGTCTATTTAATTTACAT--
Sc.puniceus7918      --------------------------------------------------
Par.weberbaueri      TACTTTTTTT-------------------TAGTCTATTTAATTTACAT--
Sc.cinnabarinus      GACCTTTTTT------------------TTAGTCTATTTAATTTAACAT-
Ster.lutea           TACTTTTTTT-------------------TAGTCTATTTAATTTACAT--
Ra.decora            TACTTTTTTT-------------------TAGTCTATTGAATTTACAT--
Sc.membranaceus7246  GACCTTTTTT------------------TTAGTCTATTTAATTTACAT--
Str.salteri7245      TACTTTTTTT--------------GAGTTTAGTCTATTTAATTTACAT--
Sc.puniceusRHA27     TACTTTTTTTTTT-------------TTTTAGTCTATTTAATTTACAT--
Str.truncata         TACTTTTTTT--------------GAGTTTAGTCTATTTAATTTACAT--
Sc.puniceus7301      GACCTTTTTTT------------------TAGTCTATTTAGATTAC-T--
Sc.puniceusspacer    GACCTTTTTTT------------------TAGTCTATTTAATTTACAT--
Sc.multiflorus7919   GACCTTTTTTT------------------TAGTCTATTTAATTTACAT--
Sc.membranaceus7917  GACCTTTTTTT------------------TAGTCTATTTAATTTACAT--
Sc.membranaceuspacer GACCTTTTTT------------------TTAGTCTATTTAATTTACAT--
Sc.membranaceusRHA25 GACCTTTTTTT-----------------TAGTGCTATTTAATTTAGCAT-
Ze.filifolia         TACTTTTTTT-------------------AGTCTATTTAATTTACAT--
Tr.modesta           TACTTTTTTT-------------------AGTCTATTTAATTTACAT--
Un.flava             TACTTTTTTT-------------------TAGTCTATTTAATTTACAT--
Wo.rayneri           TACTTTTTTT-------------------AGTCTATTTAATTTACAT--
Va.parviflora        GACCTTTTTT-------------------TAGTCTATTTAATTTACAT--
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                    701                                                 750
Ama.belladonna7920   ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Ama.belladonna       ----AGATAC-A--T-TT-----ACT-------C-T--------AA--T-
Apo.lanceolatum      ----AGATAC-ATATACTCT---ACTAGGGT--GATGCGCGGG-AAA-TC
Amm.coranica7164     --------------------------------------------------
Amm.nerinoidesRHA32  ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Amm.coranicaspacer   ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Bo.disticha          ----AGATAC-AAGTATTCT---AGTAGGAT--GATGCGC----------
Br.comptonii         ----AGATAC-AAGTATTCT---ACTAGGAT--GATG-------------
Bo.disticha7172      ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Br.gregaria7157      ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cro.flava7256        ----AGATAC-AAGTATTTCT--ACTAGGAT--GATGCGCGGG-AAA-T-
Br.radulosa7440      ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Br.radulosanata7629  ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Br.bosmaniae7251     ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cl.caulescensRC9b    ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cl.caulescensRC10b   ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cl.miniata8095       ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cl.miniataRC14       ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cl.caulescens8092    ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cl.miniata           ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cl.sp.RC7b           ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cali.korsakoffii     ----AGATAC-AAATACTCT---AGTAGGAT--GATGCGCGGG-A---TC
Cl.cyrtantiflora8094 ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-T-
Cl.nobilisRC6b       ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cl.caulescens        ----AGATAC-AAATACTCT---ACT-----------------------
Cl.gardenii          ----AGATAC-AAATACTCT---ACT-----------------------
Cl.miniata           ----AGATAC-AAATACTCT---ACT-----------------------
Cl.nobilis8091       ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Chl.fragrans         ----AGATAC-AAATACTCT---ATTTAGGAT-GATG-------------
Cl.nobilis           ----AGATAC-ATATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Calo.lutea           ----AGATAC-AAATACTCT---ACTAGGAT--GATGTGCGGG-AAA-TC
Cr.yemenense         ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AA--TC
Cr.euchrophylluRC96  ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.acauleRC106       ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.acaulglaucRC105  ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.bulbispermumRC95  ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.campanulatum7167  ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.foetidumRC98      ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.graminicola7630   ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.lugardii7632      ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAAATC
Cr.macowanii7168     ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.nearmacowaniRC100 ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.abyssinicum       ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.buphanoidesRC102  ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.americanum        ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.asiaticum         --------------------------------------------------
Cr.baumii            ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.acauleRC38        ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.buphanoides       ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.campanulatum      ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.cruentum          ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.distichum         ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.erubescens        ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.flaccidum         ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
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                        701                                                 750
Cr.forbesii              ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.jagus                 ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.ligulatum             ----AGATAC-AAGTATTCTC-TACTAGGAT--GATGCGCGGG-AAA-TC
Cr.oliganthum            ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.pendunculatum         ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.Meerow2332            ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.buphanoides7631       ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.carolschmidRC97      ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.lineareRC99           ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.minimumRC37           ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGTCGGAAATC
Cr.paludosumRC41         ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.variabileRC44         ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.moorei7921            ----AGATAC-AAGTATTGTACTCCCCGGAT--GATGCGCGGGGAAA-TC
Cry.vansonii             ----AGATAC-AAATACTCT---ACTGGGAT--GATGCGCGGG-AAA-TC
Cy.herrei7217            --------------------------------------------------
Cy.brachyscyphuRC90      --------------------------------------------------
Cyb.longifolia           ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.elatus7636            ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.brachyscyphus7406     ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.elatusRC93            ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.huttonii7206          ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.mackenii7179          ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.mackeniiRC87          ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.macowanii7201         ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.obliquus7180          ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.obliquus7278          ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAATCC
Cy.ochroleucus7639       ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.contractus7199        ACATAGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.labiatus7258          ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.nova7963              ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.sanguineusRC94        ACATAGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.spesiosus7213         ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.staadensis7316        ACATAGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.breviflorus7188       ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-GAA-TC
Cy.elatus7202            ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.labiatus7212          ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.obliquus7210          ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.sanguineus7216        ACATAGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.smithiae7214          ACATAGATAC-AAATACTCT---ACTAGGAT--GATGC--GGG-AAAATC
Cy.suaveolens7181        ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.breviflorus7634       --------------------------------------------------
Cy.elatus7198            --------------------------------------------------
Cy.spesiosus7640         ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCAGG-GAA-TC
Cy.eucallus7218          ACATAGATAC-AAATACTCT---ACCAGGAT--GCTGCGCAG--------
Cy.spesiosusRC84         --------------------------------------------------
Cy.spiralis7219          --------------------------------------------------
Cy.wellandiiRC83         ACATAGATAC-AAATACTCT---AC-AGGAT--GATGCG-----------
Cy.obrienii7193          ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.herreiRC86            ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.brachyscyphus7204     ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.thorncroftiRC80       ACATAGATAC-AAATACTCT---ACTAGGGATGGATGCGCGGG-AAA-TC
Cy.loddigesianus7203     ACATAGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.falcatus7637          --------------------------------------------------
Cy.elatus                ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
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                        701                                                 750
Cy.falcatusRC82         ----AG-TCC----TA-T-T-----TA--AT----T-----------T-
Cy.spiralis7964         --------------------------------------------------
Ge.namaquensisAMV642    ----AGATAC-AAATAC-------------------------------
Eus.darwinii            ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGC--------
Ga.plicatus             ---ACGATAC-AAATACTCT---ACTAGGAT--GATGTGCGGG-AA--TC
Euc.castelnaeana        ----AGATAC-AAATACTCT---ACTAGGAT--GGTGCCCGGG-GAA-TC
Ge.verticillaspacer     ----AGATAC-AAATACTCT---ACT----------------------
Ge.brittenianaspacer    ----AGATAC-AAATACTCT---ACT----------------------
Ge.lanuginosaspacer     ----AGATAC-AAATACTTT---ACT----------------------
Gr.hyacinthine          ----AGATAC-AAATACTCT---AGTAGGAT--GATGCGCCGG-GAA-TA
Eucr.eucrosioides       ----AGATAC-ACATACTCT---ACTAGGAT--GATGCGCGGG-GAA-TC
Ge.ciliaris             ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TA
Ge.namaquensisAMV635    --------------------------------------------------
Ge.namaquensisAMV639    --------------------------------------------------
Hes.zeyheri             ----AGATAC-AAGTATTCT---ACTAGGAT--GGTGCGCGGG-GAA-TC
Hip.sp.7447             ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-GAA-TC
Hym.eucharidifolia      ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-GAA-TC
Hae.sanguineus7253      ----AGATAC-AAATACTCT---ACTAGGGAT-GATGCGCGGGAAAATCG
Hae.montanus7163        ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Hae.humilis7254         ----AGATAC-AAATACTCT---A----------ATGCGCGGG-AAA-TC
Hae.albiflos7512        ----AGATAC-AAATACTCT---ACT----------GCGCGGCGAAA-TC
Hae.coccineusAMV632     ----AGATAC-AAATACTCT---ACCGGTTATTATGATGCCGGGAAAATC
Hae.albiflos7517        ----AGATAC-AAATACTCT---ACT--G--------CGCGGCTGAAATC
Hae.paucilifoliu7925    ----AGATAC-AAATACTCT---ACT--G--------CG-GGG-AAA-TC
Hae.albiflosspacer      ----AGATAC-AAATACTCT---A------------------------
Hae.humilisspacer       ----AGATAC-ATTTACTCT---A-----AT------------------
Hae.graniticusspacer    ----AGATAC-AAATACTCT---ACT----------------------
Hae.pumiliospacer       ----AGATAC-AAATACTCT---ACT----------------------
Hae.crispus7252         ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Hie.marginata           ----AGATAC-AACTACTCT---ACTAGGAT--GATGCGCGGG--AA-TC
Hae.crispus7260         --------------------------------------------------
Hae.humilis             --------------------------------------------------
Hip.papilio             --------------------------------------------------
Hab.martinezii          ----AGATAC-ATATACTCT---ACTAGGAT--GATGCGCAGG-GAA-TC
Hym.latifolia           ----AGCCAC-AAATA-T-----A------------------------
Hae.hirsitus7626        ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGGTAAA-TC
Han.hesperidum          ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCCCG-GAA-TC
La.martinezii           ----AGAGTAGCGTGATACTGTAGTAGAGCATGAGTGCGCGGG--AA-TA
Is.narcissiflora        ----AGATAC-AAATACTCC---ACTAGGAT--GATGC-------A----
Is.vargasii             ----AGATAC-AAATACTCT---ACTAGGAT-GAATTCGAGGG------C
Ly.squamigera           ----AGATAC-AA-TACTCT---AGTAGGTT--GAAGCGCGGG--A--TC
Lep.quitoensis          ----AGATAC-AAATACTCT---ATTAGGAT--GATGCGCGGG--AA-TC
Leu.autumnale           ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGAG-GAA-TC
Ly.albifloraintron      --------------------------------------------------
Ja.gypsophila           TACGCGGATACAAGTACTCT---GCTAGGAT--GATGCGCGAG-AAA-GG
Ne.bowdenii             ----AGATAC-AAGTATTCT---ACTGGGAT--GATGCGCGGG-AAA-TC
Na.calcicolaspacer      ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-GAA-TC
Na.serotinusspacer      ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-GAA-TC
Na.tortifoliusspacer    ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-GAA-TC
Na.jonquillaspacer      ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-GAA-TC
Na.albimarginaspacer    ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-GAA-TC
Na.cuatrecasaspacer     ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-GAA-TC
Na.marvierispacer       ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-GAA-TC
Na.rupicolaspacer       ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-GAA-TC
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Na.watierispacer      ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-GAA-TC
Na.bulbocodiumspacer  ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-GAA-TC
Na.lusitanicusspacer  ----AGATAC-AAATACTTT---ACTAGGAT--GATGCGCGGG-GAA-TC
Na.pallidulusspacer   ----AGATAC-AAATACTTT---ACTAGGAT--GATGCGCGGG-GAA-TC
Na.cyclamineusspacer  ----AGATAC-AAATACTTT---ACTAGGAT--GATGCGCGGG-GAA-TC
Na.poeticusspacer     ----AGATAC-AAATACTTT---ACTAGGAT--GATGCGCGGG-GAA-TC
Na.pseudonarcspacer   ----AGATAC-AAATACTTT---ACTAGGAT--GATGCGCGGG-GAA-TC
Na.triandrusspacer    ----AGATAC-AAATACTTT---ACTAGGAT--GATGCGCGGG-GAA-TC
Na.scaberulusspacer   ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-G---T-
Ne.laticoma8090       ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Na.sp.7607            ----GGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGA-GAA-TC
Na.sp.7608            ----AGATAC-AAATACTTT---ACTAGGAT--GATGCGCGGGGCAA-TC
Na.sp.7521            ----GGATACCAAATACTTT---ACTAGGATGATGCGCGGGGGGAAAATC
Na.elegans            ----AGATAC-AAATACTCT---AGCCCGAT--GATGCGCGGG--AA-TC
Na.tazetta            ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-GAA-TC
Pan.canariense        --------------------------------------------------
Pe.decora             TACGCGGATACAAGTACTCT---GCTAGGAT--GATGCGCGAG-AAA-GG
Rh.moelleri           ----AGATAC--AATACTCT---A---G---------------------
Sp.formosissima       ----AGATAC-AAATACTCT---ACTAGGAT--GAGGCGCAGGGAA----
Pab.incrassata        ----AGATAT-AAGTACTCT---ACGAGGAT--GATGCGCGG--AAA-TG
Sten.variegatum       ----AGATAC-AAATACTCT---ACTTAGGAT-GATGC------------
Ph.dubia              ----AGATAC-AAATACTCT---ACTAGGGG--GATGCGCGGG-A-----
Sten.pearcei          ----AGATAC--AATACTCT---AGTCGGAT--GATGCGCGGG-AA--TC
Pam.peruviana         ----AGATAC-AAATACTCT---ATTAGGAT--GATGCGCGGG-AA--TC
Pr.cunninghamii       ----AGATAC-AAATACTCT---ACTAGGAT--AATATGTGGG-AAA-TC
Sc.puniceus7918       --------------------------------------------------
Par.weberbaueri       ----AGATAC-AAATACTCT---ACTAGGAT--GATGTGCGGG-AA--TC
Sc.cinnabarinus       ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TG
Ster.lutea            ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGGGGG-AA--TC
Ra.decora             ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AA--TC
Sc.membranaceus7246   ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Str.salteri7245       ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Sc.puniceusRHA27      ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Str.truncata          ----AGATAC-AAGTATTTT---ACTAGGAT--GATGCGCGGG-AAA-TC
Sc.puniceus7301       ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGGTAAA-TC
Sc.puniceusspacer     ----AGATAC-AAATACTCT---ACT-----------------------
Sc.multiflorus7919    ----AGATAC-AAATACTCT---ACTAGGTAT-GATGCGCGGGGAAA-TC
Sc.membranaceus7917   ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Sc.membranaceuspacer  ----AGATAC-AAATACTCT---ACT-----------------------
Sc.membranaceusRHA25  ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGG--AAA-TC
Ze.filifolia          ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCAGG-AA--TC
Tr.modesta            ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AA--TC
Un.flava              ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AA--TC
Wo.rayneri            ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-GAA-TC
Va.parviflora         ----AGATAC-AAATACTCT---ACTAGGAT--GATTCACGGG-AA--TG
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Ama.belladonna7920    GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Ama.belladonna        --------------------------------------------------
Apo.lanceolatum       GTCGGGATAGCT----------------------------------------
Amm.coranica7164      --------------------------------------------------
Amm.nerinoidesRHA32   GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Amm.coranicaspacer    GTCG------------------------------------------------
Bo.disticha           --------------------------------------------------
Br.comptonii          --------------------------------------------------
Bo.disticha7172       GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Br.gregaria7157       GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cro.flava7256         --------------------------------------------------
Br.radulosa7440       GTCGGGATAGCTCAG-TTGGTAGAGCAAAGGACTGAAAA-TCCTCGTGTC
Br.radulosanata7629   GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Br.bosmaniae7251      GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cl.caulescensRC9b     GTCGGGATAGCTCAG-TTGGTAGAGCAAAGGACTGAAAA-TCCTCGTGTC
Cl.caulescensRC10b    GTCGGGATAGCTCAT-TTGGTAGAGCAGAGGACTGAAA--T-CT------
Cl.miniata8095        GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cl.miniataRC14        GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cl.caulescens8092     GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGT-
Cl.miniata            GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cl.sp.RC7b            GTCGGGATAGCTCAG-TTGGAAGAGCAGAGGACTGAAAA-TCCTC-T---
Cali.korsakoffii      GTC-------------------------------------------------
Cl.cyrtantiflora8094  --------------------------------------------------
Cl.nobilisRC6b        GTCGGGATAGCTCAG-TTGGAAGAGCAGAGGA-TGA--------------
Cl.caulescens         --------------------------------------------------
Cl.gardenii           --------------------------------------------------
Cl.miniata            --------------------------------------------------
Cl.nobilis8091        GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Chl.fragrans          --------------------------------------------------
Cl.nobilis            GTCGGGATAGCT----------------------------------------
Calo.lutea            GTCGGGATAGCT----------------------------------------
Cr.yemenense          GTCGGGATAACT----------------------------------------
Cr.euchrophylluRC96   GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cr.acauleRC106        GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-T---------
Cr.acaulglaucRC105    GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAA------------
Cr.bulbispermumRC95   GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cr.campanulatum7167   GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGGACTGAAAATCCTCGTGTC
Cr.foetidumRC98       GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cr.graminicola7630    GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCG----
Cr.lugardii7632       GTCGGGATAGCTCAG-TTGG-A-AG-AGCAAGGCTGAAAATCC--G-G--
Cr.macowanii7168      GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cr.nearmacowaniRC100  GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cr.abyssinicum        GTCG------------------------------------------------
Cr.buphanoidesRC102   GTCGGGATAGCTCAG-TTGGTAGA-C-------TGCTAAGTGGT------
Cr.americanum         GTCG------------------------------------------------
Cr.asiaticum          --------------------------------------------------
Cr.baumii             GTCG------------------------------------------------
Cr.acauleRC38         GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cr.buphanoides        GTCG------------------------------------------------
Cr.campanulatum       GTCG------------------------------------------------
Cr.cruentum           GTCG------------------------------------------------
Cr.distichum          GTCG------------------------------------------------
Cr.erubescens         GTCG------------------------------------------------
Cr.flaccidum          GTCG------------------------------------------------
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Cr.forbesii             GTCG------------------------------------------------
Cr.jagus                GTCG------------------------------------------------
Cr.ligulatum            GTCG------------------------------------------------
Cr.oliganthum           GTCG------------------------------------------------
Cr.penduncula tum       GTCG------------------------------------------------
Cr.Meerow2332           GTCG------------------------------------------------
Cr.buphanoides7631      GTCGGGATAGCTCAG-TTGGAAGAGCAAAGG-------------------
Cr.carolschmidRC97      GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cr.lineareRC99          GTCGGGA---------------------------------------------
Cr.minimumRC37          G-CGGGATAGCTCAG-TTGGTAGAGCAGAGGGACTGAAAA-CCTCG-G-C
Cr.paludosumRC41        GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTG-C
Cr.variabileRC44        GTCGGGATAGCTCAG-TTGGTAGAGCAGAGG-------------------
Cr.moorei7921           GTCGGGATAACTCAG-T-GGGAGAGCAAAGGACTGAA---TCC-------
Cry.vansonii            GTCGGGATAGCT----------------------------------------
Cy.herrei7217           ------------------------------------------------
Cy.brachyscyphuRC90     ------------------------------------------------
Cyb.longifolia          GTCGGGATAG---A--T-----------------------------------
Cy.elatus7636           GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.brachyscyphus7406    GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.elatusRC93           GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.huttonii7206         GTCG--A-A----AG-T-----------------------------------
Cy.mackenii7179         GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.mackeniiRC87         GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.macowanii7201        GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.obliquus7180         GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.obliquus7278         GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.ochroleucus7639      GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.contractus7199       GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.labiatus7258         GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.nova7963             GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCG----
Cy.sanguineusRC94       GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.spesiosus7213        GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.staadensis7316       GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.breviflorus7188      GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.elatus7202           GTCGG-ATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCG-GTC
Cy.labiatus7212         GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.obliquus7210         GTCGGGATAGCTCTG-TTGGAAGAGCAGAGGACTGAAA------------
Cy.sanguineus7216       GTCGGGATAGCTCAG-TTGGTAGAGCAAAAGACTGAAAA-TCCTCGTGTC
Cy.smithiae7214         G-----------------------------------------------
Cy.suaveolens7181       GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.breviflorus7634      ------------------------------------------------
Cy.elatus7198           ------------------------------------------------
Cy.spesiosus7640        GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.eucallus7218         ------------------------------------------------
Cy.spesiosusRC84        ------------------------------------------------
Cy.spiralis7219         ------------------------------------------------
Cy.wellandiiRC83        ------------------------------------------------
Cy.obrienii7193         CTCGG-ATAGCTCT--TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.herreiRC86           GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.brachyscyphus7204    GTCGGGATAG-TCAG--TGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.thorncroftiRC80      GTCGGGATAGCTCAA-TTGGTAGAGCAGAGGACTGGAAAATCCTCGTGTC
Cy.loddigesianus7203    GTCGGGATAGCGTAAGTTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.falcatus7637         ------------------------------------------------
Cy.elatus               GTCGGGATAGCT----------------------------------------
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                    751                                                 800
Cy.falcatusRC82     ------A---C--A--TT--TA---CA------T-AGA--T---------
Cy.spiralis7964     --------------------------------------------------
Ge.namaquensisAMV642 --------------------------------------------------
Eus.darwinii        --------------------------------------------------
Ga.plicatus         GT------------------------------------------------
Euc.castelnaeana    GTCGG-ATAGCT--------------------------------------
Ge.verticillaspacer --------------------------------------------------
Ge.brittenianaspacer --------------------------------------------------
Ge.lanuginosaspacer --------------------------------------------------
Gr.hyacinthine      GTCGGCTTAGCT--------------------------------------
Eucr.eucrosioides   GTCGAGATAGCT--------------------------------------
Ge.ciliaris         GTCGGGATAGCT--------------------------------------
Ge.namaquensisAMV635 --------------------------------------------------
Ge.namaquensisAMV639 --------------------------------------------------
Hes.zeyheri         GTCGGGATAGCT--------------------------------------
Hip.sp.7447         GTCGGGATAGCTCA-GTTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Hym.eucharidifolia  GTCGGGATAGCTCA-GT-GG-AGAGCAGAGGAC-GA----------
Hae.sanguineus7253  TCGGGGATAGCTCA-CTTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGGC
Hae.montanus7163    GTCGGGATAGCTCA-GTTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Hae.humilis7254     GTCGGGATAGCTCA-GTTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Hae.albiflos7512    GTCGGGATAGCTCA-GTTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Hae.coccineusAMV632 GCCGGGATAGCTCA-GTTGGTAGAGCAAAGGACTGAAAAATCCTCGTGTC
Hae.albiflos7517    GTCGGGATAGCTCA-GTTGGTAGAGCAGAGGACTGAAAA-TCCTC-----
Hae.paucilifoliu7925 GTCGGGATAGCTCA-GTTGGAAGAGCAGAGGACTGAAAA-TCCTCG----
Hae.albiflosspacer  --------------------------------------------------
Hae.humilisspacer   --------------------------------------------------
Hae.graniticusspacer --------------------------------------------------
Hae.pumiliospacer   --------------------------------------------------
Hae.crispus7252     GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Hie.marginata       GTCGGG-TCGCT--------------------------------------
Hae.crispus7260     --------------------------------------------------
Hae.humilis         --------------------------------------------------
Hip.papilio         --------------------------------------------------
Hab.martinezii      GTCGGGATAGCT--------------------------------------
Hym.latifolia       --------------------------------------------------
Hae.hirsitus7626    GTCGGGAATACTCA------------------------------------
Han.hesperidum      GTCGGGTTAGCT--------------------------------------
La.martinezii       GTCGCGATAGAT--------------------------------------
Is.narcissiflora    --------------------------------------------------
Is.vargasii         CT-G---T---TC-------------------------------------
Ly.squamigera       GTCG----------------------------------------------
Lep.quitoensis      GTCGGGATAGCT--------------------------------------
Leu.autumnale       GTCGGGATAGCT--------------------------------------
Ly.albifloraintron  --------------------------------------------------
Ja.gypsophila       GTCGGGATAGCTCAG-TCGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Ne.bowdenii         GTCGGG-TAGCT--------------------------------------
Na.calcicolaspacer  -T-GGGA--G-T------------------------------------
Na.serotinusspacer  -T-G---T-G---AG-T-------------------------------
Na.tortifoliusspacer -T-G---T-G---AG-T-------------------------------
Na.jonquillaspacer  -T-TGGA--G-T------------------------------------
Na.albimarginaspacer -T-GCG----C---G-T-------------------------------
Na.cuatrecasaspacer -T-GCG----C---G-T-------------------------------
Na.marvierispacer   -T-G---T-GC---G-T-------------------------------
Na.rupicolaspacer   -T-GGG----C---G-T-------------------------------
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                      751                                                800
Na.watierispacer      -TC----T-GC---G-T---------------------------------
Na.bulbocodiumspacer  -T---G-T-G---AG-T---------------------------------
Na.lusitanicusspacer  -T--GGA-AGC---------------------------------------
Na.pallidulusspacer   -T---G-TA----AG--C--------------------------------
Na.cyclamineusspacer  -T-----T---TAAG-T---------------------------------
Na.poeticusspacer     -TGC----A----AG-T---------------------------------
Na.pseudonarcspacer   -TGC--A-A-----G-T---------------------------------
Na.triandrusspacer    -T---G-TA----AG-T---------------------------------
Na.scaberulusspacer   G-CG--A---CT--------------------------------------
Ne.laticoma8090       GTCGGGATA-CTCAG-TCGGTAAAGCAAAGGACTGAAAA-TCC-------
Na.sp.7607            GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Na.sp.7608            GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Na.sp.7521            GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Na.elegans            GTCGG-----CT-AG-T---------------------------------
Na.tazetta            --------------------------------------------------
Pan.canariense        --------------------------------------------------
Pe.decora             GTCGGGATAGCTCAG-TCGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Rh.moelleri           --------------------------------------------------
Sp.formosissima       --------------------------------------------------
Pab.incrassata        GTCGG-ATAGCTCAG-TTGGTAGAGCAGAG-ACTGAAAAA-CCCC-T-T-
Sten.variegatum       --------------------------------------------------
Ph.dubia              --------------------------------------------------
Sten.pearcei          GTCGGG-TAGC-C-----------------------------------------
Pam.peruviana         GTCGGGATAGCT------------------------------------------
Pr.cunninghamii       GTCGGGATAACT------------------------------------------
Sc.puniceus7918       --------------------------------------------------
Par.weberbaueri       GTCGGGATAGCT------------------------------------------
Sc.cinnabarinus       GTCGGGATAGCT------------------------------------------
Ster.lutea            GTCGGGATAGCT------------------------------------------
Ra.decora             GTCGGG-TAGCT------------------------------------------
Sc.membranaceus7246   GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Str.salteri7245       GTCG--------------------------------------------------
Sc.puniceusRHA27      GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGGAAAATCCTCGTGTC
Str.truncata          GTCGGG-TAGCT------------------------------------------
Sc.puniceus7301       GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGTAAAATCCTCGTGTC
Sc.puniceusspacer     --------------------------------------------------
Sc.multiflorus7919    GTCGGG-TA--T-AG-TTGGTAGAGCAGAGGTACTGCAAATCCTCGTGTC
Sc.membranaceus7917   TCGGGAGTAGCTCAG-TTGGTAGAGCAGAGGACTG-AAAATCCTCGTGTC
Sc.membranaceuspacer  --------------------------------------------------
Sc.membranaceusRHA25  -C------------------------------------------------
Ze.filifolia          GTCGGG-TAGCT------------------------------------------
Tr.modesta            GTCGGG-TAGCT------------------------------------------
Un.flava              GTCGGGATAGCT------------------------------------------
Wo.rayneri            GTCGGGATAGCT------------------------------------------
Va.parviflora         GTCGG-ATAGCT------------------------------------------
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                     801          816
Ama.belladonna7920   ACCAGTTCAAATACC-
Ama.belladonna       ----------------
Apo.lanceolatum      ----------------
Amm.coranica7164     ----------------
Amm.nerinoidesRHA32  -CC-------------
Amm.coranicaspacer   ----------------
Bo.disticha          ----------------
Br.comptonii         ----------------
Bo.disticha7172      ACCAGTTCAAAT----
Br.gregaria7157      ACC-------------
Cro.flava7256        ----------------
Br.radulosa7440      AC--------------
Br.radulosanata7629  ACC-------------
Br.bosmaniae7251     AC-A-TTC--------
Cl.caulescensRC9b    -C--------------
Cl.caulescensRC10b   ----------------
Cl.miniata8095       ACCAGTTCAA-TA---
Cl.miniataRC14       ACCAGTTCAA--A---
Cl.caulescens8092    ----------------
Cl.miniata           A---------------
Cl.sp.RC7b           ----------------
Cali.korsakoffii     ----------------
Cl.cyrtantiflora8094 ----------------
Cl.nobilisRC6b       ----------------
Cl.caulescens        ----------------
Cl.gardenii          ----------------
Cl.miniata           ----------------
Cl.nobilis8091       ACC-------------
Chl.fragrans         ----------------
Cl.nobilis           ----------------
Calo.lutea           ----------------
Cr.yemenense         ----------------
Cr.euchrophylluRC96  -CCAGTTCAA-TAA--
Cr.acauleRC106       ----------------
Cr.acaulglaucRC105   ----------------
Cr.bulbispermumRC95  ACCAGTTCAAATA---
Cr.campanulatum7167  -C--------------
Cr.foetidumRC98      ACCAGTTC--------
Cr.graminicola7630   ----------------
Cr.lugardii7632      ----------------
Cr.macowanii7168     ----------------
Cr.nearmacowaniRC100 ACCAGTTCAAAT----
Cr.abyssinicum       ----------------
Cr.buphanoidesRC102  A--ACTTCAAAT----
Cr.americanum        ----------------
Cr.asiaticum         ----------------
Cr.baumii            ----------------
Cr.acauleRC38        ACCAGTTCAAAT----
Cr.buphanoides       ----------------
Cr.campanulatum      ----------------
Cr.cruentum          ----------------
Cr.distichum         ----------------
Cr.erubescens        ----------------
Cr.flaccidum         ----------------
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                        801         816
Cr.forbesii             ----------------
Cr.jagus                ----------------
Cr.ligulatum            ----------------
Cr.oliganthum           ----------------
Cr.pendunculatum        ----------------
Cr.Meerow2332           ----------------
Cr.buphanoides7631      ----------------
Cr.carolschmidRC97      ----------------
Cr.lineareRC99          ----------------
Cr.minimumRC37          --CA------------
Cr.paludosumRC41        ACCAGTTC--------
Cr.variabileRC44        ----------------
Cr.moorei7921           ----------------
Cry.vansonii            ----------------
Cy.herrei7217           ----------------
Cy.brachyscyphuRC90     ----------------
Cyb.longifolia          ----------------
Cy.elatus7636           -CC-------------
Cy.brachyscyphus7406    A---------------
Cy.elatusRC93           ACCA------------
Cy.huttonii7206         ----------------
Cy.mackenii7179         -C--------------
Cy.mackeniiRC87         ACCA----A-------
Cy.macowanii7201        ACC-------------
Cy.obliquus7180         ACC-------------
Cy.obliquus7278         -CCA------------
Cy.ochroleucus7639      AC-A------------
Cy.contractus7199       AC-A------------
Cy.labiatus7258         -C--------------
Cy.nova7963             ----------------
Cy.sanguineusRC94       AC--------------
Cy.spesiosus7213        ACC-------------
Cy.staadensis7316       ACCA-TTTC-------
Cy.breviflorus7188      ACCAG-----------
Cy.elatus7202           -CC--T--GGG-----
Cy.labiatus7212         ACC-------------
Cy.obliquus7210         ----------------
Cy.sanguineus7216       ACCAGTTTCAAA----
Cy.smithiae7214         ----------------
Cy.suaveolens7181       ACC-------------
Cy.breviflorus7634      ----------------
Cy.elatus7198           ----------------
Cy.spesiosus7640        AC-A-T----------
Cy.eucallus7218         ----------------
Cy.spesiosusRC84        ----------------
Cy.spiralis7219         ----------------
Cy.wellandiiRC83        ----------------
Cy.obrienii7193         ACC--TTTCA------
Cy.herreiRC86           -C--------------
Cy.brachyscyphus7204    A-C-------------
Cy.thorncroftiRC80      CAC-------------
Cy.loddigesianus7203    AC--GTTTCAAATAAA
Cy.falcatus7637         ----------------
Cy.elatus               ----------------
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                     801          816
Cy.falcatusRC82      AC-------AAA----
Cy.spiralis7964      ----------------
Ge.namaquensisAMV642 ----------------
Eus.darwinii         ----------------
Ga.plicatus          ----------------
Euc.castelnaeana     ----------------
Ge.verticillaspacer  ----------------
Ge.brittenianaspacer ----------------
Ge.lanuginosaspacer  ----------------
Gr.hyacinthine       ----------------
Eucr.eucrosioides    ----------------
Ge.ciliaris          ----------------
Ge.namaquensisAMV635 ----------------
Ge.namaquensisAMV639 ----------------
Hes.zeyheri          ----------------
Hip.sp.7447          AC--------------
Hym.eucharidifolia   ----------------
Hae.sanguineus7253   AC--------------
Hae.montanus7163     ACCA-TT-CAAATA--
Hae.humilis7254      AC--------------
Hae.albiflos7512     AC-A------------
Hae.coccineusAMV632  ACCAGTTTCAAA-AA-
Hae.albiflos7517     ----------------
Hae.paucilifoliu7925 ----------------
Hae.albiflosspacer   ----------------
Hae.humilisspacer    ----------------
Hae.graniticusspacer ----------------
Hae.pumiliospacer    ----------------
Hae.crispus7252      AC-A--TTC-------
Hie.marginata        ----------------
Hae.crispus7260      ----------------
Hae.humilis          ----------------
Hip.papilio          ----------------
Hab.martinezii       ----------------
Hym.latifolia        ----------------
Hae.hirsitus7626     ----------------
Han.hesperidum       ----------------
La.martinezii        ----------------
Is.narcissiflora     ----------------
Is.vargasii          ----------------
Ly.squamigera        ----------------
Lep.quitoensis       ----------------
Leu.autumnale        ----------------
Ly.albifloraintron   ----------------
Ja.gypsophila        ACCAG-TTCAAATAG-
Ne.bowdenii          ----------------
Na.calcicolaspacer   ----------------
Na.serotinusspacer   ----------------
Na.tortifoliusspacer ----------------
Na.jonquillaspacer   ----------------
Na.albimarginaspacer ----------------
Na.cuatrecasaspacer  ----------------
Na.marvierispacer    ----------------
Na.rupicolaspacer    ----------------
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                     801          816
Na.watierispacer     ----------------
Na.bulbocodiumspacer ----------------
Na.lusitanicusspacer ----------------
Na.pallidulusspacer  ----------------
Na.cyclamineusspacer ----------------
Na.poeticusspacer    ----------------
Na.pseudonarcspacer  ----------------
Na.triandrusspacer   ----------------
Na.scaberulusspacer  ----------------
Ne.laticoma8090      ----------------
Na.sp.7607           ACCAG-----------
Na.sp.7608           ACCAGTTCCAAATA--
Na.sp.7521           ACCAG-TTCAAATACC
Na.elegans           ----------------
Na.tazetta           ----------------
Pan.canariense       ----------------
Pe.decora            ACCAG-TTCAAATAG-
Rh.moelleri          ----------------
Sp.formosissima      ----------------
Pab.incrassata       ------TT--------
Sten.variegatum      ----------------
Ph.dubia             ----------------
Sten.pearcei         ----------------
Pam.peruviana        ----------------
Pr.cunninghamii      ----------------
Sc.puniceus7918      ----------------
Par.weberbaueri      ----------------
Sc.cinnabarinus      ----------------
Ster.lutea           ----------------
Ra.decora            ----------------
Sc.membranaceus7246  A---------------
Str.salteri7245      ----------------
Sc.puniceusRHA27     ACCAGTTTCC------
Str.truncata         ----------------
Sc.puniceus7301      ACCAGTT-CAAATACA
Sc.puniceusspacer    ----------------
Sc.multiflorus7919   ACCAGTT-CAAATA--
Sc.membranaceus7917  -C--------------
Sc.membranaceuspacer ----------------
Sc.membranaceusRHA25 ----------------
Ze.filifolia         ----------------
Tr.modesta           ----------------
Un.flava             ----------------
Wo.rayneri           ----------------
Va.parviflora        ----------------
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APPENDIX C Aligned sequences of the *matK* gene for Amaryllidaceae.

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                         1                                                  50
Ac.valentina             AAGAAAAAGAAATACCAAAATATC--AA--AATTTA-CGAT-CAATTCA-
Ac.fabrei                AAGAAAAAGAAATACCAAAAAATC--AT--AATTTA-CGAT-CAATTCA-
Ac.nicaeensis            AAGAAAAAGAAATACCAAAAAATC--AT--AATTTA-CGAT-CAATTCA-
Ac.longifolia            AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Ac.rosea                 AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Ac.tingitana             AGGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Ac.trichophylla          AGGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Ac.autumnalis            AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Bo.disticha7172          AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Br.striata               AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Cro.flava7256            AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCCA
Ama.belladonna           AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Br.radulosanata7629      --------------------------------------------------
Br.gregaria7157          --------------------------------------------------
Ama.belladonnaRHA28      --------------------------------------------------
Ca.lutea                 AAGAAAAAGAAATACCGAAATATC--AT--AATTTA-CGAT-CAATTCA-
Cl.nobilisRC6b           AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Chl.fragrans             AAGAGAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Cl.miniata               AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Cl.caulescens8092        AAGAAAAAGAAATACCAAAATATCC-AT--AATTTA-CGAT-CAATTCCA
Cl.miniataRC14           AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Cl.gardenii8093          AAGAAAAAGAAATCCCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Cl.cyrtanthiflor8094     AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Cl.miniata8095           AAGAAAAAGAAATCCCCAAATATC--AT--AATTTA-CGAT-CAATTCA-
Cr.acauleRC38            AAGAAAAAGAAATACCAAAATATCA-TA--ATTTAG-CGAT-CAATTCA-
Cr.acauleRC106           AAGAAAAAGAAATACCAAAATATC--AT--AATTT--CGAT-CAATTCA-
Cr.paludosumRC41         AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Cr.buphanoidesRC102      AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CCAATTCA
Cr.campanulatum7167      AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Cr.carolschmidRC97       AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Cr.euchrophyllumRC96     AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Cr.foetidumRC98          AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Cr.graminicola7630       AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Cr.lineareRC99           AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Cr.minimumRC37           AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Cr.nearmacowaniRC100     AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Cr.variabileRC44         AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Cr.moorei                AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Cr.moorei7921            AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Cr.bulbispermumRC95      AAGAAAAAGAAATACCAAAATATCC-AT--AATTT--CGAT-CAATTCA-
Cr.lugardii7632          AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Cr.macowanii7168         AAGAAAAAGAAATACCAAAATATC--AT--AATTTC-CGAT-CAATTACA
Cr.buphanoides7631       AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Cr.acaulglaucRC105       AAGAAAAAGAAATCCCCAAAATATCCAT--AATTTATCGAT-CAATTCA-
Cy.elatus7636            AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Cy.herreiRC86            --------------------------------------------------
Cy.breviflorusRC88       --------------------------------------------------
Cy.mackeniiRC87          AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Cy.montanus7638          AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTACA
Euch.grandiflora         AAGAGAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Eucr.bicolor             AAGAGAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
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                        1                                               50
Eur.amboinensis         AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Eus.darwinii            AAGAGAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Cy.sanguineusRC94       AAGAAAAAGAAATACCAAAATATGC-AT--ACTCCCCCGATGCAATTCA-
Cy.brachyscyphus7204    --------------------------------------------------
Cy.elatus7198           --------------------------------------------------
Cy.ochroleucus7639      --------------------------------------------------
Cy.elatusRC93           AAGAAAAAGAAATACCAAAATATC--AT--AACCCCCCGAT-CAATTCA-
Cy.eucallusRC79         AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGATCAATTGCA-
Cy.falcatus7637         AAGAAAAAGAAATACCAAAATATC--AT--AACCCC-GC-T-CAATTCA-
Cy.loddigesianus7203    AAGAAAAAGAAATACCAAAATATCC-AT--AATTTGACGATCCAATTCCA
Cy.smithiae7214         --------------------------------------------------
Cy.herrei7194           AAGAAAAAGAAATACCAAAATACC--AT--AAT----CGATG-A--TCA-
Cy.labiatus7212         --------------------------------------------------
Cy.staadensis7316       AAGAAAAAGAAATACCAAAATATCC-AT--AATCCCCCGGT-CAATTCA-
Cy.obliquus7278         --------------------------------------------------
Ge.namaquensisAMV635    AAGAAAAAGAAATACCAAAATATGC-AT--AATTTA-CGATCCAATTCA-
Hae.crispus7260         AAGAAAAAGAAATACCAAAATATGC-AT--AATTTA-CGATCCAATTCA-
Hae.roseus              AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Hae.albiflos7517        AAGAAAAAGAAATACCAAAATATGC-AT--AATTTAGCGAT-CAATTGCC
Gal.elwesii             AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Gal.ikariae             AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Gal.alpinus             AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Gal.cilicicus           AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Hae.crispus7252         AAGAAAAAGAAAT-CCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Gal.woronowii           AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Gal.lagodechianus       AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Gal.nivalis             AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Gal.plivatus            AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Gal.reginaeolgae        AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Gal.regianeolgae        AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Gal.fosteri             AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Gal.transcaucasicus     AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Hae.montanus7163        --------------------------------------------------
Hae.coccineusAMV632     --------------------------------------------------
Ne.bowdenii             AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Hym.caribaea            AAGAGAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Hip.stylosum            AAGAGAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Lyc.traubii             AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Na.tazetta              AAAAAAAAAAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Lap.martinezii          AAGAAAAAGAAATACAAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Leu.aestivum            AAGAAAAAGAAACACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Leu.aestivumpulchel     AAGAAAAAGAAACACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Leu.autumnale           AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Leu.vernumcarpaticu     AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Na.bicolor              AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Ne.laticoma8090         AAGAAAAAGAAATACCAAAATATC--AT--AATTTCACGAT-CAATTCA-
Hip.sp.7446             AAGAGAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
No.recurvata            AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Na.sp.7607              --------------------------------------------------
Na.sp.7608              --------------------------------------------------
Par.weberbaueri         AAGAGAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Sten.variegatum         AAGAGAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Str.watermeyeri         AAGAAAAAGAAATACAAAAATATC--AT--AATTTA-CGAT-CAATTCA-
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                    1                                                  50
Ung.tadshicorum      AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Va.parviflorum       AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Phae.dubia           AAGAGAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Urc.peruviana        AAGAGAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Rho.bifida           AAGAGAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Sc.multiflorus       AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Sc.membranaceus7246  AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Ze.candida           AGGAGAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Str.salteri7245      AAGAAAAAGAAATACAAAAATATC--AT--AATTTA-CGATCCAATTCCA
Ster.lutea           AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Pan.canariense       AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Va.parviflora        AAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTCA-
Sc.multiflorus7919   AAGAAAAAGAAATACCAAAATATC--CC--CCCCGA-CGAT-CAATTCA-
Sc.membranaceus7917  --------------------------------------------------
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                        51                                                  100
Ac.valentina            -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GTATTTAAA-
Ac.fabrei               -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Ac.nicaeensis           -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Ac.longifolia           -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Ac.rosea                -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----ACATTTAAA-
Ac.tingitana            -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Ac.trichophylla         -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Ac.autumnalis           -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Bo.disticha7172         -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Br.striata              -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Cro.flava7256           TTCCAATTTTT--CTTTTTTTAGAGGACAAATTATCC---GCATTTAAA-
Ama.belladonna          -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Br.radulosanata7629     ---------------C-----------C---TTATCC---GCATTTAAAA
Br.gregaria7157         --------------------------------------------------
Ama.belladonnaRHA28     --------------------------------------------------
Ca.lutea                -TTCAATTTTT--CCCTTTTTAGAGGACAAATTGTC----GCATTTAAA-
Cl.nobilisRC6b          -TTCCATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Chl.fragrans            -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Cl.miniata              -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Cl.caulescens8092       -TTCAATTTTT--CCCTTTTTAGAGGGCAAATTATC----GCATTTAAA-
Cl.miniataRC14          -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Cl.gardenii8093         -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATCC---GCATTTAAA-
Cl.cyrtanthiflor8094    -TTCCATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Cl.miniata8095          TTACAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Cr.acauleRC38           -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Cr.acauleRC106          -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Cr.paludosumRC41        -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Cr.buphanoidesRC102     -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Cr.campanulatum7167     -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Cr.carolschmidRC97      -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Cr.euchrophyllumRC96    -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Cr.foetidumRC98         -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Cr.graminicola7630      -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Cr.lineareRC99          -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Cr.minimumRC37          -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Cr.nearmacowaniRC100    -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Cr.variabileRC44        -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Cr.moorei               -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Cr.moorei7921           -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Cr.bulbispermumRC95     -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Cr.lugardii7632         -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Cr.macowanii7168        -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Cr.buphanoides7631      -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Cr.acaulglaucRC105      -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Cy.elatus7636           -TTCAATTTTT--CCCTTTTTAGAGGACAAAT-ATCT---GCATTTAAA-
Cy.herreiRC86           --------------------------------------------------
Cy.breviflorusRC88      --------------------------------------------------
Cy.mackeniiRC87         -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATCC---GCATTTAAA-
Cy.montanus7638         TATCAATTTTT--CCCTTTTTAGAGGACTAAATTCTC---GCATTTAAA-
Euch.grandiflora        -TTCCATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Eucr.bicolor            -TTCCATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Eur.amboinensis         -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Eus.darwinii            -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Cy.sanguineusRC94       -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
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                        51                                                  100
Cy.brachyscyphus7204 --------------------------------------------------
Cy.elatus7198        --------------------------------------------------
Cy.ochroleucus7639   --------------------------------------------------
Cy.elatusRC93        -TTCAATTTTT--CCCTTTTTAGAGGACAAATTCTC----GCATTTAAA-
Cy.eucallusRC79      -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Cy.falcatus7637      -TTCAATTTTT--CCCTTTTTAGAGGACAAATTCTAC---GCATTTAAA-
Cy.loddigesianus7203 CCTCAATTTTTGCCCTTTTTTAGAGGACAAATTATC----GCATTTAAA-
Cy.smithiae7214      --------------------------------------------------
Cy.herrei7194        ---CA-T------C-------A-----C-------C-----CA---A---
Cy.labiatus7212      --------------------------------------------------
Cy.staadensis7316    CCCCCACTTTT--GCCTTTTGAGAGGGCAAATTATCC---GCATTTAAA-
Cy.obliquus7278      --------------------------------------------------
Ge.namaquensisAMV635 -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Hae.crispus7260      TTCCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCGTTTAAA-
Hae.roseus           -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Hae.albiflos7517     -CCCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Gal.elwesii          -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Gal.ikariae          -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Gal.alpinus          -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Gal.cilicicus        -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Hae.crispus7252      -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCGTTTAAA-
Gal.woronowii        -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Gal.lagodechianus    -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Gal.nivalis          -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Gal.plivatus         -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Gal.reginaeolgae     -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Gal.regianeolgae     -TTCAATTTTT--CCCTTTTTAGAAGACAAATTATC----GCATTTAAA-
Gal.fosteri          -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Gal.transcaucasicus  -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Hae.montanus7163     --------------------------------------------------
Hae.coccineusAMV632  --------------------------------------------------
Ne.bowdenii          -CTCAATTTTT--CCCTTTTTAGAGGACAAATTCCC----GCATTTAAA-
Hym.caribaea         -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Hip.stylosum         -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Lyc.traubii          -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Na.tazetta           -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Lap.martinezii       -TTCAATTTTT--CCCTTTTTAGAGGATAAATTATC----GCATTTAAA-
Leu.aestivum         -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Leu.aestivumpulchel  -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Leu.autumnale        -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Leu.vernumcarpaticu  -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Na.bicolor           -TTCCATTTTT--CCCTTTTTAGAGGACAAATTCTC----GCATTTAAA-
Ne.laticoma8090      -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Hip.sp.7446          -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
No.recurvata         -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----ACATTTAAA-
Na.sp.7607           --------------------------------------------------
Na.sp.7608           --------------------------------------------------
Par.weberbaueri      -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Sten.variegatum      -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Str.watermeyeri      -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Ung.tadshicorum      -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Va.parviflorum       -TTCAATTTTT--CCCTTTTTAGAGGACAAATTCTC----GCATTTAAA-
Phae.dubia           -TTCCATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Urc.peruviana        -TTCCATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
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                      51                                                  100
Rho.bifida            -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Sc.multiflorus        -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Sc.membranaceus7246   -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----TCATTTAAA-
Ze.candida            -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Str.salteri7245      TTCCAATTTTT--CCCTTTTTAGAGGACAAATTATCC---GCATTTAAA-
Ster.lutea            -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----ACATTTAAA-
Pan.canariense        -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Va.parviflora         -TTCAATTTTT--CCCTTTTTAGAGGACAAATTCTC----GCATTTAAA-
Sc.multiflorus7919    -TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAAA-
Sc.membranaceus7917   ----------------------------------------------------
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                        101                                                 150
Ac.valentina            TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Ac.fabrei               TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Ac.nicaeensis           TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Ac.longifolia           TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Ac.rosea                TTATGTCTC-AGATATAC-TAATACCTCACCCC-ATCCATA--TGGAAAT
Ac.tingitana            TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Ac.trichophylla         TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Ac.autumnalis           TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Bo.disticha7172         TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAAAT
Br.striata              TTATATCTC-AGATATAC-TAATGCCTCATCCC-ATACATA--TGGAAAT
Cro.flava7256           TTATATCTCCAGATATAC-TAATACCCCATCCCCATACATA--TGGAAAT
Ama.belladonna          TTATATCTC-AGATATAC-TAATACCTTATCCC-ATACATA--TGGAAAT
Br.radulosanata7629     TTATGTCTCCAGATATAC-TAATACCTCCTTCCCATCCATA--TGGAAAT
Br.gregaria7157         ----------------------------------------------AAT
Ama.belladonnaRHA28     ----------------------------------------------
Ca.lutea                TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Cl.nobilisRC6b          TTATGTCTC-AGATATAC-TAATACCCCATCCC-ATCCATA--TGGAAAT
Chl.fragrans            TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Cl.miniata              TTATGTCTC-AGATATAC-TAATACCCCATCCC-ATCCATA--TGGAAAT
Cl.caulescens8092       TTATGTCTC-AGATATAC-TAATACCCCATCCC-ATCCATA--TGGAAAT
Cl.miniataRC14          TTATGTCTC-AGATATAC-TAATACCCCATCCC-ATCCATA--TGGAAAT
Cl.gardenii8093         TTATGTCTC-AGATATAC-TAATACCCCATCCC-ATCCATA--TGGAAAT
Cl.cyrtanthiflor8094    TTATGT-TC-AGATATAC-TAATACCCCATCCC-ATCCATA--TTGAAAT
Cl.miniata8095          TTATGTCTC-AGATATAC-TAATACCCCATCCC-ATCCATA--TGGAAAT
Cr.acauleRC38           TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAAAT
Cr.acauleRC106          TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAAAT
Cr.paludosumRC41        TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAAAT
Cr.buphanoidesRC102     TTATAT-TC-AGATATAC-TAATACCTCCATCCCATACATA--TGGAAAT
Cr.campanulatum7167     TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAAAT
Cr.carolschmidRC97      TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAAAT
Cr.euchrophyllumRC96    TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAAAT
Cr.foetidumRC98         TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAAAT
Cr.graminicola7630      TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAAAT
Cr.lineareRC99          TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAAAT
Cr.minimumRC37          TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAAAT
Cr.nearmacowaniRC100    TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAAAT
Cr.variabileRC44        TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAAAT
Cr.moorei               TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAAAT
Cr.moorei7921           TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAAAT
Cr.bulbispermumRC95     TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAAAT
Cr.lugardii7632         TTATATCTC-AGATATACCTAATACCTCATCCC-ATACATA--TGGAAAT
Cr.macowanii7168        TTATATCTC-AGATATAC-TAATACATCATCCC-ATACATA--TGGAAAT
Cr.buphanoides7631      TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAAAT
Cr.acaulglaucRC105      TTATATCTC-AGATATAC-TAATACCTCATCCCCATACATA--TGGAAAT
Cy.elatus7636           TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAA-T
Cy.herreiRC86           ----------------------------------------------
Cy.breviflorusRC88      ----------------------------------------------
Cy.mackeniiRC87         TTATGTCTC-AGATATAC-TAATACCTCCATCCCATCCATA--TGGAAAT
Cy.montanus7638         TTATGTCTCCAGAAATAC-TAATACCTCATCCCATCCCATA--GGGAAAT
Euch.grandiflora        TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Eucr.bicolor            TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Eur.amboinensis         TTATGTCTC-GGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Eus.darwinii            TTATGTCTC-AGATATGC-TAATACCTCATCCT-ATCCATA--TGGAAAT
Cy.sanguineusRC94       TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
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                        101                                                 150
Cy.brachyscyphus7204    --------------------------------------------------
Cy.elatus7198           --------------------------------------------------
Cy.ochroleucus7639      --------------------------------------------------
Cy.elatusRC93           TTATGTCTTCAGATATAC-TAATACCTCATCCCCATCCATA--TGGAAAT
Cy.eucallusRC79         TTATGTCTGCAGATATATCTAATACCTCATCCC----------------
Cy.falcatus7637         TTAT-TCTC-AG-TATA------------------------------
Cy.loddigesianus7203    ATATGTCTC-AGATATAC-TAATACCTCAGTTCCATCC-T----------
Cy.smithiae7214         --------------------------------------------------
Cy.herrei7194           ------CT-----T-TAC-T--T---T--GT-------------GG----
Cy.labiatus7212         --------------------------------------------------
Cy.staadensis7316       TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Cy.obliquus7278         --------------------------------------------------
Ge.namaquensisAMV635    TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Hae.crispus7260         TTATGTCTC-AGATATAC-TAATACCTCATCCCCATCCATA--TGGAAAT
Hae.roseus              TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Hae.albiflos7517        TTATGTCTC-AGATATAC-TAATACCTCCCCCCCATCCATA--TGGAAAT
Gal.elwesii             TTATGTCTC-AGCTATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Gal.ikariae             TTATGTCTC-AGCTATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Gal.alpinus             TTATGTCTC-AGCTATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Gal.cilicicus           TTATGTCTC-AGCTATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Hae.crispus7252         TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Gal.woronowii           TTATGTCTC-AGCTATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Gal.lagodechianus       TTATGTCTC-AGCTATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Gal.nivalis             TTATGTCTC-AGCTATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Gal.plivatus            TTATGTCTC-AGCTATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Gal.reginaeolgae        TTATGTCTC-AGCTATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Gal.regianeolgae        TTATGTCTC-AGCTATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Gal.fosteri             TTATGTCTC-AGCTATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Gal.transcaucasicus     TTATGTCTC-AGCTATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Hae.montanus7163        --------------------------------------------------
Hae.coccineusAMV632     --------------------------------------------------
Ne.bowdenii             TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAAAT
Hym.caribaea            TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Hip.stylosum            TTATGTCTC-AGATATAC-TAATACCCCATCCC-ATCCATA--TGGAAAT
Lyc.traubii             TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Na.tazetta              TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Lap.martinezii          TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Leu.aestivum            TTATGTCTC-AAATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Leu.aestivumpulchel     TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Leu.autumnale           TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Leu.vernumcarpaticu     TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Na.bicolor              TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Ne.laticoma8090         TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAAAT
Hip.sp.7446             TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
No.recurvata            TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAAAT
Na.sp.7607              --------------------------------------------------
Na.sp.7608              --------------------------------------------------
Par.weberbaueri         TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Sten.variegatum         TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Str.watermeyeri         TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAAAT
Ung.tadshicorum         TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Va.parviflorum          TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Phae.dubia              TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Urc.peruviana           TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
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                     101                                                 150
Rho.bifida           TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Sc.multiflorus       TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Sc.membranaceus7246  TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Ze.candida           TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Str.salteri7245      TTATATCTC-AGATATAACTAATACCTCATCCCATAACATA--TGGAAAT
Ster.lutea           TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCACA--TGGAAAT
Pan.canariense       TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Va.parviflora        TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Sc.multiflorus7919   TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAAAT
Sc.membranaceus7917  ---------------------------------------------------
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                        151                                                 200
Ac.valentina            CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Ac.fabrei               CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGAAGTTCCCC
Ac.nicaeensis           CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Ac.longifolia           CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Ac.rosea                CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Ac.tingitana            CTTGG---TTCAAATTCTT--CAATGC-TGGATCC-A--AGATGTTCC--
Ac.trichophylla         CTTGG---T-CAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Ac.autumnalis           CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Bo.disticha7172         CTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC--
Br.striata              CTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC--
Cro.flava7256           CTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC--
Ama.belladonna          CTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC--
Br.radulosanata7629     CTTGG---TTCAAATTTCTTCCAATGC-TGGGTTCCA--AGATGTTCC--
Br.gregaria7157         CTT-------------CT-----------GG-T-C-A---GA-GT-A---
Ama.belladonnaRHA28     ------------------------------------------------
Ca.lutea                CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Cl.nobilisRC6b          CTTGGG--TTCAAATTCTT--CAATGC-TGGATTCCA--AGATGTTCC--
Chl.fragrans            CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Cl.miniata              CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Cl.caulescens8092       CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Cl.miniataRC14          CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Cl.gardenii8093         CTTGG---TTCAAATTCTT--CAATGC-TGGATTCCA--AGATGTTCC--
Cl.cyrtanthiflor8094    CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCCCA
Cl.miniata8095          CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Cr.acauleRC38           CTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC--
Cr.acauleRC106          CTTGG---TTCAAATTCTT--CAATGT-TGGATTCCA--AGATGTTCC--
Cr.paludosumRC41        CTTGG---TTCAAATTCTT--CAATG--TGGATTC-A--AGATGTTCC--
Cr.buphanoidesRC102     CCTTGG--TTCAAATTCTT--CAATGTTTGGATTTCA--AGATGTTCC--
Cr.campanulatum7167     CTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC--
Cr.carolschmidRC97      CTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC--
Cr.euchrophyllumRC96    CTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC--
Cr.foetidumRC98         CTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC--
Cr.graminicola7630      CTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC--
Cr.lineareRC99          CTTGG---TTCAAATTCTT--CCATGT-TGGATTC-A--AGATGTTCC--
Cr.minimumRC37          CTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC--
Cr.nearmacowaniRC100    CTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC--
Cr.variabileRC44        CTTGG---TTCAAATTCTT--CAAAGT-TGGATTC-A--AGATGTTCC--
Cr.moorei               CTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC--
Cr.moorei7921           CTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC--
Cr.bulbispermumRC95     CTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGAGGTTCC--
Cr.lugardii7632         CTTGGGG-TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC--
Cr.macowanii7168        CTTGG---TTCAAATTCTT--CAATTT-GGGATTG-A--AGATGTTCC--
Cr.buphanoides7631      CTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC--
Cr.acaulglaucRC105      CTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC--
Cy.elatus7636           CTTGG---TTCAAATTCTT--CAATGC-TGGAT-C-A--AGATGTTCC--
Cy.herreiRC86           ------------AATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Cy.breviflorusRC88      ----------------------------------------ATGTTCC--
Cy.mackeniiRC87         CTTGGT--TCCAAATTCTT-CCAATGC-TGGATCC-A--AGATGT-CC--
Cy.montanus7638         CTTGGT--TCCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Euch.grandiflora        CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Eucr.bicolor            CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Eur.amboinensis         CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Eus.darwinii            CTTGG---TTAAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Cy.sanguineusRC94       CTTGG---TTCAAATTCTT-CCAATGC-TGGATTCCA--AGATGTTCC--
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                        151                                                 200
Cy.brachyscyphus7204 --------------------------------------------------
Cy.elatus7198        --------------------------------------------------
Cy.ochroleucus7639   ----------CAA-T-CTT--C--TCC-TGGA--C-A---GA-G--CA--
Cy.elatusRC93        CTTGG---TTCAAATTCTT--CAATGC-GGGATTCCA--AGATGTTCC--
Cy.eucallusRC79      ------------------------------AT-C-------T-------
Cy.falcatus7637      --------------------------------------------------
Cy.loddigesianus7203 CTT--TTTTTGCA-TT-T----AATGC--GGATT--------T-------
Cy.smithiae7214      --------------------------------------------------
Cy.herrei7194        ---GG-----CAAATTC----C----C--GCATG--A--A-AT-------
Cy.labiatus7212      --------------------------------------------------
Cy.staadensis7316    CTTGG---TTCA----C-----AAT------AT-C-------TG------
Cy.obliquus7278      --------------------------------------------------
Ge.namaquensisAMV635 CTTGG---TTGCAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Hae.crispus7260      GCTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCT--
Hae.roseus           CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Hae.albiflos7517     CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Gal.elwesii          CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Gal.ikariae          CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Gal.alpinus          CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AAATGTTCC--
Gal.cilicicus        CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Hae.crispus7252      CTTGG---TTCAAATTCCTTCCAATGC-TGGATTCCA--AGATGTTCT--
Gal.woronowii        CTTGGG---TCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Gal.lagodechianus    CTTGG---TTCAAATTCTT--CAATGC-CGGATTC-A--AGATGTTCC--
Gal.nivalis          CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Gal.plivatus         CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Gal.reginaeolgae     CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Gal.regianeolgae     CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Gal.fosteri          CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Gal.transcaucasicus  CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AAATGTTCC--
Hae.montanus7163     ----------------------CA--------A----A--GAATGTTTCCC
Hae.coccineusAMV632  ------------------------------------------TT----
Ne.bowdenii          CTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC--
Hym.caribaea         CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Hip.stylosum         CTTGG---TTCAAATTCTT--CGATGC-TGGATTC-A--AGATGTTCC--
Lyc.traubii          CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Na.tazetta           CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Lap.martinezii       CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Leu.aestivum         CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Leu.aestivumpulchel  CTTGGG---TCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Leu.autumnale        CTTGG---TTCAAATTCTT--CAATGC-TGGATCC-A--AGATGTTCC--
Leu.vernumcarpaticu  CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Na.bicolor           CTTGG---TTCAAATTCTT--CAATAC-CGGATTC-A--AGATGTTCC--
Ne.laticoma8090      CTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC--
Hip.sp.7446          CTTGG---TTCAAATTCTT--CGATGC-TGGATTC-A--AGATGTTCC--
No.recurvata         CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Na.sp.7607           ------------------------G---GGAT-C-A---GATGTTCC--
Na.sp.7608           ---------T--AATTCT---C-AGGC--GGATTC-C---GA-GTTCC--
Par.weberbaueri      CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Sten.variegatum      CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Str.watermeyeri      CTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC--
Ung.tadshicorum      CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Va.parviflorum       CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Phae.dubia           CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Urc.peruviana        CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
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                      151                                                 200
Rho.bifida            CTTGG---TTCAAATTCTT--CGATGC-TGGATTC-A--AGATGTTCC--
Sc.multiflorus        CTTGG---TTCAAATTCTT--CAATGC-CGGATTC-A--AGATGTTCC--
Sc.membranaceus7246   CTTGG---TTCAAATTCTT--CAATGC-CGGATTC-A--AGATGTTCC--
Ze.candida            CTTGG---TTCAAATTCTT--CGATGC-TGGATTC-A--AGATGTTCC--
Str.salteri7245       CTTGG---TTCAAATTCTT--GCA--C-T--ATT--A---GAT-T-C---
Ster.lutea            CTTGG----TCAAATTCTT--CAATGC-TGGATCC-A--AGATGTTCC--
Pan.canariense        CTTGGG---TCAAATTCTT--CAATGC-TGGATGC-A--AGATGTTCC--
Va.parviflora         CTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC--
Sc.multiflorus7919    CTTGG---TTCAAATTCTT-CCAATGC-TGGGTTC-A--AGATGTTCC--
Sc.membranaceus7917   C---------CAAA-------GAA-------ATTC-AA-AGAT-T-C---
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                        201                                                 250
Ac.valentina            CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Ac.fabrei               CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Ac.nicaeensis           CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-CCGAATATC--ATA
Ac.longifolia           CTTTTTG--CATT-TATT--GGGATTC-TTTCTTC-ACGAATATC--ATA
Ac.rosea                CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Ac.tingitana            CTTTTTG--CATT-TATT--GCGATTC-CTTCTTC-ACGAATATC--ATA
Ac.trichophylla         CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Ac.autumnalis           CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Bo.disticha7172         CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Br.striata              CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Cro.flava7256           CCTTTTTGCCATT-TATT--GCGATTCCTTTCTTC-ACGAATATC--ATA
Ama.belladonna          CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Br.radulosanata7629     TTTTTTG--CATT-TATT--GCGATTC-TTTCTTCCACGAATATC--ATA
Br.gregaria7157         CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Ama.belladonnaRHA28     -TTTTTG--CCC--CCTT--GCGATTC-TTTATTC-ACGAATATC--ATA
Ca.lutea                CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Cl.nobilisRC6b          CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Chl.fragrans            CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Cl.miniata              CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Cl.caulescens8092       CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Cl.miniataRC14          CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Cl.gardenii8093         CCTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Cl.cyrtanthiflor8094    ATTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Cl.miniata8095          CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Cr.acauleRC38           CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Cr.acauleRC106          CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Cr.paludosumRC41        CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Cr.buphanoidesRC102     CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Cr.campanulatum7167     CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Cr.carolschmidRC97      CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Cr.euchrophyllumRC96    CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Cr.foetidumRC98         CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Cr.graminicola7630      CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Cr.lineareRC99          CTTTTTGC-ATTT-TATT--GCGATTC-TTTCTTC-ACGAATATATCATA
Cr.minimumRC37          CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Cr.nearmacowaniRC100    CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Cr.variabileRC44        CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC--CGAATATC--ATA
Cr.moorei               CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Cr.moorei7921           CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Cr.bulbispermumRC95     CTTTTTG--CATT-TATT--GCGAATTCTTTCTTC-ACGAATATC--ATA
Cr.lugardii7632         CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Cr.macowanii7168        -CTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Cr.buphanoides7631      CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Cr.acaulglaucRC105      CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Cy.elatus7636           CTTTTTG--CATT-TATT--GCGATTC-TTTCTTCCACGAATATC--ATA
Cy.herreiRC86           CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Cy.breviflorusRC88      CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Cy.mackeniiRC87         -TTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Cy.montanus7638         CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATCC-ATA
Euch.grandiflora        CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Eucr.bicolor            CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Eur.amboinensis         CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Eus.darwinii            CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Cy.sanguineusRC94       CTTTTTG--CAT--TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
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                        201                                                250
Cy.brachyscyphus7204 ----------------------------TTTCTTCCACGAATATC--ATA
Cy.elatus7198        --------------------------------------------------
Cy.ochroleucus7639   CCTTAAG--CATT-TCTT--GCGATTC-TTTCTTC-ACGAATAAC--ATA
Cy.elatusRC93        CTTTTTG--CATT-TATT--GCGATTCCTTTCTTCCACGAATATCC-ATA
Cy.eucallusRC79      ---------CAT-------------------------------------
Cy.falcatus7637      --------------------------------------------------
Cy.loddigesianus7203 CTTTTTG--------------------TTTCTGCACGGAATATC--ATA
Cy.smithiae7214      ------------------------------------------------TA
Cy.herrei7194        -T--------AT--------G---T-C----CT-C-A-GA-TATC--ATA
Cy.labiatus7212      ------------------------------------------ATC--ATA
Cy.staadensis7316    ---------CA----AT---GC----------------------------
Cy.obliquus7278      --------------------------------------------------
Ge.namaquensisAMV635 TTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATCTC--ATA
Hae.crispus7260      TTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATCTC--ATA
Hae.roseus           TTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATCTC--ATA
Hae.albiflos7517     TTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATCTC--ATA
Gal.elwesii          CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Gal.ikariae          CTTTTTG--CAT--TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Gal.alpinus          CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Gal.cilicicus        CTTTTTG--CATT-TATT--GCGATTC-TTTTTTC-ACGAATATC--ATA
Hae.crispus7252      TTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATCTC--ATA
Gal.woronowii        -CTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Gal.lagodechianus    CTTTTTG--CATT-TATT--GCGATTA-TTTCTTC-ATGAATATC--ATA
Gal.nivalis          CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Gal.plivatus         CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Gal.reginaeolgae     CTTTTTG--CATT-AATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Gal.regianeolgae     CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Gal.fosteri          CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Gal.transcaucasicus  CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--CTA
Hae.montanus7163     TTTTTTGGCCATTTTATTTGGCGATTCCTTTCTTC-ACGAATATC--ATA
Hae.coccineusAMV632  -TTTTTG--CATT-TATT--GCGCATTCTTTCTTC-ACGAATCTC--ATA
Ne.bowdenii          CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Hym.caribaea         CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Hip.stylosum         CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Lyc.traubii          CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Na.tazetta           CTTTTTG--CATT-TATT--GCGATTC-CTTCTTC-ACGAATATC--ATA
Lap.martinezii       CCTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Leu.aestivum         CTTTTTG--CATT-TAAT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Leu.aestivumpulchel  CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Leu.autumnale        CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Leu.vernumcarpaticu  CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATG
Na.bicolor           C-TTTTG--CATT-TATT--TCGATTC-TTTCTTC-ACGAATATC--ATA
Ne.laticoma8090      CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Hip.sp.7446          CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
No.recurvata         TTTTTTC--CATT-TATT--GCGGTTC-TTTCTTC-ACGAATATC--ATA
Na.sp.7607           CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Na.sp.7608           CTTTTTG--C-TT-TATT--TCGAT-C-TGTCTTC-ACGAATATC--ATA
Par.weberbaueri      CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Sten.variegatum      CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Str.watermeyeri      CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Ung.tadshicorum      CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Va.parviflorum       CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Phae.dubia           CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Urc.peruviana        CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
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                     201                                                250
Rho.bifida           TTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Sc.multiflorus       TTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATCTC--ATA
Sc.membranaceus7246  TTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATCTC--ATA
Ze.candida           CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Str.salteri7245      ----------A----------CGAT----------------ATC--ATA
Ster.lutea           CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Pan.canariense       -TTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Va.parviflora        CTTTTTG--CATT--ATT--GCGATTC-TTTCTTC-ACGAATATC--ATA
Sc.multiflorus7919   TTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATCTC--ATA
Sc.membranaceus7917  TTTTTTG--CATT-TATT--GCGATTC-TTTCTTCACGGAATCTC--ATA
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                        251                                                 300
Ac.valentina            ATTGGAATAG--T-TTTCTCATTA-CTCAGAAAA--AATCC-ATTTT-TG
Ac.fabrei               ATTGGAATAG--T-TTTCTCATTA-CTCAGAAAA--AATCC-ATTTT-CG
Ac.nicaeensis           ATTGGAATAG--T-TTTCTCATTA-CTCAGAAAA--AATCC-ATTTT-CG
Ac.longifolia           ATTGGAATAA--G-TTTCTCATTA-CTCAAAAAA--AATCC-ATTTT-CG
Ac.rosea                ATTGGAAGAG--T-TTTCTCATTA-CTCAGAAAA--AATCC-ATTTT-CG
Ac.tingitana            ATTGGAATAG--G-TTTCTCATT--CTCAGAAAA--AATCC-ATTTT-CG
Ac.trichophylla         ATTGGAATAG--T-TTTCTCATTA-CTCAGAAAA--AATCC-ATTTT-CG
Ac.autumnalis           ATTGGAATAG--T-TTTCTCATTA-CTCAGAAAA--AATCC-ATTTT-CA
Bo.disticha7172         ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Br.striata              ATTGGAATAG--T-CTTCTCATTA-CTCAGAATA--AATCC-ATTTA-CG
Cro.flava7256           ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Ama.belladonna          ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Br.radulosanata7629     ATTGGAATAG--T-CTTCTCATTATCTCAGAAGA--AATCC-ATTTAGCG
Br.gregaria7157         ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Ama.belladonnaRHA28     ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Ca.lutea                ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cl.nobilisRC6b          ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Chl.fragrans            ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTT-CG
Cl.miniata              ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cl.caulescens8092       ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cl.miniataRC14          ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cl.gardenii8093         ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cl.cyrtanthiflor8094    ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCCCATTTA-CG
Cl.miniata8095          ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cr.acauleRC38           ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cr.acauleRC106          ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cr.paludosumRC41        ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cr.buphanoidesRC102     ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cr.campanulatum7167     ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cr.carolschmidRC97      ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cr.euchrophyllumRC96    ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cr.foetidumRC98         ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cr.graminicola7630      ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cr.lineareRC99          ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cr.minimumRC37          ATTGGAATAG--T-CTTTTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cr.nearmacowaniRC100    ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cr.variabileRC44        ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cr.moorei               ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cr.moorei7921           ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cr.bulbispermumRC95     ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cr.lugardii7632         ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cr.macowanii7168        ATTGGAATAG--TGCTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cr.buphanoides7631      ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cr.acaulglaucRC105      ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cy.elatus7636           ATTGGAATAG--TCTTCCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cy.herreiRC86           ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cy.breviflorusRC88      ATTGGAATAG--TCTTCTCCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cy.mackeniiRC87         ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cy.montanus7638         ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Euch.grandiflora        ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTT-CG
Eucr.bicolor            ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTT-CG
Eur.amboinensis         ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Eus.darwinii            ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTT-CG
Cy.sanguineusRC94       ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
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                        251                                                300
Cy.brachyscyphus7204 ATTGGAATAG--TCCTTCTCATTA-CTCGGAAGA--AATCCCATTTA-CG
Cy.elatus7198        ------------------------------AAGA--AATCCGATTTA-CG
Cy.ochroleucus7639   ATTGGTATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC--TTTA-CG
Cy.elatusRC93        ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cy.eucallusRC79      ATTGGAATAG--G-GTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cy.falcatus7637      ------------------------------------------------
Cy.loddigesianus7203 ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGAC-AATCC-ATTTA-CG
Cy.smithiae7214      A--G---TGC--TTGCTC-CATTCCTCCAGAAGAA-ATTCCCATTTTACG
Cy.herrei7194        ATTGGAATAG--G-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cy.labiatus7212      ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cy.staadensis7316    --TGG-ATAGA-G-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Cy.obliquus7278      ------------------------------------------------
Ge.namaquensisAMV635 ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Hae.crispus7260      ATTGGAATAG--T-CTTCTCATTA-CTCATAAGA--AATCC-ATTTA-CG
Hae.roseus           ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Hae.albiflos7517     ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Gal.elwesii          ATTGGAATAG--T-TTTCTCATTA-CTCAAAAAA--AATCC-ATTTT-CG
Gal.ikariae          ATTGGAATAG--G-TTTCTCATTA-CTCAGAAAA--AATCC-ATTTT-CG
Gal.alpinus          ATTGGAATAG--T-TTTCTCATTA-CTCAGAAAA--AATCT-ATTTT-GG
Gal.cilicicus        ATTGGAATAG--T-TTCCTCATTA-CTCAAAAAA--AATCCCATTTG--G
Hae.crispus7252      ATTGGAATAG--T-CTTCTCATTA-CTCATAAGA--AATCC-ATTTA-CG
Gal.woronowii        ATTGGAATAG--G-TTTCTCATTA-CTCAGAAAA--AATCT-ATTTT-TG
Gal.lagodechianus    ATTGGAATAG--T-TTTCTCATTA-CTCAAGAAA--AATCC-ATTTT-CG
Gal.nivalis          ATTGGAATAG--T-TTTCTCATTA-CTCAAAAAA--AATCC-ATTTT-TG
Gal.plivatus         ATTGGAATAG--G-TTTCTCATTA-CTCAGAAAA--AATCC-ATTTT-CG
Gal.reginaeolgae     ATTGGAATAA--G-TTTCTCATTA-CTCAGAAAA--AATCC-ATTTT-TG
Gal.regianeolgae     ATTGGAATAG--T-TTTCTCATTA-CTCAAGAAA--AAATC-ATTTT-TG
Gal.fosteri          ATTGGAATAG--T-TTTCTCATTA-CTCAAAAAA--AATCC-ATTTT-TG
Gal.transcaucasicus  ATTGGAATAA--G-TTTCTCATTA-CTCAGAAAA--AATCC-ATTTT-CG
Hae.montanus7163     ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Hae.coccineusAMV632  ATTGGAATAG--T-CTTCTCATTA-CTCATAAGA--AATCC-ATTTA-CG
Ne.bowdenii          ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Hym.caribaea         ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTT-CG
Hip.stylosum         ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTT-CG
Lyc.traubii          ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTT-CG
Na.tazetta           ATTGGAAGAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTT-CG
Lap.martinezii       ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTT-CG
Leu.aestivum         ATTGGAATAG--T-TTTCTCATTA-CTCAGAAAA--AATCC-ATTTT-CG
Leu.aestivumpulchel  ATTGGAATAG--T-TTTCTCATTA-CTCAGAAAA--AATCC-ATTTT-CG
Leu.autumnale        ATTGGAATAG--T-TTTCTCATTA-CTCAAAAAA--AATCC-ATTTT-CA
Leu.vernumcarpaticu  ATTGGAATAA--G-TTTCTCATTA-CTCAGAAAA--AATCC-ATTTT-AG
Na.bicolor           ATTGGAATAG--T-CTTCTCATTA-CTCAAAATA--AATCC-ATTTT-CG
Ne.laticoma8090      ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Hip.sp.7446          ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTT-CG
No.recurvata         ATTTGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCT-ATTTA-CG
Na.sp.7607           ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTT-CG
Na.sp.7608           ATTGGAATAG--T-CTTCTCATTA-CTCAGAATA--AATCC-ATTTT-CG
Par.weberbaueri      ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTT-CG
Sten.variegatum      ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTT-CG
Str.watermeyeri      ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Ung.tadshicorum      ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTT-CG
Va.parviflorum       ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCT-ATTTT-CG
Phae.dubia           ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTT-CG
Urc.peruviana        ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTT-CG
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                    251                                                 300
Rho.bifida          ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTT-CG
Sc.multiflorus      ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Sc.membranaceus7246 ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Ze.candida          ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTT-CG
Str.salteri7245     ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Ster.lutea          ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AACCC-ATTT--CT
Pan.canariense      ATTGGAATAG--T-CTTCTCATTC-CTCAGAAGA--AATCC-ATTT--CG
Va.parviflora       ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCT-ATTTT-CG
Sc.multiflorus7919  ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
Sc.membranaceus7917 ATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-CG
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                        301                                                 350
Ac.valentina            TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CATATA
Ac.fabrei               TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CATATA
Ac.nicaeensis           TTTTT-C----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CATATA
Ac.longifolia           TTTTTTC----AAAAGAAAATAA--AAG-ACTATTCG--GGT--CATATA
Ac.rosea                TTTTTTC----AAAAGAAAATAA--AAG-ACTATTCG--GTT--CATATA
Ac.tingitana            GTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GT-T-CATATA
Ac.trichophylla         GTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGGT-TATATA
Ac.autumnalis           TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CATATA
Bo.disticha7172         TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Br.striata              TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Cro.flava7256           TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Ama.belladonna          TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Br.radulosanata7629     TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTCTGGTTC-CCTATA
Br.gregaria7157         TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Ama.belladonnaRHA28     TTTTTTC----AAAAGAAAATAA--AAGGACTATTTC--GGTT-CCTATA
Ca.lutea                TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Cl.nobilisRC6b          TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Chl.fragrans            TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Cl.miniata              TTTTTTC----AAAAGAAAATAA--AAG-ACTCTTTC--GGTT-CCTATA
Cl.caulescens8092       TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTT--GGTT-CCTATA
Cl.miniataRC14          TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Cl.gardenii8093         TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Cl.cyrtanthiflor8094    TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Cl.miniata8095          TTTTTTC----AAAAGAAAATAA--AAG-ACTCTTTC--GGAT-CCTATA
Cr.acauleRC38           TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Cr.acauleRC106          TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Cr.paludosumRC41        TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Cr.buphanoidesRC102     TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Cr.campanulatum7167     TTTTTTC----AAAAGAAAAAAA--AAG-ACTATTTC--GGTT-CCTATA
Cr.carolschmidRC97      TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Cr.euchrophyllumRC96    TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Cr.foetidumRC98         TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Cr.graminicola7630      TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Cr.lineareRC99          TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Cr.minimumRC37          TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Cr.nearmacowaniRC100    TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Cr.variabileRC44        TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Cr.moorei               TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Cr.moorei7921           TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Cr.bulbispermumRC95     TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Cr.lugardii7632         TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Cr.macowanii7168        TTTTTTC----AAAAGAAAAAAA--AAG-ACTATTTC--GGTT-CGTATG
Cr.buphanoides7631      TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Cr.acaulglaucRC105      TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Cy.elatus7636           TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Cy.herreiRC86           TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Cy.breviflorusRC88      TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Cy.mackeniiRC87         TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Cy.montanus7638         TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Euch.grandiflora        TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Eucr.bicolor            TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Eur.amboinensis         TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Eus.darwinii            TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Cy.sanguineusRC94       TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
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                        301                                                 350
Cy.brachyscyphus7204 TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTTCCCTATA
Cy.elatus7198        GTTTTTCTC--AAAAGCAAAATAAGAAGGACTATTTCGGGGTTCCCTATA
Cy.ochroleucus7639   TTTTTTC---AAAAGGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Cy.elatusRC93        TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Cy.eucallusRC79      TTTTTC-----AAAAGAAAATAA--AAG-ACTATTTC--GGTC--CTATA
Cy.falcatus7637      ------------------------------------------------
Cy.loddigesianus7203 TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Cy.smithiae7214      TTTTATT--CAAAAAGAAAATTA--AAAGACTATTTGC-GGTTCCCTATG
Cy.herrei7194        CTCTTTT----CAAAGAAAATAA---AG-ACTATTTC--GGTT-CCTATA
Cy.labiatus7212      TTTTTTC----AAAAGAAAATAA--AAGACTGATTTC--GGTT-CCTATA
Cy.staadensis7316    TTTTTTC----AAAAGAAAATAA--AAG-GCTATTTC--GGTT-CCTATA
Cy.obliquus7278      ------------------------------------------------
Ge.namaquensisAMV635 TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Hae.crispus7260      TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Hae.roseus           TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTT--GGTT-CCTATA
Hae.albiflos7517     TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Gal.elwesii          TTTTTTC----AAAAGAAAAAAA--AAG-ACTATTTC--GGTT-CATATA
Gal.ikariae          TTTTTTC----AAAAGAAAAAAA--AAG-ACTATTTC--GGTT-CATATA
Gal.alpinus          TTTTTTC----AAAAGAAAAAAA--AAG-ACTATTTT--GGTT-CATATC
Gal.cilicicus        TTTTTTC----AAAAGAAAAAAA--AAG-ACTATTTC--GGTT-CATATA
Hae.crispus7252      TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Gal.woronowii        GTTTTTC----AAAAGAAAAAAA--AAG-ACTTTTTT--GGGT-CATATA
Gal.lagodechianus    TTTTTTC----AAAAAGAAAAAA--AAG-ACTATTTC--GGTT-CATATA
Gal.nivalis          TTTTTTC----AAAAGAAAAAAA--AAG-ACTATTTC--GGTT-CATATA
Gal.plivatus         TTTTTTC----AAAAGAAAAAAA--AAG--CTATTTC--GGTT-CATATA
Gal.reginaeolgae     GTTTTTC----AAAAGAAAAAAA--AAG-ACTATTTC--GGTT-CATATA
Gal.regianeolgae     TTTTTTC----AAAAGAAAAAAA--AAG--CTATT-C--GGTT-CATATA
Gal.fosteri          TTTTTTC----AAAAGAAAAAAA--AAG-ACTATTTC--GGTT-CATATA
Gal.transcaucasicus  TTTTTTC----AAAAAAAAAAAA--AAG-ACTATTTC--GGTT-CATATA
Hae.montanus7163     TTTTTTC----AAAAGAAAATCA--AAAGACTATTTC--GGTT-CCTATA
Hae.coccineusAMV632  TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Ne.bowdenii          TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Hym.caribaea         TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Hip.stylosum         TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Lyc.traubii          TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Na.tazetta           TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Lap.martinezii       TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Leu.aestivum         TTTTTTC----AAAAGAAAAAAA--AAG-ACTATTTC--GGTT-CATATA
Leu.aestivumpulchel  TTTTTTC----AAAAGAAAAAAA--AAG-ACTATTTC--GGTT-CATATA
Leu.autumnale        TTTTTTC----AAAAGAAAATAA--AAG-ACTATTCG--GGTT-CATATA
Leu.vernumcarpaticu  TTTTTTC----AAAAGAAAAAAA--AAG-ACTATTTC--GGTT-CATATA
Na.bicolor           TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Ne.laticoma8090      TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Hip.sp.7446          TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
No.recurvata         TTTTTTC----AAAAGAAAATAA--AAG-ATTATTTC--GGTT-CCTATA
Na.sp.7607           TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Na.sp.7608           TTTTTTC----AAAAGAAAATAA--AAG-ACTATTGC--GGTT-CCTATA
Par.weberbaueri      TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Sten.variegatum      TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTT--GGTT-CCTATA
Str.watermeyeri      TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Ung.tadshicorum      TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Va.parviflorum       TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Phae.dubia           TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Urc.peruviana        TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
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                    301                                                 350
Rho.bifida          TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Sc.multiflorus      TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Sc.membranaceus7246 TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Ze.candida          TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Str.salteri7245     TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Ster.lutea          TTTTTTC----AAAAGAAAATAA--AAA-ACGATTTC--GGTT-CATATA
Pan.canariense      GTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Va.parviflora       TTTTT-C----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Sc.multiflorus7919  TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
Sc.membranaceus7917 TTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTATA
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                        351                                                 400
Ac.valentina            C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-GGTTTT-T
Ac.fabrei               C---AATTTTTATG-GGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Ac.nicaeensis           C---AATTTT-ATG-TGTT-GAATG-TGAATTTT---TATT-TGTTTT--
Ac.longifolia           C---AATTTTTATG-TGTTGGAATT-TGAAATAT---TATT-GGTTTT--
Ac.rosea                C---AATTTT-ATG-TGGTGGAATT--GAATTAT---TATT--GTTTT--
Ac.tingitana            CC--AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Ac.trichophylla         C---AATTTTTATG-TGGTTGAATG-TGAATTTT----A-T-TGGTTT-T
Ac.autumnalis           C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TCTTTT-T
Bo.disticha7172         C---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT-T
Br.striata              C---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cro.flava7256           C---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT-T
Ama.belladonna          C---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT-T
Br.radulosanata7629     C---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT-T
Br.gregaria7157         C---AATTTTTATG-TATTTGAATGTGCAATTTT---TATT-TGTTTT-T
Ama.belladonnaRHA28     C---AATTTTTATG-TATTTGCAATGTGAATTTT---TATT-TGTTTT-T
Ca.lutea                C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cl.nobilisRC6b          C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Chl.fragrans            C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cl.miniata              C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cl.caulescens8092       C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cl.miniataRC14          C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cl.gardenii8093         C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TTTTTT-T
Cl.cyrtanthiflor8094    C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cl.miniata8095          C---AATTTTTATG-TGTGTTGAATGTGAATTTT---TATT-TGTTTT-T
Cr.acauleRC38           C---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cr.acauleRC106          C---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cr.paludosumRC41        C---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cr.buphanoidesRC102     C---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cr.campanulatum7167     C---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cr.carolschmidRC97      C---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cr.euchrophyllumRC96    C---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cr.foetidumRC98         C---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cr.graminicola7630      C---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cr.lineareRC99          C---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cr.minimumRC37          C---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cr.nearmacowaniRC100    C---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cr.variabileRC44        C---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cr.moorei               C---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cr.moorei7921           C---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cr.bulbispermumRC95     C---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cr.lugardii7632         C---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cr.macowanii7168        C---AATTTTTATG-TATTTGAATG-GGAATTTT---TATT-TGTTTT-T
Cr.buphanoides7631      C---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cr.acaulglaucRC105      C---AATTTTTATG-TATTTGAATG--GAATTTT---TATT-TGTTTT-T
Cy.elatus7636           C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cy.herreiRC86           C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cy.breviflorusRC88      C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cy.mackeniiRC87         C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cy.montanus7638         C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Euch.grandiflora        C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Eucr.bicolor            C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Eur.amboinensis         C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Eus.darwinii            C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cy.sanguineusRC94       C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
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                        351                                                 400
Cy.brachyscyphus7204 C----AATTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT--
Cy.elatus7198        C---AATTTTTATG-TGTTTGAATG-TGAATTCT---TATT-TGTTTT-T
Cy.ochroleucus7639   C----ATTTTTATG-TGTTTGAATGTGCAATTTT---TATT-TGTTTT-T
Cy.elatusRC93        C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cy.eucallusRC79      C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cy.falcatus7637      ------------------------------------------------
Cy.loddigesianus7203 C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cy.smithiae7214      AC--AATTTTTATGGTGTTTGAATG-TGAATTAT--TTATTGTGTTTTTA
Cy.herrei7194        C---AATTTTTATG-TGTTTGAATG-TGAATTCT--TTATT-TGTTTT-T
Cy.labiatus7212      C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Cy.staadensis7316    C---AATTTTTATG-TGTTTGAATG--GAATTTT---TATT--GTTTT--
Cy.obliquus7278      ------------------------------------------------
Ge.namaquensisAMV635 C---AATTTTTATG-TGTTTGAGTG-TGAATTTT---TATT-TGTTTT-T
Hae.crispus7260      C---AATTTTTATG-TGTTTGAGTG-TGAATTTT---TATT-TGTTTT-T
Hae.roseus           C---AATTTTTATG-TGTTTGAGTG-TGAATTTT---TATT-TGTTTT-T
Hae.albiflos7517     C---AATTTTTATG-TGTTTGAGTG-TGAATTTT---TATT-TGTTTT-T
Gal.elwesii          C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Gal.ikariae          C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Gal.alpinus          C---AATTTTTATG-TGGTTGAATG-TGAATTTT---TATT-TGTTTT-T
Gal.cilicicus        C---AATTTTTATG-GGTTGGAATG-GGAATTTT---TATT-TGTTTT-T
Hae.crispus7252      C---AATTTTTATG-TGTTTGAGTG-TGAATTTT---TATT-TGTTTT-T
Gal.woronowii        C---AATTTTTATG-TGTTTGGAATGTGAATTTT---TATT-TGTTTT-T
Gal.lagodechianus    C---AATTTTTATG-GGTTGGAATG-TGAATTTT---TATT-TGTTTT-T
Gal.nivalis          C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Gal.plivatus         C---AATTTTTATG-TGGTTGAATG--GAATTTT---TATT-GGTTTT--
Gal.reginaeolgae     C---AATTTTAATG-TGTTGGAATG-TGAATTTT---TATT-TGTTTT-T
Gal.regianeolgae     C---AATTTTAATG-TGTTGGAATG-TGAATTTT---TATT-TGTTTT-A
Gal.fosteri          C---AATTTTTATG-TGTTTGAATT-TGAATTTT---TATTTGGTTTT--
Gal.transcaucasicus  C---AATTTTTATG-TGTTTGAATT-TGAATTTT---TATT-TGTTTT-T
Hae.montanus7163     G---CGTTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Hae.coccineusAMV632  C---AATTTTTATG-TGTTTGAGTG-TGAATTTT---TATT-TGTTTT-T
Ne.bowdenii          C---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT-T
Hym.caribaea         C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Hip.stylosum         C---AATTTTTATG-TGTTTGAATT-TGAATTTT---TATT-TGTTTT-T
Lyc.traubii          C---AATTTTTATG-TGTTTGAATG-CGAATTTT---TATT-TGTTTT-T
Na.tazetta           C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Lap.martinezii       C---AATTTTTATG-TGTTTGGAATGTGAATTTG---TATT-TGGTTT-T
Leu.aestivum         C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Leu.aestivumpulchel  C---AATTTTTATG-GGTTTGAATG-TGAATTTT---AATT--GGTTT-A
Leu.autumnale        C---AATTTTTATG-TGGTTGAATG-TGAATTTT----ATT-TCTTTT-T
Leu.vernumcarpaticu  C---AATTTTTATG-TGGTTGAATA-TGAATTTT----ATT-GGTTTT--
Na.bicolor           C---AATTTTTATG-TGTTTGAATG-TGAATTTT----ATT-TGTTTT-T
Ne.laticoma8090      C---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT-T
Hip.sp.7446          C---AATTTTTATG-TGTTTGAATT-TGAATTTT---TATT-TGTTTT-T
No.recurvata         C---AATTCTTATG-TATTTGAATG-GGAATTCT---TATT-AGTTTT-T
Na.sp.7607           C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Na.sp.7608           C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Par.weberbaueri      C---AATTTTTATG-TGTTTGAATG-TGAATTTG---TATT-TGTTTT-T
Sten.variegatum      C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Str.watermeyeri      C---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT-T
Ung.tadshicorum      C---AATTTTTACG-TGTTTGAATG-CGAATTTT---TATT-TGTTTT-T
Va.parviflorum       C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Phae.dubia           C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Urc.peruviana        C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
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                      351                                                 400
Rho.bifida            C---AATTTTTATG-TGTTTGAATT-TGAATTTT---TATT-TGTTTT-T
Sc.multiflorus        C---AATTTTTATG-TGTTTGAGTG-TGAATTTT---TATT-TGTTTT-T
Sc.membranaceus7246   C---AATTTTTATG-TGTTTGAGTG-TGAATTTT---TATT-TGTTTT-T
Ze.candida            C---AATTTTTATG-TGTTTGAATT-TGAATTTT---TATT-TGTTTT-T
Str.salteri7245       C---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT-T
Ster.lutea            C---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Pan.canariense        C---AA-TTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-A
Va.parviflora         C---AA-TTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT-T
Sc.multiflorus7919    C---AATTTTTATG-TGTTTGAGTG-TGAATTTT---TATT-TGTTTT-T
Sc.membranaceus7917   C---AATTTTTATG-TGTTTGAGTG-TGAATTTT---TATT-TGTTTT-T
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                        401                                                 450
Ac.valentina            ATTCG-GAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Ac.fabrei               ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CGT-TTGG
Ac.nicaeensis           ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Ac.longifolia           ATTCG-TAAACAAT---CC-CTT-TTTACCAAT---AACAT-CTT-TTGG
Ac.rosea                AATCG-TAAACAAT---CCTCTTATT-ACGAT----AACGT-CTT-T-GG
Ac.tingitana            ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Ac.trichophylla         ATTCG-TAAACAAT---CCTCTTATT-ACGAT----AACAT-CTT-TTGG
Ac.autumnalis           ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Bo.disticha7172         ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Br.striata              ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Cro.flava7256           ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Ama.belladonna          ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Br.radulosanata7629     ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Br.gregaria7157         ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Ama.belladonnaRHA28     ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Ca.lutea                ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Cl.nobilisRC6b          ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Chl.fragrans            ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Cl.miniata              ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Cl.caulescens8092       ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Cl.miniataRC14          ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Cl.gardenii8093         ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Cl.cyrtanthiflor8094    ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Cl.miniata8095          ATTCGGTAAACAAT---CTTCTTATTTACGATCT--AACAT-CTT-TTGG
Cr.acauleRC38           ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Cr.acauleRC106          ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Cr.paludosumRC41        ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Cr.buphanoidesRC102     ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Cr.campanulatum7167     ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Cr.carolschmidRC97      ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Cr.euchrophyllumRC96    ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Cr.foetidumRC98         ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Cr.graminicola7630      ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Cr.lineareRC99          ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Cr.minimumRC37          ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Cr.nearmacowaniRC100    ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Cr.variabileRC44        ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Cr.moorei               ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Cr.moorei7921           ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Cr.bulbispermumRC95     ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Cr.lugardii7632         ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Cr.macowanii7168        ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Cr.buphanoides7631      ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Cr.acaulglaucRC105      ATTCGATAAACAAT---CTTCTTATTTACGATT---AACAT-CTTGTTGG
Cy.elatus7636           ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Cy.herreiRC86           ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Cy.breviflorusRC88      ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Cy.mackeniiRC87         ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Cy.montanus7638         ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Euch.grandiflora        ATTCG-TAAACAAT---CCTTTTATTTACGATT---AAAAT-CTT-TTGG
Eucr.bicolor            ATTCG-TAAACAAT---CCTTTTATTTACGATT---CAAAT-CTT-TTGG
Eur.amboinensis         ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Eus.darwinii            ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Cy.sanguineusRC94       ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
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                        401                                                 450
Cy.brachyscyphus7204 ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT--TGG
Cy.elatus7198        ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Cy.ochroleucus7639   ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACCT-CTTTTGGG
Cy.elatusRC93        ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Cy.eucallusRC79      ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Cy.falcatus7637      ----------CAAT---CCTCTTATTT-CGATT---AACAT-CTT-TTGG
Cy.loddigesianus7203 ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Cy.smithiae7214      ATTGGTAAGACAAT-GCATATTTATTTACGATT--AAACATGCTTGTTGG
Cy.herrei7194        ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT--TGG
Cy.labiatus7212      ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Cy.staadensis7316    ATTCG-TAAACAAT--CCTCTCTATTTACGATT---AACAT-CTT--TGG
Cy.obliquus7278      ----------------------TATTTGGGATT---AACAT-CTT-TTGG
Ge.namaquensisAMV635 ATTCG-TAAACAAG---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Hae.crispus7260      ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Hae.roseus           ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Hae.albiflos7517     ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Gal.elwesii          ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT--TTTTTGG
Gal.ikariae          ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Gal.alpinus          ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Gal.cilicicus        ATTCG-TAACCAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Hae.crispus7252      ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Gal.woronowii        ATTCG-GAAACAAT---CCTTTTATTTACGATT---AACAT-CTT-TTGG
Gal.lagodechianus    ATTCG-TAACCAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Gal.nivalis          ATTCG-TAACCAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Gal.plivatus         ATTCG-TAA-CAAT---CCTCTTATTTACGATT---AACATTCTT--TGG
Gal.reginaeolgae     ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Gal.regianeolgae     ATTGG-TAACCAAT---CCTCTTATTTACGGATT--AACTT-CTT--TGG
Gal.fosteri          ATTCG-TAACCAAT---CCTCTTTTTTACAATT---AACAT-CTT-TTGG
Gal.transcaucasicus  ATTCG-TAACCAAT---CCTCTTATTTACAATT---AACAT-CTT-TTGG
Hae.montanus7163     ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Hae.coccineusAMV632  ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Ne.bowdenii          ATTCG-TAAACAAT---CTTATTATTTACGATT---AACAT-CTT-TTGG
Hym.caribaea         ATTCG-TAAACAAT---CCTCTTATTTACGATT---AAAAT-CTT-TTGG
Hip.stylosum         ATTCG-TAAACAAT---CCTCTTATTTACGATT---AAGAT-CTT-TTGG
Lyc.traubii          ATTCG-TAAACAAT---CCTTTTATTTACGATT---AACAT-CTT-TTGG
Na.tazetta           TTTCA-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Lap.martinezii       ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Leu.aestivum         ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Leu.aestivumpulchel  ATTCG-TAACCAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Leu.autumnale        ATTCG-TAAACAAT---CCTCTTATTTACGAT----AACAT-CTT-TTGG
Leu.vernumcarpaticu  ATTCG--TAACAAT---CCTCTTATTTACGAT----AACAT-CTT-TTGG
Na.bicolor           ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT--TTG
Ne.laticoma8090      TTTCG-TAAACAAT---CTTCTTATTTACGATT---AAAAT-CTT-TTGG
Hip.sp.7446          ATTCG-TAAACAAT---CCTCTTATTTACGATT---AAGAT-CTT-TTGG
No.recurvata         ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-CTGG
Na.sp.7607           TTTCA-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Na.sp.7608           ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Par.weberbaueri      ATTCG-TAAACAAT---CCTCTTATTTACGATT---AAAAT-CTT-TTGG
Sten.variegatum      ATTCG-TAAACAAT---CCTCTTATTTACGATT---AAAAT-CTT-TTGG
Str.watermeyeri      ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Ung.tadshicorum      ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Va.parviflorum       ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Phae.dubia           ATTCG-TAAACAAT---CCTTTTATTTACGATT---AAAAT-CTT-TTGG
Urc.peruviana        ATTCG-TAAACAAT---CCTTTTATTTACGATT---AAAAT-CTT-TTGG
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                    401                                                 450
Rho.bifida          ATTCG-TAAACAAT---CCTCTTATTTACGATT---AAGAT-CTT-TTGG
Sc.multiflorus      ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Sc.membranaceus7246 ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Ze.candida          ATTCG-TAAACAAT---CCTCTTATTTACGATT---AAGAT-CTT-TTGG
Str.salteri7245     ATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TTGG
Ster.lutea          ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Pan.canariense      ATTCG-TAA-CAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Va.parviflora       ATTCG-TAACCAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Sc.multiflorus7919  ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
Sc.membranaceus7917 ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TTGG
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                        451                                                 500
Ac.valentina            AACTT----TT-CTTGAACG--AACACATTT-CTACGG-AAAAATAGAA-
Ac.fabrei               AACTT----TT-CTTGAACG--AACACATTT-CTACGG-AAAAATAGAA-
Ac.nicaeensis           AACTT----TT-CTTGAACG--AACACATT--CTACGG-AAAAATAGAA-
Ac.longifolia           AACTT----TT-CTTGAACG--AACACATTT-CTACGG-AAAAATAGAA-
Ac.rosea                AACTT----T--CTTGAACG--AACACATTT-CTACGG-AAAA-TAGAA-
Ac.tingitana            AACTC----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
Ac.trichophylla         ACCTC----T---CTGGACG--AAC-CATTT-CTATGG-AAAA-TAGA--
Ac.autumnalis           AACTC----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
Bo.disticha7172         AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Br.striata              AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cro.flava7256           AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Ama.belladonna          AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Br.radulosanata7629     AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Br.gregaria7157         AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Ama.belladonnaRHA28     AACTT----TT-CTTGAGCG--AACACATTT-CTATGGGAAAAATAGAA-
Ca.lutea                AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cl.nobilisRC6b          AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Chl.fragrans            AACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
Cl.miniata              AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cl.caulescens8092       AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cl.miniataRC14          AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cl.gardenii8093         AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cl.cyrtanthiflor8094    AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cl.miniata8095          AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cr.acauleRC38           AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cr.acauleRC106          AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cr.paludosumRC41        AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cr.buphanoidesRC102     AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cr.campanulatum7167     AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cr.carolschmidRC97      AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cr.euchrophyllumRC96    AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cr.foetidumRC98         AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cr.graminicola7630      AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cr.lineareRC99          AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cr.minimumRC37          AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cr.nearmacowaniRC100    AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cr.variabileRC44        AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cr.moorei               AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cr.moorei7921           AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cr.bulbispermumRC95     AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cr.lugardii7632         AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cr.macowanii7168        AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cr.buphanoides7631      AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cr.acaulglaucRC105      AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cy.elatus7636           AACTT----TTGCTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cy.herreiRC86           AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cy.breviflorusRC88      AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cy.mackeniiRC87         AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cy.montanus7638         AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Euch.grandiflora        AACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
Eucr.bicolor            AACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
Eur.amboinensis         AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Eus.darwinii            AACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
Cy.sanguineusRC94       AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
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                          451                                                 500
Cy.brachyscyphus7204 AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cy.elatus7198        AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cy.ochroleucus7639   AACTT----TT-CTTGAGCGT-AACACATTT-CTATCG-AAAAATAGGAA
Cy.elatusRC93        AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cy.eucallusRC79      AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cy.falcatus7637      AACTT----TT--TTGAGCG--AACACATTTCCTATGG-AAAAATAGAA-
Cy.loddigesianus7203 AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cy.smithiae7214      ATCTT----TTTCTTGGAGCG-AACACATTTTCTATGG-AAAAATAGAA-
Cy.herrei7194        AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cy.labiatus7212      AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cy.staadensis7316    AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Cy.obliquus7278      AACTT----TT--TTGAGCG--AGGACATTTTCTATGG-AAAAATAGAA-
Ge.namaquensisAMV635 AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Hae.crispus7260      AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Hae.roseus           AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Hae.albiflos7517     AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Gal.elwesii          AACTT----TT-TTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
Gal.ikariae          AACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
Gal.alpinus          AACTT----TT-CTTGAACG--GACACATTT-CTATGG-AAAAATAGAA-
Gal.cilicicus        AACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
Hae.crispus7252      AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Gal.woronowii        AACTT----TT-TTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
Gal.lagodechianus    AACTT----TT-CTTGAACG--AACACATTT-TTATGG-AAAAATAGAA-
Gal.nivalis          AACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
Gal.plivatus         AACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
Gal.reginaeolgae     AACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
Gal.regianeolgae     GACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
Gal.fosteri          AACTT----TT-TTTGGACC--AACACATTT-CTATGG-AAAAATAGAA-
Gal.transcaucasicus  AACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGA--
Hae.montanus7163     AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Hae.coccineusAMV632  AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Ne.bowdenii          AACTT----TT-TTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Hym.caribaea         AACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
Hip.stylosum         AACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
Lyc.traubii          AACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
Na.tazetta           AACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
Lap.martinezii       AACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
Leu.aestivum         AACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
Leu.aestivumpulchel  AACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
Leu.autumnale        AACTC----TT-CTTGAACG--AACACATT--CTATGG--AAAATAGA--
Leu.vernumcarpaticu  AACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
Na.bicolor           GACTT----TT-CTTGACCG--AACACATTT-CTATGG-AAAAATAGAA-
Ne.laticoma8090      AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Hip.sp.7446          AACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
No.recurvata         AACCT----TT-CTTGAGCG--AACACATTT-CTATGA-AAAAATAGAA-
Na.sp.7607           AACTT----TT-CTTGAACG--AACACACTT-CTATGG-AAAAATAGAA-
Na.sp.7608           AACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
Par.weberbaueri      AACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
Sten.variegatum      AACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
Str.watermeyeri      AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Ung.tadshicorum      AACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
Va.parviflorum       AACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
Phae.dubia           AACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
Urc.peruviana        AACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
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                        451                                                 500
Rho.bifida              AACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
Sc.multiflorus          AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Sc.membranaceus7246     AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Ze.candida              AACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
Str.salteri7245         AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Ster.lutea              AACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
Pan.canariense          AACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATGGAA-
Va.parviflora           AACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGAA-
Sc.multiflorus7919      AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
Sc.membranaceus7917     AACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGAA-
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                        501                                                 550
Ac.valentina            -CAT-TTTCAAATAG--AAAAATTTATAGTA-ATTTGTC------GTAAC
Ac.fabrei               -CAT-TTTCAAATAG--AAAAATTTATAGTA-ATTTGTC------GTAAC
Ac.nicaeensis           -CAT-TTTCAAATAG--AAAAATTTATAGTA-ATTTGTC------GTAAC
Ac.longifolia           -CAT-TTTCAAATAG--AAAAATTTATAGTA-ATTTGTC------CTAAC
Ac.rosea                -CAT-TTTCAAATAG--AAAAATTTATAGTA-ATTCGTC------GTAAC
Ac.tingitana            -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATTTGTC------GTAAC
Ac.trichophylla         -CAT-CTTCAA-TAG--AAAA-TTGATAGTA-ATTTGTC------GTAAG
Ac.autumnalis           -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATTTGTC------GTAAC
Bo.disticha7172         -CAT-CTTAAAATAG--AAAATTTTATAGTA-ATATGTC------GTAAC
Br.striata              -CAT-CTTCAAATAG--AAAATTTTATAATA-ATATGTC------GTAAC
Cro.flava7256           -CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTAAC
Ama.belladonna          -CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTAAC
Br.radulosanata7629     -CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTAAC
Br.gregaria7157         -CAT-CTTCAAATAG--AAAATTTTATAATA-ATATGTC------GTAAC
Ama.belladonnaRHA28     -CAT-CTTCAAATAGG-AAAATTTTATAGTA-ATATGCC------GTAAC
Ca.lutea                -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
Cl.nobilisRC6b          -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGCC------GTAAC
Chl.fragrans            -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
Cl.miniata              -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
Cl.caulescens8092       -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
Cl.miniataRC14          -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
Cl.gardenii8093         -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
Cl.cyrtanthiflor8094    -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGCC------GTAAC
Cl.miniata8095          -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
Cr.acauleRC38           -CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTAAC
Cr.acauleRC106          -CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTAAC
Cr.paludosumRC41        -CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTAAC
Cr.buphanoidesRC102     -CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTAAC
Cr.campanulatum7167     -CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTAAC
Cr.carolschmidRC97      -CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTAAC
Cr.euchrophyllumRC96    -CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTAAC
Cr.foetidumRC98         -CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTAAC
Cr.graminicola7630      -CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTAAC
Cr.lineareRC99          -CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTAAC
Cr.minimumRC37          -CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTAAC
Cr.nearmacowaniRC100    -CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTAAC
Cr.variabileRC44        -CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTAAC
Cr.moorei               -CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTAAC
Cr.moorei7921           -CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTAAC
Cr.bulbispermumRC95     -CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTAAC
Cr.lugardii7632         -CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTAAC
Cr.macowanii7168        -CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTAAC
Cr.buphanoides7631      -CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTAAC
Cr.acaulglaucRC105      -CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTAAC
Cy.elatus7636           -CAT-CTTAAAATAG--AAAAATTTATAGTA-ATATGTCC-----GTAAC
Cy.herreiRC86           -CAT-CTTAAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
Cy.breviflorusRC88      -CAT-CTTAAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
Cy.mackeniiRC87         -CAT-CTTAAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
Cy.montanus7638         -CAT-CTTAAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
Euch.grandiflora        -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
Eucr.bicolor            -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
Eur.amboinensis         -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
Eus.darwinii            -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
Cy.sanguineusRC94       -CAT-CTTAAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
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                        501                                                 550
Cy.brachyscyphus7204 -CAT-CTTAAAATAG--AAAAATTTATAGTA-ATATGTC-----------
Cy.elatus7198        -C-T-CTTAAAATAG--AAAAATTTATAGTACATATGTC------GTAAC
Cy.ochroleucus7639   CCAT-CTTAAAATAA---AAAATTTATAGCA-ATATGTC------GTAAC
Cy.elatusRC93        -CAT-CTTAAAATAG--AAAAATTTATAGTA-ATATGCG-------TAAC
Cy.eucallusRC79      -CAT-CTTAAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
Cy.falcatus7637      -CATGCTTTAAATAG-AAAAATTTGATAGTA-ATA-CTC--------AAC
Cy.loddigesianus7203 -CAT-CTTAAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
Cy.smithiae7214      -CATGCTTAAAATAGG-AAAAATTTATAATA-ATATGTCC----GCTAAC
Cy.herrei7194        -CAT-CTTAAAATAG--AAAAATTTATAGTAATACTGTC------GTAAC
Cy.labiatus7212      -CAT-CTTAAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
Cy.staadensis7316    -CAT-CTTAAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
Cy.obliquus7278      -C-TTCTTAAAATAG-AAAAATTGTATAGTA-ATAAGGC------GTAGC
Ge.namaquensisAMV635 -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTCG-----CTAAC
Hae.crispus7260      -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
Hae.roseus           -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
Hae.albiflos7517     -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
Gal.elwesii          -CAT-CTTCAAATAG--AAAAATTAATAGTA-ATTTGTC------GTAAC
Gal.ikariae          -CAT-CTTCAAATAG--AAAAATTAATAGTA-ATTTGTC------GTAAC
Gal.alpinus          -CAT-CTTCAAATAG--AAAAATTAATAGTA-ATTTGTC------GTAAC
Gal.cilicicus        -CAT-TTTCAAATAG--AAAAATTAATAGTA-ATTTGTC------GTAAC
Hae.crispus7252      -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
Gal.woronowii        -CAT-CTTCAAATAG--AAAAATTAATAGTA-ATTTGTC------GTAAC
Gal.lagodechianus    -CAT-CTTCAAATAG--AAAAATTAATAGTA-ATTTGTC------GTAAC
Gal.nivalis          -CAT-CTTCAAATAG--AAAAATTAATAGTA-ATTTGTC------GTAAC
Gal.plivatus         -CAT-CTTCAAATAG--AAAAATTAATAGTA-ATTTGTC------GTAAC
Gal.reginaeolgae     -CAT-CTTCAAATAG--AAAAATTAATAGTA-ATTTGTC------GTAAC
Gal.regianeolgae     -CAT-CTTCAAATAG--AAAAATTAATAGTA-ATTTGTC------GTAAC
Gal.fosteri          -CAT-CTTCAAATAA--AAAAATTAATAGTA-ATTTGTC------GTAAC
Gal.transcaucasicus  -CAT-CTTCAAATAG--AAAAATTAATAGTA-ATTTGTC------GTAAC
Hae.montanus7163     -CAT-CTTAAAATAG--AAAATTTTATAGTA-ATATGTC------GTAAC
Hae.coccineusAMV632  -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
Ne.bowdenii          -CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTAAC
Hym.caribaea         -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
Hip.stylosum         -CAT-CTTCAAGTAG--AAAAATTTATAGTA-ATAGGTC------GTAAC
Lyc.traubii          -CAT-CCGCAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
Na.tazetta           -CAT-CTTCAAATAG--AAAATTTTATAGTA-ATTTGTC------GTAAC
Lap.martinezii       -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATTTGTC------G-AAC
Leu.aestivum         -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATTTGTC------GTAAC
Leu.aestivumpulchel  -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATTTGTC------GTAAC
Leu.autumnale        -CAT-CTTCAA-TAG---AAAATTTATAGTA-ATT-GTC------GTAAC
Leu.vernumcarpaticu  -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATTTGTC------GTAAC
Na.bicolor           -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATTTGTC------GTAAC
Ne.laticoma8090      -CAT-TTTCAAATAG--GAAATTTTATAGTA-ATATATC------GTAAC
Hip.sp.7446          -CAT-CTTCAAGTAG--AAAAATTTATAGTA-ATAGGTC------GTAAC
No.recurvata         -CAT------------------TTTGTAGTA-GTATGTC------GTAAC
Na.sp.7607           -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATTTGTC------ATAAC
Na.sp.7608           -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATTTGTC------GTAAC
Par.weberbaueri      -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
Sten.variegatum      -CAT-CTTCAAATAG--AAAAAATTATAGTA-ATATGTC------GTAAC
Str.watermeyeri      -CAT-CTTCAAATAG--GAAATTTTATAGTA-ATATGTC------GTAAC
Ung.tadshicorum      -CAT-CTGCAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
Va.parviflorum       -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATTTGTC------GTAAC
Phae.dubia           -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
Urc.peruviana        -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
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                     501                                                 550
Rho.bifida           -CAT-CTTCAAGTAG--AAAAATTTATAGTA-GTAGGTC------GTAAC
Sc.multiflorus       -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
Sc.membranaceus7246  -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
Ze.candida           -CAT-CTTCAAGTAG--AAAAATTTATAGTA-ATAGGTC------GTAAC
Str.salteri7245      -CAT-CTTAAAATAG--GAAATTTTATAGTA-ATATGTC------GTAAC
Ster.lutea           -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATTTGTC------GTAAC
Pan.canariense       -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATTTGCT------GGAAC
Va.parviflora        -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATTTGTC------GTAAC
Sc.multiflorus7919   -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTAAC
Sc.membranaceus7917  -CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GCCAC
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                        551                                                 600
Ac.valentina            --GATTTTCATAG--GACCCTCTGGTT-CTT-CAA-AGATCCTTT--CAT
Ac.fabrei               --GATTTTCATAG--GATCTTTGGGTT-CTT-CAA-AGATCCTTT--CAT
Ac.nicaeensis           --GATTTTCATAG--GATCTTTTGGTT-CTT-CAA-AGATCCTTT--CAT
Ac.longifolia           --GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--CGT
Ac.rosea                --GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--CGT
Ac.tingitana            --GATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Ac.trichophylla         --GATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Ac.autumnalis           --GATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Bo.disticha7172         --GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Br.striata              --GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATACTTT--CAT
Cro.flava7256           --GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Ama.belladonna          --GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Br.radulosanata7629     --GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTTT-CAT
Br.gregaria7157         --GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Ama.belladonnaRHA28     --GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Ca.lutea                --GATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Cl.nobilisRC6b          --AATTTTCATAG--GACCTTATGGTT-CTT-CAA-GGATCCTTT--TAT
Chl.fragrans            --GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--CAT
Cl.miniata              --AATTTTCATAG--GACCTTATGGTT-CTT-CAA-GGATCCTTT--TAT
Cl.caulescens8092       --AATTTTCATAG--GACCTTATGGTT-CTT-CAA-GGATCCTTT--TAT
Cl.miniataRC14          --AATTTTCATAG--GACCTTATGGTT-CTT-CAA-GGATCCTTT--TAT
Cl.gardenii8093         --AATTTTCATAG--GACCTTATGGTT-CTT-CAA-GGATCCTTT--TAT
Cl.cyrtanthiflor8094    --AATTTTCATAG--GACCTTATGGTT-CTT-CAA-GGATCCTTT--TAT
Cl.miniata8095          --AATTTTCATAG--GACCTTATGGTT-CTT-CAA-GGATCCTTT--TAT
Cr.acauleRC38           --GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Cr.acauleRC106          --GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Cr.paludosumRC41        --GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Cr.buphanoidesRC102     --GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Cr.campanulatum7167     --GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Cr.carolschmidRC97      --GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Cr.euchrophyllumRC96    --GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Cr.foetidumRC98         --GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Cr.graminicola7630      --GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Cr.lineareRC99          --GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Cr.minimumRC37          --GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Cr.nearmacowaniRC100    --GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Cr.variabileRC44        --GATTTTAATAG--AACCTTATGGTT-TTT-CAA-AGATCCTTT--CAT
Cr.moorei               --GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Cr.moorei7921           --GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Cr.bulbispermumRC95     --GATTTTCATAG--AACCTTATGGTT-CTT-CAA-GGATCCTTT--CAT
Cr.lugardii7632         --GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Cr.macowanii7168        --GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Cr.buphanoides7631      --GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Cr.acaulglaucRC105      C-GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Cy.elatus7636           --GATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Cy.herreiRC86           --GATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Cy.breviflorusRC88      --GATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Cy.mackeniiRC87         --GATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Cy.montanus7638         --GATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Euch.grandiflora        --GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--CAT
Eucr.bicolor            --GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--CAT
Eur.amboinensis         --GATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Eus.darwinii            --GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--CAT
Cy.sanguineusRC94       --GATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
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                          551                                                600
Cy.brachyscyphus7204 ------------G-----------------------------------
Cy.elatus7198        --GATTTTCCTAG--ACCCTTATGGTT-CTTTCAA-AGATCCTTTTCCAT
Cy.ochroleucus7639   G-GATTTTCATAG--GACCTTATGGATTCTT-CAA-AGATCCTTTC-CAT
Cy.elatusRC93        --GATTTTCATAG--GACCTTATGGT-----------------------
Cy.eucallusRC79      --GATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCCTTT-CAT
Cy.falcatus7637      --GATTTTCATAG--GACCTTATGGTT-CTTACAA-AATACCTTT--CAT
Cy.loddigesianus7203 --GATTTTCACTAG-GACCTTATGGTT-ACTTCAA-AGATCCTTT--CAT
Cy.smithiae7214      -GAATTTTACATAG-GACCTTATGGTTGCTTTCAAGAGATACCTTTGCAT
Cy.herrei7194        --GATTTTCATCG-GCACCTTATGGTT-CTTGCAA-AGATCCTTT--CAT
Cy.labiatus7212      --GATTTTCACTAG-GACCTTATGGTTTCTT-CAA-AGATCCTTT--CAT
Cy.staadensis7316    C-GATTTTCATAG--GACCTTATGGTG-CTT-CAA-AGATCCTTTA-CAT
Cy.obliquus7278      --GATTTTGATACG-TTCCTCATGGCT-CTTACAGAGGA-----------
Ge.namaquensisAMV635 --AATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--TAT
Hae.crispus7260      --AATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--TAT
Hae.roseus           --AATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--TAT
Hae.albiflos7517     --AATTTTCATACG-GACCTTATGGTT-CTT-CAA-AGATCCTTT--TAT
Gal.elwesii          --GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCCTT--CAT
Gal.ikariae          --GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--CAT
Gal.alpinus          --GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--CAT
Gal.cilicicus        --GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGGTCCTTT--CAT
Hae.crispus7252      --AATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--TAT
Gal.woronowii        --GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--CAT
Gal.lagodechianus    --GATTTTCATAG--GACCCTCTGGTT-CTT-CAA-AGATCCTTT--CAT
Gal.nivalis          --GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--CAT
Gal.plivatus         --GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--CAT
Gal.reginaeolgae     --GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--CAT
Gal.regianeolgae     --GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--CAT
Gal.fosteri          --GATTTTCATAG--GACCTTCTGGTT-CCT-CAA-AGATCCTTT--CAT
Gal.transcaucasicus  --GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--CAT
Hae.montanus7163     --GATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTTA-CAT
Hae.coccineusAMV632  --AATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--TAT
Ne.bowdenii          --GATTTTCACAG--AACCGTATGGTT-CTT-CAA-AGATCCTTT--CAT
Hym.caribaea         --GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--CAT
Hip.stylosum         --GATTTTCATAG--GGCCTTCCGGTT-CTT-CAA-AGATCCTTT--CAT
Lyc.traubii          --GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--CAT
Na.tazetta           --GATTTTCATAG--GACCTCCTGGTT-CTT-CAA-AGATCCTTT--CAT
Lap.martinezii       --GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--CAT
Leu.aestivum         --GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--CAT
Leu.aestivumpulchel  --GATTTTCATAG--ACCCTTCTGGTT-CTT-CAA-AGATCCTTT--CAT
Leu.autumnale        --GATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Leu.vernumcarpaticu  --GATTTTCATAG--ACCTTTCTGGTT-CTT-CAA-AGATCCTTT--CAT
Na.bicolor           --GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--CAT
Ne.laticoma8090      --GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Hip.sp.7446          -GATTTTCCATAG--GGCCTTCTGGTTCCTTCCAA-AGATCCTTT--CAT
No.recurvata         --TATTTTCATAG--AACCCTATGGTT-CTG-CAA-AGATCCTTT--CAT
Na.sp.7607           -GATTTTGCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--CAT
Na.sp.7608           --GATTTTCATAGG-GACCTTCTGGTT-CTT-CAA-AGATCCTTT--CAT
Par.weberbaueri      --GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--CAT
Sten.variegatum      --GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--CAT
Str.watermeyeri      --GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Ung.tadshicorum      --GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--CAT
Va.parviflorum       --GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--CAT
Phae.dubia           --GATTTTCATAG--GGCCTTCTGGTT-CTT-CAA-AGATCCTTT--CAT
Urc.peruviana        --GATTTTCATAG--GGCCTTCTGGTT-CTT-CAA-AGATCCTTT--CAT
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                      551                                                 600
Rho.bifida            --GATTTTCATAG--GGCCTTCTGGTT-CTT-CAA-AGATCCTTT--CAT
Sc.multiflorus        --AATTTTCATAG--GACCTTATGGCT-CTT-CAA-GGATCCTTT--TAT
Sc.membranaceus7246   --AATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--TAT
Ze.candida            --GATTTTCATAG--GGCCTTCTGGTT-CTT-CAA-AGATCCTTT--CAT
Str.salteri7245       --GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--CAT
Ster.lutea            --GATTTTCATAG--GACCCTCTGGTT-CTT-CAA-AGATCCTTT--CAT
Pan.canariense        --GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--CAT
Va.parviflora         --GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--CAT
Sc.multiflorus7919    --AATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--TAT
Sc.membranaceus7917   --AATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--TAT
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                        601                                                 650
Ac.valentina            G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Ac.fabrei               G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Ac.nicaeensis           G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Ac.longifolia           G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Ac.rosea                G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Ac.tingitana            G--CATTATGTT-CGATAT-CAAGGA-AAAGCCAT----TCTTG-----C
Ac.trichophylla         G--CATTATGTT-CGATAT-CAAGGA-AAAGCCAT----TCTTG-----C
Ac.autumnalis           G--CATTATGTT-CGACAT-CAAGGA-AAAGCCAT----TCTTG-----C
Bo.disticha7172         G--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG-----T
Br.striata              G--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG-----T
Cro.flava7256           G--CATTATGTT-CGATAT-CGGGGA-AAAGTAAT----TCTTG-----T
Ama.belladonna          G--CATTATGTT-CGATAT-CGAGGA-AAAGCAAT----TCTTG-----T
Br.radulosanata7629     GA-CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG-----T
Br.gregaria7157         G--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG-----T
Ama.belladonnaRHA28     GG-GATTATGTT-CGATAT-CGAGGA-AAAGCAAT----TCTTG-----T
Ca.lutea                G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Cl.nobilisRC6b          G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Chl.fragrans            G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Cl.miniata              G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Cl.caulescens8092       G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Cl.miniataRC14          G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Cl.gardenii8093         G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Cl.cyrtanthiflor8094    G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Cl.miniata8095          G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Cr.acauleRC38           G--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG-----T
Cr.acauleRC106          G--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG-----T
Cr.paludosumRC41        G--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG-----T
Cr.buphanoidesRC102     G--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG-----T
Cr.campanulatum7167     G--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG-----T
Cr.carolschmidRC97      G--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG-----T
Cr.euchrophyllumRC96    G--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG-----T
Cr.foetidumRC98         G--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG-----T
Cr.graminicola7630      G--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG-----T
Cr.lineareRC99          G--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG-----T
Cr.minimumRC37          G--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG-----T
Cr.nearmacowaniRC100    G--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG-----T
Cr.variabileRC44        G--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG-----T
Cr.moorei               G--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG-----T
Cr.moorei7921           G--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG-----T
Cr.bulbispermumRC95     G--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG-----T
Cr.lugardii7632         G--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG-----T
Cr.macowanii7168        G--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG-----T
Cr.buphanoides7631      G--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG-----T
Cr.acaulglaucRC105      G--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG-----T
Cy.elatus7636           G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Cy.herreiRC86           G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Cy.breviflorusRC88      G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Cy.mackeniiRC87         G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Cy.montanus7638         G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Euch.grandiflora        G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Eucr.bicolor            G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Eur.amboinensis         G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Eus.darwinii            G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Cy.sanguineusRC94       G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
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                        601                                                650
Cy.brachyscyphus7204 ----------------------------AA--------------------
Cy.elatus7198        GCACTTAATGTTACGATAT-CAAGGAAAAGGCAAT----TCTTG-----C
Cy.ochroleucus7639   GG-CATTATGTT-CGATAT-CAAGGGCAATACAGTCAAGTCTTG-----C
Cy.elatusRC93        --------------------------------------------------
Cy.eucallusRC79      G-CATTTATGTTCCGATAT-CAAGGAAAATGCAAT----TC--------C
Cy.falcatus7637      G--CAT-ATGTT--GAT-T-CAAGGA-AAAGCAAT----TCTTG-----C
Cy.loddigesianus7203 G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Cy.smithiae7214      G--CATTATGTTGCGATAT-CAAGGA-AAAGCAAT--TCCCTAG-----C
Cy.herrei7194        G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Cy.labiatus7212      CG-CATTATGTC--GATAT-CAAGGA-AAAGCAATT--CTTGCG-----G
Cy.staadensis7316    G--CATTATGTT-CGATAT-CAAGGA-AAACGCAAT---TCTTG-----C
Cy.obliquus7278      --------------------------------------------------
Ge.namaquensisAMV635 G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Hae.crispus7260      G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Hae.roseus           G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Hae.albiflos7517     G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Gal.elwesii          G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Gal.ikariae          G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Gal.alpinus          G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Gal.cilicicus        G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Hae.crispus7252      G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Gal.woronowii        G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Gal.lagodechianus    G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Gal.nivalis          G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Gal.plivatus         G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Gal.reginaeolgae     G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Gal.regianeolgae     G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Gal.fosteri          G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Gal.transcaucasicus  G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Hae.montanus7163     G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Hae.coccineusAMV632  G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Ne.bowdenii          G--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG-----T
Hym.caribaea         G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Hip.stylosum         G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Lyc.traubii          G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Na.tazetta           G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Lap.martinezii       G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Leu.aestivum         G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Leu.aestivumpulchel  G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Leu.autumnale        G--CATTATGTT-CGACAT-CAAGGA-AAAGCCAT----TCTTG-----C
Leu.vernumcarpaticu  G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Na.bicolor           G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Ne.laticoma8090      G--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG-----T
Hip.sp.7446          G--CATTATGTT-CGATATCCAAGGA-AAAGCAATT---CCTTC-----T
No.recurvata         G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Na.sp.7607           G--CATTATGTTACGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Na.sp.7608           G--CATTATGTT-CGATAT-CA-GGA-AAAGCAAT----TCTTG-----C
Par.weberbaueri      G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Sten.variegatum      G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Str.watermeyeri      G--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG-----T
Ung.tadshicorum      G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Va.parviflorum       G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Phae.dubia           G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Urc.peruviana        G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
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                     601                                                650
Rho.bifida           G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Sc.multiflorus       G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Sc.membranaceus7246  G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Ze.candida           G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Str.salteri7245      G--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG-----T
Ster.lutea           G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Pan.canariense       G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TGTTG-----G
Va.parviflora        G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Sc.multiflorus7919   G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG-----C
Sc.membranaceus7917  G--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCT-G-----C
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                          651                                                 700
Ac.valentina              TTCAAAAGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Ac.fabrei                 TTCAAAAGGG---ACTCATCTTGTG-ATGACGAAA--TGG-AAAT-----
Ac.nicaeensis             TTCAAAAGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Ac.longifolia             TTCAAAAGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Ac.rosea                  TTCAAAAGGG---ACTCATCTTCTT-ATGACGAAA--TGG-AAAT-----
Ac.tingitana              TTCAAAAGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Ac.trichophylla           TTCAAAAGGA---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Ac.autumnalis             TTCAAAAGGG---ACTCATCTTTTG-ATGACGAAA--TGG-AAAT-----
Bo.disticha7172           TTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT-----
Br.striata                TTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT-----
Cro.flava7256             TTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT-----
Ama.belladonna            TTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT-----
Br.radulosanata7629       TTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAAA-TGGTAAAT-----
Br.gregaria7157           TTCAA--GGG---ACTCATCTTCTG-ATGAAGAAAA-TGG-AAAT-----
Ama.belladonnaRHA28       TTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGGTAAAT-----
Ca.lutea                  TTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Cl.nobilisRC6b            TTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Chl.fragrans              TTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Cl.miniata                TTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Cl.caulescens8092         TTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Cl.miniataRC14            TTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Cl.gardenii8093           TTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Cl.cyrtanthiflor8094      TTTAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Cl.miniata8095            TTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Cr.acauleRC38             TTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGGAAAAT-----
Cr.acauleRC106            TTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT-----
Cr.paludosumRC41          TTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT-----
Cr.buphanoidesRC102       TTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT-----
Cr.campanulatum7167       TTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT-----
Cr.carolschmidRC97        TTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT-----
Cr.euchrophyllumRC96      TTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT-----
Cr.foetidumRC98           TTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT-----
Cr.graminicola7630        TTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT-----
Cr.lineareRC99            TTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT-----
Cr.minimumRC37            TTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT-----
Cr.nearmacowaniRC100      TTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT-----
Cr.variabileRC44          TTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT-----
Cr.moorei                 TTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT-----
Cr.moorei7921             TTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT-----
Cr.bulbispermumRC95       TTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT-----
Cr.lugardii7632           TTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT-----
Cr.macowanii7168          TTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT-----
Cr.buphanoides7631        TTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT-----
Cr.acaulglaucRC105        TTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT-----
Cy.elatus7636             TTCAAAGGGG---ACTCGTCTTCTG-ATGACGAAA--TGG-AAAT-----
Cy.herreiRC86             TTCAAAGGGG---ACTCGTCTTCTG-ATGACGAAA--TGGGAAAT-----
Cy.breviflorusRC88        TTCAAAGGGG---ACTCGTCTTCTG-ATGACGAAA--TGGGAAAT-----
Cy.mackeniiRC87           TTCAAAGGGG---ACTCGTCTTCTG-ATGACGAAA--TGG-AAAT-----
Cy.montanus7638           TTCAAAGGGG---ACTCGTCTTCTGTATGACGAAA--TGG-AAAT-----
Euch.grandiflora          TTCAAAGGGG---ACTCATTTTCTG-ATGACGAAA--TGG-AAAT-----
Eucr.bicolor              TTCAAAGGGG---ACTCATTTTCTG-ATGACGAAA--TGG-AAAT-----
Eur.amboinensis           TTCAAAGGGG---ACTCGTCTTCTG-ATGACGAAA--TGG-AAAT-----
Eus.darwinii              TTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Cy.sanguineusRC94         TTCAAAGGGG---ACTCGTCTTCTGTATGACGAAA--TGGGAAAT-----
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                        651                                                 700
Cy.brachyscyphus7204    --------------------------------------------------
Cy.elatus7198           TTCAAAGGGG---ACTCGTCTTCTG-ATGACGAAA--TGGTAAAT-----
Cy.ochroleucus7639      TTCAAA--GGA--ACTCGTCTTCTG-ATGACGAAA--TGGCAAAT-----
Cy.elatusRC93           --------------------------------------------------
Cy.eucallusRC79         --------------------------------------------------
Cy.falcatus7637         TTCAAAGGGG---ACTCGTCTT-TG-ATGACGAAA--TGG-AAAT-----
Cy.loddigesianus7203    TTCAAAGGGG---ACTCGTCTTCTGATGCACGAAA--TGGTAAAT-----
Cy.smithiae7214         TTACATGGGG---ACTCGTCTTCTG-ATGACGAAA--TGG-AAAT-----
Cy.herrei7194           TTCAAAGGGG---ACTCGTCTTCTG-ATGACGAAA--TGGGAAAT-----
Cy.labiatus7212         TTCAAAGGGGGG-ACTCGTCTTCTGAATGACGAAAA-TGGGAAAT-----
Cy.staadensis7316       TTCAAAGGGG---ACTCGTCTTCTG-CTGACGAAAA-TGAGAAAT-----
Cy.obliquus7278         --------------------------------------------------
Ge.namaquensisAMV635    TTCAAAGGGG---ACTCATCTTCTGATGCACGAAA--TGGTAAAT-----
Hae.crispus7260         TTCAAGGGGG---ACTGCATCTTCTGATGTACGAA--TGG--AAT-----
Hae.roseus              TTCAAAGGGG---ACTCATCTTTTG-ATGACGAAA--TGG-AAAT-----
Hae.albiflos7517        TTCAAAGGGG---ACTCATCTTTTGTATGACGAAA--TGG-AAAT-----
Gal.elwesii             TTCAAAAGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Gal.ikariae             TTCAAAAGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Gal.alpinus             TTCAAAAGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Gal.cilicicus           TTCAAAAGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Hae.crispus7252         TTCAAGGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Gal.woronowii           TTCAAAAGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Gal.lagodechianus       TTCAAAAGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Gal.nivalis             TTCAAAAGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Gal.plivatus            TTCAAAAGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Gal.reginaeolgae        TTCAAAAGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Gal.regianeolgae        TTCAAAAGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Gal.fosteri             TTCAAAAGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Gal.transcaucasicus     TTCAAAAGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Hae.montanus7163        TTCAACAGGGG--ACTCCATCTTCTGATGAAGGAAA-TGG-AAAT-----
Hae.coccineusAMV632     TTCAAGGGGG---ACTCATCTTCTGATGGACGAAA--TGGGAAAT-----
Ne.bowdenii             TTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT-----
Hym.caribaea            TTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Hip.stylosum            TTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Lyc.traubii             TTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Na.tazetta              TTCAAAGGGT---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Lap.martinezii          TTCAAAGGGG---ACTAATCTTCTG-ATGACGAAA--TGG-AAAT-----
Leu.aestivum            TTCAAAAGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Leu.aestivumpulchel     TTCAAAAGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Leu.autumnale           TTCAAAAGGG---ACTCATCTTTTG-ATGACGAAA--TGG-AAAT-----
Leu.vernumcarpaticu     TTCAAAAGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Na.bicolor              TTCAAAGGGT---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Ne.laticoma8090         TTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT-----
Hip.sp.7446             TTCAAAGGGG---ACTCATCTTCTG-A-GACGAAA--TGG-AAGT-----
No.recurvata            TTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT-----
Na.sp.7607              TTCAAAGGGT---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Na.sp.7608              TTCAAAGGGT---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Par.weberbaueri         TTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Sten.variegatum         TTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Str.watermeyeri         TTCAAAGGGG---ACTTATCTTCTG-ATGAAGAAA--TGG-AAAT-----
Ung.tadshicorum         TTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Va.parviflorum          TTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Phae.dubia              TTCAAAGGGG---ACTCATTTTCTG-ATGACGAAA--TGG-AAAT-----
Urc.peruviana           TTCAAAGGGG---ACTCATTTTCTG-ATGACGAAA--TGG-AAAT-----
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                      651                                                 700
Rho.bifida            TTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Sc.multiflorus        TTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Sc.membranaceus7246   TTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Ze.candida            TTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Str.salteri7245       TTCAAAGGGG---ACTTATCTTCTG-ATGAAGAAA--TGG-AAAT-----
Ster.lutea            TTCAAAGGGT---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Pan.canariense        TTCAAAGGGT---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Va.parviflora         TTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
Sc.multiflorus7919    TTCAAAGGGG---ACTCATCTTCTG-ATGGACGAAA-TGG-AAAT-----
Sc.membranaceus7917   TTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT-----
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                        701                                                 750
Ac.valentina            ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Ac.fabrei               ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Ac.nicaeensis           ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Ac.longifolia           ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTG
Ac.rosea                ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Ac.tingitana            ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Ac.trichophylla         ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Ac.autumnalis           ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Bo.disticha7172         ATCAT----TTTG---TCGATTTCTGGCA--ATA---------TTATTTT
Br.striata              ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cro.flava7256           ATCAT----TTTG---TCAATTTCTGGCAG-ATA---------TTATTTT
Ama.belladonna          ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TCATTTT
Br.radulosanata7629     ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Br.gregaria7157         ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Ama.belladonnaRHA28     ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TCATTTT
Ca.lutea                ATCAT----TTTG---TCAATTTCTGTCA--ATA---------TTATTTT
Cl.nobilisRC6b          ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Chl.fragrans            ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cl.miniata              ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cl.caulescens8092       ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cl.miniataRC14          ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cl.gardenii8093         ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cl.cyrtanthiflor8094    ATCTT----TTG-----CAATTTCTGGCA--ATA---------TTATTTT
Cl.miniata8095          ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cr.acauleRC38           ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cr.acauleRC106          ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cr.paludosumRC41        ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cr.buphanoidesRC102     ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cr.campanulatum7167     ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cr.carolschmidRC97      ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cr.euchrophyllumRC96    ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cr.foetidumRC98         ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cr.graminicola7630      ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cr.lineareRC99          ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cr.minimumRC37          ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cr.nearmacowaniRC100    ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cr.variabileRC44        ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cr.moorei               ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cr.moorei7921           ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cr.bulbispermumRC95     ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cr.lugardii7632         ATCTT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cr.macowanii7168        ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cr.buphanoides7631      ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cr.acaulglaucRC105      ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cy.elatus7636           ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cy.herreiRC86           ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cy.breviflorusRC88      ATCAT----TTTTGT-CCAATTTCTGGCA--ATA---------TTATTTT
Cy.mackeniiRC87         ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cy.montanus7638         ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Euch.grandiflora        ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Eucr.bicolor            ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Eur.amboinensis         ATCAT----TTTG---TCAATTTCTGTCA--ATA---------TTATTTT
Eus.darwinii            ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cy.sanguineusRC94       ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
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                        701                                                 750
Cy.brachyscyphus7204 --------------------------------TA---------TTATTTT
Cy.elatus7198        ATCAT----TTTG--TGCAATTTCTGGCA--ATA---------TTATTTT
Cy.ochroleucus7639   ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cy.elatusRC93        --------------------------------------------------
Cy.eucallusRC79      --------------------------------------------------
Cy.falcatus7637      ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cy.loddigesianus7203 ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cy.smithiae7214      ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cy.herrei7194        ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cy.labiatus7212      ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Cy.staadensis7316    ATCAT----TTTG----CAATTTCTGGCA--ATA---------TTATTTT
Cy.obliquus7278      --------------------------------------------------
Ge.namaquensisAMV635 ATCAT----TTTG----CAATTTCTGGCCA-ATA---------TTATTTT
Hae.crispus7260      ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Hae.roseus           ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Hae.albiflos7517     ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Gal.elwesii          ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Gal.ikariae          ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Gal.alpinus          ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Gal.cilicicus        ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Hae.crispus7252      ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Gal.woronowii        ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Gal.lagodechianus    ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Gal.nivalis          ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Gal.plivatus         ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Gal.reginaeolgae     ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Gal.regianeolgae     ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Gal.fosteri          ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Gal.transcaucasicus  ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Hae.montanus7163     ATCAT----TTTG---TCGATTTCTGGCA--ATA---------TTATTTT
Hae.coccineusAMV632  ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Ne.bowdenii          ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTCTTTT
Hym.caribaea         ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Hip.stylosum         ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Lyc.traubii          ATCAT----TTTT---TCAATTTCTGGCA--ATA---------TTATTTT
Na.tazetta           ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTG
Lap.martinezii       ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Leu.aestivum         ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Leu.aestivumpulchel  ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Leu.autumnale        ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Leu.vernumcarpaticu  ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Na.bicolor           ATCAT----TTTG---TCAATTTATGGCA--ATA---------TTATTTT
Ne.laticoma8090      ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Hip.sp.7446          ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
No.recurvata         ATCAT----TTTT---TCAATTTCTGGCA--ATA---------TTATTTT
Na.sp.7607           ATCAT----TTTG---TCAATTTCTGGCAGGATA---------TTATTTG
Na.sp.7608           ATCAT----TTTG---TCAATTTATGGCA--ATA---------TTATTTT
Par.weberbaueri      ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Sten.variegatum      ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Str.watermeyeri      ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TAATTTT
Ung.tadshicorum      ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Va.parviflorum       ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Phae.dubia           ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Urc.peruviana        ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
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                        701                                                 750
Rho.bifida              ATAAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Sc.multiflorus          ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Sc.membranaceus7246     ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Ze.candida              ATAAT----TTTG---TCAATCTCTGGCA--ATA---------TTATTTT
Str.salteri7245         ATCAT-----TTG---TCAA-TTCTGGCA--ATA---------TAATTTT
Ster.lutea              ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Pan.canariense          ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Va.parviflora           ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Sc.multiflorus7919      ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
Sc.membranaceus7917     ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATTTT
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                        751                                                 800
Ac.valentina            ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Ac.fabrei               ----AACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Ac.nicaeensis           ----AACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Ac.longifolia           ----AACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Ac.rosea                ----AACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Ac.tingitana            ----AACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Ac.trichophylla         ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TTCATATAAATCAA-
Ac.autumnalis           ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Bo.disticha7172         ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Br.striata              ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Cro.flava7256           ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Ama.belladonna          ----AACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Br.radulosanata7629     ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Br.gregaria7157         ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Ama.belladonnaRHA28     ----AACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Ca.lutea                ----AACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Cl.nobilisRC6b          ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Chl.fragrans            ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Cl.miniata              ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATAAA-
Cl.caulescens8092       ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATAAA-
Cl.miniataRC14          ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATAAA-
Cl.gardenii8093         ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATAAA-
Cl.cyrtanthiflor8094    ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Cl.miniata8095          ----CACTTTTGG--GCTCAACC-GT-ACAG-GA-TCCATATAAATAAA-
Cr.acauleRC38           ----CACTTTTGG--TCTCAACC-GTTACAG-GA-TCCATATAAATCAA-
Cr.acauleRC106          ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Cr.paludosumRC41        ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Cr.buphanoidesRC102     ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Cr.campanulatum7167     ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Cr.carolschmidRC97      ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Cr.euchrophyllumRC96    ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Cr.foetidumRC98         ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Cr.graminicola7630      ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Cr.lineareRC99          ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Cr.minimumRC37          ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Cr.nearmacowaniRC100    ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Cr.variabileRC44        ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Cr.moorei               ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Cr.moorei7921           ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Cr.bulbispermumRC95     ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Cr.lugardii7632         ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Cr.macowanii7168        ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Cr.buphanoides7631      ----CACTTTTGG--TCTCAACCCGCAACAGGGA-TCCATATAAATCAAA
Cr.acaulglaucRC105      ----CACTTTTGG--TCTCAACC-GTTACAG-GA-TCCATATAAATCAA-
Cy.elatus7636           ----CACTTTTGG--TCTCAACC-GTTACAG-GA-TCCATATAAATCAA-
Cy.herreiRC86           ----CACTTTTGG--------------------------------------
Cy.breviflorusRC88      T---CACTTTTGGG-TCTCCACCCG-----------------------
Cy.mackeniiRC87         ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Cy.montanus7638         ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Euch.grandiflora        ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Eucr.bicolor            ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Eur.amboinensis         ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Eus.darwinii            ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCCA-
Cy.sanguineusRC94       ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
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                          751                                                800
Cy.brachyscyphus7204 ----CACTTTAGG--TCTCAACCGGT-ACAGGCA-TCCATATAAATCAA-
Cy.elatus7198        ----CACTTTTGG--TCTCAACCGGT-ACAGGCA-TCCATATAAATCAA-
Cy.ochroleucus7639   ----CACTTTTGG--TCTCAACC-GT-ACAGGGA-TCCATATAAATCAA-
Cy.elatusRC93        --------------------------------------------------
Cy.eucallusRC79      --------------------------------------------------
Cy.falcatus7637      ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Cy.loddigesianus7203 ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Cy.smithiae7214      ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Cy.herrei7194        ----CACTTTTGG--TCTCAACC-GT-ACAGGCA-TCCATATAAAACAA-
Cy.labiatus7212      ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Cy.staadensis7316    ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCC-TATAAATCAA-
Cy.obliquus7278      --------------------------------------------------
Ge.namaquensisAMV635 ----CGCTTTTGG--TCTCAACC-GT-ACAG-GA-CCCATATAAATCAA-
Hae.crispus7260      ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Hae.roseus           ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-CCCATATAAATCAA-
Hae.albiflos7517     ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-CCCATATAAATCAA-
Gal.elwesii          ----AACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCAGATAAATCAA-
Gal.ikariae          ----AACTTTTGG--TCTCAACC-GT-ACAG-GA-TTCAGATAAATCAA-
Gal.alpinus          ----AACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCAGATAAATCAA-
Gal.cilicicus        ----AACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCAGATAAATCAA-
Hae.crispus7252      ----CACTTTTGG--TCTCAACC-GT-GCAG-GA-TCCATATAAATCAA-
Gal.woronowii        ----AACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCAGATAAATCAA-
Gal.lagodechianus    ----AACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCAGATAAATCAA-
Gal.nivalis          ----AACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCAGATAAATCAA-
Gal.plivatus         ----AACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCAGATAAATCAA-
Gal.reginaeolgae     ----AACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCAGATAAATCAA-
Gal.regianeolgae     ----AACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCAGATAAATCAA-
Gal.fosteri          ----AACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCAGATAAATCAA-
Gal.transcaucasicus  ----AACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCAGATAAATCAA-
Hae.montanus7163     ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Hae.coccineusAMV632  ----CACTTTTGG--TCTCAACC-GT-ACAGGGA-TCCATATAAATCAAT
Ne.bowdenii          ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Hym.caribaea         ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Hip.stylosum         ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Lyc.traubii          ----TACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Na.tazetta           ----AACTTTTGG--TCTCAGCC-GT-ACAG-GA-TCCATTTAAATCAA-
Lap.martinezii       ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCCA-
Leu.aestivum         ----AACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Leu.aestivumpulchel  ----AACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Leu.autumnale        ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Leu.vernumcarpaticu  ----AACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Na.bicolor           ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Ne.laticoma8090      ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Hip.sp.7446          ----CACTTTTGG---CTCAACC-GA-ACAG-GA-TCCATATAAATCAA-
No.recurvata         ----CATGTTTGG--TCGCAACC-GT-ACAG-GA-TCCATCTAAACCAA-
Na.sp.7607           G---AACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATAAA-
Na.sp.7608           ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Par.weberbaueri      ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TTCATATAAATCAA-
Sten.variegatum      ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TTCATATAAATCAA-
Str.watermeyeri      ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Ung.tadshicorum      ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Va.parviflorum       ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Phae.dubia           ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Urc.peruviana        ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
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                      751                                                 800
Rho.bifida            ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Sc.multiflorus        ----AACTTTTGG--TCTCAACC-GT-ACAG-GA-CCCATATAAATCAA-
Sc.membranaceus7246   ----AACTTTTGG--TCTCAACC-GT-ACAG-GA-CCCATATAAATCAA-
Ze.candida            ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Str.salteri7245       ----CACTTTTGG--TCTCAACCGGT-ACAG-GA-TCCATATAAATCAA-
Ster.lutea            ----AACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCGTATAAATCAA-
Pan.canariense        ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Va.parviflora         ----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCAA-
Sc.multiflorus7919    ----CACTTTTGG--TCTCAACC-GT-ACAGGGACTCCATATGAATCAA-
Sc.membranaceus7917   ----CACTTTTGG--TCTCAACC-G--ACAG-GA-CTCATATAAATCAA-
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                        801                                                 850
Ac.valentina            TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Ac.fabrei               TTATC-----AAACTA-TTCTTTT-TATTTTCT--GGG-TTATCTTTCAA
Ac.nicaeensis           TTATC-----TAACTA-TTCTTTC-TATTTTCT--GGG-TTATATTTCAA
Ac.longifolia           TTATC-----AAATTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Ac.rosea                TTATC-----AAATTA-TTCTTTC-GATTTTCT--GGG-TTATCTTTCAA
Ac.tingitana            TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Ac.trichophylla         TTATC-----AAACTA-TTCTTTC-TTTTTTCT--GGG-TTATCTTTCAA
Ac.autumnalis           TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Bo.disticha7172         CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Br.striata              CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Cro.flava7256           CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Ama.belladonna          CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Br.radulosanata7629     CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Br.gregaria7157         CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Ama.belladonnaRHA28     CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Ca.lutea                TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Cl.nobilisRC6b          TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Chl.fragrans            TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Cl.miniata              TTCTC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Cl.caulescens8092       TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Cl.miniataRC14          TTCTC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Cl.gardenii8093         TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Cl.cyrtanthiflor8094    TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Cl.miniata8095          TTCTC-----AAACTA-TTCTTTC-TATTTTCT--GGG-ATATCTTTCAA
Cr.acauleRC38           CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Cr.acauleRC106          CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Cr.paludosumRC41        CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Cr.buphanoidesRC102     CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Cr.campanulatum7167     CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Cr.carolschmidRC97      CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Cr.euchrophyllumRC96    CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Cr.foetidumRC98         CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Cr.graminicola7630      CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Cr.lineareRC99          CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Cr.minimumRC37          CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Cr.nearmacowaniRC100    CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Cr.variabileRC44        CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Cr.moorei               CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Cr.moorei7921           CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Cr.bulbispermumRC95     CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Cr.lugardii7632         CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Cr.macowanii7168        CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Cr.buphanoides7631      CTATCC----AAACTAATTCTTTC-TATTTTTCCGGGGGTTATCTTTCAA
Cr.acaulglaucRC105      CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGGATTATCTTTCAA
Cy.elatus7636           TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Cy.herreiRC86           --------------------------------------------------
Cy.breviflorusRC88      --------------------------------------------------
Cy.mackeniiRC87         TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Cy.montanus7638         TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Euch.grandiflora        TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Eucr.bicolor            TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Eur.amboinensis         TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Eus.darwinii            TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Cy.sanguineusRC94       TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
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                        801                                                 850
Cy.brachyscyphus7204 TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Cy.elatus7198        TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Cy.ochroleucus7639   TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Cy.elatusRC93        --------------------------------------------------
Cy.eucallusRC79      --------------------------------------------------
Cy.falcatus7637      TTATC-----AAACTA-TTCTTTC-TAGTTTCT--GGG-TTATCTTTCAA
Cy.loddigesianus7203 TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGGGTTATCTTTCAA
Cy.smithiae7214      TTATC-----AAACTA-TTCTTTC-GATTTTCT--GGG-TTATCTTTCAA
Cy.herrei7194        TTATC-----GGGCTA-TCTCTTC-TATTTTCT--GGGTGTATCTTTCAA
Cy.labiatus7212      TTATCA----GGACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Cy.staadensis7316    TTATCG----GGACTA-TTCTTTC-TATTTTCT--GGG-GTATCTTTCAA
Cy.obliquus7278      --------------------------------------------------
Ge.namaquensisAMV635 TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Hae.crispus7260      TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Hae.roseus           TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Hae.albiflos7517     TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Gal.elwesii          TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Gal.ikariae          TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Gal.alpinus          TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Gal.cilicicus        TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Hae.crispus7252      TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Gal.woronowii        TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Gal.lagodechianus    TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Gal.nivalis          TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Gal.plivatus         TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Gal.reginaeolgae     TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Gal.regianeolgae     TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Gal.fosteri          TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Gal.transcaucasicus  TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Hae.montanus7163     TTATC------GACTA-TTCTTTC-TATTTTCT--GG--TTATCTTTCAA
Hae.coccineusAMV632  TTATC------AACTA-TTCTTAC-TATTTCCA--GGG--TATCTTTCA-
Ne.bowdenii          CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Hym.caribaea         TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Hip.stylosum         TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Lyc.traubii          TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Na.tazetta           TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Lap.martinezii       TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATTTTTCAA
Leu.aestivum         TTATC-----AAACTA-TTCTTTT-TATTTTCT--GGG-TTATCTTTCAA
Leu.aestivumpulchel  TTATC-----AAACTA-TTCTTTT-TATTTTCT--GGG-TTATCTTTCAA
Leu.autumnale        TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Leu.vernumcarpaticu  TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTACCTTTCAA
Na.bicolor           TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Ne.laticoma8090      CTATC-----AAACTA-TTCCTTC-TATTTTCT--AGG-TTATCTTTCAA
Hip.sp.7446          TTATC-----AAACTATCTCTTTCGTAGGTTCT--GGG-TTATCTTTCAA
No.recurvata         TTATC-----AAACTA-TTCTTTT-TATTTTCT--GGG-TTATCTTTCAA
Na.sp.7607           TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Na.sp.7608           TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG--TATCTTTCAA
Par.weberbaueri      TTATC-----AAACTA-TTCTTTC-TATTTTTT--GGG-TTATCTTTCAA
Sten.variegatum      TTATC-----AAACTA-TTCTTTC-GATTTTCT--GGG-TTATCTTTCAA
Str.watermeyeri      CTATC-----AAACTA-TTCTTTC-TATTTTCT--AGG-TTATCTTTCAA
Ung.tadshicorum      TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Va.parviflorum       GTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Phae.dubia           TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Urc.peruviana        TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
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                      801                                                 850
Rho.bifida            TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Sc.multiflorus        TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Sc.membranaceus7246   TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Ze.candida            TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Str.salteri7245       CTATC-----AAACTA-TTCTTTC-TATTTTCT--AGG-TTATCTTTCAA
Ster.lutea            TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Pan.canariense        TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Va.parviflora         GTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
Sc.multiflorus7919    TT-----------------------------------------------
Sc.membranaceus7917   TTATC------AACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTCAA
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                        851                                                 900
Ac.valentina            G----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Ac.fabrei               G----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Ac.nicaeensis           G----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Ac.longifolia           G----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Ac.rosea                G----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Ac.tingitana            G----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Ac.trichophylla         G----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Ac.autumnalis           G----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Bo.disticha7172         G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Br.striata              G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cro.flava7256           G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Ama.belladonna          G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Br.radulosanata7629     G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Br.gregaria7157         G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Ama.belladonnaRHA28     G----TCTACTAATA-AATTCTTCGGCA-GTAGGG-AA-TCAAATGTTAG
Ca.lutea                G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cl.nobilisRC6b          G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Chl.fragrans            G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cl.miniata              G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cl.caulescens8092       G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cl.miniataRC14          G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cl.gardenii8093         G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cl.cyrtanthiflor8094    G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cl.miniata8095          G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cr.acauleRC38           G----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cr.acauleRC106          G----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cr.paludosumRC41        G----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cr.buphanoidesRC102     G----TCTACTAATA-ATTTCTTCGGCA-GTAAGGGAA-TCAAATGTTAG
Cr.campanulatum7167     G----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cr.carolschmidRC97      G----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cr.euchrophyllumRC96    G----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cr.foetidumRC98         G----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cr.graminicola7630      G----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cr.lineareRC99          G----TATACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cr.minimumRC37          G----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cr.nearmacowaniRC100    G----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cr.variabileRC44        G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cr.moorei               G----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cr.moorei7921           G----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cr.bulbispermumRC95     G----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cr.lugardii7632         G----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cr.macowanii7168        G----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cr.buphanoides7631      GA---TCTACTAATAAATTTCTTCGGCA-GTAAGGGAA-TCAAATGTTAA
Cr.acaulglaucRC105      G----TCTACTAATA-ATTTCTTCGGCA-GTAAGGCAA-TCAAATGTTAG
Cy.elatus7636           G----TCTACTAAAA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cy.herreiRC86           --------------------------------------------------
Cy.breviflorusRC88      --------------------------------------------------
Cy.mackeniiRC87         G----TTTACTAAAA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cy.montanus7638         G----TCTACTAAAA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Euch.grandiflora        G----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Eucr.bicolor            G----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Eur.amboinensis         G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Eus.darwinii            G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cy.sanguineusRC94       G----TCTACTAAAA-AATTCTTCGGCA-GTAAGGGAA-TCAAATGTTAG
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                        851                                                 900
Cy.brachyscyphus7204 G----TTTACTAAAA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cy.elatus7198        G----TCTACTAAAA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cy.ochroleucus7639   G----TTTACTAAAA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cy.elatusRC93        ------------------------------------------------
Cy.eucallusRC79      ------------------------------------------------
Cy.falcatus7637      G----TCTACTAAAA-AA-TCTTCGGCA-GTAAGGGAA-TCAAATGTTAG
Cy.loddigesianus7203 G----TCTACTAAAA-AATTCTTCGGCA-GTAAGGGAA-TCAAATGTTAG
Cy.smithiae7214      G----TCTACTAAAA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cy.herrei7194        G---TGCTACTAAAA-AATTCTTCGGCAGGTAAGG-AA-TCAAATGTTAG
Cy.labiatus7212      G----TCTACTAAAA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Cy.staadensis7316    G-----CTACTAAAA-AATTCTTCGGGG-G-AAGGGAA-TCAAATGTTAG
Cy.obliquus7278      ------------------------------------------------
Ge.namaquensisAMV635 G----TCTACTAATA-AATTCTTCGACA-GTAAGG-AA-TCAAATGTTAG
Hae.crispus7260      G----TCTACTAATA-AATTCTTCGGCA-GTAAGGTAA-TCAAATGTTAG
Hae.roseus           G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Hae.albiflos7517     G----TCTACTAATA-AATTCTTCGGCA-GTAAGGGAA-TCAAATGTTAG
Gal.elwesii          G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Gal.ikariae          G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Gal.alpinus          G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Gal.cilicicus        G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Hae.crispus7252      G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Gal.woronowii        G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Gal.lagodechianus    G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Gal.nivalis          G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Gal.plivatus         G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Gal.reginaeolgae     G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Gal.regianeolgae     G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Gal.fosteri          G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Gal.transcaucasicus  G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Hae.montanus7163     G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Hae.coccineusAMV632  G----TCTGCTCATG--ATTA-T-GGC----------------------
Ne.bowdenii          G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Hym.caribaea         G----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Hip.stylosum         G----TCTACTAAAA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Lyc.traubii          G----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Na.tazetta           G----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Lap.martinezii       G----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Leu.aestivum         G----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Leu.aestivumpulchel  G----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Leu.autumnale        G----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Leu.vernumcarpaticu  G----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Na.bicolor           G----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Ne.laticoma8090      G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Hip.sp.7446          G----TCTACTAAAA-AATTCTTCGGCCAGTAAGG-AAATCAAATGTTA-
No.recurvata         G----TCTACTACTC-AATTTTTCGGCG-GTAAGG-AA-TCAAATGTTAG
Na.sp.7607           G----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Na.sp.7608           G----TCTACTAAGA-AATTCTTCGGCA-GTAAGGGAA-TCAAATGTTAG
Par.weberbaueri      G----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Sten.variegatum      G----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Str.watermeyeri      G----TCTACTAATA-AATTCTTCGACA-GTAAGG-AA-TCAAATGTTAG
Ung.tadshicorum      G----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Va.parviflorum       G----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Phae.dubia           G----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Urc.peruviana        G----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
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                      851                                                 900
Rho.bifida            G----TCTACTAAAA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Sc.multiflorus        G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Sc.membranaceus7246   G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Ze.candida            G----TCTACTAAAA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Str.salteri7245       G----TCTACTAATA-AATTCTTCGACA-GTAAGGGAA-TCAAATGTTAG
Ster.lutea            G----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Pan.canariense        G----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Va.parviflora         G----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
Sc.multiflorus7919    ------------------------------------------------
Sc.membranaceus7917   G----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTTAG
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                        901                                                 950
Ac.valentina            -AG--AATTCATTTAGA--AT-AG-ATACCCTTA-----CTAAG-AAAT-
Ac.fabrei               -AG--AATTCATTTATA--AT-AG-ATACCCTTA-----CTAAT-AAAT-
Ac.nicaeensis           -AG--AATTCATTTAGA--AT-AG-ATACCCTTA-----CTAAT-AAAT-
Ac.longifolia           -AG--AATTCATTTAGA--AT-AG-ATACCCTTA-----CTAAG-AAAT-
Ac.rosea                -AG--AATTCATTTAGA--AT-AG-ATACCCTTA-----CTAAG-AAAT-
Ac.tingitana            -AG--AATTCATTTATA--AT-AG-ATACCCTTA-----CTAAG-AAAT-
Ac.trichophylla         -AG--AATTCATTTATA--GT-AG-ATACCCTTA-----CTAAG-AAAT-
Ac.autumnalis           -AG--AATTCATTTATA--AT-AG-ATACCCTTA-----CTAAG-AAAT-
Bo.disticha7172         -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Br.striata              -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cro.flava7256           -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Ama.belladonna          -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Br.radulosanata7629     -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Br.gregaria7157         -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Ama.belladonnaRHA28     -AG--AATTCATTTCTAC-AT-AG-ATACCGTTA-----CTAAG-AAAT-
Ca.lutea                -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cl.nobilisRC6b          -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Chl.fragrans            -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cl.miniata              -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cl.caulescens8092       -AG--AATTCATTTCTA--AT-AG-ATACCATTA-----CTAAG-AAAT-
Cl.miniataRC14          -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cl.gardenii8093         -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cl.cyrtanthiflor8094    -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cl.miniata8095          -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cr.acauleRC38           -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cr.acauleRC106          -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cr.paludosumRC41        -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cr.buphanoidesRC102     -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cr.campanulatum7167     -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cr.carolschmidRC97      -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cr.euchrophyllumRC96    -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cr.foetidumRC98         -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cr.graminicola7630      -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cr.lineareRC99          -AG--AATTCATTTCTA--AT-AG-ATACCATTA-----CTAAG-AAAT-
Cr.minimumRC37          -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cr.nearmacowaniRC100    -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cr.variabileRC44        -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cr.moorei               -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cr.moorei7921           -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cr.bulbispermumRC95     -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cr.lugardii7632         -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cr.macowanii7168        -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cr.buphanoides7631      GAG--AATTCATTTCCAAAAT-AG-ATACCGGTTTA--CTTAAGAAAAT-
Cr.acaulglaucRC105      -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cy.elatus7636           -AG--AATTCTTTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cy.herreiRC86           --------------------------------------------------
Cy.breviflorusRC88      --------------------------------------------------
Cy.mackeniiRC87         -AG--AATTCTTTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cy.montanus7638         -AG--AATTCTTTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Euch.grandiflora        -AG--AATTCATTTCTA--AT-GG-ATACCCTTA-----CTAAG-AAAT-
Eucr.bicolor            -AG--AATTCATTTCTA--AT-AG-ATACCCTTA-----CTAAG-AAAT-
Eur.amboinensis         -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Eus.darwinii            -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cy.sanguineusRC94       -AG--AATTCTTTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
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                          901                                                 950
Cy.brachyscyphus7204 -AGT-AATTCTTTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cy.elatus7198        -AG--AATTCTTTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cy.ochroleucus7639   -AG--AATTCTTTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cy.elatusRC93        --------------------------------------------------
Cy.eucallusRC79      --------------------------------------------------
Cy.falcatus7637      -AG--AATTCTTTTCTAA-TA-GG-ATACCGTTA-----CTAAG-AAAT-
Cy.loddigesianus7203 -AG--AATTCTTTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cy.smithiae7214      -AG--AATTCTTTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cy.herrei7194        CAG--AATTCTTTTCTA--AT-AGCATACCGTTA-----CTAAGCAAAT-
Cy.labiatus7212      -AG--AATTCTTTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Cy.staadensis7316    GAG--AATTCTTTTCTA--AT-AG-ATACCGTTA-----CTAAGGAAAT-
Cy.obliquus7278      --------------------------------------------------
Ge.namaquensisAMV635 -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Hae.crispus7260      -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Hae.roseus           -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Hae.albiflos7517     -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Gal.elwesii          -AG--AATTCATTTATA--AT-AG-ATACCCTTA-----CTAAG-AAAT-
Gal.ikariae          -AG--AATTCATTTATA--AT-AG-ATACCCTTA-----CTAAG-AAAT-
Gal.alpinus          -AG--AATTCATTTATA--AT-AG-ATACCCTTA-----CTAAG-AAAT-
Gal.cilicicus        -AG--AATTCATTTATA--AT-AG-ATACCCTTA-----CTAAG-AAAT-
Hae.crispus7252      -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Gal.woronowii        -AG--AATTCATTTATA--AT-AG-AGACCCTTA-----CTAAG-AAAT-
Gal.lagodechianus    -AG--AATTCATTTATA--AT-AG-ATACCCTTA-----CTAAG-AAAT-
Gal.nivalis          -AG--AATTCATTTATA--AT-AG-ATACCCTTA-----CTAAG-AAAT-
Gal.plivatus         -AG--AATTCATTTATA--AT-AG-ATACCCTTA-----CTAAT-AAAT-
Gal.reginaeolgae     -AG--AATTCATTTATA--AT-AG-ATACCCTTA-----CTAAG-AAAT-
Gal.regianeolgae     -AG--AATTCATTTATA--AT-AG-ATACCCTTA-----CTAAG-AAAT-
Gal.fosteri          -AG--AATTCATTTATA--AT-AG-ATACCTTTA-----CTAAG-AAAT-
Gal.transcaucasicus  -AG--AATTCATTTATA--AT-AG-ATACCCTTA-----CTAAG-AAAT-
Hae.montanus7163     -AC--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Hae.coccineusAMV632  --------------------------------------------------
Ne.bowdenii          -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Hym.caribaea         -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Hip.stylosum         -AT--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Lyc.traubii          -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Na.tazetta           -AG--AATTCATTTATA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Lap.martinezii       -AG--AATTCATTTATA--AC-AG-ATACCGTTA-----CTAAG-AAAT-
Leu.aestivum         -AG--AATTCATTTATA--AT-AG-ATACCCTTA-----CTAAG-AAAT-
Leu.aestivumpulchel  -AG--AATTCATTTATA--AT-AG-ATACCCTTA-----CTAAG-AAAT-
Leu.autumnale        -AG--AATTCATTTATA--AT-AG-ATACCCTTA-----CTAAG-AAAT-
Leu.vernumcarpaticu  -AG--AATTCATTTATA--AT-AG-ATACCCTTA-----CTAAG-AAAT-
Na.bicolor           -AG--AATTCATTTAGA--AT-AG-ATACTGTTA-----CTAAG-AAAT-
Ne.laticoma8090      -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAGAAAAT-
Hip.sp.7446          -AT--AATTCATTTCTA--AA-GA-ATACCGC-A------TA-C-AAAA-
No.recurvata         -AG--AATTCATTTCTA--AT-AG-ATACCATTA-----CTAAG-AAAT-
Na.sp.7607           -AG--AATTCATTTATA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Na.sp.7608           -AG--AATTCATTTAGA--AT-AG-ATACTGTTA-----CTAAG-AAAT-
Par.weberbaueri      -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Sten.variegatum      -AG--AATTCATTTCTA--AT-AG-ATACCATTA-----CTAAG-AAAT-
Str.watermeyeri      -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Ung.tadshicorum      -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Va.parviflorum       -AG--AATTCATTTATA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Phae.dubia           -AG--AATTCATTTCTA--AT-AG-ATACCCTTA-----CTAAG-AAAT-
Urc.peruviana        -AG--AATTCATTTCTA--AT-AG-ATACCCTTA-----CTAAG-AAAT-
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                      901                                                 950
Rho.bifida            -AT--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Sc.multiflorus        -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Sc.membranaceus7246   -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Ze.candida            -AT--AATTCATTTCTA--AT-GG-ATACCGTTA-----CTAAG-AAAT-
Str.salteri7245       -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Ster.lutea            -AT--AATTCATTTATA--AT-AG-ATACCGTTA-----CTAAT-AAAT-
Pan.canariense        -AG--AATTCATTTATA--AT-AG-ATTCCGTTA-----CTAAG-AAAT-
Va.parviflora         -AG--AATTCATTTATA--AT-AG-ATACCGTTA-----CTAAG-AAAT-
Sc.multiflorus7919    --------------------------------------------------
Sc.membranaceus7917   -AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAGAAAAT-
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                        951                                                1000
Ac.valentina            --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Ac.fabrei               --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Ac.nicaeensis           --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Ac.longifolia           --TT----GATACGA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Ac.rosea                --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Ac.tingitana            --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATC
Ac.trichophylla         --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATC
Ac.autumnalis           --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATC
Bo.disticha7172         --TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--ATT
Br.striata              --TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--ATT
Cro.flava7256           --TT----GATACCG--TAGT-----CCCGG---TTATTCTTCTT--ATT
Ama.belladonna          --TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--ATT
Br.radulosanata7629     --TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--ATT
Br.gregaria7157         --TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--ATT
Ama.belladonnaRHA28     --TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--ATT
Ca.lutea                --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Cl.nobilisRC6b          --TT----GATACCA--TAGT-----CCCAA---TTATTCTTCTT--ATT
Chl.fragrans            --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Cl.miniata              --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Cl.caulescens8092       --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Cl.miniataRC14          --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Cl.gardenii8093         --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Cl.cyrtanthiflor8094    --TT----GATACCA--TAGT-----CCCAA---TTATTCTTCTT--ATT
Cl.miniata8095          --TT----GATACCA--TAGT-----CCCAGA--TTATTCTTCTT--ATT
Cr.acauleRC38           --TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--ATT
Cr.acauleRC106          --TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--ATT
Cr.paludosumRC41        --TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--ATT
Cr.buphanoidesRC102     --TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--ATT
Cr.campanulatum7167     --TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--ATT
Cr.carolschmidRC97      --TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--ATT
Cr.euchrophyllumRC96    --TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--ATT
Cr.foetidumRC98         --TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--ATT
Cr.graminicola7630      --TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--ATT
Cr.lineareRC99          --TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--ATT
Cr.minimumRC37          --TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--ATT
Cr.nearmacowaniRC100    --TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--ATT
Cr.variabileRC44        --TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--ATT
Cr.moorei               --TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--ATT
Cr.moorei7921           --TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--ATT
Cr.bulbispermumRC95     --TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--ATT
Cr.lugardii7632         --TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--ATT
Cr.macowanii7168        --TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--ATT
Cr.buphanoides7631      --TT---GGATACCA-AAAGT-----CCCG-------------------
Cr.acaulglaucRC105      --TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--ATT
Cy.elatus7636           --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Cy.herreiRC86           ---------------------------------------------------
Cy.breviflorusRC88      ---------------------------------------------------
Cy.mackeniiRC87         --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Cy.montanus7638         --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Euch.grandiflora        --TT----TATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Eucr.bicolor            --TT----GATACCA--CAGT-----CCCAG---TTATTCTTCTT--ATT
Eur.amboinensis         --TT----GATACCA--CAGT-----CCCAG---TTATTCTTCTT--ATT
Eus.darwinii            --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Cy.sanguineusRC94       --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
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                        951                                                1000
Cy.brachyscyphus7204 --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Cy.elatus7198        --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Cy.ochroleucus7639   --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Cy.elatusRC93        --------------------------------------------------
Cy.eucallusRC79      --------------------------------------------------
Cy.falcatus7637      --TTG---GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Cy.loddigesianus7203 --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Cy.smithiae7214      --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Cy.herrei7194        --TGG---GATACCA--TAGTT----CCCGGG--TTATTCTTTTT--ATT
Cy.labiatus7212      --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Cy.staadensis7316    --TT---GGATACCA--TAGCT----CCCAG---TTATTCTTCTT--ATT
Cy.obliquus7278      --------------------------------------------------
Ge.namaquensisAMV635 --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Hae.crispus7260      --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Hae.roseus           --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Hae.albiflos7517     --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Gal.elwesii          --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Gal.ikariae          --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Gal.alpinus          --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Gal.cilicicus        --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Hae.crispus7252      --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Gal.woronowii        --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Gal.lagodechianus    --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Gal.nivalis          --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Gal.plivatus         --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Gal.reginaeolgae     --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Gal.regianeolgae     --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Gal.fosteri          --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Gal.transcaucasicus  --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATC
Hae.montanus7163     --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Hae.coccineusAMV632  --------------------------------------------------
Ne.bowdenii          --TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--ATT
Hym.caribaea         --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Hip.stylosum         --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Lyc.traubii          --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Na.tazetta           --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Lap.martinezii       --TT----GATACCA--TAGT-----CCCTG---TTATTCTTCTT--ATT
Leu.aestivum         --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Leu.aestivumpulchel  --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Leu.autumnale        --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATC
Leu.vernumcarpaticu  --TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--ATT
Na.bicolor           --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Ne.laticoma8090      --TT---GGATACCA--TAGT-----CCCGG----TATTCTTCTT--ATT
Hip.sp.7446          --TT----GATACCA--TA-T-----CCC-G---TTATTCTTCTT--AAT
No.recurvata         --TT----GATACCA--TAGT-----CCCAG---TTATTTTTCTT--ATT
Na.sp.7607           --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Na.sp.7608           --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Par.weberbaueri      --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Sten.variegatum      --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Str.watermeyeri      --TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--ATT
Ung.tadshicorum      --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Va.parviflorum       --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Phae.dubia           --TT----GATACCA--CAGT-----CCCAG---TTATTCTTCTT--ATT
Urc.peruviana        --TT----GATACCA--CAGT-----CCCAG---TTATTCTTCTT--ATT
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                      951                                                1000
Rho.bifida            --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--TTT
Sc.multiflorus        --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Sc.membranaceus7246   --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Ze.candida            --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--GTT
Str.salteri7245       --TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--ATT
Ster.lutea            --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Pan.canariense        --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Va.parviflora         --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
Sc.multiflorus7919    --------------------------------------------------
Sc.membranaceus7917   --TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--ATT
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                        1001                                                1050
Ac.valentina            GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Ac.fabrei               GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Ac.nicaeensis           GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Ac.longifolia           GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATT
Ac.rosea                GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATT
Ac.tingitana            GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Ac.trichophylla         AG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Ac.autumnalis           GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Bo.disticha7172         GG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Br.striata              GG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Cro.flava7256           GG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Ama.belladonna          GG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Br.radulosanata7629     GG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Br.gregaria7157         GG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Ama.belladonnaRHA28     GG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Ca.lutea                GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Cl.nobilisRC6b          GG---GTCCTTGT-----CTAAAG-CG-AAATTTTG---TACCGT--ATC
Chl.fragrans            GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Cl.miniata              GG---GTCCTTGT-----CTAAAG-CG-AAATTTTG---TACCGT--ATC
Cl.caulescens8092       GG---GTCCTTGT-----CTAAAG-CG-AAATTTTG---TACCGT--ATC
Cl.miniataRC14          GG---GTCCTTGT-----CTAAAG-CG-AAATTTTG---TACCGT--ATC
Cl.gardenii8093         GG---GTCCTTGT-----CTAAAG-CG-AAATTTTG---TACCGT--ATC
Cl.cyrtanthiflor8094    GG---GTCCTTGT-----CTAAAG-CG-AAATTTTG---TACCGT--ATC
Cl.miniata8095          GG---GCCCTTGTC----CTAAAG-CGGAAATTTTG---TACCGAG-ATC
Cr.acauleRC38           GG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Cr.acauleRC106          GG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Cr.paludosumRC41        GG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Cr.buphanoidesRC102     GG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Cr.campanulatum7167     GG---ATCCCTGT-----CTAAAG-CG-AAATTTTG---TACCGT--ATC
Cr.carolschmidRC97      GG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Cr.euchrophyllumRC96    GG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATT
Cr.foetidumRC98         GG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGAT-ATC
Cr.graminicola7630      GG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Cr.lineareRC99          GG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Cr.minimumRC37          GG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Cr.nearmacowaniRC100    GG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATT
Cr.variabileRC44        GG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Cr.moorei               GG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Cr.moorei7921           GGC--ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Cr.bulbispermumRC95     GG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Cr.lugardii7632         GG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Cr.macowanii7168        GG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Cr.buphanoides7631      --------------------------------------------------
Cr.acaulglaucRC105      GG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---T-CCGT--ATC
Cy.elatus7636           GG---ATCCTTGT-----CTAAAG-CG-AAATTTTG---TACCGT--ATC
Cy.herreiRC86           --------------------------------------------------
Cy.breviflorusRC88      --------------------------------------------------
Cy.mackeniiRC87         GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Cy.montanus7638         GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Euch.grandiflora        GG---ATCCTTGT-----CTAAAG-CG-AAATTTTG---TACTGT--ATC
Eucr.bicolor            GG---ATCCTTGT-----CTAAAG-CG-AAATTTTG---TACTGT--ATC
Eur.amboinensis         GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Eus.darwinii            GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Cy.sanguineusRC94       GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
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                        1001                                                1050
Cy.brachyscyphus7204 GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Cy.elatus7198        GG---ATCCTTGT-----CTAAAG-CG-AAATTTTG---TACCGT--ATC
Cy.ochroleucus7639   GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Cy.elatusRC93        --------------------------------------------------
Cy.eucallusRC79      --------------------------------------------------
Cy.falcatus7637      GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Cy.loddigesianus7203 GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Cy.smithiae7214      GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Cy.herrei7194        GGC--ATCCCTTGT----CTAAAG-CT-AAATTTTG---TACCGGT-ATC
Cy.labiatus7212      GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Cy.staadensis7316    GGG--ATCCTTGGT----CTAAAGGCTAAAATTTTG---TACCGGT-ATC
Cy.obliquus7278      --------------------------------------------------
Ge.namaquensisAMV635 GG---ATCCTTGT-----CTAAAG-TT-AAATTTTG---TACCGT--ATC
Hae.crispus7260      GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Hae.roseus           GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Hae.albiflos7517     GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Gal.elwesii          GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCAT--ATC
Gal.ikariae          GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCAT--ATC
Gal.alpinus          GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCAT--ATC
Gal.cilicicus        GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCAT--ATC
Hae.crispus7252      GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Gal.woronowii        GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCAT--ATC
Gal.lagodechianus    GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCAT--ATC
Gal.nivalis          GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCAT--ATC
Gal.plivatus         GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCAT--ATC
Gal.reginaeolgae     GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCAT--ATC
Gal.regianeolgae     GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCAT--ATC
Gal.fosteri          GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCAT--ATC
Gal.transcaucasicus  GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCAT--ATC
Hae.montanus7163     GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Hae.coccineusAMV632  --------------------------------------------------
Ne.bowdenii          GG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATT
Hym.caribaea         GG---ATCCTTGT-----CTAAAG-CG-AAATTTTG---TACTGT--ATC
Hip.stylosum         GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Lyc.traubii          GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Na.tazetta           GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Lap.martinezii       GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Leu.aestivum         GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Leu.aestivumpulchel  GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Leu.autumnale        GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Leu.vernumcarpaticu  GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Na.bicolor           GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCAT--ATC
Ne.laticoma8090      GG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Hip.sp.7446          GG---AACCTTG------CTAAAG-CTACAATTTTG---CACCGT--TAC
No.recurvata         GG---ATCTTTGG-----CTAAAG-CT-AAATTTTG---TACTGT--ATC
Na.sp.7607           AG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Na.sp.7608           GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCAT--ATC
Par.weberbaueri      GG---ATCCTTGT-----CTAAAG-CG-AAATTTTG---TACTGT--ATC
Sten.variegatum      GG---ATCCTTGT-----CTAAAG-CG-AAATTTTG---TACTGT--ATC
Str.watermeyeri      GG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Ung.tadshicorum      GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Va.parviflorum       GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Phae.dubia           GG---ATCCTTGT-----CTAAAG-CG-AAATTTTG---TACTGT--ATC
Urc.peruviana        GG---ATCCTTGT-----CTAAAG-CG-AAATTTTG---TACTGT--ATC
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                      1001                                                1050
Rho.bifida            GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Sc.multiflorus        GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Sc.membranaceus7246   GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Ze.candida            GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Str.salteri7245       GG---ATCCCTGT-----TTAAAG-CT-AAATTTTG---TACCGT--ATC
Ster.lutea            GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Pan.canariense        GG---ATCCTTGT-----CTAAAG-GT-AAATTTTG---TACCGT--ATC
Va.parviflora         GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
Sc.multiflorus7919    --------------------------------------------------
Sc.membranaceus7917   GG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--ATC
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                        1051                                                1100
Ac.valentina            GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Ac.fabrei               GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Ac.nicaeensis           GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Ac.longifolia           GGG---CC-ATCCCA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Ac.rosea                GGG---CC-ATCCCA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Ac.tingitana            GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Ac.trichophylla         GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Ac.autumnalis           GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Bo.disticha7172         GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Br.striata              GGG---CC-ACCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cro.flava7256           GGG---CC-ATCCTA---TTAGT---AAGCCGGA--TCTGG--GCCGATT
Ama.belladonna          GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Br.radulosanata7629     GGG---CC-ACCCTA---TTAGT---AAGCCGGA--TCTGG--GCCGATT
Br.gregaria7157         GGG---CC-ACCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Ama.belladonnaRHA28     GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Ca.lutea                GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--ACCGATT
Cl.nobilisRC6b          GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Chl.fragrans            GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cl.miniata              GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cl.caulescens8092       GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cl.miniataRC14          GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cl.gardenii8093         GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cl.cyrtanthiflor8094    GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cl.miniata8095          GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGGC-GCCGATT
Cr.acauleRC38           GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cr.acauleRC106          GGG---CC-ATCCTA---TTAGT---AAGCCGGA--TCTGG--GCCGATT
Cr.paludosumRC41        GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cr.buphanoidesRC102     GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cr.campanulatum7167     GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cr.carolschmidRC97      GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cr.euchrophyllumRC96    GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cr.foetidumRC98         GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cr.graminicola7630      GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cr.lineareRC99          GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cr.minimumRC37          GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cr.nearmacowaniRC100    GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cr.variabileRC44        GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cr.moorei               GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cr.moorei7921           GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cr.bulbispermumRC95     GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cr.lugardii7632         GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cr.macowanii7168        GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cr.buphanoides7631      --------------------------------------------------
Cr.acaulglaucRC105      GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cy.elatus7636           GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cy.herreiRC86           --------------------------------------------------
Cy.breviflorusRC88      --------------------------------------------------
Cy.mackeniiRC87         GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cy.montanus7638         GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Euch.grandiflora        GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Eucr.bicolor            GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Eur.amboinensis         GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Eus.darwinii            GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cy.sanguineusRC94       GGG---CC-ATTCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
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                        1051                                                1100
Cy.brachyscyphus7204 GGG---CC-ATCCTA---TTATT---AAGCCG-A--TCTGG--GCCGATT
Cy.elatus7198        GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cy.ochroleucus7639   GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cy.elatusRC93        ---------------------------------------------------
Cy.eucallusRC79      ---------------------------------------------------
Cy.falcatus7637      GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cy.loddigesianus7203 GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cy.smithiae7214      GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cy.herrei7194        GGG---CC-ATCCTA---TTAGT---AAGGCCGA--TCTGGG-ACCGATT
Cy.labiatus7212      GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Cy.staadensis7316    GGG---GCCATCCTA---TTAGGTA-AGGCCGGA--TCTGGGGGCCGATT
Cy.obliquus7278      ---------------------------------------------------
Ge.namaquensisAMV635 GGG---CC-ATCCTA---TTAGT---AAGCCGGA--TCTGG--GCCGATT
Hae.crispus7260      GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Hae.roseus           GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGACT
Hae.albiflos7517     GGG---CC-ATCCTA---TTAGT---AAGCCGGA--TCTGG--GCCGACT
Gal.elwesii          GGG---CC-ATCCTA---TTAGT---AAGCCA-A--TCTGG--GCCAATT
Gal.ikariae          GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCAATT
Gal.alpinus          GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCAATT
Gal.cilicicus        GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCAATT
Hae.crispus7252      GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Gal.woronowii        GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCAATT
Gal.lagodechianus    GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCAATT
Gal.nivalis          GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCAATT
Gal.plivatus         GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCAATT
Gal.reginaeolgae     GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCAATT
Gal.regianeolgae     GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCAATT
Gal.fosteri          GGG---TC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCAATT
Gal.transcaucasicus  GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCAATT
Hae.montanus7163     GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Hae.coccineusAMV632  ---------------------------------------------------
Ne.bowdenii          GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Hym.caribaea         GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Hip.stylosum         GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Lyc.traubii          GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Na.tazetta           GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Lap.martinezii       GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Leu.aestivum         GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Leu.aestivumpulchel  GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Leu.autumnale        GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Leu.vernumcarpaticu  GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Na.bicolor           GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Ne.laticoma8090      GGG---CC-ATCCTA---TTAGT---AAGTCG-A--TCTGG--GCCGATT
Hip.sp.7446          GGG---CGCATCCCA---TTATAT--AAGCCG-A--TCTGG--TCCGATT
No.recurvata         GGG---CC-ATCCTA---TTAGT---AAACCA-A--TCTGG--ACCGATT
Na.sp.7607           GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Na.sp.7608           GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Par.weberbaueri      GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Sten.variegatum      GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Str.watermeyeri      GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Ung.tadshicorum      AGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Va.parviflorum       GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Phae.dubia           GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Urc.peruviana        GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
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                      1051                                                1100
Rho.bifida            GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Sc.multiflorus        GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Sc.membranaceus7246   GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Ze.candida            GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Str.salteri7245       GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG-GCCGGATT
Ster.lutea            GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Pan.canariense        GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Va.parviflora         GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
Sc.multiflorus7919    ---------------------------------------------------
Sc.membranaceus7917   GGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGATT
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                         1101                                                1150
Ac.valentina             TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Ac.fabrei                TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Ac.nicaeensis            TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Ac.longifolia            TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Ac.rosea                 TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGCC--
Ac.tingitana             TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Ac.trichophylla          TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Ac.autumnalis            TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Bo.disticha7172          TATCAG-----ATTCTG-AT---ATTC---TTGATCGC--ATTCGGTC--
Br.striata               TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Cro.flava7256            TATCAGG----ATTCTG-AT---ATTC---TTGGATCG--ATTCGGTC--
Ama.belladonna           TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Br.radulosanata7629      TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Br.gregaria7157          TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Ama.belladonnaRHA28      TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Ca.lutea                 TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Cl.nobilisRC6b           TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Chl.fragrans             TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Cl.miniata               TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Cl.caulescens8092        TATCAG-----ATTCTG-AT---ATTC---TTGGATCG--ATTCGGTC--
Cl.miniataRC14           TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Cl.gardenii8093          TATCAG-----ATTCTGGAT---ATTC---TTGATCG---ATTCGGTC--
Cl.cyrtanthiflor8094     TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Cl.miniata8095           TATCAG-----ATTCTGGAT---ATTC---TTGATCG---ATTCGGTC--
Cr.acauleRC38            TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Cr.acauleRC106           TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Cr.paludosumRC41         TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Cr.buphanoidesRC102      TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Cr.campanulatum7167      TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Cr.carolschmidRC97       TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Cr.euchrophyllumRC96     TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Cr.foetidumRC98          TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Cr.graminicola7630       TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Cr.lineareRC99           TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Cr.minimumRC37           TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Cr.nearmacowaniRC100     TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Cr.variabileRC44         TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Cr.moorei                TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Cr.moorei7921            TATCAG-----ATTCTG-AT---ATTC---TTGATCGG--ATTCGGGC--
Cr.bulbispermumRC95      TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Cr.lugardii7632          TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Cr.macowanii7168         TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Cr.buphanoides7631       --------------------------------------------------
Cr.acaulglaucRC105       TATCAAA----ATCCTG-AT---ATTC---TTGATCGG--ATTCGGAC--
Cy.elatus7636            TCTCAG-----ATTCTG-AT---ATTC---TTGGATCG--ATTCGGTC--
Cy.herreiRC86            --------------------------------------------------
Cy.breviflorusRC88       --------------------------------------------------
Cy.mackeniiRC87          TCTCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Cy.montanus7638          TCTCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Euch.grandiflora         TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Eucr.bicolor             TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Eur.amboinensis          TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Eus.darwinii             TATCAG-----ATTCTT-AT---ATTC---TTGATCG---ATTCGGCC--
Cy.sanguineusRC94        TCTCAG-----ATTCTG-AT---ATTC---TTGGATCG--ATTCGGTC--
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                        1101                                                1150
Cy.brachyscyphus7204 TCTCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGCG--
Cy.elatus7198        TCTCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Cy.ochroleucus7639   TCTCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Cy.elatusRC93        --------------------------------------------------
Cy.eucallusRC79      --------------------------------------------------
Cy.falcatus7637      TCTCAG-----ATTCTG-AT---ATTC---TTGGACG---ATTCGGTC--
Cy.loddigesianus7203 TCTCAG-----ATTCTG-AT---ATTC---TTGGATCG--ATTCGGTC--
Cy.smithiae7214      TCTCAG-----ATTCTG-AT---ATTC---TTGGATCG--ATTCGGCC--
Cy.herrei7194        TCTC----------C---A------------------------------
Cy.labiatus7212      TCTCAG-----ATTCTG-AT---ATTC---TTGGATCG--ATTCGGTC--
Cy.staadensis7316    TCTCAGG----ATTCTGGAT---ATTTCCTTGGATCGGATGTCGGGTC--
Cy.obliquus7278      --------------------------------------------------
Ge.namaquensisAMV635 TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGG-C--
Hae.crispus7260      TATCAG-----ATTCTG-AT---ATTC---TTGGTCG---ATTCGGCC--
Hae.roseus           TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Hae.albiflos7517     TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Gal.elwesii          TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Gal.ikariae          TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Gal.alpinus          TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Gal.cilicicus        TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Hae.crispus7252      TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Gal.woronowii        TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Gal.lagodechianus    TATCAG-----ATTCTT-AT---ATTC---TTGATCG---ATTCGGTC--
Gal.nivalis          TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Gal.plivatus         TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Gal.reginaeolgae     TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Gal.regianeolgae     TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Gal.fosteri          TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Gal.transcaucasicus  TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Hae.montanus7163     TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Hae.coccineusAMV632  --------------------------------------------------
Ne.bowdenii          TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Hym.caribaea         TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Hip.stylosum         TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Lyc.traubii          TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Na.tazetta           TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Lap.martinezii       TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ACTCGGTC--
Leu.aestivum         TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Leu.aestivumpulchel  TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Leu.autumnale        TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Leu.vernumcarpaticu  TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Na.bicolor           TATCAG-----ATTTTG-AT---ATTC---TTGATCG---ATTCGGTC--
Ne.laticoma8090      TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Hip.sp.7446          ATCAAG-----ATTCTG-AT---ATCC---TTGCACG---ATTCGGTC--
No.recurvata         TATCGG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Na.sp.7607           TATCAG-----ATTCTG-AT---ATTC--TTGGATCG---ATTCGGTC--
Na.sp.7608           TATCAG-----ATTTTG-AT---ATTC---TTGATCG---ATTCGGTC--
Par.weberbaueri      TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Sten.variegatum      TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Str.watermeyeri      TCTCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Ung.tadshicorum      TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Va.parviflorum       TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Phae.dubia           TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Urc.peruviana        TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
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                        1101                                                1150
Rho.bifida              TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Sc.multiflorus          TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Sc.membranaceus7246     TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Ze.candida              TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGCC--
Str.salteri7245         TATCAG-----ATTCTG-AT---ATTC--TTGGATCG---ATTCGGTC--
Ster.lutea              TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Pan.canariense          TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Va.parviflora           TATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC--
Sc.multiflorus7919      --------------------------------------------------
Sc.membranaceus7917     TATCA------------------------------------------
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                        1151                                                1200
Ac.valentina            -GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--ATC
Ac.fabrei               -GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--ATC
Ac.nicaeensis           -GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--ATC
Ac.longifolia           -GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--ATC
Ac.rosea                -GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--ATC
Ac.tingitana            -GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--ATC
Ac.trichophylla         -GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--ATC
Ac.autumnalis           -GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--ATC
Bo.disticha7172         -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--ATC
Br.striata              -GG-AT---ATG---TAGAAA-TCTTTCT--------------------
Cro.flava7256           -GGGAT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGGG-ATC
Ama.belladonna          -GG-AT---ATG---TAGAAA-TCTTTCT--------------------
Br.radulosanata7629     -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGGG-ATC
Br.gregaria7157         -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--ATC
Ama.belladonnaRHA28     -GG-AT---ATG---TAGAAAATCTTTCTC-ATTATC-ACAGTGG--ATC
Ca.lutea                -GG-AT---ATG---TAGAAA-TCTTTCT--------------------
Cl.nobilisRC6b          -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--ATC
Chl.fragrans            -GG-AT---ATG---TAGAAA-TCTTTTT--------------------
Cl.miniata              -GG-AT---ATG---TAGAAA-TCTTTCT--------------------
Cl.caulescens8092       -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--ATC
Cl.miniataRC14          -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGGG-ATC
Cl.gardenii8093         -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGGG-ATC
Cl.cyrtanthiflor8094    -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--ATC
Cl.miniata8095          -GGGAT---ATG---TAAGAAATCTTTCTCCATTATC-ACAGTGGG-ATC
Cr.acauleRC38           -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--ATC
Cr.acauleRC106          -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGGG-ATC
Cr.paludosumRC41        -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--ATC
Cr.buphanoidesRC102     -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--ATC
Cr.campanulatum7167     -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--ATC
Cr.carolschmidRC97      -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--ATC
Cr.euchrophyllumRC96    -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--ATC
Cr.foetidumRC98         -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--ATC
Cr.graminicola7630      -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGGG-ATC
Cr.lineareRC99          -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--ATC
Cr.minimumRC37          -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--ATC
Cr.nearmacowaniRC100    -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--ATC
Cr.variabileRC44        -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--ATC
Cr.moorei               -GG-AT---ATG---TAGAAA-TCTTTCT--------------------
Cr.moorei7921           -CGGAT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGGGGG-ATC
Cr.bulbispermumRC95     -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGGGG--ATC
Cr.lugardii7632         -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--ATC
Cr.macowanii7168        -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--ATC
Cr.buphanoides7631      ---------------------------------------------------
Cr.acaulglaucRC105      -GGGAT---ATGG--TAGAAAATCTTTCCG-ATTATCCACAGGGGG-ATC
Cy.elatus7636           -GG-AT---ATG---TAGAAAATCTTTCTC-ATTATC-ACAGTGGG-ATC
Cy.herreiRC86           ---------------------------------------------------
Cy.breviflorusRC88      ---------------------------------------------------
Cy.mackeniiRC87         -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--ACC
Cy.montanus7638         -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--ATC
Euch.grandiflora        -GG-AT---ATG---TAGAAA-TCTTTTT--------------------
Eucr.bicolor            -GG-AT---ATG---TAGAAA-TCTTTTT--------------------
Eur.amboinensis         -GG-AT---ATG---TAGAAA-TCTTTCT--------------------
Eus.darwinii            -GG-AT---ATG---TAGAAA-TCTTTTT--------------------
Cy.sanguineusRC94       -GGAAT---GTA-----GAAA-TCTTTCTC-ATTATC-ACAGTGGA-ACC
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                          1151                                                1200
Cy.brachyscyphus7204 -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGGG-ATC
Cy.elatus7198        -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--ATC
Cy.ochroleucus7639   -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--ATC
Cy.elatusRC93        ---------------------------------------------------
Cy.eucallusRC79      ---------------------------------------------------
Cy.falcatus7637      -GG-AT---ATG---TAGAAA--CTTTCTC-ATTATC-ACAGTGG--ATC
Cy.loddigesianus7203 -GGGAT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGGG-ATC
Cy.smithiae7214      -GGGAT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--ATC
Cy.herrei7194        ---------------------------------------------------
Cy.labiatus7212      -GGGAT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGGGGG-ATC
Cy.staadensis7316    -GGGATT--ATG-----G-------------------------------
Cy.obliquus7278      ---------------------------------------------------
Ge.namaquensisAMV635 -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--ATC
Hae.crispus7260      -GGGAT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG-----
Hae.roseus           -GG-AT---ATG---TAGAAA-TCTTTCT--------------------
Hae.albiflos7517     -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGGG-ATC
Gal.elwesii          -GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--ATC
Gal.ikariae          -GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--ATC
Gal.alpinus          -GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATT-ACAGTGG--ATC
Gal.cilicicus        -GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--ATC
Hae.crispus7252      -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--ATC
Gal.woronowii        -GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--ATC
Gal.lagodechianus    -GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--ATC
Gal.nivalis          -GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--ATC
Gal.plivatus         -GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--ATC
Gal.reginaeolgae     -GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--ATC
Gal.regianeolgae     -GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--ATC
Gal.fosteri          -GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--ATC
Gal.transcaucasicus  -GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--ATC
Hae.montanus7163     -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-GCAGTGG--ATC
Hae.coccineusAMV632  ---------------------------------------------------
Ne.bowdenii          -GG-AT---ATG---TAGAAA-TCTTTTT--------------------
Hym.caribaea         -GG-AT---ATG---TAGAAA-TCTTTTT--------------------
Hip.stylosum         -GG-AT---ATG---TAGAAA-TCTTTTT--------------------
Lyc.traubii          -GG-AT---ATG---TAGAAA-TCTTTTT--------------------
Na.tazetta           -GG-AT---ATG---TAGAAA-TCTTTTT--------------------
Lap.martinezii       -GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--ATC
Leu.aestivum         -GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--ATC
Leu.aestivumpulchel  -GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--ATC
Leu.autumnale        -GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--ATC
Leu.vernumcarpaticu  -GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--ATC
Na.bicolor           -GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--ATC
Ne.laticoma8090      -GGGAT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGGG-ATC
Hip.sp.7446          ---------------------------------------------------
No.recurvata         -GG-AT---ATG---TAGAAA-TCTTTCT--------------------
Na.sp.7607           -GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--ATC
Na.sp.7608           -GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--ATC
Par.weberbaueri      -GG-AT---ATG---TAGAAA-TCTTTTT--------------------
Sten.variegatum      -GG-AT---ATG---TAGAAA-TCTTTTT--------------------
Str.watermeyeri      -GG-AT---ATG---TAGAAA-TCTTTCT--------------------
Ung.tadshicorum      -GG-AT---ATG---TAGAAA-TCTTTTT--------------------
Va.parviflorum       -GG-AT---ATG---TAGAAA-TCTTTTT--------------------
Phae.dubia           -GG-AT---ATG---TAGAAA-TCTTTTT--------------------
Urc.peruviana        -GG-AT---ATG---TAGAAA-TCTTTTT--------------------
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                      1151                                                1200
Rho.bifida            -GG-AT---ATG---TAGAAA-TCTTTTT--------------------
Sc.multiflorus        -GG-AT---ATG---TAGAAA-TCTTTCT--------------------
Sc.membranaceus7246   -GGGAT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--ATC
Ze.candida            -GG-AT---ATG---TAGAAA-TCTTTTT--------------------
Str.salteri7245       -GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGGG-ATC
Ster.lutea            -GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--ATC
Pan.canariense        -GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--ATC
Va.parviflora         -GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--ATC
Sc.multiflorus7919    --------------------------------------------------
Sc.membranaceus7917   --------------------------------------------------
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                        1201                                                1250
Ac.valentina            CTCAAAAAAAC--AGGG-TT-TGTATCGAATAAA-GTATATACTTCGACT
Ac.fabrei               CTCAAAAAAAC--AGGG-TT-TGTATCGAATAAA-GTATATACTTCGACT
Ac.nicaeensis           CTCAAAAAAAC--AGGG-TT-TGTATCGAATAAA-GTATATACTTCGACT
Ac.longifolia           CTCAAAAAAAC--AGGG-TT-TGTATCGAATAAA-GTATATACTTCGACT
Ac.rosea                CTCAAAAAAAC--AGGG-TT-TGTATCGAATAAA-GTATATACTTCGACT
Ac.tingitana            CTCAAAAAAAC--AGGG-TT-TGTATCGAATAAA-GTATATACTTCGACT
Ac.trichophylla         CTCAAAAAAAC--AGGG-TT-TGTATCGAATAAA-GTATATACTTCGACT
Ac.autumnalis           CTCAAAAAAAC--AGGG-TT-TGTATCGAATAAA-GTATATACTTCGACT
Bo.disticha7172         CTCAAAAAAAC--AGGG-TT-TGTATCGAATAAA-GTATATACTTCGACT
Br.striata              --------------------------------------------------
Cro.flava7256           CTCAAAAAAAC--GGGG-TT-TGTATCGAATAAA-GTATATACTTCGACT
Ama.belladonna          --------------------------------------------------
Br.radulosanata7629     CTCAAAAAAAC--AGGGCTT-TGTATCGAATAAAAGTATATACTTCGACT
Br.gregaria7157         CTCAAAAAAAC--AGGG-TT-TGTATCGAATAAA-GTATATACTTCGACT
Ama.belladonnaRHA28     CTCAAAAA----------------------------------------
Ca.lutea                --------------------------------------------------
Cl.nobilisRC6b          CTCAAAAAAAC--AGGG-TT-TGTATCGAATAAAAGTATATACTTCGACT
Chl.fragrans            --------------------------------------------------
Cl.miniata              --------------------------------------------------
Cl.caulescens8092       CTCAAAAAAAC--AGGG-TT-TGTATCGAATAAA-GTATATACTTCGACT
Cl.miniataRC14          CTCAAAAAAAC--AGGG-TT-TGTATCGAATAAA-GTATATACTTCGACT
Cl.gardenii8093         CTCAAAAAAAC--AGGG-TT-TGTATCGAAATAAAGTATATACTTCGGCT
Cl.cyrtanthiflor8094    CTCAAAAAAAC--AGGGGTT-TGTATCGAATAAA-GTATATACTTCGACT
Cl.miniata8095          CTCAAAAAAAAC-AGGGGGTTGGTATCGAATAAAAGCATATACTTCGACT
Cr.acauleRC38           CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Cr.acauleRC106          CTCAAAAAAAC--AGGGGTT--GTATCGAATAAA-GTATATACTTCGACT
Cr.paludosumRC41        CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Cr.buphanoidesRC102     CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Cr.campanulatum7167     CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Cr.carolschmidRC97      CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GCATATACTTCGACT
Cr.euchrophyllumRC96    CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Cr.foetidumRC98         CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Cr.graminicola7630      CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Cr.lineareRC99          CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Cr.minimumRC37          CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Cr.nearmacowaniRC100    CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Cr.variabileRC44        CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Cr.moorei               --------------------------------------------------
Cr.moorei7921           CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Cr.bulbispermumRC95     CTCAAAAAAAC--AGGGG-TTTGTATCGAATAAA-GTATATACTTCGACT
Cr.lugardii7632         CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Cr.macowanii7168        CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Cr.buphanoides7631      --------------------------------------------------
Cr.acaulglaucRC105      CTCAGAAAAAC--AGGGGTTTTGTATCGCAATCAAGCATATTACTCCACT
Cy.elatus7636           CTCAAAAAAAC--AGGG--TTTGTATCGAATAAAAGTATATACTTC----
Cy.herreiRC86           --------------------------------------------------
Cy.breviflorusRC88      --------------------------------------------------
Cy.mackeniiRC87         TCAAAAAAAAC--AGGG--TTTGTATCGAAATAAAGTATATACT-C----
Cy.montanus7638         CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Euch.grandiflora        --------------------------------------------------
Eucr.bicolor            --------------------------------------------------
Eur.amboinensis         --------------------------------------------------
Eus.darwinii            --------------------------------------------------
Cy.sanguineusRC94       CTCAAAAAAAC--AGGGG-TTGGTATCGAATAAAGGTATAAACTCCGACT
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                        1201                                                1250
Cy.brachyscyphus7204 CTCAAAAAAAC--AGGGG-TTTGTATCGAATAAA-GTATATACTTCGACT
Cy.elatus7198        CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Cy.ochroleucus7639   CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Cy.elatusRC93        ----------------------------------------------------
Cy.eucallusRC79      ----------------------------------------------------
Cy.falcatus7637      CTCAAAAAAAC--AGGG---------------------------------
Cy.loddigesianus7203 CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Cy.smithiae7214      CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Cy.herrei7194        ----------------------------------------------------
Cy.labiatus7212      CTCAAAAAAAC--AGAGGTATTGTAT---AT------------------
Cy.staadensis7316    ----------------------------------------------------
Cy.obliquus7278      ----------------------------------------------------
Ge.namaquensisAMV635 CTCAAAAAAAC--AGGG--CTTGTATCGAATAAA-GTATATACCTTCGAC
Hae.crispus7260      ----------------------------------------------------
Hae.roseus           ----------------------------------------------------
Hae.albiflos7517     CTCAAAAAAAC--AGGG--TTTG--------------------------
Gal.elwesii          CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Gal.ikariae          CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Gal.alpinus          CTCAGAAAAAC--AGGG--TTTGTATGGAATAAA-GTATATACTTCGACT
Gal.cilicicus        CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Hae.crispus7252      CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Gal.woronowii        CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Gal.lagodechianus    CTCAAAAA--C--AGGTTGTTTGTATCGAATAAA-GTATATACTTCGACT
Gal.nivalis          CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Gal.plivatus         CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Gal.reginaeolgae     CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Gal.regianeolgae     CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Gal.fosteri          CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCAACT
Gal.transcaucasicus  CTCAAAAAAAC--AGGG--TTTGTATCGAATAGA-GTATATACTTCGACT
Hae.montanus7163     CTCGGGAAAACC-AGGG--GTTGTATCGAAAAAAAGTATATACTTCCACT
Hae.coccineusAMV632  ----------------------------------------------------
Ne.bowdenii          ----------------------------------------------------
Hym.caribaea         ----------------------------------------------------
Hip.stylosum         ----------------------------------------------------
Lyc.traubii          ----------------------------------------------------
Na.tazetta           ----------------------------------------------------
Lap.martinezii       CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Leu.aestivum         CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Leu.aestivumpulchel  CTCAAAAAAAC--AGGG--TTTGAATCGAATAAA-GTATATACTTCGACT
Leu.autumnale        CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Leu.vernumcarpaticu  CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Na.bicolor           CTCAAAAAAGC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Ne.laticoma8090      CTCAAAAAAAC--AGGGG-TTTGTATCGAAATAAAGTATATACTTCGACT
Hip.sp.7446          ----------------------------------------------------
No.recurvata         ----------------------------------------------------
Na.sp.7607           CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Na.sp.7608           CTCAAAAAAGC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Par.weberbaueri      ----------------------------------------------------
Sten.variegatum      ----------------------------------------------------
Str.watermeyeri      ----------------------------------------------------
Ung.tadshicorum      ----------------------------------------------------
Va.parviflorum       ----------------------------------------------------
Phae.dubia           ----------------------------------------------------
Urc.peruviana        ----------------------------------------------------
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                    1201                                                1250
Rho.bifida          --------------------------------------------------
Sc.multiflorus      --------------------------------------------------
Sc.membranaceus7246 CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Ze.candida          --------------------------------------------------
Str.salteri7245     CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Ster.lutea          TTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Pan.canariense      CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Va.parviflora       CTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGACT
Sc.multiflorus7919  --------------------------------------------------
Sc.membranaceus7917 --------------------------------------------------
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                        1251                                                1300
Ac.valentina            TT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACGGT
Ac.fabrei               TT--CGTGGGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACGGT
Ac.nicaeensis           TT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACGGT
Ac.longifolia           TT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACGGT
Ac.rosea                TT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTATGGT
Ac.tingitana            TT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACGGT
Ac.trichophylla         TT--CGTGTGCTAGAA-CTTTA---GCTTG-TAAACATAAAA-GTACGGT
Ac.autumnalis           TT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACGGT
Bo.disticha7172         TT--CGTGTGCTAGAA-CTTTA---GCCCG-TAAACATAAAA-GTACGGT
Br.striata              --------------------------------------------------
Cro.flava7256           TTT-CGTGTGCTAGAA-CTTTA---GCCCGGTAAACATAAAAAGTAC---
Ama.belladonna          --------------------------------------------------
Br.radulosanata7629     TTT-CGTGTGCTAGAAACTTTA---GCCCG-TAAACATTAAAAGTACGGT
Br.gregaria7157         TT--CTTGTCAGAGTATATTTA--------------------------
Ama.belladonnaRHA28     --------------------------------------------------
Ca.lutea                --------------------------------------------------
Cl.nobilisRC6b          TT--CGTGTGCTAGAA-CTTTA---GCTCGGTAAGCATAAAA-GTACGGT
Chl.fragrans            --------------------------------------------------
Cl.miniata              --------------------------------------------------
Cl.caulescens8092       TT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAGCATAAAA-GTACGGT
Cl.miniataRC14          TT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAGCATAAAA-GTACGGT
Cl.gardenii8093         TT--CGTGGGCTAGA--CTTTA---GCTCG-TAAGCATAAAA-GT-CGGT
Cl.cyrtanthiflor8094    TT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAGCATAAAAAGTACGGC
Cl.miniata8095          TTT-CGGGTGCTAGAA-CTTTA---GCTCGGTAAGCATTAAAAGTACGGT
Cr.acauleRC38           TT---CGGGGCTAGAA-CTTTA---GCCCG-TAAACATAAAA-GTACGGT
Cr.acauleRC106          TT--CGTGTGCTAGAA-CTTTA---GCCCG-TAAACATTAAAAGTACGGT
Cr.paludosumRC41        TT--CGTGTGCTAGAA-CTTTA---GCCCG-TAAACATAAAA-GTACGGT
Cr.buphanoidesRC102     TT--CGTGTGCTAGAA-CTTTA---GCCCG-TAAACATAAAA-GTACGGT
Cr.campanulatum7167     TT--CGTGTGCTAGAA-CTTTA---GCCCG-TAAACATAAAA-GTACGGT
Cr.carolschmidRC97      TT---CGGTGCTAGAA-CTTTA---GCCCG-TAAACATAAAA-GTACGGT
Cr.euchrophyllumRC96    TT--CGTGTGCTAGAA-CTTTA---GCCCG-TAAACATAAAA-GTACGGT
Cr.foetidumRC98         TT--CGTGTGCTAGAA-CTTTA---GCCCG-TAAACATAAAA-GTACGGT
Cr.graminicola7630      TT--CGTGTGCTAGAA-CTTTA---GCCCG-TAAACATTAAAAGTACGGT
Cr.lineareRC99          TT--CGTGTGCTAGAA-CTTTA---GCCCG-TAAACATAAAA-GTACGGT
Cr.minimumRC37          TT--CGTGTGCTAGAA-CTTTA---GCCCG-TAAACATAAAA-GTACGGT
Cr.nearmacowaniRC100    TT--CGTGTGCTAGAA-CTTTA---GCCCG-TAAACATAAAA-GTACGGT
Cr.variabileRC44        TT--CGTGTGCTAGAA-CTTTA---GCCCG-TAAACATAAAA-GTACGGT
Cr.moorei               --------------------------------------------------
Cr.moorei7921           TT--CGTGTGCTAGAA-CTTTA---GCCCGTAAAACATAAAAGGTACGGT
Cr.bulbispermumRC95     TT--CGTG-GCTAGAA-CTTTA---GCCCGTAAAACATAAAA-GTACGGT
Cr.lugardii7632         TT--CGTGTGCTAGAA-CTTTA---GCCCG-TAAACATAAAA-GTACGGT
Cr.macowanii7168        TT--CGTGTGCTAGAA-CTTTA---GCCCG-TAAACATAAAA-GTACGGT
Cr.buphanoides7631      --------------------------------------------------
Cr.acaulglaucRC105      TTTGGGGGGGGCCAAAACTTTAAA-GCCGG-TAAACA-A----C-A---T
Cy.elatus7636           --------------------------------------------------
Cy.herreiRC86           --------------------------------------------------
Cy.breviflorusRC88      --------------------------------------------------
Cy.mackeniiRC87         --------------------------------------------------
Cy.montanus7638         TT--CTTG----------------------------------------
Euch.grandiflora        --------------------------------------------------
Eucr.bicolor            --------------------------------------------------
Eur.amboinensis         --------------------------------------------------
Eus.darwinii            --------------------------------------------------
Cy.sanguineusRC94       TTT-CG-G-G--------------------------------------
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                        1251                                                1300
Cy.brachyscyphus7204    TCT--G-G-G-----------------------------------------
Cy.elatus7198           TT--CGTGTGCTAGAAACTTTA-----------------------------
Cy.ochroleucus7639      TT--CTTGTG-AAAAAACTTTAAAA--------------------------
Cy.elatusRC93           ------------------------------------------------
Cy.eucallusRC79         ------------------------------------------------
Cy.falcatus7637         ------------------------------------------------
Cy.loddigesianus7203    TT--CGTGTGCTAGAAACTTTA-----------------------------
Cy.smithiae7214         TT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACGGT
Cy.herrei7194           ------------------------------------------------
Cy.labiatus7212         ------------------------------------------------
Cy.staadensis7316       ------------------------------------------------
Cy.obliquus7278         ------------------------------------------------
Ge.namaquensisAMV635    TTT-CGTGCGCCAGAAACTTTA---GC----T---C-------------
Hae.crispus7260         ------------------------------------------------
Hae.roseus              ------------------------------------------------
Hae.albiflos7517        ------------------------------------------------
Gal.elwesii             TT--CATGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACGGT
Gal.ikariae             TT--CATGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACGGT
Gal.alpinus             TT--CATGTGCTAGAA-CTTTA---GCTGG-TAAACATAAAA-GTACGGT
Gal.cilicicus           TT--CATGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACGGT
Hae.crispus7252         TT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAGCATAAAA-GTACGGT
Gal.woronowii           TT--CATGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACGGT
Gal.lagodechianus       TT--CATGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACGGT
Gal.nivalis             TT--CATGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACGGT
Gal.plivatus            TT--CATGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACGGT
Gal.reginaeolgae        TT--CATGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACGGT
Gal.regianeolgae        TT--CATGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACGGT
Gal.fosteri             TT--CATGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACGGT
Gal.transcaucasicus     TT--CATGTGCTAGAA-CTTTA---GCTCG-TAGACATAAAA-GTACGGT
Hae.montanus7163        TT--CGTGTGCTAGAACTTTTA---GCTCG-T-----TAA----------
Hae.coccineusAMV632     ------------------------------------------------
Ne.bowdenii             ------------------------------------------------
Hym.caribaea            ------------------------------------------------
Hip.stylosum            ------------------------------------------------
Lyc.traubii             ------------------------------------------------
Na.tazetta              ------------------------------------------------
Lap.martinezii          TT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACGGT
Leu.aestivum            TT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACGGT
Leu.aestivumpulchel     TT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACGGT
Leu.autumnale           TT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACGGT
Leu.vernumcarpaticu     TT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACGGT
Na.bicolor              TT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACGGT
Ne.laticoma8090         TTTCGGGGTGCTAAAACTTTTA---GCCCG-TAAACATAAAAGGTACGGG
Hip.sp.7446             ------------------------------------------------
No.recurvata            ------------------------------------------------
Na.sp.7607              TT--CGTGTGCTAAGAACTTTA---GCTCG-TAAACCATTAAAGTACCGG
Na.sp.7608              TT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACGGT
Par.weberbaueri         ------------------------------------------------
Sten.variegatum         ------------------------------------------------
Str.watermeyeri         ------------------------------------------------
Ung.tadshicorum         ------------------------------------------------
Va.parviflorum          ------------------------------------------------
Phae.dubia              ------------------------------------------------
Urc.peruviana           ------------------------------------------------
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                     1251                                                1300
Rho.bifida           --------------------------------------------------
Sc.multiflorus       --------------------------------------------------
Sc.membranaceus7246  TT--CGTGCGGCTAGAACTTTA---GCTCG-TAAACATAAAA-GTACGGT
Ze.candida           --------------------------------------------------
Str.salteri7245      TT--CGTGTGCTAGAA-CT----------------------------
Ster.lutea           TT--CGTGTGCTAGAA-CTTTA---GCTAG-TAAACATAAAA-GTACGGT
Pan.canariense       TT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACGGT
Va.parviflora        TT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACGGT
Sc.multiflorus7919   --------------------------------------------------
Sc.membranaceus7917  --------------------------------------------------
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                        1301                                                1350
Ac.valentina            A--CG-CACCTTTTTGCG-AAG-ATTA--GGTTCGGGG----TTATTAGA
Ac.fabrei               A--CG-CACCTTTTTGCG-AAG-ATTA--GGTTCGGGG----TTATTAGA
Ac.nicaeensis           A--CG-CCCCTTTTTGCG-AAG-ATTA--GGTTCGGGG----TTATTAGA
Ac.longifolia           A--CG-CACCTTTTTGCG-AAG-ATTA--GGTTCGGGG----TTATTAGA
Ac.rosea                A--CG-CACCTTTTTGCA-AAG-ATTA--GGTTCGGGG----TTATTAGA
Ac.tingitana            A--CG-CACCTTTTTGCG-AAG-ATTA--GGTTCGGGG----TTATTAGA
Ac.trichophylla         A--CG-CACCTTTTTGCG-AAG-ATTA--GGTTCGGGG----TTATTAGA
Ac.autumnalis           A--CG-CACTTTTTTGCG-AAG-ATTA--GGTTCGGGG----TTATTAGA
Bo.disticha7172         G--CG-CACTTTTTCGCGCAAG-ATTA--GGGTCGGGGG---TCATTAGA
Br.striata              --------------------------------------------------
Cro.flava7256           --------------------------------------------------
Ama.belladonna          --------------------------------------------------
Br.radulosanata7629     G--CGGCACTTTTTTGGCGAAGACTTA----------------------
Br.gregaria7157         --------------------------------------------------
Ama.belladonnaRHA28     --------------------------------------------------
Ca.lutea                --------------------------------------------------
Cl.nobilisRC6b          A--CG-CACCTTTTTGCG-AAG-ATTAA-GGTTCGGGGG---TTATTAAA
Chl.fragrans            --------------------------------------------------
Cl.miniata              --------------------------------------------------
Cl.caulescens8092       A--CG-CACCTTTTTGCG-AAG-ATTA--GGTTCGGGGG---TTATTAGA
Cl.miniataRC14          A--CG-CACCTTTTTGCG-AAG-ATTA---GTTCGGGG----TTATTAGA
Cl.gardenii8093         A--C--CACCTTTTTGCG-AAG-ATTAA-GGTTCGGGGG---TTATTAAG
Cl.cyrtanthiflor8094    A--CG-CACCTTTTTGGCGAAG-ATTA--TGTCCCCGGGG--TTATTAGA
Cl.miniata8095          A--CC-CACCTTTTTGGCAAAGGATTA-GGTTTCGGGGGGTAATTTAAGA
Cr.acauleRC38           G--CG-CACTTTTTTGCG-AAG-ATTA--GGTTCGGGGG---TTATTAGA
Cr.acauleRC106          G--CG-CACTTTTTTGCG-AAG-ATTTAGGGTTCGGGGG---TTATTAGA
Cr.paludosumRC41        G--CG-CACTTTTTTGCG-AAG-ATTA--GGTTCGGGG----TTATTAGA
Cr.buphanoidesRC102     G--CG-CACTTTTTTGCG-AAG-ATTA--GGTTCGGGG----TTATTAGA
Cr.campanulatum7167     G--CG-CACTTTTTTGCG-AAA-ATTA--GGTTCGGGG----TTATTAGA
Cr.carolschmidRC97      G--CG-CACTTTTTTGCCGAAG-ATTAA-GGTTCGGGGG---TTATTAGA
Cr.euchrophyllumRC96    G--CG-CACTTTTTTGCG-AAG-ATTA--GGTTCGGGG----TTATTAGA
Cr.foetidumRC98         G--CG-CACTTTTTTGCG-AAG-ATTA--GGTTCGGGG----TTATTAGA
Cr.graminicola7630      G--CG-CACTTTTTTGCG-AAG-ATTAA-GGTTCGGGGG---TTATTTAG
Cr.lineareRC99          G--CG-CACTTTTTTGCG-AAG-ATTA--GGTTCGGGG----TTATTAGA
Cr.minimumRC37          G--CG-CACTTTTTTGCG-AAG-ATTA--GGTTCGGGG----TTATTAGA
Cr.nearmacowaniRC100    G--CG-CACTTTTTTGCG-AAG-ATTA--GGTTCGGGG----TTATTAGA
Cr.variabileRC44        G--CG-CACTTTTTTGCG-AAG-ATTA--GGTTCGGGGG---TTATTAGA
Cr.moorei               --------------------------------------------------
Cr.moorei7921           G--CCGCACTTTTTTGCGAAAA-ATTA--GGTTCCGGGGG--TTATTAGA
Cr.bulbispermumRC95     G--CG-CACTTTTTTTGCGAAG-ATTA---GGTCGGGGG---TATTTAGA
Cr.lugardii7632         G--CG-CACTTTTTTGCG-AAG-ATTA--GGTTCGGGG----TTATTAAA
Cr.macowanii7168        G--CG-CACTTTTTTGCCGAAA-ATTA--GGTTCGGGGGG--TTATTAGA
Cr.buphanoides7631      --------------------------------------------------
Cr.acaulglaucRC105      -------A-----------AAA-A--A----------------------
Cy.elatus7636           --------------------------------------------------
Cy.herreiRC86           --------------------------------------------------
Cy.breviflorusRC88      --------------------------------------------------
Cy.mackeniiRC87         --------------------------------------------------
Cy.montanus7638         --------------------------------------------------
Euch.grandiflora        --------------------------------------------------
Eucr.bicolor            --------------------------------------------------
Eur.amboinensis         --------------------------------------------------
Eus.darwinii            --------------------------------------------------
Cy.sanguineusRC94       --------------------------------------------------
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                        1301                                                1350
Cy.brachyscyphus7204    --------------------------------------------------
Cy.elatus7198           --------------------------------------------------
Cy.ochroleucus7639      --------------------------------------------------
Cy.elatusRC93           --------------------------------------------------
Cy.eucallusRC79         --------------------------------------------------
Cy.falcatus7637         --------------------------------------------------
Cy.loddigesianus7203    --------------------------------------------------
Cy.smithiae7214         A--CG--CACCTTTTGCGAAGA-AT-A---GTTCGGGG----TTATTAGA
Cy.herrei7194           --------------------------------------------------
Cy.labiatus7212         --------------------------------------------------
Cy.staadensis7316       --------------------------------------------------
Cy.obliquus7278         --------------------------------------------------
Ge.namaquensisAMV635    --------------------------------------------------
Hae.crispus7260         --------------------------------------------------
Hae.roseus              --------------------------------------------------
Hae.albiflos7517        --------------------------------------------------
Gal.elwesii             A--CG-CACCTTTTTGC-GAAG-ATTA--GGTTCGGGG----TTATTAGA
Gal.ikariae             A--CG-CACCTTTTTGC-GAAG-ATTA--GGTTCGGGG----TTATTAGA
Gal.alpinus             A--CG-CACCTTTTTGC-GAAG-ATTA--GGTTCGGGG----TTATTAGA
Gal.cilicicus           A--CG-CACCTTTTTGC-GAAG-ATTA--GGTTCGGGG----TTATTAGA
Hae.crispus7252         A--CG-CACCTTTTTGC-GAAG-ATTA--GGTTCGGGGG---TTATTAGA
Gal.woronowii           A--CG-CACCTTTTTGC-GAAG-ATTA--GGTTCGGGG----TTATTAGA
Gal.lagodechianus       A--CG-CACCTTTTTGC-GAAG-ATTA--GGTTCGGGG----TTATTAGA
Gal.nivalis             A--CG-CACTTTTTTGC-GAAG-ATTG--GGTTCGGGC----TTATTAGA
Gal.plivatus            A--CG-CACCTTTTTGC-GAAG-ATTA--GGTTCGGGG----TTATTAGA
Gal.reginaeolgae        A--CG-CACTTTTTTGC-GAAG-ATTA--GGTTCGGGG----TTATTAGA
Gal.regianeolgae        A--CG-CACTTTTTTGC-GAAG-ATTA--GGTTCGGGG----TTATTAGA
Gal.fosteri             A--CG-CACCTTTTTGC-GAAG-ATTA--GGTTCGGGG----TTATTAGA
Gal.transcaucasicus     A--CG-CACCTTTTTGC-GAAG-ATTA--GGTTCGGGG----TTATTAGA
Hae.montanus7163        --------------------------------------------------
Hae.coccineusAMV632     --------------------------------------------------
Ne.bowdenii             --------------------------------------------------
Hym.caribaea            --------------------------------------------------
Hip.stylosum            --------------------------------------------------
Lyc.traubii             --------------------------------------------------
Na.tazetta              --------------------------------------------------
Lap.martinezii          A--CG-CACCTTTTTGC-GAAG-ATTA---GTTCGGGG----TTATTAGA
Leu.aestivum            A--CG-CACCTTTTTGC-GAAG-ATTA---GGTTCGGGG---TTATTAGA
Leu.aestivumpulchel     A--CG-CACCTTTTTGC-GAAG-ATTA---GGTTCGGGG---TTATTAGA
Leu.autumnale           A--CG-CACTTTTTTGC-GAAG-ATTA---GGTTCGGGG---TTATTAGA
Leu.vernumcarpaticu     A--CG-CACCTTTTTGC-GAAG-ATTA---GGTTCGGGG---TTATTAGA
Na.bicolor              A--CG-CACCTTTTTGC-GAAG-ATTA---GGTTCGGGG---TTCTTAGA
Ne.laticoma8090         GG-CG-CCTTTTTTTGC-GAAG-AATAA--GGTTCCGGGGGGTTATTAGA
Hip.sp.7446             --------------------------------------------------
No.recurvata            --------------------------------------------------
Na.sp.7607              TTACG-CACC----------------------------------------
Na.sp.7608              A--CG-CACCTTTTTGC-GAAG-ATTA----GTTCGGGG---TTCTTAGA
Par.weberbaueri         --------------------------------------------------
Sten.variegatum         --------------------------------------------------
Str.watermeyeri         --------------------------------------------------
Ung.tadshicorum         --------------------------------------------------
Va.parviflorum          --------------------------------------------------
Phae.dubia              --------------------------------------------------
Urc.peruviana           --------------------------------------------------
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                    1301                                                1350
Rho.bifida          --------------------------------------------------
Sc.multiflorus      --------------------------------------------------
Sc.membranaceus7246 A--CG-CACCCTTTTGCCGAAG-ATTAA--GGTTCGGGG---TCATTAGA
Ze.candida          --------------------------------------------------
Str.salteri7245     --------------------------------------------------
Ster.lutea          A--CG-CACCTTTTTGC-GAAG-ATTA---GGTTCGGGG---TTATTAGA
Pan.canariense      A--CG-CACCTTTTTGC-GAAG-ATTA---GGTTCGGGG---TTCTTAGA
Va.parviflora       A--CG-CACCTTTTTGC-GAAG-ATTA---GGTTCGGGG---TTATTAGA
Sc.multiflorus7919  --------------------------------------------------
Sc.membranaceus7917 --------------------------------------------------
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                        1351                                                1400
Ac.valentina            A----GAATTTTTT---AC-GGAAGAAG-AAGAGGTTCTTTC----TTTG
Ac.fabrei               A----GAATTTTTT---AC-GGAAGAAA-AAGAGGTTCTTTC----TTTG
Ac.nicaeensis           A----GAATTTTTT---AC-GGAAGAAG-AAGAGGTTCTTTC----TTTG
Ac.longifolia           A----GAATTTTTT---AC-GGAAGAAG-AAGAGGTTCTTTC----TTTG
Ac.rosea                A----GAATTTTTT---AC-GGAAGAAG-AAGAGGTTCTTTC----TTTG
Ac.tingitana            A----GAATTTTTT---AC-GGAAGAAG-AAGAGGTTCTTTC----TTTG
Ac.trichophylla         A----GAATTTTTT---AC-GGAAGAAG-AAGAGGTTCTTTC----TTTG
Ac.autumnalis           A----GAATTTTTT---AC-GGAAGAAG-AAGAGGTTCTTTC----TTTG
Bo.disticha7172         A----GAATTTTTT---ACCGGAAGAAG-AACAGGTCCTTTC----TTTG
Br.striata              -------------------------------------------------
Cro.flava7256           -------------------------------------------------
Ama.belladonna          -------------------------------------------------
Br.radulosanata7629     -------------------------------------------------
Br.gregaria7157         -------------------------------------------------
Ama.belladonnaRHA28     -------------------------------------------------
Ca.lutea                -------------------------------------------------
Cl.nobilisRC6b          AAA--AAATTTTTT---AC-GGAAGAAAAACAGGGTTCTTTC----TTTG
Chl.fragrans            -------------------------------------------------
Cl.miniata              -------------------------------------------------
Cl.caulescens8092       AA---GAAATTTTTTTTACGGAAGGAAG-AACAGGTTCTTTTC---TTTG
Cl.miniataRC14          A----GAATTTTTT---AC-GGAAGAAG-AACAG-TTCTTTC----TTTG
Cl.gardenii8093         AA---GAATTTTTT---AC-GGAAGAAGAAAAAGGTCCTTTT----TTTG
Cl.cyrtanthiflor8094    A----AAATTTTTT---AC-GGAAGAAGAAAGGGTTTTTTTT----TTTG
Cl.miniata8095          A--AAAAATTTTTTTT-ACCGGAAGAAGAAACAGAGGGTCTTTTCCTTTG
Cr.acauleRC38           A----GAATTTTT----AC-GGAAGAAAGAACAAGTTCTTTC----TTTG
Cr.acauleRC106          A---GGAATTTTTT---AC-GGAAGAAG-AACAAGGGTTCTTTC--TTTG
Cr.paludosumRC41        A----GAATTTTTT---ACGGGAAGAAG-AACAGGGTCTTTCT---TTGG
Cr.buphanoidesRC102     A----GAATTTTTT---ACGGGAAGGAAGAACAGGGTTCTTTCC-TTTGG
Cr.campanulatum7167     A----GAATTTTTT---AC-GGAAGAAG-AACAGGTTCTTTCT---TTGG
Cr.carolschmidRC97      A---GAAATTTTTT---ACGGGAAGAAG-AACAGGTCCTTTC----TTTG
Cr.euchrophyllumRC96    A----GAATTTTTT---AC-GGAAGAAG-AACAGGTTCTTTC---TTTGG
Cr.foetidumRC98         A----GAATTTTTT---ACGGGAAGAAG-AACAGGGTCTTTC----TTTG
Cr.graminicola7630      AA---GAATTTTTT---ACGG-AAGAAAGAACAGGGTCTTTC----TTGG
Cr.lineareRC99          A----GAATTTTTT---ACGGGA-GAAGA-ACAGGGTCCTTTC---TTGG
Cr.minimumRC37          A----GAATTTTTT---ACGGGAAGAAG-AACAGGGTTCTTTC---TTTG
Cr.nearmacowaniRC100    A----GAATTTTTT---AC-GGAAGAAG-AACAGGTTCTTTC----TTTG
Cr.variabileRC44        A----GAATTTTTT---TCGGGAAGAAG-AACAGGTTCTTTC----TTTG
Cr.moorei               -------------------------------------------------
Cr.moorei7921           AA---GAAATTTTTT--ACCGGAAGAA----------------------
Cr.bulbispermumRC95     A----GAATTTTTT---ACGG-AAGAAG-AACAGGT-CTTTC---TTTGG
Cr.lugardii7632         AAA--AAATTTTTT---ACGGGAAGAAG-AACAGGGTCTTTCC---TTGG
Cr.macowanii7168        AA---GAATTTTTTT--ACGGGAAGAAA-AACAGGGTCTTTC---TTTTG
Cr.buphanoides7631      -------------------------------------------------
Cr.acaulglaucRC105      -------------------------------------------------
Cy.elatus7636           -------------------------------------------------
Cy.herreiRC86           -------------------------------------------------
Cy.breviflorusRC88      -------------------------------------------------
Cy.mackeniiRC87         -------------------------------------------------
Cy.montanus7638         -------------------------------------------------
Euch.grandiflora        -------------------------------------------------
Eucr.bicolor            -------------------------------------------------
Eur.amboinensis         -------------------------------------------------
Eus.darwinii            -------------------------------------------------
Cy.sanguineusRC94       -------------------------------------------------
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                        1351                                                1400
Cy.brachyscyphus7204    --------------------------------------------------
Cy.elatus7198           --------------------------------------------------
Cy.ochroleucus7639      --------------------------------------------------
Cy.elatusRC93           --------------------------------------------------
Cy.eucallusRC79         --------------------------------------------------
Cy.falcatus7637         --------------------------------------------------
Cy.loddigesianus7203    --------------------------------------------------
Cy.smithiae7214         A----GAATTTTTT---ACGG-AAGAAG-AACA----------------
Cy.herrei7194           --------------------------------------------------
Cy.labiatus7212         --------------------------------------------------
Cy.staadensis7316       --------------------------------------------------
Cy.obliquus7278         --------------------------------------------------
Ge.namaquensisAMV635    --------------------------------------------------
Hae.crispus7260         --------------------------------------------------
Hae.roseus              --------------------------------------------------
Hae.albiflos7517        --------------------------------------------------
Gal.elwesii             A----GAATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TTTG
Gal.ikariae             A----GAATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TTTG
Gal.alpinus             A----GAATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TTTG
Gal.cilicicus           A----GAATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TTTG
Hae.crispus7252         A----GAATTTTTT---ACGG-AAGAAG-AACAGGGTCTTTC-----TTG
Gal.woronowii           A----GAATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TTTG
Gal.lagodechianus       A----GAATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TTTG
Gal.nivalis             A----GAATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TTTG
Gal.plivatus            A----GAATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TTTG
Gal.reginaeolgae        A----GAATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TTTG
Gal.regianeolgae        A----GAATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TTTG
Gal.fosteri             A----GAATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TTTG
Gal.transcaucasicus     A----GAATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TTTG
Hae.montanus7163        --------------------------------------------------
Hae.coccineusAMV632     --------------------------------------------------
Ne.bowdenii             --------------------------------------------------
Hym.caribaea            --------------------------------------------------
Hip.stylosum            --------------------------------------------------
Lyc.traubii             --------------------------------------------------
Na.tazetta              --------------------------------------------------
Lap.martinezii          A----GAATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TTTG
Leu.aestivum            A----GAATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TTTG
Leu.aestivumpulchel     A----GAATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TTTG
Leu.autumnale           A----GAATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TTTG
Leu.vernumcarpaticu     A----GAATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TTTG
Na.bicolor              A----GAATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TTTG
Ne.laticoma8090         AA---GAAATTTTTTTT-CGGAAAGAAAAAACAGGTCCTTTC-TTTTGGA
Hip.sp.7446             --------------------------------------------------
No.recurvata            --------------------------------------------------
Na.sp.7607              --------------------------------------------------
Na.sp.7608              A----GAATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TTTG
Par.weberbaueri         --------------------------------------------------
Sten.variegatum         --------------------------------------------------
Str.watermeyeri         --------------------------------------------------
Ung.tadshicorum         --------------------------------------------------
Va.parviflorum          --------------------------------------------------
Phae.dubia              --------------------------------------------------
Urc.peruviana           --------------------------------------------------
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                    1351                                                1400
Rho.bifida          --------------------------------------------------
Sc.multiflorus      --------------------------------------------------
Sc.membranaceus7246 AA---GAATTTTTTT--ACGGGAAGAAGAAAGAGGGTCTTTCC----TTG
Ze.candida          --------------------------------------------------
Str.salteri7245     --------------------------------------------------
Ster.lutea          A----GCATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TTTG
Pan.canariense      A----GAATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TTTG
Va.parviflora       A----GAATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TTTG
Sc.multiflorus7919  --------------------------------------------------
Sc.membranaceus7917 --------------------------------------------------
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                        1401                                                1450
Ac.valentina            ATGTTTCCAAAAACAACTTCTTTTAC-TTTACA-TGGATCACATAGAGAA
Ac.fabrei               ATGTTTCCAAAAACAACTTCTTTTAC-TTTACA-TGGATCACATAGAGAA
Ac.nicaeensis           ATGTTTCCAAAAACAACTTCTTTTAC-TTTACA-TGGATCACATAGAGAA
Ac.longifolia           ATGTTTCCAAAAACAATTTCTTTTAC-TTTACA-TGGATCACATAGAGAA
Ac.rosea                ATGTTTCCAAAAACAACTTCTTTTAC-TTTACA-TGGATCGCATAGAGAA
Ac.tingitana            ATGTTTCCCAAAACAACTTCTTTTAC-TTTACA-TGGATCACATAGAGAA
Ac.trichophylla         ATGTTTCCCAAAACAACTTCTTTTAC-TTTACA-TGGATCACATAGAGAA
Ac.autumnalis           ATGTTTCCCAAAACAACTTCTTTTAC-TTTACA-TGGATCACATAGAGAA
Bo.disticha7172         ATCTTTCCCAAAACAACTCCTTTTA------------------------
Br.striata              --------------------------------------------------
Cro.flava7256           --------------------------------------------------
Ama.belladonna          --------------------------------------------------
Br.radulosanata7629     --------------------------------------------------
Br.gregaria7157         --------------------------------------------------
Ama.belladonnaRHA28     --------------------------------------------------
Ca.lutea                --------------------------------------------------
Cl.nobilisRC6b          ATCTTTCCCAAAACAACTCCTTT-ACTTTTACA-TGGATCGCATAAAGAA
Chl.fragrans            --------------------------------------------------
Cl.miniata              --------------------------------------------------
Cl.caulescens8092       ATCTTTCCCAAAACAACTCCTTTTACTTTTACC-TGGATCACATAGAGAA
Cl.miniataRC14          ATCTTTCCCAAAACAACTCCTTTTAC-TTTACA-TGGATCGCATAGAGAA
Cl.gardenii8093         ATTTTTCCCAAAAAAACTCCTTTT------------------------
Cl.cyrtanthiflor8094    ATCTTT-----------TT-----------------------------
Cl.miniata8095          ATCCTTTCC----C--C-C----------------------------
Cr.acauleRC38           ATCTTTCCCAAACCAACTCCTTTTAC-TTTACA-TGGATCGCATAGAGAA
Cr.acauleRC106          ATCCTTCCCAAAACAACCCCTTTTAC-TTT--------------------
Cr.paludosumRC41        ATCTTTCCCAAAACAACTCCTTTTAC-TTTACA-TGGATCGCATAGAGAA
Cr.buphanoidesRC102     GTCTTTCCCCAAACAACTCCTTTTAC-TTTACATTGGATCGCATAGAGGA
Cr.campanulatum7167     ATCTTTCCCAAAACAACTCCTTTTAC-TTTACA-TGGATCGCATAGAGAA
Cr.carolschmidRC97      ATCTTTCCCAAAACAACTCCTTTTACTTTTACA-TGGATCGCATAAAGAA
Cr.euchrophyllumRC96    ATCTTTCCCAAAACAACTCCTTTTAC-TTTACA-TGGATCGCATAGAGAA
Cr.foetidumRC98         ATCTTTCCCAAAACAACTCCTTTTAC-TTTACA-TGGATCGCCTAGAGAA
Cr.graminicola7630      ATCTTTCCCAAAACACTCCCTTTTAC-TTTACATGGGATCGCATAGAAAA
Cr.lineareRC99          ATCTTTCCCAAAACAACTCCTTTTAC-TTT-CATTGGATCGCATAGAAAA
Cr.minimumRC37          ATCTTTCCCAAAACCAACTCCTTTTACTTTACATGGGATCGCATAGAGAA
Cr.nearmacowaniRC100    ATCTTTCCCAAAACAACTCCTTTTAC-TTTAC--TGGATCGCATAGAGAA
Cr.variabileRC44        ATCTTTCCCAAAACAACTCCTTTTAC-TTTACATGGGATCGCATAGAGAA
Cr.moorei               --------------------------------------------------
Cr.moorei7921           --------------------------------------------------
Cr.bulbispermumRC95     ATCTTTCCCCAAACAACTCCTTT-AC-TTTACATGGGATGC-ATAGAGAA
Cr.lugardii7632         ATCTTTCCCAAAACAACTCCTTTTAC-TTTACATGGGATCGCATAAAAAA
Cr.macowanii7168        ACCTTTCCCC-------------------------------------
Cr.buphanoides7631      --------------------------------------------------
Cr.acaulglaucRC105      --------------------------------------------------
Cy.elatus7636           --------------------------------------------------
Cy.herreiRC86           --------------------------------------------------
Cy.breviflorusRC88      --------------------------------------------------
Cy.mackeniiRC87         --------------------------------------------------
Cy.montanus7638         --------------------------------------------------
Euch.grandiflora        --------------------------------------------------
Eucr.bicolor            --------------------------------------------------
Eur.amboinensis         --------------------------------------------------
Eus.darwinii            --------------------------------------------------
Cy.sanguineusRC94       --------------------------------------------------
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                        1401                                                1450
Cy.brachyscyphus7204    --------------------------------------------------
Cy.elatus7198           --------------------------------------------------
Cy.ochroleucus7639      --------------------------------------------------
Cy.elatusRC93           --------------------------------------------------
Cy.eucallusRC79         --------------------------------------------------
Cy.falcatus7637         --------------------------------------------------
Cy.loddigesianus7203    --------------------------------------------------
Cy.smithiae7214         --------------------------------------------------
Cy.herrei7194           --------------------------------------------------
Cy.labiatus7212         --------------------------------------------------
Cy.staadensis7316       --------------------------------------------------
Cy.obliquus7278         --------------------------------------------------
Ge.namaquensisAMV635    --------------------------------------------------
Hae.crispus7260         --------------------------------------------------
Hae.roseus              --------------------------------------------------
Hae.albiflos7517        --------------------------------------------------
Gal.elwesii             ATGTTTCCCAAAACAACTTCTTTTAC-TTTACA-TGGATCACATAGAGAA
Gal.ikariae             ATGTTTCCAAAAACCACTTTTTTTAC-TTTACA-TGGATCACATAGAGAA
Gal.alpinus             ATGTTTCCCAAAACAACTTCTTTTAC-TTTACA-TGGATCACATAGAGAA
Gal.cilicicus           ATGTTTCCCAAAACAACTTCTTTTAC-TTTACA-TGGATCACATAGAGAA
Hae.crispus7252         ATCTTTCCCAAA-C-ACTCCTTTTAC-TTTACA-TGGGATGCATAGAGAA
Gal.woronowii           ATGTTTCCCAAAACAACTTCTTTTAC-TTTACA-TGGATCACATAGAGAA
Gal.lagodechianus       ATGTTTCCCAAAACAACTTCTTTTAC-TTTACA-TGGATCACATAGAGAA
Gal.nivalis             ATGTTTCCAAAAACAACTTCTTATAC-TTTACA-TGGATCACATAGAGAA
Gal.plivatus            ATGTTTCCAAAAACAACTTCTTTTAC-TTTACA-TGGATCACATAGAGAA
Gal.reginaeolgae        ATGTTTCCAAAAACAACTTCTTATAC-TTTACA-TGGATCACATAGAGAA
Gal.regianeolgae        ATGTTTCCAAAAACAACTTCTTATAC-TTTACA-TGGATCACATAGAGAA
Gal.fosteri             ATGTTTCCCAAAACAACTTCTTTTAC-TTTACA-TGGATCACATAGAGAA
Gal.transcaucasicus     ATGTTTCCCAAGACAACTTCTTTTAC-TTTACA-TGGATCACATAGAGAA
Hae.montanus7163        --------------------------------------------------
Hae.coccineusAMV632     --------------------------------------------------
Ne.bowdenii             --------------------------------------------------
Hym.caribaea            --------------------------------------------------
Hip.stylosum            --------------------------------------------------
Lyc.traubii             --------------------------------------------------
Na.tazetta              --------------------------------------------------
Lap.martinezii          ATGTTTCCCAAAACAACTCCTTTTAC-TTTACA-TGGATCACATAGAGAA
Leu.aestivum            ATGTTTCCAAAAACAACTTCTTTTAC-TTTACA-TGGATCACATAGAGAA
Leu.aestivumpulchel     ATGTTTCCAAAAACAACTTCTTTTAC-TTTACA-TGGATCACATAGAGAA
Leu.autumnale           ATGTTTCCCAAAACAACTTCTTTTAC-TTTACA-TGGATCACATAGAGAA
Leu.vernumcarpaticu     ATGTTTCCAAAAACAACTTCTTTTAC-TTTACA-TGGATCACATAGAGAA
Na.bicolor              ATGTTTCCCAAAACCACTCCTTTGAC-TTTACA-TGGATCACATAGAGAA
Ne.laticoma8090         CCTTTTCCCAAAACC--TC-TTTT---TT--------------------
Hip.sp.7446             --------------------------------------------------
No.recurvata            --------------------------------------------------
Na.sp.7607              --------------------------------------------------
Na.sp.7608              ATGTTTCCCAAAACCACTCCTTTGAC-TTTACA-TGGATCACA-------
Par.weberbaueri         --------------------------------------------------
Sten.variegatum         --------------------------------------------------
Str.watermeyeri         --------------------------------------------------
Ung.tadshicorum         --------------------------------------------------
Va.parviflorum          --------------------------------------------------
Phae.dubia              --------------------------------------------------
Urc.peruviana           --------------------------------------------------
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                    1401                                                1450
Rho.bifida          --------------------------------------------------
Sc.multiflorus      --------------------------------------------------
Sc.membranaceus7246 ATCCTT----------------------------------------------
Ze.candida          --------------------------------------------------
Str.salteri7245     --------------------------------------------------
Ster.lutea          ATGTTTCCCAAAACAACTCTTTTTAC-TTTACA-TGGATCACATAGAGAA
Pan.canariense      ATGTTTCCCAAAACAACTCCTTTTAC-TTTACA-TGGATCACATAGAGAA
Va.parviflora       ATGTTTCCAAAAACAACTCCTTTTAC-TTTACA-TGGATCACATAGAGAA
Sc.multiflorus7919  --------------------------------------------------
Sc.membranaceus7917 --------------------------------------------------
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                        1451                                                1500
Ac.valentina            CGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGACC--TAGTGAAT
Ac.fabrei               CGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGACC--TAGTGAAT
Ac.nicaeensis           CGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGACC--TAGTGAAT
Ac.longifolia           CGTATTTGGTTTTTGGATA--TTATC-CATATTAATGACC--TAGTGAAT
Ac.rosea                CGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGACC--TAGTGAAT
Ac.tingitana            CGTATTTGGTTTTTGGATA--TTATC-TGTATTAATGACC--TAGTGAAT
Ac.trichophylla         CGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGCCC--TAGTGAAT
Ac.autumnalis           CGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGACC--TAGTGAAT
Bo.disticha7172         --------------------------------------------------
Br.striata              --------------------------------------------------
Cro.flava7256           --------------------------------------------------
Ama.belladonna          --------------------------------------------------
Br.radulosanata7629     --------------------------------------------------
Br.gregaria7157         --------------------------------------------------
Ama.belladonnaRHA28     --------------------------------------------------
Ca.lutea                --------------------------------------------------
Cl.nobilisRC6b          CGTATTTTGGGTTTTGGGAAATTA------------------------
Chl.fragrans            --------------------------------------------------
Cl.miniata              --------------------------------------------------
Cl.caulescens8092       CGTA------------------------------------------------
Cl.miniataRC14          CGTATTTGGGTTTTGGATA--TTTTC-CGTATTAATGACC--TAGGGAAT
Cl.gardenii8093         --------------------------------------------------
Cl.cyrtanthiflor8094    --------------------------------------------------
Cl.miniata8095          --------------------------------------------------
Cr.acauleRC38           CGTATTTGGTATTTGGATA-TTTATC-CGGATTAATGACC--TAAGGAAC
Cr.acauleRC106          --------------------------------------------------
Cr.paludosumRC41        CGTATTTGG-------------------------------------------
Cr.buphanoidesRC102     A---------------------------------------------------
Cr.campanulatum7167     CGTATTTGGTATTTGGAT---T------------------------------
Cr.carolschmidRC97      CGTATTTGGGATTTGGATA-TTTATCCCGTATTAATGG-----A------
Cr.euchrophyllumRC96    CGTATTTGGGTATTGGATA--TTATC-C-----------------------
Cr.foetidumRC98         CGTATTTGGGGATTGGATA--TTATC-CGTATTAATGGACC-TAGGGAAT
Cr.graminicola7630      CGTATTTGGTATTGGGATA--TTATC-CGGAATTAAGGACC-TAGGGAAC
Cr.lineareRC99          CGTATTTGGTATTG--------------------------------------
Cr.minimumRC37          CGGATTTGGGAATTTGGGATATTATC-CTGATTAATGGACC-TAGTGAAT
Cr.nearmacowaniRC100    CGTATTTGGTATTTGGATA--TTATC-CGTATTAATG-ACCTAAGTGAAT
Cr.variabileRC44        CGTATTTGGTATTTGGGATA-TTATCCCGTATTAATGG-CCTAGGGGAAT
Cr.moorei               --------------------------------------------------
Cr.moorei7921           --------------------------------------------------
Cr.bulbispermumRC95     CGCATTTGGGATTTGGGATA-TTATC-CGCATTAATGGACCCAGG-AAA-
Cr.lugardii7632         CGAATTTGGGATTTGGGATA-TTATCCCGTATTTAAT-------------
Cr.macowanii7168        --------------------------------------------------
Cr.buphanoides7631      --------------------------------------------------
Cr.acaulglaucRC105      --------------------------------------------------
Cy.elatus7636           --------------------------------------------------
Cy.herreiRC86           --------------------------------------------------
Cy.breviflorusRC88      --------------------------------------------------
Cy.mackeniiRC87         --------------------------------------------------
Cy.montanus7638         --------------------------------------------------
Euch.grandiflora        --------------------------------------------------
Eucr.bicolor            --------------------------------------------------
Eur.amboinensis         --------------------------------------------------
Eus.darwinii            --------------------------------------------------
Cy.sanguineusRC94       --------------------------------------------------
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                        1451                                                1500
Cy.brachyscyphus7204    --------------------------------------------------
Cy.elatus7198           --------------------------------------------------
Cy.ochroleucus7639      --------------------------------------------------
Cy.elatusRC93           --------------------------------------------------
Cy.eucallusRC79         --------------------------------------------------
Cy.falcatus7637         --------------------------------------------------
Cy.loddigesianus7203    --------------------------------------------------
Cy.smithiae7214         --------------------------------------------------
Cy.herrei7194           --------------------------------------------------
Cy.labiatus7212         --------------------------------------------------
Cy.staadensis7316       --------------------------------------------------
Cy.obliquus7278         --------------------------------------------------
Ge.namaquensisAMV635    --------------------------------------------------
Hae.crispus7260         --------------------------------------------------
Hae.roseus              --------------------------------------------------
Hae.albiflos7517        --------------------------------------------------
Gal.elwesii             CGTATTTGGTTTT-GGATA--TTATC-CGTATTAACGAGC--TAGTGAAT
Gal.ikariae             CGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGACC--TAGTGAAT
Gal.alpinus             CGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGACC--TAGTGAAT
Gal.cilicicus           CGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGACC--TAGTGAAT
Hae.crispus7252         CGTATTTGGTTTTGGGATA--TTATC-CGCATTAATGGACC-TAGGGATC
Gal.woronowii           CGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGACC--TAGTGAAT
Gal.lagodechianus       CGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGACC--TAGTGAAT
Gal.nivalis             CGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGACC--TAGTGAAT
Gal.plivatus            CGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGATC--TAGTGAAT
Gal.reginaeolgae        CGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGACC--TAGTGAAT
Gal.regianeolgae        CGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGACC--TAGTGAAT
Gal.fosteri             CGTATTTGGTTTTTGGATA--TTATC-CATATTAATGACC--TAGTGAAT
Gal.transcaucasicus     CGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGACC--TAGTGAAT
Hae.montanus7163        --------------------------------------------------
Hae.coccineusAMV632     --------------------------------------------------
Ne.bowdenii             --------------------------------------------------
Hym.caribaea            --------------------------------------------------
Hip.stylosum            --------------------------------------------------
Lyc.traubii             --------------------------------------------------
Na.tazetta              --------------------------------------------------
Lap.martinezii          CGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGACC--TAGTGAAT
Leu.aestivum            CGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGACC--TAGTGAAT
Leu.aestivumpulchel     CGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGACC--TAGTGAAT
Leu.autumnale           CGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGACC--TAGTGAAT
Leu.vernumcarpaticu     CGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGACC--TAGTGAAT
Na.bicolor              CGTATTTGGTTTTTGGATA--TTATC-TGTATTAATGACC--TAGTGAAT
Ne.laticoma8090         --------------------------------------------------
Hip.sp.7446             --------------------------------------------------
No.recurvata            --------------------------------------------------
Na.sp.7607              --------------------------------------------------
Na.sp.7608              --------------------------------------------------
Par.weberbaueri         --------------------------------------------------
Sten.variegatum         --------------------------------------------------
Str.watermeyeri         --------------------------------------------------
Ung.tadshicorum         --------------------------------------------------
Va.parviflorum          --------------------------------------------------
Phae.dubia              --------------------------------------------------
Urc.peruviana           --------------------------------------------------
```

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                     1451                                                1500
Rho.bifida           --------------------------------------------------
Sc.multiflorus       --------------------------------------------------
Sc.membranaceus7246  --------------------------------------------------
Ze.candida           --------------------------------------------------
Str.salteri7245      --------------------------------------------------
Ster.lutea           CGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGACC--TAGTGAAT
Pan.canariense       CGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGACC--TAGCGAAT
Va.parviflora        CGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGACC--TAGTGAAT
Sc.multiflorus7919   --------------------------------------------------
Sc.membranaceus7917  --------------------------------------------------
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                        1501                                                1550
Ac.valentina            CGTTCATGATTGGTCATGATACC--------TTCTAACTAGAACAGAAAT
Ac.fabrei               CGTTCATGATTGGTCATGATACC--------TTCTAACTAGAACAGAAAT
Ac.nicaeensis           CGTTCATGATTGGTCATGATCCC--------TTCTAACTAGAACAGAAAT
Ac.longifolia           TGTTCATGATTGGTCATGATACC--------TTCTAACTAGAACAGAAAT
Ac.rosea                TGTTCATGATTGGTCATGATACC--------TTCTAACTAGAACAGAAAT
Ac.tingitana            CGTTCATGATTGGTCATGATACC--------TTCTAACTAGAACAGAAAT
Ac.trichophylla         CGTTCATGATTGGTCATGATACC--------TTCTAACTAGAACAGAAAT
Ac.autumnalis           CGTTCATGATTGGTTATGATACC--------TTCTAACTAGAACAGAAAT
Bo.disticha7172         --------------------------------------------------
Br.striata              --------------------------------------------------
Cro.flava7256           --------------------------------------------------
Ama.belladonna          --------------------------------------------------
Br.radulosanata7629     --------------------------------------------------
Br.gregaria7157         --------------------------------------------------
Ama.belladonnaRHA28     --------------------------------------------------
Ca.lutea                --------------------------------------------------
Cl.nobilisRC6b          --------------------------------------------------
Chl.fragrans            --------------------------------------------------
Cl.miniata              --------------------------------------------------
Cl.caulescens8092       --------------------------------------------------
Cl.miniataRC14          CGT-CATGA-TGG--------CC--------T--------G----GAAA-
Cl.gardenii8093         --------------------------------------------------
Cl.cyrtanthiflor8094    --------------------------------------------------
Cl.miniata8095          --------------------------------------------------
Cr.acauleRC38           CGTTCATGAATGGGCAT-AAACCCC------TTCTAACT----------T
Cr.acauleRC106          --------------------------------------------------
Cr.paludosumRC41        --------------------------------------------------
Cr.buphanoidesRC102     --------------------------------------------------
Cr.campanulatum7167     --------------------------------------------------
Cr.carolschmidRC97      --------------------------------------------------
Cr.euchrophyllumRC96    --------------------------------------------------
Cr.foetidumRC98         CGTCCTGGATTGGGCAT-A-ACCCC------TTCTAACT-----------
Cr.graminicola7630      CGTTCATGAATGGCCAT-A-ACCC-------TTCTAACTAGAAGGGAAA-
Cr.lineareRC99          --------------------------------------------------
Cr.minimumRC37          CGTTCATGATTGGGCCT-AAACACC------TTCT---------------
Cr.nearmacowaniRC100    CGTCC-TGAATGGGCCATA-ACCCC------TTCTAACTA----------
Cr.variabileRC44        CGGTCCTGGATTGGCCATA-ACACCC-----TTCT---------------
Cr.moorei               --------------------------------------------------
Cr.moorei7921           --------------------------------------------------
Cr.bulbispermumRC95     CGGTCCTGA-TGGGCC-TA-ACCCC------TCCTACCTAG---------
Cr.lugardii7632         --------------------------------------------------
Cr.macowanii7168        --------------------------------------------------
Cr.buphanoides7631      --------------------------------------------------
Cr.acaulglaucRC105      --------------------------------------------------
Cy.elatus7636           --------------------------------------------------
Cy.herreiRC86           --------------------------------------------------
Cy.breviflorusRC88      --------------------------------------------------
Cy.mackeniiRC87         --------------------------------------------------
Cy.montanus7638         --------------------------------------------------
Euch.grandiflora        --------------------------------------------------
Eucr.bicolor            --------------------------------------------------
Eur.amboinensis         --------------------------------------------------
Eus.darwinii            --------------------------------------------------
Cy.sanguineusRC94       --------------------------------------------------
```

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                        1501                                                1550
Cy.brachyscyphus7204    --------------------------------------------------
Cy.elatus7198           --------------------------------------------------
Cy.ochroleucus7639      --------------------------------------------------
Cy.elatusRC93           --------------------------------------------------
Cy.eucallusRC79         --------------------------------------------------
Cy.falcatus7637         --------------------------------------------------
Cy.loddigesianus7203    --------------------------------------------------
Cy.smithiae7214         --------------------------------------------------
Cy.herrei7194           --------------------------------------------------
Cy.labiatus7212         --------------------------------------------------
Cy.staadensis7316       --------------------------------------------------
Cy.obliquus7278         --------------------------------------------------
Ge.namaquensisAMV635    --------------------------------------------------
Hae.crispus7260         --------------------------------------------------
Hae.roseus              --------------------------------------------------
Hae.albiflos7517        --------------------------------------------------
Gal.elwesii             CGTTCATGATTGGTCATGATACCGATACC--TTCTAACTAGAACAGAAAT
Gal.ikariae             CGTTCATGATTGGTCATGATACC--------TTCTAACTAGAACAGAAAT
Gal.alpinus             CGGTCATGATTGGTCATGATACC--------TTCTAACTAGAACAGAAAT
Gal.cilicicus           CGTTCATGATTGGTCATGATACC--------TTCTAACTAGAACAGAAAT
Hae.crispus7252         NGTTCATGATTGGCCATGAAACC--------TTCTACCTAGAACAGAAAT
Gal.woronowii           CGTTCATGATTGGTCATGATACC--------TTCTAACTAGAACAGAAAT
Gal.lagodechianus       CGTTCATGATTGGTCATGATACC--------TTCTAACTAGAACAGAAAT
Gal.nivalis             CGTTCATGATTGGTCATGATACC--------TTCTAACTAGAACAGAAAT
Gal.plivatus            CGTTCATGATTGGTCATGATACC--------TTCTAACTAGAACAGAAAT
Gal.reginaeolgae        CGTTCATGATTGGTCATGATACC--------TTCTAACTAGAACAGAAAT
Gal.regianeolgae        CGTTCATGATTGGTCATGATACC--------TTCTAACTAGAACAGAAAT
Gal.fosteri             CGTTCATGATTGGTCATGATACC--------TTCTAACTAGAACAGAAAT
Gal.transcaucasicus     CGTTCATGATTGGTCATGATACC--------TTCTAACTAGAACAGAAAT
Hae.montanus7163        --------------------------------------------------
Hae.coccineusAMV632     --------------------------------------------------
Ne.bowdenii             --------------------------------------------------
Hym.caribaea            --------------------------------------------------
Hip.stylosum            --------------------------------------------------
Lyc.traubii             --------------------------------------------------
Na.tazetta              --------------------------------------------------
Lap.martinezii          CGTTCATGATTGGTCATGATACC--------TTCTAACTAGAACAGAAAT
Leu.aestivum            CGTTCATGATTGGTCATGATACC--------TTCTAACTAGAACAGAAAT
Leu.aestivumpulchel     CGTTCATGATTGGTCATGATACC--------TTCTAACTAGAACAGAAAT
Leu.autumnale           CGTTCATGATTGGTTATGATACC--------TTCTAACTAGAACAGAAAT
Leu.vernumcarpaticu     CGTTCATGATTGGTCATGATACC--------TTCTAACTAGAACAGAAAT
Na.bicolor              CGTTCATGATTGGTCATGATACC--------TTCTAACTAGAACAGAAAT
Ne.laticoma8090         --------------------------------------------------
Hip.sp.7446             --------------------------------------------------
No.recurvata            --------------------------------------------------
Na.sp.7607              --------------------------------------------------
Na.sp.7608              --------------------------------------------------
Par.weberbaueri         --------------------------------------------------
Sten.variegatum         --------------------------------------------------
Str.watermeyeri         --------------------------------------------------
Ung.tadshicorum         --------------------------------------------------
Va.parviflorum          --------------------------------------------------
Phae.dubia              --------------------------------------------------
Urc.peruviana           --------------------------------------------------
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                     1501                                                1550
Rho.bifida           --------------------------------------------------
Sc.multiflorus       --------------------------------------------------
Sc.membranaceus7246  --------------------------------------------------
Ze.candida           --------------------------------------------------
Str.salteri7245      --------------------------------------------------
Ster.lutea           CGTTCATGATTGGTCATGATACC--------TTCTAACTAGAACAGAAAT
Pan.canariense       CATTCATGATTGGTCATGATACC--------TTCTAACTAGAACAGAAAT
Va.parviflora        CGTTCATGATTGGTCATGATACC--------CTCTAACTAGAACAGAAAT
Sc.multiflorus7919   --------------------------------------------------
Sc.membranaceus7917  --------------------------------------------------
```

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                        1551                                                1600
Ac.valentina            GATCT----------ATAAATAATCAAAAGAGAAAACAAGAAGATTCATG
Ac.fabrei               AATCT----------ATAAATAATCAAAAGAGAAAACAAGAAGATTCATG
Ac.nicaeensis           AATCT----------ATAAATAATCAAAAGAGAAACCAAGAAGATTCATG
Ac.longifolia           TATCT----------ATAAATAATCAAAAGAGAAAACAAGAAGATTCATG
Ac.rosea                TATCT----------ATAAATAATCAAAAGAGAAAGCAAGAAGATTCATG
Ac.tingitana            GATCT----------ATAAATAATCAAAAGAGAAAACAAGAAGATTCATG
Ac.trichophylla         GATCT----------ATAAATAATCAAAAGAGAAAACAAGAAGATTCATG
Ac.autumnalis           GATCT----------ATAAATAATCAAAGGAGAAAACAAGAAGATTAATG
Bo.disticha7172         --------------------------------------------------
Br.striata              --------------------------------------------------
Cro.flava7256           --------------------------------------------------
Ama.belladonna          --------------------------------------------------
Br.radulosanata7629     --------------------------------------------------
Br.gregaria7157         --------------------------------------------------
Ama.belladonnaRHA28     --------------------------------------------------
Ca.lutea                --------------------------------------------------
Cl.nobilisRC6b          --------------------------------------------------
Chl.fragrans            --------------------------------------------------
Cl.miniata              --------------------------------------------------
Cl.caulescens8092       --------------------------------------------------
Cl.miniataRC14          CCTC-----------A-------------------------------------
Cl.gardenii8093         --------------------------------------------------
Cl.cyrtanthiflor8094    --------------------------------------------------
Cl.miniata8095          --------------------------------------------------
Cr.acauleRC38           -A------------------------------------------------
Cr.acauleRC106          --------------------------------------------------
Cr.paludosumRC41        --------------------------------------------------
Cr.buphanoidesRC102     --------------------------------------------------
Cr.campanulatum7167     --------------------------------------------------
Cr.carolschmidRC97      --------------------------------------------------
Cr.euchrophyllumRC96    --------------------------------------------------
Cr.foetidumRC98         --------------------------------------------------
Cr.graminicola7630      --------------------------------------------------
Cr.lineareRC99          --------------------------------------------------
Cr.minimumRC37          --------------------------------------------------
Cr.nearmacowaniRC100    --------------------------------------------------
Cr.variabileRC44        --------------------------------------------------
Cr.moorei               --------------------------------------------------
Cr.moorei7921           --------------------------------------------------
Cr.bulbispermumRC95     --------------------------------------------------
Cr.lugardii7632         --------------------------------------------------
Cr.macowanii7168        --------------------------------------------------
Cr.buphanoides7631      --------------------------------------------------
Cr.acaulglaucRC105      --------------------------------------------------
Cy.elatus7636           --------------------------------------------------
Cy.herreiRC86           --------------------------------------------------
Cy.breviflorusRC88      --------------------------------------------------
Cy.mackeniiRC87         --------------------------------------------------
Cy.montanus7638         --------------------------------------------------
Euch.grandiflora        --------------------------------------------------
Eucr.bicolor            --------------------------------------------------
Eur.amboinensis         --------------------------------------------------
Eus.darwinii            --------------------------------------------------
Cy.sanguineusRC94       --------------------------------------------------
```

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                        1551                                                1600
Cy.brachyscyphus7204    --------------------------------------------------
Cy.elatus7198           --------------------------------------------------
Cy.ochroleucus7639      --------------------------------------------------
Cy.elatusRC93           --------------------------------------------------
Cy.eucallusRC79         --------------------------------------------------
Cy.falcatus7637         --------------------------------------------------
Cy.loddigesianus7203    --------------------------------------------------
Cy.smithiae7214         --------------------------------------------------
Cy.herrei7194           --------------------------------------------------
Cy.labiatus7212         --------------------------------------------------
Cy.staadensis7316       --------------------------------------------------
Cy.obliquus7278         --------------------------------------------------
Ge.namaquensisAMV635    --------------------------------------------------
Hae.crispus7260         --------------------------------------------------
Hae.roseus              --------------------------------------------------
Hae.albiflos7517        --------------------------------------------------
Gal.elwesii             GATCT----------ATAAATAACCAAAAGAGAAAACAAGAAAATTCACG
Gal.ikariae             GATCT----------ATAAATAATCAAAAGAGAAAACAAGAAAATTCACG
Gal.alpinus             GATCT----------ATAAATAATCAAAAGATAAAACAAGAAAATTCACG
Gal.cilicicus           GATCT----------ATAAATAATCAAAAGAGAAAACAAGAAAATTCACG
Hae.crispus7252         GATCTT---------TTAATTAACCAA--GATTAAACCAGAAGATCCTGG
Gal.woronowii           GATCT----------ATAAATAATCAAAAGAGAAAACAAGAAAATTCACG
Gal.lagodechianus       GATCC----------ATAAATAATCAAAAGATAAAACAAGAAAATTCACG
Gal.nivalis             GATCT----------ATAAATAATCAAAAGAGAAAACAAGAAAATTCACG
Gal.plivatus            GATCT----------ATAAATAATCAAAAGAGAAAACAAGAAAATTCACG
Gal.reginaeolgae        GATCT----------ATAAATAATCAAAAGAGAAAACAAGAAAATTCACG
Gal.regianeolgae        GATCT----------ATAAATAATCAAAAGAGAAAACAAGAAAATTCACG
Gal.fosteri             GATCT----------ATAAATAATCAAAAGAGAAAACAAGAAAATTCACG
Gal.transcaucasicus     GATCT----------ATAAATAATCAAAAGAGAAAACAAGAAAATTCACG
Hae.montanus7163        --------------------------------------------------
Hae.coccineusAMV632     --------------------------------------------------
Ne.bowdenii             --------------------------------------------------
Hym.caribaea            --------------------------------------------------
Hip.stylosum            --------------------------------------------------
Lyc.traubii             --------------------------------------------------
Na.tazetta              --------------------------------------------------
Lap.martinezii          GAGAAATGATCT---ATAAATAATCAAAAGAGAAAACAAGAAGATTCATG
Leu.aestivum            TATCT----------ATAAATAATCAAAAGAGAAAACAAGAAGATTCATT
Leu.aestivumpulchel     TATCT----------ATAAATAATCAAAAGAGAAAACAAGAAGATTCATT
Leu.autumnale           GATCT----------ATAAATAATCAAAGGAGAAAACAAGAAGATTAATG
Leu.vernumcarpaticu     GATCT----------ATAAATAATCAAAAGAGAAAACAAGAAGATTCACG
Na.bicolor              GATCT-----ACCAATAATCAAAATAGAAAACAAGAAAAGAAAATTCATG
Ne.laticoma8090         --------------------------------------------------
Hip.sp.7446             --------------------------------------------------
No.recurvata            --------------------------------------------------
Na.sp.7607              --------------------------------------------------
Na.sp.7608              --------------------------------------------------
Par.weberbaueri         --------------------------------------------------
Sten.variegatum         --------------------------------------------------
Str.watermeyeri         --------------------------------------------------
Ung.tadshicorum         --------------------------------------------------
Va.parviflorum          --------------------------------------------------
Phae.dubia              --------------------------------------------------
Urc.peruviana           --------------------------------------------------
```

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                     1551                                                1600
Rho.bifida           --------------------------------------------------
Sc.multiflorus       --------------------------------------------------
Sc.membranaceus7246  --------------------------------------------------
Ze.candida           --------------------------------------------------
Str.salteri7245      --------------------------------------------------
Ster.lutea           GATCT----------ATCAATAATCAAAAGAGAAAACAAGAAGATTCATG
Pan.canariense       GATCT----------ATCAATAATCAAAAGAGAAAACAAGAAGATTCATG
Va.parviflora        GATCT----------ATAAATAATCAAAAGATAAACCAAGAAGATTCATG
Sc.multiflorus7919   --------------------------------------------------
Sc.membranaceus7917  --------------------------------------------------
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                        1601                                                1650
Ac.valentina            AATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTATTC
Ac.fabrei               AATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTATTC
Ac.nicaeensis           AATTTTCATTTTGAAATGCCCATGTA-GTGGTTGAATCCCCTGAGTATTC
Ac.longifolia           AATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTATTC
Ac.rosea                AATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTATTC
Ac.tingitana            AATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTATTC
Ac.trichophylla         AATTTTCATTTTGAAATGCCCATGTA-GTAGTTGAATCCACTGAGTATTC
Ac.autumnalis           AATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTATTC
Bo.disticha7172         --------------------------------------------------
Br.striata              --------------------------------------------------
Cro.flava7256           --------------------------------------------------
Ama.belladonna          --------------------------------------------------
Br.radulosanata7629     --------------------------------------------------
Br.gregaria7157         --------------------------------------------------
Ama.belladonnaRHA28     --------------------------------------------------
Ca.lutea                --------------------------------------------------
Cl.nobilisRC6b          --------------------------------------------------
Chl.fragrans            --------------------------------------------------
Cl.miniata              --------------------------------------------------
Cl.caulescens8092       --------------------------------------------------
Cl.miniataRC14          --------------------------------------------------
Cl.gardenii8093         --------------------------------------------------
Cl.cyrtanthiflor8094    --------------------------------------------------
Cl.miniata8095          --------------------------------------------------
Cr.acauleRC38           --------------------------------------------------
Cr.acauleRC106          --------------------------------------------------
Cr.paludosumRC41        --------------------------------------------------
Cr.buphanoidesRC102     --------------------------------------------------
Cr.campanulatum7167     --------------------------------------------------
Cr.carolschmidRC97      --------------------------------------------------
Cr.euchrophyllumRC96    --------------------------------------------------
Cr.foetidumRC98         --------------------------------------------------
Cr.graminicola7630      --------------------------------------------------
Cr.lineareRC99          --------------------------------------------------
Cr.minimumRC37          --------------------------------------------------
Cr.nearmacowaniRC100    --------------------------------------------------
Cr.variabileRC44        --------------------------------------------------
Cr.moorei               --------------------------------------------------
Cr.moorei7921           --------------------------------------------------
Cr.bulbispermumRC95     --------------------------------------------------
Cr.lugardii7632         --------------------------------------------------
Cr.macowanii7168        --------------------------------------------------
Cr.buphanoides7631      --------------------------------------------------
Cr.acaulglaucRC105      --------------------------------------------------
Cy.elatus7636           --------------------------------------------------
Cy.herreiRC86           --------------------------------------------------
Cy.breviflorusRC88      --------------------------------------------------
Cy.mackeniiRC87         --------------------------------------------------
Cy.montanus7638         --------------------------------------------------
Euch.grandiflora        --------------------------------------------------
Eucr.bicolor            --------------------------------------------------
Eur.amboinensis         --------------------------------------------------
Eus.darwinii            --------------------------------------------------
Cy.sanguineusRC94       --------------------------------------------------
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                        1601                                              1650
Cy.brachyscyphus7204    --------------------------------------------------
Cy.elatus7198           --------------------------------------------------
Cy.ochroleucus7639      --------------------------------------------------
Cy.elatusRC93           --------------------------------------------------
Cy.eucallusRC79         --------------------------------------------------
Cy.falcatus7637         --------------------------------------------------
Cy.loddigesianus7203    --------------------------------------------------
Cy.smithiae7214         --------------------------------------------------
Cy.herrei7194           --------------------------------------------------
Cy.labiatus7212         --------------------------------------------------
Cy.staadensis7316       --------------------------------------------------
Cy.obliquus7278         --------------------------------------------------
Ge.namaquensisAMV635    --------------------------------------------------
Hae.crispus7260         --------------------------------------------------
Hae.roseus              --------------------------------------------------
Hae.albiflos7517        --------------------------------------------------
Gal.elwesii             AATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGCATTC
Gal.ikariae             AATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACCGAGTATTC
Gal.alpinus             AATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTATTC
Gal.cilicicus           AATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTATTC
Hae.crispus7252         AATTTGCATTCTGAA----------------------------------
Gal.woronowii           AATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTATTC
Gal.lagodechianus       AATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTATTC
Gal.nivalis             AATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTATTC
Gal.plivatus            AATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTATTC
Gal.reginaeolgae        AATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTATTC
Gal.regianeolgae        AATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTATTC
Gal.fosteri             AATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTATTC
Gal.transcaucasicus     AATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTATTC
Hae.montanus7163        --------------------------------------------------
Hae.coccineusAMV632     --------------------------------------------------
Ne.bowdenii             --------------------------------------------------
Hym.caribaea            --------------------------------------------------
Hip.stylosum            --------------------------------------------------
Lyc.traubii             --------------------------------------------------
Na.tazetta              --------------------------------------------------
Lap.martinezii          AATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTATTC
Leu.aestivum            AATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTATTC
Leu.aestivumpulchel     AATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTATTC
Leu.autumnale           AATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTATTC
Leu.vernumcarpaticu     AATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTATTC
Na.bicolor              AATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTATTA
Ne.laticoma8090         --------------------------------------------------
Hip.sp.7446             --------------------------------------------------
No.recurvata            --------------------------------------------------
Na.sp.7607              --------------------------------------------------
Na.sp.7608              --------------------------------------------------
Par.weberbaueri         --------------------------------------------------
Sten.variegatum         --------------------------------------------------
Str.watermeyeri         --------------------------------------------------
Ung.tadshicorum         --------------------------------------------------
Va.parviflorum          --------------------------------------------------
Phae.dubia              --------------------------------------------------
Urc.peruviana           --------------------------------------------------
```

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                    1601                                                1650
Rho.bifida          --------------------------------------------------
Sc.multiflorus      --------------------------------------------------
Sc.membranaceus7246 --------------------------------------------------
Ze.candida          --------------------------------------------------
Str.salteri7245     --------------------------------------------------
Ster.lutea          AATTTTCATTTTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTATTC
Pan.canariense      AATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTATTC
Va.parviflora       AATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTATTC
Sc.multiflorus7919  --------------------------------------------------
Sc.membranaceus7917 --------------------------------------------------
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                        1651                                                1700
Ac.valentina            AAAATTCTTAGACTTTCTTCTCGGCATGTATTTTTTTT------TATGTA
Ac.fabrei               AAAATTCTTAGACTTTCTTCTCGGTATGTATTTTTTTT-----TTATGTA
Ac.nicaeensis           AAAATTTTTAGACTTTCTTCTCGGTATGTATTTTTTTT----TTTATGTA
Ac.longifolia           AAAATTCTTAGACTTTCTTCTCGGTATGTATTTTTTTTGATATGTATACA
Ac.rosea                CAAATTCTTAGACTTTCTTCTCGGTATGTATTTTTTTT-ATATGTATACA
Ac.tingitana            AAAACTCTTAGGCTTTCTTCTCGGTATGTATTTTTTTT---A--TATGTA
Ac.trichophylla         AAAACTCTTAGACTTTCTTCTCGGTATGTATTTTTTTT------T-TGTA
Ac.autumnalis           AAAACTCTTAGACTTTCTTCTCGGTATGTATTTTTTTT-------ATGTA
Bo.disticha7172         --------------------------------------------------
Br.striata              --------------------------------------------------
Cro.flava7256           --------------------------------------------------
Ama.belladonna          --------------------------------------------------
Br.radulosanata7629     --------------------------------------------------
Br.gregaria7157         --------------------------------------------------
Ama.belladonnaRHA28     --------------------------------------------------
Ca.lutea                --------------------------------------------------
Cl.nobilisRC6b          --------------------------------------------------
Chl.fragrans            --------------------------------------------------
Cl.miniata              --------------------------------------------------
Cl.caulescens8092       --------------------------------------------------
Cl.miniataRC14          --------------------------------------------------
Cl.gardenii8093         --------------------------------------------------
Cl.cyrtanthiflor8094    --------------------------------------------------
Cl.miniata8095          --------------------------------------------------
Cr.acauleRC38           --------------------------------------------------
Cr.acauleRC106          --------------------------------------------------
Cr.paludosumRC41        --------------------------------------------------
Cr.buphanoidesRC102     --------------------------------------------------
Cr.campanulatum7167     --------------------------------------------------
Cr.carolschmidRC97      --------------------------------------------------
Cr.euchrophyllumRC96    --------------------------------------------------
Cr.foetidumRC98         --------------------------------------------------
Cr.graminicola7630      --------------------------------------------------
Cr.lineareRC99          --------------------------------------------------
Cr.minimumRC37          --------------------------------------------------
Cr.nearmacowaniRC100    --------------------------------------------------
Cr.variabileRC44        --------------------------------------------------
Cr.moorei               --------------------------------------------------
Cr.moorei7921           --------------------------------------------------
Cr.bulbispermumRC95     --------------------------------------------------
Cr.lugardii7632         --------------------------------------------------
Cr.macowanii7168        --------------------------------------------------
Cr.buphanoides7631      --------------------------------------------------
Cr.acaulglaucRC105      --------------------------------------------------
Cy.elatus7636           --------------------------------------------------
Cy.herreiRC86           --------------------------------------------------
Cy.breviflorusRC88      --------------------------------------------------
Cy.mackeniiRC87         --------------------------------------------------
Cy.montanus7638         --------------------------------------------------
Euch.grandiflora        --------------------------------------------------
Eucr.bicolor            --------------------------------------------------
Eur.amboinensis         --------------------------------------------------
Eus.darwinii            --------------------------------------------------
Cy.sanguineusRC94       --------------------------------------------------
```

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                        1651                                                1700
Cy.brachyscyphus7204    --------------------------------------------------
Cy.elatus7198           --------------------------------------------------
Cy.ochroleucus7639      --------------------------------------------------
Cy.elatusRC93           --------------------------------------------------
Cy.eucallusRC79         --------------------------------------------------
Cy.falcatus7637         --------------------------------------------------
Cy.loddigesianus7203    --------------------------------------------------
Cy.smithiae7214         --------------------------------------------------
Cy.herrei7194           --------------------------------------------------
Cy.labiatus7212         --------------------------------------------------
Cy.staadensis7316       --------------------------------------------------
Cy.obliquus7278         --------------------------------------------------
Ge.namaquensisAMV635    --------------------------------------------------
Hae.crispus7260         --------------------------------------------------
Hae.roseus              --------------------------------------------------
Hae.albiflos7517        --------------------------------------------------
Gal.elwesii             AAAATTCTTAGACTTTCTTCTCGGGATGTATTTTCTTTTT---ATATGTA
Gal.ikariae             AAAATTCTTAGACTTTCTTCTCGGGATGTATTTTTTTT-----ATATGTA
Gal.alpinus             AAAATTCTTAGACTTTCTTCTCGGGATGTATTTTTTTT-----ATATGTA
Gal.cilicicus           AAAATTCTTAGACTTTCTTCTCGGGATGTATTTTTTTTT----ATATGTA
Hae.crispus7252         --------------------------------------------------
Gal.woronowii           AAAATTCTTAGACTTTCTTCTCGGGATGTATTTTTTTT-----ATATGTA
Gal.lagodechianus       AAAATTCTTAGACTTTCTTCTCGGGATGTATTTTTTTT-----ATATGTA
Gal.nivalis             AAAATTCTTAGACTTTCTTCTCGGGATGTATTTTTTTT-----ATATGTA
Gal.plivatus            AAAATTCTTAGACTTTCTTCTCGGGATGTATTTTTTTT-----ATATGTA
Gal.reginaeolgae        AAAATTCTTAGACTTTCTTCTCGGGATGTATTTTTTTT-----ATATGTA
Gal.regianeolgae        AAAATTCTTAGACTTTCTTCTCGGGATGTATTTTTTTT-----ATATGTA
Gal.fosteri             AAAATTCTTAGACTTTCTTCTCGGGGTGTATTTTTTT------ATATGTA
Gal.transcaucasicus     AAAATTCTTAGACTTTCTTCTCGGGATGTATTTTTTTT-----ATATGTA
Hae.montanus7163        --------------------------------------------------
Hae.coccineusAMV632     --------------------------------------------------
Ne.bowdenii             --------------------------------------------------
Hym.caribaea            --------------------------------------------------
Hip.stylosum            --------------------------------------------------
Lyc.traubii             --------------------------------------------------
Na.tazetta              --------------------------------------------------
Lap.martinezii          AAAATTCTTAGACTTTCTTCCCGGTATGTATTTTTTTTT----ATATGTA
Leu.aestivum            AAAATTCTTAGACTTTCTTCTCGGTATGTATTTTTTT------ATACGTA
Leu.aestivumpulchel     AAAATTCTTAGACTTTCTTCTCGGTATGTATTTTTTT------ATACGTA
Leu.autumnale           AAAACTCTTAGACTTTCTTCTCGGTATGTATTTTTTT-------TATGTA
Leu.vernumcarpaticu     AAAATTCTTAGACTTAATTCTCGGTATGTATTTTTTTT-----ATATGTA
Na.bicolor              AAAATTCTTAGACTTTCTTTTCGGTAT-T-TTTTTTT------ATAT--A
Ne.laticoma8090         --------------------------------------------------
Hip.sp.7446             --------------------------------------------------
No.recurvata            --------------------------------------------------
Na.sp.7607              --------------------------------------------------
Na.sp.7608              --------------------------------------------------
Par.weberbaueri         --------------------------------------------------
Sten.variegatum         --------------------------------------------------
Str.watermeyeri         --------------------------------------------------
Ung.tadshicorum         --------------------------------------------------
Va.parviflorum          --------------------------------------------------
Phae.dubia              --------------------------------------------------
Urc.peruviana           --------------------------------------------------
```

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                    1651                                                1700
Rho.bifida          --------------------------------------------------
Sc.multiflorus      --------------------------------------------------
Sc.membranaceus7246 --------------------------------------------------
Ze.candida          --------------------------------------------------
Str.salteri7245     --------------------------------------------------
Ster.lutea          AAAATTCTTAGACTTTCTTCTCGGTATGTCTTTTTTTT------T-TGTA
Pan.canariense      AAAATTCTTAGACTTTCTTCTCGGTATGTATTTTTTTT-----ATATGTA
Va.parviflora       GAAATTCTTAGACTTTGTTCTCGATATGT--------------------
Sc.multiflorus7919  --------------------------------------------------
Sc.membranaceus7917 --------------------------------------------------
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                        1701                                                1750
Ac.valentina            TAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGCACGGTTTG
Ac.fabrei               TAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGCACGGTTTG
Ac.nicaeensis           TAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGCACGG----
Ac.longifolia           TAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGCACGGTTTG
Ac.rosea                TAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCGAGCACGGTTT-
Ac.tingitana            TAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGCACGGTTTG
Ac.trichophylla         TAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGCACGGTTTG
Ac.autumnalis           TAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGCACGGTTTG
Bo.disticha7172         --------------------------------------------------
Br.striata              --------------------------------------------------
Cro.flava7256           --------------------------------------------------
Ama.belladonna          --------------------------------------------------
Br.radulosanata7629     --------------------------------------------------
Br.gregaria7157         --------------------------------------------------
Ama.belladonnaRHA28     --------------------------------------------------
Ca.lutea                --------------------------------------------------
Cl.nobilisRC6b          --------------------------------------------------
Chl.fragrans            --------------------------------------------------
Cl.miniata              --------------------------------------------------
Cl.caulescens8092       --------------------------------------------------
Cl.miniataRC14          --------------------------------------------------
Cl.gardenii8093         --------------------------------------------------
Cl.cyrtanthiflor8094    --------------------------------------------------
Cl.miniata8095          --------------------------------------------------
Cr.acauleRC38           --------------------------------------------------
Cr.acauleRC106          --------------------------------------------------
Cr.paludosumRC41        --------------------------------------------------
Cr.buphanoidesRC102     --------------------------------------------------
Cr.campanulatum7167     --------------------------------------------------
Cr.carolschmidRC97      --------------------------------------------------
Cr.euchrophyllumRC96    --------------------------------------------------
Cr.foetidumRC98         --------------------------------------------------
Cr.graminicola7630      --------------------------------------------------
Cr.lineareRC99          --------------------------------------------------
Cr.minimumRC37          --------------------------------------------------
Cr.nearmacowaniRC100    --------------------------------------------------
Cr.variabileRC44        --------------------------------------------------
Cr.moorei               --------------------------------------------------
Cr.moorei7921           --------------------------------------------------
Cr.bulbispermumRC95     --------------------------------------------------
Cr.lugardii7632         --------------------------------------------------
Cr.macowanii7168        --------------------------------------------------
Cr.buphanoides7631      --------------------------------------------------
Cr.acaulglaucRC105      --------------------------------------------------
Cy.elatus7636           --------------------------------------------------
Cy.herreiRC86           --------------------------------------------------
Cy.breviflorusRC88      --------------------------------------------------
Cy.mackeniiRC87         --------------------------------------------------
Cy.montanus7638         --------------------------------------------------
Euch.grandiflora        --------------------------------------------------
Eucr.bicolor            --------------------------------------------------
Eur.amboinensis         --------------------------------------------------
Eus.darwinii            --------------------------------------------------
Cy.sanguineusRC94       --------------------------------------------------
```

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                        1701                                                1750
Cy.brachyscyphus7204    --------------------------------------------------
Cy.elatus7198           --------------------------------------------------
Cy.ochroleucus7639      --------------------------------------------------
Cy.elatusRC93           --------------------------------------------------
Cy.eucallusRC79         --------------------------------------------------
Cy.falcatus7637         --------------------------------------------------
Cy.loddigesianus7203    --------------------------------------------------
Cy.smithiae7214         --------------------------------------------------
Cy.herrei7194           --------------------------------------------------
Cy.labiatus7212         --------------------------------------------------
Cy.staadensis7316       --------------------------------------------------
Cy.obliquus7278         --------------------------------------------------
Ge.namaquensisAMV635    --------------------------------------------------
Hae.crispus7260         --------------------------------------------------
Hae.roseus              --------------------------------------------------
Hae.albiflos7517        --------------------------------------------------
Gal.elwesii             TAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGCACGGT---
Gal.ikariae             TAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGCACGGTT-G
Gal.alpinus             TAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGCACGGTT-G
Gal.cilicicus           TAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGCACGGTTTG
Hae.crispus7252         --------------------------------------------------
Gal.woronowii           TAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGCACGGTT--
Gal.lagodechianus       TAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGCACGGTTT-
Gal.nivalis             TAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGC-CGGTTT-
Gal.plivatus            TAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGCACGGTTTG
Gal.reginaeolgae        TAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGCACGGTTTG
Gal.regianeolgae        TAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGCACGGTTT-
Gal.fosteri             TAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGCACGGTTT-
Gal.transcaucasicus     TAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGCACGGTTTG
Hae.montanus7163        --------------------------------------------------
Hae.coccineusAMV632     --------------------------------------------------
Ne.bowdenii             --------------------------------------------------
Hym.caribaea            --------------------------------------------------
Hip.stylosum            --------------------------------------------------
Lyc.traubii             --------------------------------------------------
Na.tazetta              --------------------------------------------------
Lap.martinezii          TAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGCACGGTTTG
Leu.aestivum            TAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGCACGGTTTG
Leu.aestivumpulchel     TAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGCACGGTTTG
Leu.autumnale           TAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGCACGGTTTG
Leu.vernumcarpaticu     TAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGCACG-----
Na.bicolor              TAC---ATAGG-AAAGTCGTGTGCAA--TGAAAAATGCAAGCACGGTTTG
Ne.laticoma8090         --------------------------------------------------
Hip.sp.7446             --------------------------------------------------
No.recurvata            --------------------------------------------------
Na.sp.7607              --------------------------------------------------
Na.sp.7608              --------------------------------------------------
Par.weberbaueri         --------------------------------------------------
Sten.variegatum         --------------------------------------------------
Str.watermeyeri         --------------------------------------------------
Ung.tadshicorum         --------------------------------------------------
Va.parviflorum          --------------------------------------------------
Phae.dubia              --------------------------------------------------
Urc.peruviana           --------------------------------------------------
```

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                    1701                                                1750
Rho.bifida          --------------------------------------------------
Sc.multiflorus      --------------------------------------------------
Sc.membranaceus7246 --------------------------------------------------
Ze.candida          --------------------------------------------------
Str.salteri7245     --------------------------------------------------
Ster.lutea          TAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGCACGGTTTG
Pan.canariense      TAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGCACGGTTTG
Va.parviflora       --------------------------------------------------
Sc.multiflorus7919  --------------------------------------------------
Sc.membranaceus7917 --------------------------------------------------
```

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                      1751                  1776
Ac.valentina          GGGAGGGGTCTTTTTCC--T------
Ac.fabrei             GGGAGAGGTCAAT-TC----------
Ac.nicaeensis         --------------------------
Ac.longifolia         GGGAGGGGTCTTTTTCCCGT--A---
Ac.rosea              --------------------------
Ac.tingitana          GGGAGGGGTCTTTTTCC--T------
Ac.trichophylla       GGGAGGGGTCTTTTTCC--TGTATTA
Ac.autumnalis         GGGAGGGTTCATTTTCC--T------
Bo.disticha7172       --------------------------
Br.striata            --------------------------
Cro.flava7256         --------------------------
Ama.belladonna        --------------------------
Br.radulosanata7629   --------------------------
Br.gregaria7157       --------------------------
Ama.belladonnaRHA28   --------------------------
Ca.lutea              --------------------------
Cl.nobilisRC6b        --------------------------
Chl.fragrans          --------------------------
Cl.miniata            --------------------------
Cl.caulescens8092     --------------------------
Cl.miniataRC14        --------------------------
Cl.gardenii8093       --------------------------
Cl.cyrtanthiflor8094  --------------------------
Cl.miniata8095        --------------------------
Cr.acauleRC38         --------------------------
Cr.acauleRC106        --------------------------
Cr.paludosumRC41      --------------------------
Cr.buphanoidesRC102   --------------------------
Cr.campanulatum7167   --------------------------
Cr.carolschmidRC97    --------------------------
Cr.euchrophyllumRC96  --------------------------
Cr.foetidumRC98       --------------------------
Cr.graminicola7630    --------------------------
Cr.lineareRC99        --------------------------
Cr.minimumRC37        --------------------------
Cr.nearmacowaniRC100  --------------------------
Cr.variabileRC44      --------------------------
Cr.moorei             --------------------------
Cr.moorei7921         --------------------------
Cr.bulbispermumRC95   --------------------------
Cr.lugardii7632       --------------------------
Cr.macowanii7168      --------------------------
Cr.buphanoides7631    --------------------------
Cr.acaulglaucRC105    --------------------------
Cy.elatus7636         --------------------------
Cy.herreiRC86         --------------------------
Cy.breviflorusRC88    --------------------------
Cy.mackeniiRC87       --------------------------
Cy.montanus7638       --------------------------
Euch.grandiflora      --------------------------
Eucr.bicolor          --------------------------
Eur.amboinensis       --------------------------
Eus.darwinii          --------------------------
Cy.sanguineusRC94     --------------------------
```

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                        1751                    1776
Cy.brachyscyphus7204    -------------------------
Cy.elatus7198           -------------------------
Cy.ochroleucus7639      -------------------------
Cy.elatusRC93           -------------------------
Cy.eucallusRC79         -------------------------
Cy.falcatus7637         -------------------------
Cy.loddigesianus7203    -------------------------
Cy.smithiae7214         -------------------------
Cy.herrei7194           -------------------------
Cy.labiatus7212         -------------------------
Cy.staadensis7316       -------------------------
Cy.obliquus7278         -------------------------
Ge.namaquensisAMV635    -------------------------
Hae.crispus7260         -------------------------
Hae.roseus              -------------------------
Hae.albiflos7517        -------------------------
Gal.elwesii             -------------------------
Gal.ikariae             GGGAGGG-TCTTTT-CC--TCTAT--
Gal.alpinus             GGGAGGG-TCTGTT-CC--TCTACTC
Gal.cilicicus           GGGAGGGGTCTTTT-CC--TCTATT-
Hae.crispus7252         -------------------------
Gal.woronowii           -------------------------
Gal.lagodechianus       GGGAGGGGTCTTTT-CC--TC-----
Gal.nivalis             GGGAGGG-TCTTTT-CC--TCTAT--
Gal.plivatus            GGGA--------------------
Gal.reginaeolgae        GGGAG-------------------
Gal.regianeolgae        GGGAGGGGTCTTTT-CC--TCTATAC
Gal.fosteri             GGGAGGG-TCTTTT-CC--TCTATCC
Gal.transcaucasicus     GGGAGGG-TCTTTT-CCTCTGGATT-
Hae.montanus7163        -------------------------
Hae.coccineusAMV632     -------------------------
Ne.bowdenii             -------------------------
Hym.caribaea            -------------------------
Hip.stylosum            -------------------------
Lyc.traubii             -------------------------
Na.tazetta              -------------------------
Lap.martinezii          -------------------------
Leu.aestivum            GGGAGGGGTCTTTTTCC---GG-TA-
Leu.aestivumpulchel     GGGAGGGGTCTTTTTCCT-------
Leu.autumnale           GGGAGGGTTAATTTTCCTG-GG-TTC
Leu.vernumcarpaticu     -------------------------
Na.bicolor              GGGAGGGGTCTTTTTCCTCT--ATT-
Ne.laticoma8090         -------------------------
Hip.sp.7446             -------------------------
No.recurvata            -------------------------
Na.sp.7607              -------------------------
Na.sp.7608              -------------------------
Par.weberbaueri         -------------------------
Sten.variegatum         -------------------------
Str.watermeyeri         -------------------------
Ung.tadshicorum         -------------------------
Va.parviflorum          -------------------------
Phae.dubia              -------------------------
Urc.peruviana           -------------------------
```

```
                     1751                  1776
Rho.bifida           -------------------------
Sc.multiflorus       -------------------------
Sc.membranaceus7246  -------------------------
Ze.candida           -------------------------
Str.salteri7245      -------------------------
Ster.lutea           GGGAGGGGTAT---------------
Pan.canariense       GGGAGGGGTCTTTTTCGTGT--ATT-
Va.parviflora        -------------------------
Sc.multiflorus7919   -------------------------
Sc.membranaceus7917  -------------------------
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APPENDIX D Aligned sequences of the ITS DNA region for Amaryllidaceae.

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                     1                                                50
Ama.belladonnaRHA28  C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Ama.belladonna       C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Ama.paradisicola     C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Amm.coranica7164     C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTCGCGCCTGAG-GCTA
Amm.nerinoidesRHA32  C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTCGCGCCTGAG-GCTA
Amm.nerinoides       C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTCGCGCCTGAG-GCTA
Amm.coranica         C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTCGCGCCTGAG-GCTA
Apo.lanceolatum      C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Aga.caulescens       C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCCG
Bo.haemanthoides     C-GCGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Bo.disticha          C-GCGAAT--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cl.caulescens        C-GTGAA---CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cl.gardenii          C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cl.miniata           C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cl.nobilis           C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cl.miniataRC14       C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAGTGCTA
Br.bosmaniae         C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Br.radula            C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Br.comptonii         C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Br.radulosanata7629  C-GTGAAC--CATCG-AGTCTTTGAACTAC-AAGTTGCGCCCGAG-GCTA
Br.bosmaniae7251     C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Br.gregaria7157      C-GTGAAC--CATC--AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cro.flava7256        C-GTGAAC--CATTG-AGTCTTCGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cal.korsakoffii      C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Chl.fragrans         C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCTGAG-GCTA
Car.spiralis         C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCTGAG-GTTA
Cy.longifolia        C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTCGCGCCTGAG-GCTA
Cr.baumii            C-GTGAAC--CATCG-AGTCTTCGAAC-GC-AAGTCGCGCCTGAG-GCTA
Cro.guttata          C-GTGAAC--CATTG-AGTCTTCGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cr.abyssinicum       C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCTGAG-GCTA
Cr.kirkii            C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cr.latifolium        C-GCGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cr.politifolium      C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cr.yemenense         C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cr.americanum        C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cr.cruentum          C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cr.erubescens        C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cr.oliganthum        C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cr.Schunke14054      C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cr.distichum         C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cr.humile            C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cr.jagus             C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cr.moorei            C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cr.bulbispermum      C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cr.flaccidum         C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cr.macowanii         C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cr.variabile         C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cr.bulbispermumRC95  C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cr.euchrophyllumRC96 C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cr.moorei7921        C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cr.acaule            C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
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                     1                                               50
Cr.forbesii          C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cr.acaulglaucRC105   C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cr.acauleRC106       C-GTGAACC-CATCG-AATTTTTGAAC-CC-AA-TTGCCCCCGAG-GTT-
Cr.campanulatum      C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cr.caroloschmidtii   C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cr.crassicaule       C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cr.acauleRC38        C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cr.carolschmidRC97   CCGTGAAC--CATCG-TGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cr.foetidumRC98      C-GTGAACC-CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cr.graminicola7630   C-ATG--------CG-AGTCTTTGAAC-TC-A--TTGCGCCCGAG-GCTA
Cr.asiaticum         C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GTTA
Cr.pedunculatum      C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GTTA
Cr.Meerow2332        C-GCGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GTTA
Cr.defixum           C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GTTA
Cr.Meerow2333        C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GTTA
Cr.buphanoides       C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GTTA
Cr.ligulatum         C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GTTA
Cr.razafindratsiraea C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GTTA
Cr.modestum          C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GTTA
Cr.mauritianum       C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GTTA
Cr.subcernuum        C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GTTA
Cr.venosum           C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GTTA
Cr.buphanoidesRC102  C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GTTA
Cr.fimbriatulum      C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCTGAG-GCTA
Cr.broussonetii      C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cry.haemanthoides    C-ATGA-C--CATCG-AGTCTTTGA-C-TC-AAGT-GCGCCC-AG-GCTA
Cyr.falcatus7637     C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cyr.obliquus7278     C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cyr.elatus7202       C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cyr.labiatus7212     C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cyr.labiatus7258     C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cyr.elatus7636       CCGTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cyr.herrei7217       C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCTGAG-GCTA
Cyr.herreiRC86       C-GTGAAC--CATCG-AGTCTTTGATC-GC-AAGTTGCGCCTGAG-GCTA
Cyr.montanus7209     C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cyr.staadensis7316   C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cyr.eucallusRC79     C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cyr.brachyscyphu7406 C-GTGACC---ATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cyr.brachyscyphuRC90 C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cyr.mackeniiRC87     --GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCTGAG-GCTA
Cyr.obrienii7193     C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cyr.sanguineusRC94   C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cyr.suaveolens7181   C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cyr.ochroleucus7639  C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cyr.breviflorus7634  --GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cyr.obliquus7210     --G-GAAC---ATC--AGTCT-TGAAC-GC--AGTTGCGCCCGAG-GCTA
Cyr.thorncroftiRC80  --GTGAAC--CATCG-AGT-TTTGAAC-GC--AGTTGCGCCCGAG-GCTA
Cyr.eucallusRC78     C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cyr.spiralis7219     CAGTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG--CTA
Cyr.wellandiiRC83    --------------------------------------------G-ACTA
Cyr.attenuatesRC81   CCGTGAAC--CATACGAGTTTTTTAA--GC-AAGTTGCGCCAGAG--TTA
Cyr.smithiae7214     C-GTGAAC--CAT-G-AGT-TTTGAAC--C-AAGTTGCGCCCGAG-GCTA
Cyr.breviflorusRC88  C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Cyr.speciosus7640    C-GTGAAC--CATCG-AGTTTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
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                    1                                                  50
Cyr.macowanii7201   C-GTGAAC--CATCG-AGTCTTTGAGC-GC-AAGTTGCGCCAGAG-GCTA
Ge.ciliaris         C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Ge.britteniana      C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Ge.verticillata     C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Ge.namaquensisAMV635 C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Ge.lanuginosa       C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Euch.formosa        C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Eucr.bicolor        C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Eust.darwinii       C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Gr.hyacinthina      C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCGA
Ga.fosteri          T-GTGAAC--CATCG-AGTCTTTGAAT-GC-AAGTTGCGCACAAG-GCTA
Hab.brachyandrus    C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Hae.hirsitus7626    C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Hae.humilis7254     C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Hae.paucilifoliu7925 C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Hae.paucilifoliRHA21 C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Hae.albiflos        C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Hae.graniticus      C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Hae.crispus7260     C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Hae.coccineus       C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Hae.pumilio         C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Hae.coccineusAMV632 C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Hae.crispus7252     --GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Hae.sanguineus7253  C-GTGAAC--CATCG-AGTCTTTGAAC----AAGTTGCGCCCGAG-GCTA
Hip.sp.7446         C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Hip.brasilianum     C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Hip.papilio         C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Hip.reticulatum     C-GTGAAC--CATCC-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Hip.macbridei       C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Hip.mollevillquense C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Hip.parodii         C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Hip.blumenavia      C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Hes.stellaris       C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Hip.sp.7447         C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Hie.argentina       C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCTGAG-GCTA
Hy.latifolia        C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Rho.moelleri        C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Pyr.Chase3639       C-GTGAAC--CATCG-AGTTTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Is.longipetala      C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Lep.quitoensis      C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Pam.peruviana       C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Par.weberbaueri     C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCTCGAG-GCTA
Phae.ventricosa     C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Rau.decora          C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTG
Ne.alta             C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Pan.canariense      C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
La.martinezii       C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Leu.autumnale       C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Na.bicolor          C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCCG
Na.sp.7521          C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCCG
Na.sp.7608          C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCCG
Phy.ignea           C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Ly.chinensis        T-GTGAAC--CATCA-AGTCTTT-AAC-AC-AAGTTATGCCCGAG-GTTA
Urc.microcrater     C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
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                         1                                                50
Spr.formosissima      C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Zep.flavissima        C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Sca.membranaceuRHA25  C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Sca.membranaceus7246  C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Sca.membranaceus7917  C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Sca.puniceusRHA26     C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Sca.puniceusRHA27     C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Sca.puniceus          CCGTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Sca.membranaceus      C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Sca.puniceus7301      ---TGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Sca.cinnabarinus      C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Sten.humile           C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCTCGAG-GCTA
Ster.lutea            C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Va.parviflora         C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCTGAG-GCCA
Str.aestivalis        C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Str.discifera         C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Str.chaplinii         C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Str.watermeyeri       C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCTGAG-GCTA
Str.picta             C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GTTA
Str.salteri7245       C-GTGAAC--CATTG-AGTTTTTGAAC-GC-AAGTTGCGCCCGGG--CTA
Str.bidentata         C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Str.truncata          C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
Str.tenella           C-GTGAGC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCTTAA-GCTA
Wor.rayneri           C-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTTGCGCCCGAG-GCTA
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                        51                                                  100
Ama.belladonnaRHA28     TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGCG
Ama.belladonna          TC-CG------GCCAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGCG
Ama.paradisicola        TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGAG
Amm.coranica7164        TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTTGTG
Amm.nerinoidesRHA32     TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTTGTG
Amm.nerinoides          TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTTGTG
Amm.coranica            TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTTGTG
Apo.lanceolatum         TC-TG------GCCGAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTG
Aga.caulescens          TC-TG------GCCGAGGGCAC--GCCTGCCTGGGCGT-CATGCCTTACG
Bo.haemanthoides        TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGCG
Bo.disticha             TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGCG
Cl.caulescens           TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACCG
Cl.gardenii             TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTG
Cl.miniata              TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTG
Cl.nobilis              TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTG
Cl.miniataRC14          TC-TG------GCCAAGGGC-C--GCCTGCCTGGGCGTACACGCTAGCTG
Br.bosmaniae            TC-TG------GCTGAGGGCAC--GCCTGCCTGGGCAT-CACGTCTCGCG
Br.radula               TC-TG------GCTGAGGGCAC--GCCTGCCTGGGCAT-CACGTCTCGCG
Br.comptonii            TC-TG------GCTGAGGGCAC--GCCTGCCTGGGCAT-CACGTCTCGCG
Br.radulosanata7629     TT-TG------G-TGAGGGCAC--GCCTGC-TGGGCAT-CACGTCTCGCG
Br.bosmaniae7251        TC-TG------GCTGAGGGCAC--GCCTGCCTGGGCAT-CACGTCTCGCG
Br.gregaria7157         TC-TG------GCTGAGGGCAC--GCCTTCCTGGCCAT-CACGTCTCGCG
Cro.flava7256           TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGCG
Cal.korsakoffii         TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CTCGCCTTGCA
Chl.fragrans            TC-TG------GTCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTATCG
Car.spiralis            TT-TG------GCTAAGGGCAT--GCCTGCTTGGGCAT-CATGTCTTGAG
Cy.longifolia           TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTTGTG
Cr.baumii               TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTTGTG
Cro.guttata             TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGGG
Cr.abyssinicum          TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGTG
Cr.kirkii               TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGTG
Cr.latifolium           TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGTG
Cr.politifolium         TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGTG
Cr.yemenense            TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGTG
Cr.americanum           TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGTG
Cr.cruentum             TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGTG
Cr.erubescens           TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGTG
Cr.oliganthum           TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGTG
Cr.Schunke14054         TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGTG
Cr.distichum            TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGCG
Cr.humile               TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGCG
Cr.jagus                TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGCG
Cr.moorei               TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGTG
Cr.bulbispermum         TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGTG
Cr.flaccidum            TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGTG
Cr.macowanii            TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGTG
Cr.variabile            TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGTG
Cr.bulbispermumRC95     TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCT-GTG
Cr.euchrophyllumRC96    TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGTG
Cr.moorei7921           TCCTG------GCTAAGGGCAC--ACCTGCCTGGGCAT-CACGCCT-GTG
Cr.acaule               TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGTG
Cr.forbesii             TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGTG
Cr.acaulglaucRC105      TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGTG
Cr.acauleRC106          TC-T-------GGTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGTG
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                        51                                                  100
Cr.campanulatum         TC-TG------GCTAAGGGCAC--GTCTGCCTGGGCAT-CACGCCTCGTG
Cr.caroloschmidtii      TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGTG
Cr.crassicaule          TC-TG------GCTAAGGGCAC--GCCTTCCTGGGCAT-CACGCCTCGTG
Cr.acauleRC38           TC-TG------GCTAAGGGCAC--GCCTTCCTGGGCAT-CACGCCTCGTG
Cr.carolschmidRC97      TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGTG
Cr.foetidumRC98         TC-TG------GCTAAGGGCAC--GCTT--CTGGGCAT-CACGCCT-GTG
Cr.graminicola7630      TCCTG------GCTAAGGGCAC--GCCTGCCTGGGCATCCACGCCTCGTG
Cr.asiaticum            TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTGGTG
Cr.pedunculatum         TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTGGTG
Cr.Meerow2332           TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTGGTG
Cr.defixum              TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGTG
Cr.Meerow2333           TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGTG
Cr.buphanoides          TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGTG
Cr.ligulatum            TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGTG
Cr.razafindratsiraea    TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGTG
Cr.modestum             TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGTG
Cr.mauritianum          TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTGGTG
Cr.subcernuum           TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGTG
Cr.venosum              TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGTG
Cr.buphanoidesRC102     TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGTG
Cr.fimbriatulum         TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGCG
Cr.broussonetii         TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGTG
Cry.haemanthoides       TC-TG-------C-A-GGGTGC--GTCTGCCTAGGCGT-CATGCCTTCTG
Cyr.falcatus7637        TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACCT
Cyr.obliquus7278        TC-TG------GCCAAGGGCAT--GCCTGCCTGGGCGT-CACGCCTACCT
Cyr.elatus7202          TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTT
Cyr.labiatus7212        TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACCT
Cyr.labiatus7258        TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACCT
Cyr.elatus7636          TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACCT
Cyr.herrei7217          TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACAT
Cyr.herreiRC86          TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACAT
Cyr.montanus7209        TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTG
Cyr.staadensis7316      TC-TG------GCCAAGGGCAT--GCCTGCCTGGGCGT-CACGCCTACCT
Cyr.eucallusRC79        TC-TG------GCCAAGGGCAT--GCCTGCCTGGGCGT-CACGCCTACCT
Cyr.brachyscyphu7406    TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACCT
Cyr.brachyscyphuRC90    TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACCT
Cyr.mackeniiRC87        TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTAC-T
Cyr.obrienii7193        TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACCT
Cyr.sanguineusRC94      TC-TG------GCCAAGGGCAT--GCCTGCCTGGGCGT-CACGCCTACCT
Cyr.suaveolens7181      TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTAC-T
Cyr.ochroleucus7639     TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACCT
Cyr.breviflorus7634     TC-TG------GCCAAGGGCAC--GCCTGCCTGGGTGT-CACGCCTACAT
Cyr.obliquus7210        TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACCT
Cyr.thorncroftiRC80     TC-TG------GCCAAGGGCAT--GCCTGCCTGGGCGT-CACGCCTACCT
Cyr.eucallusRC78        TC-TG------GT-AAGGGCAT--GCCTGCCTGGGCGT-CACGCCTACCT
Cyr.spiralis7219        TC-TG------GC-AAGGGCAT--GCCTGCTTGGGCGT-CACGCCTACCT
Cyr.wellandiiRC83       TC-TG-------CCAAGGGCAT--GCCTGCCTGGGCGT-CACGCCTATCT
Cyr.attenuatesRC81      TGTTG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACCT
Cyr.smithiae7214        TC-TG------GCCAAGGGCAT--GCCTGCTTGGGCGT-CACGCCTACCT
Cyr.breviflorusRC88     TC-TG-----GACCAAGGGCAC--GCCTGCCTGGGTGT-CACGCCTACAT
Cyr.speciosus7640       TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACCG
Cyr.macowanii7201       TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGTACACGCCTACCT
Ge.ciliaris             TC-TG------GCCGAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTG
Ge.britteniana          TC-TG------GCCGAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTG
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                        51                                                  100
Ge.verticillata         TC-TG------GCCGAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTG
Ge.namaquensisAMV635    TC-TG------GC-GAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTG
Ge.lanuginosa           TCTTG------GCCGAGGGCAC--GCCTGCCTGGGCGT-CATGCCTGCTG
Euch.formosa            TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CTAGCCTTGCC
Eucr.bicolor            TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CTCGCCTTGCA
Eust.darwinii           TC-TG------GTCAAGGGCAC--GTCTGCCTGGGCGT-CAC--ACGACC
Gr.hyacinthina          TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACCG
Ga.fosteri              TG-AG------GCTAAAGGCAC--TCCTGTCTGGGCAT-CATGCTTATCG
Hab.brachyandrus        TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACCG
Hae.hirsitus7626        TC-TA------GTCGAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTG
Hae.humilis7254         TC-TA------GTCGAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTG
Hae.paucilifoliu7925    TC-TA------GTCGAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTG
Hae.paucilifoliRHA21    TC-TA------GTCGAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTG
Hae.albiflos            TC-TA------GTCGAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTG
Hae.graniticus          TC-TG------GTCGAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTG
Hae.crispus7260         TC-TG------GTCGAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTG
Hae.coccineus           TC-TG------GTCGAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTG
Hae.pumilio             TC-TG------GTCGAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTG
Hae.coccineusAMV632     TC-TG------GTCGAGGGCAC--GCCTGCCTGGG-GT-CACGCCTACTG
Hae.crispus7252         TC-TG------GTCGAGGGCAC--GCCTGCCTGGGCGT-CATGCCTACTG
Hae.sanguineus7253      TC-TG------GGCGAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTG
Hip.sp.7446             TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTT
Hip.brasilianum         TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTG
Hip.papilio             TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTT
Hip.reticulatum         TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTG
Hip.macbridei           TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTT
Hip.mollevillquense     TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTT
Hip.parodii             TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTT
Hip.blumenavia          TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACCG
Hes.stellaris           TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CACGCCTCGTG
Hip.sp.7447             TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTG
Hie.argentina           TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTG
Hy.latifolia            TC-TG------GTCAAGGGCAC--GCCTGCCTGGGCGT-CTCGCCTGCCG
Rho.moelleri            TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACCG
Pyr.Chase3639           TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACCG
Is.longipetala          TC-TG------GTCAAGGGCAC--GCCTGCCTGGGCGT-CTCGCCTGCCG
Lep.quitoensis          TC-AG------GTCAAGGGCAC--GCCTGCCTGGGCGT-CTCGCCTGCCG
Pam.peruviana           CA-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-ATTGCCTACCG
Par.weberbaueri         TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CTCGCCTACCG
Phae.ventricosa         TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CTCGCCTTGCC
Rau.decora              TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CTCGCCTTGCC
Ne.alta                 TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CGCGCCTCGTG
Pan.canariense          TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACCG
La.martinezii           TC-TG------GTCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCCACCG
Leu.autumnale           TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACCG
Na.bicolor              TC-CG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTGCCG
Na.sp.7521              TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTGCCG
Na.sp.7608              TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTGCCG
Phy.ignea               TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTATCG
Ly.chinensis            TC-TG------GCCAAGGGCAC--GCCTGCCTAGGCGT-CATGCCTATCG
Urc.microcrater         TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTTGCC
Spr.formosissima        TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACCG
Zep.flavissima          TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACCG
Sca.membranaceuRHA25    TC-TG------GCCGAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTG
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                        51                                                  100
Sca.membranaceus7246 TC-TG------GCCGAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTG
Sca.membranaceus7917 TC-TG------GCCGAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTG
Sca.puniceusRHA26    TC-TG------GCCGAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTG
Sca.puniceusRHA27    TC-TG------GCCGAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTG
Sca.puniceus         TC-TG------GCCGAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTG
Sca.membranaceus     TC-TG------GCCGAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTG
Sca.puniceus7301     TC-TG------GCCGAGGGCAC--GCCTGCCTGGGCGT-CACGCCTACTG
Sca.cinnabarinus     TC-TG------GCCGAGGGCAC--GCCTGCCTGGGCGT-CACGCCTGCTG
Sten.humile          TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CTCGCCTACCG
Ster.lutea           TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT--ACGCCTACCG
Va.parviflora        TC-TG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CATGCCTACTG
Str.aestivalis       TC-TG------GCTAAGGGCAC--GTCTGCCTGGGCAT-CAAGCCTTACG
Str.discifera        TC-TG------GCTAAGGGCAC--GTCTGCCTGGGCAT-CAAGCCTTACG
Str.chaplinii        TC-TG------GCTAAGGGCAC--GTCTGCTTGGGCAT-CAAGCCTTACG
Str.watermeyeri      TC-CG------GCTAAGGGCAC--GTCTGCCTGGGCAT-CAAGCCTTACG
Str.picta            TC-TG------GCCAAGGGCAC--GTTTGCCTGGGCAT-CAAGCCTTACG
Str.salteri7245      TT-TG------GCTGGGGGCAC--GTTTGCCTGGGCAT-CAACCCT-A-G
Str.bidentata        TC-TG------GTTAAGGGCAT--GCCTGCCTGGGCAT-CATGCATTGCG
Str.truncata         TC-TG------GTTAAGGGCAT--GCCTGCCTGGGCAT-CATGCATTGCG
Str.tenella          TC-TG------GCTAAGGGCAC--GCCTGCCTGGGCAT-CATGCCTTGCG
Wor.rayneri          TC-GG------GCCAAGGGCAC--GCCTGCCTGGGCGT-CAAGCCTACCG
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                          101                                                 150
Ama.belladonnaRHA28       A-CGCTT-CGTGCCCCTTGC-------CCCCCA------ATTGGTGCGG-
Ama.belladonna            A-CGCTT-CGTGCCCCTTGC-------CCCCCA------ATTGGTGCGG-
Ama.paradisicola          A-CGCTT-CGTGCCCCTTGC-------CCCCCA------ACTGGTGCGG-
Amm.coranica7164          A-CGCTT-CGTGCCCTTTGC-------CTTTCA------CCTGGTGCAG-
Amm.nerinoidesRHA32       A-CGCTT-CGTGCCCTTTGC-------CTTTCA------CCTGGTGCAG-
Amm.nerinoides            A-CGCTT-CGTGCCCTTTGC-------CTTTCA------CCTGGTGCAG-
Amm.coranica              A-CGCTT-CGTGCCCTTTGC-------CTTTCA------CCTGGTGCAG-
Apo.lanceolatum           G-CGCTC-TGTGCCTCTCGC------ACCATCG------CCTTGTGCGG-
Aga.caulescens            TTCGCTC-CGTTCACCCAGC------CTTCCCG------TGCAGCGCGG-
Bo.haemanthoides          A-TGCTT-CGTGTCCCTTGC-----CCCTCCCA------CTTGGTGCAG-
Bo.disticha               A-TGCTT-CGTGCCCCTTGCCCCCCTCCCCCCA------CTTGGTGCAG-
Cl.caulescens             A-CGCTC-CGTGCCTCCTGC------CCTCTCA-----CCCT-GCGCGG-
Cl.gardenii               A-CGCTC-CGTGCCTCTTGC------CCCCTCA-----CCCT-GCGCGG-
Cl.miniata                A-CGCTC-CGTGCCTCTTGC------CCCCTCA-----CCCT-GCGCGG-
Cl.nobilis                A-CGCTC-CGTGCCTCTTGC------CCCCTCA-----CCCT-GCGCGG-
Cl.miniataRC14            A-CGC-C-CGTGCCTCT-GC------CCCTCCA-----CCCT-GCGCGGT
Br.bosmaniae              A-CGCTT-CGTGCCACCTGC-------CCCTCA------CCTGGTGCAT-
Br.radula                 A-CGCTT-CGTGCCACCTGC-------CCCTCA------CCTGGTGCAT-
Br.comptonii              A-CGCTT-CGTGCCACCTGC-------CCCTCA------CCTGGTGCAT-
Br.radulosanata7629       A-CGCTTGCGTGCCACCTGC-------CCCTCA------CCTGGTGCAT-
Br.bosmaniae7251          A-CGCTT-CGTGCCACCTGC-------CCCTCA------CCTGGTGCAT-
Br.gregaria7157           A-CGCTT-C-TGCCAC-TGC------CCCCTCA------CCTGGTGCAT-
Cro.flava7256             A-CGCTT-CGTGCCACCTGC-------CCTTTG------TCTGGTGCA--
Cal.korsakoffii           GACGCTC-CATGCCTCCCGC--------CCCCG---CCACGTGCGGTTCG
Chl.fragrans              A-CGCTC-CCTGCCTCTTAC--CCCTCCCCCCG-----CCATG-TGCGGT
Car.spiralis              A-TGCTT-TGTTCTATTTGT-------CCCTCT------CCTGTTGTAG-
Cy.longifolia             A-CGCTT-CGTGCCCTTTGC-------CTTTCA------CCTGGTGCAG-
Cr.baumii                 A-CGCTT-CGTGCCCTTTGC-------CTTTCA------CCTGGTGCAG-
Cro.guttata               A-CGCTT-CGTGCCACCTGC-------CCTTCG------TCTGGTGCAG-
Cr.abyssinicum            A-CGCTT-CGCGCCCCTCGC-------CCCTTA------CCTGGTGCAG-
Cr.kirkii                 A-CGCTT-CGCGCCCCTCGC-------CCCTTA------CCTGGTGCAG-
Cr.latifolium             A-CGCTT-CGCGCCCCTCGC-------CCCTTA------CCTGGTGCAG-
Cr.politifolium           A-CGCTT-CGCGCTCCTCGC-------CCCTTA------CCTGGTGCAG-
Cr.yemenense              A-CGCTT-CGCGCCCCTCGC-------CCCTTA------CCTGGTGCAG-
Cr.americanum             A-CGCTT-CGCGCCCCTCGC-------CCCTTA------CCTGGTGCAG-
Cr.cruentum               A-CGCTT-CGCGCCCCTCGC-------CACTTA------CCTGGTGCAG-
Cr.erubescens             A-CGCTT-CGCGCCCCTCGC-------CACTTA------CCTGGTGCAG-
Cr.oliganthum             A-CGCTT-CGCGCCCCTCGC-------CCCTTA------CCTGGTGCAG-
Cr.Schunke14054           A-CGCTT-CGCGCCCCTCGC-------CACTTA------CCTGGTGCAG-
Cr.distichum              A-CGCTT-CGCGCCCCTCGC-------CCCTTA------CCTGGTGCAG-
Cr.humile                 A-CGCTT-CGCGCCCCTCGC-------CCCTTA------CCTGGTGCAG-
Cr.jagus                  A-CTCTT-CGCGCCCCTCGC-------CCCTTA------CCTGGTGCAG-
Cr.moorei                 A-CGCTT-CGCGCCCCTTGC-------CCCTTA------CCTGGTGCAG-
Cr.bulbispermum           A-CGCTT-CGCGCCCCTTGC-------CCCTTA------CCTGGTGTAG-
Cr.flaccidum              A-CTCCT-CGCGCCCCTTGC-------CCCTTA------CCTGGTGCAG-
Cr.macowanii              A-CGCTT-CGCGCCCCTTGC-------CCCTTA------CCTGGTGCAG-
Cr.variabile              A-CGCTT-CGCGCCCCTTGC-------CCCTTA------CCTGGTGTAG-
Cr.bulbispermumRC95       A-CGCTT-CGCGCCCCTTGC-------CCCTTA------CCTGGTGTAG-
Cr.euchrophyllumRC96      A-CGCTT-CGCGCCCCTTGC-------CCCTTA------CCTGGTGCAG-
Cr.moorei7921             A-CGCTT-CGCGCCCCTTGC-------CCCTTA------CCTGGTGCAG-
Cr.acaule                 A-CGCTT-CGCGCCCTTTGC-------CCCTTA------CCTGGTGCAG-
Cr.forbesii               A-CGCTT-CGCGCCCTTTGC-------CCCTTA------CCTGGTGCAG-
Cr.acaulglaucRC105        A-CGCTT-CGCGCCCTTTGC-------CCCTTA------CCTGGTGCAG-
Cr.acauleRC106            A-CG-TT-CGCGCC-TTTGC-------CCCTTA------CCTGGTGCAG-
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                        101                                                 150
Cr.campanulatum         A-CGCTT-CGCGCCCCTTGC-------CCCTTA------CCTGGTGCAG-
Cr.caroloschmidtii      A-CGCTT-CGCGCCCCTTGC-------CCCTTA------CCTGGTGCAG-
Cr.crassicaule          A-CGCTT-CGCGCCCCTTGC-------CCCTTA------CCTGGTGCAG-
Cr.acauleRC38           A-CGCTT-CGCGCCCCTTGC-------CCCTTA------CCTGGTGCAG-
Cr.carolschmidRC97      A-CGCTT-CGCGCCCCTTGC-------CCCTTA------CCTGGTGCAG-
Cr.foetidumRC98         A-CGCTT-CGCGCCCCTTGC--------CCTTA------CCTGGTGCAG-
Cr.graminicola7630      A-CGCTT-CGCACCCTTTGC-------CCCTTA------CCTGATGCAG-
Cr.asiaticum            A-CGCTT-CGTGCCCCTTGC-------CCCTGA------TCTGGTGCAG-
Cr.pedunculatum         A-CGCTT-CGTGCCCCTTGC-------CCCTGA------TCTGGTGCAG-
Cr.Meerow2332           A-CGCTT-CGTGCCCCTTGC-------CCCTGA------TCTGGTGCAG-
Cr.defixum              A-CGCTT-CGCGCCCCTTGC-------CCCTGA------TCTGGTGCAG-
Cr.Meerow2333           A-CGCTT-CGCGCCCCTTGC-------CCCTGA------TCTGGTGCAG-
Cr.buphanoides          A-CGCTT-CGCGCCCCCTGC-------CCCTGA------TCTGGGGCAG-
Cr.ligulatum            A-CGCTT-CGCGCCCCTTGC-------CCCTGA------TCTGGTGCAG-
Cr.razafindratsiraea    A-CGCTT-CGCGCCCCTTGC-------CCCTGA------TCTGGTGCAG-
Cr.modestum             A-CGCTT-CGCGCCCCTTGC-------CCCTGA------TCTGGTGCAG-
Cr.mauritianum          A-CGCTT-CGCGCCCCTTGC-------CCCTGA------TCTGGTGCAG-
Cr.subcernuum           A-CGCTT-CGCGCCCCTTGC-------CCCTGA------TCTGGTGCAG-
Cr.venosum              A-CGCTT-CGTGCCCCTTGC-------CCCTGA------TCTGGTGCAG-
Cr.buphanoidesRC102     A-CGCTT-CGCGCCCCTTGC-------CCCTGA------TCTGGTGCAG-
Cr.fimbriatulum         A-CGCTT-CGCGCCCCTTTA-------CCCTTG------CCTGGTGCAG-
Cr.broussonetii         A-CGCTT-CGCGCCCCTCGC-------CCCTTA------CCTGGTGCAG-
Cry.haemanthoides       A-TGCTCCCGTGCCTCTTGC------CCTCTCA-----CCCTG-CACAG-
Cyr.falcatus7637        G-TGCTC-CGAGCCTCTCGC------CCCTTCA------CACCGTGCGG-
Cyr.obliquus7278        G-TGCTT-CGAGCCTCTTGC------CCCCTCA------CGCCGTGCGG-
Cyr.elatus7202          G-CGCTC-CGAGCCTCTTGC------CCCCTCA------CGTCGTGCGG-
Cyr.labiatus7212        G-CGCTC-CGAGCCTCTTGC------CCCCTCA------CGCCGTGCGG-
Cyr.labiatus7258        G-CGCTC-CGAGCCTCTTGC------CCCCTCA------CGCCGTGCGG-
Cyr.elatus7636          G-CGCTC-CGAGCCTCTTGC------CCCCTCA------CGTCGTGCGG-
Cyr.herrei7217          G-TGCTC-CGAGCCTCTTGC------CCCCTCG------CGTCGTGCGA-
Cyr.herreiRC86          G-TGCTC-CGAGCCTCTTGC------CCCCTCG------CGTCGTGCGA-
Cyr.montanus7209        C--GCTC-CGAGCCTCTTGC------CCCCTCA------CGCCGTGCGG-
Cyr.staadensis7316      G-TGCTC-CGAGCCTCTTGC------CCCCTCA------CGCCGTGCGG-
Cyr.eucallusRC79        G-TGCTC-CGAGCCTCTTGC------CCCCTCA------CGCCGTGCGG-
Cyr.brachyscyphu7406    G-CGCTC-CGAGCCTCTTGC------CCTCTCA------CGCCGTGCGG-
Cyr.brachyscyphuRC90    G-CGCTC-CGAGCCTCTTGC------CCCCTCA------CGCCGTGCGG-
Cyr.mackeniiRC87        G-CGCTC-CGAGCCTCTTGC------CCCCTCA------CGCCGTGCGG-
Cyr.obrienii7193        G-CGCTC-CGAGCCTCTTGC------CCCCTCA------CGCCGTGACGG
Cyr.sanguineusRC94      G-TGCTC-CGAGCCTCTTGC------CCCCTCA------CGCCGTGCGG-
Cyr.suaveolens7181      G-CGCTT--GAGCCTCTTGC------CCCCTCA------CGCCGTGCGG-
Cyr.ochroleucus7639     G-CGCTC-CGAGCCTCTTGC------CCCCTCA------CGCCGTGCGG-
Cyr.breviflorus7634     G-TGCTC-CGAGCCTCTTGC------CCCCTCA------CGCCGTGCGG-
Cyr.obliquus7210        G-TGCTT-CGAGCCTCTTGC------CCCCTCA------CGCCGTGCGG-
Cyr.thorncroftiRC80     G-TGCTC-CGAGCCTCTTGC------CCCCTCA------CGCCGTGCGG-
Cyr.eucallusRC78        G-TGCTC-CGAGCCTCTTGC------CCCCTCA------CGCCGTGCGG-
Cyr.spiralis7219        G-TGCTC-CGAGCCTCTTGC------CCCCTCA------CGCCGTGCGG-
Cyr.wellandiiRC83       G-TGCTC-CGAGCCTCTTGC------CCCCTCA------CGCCGTGCGG-
Cyr.attenuatesRC81      G-TGCT---GAGCCTCTTGC------CCCCTCA------CGCCGTGCGG-
Cyr.smithiae7214        G-TGTTC-CGAGCCTCTTGC------CCCCTCA------CGCCTTGCGT-
Cyr.breviflorusRC88     G-TGCTC-CGAGCCTCTTGC------CCCCTCA------CGCCGTGCGG-
Cyr.speciosus7640       A-CGCTC-CTTGCATACTGC---TCGTTCCACA-----GGCACGCGTGGC
Cyr.macowanii7201       G-CGCTC-AGAGCCTCTTGC------CCCCTCA------CGCCGTGCGG-
Ge.ciliaris             G-CGCTC-TGTGCCTCTTGC------ACCGTCA------CCTCGTGCGG-
Ge.britteniana          G-CGCTC-TGTGCCTCTTGC------ACCATCA------CCTTGTGCGG-
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                    101                                                 150
Ge.verticillata     G-CGCTC-TGTGCCTCTTGG------ACCATCA------CCTTGTGCGG-
Ge.namaquensisAMV635 G-CGCTC-TGTGCT-CTTGC------ACCATCA------CCTTGTGCGG-
Ge.lanuginosa       G-CGCTC-TGTGCCTCT-GC------ACCATCG------CCTCGTGCGG-
Euch.formosa        GACGCTC-CATGCCTCCCGC-------CCCCG-------CCCCGTGCGGT
Eucr.bicolor        GACGCTC-CATGCCTCCTGC-------CCCCG-------CCCCGAGCCGT
Eust.darwinii       GACGCTC-CGTGCCTCCTGCCC---ACCCCTCT------CACTGTGCGGT
Gr.hyacinthina      A-CGCTC-CTAGTCTCCTGCCTGTTGGCCC-G-------CCATGTGCGGC
Ga.fosteri          A-CGCTC-TTTGCCTTTTG----TAATTTCCTA--------TCTTACTA-
Hab.brachyandrus    A-CGCTC-CTTGCATACTGC-----CCGTCCCACCG---CCACGCGTGGT
Hae.hirsitus7626    G-CGCTC-TGTGTCTCTTGC------ACCATCA------CCTTATGCTG-
Hae.humilis7254     G-CGCTC-TGTGTCTCTTGC------ACCATCA------CCTTATGCTG-
Hae.paucilifoliu7925 G-CGCTC-TGTGTCTCTTGC------ACCATCA------CCTTATGCTG-
Hae.paucilifoliRHA21 G-CGCTC-TGTGTCTCTTGC------ACCATCA------CCTTATGCTG-
Hae.albiflos        G-CGCTC-TGTGTCTCTTGC------ACCATCA------CCTTATGCTG-
Hae.graniticus      G-CGCTC-AGTGCCTCTTGC------ACCATCA------CCTTATGTTG-
Hae.crispus7260     G-CGCTC-AGTGCCTCTTGC------ACCATCA------CCTTATGTTG-
Hae.coccineus       G-CGCTC-AGTGCCTCTTGC------ACCATCA------CCTTATGTTG-
Hae.pumilio         G-CGCTC-TGTGCCTCTTGC------ACCATCA------CCTTATGCTG-
Hae.coccineusAMV632 G-CGCTC-AGTGCCTCTTGC------ACCATCA------CCTTATGTTG-
Hae.crispus7252     G-CGCTC-AGTGCCTCTTGC------ACCATC-------CCTTATGTTG-
Hae.sanguineus7253  G-CGCTC-AGTGCCTCTTGC------ACCATCA------CCTTATGTTG-
Hip.sp.7446         A-CGCTC-CTTGCATACTGC--CCGTCCCACTG------CCACGCGTGGC
Hip.brasilianum     A-CGCTC-CTTGCATACTGC--CCGTCCCACTG------CCACGCGTGGC
Hip.papilio         A-CGCTC-CTTGCATACTGC--CCGTCCCACTG------CCACGCGTGGC
Hip.reticulatum     A-CGCTC-CTTGCATACTGC--CCGTCCCACTG------CCACGCGTGGC
Hip.macbridei       A-CGCTC-CTTGCATACTGC--CCGTCCCACTG------CCACGCGTGGC
Hip.mollevillquense A-CGCTC-CTTGCATACTGC--CCGTCCCACTG------CCACGCGTGGC
Hip.parodii         A-CGCTC-CTTGCATACTGC--CCGTCCCACTG------CCACGCGTGGC
Hip.blumenavia      A-CGCTC-CTTGCATACTGC--CCTTCCCACTG------CTACGCGTGGC
Hes.stellaris       A-CGCTT-TGTGCTACCTAC-------CCCTCA------CTTGGTGCTA-
Hip.sp.7447         A-CGCTC-CTTGCATACTGC--CCGTCCCACTG------CCACGCGTGGC
Hie.argentina       A-CGCTC-CCTGCCTCTTAC-CCCTACCCCCCG------CCCTGTGCGGT
Hy.latifolia        A-CGCTT-CGTGCCTCCTGG-----CCCC---G------CCCCGTGCGGT
Rho.moelleri        A-CGCTC-CTTGCATACTGCCC--GTCCCACTG------CTACGCGTGGC
Pyr.Chase3639       A-CGCTC-CTTGCATACTGC--TCGTTCCACAG------GCACGCGTGGC
Is.longipetala      A-CGCTC-CATGCCTCCTGG--------CCCCG------CCCCGTGCGGT
Lep.quitoensis      G-CGCTC-CATGCCTCCCGG--------CCCCG------CCCCGTGCGGT
Pam.peruviana       G-CGCTC-CATGCCTCATGC--------CCCCG------TCCCGTGCGGT
Par.weberbaueri     A-CGCTC-CATGCCTCCTGC-------------------CCCGTGCGGT
Phae.ventricosa     GACGCTA-CATGCCTCCCGC--------CCCCG------CCCCGTGCGGA
Rau.decora          GACGCTC-CATGCCTCCCGC--------CCCCG------CCCTGTGCGGT
Ne.alta             A-CGCTT-CGTGCCACCTGC-------CCCTTA------CCTGGTGCAG-
Pan.canariense      A-CGCTC-CGTGCCTCCTGC-------CCCTCA--CCCCGCCCGTGCGAT
La.martinezii       A-CGCTC-TGTGCCTCCTGC--CCCTCCCCCCG------CCATGTGCGGT
Leu.autumnale       A-CGCTC-CGTGGCTCTT-C----CCCCTTCCG-----TCGTCGCGCGGT
Na.bicolor          A-CGCTC-ATTGCCCCCTTC--------CCCTG------CCTCGTGCGGT
Na.sp.7521          A-CGCTC-ATTGCCCCCTTC--------CCCTG------CCTCGTGCGGT
Na.sp.7608          A-CGCTC-ATTGCCCCCTTC--------CCCTG------CCTCGTGCGGT
Phy.ignea           A-CGCTC-CTTGCTTCCTGC--CCCTCCCCCCG------CCTTGTGCGGC
Ly.chinensis        A-TGCTC-CGTGCC-CCTCC--------CCACG------CCTTGCATGGT
Urc.microcrater     GACGCTC-CATGCCTCCCGC--------CCCCG------CCCCGTGCGGT
Spr.formosissima    A-CGCTC-CTTGCATACTGC--CCGTCCCCCTG------CCACGCGTGGC
Zep.flavissima      A-CGCTC-CTTGCATACTGC--CCGTCCCACCG------CCACGCATGGC
Sca.membranaceuRHA25 A-CGCTC-TGTGCCTCTTGC------ACCATCA------CCTTGTGCGG-
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                     101                                                 150
Sca.membranaceus7246 A-CGCTC-TGTGCCTCTTGC------ACCATCA------CCTTGTGCGG-
Sca.membranaceus7917 A-CGCTC-TGTGCCTCTTGC------ACCATCA------CCTTGTGCGT-
Sca.puniceusRHA26    A-CGCTC-TGTGCCTCTTGC------ACCATCA------CCTTGTGCGG-
Sca.puniceusRHA27    A-CGCTC-TGTGCCTCTTGC------ACCATCA------CCTTGTGCGG-
Sca.puniceus         A-CGCTC-TGTGCCTCTTGC------ACCATCA------CCTTGTGCGG-
Sca.membranaceus     A-CGCTC-TGTGCCTCTTGC------ACCATCA------CCTTGTGCGG-
Sca.puniceus7301     GACGCTC-TGTGCCTCTTGC------ACCATCA------CCTTGTGCGG-
Sca.cinnabarinus     G-CGCTC-TGTGCCTCTTGC------ACCATCG------CCTTGTGCGG-
Sten.humile          A-CGCTC-CGTGCCTCCTGC--------CCCCG------CCTCGTGCGGT
Ster.lutea           A-CGCTC-CGTGCCTCCTGC--CCCCTCCCCTG------CCA-GTGCAGT
Va.parviflora        A-CGCTT-CGTGCCTCTTGCGC--CTCCCCACG-----CCCT-GTGCGGT
Str.aestivalis       A-CGCTT-CGTGCCCCCTTC---------A--A-------CTAGTGGAG-
Str.discifera        A-CGCTT-CGAGCCCCCTTC---------A--A-------CTAGTGGAG-
Str.chaplinii        A-CGCTT-CGTGCCCCCTTC------A-CCTAG--------TGGTGGGG-
Str.watermeyeri      A-TGCTT-TGTGCCCCC-----------CTTCA------CCTAGTGGAGG
Str.picta            A-CGCTT-CGTGCCCCCT------------TTA------CCTAGTGGAG-
Str.salteri7245      A-TGCTT-TGTGCCCCC----------CTTTCA------CCTAGTAGAGG
Str.bidentata        A-CGCTT-CGTGCCACCTGC--------CTTTAC-----CTTGGTGAAG-
Str.truncata         A-CGCTT-CGTGCCACCTGC--------CTTTAC-----CTTGGTGGAG-
Str.tenella          A-CGCTT-CGTGTTGCCTGC-------CCCTT-C-----CATGGTGCA-T
Wor.rayneri          A-CGTTC-TTGGCTTCCAGC--CCATTCCCCCG------CCAAGTGCGGC
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                        151                                                 200
Ama.belladonnaRHA28     GCG-GCAACTGGCTCAAACGCGGAGATT--GGCCCC---CTGTGCGTCG-
Ama.belladonna          GCG-GCAACTGGCTCAAACGCGGAGATT--GGCCCC---CCGTGCGTCG-
Ama.paradisicola        GTG-GCAACTGGCTCAAACGCGGAGATT--GGCTCC---CTGTGCGTCG-
Amm.coranica7164        GCG-GCAACTGGCTCGAACGTGGAGATT--GGCCCC---CTGTGCGTCG-
Amm.nerinoidesRHA32     GCG-GCAACTGGCTCGAACGTGGAGATT--GGCCCC---CTGTGCGTCG-
Amm.nerinoides          GCG-GCAACTGGCTCGAACGTGGAGATT--GGCCCC---CTGTGCGTCG-
Amm.coranica            GCG-GCAACTGGCTCGAACGTGGAGATT--GGCCCC---CTGTGCGTCG-
Apo.lanceolatum         TCG-GCGGCAGGCACCGATGCGGAGATT--GGCCCC---CCACGCCTCG-
Aga.caulescens          GCG-CCGGCGGGTGCGGATGCGGAGATT--GGCCCC---CCGTGCCTCG-
Bo.haemanthoides        GCG-GCAACTGGCTCGAACGCGGAGATT--GGCCCC---CTGTGCGTCG-
Bo.disticha             GCG-GCAACTGGCTCGAACGCGGAGATT--GGCCCC---CTGTGCGTCG-
Cl.caulescens           TCG-GCGGCAGGCACGGATGCGGAGATT--GGCCCC---CCACGCATCG-
Cl.gardenii             TCG-GCGGCAGGCACGGAAGCGGAGATT--GGCCCC---CCACGCATCG-
Cl.miniata              TCG-GCGGCAGGCACGGATGCGGAGATT--GGCCCC---CCACGCATCG-
Cl.nobilis              TCG-GCGGCAGGCACGGATGCGGAGATT--GGCCCG---CCACGCATCG-
Cl.miniataRC14          ACG-GCGGCAGGCACGGATGCGGAGATT--GGCCCC---C-ACGCATCGA
Br.bosmaniae            GCG-ACAAATGGCGCGAACGCGGAGATT--GGCCCC---TTGTGCGTCA-
Br.radula               GCG-GCAACTGGCGCGAACGCGGAGATT--GGCCCC---TTGTGCGTCA-
Br.comptonii            GCG-ACAACTGGCGCGAACGCGGAGATT--GGCCCC---TTGTGCGTCA-
Br.radulosanata7629     GCG-ACAACTGGCGCGAACGCGGAGATT--GGCCCC---TCGTGCGTCA-
Br.bosmaniae7251        GCG-ACAAATGGCGCGAACGCGGAGATT--GGCCCC---TTGTGCGTCA-
Br.gregaria7157         GCG-ACAACTGGCGCGAACGCGGAGATT--GGCCCC---TCGTGCGTCAT
Cro.flava7256           GCG-ACAGCTGGCGCAAACGCGGAGATT--GGCTCC---CTGTGCGTCA-
Cal.korsakoffii         GCG-G---TTGGCACGGATGCGGAGATT--GGCCCC---CCACGCGTCG-
Chl.fragrans            TCG-ACGGTAGGCACGGATGCGGAGATTT-GGCCTC---CCACGCTTCG-
Car.spiralis            GTG-ACAATTGGTACGAATGTGGAGATT--GGCCCT---CTGTGTGTTG-
Cy.longifolia           GCG-GCAACTGGCTCGAACGTGGAGATT--GGCCCC---CTGTGCGTCG-
Cr.baumii               GTG-GCAACTGGCTCGAATGTGGAGATT--GGCCCC---CTGTGCGTCG-
Cro.guttata             -CG-ACAGCTGGCGCAAACGCGGAGATT--GGCTCC---CTGTGCGTCA-
Cr.abyssinicum          GTG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCGTCA-
Cr.kirkii               GTG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCGTCA-
Cr.latifolium           GCG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCGTCG-
Cr.politifolium         GTG-GCAACTGGTTCGAACGTGGAGATT--GGCCTC---CTGTGCGTCA-
Cr.yemenense            GTG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCGTCA-
Cr.americanum           GTG-GCAGCTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCGTCA-
Cr.cruentum             GTG-GCAGCTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCGTCA-
Cr.erubescens           GTG-GCAGCTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCGTCA-
Cr.oliganthum           GTG-GCAGCTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCGTCA-
Cr.Schunke14054         GTG-GCAGCTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCGTCA-
Cr.distichum            GTG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCGTCA-
Cr.humile               GTG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCGTCA-
Cr.jagus                GTG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCGTCA-
Cr.moorei               GTG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCATCA-
Cr.bulbispermum         GTG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCATCA-
Cr.flaccidum            GTG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCATCA-
Cr.macowanii            GTG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCATCA-
Cr.variabile            GTG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCATCA-
Cr.bulbispermumRC95     GTG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCATCA-
Cr.euchrophyllumRC96    GTG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCATCA-
Cr.moorei7921           GTG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCATCA-
Cr.acaule               GTG-GCAACTGGTCCAAACGTGGAGATT--GGCCCC---CTGTGCATCA-
Cr.forbesii             GTG-GCAACTGGTCCAAACGTGGAGATT--GGCCCC---CTGTGCATCA-
Cr.acaulglaucRC105      GTG-GCAACTGGTCCAAACGTGGAGATT--GGCCCC---CTGTGCATCCA
Cr.acauleRC106          GTG-GCAACTGGTCCAAACGTGGAGATT--GGCCCC---CTGTGCATCA-
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                        151                                                 200
Cr.campanulatum         GTG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCATCA-
Cr.caroloschmidtii      GTG-GCACCTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCATCA-
Cr.crassicaule          GTG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCATCA-
Cr.acauleRC38           GTG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCATCA-
Cr.carolschmidRC97      GTG-GCACTTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCATCCA
Cr.foetidumRC98         GTG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCATCCA
Cr.graminicola7630      GTG-GCAACTGGTCCAAACGTGGAGATT--GGCCCC---CTGTGCATCA-
Cr.asiaticum            GCG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCGTCA-
Cr.pedunculatum         GCG-GCAGCTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCGTCA-
Cr.Meerow2332           GCG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCGTCA-
Cr.defixum              GCG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCGTCA-
Cr.Meerow2333           GCG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCGTCA-
Cr.buphanoides          GCG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCGTCA-
Cr.ligulatum            GTG-GCAACTGGCTCGAACGTGGAGATT--GGCCCC---CTGTGCGTCA-
Cr.razafindratsiraea    GTG-GCAACTGGCTCGAACGTGGAGATT--GGCCCC---CTGTGCGTCA-
Cr.modestum             GTG-GCAACTGGCTCGAACGTGGAGATT--GGCCCC---CTGTGCGTCA-
Cr.mauritianum          GTG-GCAACTGGCTCGAACGTGGAGATT--GGCCCC---CTGTGCGTCA-
Cr.subcernuum           GCG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCGTCA-
Cr.venosum              GCG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCGTCA-
Cr.buphanoidesRC102     GCG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCGTCA-
Cr.fimbriatulum         GTG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCATCA-
Cr.broussonetii         GTG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC---CTGTGCGTCA-
Cry.haemanthoides       TCG-GTGGTAAGCAAAGATGTGGAGATT--GGCCCC---TCATGCATTG-
Cyr.falcatus7637        TCG-GCGGCGGGCATGGATGCGGAGATT--GGCCCC---CCACGCGTCG-
Cyr.obliquus7278        TCG-GCGGCGGGCACGGATGCGGAGATT--GGCCCC---CCACGCATCG-
Cyr.elatus7202          TCG-GCTGCGGGCACGGATGCGGAGATT--GGCCCC---CCACGCATCG-
Cyr.labiatus7212        TCG-GCGGCGGGCACGGATGCGGAGATT--GGCCCC---CCACGCATCG-
Cyr.labiatus7258        TCG-GCGGCGGGCACGGATGCGGAGATT--GGCCCC---CCACGCATCG-
Cyr.elatus7636          TCG-GCTGCGGGCACGGATGCGGAGATT--GGCCCC---CCACGCATCG-
Cyr.herrei7217          TCG-GCGGCGGGCACGGATGCGGAGATT--GGCCCC---CCACGCATCG-
Cyr.herreiRC86          TCG-GCGGCGGGCACGGATGCGGAGATT--GGCCCC---CCACGCATCG-
Cyr.montanus7209        TCG-GCGGCGGGCACGGATGCGGAGATT--GGCCCC---CCACGCATCG-
Cyr.staadensis7316      TCG-GCGGCGGGCACGGATGCGGAGATT--GGCCTC---CCACGCATCG-
Cyr.eucallusRC79        TCG-GCGGCGGGCACGGATGCGGAGATT--GGCCCC---CCACGCATCG-
Cyr.brachyscyphu7406    GCG-GCGGCGGGCACGGATGTGGAGATT--GGCCCC---CCACGCATCG-
Cyr.brachyscyphuRC90    GCG-GCGGCGGGCACGGATGTGGAGATT--GGCCCC---CCACGCATCG-
Cyr.mackeniiRC87        GCG-GCGGCGGGCACGGATGCGGAGATT--GGCCCC---CCACGCATCG-
Cyr.obrienii7193        GCG-GCGGCGGGCACGGATGTGGAGATT--GGCCCC---CCACGCATCG-
Cyr.sanguineusRC94      TCG-GCGGCGGGCACGGATGCGGAGATT--GGCCCC---CCACGCATCG-
Cyr.suaveolens7181      GCG-GCGGCGGGCACGGATGCGGAGATT--GGCCCC---CCACGCATCG-
Cyr.ochroleucus7639     GCG-GCGGCGGGCACGGATGCGGAGATT--GGCCCC---CCACGCATCG-
Cyr.breviflorus7634     GCG-GCGGCGGGCACGGATGCGGAGATT--GGCCAT---CCACGCATCG-
Cyr.obliquus7210        TCG-GCGGCGGGCACGGATGCGGAGATT--GGCCCC---CCACGCATCG-
Cyr.thorncroftiRC80     TCG-GCGGCGGGCACGGATGCGGAGATT--GGCCCC---CCACGCATCG-
Cyr.eucallusRC78        TCG-GCGGCGGGCACGGATGCGGAGATT--GGCCCC---CCACGCATCG-
Cyr.spiralis7219        TCG-GCGG-GGGCACGGATGCGGAGATT--GGCCCC---CCACGCATCG-
Cyr.wellandiiRC83       TCG-GCGGCGGGCACGGATGCGGAGATT--GGCCCC---CCACGCATCGC
Cyr.attenuatesRC81      GCG-GCGGCGGGCTCGGATGCGGAGATT--GGCCCC---CCAGATG-CG-
Cyr.smithiae7214        TCG-GCGGCGGGCACGGTTGCGGAGATT--GGCCCC---CCACGCATCG-
Cyr.breviflorusRC88     GCG-GCGGCGGGCACGGATGCGGAGATT--GGCCAT---CCACGCATCG-
Cyr.speciosus7640       GCG-ACGGCAGTAACGGATGCGGAGATT--GGCCCC---CCGCGCATCG-
Cyr.macowanii7201       GCG-GCGGCGGGCACGGATGCGGAGATT--GGCCCC---CCACGCATCG-
Ge.ciliaris             TCG-GCGATAGGCACGGATGCGGAGATT--GGCCCC---CCACGCATCG-
Ge.britteniana          TCG-GCGATAGGCACGGATGCGGAGATT--GGCCCC---CCACGCATCG-
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                        151                                                200
Ge.verticillata         TCG-GCGATAGGCACGGATGCGGAGATT--GGCCCC---CCACGCATCG-
Ge.namaquensisAMV635    TCG-GCGATAGGCACGGAAGCGGAGATT--GGCCCC---CCACGCATCG-
Ge.lanuginosa           TCG-GCGGCAGGCGCGGATGCGGAGATT--GGCCCC---CCACGCATCG-
Euch.formosa            TCG-GCGGCCGGCACGGATGCGGAGATT--GGCCCC---CCACGCGTCG-
Eucr.bicolor            TCG-GCGGCCTGCACGGATGCGGAGATT--GGCCCC---CCACGCGTCG-
Eust.darwinii           TCG-GCGGCAGGCACGGATGCGGAGATTT-GACCCC---CCACGCTTTG-
Gr.hyacinthina          TCT-ACGGCTGGCACGGATGCGGAGATT--GGCCCT---CCGTGCATCG-
Ga.fosteri              TTAGACAGTAGGCATTGATGTGGAGATT--GCCCCC---CTATACATCA-
Hab.brachyandrus        GCG-ACGGCAGTAATGGATGCGGAGATT--GGCCCC---CCGCGCGTCG-
Hae.hirsitus7626        TCG-GCGAGAGGCACGGATGCGGAGATT--GGCCCC---TCGCGCATCG-
Hae.humilis7254         TCG-GCGAGAGGCACGGATGCGGAGATT--GGCCCC---TCGCGCATCG-
Hae.paucilifoliu7925    TCG-GCGAGAGGCACGGATGCGGAGATT--GGCCCC---TCGCGCATCG-
Hae.paucilifoliRHA21    TCG-GCGAGAGGCACGGATGCGGAGATT--GGCCCC---TCGCGCATACG
Hae.albiflos            TCG-GCGAGAGGCACGGATGCGGAGATT--GGCCCC---TCGCGCATCG-
Hae.graniticus          TTG-GTGAGAGGCACGGATGCGGAGATT--GGCCTC---CCGCGCATCG-
Hae.crispus7260         TTG-GTGAGAGGCACGGATGCGGAGATT--GGCCTC---CCGCGCATCG-
Hae.coccineus           TTG-GTGAGAGGCACGGATGCGGAGATT--GGCCTC---CCGCGCATCG-
Hae.pumilio             TTG-GTGAGAGGCACGGATGCGGAGATT--GGCCTC---CCGCGCATCG-
Hae.coccineusAMV632     TTG-GTGA-AGGCACGGATGC-GAGATT--GGCCTC---CCGCGCATCG-
Hae.crispus7252         TTG-GTGAGAGGCACGGATGCGGAGATT--GGCCTC---CCGCGCATCG-
Hae.sanguineus7253      TTG-GTGAGAGGCACGGATGCGGAGATT--GGCCTC---CCGCGCATCG-
Hip.sp.7446             TCA-ACGGCAGGAACGGATGCGGAGATT--GGCCCC---CCGCGCATCG-
Hip.brasilianum         TCA-ACGGCAGGAACGGATGCGGAGATT--GGCCCC---CCGCGCATCG-
Hip.papilio             TCA-ACGGCAGGAACGGATGCGGAGATT--GGCCCC---CCGCGCATCG-
Hip.reticulatum         TCA-ACGGCAGGAACGGATGCGGAGATT--GGCCCC---CCGCGCATCG-
Hip.macbridei           TCA-ACGGCAGGAACGGATGCGGAGATT--GGCCCC---CCGCGCATCG-
Hip.mollevillquense     TCA-ACGGCAGGAACGGATGCGGAGATT--GGCCCC---CCGCGCATCG-
Hip.parodii             TCA-ACGGCAGGAACGGATGCGGAGATT--GGCCCC---CCGCGCATCG-
Hip.blumenavia          TCA-ACGGCAGGAACGGATGCGGAGATT--GGCCCC---CCGCGCATCG-
Hes.stellaris           GTG-AGAACTGGCGCGAACGCGTGGACT--GGCCCC---CTGTGCCTCG-
Hip.sp.7447             TCA-ACGGCAGG-ACGGATGCGGAGATT--GGCCCC---CCGCGCATCG-
Hie.argentina           TTG-ACGGTTGGCAAGGATGCGGAGATTT-GGCCTC---CCACGCTTCG-
Hy.latifolia            TCG-GCGGTGGGCACGGAAGCGGAGATT--GGCCCC---CCCTGCATCG-
Rho.moelleri            TCA-ACGGCAGGAAAGGATGCGGAGATT--GGCCCC---CCGCGCATCG-
Pyr.Chase3639           GCG-ACGGCAGTAACGGATGCGGAGATT--GGCCCC---CCGCGCATCG-
Is.longipetala          TCG-GCGGTAGGCACGGATGCGGAGATT--GGCCCC---CCATGCATCG-
Lep.quitoensis          TCG-GCGGTAGGCACGGATGCGGAGATT--GGCCCC---CCTTGCTTCG-
Pam.peruviana           TCG-GTGGTAGGCACGGATGCGGAGATT--GGCCCC---CCTCGCATCG-
Par.weberbaueri         TCG-GCGGTAGGCACGGATGCGGAGATT--GGCCCG---CCACGCATCG-
Phae.ventricosa         TCG-GCGGTCGGCACGGATGCGGAGATT--GGCCTC---CCACGCGTCG-
Rau.decora              TCG-GCGGCTGGCACGGACGCGGAGATT--GGCCCC---CCACGCGTCG-
Ne.alta                 GCG-ACAACTGGTGCGAACGTCGAGATT--GGCCCC---CTGTGCGTCA-
Pan.canariense          TCG-GCGGCAGGCACCGATGCGGAGATT--GGCCCCC--CCACGCGTCG-
La.martinezii           TCG-GCGGCAGGCACTGATGCGGAGATT--GGCCCC---CCACGCATCG-
Leu.autumnale           TCG-GTGGAAGGCACTGATGCGGAGATT--GGCCCC---CCACGCGTCG-
Na.bicolor              TCG-GCGGCTGGCATTGACGCGGAGAGT--GGCCCC---CCGCGCATCC-
Na.sp.7521              TCG-GCGGCTGGCATTGATGCGGAGAGT--GGCCCC---CCGCGCATCC-
Na.sp.7608              TCG-GCGGCTGGCATTGATGCGGAGAGT--GGCCCC---CCGCGCATCC-
Phy.ignea               TCG-GTAACAGGAACGGACGCGGAGATT--GGCCCC---CCATGCATCG-
Ly.chinensis            TCG-GCAGCAGGCATGGATGCGGAGATT--GGCCCC---TCATGCATCA-
Urc.microcrater         TCG-GCGGCCGGCACGGATGCGGAGATT--GGCCCC---CCACGCGTCG-
Spr.formosissima        TCA-ACGGCAGTAACGGATGCGGAGATT--GGCCCC---CCGCGCATCG-
Zep.flavissima          GCA-ACGGCAGTAACGGATGCGGAGATT--GGCCCC---CCGCGCATTG-
Sca.membranaceuRHA25    TCG-GCGATAGGCACGGATGCGGAGATT--GGCCCC---CCACGCATCG-
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                      151                                                 200
Sca.membranaceus7246 TCG-GCGATAGGCACGGATGCGGAGATT--GGCCCC---CCACGCATCG-
Sca.membranaceus7917 TCG-GCGATAGGCACGGATGCGGAGATT--GGCCCC---CCACGCATCG-
Sca.puniceusRHA26    TCG-GCGATAGGCACGGATGCGGAGATT--GGCCCC---CCACGCATCG-
Sca.puniceusRHA27    TCG-GCGATAGGCACGGATGCGGAGATT--GGCCCC---CCACGCATCG-
Sca.puniceus         TCG-GCGATAGGCACGGATGCGGAGATT--GGCCCC---CCACGCATCG-
Sca.membranaceus     TCG-GCGATAGGCACGGATGCGGAGATT--GGCCCC---CCACGCATCG-
Sca.puniceus7301     TCG-GCGATAGGCACGGAGGCGGAGATT--GGCCCC---CCACGCATCG-
Sca.cinnabarinus     TCG-GCGACAGGCACGGATGCGGAGATT--GGCCCC---CCACGCATAG-
Sten.humile          TCG-ACGGTAGGCACGGATGCGGAGATT--GGCCCC---CCACGCATCG-
Ster.lutea           TCG-GCGGCAGGCACTGATGCGGAGATT--GGCCCC---TCACGCATCG-
Va.parviflora        TCG-GCAGCAGGCACTGATGCGGAGATT--GGCCCC---CCACGCATTG-
Str.aestivalis       GGG-ATAAATGGCACGAACGTTGAGATT--GGTCCC---CTGTGCGTCA-
Str.discifera        GGG-ATAAATGGCACGAACGTTGAGATT--GGTCCC---CTGTGCGTCA-
Str.chaplinii        ----ATAAACGGCACGAACGTTGAGATT--GGTCCC---CTGTGCGTCA-
Str.watermeyeri      GGG-ATAAATGGCACGAACGTTGAGATT--GGTCCC---CTGTGCGTTA-
Str.picta            -GG-GTGAACGGCACGAACGTTGAGATT--GGTCCC---CCGTGCGTCA-
Str.salteri7245      GGG-ATAAATGGC-CGAACGTTGAGATT--GGTTCCC--CTGTGGTTCA-
Str.bidentata        GTG-GCAACGGGCGCGAACGTGGAGATT--GGCCCC---CTGTGCGTCA-
Str.truncata         GTG-GCAACTGGTGCGAACGTGGAGATT--GGCCCC---CTGTGCGTCA-
Str.tenella          GCG-ATAACTGGTGCGAACGTGAAGATT--GACCCC---CTGTTCGTCT-
Wor.rayneri          TCG-ACGGCAGGCACGGATGCGGAGATT--GGCCCT---CCACGCATCG-
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                        201                                                 250
Ama.belladonnaRHA28     TCGT-GCGGTGGG--TTGAAGTGCGGGCT--GTTGGT--GGGCCGGATGC
Ama.belladonna          TCGT-GCGGTGGG--TTGAAGTGCGGGCT--GTTGGT--GGGCCGGATGC
Ama.paradisicola        TCGT-GCGGTGGG--TTAAAGCGCGGGCC--GTTGGT--GGGCCGGATGC
Amm.coranica7164        TCGC-GCGGTTC---TTGAAGTGTGGGCC--GTTGGC--GGGCTAGATGC
Amm.nerinoidesRHA32     TCGC-GCGGTGG---GTTGAATGCGGGCC--GTTGGC--GGGCTAGATGC
Amm.nerinoides          TCGC-GCGGTGGG--TTGAAGTGCGGGCC--GTTGGC--GGGCTAGATGC
Amm.coranica            TCGC-GCGGTGGG--TTGAAGTGCGGGCC--GTTGGC--GGGCTAGATGC
Apo.lanceolatum         TTGC-GCGGCGGG--TCGAAGTGAGGGCC--GTTGGCT-GGGCCAGACGC
Aga.caulescens          CGGC-GCGGCGGG--CCGAAGTGCGGGCC--GCAGGCC-GGGCCGGACGC
Bo.haemanthoides        TCGT-GCGGTGGG--TTGAAGTGCGGGCC--GTTGGC--GGGTCGGATGC
Bo.disticha             TCGT-GCGGTGGG--TTGAAGTGCGGGCC--GTTGGC--GGGTCGGATGC
Cl.caulescens           CTGC-GCGGAGGG--TCGAAGTGCGGGCC--GTCGGCA-GGGTCAGACGC
Cl.gardenii             CTGC-GCGGAGGG--TCGAAGTGCGGGCC--GTCGGTA-GGGTCAGACGC
Cl.miniata              CTGC-GCGGCGGG--TCAAAGTGCGGGCC--GCCGGCA-GGGTCAGACGC
Cl.nobilis              CTGC-GCGGCGGG--TCGAAGTGCGGGCC--GTCGGCA-GGGTCAGACGC
Cl.miniataRC14          CTGC-GCGGCGGG--TCGAAGTGCGGGCC--GCCGGCA-GGGTCAGACGC
Br.bosmaniae            TCGT-GCGGTGGG--TTAAAGTGTGGGCT--GTTGGC--GTGCTGGGTGC
Br.radula               TCGT-GCGGTGGG--TTAAAGTGTGGGCT--GTTGGC--GTGCTGGATGC
Br.comptonii            TCGT-GCGGTGGG--TTAAAGTGTGGGCT--GTTGGC--GTGCTGGATGC
Br.radulosanata7629     TCGT-GCGGTGGG--TTAAAGTGTGGGCT--GTTGGC--GTGCTGGATGC
Br.bosmaniae7251        TCGT-GCGGTGGG--TTAAAGTGTGGGCT--GTTGGC--GTGCTGGGTGC
Br.gregaria7157         CGTG-ACGGTGGG--TTAAAGTGTGGCCT--GTTGGC--GT-CTGGATGC
Cro.flava7256           TCGT-GCGGTGGG--CTGAAGTGTGGGCC--GTTGGC--GGGCCGGATGC
Cal.korsakoffii         CTGC-GCGGCGGG--CCGAAGAGCGGGCC--GTCGGCC-GGGCCGGACGC
Chl.fragrans            TCGC-GTGGTGGG--TCGAAGTGCGGGCC--GTCGGTC-GGGTCGGACGC
Car.spiralis            ATGT-GCGGTGGG--TTAAAGTGTGGGCC--GTTGAC--AGGTCAGATGT
Cy.longifolia           TCGT-GCGGTGGG--TTGAAGTGTGGGCC--GTTGGC--GGGATAGATGC
Cr.baumii               TCGT-GCGGTGGG--TTGAAGTGTGGGCT--GTTGGC--AGGCTAGATGC
Cro.guttata             TCGT-GCGGTGGG--CTGAAGTGTGGGCCC-GTTGGCG-GGCCCGGATGC
Cr.abyssinicum          TCGT-GCGGTGGG--TTGAAGTGTGGGCC--GTTGGC--GGGCCGGATGC
Cr.kirkii               TCGT-GCGGTGGG--TTGAAGTGTGGGCC--GTTGGC--GGGCCGGATGC
Cr.latifolium           TCGT-GCGGTGGG--TTGAAGTGTGGGCC--GTTGGC--GGGCCGGATGC
Cr.politifolium         TCGT-GCGGTGGG--TTGAAGTGTGGGCC--GTTGGC--GGGTCGGATGC
Cr.yemenense            TCGT-GCGGTGGG--TTGAAGTGTGGGCC--GTTGGC--GGGCCGGATGC
Cr.americanum           TCGT-GCGGTGGG--TTGAAGTGTGGGCC--GTTGGC--GGGCCGGATGC
Cr.cruentum             TCGT-GCGGTGGG--TTGAAGTGTGGGCC--GTTGGC--GGGTCGGATGC
Cr.erubescens           TCGT-GCGGTGGG--TTGAAGTGTGGGCC--GTTGGC--GGGTCGGATGC
Cr.oliganthum           TCGT-GCGGTGGG--TTGAAGTGTGGGCC--GTTGGC--GGGCCGGATGC
Cr.Schunke14054         TCGT-GCGGTGGG--TTGAAGTGTGGGCC--GTTGGC--GGGTCGGATGC
Cr.distichum            TCGC-GCGGTGGG--TTGAAGTGTGGGCC--GTTGGC--GGGCCGGATGC
Cr.humile               TCGC-GCGGTGGG--TTGAAGTGTGGGCC--GTTGGC--GGGCCGGATGC
Cr.jagus                TCGT-GCGGTGGG--TTGAAGTGTGGGCC--GTTGGC--GGGCCGGATGC
Cr.moorei               TCGC-GCGGTGGG--TTGAAGTGTGGGCC--GTTGGC--GGGCCGGATGC
Cr.bulbispermum         TCGC-GCGGTGGG--TTGAAGTGTGGGCC--GTTGGC--GGGCCGGATGC
Cr.flaccidum            TCGC-GCGGTGGG--TTGAAGTGTGGGCC--GTTGGC--GGGCCGGATGC
Cr.macowanii            TCGC-GCGGTGGG--TTGAAGTGTGGGCC--GTTGGC--GGGCCGGATGC
Cr.variabile            TCGC-GCGGTGGG--TTGAAGTGTGGGCC--GTTGGC--GGGCCGGATGC
Cr.bulbispermumRC95     TCGC-GCGGTGGG--TTGAAGTGTGGGCC--GTTGGC--GGGCCGGATGC
Cr.euchrophyllumRC96    TCGC-GCGGTGGG--TTGAAGTGTGGCCC--GTTGGC--GGGCCGGATGC
Cr.moorei7921           TCGC-GCGGTGGG--TTGAAGTGTGCCCCC-GTTGGC--GGCCCGGATGC
Cr.acaule               TCGT-GCGGTGGG--TTGAAGTGTGGGCC--GTTGGC--GGGCCGGATGC
Cr.forbesii             TCGT-GCGGTGGG--TTGAAGTGTGGGCC--GTTGGC--GGGCCGGATGC
Cr.acaulglaucRC105      TCGT-GCGGTGGG--TTGAAGTGTGGGCC--GTTGGC--GGGCCGGATGC
Cr.acauleRC106          TCGT-GCGGTGGG--TTGAAGTGTGGGCC--GTTGGC--GGGCCGGATGC
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                        201                                                 250
Cr.campanulatum         TCGC-GCGGTGGG--TTGAAGTATGGGCC--GTTGGT--GGGTCGGATGC
Cr.caroloschmidtii      TCGC-GCGGTGGG--TTGAAGTGTGGGTC--GTTGGC--GGGCTGGATGC
Cr.crassicaule          TCGC-GCGGTGGG--TTGAAGTGTGGGTC--GTTGGC--AGGTCGGATGC
Cr.acauleRC38           TCGC-GCGGTGGG--TTGAAGTG-GGGCC--GTTGGC--AGGCCGGATGC
Cr.carolschmidRC97      TCGC-GCGGTGGG--TTGAACTCTGGGTC--GTTGGC--GGGCTGGATGC
Cr.foetidumRC98         TCGC-GCGGTGGG--TTGAAGTGCGGGTC--GTTGGC--AGGTCGGATGC
Cr.graminicola7630      TCGT-GCGGTGGG--TTGAAGTGTGGCCC--GTTGGC--GGGCCGGATGC
Cr.asiaticum            TCGC-GCGGTGGG--TTGAAGTGTGGGTC--GTTGGC--GGGTCGGATGC
Cr.pedunculatum         TCGC-GCGGTGGG--TTGAAGTGTGGGTC--GTTGGC--GGGTCGGATGC
Cr.Meerow2332           TCGC-GCGGTGGG--TTGAAGTGTGGGTC--GTTGGC--GGGTCGGATGC
Cr.defixum              TCGC-GCGGTGGG--TTGAAGTGTGGGCC--GTTGGC--GGGTCGGATGC
Cr.Meerow2333           TCGC-GCGGTGGG--TTGAAGTGTGGGCC--GTTGGC--GGGTCGGATGC
Cr.buphanoides          TCGC-GCGGTGGG--TTGAAGTGTGGGTC--GTTGGC--GGGTCGGATGC
Cr.ligulatum            TCGC-GCGGTGGG--TTGAAGTGTGGGTC--GTTGGC--GGGTCGGATGC
Cr.razafindratsiraea    TCGC-GCGGTGGG--TTGAAGTGTGGGTC--GTTGGC--GGGTCGGATGC
Cr.modestum             TCGC-GCGGTGGG--TTGAAGTGTGGGTC--GTTGGC--GGGTCGGATGC
Cr.mauritianum          TCGC-GCGGTGGG--TTGAAGTGTGGGTC--GTTGGC--GGGTCGGATGC
Cr.subcernuum           TCGC-GCGGTGGG--TTGAAGTGTGGGTC--GTTGGC--GGGTCGGATGC
Cr.venosum              TCGC-GCGGTGGG--TTGAAGTGTGGGTC--GTTGGC--GGGTCGGATGC
Cr.buphanoidesRC102     TCGC-GCGGTGGG--TTGAAGTGTGGGTC--GTTGGC--GGGTCGGATGC
Cr.fimbriatulum         TCGT-GCGGTGGG--CTGAAGTGTGGGCC--GTCGGC--GGGTCGGATGC
Cr.broussonetii         TCGT-GCGGTGGG--TTAAGATGTGGGCC--CTTGGCG-GGCCCGGATCC
Cry.haemanthoides       CTAT-GCGGCAGG--TCAAAGTGTGGGCC--GTCGGCT-GGGTTAGATGT
Cyr.falcatus7637        CTGC-GTGGCGGG--TCGAAGTGCGGGCC--GTCGGTT-GGGTCGGACGC
Cyr.obliquus7278        CTGC-GTGGCGGG--TCGAAGTGCGGGCC--GTCGGTT-GGGCCGGACGC
Cyr.elatus7202          CTGC-GTGGCGGG--TCGAAGTGCGGGCC--GTCGGTT-GGGCCGGACGC
Cyr.labiatus7212        CTGC-GTGGCGGG--TCGAAGTGCGGGCC--GTCGGTT-GGGCCGGATGC
Cyr.labiatus7258        CTGC-GTGGCGGG--TCGAAGTGCGGGCC-GTCCGGTT-GGGCCGGATGC
Cyr.elatus7636          CTGC-GTGGCGGG--TCGAAGTGCGGGCC--GTCGGT--TGGCCGGACGC
Cyr.herrei7217          CTGC-GTGGCGGG--TCGAAGTGCGGGCC--GTCAGTT-GGGCCGAACGC
Cyr.herreiRC86          CTGC-GTGGCGGG--TCGAAGTGCGGGCC--GTCAGTT-GGGCCGAACGC
Cyr.montanus7209        CTGC-GTGGCGGG--TCGAAGTGCGGGCC---TCGGTT-GGGCCGGATGC
Cyr.staadensis7316      CTGC-GTGGCGGG--TCGAAGTGCGGGCC--GTCGGTT-GGGCCGGACGC
Cyr.eucallusRC79        CTGC-GTGGCGGG--TCGAAGTGCGGGCC--GTCGGTT-GGGCCGGACGC
Cyr.brachyscyphu7406    CTGC-GTGGCGGG--TCGAAGTGCGGGCC--GTCGGCT-GGGCCGGACGC
Cyr.brachyscyphuRC90    CTGC-GTGGCGGG--TCGAA-TGCGGGCC--GTCGGCT-GGGCCGGACGC
Cyr.mackeniiRC87        CTGC-GTGGCGGG--TCGAAGTGCGGGCC--GTCGGCT-GGGCCGGACGC
Cyr.obrienii7193        CTGC-GTGGCGGG--TCGAAGTGCGGGCC--GTCGGCT-GGGCCGGACGC
Cyr.sanguineusRC94      CTGC-GTGGTCGGG-TCGAAG-GCGGGC---GTCGGTT-GGGCCGGACGC
Cyr.suaveolens7181      CTGC-GTGGCGGG--T-GAAGTGCGGGCC--GTCGGCT-GGGCCGGACGC
Cyr.ochroleucus7639     CTGC-GTGGCGGG--TCGAAGTGCGGGCC---TCGGCT-GGGCCGGACGC
Cyr.breviflorus7634     CTGT-GTGGCGGG--TTGAAGTGCGGGCC--GTCGGCT-GGGCCGGACGC
Cyr.obliquus7210        CTGC-GTGGCGGG--TCGAAGTGCGGGCC--GTCGGTT-GGGCCGGACGC
Cyr.thorncroftiRC80     TTGC-GTGGCGGG--TCGAAGTGCGGGCC--GTCGGTT-GGGCCGGACGC
Cyr.eucallusRC78        CTGC-GTGGCGGG--TCGAAGTGCCGGCC--GTCGGTT--GGCCGGACGC
Cyr.spiralis7219        CTGC-GTGGCGGG--TCGAAGTGCGGGCC--GCCGGTT--GGCCGGACGC
Cyr.wellandiiRC83       TGTC-GTGGCGGG--TCGAAGTCCGGACC-GTACGGTT-GGGTCGGACGC
Cyr.attenuatesRC81      CTGC-GTGGCGGG--T-GAATTCC--CCC--GTCGGTT-GGGCCGG-CGC
Cyr.smithiae7214        TTGC-GTGGCGGT--TCTAATTGCGGGCCC--CCGGTT-GGGCCGGACGT
Cyr.breviflorusRC88     CTGT-GTGGCGGG--TTGAAGTGCGGGCC--GTCGGCT-GGGCCGGACGC
Cyr.speciosus7640       CTGC-GTGGTGGG--TTGAAGTGCGGGCC--GCCGGTC-GGGTCGGATGC
Cyr.macowanii7201       CTGC-GTGGCGGG--TCGAAGTGCGGCCC--GTCGGCT-GGGCCGGACGC
Ge.ciliaris             CTGC-GCGGCGGG--TCGAAGTGCGGGCC--GCCGGCT-GGGCCAGACGC
Ge.britteniana          CTGC-GCGGCGGG--TCGAAGTGCGGGCC--GTTGGCT-GGGCCAGGCGC
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                        201                                                 250
Ge.verticillata         CTGC-GCGGCGGG--TCGAAGTGCGGGCC--GTTGGCT-GGGCCAGACGC
Ge.namaquensisAMV635    CTGC-GCGGCGGG--TCGAAGTGCGGGCC--GTTGGCT-GGGCCAGACGC
Ge.lanuginosa           TTGC-GCGGCGGG--TCGAAGTGCGGGCC--GTTGGCT-GGGCCAGACGC
Euch.formosa            CTGC-GCGGCGGG--CCGAAGAGCGGGCC--GTCGGCC-GGGCCGGACGC
Eucr.bicolor            CTGA-GCGGCGGG--CCGAAGAGCGGGCC--GTCGGCC-GGGCCGGACGC
Eust.darwinii           TTGC-GTGGCGGG--TAGAAGTGCGGGCC--ATCGGTC-GGGTCAGAAGC
Gr.hyacinthina          TTAC-GCGGCGGG--TTGAAGTGCGGGCC--GCCGGTC-GGGTCGGACGC
Ga.fosteri              TTAG-GTGGTGGG--TCTAATTGTTGGTT--GTTGATC-GTGATGGACGT
Hab.brachyandrus        CTGC-GTGGTGGG--TTGAAGTGCGGGCC--GCCGGTC-GGGTCGGATGC
Hae.hirsitus7626        CTGC-GTGGCGGG--TCGAAGTGCGGGCT--GCTGGCT-GAGCCAGACGC
Hae.humilis7254         CTGC-GTGGCGGG--TCGAAGTGCGGGCT--GCTGGCT-GAGCCAGACGC
Hae.paucilifoliu7925    CTGC-GTGGCGGG--TCGAAGTGCGGGCT--GCTGGCT-GGGCCAGACGC
Hae.paucilifoliRHA21    CTGC-GTGGCGGG--TCCGAAGTGCGGGCT-GCTGGCT-GGGCCAGACGC
Hae.albiflos            CTGC-GTGGCGGG--TCGAAGTGCGGGCT--GCTGGCT-GGGCCAGACGC
Hae.graniticus          CTGC-GTGGCGGG--TCGAAGTGCGGGCC--GTTGTCT-GGGCCAGACGT
Hae.crispus7260         CTGC-GTGGCGGG--TCGAAGTGCGGGCC--GTTGTCT-GGGTCAGACGT
Hae.coccineus           CTGC-GTGGCGGG--TCGAAGTGCGGGCC--GTTGTCT-GGGTCAGACGT
Hae.pumilio             CTGC-ACGGCGGG--TCGAAGTGCGGGCC--GTTGTCT-AGGCCAGATGC
Hae.coccineusAMV632     CTGC-GTGGCAGG--TCGAAGTGCGGGCC--GTTGTCT--GGTCA-ACGT
Hae.crispus7252         CTGC-GTGGCGGG--TCGAAGTGCGGGCC--GTTGTCT-GGGTCAGACGT
Hae.sanguineus7253      --GC-GTGGCGGG--T-GAAGTGCGGCCC---TTGTCT-GGGTCAGACGT
Hip.sp.7446             CTGC-GTGGTGGG--TTGAAGTGCGGGCC--GCCGGTC-GGGTCGGATGC
Hip.brasilianum         CAGC-GTGGCGGG--TTGAAGTGCGGGTC--GCCGGTC-GGGTCGGATGC
Hip.papilio             CTGC-GTGGCGGG--TTGAAGTGCGGGCC--GCCGGTC-GGGTCGGATGC
Hip.reticulatum         CTGC-GTGGCGGG--TTGAAGTGCGGGCC--GCCGGTC-GGGTCGGATGC
Hip.macbridei           CTGC-GTGGTGGG--TTGAAGTGCGGGCC--GCCGGTC-GGGTCGGATGC
Hip.mollevillquense     CTGC-GTGGTGGG--TTGAAGTGCGGGCC--GCCGGTC-GGGTCGGATGC
Hip.parodii             CTGC-GTGGTGGG--TTGAAGTGCGGGCC--GCCGGTC-GGGTCGGATGC
Hip.blumenavia          CTGC-GTGGCGGG--TTGAAGTGCGCGCC--GCCGGTC-GGGTCGGATGC
Hes.stellaris           TCGT-GCGGTGGG--TTAAAGTGTGGGCC--GTTGGC--GGGCCTGATGC
Hip.sp.7447             CTGC-GTGGCGGG--TTGAAGTGCGGGCC--GCCGGTC-GGGTCGGATGC
Hie.argentina           TCGC-GTGGTGGG--TCGAAGTGCGGGTC--GTCGGTC-GGGTCGGACGC
Hy.latifolia            TTGC-GCGGTGGG--TTAAAGTGTGGGCC--GCCGGTC-GGGCCGGACGC
Rho.moelleri            CTGC-GTGGCGGG--TTGAAGTGCGGGCC--GCTGATC-GGGTCGGATGT
Pyr.Chase3639           CTGC-GTGGTGGG--TTGAAGTGCGGGCC--GCCGGTC-GGGTCGGATGC
Is.longipetala          TTGC-GCGGTGGG--TTAAAGTGTGGGCC--GTCGGTC-GGGCCGGACGC
Lep.quitoensis          TTGC-GCGGTGGG--TTAAAGTGTGGGCC--GTCGGTC-GGGCCGGGCGC
Pam.peruviana           TTGC-GCGGCGGG--TTGAAGTGCGGGCC--GTCGGTC-GGATCGGACGT
Par.weberbaueri         CTGC-GCGGCGGG--TTGAAGTGTGGGCC--GTCGGCT-GGGCCAGACGC
Phae.ventricosa         CTGC-GCGGCGGG--CCGAAGAGCGAGCC--GTCGGTC-GGGCCGGACGC
Rau.decora              CTGC-GCGGCGGG--CCGAAGAGCGGGCC--GTCGGCC-GGGCCGGACGC
Ne.alta                 TCGT-GCGGTGGG--TTAAAGTGTGGGCC--GTCGGC--GGGTCGGATGC
Pan.canariense          TTGC-GTGGCGGG--TCTAAGTGCGGGCC--GTCGGCC-GGGCTGGACGC
La.martinezii           TTGC-GTGGCGGG--TCGAAGTGCGGGCC--GCCGGCC-GGGCCGGACGC
Leu.autumnale           TTGC-GTGGCGGG--CCGAAGTGCGGGTC--GCCGGTC-GGGCCGGACGT
Na.bicolor              TTGC-GTGGCGGG--TCGAAGTGCGGGTC--GCCGGTC-GGGCTTGACGC
Na.sp.7521              TTGC-GTGGCGGG--TTGAAGTGCGGGTC--CCCGGTC-GGGCTTGACGC
Na.sp.7608              TTGC-GTGGCGGG---TGAAGTGCGGGTC--GCCGGTC-GGGCTTGACGC
Phy.ignea               ATGC-GTGGCGGG--TTGAAGTGTGGGTC--GTCGGTC-GGGTCGGATGC
Ly.chinensis            CTGC-GTAGCGGG--TCGAAGTGCGGGCC--ACCAGCC-GGGCCAGACAT
Urc.microcrater         CTGC-GCGGCGGG--CCGAAGAGCGGGCC--GTCGGCC-GGGCCGGACTC
Spr.formosissima        TTGC-GTGGCGGG--TTGAAGTGCGGGCC--GCCGGTC-GGGTCGGATTC
Zep.flavissima          CTGC-GTGGCGGG--TTGAAGTGTGGGCC--GCCGGTC-GGGTCGGATGC
Sca.membranaceuRHA25    CTGC-GCGGCGGG--TCGAAGTGCGGGCC--GTCGACT-GGGTTAGACGC
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                     201                                                250
Sca.membranaceus7246 CTGC-GCGGCGGG--TCGAAGTGCGGGCC--GTCGACT-GGGTTAGACGC
Sca.membranaceus7917 CTGC-GCGGCGGG--TCGAAGTGCGGGCC--GTCGACT-GGGTTAGACGC
Sca.puniceusRHA26    CTGC-GCGGCGGG--TCGAAGTGCGGGCC--GTCGACT-GGGTTAGACGC
Sca.puniceusRHA27    CTGC-GCGGCGGG--TCGAAGTGCGGGCC--GTCGACT-GGGTTAGACGC
Sca.puniceus         CTGC-GCGGCGGG--TCGAAGTGCGGGCC--GTCGACT-GGGTTAGACGC
Sca.membranaceus     CTGC-GCGGCGGG--TCGAAGTGCGGGCCC-GTCGACT-GGGTTAGACGC
Sca.puniceus7301     CTGC-GCGGCGGG--TCGAA-TGCGGGCC--GTCGACT--GGTTAACCG-
Sca.cinnabarinus     CCGC-GCGGTGGG--TCGAAGTGCGGGCC--GTCGACT-GGGTTAGACGC
Sten.humile          TTGC-GCGGCGGG--TTGAAGTGCGGGCC--GTCGGCT-GGGCCAGACGC
Ster.lutea           TTGC-GTGGCGGG--TCGAAGTGCGGGTC--GCCGGTC-GGGTCGGACGC
Va.parviflora        TTGC-GTGGTGGG--TCGAAGTGCGGGC---GCCGGTC-AGACCGGACGT
Str.aestivalis       TCGT-GCGGTGGG--TTAAAGTGTGGGCC--GTTGGC--GGGCCGGATGC
Str.discifera        TCGT-GCGGTGGG--TTAAAGTGTGGGCC--GTTGGC--GGGCTGGATGC
Str.chaplinii        TCGT-GCGGTGGG--TTAAAGTGTGGGCC--GTTGGC--GGGCTGGATGC
Str.watermeyeri      TCGT-GCGGTGGG--TTAAAGTGTGGGCC--GTTGGC--GGGCTGGATGC
Str.picta            TCGT-GCGGTGGG--TTAAAGTGTGGGCC--GTTGGC--GGGTTGGATGC
Str.salteri7245      TTGT-GCGGTGGG--TTAAA-TGTGGCCC---TTGGCC--GGCTGGAT-C
Str.bidentata        TTGT-GCAGTGGG--TTAAAGTGGGGGCC--GTTGGC--GTGCTGGATGC
Str.truncata         TTGT-GCAGTGGG--TTAAAGTGGGGGCC--GTTGGC--GTGCTGGATGC
Str.tenella          TCGT-GCGGTGGG--TTAAAGTGCGGGCC--ATTGG-T-GGGCCAGATAC
Wor.rayneri          CTGC-GCGGCGGG--TCGAAGTGCGGGCC--GTCGGTC-GGGTCGGACGC
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                        251                                                 300
Ama.belladonnaRHA28     G-GCGA-GTGGTGGAAAA-GACACGCACG-GCGT-CGC--------TGGA
Ama.belladonna          G-GCGA-GTGGTGGAAAA-GACACGCACG-GCGT-CGC--------TGGA
Ama.paradisicola        G-GCGA-GTGGTGGAAAA-GACACGCACG-GCGT-CGC--------TGGA
Amm.coranica7164        G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Amm.nerinoidesRHA32     G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Amm.nerinoides          G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Amm.coranica            G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Apo.lanceolatum         G-GCGG-GTGGTGGATT--GACACGCACG-ACGT-CGT--------TGG-
Aga.caulescens          G-GCGA-GTGGTGGACG--GACAAGCACG-GCGC-CGAACGCCGCGTGCC
Bo.haemanthoides        G-GCGA-GCGGTGGAAAA-GTCACGCACG-GCGT-CGC--------TGAA
Bo.disticha             G-GCGA-GCGGTGGAAAA-GACACGCACG-GCGT-CGC--------TGAA
Cl.caulescens           G-GCGA-CTGTTGGATT--GACACGCACG-ACGC-CGC--------TGAA
Cl.gardenii             G-GCGA-CTGTTGGATT--GACACGCACG-ACGC-CGC--------TGAA
Cl.miniata              G-GCGA-CTGTTGGATT--GACACGCACG-ACGC-CGC--------TGAA
Cl.nobilis              G-GCGA-CTGTTGGATT--GACACGCACG-ACGC-CGC--------TGAA
Cl.miniataRC14          G-GCGATCTGTTGGATT-GATCGCGCACG-ACGG-CGC--------TGAA
Br.bosmaniae            G-GCGA-GTGGTGGAGAA-CACACGCACG-ACGT-CGT--------TGGA
Br.radula               G-GCGA-GTGGTGGAGAA-CACACGCACG-ACGT-CGT--------TGGA
Br.comptonii            G-GCGA-GTGGTGGAGAA-CACACGCACG-GCGT-CGT--------TGGA
Br.radulosanata7629     G-GTGA-GTGGTGGAGAA-CACACGCACG-ACGTGCGT--------TGGA
Br.bosmaniae7251        G-GCGA-GTGGTGGAGAA-CACACGCACG-ACGT-CGT---------GGA
Br.gregaria7157         G-GCGA-GTGGTGGAGAA-CACACGCACG-ACGTACGT--------TGGA
Cro.flava7256           G-GCGA-GTGGTGGAGAA-CACACGTGCG-ACGT-CGT--------CGAA
Cal.korsakoffii         G-GCGA-GTGGTGGATT--GACACGCACG-ACGC-CGT--------CGAA
Chl.fragrans            G-GCGA-GTGGTGGATT--GACACGCACG-TCGT-CGC--------CGAA
Car.spiralis            G-AGGA-GTGGTGGAGAA-TACACGCATG-TACT-CTT---------GAA
Cy.longifolia           G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.baumii               G-GCGA-GTGGTGGACAA-GACACGCACA-GCGT-CGT--------TGAA
Cro.guttata             G-GCGA-GTGGTGGAGAA-CACACGTGCG-ACGT-CGT--------TGAA
Cr.abyssinicum          G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.kirkii               G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.latifolium           G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.politifolium         G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.yemenense            G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.americanum           G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.cruentum             G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.erubescens           G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.oliganthum           G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.Schunke14054         G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.distichum            G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.humile               G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.jagus                G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.moorei               G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.bulbispermum         G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.flaccidum            G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.macowanii            G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.variabile            G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.bulbispermumRC95     G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.euchrophyllumRC96    G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.moorei7921           G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.acaule               G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.forbesii             G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.acaulglaucRC105      G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.acauleRC106          G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT---------GAA
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                        251                                                 300
Cr.campanulatum         G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.caroloschmidtii      G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.crassicaule          G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.acauleRC38           G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.carolschmidRC97      G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGTACGT--------TGAA
Cr.foetidumRC98         G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.graminicola7630      G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.asiaticum            G-GCGA-GTGGTGGAGAAAGACACGCACG-GCGT-CGT--------TGAA
Cr.pedunculatum         G-GCGA-GTGGTGGAGAAAGACACGCACG-GCGT-CGT--------TGAA
Cr.Meerow2332           G-GCGA-GTGGTGGAGAAAGACACGCACG-GCGT-CGT--------TGAA
Cr.defixum              G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.Meerow2333           G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.buphanoides          G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGA--------TGAA
Cr.ligulatum            G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.razafindratsiraea    G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.modestum             G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.mauritianum          G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.subcernuum           G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.venosum              G-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.buphanoidesRC102     G-ACGA-GTGGTGGAGAA-GACACGCACG-GCGT-CGT--------TGAA
Cr.fimbriatulum         G-GCGA-GCGGTGGAGAG-GACACGCACG-GCGC-CGT--------TGAA
Cr.broussonetii         G--CAA--TG-TGTGGAA-GACGCGCACG-GCGT-CGT--------TGAA
Cry.haemanthoides       G-ACGA-GTGGTGGATT--GACACGCACG-ACGC-TGC--------TGAA
Cyr.falcatus7637        G-GCGA-GTGGTGGATT--GACACGCACG-ACGT-CGC--------TGAA
Cyr.obliquus7278        G-GCGA-GTGGTGGATT--GACACGCACG-ACGT-CGC--------TGAA
Cyr.elatus7202          G-GCGA-GTGGTGGATT--GACACGCACG-ACGT-CGC--------TGAA
Cyr.labiatus7212        G-GCGA-GTGGTGGATT--GACACGCACG-ACGT-CGC--------TGAA
Cyr.labiatus7258        G-GCGA-GTGGTGGATT--GACACGCACG-ACGT-CGC--------TGAA
Cyr.elatus7636          G-GCGA-GTGGTGGATG--GACACGCACG-ACGT-CGC--------TGAA
Cyr.herrei7217          G-GCGA-GTGGTGGATT--GACACGCACG-ACGT-CGC--------TGAA
Cyr.herreiRC86          G-GCGA-GTGGTGGATT--GACACGCACG-ACGT-CGC--------TGAA
Cyr.montanus7209        G-GCGA-GTGGTGGATT--GACACGCACG-ACGT-CGC--------TGAA
Cyr.staadensis7316      G-GCGA-GTGGTGGATT--GACACGCACG-ACGT-CGC--------TGAA
Cyr.eucallusRC79        G-GCGA-GTGGTGGATT--GACACGCACG-ACGT-CGC--------TGAA
Cyr.brachyscyphu7406    G-GCGA-GTGGTGGATT--GACACGCACG-ACGT-CGC--------TGAT
Cyr.brachyscyphuRC90    G-GCGA-GTGGTGGATT--GACACGCACG-ACGT-CGC--------TGAT
Cyr.mackeniiRC87        G-GCGA-GTGGTGGATT--GACACGCACG-ACGT-CGC--------TGAT
Cyr.obrienii7193        G-GCGA-GTGGTGGATT--GACACGCACG-ACGT-CGC--------TGAT
Cyr.sanguineusRC94      GTGCGA-GTGGTGGATT--GACACGCACG-ACGT-CGC--------TGAA
Cyr.suaveolens7181      G-GCGA-GTGGTGGATT--GACACGCACG-ACGT-CGC--------TGAT
Cyr.ochroleucus7639     G-GCGA-GTGGTGGATT--GACACGCACG-ACGT-CGC--------TGAT
Cyr.breviflorus7634     G-GCGA-GTGGTGGATT--GACACGCACG-ACGT-CGC--------TGAA
Cyr.obliquus7210        G-GCGA-GTGGTGGATT--GACACGCACG-ACGT-CGC--------TGAA
Cyr.thorncroftiRC80     G-GCGA-TTGGTGGATT--GACACGCACG-ACGT-CGC--------TGAA
Cyr.eucallusRC78        G-GCGA-GTGGTGGATT--GACACGCACG-ACGT-CGC--------TGAA
Cyr.spiralis7219        G-GCGA-GTGGTGGATT--GACACGCACG-ACGT-CGT---------GAA
Cyr.wellandiiRC83       G-GCGA-GTGGTGGATT--GACACGCACG-ACGTGCGC--------TGAA
Cyr.attenuatesRC81      G-GCGA--TGGTGGATT--GACACGCACG-ACGT-CGC---------GAA
Cyr.smithiae7214        G-GCGA-TTGGTGGATT--TACACGCACG-ACGT-GCG--------TGAA
Cyr.breviflorusRC88     G-GCGA-GTGGTGGATT--GACACGCACG-ACGT-CGC--------TGAA
Cyr.speciosus7640       G-GCGA-GTGGTGGAAT--GACACGCACG-CCGT-CGT--------TGAT
Cyr.macowanii7201       G-GCGA-GTGGTGGATT--GACACGCACG-ACGT-CGC---------AAT
Ge.ciliaris             G-GCGA-GTGGTGGATT--GACACGCACG-ACGT-CGT--------TGAG
Ge.britteniana          G-GCGA-GTGGTGGATT--GACACGCACG-ACGC-CGT--------TGAG
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                    251                                                 300
Ge.verticillata     G-GCGA-GTGGTGGATT--GACACGCACG-ACGC-CGT--------TGAG
Ge.namaquensisAMV635 G-GCGA-GTGGTGGATT--GACACGCACG-ACGC-CGT--------TGAG
Ge.lanuginosa       G-GCGA-GTGGTGGATT--GACACGCACG-ACGT-CGT--------TGAG
Euch.formosa        T-GCGA-GTGGTGGATT--GACACGCACG-ACGC-CGT--------CGAA
Eucr.bicolor        G-GCGA-GTGGTGGATT--GACACGCACG-ACGC-CGT--------CGAA
Eust.darwinii       G-GCGA-GTGGTGGATT--GACACGCACG-TCGC-CGT--------CTAA
Gr.hyacinthina      G-GCGA-TTGGTGGATT--GGCACGCACG-TCGC-CTC--------CGAA
Ga.fosteri          G-GTGA-GTGGTGGATT--GACACGCATG-ATAT-CAC--------TGAA
Hab.brachyandrus    G-GCGA-GTGGTGGAAT--GACACGCACG-CCGT-CGT--------TGAT
Hae.hirsitus7626    G-GCGA-GTGGTGGATT--GGCACGCACG-TCGT-CGT--------TGAG
Hae.humilis7254     G-GCGA-GTGGTGGATT--G-CACGCACG-TCGT-CGT--------TGAG
Hae.paucilifoliu7925 G-GCGA-GTGGTGGATT--GACACGCACG-TCGT-CGT--------TGAG
Hae.paucilifoliRHA21 G-GCGA-GTGGTGGATT--GACACGCACGTACGT-CGT--------TGAG
Hae.albiflos        G-GCGA-GTGGTGGATT--GACACGCACG-TCGT-CGT--------TGAG
Hae.graniticus      G-GCGA-GTGGTGGATT--GACACGCACG-CTGT-CGT--------TGAG
Hae.crispus7260     G-GCGA-GTGGTGGATT--GACACGCACG-CTGT-CGT--------TGAG
Hae.coccineus       G-GCGA-GTGGTGGATT--GACACGCACG-CTGT-CGT--------TGAG
Hae.pumilio         G-GCGA-GTGGTGGATT--GACACGCACG-CTGT-CGT--------TGAG
Hae.coccineusAMV632 G-GCGA-GTGGTGGATT--GACAC--------------------------
Hae.crispus7252     G-GCGA-GTGGTGGATT--GACACGCACG-CTGT-CGT--------TGAG
Hae.sanguineus7253  G-GCGA-GTGGTGGATT--GACACGCACG-CTGT-CGT--------TGAG
Hip.sp.7446         G-GCGA-GTGGTGGAAT--GACACGCACG-CCGT-CGT--------TGAT
Hip.brasilianum     G-GCGA-GTGGTGGAAT--GACACGCACG-CCGT-CGT--------TGAT
Hip.papilio         G-GCGA-GTGGTGGTAT--GACACGCACG-CCGT-CGT--------TGAT
Hip.reticulatum     G-GCGA-GTGGTGGAAT--AACACGCACG-CCGC-CGT--------TGAT
Hip.macbridei       G-GCGA-GTGGTGGAAT--GACACGCACG-CCGT-CGT--------TGAT
Hip.mollevillquense G-GCGA-GTGGTGGAAT--GACACGCACG-CCGT-CGT--------TGAT
Hip.parodii         G-GCGA-GTGGTGGAAT--GACACGCACG-CCGT-CGT--------TGAT
Hip.blumenavia      G-GCGA-GTGGTGGAAT--GACACGCACG-ACGC-CGT--------TGAT
Hes.stellaris       G-GCTA-GTGGTGGATAA-AACACGAACG-ACGT-CGT--------TGGA
Hip.sp.7447         G-GCGA-GTGGTGGAAT--GACACGCACG-CCGT-CGT--------TGAT
Hie.argentina       G-GCGA-GTGGTGGATT--GACACGCACG-TCGT-CGC--------CGTA
Hy.latifolia        G-GCGA-GTGGTGGATT--GGCATGTACG-ACGT-CGT--------CGAA
Rho.moelleri        G-GCGA-GTGGTGGAAT--GACACGCACG-CCGC-CGT--------TGAT
Pyr.Chase3639       G-GCGA-GTGGTGGAAT--GACACGCACG-CGGT-CGT--------TGAT
Is.longipetala      G-GCGA-GTGGTGGATT--GACATGCACG-ACGT-CGT--------CGAA
Lep.quitoensis      G-GCGA-GCGGTGGATT--GACATGCACG-ACGT-CGT--------CGAA
Pam.peruviana       G-GTGA-GTGGTGGATT--GACATGCACG-TCGC-CGT--------CGTA
Par.weberbaueri     G-GTGA-GTGGTGGATT--GACATGCACG-ACGC-CGT--------CGAA
Phae.ventricosa     G-GTGA-GTGGTGGATT--GACACGCACG-ACGC-CGT--------CGAA
Rau.decora          G-GCGA-GTGGTGGATT--GACAAGCACG-ACGC-TGT--------CGAA
Ne.alta             G-GCGA-GTGGTGGAGAA-CACACGCACG-ACGT-CGT--------TGGA
Pan.canariense      G-GCGA-GCGGTGGATT--GTCTCGCGCG-CCGC-CGC--------CGAA
La.martinezii       G-GCGA-GCGGTGGATT--GACACGCACG-CCGC-CGC--------AGAA
Leu.autumnale       G-GCGA-GCGGTGGATT--GACACGCGCG-CCGT-CGC--------TGAA
Na.bicolor          G-GCGA-GCGATGGACT--GACGCGCACG-CTGT-CGC--------CGAA
Na.sp.7521          G-GCGA-GCGATGGACT--GACGCGCACG-CTGT-CGC--------CGA-
Na.sp.7608          G--CGA-GCGATGGACT--GACGCGCACG-CTGT-CGC--------CGAT
Phy.ignea           G-ACGA-GTGGTGGATT--GACACGCTCG-CGGT-CGT--------TGAA
Ly.chinensis        G-GCGA-GTGGTGGATT--GGCACGCATG-TCGC-CGC--------CGAA
Urc.microcrater     G-GCGA-GTGGTGGATT--GACACGCACG-ACGC-CGT--------CGGA
Spr.formosissima    G-GCGA-GTGGTGGAAT--GACACGCACG-TCGC-CGT--------TGAT
Zep.flavissima      G-GCGA-GTGGTGGAAT--GACACGCACG-CCGC-CGT--------TGAT
Sca.membranaceuRHA25 G-GCGA-GTGGTGGATT--GACACGCACG-ACGC-CGT-----------
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                     251                                                 300
Sca.membranaceus7246 G-GCGA-GTGGTGGATT--GACACGCACG-ACGC-CGT------------
Sca.membranaceus7917 G-GCGA-GTGGTGGATT--GACACGCACG-ACGC-CGT------------
Sca.puniceusRHA26    G-GCGA-GTGGTGGATT--GACACGCACG-ACGC-CGT------------
Sca.puniceusRHA27    G-GCGA-GTGGTGGATT--GACACGCACG-ACGC-CGT------------
Sca.puniceus         G-GCGA-GTGGTGGATT--GACACGCACG-ACGC-CGT------------
Sca.membranaceus     G-GCGA-GTGGTGGATT--GACACGCACG-ACGC-CGT------------
Sca.puniceus7301     --GCGA-GTGGTGGATT--GACACGCACG-ACGC-CGT------------
Sca.cinnabarinus     G-GCGA-GTGGTGGATT--GACACGCACG-ACGC-CGT------------
Sten.humile          G-GTGA-GTGGTGGATT--GACATGCACG-ACGC-CGT--------CGAA
Ster.lutea           A-GCGA-GCGGTGGATC--GACACGCGCG-TTGC-CGC--------CGGA
Va.parviflora        G-GCGA-GCGGTGGATT--GACACGCACG-TCGT-CGC--------CGAA
Str.aestivalis       G-GCGA-GTGGTGGAGAA-CACACGCACG-ACGT-CGT--------TGTA
Str.discifera        G-GCGA-GTGGTGGAGAA-CACACGCACG-ACGT-CGT--------TGTA
Str.chaplinii        G-GCGA-GTGGTGGAGAA-CACAAGCACG-ACGT-CGT--------TGTA
Str.watermeyeri      G-GCGA-GTGGTGGAGAA-CACGCGCACG-ACGT-CGT--------TGTA
Str.picta            A-GCGA-GTGGTGGAGAA-CACACGCACG-ACGT-CGT--------TGTA
Str.salteri7245      G-GCGA-ATGGTGGAGAA-CCCGCGCCCG-ACGT-TGT--------TGTA
Str.bidentata        G-GCAA-GTGGTGGAAAA-TACACGCACG-ATGT-CGT--------TGAA
Str.truncata         G-GCAA-GTGGTGGAAAA-TACACGCACG-ATGT-CGT--------TGAA
Str.tenella          G-ACGA-GTGGTGGACAA-AGTATGCACG-ACGT-CGT--------TGAA
Wor.rayneri          G-GCGA-GTGGTGGATT--GACACGCACA-CCGC-CGC--------CGAA
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                        301                                                 350
Ama.belladonnaRHA28     GGTGCCCT--GTCCTGAAC-----GTTGCACTGGAGGAA-----CCCATG
Ama.belladonna          GGTGCCCT--GTCCTGAAC-----GGTGCACTGGAGGAA-----CCCATG
Ama.paradisicola        GTTGCCCT--GTCCTGAAC-----GGTGCACTGGAGGAA-----CCCATG
Amm.coranica7164        GTTGCCCT--GCTCTGAAC-----GGTGCATTACTGGAA-----CCCACG
Amm.nerinoidesRHA32     GTTGCCCT--GCTCTGAAC-----GGTGCATTACTGGAA-----CCCACG
Amm.nerinoides          GTTGCCCT--GCTCTGAAC-----GGTGCATTACTGGAA-----CCCACG
Amm.coranica            GTTGCCCT--GCTCTGAAC-----GGTGCATTACTGGAA-----CCCACG
Apo.lanceolatum         GTGACCCT--AGCTCGGAC-----GGTGGACCGGAGGAA-----CCCACG
Aga.caulescens          GAGACCCG--TGGCCGAGC-----GGCGCATGGAAGCAAA--ACCCTTTG
Bo.haemanthoides        GTTGCCTT--GCCGCGAAC-----GGTGCACTGGAGGAA-----CCCATG
Bo.disticha             GTTGCCTT--GCCGCGAAC-----GGTGCACTGGAGGAA-----CCCAAG
Cl.caulescens           GTGACCCT--AGATCGGGC-----GGTGCACCGGAGGAA-----CCCACG
Cl.gardenii             GTGACCCT--AGATCGGGC-----GGTGCACCGGAGGAA-----CCCACG
Cl.miniata              GTGACCCT--AGATCGGGC-----GGTGCACCGGAGGAA-----CCCACG
Cl.nobilis              GTGACCCT--AGATCGGGC-----GGTGCACCGGAGGAA-----CCCACG
Cl.miniataRC14          GTGACCCTC-TGATCGGGC-----GTTGCACC-----------------
Br.bosmaniae            GTTGCCCT--GCCCCGAAC-----GGTGCATTGGAGGAA-----TCCACG
Br.radula               GTTGCCCT--GCCCCGAAC-----GGTGCATTGGAGGAA-----TCCACG
Br.comptonii            GTTGCCCT--GCCCTGAAC-----GGTGCATTGGAGGAA-----TCCACG
Br.radulosanata7629     GTTGCCCT--GCCCCGAAC-----GGTGCATTGGAGGAA----TCCCACG
Br.bosmaniae7251        GTTGCCCT--GCCCCGAAC-----GGTGCATTGGAGGAA----TACCACG
Br.gregaria7157         GTTGCCCT--GCCCCGAAC-----GGTGCATTGGAGGAA----TCCCACG
Cro.flava7256           GTTGCCCC--ACCCCGAAC-----GGTGCATTGGAGGAA-----TCCACG
Cal.korsakoffii         G-CGGCCT--GGGTCGGGC-----GGTGCATCGGAGGAA-----CCCACG
Chl.fragrans            G-CGACAT--GGATCGAGC-----GGTGCACTGGAGGAA-----CCCATG
Car.spiralis            GTTGTC-T--ACTTTGAAC-----GGTGCATTGGAGGAA-----TCCATG
Cy.longifolia           GTTGCCCT--GCTCTGAAC-----GGTGCATTACAGGAA-----CCCACC
Cr.baumii               GTTGCCCT--GTTCTGAAC-----GGTGCACTACAGGAA-----CCCATG
Cro.guttata             GTTGCCCCT-ACCCCGAACC----GGTGCATTGGAGGAA-----TCCACG
Cr.abyssinicum          GTTGCCCT--CCTCTGAAC-----GGTGCATTGGAGGAA-----CCCACG
Cr.kirkii               GTTGCCCT--CCTCTGAAC-----GGTGCATTGGAGGAA-----CCCACG
Cr.latifolium           GTTGCCCT--CCTCTGAAC-----GGTGCATTGGAGGAA-----CCCACG
Cr.politifolium         GTTGCCCT--CCTCTGAAC-----GGTGCATTGGAGGAA-----CCCACG
Cr.yemenense            GTTGCCCT--CCTCTGAAC-----GGTGCATTGGAGGAA-----CCCACG
Cr.americanum           GTTGCCCT--CCTCTGAAC-----GGTGCATTGGAGGAA-----CCCACG
Cr.cruentum             GTTGCCCT--CCTCTGAAC-----GGTGCATTGGAGGAA-----CCCACG
Cr.erubescens           GTTGCCCT--CCTCTGAAC-----GGTGCATTGGAGGAA-----CCCACG
Cr.oliganthum           GTTGCCCT--CCTCTGAAC-----GGTGCATTGGAGGAA-----CCCACG
Cr.Schunke14054         GTTGCCCT--CCTCTGAAC-----GGTGCATTGGAGGAA-----CCCACG
Cr.distichum            GTTGCCCT--CCTCTGAAC-----GGTGCATTGGAGGAA-----CCCGCG
Cr.humile               GTTGCCCT--CCTCTGAAC-----GGTGCATTGGAGGAA-----CCCGCG
Cr.jagus                GTTGCCCT--CCTCTGAAC-----GGTGCATTGGAGGAA-----CCCGCG
Cr.moorei               GTTGCCCT--GCTCTGAAC-----GGTGCATTGGAGGAA-----CCCATG
Cr.bulbispermum         GTTGCCCT--GCTCTGAAC-----GGTGCATTGGAGGAA-----CCCATG
Cr.flaccidum            GTTGCCCT--GCTCTGAAC-----GGTGCATTGGAGGAA-----CCCACG
Cr.macowanii            GTTGCCCT--GCTCTGAAC-----GGTGCATTGGAGGAA-----CCCATG
Cr.variabile            GTTGCCCT--GCTCTGAAC-----GGTGCATTGGAGGAA-----CCCATG
Cr.bulbispermumRC95     GTTGCC-T--GCTCTGAAC-----GGTGCATTGGAGGA------CCCATG
Cr.euchrophyllumRC96    GTTGCCCT--GCTATGAAC-----GGTGCATTGGAGGAA-----CCCATG
Cr.moorei7921           GTTGCCCT--GCTCTGAAC-----GGTGCATTGGAGGAA-----CCCATG
Cr.acaule               GTTGCCCT--GCTCTGAAC-----GGTGCATTGGAGGAA-----CCCACG
Cr.forbesii             GTTGCCCT--GCTCTGAAC-----GGTGCATTGGAGGAA-----CCCACG
Cr.acaulglaucRC105      GTTGCCCT--GCTCTGAAC-----GGTGCATTGGAGGAA-----CCCACG
Cr.acauleRC106          GTTGCCCT--GCTCTGACC-----GTTGCATTGGAGGAA-----CCCACG
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                        301                                                 350
Cr.campanulatum         GTTGCCCT--GCTCTGAAC-----GGTGCATCGGAGGAA-----CCCATG
Cr.caroloschmidtii      GTTGCCTT--GCTCTGAAC-----GGTGCATTGGAGGAA-----CCCATG
Cr.crassicaule          GTTGCCCT--GCTCTGAAC-----GGTGCATTGGAGGAA-----CCCATG
Cr.acauleRC38           GTTGCCCT--GCTCTGAAC-----GGTGCATTGGAGGAA-----CCCATG
Cr.carolschmidRC97      GTTGCCTT--GCTCTGAAC-----GGTGCATTGGAGGAA-----CCCATG
Cr.foetidumRC98         GTTGCCCT--GCTCTGAAC-----GGTGCATTGGAGGAA-----CCCATG
Cr.graminicola7630      GTTGCCCT--GCTCTGAAC-----GGTGCATTGGAGGGA-----CCCACG
Cr.asiaticum            GTTGCTCT--GCTCTGAAC-----GGTGCATTGGAGGAA-----CCCATG
Cr.pedunculatum         GTTGCTCT--GCTCTGAAC-----GGTGCATTGGAGGAA-----CCCATG
Cr.Meerow2332           GTTGCTCT--GCTCTGAAC-----GGTGCATTGGAGGAA-----CCCATG
Cr.defixum              GTTGCTCT--GCTCTGAAC-----GGTGCATTGGAGGAA-----CCCATG
Cr.Meerow2333           GTTGCTCT--GCTCTGAAC-----GGTGCATTGGAGGAA-----CCCATG
Cr.buphanoides          GTTGCTCT--GCTCTGAAC-----GGTGCATTGGAGGAA-----CCCATG
Cr.ligulatum            GTTGCTCT--GCTCTGAAC-----GGTGCATTGGAGGAA-----CCCATG
Cr.razafindratsiraea    GTTGCTCT--GCTCTGAAC-----GGTGCATTGGAGGAA-----CCCATG
Cr.modestum             GTTGCTCT--GCTCTGAAC-----GGTGCATTGGAGGAA-----CCCATG
Cr.mauritianum          GTTGCTCT--GCTCTGAAC-----GGTGCATTGGAGGAA-----CCCATG
Cr.subcernuum           GTGGCTCT--GCTCTGAAC-----GGTGCATTGGAGGAA-----CCCATG
Cr.venosum              GTTGCTCT--GCTCTGAAC-----GGTGCATTGGAGGAA-----CCCATG
Cr.buphanoidesRC102     GTGGCTTT--GCTCTGAAC-----GGTGCATTGGAGGAA-----CCCATG
Cr.fimbriatulum         GTTGCCCT--GCTCCGAAC-----GGTGCATTGGAGGAA-----CCCACG
Cr.broussonetii         GTTGCCCT--CCTCTGAAGC----GGTGCATTTGGAGAA-----CCCACG
Cry.haemanthoides       GTAACCCT--AGATTAGGC-----GATGCACCGCAGGAA-----CCCACG
Cyr.falcatus7637        GTGACCCT--AGCTCGGGC-----GGTGCAACGGGGGAA-----CCCACG
Cyr.obliquus7278        GTGTCCCT--AGCTCGGGC-----GGTGCATCGGGGGAA-----CCCACG
Cyr.elatus7202          GTGACCCT--AGCTCGGGC-----GGTGCATCGGGGGAA-----CCCACA
Cyr.labiatus7212        GTGACCCT--AGCTCGGGC-----GGTGCATCGGGGGAA-----CCCACG
Cyr.labiatus7258        GTGACCCT--AGCTCGGGC-----GGTGCATCGGGGGAA------CCACG
Cyr.elatus7636          GTGACCCT--AGCTCGGGC-----GGTGCATCGGGGGAA-----CCCACA
Cyr.herrei7217          GTGACCCT--AGCTCGGGC-----GGTGCATCGGGGGAA-----CCCACG
Cyr.herreiRC86          GTGACCCT--AGCTCGGGC-----GGTGCATCGGGGGAA-----CCCACG
Cyr.montanus7209        GTGACCCT--AGCTCGGGC------GTGCATCGGGGGAA-----CCCACG
Cyr.staadensis7316      GTGACCC---AGCTCGGGC-----GGTGCATCAGGGGAA-----CCCACG
Cyr.eucallusRC79        GTGACCC---AGCTCGGGC-----GGTGCATTAGGGGAA-----CCCACG
Cyr.brachyscyphu7406    GTGACCCT--AGCTCGGGC-----GGCGACTCGGGGGAA-----CCCACG
Cyr.brachyscyphuRC90    GTGACCCT--AGCTCGGGC-----GGCGACTCGGGGGAA-----CCCACG
Cyr.mackeniiRC87        GTGACCCT--AG-TCGGGC-----GGCGACTCTGGGGAA-----CCCACG
Cyr.obrienii7193        GTGACCCT--AGCTCGGGC-----GGCGACTCGGGGGAA-----CCCACG
Cyr.sanguineusRC94      GTGACCC---AGCTCGGGC-----GGTGCATCAGGGGAA-----CCCACG
Cyr.suaveolens7181      GTGACCCT--AGCTCGGGC-----GGCGACTCGGGGGAA-----CCCACG
Cyr.ochroleucus7639     GTGACCCT--AGCTCGGGC-----GGCGACTCGGGGGAA-----CCCACG
Cyr.breviflorus7634     GTGACCCT--AGCTCGGGC-----AGTGCCTCGGGGGAA-----CCCACG
Cyr.obliquus7210        GTGTCCCT--AGCTCGGGC-----GGTGCATCGGGGGAA-----CCCACA
Cyr.thorncroftiRC80     GTGACCC---AGCTCGGGC-----GGTGCATTAGGGGAA-----CCCA-G
Cyr.eucallusRC78        GTGACCC---AACTCGGGC------GTGCATTAGGGGAA-----CCCACG
Cyr.spiralis7219        GTGACCC---AGCTCGGGC-----GGTGCATACAGGGGAA----CCCACG
Cyr.wellandiiRC83       GTGACCC---AGCTCGGGC-----GGTGCTACAGGGGAA-----CCCACG
Cyr.attenuatesRC81      GAGACCCT--GCTACGGGC-----GCTGCCTACGGGGAA-----CCCA-G
Cyr.smithiae7214        GTGACCC---AGCTACGGGT----GCTGCATACAGGGGAA---CCCATCG
Cyr.breviflorusRC88     GTGACCCT--AGCTTGGGC-----AGTGCCTCAGGGGAA-----CCCACG
Cyr.speciosus7640       GTGACC-T--GACTCGTGC-----GGTGCAGT-GGTGAA-----CCCATG
Cyr.macowanii7201       GTGACC-T--AGCTCGGGC------GTCGATCTCTGGGGAA---CCCACG
Ge.ciliaris             TGAACC-T--AGCTCGGGC-----GGTGCA-CGGAGGAA-----CCCACG
Ge.britteniana          GGAACC-T--AGCTCGGGC-----GGTGCA-CGGAGGAA-----CCCACG
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                        301                                                 350
Ge.verticillata         TGAACC-T--AGCTCGGGC-----GGTGCA-CGGAGGAA-----CCCACG
Ge.namaquensisAMV635    GGAACC-T--AGCTCGGGC-----GGTGCA-CGGAGGAA-----CCCACG
Ge.lanuginosa           TGACCC-T--AGCTCGGAC-----GGTGTGCCGGAGGAA-----CCCACG
Euch.formosa            GCGGCC-T--GGGTCGGGC-----GGTGCACCGGAGGAA-----CCCACG
Eucr.bicolor            GCGGCC-T--GGGTCGGGC-----GGTGCACCGGAGGAA-----CCCACG
Eust.darwinii           GCGACA-T--GGCTTGGGC-----GGTGCACTAAAGGAG-----CCCATG
Gr.hyacinthina          GTGACC-T--GGCTCGGGC-----GGCACGCCGGAGGAA-----CCCACG
Ga.fosteri              GTAACT-T--AGCTTAGGT-----GATGCACTGGAATAA-----CCCATG
Hab.brachyandrus        ATGACCC---GACTCGTGC-----GGTGCAGTGGTGGAA-----CCCATG
Hae.hirsitus7626        CGACCC-T--AGCTCGGGC-----GTTGCACCGGAGGAA-----CCCACG
Hae.humilis7254         CGACCC-T--AGC-CGGGC-----GTTGCACCGGAGGAA-----CCCACG
Hae.paucilifoliu7925    CGACCC-T--AGCCCGGGC-----GATGCACCGGAGGAA-----CCCACG
Hae.paucilifoliRHA21    CGACCC-T--AGCCCGGGC-----GATGCACCGGAGGAA-----CCCACG
Hae.albiflos            CGACCC-T--AGCCCGGGC-----GATGCACCGGAGGAA-----CCCACG
Hae.graniticus          CGTCCC-T--AGCCCGGGC-----GGTGCACCGGAGGAA-----CCCACG
Hae.crispus7260         CGACCC-T--AGCCCGGGC-----GGCGCACCGGAGGAA-----CCCACG
Hae.coccineus           CGACCC-T--AGCCCGGGC-----GGCGCACCGGAGGAA-----CCCACG
Hae.pumilio             CGACCC-T--AGCCCGGGC-----GGTGCACCGGAGGAA-----CCCACG
Hae.coccineusAMV632     ------------------------------------------------
Hae.crispus7252         CGTACC-T--AGCCCGGGC-----GGCGCACCGGAGGAA-----CCCTCG
Hae.sanguineus7253      CGACCC-T--AGCCCGGGC-----GGCGCACCGGAGGAA-----CCCACG
Hip.sp.7446             GCGACCC---GACTCGGGCT-----GTGCATTGGTG-AA-----CCCATG
Hip.brasilianum         GCGACCC---GACTCGTGC-----GGTGCATTGGTGGAA-----CCCATG
Hip.papilio             GCGACCC---GACTCGGGCT-----GTGCATTGGAGGAA-----CCCATG
Hip.reticulatum         GCGACCC---GACTCGTGC-----GGTGCATTGGTGGAA-----CCCATG
Hip.macbridei           GCGACCC---GACTCGGGTT-----GTGCATTGGTGGAA-----CCCATG
Hip.mollevillquense     GCGACCC---GACTCGGGTT-----GTGCATTGGTGGAA-----CCCATG
Hip.parodii             GCGACCC---GACTCGGGCT-----GTGCATTGGTGGAA-----CCCATG
Hip.blumenavia          GTGACCC---GACTCGTGA-----GGTGCATTGGTGGAA-----CCCACA
Hes.stellaris           GATGCTCT--GCCCATAAC-----GGTGCATTAGAGGAA-----TCCAGG
Hip.sp.7447             GCGACCC---GACTCGTGCT-----GTGCATTGGTGGAA-----CCCATG
Hie.argentina           GCGACATT--GA-TCGAGC-----GGTGCACTGGAGGAA-----CCCATG
Hy.latifolia            GCGGCC-T--GGGTTGGGC-----GGTGCACCGGAGGGA-----CCCACG
Rho.moelleri            GTGACCC---GACTCGTGC-----GGCGCATTGGTGGAA-----CCCACG
Pyr.Chase3639           GTGACC-T--GACTCGTGC-----GGTGCAGTGGTG-AA-----CCCATG
Is.longipetala          GCGGCC-T--GGGTCGGGC-----GGTGCACCGGAGGAA-----CCCACG
Lep.quitoensis          GCGGC-TT--GGGTCGGGC-----GGTGCGCCGGAGGAA-----CCCACG
Pam.peruviana           GCGGCC-T--GTGTCGGGC-----GGTGCTCCGGAGGAA-----CCCACG
Par.weberbaueri         GCGGCC-T--GGGTCGGGC-----GGTGCACCGGGGGAA-----CCCACG
Phae.ventricosa         GCGGCC-T--GGGTCGGGC-----GGTGCATCGGAGGAA-----CCCACG
Rau.decora              GCGGCC-T--GGTTCGGGC-----GGCGCACCCGAGGAA-----CCCAAG
Ne.alta                 GTTGCCCT--GCCTTGAAC-----GGTGCATTGGAGGAA-----TCCACG
Pan.canariense          GTGACTC---GGCTCGT-C-----GATGCACCGGAGGAA-----CCCACG
La.martinezii           GTGTCCC---GGCTCGGGC-----GATGCGCCGGAGGAA-----CCCACG
Leu.autumnale           GTGCCCC---GGCTCGGGC-----GTTGCACCGGAGGAA-----CCTATG
Na.bicolor              GTGACCC---GACTCGGCT-----GATGCACAGAAGGAA-----CCTACG
Na.sp.7521              GTGACCC---GACTCGGTC-----GATGCACAGAAGGAA-----CCTACG
Na.sp.7608              GTGACCC---GACTCGGTC-----GATGCACAGAAGGAA-----CCTACG
Phy.ignea               GTGACC-T--GACTTGGGC-----GGTGCATTGGTGGAA-----CCCATG
Ly.chinensis            GTGACCC---GGATCGAGC-----GGTGCACCGGAGGAAA-----CCACG
Urc.microcrater         GAGGCC-T--GGGTCGGGC-----GGTGCACAGGAGGAA-----CCCACG
Spr.formosissima        GCGACCC---GACTCGTGC-----GTTGCATTGGTGGAA-----CCCATG
Zep.flavissima          GTGACCC---GACTCGTGC-----GGTGCAGTGGTGGAA-----CCCATT
Sca.membranaceuRHA25    -TG-CC-T--AGCTCGGGC-----GGTGCACCGGAGGAA-----CCCATG
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                      301                                                 350
Sca.membranaceus7246 -TG-CC-T--AGCTCGGGC-----GGTGCACCGGAGGAA-----CCCATG
Sca.membranaceus7917 -TG-CC-T--AGCTCGGGC-----GGTGCACCGGAGGAA-----CCCATG
Sca.puniceusRHA26    -TG-CC-T--AGCTCGGGC-----GGTGCACCGGAGGAA-----CCCATG
Sca.puniceusRHA27    -TG-CC-T--AGCTCGGGC-----GGTGCACCGGAGGAA-----CCCATG
Sca.puniceus         -TG-CC-T--AGCTCGGGC-----GGTGCACCGGAGGAA-----CCCATG
Sca.membranaceus     -TG-CC-T--AGCTCGGGC-----GGTGCACCGGAGGAA-----CCCATG
Sca.puniceus7301     -TG-CC-T--AGCTCGGGC-----GGTGCACCGGAGGAA-----CCCATG
Sca.cinnabarinus     -TG-CC-T--AGCTCCGGC-----GGTGCACCGGGGGAA-----CCCATG
Sten.humile          GCGGC-TT--GGGCCGGGC-----GGTGCACCGGAGGAA-----CCCACG
Ster.lutea           GTGACCC---GACTCGAGC-----GATGCACCGGAGGAA-----CCCACG
Va.parviflora        GTGATCC---GGCTCGGGC-----GATGCATCGGAGGAA-----CCCACG
Str.aestivalis       GTTGCC-T--GCCTAAA-C-----GGTGCATTGGATGAGG-----CCACG
Str.discifera        GTTGCCCT--GCCCTAAAC-----GGTGCATTGGATGAGG-----CCACG
Str.chaplinii        GATGCCCT--GCCCTGAAC-----GGTGCATTGGATGAG-----TCCACG
Str.watermeyeri      GTTGCCCT--GCCCTGAAC-----GATGCATTGGATGAG-----TCCACG
Str.picta            GTTGCCCT--GCCCTATAC-----GGTGCATTGGATGAG-----TCCACG
Str.salteri7245      GTTGCCCT--GCCCTGAAC-----GATGCATTGGATGTG-----TCCACG
Str.bidentata        GTTGCCCT--GCCTCAGAC-----GGTACAACGGAGGAA-----TCCACG
Str.truncata         GTTGCCCT--GCCTCAGAC-----GGTACAACGGAGGAA-----TCCACG
Str.tenella          GTTGTCCT--ACCTCGAAC-----TGTGCATTGGAGGAA-----TCCTTT
Wor.rayneri          GT-GACCT--GGCTCGGGC-----GGCGCGCCGGAGGAA-----CCCACG
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                        351                                                 400
Ama.belladonnaRHA28     C-CGGTGG-TCGCGAGC-TG----------TT------------------
Ama.belladonna          C-CGGTGG-GCGCGAGC-TGAGCGC-CC--TTGGAAC-------------
Ama.paradisicola        C-TGGTGG-GCGCGAGC-TGAGCGC-CC--TTGGAAC-------------
Amm.coranica7164        C-TGGTTG-GTG-GAGT-TGAGCAC-CC--T-GGAAC---AA-GATCCCA
Amm.nerinoidesRHA32     C-TGGTTG-GTGCGAGT-TGAGCAC-CC--TTGGAAC---AA-GATCCCA
Amm.nerinoides          C-TGGTTG-GTGCGAGT-TGAGCAC-CC--TTGGAAC---AA-GATCCCA
Amm.coranica            C-TGGTTG-GTGCGAGT-TGAGCAC-CC--TTGGAAC-------------
Apo.lanceolatum         T-CGACGG-GCGCCATG-CGAGCGC-CCC-TTGGAAC-------------
Aga.caulescens          C-CGGCGG-GCGCGAG--CGAGCGC-CC--TCGGA-C-------------
Bo.haemanthoides        C-CGGTGG-GCGCGAGC-TGAGCGC-CC--TTGGAAC-------------
Bo.disticha             C-CGGTGG-GCGCGAGC-TGAGCGC-CC--TTGGAAC-------------
Cl.caulescens           C-CGACGG-GCGCCATG-TGAGCGT-CCA-TTGGAAC-------------
Cl.gardenii             C-GGACGG-GCGCCATG-TGAGCGT-CCA-TTGGAAC-------------
Cl.miniata              C-CGACGG-GCGCCATG-TGAGCGT-CCA-TTGGAAC-------------
Cl.nobilis              C-CGACGG-GCGCCATG-TGAGCGT-CCA-TCGGAAC-------------
Cl.miniataRC14          ------------------------------------------------
Br.bosmaniae            C-TGGTGG-GCGCAAGT-CGAGCGT-CC--TTGGAAC-------------
Br.radula               C-TGGTGG-GCGCAAGT-CGAGCGT-CC--TTGGAAC-------------
Br.comptonii            C-TGGTGG-GCGCAAGT-CGAGCGT-CC--TTGGAAC-------------
Br.radulosanata7629     C-TGGTGG-GCGCAAGT-CGAGCGT-CC--TTGGAAC---AA-GATGCCA
Br.bosmaniae7251        C-TGGTGG-GCGCAAGT-CGAGCGT-CCC-TTGGAAC---AA-GATGCAA
Br.gregaria7157         C-TGGTGG-GCGCAAGTGCGAGCGT-CC--TTGGAAC---AA-GATCGCA
Cro.flava7256           C-TGGTGG-GCGCAAGC-TGAGCGC-CC--TTGGAAC---AA-GATCCCA
Cal.korsakoffii         C-CGACGG-GGCGCCACGTGGGCGCTCCC-TTGGAAC-------------
Chl.fragrans            C-CGACGG-GAGCCA-------CGC-CC--TTGGAAC-------------
Car.spiralis            T-TGGTAG-ATGCAATG-TCAGCGTT---TATGGAA---------T----
Cy.longifolia           C-TGGTTG-GTGCGAGT-TGAGCAC-CC--TTGGAAC-------------
Cr.baumii               C-TGGCTG-GTGCGAGT-TGAGCAC-CC--TTGGAAC---AA-GATCCCA
Cro.guttata             C-TGGTGG-GCCGCAAGCTGAGCGC-CC--TTGGAAC-------------
Cr.abyssinicum          C-TGGTGG-GTGCGAGT-TGAGCGC-CC--TTGGAAC---AA-GATCCCA
Cr.kirkii               C-TGGTGG-GTGCGAGT-TGAGCGC-CC--TTGGAAC---AA-GATCCCA
Cr.latifolium           C-TGGTGG-GTGCGAGT-TGAGCGC-CC--TTGGAAC---AA-GATCCCA
Cr.politifolium         C-TGGTGG-GTGCGAGT-TGAGCGC-CC--TTGGAAC---AA-GATCCCA
Cr.yemenense            C-TGGTGG-GTGCGAGT-TGAGCGC-CC--TTGGAAC---AA-GATCCCA
Cr.americanum           C-TGCTGG-GTGCGAGT-TGAGCGC-CC--TTGGAAC---AA-GATCCCA
Cr.cruentum             C-TGCTGG-GTGCGAGT-TGAGCGC-CC--TTGGAAC---AA-GATCCCA
Cr.erubescens           C-TGCTGG-GTGCGAGT-TGAGCGC-CC--TTGGAAC---AA-GATCCCA
Cr.oliganthum           C-TGCTGG-GTGCGAGT-TGAGCGC-CC--TTGGAAC---AA-GATCCCA
Cr.Schunke14054         C-TGCTGG-GTGCGAGT-TGAGCGC-CC--TTGGAAC---AA-GATCCCA
Cr.distichum            T-TGGTGG-GTGCGAGT-TGAGCGC-CC--TTGGAAC---AA-GATCCCA
Cr.humile               T-TGGTGG-GTGCGAGT-TGAGCGC-CC--TTGGAAC---AA-GATCCCA
Cr.jagus                T-TGGTGG-GTGCGAGT-TGAGCGC-CC--TTGGAAC---AA-GATCCCA
Cr.moorei               C-TGGTGG-GTGCGAGT-TGAGCAC-CC--TTGGAAC---AA-GATCCCA
Cr.bulbispermum         C-TGGTGG-GTGCGAGT-TGAGCAC-CC--TTGGAAC---AA-GATCCCA
Cr.flaccidum            C-TGGTGG-GTGCGAGT-TGAGCAC-CC--TTGGAAC---AA-GATCCCA
Cr.macowanii            C-TGGTGG-GTGCGAGT-TGAGCAC-CC--TTGGAAC-------------
Cr.variabile            C-TGGTGG-GTGCGAGT-TGAGCAC-CC--TTGGAAC-------------
Cr.bulbispermumRC95     C-TGGT-G-GTGCGAGT-TGAGCTC-CC--TTG-AAC---AA-GATCGCA
Cr.euchrophyllumRC96    C-TGGTGG-GTGCGAGT-TGA----------------------------
Cr.moorei7921           C-TGGTG-------------------------------------------
Cr.acaule               C-TGGTGG-GTGCGAGT-TGAGCAC-CC--TTGGAAC---AA-GATCCCA
Cr.forbesii             C-TGGTGG-GTGCGAGT-TGAGCAC-CC--TTGGAAC---AA-GATCCCA
Cr.acaulglaucRC105      C-TGGTGG-GTGCGAGT-TGTGCAC-CC--TTGGAAC---AA-GATC---
Cr.acauleRC106          C-TGGTGG-GTGCGAGT-TGT-CAC-CC--TTG----------------
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                    351                                                 400
Cr.campanulatum     C-TGGTGG-GTGCGAGT-TGAGCAC-CC--TTGGAAC------------
Cr.caroloschmidtii  C-TGGTGG-GTGCGAGT-TGAGCAC-CC--TTGGAAC---AAAGATCCCA
Cr.crassicaule      C-TGGTGG-GTGCGAGT-TGAGCAC-CC--TTGGAAC---AG-GATCCCA
Cr.acauleRC38       C-TGGT-G-GTGCGAGT-TGAGCTC-CC--TTGGAAC---AA-GATCCCA
Cr.carolschmidRC97  C-TGGT-G-GTGCGAGT-TGATCAC-CC--TTGG---------------
Cr.foetidumRC98     C-TGGTGG-GTGCGAGT-TGAGCAC-CC--TTG-AAC---AG-GATACC-
Cr.graminicola7630  C-TGGTGG-GTGCGAGT-TGA----------------------------
Cr.asiaticum        C-TGGTGG-GTGCGAGT-TGAGCAC-CC--TTGGAAC---AA-GATCCCA
Cr.pedunculatum     C-TGGCGG-GTGCGAGT-TGAGCAC-CC--TTGGAAC---AA-GATCCCA
Cr.Meerow2332       C-TGGTGG-GTGCGAGT-TGAGCAC-CC--TTGGAAC---AA-GATCCCA
Cr.defixum          C-TGGTGG-GTGCGAGT-TGAGCAC-CC--TTGGAAC---AA-GATCCCA
Cr.Meerow2333       C-TGGTGG-GTGCGAGT-TGAGCAC-CC--TTGGAAC---AA-GATCCCA
Cr.buphanoides      C-TGGTGG-GTGCGAGT-TGAGCAC-CC--TCGGAAC---AA-GATCCCA
Cr.ligulatum        C-TGGTGG-GTGCGAGT-TGAGCAC-CC--TTGGAAC---AA-GATCCCA
Cr.razafindratsiraea C-TGGTGG-GTGCGAGT-TGAGCAC-CC--TTGGAAC---AA-GATCCCA
Cr.modestum         C-TGGTGG-GTGCGAGT-TGAGCAC-CC--TTGGAAC---AA-GATCCCA
Cr.mauritianum      C-TGGTGGAGTGCGAGT-TGAGCAC-CC--TTGGAAC---AA-GATCCCA
Cr.subcernuum       C-TGGTGG-GTGCGAGT-TGAGCAC-CC--TTGGAAC---AA-GATCCCA
Cr.venosum          C-TGGTGG-GTGCGAGT-TGAGCAC-CC--TTGGAAC---AA-GATCCCA
Cr.buphanoidesRC102 C-TGGTGG-TTGCGAGT-TGTGCAC-CA--TTGGAAC---AA-GATGCCA
Cr.fimbriatulum     C-TGGTGG-GTGCGAGT-TGAGCAC-CC--TTGGAAC---AA-GATCCCA
Cr.broussonetii     C-TGGTGG--T-CGAGT-TGAGCGC-CC--TTG-AAC------------
Cry.haemanthoides   T-CGACGG-GCACCCATGTGGGCGT-TCTGTTGGAAC------------
Cyr.falcatus7637    T-CGACGG-GCGCCATG-TGAGCGTCCC--TTGGAAC---AC-GACCCCA
Cyr.obliquus7278    T-CGACGG-GCGCCATG-TGAGCGTCCC--TTGGAAC---AT-GACCCCA
Cyr.elatus7202      T-CGACGG-GCGCCATG-TGAGCGTACC--TTGGAAC---AC-GACCCCA
Cyr.labiatus7212    T-CGACGG-GCGCCATG-TGAGCGTCCC--TTGGAAC---AC-GACCCCA
Cyr.labiatus7258    T-CGACGG-GCGCCATG-TGAGCGTCCC--TTGGAAC---AC-GACCCCA
Cyr.elatus7636      TACGACGG-GCGCC-------------------------------------
Cyr.herrei7217      T-CGACGG-GCGCCATG-TGAGCGTCCC--TTGGAAC---AC-GACCCCA
Cyr.herreiRC86      T-CGACGG-GCGCCATG-TGAGCGTCCC--TTGGAAC---AC-GACCCCA
Cyr.montanus7209    T-GCGACGGGCGCCATG-TGAGCGTCCC---TGGAAC---AC-GACCGCA
Cyr.staadensis7316  T-CGACGG-GTGCCATG-TGAGCGCCCC--TTGGAAC---AC-GACCCCA
Cyr.eucallusRC79    T-CGACGG-GCGCCATG-TGAGCGCCCC--TTGGAAC---AC-GACCCCA
Cyr.brachyscyphu7406 T-CGACGG-GCGCCATG-CGAGCGTCCC--TTGGAAC---AC-GACCCCA
Cyr.brachyscyphuRC90 T-CGACGG-GCGCCATG-CGAGCGTCCC--TTGGAAC---AC-GACCCCA
Cyr.mackeniiRC87    T-CGACGG-GCGCCATG-CGAGCGTCCC--TTGGAAC---AC-GAACC-A
Cyr.obrienii7193    T-CGACGG-GCGCCATG-CGAGCGTCCC--TTGGAAC---AC-GACCCCA
Cyr.sanguineusRC94  T-CGACGG-GCGCCATG-TGAGCGTCCC--TTGGAAC---AC-GACCCCA
Cyr.suaveolens7181  T-CGACGG-GCGCCATG-CGAGCGTCCC--TTGGAAC---AC-GACCCCA
Cyr.ochroleucus7639 T-CGACGG-GCGCCATG-CGAGCGTCCC--TTGGAAC---AC-GACCCCA
Cyr.breviflorus7634 T-CGACGG-GCGCCATG-CGAGCGTCCC--TTGGAAC---AC-GACCCCA
Cyr.obliquus7210    T-CGACGG-GCGCCATG-TGAGCGTCCC--TTGGAAC---AC-GACCCCA
Cyr.thorncroftiRC80 T-CGACGG-ACGCCATG-TGAGCGCCCC--TTG-AAC---AC-GACCCCG
Cyr.eucallusRC78    T-CGACGG--CGCCACG-TGA----------------------------
Cyr.spiralis7219    T-CGACGG-GCGCCATG-TGAGCGCCCC--TTGGAAC---AC-GACCGCA
Cyr.wellandiiRC83   T-CGACGG-GCGCCATG-TGAGCGCCCC--TTGGAAC---AC-GACCC--
Cyr.attenuatesRC81  T-CGACGG-------T---------------------------------
Cyr.smithiae7214    TACGACGG--C----T--TG----------T-----C---A---------
Cyr.breviflorusRC88 T-CGACGG--CGCCATG-CGAGCGTCCC--TTGGAAC---AC-GACCCCA
Cyr.speciosus7640   T-CGACGG-GCGTCACA-TGAGCGCTCC--T-GGACC---AC-GA-----
Cyr.macowanii7201   TGGAACGG--CGCCAT--TCATTAGGAGATGTGTAAC---AA-G-GTTTC
Ge.ciliaris         T-CGACGG-GCGCCATG-CGAGCGCGCCCCTTGGAAC------------
Ge.britteniana      T-CGACGG-GCGCCATG-CGAGCGCCCG--TTGGAAC------------
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                        351                                                 400
Ge.verticillata         T-CGACGG-GCGCCACG-CGAGCGCCCG--TTGGAAC------------
Ge.namaquensisAMV635    T-CGACGG-GCGCCATG-CGAGCGCCCG--TTGGAAC---AC-GACC---
Ge.lanuginosa           T-CGACGG-GCGCCATG-CGAGCGCCCC--TTGGAAT------------
Euch.formosa            C-CGACGG-GCGCCACG-CGGGCGCCCC--TTGGAAC------------
Eucr.bicolor            C-CGACGA-GCGCCACG-TG-GCGCCCC--TTGGAAC------------
Eust.darwinii           T-CGAGGG--CGCCACG-TGAGCGCACC--CTTGAAC------------
Gr.hyacinthina          T-TGACGG-GCTGCACG-TAAGCGCCCC--TTGGAA-------------
Ga.fosteri              C-TAATTG-GTGACATG-TGAGTATTAC--TTGGAAC---AT-GACCCCA
Hab.brachyandrus        T-CGACGG-GCGTCACA-TGAGCGCTCCC--TGGACC------------
Hae.hirsitus7626        C-CGACAG-GCGCCACG-TGAGCGTCCC--TTGGAAC---AC-GACCGCA
Hae.humilis7254         C-CGACAG-GCGCCACG-TGAGCGTCCC--TTGGAAC---AC-GACCCCA
Hae.paucilifoliu7925    T-CGACAG-GCGCCACG-TGAGCGTCCC--TTGGAAC---AC-GACC---
Hae.paucilifoliRHA21    TGCGACAG-GCGCCACG-TGAGCGTCCC--TTGGAAC---AC-GAACCCA
Hae.albiflos            T-CGACAG-GCGCCACG-TGAGCGTCCC--TTGGAAC------------
Hae.graniticus          C-CGACAG-GCGCCACC-TGAGCGTCCC--TTGGAAC------------
Hae.crispus7260         C-CGACAG-GCGCCACT-TGAGCGTCCC--TTGGAAC---AC-GACCCCA
Hae.coccineus           C-CGACAG-GCGCCACC-TGAGCGTCCC--TTGGAAC---AC--------
Hae.pumilio             T-CGACAG-GCGCCACC-TGAGCGTCCC--TTGGAAC------------
Hae.coccineusAMV632     ------------------------------------------------
Hae.crispus7252         C-CGACAG-GCGCCACC-TAAGAGTCCC--GTAGAAC---AC-G-TCC--
Hae.sanguineus7253      C-CGACAG-GCGCCA----GAGCGTCCC--TTGGAAC---AC-GACCCCA
Hip.sp.7446             T-CGACGG-GCGCCACA-TGAGCGCTCC--CTTGACC---AC-GACCCCA
Hip.brasilianum         T-CGACGG-GCGCCACA-TGAGCGCTCC--CTTGACC------------
Hip.papilio             T-CGACGG-GCGCCACA-TGAGCGCTCC--CTTGACC------------
Hip.reticulatum         T-CGACGG-GCGCCACA-TGAGCGCTCC--CTTGACC------------
Hip.macbridei           T-CGACGG-GCGCCACA-TGAGCGCTCC--CTTGACC------------
Hip.mollevillquense     T-CGACGG-GCGCCACA-TGAGCGCTCC--CTTGACC------------
Hip.parodii             T-CGACGG-GCGCCACA-TGAGCGCTCC--CTTGACC------------
Hip.blumenavia          T-CGACGG-GCGCCACA-TGAGCGCTCC--CTTGACC------------
Hes.stellaris           C-TGGTCG-GCGCAAGT-TGAGCGCCTT---TGGAAC------------
Hip.sp.7447             T-CGACGG-GCGCCACA-TGAGCGCTCC--CTTGACC---AC-GACCCCA
Hie.argentina           C-CGACGG-GTGCCA-------CGC-CC--TTGGAAC------------
Hy.latifolia            T-CGACGG-TCGCGACG-CGAGCGCTCC-TTTAGAAG------------
Rho.moelleri            T-CGACGG-GCGCCACA-TGAACGCTCC--CTTGACC------------
Pyr.Chase3639           T-CTACGG-GCGTCACA-TGAGCGCTCC--CTGGACC------------
Is.longipetala          T-CGATGG-GCGCCACG-TGAGCGCTCCC-TTAGAAC------------
Lep.quitoensis          T-CGATGG-GCGCCACG-TGAGCGCTCCC-TTAGAAC------------
Pam.peruviana           T-CGACGG-GCGCCCCG-TGAGCGTTCCC-TTAGAAC------------
Par.weberbaueri         T-CGACGG-GCGCCACG-TGAGCGCTCGC-TTAGAAC------------
Phae.ventricosa         C-CGACGGGGCCCCACG-TGGGCGCCCC--TTGGAAC------------
Rau.decora              CTTGAACGGGCGCCACG-TGGGCGCTCCCATAAGAAC------------
Ne.alta                 C-TGGTGG-GTGCAAGT-TGAGCGCCCT---TGGAAC------------
Pan.canariense          CCGAGTGG--CGCCGCGTTGAGCGCTCC--TCGGAAC---AC-GACCCCA
La.martinezii           C-CGACGG-GCGCCACG-TGAGCGCTCA--TCGGAAC---AC-GACCCCA
Leu.autumnale           T-CGAGGG-GCGCCACG-TTAGCGCCCC--TTGGAAC---AC-GACCCCA
Na.bicolor              T-CGATGG-GCGCCGCG-CGGGCGCTCC--TCGAAAA---AC-GACCCCA
Na.sp.7521              T-CGATGG-GCGCC-CG-CGGGCGCTCC--TCGAAAA---AC-GACCCCA
Na.sp.7608              T-CGATGG-GCGCCACG-CGGGCGCTCC--TCGAAAA---AC-GACCCCA
Phy.ignea               T-TTACGG-GCGCCACG-CGAGCGCTCCC-TTGGAAC------------
Ly.chinensis            C-CGATGG-GCGCGACG-CGAGCGCTCC--TTGGAAC---CC-GACCCCA
Urc.microcrater         C-CGACGGGGCGCCACG-TGGGCGCCCCC-TTGGAAC------------
Spr.formosissima        T-CGACGG-GCGTCACA-TGAGCGCTCC--TTGGACC------------
Zep.flavissima          T-CGACGG-GCGTCACA-TGAGCGCTCC--CTTGACC------------
Sca.membranaceuRHA25    C-CGACGG-GCGCTATG-TGAGCGTCCC--TTGGAAT---AC-GACCCCA
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                     351                                                400
Sca.membranaceus7246 C-CGACGG-GCGCTATG-TGAGCGTCCC--TTGGAAT---AC-GACCCCA
Sca.membranaceus7917 C-CGACGG-GCGCTATG-TGAGCGTCCC--TTGGAAT---AC-GACCCCA
Sca.puniceusRHA26    C-CGACGG-GCGCTATG-TGAGCGTCCC--TTGGAAT---AC-GACCCCA
Sca.puniceusRHA27    C-CGACGG-GCGCTATG-TGAGCGTCCC--TTGGAAT---AC-GACCCCA
Sca.puniceus         C-CGACGG-GCGCTATG-TGAGCGTCCC--TTGGAAT-------------
Sca.membranaceus     C-CGACGG-GCGCTATG-TGAGCGTCCC--TTGGAAT-------------
Sca.puniceus7301     C-CGACGG-GCGCTATG-TGAGCGTCCC--TTGGAAT---AC-GACCCCA
Sca.cinnabarinus     C-CGACGG-GCGCTATG-TGAGCGTCCA--TTGGAAC-------------
Sten.humile          T-CGACGG-GCGCCACG-TGAGCGCTCCC-TTGGAAC-------------
Ster.lutea           C--GACGG-GCGCTACGTTGTGCGCTCC--TCGGAAC---AC-GACCCCA
Va.parviflora        T-CGACGG-GCGCCACG-CGGGCGCTCC--TCGGAAC---AC-GACCCCA
Str.aestivalis       C-TGGTGG-GCGCTTGT-TGAGCGCCCC--TTGGAAC-------------
Str.discifera        C-TGGTGG-GCGCAAGT-TGAGCGCCCT---TGGAAC-------------
Str.chaplinii        C-TGGTGG-GCGCAAGT-TGAGCGCCCC--TTGGAAC-------------
Str.watermeyeri      C-TGCTGG-GCGCAAGT-TGAGGGCCCC--TTGGAAC-------------
Str.picta            C-TGGTGG-GCGCAAGT-TGAGCGCCCC--TTGGAAC-------------
Str.salteri7245      C-TGGTGG-GCGCAAGT-TGAGAGGGCCCCTTGGAAC---A--GATCCCA
Str.bidentata        T-CGGGGG-CTGCAAGT-TGTGTGCCTT---TGGAGT-------------
Str.truncata         T-CGGGGG-CTGCAAGT-TGTGTGCCTT---TGGAGT-------------
Str.tenella          T-T--TGG-C-GCAAGT-CGAGCGTCTA---TGGAAT-------------
Wor.rayneri          T-CGACGG-GAGCCACG-CGAGCGCTACCCTTGGAA--------------
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                        401                                                 450
Ama.belladonnaRHA28     --------------------------------------------------
Ama.belladonna          --------------------------------------------------
Ama.paradisicola        --------------------------------------------------
Amm.coranica7164        G-TCAGGCGGG-AC-------T--------------------------
Amm.nerinoidesRHA32     G-TCAG-----------------------------------------
Amm.nerinoides          GGTCAGGCGGG-ACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Amm.coranica            --------------------------------------------------
Apo.lanceolatum         --------------------------------------------------
Aga.caulescens          --------------------------------------------------
Bo.haemanthoides        --------------------------------------------------
Bo.disticha             --------------------------------------------------
Cl.caulescens           --------------------------------------------------
Cl.gardenii             --------------------------------------------------
Cl.miniata              --------------------------------------------------
Cl.nobilis              --------------------------------------------------
Cl.miniataRC14          --------------------------------------------------
Br.bosmaniae            --------------------------------------------------
Br.radula               --------------------------------------------------
Br.comptonii            --------------------------------------------------
Br.radulosanata7629     G-------------------------------------------------
Br.bosmaniae7251        G-T-AGG-------------------------------------------
Br.gregaria7157         GGTCAGGCTGG-A-------------------------------------
Cro.flava7256           G-TCAGGC------------------------------------------
Cal.korsakoffii         --------------------------------------------------
Chl.fragrans            --------------------------------------------------
Car.spiralis            --------------------------------------------------
Cy.longifolia           --------------------------------------------------
Cr.baumii               GGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cro.guttata             --------------------------------------------------
Cr.abyssinicum          GGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cr.kirkii               GGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cr.latifolium           GGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cr.politifolium         GGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cr.yemenense            GGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cr.americanum           GGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cr.cruentum             GGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cr.erubescens           GGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cr.oliganthum           GGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cr.Schunke14054         GGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cr.distichum            GGTCAGGCGGGGGCACC-CGCTGAGTTTAAG-CATATCAATAGGCGGAGG
Cr.humile               GGTCAGGCGGGGGCACC-CGCTGAGTTTAAG-CATATCAATAGGCGGAGG
Cr.jagus                GGTCAGGCGGGGGCACC-CGCTGAGTTTAAG-CATATCAATAGGCGGAGG
Cr.moorei               GGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAG-
Cr.bulbispermum         GGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAG-
Cr.flaccidum            GGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cr.macowanii            --------------------------------------------------
Cr.variabile            --------------------------------------------------
Cr.bulbispermumRC95     GGTCAG--------------------------------------------
Cr.euchrophyllumRC96    --------------------------------------------------
Cr.moorei7921           --------------------------------------------------
Cr.acaule               GGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAG-
Cr.forbesii             GGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cr.acaulglaucRC105      --------------------------------------------------
Cr.acauleRC106          --------------------------------------------------
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                    401                                                 450
Cr.campanulatum     --------------------------------------------------
Cr.caroloschmidtii  GGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cr.crassicaule      GGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAA-------
Cr.acauleRC38       G-TCAGG-----------------------------------------
Cr.carolschmidRC97  --------------------------------------------------
Cr.foetidumRC98     --------------------------------------------------
Cr.graminicola7630  --------------------------------------------------
Cr.asiaticum        GGTCAGGTGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cr.pedunculatum     GGTCAGGTGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cr.Meerow2332       GGTCAGGTGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cr.defixum          GGTCAGGTGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cr.Meerow2333       GGTCAGGTGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cr.buphanoides      GGTCAGGTGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cr.ligulatum        GGTCAGGTGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cr.razafindratsiraea GGTCAGGTGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cr.modestum         GGTCAGGTGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cr.mauritianum      GGTCAGGTGGGGACAGCACGGTGAGTTTAAG-CATATCAATAAGCGGAGG
Cr.subcernuum       GGTCAGGTGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cr.venosum          GGTCAGGTGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAG-
Cr.buphanoidesRC102 GGTCAGGT-------------T--------------------------
Cr.fimbriatulum     GGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cr.broussonetii     --------------------------------------------------
Cry.haemanthoides   --------------------------------------------------
Cyr.falcatus7637    GGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cyr.obliquus7278    GGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cyr.elatus7202      GGTCAGGCGGGGACACC-CGTTGAGTTTAAG-CATATCAATAAGCGGAGG
Cyr.labiatus7212    GGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cyr.labiatus7258    GGTCAGGCGGGGACACC-CGCTGAGTTTAA--CATATCAATAAGCGGAG-
Cyr.elatus7636      --------------------------------------------------
Cyr.herrei7217      GGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cyr.herreiRC86      GGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cyr.montanus7209    ----A---------------------------------------------
Cyr.staadensis7316  GGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cyr.eucallusRC79    G-TCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGA
Cyr.brachyscyphu7406 GGTCAGGC-GGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGA
Cyr.brachyscyphuRC90 G-TCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cyr.mackeniiRC87    GGTC----------------------------------------------
Cyr.obrienii7193    GGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cyr.sanguineusRC94  GGTCAGGCGGGGACACCCGCCTGAGTTTAAGGCATATCAATAATCG-AGG
Cyr.suaveolens7181  GGTCAGGC------------------------------------------
Cyr.ochroleucus7639 GGTCAGGCG-----------------------------------------
Cyr.breviflorus7634 GGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Cyr.obliquus7210    GGTCAGGC-GGGACACCCGCTGGAGTTTAAG-CATATCAATAAGCGGAGG
Cyr.thorncroftiRC80 G-TCAGGCGGGGACACC-CCCTGAGTTTAAG-CATATCAATAAGCGGATG
Cyr.eucallusRC78    --------------------------------------------------
Cyr.spiralis7219    A-TCAGGCTGG-A-AC-----TG--TT-A-----T-TC--TA--C-----
Cyr.wellandiiRC83   AGTCAG------------------------------------------
Cyr.attenuatesRC81  --------------------------------------------------
Cyr.smithiae7214    --T--G--------------T--------------------------
Cyr.breviflorusRC88 GGTCAGGGGGGGACACC-CGCTGAATTTAAG-CATATCAATAAGCG-A--
Cyr.speciosus7640   --------------------------------------------------
Cyr.macowanii7201   CGT-AGG-------------TGAA-------CCT--------GCGGAGG
Ge.ciliaris         --------------------------------------------------
Ge.britteniana      --------------------------------------------------
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                    401                                                 450
Ge.verticillata     --------------------------------------------------
Ge.namaquensisAMV635 --------------------------------------------------
Ge.lanuginosa       --------------------------------------------------
Euch.formosa        --------------------------------------------------
Eucr.bicolor        --------------------------------------------------
Eust.darwinii       --------------------------------------------------
Gr.hyacinthina      --------------------------------------------------
Ga.fosteri          GGTCA----------------------------------------------
Hab.brachyandrus    --------------------------------------------------
Hae.hirsitus7626    GGTCAGGCGGGAACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Hae.humilis7254     GGTCAGGCGGGAACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGA
Hae.paucilifoliu7925 --------------------------------------------------
Hae.paucilifoliRHA21 G-TCA----------------------------------------------
Hae.albiflos        --------------------------------------------------
Hae.graniticus      --------------------------------------------------
Hae.crispus7260     G-TCAGGCGG-A-------G-----------------------------
Hae.coccineus       --------------------------------------------------
Hae.pumilio         --------------------------------------------------
Hae.coccineusAMV632 --------------------------------------------------
Hae.crispus7252     --TCA--C-------------T-----------------------------
Hae.sanguineus7253  CGTCAGG-GGGAACACC-CGCTGAGTTTAA--CATATCAATAAGCGGAGG
Hip.sp.7446         GGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Hip.brasilianum     --------------------------------------------------
Hip.papilio         --------------------------------------------------
Hip.reticulatum     --------------------------------------------------
Hip.macbridei       --------------------------------------------------
Hip.mollevillquense --------------------------------------------------
Hip.parodii         --------------------------------------------------
Hip.blumenavia      --------------------------------------------------
Hes.stellaris       --------------------------------------------------
Hip.sp.7447         GGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Hie.argentina       --------------------------------------------------
Hy.latifolia        --------------------------------------------------
Rho.moelleri        --------------------------------------------------
Pyr.Chase3639       --------------------------------------------------
Is.longipetala      --------------------------------------------------
Lep.quitoensis      --------------------------------------------------
Pam.peruviana       --------------------------------------------------
Par.weberbaueri     --------------------------------------------------
Phae.ventricosa     --------------------------------------------------
Rau.decora          --------------------------------------------------
Ne.alta             --------------------------------------------------
Pan.canariense      GGTCAGGCGGGG-------G-----------------------------
La.martinezii       GGTCAGGCGGGAACAC---------------------------------
Leu.autumnale       GGTCAGGCGGGGAC-----------------------------------
Na.bicolor          GGTCAGGCGG--------------------------------------
Na.sp.7521          GGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Na.sp.7608          GGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
Phy.ignea           --------------------------------------------------
Ly.chinensis        GGTCAGGCCAGGACACC-CGCTGAGTTTAAG-CATAAGACCTGTCTGCAG
Urc.microcrater     --------------------------------------------------
Spr.formosissima    --------------------------------------------------
Zep.flavissima      --------------------------------------------------
Sca.membranaceuRHA25 GGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGGAGG
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                      401                                                 450
Sca.membranaceus7246  G-TCAGGCTGG-AGACC-CCCTGA-------------------------
Sca.membranaceus7917  GGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATATCAATAAGCGG---
Sca.puniceusRHA26     G-TCAGGCGGGGACACC-CGCTGATTTTAAG-CATATCAATAACCGGAGG
Sca.puniceusRHA27     GTGTCAGCGGGGACATC-CGCTGAGTTTA---CATATCT-TAA-CGGAGG
Sca.puniceus          ----------------------------------------------------
Sca.membranaceus      ----------------------------------------------------
Sca.puniceus7301      GGTCAAGCGGGGACACC-CGCTGA-TTTAAG-CATATCAATAAGCGGAGG
Sca.cinnabarinus      ----------------------------------------------------
Sten.humile           ----------------------------------------------------
Ster.lutea            GTTCAGGCGGGGACA-----------------------------------
Va.parviflora         GGTCAG--------------------------------------------
Str.aestivalis        ----------------------------------------------------
Str.discifera         ----------------------------------------------------
Str.chaplinii         ----------------------------------------------------
Str.watermeyeri       ----------------------------------------------------
Str.picta             ----------------------------------------------------
Str.salteri7245       G-TCAGGC------------------------------------------
Str.bidentata         ----------------------------------------------------
Str.truncata          ----------------------------------------------------
Str.tenella           ----------------------------------------------------
Wor.rayneri           ----------------------------------------------------
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                      451                 474
Ama.belladonnaRHA28   ------------------------
Ama.belladonna        ------------------------
Ama.paradisicola      ------------------------
Amm.coranica7164      ------------------------
Amm.nerinoidesRHA32   ------------------------
Amm.nerinoides        AGAAGAAACTTACGAGGATTCCCT
Amm.coranica          ------------------------
Apo.lanceolatum       ------------------------
Aga.caulescens        ------------------------
Bo.haemanthoides      ------------------------
Bo.disticha           ------------------------
Cl.caulescens         ------------------------
Cl.gardenii           ------------------------
Cl.miniata            ------------------------
Cl.nobilis            ------------------------
Cl.miniataRC14        ------------------------
Br.bosmaniae          ------------------------
Br.radula             ------------------------
Br.comptonii          ------------------------
Br.radulosanata7629   ------------------------
Br.bosmaniae7251      ------------------------
Br.gregaria7157       ------------------------
Cro.flava7256         ------------------------
Cal.korsakoffii       ------------------------
Chl.fragrans          ------------------------
Car.spiralis          ------------------------
Cy.longifolia         ------------------------
Cr.baumii             AGAAGAAACTTACGAGGATTCCCT
Cro.guttata           ------------------------
Cr.abyssinicum        AGAAGAAACTTACGAGGATTCCCT
Cr.kirkii             AGAAGAAACTTACG----------
Cr.latifolium         AGAAGAAACTTACGAGGATTCC--
Cr.politifolium       AGAAGAAACTTACGAGGATT----
Cr.yemenense          AGAAGAAACTTACGAGGATTCCCT
Cr.americanum         AGAAGAAACTTGCGAGGATTCC--
Cr.cruentum           AGAAGAAACTTACGAGGATTCCCT
Cr.erubescens         AGAAGAAACTTACGAGGATTCCCT
Cr.oliganthum         AGAAGAAACTTACGAGGATTCCCT
Cr.Schunke14054       AGAAGAAACTTACGAGGATTCCCT
Cr.distichum          AGAAGAAACTTACGAGGATT----
Cr.humile             AGAAGAAACTTACGAGGATTCCCT
Cr.jagus              AGAAGAAACTTACGAGGATTCCCT
Cr.moorei             AGAAGAA-CTTACGAGGATTCC-T
Cr.bulbispermum       AGAAGAA-C---------------
Cr.flaccidum          AGAAGAAACTTAC-AG-ATTCC-T
Cr.macowanii          ------------------------
Cr.variabile          ------------------------
Cr.bulbispermumRC95   ------------------------
Cr.euchrophyllumRC96  ------------------------
Cr.moorei7921         ------------------------
Cr.acaule             AGAAGAA-CTTAC-AG--------
Cr.forbesii           AGAAGAAACTTACGAGGATTCCCT
Cr.acaulglaucRC105    ------------------------
Cr.acauleRC106        ------------------------
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                    451                 474
Cr.campanulatum     ------------------------
Cr.caroloschmidtii  AGAAGAAACTTACGAG-ATTCC-T
Cr.crassicaule      ------------------------
Cr.acauleRC38       ------------------------
Cr.carolschmidRC97  ------------------------
Cr.foetidumRC98     ------------------------
Cr.graminicola7630  ------------------------
Cr.asiaticum        AGAAGAAACTTACGAGGATTCCCT
Cr.pedunculatum     AGAAGAAACTTA------------
Cr.Meerow2332       AGAAGAAACTTACGAGGATTCCCT
Cr.defixum          AGAAGAAACTTACGAGGATTCCCT
Cr.Meerow2333       AGAAGAAACTTACGAGGATTCCCT
Cr.buphanoides      AGAAGAAACTTACGAGGATTCCCT
Cr.ligulatum        AGAAGAAACTTACGAGGATTCCCT
Cr.razafindratsiraea AGAAGAAACTTACGAGGATTCCCT
Cr.modestum         AGAAGAAACTTACGAGGATTCCCT
Cr.mauritianum      AGAAGAAACTTACGAGGATTCCCT
Cr.subcernuum       AGAAGAAACTTACGAG--------
Cr.venosum          AGAAGAA-CTTAC-AG-ATTCC-T
Cr.buphanoidesRC102 ------------------------
Cr.fimbriatulum     AGAAGAAACTTACGAGGATTCCCT
Cr.broussonetii     ------------------------
Cry.haemanthoides   ------------------------
Cyr.falcatus7637    AAAAAAAAC--A--A--A------
Cyr.obliquus7278    AAAAGAAAC--A--A---------
Cyr.elatus7202      A-A--------------------
Cyr.labiatus7212    A-AA-------------------
Cyr.labiatus7258    A-AAG------------------
Cyr.elatus7636      ------------------------
Cyr.herrei7217      A-AA-------------------
Cyr.herreiRC86      AAAAGAAAC--A-AAGG----CCT
Cyr.montanus7209    ------------------------
Cyr.staadensis7316  AAAAGAAAC--A------------
Cyr.eucallusRC79    AAAAAAAAC--A-AAG--------
Cyr.brachyscyphu7406 AAAA-AA-C--A-AAG--------
Cyr.brachyscyphuRC90 AAAAGAAAC--AAAAG--------
Cyr.mackeniiRC87    ------------------------
Cyr.obrienii7193    A-AA-A-----------------
Cyr.sanguineusRC94  A-AA-AAA---AC-A---------
Cyr.suaveolens7181  ------------------------
Cyr.ochroleucus7639 ------------------------
Cyr.breviflorus7634 AAAAGAAAC--A------------
Cyr.obliquus7210    AAAA-------------------
Cyr.thorncroftiRC80 AAAAAAAAC--A-AAGG-------
Cyr.eucallusRC78    ------------------------
Cyr.spiralis7219    ------------------------
Cyr.wellandiiRC83   ------------------------
Cyr.attenuatesRC81  ------------------------
Cyr.smithiae7214    ------------------------
Cyr.breviflorusRC88 AAAA-------------------
Cyr.speciosus7640   ------------------------
Cyr.macowanii7201   A----------------------
Ge.ciliaris         ------------------------
Ge.britteniana      ------------------------
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                    451                 474
Ge.verticillata     ------------------------
Ge.namaquensisAMV635 ------------------------
Ge.lanuginosa       ------------------------
Euch.formosa        ------------------------
Eucr.bicolor        ------------------------
Eust.darwinii       ------------------------
Gr.hyacinthina      ------------------------
Ga.fosteri          ------------------------
Hab.brachyandrus    ------------------------
Hae.hirsitus7626    AAAAAAAAC--A--A---------
Hae.humilis7254     AAAAAAAAC--A--A--A------
Hae.paucilifoliu7925 ------------------------
Hae.paucilifoliRHA21 ------------------------
Hae.albiflos        ------------------------
Hae.graniticus      ------------------------
Hae.crispus7260     ------------------------
Hae.coccineus       ------------------------
Hae.pumilio         ------------------------
Hae.coccineusAMV632 ------------------------
Hae.crispus7252     ------------------------
Hae.sanguineus7253  AAAAAAAAC--A-AAGG-------
Hip.sp.7446         AAAAGAAACAAACG----------
Hip.brasilianum     ------------------------
Hip.papilio         ------------------------
Hip.reticulatum     ------------------------
Hip.macbridei       ------------------------
Hip.mollevillquense ------------------------
Hip.parodii         ------------------------
Hip.blumenavia      ------------------------
Hes.stellaris       ------------------------
Hip.sp.7447         AAA-GAAAC--A--A---TT----
Hie.argentina       ------------------------
Hy.latifolia        ------------------------
Rho.moelleri        ------------------------
Pyr.Chase3639       ------------------------
Is.longipetala      ------------------------
Lep.quitoensis      ------------------------
Pam.peruviana       ------------------------
Par.weberbaueri     ------------------------
Phae.ventricosa     ------------------------
Rau.decora          ------------------------
Ne.alta             ------------------------
Pan.canariense      ------------------------
La.martinezii       ------------------------
Leu.autumnale       ------------------------
Na.bicolor          ------------------------
Na.sp.7521          AAAAGAAAC--A--A---------
Na.sp.7608          AAA-GAAAC--A------------
Phy.ignea           ------------------------
Ly.chinensis        CGCCGCCCATGGATATCATCGATC
Urc.microcrater     ------------------------
Spr.formosissima    ------------------------
Zep.flavissima      ------------------------
Sca.membranaceuRHA25 AAAAGAAAC--A------------
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                     451                 474
Sca.membranaceus7246 ------------------------
Sca.membranaceus7917 ------------------------
Sca.puniceusRHA26    AAAA-AAA---A--A---------
Sca.puniceusRHA27    AATAGAAAC--A------------
Sca.puniceus         ------------------------
Sca.membranaceus     ------------------------
Sca.puniceus7301     AAAAAAAAC--A------------
Sca.cinnabarinus     ------------------------
Sten.humile          ------------------------
Ster.lutea           ------------------------
Va.parviflora        ------------------------
Str.aestivalis       ------------------------
Str.discifera        ------------------------
Str.chaplinii        ------------------------
Str.watermeyeri      ------------------------
Str.picta            ------------------------
Str.salteri7245      ------------------------
Str.bidentata        ------------------------
Str.truncata         ------------------------
Str.tenella          ------------------------
Wor.rayneri          ------------------------
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APPENDIX E Aligned sequences of the combined *trnL-F* and *matK* matrix for Amaryllidaceae.

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                     1                                                50
Ama.belladonna       GAAGTTAA------AGGAAGAATCGAA-TATTCG-----GTGATC--AAA
Bo.distich7172       GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Br.gregaria7157      GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATA--AAA
Cro.flava7256        GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GCGATC--AAA
Br.radulosanata7629  GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GCGATA--AAA
Cl.miniata8095       GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GGGATC--AAA
Cl.miniataRC14       GAAGTTAAGTTAA-AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cl.caulescens8092    GAAGTTAA------GGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cl.miniata           GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cl.nobilisRC6b       GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cl.cyrtantiflora8094 GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Chl.fragrans         GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GCGATC--AAA
Calo.lutea           GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.euchrophyllRC96   GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.acauleRC106       GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.acaulglaucRC105   GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.bulbispermumRC95  GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.campanulatum7167  GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.foetidumRC98      GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.graminicola7630   GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.lugardii7632      GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.macowanii7168     GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.nearmacowanRC100  GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.buphanoidesRC102  GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.acauleRC38        GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.buphanoides7631   GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.carolschmidRC97   GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.lineareRC99       GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.minimumRC37       GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.paludosumRC41     GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.variabileRC44     GAAGTTAA------AGGAAGAATCGAAATATTCA-----GTGATC--AAA
Cr.moorei7921        GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.elatus7636        GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.elatusRC93        GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.mackeniiRC87      GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.obliquus7278      GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.ochroleucus7639   GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.sanguineusRC94    GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.staadensis7316    GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC-AAAT
Cy.labiatus7212      GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.smithiae7214      GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.elatus7198        GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.herreiRC86        --------------------------------------------------
Cy.brachyscyphus7204 --------------------------------------------------
Cy.loddigesianus7203 --------------------------------------------------
Cy.falcatus7637      GAAGTTAA------AGGAAGAATCGAA-TATTCCC----GGGATC--AAA
Eus.darwini          GAAGTTCA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Ge.namaquensiAMV635  GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC---AA
Hae.montanus7163     GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Hae.coccineusAMV632  GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GCGATC--AAA
Hae.albiflos7517     GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
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                       1                                                50
Hae.crispus7252        ------------------------------------------ATA--AAA
Hae.crispus7260        GAAGTTAA------AGGAAGAATCGAA-TATTCCA----GTGATCC-AAA
Lap.martinezii         GAAGTTAA------AGGAAGAATCGAATAGAATATTCA-GTGATC--AAA
Leu.autumnale          GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Ne.bowdenii            GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Ne.laticoma8090        GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Na.sp.7607             GAAGTTAA------AGGAAGAATTGAA-TATTCA-----GTGATC--AAA
Na.sp.7608             GAAGTTAA------AGGAAGAATCGAA-TATTCA-----ATGATC--AAA
Na.tazetta             GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Pan.canariense         GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Sten.variegatum        GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Phae.dubia             GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Par.weberbaueri        GAAGTTAA------AAGAAGAATCGAA-TATTCA-----GTGATC--AAA
Ster.lutea             GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Sc.membranaceus7246    GAAGTTAA------AGAAAGAATCGAA-TATTCA-----GTGATC--AAA
Str.salter7245         GAAGTGAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Sc.multiflorus7919     ----------------AAAGAATCGAA-T-TTCA-----GTGATCC-AAA
Sc.membranaceus7917    ----------------AAAGAATCGAA-TATTCA-----GTATC---AAA
Va.parviflora          GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Hya.orientalis         GAAGTTGAC------GGAAGAATCGAA-TATTCA-----GTGATC--AAA
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                         51                                                  100
Ama.belladonna           TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Bo.distich7172           TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Br.gregaria7157          TCGTTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cro.flava7256            TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Br.radulosanata7629      TCGTTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cl.miniata8095           TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cl.miniataRC14           TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cl.caulescens8092        TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cl.miniata               TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cl.nobilisRC6b           TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cl.cyrtantiflora8094     TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT---AA----
Chl.fragrans             TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Calo.lutea               TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cr.euchrophyllRC96       TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.acauleRC106           TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.acaulglaucRC105       TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.bulbispermumRC95      TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.campanulatum7167      TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.foetidumRC98          TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.graminicola7630       TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.lugardii7632          TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.macowanii7168         TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.nearmacowanRC100      TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.buphanoidesRC102      TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.acauleRC38            TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.buphanoides7631       TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.carolschmidRC97       TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.lineareRC99           TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.minimumRC37           TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.paludosumRC41         TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.variabileRC44         TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.moorei7921            TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cy.elatus7636            TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cy.elatusRC93            TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cy.mackeniiRC87          TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTTTTTTGAA--
Cy.obliquus7278          TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cy.ochroleucus7639       TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTTTTTGAA---
Cy.sanguineusRC94        TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cy.staadensis7316        CCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cy.labiatus7212          TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cy.smithiae7214          TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cy.elatus7198            TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cy.herreiRC86            --------------------------------------------------
Cy.brachyscyphus7204     --------------------------------------------------
Cy.loddigesianus7203     --------------------------------------------------
Cy.falcatus7637          TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Eus.darwini              TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Ge.namaquensiAMV635      TC-TTC-T-TCCCA----GAGTTTGA-TAGACC-TTTTTTTT-GAA----
Hae.montanus7163         TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTTTT-------
Hae.coccineusAMV632      TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTTTT-------
Hae.albiflos7517         TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTTTT---------
Hae.crispus7252          TCGTTCAT-TCCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Hae.crispus7260          TCATTCCA-TTCCA----GAGTTTGA-TAGACC-TTTTTTTTT-------
Lap.martinezii           TCATTCAT--TCCA----GAGTTTGA-TAGACCATTTTT----GAA----
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                        51                                                  100
Leu.autumnale           TCATTCAT--TCCA----GAGTTTGA-TAGACCATTTTT----GAA----
Ne.bowdenii             TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Ne.laticoma8090         TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTT-----GAA----
Na.sp.7607              TCATTCAT--TCCC----GAGTTTGA-TAGACCATTTTT----GCA----
Na.sp.7608              TCATTCAT--TCCA----GAGTTTGA-TAGACCATTTTT----GCA----
Na.tazetta              TCATTCAT--TCCA----GAGTTTGA-TAGACCATTTT-----GCA----
Pan.canariense          TCATTCAT--TCCA----GAGTTTGA-TAGACCATTTTT----GAA----
Sten.variegatum         TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Phae.dubia              TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Par.weberbaueri         TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Ster.lutea              TCATTCAT--TCCA----GAGTTTGA-TAGATCATTTTT----GAA----
Sc.membranaceus7246     TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Str.salter7245          TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Sc.multiflorus7919      TCATTCAAT-TCCA----GAGTTTGA-TAGACC-TTTTTTTT-GAA----
Sc.membranaceus7917     TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTTT-GAA----
Va.parviflora           TCATTCAT--TCCA----GAGTTTGA-TAGACCATTTTT----GAA----
Hya.orientalis          TTATTCAT--TCCA----GAGTTTAA-TAGACCCTTTTTTTT-GAA----
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                          101                                                 150
Ama.belladonna            ----AA--AATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Bo.distich7172            ----AA--AATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Br.gregaria7157           ----AA--AATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cro.flava7256             ----AA--AATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Br.radulosanata7629       ----AA--AATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cl.miniata8095            --AAAAAAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cl.miniataRC14            --AAAAAAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cl.caulescens8092         ---AAAAAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cl.miniata                --AAAAAAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cl.nobilisRC6b            -AAAAAAAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cl.cyrtantiflora8094      -AAAAAAAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Chl.fragrans              ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Calo.lutea                ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.euchrophyllRC96        ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.acauleRC106            ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.acaulglaucRC105        ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.bulbispermumRC95       ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.campanulatum7167       ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.foetidumRC98           ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.graminicola7630        ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.lugardii7632           ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.macowanii7168          ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.nearmacowanRC100       ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.buphanoidesRC102       ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.acauleRC38             ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.buphanoides7631        ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.carolschmidRC97        ------AAAATGATTAATCGGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.lineareRC99            ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.minimumRC37            ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.paludosumRC41          ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.variabileRC44          ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.moorei7921             ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.elatus7636             ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.elatusRC93             ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.mackeniiRC87           ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.obliquus7278           -AAAATGATTAGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.ochroleucus7639        -------AAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.sanguineusRC94         -AAAATGATTAGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.staadensis7316         -AAAATGATTAGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.labiatus7212           ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.smithiae7214           -AAAATGATTAGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.elatus7198             ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.herreiRC86             ----------------------------------------------CCCT
Cy.brachyscyphus7204      --------------------------------------------------
Cy.loddigesianus7203      --------------------------------------------------
Cy.falcatus7637           -AAAATGATTAGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Eus.darwini               ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Ge.namaquensiAMV635       AAAAAAAAAATGATTAGT-CGGAC-GAGAATAAA-GAGAGAG-TTCCCAT
Hae.montanus7163          --------AATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Hae.coccineusAMV632       --------AATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Hae.albiflos7517          --------TATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Hae.crispus7252           ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Hae.crispus7260           --------AATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Lap.martinezii            ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG---TCCAT
```

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                      101                                                 150
Leu.autumnale         ------AAAATGATTAAT-TGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Ne.bowdenii           ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Ne.laticoma8090       ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Na.sp.7607            -----AAAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Na.sp.7608            ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Na.tazetta            -----AAAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Pan.canariense        ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Sten.variegatum       ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Phae.dubia            ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Par.weberbaueri       ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Ster.lutea            ----AAAAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Sc.membranaceus7246   --AAAAAAAATGATTAAT-CGGGC-GAGAATAAA-GAGAGAG--TCCCAT
Str.salter7245        ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Sc.multiflorus7919    -AAAAAAAAATGATTAAT-CGGGC-GAGAATAAA-GAGAGAG--TCCCAT
Sc.membranaceus7917   AAAAAAAAAATGATTAAT-CGGGC-GAGAATAAA-GAGAGAG--TCCCAT
Va.parviflora         ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Hya.orientalis        ------AAACTGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
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                         151                                                200
Ama.belladonna           T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Bo.distich7172           T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Br.gregaria7157          T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cro.flava7256            T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Br.radulosanata7629      T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGGAAA-TTATAG--
Cl.miniata8095           T-CTAAC--ATGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cl.miniataRC14           T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cl.caulescens8092        T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cl.miniata               T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cl.nobilisRC6b           T-TCTAC--ATGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cl.cyrtantiflora8094     T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Chl.fragrans             TTCTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Calo.lutea               T-CTACA---TGTCT----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.euchrophyllRC96       T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.acauleRC106           T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.acaulglaucRC105       T-CTACA--TGTCCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.bulbispermumRC95      T-TCTAC--ATGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.campanulatum7167      T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.foetidumRC98          T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.graminicola7630       T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.lugardii7632          T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.macowanii7168         T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.nearmacowanRC100      T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.buphanoidesRC102      T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.acauleRC38            T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.buphanoides7631       T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.carolschmidRC97       T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGGAAATTTATAG--
Cr.lineareRC99           T-CTACA---TGTCA----ATA-CCGACCACC-AATGAAAT-TTATAG--
Cr.minimumRC37           T-CTACA---TGTCA----ATA-CCGAC--AC-AATGAAAT-TTATAG--
Cr.paludosumRC41         T-CTACA---TGTCA----ATA-CCACC--GC-CATGAAAT-TTATAG--
Cr.variabileRC44         T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.moorei7921            T-CTACA---TGTCA----ATA-CCGAC--AC-AATGAAAT-TTATAG--
Cy.elatus7636            T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.elatusRC93            T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.mackeniiRC87          T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.obliquus7278          T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.ochroleucus7639       T-CTACA---TGTCA----ATA-CCGAC--AC-AATGAAAT-TTATAG--
Cy.sanguineusRC94        T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.staadensis7316        T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.labiatus7212          T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.smithiae7214          TTCTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.elatus7198            TTCTACA---TGTCCA---ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.herreiRC86            TTTTACCA--TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.brachyscyphus7204     ----------------------------------------------------
Cy.loddigesianus7203     ----------------------------------------------------
Cy.falcatus7637          TTCTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Eus.darwini              T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Ge.namaquensiAMV635      TTCTAACA--TGTCCA---ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Hae.montanus7163         T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTTTATAG
Hae.coccineusAMV632      TTCTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Hae.albiflos7517         T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT--TATAG--
Hae.crispus7252          TTCTA-CA--TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Hae.crispus7260          TTCTAACA--TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Lap.martinezii           T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
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                    151                                                 200
Leu.autumnale       T-CTGCA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Ne.bowdenii         T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Ne.laticoma8090     T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Na.sp.7607          T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT---ATAG--
Na.sp.7608          T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Na.tazetta          T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Pan.canariense      T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Sten.variegatum     T-CTACA---TGTCT----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Phae.dubia          T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Par.weberbaueri     T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Ster.lutea          T-CTACA---TGTCT----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Sc.membranaceus7246 T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Str.salter7245      T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Sc.multiflorus7919  T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Sc.membranaceus7917 T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Va.parviflora       T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAATT--TATAG--
Hya.orientalis      T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
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                         201                                                250
Ama.belladonna           TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Bo.distich7172           TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Br.gregaria7157          TAAGAGGAAAATCCGTCGTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cro.flava7256            TAAGAGGAAAATCCC--GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Br.radulosanata7629      TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cl.miniata8095           TAAGAGGAAAATCC---GTCGACTTTAGAA--TCGTGAGGG----TTCAA
Cl.miniataRC14           TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cl.caulescens8092        TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cl.miniata               TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cl.nobilisRC6b           TAAGAGGAAAATCCC--GTCGACTTTAGAAAATCGTGGAGGGT--TCCAA
Cl.cyrtantiflora8094     TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Chl.fragrans             TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Calo.lutea               TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.euchrophyllRC96       TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.acauleRC106           TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGGG---TTCAA
Cr.acaulglaucRC105       TAAGAGGAAAATCC--GTCCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.bulbispermumRC95      TA-GGGGAAA-TCC---GTCGACTTAGAA---TCGTGAGGG----TTCAA
Cr.campanulatum7167      TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.foetidumRC98          TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.graminicola7630       TAAGAGGAAAATCCC--GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.lugardii7632          TAAGAGGAAAATCC---GTCGACTTTAGAAATCCGTGAGGG----TTCAA
Cr.macowanii7168         TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.nearmacowanRC100      TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.buphanoidesRC102      TAAGAGGAAAATCC---GTCGACT-TAGAAA-TCGTGAGGG---TTCCAA
Cr.acauleRC38            TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGGGAGGG----TTCAA
Cr.buphanoides7631       TAAGAGGGAAAATCC--GTCGACTTTAGAAA-TCGTGGAGGGG--TTCAA
Cr.carolschmidRC97       TAAGAGGAAAATCC--GTCCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.lineareRC99           TAAGGAGGAAAAATCCGTCCGACCTTTAGAAATCGTGGAGGGGG-TTCAA
Cr.minimumRC37           TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCA-
Cr.paludosumRC41         TAAGAGGAAAATCC---GTCGATCTTAGAAA-TCGTGAGGG----TTCAA
Cr.variabileRC44         TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TGCAA
Cr.moorei7921            TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.elatus7636            TAAGAGGAAA-TCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.elatusRC93            TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.mackeniiRC87          TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.obliquus7278          TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.ochroleucus7639       TA-GAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG-----TCAA
Cy.sanguineusRC94        TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.staadensis7316        TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.labiatus7212          TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.smithiae7214          TA-GAGGAAAATCCC--GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.elatus7198            TAAGAGGAAAATCCC---TCGACTT-AGAA--T----------------
Cy.herreiRC86            TAAGAGGAAAATTCC--GTCGAACTTTAGAAATCGTGAGGG----TTCAA
Cy.brachyscyphus7204     --------------------------------------------------
Cy.loddigesianus7203     --------------------------------------------------
Cy.falcatus7637          TAAGAGGAAAATCC-----------------------------------
Eus.darwini              TAAGAGGAAACTCC---GTCGACTTTAGAATATCGTGAGGG----TTCAA
Ge.namaquensiAMV635      TA------------------------------------------------
Hae.montanus7163         TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Hae.coccineusAMV632      TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Hae.albiflos7517         TAAA-GGAAA-TCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Hae.crispus7252          TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Hae.crispus7260          TAAGAGGAAAATCC----TCG------G--------GA------------
Lap.martinezii           TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
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                    201                                                 250
Leu.autumnale       TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGGAGGG---GTTAA
Ne.bowdenii         TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Ne.laticoma8090     TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Na.sp.7607          TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Na.sp.7608          TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Na.tazetta          TAAGAGG----------------------------------------
Pan.canariense      TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Sten.variegatum     TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Phae.dubia          TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Par.weberbaueri     TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Ster.lutea          TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Sc.membranaceus7246 TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Str.salter7245      TAAGAGGAAATCC----GTCGACTTTAGAAA-TCGTGAGGGG---TTCAA
Sc.multiflorus7919  TAAGAGGAAAATCC---GTCGACATTTAGAAATCGTGAGGG----TTCAA
Sc.membranaceus7917 TAAGAGGAAAATCC----TCGACTTTAGAAA-TCGTGAGGG----TTCAA
Va.parviflora       TAAGAGAAGAGTGATCCATAAACTGAGAGAA-TCGGGAGGG----TTCA-
Hya.orientalis      TAAACAGGAAAATCC--GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
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                        251                                                 300
Ama.belladonna          GTCC----TCTATCCCCA-GATAAAAAGCCC-ATTT-C---ACTTCCT-A
Bo.distich7172          GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Br.gregaria7157         GTCCC---TCTATCCCCA--GTAAAAAGCCC-ACTT-T---TCTTCTT-A
Cro.flava7256           GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Br.radulosanata7629     GTCCC---TCTATCCCCA--GTAAAAAGCCC-ACTT-T---TCTCCT--A
Cl.miniata8095          GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cl.miniataRC14          GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cl.caulescens8092       GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cl.miniata              GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cl.nobilisRC6b          GTCCC--CTCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cl.cyrtantiflora8094    GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Chl.fragrans            GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTA-A
Calo.lutea              GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cr.euchrophyllRC96      GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.acauleRC106          GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.acaulglaucRC105      GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.bulbispermumRC95     GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.campanulatum7167     GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-C
Cr.foetidumRC98         GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.graminicola7630      GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.lugardii7632         GTCCC---TCTATCCCCAG-GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.macowanii7168        GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.nearmacowanRC100     GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.buphanoidesRC102     GTCCC---TCTATCCCCCA-GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.acauleRC38           GTCCC---TCTATCCCCCA-GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.buphanoides7631      GTCCC--CTCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.carolschmidRC97      GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.lineareRC99          AGTCCC--TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.minimumRC37          GTCCC---TCTATCCCCA--GTAAAA-GCCC-GTTT-T---TCTTCTC-A
Cr.paludosumRC41        GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.variabileRC44        GTCCC---TCTATCCCCA--G-AAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.moorei7921           GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTCAA
Cy.elatus7636           GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.elatusRC93           GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.mackeniiRC87         GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.obliquus7278         GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT--
Cy.ochroleucus7639      GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.sanguineusRC94       GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.staadensis7316       GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.labiatus7212         GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.smithiae7214         GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.elatus7198           ------------------------------------------------
Cy.herreiRC86           GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.brachyscyphus7204    --------------------GTAAA--GCCC-ATTT-C----CTTCTT-A
Cy.loddigesianus7203    ----------------------------------------CTTCTT-A
Cy.falcatus7637         ------------------------------------------------
Eus.darwini             GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Ge.namaquensiAMV635     ------------------------------------------------
Hae.montanus7163        GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ATTTCTTTA
Hae.coccineusAMV632     GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Hae.albiflos7517        GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Hae.crispus7252         GTCCC---TCTATCCCCA--GTAAAAAGCCCACTTT-T----CTTCTT-A
Hae.crispus7260         ------------------------------------------------
Lap.martinezii          GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTTTT-A
```

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                        251                                                 300
Leu.autumnale           TTCCC---TCTTTCCCCC--GTAAAAACCCCCATTA-A---AATT-TT-A
Ne.bowdenii             GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Ne.laticoma8090         GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Na.sp.7607              GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Na.sp.7608              GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Na.tazetta              --------------------GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Pan.canariense          GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Sten.variegatum         GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Phae.dubia              GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Par.weberbaueri         GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Ster.lutea              GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Sc.membranaceus7246     GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Str.salter7245          GTCCC---TCTATCCCCG--GTAAAAAGCCC-ATTT-T--TCCTTCTT-A
Sc.multiflorus7919      GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Sc.membranaceus7917     GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Va.parviflora           GTCCC---TCTTTCCCCA-GATTAAAAGCCCATGATTC---ACTTCTT-A
Hya.orientalis          GTCCC---TCTATCCCCAAAATAAAAAGCCC-ATTT-T---ACTTC----
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                        301                                                 350
Ama.belladonna          ACTATGTATC----------CT-CTTTTTTTT-CAT-AA---------CA
Bo.distich7172          ACTATTTATCTATTTAT---CTTCTTTTTTTT-CAT-AAGCGGT---TCA
Br.gregaria7157         ACTATTTATCTATTTAT---CTTCTTTTTTTTTCAT-AAGCGGT---TCA
Cro.flava7256           ACTATTTATCTATTTAT---CTTCTTTTTTTTTCAT-AAGCGGT---TCA
Br.radulosanata7629     ACTATTTATCTATT-AT-----CTCTTTTTTTTCAA-AAGCGGT---TCA
Cl.miniata8095          ACTATTTATCC-----------TCTTTTTTTTTCAT-AAGTGGT---TAA
Cl.miniataRC14          ACTATTTATCC-----------TCTTTTTTTTTCAT-AAGTGGT---TAA
Cl.caulescens8092       ACTATTTATCC-----------TCTTTTTTTTTCAT-AAGCGGT---TCA
Cl.miniata              ACTATTTATCC-----------TCTTTTTTTTTCAT-AAGTGGT---TAA
Cl.nobilisRC6b          ACTATTTATCC-----------TCTTTTTTTTTCAT-AAGCGGT---TCA
Cl.cyrtantiflora8094    ACTATTTATCC-----------TCTTTTTTTTTCAT-AAGCGGT---TCA
Chl.fragrans            ACTATTTATCT-----------TCTTTTTTTTCAT-AAGCAGT---TCA
Calo.lutea              ACTATTTATCT-----------TCTTTTTTTTCAT-AAGCGGT---TCA
Cr.euchrophyllRC96      ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.acauleRC106          ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.acaulglaucRC105      ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.bulbispermumRC95     ACTATTTATCTGGG-ACTA--CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.campanulatum7167     ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.foetidumRC98         ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.graminicola7630      ACTATTTATCTATTATC-----TTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.lugardii7632         ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.macowanii7168        ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.nearmacowanRC100     ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.buphanoidesRC102     ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.acauleRC38           ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.buphanoides7631      ACTATTTATCTATTTAT---CTTCTTTTTTTTTCAT-AAGCGGT---TCA
Cr.carolschmidRC97      ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.lineareRC99          ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.minimumRC37          ACCATTTACCTATTAAT----CTTCTTTTCTTTCAT-AAGCGGT---TCA
Cr.paludosumRC41        ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.variabileRC44        ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.moorei7921           ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cy.elatus7636           ACTATTTATCT-----------TCTTTTTTTTCAT-AAGCGGT---TCA
Cy.elatusRC93           ACTATTTATCT-----------TCTTTTTTTTCAT-AAGCGGT---TCA
Cy.mackeniiRC87         ACTATTTATCT-----------TCTTTTTTTTCAT-AAGCGGT---TCA
Cy.obliquus7278         ACTATTTAT-----------------TTTTTTTCAT-AAGCGGT---TCA
Cy.ochroleucus7639      ACTATTTATCT-----------TCTTTTTTTTGCAT-AAGCGGT---TCA
Cy.sanguineusRC94       ACTATTTATCT-----------TCTTTTTTTTCAT-AAGCGGT---TCA
Cy.staadensis7316       ACTATTTATCT-----------TCTTTTTTTTCAT-AAGCGGT---TCA
Cy.labiatus7212         ACTATACTATCTA---------TCCTTTTTTTTCAT-AAGCGGT---TCA
Cy.smithiae7214         ACTATTTATCT-----------TCTTTTTTTTCAT-AAGCGGT---TCA
Cy.elatus7198           --------------------------------------------------
Cy.herreiRC86           ACAATTTATAC-----------TTCTTTTTTTTCAT-AAGCGGT---TCA
Cy.brachyscyphus7204    ACTATTTATCT-----------TCTTTTTTTTCAT-AAGCGGT--TGCA
Cy.loddigesianus7203    ACTATTTATCT-----------TCTTTTTTTTCAT-AAGCGGT---TCA
Cy.falcatus7637         --------------------------------------------------
Eus.darwini             ACTATTTATCT-----------TCTTTTTTTTCAT-AAGCAGT---TCA
Ge.namaquensiAMV635     --------------------------------------------------
Hae.montanus7163        ACTATTTATCC-----------TCTTTTTTTTCAT-AAGCGGT---TCA
Hae.coccineusAMV632     ACTATTTATCC---------TCTTTTTTTTTTTCAT-AAGCGGT---TCA
Hae.albiflos7517        ACTATTTATCC----------TCTTTTTTTTTTCAT-AA---------CA
Hae.crispus7252         ACTATTTATCTATTTATCT---TCTTTTTTTTTCAT-AAGCGGTT--CAA
Hae.crispus7260         --------------------------------------------------
Lap.martinezii          ACTATTTATCT----------TCTTTTATTTTCAT-AAGCGGT---TCA
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                    301                                                 350
Leu.autumnale       AAAATTTTTTTTT---------TTTTTTTTTTTCAA-AGGCGGT---TCA
Ne.bowdenii         ACTATTTATCTACTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Ne.laticoma8090     ACTATTTATCTATTTATCTTCTTTTTTTTTTTTCAT-AAGCGGT---TCA
Na.sp.7607          ACTATTTCTCT-----------TCTTTTTTTTTCAT-AAGCGGT---TCA
Na.sp.7608          ACTATTTATCT-----------TCTTTTTTTTTCAT-AAGCGGT---TCA
Na.tazetta          ACTATTTCTCT-----------TCTTTTTTTTTCAT-AAGCGGT---TCA
Pan.canariense      ACTATTTATCT-----------TCTTTTTTTTTCAG-AAGCGGT---TCA
Sten.variegatum     ACTATTTATCT-------------TCTTTTTTTCAT-AAGCAGT---TCA
Phae.dubia          ACTATTTATCT-----------TCTTTTTTTTCAT-AAGCAGT---TCA
Par.weberbaueri     ACTATTTATCT----------TCTTTTTTTTTTCAT-AAGCAGT---TCA
Ster.lutea          ACTATTTATCT--------------TCTTTTTTCAT-AAGCGGT---TCA
Sc.membranaceus7246 ACTATACTATTTA---------TCCTCTTTTTTCAT-AAGCGGT---TCA
Str.salter7245      ACTATTTATCT---------TCTTTTTTTTTTTCAT-AAGCGGT---TCA
Sc.multiflorus7919  ACTATTTATCC--------------TCTTTTTTCAT-AAGCGGT---TCA
Sc.membranaceus7917 ACTATTTATCC--------------TCTTTTTTCAT-AAGCGGT---TCA
Va.parviflora       ACTATGTATCT----------TCTTTTTTTTTTCAT-AAGCGGT---TCA
Hya.orientalis      -CT------------------------TTTTTTCGT-AAGCGGT---TCA
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                        351                                                 400
Ama.belladonna          AAGAAAATTC-GATATC---TTTCT-CATTC-------ATT-CTACT--T
Bo.distich7172          AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Br.gregaria7157         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cro.flava7256           AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Br.radulosanata7629     AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cl.miniata8095          AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cl.miniataRC14          AATAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cl.caulescens8092       AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cl.miniata              AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cl.nobilisRC6b          AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cl.cyrtantiflora8094    AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Chl.fragrans            AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Calo.lutea              AAGAAAATTC-AATATC---TTTCT-TATTC-------ATT-CTACT--C
Cr.euchrophyllRC96      AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.acauleRC106          AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.acaulglaucRC105      AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.bulbispermumRC95     AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.campanulatum7167     AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.foetidumRC98         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.graminicola7630      AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.lugardii7632         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.macowanii7168        AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.nearmacowanRC100     AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.buphanoidesRC102     AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.acauleRC38           AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.buphanoides7631      AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.carolschmidRC97      AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.lineareRC99          AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.minimumRC37          AAGA-AATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.paludosumRC41        AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.variabileRC44        AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.moorei7921           AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.elatus7636           AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.elatusRC93           AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.mackeniiRC87         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.obliquus7278         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.ochroleucus7639      AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.sanguineusRC94       AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.staadensis7316       AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.labiatus7212         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.smithiae7214         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.elatus7198           --------------------------------------------------
Cy.herreiRC86           AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.brachyscyphus7204    AAGAAAATTC-AATATC--TTTGCT-CATTC-------ATT-CTACT--C
Cy.loddigesianus7203    AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.falcatus7637         --------------------------------------------------
Eus.darwini             AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Ge.namaquensiAMV635     --------------------------------------------------
Hae.montanus7163        AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Hae.coccineusAMV632     AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Hae.albiflos7517        AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Hae.crispus7252         AGAAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Hae.crispus7260         --------------------------------------------------
Lap.martinezii          AAGAAAATTC-AAAATC---TTTCT-CATTC-------ATT-CAACT--C
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                    351                                                 400
Leu.autumnale       AAGGAAAATC-AAAATT---TTTTT-CATTC-------ATT-TGGGT--T
Ne.bowdenii         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Ne.laticoma8090     AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Na.sp.7607          AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Na.sp.7608          AAGAAAATTC-AATATC---TTTC--------------------------
Na.tazetta          AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Pan.canariense      AAGAAAATTC-AATATC---TTTCT-CATTC-------ATC-CTACT--C
Sten.variegatum     AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Phae.dubia          AAGAAAATTC-AATATCAATATCTTTCTCATTC-----ATT-CTACT--C
Par.weberbaueri     AAAGAAAATTCAATATC---TTTCT-CATTC-------ATT-CTACT--C
Ster.lutea          AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Sc.membranaceus7246 AAGAAAAATTCAATATC---TTTCT-CATTC-------ATT-CTACT--C
Str.salter7245      AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Sc.multiflorus7919  AAGAAAATTC-AATATC--------------------------------
Sc.membranaceus7917 AAGAAAATTC-AATATC--------------------------------
Va.parviflora       AAGAAAATTC-AATATC---TTTCT-CATCC-------ATT-CTACT--C
Hya.orientalis      AAGAAATTT--AATATC---TTTCT-CATTC-------ATT-CTACT--C
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                        401                                                 450
Ama.belladonna          CTTC--ACAAATGG-ATCCGAA---CATAAA---TCTGTTGA-----T-C
Bo.distich7172          TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Br.gregaria7157         TTTC--ACAAATGG-ACCCGAA---CATAA-------TTTGA-----T-C
Cro.flava7256           TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Br.radulosanata7629     TTTC--ACAAATGG-ACCCGAA---CATAA-------TTTGA-----T-C
Cl.miniata8095          TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cl.miniataRC14          TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cl.caulescens8092       TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cl.miniata              TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cl.nobilisRC6b          TTTC--ACAAATCG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cl.cyrtantiflora8094    TTTC--ACAAATCG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Chl.fragrans            TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Calo.lutea              TTTC--ACAAAGGG-ATCCGAA---CATAAA---TCTTTGGA-----T-C
Cr.euchrophyllRC96      TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.acauleRC106          TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.acaulglaucRC105      TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.bulbispermumRC95     TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.campanulatum7167     TTTC--ACAAATGG-ACCCGAA---CATAA-------TTTGA-----T-C
Cr.foetidumRC98         TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.graminicola7630      TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.lugardii7632         TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.macowanii7168        TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.nearmacowanRC100     TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.buphanoidesRC102     TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.acauleRC38           TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.buphanoides7631      TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.carolschmidRC97      TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.lineareRC99          TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.minimumRC37          TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.paludosumRC41        TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.variabileRC44        TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.moorei7921           TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cy.elatus7636           TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cy.elatusRC93           TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cy.mackeniiRC87         TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cy.obliquus7278         TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCCTTTGA-----T-C
Cy.ochroleucus7639      TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cy.sanguineusRC94       TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCCTTTGA-----T-C
Cy.staadensis7316       TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCCTTTGA-----T-C
Cy.labiatus7212         TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cy.smithiae7214         TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCCTTTGA-----T-C
Cy.elatus7198           --------------------------------------------------
Cy.herreiRC86           TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cy.brachyscyphus7204    TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cy.loddigesianus7203    TTTC-ACAAAAAGG-ATGCCGAA--CATAAA---TCCTTTGA-----T-C
Cy.falcatus7637         --------------------------------------------------
Eus.darwini             TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Ge.namaquensiAMV635     --------------------------------------------------
Hae.montanus7163        TTTC--ACAAATGG-ATCCGAAA--CATAAA---TCTTTTGATCTTATGC
Hae.coccineusAMV632     TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGATCTTAT-C
Hae.albiflos7517        TTTC--ACAAATGG-ATCCGAAA--CATAAA---TCTTTTGA-----T-C
Hae.crispus7252         TTTC--ACAAATGGGACCCGAA---CATAAA---TCTTTTGA-----T-C
Hae.crispus7260         --------------------------------------------------
Lap.martinezii          GTTC--CCAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
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                        401                                                 450
Leu.autumnale           TTTC--ACAAACGG-ATCCGGAG--GAAAA----TTTTTGGA-----T-T
Ne.bowdenii             TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Ne.laticoma8090         TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Na.sp.7607              TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Na.sp.7608              ------ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Na.tazetta              TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Pan.canariense          TTTC--ACAAATGG-ATCCGAA---CATAAG-------TTGA-----T-C
Sten.variegatum         TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Phae.dubia              TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Par.weberbaueri         TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Ster.lutea              TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTGGA-----T-C
Sc.membranaceus7246     TTTC--ACAAATGG-ATCCGAAA--CATAAA---TCTTTTGA-----T-C
Str.salter7245          TTTC--ACAAATGG--CCCGAA---CATAAA---TCTTTTGA-----T-C
Sc.multiflorus7919      --------------------------------------------------
Sc.membranaceus7917     --------------------------------------------------
Va.parviflora           TATC--ACAAATGG-ATCCGAA---CATAAA---TCTTTGGA-----T-C
Hya.orientalis          TTTC--GCAAATAG-ATCCGGA---CAGAAA---TCTTTGGA-----T-C
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                         451                                                 500
Ama.belladonna           TTATACC--AATTTGGTTGGAA-----TAGATATGATACCCGT--ACAAA
Bo.distich7172           TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Br.gregaria7157          TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cro.flava7256            TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Br.radulosanata7629      TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cl.miniata8095           TTATACC--AATTTGGTTTGAA-----TAGATATGATCCCCGT--ACAAA
Cl.miniataRC14           TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cl.caulescens8092        TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cl.miniata               TTATACC--AATTTGGTTTGAA-----TAGATATGATCCCCGT--ACAAA
Cl.nobilisRC6b           TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cl.cyrtantiflora8094     TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Chl.fragrans             TTATACC--AATTTGGTTTGAA-----TAGATATGATAGCCGT--ACAAA
Calo.lutea               TAATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.euchrophyllRC96       TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.acauleRC106           TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.acaulglaucRC105       TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.bulbispermumRC95      TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.campanulatum7167      TTATACC--AATTTGGTTTTCA-----TAGATATGATACCCGT--ACAAA
Cr.foetidumRC98          TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.graminicola7630       TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.lugardii7632          TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.macowanii7168         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.nearmacowanRC100      TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.buphanoidesRC102      TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.acauleRC38            TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.buphanoides7631       TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.carolschmidRC97       TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.lineareRC99           TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.minimumRC37           TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.paludosumRC41         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.variabileRC44         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.moorei7921            TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.elatus7636            TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.elatusRC93            TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.mackeniiRC87          TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.obliquus7278          TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.ochroleucus7639       TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.sanguineusRC94        TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.staadensis7316        TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.labiatus7212          TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.smithiae7214          TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.elatus7198            ---------------------------------------------------
Cy.herreiRC86            TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.brachyscyphus7204     TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.loddigesianus7203     TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.falcatus7637          ---------------------------------------------------
Eus.darwini              TTATACC--AATTTGGTTTGAA-----TAGATATGATAGCCGT--ACAAA
Ge.namaquensiAMV635      ---------------------------------------------------
Hae.montanus7163         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Hae.coccineusAMV632      TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Hae.albiflos7517         TTATACC--AATTTGGTTTGAAA----TAGATATGATACCCGT--ACAAA
Hae.crispus7252          TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Hae.crispus7260          ---------------------------------------------------
Lap.martinezii           TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
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                        451                                                 500
Leu.autumnale           TTAAATC-AAATTGGTTGGGAA------AGATATGAAACCCCT--ACAAA
Ne.bowdenii             TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Ne.laticoma8090         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Na.sp.7607              TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Na.sp.7608              TTATACC--CATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Na.tazetta              TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Pan.canariense          TTATACC--AATTTGGTTTGAA-----TAGATATGATACCGTA---C-AA
Sten.variegatum         TTATACC--AATTTTGTTTGAA-----TAGATATGATAGCCGT--ACAAA
Phae.dubia              TTATACC--AATTTGGTTTGAA-----TAGATATGATAGCCGT--ACAAA
Par.weberbaueri         TTATACC--AATTTGGTTTGAA-----TAGATATGATAGCCGT--ACAAA
Ster.lutea              TTATACC--AATTTGGTTGGAA-----TAGATATGATACCCGT--ACAAA
Sc.membranaceus7246     TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Str.salter7245          TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Sc.multiflorus7919      --------------------------------------------------
Sc.membranaceus7917     --------------------------------------------------
Va.parviflora           TTATACC--AATTTGGTGGGAA-----TAGATATGATACCCGT--ACAAA
Hya.orientalis          TTATCCC--TATTAGGTTTGAA-----TAGATACGATATCTGT--ACAAA
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                        501                                                 550
Ama.belladonna          TGAAC----ATATACGGT-CAAGG-AATTCATTCCCATTGTTG-AATCAC
Bo.distich7172          TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Br.gregaria7157         TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cro.flava7256           TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Br.radulosanata7629     TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cl.miniata8095          TGAAC----ATATATGGT-CAAGG-----GATTCCCATTATTG-AATCAT
Cl.miniataRC14          TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cl.caulescens8092       TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cl.miniata              TGAAC----ATATATGGT-CAAGG-----GATTCCCATTATTG-AATCAT
Cl.nobilisRC6b          TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cl.cyrtantiflora8094    TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Chl.fragrans            TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Calo.lutea              TGAAC----ATATATAGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.euchrophyllRC96      TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.acauleRC106          TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.acaulglaucRC105      TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.bulbispermumRC95     TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.campanulatum7167     TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.foetidumRC98         TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.graminicola7630      TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.lugardii7632         TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.macowanii7168        TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.nearmacowanRC100     TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.buphanoidesRC102     TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.acauleRC38           TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.buphanoides7631      TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.carolschmidRC97      TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.lineareRC99          TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.minimumRC37          TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.paludosumRC41        TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.variabileRC44        TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.moorei7921           TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.elatus7636           TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.elatusRC93           TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.mackeniiRC87         TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.obliquus7278         TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.ochroleucus7639      TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.sanguineusRC94       TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.staadensis7316       TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.labiatus7212         TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.smithiae7214         TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.elatus7198           --------------------------------------------------
Cy.herreiRC86           TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.brachyscyphus7204    TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.loddigesianus7203    TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.falcatus7637         --------------------------------------------------
Eus.darwini             TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Ge.namaquensiAMV635     --------------------------------------------------
Hae.montanus7163        TGNAAC---ATATATGGT-CAAGGC----AATTCCCATTATTG-AATCAT
Hae.coccineusAMV632     TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Hae.albiflos7517        TGAAC----ATATACGGT-CAAGG-AATTCATTCCCATTATTG-AATCAC
Hae.crispus7252         TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Hae.crispus7260         --------------------------------------------------
Lap.martinezii          TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
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                        501                                                 550
Leu.autumnale           TGAAA----AAAAATGGT-CATGG-----GATTCCCATTATGG-AATCAG
Ne.bowdenii             TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Ne.laticoma8090         TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Na.sp.7607              TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Na.sp.7608              TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Na.tazetta              TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Pan.canariense          TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Sten.variegatum         TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Phae.dubia              TGAAC----ATATATGGT-CATGG-----AATTTCCATTATTG-AATCAT
Par.weberbaueri         TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Ster.lutea              TGAAT----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Sc.membranaceus7246     TGAAAC---ATATATGGT-CAAGGG----AATTCCCATTATTG-AATCAT
Str.salter7245          TGAGC----ATATATGGT-CAAGT-----AATTCCCATTATTG-AATCAT
Sc.multiflorus7919      --------------------------------------------------
Sc.membranaceus7917     --------------------------------------------------
Va.parviflora           TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Hya.orientalis          TGAAC----ATATATGGT-CAAAG-----AATTCCCATTATTG-AATTAT
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                        551                                                 600
Ama.belladonna          TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Bo.distich7172          TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Br.gregaria7157         TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cro.flava7256           TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Br.radulosanata7629     TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cl.miniata8095          TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cl.miniataRC14          TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cl.caulescens8092       TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cl.miniata              TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cl.nobilisRC6b          TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cl.cyrtantiflora8094    TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Chl.fragrans            TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Calo.lutea              TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCC
Cr.euchrophyllRC96      TTACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.acauleRC106          TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.acaulglaucRC105      TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.bulbispermumRC95     TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.campanulatum7167     TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.foetidumRC98         TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.graminicola7630      TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.lugardii7632         TCACAG-TCCATATC-ATTATTCTTAC-----TTTCACAAAG-AAAGTCT
Cr.macowanii7168        TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.nearmacowanRC100     TTACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.buphanoidesRC102     TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.acauleRC38           TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.buphanoides7631      TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.carolschmidRC97      TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.lineareRC99          TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.minimumRC37          TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.paludosumRC41        TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.variabileRC44        TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.moorei7921           TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cy.elatus7636           TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.elatusRC93           TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.mackeniiRC87         TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.obliquus7278         TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.ochroleucus7639      TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.sanguineusRC94       TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.staadensis7316       TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.labiatus7212         TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.smithiae7214         TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.elatus7198           --------------------------------------------------
Cy.herreiRC86           TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.brachyscyphus7204    TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.loddigesianus7203    TCACAG-TCCATATC-ATTATCCTTAG----CATTCACAAAG-AAAGTCT
Cy.falcatus7637         --------------------------------------------------
Eus.darwini             TCACAG-TCCATATT-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Ge.namaquensiAMV635     --------------------------------------------------
Hae.montanus7163        TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Hae.coccineusAMV632     TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAGG-AAAGTCT
Hae.albiflos7517        TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Hae.crispus7252         TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Hae.crispus7260         --------------------------------------------------
Lap.martinezii          TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAGAGAGAGTCTT
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                        551                                                 600
Leu.autumnale           TCACAG-CCCAAATC-ATTATCCCAAC-----ATTCACAAAGGAAGTTTT
Ne.bowdenii             TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Ne.laticoma8090         TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Na.sp.7607              TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-----TCT
Na.sp.7608              TCACAG-TCCGTATC-ATTACCCTTAC-----ATTCACAAGG-AAAGTCT
Na.tazetta              TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Pan.canariense          TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAGA--AAGTCT
Sten.variegatum         TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Phae.dubia              TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Par.weberbaueri         TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Ster.lutea              TCACAG-TCCATAGC-ATTATCCTTAC-----ATTCACAAAG-AATGTCT
Sc.membranaceus7246     TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Str.salter7245          TCACAA-TCCATATC-ATTATTCTTAAC----ATTCACAAAG-AAAGTCT
Sc.multiflorus7919      ----------------------CTTAC-----ATTCACAAAG-AAAGTCT
Sc.membranaceus7917     ----------------------CTTAC-----ATTCACAAAG-AAAGTCT
Va.parviflora           TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGCCT
Hya.orientalis          TCACAG-CCCATATC-ATTATCTTTAC-----ATTCACAAAA-AAAGTCT
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                        601                                                 650
Ama.belladonna          TCTTTTT-GAAAATCTAAGAAATT-CGGGGAGTAGGT--CAAAATTTTTA
Bo.distich7172          TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT--CAAAATTTTTA
Br.gregaria7157         TCTTTTT-GAAAATGTAAGAAATT-CGGGGACTAGGT--CAAAATTTTTA
Cro.flava7256           TCTTCTT-AAAAATCTAAGAAATTTCGGGGACTAGGT--CAAAATTTTTA
Br.radulosanata7629     TCTTTTT-GAAAATGTAAGAAATT-CGGGGACTAGGT--CAAAATTTTTA
Cl.miniata8095          TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT--CCAAATTTTTA
Cl.miniataRC14          TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT--CCAAATTTTTA
Cl.caulescens8092       TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT--CCAAATTTTTA
Cl.miniata              TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT--CCAAATTTTTA
Cl.nobilisRC6b          TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT--CCAAATTTTTA
Cl.cyrtantiflora8094    TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT--CCAAATTTTTA
Chl.fragrans            TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT--CAAAATTTTTA
Calo.lutea              TCCTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT--CAAAATTTTTA
Cr.euchrophyllRC96      TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.acauleRC106          TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.acaulglaucRC105      TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.bulbispermumRC95     TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.campanulatum7167     TCTTTTT-TAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.foetidumRC98         TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.graminicola7630      TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.lugardii7632         TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.macowanii7168        TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.nearmacowanRC100     TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.buphanoidesRC102     TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.acauleRC38           TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.buphanoides7631      TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.carolschmidRC97      TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.lineareRC99          TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.minimumRC37          TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.paludosumRC41        TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.variabileRC44        TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.moorei7921           TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cy.elatus7636           TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cy.elatusRC93           TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cy.mackeniiRC87         TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cy.obliquus7278         TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cy.ochroleucus7639      TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cy.sanguineusRC94       TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cy.staadensis7316       TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTGGAA
Cy.labiatus7212         TCTTTTT-GAAAATCTAAKAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cy.smithiae7214         TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTGGAA
Cy.elatus7198           --------------------------------------------------
Cy.herreiRC86           TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cy.brachyscyphus7204    TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAA-TTTTGAA
Cy.loddigesianus7203    TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTGGAA
Cy.falcatus7637         --------------------------------------------------
Eus.darwini             TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Ge.namaquensiAMV635     --------------------------------------------------
Hae.montanus7163        TCTTTTT-GAAAATCTAAGAAATTTCGGGGAGCTAGGTCAAAATTTTTAA
Hae.coccineusAMV632     TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Hae.albiflos7517        TTCTTTTTGAAAATCTAAGAAATTTCGGGGACTAGGT-CAAAATTTTTAA
Hae.crispus7252         TCTTTTT-GAAAATGTAAGAAATT-CGGGGACTAGGT-CAAAATTTGTAA
Hae.crispus7260         --------------------------------------------------
Lap.martinezii          CCTTCTTTGAAAATTTAAGAAATATCGGGGACTAGGT-CCAAATATTAAA
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                        601                                                 650
Leu.autumnale           TTTTTTTTTTTTATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Ne.bowdenii             TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Ne.laticoma8090         TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Na.sp.7607              TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Na.sp.7608              TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Na.tazetta              TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Pan.canariense          -CTTTT--G-AAATCTAAGAAATT-CGGGGACTAGGT-CAAA--------
Sten.variegatum         TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Phae.dubia              TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Par.weberbaueri         TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Ster.lutea              TCTTTTT-AAAAATCTAAGAAATT-TGGGGACTAGGT-CAAAATTTTTAA
Sc.membranaceus7246     TCTTTTT-GAAAATCTAATAAATTTCGGGGACTAGGT-CAAAATTTTTAA
Str.salter7245          TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Sc.multiflorus7919      TCTTTTTT-AAAATCTAATAAATT-CGGGGACTAGGT-AAAAATTTTTAA
Sc.membranaceus7917     TCTTTTTT-AAAATCTAATAAATT-CGGGGACTAGGT-AAAAATTTTTAA
Va.parviflora           TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTGGAA
Hya.orientalis          TCTTTTT-GAAGATCTAAGAAATT-CTGGGACTAGGT-CAAAATTTGGAA
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                        651                                                 700
Ama.belladonna          AGACCTTTTTTTT-----------AGT-----CTATTTAATTTACAT--
Bo.distich7172          ATACTTTTTTTG------------AGTTTAGTCTATTTAATTTACAT--
Br.gregaria7157         ATACTTTTTTTG------------AGTTTAGTCTATTTAATTTACAT--
Cro.flava7256           ATACTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Br.radulosanata7629     ATACTTTTTTTG------------AGTTTAGTCTATTTAATTTACAT--
Cl.miniata8095          AGACCTTTTTT-----------------TTAGTCTATTTAATTTACAT--
Cl.miniataRC14          AGACCTTTTTT-----------------TTAGTCTATTTAATTTACAT--
Cl.caulescens8092       AGACCTTTTTT-----------------TTAGTCTATTTAATTTACAT--
Cl.miniata              AGACCTTTTTT-----------------TTAGTCTATTTAATTTACAT--
Cl.nobilisRC6b          AGACCTTTTTT-----------------TAGTCTATTTAATTTACAT--
Cl.cyrtantiflora8094    AGACCTTTTTT-----------------TAGTCTATTTAATTTACAT--
Chl.fragrans            ATACTTTTTTT-----------------TAGTCTATTTAATTTAACAT-
Calo.lutea              ATACTTTTTTT-----------------TAGTCTATTTAATTTACAT--
Cr.euchrophyllRC96      TACTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.acauleRC106          TACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.acaulglaucRC105      TACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.bulbispermumRC95     TACTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.campanulatum7167     TACTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.foetidumRC98         TACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.graminicola7630      TACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.lugardii7632         TACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.macowanii7168        TACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.nearmacowanRC100     TACTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.buphanoidesRC102     TACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.acauleRC38           TACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.buphanoides7631      TACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.carolschmidRC97      TACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.lineareRC99          TACTTTTTTTTTT-----------AGTTTAGTCTATTTAATTTACAT--
Cr.minimumRC37          TACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.paludosumRC41        TACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.variabileRC44        TACTTTTTTTT-------------AGTTTAGTCTATTTAATTTACAT--
Cr.moorei7921           TACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cy.elatus7636           TACTTTTTTT--------------------AGTCTATTTAATTTACAT--
Cy.elatusRC93           TACTTTTTTT--------------------AGTCTATTTAATTTACAT--
Cy.mackeniiRC87         TACTTTTTTT--------------------AGTCTATTTAATTTACAT--
Cy.obliquus7278         TACTTTTTTT--------------------AGTCTATTTAATTTACAT--
Cy.ochroleucus7639      TACTTTTTTT--------------------AGTCTATTTAATTTACAT--
Cy.sanguineusRC94       TACTTTTTTTAGTCTATTTAATTTATTTTTAGTCTATTTAATTTACATTT
Cy.staadensis7316       TACTTTTTTTAGTCTATTTAATTTATTTTTAGTCTATTTAATTTACATTT
Cy.labiatus7212         TACCTTTTTT--------------------TAGTCTATTTAATTTACAT--
Cy.smithiae7214         TACTTTTTTTAGTCTATTTAATTTATTTTTAGTCTATTTAATTTACATTT
Cy.elatus7198           --------------------------------------------------
Cy.herreiRC86           TACTTTTTTTAGTCTATT-------TTTTTACTCTATTTAATTTACAT--
Cy.brachyscyphus7204    TACTTTTTTT--------------------AGTCTATTTAATTTACAT--
Cy.loddigesianus7203    TACTTTTTTTAGTCTATTTAATTTATTTTTAGTCTATTTAATTTACATTT
Cy.falcatus7637         --------------------------------------------------
Eus.darwini             TACTTTTTTT--------------------TAGTCTATTTCATTTACAT--
Ge.namaquensiAMV635     --------------------------------------------------
Hae.montanus7163        GACCTTTTTT------------------TTAGTCTATTTAATTTACAG--
Hae.coccineusAMV632     GACCTTTTTT------------------TTAGTCTATTTAATTTACAG--
Hae.albiflos7517        GACCTTTTTT------------------TTAGTCTATTTAATTTACAT--
Hae.crispus7252         TACTTTTTTT-------------GAGTTTAGTCTATTTAATTTACAT--
Hae.crispus7260         --------------------------------------------------
Lap.martinezii          TAAT--------------------GATTTGTGGTTTACTAATTAACAT--
```

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                        651                                                 700
Leu.autumnale           TACTTTTTTT-------------------AGTCTATTTCATTTATAT--
Ne.bowdenii             TACTTTTTTT-------------GAGTTTAGTCTATTTAATTTACAT--
Ne.laticoma8090         TACTTTTTTT-------------GAGTTTAGTCTATTTAATTTACAT--
Na.sp.7607              TACTTTATTT------------------TGAGTCTATTTCATTTACAT--
Na.sp.7608              TACTTTTTTT------------------TAGTCTATTTAATTTACAT--
Na.tazetta              TACTTTTTTT------------------TAGTCTATTTCATTTACAT--
Pan.canariense          --------------------------------------------------
Sten.variegatum         TACTTTTTTT------------------TAGTCTATTTAATTTACAT--
Phae.dubia              TACTTTTTTT------------------TAGTCTATTTAATTTACAT--
Par.weberbaueri         TACTTTTTTT------------------TAGTCTATTTAATTTACAT--
Ster.lutea              TACTTTTTTT------------------TAGTCTATTTAATTTACAT--
Sc.membranaceus7246     GACCTTTTTT-----------------TTAGTCTATTTAATTTACAT--
Str.salter7245          TACTTTTTTT-------------GAGTTTAGTCTATTTAATTTACAT--
Sc.multiflorus7919      GACCTTTTTTT-----------------TAGTCTATTTAATTTACAT--
Sc.membranaceus7917     GACCTTTTTTT-----------------TAGTCTATTTAATTTACAT--
Va.parviflora           GACCTTTTTT------------------TAGTCTATTTAATTTACAT--
Hya.orientalis          TAGTTTTTT-----------------AGTCTATTTAATTTACATACATAT
```

```
                        701                                                 750
Ama.belladonna          ----AGATAC-A--T-TT-----ACT-------C-T--------AA--T-
Bo.distich7172          ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Br.gregaria7157         ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cro.flava7256           ----AGATAC-AAGTATTTCT--ACTAGGAT--GATGCGCGGG-AAA-T-
Br.radulosanata7629     ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cl.miniata8095          ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cl.miniataRC14          ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cl.caulescens8092       ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cl.miniata              ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cl.nobilisRC6b          ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cl.cyrtantiflora8094    ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-T-
Chl.fragrans            ----AGATAC-AAATACTCT---ATTTAGGAT-GATG------------
Calo.lutea              ----AGATAC-AAATACTCT---ACTAGGAT--GATGTGCGGG-AAA-TC
Cr.euchrophyllRC96      ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.acauleRC106          ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.acaulglaucRC105      ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.bulbispermumRC95     ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.campanulatum7167     ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.foetidumRC98         ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.graminicola7630      ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.lugardii7632         ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAAATC
Cr.macowanii7168        ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.nearmacowanRC100     ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.buphanoidesRC102     ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.acauleRC38           ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.buphanoides7631      ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.carolschmidRC97      ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.lineareRC99          ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.minimumRC37          ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGTCGGAAATC
Cr.paludosumRC41        ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.variabileRC44        ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.moorei7921           ----AGATAC-AAGTATTGTACTCCCCGGAT--GATGCGCGGGGAAA-TC
Cy.elatus7636           ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.elatusRC93           ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.mackeniiRC87         ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.obliquus7278         ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAATCC
Cy.ochroleucus7639      ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.sanguineusRC94       ACATAGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.staadensis7316       ACATAGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.labiatus7212         ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.smithiae7214         ACATAGATAC-AAATACTCT---ACTAGGAT--GATGC--GGG-AAAATC
Cy.elatus7198           --------------------------------------------------
Cy.herreiRC86           ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.brachyscyphus7204    ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.loddigesianus7203    ACATAGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.falcatus7637         --------------------------------------------------
Eus.darwini             ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGC--------
Ge.namaquensiAMV635     --------------------------------------------------
Hae.montanus7163        ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Hae.coccineusAMV632     ----AGATAC-AAATACTCT---ACCGGTTATTATGATGCCGGGAAAATC
Hae.albiflos7517        ----AGATAC-AAATACTCT---ACT--G--------CGCGGCTGAAATC
Hae.crispus7252         ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Hae.crispus7260         --------------------------------------------------
Lap.martinezii          ----AGAGTAGCGTGATACTGTAGTAGAGCATGAGTGCGCGGG--AA-TA
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                      701                                                 750
Leu.autumnale         ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGAG-GAA-TC
Ne.bowdenii           ----AGATAC-AAGTATTCT---ACTGGGAT--GATGCGCGGG-AAA-TC
Ne.laticoma8090       ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Na.sp.7607            ----GGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGA-GAA-TC
Na.sp.7608            ----AGATAC-AAATACTTT---ACTAGGAT--GATGCGCGGGGCAA-TC
Na.tazetta            ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-GAA-TC
Pan.canariense        ------------------------------------------------
Sten.variegatum       ----AGATAC-AAATACTCT---ACTTAGGAT-GATGC-----------
Phae.dubia            ----AGATAC-AAATACTCT---ACTAGGGG--GATGCGCGGG-A-----
Par.weberbaueri       ----AGATAC-AAATACTCT---ACTAGGAT--GATGTGCGGG-AA--TC
Ster.lutea            ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGGGGG-AA--TC
Sc.membranaceus7246   ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Str.salter7245        ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Sc.multiflorus7919    ----AGATAC-AAATACTCT---ACTAGGTAT-GATGCGCGGGGAAA-TC
Sc.membranaceus7917   ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Va.parviflora         ----AGATAC-AAATACTCT---ACTAGGAT--GATTCACGGG-AA--TG
Hya.orientalis        TACATAGATACAAGTACTCT---ACTAAGAC--GATGCACGGG-AAA-TG
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                    751                                                 800
Ama.belladonna      --------------------------------------------------
Bo.distich7172      GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Br.gregaria7157     GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cro.flava7256       --------------------------------------------------
Br.radulosanata7629 GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cl.miniata8095      GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cl.miniataRC14      GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cl.caulescens8092   GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGT-
Cl.miniata          GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cl.nobilisRC6b      GTCGGGATAGCTCAG-TTGGAAGAGCAGAGGA-TGA-------------
Cl.cyrtantiflora8094 --------------------------------------------------
Chl.fragrans        --------------------------------------------------
Calo.lutea          GTCGGGATAGCT----------------------------------------
Cr.euchrophyllRC96  GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cr.acauleRC106      GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-T---------
Cr.acaulglaucRC105  GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAA------------
Cr.bulbispermumRC95 GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cr.campanulatum7167 GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGGACTGAAAATCCTCGTGTC
Cr.foetidumRC98     GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cr.graminicola7630  GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCG----
Cr.lugardii7632     GTCGGGATAGCTCAG-TTGG-A-AG-AGCAAGGCTGAAAATCC--G-G--
Cr.macowanii7168    GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cr.nearmacowanRC100 GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cr.buphanoidesRC102 GTCGGGATAGCTCAG-TTGGTAGA-C-------TGCTAAGTGGT------
Cr.acauleRC38       GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cr.buphanoides7631  GTCGGGATAGCTCAG-TTGGAAGAGCAAAGG------------------
Cr.carolschmidRC97  GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cr.lineareRC99      GTCGGGA---------------------------------------------
Cr.minimumRC37      G-CGGGATAGCTCAG-TTGGTAGAGCAGAGGGACTGAAAA-CCTCG-G-C
Cr.paludosumRC41    GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTG-C
Cr.variabileRC44    GTCGGGATAGCTCAG-TTGGTAGAGCAGAGG------------------
Cr.moorei7921       GTCGGGATAACTCAG-T-GGGAGAGCAAAGGACTGAA---TCC-------
Cy.elatus7636       GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.elatusRC93       GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.mackeniiRC87     GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.obliquus7278     GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.ochroleucus7639  GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.sanguineusRC94   GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.staadensis7316   GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.labiatus7212     GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.smithiae7214     G---------------------------------------------------
Cy.elatus7198       --------------------------------------------------
Cy.herreiRC86       GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.brachyscyphus7204 GTCGGGATAG-TCAG--TGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.loddigesianus7203 GTCGGGATAGCGTAAGTTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.falcatus7637     --------------------------------------------------
Eus.darwini         --------------------------------------------------
Ge.namaquensiAMV635 --------------------------------------------------
Hae.montanus7163    GTCGGGATAGCTCA-GTTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Hae.coccineusAMV632 GCCGGGATAGCTCA-GTTGGTAGAGCAAAGGACTGAAAAATCCTCGTGTC
Hae.albiflos7517    GTCGGGATAGCTCA-GTTGGTAGAGCAGAGGACTGAAAA-TCCTC-----
Hae.crispus7252     GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Hae.crispus7260     --------------------------------------------------
Lap.martinezii      GTCGCGATAGAT----------------------------------------
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                    751                                                800
Leu.autumnale       GTCGGGATAGCT---------------------------------------
Ne.bowdenii         GTCGGG-TAGCT---------------------------------------
Ne.laticoma8090     GTCGGGATA-CTCAG-TCGGTAAAGCAAAGGACTGAAAA-TCC-------
Na.sp.7607          GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Na.sp.7608          GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Na.tazetta          --------------------------------------------------
Pan.canariense      --------------------------------------------------
Sten.variegatum     --------------------------------------------------
Phae.dubia          --------------------------------------------------
Par.weberbaueri     GTCGGGATAGCT---------------------------------------
Ster.lutea          GTCGGGATAGCT---------------------------------------
Sc.membranaceus7246 GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Str.salter7245      GTCG----------------------------------------------
Sc.multiflorus7919  GTCGGG-TA--T-AG-TTGGTAGAGCAGAGGTACTGCAAATCCTCGTGTC
Sc.membranaceus7917 TCGGGAGTAGCTCAG-TTGGTAGAGCAGAGGACTG-AAAATCCTCGTGTC
Va.parviflora       GTCGG-ATAGCT---------------------------------------
Hya.orientalis      GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTG--------------
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                        801                                                 850
Ama.belladonna          --------------------------------------------------
Bo.distich7172          ACCAGTTCAAAT----GGTAATCCCAAGAAATGCCTATT-TTTCTGGTTC
Br.gregaria7157         ACC-------------------------------------------------
Cro.flava7256           --------------------------------------------------
Br.radulosanata7629     ACC-------------------------------------------------
Cl.miniata8095          ACCAGTTCAA-TA---GATAATCCCAAGAAATGCCTATTGTATCGGGTTC
Cl.miniataRC14          ACCAGTTCAA--A---GATAATCCCA-GAA-TGCCTATTGTTTCTGGTTC
Cl.caulescens8092       ----------------GGTAATCCCAAGAAAGGCCTATTGTTTCTGGTTC
Cl.miniata              A-------------------------------------------------
Cl.nobilisRC6b          ----------------------------------------TTTCTGGTTC
Cl.cyrtantiflora8094    ----------------------CC--TTAA-----T-TTTTTTCTTTTTC
Chl.fragrans            --------------------------------------------------
Calo.lutea              --------------------------------------------------
Cr.euchrophyllRC96      -CCAGTTCAA-TAA--GATAATCC-AAGAAATGCCTATTGTTTCTGGTTC
Cr.acauleRC106          -------------------------------------------------C
Cr.acaulglaucRC105      --------------------------------------------------
Cr.bulbispermumRC95     ACCAGTTCAAATA----------------------------------------
Cr.campanulatum7167     -C--------------GATAATCC-AAGAAATGCCTATTGTTTCTGGTCC
Cr.foetidumRC98         ACCAGTTC--------GATAATCCCAAGAAA-GCCTATTGTTTCTGGTTC
Cr.graminicola7630      ----------------GATAATCCCAAGAAATGCCTATTGTTTCTGGTTC
Cr.lugardii7632         ----------------TGAAATCCCAAGAAATGCCTATTTGTTCTGGTTC
Cr.macowanii7168        ----------------GATAATCCCAAGAAATGGCCATGTTTTATGGTTC
Cr.nearmacowanRC100     ACCAGTTCAAAT----GATAATTCCAAGAAA-GCCTATTGTTTCTGGTTC
Cr.buphanoidesRC102     A--ACTTCAAAT----GATAATCC-AAGAAATGCCTATTGTTTCTGGTTC
Cr.acauleRC38           ACCAGTTCAAAT-----A-AATCCCAAGAAAGGCCTATTTTTTCTGGTTC
Cr.buphanoides7631      ----------------GATAATCCCAAAAAATGCCTATTGTTTCTGGTTC
Cr.carolschmidRC97      ----------------GATAATCCCAGGAA-GGCCTATTGTTTCTGGTTC
Cr.lineareRC99          ----------------GATAATCCCAAGAAATGCCTATTGTTTCTGGTTC
Cr.minimumRC37          --CA------------GATAATCCCAAGAAATGCCTATTGTTTCTGGTTC
Cr.paludosumRC41        ACCAGTTC-------------------------------GTTTCTGGTTC
Cr.variabileRC44        ----------------TGATATCCCAAGAAATGCCTATTGTTTCTGGTTC
Cr.moorei7921           ------------------A-ACCCAAGGAAATGCCTATTGTTTCCTGGTT
Cy.elatus7636           -CC-------------------------------------------------
Cy.elatusRC93           ACCA------------TGATAATCCAAGAAATGCCTATTGTTTCTGGTTC
Cy.mackeniiRC87         ACCA----A---------------------------------------------
Cy.obliquus7278         -CCA-------------------------------------------------
Cy.ochroleucus7639      AC-A-------------------------------------------------
Cy.sanguineusRC94       AC---------------------------------------------------
Cy.staadensis7316       ACCA-TTTC--------------------------------------------
Cy.labiatus7212         ACC--------------------------------------------------
Cy.smithiae7214         --------------------------------------------------
Cy.elatus7198           --------------------------------------------------
Cy.herreiRC86           -C---------------------------------------------------
Cy.brachyscyphus7204    A-C--------------------------------------------------
Cy.loddigesianus7203    AC--GTTTCAAATAAA-------------------------------------
Cy.falcatus7637         --------------------------------------------------
Eus.darwini             --------------------------------------------------
Ge.namaquensiAMV635     --------------------------------------------------
Hae.montanus7163        ACCA-TT-CAAATA---------------------------------------
Hae.coccineusAMV632     ACCAGTTTCAAA-AA--------------------------------------
Hae.albiflos7517        --------------------------------------------------
Hae.crispus7252         AC-A--TTC-------------------------------TTTCTGGTTC
Hae.crispus7260         --------------------------------------------------
Lap.martinezii          -------------------------AGAAATGCCTATTGTTTCTGGTTC
```

```
                      801                                                850
Leu.autumnale         ---------------------ATT-AACAAATGCCTATTGTTTCTGGTTC
Ne.bowdenii           --------------------------------------------------
Ne.laticoma8090       ---------------GATAATCCCAAGAAATGCCTATTGTTTCTGGTTC
Na.sp.7607            ACCAG------------------------------------------
Na.sp.7608            ACCAGTTCCAAATA---------------------------------
Na.tazetta            --------------------------------------------------
Pan.canariense        ------------------------------------TTTCTGGTTC
Sten.variegatum       --------------------------------------------------
Phae.dubia            --------------------------------------------------
Par.weberbaueri       --------------------------------------------------
Ster.lutea            --------------------GATTAAAGAACCGCCTATTGTTTCTGGTTC
Sc.membranaceus7246   A---------------GATAATCCCAAGAAATGCCTATTGTTTCCGGTTC
Str.salter7245        --------------------------------------------------
Sc.multiflorus7919    ACCAGTT-CAAATA---------------------------------
Sc.membranaceus7917   -C------------------------------------------------
Va.parviflora         ----------------------------------TATTGTTTCTGGTTC
Hya.orientalis        --------------------------------------------------
```

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                    851                                                 900
Ama.belladonna      --------------------------------------------------
Bo.distich7172      CA--GTAGAAA-TGTAAGGCAATGGAAGAATTAC-----AAAGATATTTA
Br.gregaria7157     --------------------------------------------------
Cro.flava7256       --------------------------------------------------
Br.radulosanata7629 --------------------------------------------------
Cl.miniata8095      A---GTAGAAA-TGTTAGTCAATGGAAAGATTACC---AGAGGACTTTTG
Cl.miniataRC14      AA--GTAGAAA-TGTAAGTCAATGGAAGAATTAC-----AAGGATATTTA
Cl.caulescens8092   AAAGGTAGAAAATGTAAGTCAATGGAAGAATTACC----AAGGATATTTA
Cl.miniata          --------------------------------------------------
Cl.nobilisRC6b      AA--GTAGAAAATGTAAGTCAATGGAAGAATTAC-----AAGGATATTTA
Cl.cyrtantiflora8094 AAA-TTAAAAA-TTTAATTCAATCGAATAAATACCC--AATCATTATTTA
Chl.fragrans        --------------------------------------------------
Calo.lutea          --------------------------------------------------
Cr.euchrophyllRC96  AA--GTAGAAA-TGTAAGTCAATGGAAGAATTAC-----AAAGATATTTA
Cr.acauleRC106      AA-GGTAGGAAATGTAAGTCCATGGAAGGATTTCC---AAAGGTTTTTG
Cr.acaulglaucRC105  --------------------------------------------------
Cr.bulbispermumRC95 ----------------------------------------AAAGATATTTG
Cr.campanulatum7167 AA--GTAGAAA-TGTAAGTCAATGGAAGAATTAC-----AAAGATATTTA
Cr.foetidumRC98     AA--GTAGAAA-TGTAAGTCAATGGAAGAATTAC-----AAAGATATTTA
Cr.graminicola7630  AA--GTAGAAA-TGTAAGTCAATGGAAGAATTAC-----AAAGATATTTA
Cr.lugardii7632     AA--GTAGAAA-TGTAAGTCAATGGAAGAATTAC----AAAGGATATTTA
Cr.macowanii7168    AA--GTAGAAA-TGTAAGTCCAAGGAAGAATTAC-----AAAGGTATTTA
Cr.nearmacowanRC100 AA--GTAGAAA-TGTAAGTCAATGGAAGAATTAC-----AAAGATATTTA
Cr.buphanoidesRC102 CAAGGTAGAAA-TGTAAGTCAATGGAAGAATTACC----AAAGATATTTA
Cr.acauleRC38       AA--GTAGGAAATGTAAGTCCATGGAAGGATTAC----AAAGGATATTTA
Cr.buphanoides7631  AA--GTAGAAA-TGTAAGTCAATGGAAGAATTAC-----AAAGATATTTA
Cr.carolschmidRC97  AA--GTAGAAA-TGTAAGTCAATGGAAGAATTAC-----AAAGATATTTA
Cr.lineareRC99      A---GTAGAAA-TGTAAGTCAATGGAAGAATTAAC----AAAGATATTTA
Cr.minimumRC37      AA--GTAGAAA-TGTAAGTCAATGGAAGAATTAC-----AAAGATATTTA
Cr.paludosumRC41    AA--GTAGAAA-TGTAAGTCAATGGAAGAATTAC-----AAAGATATTTA
Cr.variabileRC44    AA--GTAGAAA-TGTAAGTCAATGGCAAGAATTAC----AAAGATATTTA
Cr.moorei7921       CAAGGTAGAAAAGGTAAGTCCATGG-AGGAATTTAC---AAAGATATTTA
Cy.elatus7636       --------------------------------------------------
Cy.elatusRC93       AA--GTAGAAA-TGTAAGTCAATGGAAGAATTAC-----AAGGATATTTA
Cy.mackeniiRC87     --------------------------------------------------
Cy.obliquus7278     --------------------------------------------------
Cy.ochroleucus7639  --------------------------------------------------
Cy.sanguineusRC94   --------------------------------------------------
Cy.staadensis7316   --------------------------------------------------
Cy.labiatus7212     --------------------------------------------------
Cy.smithiae7214     --------------------------------------------------
Cy.elatus7198       --------------------------------------------------
Cy.herreiRC86       --------------------------------------------------
Cy.brachyscyphus7204 --------------------------------------------------
Cy.loddigesianus7203 --------------------------------------------------
Cy.falcatus7637     --------------------------------------------------
Eus.darwini         --------------------------------------------------
Ge.namaquensiAMV635 --------------------------------------------------
Hae.montanus7163    --------------------------------------------------
Hae.coccineusAMV632 --------------------------------------------------
Hae.albiflos7517    --------------------------------------------------
Hae.crispus7252     CA--GTAGAAA-TGTAAGTCAATGGAAGAATTCCA---AAGGATATTTA
Hae.crispus7260     --------------------------------------------------
Lap.martinezii      AA--GTAGAAA-TGTAAGTCAATGGAAGAATTAC-----AAGGATATTTA
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                      851                                                900
Leu.autumnale         AA--GTAGAAA-TGTAAGTCAATGGAAGAATTAC-----AAGGATATTTA
Ne.bowdenii           --------------------------------------------------
Ne.laticoma8090       CAA-GTAGAAA-TGAAGTCCAATGGAAGAATTCC-----AAAGATATTTA
Na.sp.7607            --------------------------------------------------
Na.sp.7608            --------------------------------------------------
Na.tazetta            --------------------------------------------------
Pan.canariense        AA--GTAGAAA-TGTAAGTCAATGGAAGAATTAC-----AAGGATATTTA
Sten.variegatum       --------------------------------------------------
Phae.dubia            --------------------------------------------------
Par.weberbaueri       --------------------------------------------------
Ster.lutea            AA--GTAGAAA-TGTAAGTCAATGGAAGAATTAC-----AAGGATATTTA
Sc.membranaceus7246   AA-GGTAGAAA-TGTAAGCCAATGGAAGGAATTCC----AAGGATATTTA
Str.salter7245        --------------------------------------------------
Sc.multiflorus7919    --------------------------------------------------
Sc.membranaceus7917   --------------------------------------------------
Va.parviflora         AA--GTAGAAA-TGTAAGTCAATGGAAGAATTAC-----AAGGATATTTA
Hya.orientalis        --------------------------------------------------
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                    901                                                 950
Ama.belladonna      --------------------------------------------------
Bo.distich7172      G-AAAAGGATAGA--TCTCGGCAACAACACTTCCCTATATCCCGCTAC--
Br.gregaria7157     --------------------------------------------------
Cro.flava7256       --------------------------------------------------
Br.radulosanata7629 --------------------------------------------------
Cl.miniata8095      GGAAAAGGATAGA--TCTCGGCAACAACACTTC-TTATACCCCGCTAC-C
Cl.miniataRC14      G-AAAAGGATAGA--TCTCGGCAACAACACTTCC-TATACCC-GCTAC--
Cl.caulescens8092   GAAAAGGGATAGA-TTTCGGGCAACAACACTTCC-TATACCC-GCTAC--
Cl.miniata          --------------------------------------------------
Cl.nobilisRC6b      GGAAAAGGATAGA--TCTCGGCAACAACACTTCC-TATACCC-GCTAC--
Cl.cyrtantiflora8094 CAAAAAGGATTAGA-TCTCGGCAACAACCTTTCCTAATACCCCATTAC-T
Chl.fragrans        --------------------------------------------------
Calo.lutea          --------------------------------------------------
Cr.euchrophyllRC96  G-AAAAGGATAGA--TCTCGGCAACAACACTTCC-TATATCC-GCTAC--
Cr.acauleRC106      GAAAAGGGATAGATTTTCGGGCAACCACCACTTCCTATATCC-GCTACTT
Cr.acaulglaucRC105  -----------------T------------TTCCCTATATCC-GCTAC-T
Cr.bulbispermumRC95 GGAAAGGGATAGA-TCTCCGGCAACAACCACTTCCTATATCC-GCTAC--
Cr.campanulatum7167 G-AAAAGGATAGA--TCTCGGCAACAACACTTCC-TATATCC-GCTAC--
Cr.foetidumRC98     G-AAAAGGATAGA--TCTCGGCAACAACACTTCC-TATATCC-GCTAC--
Cr.graminicola7630  G-AAAAGGATAGA--TCTCGGCAACAACACTTCC-TATATCC-GCTAC--
Cr.lugardii7632     G-AAAAGGATAGA--TCTCGGCAACAACACTTCC-TATATCC-GCTAC--
Cr.macowanii7168    G-AAAAGGATAGA--TCTCGGCAACAACACTTCC-TATATCC-GCTAC--
Cr.nearmacowanRC100 G-AAAAGGATAGA--TCTCGGCAACAACACTTCC-TATATCC-GCTAC--
Cr.buphanoidesRC102 G-AAAAGGATAGA-TCTCGGGCAACAACACTTCCCTATATCC-GCTAC--
Cr.acauleRC38       GAAAAAGGATAGA--TCTCGGCAACAACCACTTCCTATATCC-GCTAC--
Cr.buphanoides7631  G-AAAAGGATAGA--TCTCGGCAACAACACTTCC-TATATCC-GCTAC--
Cr.carolschmidRC97  G-AAAAGGATAGA--TCTCGGCAACAACACTTCC-TATATCC-GCTAC--
Cr.lineareRC99      G-AAAAGGATAGA--TCTCGGCAACAACACTTCC-TATATCC-GCTAC--
Cr.minimumRC37      G-AAAAGGATAGA--TCTCGGCAACAACACTTCC-TATATCC-GCTAC--
Cr.paludosumRC41    G-AAAAGGATAGA--TCTCGGCAACAACACTTCC-TATATCC-GCTAC--
Cr.variabileRC44    G-AAAAGGATAGA--TCTCGGCAACAACACTTCC-TATATCC-GCTAC--
Cr.moorei7921       GGAAAAGGATAGA--TCTCGGCAACAACACTTCC-TATATCC-GCTAC--
Cy.elatus7636       --------------------------------------------------T
Cy.elatusRC93       G-AAAAGGATAGA--TCTCGGCAACAACACTTTCTTATATCC-GCTAC--
Cy.mackeniiRC87     --------------------------------------------------
Cy.obliquus7278     --------------------------------------------------
Cy.ochroleucus7639  --------------------------------------------------
Cy.sanguineusRC94   --------------------------------------------------
Cy.staadensis7316   --------------------------------------------------
Cy.labiatus7212     --------------------------------------------------
Cy.smithiae7214     --------------------------------------------------
Cy.elatus7198       --------------------------------------------------
Cy.herreiRC86       --------------------------------------------------
Cy.brachyscyphus7204 --------------------------------------------------
Cy.loddigesianus7203 --------------------------------------------------
Cy.falcatus7637     --------------------------------------------------
Eus.darwini         --------------------------------------------------
Ge.namaquensiAMV635 ----------------CT------------TTCCCAATA-CCCGCTAC--
Hae.montanus7163    --------------------------------------------------
Hae.coccineusAMV632 --------------------------------------------------
Hae.albiflos7517    -------------------GGCAACAACACTTCCCTATACCCCGCTAC-T
Hae.crispus7252     G-AAAAGGAGGGA--TCTCGGCAACCAGCAATTCCTATACCC-GGTAC--
Hae.crispus7260     --------------------------------------------------
Lap.martinezii      G-AAAAGGATAGA--TCTCGGCAACAACACTTCC-TATATCC-GCTAC--
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                        901                                                 950
Leu.autumnale           G-AAAAGGATAGA--TCTCGGCAACAACACTTCC-TGTATCC-ACTAC--
Ne.bowdenii             --------------------------------------------------
Ne.laticoma8090         G-AAAAGGATAGA--CCTCGGCAACCAGCCTTTCCTATATCCCGCTAC--
Na.sp.7607              --------------------------------------------------
Na.sp.7608              --------------------------------------------------
Na.tazetta              --------------------------------------------------
Pan.canariense          G-AAAAGGATAGA--TCTCGGCAACAACACTTCC-TATATCC-GCTAC--
Sten.variegatum         --------------------------------------------------
Phae.dubia              --------------------------------------------------
Par.weberbaueri         --------------------------------------------------
Ster.lutea              G-AAAAGGATAGA--TCTCGGCAACAACACTTCC-TATATCC-GCTAC--
Sc.membranaceus7246     GTAAA-GGATAGG--TCTCGGCAACAACACTTCC-TATATCC-GCTAC--
Str.salter7245          --------------------------------------------------
Sc.multiflorus7919      --------------------------------------------------
Sc.membranaceus7917     --------------------------------------------------
Va.parviflora           G-AAAAGGATAGA--TCTCGGCAACAACACTTCC-TATATCC-GCTAC--
Hya.orientalis          --------------------------------------------------
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                        951                                                1000
Ama.belladonna          --------------------------------------------------
Bo.distich7172          TCTTTCAGGAGTATATTTATGCAC-TTGC-TCATG---ATTATGGTTT--
Br.gregaria7157         --------------------------------------------------
Cro.flava7256           --------------------------------------------------
Br.radulosanata7629     --------------------------------------------------
Cl.miniata8095          TCTTTCAGGAGTATATTTAGGCAC-TTGC-TCATG---ATTATGGTTTT-
Cl.miniataRC14          TCTTTCAGGAGTATATTTATGCAC-TTGC-TCATG---ATTATGGTTT--
Cl.caulescens8092       TCTTTCAGGAGTATATTTATGCAC-TTGC-TCATG---ATTATGGTTT--
Cl.miniata              --------------------------------------------------
Cl.nobilisRC6b          TCTTTCAGGAGTATATTTATGCAC-TTGC-TCATG---ATTATGGTTT--
Cl.cyrtantiflora8094    CCTTTCCAAAAAATATTTATCCAA-TTTC-TCATT---ATTATGGTTT--
Chl.fragrans            --------------------------------------------------
Calo.lutea              --------------------------------------------------
Cr.euchrophyllRC96      TCTTTCAGGAGTATATTTATGCAC-TTGC-TCATG---ATTATGGTTT--
Cr.acauleRC106          TTTCTTGGAGGATATTTAATGCAC-TTGC-CCAGG---ATAAGGGTT--A
Cr.acaulglaucRC105      TCTTTCAGGAGTATATTTATGCACCTTCCTTCATG--AATTATGGTTTT-
Cr.bulbispermumRC95     TCTTTCCGGAGTATATTTATGCAC-TTGGCGCATGG--ATTATGGTGT--
Cr.campanulatum7167     TCTTTCAGGAGTATATTTATGCAC-TTGC-TCATG---ATTATGGTTT--
Cr.foetidumRC98         TCTTTCAGGAGTATATTTATGCAC-TTGC-TCATG---ATTATGGTTT--
Cr.graminicola7630      TCTTTCAGGAGTATATTTATGCAC-TTGC-TCATG---ATTATGGTTT--
Cr.lugardii7632         TCTTTCAGGAGTATATTTATGCAC-TTGC-TCATG---ATTATGGTTT--
Cr.macowanii7168        TCTTTCAGGAGTATATTTATGCAC-TTGC-TCATG---ATTATGGTTT--
Cr.nearmacowanRC100     TCTTTCAGGAGTATATTTATGCAC-TTGC-TCATG---ATTATGGTTT--
Cr.buphanoidesRC102     TCTTTGCAGGAGTATATTTATGCACTTGC-TCATG---ATTATGGTTT--
Cr.acauleRC38           TCTTTCCAGGAGTATATTTATGCACTTGCCTCATG---ATTATGGTTT--
Cr.buphanoides7631      TCTTTCAGGAGTATATTTATGCAC-TTGC-TCATG---ATTATGGTTT--
Cr.carolschmidRC97      TCTTTCAGGAGTATATTTATGCAC-TTGC-TCATG---ATTATGGTTT--
Cr.lineareRC99          TCTTTCAGGAGTATA-TTATGCAC-TTGC-TCATG---ATTATGGTTT--
Cr.minimumRC37          TCTTTCAGGAGTATATTTATGCAC-TTGC-TCATG---ATTATGGTTT--
Cr.paludosumRC41        TCTTTCAGGAGTATATTTATGCAC-TTGC-TCATG---ATTATGGTTT--
Cr.variabileRC44        TCTTTCAGGAGTATATTTATGCAC-TTGC-TCATG---ATTATGGTTT--
Cr.moorei7921           TCTTTCAGGAGTATA-TTATGCAC-TTGC-TCATG---ATTATGGTTT--
Cy.elatus7636           CTTTCCAGGAGTATATTTATGCAC-TTGCTCCATG---ATTATGGTTT--
Cy.elatusRC93           TCTTTCAGGAGTATATTTATGCAC-TTGC-TCATG---ATTATGGTTT--
Cy.mackeniiRC87         -----------------TA-GCAC-TTGCTCCATG---ATTATGGTTT--
Cy.obliquus7278         --------------------------------------------------
Cy.ochroleucus7639      --------------------------------------------------
Cy.sanguineusRC94       ------------------------------------------AT-------
Cy.staadensis7316       --------------------G------GCTCCATG--ATTTATGGTTTT-
Cy.labiatus7212         --------------------------------------------------
Cy.smithiae7214         --------------------------------------------------
Cy.elatus7198           --------------------------------------------------
Cy.herreiRC86           --------------------------------------------------
Cy.brachyscyphus7204    --------------------------------------------------
Cy.loddigesianus7203    --------------------------------------------------
Cy.falcatus7637         ---------A-TAT-TT-ATGCAC-TTGCTCCATG---ATTATGGTTT--
Eus.darwini             --------------------------------------------------
Ge.namaquensiAMV635     TCTTTCAGGAGTATATTTATGCAC-TTGCTCCATG---ATTATGGTTT--
Hae.montanus7163        --------------------------------------------------
Hae.coccineusAMV632     --------------------------------------------------
Hae.albiflos7517        TTTTTCAGGAGTATATTTATGCACTTGCCTCCATG---ATTATGGTTT--
Hae.crispus7252         TCTTTCAGGAGTATATTTATGCACCTTGC-TCATG---ATTATGGTTT--
Hae.crispus7260         --------------------------------------------------
Lap.martinezii          TCTTTCAGGAGTATATTTATGCGC-TTGC-CCATG---ATTATGGTTT--
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                        951                                                1000
Leu.autumnale           TCTTTCAGGAGTATATTTATGCGC-TTGC-TCATT---ATTATGGTTT--
Ne.bowdenii             --------------------------------------------------
Ne.laticoma8090         TCTTTCAGGAGTATATTTATGCAC-TTGC-TCAGG---ATTATGGTTT--
Na.sp.7607              --------------------------------------------------
Na.sp.7608              --------------------------------------------------
Na.tazetta              --------------------------------------------------
Pan.canariense          TCTTTCAGGAGTATATTTATGCAC-TTGC-TCATG---ATTATGGTTT--
Sten.variegatum         --------------------------------------------------
Phae.dubia              --------------------------------------------------
Par.weberbaueri         --------------------------------------------------
Ster.lutea              TCTTTCAGGAGTATATTTATGCAC-TTGC-CCATG---ATTATGATTT--
Sc.membranaceus7246     TCTTTCAGGAGTATATTTATGCAC-TTGC-TCAGG---ATTATGGTTT--
Str.salter7245          T-TTCCAGGAGAATATTTATGCCACTTGCCTCATG---ATTATGGTTT--
Sc.multiflorus7919      --------------------------------------------------
Sc.membranaceus7917     --------------------------------------------------
Va.parviflora           TCTTTCAGGAGTATATTTATGCAC-TTGC-TCATT---ATTATGGTTT--
Hya.orientalis          --------------------------------------------------
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                        1001                                                1050
Ama.belladonna          ------------------------------------------------TTGG-
Bo.distich7172          -AAACGGTTCGA---TTTTTTACGAACCC------GCGGGAGTTCTTGG-
Br.gregaria7157         ------------------------------------------------------
Cro.flava7256           ---------CGA---TTTTTTACGAACCCC-----GCGGGAGTTCTTGG-
Br.radulosanata7629     ------------------------------------------------------
Cl.miniata8095          AAAATGGTTCGA--TTTTTTTACGAATCT-----GCGGAAAGTTTTGG--
Cl.miniataRC14          -AAATGGTTCGA---TTTTTTACGAATCT------GCGGAAGTTTTTGG-
Cl.caulescens8092       -AAATGGTTCGA---TTTTTTACGAATCT------GCGGAAGTTTTTGG-
Cl.miniata              ------------------------------------------------TTGG-
Cl.nobilisRC6b          -AAATGGTTCGA---TTTTTTACGAATCT------GCGGAAGTTTTTGG-
Cl.cyrtantiflora8094    AAAATGGTTTGAA-TTTTTTAATAAATCT-----CCCGAAAGTTTTGGG-
Chl.fragrans            ------------------------------------------------TTGG-
Calo.lutea              ------------------------------------------------TTGG-
Cr.euchrophyllRC96      -AAATGGTTCGA---TTTTTTACGAACCC------GCGGGAGTTCTTGG-
Cr.acauleRC106          AAAAGGGTTCGA--TTTTTTTACGAACCC-----GCGGGA-GTTCTTGG-
Cr.acaulglaucRC105      -AAATGTTTCGA--TTTTTTTACGAACCTC-----GCGGGAGTTCTTGGG
Cr.bulbispermumRC95     -AAATGGGGC-A---TTTTTGGGGGGCCC------GCGG-AATTCTTGG-
Cr.campanulatum7167     -AAATGGTTCGA---TTTTTTACGAACCC------GCGGGAGTTCTTGG-
Cr.foetidumRC98         -AAATGGTTCGA---TTTTTTACGAACCCG-----CGGGAGTTTCTTGG-
Cr.graminicola7630      -AAATGGTTCGA---TTTTTTACGAACCC------GCGGGAGTTCTTGG-
Cr.lugardii7632         -AAATGGTTCGA---TTTTTTACGAACCC------GCGGGAGTTCTTGG-
Cr.macowanii7168        -AAATGGTTCGA---TTTTTTACGAACCC------GCGGGAGTTCTTGG-
Cr.nearmacowanRC100     -AAATGGTTCGA---TTTTTTACGAACCC------GCGGGAGTTCTTGG-
Cr.buphanoidesRC102     -AAATGGTTCGA---TTTTTTACGAACCC------GCGGGAGTTCTTGG-
Cr.acauleRC38           -AAATGGTTCGA---TTTTTTACGAACCC-----GCGGGAGTTTCTTGG-
Cr.buphanoides7631      -AAATGGTTCGA---TTTTTTACGAACCC------GCGGGAGTTCTTGG-
Cr.carolschmidRC97      -AAATGGTTCGA---TTTTTTACGAACCC------GCGGGAGTTCTTGG-
Cr.lineareRC99          -AAATGGTTCGA---TTTTTTACGAACCC------GCGGGAGTTCTTGG-
Cr.minimumRC37          -AAATGGTTCGA---TTTTTTACGAACCC------GCGGGAGTTCTTGG-
Cr.paludosumRC41        -AAATGGTTCGA---TTTTTTACGAACCC------GCGGGAGTTCTTGG-
Cr.variabileRC44        -AAATGGTTCGA---TTTTTTACGAACCC------GCGGGAGTTCTTGG-
Cr.moorei7921           -AAATGGTTCGA---TTTTTTACGAACCC------GCGGGAGTTCTTGG-
Cy.elatus7636           -AAATGGTTCGA---TTTTTTACGAATCC------GCGGAAGTTTTTGG-
Cy.elatusRC93           -AAATGGTTC-AA--TTTTTTACGAATCC------GCGGAAGTTTTTGG-
Cy.mackeniiRC87         -AAATGTTTCCAA--TTTTTTACGAATCC------GCGGAAGTTTTTGG-
Cy.obliquus7278         ------------------------------------------------------
Cy.ochroleucus7639      ------------------------------------------------------
Cy.sanguineusRC94       -A-------C-AA--TTTTTTACGAATCC------GCGGAAGTTTTTTGG
Cy.staadensis7316       AAATGGGTTCCAATTTTTTAACGAA-TCC------GCGGAAGTTTCTGG-
Cy.labiatus7212         ------------------------------------------------------
Cy.smithiae7214         ------------------------------------------------------
Cy.elatus7198           ------------------------------------------------------
Cy.herreiRC86           ------------------------------------------------------
Cy.brachyscyphus7204    ------------------------------------------------------
Cy.loddigesianus7203    ------------------------------------------------------
Cy.falcatus7637         -AAATGGTTC-AA-TTTTTTTACGAATCC------GCGGAAGTTTTTGG-
Eus.darwini             ------------------------------------------------TTGG-
Ge.namaquensiAMV635     -AAATGGTTCGA---TTTTTTACGAATCCT-----GCGGAAGTTTTTGG-
Hae.montanus7163        ------------------------------------------------------
Hae.coccineusAMV632     ------------------------------------------------------
Hae.albiflos7517        -AAATGGTTCGA---TTTTTTACGAATCT------GCGGAAGTTTTTGG-
Hae.crispus7252         -AAATGGTTCGGA--TTTTTTATGAATCT------GCGGAAGTTTTTGG-
Hae.crispus7260         ---------C------------CGAATC-T-----GCGGAAGTTTTTGG-
Lap.martinezii          -AAATGGTTCGA---TTTTTTACGAATCC------GCGGAAGTTTTTGG-
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                    1001                                                1050
Leu.autumnale       -AAATGTTTCAA---TTTTTTACGAATCT------GCAGAAGTTTTTGG-
Ne.bowdenii         ----------------------------------------------TTGG-
Ne.laticoma8090     -AAATGGTTCGA---TTTTTTACGAACCC------GCGGGAGTTCTTGG-
Na.sp.7607          --------------------------------------------------
Na.sp.7608          --------------------------------------------------
Na.tazetta          ----------------------------------------------TTGG-
Pan.canariense      -AAATGATTCGA---TTTTTTACGAATCC------GCGGAAGTTTTTGG-
Sten.variegatum     ----------------------------------------------TTGG-
Phae.dubia          ----------------------------------------------TTGG-
Par.weberbaueri     ----------------------------------------------TTGG-
Ster.lutea          -AAATGATTCGA---TTTTTTACGAATCC------GCGGAAGTTTTTGG-
Sc.membranaceus7246 -AAATGGTTCGA---TTTTTTACGAATCT------GCGGAAGTTTTTGG-
Str.salter7245      -AAATGGTTCGA---TTTTTTACGAACCC------GCGGGAGTTTCTTGG
Sc.multiflorus7919  --------------------------------------------------
Sc.membranaceus7917 --------------------------------------------------
Va.parviflora       -AAATGGTTCGA---TTTTTTACGAATTC------GCGGAAGTTTTTGG-
Hya.orientalis      ----------------------------------------------TTGG-
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                          1051                                                1100
Ama.belladonna            TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Bo.distich7172            TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Br.gregaria7157           --------------------------------------------------
Cro.flava7256             TTATGACAATAAATCCTAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Br.radulosanata7629       --------------------------------------------------
Cl.miniata8095            TTATGACAATAAATC-TAGTTTAGCACTGGTA--AAACGTTTAATTGCT-
Cl.miniataRC14            TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cl.caulescens8092         TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cl.miniata                TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cl.nobilisRC6b            TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cl.cyrtantiflora8094      TTATGACAATAAATT-TATTTTAGCACGGGTAGGAAACGTTTAACTCCT-
Chl.fragrans              TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Calo.lutea                TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cr.euchrophyllRC96        TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cr.acauleRC106            TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cr.acaulglaucRC105        TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cr.bulbispermumRC95       TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cr.campanulatum7167       TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cr.foetidumRC98           TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cr.graminicola7630        TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cr.lugardii7632           TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cr.macowanii7168          TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cr.nearmacowanRC100       TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cr.buphanoidesRC102       TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cr.acauleRC38             TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cr.buphanoides7631        TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cr.carolschmidRC97        TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cr.lineareRC99            TTATGACAATAAATC-TAGTTTAGTACTTGTA--AAACGTTTAATTACT-
Cr.minimumRC37            TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cr.paludosumRC41          TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cr.variabileRC44          TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cr.moorei7921             TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cy.elatus7636             TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cy.elatusRC93             TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cy.mackeniiRC87           TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cy.obliquus7278           --------------------------------------------------
Cy.ochroleucus7639        --------------------------------------------------
Cy.sanguineusRC94         GTATGACAATAAATCTGGTTTGGGCACTTGTA--AAACGTTTAATTACT-
Cy.staadensis7316         TTATGACAATAAATCCTAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cy.labiatus7212           --------------------------------------------------
Cy.smithiae7214           --------------------------------------------------
Cy.elatus7198             --------------------------------------------------
Cy.herreiRC86             --------------------------------------------------
Cy.brachyscyphus7204      --------------------------------------------------
Cy.loddigesianus7203      ------C--TA------GGTTTAGCACTTGTTAAAACCGTTTAATTACTC
Cy.falcatus7637           TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Eus.darwini               TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Ge.namaquensiAMV635       TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Hae.montanus7163          --------------------------------------------------
Hae.coccineusAMV632       --------------------------------------------------
Hae.albiflos7517          TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Hae.crispus7252           TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Hae.crispus7260           TTATGACAATAAATTCTAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Lap.martinezii            TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
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                        1051                                                1100
Leu.autumnale           TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Ne.bowdenii             TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Ne.laticoma8090         TTATGACAATAAATC-TAGTTTAGCGCTTGTA--AAACGTTTAATTACT-
Na.sp.7607              --------------------------------------------------
Na.sp.7608              --------------------------------------------------
Na.tazetta              TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Pan.canariense          TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Sten.variegatum         TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Phae.dubia              TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Par.weberbaueri         TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Ster.lutea              TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Sc.membranaceus7246     TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Str.salter7245          TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACC-
Sc.multiflorus7919      --------------------------------------------------
Sc.membranaceus7917     --------------------------------------------------
Va.parviflora           TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Hya.orientalis          TTATGATAATAAATC-TAGTTTAGCACTTGTA--AAACGCTTAATTACT-
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                        1101                                                1150
Ama.belladonna          CGAATCTATC-AACAGAATTCTTTGATTTC------TTTGGTTAATGATT
Bo.distich7172          CGAATCTATC-AACATAATTCTTTGATTTC------TTTGGTTAATGATT
Br.gregaria7157         --------------------------------------------------
Cro.flava7256           CGAATCTATC-AACAGAATTCTTTGATTTCC-----TTTGGTTAATGATT
Br.radulosanata7629     --------------------------------------------------
Cl.miniata8095          CGAATCTATC-AACAGAAATCAAAGATTTC------TTTGGTTAATGATT
Cl.miniataRC14          CGAATCTATC-AACAGAAATCAAAGATTTC------TTTGGTTAATGATT
Cl.caulescens8092       CGAATCTATC-AACAGAAATCAAAGATTTC------TTTGGTTAATGATT
Cl.miniata              CGAATCTATC-AACAGAAATCAAAGATTTC------TTTGGTTAATGATT
Cl.nobilisRC6b          AGAATCTATC-AACAGAAATCAAAGATTTCTTTGGTTTTGGTTAATGATT
Cl.cyrtantiflora8094    AGAATCTATC-AACA-AAATCAAAAATTTCTTTCC-TTTGCTTAAT-ATT
Chl.fragrans            CGAATCTATC-AACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Calo.lutea              CGAAAATATC-AACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Cr.euchrophyllRC96      CGAATCTATC-AACAGAATTCTTTGATTTC------TTTGGTTAATGATT
Cr.acauleRC106          CGAATCTATC-AACAGAATTCTTTGATTTC------TTTGGTTAATGATT
Cr.acaulglaucRC105      CGAATCTATCCAACAGAATTCTTTGATTTC-----TTTGGTTAATGATT
Cr.bulbispermumRC95     CGAATCTATC-AACAGAATTCTTTGATTTC------TTTGGTTAATGATT
Cr.campanulatum7167     CGAATCTATC-AACAGAATTCTTTGATTTC------TTTGGTTAATGATT
Cr.foetidumRC98         CGAATCTATC-AACAGAATTCTTTGATTTC------TTTGGTTAATGATT
Cr.graminicola7630      CGAATCTATC-AACAGAATTCTTTGATTTC------TTTGGTTAATGATT
Cr.lugardii7632         CGAATCTATC-AACAGAATTCTTTGATTTC------TTTGGTTAATGATT
Cr.macowanii7168        CGAATCTATCCAACAGAATTCTTTGATTTC------TTTGGTTAATGATT
Cr.nearmacowanRC100     CGAATCTATC-AACAGAATTCTTTGATTTC------TTTGGTTAATGATT
Cr.buphanoidesRC102     CGAATCTATC-AACAGAATTCTTTGATTTC------TTTGGTTAATGATT
Cr.acauleRC38           CGAATCTATC-AACAGAATTCCTTTGATTTC-----TTTGGTTAATGATT
Cr.buphanoides7631      CGAATCTATC-AACAGAATTCTTTGATTTC------TTTGGTTAATGATT
Cr.carolschmidRC97      CGAATCTATC-AACAGAATTCTTTGATTTC------TTTGGTTAATGATT
Cr.lineareRC99          CGAATCTATC-AACAGAATTCTTTGATTTC------TTTGGTTAATGATT
Cr.minimumRC37          CGAATCTATC-AACAGAATTCTTTGATTTC------TTTGGTTAATGATT
Cr.paludosumRC41        CGAATCTATC-AACAGAATTCTTTGATTTC------TTTGGTTAATGATT
Cr.variabileRC44        CGAATCTATC-AACAGAATTCTTTGATTTC------TTTGGTTAATGATT
Cr.moorei7921           CGAATCTATC-AACAGAATTCTTTGATTTC------TTTGGTTAATGATT
Cy.elatus7636           CGAATCTATC-AACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Cy.elatusRC93           CGAATCTATC-AACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Cy.mackeniiRC87         CGAATCTATC-AACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Cy.obliquus7278         --------------------------------------------------
Cy.ochroleucus7639      --------------------------------------------------
Cy.sanguineusRC94       GGAATCTATC-AACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Cy.staadensis7316       CGAATCTAT-CAACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Cy.labiatus7212         --------------------------------------------------
Cy.smithiae7214         --------------------------------------------------
Cy.elatus7198           --------------------------------------------------
Cy.herreiRC86           --------------------------------------------------
Cy.brachyscyphus7204    --------------------------------------------------
Cy.loddigesianus7203    GAATGCTATCCAACAGAAATTCTTGTGAATTTC---TTTGGTTTAATGAT
Cy.falcatus7637         GAATGCTATACAACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Eus.darwini             CGAATCTATC-AACAGAAATCCTTGATTTC------TTTGGTTAATGATT
Ge.namaquensiAMV635     CGAATCTATC-AACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Hae.montanus7163        --------------------------------------------------
Hae.coccineusAMV632     --------------------------------------------------
Hae.albiflos7517        CGAATCTATA-AACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Hae.crispus7252         CGAATCTATC-AACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Hae.crispus7260         CGAATCTATC-AACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Lap.martinezii          CGAATCTATC-AACAGAAATCTTTGATTTC------TTTGGTTAATGATT
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                        1101                                                1150
Leu.autumnale           CGAATCTATC-AACAGAAATCTTTGATTTC------TTTGGTTAATTATT
Ne.bowdenii             CGAATCTATC-AACAGAATTCTTTGATTTC------TTTGGTTAATGATT
Ne.laticoma8090         CGAATCTATC-AACAGAATTCTTTGATTTC------TTTGGTTAATGATT
Na.sp.7607              --------------------------------------------------
Na.sp.7608              --------------------------------------------------
Na.tazetta              CGAATCTATC-AACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Pan.canariense          CGAATCTATC-AACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Sten.variegatum         CGAATCTATC-AACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Phae.dubia              CGAATCTATC-AACAGAAATCAAAGATTTC------TTTGGTTAATGATT
Par.weberbaueri         CGAATCTATC-AACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Ster.lutea              CGAATCTATC-AACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Sc.membranaceus7246     CGAATCTATC-AACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Str.salter7245          CGAATCTATC-AACAGAATTCTTTAATTTC------TTTGGTTAATGATT
Sc.multiflorus7919      --------------------------------------------------
Sc.membranaceus7917     --------------------------------------------------
Va.parviflora           CGAATCTATC-AACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Hya.orientalis          CGAATCTATC-AACAGAATTATTTGATT-A------TTTCGGTTAATGAT
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                        1151                                                1200
Ama.belladonna          -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Bo.distich7172          -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Br.gregaria7157         --------------------------------------------------
Cro.flava7256           -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Br.radulosanata7629     --------------------------------------------------
Cl.miniata8095          -CTAA-CCAAAATCG--ATTTGTTGGA-C--ACACCCACAACAA---TTT
Cl.miniataRC14          -CTAA-CCAAAATCG--ATTTGTTGGA-C--ACACCCACAACAA---TTT
Cl.caulescens8092       -CTAA-CCAAAATCG--ATTTGTTGGA-C--ACACCCACAACAA---TTT
Cl.miniata              -CTAA-CCAAAATCG--ATTTGTTGGA-C--ACACCCACAACAA---TTT
Cl.nobilisRC6b          -CTAA-CCAAAATCG--ATTTGTTGGA-C--ACACCCACAACAA---TTT
Cl.cyrtantiflora8094    -CTAA-CCAAAATCG--ATTTGTTGGGGC--ACACCCACAACAAGG-TTT
Chl.fragrans            -CTAA-CCAAAATCG--ATTTGTTGGG-T--ACACCCACAACAA---TTT
Calo.lutea              -CTAA-CCAAAATCA--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cr.euchrophyllRC96      -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cr.acauleRC106          -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cr.acaulglaucRC105      -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cr.bulbispermumRC95     -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cr.campanulatum7167     -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cr.foetidumRC98         -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cr.graminicola7630      -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cr.lugardii7632         -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cr.macowanii7168        -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cr.nearmacowanRC100     -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cr.buphanoidesRC102     -CTAA-CCAAAATCG--ATTTGGTGGG-C--ACACCCACAACAA---TTT
Cr.acauleRC38           -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cr.buphanoides7631      -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cr.carolschmidRC97      -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cr.lineareRC99          -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cr.minimumRC37          -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cr.paludosumRC41        -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cr.variabileRC44        -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cr.moorei7921           -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cy.elatus7636           -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cy.elatusRC93           -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cy.mackeniiRC87         -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cy.obliquus7278         --------------------------------------------------
Cy.ochroleucus7639      --------------------------------------------------
Cy.sanguineusRC94       ACTAA-CCAAAATCG--ATTTGGTTGGGC--ACACCCACAACAA--TTTT
Cy.staadensis7316       -CTAA-CCAAAATCCG-ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cy.labiatus7212         --------------------------------------------------
Cy.smithiae7214         --------------------------------------------------
Cy.elatus7198           --------------------------------------------------
Cy.herreiRC86           --------------------------------------------------
Cy.brachyscyphus7204    --------------------------------------------------
Cy.loddigesianus7203    TCTAAACCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cy.falcatus7637         -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Eus.darwini             -CTAA-CCAAAATCG--ATTTGTTGGG-T--ACACCCACAACAA---TTT
Ge.namaquensiAMV635     -CTAA-CCAAAATCG--ATTTGTTGAG-C--ACACCCACAACAA---TTT
Hae.montanus7163        --------------------------------------------------
Hae.coccineusAMV632     --------------------------------------------------
Hae.albiflos7517        -CTAA-ACAAAATCG--ATTTGTTGAG-C--ACACCCACAACAA---TCT
Hae.crispus7252         -CTAA-CCAAAATCG--ATTTGTTGAG-C--ACACCCACAACAA---TTT
Hae.crispus7260         -CTAA-CCAAAATCG--ATTTGTTGAG-C--ACACCCACAACAA---TTT
Lap.martinezii          -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACTCACAACAA---TTT
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                        1151                                                1200
Leu.autumnale           -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Ne.bowdenii             -CTAA-CCAAAACCA--ATTTGTTGGG-C--ACACCCACAACAA---ATT
Ne.laticoma8090         -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Na.sp.7607              --------------------------------------------------
Na.sp.7608              --------------------------------------------------
Na.tazetta              -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAC---TTT
Pan.canariense          -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Sten.variegatum         -CTAA-CCAAAATCG--ATTTGTTGGG-T--ACACCCACAACAA---TTT
Phae.dubia              -CTAA-CCAAAATCG--ATTTGTTGGG-T--ACACCCACAACAA---TTT
Par.weberbaueri         -CTAA-CCAAAATCG--ATTTGTTGGG-T--ACACCCACAACAA---TTT
Ster.lutea              -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Sc.membranaceus7246     -CTAA-CCAAAATCG--ATTTGTTGAG-C--ACACCCACAACAA---TTT
Str.salter7245          -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Sc.multiflorus7919      --------------------------------------------------
Sc.membranaceus7917     --------------------------------------------------
Va.parviflora           -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Hya.orientalis          TCTAA-TCAAAATGG--ATTTGTTGGG-A--ACA---AC--CA----TTT
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                          1201                                                1250
Ama.belladonna            TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Bo.distich7172            TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Br.gregaria7157           --------------------------------------------------
Cro.flava7256             TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Br.radulosanata7629       --------------------------------------------------
Cl.miniata8095            TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cl.miniataRC14            TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cl.caulescens8092         TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cl.miniata                TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cl.nobilisRC6b            TTTTTATTCTC--ATTTTTATTCTCAAATGGAT--ATC-AGAAAGTTTTT
Cl.cyrtantiflora8094      TTTCTATTCTC--ATTTTTATTCTCAAA-G-AT--ATC-A-AAA-TTTTT
Chl.fragrans              TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Calo.lutea                TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cr.euchrophyllRC96        TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cr.acauleRC106            TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cr.acaulglaucRC105        TTTTTATTCTC--GTTTTTATTCTCCAAATGAT--ATCCAGAAAGTTTTT
Cr.bulbispermumRC95       TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cr.campanulatum7167       TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cr.foetidumRC98           TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cr.graminicola7630        TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cr.lugardii7632           TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cr.macowanii7168          TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cr.nearmacowanRC100       TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cr.buphanoidesRC102       TTTTTATTCTGC-GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cr.acauleRC38             TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cr.buphanoides7631        TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cr.carolschmidRC97        TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cr.lineareRC99            TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cr.minimumRC37            TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cr.paludosumRC41          TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cr.variabileRC44          TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cr.moorei7921             TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cy.elatus7636             TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cy.elatusRC93             TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cy.mackeniiRC87           TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cy.obliquus7278           --------------------------------------------------
Cy.ochroleucus7639        --------------------------------------------------
Cy.sanguineusRC94         TTTTTATTACTCGGTTTTTATTCCTCAAATGAT--ATCCAGAAAGTTTTT
Cy.staadensis7316         TTTTTATTCTCC-GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cy.labiatus7212           --------------------------------------------------
Cy.smithiae7214           --------------------------------------------------
Cy.elatus7198             --------------------------------------------------
Cy.herreiRC86             --------------------------------------------------
Cy.brachyscyphus7204      --------------------------------------------------
Cy.loddigesianus7203      TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATCCAGAAAGTTTTT
Cy.falcatus7637           TTTTTATTC----GTTTTTATTCCTCAAATGAT--ATC-AGAAAGTTTTT
Eus.darwini               TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTCT
Ge.namaquensiAMV635       TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Hae.montanus7163          --------------------------------------------------
Hae.coccineusAMV632       --------------------------------------------------
Hae.albiflos7517          TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Hae.crispus7252           TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Hae.crispus7260           TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Lap.martinezii            TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
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                        1201                                                1250
Leu.autumnale           TTTTTATTCCC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Ne.bowdenii             TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Ne.laticoma8090         TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Na.sp.7607              --------------------------------------------------
Na.sp.7608              --------------------------------------------------
Na.tazetta              TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Pan.canariense          TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Sten.variegatum         TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Phae.dubia              TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Par.weberbaueri         TTTTTATTTTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Ster.lutea              TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Sc.membranaceus7246     TTTTTATTCCTC-GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Str.salter7245          TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Sc.multiflorus7919      ----TAT------G--------CTCAAATG-AT--ATC-AGAAAGTTTT-
Sc.membranaceus7917     --------------------------------------------------
Va.parviflora           TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Hya.orientalis          TTTTTATTCTC--ATTTTGATTCTCAAATG-AT--ATC-AGAAAGTTTTG
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                        1251                                                1300
Ama.belladonna          -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTACCTTATTTC
Bo.distich7172          -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTACCTTATTTC
Br.gregaria7157         --------------------------------------------------
Cro.flava7256           -CAATTATTGCAGAAATT-CCATTC-TCGCTGCGATTAGTACCTTATTTC
Br.radulosanata7629     --------------------------------------------------
Cl.miniata8095          -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTATCTTATTTC
Cl.miniataRC14          -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTATCTTATTTC
Cl.caulescens8092       -CAATTATTGTAGAAATT-CCATTCCTCGCTGCGATTAGTATCTTATTTC
Cl.miniata              -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTATCTTATTTC
Cl.nobilisRC6b          -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTATCTTATTTC
Cl.cyrtantiflora8094    -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTATCTTATTTC
Chl.fragrans            -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTATCTTATTTC
Calo.lutea              -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTATCTTATTTC
Cr.euchrophyllRC96      -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTACCTTATTTC
Cr.acauleRC106          -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTACCTTATTTC
Cr.acaulglaucRC105      GCAATTATTGTAGAAATT-CCCATTCCTCCTGCGATTAGTACCTTATTTC
Cr.bulbispermumRC95     -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTACCTTATTTC
Cr.campanulatum7167     -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTACCTTATTTC
Cr.foetidumRC98         -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTACCTTATTTC
Cr.graminicola7630      -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTACCTTATTTC
Cr.lugardii7632         -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTACCTTATTTC
Cr.macowanii7168        -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTACCTTATTTC
Cr.nearmacowanRC100     -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTACCTTATTTC
Cr.buphanoidesRC102     -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTACCTTATTTC
Cr.acauleRC38           -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTACCTTATTTC
Cr.buphanoides7631      -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTACCTTATTTC
Cr.carolschmidRC97      -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTACCTTATTTC
Cr.lineareRC99          -CAATTATTGTAGAAATT-CCATTC-TCGCGGCGATTAGTACCTTATTTC
Cr.minimumRC37          -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTACCTTATTTC
Cr.paludosumRC41        -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTACCTTATTTC
Cr.variabileRC44        -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGCACCTTATTTC
Cr.moorei7921           -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTACCTTATTTC
Cy.elatus7636           -CAATTATTGTAGAAATT-CCATTTCTCGCTGCGATTAGTATCTTATTTC
Cy.elatusRC93           -CCATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTATCTTATTTC
Cy.mackeniiRC87         -CCATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTATCTTATTTC
Cy.obliquus7278         --------------------------------------------------
Cy.ochroleucus7639      --------------------------------------------------
Cy.sanguineusRC94       CCCATTATTGTAGAAATTACCATTCCTCGCTGCGATTAGTATCTTATTTC
Cy.staadensis7316       -CCATTATTGTAGAAATTCCCATTC-TCGCTGCGATTAGTATCTTATTTC
Cy.labiatus7212         --------------------------------------------------
Cy.smithiae7214         --------------------------------------------------
Cy.elatus7198           --------------------------------------------------
Cy.herreiRC86           --------------------------------------------------
Cy.brachyscyphus7204    --------------------------------------------------
Cy.loddigesianus7203    ACCATTATTGTAGAAATTCCCATTC-TCGCTGCGATTAGTATCCTTATTT
Cy.falcatus7637         -CCATTATTGTAGAAATT-CCATTCCTCGCTGCGATTAGTATCCTTTTTC
Eus.darwini             -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTATCTTATTTC
Ge.namaquensiAMV635     -CAATTATTGTAGAAATT-CCATTCCTCGCTGCGGTTAGTATCTTATTTC
Hae.montanus7163        --------------------------------------------------
Hae.coccineusAMV632     --------------------------------------------------
Hae.albiflos7517        CCAATTATTGTAGAAATT-CCATTC-TCGCTGTGGTTAGTATCTTATTTC
Hae.crispus7252         -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGGTTAGTATCTTATTTC
Hae.crispus7260         -CAATTATTGTAGAAATT-CCATTCCTCGCTGCGGTTAGTATCTTATTTC
Lap.martinezii          -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTATCTTATTTC
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                        1251                                                1300
Leu.autumnale           -CTATTATTGTTGAAATT-CCATTC-TCGCTGCGATTAGTATCTTATTTC
Ne.bowdenii             -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTACCTTATTTC
Ne.laticoma8090         -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTACCTTATTTC
Na.sp.7607              --------------------------------------------------
Na.sp.7608              --------------------------------------------------
Na.tazetta              -CAATTATTGTAGAAATT-TCATTC-TCGCTGCGATTAGTATCTTATTTC
Pan.canariense          -CAATTATTGTAGAAATT-TCATTC-TCGCTGCGATTAGTATCTTATTTC
Sten.variegatum         -CCATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTATCTTATTTC
Phae.dubia              -CTATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTATCTTATTTC
Par.weberbaueri         -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTATCTTATTTC
Ster.lutea              -CAATTATTGTAGAAATT-TTATTC-TCGCTGCAATTAGTATCTTATTTC
Sc.membranaceus7246     -CAATTATTGTAGAAATTCCATTGCTCCGCTGCGGTTAGTATCTTATTTC
Str.salter7245          -CAATTATTGTAGAAATT-CCATTCCTCGCTGCGATTAGTACCTTATTTC
Sc.multiflorus7919      -CAATTATTGTAGAAATTACCATTC-TCGCTGCGGTTAGTATCTTATTTC
Sc.membranaceus7917     --------------------------------------------------
Va.parviflora           -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTATCTTATTTC
Hya.orientalis          -CAATTATTGTAGAAATT-CAGTTC-TCGCCGCAATTAGTATCTGATTTC
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                        1301                                                1350
Ama.belladonna          -GAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Bo.distich7172          -GAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Br.gregaria7157         --------------------------------------------------
Cro.flava7256           -GAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Br.radulosanata7629     --------------------------------------------------
Cl.miniata8095          -AAAGAAAAAGAAATCCCCAAATATC--AT--AATTTA-CGAT-CAATTC
Cl.miniataRC14          -AAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Cl.caulescens8092       -AAAGAAAAAGAAATACCAAAATATCC-AT--AATTTA-CGAT-CAATTC
Cl.miniata              -AAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Cl.nobilisRC6b          -AAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Cl.cyrtantiflora8094    -AAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Chl.fragrans            -AAAGAGAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Calo.lutea              -AAAGAAAAAGAAATACCGAAATATC--AT--AATTTA-CGAT-CAATTC
Cr.euchrophyllRC96      -GAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Cr.acauleRC106          -GAAGAAAAAGAAATACCAAAATATC--AT--AATTT--CGAT-CAATTC
Cr.acaulglaucRC105      -GAAGAAAAAGAAATCCCCAAAATATCCAT--AATTTATCGAT-CAATTC
Cr.bulbispermumRC95     -GAAGAAAAAGAAATACCAAAATATCC-AT--AATTT--CGAT-CAATTC
Cr.campanulatum7167     -GAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Cr.foetidumRC98         -GAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Cr.graminicola7630      -GAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Cr.lugardii7632         -GAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Cr.macowanii7168        -GAAGAAAAAGAAATACCAAAATATC--AT--AATTTC-CGAT-CAATTA
Cr.nearmacowanRC100     -GAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Cr.buphanoidesRC102     -GAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CCAATT
Cr.acauleRC38           -GAAGAAAAAGAAATACCAAAATATCA-TA--ATTTAG-CGAT-CAATTC
Cr.buphanoides7631      -GAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Cr.carolschmidRC97      -GAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Cr.lineareRC99          -GAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Cr.minimumRC37          -GAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Cr.paludosumRC41        -GAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Cr.variabileRC44        -GAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Cr.moorei7921           -GAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Cy.elatus7636           -AAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Cy.elatusRC93           -AAAGAAAAAGAAATACCAAAATATC--AT--AACCCCCCGAT-CAATTC
Cy.mackeniiRC87         -AAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Cy.obliquus7278         --------------------------------------------------
Cy.ochroleucus7639      --------------------------------------------------
Cy.sanguineusRC94       CAAAGAAAAAGAAATACCAAAATATGC-AT--ACTCCCCCGATGCAATTC
Cy.staadensis7316       -AAAGAAAAAGAAATACCAAAATATCC-AT--AATCCCCCGGT-CAATTC
Cy.labiatus7212         --------------------------------------------------
Cy.smithiae7214         --------------------------------------------------
Cy.elatus7198           --------------------------------------------------
Cy.herreiRC86           --------------------------------------------------
Cy.brachyscyphus7204    --------------------------------------------------
Cy.loddigesianus7203    CAAAGAAAAAGAAATACCAAAATATCC-AT--AATTTGACGATCCAATTC
Cy.falcatus7637         -AAAGAAAAAGAAATACCAAAATATC--AT--AACCCC-GC-T-CAATTC
Eus.darwini             -AAAGAGAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Ge.namaquensiAMV635     -AAAGAAAAAGAAATACCAAAATATGC-AT--AATTTA-CGATCCAATTC
Hae.montanus7163        --------------------------------------------------
Hae.coccineusAMV632     --------------------------------------------------
Hae.albiflos7517        -AAAGAAAAAGAAATACCAAAATATGC-AT--AATTTAGCGAT-CAATTG
Hae.crispus7252         -AAAGAAAAAGAAAT-CCAAAATATC--AT--AATTTA-CGAT-CAATTC
Hae.crispus7260         -AAAGAAAAAGAAATACCAAAATATGC-AT--AATTTA-CGATCCAATTC
Lap.martinezii          -AAAGAAAAAGAAATACAAAAATATC--AT--AATTTA-CGAT-CAATTC
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                        1301                                                1350
Leu.autumnale           -AAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Ne.bowdenii             -GAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Ne.laticoma8090         -GAAGAAAAAGAAATACCAAAATATC--AT--AATTTCACGAT-CAATTC
Na.sp.7607              --------------------------------------------------
Na.sp.7608              --------------------------------------------------
Na.tazetta              -AAAAAAAAAAAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Pan.canariense          -AAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Sten.variegatum         -AAAGAGAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Phae.dubia              -AAAGAGAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Par.weberbaueri         -AAAGAGAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Ster.lutea              -AAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Sc.membranaceus7246     -AAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Str.salter7245          -GAAGAAAAAGAAATACAAAAATATC--AT--AATTTA-CGATCCAATTC
Sc.multiflorus7919      -AAAGAAAAAGAAATACCAAAATATC--CC--CCCCGA-CGAT-CAATTC
Sc.membranaceus7917     --------------------------------------------------
Va.parviflora           -AAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Hya.orientalis          -AAAGAAAAAGAAATATCAAAATCTT--AT--AATTTA-CGAT-CAATTC
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                        1351                                                1400
Ama.belladonna          A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Bo.distich7172          A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Br.gregaria7157         --------------------------------------------------
Cro.flava7256           CATTCCAATTTTT--CTTTTTTTAGAGGACAAATTATCC---GCATTTAA
Br.radulosanata7629     -----------------C-----------C---TTATCC---GCATTTAA
Cl.miniata8095          A-TTACAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cl.miniataRC14          A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cl.caulescens8092       CA-TTCAATTTTT--CCCTTTTTAGAGGGCAAATTATC----GCATTTAA
Cl.miniata              A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cl.nobilisRC6b          A--TTCCATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cl.cyrtantiflora8094    A--TTCCATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Chl.fragrans            A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Calo.lutea              A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTGTC----GCATTTAA
Cr.euchrophyllRC96      A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cr.acauleRC106          A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cr.acaulglaucRC105      A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cr.bulbispermumRC95     A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cr.campanulatum7167     A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cr.foetidumRC98         A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cr.graminicola7630      A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cr.lugardii7632         A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cr.macowanii7168        CA-TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cr.nearmacowanRC100     A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cr.buphanoidesRC102     CA-TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cr.acauleRC38           A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cr.buphanoides7631      A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cr.carolschmidRC97      A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cr.lineareRC99          A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cr.minimumRC37          A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cr.paludosumRC41        A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cr.variabileRC44        A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cr.moorei7921           A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cy.elatus7636           A--TTCAATTTTT--CCCTTTTTAGAGGACAAAT-ATCT---GCATTTAA
Cy.elatusRC93           A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTCTC----GCATTTAA
Cy.mackeniiRC87         A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATCC---GCATTTAA
Cy.obliquus7278         --------------------------------------------------
Cy.ochroleucus7639      --------------------------------------------------
Cy.sanguineusRC94       A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cy.staadensis7316       A-CCCCCACTTTT--GCCTTTTGAGAGGGCAAATTATCC---GCATTTAA
Cy.labiatus7212         --------------------------------------------------
Cy.smithiae7214         --------------------------------------------------
Cy.elatus7198           --------------------------------------------------
Cy.herreiRC86           --------------------------------------------------
Cy.brachyscyphus7204    --------------------------------------------------
Cy.loddigesianus7203    CACCTCAATTTTTGCCCTTTTTTAGAGGACAAATTATC----GCATTTAA
Cy.falcatus7637         A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTCTAC---GCATTTAA
Eus.darwini             A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Ge.namaquensiAMV635     A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Hae.montanus7163        --------------------------------------------------
Hae.coccineusAMV632     --------------------------------------------------
Hae.albiflos7517        CC-CCCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Hae.crispus7252         A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCGTTTAA
Hae.crispus7260         A-TTCCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCGTTTAA
Lap.martinezii          A--TTCAATTTTT--CCCTTTTTAGAGGATAAATTATC----GCATTTAA
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                        1351                                                1400
Leu.autumnale           A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Ne.bowdenii             A--CTCAATTTTT--CCCTTTTTAGAGGACAAATTCCC----GCATTTAA
Ne.laticoma8090         A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Na.sp.7607              ------------------------------------------------
Na.sp.7608              ------------------------------------------------
Na.tazetta              A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Pan.canariense          A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Sten.variegatum         A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Phae.dubia              A--TTCCATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Par.weberbaueri         A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Ster.lutea              A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----ACATTTAA
Sc.membranaceus7246     A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----TCATTTAA
Str.salter7245          CATTCCAATTTTT--CCCTTTTTAGAGGACAAATTATCC---GCATTTAA
Sc.multiflorus7919      A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Sc.membranaceus7917     ------------------------------------------------
Va.parviflora           A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTCTC----GCATTTAA
Hya.orientalis          A--TTCCATTTTT---CTTTTTTAGAGGACAAATTATC----ACATTTAA
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                        1401                                                1450
Ama.belladonna          A-TTATATCTC-AGATATAC-TAATACCTTATCCC-ATACATA--TGGAA
Bo.distich7172          A-TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAA
Br.gregaria7157         ------------------------------------------------A
Cro.flava7256           A-TTATATCTCCAGATATAC-TAATACCCCATCCCCATACATA--TGGAA
Br.radulosanata7629     AATTATGTCTCCAGATATAC-TAATACCTCCTTCCCATCCATA--TGGAA
Cl.miniata8095          A-TTATGTCTC-AGATATAC-TAATACCCCATCCC-ATCCATA--TGGAA
Cl.miniataRC14          A-TTATGTCTC-AGATATAC-TAATACCCCATCCC-ATCCATA--TGGAA
Cl.caulescens8092       A-TTATGTCTC-AGATATAC-TAATACCCCATCCC-ATCCATA--TGGAA
Cl.miniata              A-TTATGTCTC-AGATATAC-TAATACCCCATCCC-ATCCATA--TGGAA
Cl.nobilisRC6b          A-TTATGTCTC-AGATATAC-TAATACCCCATCCC-ATCCATA--TGGAA
Cl.cyrtantiflora8094    A-TTATGT-TC-AGATATAC-TAATACCCCATCCC-ATCCATA--TTGAA
Chl.fragrans            A-TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAA
Calo.lutea              A-TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAA
Cr.euchrophyllRC96      A-TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAA
Cr.acauleRC106          A-TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAA
Cr.acaulglaucRC105      A-TTATATCTC-AGATATAC-TAATACCTCATCCCCATACATA--TGGAA
Cr.bulbispermumRC95     A-TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAA
Cr.campanulatum7167     A-TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAA
Cr.foetidumRC98         A-TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAA
Cr.graminicola7630      A-TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAA
Cr.lugardii7632         A-TTATATCTC-AGATATACCTAATACCTCATCCC-ATACATA--TGGAA
Cr.macowanii7168        A-TTATATCTC-AGATATAC-TAATACATCATCCC-ATACATA--TGGAA
Cr.nearmacowanRC100     A-TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAA
Cr.buphanoidesRC102     A-TTATAT-TC-AGATATAC-TAATACCTCCATCCCATACATA--TGGAA
Cr.acauleRC38           A-TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAA
Cr.buphanoides7631      A-TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAA
Cr.carolschmidRC97      A-TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAA
Cr.lineareRC99          A-TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAA
Cr.minimumRC37          A-TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAA
Cr.paludosumRC41        A-TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAA
Cr.variabileRC44        A-TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAA
Cr.moorei7921           A-TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAA
Cy.elatus7636           A-TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAA
Cy.elatusRC93           A-TTATGTCTTCAGATATAC-TAATACCTCATCCCCATCCATA--TGGAA
Cy.mackeniiRC87         A-TTATGTCTC-AGATATAC-TAATACCTCCATCCCATCCATA--TGGAA
Cy.obliquus7278         ------------------------------------------------
Cy.ochroleucus7639      ------------------------------------------------
Cy.sanguineusRC94       A-TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAA
Cy.staadensis7316       A-TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAA
Cy.labiatus7212         ------------------------------------------------
Cy.smithiae7214         ------------------------------------------------
Cy.elatus7198           ------------------------------------------------
Cy.herreiRC86           ------------------------------------------------
Cy.brachyscyphus7204    ------------------------------------------------
Cy.loddigesianus7203    A-ATATGTCTC-AGATATAC-TAATACCTCAGTTCCATCC-T--------
Cy.falcatus7637         A-TTAT-TCTC-AG-TATA-----------------------------
Eus.darwini             A-TTATGTCTC-AGATATGC-TAATACCTCATCCT-ATCCATA--TGGAA
Ge.namaquensiAMV635     A-TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAA
Hae.montanus7163        ------------------------------------------------
Hae.coccineusAMV632     ------------------------------------------------
Hae.albiflos7517        A-TTATGTCTC-AGATATAC-TAATACCTCCCCCCCATCCATA--TGGAA
Hae.crispus7252         A-TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAA
Hae.crispus7260         A-TTATGTCTC-AGATATAC-TAATACCTCATCCCCATCCATA--TGGAA
Lap.martinezii          A-TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAA
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                      1401                                                1450
Leu.autumnale         A-TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAA
Ne.bowdenii           A-TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAA
Ne.laticoma8090       A-TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAA
Na.sp.7607            ---------------------------------------------------
Na.sp.7608            ---------------------------------------------------
Na.tazetta            A-TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAA
Pan.canariense        A-TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAA
Sten.variegatum       A-TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAA
Phae.dubia            A-TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAA
Par.weberbaueri       A-TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAA
Ster.lutea            A-TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCACA--TGGAA
Sc.membranaceus7246   A-TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAA
Str.salter7245        A-TTATATCTC-AGATATAACTAATACCTCATCCCATAACATA--TGGAA
Sc.multiflorus7919    A-TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAA
Sc.membranaceus7917   ---------------------------------------------------
Va.parviflora         A-TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAA
Hya.orientalis        A-TTATGTCTC-AGATATAC-TAATACCGTATCCC-ATTCATA--TGGAA
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                         1451                                                1500
Ama.belladonna           ATCTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC
Bo.distich7172           ATCTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC
Br.gregaria7157          ATCTT-------------CT-----------GG-T-C-A---GA-GT-A-
Cro.flava7256            ATCTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC
Br.radulosanata7629      ATCTTGG---TTCAAATTTCTTCCAATGC-TGGGTTCCA--AGATGTTCC
Cl.miniata8095           ATCTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC
Cl.miniataRC14           ATCTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC
Cl.caulescens8092        ATCTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC
Cl.miniata               ATCTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC
Cl.nobilisRC6b           ATCTTGGG--TTCAAATTCTT--CAATGC-TGGATTCCA--AGATGTTCC
Cl.cyrtantiflora8094     ATCTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC
Chl.fragrans             ATCTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC
Calo.lutea               ATCTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC
Cr.euchrophyllRC96       ATCTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC
Cr.acauleRC106           ATCTTGG---TTCAAATTCTT--CAATGT-TGGATTCCA--AGATGTTCC
Cr.acaulglaucRC105       ATCTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC
Cr.bulbispermumRC95      ATCTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGAGGTTCC
Cr.campanulatum7167      ATCTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC
Cr.foetidumRC98          ATCTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC
Cr.graminicola7630       ATCTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC
Cr.lugardii7632          ATCTTGGGG-TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC
Cr.macowanii7168         ATCTTGG---TTCAAATTCTT--CAATTT-GGGATTG-A--AGATGTTCC
Cr.nearmacowanRC100      ATCTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC
Cr.buphanoidesRC102      ATCCTTGG--TTCAAATTCTT--CAATGTTTGGATTTCA--AGATGTTCC
Cr.acauleRC38            ATCTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC
Cr.buphanoides7631       ATCTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC
Cr.carolschmidRC97       ATCTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC
Cr.lineareRC99           ATCTTGG---TTCAAATTCTT--CCATGT-TGGATTC-A--AGATGTTCC
Cr.minimumRC37           ATCTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC
Cr.paludosumRC41         ATCTTGG---TTCAAATTCTT--CAATG--TGGATTC-A--AGATGTTCC
Cr.variabileRC44         ATCTTGG---TTCAAATTCTT--CAAAGT-TGGATTC-A--AGATGTTCC
Cr.moorei7921            ATCTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC
Cy.elatus7636            -TCTTGG---TTCAAATTCTT--CAATGC-TGGAT-C-A--AGATGTTCC
Cy.elatusRC93            ATCTTGG---TTCAAATTCTT--CAATGC-GGGATTCCA--AGATGTTCC
Cy.mackeniiRC87          ATCTTGGT--TCCAAATTCTT-CCAATGC-TGGATCC-A--AGATGT-CC
Cy.obliquus7278          ----------------------------------------------------
Cy.ochroleucus7639       ------------CAA-T-CTT--C--TCC-TGGA--C-A---GA-G--CA
Cy.sanguineusRC94        ATCTTGG---TTCAAATTCTT-CCAATGC-TGGATTCCA--AGATGTTCC
Cy.staadensis7316        ATCTTGG---TTCA----C-----AAT------AT-C-------TG----
Cy.labiatus7212          ----------------------------------------------------
Cy.smithiae7214          ----------------------------------------------------
Cy.elatus7198            ----------------------------------------------------
Cy.herreiRC86            --------------AATTCTT--CAATGC-TGGATTC-A--AGATGTTCC
Cy.brachyscyphus7204     ----------------------------------------------------
Cy.loddigesianus7203     --CTT--TTTTTGCA-TT-T----AATGC--GGATT--------T-----
Cy.falcatus7637          ----------------------------------------------------
Eus.darwini              ATCTTGG---TTAAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC
Ge.namaquensiAMV635      ATCTTGG---TTGCAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC
Hae.montanus7163         ----------------------CA--------A----A--GAATGTTTC
Hae.coccineusAMV632      ----------------------------------------------TT--
Hae.albiflos7517         ATCTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC
Hae.crispus7252          ATCTTGG---TTCAAATTCCTTCCAATGC-TGGATTCCA--AGATGTTCT
Hae.crispus7260          ATGCTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCT
Lap.martinezii           ATCTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC
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                        1451                                                1500
Leu.autumnale           ATCTTGG---TTCAAATTCTT--CAATGC-TGGATCC-A--AGATGTTCC
Ne.bowdenii             ATCTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC
Ne.laticoma8090         ATCTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC
Na.sp.7607              --------------------------G---GGAT-C-A---GATGTTCC
Na.sp.7608              -----------T--AATTCT---C-AGGC--GGATTC-C---GA-GTTCC
Na.tazetta              ATCTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC
Pan.canariense          ATCTTGGG---TCAAATTCTT--CAATGC-TGGATGC-A--AGATGTTCC
Sten.variegatum         ATCTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC
Phae.dubia              ATCTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC
Par.weberbaueri         ATCTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC
Ster.lutea              ATCTTGG----TCAAATTCTT--CAATGC-TGGATCC-A--AGATGTTCC
Sc.membranaceus7246     ATCTTGG---TTCAAATTCTT--CAATGC-CGGATTC-A--AGATGTTCC
Str.salter7245          ATCTTGG---TTCAAATTCTT--GCA--C-T--ATT--A---GAT-T-C-
Sc.multiflorus7919      ATCTTGG---TTCAAATTCTT-CCAATGC-TGGGTTC-A--AGATGTTCC
Sc.membranaceus7917     --C---------CAAA-------GAA-------ATTC-AA-AGAT-T-C-
Va.parviflora           ATCTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC
Hya.orientalis          ATCTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGACGTTCC
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                        1501                                                1550
Ama.belladonna          --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Bo.distich7172          --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Br.gregaria7157         --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cro.flava7256           --CCTTTTTGCCATT-TATT--GCGATTCCTTTCTTC-ACGAATATC--A
Br.radulosanata7629     --TTTTTTG--CATT-TATT--GCGATTC-TTTCTTCCACGAATATC--A
Cl.miniata8095          --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cl.miniataRC14          --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cl.caulescens8092       --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cl.miniata              --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cl.nobilisRC6b          --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cl.cyrtantiflora8094 CAATTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Chl.fragrans            --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Calo.lutea              --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cr.euchrophyllRC96      --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cr.acauleRC106          --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cr.acaulglaucRC105      --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cr.bulbispermumRC95     --CTTTTTG--CATT-TATT--GCGAATTCTTTCTTC-ACGAATATC--A
Cr.campanulatum7167     --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cr.foetidumRC98         --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cr.graminicola7630      --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cr.lugardii7632         --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cr.macowanii7168        ---CTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cr.nearmacowanRC100     --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cr.buphanoidesRC102     --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cr.acauleRC38           --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cr.buphanoides7631      --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cr.carolschmidRC97      --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cr.lineareRC99          --CTTTTTGC-ATTT-TATT--GCGATTC-TTTCTTC-ACGAATATATCA
Cr.minimumRC37          --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cr.paludosumRC41        --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cr.variabileRC44        --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC--CGAATATC--A
Cr.moorei7921           --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cy.elatus7636           --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTCCACGAATATC--A
Cy.elatusRC93           --CTTTTTG--CATT-TATT--GCGATTCCTTTCTTCCACGAATATCC-A
Cy.mackeniiRC87         ---TTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cy.obliquus7278         ----------------------------------------------------
Cy.ochroleucus7639      --CCTTAAG--CATT-TCTT--GCGATTC-TTTCTTC-ACGAATAAC--A
Cy.sanguineusRC94       --CTTTTTG--CAT--TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cy.staadensis7316       -----------CA----AT---GC------------------------
Cy.labiatus7212         ---------------------------------------------ATC--A
Cy.smithiae7214         ----------------------------------------------------
Cy.elatus7198           ----------------------------------------------------
Cy.herreiRC86           --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cy.brachyscyphus7204 ------------------------------TTTCTTCCACGAATATC--A
Cy.loddigesianus7203 --CTTTTTG--------------------TTTCTGCACGGAATATC--A
Cy.falcatus7637         ----------------------------------------------------
Eus.darwini             --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Ge.namaquensiAMV635     --TTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATCTC--A
Hae.montanus7163     CCTTTTTTGGCCATTTTATTTGGCGATTCCTTTCTTC-ACGAATATC--A
Hae.coccineusAMV632     ---TTTTTG--CATT-TATT--GCGCATTCTTTCTTC-ACGAATCTC--A
Hae.albiflos7517        --TTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATCTC--A
Hae.crispus7252         --TTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATCTC--A
Hae.crispus7260         --TTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATCTC--A
Lap.martinezii          --CCTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
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                      1501                                                1550
Leu.autumnale         --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Ne.bowdenii           --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Ne.laticoma8090       --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Na.sp.7607            --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Na.sp.7608            --CTTTTTG--C-TT-TATT--TCGAT-C-TGTCTTC-ACGAATATC--A
Na.tazetta            --CTTTTTG--CATT-TATT--GCGATTC-CTTCTTC-ACGAATATC--A
Pan.canariense        ---TTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Sten.variegatum       --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Phae.dubia            --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Par.weberbaueri       --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Ster.lutea            --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Sc.membranaceus7246   --TTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATCTC--A
Str.salter7245        ------------A----------CGAT----------------ATC--A
Sc.multiflorus7919    --TTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATCTC--A
Sc.membranaceus7917   --TTTTTTG--CATT-TATT--GCGATTC-TTTCTTCACGGAATCTC--A
Va.parviflora         --CTTTTTG--CATT--ATT--GCGATTC-TTTCTTC-ACGAATATC--A
Hya.orientalis        --CTTTTTG--CATT-CATT--GCGATTC-TTTCTTC-ACGAATGTC--A
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                        1551                                                1600
Ama.belladonna          TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Bo.distich7172          TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Br.gregaria7157         TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cro.flava7256           TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Br.radulosanata7629     TAATTGGAATAG--T-CTTCTCATTATCTCAGAAGA--AATCC-ATTTAG
Cl.miniata8095          TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cl.miniataRC14          TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cl.caulescens8092       TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cl.miniata              TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cl.nobilisRC6b          TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cl.cyrtantiflora8094    TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCCCATTTA-
Chl.fragrans            TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTT-
Calo.lutea              TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cr.euchrophyllRC96      TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cr.acauleRC106          TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cr.acaulglaucRC105      TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cr.bulbispermumRC95     TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cr.campanulatum7167     TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cr.foetidumRC98         TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cr.graminicola7630      TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cr.lugardii7632         TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cr.macowanii7168        TAATTGGAATAG--TGCTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cr.nearmacowanRC100     TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cr.buphanoidesRC102     TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cr.acauleRC38           TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cr.buphanoides7631      TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cr.carolschmidRC97      TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cr.lineareRC99          TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cr.minimumRC37          TAATTGGAATAG--T-CTTTTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cr.paludosumRC41        TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cr.variabileRC44        TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cr.moorei7921           TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cy.elatus7636           TAATTGGAATAG--TCTTCCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cy.elatusRC93           TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cy.mackeniiRC87         TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cy.obliquus7278         ----------------------------------------------------
Cy.ochroleucus7639      TAATTGGTATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC--TTTA-
Cy.sanguineusRC94       TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cy.staadensis7316       ----TGG-ATAGA-G-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cy.labiatus7212         TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cy.smithiae7214         TAA--G---TGC--TTGCTC-CATTCCTCCAGAAGAA-ATTCCCATTTTA
Cy.elatus7198           --------------------------------AAGA--AATCCGATTTA-
Cy.herreiRC86           TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cy.brachyscyphus7204    TAATTGGAATAG--TCCTTCTCATTA-CTCGGAAGA--AATCCCATTTA-
Cy.loddigesianus7203    TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGAC-AATCC-ATTTA-
Cy.falcatus7637         ----------------------------------------------------
Eus.darwini             TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTT-
Ge.namaquensiAMV635     TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Hae.montanus7163        TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Hae.coccineusAMV632     TAATTGGAATAG--T-CTTCTCATTA-CTCATAAGA--AATCC-ATTTA-
Hae.albiflos7517        TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Hae.crispus7252         TAATTGGAATAG--T-CTTCTCATTA-CTCATAAGA--AATCC-ATTTA-
Hae.crispus7260         TAATTGGAATAG--T-CTTCTCATTA-CTCATAAGA--AATCC-ATTTA-
Lap.martinezii          TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTT-
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                        1551                                                1600
Leu.autumnale           TAATTGGAATAG--T-TTTCTCATTA-CTCAAAAAA--AATCC-ATTTT-
Ne.bowdenii             TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Ne.laticoma8090         TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Na.sp.7607              TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTT-
Na.sp.7608              TAATTGGAATAG--T-CTTCTCATTA-CTCAGAATA--AATCC-ATTTT-
Na.tazetta              TAATTGGAAGAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTT-
Pan.canariense          TAATTGGAATAG--T-CTTCTCATTC-CTCAGAAGA--AATCC-ATTT--
Sten.variegatum         TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTT-
Phae.dubia              TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTT-
Par.weberbaueri         TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTT-
Ster.lutea              TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AACCC-ATTT--
Sc.membranaceus7246     TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Str.salter7245          TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Sc.multiflorus7919      TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Sc.membranaceus7917     TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Va.parviflora           TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCT-ATTTT-
Hya.orientalis          TAATTCGAATAG--T-CTTTTCGTTA-CTCAGAAGA--AATCT-ATTTA-
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                        1601                                                1650
Ama.belladonna          CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Bo.distich7172          CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Br.gregaria7157         CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cro.flava7256           CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Br.radulosanata7629     CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTCTGGTTC-CCTA
Cl.miniata8095          CGTTTTTTC----AAAAGAAAATAA--AAG-ACTCTTTC--GGAT-CCTA
Cl.miniataRC14          CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cl.caulescens8092       CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTT--GGTT-CCTA
Cl.miniata              CGTTTTTTC----AAAAGAAAATAA--AAG-ACTCTTTC--GGTT-CCTA
Cl.nobilisRC6b          CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cl.cyrtantiflora8094    CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Chl.fragrans            CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Calo.lutea              CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cr.euchrophyllRC96      CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cr.acauleRC106          CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cr.acaulglaucRC105      CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cr.bulbispermumRC95     CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cr.campanulatum7167     CGTTTTTTC----AAAAGAAAAAAA--AAG-ACTATTTC--GGTT-CCTA
Cr.foetidumRC98         CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cr.graminicola7630      CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cr.lugardii7632         CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cr.macowanii7168        CGTTTTTTC----AAAAGAAAAAAA--AAG-ACTATTTC--GGTT-CGTA
Cr.nearmacowanRC100     CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cr.buphanoidesRC102     CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cr.acauleRC38           CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cr.buphanoides7631      CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cr.carolschmidRC97      CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cr.lineareRC99          CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cr.minimumRC37          CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cr.paludosumRC41        CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cr.variabileRC44        CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cr.moorei7921           CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cy.elatus7636           CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cy.elatusRC93           CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cy.mackeniiRC87         CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cy.obliquus7278         ------------------------------------------------
Cy.ochroleucus7639      CGTTTTTTC---AAAAGGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cy.sanguineusRC94       CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cy.staadensis7316       CGTTTTTTC----AAAAGAAAATAA--AAG-GCTATTTC--GGTT-CCTA
Cy.labiatus7212         CGTTTTTTC----AAAAGAAAATAA--AAGACTGATTTC--GGTT-CCTA
Cy.smithiae7214         CGTTTTATT--CAAAAAGAAAATTA--AAAGACTATTTGC-GGTTCCCTA
Cy.elatus7198           CGGTTTTTCTC--AAAAGCAAAATAAGAAGGACTATTTCGGGGTTCCCTA
Cy.herreiRC86           CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cy.brachyscyphus7204    CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTTCCCTA
Cy.loddigesianus7203    CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cy.falcatus7637         ------------------------------------------------
Eus.darwini             CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Ge.namaquensiAMV635     CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Hae.montanus7163        CGTTTTTTC----AAAAGAAAATCA--AAAGACTATTTC--GGTT-CCTA
Hae.coccineusAMV632     CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Hae.albiflos7517        CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Hae.crispus7252         CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Hae.crispus7260         CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Lap.martinezii          CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
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                    1601                                                1650
Leu.autumnale       CATTTTTTC----AAAAGAAAATAA--AAG-ACTATTCG--GGTT-CATA
Ne.bowdenii         CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Ne.laticoma8090     CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Na.sp.7607          CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Na.sp.7608          CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTGC--GGTT-CCTA
Na.tazetta          CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Pan.canariense      CGGTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Sten.variegatum     CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTT--GGTT-CCTA
Phae.dubia          CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Par.weberbaueri     CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Ster.lutea          CTTTTTTTC----AAAAGAAAATAA--AAA-ACGATTTC--GGTT-CATA
Sc.membranaceus7246 CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Str.salter7245      CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Sc.multiflorus7919  CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Sc.membranaceus7917 CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Va.parviflora       CGTTTTT-C----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Hya.orientalis      CGTTTTTTC----AAAAGAAAATAA--AAG-ATTATTTC--GGTT-TCTA
```

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                          1651                                                1700
Ama.belladonna            TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Bo.distich7172            TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Br.gregaria7157           TAC---AATTTTTATG-TATTTGAATGTGCAATTTT---TATT-TGTTTT
Cro.flava7256             TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Br.radulosanata7629       TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Cl.miniata8095            TAC---AATTTTTATG-TGTGTTGAATGTGAATTTT---TATT-TGTTTT
Cl.miniataRC14            TAC---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Cl.caulescens8092         TAC---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Cl.miniata                TAC---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Cl.nobilisRC6b            TAC---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Cl.cyrtantiflora8094      TAC---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Chl.fragrans              TAC---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Calo.lutea                TAC---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Cr.euchrophyllRC96        TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Cr.acauleRC106            TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Cr.acaulglaucRC105        TAC---AATTTTTATG-TATTTGAATG--GAATTTT---TATT-TGTTTT
Cr.bulbispermumRC95       TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Cr.campanulatum7167       TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Cr.foetidumRC98           TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Cr.graminicola7630        TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Cr.lugardii7632           TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Cr.macowanii7168          TGC---AATTTTTATG-TATTTGAATG-GGAATTTT---TATT-TGTTTT
Cr.nearmacowanRC100       TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Cr.buphanoidesRC102       TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Cr.acauleRC38             TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Cr.buphanoides7631        TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Cr.carolschmidRC97        TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Cr.lineareRC99            TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Cr.minimumRC37            TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Cr.paludosumRC41          TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Cr.variabileRC44          TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Cr.moorei7921             TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Cy.elatus7636             TAC---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Cy.elatusRC93             TAC---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Cy.mackeniiRC87           TAC---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Cy.obliquus7278           ------------------------------------------------
Cy.ochroleucus7639        TAC----ATTTTTATG-TGTTTGAATGTGCAATTTT---TATT-TGTTTT
Cy.sanguineusRC94         TAC---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Cy.staadensis7316         TAC---AATTTTTATG-TGTTTGAATG--GAATTTT---TATT--GTTTT
Cy.labiatus7212           TAC---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Cy.smithiae7214           TGAC--AATTTTTATGGTGTTTGAATG-TGAATTAT--TTATTGTGTTTT
Cy.elatus7198             TAC---AATTTTTATG-TGTTTGAATG-TGAATTCT---TATT-TGTTTT
Cy.herreiRC86             TAC---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Cy.brachyscyphus7204      TAC----AATTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Cy.loddigesianus7203      TAC---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Cy.falcatus7637           ------------------------------------------------
Eus.darwini               TAC---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Ge.namaquensiAMV635       TAC---AATTTTTATG-TGTTTGAGTG-TGAATTTT---TATT-TGTTTT
Hae.montanus7163          TAG---CGTTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Hae.coccineusAMV632       TAC---AATTTTTATG-TGTTTGAGTG-TGAATTTT---TATT-TGTTTT
Hae.albiflos7517          TAC---AATTTTTATG-TGTTTGAGTG-TGAATTTT---TATT-TGTTTT
Hae.crispus7252           TAC---AATTTTTATG-TGTTTGAGTG-TGAATTTT---TATT-TGTTTT
Hae.crispus7260           TAC---AATTTTTATG-TGTTTGAGTG-TGAATTTT---TATT-TGTTTT
Lap.martinezii            TAC---AATTTTTATG-TGTTTGGAATGTGAATTTG---TATT-TGGTTT
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                        1651                                                1700
Leu.autumnale           TAC---AATTTTTATG-TGGTTGAATG-TGAATTTT----ATT-TCTTTT
Ne.bowdenii             TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Ne.laticoma8090         TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Na.sp.7607              TAC---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Na.sp.7608              TAC---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Na.tazetta              TAC---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Pan.canariense          TAC---AA-TTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Sten.variegatum         TAC---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Phae.dubia              TAC---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Par.weberbaueri         TAC---AATTTTTATG-TGTTTGAATG-TGAATTTG---TATT-TGTTTT
Ster.lutea              TAC---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Sc.membranaceus7246     TAC---AATTTTTATG-TGTTTGAGTG-TGAATTTT---TATT-TGTTTT
Str.salter7245          TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Sc.multiflorus7919      TAC---AATTTTTATG-TGTTTGAGTG-TGAATTTT---TATT-TGTTTT
Sc.membranaceus7917     TAC---AATTTTTATG-TGTTTGAGTG-TGAATTTT---TATT-TGTTTT
Va.parviflora           TAC---AA-TTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Hya.orientalis          TAC---AATTCTTATG-TATTTGAATG-TGAATTTT---TATT-AGTTTT
```

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                        1701                                                1750
Ama.belladonna          -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Bo.distich7172          -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Br.gregaria7157         -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cro.flava7256           -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Br.radulosanata7629     -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cl.miniata8095          -TATTCGGTAAACAAT---CTTCTTATTTACGATCT--AACAT-CTT-TT
Cl.miniataRC14          -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cl.caulescens8092       -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cl.miniata              -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cl.nobilisRC6b          -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cl.cyrtantiflora8094    -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Chl.fragrans            -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Calo.lutea              -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Cr.euchrophyllRC96      -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cr.acauleRC106          -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cr.acaulglaucRC105      -TATTCGATAAACAAT---CTTCTTATTTACGATT---AACAT-CTTGTT
Cr.bulbispermumRC95     -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cr.campanulatum7167     -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cr.foetidumRC98         -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cr.graminicola7630      -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cr.lugardii7632         -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cr.macowanii7168        -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cr.nearmacowanRC100     -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cr.buphanoidesRC102     -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cr.acauleRC38           -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cr.buphanoides7631      -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cr.carolschmidRC97      -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cr.lineareRC99          -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cr.minimumRC37          -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cr.paludosumRC41        -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cr.variabileRC44        -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cr.moorei7921           -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cy.elatus7636           -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Cy.elatusRC93           -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Cy.mackeniiRC87         -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Cy.obliquus7278         ------------------------TATTTGGGATT---AACAT-CTT-TT
Cy.ochroleucus7639      -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACCT-CTTTTG
Cy.sanguineusRC94       -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Cy.staadensis7316       --ATTCG-TAAACAAT--CCTCTCTATTTACGATT---AACAT-CTT--T
Cy.labiatus7212         -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Cy.smithiae7214         TAATTGGTAAGACAAT-GCATATTTATTTACGATT--AAACATGCTTGTT
Cy.elatus7198           -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Cy.herreiRC86           -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Cy.brachyscyphus7204    --ATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT--T
Cy.loddigesianus7203    -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Cy.falcatus7637         ------------CAAT---CCTCTTATTT-CGATT---AACAT-CTT-TT
Eus.darwini             -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Ge.namaquensiAMV635     -TATTCG-TAAACAAG---CCTCTTATTTACGATT---AACAT-CTT-TT
Hae.montanus7163        -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Hae.coccineusAMV632     -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Hae.albiflos7517        -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Hae.crispus7252         -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Hae.crispus7260         -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Lap.martinezii          -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
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                      1701                                                1750
Leu.autumnale         -TATTCG-TAAACAAT---CCTCTTATTTACGAT----AACAT-CTT-TT
Ne.bowdenii           -TATTCG-TAAACAAT---CTTATTATTTACGATT---AACAT-CTT-TT
Ne.laticoma8090       -TTTTCG-TAAACAAT---CTTCTTATTTACGATT---AAAAT-CTT-TT
Na.sp.7607            -TTTTCA-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Na.sp.7608            -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Na.tazetta            -TTTTCA-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Pan.canariense        -AATTCG-TAA-CAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Sten.variegatum       -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AAAAT-CTT-TT
Phae.dubia            -TATTCG-TAAACAAT---CCTTTTATTTACGATT---AAAAT-CTT-TT
Par.weberbaueri       -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AAAAT-CTT-TT
Ster.lutea            -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Sc.membranaceus7246   -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Str.salter7245        -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Sc.multiflorus7919    -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Sc.membranaceus7917   -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Va.parviflora         -TATTCG-TAACCAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Hya.orientalis        -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-CT
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                        1751                                                1800
Ama.belladonna          GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Bo.distich7172          GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Br.gregaria7157         GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cro.flava7256           GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Br.radulosanata7629     GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cl.miniata8095          GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cl.miniataRC14          GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cl.caulescens8092       GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cl.miniata              GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cl.nobilisRC6b          GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cl.cyrtantiflora8094    GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Chl.fragrans            GGAACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGA
Calo.lutea              GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cr.euchrophyllRC96      GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cr.acualeRC106          GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cr.acaulglaucRC105      GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cr.bulbispermumRC95     GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cr.campanulatum7167     GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cr.foetidumRC98         GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cr.graminicola7630      GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cr.lugardii7632         GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cr.macowanii7168        GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cr.nearmacowanRC100     GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cr.buphanoidesRC102     GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cr.acauleRC38           GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cr.buphanoides7631      GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cr.carolschmidRC97      GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cr.lineareRC99          GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cr.minimumRC37          GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cr.paludosumRC41        GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cr.variabileRC44        GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cr.moorei7921           GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cy.elatus7636           GGAACTT----TTGCTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cy.elatusRC93           GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cy.mackeniiRC87         GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cy.obliquus7278         GGAACTT----TT--TTGAGCG--AGGACATTTTCTATGG-AAAAATAGA
Cy.ochroleucus7639      GGAACTT----TT-CTTGAGCGT-AACACATTT-CTATCG-AAAAATAGG
Cy.sanguineusRC94       GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cy.staadensis7316       GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cy.labiatus7212         GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cy.smithiae7214         GGATCTT----TTTCTTGGAGCG-AACACATTTTCTATGG-AAAAATAGA
Cy.elatus7198           GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cy.herreiRC86           GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cy.brachyscyphus7204    GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cy.loddigesianus7203    GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cy.falcatus7637         GGAACTT----TT--TTGAGCG--AACACATTTCCTATGG-AAAAATAGA
Eus.darwini             GGAACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGA
Ge.namaquensiAMV635     GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Hae.montanus7163        GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Hae.coccineusAMV632     GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Hae.albiflos7517        GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Hae.crispus7252         GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Hae.crispus7260         GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Lap.martinezii          GGAACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGA
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                        1751                                                1800
Leu.autumnale           GGAACTC----TT-CTTGAACG--AACACATT--CTATGG--AAAATAGA
Ne.bowdenii             GGAACTT----TT-TTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Ne.laticoma8090         GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Na.sp.7607              GGAACTT----TT-CTTGAACG--AACACACTT-CTATGG-AAAAATAGA
Na.sp.7608              GGAACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGA
Na.tazetta              GGAACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGA
Pan.canariense          GGAACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATGGA
Sten.variegatum         GGAACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGA
Phae.dubia              GGAACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGA
Par.weberbaueri         GGAACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGA
Ster.lutea              GGAACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGA
Sc.membranaceus7246     GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Str.salter7245          GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Sc.multiflorus7919      GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Sc.membranaceus7917     GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Va.parviflora           GGAACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGA
Hya.orientalis          GGAACTT----TT-CTTGAACG--AATACATTT-CTATGG-AAAAATAGA
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                        1801                                                1850
Ama.belladonna          A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Bo.distich7172          A--CAT-CTTAAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Br.gregaria7157         A--CAT-CTTCAAATAG--AAAATTTTATAATA-ATATGTC------GTA
Cro.flava7256           A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Br.radulosanata7629     A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Cl.miniata8095          A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Cl.miniataRC14          A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Cl.caulescens8092       A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Cl.miniata              A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Cl.nobilisRC6b          A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGCC------GTA
Cl.cyrtantiflora8094    A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGCC------GTA
Chl.fragrans            A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Calo.lutea              A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Cr.euchrophyllRC96      A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Cr.acauleRC106          A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Cr.acaulglaucRC105      A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Cr.bulbispermumRC95     A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Cr.campanulatum7167     A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Cr.foetidumRC98         A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Cr.graminicola7630      A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Cr.lugardii7632         A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Cr.macowanii7168        A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Cr.nearmacowanRC100     A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Cr.buphanoidesRC102     A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Cr.acauleRC38           A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Cr.buphanoides7631      A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Cr.carolschmidRC97      A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Cr.lineareRC99          A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Cr.minimumRC37          A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Cr.paludosumRC41        A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Cr.variabileRC44        A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Cr.moorei7921           A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Cy.elatus7636           A--CAT-CTTAAAATAG--AAAAATTTATAGTA-ATATGTCC-----GTA
Cy.elatusRC93           A--CAT-CTTAAAATAG--AAAAATTTATAGTA-ATATGCG-------TA
Cy.mackeniiRC87         A--CAT-CTTAAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Cy.obliquus7278         A--C-TTCTTAAAATAG-AAAAATTGTATAGTA-ATAAGGC------GTA
Cy.ochroleucus7639      AACCAT-CTTAAAATAA---AAAATTTATAGCA-ATATGTC------GTA
Cy.sanguineusRC94       A--CAT-CTTAAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Cy.staadensis7316       A--CAT-CTTAAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Cy.labiatus7212         A--CAT-CTTAAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Cy.smithiae7214         A--CATGCTTAAAATAGG-AAAAATTTATAATA-ATATGTCC----GCTA
Cy.elatus7198           A--C-T-CTTAAAATAG--AAAAATTTATAGTACATATGTC------GTA
Cy.herreiRC86           A--CAT-CTTAAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Cy.brachyscyphus7204    A--CAT-CTTAAAATAG--AAAAATTTATAGTA-ATATGTC---------
Cy.loddigesianus7203    A--CAT-CTTAAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Cy.falcatus7637         A--CATGCTTTAAATAG-AAAAATTTGATAGTA-ATA-CTC--------A
Eus.darwini             A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Ge.namaquensiAMV635     A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTCG-----CTA
Hae.montanus7163        A--CAT-CTTAAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Hae.coccineusAMV632     A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Hae.albiflos7517        A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Hae.crispus7252         A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Hae.crispus7260         A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Lap.martinezii          A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATTTGTC------G-A
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                        1801                                                1850
Leu.autumnale           ---CAT-CTTCAA-TAG---AAAATTTATAGTA-ATT-GTC------GTA
Ne.bowdenii             A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Ne.laticoma8090         A--CAT-TTTCAAATAG--GAAATTTTATAGTA-ATATATC------GTA
Na.sp.7607              A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATTTGTC------ATA
Na.sp.7608              A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATTTGTC------GTA
Na.tazetta              A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATTTGTC------GTA
Pan.canariense          A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATTTGCT------GGA
Sten.variegatum         A--CAT-CTTCAAATAG--AAAAAATTATAGTA-ATATGTC------GTA
Phae.dubia              A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Par.weberbaueri         A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Ster.lutea              A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATTTGTC------GTA
Sc.membranaceus7246     A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Str.salter7245          A--CAT-CTTAAAATAG--GAAATTTTATAGTA-ATATGTC------GTA
Sc.multiflorus7919      A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Sc.membranaceus7917     A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GCC
Va.parviflora           A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATTTGTC------GTA
Hya.orientalis          A--CAT-CTTCAAATAG--AACATTTTATAGTAGTAGTATGTC----GTA
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                        1851                                                1900
Ama.belladonna          AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Bo.distich7172          AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Br.gregaria7157         AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cro.flava7256           AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Br.radulosanata7629     AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTTT-C
Cl.miniata8095          AC--AATTTTCATAG--GACCTTATGGTT-CTT-CAA-GGATCCTTT--T
Cl.miniataRC14          AC--AATTTTCATAG--GACCTTATGGTT-CTT-CAA-GGATCCTTT--T
Cl.caulescens8092       AC--AATTTTCATAG--GACCTTATGGTT-CTT-CAA-GGATCCTTT--T
Cl.miniata              AC--AATTTTCATAG--GACCTTATGGTT-CTT-CAA-GGATCCTTT--T
Cl.nobilisRC6b          AC--AATTTTCATAG--GACCTTATGGTT-CTT-CAA-GGATCCTTT--T
Cl.cyrtantiflora8094    C--AATTTTCATAG--GACCTTATGGTT-CTT-CAA-GGATCCTTT--T
Chl.fragrans            AC--GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--C
Calo.lutea              AC--GATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cr.euchrophyllRC96      AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cr.acauleRC106          AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cr.acaulglaucRC105      ACC-GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cr.bulbispermumRC95     AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-GGATCCTTT--C
Cr.campanulatum7167     AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cr.foetidumRC98         AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cr.graminicola7630      AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cr.lugardii7632         AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cr.macowanii7168        AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cr.nearmacowanRC100     AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cr.buphanoidesRC102     AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cr.acauleRC38           AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cr.buphanoides7631      AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cr.carolschmidRC97      AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cr.lineareRC99          AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cr.minimumRC37          AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cr.paludosumRC41        AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cr.variabileRC44        AC--GATTTTAATAG--AACCTTATGGTT-TTT-CAA-AGATCCTTT--C
Cr.moorei7921           AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cy.elatus7636           AC--GATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cy.elatusRC93           AC--GATTTTCATAG--GACCTTATGGT----------------------
Cy.mackeniiRC87         AC--GATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cy.obliquus7278         GC--GATTTTGATACG-TTCCTCATGGCT-CTTACAGAGGA---------
Cy.ochroleucus7639      ACG-GATTTTCATAG--GACCTTATGGATTCTT-CAA-AGATCCTTTC-C
Cy.sanguineusRC94       AC--GATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cy.staadensis7316       ACC-GATTTTCATAG--GACCTTATGGTG-CTT-CAA-AGATCCTTTA-C
Cy.labiatus7212         AC--GATTTTCACTAG-GACCTTATGGTTTCTT-CAA-AGATCCTTT--C
Cy.smithiae7214         AC-GAATTTTACATAG-GACCTTATGGTTGCTTTCAAGAGATACCTTTGC
Cy.elatus7198           AC--GATTTTCCTAG--ACCCTTATGGTT-CTTTCAA-AGATCCTTTTCC
Cy.herreiRC86           AC--GATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cy.brachyscyphus7204    --------------G----------------------------------
Cy.loddigesianus7203    AC--GATTTTCACTAG-GACCTTATGGTT-ACTTCAA-AGATCCTTT--C
Cy.falcatus7637         AC--GATTTTCATAG--GACCTTATGGTT-CTTACAA-AATACCTTT--C
Eus.darwini             AC--GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--C
Ge.namaquensiAMV635     AC--AATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--T
Hae.montanus7163        AC--GATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTTA-C
Hae.coccineusAMV632     AC--AATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--T
Hae.albiflos7517        AC--AATTTTCATACG-GACCTTATGGTT-CTT-CAA-AGATCCTTT--T
Hae.crispus7252         AC--AATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--T
Hae.crispus7260         AC--AATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--T
Lap.martinezii          AC--GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--C
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                    1851                                                1900
Leu.autumnale       AC--GATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Ne.bowdenii         AC--GATTTTCACAG--AACCGTATGGTT-CTT-CAA-AGATCCTTT--C
Ne.laticoma8090     AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Na.sp.7607          AC-GATTTTGCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--C
Na.sp.7608          AC--GATTTTCATAGG-GACCTTCTGGTT-CTT-CAA-AGATCCTTT--C
Na.tazetta          AC--GATTTTCATAG--GACCTCCTGGTT-CTT-CAA-AGATCCTTT--C
Pan.canariense      AC--GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--C
Sten.variegatum     AC--GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--C
Phae.dubia          AC--GATTTTCATAG--GGCCTTCTGGTT-CTT-CAA-AGATCCTTT--C
Par.weberbaueri     AC--GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--C
Ster.lutea          AC--GATTTTCATAG--GACCCTCTGGTT-CTT-CAA-AGATCCTTT--C
Sc.membranaceus7246 AC--AATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--T
Str.salter7245      AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Sc.multiflorus7919  AC--AATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--T
Sc.membranaceus7917 AC--AATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--T
Va.parviflora       AC--GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--C
Hya.orientalis      AC--TATTCTCATAG--AACTCTATGGTT-CTT-CAA-AGAGTCTTT--C
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                        1901                                                1950
Ama.belladonna          ATG--CATTATGTT-CGATAT-CGAGGA-AAAGCAAT----TCTTG----
Bo.distich7172          ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Br.gregaria7157         ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Cro.flava7256           ATG--CATTATGTT-CGATAT-CGGGGA-AAAGTAAT----TCTTG----
Br.radulosanata7629     ATGA-CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Cl.miniata8095          ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Cl.miniataRC14          ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Cl.caulescens8092       ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Cl.miniata              ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Cl.nobilisRC6b          ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Cl.cyrtantiflora8094    ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Chl.fragrans            ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Calo.lutea              ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Cr.euchrophyllRC96      ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Cr.acauleRC106          ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Cr.acaulglaucRC105      ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Cr.bulbispermumRC95     ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Cr.campanulatum7167     ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Cr.foetidumRC98         ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Cr.graminicola7630      ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Cr.lugardii7632         ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Cr.macowanii7168        ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Cr.nearmacowanRC100     ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Cr.buphanoidesRC102     ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Cr.acauleRC38           ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Cr.buphanoides7631      ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Cr.carolschmidRC97      ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Cr.lineareRC99          ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Cr.minimumRC37          ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Cr.paludosumRC41        ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Cr.variabileRC44        ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Cr.moorei7921           ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Cy.elatus7636           ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Cy.elatusRC93           ------------------------------------------------
Cy.mackeniiRC87         ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Cy.obliquus7278         ------------------------------------------------
Cy.ochroleucus7639      ATGG-CATTATGTT-CGATAT-CAAGGGCAATACAGTCAAGTCTTG----
Cy.sanguineusRC94       ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Cy.staadensis7316       ATG--CATTATGTT-CGATAT-CAAGGA-AAACGCAAT---TCTTG----
Cy.labiatus7212         ATCG-CATTATGTC--GATAT-CAAGGA-AAAGCAATT--CTTGCG----
Cy.smithiae7214         ATG--CATTATGTTGCGATAT-CAAGGA-AAAGCAAT--TCCCTAG----
Cy.elatus7198           ATGCACTTAATGTTACGATAT-CAAGGAAAAGGCAAT----TCTTG----
Cy.herreiRC86           ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Cy.brachyscyphus7204    ----------------------------AA------------------
Cy.loddigesianus7203    ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Cy.falcatus7637         ATG--CAT-ATGTT--GAT-T-CAAGGA-AAAGCAAT----TCTTG----
Eus.darwini             ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Ge.namaquensiAMV635     ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Hae.montanus7163        ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Hae.coccineusAMV632     ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Hae.albiflos7517        ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Hae.crispus7252         ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Hae.crispus7260         ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Lap.martinezii          ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
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                    1901                                                1950
Leu.autumnale       ATG--CATTATGTT-CGACAT-CAAGGA-AAAGCCAT----TCTTG----
Ne.bowdenii         ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Ne.laticoma8090     ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Na.sp.7607          ATG--CATTATGTTACGATAT-CAAGGA-AAAGCAAT----TCTTG----
Na.sp.7608          ATG--CATTATGTT-CGATAT-CA-GGA-AAAGCAAT----TCTTG----
Na.tazetta          ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Pan.canariense      ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TGTTG----
Sten.variegatum     ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Phae.dubia          ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Par.weberbaueri     ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Ster.lutea          ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Sc.membranaceus7246 ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Str.salter7245      ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Sc.multiflorus7919  ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Sc.membranaceus7917 ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCT-G----
Va.parviflora       ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Hya.orientalis      ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
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                        1951                                                2000
Ama.belladonna          -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Bo.distich7172          -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Br.gregaria7157         -TTTCAA--GGG---ACTCATCTTCTG-ATGAAGAAAA-TGG-AAAT---
Cro.flava7256           -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Br.radulosanata7629     -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAAA-TGGTAAAT---
Cl.miniata8095          -CTTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT---
Cl.miniataRC14          -CTTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT---
Cl.caulescens8092       -CTTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT---
Cl.miniata              -CTTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT---
Cl.nobilisRC6b          -CTTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT---
Cl.cyrtantiflora8094    -CTTTAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT---
Chl.fragrans            -CTTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT---
Calo.lutea              -CTTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT---
Cr.euchrophyllRC96      -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Cr.acauleRC106          -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Cr.acaulglaucRC105      -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Cr.bulbispermumRC95     -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Cr.campanulatum7167     -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Cr.foetidumRC98         -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Cr.graminicola7630      -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Cr.lugardii7632         -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Cr.macowanii7168        -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Cr.nearmacowanRC100     -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Cr.buphanoidesRC102     -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Cr.acauleRC38           -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGGAAAAT---
Cr.buphanoides7631      -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Cr.carolschmidRC97      -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Cr.lineareRC99          -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Cr.minimumRC37          -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Cr.paludosumRC41        -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Cr.variabileRC44        -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Cr.moorei7921           -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Cy.elatus7636           -CTTCAAAGGGG---ACTCGTCTTCTG-ATGACGAAA--TGG-AAAT---
Cy.elatusRC93           ------------------------------------------------
Cy.mackeniiRC87         -CTTCAAAGGGG---ACTCGTCTTCTG-ATGACGAAA--TGG-AAAT---
Cy.obliquus7278         ------------------------------------------------
Cy.ochroleucus7639      -CTTCAAA--GGA--ACTCGTCTTCTG-ATGACGAAA--TGGCAAAT---
Cy.sanguineusRC94       -CTTCAAAGGGG---ACTCGTCTTCTGTATGACGAAA--TGGGAAAT---
Cy.staadensis7316       -CTTCAAAGGGG---ACTCGTCTTCTG-CTGACGAAAA-TGAGAAAT---
Cy.labiatus7212         -GTTCAAAGGGGGG-ACTCGTCTTCTGAATGACGAAAA-TGGGAAAT---
Cy.smithiae7214         -CTTACATGGGG---ACTCGTCTTCTG-ATGACGAAA--TGG-AAAT---
Cy.elatus7198           -CTTCAAAGGGG---ACTCGTCTTCTG-ATGACGAAA--TGGTAAAT---
Cy.herreiRC86           -CTTCAAAGGGG---ACTCGTCTTCTG-ATGACGAAA--TGGGAAAT---
Cy.brachyscyphus7204    ------------------------------------------------
Cy.loddigesianus7203    -CTTCAAAGGGG---ACTCGTCTTCTGATGCACGAAA--TGGTAAAT---
Cy.falcatus7637         -CTTCAAAGGGG---ACTCGTCTT-TG-ATGACGAAA--TGG-AAAT---
Eus.darwini             -CTTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT---
Ge.namaquensiAMV635     -CTTCAAAGGGG---ACTCATCTTCTGATGCACGAAA--TGGTAAAT---
Hae.montanus7163        -CTTCAACAGGGG--ACTCCATCTTCTGATGAAGGAAA-TGG-AAAT---
Hae.coccineusAMV632     -CTTCAAGGGGG---ACTCATCTTCTGATGGACGAAA--TGGGAAAT---
Hae.albiflos7517        -CTTCAAAGGGG---ACTCATCTTTTGTATGACGAAA--TGG-AAAT---
Hae.crispus7252         -CTTCAAGGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT---
Hae.crispus7260         -CTTCAAGGGGG---ACTGCATCTTCTGATGTACGAA--TGG--AAT---
Lap.martinezii          -CTTCAAAGGGG---ACTAATCTTCTG-ATGACGAAA--TGG-AAAT---
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                        1951                                                2000
Leu.autumnale           -CTTCAAAAGGG---ACTCATCTTTTG-ATGACGAAA--TGG-AAAT---
Ne.bowdenii             -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Ne.laticoma8090         -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Na.sp.7607              -CTTCAAAGGGT---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT---
Na.sp.7608              -CTTCAAAGGGT---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT---
Na.tazetta              -CTTCAAAGGGT---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT---
Pan.canariense          -GTTCAAAGGGT---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT---
Sten.variegatum         -CTTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT---
Phae.dubia              -CTTCAAAGGGG---ACTCATTTTCTG-ATGACGAAA--TGG-AAAT---
Par.weberbaueri         -CTTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT---
Ster.lutea              -CTTCAAAGGGT---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT---
Sc.membranaceus7246     -CTTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT---
Str.salter7245          -TTTCAAAGGGG---ACTTATCTTCTG-ATGAAGAAA--TGG-AAAT---
Sc.multiflorus7919      -CTTCAAAGGGG---ACTCATCTTCTG-ATGGACGAAA-TGG-AAAT---
Sc.membranaceus7917     -CTTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT---
Va.parviflora           -CTTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT---
Hya.orientalis          -CTTCAAAAGGG---GCTCATTTTCTG-ACGAAGAAA--TGG-AAAT---
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                        2001                                                2050
Ama.belladonna          --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TCATT
Bo.distich7172          --ATCAT----TTTG---TCGATTTCTGGCA--ATA---------TTATT
Br.gregaria7157         --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cro.flava7256           --ATCAT----TTTG---TCAATTTCTGGCAG-ATA---------TTATT
Br.radulosanata7629     --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cl.miniata8095          --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cl.miniataRC14          --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cl.caulescens8092       --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cl.miniata              --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cl.nobilisRC6b          --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cl.cyrtantiflora8094    --ATCTT----TTG-----CAATTTCTGGCA--ATA---------TTATT
Chl.fragrans            --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Calo.lutea              --ATCAT----TTTG---TCAATTTCTGTCA--ATA---------TTATT
Cr.euchrophyllRC96      --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cr.acauleRC106          --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cr.acaulglaucRC105      --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cr.bulbispermumRC95     --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cr.campanulatum7167     --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cr.foetidumRC98         --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cr.graminicola7630      --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cr.lugardii7632         --ATCTT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cr.macowanii7168        --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cr.nearmacowanRC100     --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cr.buphanoidesRC102     --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cr.acauleRC38           --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cr.buphanoides7631      --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cr.carolschmidRC97      --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cr.lineareRC99          --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cr.minimumRC37          --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cr.paludosumRC41        --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cr.variabileRC44        --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cr.moorei7921           --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cy.elatus7636           --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cy.elatusRC93           ------------------------------------------------
Cy.mackeniiRC87         --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cy.obliquus7278         ------------------------------------------------
Cy.ochroleucus7639      --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cy.sanguineusRC94       --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cy.staadensis7316       --ATCAT----TTTG----CAATTTCTGGCA--ATA---------TTATT
Cy.labiatus7212         --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cy.smithiae7214         --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cy.elatus7198           --ATCAT----TTTG--TGCAATTTCTGGCA--ATA---------TTATT
Cy.herreiRC86           --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cy.brachyscyphus7204    ----------------------------------TA---------TTATT
Cy.loddigesianus7203    --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cy.falcatus7637         --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Eus.darwini             --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Ge.namaquensiAMV635     --ATCAT----TTTG----CAATTTCTGGCCA-ATA---------TTATT
Hae.montanus7163        --ATCAT----TTTG---TCGATTTCTGGCA--ATA---------TTATT
Hae.coccineusAMV632     --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Hae.albiflos7517        --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Hae.crispus7252         --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Hae.crispus7260         --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Lap.martinezii          --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
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                    2001                                                2050
Leu.autumnale       --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Ne.bowdenii         --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTCTT
Ne.laticoma8090     --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Na.sp.7607          --ATCAT----TTTG---TCAATTTCTGGCAGGATA---------TTATT
Na.sp.7608          --ATCAT----TTTG---TCAATTTATGGCA--ATA---------TTATT
Na.tazetta          --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Pan.canariense      --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Sten.variegatum     --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Phae.dubia          --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Par.weberbaueri     --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Ster.lutea          --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Sc.membranaceus7246 --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Str.salter7245      --ATCAT-----TTG---TCAA-TTCTGGCA--ATA---------TAATT
Sc.multiflorus7919  --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Sc.membranaceus7917 --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Va.parviflora       --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Hya.orientalis      --ATCAT----TTTG---TTAATTTCTGGCA--ATA---------TTATT
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                        2051                                                2100
Ama.belladonna          TT----AACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Bo.distich7172          TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Br.gregaria7157         TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cro.flava7256           TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Br.radulosanata7629     TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cl.miniata8095          TT----CACTTTTGG--GCTCAACC-GT-ACAG-GA-TCCATATAAATAA
Cl.miniataRC14          TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATAA
Cl.caulescens8092       TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATAA
Cl.miniata              TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATAA
Cl.nobilisRC6b          TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cl.cyrtantiflora8094    TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Chl.fragrans            TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Calo.lutea              TT----AACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cr.euchrophyllRC96      TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cr.acauleRC106          TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cr.acaulglaucRC105      TT----CACTTTTGG--TCTCAACC-GTTACAG-GA-TCCATATAAATCA
Cr.bulbispermumRC95     TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cr.campanulatum7167     TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cr.foetidumRC98         TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cr.graminicola7630      TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cr.lugardii7632         TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cr.macowanii7168        TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cr.nearmacowanRC100     TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cr.buphanoidesRC102     TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cr.acauleRC38           TT----CACTTTTGG--TCTCAACC-GTTACAG-GA-TCCATATAAATCA
Cr.buphanoides7631      TT----CACTTTTGG--TCTCAACCCGCAACAGGGA-TCCATATAAATCA
Cr.carolschmidRC97      TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cr.lineareRC99          TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cr.minimumRC37          TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cr.paludosumRC41        TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cr.variabileRC44        TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cr.moorei7921           TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cy.elatus7636           TT----CACTTTTGG--TCTCAACC-GTTACAG-GA-TCCATATAAATCA
Cy.elatusRC93           ------------------------------------------------
Cy.mackeniiRC87         TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cy.obliquus7278         ------------------------------------------------
Cy.ochroleucus7639      TT----CACTTTTGG--TCTCAACC-GT-ACAGGGA-TCCATATAAATCA
Cy.sanguineusRC94       TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cy.staadensis7316       TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCC-TATAAATCA
Cy.labiatus7212         TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cy.smithiae7214         TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cy.elatus7198           TT----CACTTTTGG--TCTCAACCGGT-ACAGGCA-TCCATATAAATCA
Cy.herreiRC86           TT----CACTTTTGG---------------------------------
Cy.brachyscyphus7204    TT----CACTTTAGG--TCTCAACCGGT-ACAGGCA-TCCATATAAATCA
Cy.loddigesianus7203    TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cy.falcatus7637         TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Eus.darwini             TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCC
Ge.namaquensiAMV635     TT----CGCTTTTGG--TCTCAACC-GT-ACAG-GA-CCCATATAAATCA
Hae.montanus7163        TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Hae.coccineusAMV632     TT----CACTTTTGG--TCTCAACC-GT-ACAGGGA-TCCATATAAATCA
Hae.albiflos7517        TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-CCCATATAAATCA
Hae.crispus7252         TT----CACTTTTGG--TCTCAACC-GT-GCAG-GA-TCCATATAAATCA
Hae.crispus7260         TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Lap.martinezii          TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCC
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                        2051                                                2100
Leu.autumnale           TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Ne.bowdenii             TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Ne.laticoma8090         TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Na.sp.7607              TGG---AACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATAA
Na.sp.7608              TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Na.tazetta              TG----AACTTTTGG--TCTCAGCC-GT-ACAG-GA-TCCATTTAAATCA
Pan.canariense          TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Sten.variegatum         TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TTCATATAAATCA
Phae.dubia              TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Par.weberbaueri         TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TTCATATAAATCA
Ster.lutea              TT----AACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCGTATAAATCA
Sc.membranaceus7246     TT----AACTTTTGG--TCTCAACC-GT-ACAG-GA-CCCATATAAATCA
Str.salter7245          TT----CACTTTTGG--TCTCAACCGGT-ACAG-GA-TCCATATAAATCA
Sc.multiflorus7919      TT----CACTTTTGG--TCTCAACC-GT-ACAGGGACTCCATATGAATCA
Sc.membranaceus7917     TT----CACTTTTGG--TCTCAACC-G--ACAG-GA-CTCATATAAATCA
Va.parviflora           TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Hya.orientalis          TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAACCA
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                        2101                                                2150
Ama.belladonna          A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Bo.distich7172          A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Br.gregaria7157         A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cro.flava7256           A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Br.radulosanata7629     A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cl.miniata8095          A-TTCTC-----AAACTA-TTCTTTC-TATTTTCT--GGG-ATATCTTTC
Cl.miniataRC14          A-TTCTC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cl.caulescens8092       A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cl.miniata              A-TTCTC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cl.nobilisRC6b          A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cl.cyrtantiflora8094    A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Chl.fragrans            A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Calo.lutea              A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cr.euchrophyllRC96      A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cr.acauleRC106          A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cr.acaulglaucRC105      A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGGATTATCTTTC
Cr.bulbispermumRC95     A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cr.campanulatum7167     A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cr.foetidumRC98         A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cr.graminicola7630      A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cr.lugardii7632         A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cr.macowanii7168        A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cr.nearmacowanRC100     A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cr.buphanoidesRC102     A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cr.acauleRC38           A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cr.buphanoides7631      AACTATCC----AAACTAATTCTTTC-TATTTTTCCGGGGGTTATCTTTC
Cr.carolschmidRC97      A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cr.lineareRC99          A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cr.minimumRC37          A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cr.paludosumRC41        A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cr.variabileRC44        A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cr.moorei7921           A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cy.elatus7636           A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cy.elatusRC93           --------------------------------------------------
Cy.mackeniiRC87         A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cy.obliquus7278         --------------------------------------------------
Cy.ochroleucus7639      A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cy.sanguineusRC94       A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cy.staadensis7316       A-TTATCG----GGACTA-TTCTTTC-TATTTTCT--GGG-GTATCTTTC
Cy.labiatus7212         A-TTATCA----GGACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cy.smithiae7214         A-TTATC-----AAACTA-TTCTTTC-GATTTTCT--GGG-TTATCTTTC
Cy.elatus7198           A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cy.herreiRC86           --------------------------------------------------
Cy.brachyscyphus7204    A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cy.loddigesianus7203    A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGGGTTATCTTTC
Cy.falcatus7637         A-TTATC-----AAACTA-TTCTTTC-TAGTTTCT--GGG-TTATCTTTC
Eus.darwini             A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Ge.namaquensiAMV635     A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Hae.montanus7163        A-TTATC------GACTA-TTCTTTC-TATTTTCT--GG--TTATCTTTC
Hae.coccineusAMV632     ATTTATC------AACTA-TTCTTAC-TATTTCCA--GGG--TATCTTTC
Hae.albiflos7517        A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Hae.crispus7252         A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Hae.crispus7260         A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Lap.martinezii          A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATTTTTC
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                      2101                                                2150
Leu.autumnale         A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Ne.bowdenii           A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Ne.laticoma8090       A-CTATC-----AAACTA-TTCCTTC-TATTTTCT--AGG-TTATCTTTC
Na.sp.7607            A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Na.sp.7608            A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG--TATCTTTC
Na.tazetta            A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Pan.canariense        A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Sten.variegatum       A-TTATC-----AAACTA-TTCTTTC-GATTTTCT--GGG-TTATCTTTC
Phae.dubia            A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Par.weberbaueri       A-TTATC-----AAACTA-TTCTTTC-TATTTTTT--GGG-TTATCTTTC
Ster.lutea            A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Sc.membranaceus7246   A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Str.salter7245        A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--AGG-TTATCTTTC
Sc.multiflorus7919    A-TT----------------------------------------------
Sc.membranaceus7917   A-TTATC------AACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Va.parviflora         A-GTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Hya.orientalis        A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
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                        2151                                                2200
Ama.belladonna          AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Bo.distich7172          AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Br.gregaria7157         AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cro.flava7256           AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Br.radulosanata7629     AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cl.miniata8095          AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cl.miniataRC14          AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cl.caulescens8092       AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cl.miniata              AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cl.nobilisRC6b          AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cl.cyrtantiflora8094    AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Chl.fragrans            AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Calo.lutea              AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cr.euchrophyllRC96      AAG----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cr.acauleRC106          AAG----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cr.acaulglaucRC105      AAG----TCTACTAATA-ATTTCTTCGGCA-GTAAGGCAA-TCAAATGTT
Cr.bulbispermumRC95     AAG----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cr.campanulatum7167     AAG----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cr.foetidumRC98         AAG----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cr.graminicola7630      AAG----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cr.lugardii7632         AAG----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cr.macowanii7168        AAG----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cr.nearmacowanRC100     AAG----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cr.buphanoidesRC102     AAG----TCTACTAATA-ATTTCTTCGGCA-GTAAGGGAA-TCAAATGTT
Cr.acauleRC38           AAG----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cr.buphanoides7631      AAGA---TCTACTAATAAATTTCTTCGGCA-GTAAGGGAA-TCAAATGTT
Cr.carolschmidRC97      AAG----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cr.lineareRC99          AAG----TATACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cr.minimumRC37          AAG----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cr.paludosumRC41        AAG----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cr.variabileRC44        AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cr.moorei7921           AAG----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cy.elatus7636           AAG----TCTACTAAAA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cy.elatusRC93           ----------------------------------------------------
Cy.mackeniiRC87         AAG----TTTACTAAAA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cy.obliquus7278         ----------------------------------------------------
Cy.ochroleucus7639      AAG----TTTACTAAAA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cy.sanguineusRC94       AAG----TCTACTAAAA-AATTCTTCGGCA-GTAAGGGAA-TCAAATGTT
Cy.staadensis7316       AAG-----CTACTAAAA-AATTCTTCGGGG-G-AAGGGAA-TCAAATGTT
Cy.labiatus7212         AAG----TCTACTAAAA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cy.smithiae7214         AAG----TCTACTAAAA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cy.elatus7198           AAG----TCTACTAAAA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cy.herreiRC86           ----------------------------------------------------
Cy.brachyscyphus7204    AAG----TTTACTAAAA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cy.loddigesianus7203    AAG----TCTACTAAAA-AATTCTTCGGCA-GTAAGGGAA-TCAAATGTT
Cy.falcatus7637         AAG----TCTACTAAAA-AA-TCTTCGGCA-GTAAGGGAA-TCAAATGTT
Eus.darwini             AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Ge.namaquensiAMV635     AAG----TCTACTAATA-AATTCTTCGACA-GTAAGG-AA-TCAAATGTT
Hae.montanus7163        AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Hae.coccineusAMV632     A-G----TCTGCTCATG--ATTA-T-GGC--------------------
Hae.albiflos7517        AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGGGAA-TCAAATGTT
Hae.crispus7252         AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Hae.crispus7260         AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGGTAA-TCAAATGTT
Lap.martinezii          AAG----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
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                        2151                                                2200
Leu.autumnale           AAG----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Ne.bowdenii             AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Ne.laticoma8090         AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Na.sp.7607              AAG----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Na.sp.7608              AAG----TCTACTAAGA-AATTCTTCGGCA-GTAAGGGAA-TCAAATGTT
Na.tazetta              AAG----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Pan.canariense          AAG----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Sten.variegatum         AAG----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Phae.dubia              AAG----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Par.weberbaueri         AAG----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Ster.lutea              AAG----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Sc.membranaceus7246     AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Str.salter7245          AAG----TCTACTAATA-AATTCTTCGACA-GTAAGGGAA-TCAAATGTT
Sc.multiflorus7919      ------------------------------------------------
Sc.membranaceus7917     AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Va.parviflora           AAG----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Hya.orientalis          AAG----TCTATTAAGA-AATTCTTCGCCG-ATAAGG-AA-TCAAATATT
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                          2201                                                2250
Ama.belladonna            AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Bo.distich7172            AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Br.gregaria7157           AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cro.flava7256             AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Br.radulosanata7629       AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cl.miniata8095            AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cl.miniataRC14            AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cl.caulescens8092         AG-AG--AATTCATTTCTA--AT-AG-ATACCATTA-----CTAAG-AAA
Cl.miniata                AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cl.nobilisRC6b            AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cl.cyrtantiflora8094      AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Chl.fragrans              AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Calo.lutea                AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cr.euchrophyllRC96        AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cr.acauleRC106            AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cr.acaulglaucRC105        AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cr.bulbispermumRC95       AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cr.campanulatum7167       AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cr.foetidumRC98           AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cr.graminicola7630        AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cr.lugardii7632           AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cr.macowanii7168          AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cr.nearmacowanRC100       AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cr.buphanoidesRC102       AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cr.acauleRC38             AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cr.buphanoides7631        AAGAG--AATTCATTTCCAAAAT-AG-ATACCGGTTTA--CTTAAGAAAA
Cr.carolschmidRC97        AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cr.lineareRC99            AG-AG--AATTCATTTCTA--AT-AG-ATACCATTA-----CTAAG-AAA
Cr.minimumRC37            AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cr.paludosumRC41          AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cr.variabileRC44          AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cr.moorei7921             AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cy.elatus7636             AG-AG--AATTCTTTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cy.elatusRC93             ------------------------------------------------
Cy.mackeniiRC87           AG-AG--AATTCTTTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cy.obliquus7278           ------------------------------------------------
Cy.ochroleucus7639        AG-AG--AATTCTTTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cy.sanguineusRC94         AG-AG--AATTCTTTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cy.staadensis7316         AGGAG--AATTCTTTTCTA--AT-AG-ATACCGTTA-----CTAAGGAAA
Cy.labiatus7212           AG-AG--AATTCTTTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cy.smithiae7214           AG-AG--AATTCTTTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cy.elatus7198             AG-AG--AATTCTTTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cy.herreiRC86             ------------------------------------------------
Cy.brachyscyphus7204      AG-AGT-AATTCTTTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cy.loddigesianus7203      AG-AG--AATTCTTTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cy.falcatus7637           AG-AG--AATTCTTTTCTAA-TA-GG-ATACCGTTA-----CTAAG-AAA
Eus.darwini               AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Ge.namaquensiAMV635       AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Hae.montanus7163          AG-AC--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Hae.coccineusAMV632       ------------------------------------------------
Hae.albiflos7517          AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Hae.crispus7252           AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Hae.crispus7260           AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Lap.martinezii            AG-AG--AATTCATTTATA--AC-AG-ATACCGTTA-----CTAAG-AAA
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                        2201                                                2250
Leu.autumnale           AG-AG--AATTCATTTATA--AT-AG-ATACCCTTA-----CTAAG-AAA
Ne.bowdenii             AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Ne.laticoma8090         AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAGAAAA
Na.sp.7607              AG-AG--AATTCATTTATA--AT-AG-ATACCGTTA-----CTAAG-AAA
Na.sp.7608              AG-AG--AATTCATTTAGA--AT-AG-ATACTGTTA-----CTAAG-AAA
Na.tazetta              AG-AG--AATTCATTTATA--AT-AG-ATACCGTTA-----CTAAG-AAA
Pan.canariense          AG-AG--AATTCATTTATA--AT-AG-ATTCCGTTA-----CTAAG-AAA
Sten.variegatum         AG-AG--AATTCATTTCTA--AT-AG-ATACCATTA-----CTAAG-AAA
Phae.dubia              AG-AG--AATTCATTTCTA--AT-AG-ATACCCTTA-----CTAAG-AAA
Par.weberbaueri         AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Ster.lutea              AG-AT--AATTCATTTATA--AT-AG-ATACCGTTA-----CTAAT-AAA
Sc.membranaceus7246     AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Str.salter7245          AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Sc.multiflorus7919      ------------------------------------------------
Sc.membranaceus7917     AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAGAAAA
Va.parviflora           AG-AG--AATTCATTTATA--AT-AG-ATACCGTTA-----CTAAG-AAA
Hya.orientalis          AG-AA--AATTCGTTTCTA--AT-AG-ATACTGTTA-----CTAAG-AAA
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                        2251                                                2300
Ama.belladonna          T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Bo.distich7172          T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Br.gregaria7157         T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Cro.flava7256           T---TT----GATACCG--TAGT-----CCCGG---TTATTCTTCTT--A
Br.radulosanata7629     T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Cl.miniata8095          T---TT----GATACCA--TAGT-----CCCAGA--TTATTCTTCTT--A
Cl.miniataRC14          T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Cl.caulescens8092       T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Cl.miniata              T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Cl.nobilisRC6b          T---TT----GATACCA--TAGT-----CCCAA---TTATTCTTCTT--A
Cl.cyrtantiflora8094    T---TT----GATACCA--TAGT-----CCCAA---TTATTCTTCTT--A
Chl.fragrans            T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Calo.lutea              T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Cr.euchrophyllRC96      T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Cr.acauleRC106          T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Cr.acaulglaucRC105      T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Cr.bulbispermumRC95     T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Cr.campanulatum7167     T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Cr.foetidumRC98         T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Cr.graminicola7630      T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Cr.lugardii7632         T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Cr.macowanii7168        T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Cr.nearmacowanRC100     T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Cr.buphanoidesRC102     T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Cr.acauleRC38           T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Cr.buphanoides7631      T---TT---GGATACCA-AAAGT-----CCCG-----------------
Cr.carolschmidRC97      T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Cr.lineareRC99          T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Cr.minimumRC37          T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Cr.paludosumRC41        T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Cr.variabileRC44        T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Cr.moorei7921           T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Cy.elatus7636           T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Cy.elatusRC93           ------------------------------------------------
Cy.mackeniiRC87         T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Cy.obliquus7278         ------------------------------------------------
Cy.ochroleucus7639      T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Cy.sanguineusRC94       T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Cy.staadensis7316       T---TT---GGATACCA--TAGCT----CCCAG---TTATTCTTCTT--A
Cy.labiatus7212         T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Cy.smithiae7214         T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Cy.elatus7198           T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Cy.herreiRC86           ------------------------------------------------
Cy.brachyscyphus7204    T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Cy.loddigesianus7203    T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Cy.falcatus7637         T---TTG---GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Eus.darwini             T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Ge.namaquensiAMV635     T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Hae.montanus7163        T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Hae.coccineusAMV632     ------------------------------------------------
Hae.albiflos7517        T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Hae.crispus7252         T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Hae.crispus7260         T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Lap.martinezii          T---TT----GATACCA--TAGT-----CCCTG---TTATTCTTCTT--A
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                        2251                                                2300
Leu.autumnale           T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Ne.bowdenii             T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Ne.laticoma8090         T---TT---GGATACCA--TAGT-----CCCGG----TATTCTTCTT--A
Na.sp.7607              T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Na.sp.7608              T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Na.tazetta              T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Pan.canariense          T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Sten.variegatum         T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Phae.dubia              T---TT----GATACCA--CAGT-----CCCAG---TTATTCTTCTT--A
Par.weberbaueri         T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Ster.lutea              T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Sc.membranaceus7246     T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Str.salter7245          T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Sc.multiflorus7919      ------------------------------------------------
Sc.membranaceus7917     T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Va.parviflora           T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Hya.orientalis          T---TT----GACACCA--TAGT-----CCCGG---TTATTCTTCTT--A
```

```
                        2301                                                2350
Ama.belladonna          TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Bo.distich7172          TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Br.gregaria7157         TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cro.flava7256           TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Br.radulosanata7629     TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cl.miniata8095          TTGG---GCCCTTGTC----CTAAAG-CGGAAATTTTG---TACCGAG-A
Cl.miniataRC14          TTGG---GTCCTTGT-----CTAAAG-CG-AAATTTTG---TACCGT--A
Cl.caulescens8092       TTGG---GTCCTTGT-----CTAAAG-CG-AAATTTTG---TACCGT--A
Cl.miniata              TTGG---GTCCTTGT-----CTAAAG-CG-AAATTTTG---TACCGT--A
Cl.nobilisRC6b          TTGG---GTCCTTGT-----CTAAAG-CG-AAATTTTG---TACCGT--A
Cl.cyrtantiflora8094    TTGG---GTCCTTGT-----CTAAAG-CG-AAATTTTG---TACCGT--A
Chl.fragrans            TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Calo.lutea              TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cr.euchrophyllRC96      TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cr.acauleRC106          TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cr.acaulglaucRC105      TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---T-CCGT--A
Cr.bulbispermumRC95     TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cr.campanulatum7167     TTGG---ATCCCTGT-----CTAAAG-CG-AAATTTTG---TACCGT--A
Cr.foetidumRC98         TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGAT-A
Cr.graminicola7630      TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cr.lugardii7632         TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cr.macowanii7168        TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cr.nearmacowanRC100     TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cr.buphanoidesRC102     TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cr.acauleRC38           TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cr.buphanoides7631      ------------------------------------------------
Cr.carolschmidRC97      TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cr.lineareRC99          TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cr.minimumRC37          TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cr.paludosumRC41        TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cr.variabileRC44        TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cr.moorei7921           TTGGC--ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cy.elatus7636           TTGG---ATCCTTGT-----CTAAAG-CG-AAATTTTG---TACCGT--A
Cy.elatusRC93           ------------------------------------------------
Cy.mackeniiRC87         TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cy.obliquus7278         ------------------------------------------------
Cy.ochroleucus7639      TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cy.sanguineusRC94       TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cy.staadensis7316       TTGGG--ATCCTTGGT----CTAAAGGCTAAAATTTTG---TACCGGT-A
Cy.labiatus7212         TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cy.smithiae7214         TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cy.elatus7198           TTGG---ATCCTTGT-----CTAAAG-CG-AAATTTTG---TACCGT--A
Cy.herreiRC86           ------------------------------------------------
Cy.brachyscyphus7204    TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cy.loddigesianus7203    TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cy.falcatus7637         TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Eus.darwini             TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Ge.namaquensiAMV635     TTGG---ATCCTTGT-----CTAAAG-TT-AAATTTTG---TACCGT--A
Hae.montanus7163        TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Hae.coccineusAMV632     ------------------------------------------------
Hae.albiflos7517        TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Hae.crispus7252         TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Hae.crispus7260         TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Lap.martinezii          TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
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                    2301                                                2350
Leu.autumnale       TCGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Ne.bowdenii         TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Ne.laticoma8090     TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Na.sp.7607          TTAG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Na.sp.7608          TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCAT--A
Na.tazetta          TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Pan.canariense      TTGG---ATCCTTGT-----CTAAAG-GT-AAATTTTG---TACCGT--A
Sten.variegatum     TTGG---ATCCTTGT-----CTAAAG-CG-AAATTTTG---TACTGT--A
Phae.dubia          TTGG---ATCCTTGT-----CTAAAG-CG-AAATTTTG---TACTGT--A
Par.weberbaueri     TTGG---ATCCTTGT-----CTAAAG-CG-AAATTTTG---TACTGT--A
Ster.lutea          TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Sc.membranaceus7246 TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Str.salter7245      TTGG---ATCCCTGT-----TTAAAG-CT-AAATTTTG---TACCGT--A
Sc.multiflorus7919  ------------------------------------------------
Sc.membranaceus7917 TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Va.parviflora       TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Hya.orientalis      TTGG---ATCCTTGT-----TTAAAG-CT-AAATTTTG---TACCGT--A
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                        2351                                                2400
Ama.belladonna          TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Bo.distich7172          TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Br.gregaria7157         TCGGG---CC-ACCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cro.flava7256           TCGGG---CC-ATCCTA---TTAGT---AAGCCGGA--TCTGG--GCCGA
Br.radulosanata7629     TCGGG---CC-ACCCTA---TTAGT---AAGCCGGA--TCTGG--GCCGA
Cl.miniata8095          TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGGC-GCCGA
Cl.miniataRC14          TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cl.caulescens8092       TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cl.miniata              TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cl.nobilisRC6b          TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cl.cyrtantiflora8094    TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Chl.fragrans            TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Calo.lutea              TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--ACCGA
Cr.euchrophyllRC96      TTGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cr.acauleRC106          TCGGG---CC-ATCCTA---TTAGT---AAGCCGGA--TCTGG--GCCGA
Cr.acaulglaucRC105      TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cr.bulbispermumRC95     TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cr.campanulatum7167     TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cr.foetidumRC98         TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cr.graminicola7630      TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cr.lugardii7632         TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cr.macowanii7168        TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cr.nearmacowanRC100     TTGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cr.buphanoidesRC102     TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cr.acauleRC38           TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cr.buphanoides7631      --------------------------------------------------
Cr.carolschmidRC97      TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cr.lineareRC99          TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cr.minimumRC37          TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cr.paludosumRC41        TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cr.variabileRC44        TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cr.moorei7921           TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cy.elatus7636           TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cy.elatusRC93           --------------------------------------------------
Cy.mackeniiRC87         TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cy.obliquus7278         --------------------------------------------------
Cy.ochroleucus7639      TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cy.sanguineusRC94       TCGGG---CC-ATTCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cy.staadensis7316       TCGGG---GCCATCCTA---TTAGGTA-AGGCCGGA--TCTGGGGGCCGA
Cy.labiatus7212         TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cy.smithiae7214         TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cy.elatus7198           TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cy.herreiRC86           --------------------------------------------------
Cy.brachyscyphus7204    TCGGG---CC-ATCCTA---TTATT---AAGCCG-A--TCTGG--GCCGA
Cy.loddigesianus7203    TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cy.falcatus7637         TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Eus.darwini             TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Ge.namaquensiAMV635     TCGGG---CC-ATCCTA---TTAGT---AAGCCGGA--TCTGG--GCCGA
Hae.montanus7163        TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Hae.coccineusAMV632     --------------------------------------------------
Hae.albiflos7517        TCGGG---CC-ATCCTA---TTAGT---AAGCCGGA--TCTGG--GCCGA
Hae.crispus7252         TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Hae.crispus7260         TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Lap.martinezii          TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
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                        2351                                                2400
Leu.autumnale           TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Ne.bowdenii             TTGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Ne.laticoma8090         TCGGG---CC-ATCCTA---TTAGT---AAGTCG-A--TCTGG--GCCGA
Na.sp.7607              TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Na.sp.7608              TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Na.tazetta              TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Pan.canariense          TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Sten.variegatum         TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Phae.dubia              TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Par.weberbaueri         TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Ster.lutea              TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Sc.membranaceus7246     TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Str.salter7245          TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG-GCCGGA
Sc.multiflorus7919      ------------------------------------------------
Sc.membranaceus7917     TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Va.parviflora           TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Hya.orientalis          TCAGG---TC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
```

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                        2401                                                2450
Ama.belladonna          TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Bo.distich7172          TTTATCAG-----ATTCTG-AT---ATTC---TTGATCGC--ATTCGGTC
Br.gregaria7157         TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cro.flava7256           TTTATCAGG----ATTCTG-AT---ATTC---TTGGATCG--ATTCGGTC
Br.radulosanata7629     TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cl.miniata8095          TTTATCAG-----ATTCTGGAT---ATTC---TTGATCG---ATTCGGTC
Cl.miniataRC14          TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cl.caulescens8092       TTTATCAG-----ATTCTG-AT---ATTC---TTGGATCG--ATTCGGTC
Cl.miniata              TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cl.nobilisRC6b          TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cl.cyrtantiflora8094    TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Chl.fragrans            TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Calo.lutea              TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cr.euchrophyllRC96      TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cr.acauleRC106          TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cr.acaulglaucRC105      TTTATCAAA----ATCCTG-AT---ATTC---TTGATCGG--ATTCGGAC
Cr.bulbispermumRC95     TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cr.campanulatum7167     TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cr.foetidumRC98         TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cr.graminicola7630      TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cr.lugardii7632         TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cr.macowanii7168        TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cr.nearmacowanRC100     TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cr.buphanoidesRC102     TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cr.acauleRC38           TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cr.buphanoides7631      ------------------------------------------------
Cr.carolschmidRC97      TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cr.lineareRC99          TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cr.minimumRC37          TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cr.paludosumRC41        TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cr.variabileRC44        TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cr.moorei7921           TTTATCAG-----ATTCTG-AT---ATTC---TTGATCGG--ATTCGGGC
Cy.elatus7636           TTTCTCAG-----ATTCTG-AT---ATTC---TTGGATCG--ATTCGGTC
Cy.elatusRC93           ------------------------------------------------
Cy.mackeniiRC87         TTTCTCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cy.obliquus7278         ------------------------------------------------
Cy.ochroleucus7639      TTTCTCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cy.sanguineusRC94       TTTCTCAG-----ATTCTG-AT---ATTC---TTGGATCG--ATTCGGTC
Cy.staadensis7316       TTTCTCAGG----ATTCTGGAT---ATTTCCTTGGATCGGATGTCGGGTC
Cy.labiatus7212         TTTCTCAG-----ATTCTG-AT---ATTC---TTGGATCG--ATTCGGTC
Cy.smithiae7214         TTTCTCAG-----ATTCTG-AT---ATTC---TTGGATCG--ATTCGGCC
Cy.elatus7198           TTTCTCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cy.herreiRC86           ------------------------------------------------
Cy.brachyscyphus7204    TTTCTCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGCG
Cy.loddigesianus7203    TTTCTCAG-----ATTCTG-AT---ATTC---TTGGATCG--ATTCGGTC
Cy.falcatus7637         TTTCTCAG-----ATTCTG-AT---ATTC---TTGGACG---ATTCGGTC
Eus.darwini             TTTATCAG-----ATTCTT-AT---ATTC---TTGATCG---ATTCGGCC
Ge.namaquensiAMV635     TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGG-C
Hae.montanus7163        TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Hae.coccineusAMV632     ------------------------------------------------
Hae.albiflos7517        CTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Hae.crispus7252         TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Hae.crispus7260         TTTATCAG-----ATTCTG-AT---ATTC---TTGGTCG---ATTCGGCC
Lap.martinezii          TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ACTCGGTC
```

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                        2401                                                2450
Leu.autumnale           TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Ne.bowdenii             TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Ne.laticoma8090         TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Na.sp.7607              TTTATCAG-----ATTCTG-AT---ATTC--TTGGATCG---ATTCGGTC
Na.sp.7608              TTTATCAG-----ATTTTG-AT---ATTC---TTGATCG---ATTCGGTC
Na.tazetta              TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Pan.canariense          TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Sten.variegatum         TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Phae.dubia              TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Par.weberbaueri         TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Ster.lutea              TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Sc.membranaceus7246     TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Str.salter7245          TTTATCAG-----ATTCTG-AT---ATTC--TTGGATCG---ATTCGGTC
Sc.multiflorus7919      ------------------------------------------------
Sc.membranaceus7917     TTTATCA---------------------------------------
Va.parviflora           TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Hya.orientalis          TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
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                        2451                                                 2500
Ama.belladonna          ---GG-AT---ATG---TAGAAA-TCTTTCT------------------
Bo.distich7172          ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Br.gregaria7157         ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Cro.flava7256           ---GGGAT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGGG-A
Br.radulosanata7629     ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGGG-A
Cl.miniata8095          ---GGGAT---ATG---TAAGAAATCTTTCTCCATTATC-ACAGTGGG-A
Cl.miniataRC14          ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGGG-A
Cl.caulescens8092       ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Cl.miniata              ---GG-AT---ATG---TAGAAA-TCTTTCT------------------
Cl.nobilisRC6b          ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Cl.cyrtantiflora8094    ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Chl.fragrans            ---GG-AT---ATG---TAGAAA-TCTTTTT------------------
Calo.lutea              ---GG-AT---ATG---TAGAAA-TCTTTCT------------------
Cr.euchrophyllRC96      ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Cr.acauleRC106          ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGGG-A
Cr.acaulglaucRC105      ---GGGAT---ATGG--TAGAAAATCTTTCCG-ATTATCCACAGGGGG-A
Cr.bulbispermumRC95     ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGGGG--A
Cr.campanulatum7167     ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Cr.foetidumRC98         ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Cr.graminicola7630      ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGGG-A
Cr.lugardii7632         ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Cr.macowanii7168        ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Cr.nearmacowanRC100     ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Cr.buphanoidesRC102     ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Cr.acauleRC38           ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Cr.buphanoides7631      -------------------------------------------------
Cr.carolschmidRC97      ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Cr.lineareRC99          ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Cr.minimumRC37          ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Cr.paludosumRC41        ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Cr.variabileRC44        ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Cr.moorei7921           ---CGGAT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGGGGG-A
Cy.elatus7636           ---GG-AT---ATG---TAGAAAATCTTTCTC-ATTATC-ACAGTGGG-A
Cy.elatusRC93           -------------------------------------------------
Cy.mackeniiRC87         ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Cy.obliquus7278         -------------------------------------------------
Cy.ochroleucus7639      ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Cy.sanguineusRC94       ---GGAAT---GTA-----GAAA-TCTTTCTC-ATTATC-ACAGTGGA-A
Cy.staadensis7316       ---GGGATT--ATG-----G-----------------------------
Cy.labiatus7212         ---GGGAT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGGGGG-A
Cy.smithiae7214         ---GGGAT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Cy.elatus7198           ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Cy.herreiRC86           -------------------------------------------------
Cy.brachyscyphus7204    ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGGG-A
Cy.loddigesianus7203    ---GGGAT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGGG-A
Cy.falcatus7637         ---GG-AT---ATG---TAGAAA--CTTTCTC-ATTATC-ACAGTGG--A
Eus.darwini             ---GG-AT---ATG---TAGAAA-TCTTTTT------------------
Ge.namaquensiAMV635     ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Hae.montanus7163        ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-GCAGTGG--A
Hae.coccineusAMV632     -------------------------------------------------
Hae.albiflos7517        ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGGG-A
Hae.crispus7252         ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Hae.crispus7260         ---GGGAT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG---
Lap.martinezii          ---GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--A
```

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                    2451                                                2500
Leu.autumnale       ---GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--A
Ne.bowdenii         ---GG-AT---ATG---TAGAAA-TCTTTTT------------------
Ne.laticoma8090     ---GGGAT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGGG-A
Na.sp.7607          ---GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--A
Na.sp.7608          ---GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--A
Na.tazetta          ---GG-AT---ATG---TAGAAA-TCTTTTT------------------
Pan.canariense      ---GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--A
Sten.variegatum     ---GG-AT---ATG---TAGAAA-TCTTTTT------------------
Phae.dubia          ---GG-AT---ATG---TAGAAA-TCTTTTT------------------
Par.weberbaueri     ---GG-AT---ATG---TAGAAA-TCTTTTT------------------
Ster.lutea          ---GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--A
Sc.membranaceus7246 ---GGGAT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Str.salter7245      ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGGG-A
Sc.multiflorus7919  --------------------------------------------------
Sc.membranaceus7917 --------------------------------------------------
Va.parviflora       ---GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--A
Hya.orientalis      ---GG-AT---ATG---TAGAAA-TCTCTCT------------------
```

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                        2501                                                2550
Ama.belladonna          --------------------------------------------------
Bo.distich7172          TCCTCAAAAAAAC--AGGG-TT-TGTATCGAATAAA-GTATATACTTCGA
Br.gregaria7157         TCCTCAAAAAAAC--AGGG-TT-TGTATCGAATAAA-GTATATACTTCGA
Cro.flava7256           TCCTCAAAAAAAC--GGGG-TT-TGTATCGAATAAA-GTATATACTTCGA
Br.radulosanata7629     TCCTCAAAAAAAC--AGGGCTT-TGTATCGAATAAAAGTATATACTTCGA
Cl.miniata8095          TCCTCAAAAAAAAC-AGGGGGTTGGTATCGAATAAAAGCATATACTTCGA
Cl.miniataRC14          TCCTCAAAAAAAC--AGGG-TT-TGTATCGAATAAA-GTATATACTTCGA
Cl.caulescens8092       TCCTCAAAAAAAC--AGGG-TT-TGTATCGAATAAA-GTATATACTTCGA
Cl.miniata              --------------------------------------------------
Cl.nobilisRC6b          TCCTCAAAAAAAC--AGGG-TT-TGTATCGAATAAAAGTATATACTTCGA
Cl.cyrtantiflora8094    TCCTCAAAAAAAC--AGGGGTT-TGTATCGAATAAA-GTATATACTTCGA
Chl.fragrans            --------------------------------------------------
Calo.lutea              --------------------------------------------------
Cr.euchrophyllRC96      TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Cr.acauleRC106          TCCTCAAAAAAAC--AGGGGTT--GTATCGAATAAA-GTATATACTTCGA
Cr.acaulglaucRC105      TCCTCAGAAAAAC--AGGGGTTTTGTATCGCAATCAAGCATATTACTCCA
Cr.bulbispermumRC95     TCCTCAAAAAAAC--AGGGG-TTTGTATCGAATAAA-GTATATACTTCGA
Cr.campanulatum7167     TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Cr.foetidumRC98         TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Cr.graminicola7630      TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Cr.lugardii7632         TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Cr.macowanii7168        TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Cr.nearmacowanRC100     TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Cr.buphanoidesRC102     TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Cr.acauleRC38           TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Cr.buphanoides7631      --------------------------------------------------
Cr.carolschmidRC97      TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GCATATACTTCGA
Cr.lineareRC99          TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Cr.minimumRC37          TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Cr.paludosumRC41        TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Cr.variabileRC44        TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Cr.moorei7921           TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Cy.elatus7636           TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAAAGTATATACTTC--
Cy.elatusRC93           --------------------------------------------------
Cy.mackeniiRC87         CCTCAAAAAAAAC--AGGG--TTTGTATCGAAATAAAGTATATACT-C--
Cy.obliquus7278         --------------------------------------------------
Cy.ochroleucus7639      TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Cy.sanguineusRC94       CCCTCAAAAAAAC--AGGGG-TTGGTATCGAATAAAGGTATAAACTCCGA
Cy.staadensis7316       --------------------------------------------------
Cy.labiatus7212         TCCTCAAAAAAAC--AGAGGTATTGTAT---AT----------------
Cy.smithiae7214         TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Cy.elatus7198           TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Cy.herreiRC86           --------------------------------------------------
Cy.brachyscyphus7204    TCCTCAAAAAAAC--AGGGG-TTTGTATCGAATAAA-GTATATACTTCGA
Cy.loddigesianus7203    TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Cy.falcatus7637         TCCTCAAAAAAAC--AGGG------------------------------
Eus.darwini             --------------------------------------------------
Ge.namaquensiAMV635     TCCTCAAAAAAAC--AGGG--CTTGTATCGAATAAA-GTATATACCTTCG
Hae.montanus7163        TCCTCGGGAAAACC-AGGG--GTTGTATCGAAAAAAAGTATATACTTCCA
Hae.coccineusAMV632     --------------------------------------------------
Hae.albiflos7517        TCCTCAAAAAAAC--AGGG--TTTG------------------------
Hae.crispus7252         TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Hae.crispus7260         --------------------------------------------------
Lap.martinezii          TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
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                    2501                                                2550
Leu.autumnale       TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Ne.bowdenii         -------------------------------------------------
Ne.laticoma8090     TCCTCAAAAAAAC--AGGGG-TTTGTATCGAAATAAAGTATATACTTCGA
Na.sp.7607          TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Na.sp.7608          TCCTCAAAAAAGC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Na.tazetta          -------------------------------------------------
Pan.canariense      TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Sten.variegatum     -------------------------------------------------
Phae.dubia          -------------------------------------------------
Par.weberbaueri     -------------------------------------------------
Ster.lutea          TCTTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Sc.membranaceus7246 TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Str.salter7245      TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Sc.multiflorus7919  -------------------------------------------------
Sc.membranaceus7917 -------------------------------------------------
Va.parviflora       TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Hya.orientalis      -------------------------------------------------
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                    2551                                                2600
Ama.belladonna      --------------------------------------------------
Bo.distich7172      CTTT--CGTGTGCTAGAA-CTTTA---GCCCG-TAAACATAAAA-GTACG
Br.gregaria7157     CTTT--CTTGTCAGAGTATATTTA-------------------------
Cro.flava7256       CTTTT-CGTGTGCTAGAA-CTTTA---GCCCGGTAAACATAAAAAGTAC-
Br.radulosanata7629 CTTTT-CGTGTGCTAGAAACTTTA---GCCCG-TAAACATTAAAAGTACG
Cl.miniata8095      CTTTT-CGGGTGCTAGAA-CTTTA---GCTCGGTAAGCATTAAAAGTACG
Cl.miniataRC14      CTTT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAGCATAAAA-GTACG
Cl.caulescens8092   CTTT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAGCATAAAA-GTACG
Cl.miniata          --------------------------------------------------
Cl.nobilisRC6b      CTTT--CGTGTGCTAGAA-CTTTA---GCTCGGTAAGCATAAAA-GTACG
Cl.cyrtantiflora8094 CTTT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAGCATAAAAAGTACG
Chl.fragrans        --------------------------------------------------
Calo.lutea          --------------------------------------------------
Cr.euchrophyllRC96  CTTT--CGTGTGCTAGAA-CTTTA---GCCCG-TAAACATAAAA-GTACG
Cr.acauleRC106      CTTT--CGTGTGCTAGAA-CTTTA---GCCCG-TAAACATTAAAAGTACG
Cr.acaulglaucRC105  CTTTTGGGGGGGGCCAAAACTTTAAA-GCCGG-TAAACA-A----C-A--
Cr.bulbispermumRC95 CTTT--CGTG-GCTAGAA-CTTTA---GCCCGTAAAACATAAAA-GTACG
Cr.campanulatum7167 CTTT--CGTGTGCTAGAA-CTTTA---GCCCG-TAAACATAAAA-GTACG
Cr.foetidumRC98     CTTT--CGTGTGCTAGAA-CTTTA---GCCCG-TAAACATAAAA-GTACG
Cr.graminicola7630  CTTT--CGTGTGCTAGAA-CTTTA---GCCCG-TAAACATTAAAAGTACG
Cr.lugardii7632     CTTT--CGTGTGCTAGAA-CTTTA---GCCCG-TAAACATAAAA-GTACG
Cr.macowanii7168    CTTT--CGTGTGCTAGAA-CTTTA---GCCCG-TAAACATAAAA-GTACG
Cr.nearmacowanRC100 CTTT--CGTGTGCTAGAA-CTTTA---GCCCG-TAAACATAAAA-GTACG
Cr.buphanoidesRC102 CTTT--CGTGTGCTAGAA-CTTTA---GCCCG-TAAACATAAAA-GTACG
Cr.acauleRC38       CTTT---CGGGGCTAGAA-CTTTA---GCCCG-TAAACATAAAA-GTACG
Cr.buphanoides7631  --------------------------------------------------
Cr.carolschmidRC97  CTTT---CGGTGCTAGAA-CTTTA---GCCCG-TAAACATAAAA-GTACG
Cr.lineareRC99      CTTT--CGTGTGCTAGAA-CTTTA---GCCCG-TAAACATAAAA-GTACG
Cr.minimumRC37      CTTT--CGTGTGCTAGAA-CTTTA---GCCCG-TAAACATAAAA-GTACG
Cr.paludosumRC41    CTTT--CGTGTGCTAGAA-CTTTA---GCCCG-TAAACATAAAA-GTACG
Cr.variabileRC44    CTTT--CGTGTGCTAGAA-CTTTA---GCCCG-TAAACATAAAA-GTACG
Cr.moorei7921       CTTT--CGTGTGCTAGAA-CTTTA---GCCCGTAAAACATAAAAGGTACG
Cy.elatus7636       --------------------------------------------------
Cy.elatusRC93       --------------------------------------------------
Cy.mackeniiRC87     --------------------------------------------------
Cy.obliquus7278     --------------------------------------------------
Cy.ochroleucus7639  CTTT--CTTGTG-AAAAAACTTTAAAA----------------------
Cy.sanguineusRC94   CTTTT-CG-G-G-------------------------------------
Cy.staadensis7316   --------------------------------------------------
Cy.labiatus7212     --------------------------------------------------
Cy.smithiae7214     CTTT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACG
Cy.elatus7198       CTTT--CGTGTGCTAGAAACTTTA-------------------------
Cy.herreiRC86       --------------------------------------------------
Cy.brachyscyphus7204 CTTCT--G-G-G-------------------------------------
Cy.loddigesianus7203 CTTT--CGTGTGCTAGAAACTTTA-------------------------
Cy.falcatus7637     --------------------------------------------------
Eus.darwini         --------------------------------------------------
Ge.namaquensiAMV635 ACTTT-CGTGCGCCAGAAACTTTA---GC----T---C------------
Hae.montanus7163    CTTT--CGTGTGCTAGAACTTTTA---GCTCG-T-----TAA--------
Hae.coccineusAMV632 --------------------------------------------------
Hae.albiflos7517    --------------------------------------------------
Hae.crispus7252     CTTT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAGCATAAAA-GTACG
Hae.crispus7260     --------------------------------------------------
Lap.martinezii      CTTT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACG
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                      2551                                                2600
Leu.autumnale         CTTT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACG
Ne.bowdenii           --------------------------------------------------
Ne.laticoma8090       CTTTTCGGGGTGCTAAAACTTTTA---GCCCG-TAAACATAAAAGGTACG
Na.sp.7607            CTTT--CGTGTGCTAAGAACTTTA---GCTCG-TAAACCATTAAAGTACC
Na.sp.7608            CTTT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACG
Na.tazetta            --------------------------------------------------
Pan.canariense        CTTT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACG
Sten.variegatum       --------------------------------------------------
Phae.dubia            --------------------------------------------------
Par.weberbaueri       --------------------------------------------------
Ster.lutea            CTTT--CGTGTGCTAGAA-CTTTA---GCTAG-TAAACATAAAA-GTACG
Sc.membranaceus7246   CTTT--CGTGCGGCTAGAACTTTA---GCTCG-TAAACATAAAA-GTACG
Str.salter7245        CTTT--CGTGTGCTAGAA-CT----------------------------
Sc.multiflorus7919    --------------------------------------------------
Sc.membranaceus7917   --------------------------------------------------
Va.parviflora         CTTT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACG
Hya.orientalis        --------------------------------------------------
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                        2601                                                2650
Ama.belladonna          --------------------------------------------------
Bo.distich7172          GTG--CG-CACTTTTTCGCGCAAG-ATTA--GGGTCGGGGG---TCATTA
Br.gregaria7157         --------------------------------------------------
Cro.flava7256           --------------------------------------------------
Br.radulosanata7629     GTG--CGGCACTTTTTTGGCGAAGACTTA--------------------
Cl.miniata8095          GTA--CC-CACCTTTTTGGCAAAGGATTA-GGTTTCGGGGGGTAATTTAA
Cl.miniataRC14          GTA--CG-CACCTTTTTGCG-AAG-ATTA---GTTCGGGG----TTATTA
Cl.caulescens8092       GTA--CG-CACCTTTTTGCG-AAG-ATTA--GGTTCGGGGG---TTATTA
Cl.miniata              --------------------------------------------------
Cl.nobilisRC6b          GTA--CG-CACCTTTTTGCG-AAG-ATTAA-GGTTCGGGGG---TTATTA
Cl.cyrtantiflora8094    GCA--CG-CACCTTTTTGGCGAAG-ATTA--TGTCCCCGGGG--TTATTA
Chl.fragrans            --------------------------------------------------
Calo.lutea              --------------------------------------------------
Cr.euchrophyllRC96      GTG--CG-CACTTTTTTGCG-AAG-ATTA--GGTTCGGGG----TTATTA
Cr.acauleRC106          GTG--CG-CACTTTTTTGCG-AAG-ATTTAGGGTTCGGGGG---TTATTA
Cr.acaulglaucRC105      -T-------A-----------AAA-A--A--------------------
Cr.bulbispermumRC95     GTG--CG-CACTTTTTTTGCGAAG-ATTA---GGTCGGGGG---TATTTA
Cr.campanulatum7167     GTG--CG-CACTTTTTTGCG-AAA-ATTA--GGTTCGGGG----TTATTA
Cr.foetidumRC98         GTG--CG-CACTTTTTTGCG-AAG-ATTA--GGTTCGGGG----TTATTA
Cr.graminicola7630      GTG--CG-CACTTTTTTGCG-AAG-ATTAA-GGTTCGGGGG---TTATTT
Cr.lugardii7632         GTG--CG-CACTTTTTTGCG-AAG-ATTA--GGTTCGGGG----TTATTA
Cr.macowanii7168        GTG--CG-CACTTTTTTGCCGAAA-ATTA--GGTTCGGGGGG--TTATTA
Cr.nearmacowanRC100     GTG--CG-CACTTTTTTGCG-AAG-ATTA--GGTTCGGGG----TTATTA
Cr.buphanoidesRC102     GTG--CG-CACTTTTTTGCG-AAG-ATTA--GGTTCGGGG----TTATTA
Cr.acauleRC38           GTG--CG-CACTTTTTTGCG-AAG-ATTA--GGTTCGGGGG---TTATTA
Cr.buphanoides7631      --------------------------------------------------
Cr.carolschmidRC97      GTG--CG-CACTTTTTTGCCGAAG-ATTAA-GGTTCGGGGG---TTATTA
Cr.lineareRC99          GTG--CG-CACTTTTTTGCG-AAG-ATTA--GGTTCGGGG----TTATTA
Cr.minimumRC37          GTG--CG-CACTTTTTTGCG-AAG-ATTA--GGTTCGGGG----TTATTA
Cr.paludosumRC41        GTG--CG-CACTTTTTTGCG-AAG-ATTA--GGTTCGGGG----TTATTA
Cr.variabileRC44        GTG--CG-CACTTTTTTGCG-AAG-ATTA--GGTTCGGGGG---TTATTA
Cr.moorei7921           GTG--CCGCACTTTTTTGCGAAAA-ATTA--GGTTCCGGGGG--TTATTA
Cy.elatus7636           --------------------------------------------------
Cy.elatusRC93           --------------------------------------------------
Cy.mackeniiRC87         --------------------------------------------------
Cy.obliquus7278         --------------------------------------------------
Cy.ochroleucus7639      --------------------------------------------------
Cy.sanguineusRC94       --------------------------------------------------
Cy.staadensis7316       --------------------------------------------------
Cy.labiatus7212         --------------------------------------------------
Cy.smithiae7214         GTA--CG--CACCTTTTGCGAAGA-AT-A---GTTCGGGG----TTATTA
Cy.elatus7198           --------------------------------------------------
Cy.herreiRC86           --------------------------------------------------
Cy.brachyscyphus7204    --------------------------------------------------
Cy.loddigesianus7203    --------------------------------------------------
Cy.falcatus7637         --------------------------------------------------
Eus.darwini             --------------------------------------------------
Ge.namaquensiAMV635     --------------------------------------------------
Hae.montanus7163        --------------------------------------------------
Hae.coccineusAMV632     --------------------------------------------------
Hae.albiflos7517        --------------------------------------------------
Hae.crispus7252         GTA--CG-CACCTTTTTGC-GAAG-ATTA--GGTTCGGGGG---TTATTA
Hae.crispus7260         --------------------------------------------------
Lap.martinezii          GTA--CG-CACCTTTTTGC-GAAG-ATTA---GTTCGGGG----TTATTA
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                    2601                                                2650
Leu.autumnale       GTA--CG-CACTTTTTTGC-GAAG-ATTA---GGTTCGGGG---TTATTA
Ne.bowdenii         --------------------------------------------------
Ne.laticoma8090     GGGG-CG-CCTTTTTTTGC-GAAG-AATAA--GGTTCCGGGGGGTTATTA
Na.sp.7607          GGTTACG-CACC-------------------------------------
Na.sp.7608          GTA--CG-CACCTTTTTGC-GAAG-ATTA----GTTCGGGG---TTCTTA
Na.tazetta          --------------------------------------------------
Pan.canariense      GTA--CG-CACCTTTTTGC-GAAG-ATTA---GGTTCGGGG---TTCTTA
Sten.variegatum     --------------------------------------------------
Phae.dubia          --------------------------------------------------
Par.weberbaueri     --------------------------------------------------
Ster.lutea          GTA--CG-CACCTTTTTGC-GAAG-ATTA---GGTTCGGGG---TTATTA
Sc.membranaceus7246 GTA--CG-CACCCTTTTGCCGAAG-ATTAA--GGTTCGGGG---TCATTA
Str.salter7245      --------------------------------------------------
Sc.multiflorus7919  --------------------------------------------------
Sc.membranaceus7917 --------------------------------------------------
Va.parviflora       GTA--CG-CACCTTTTTGC-GAAG-ATTA---GGTTCGGGG---TTATTA
Hya.orientalis      --------------------------------------------------
```

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                    2651                                                2700
Ama.belladonna      --------------------------------------------------
Bo.distich7172      GAA----GAATTTTTT---ACCGGAAGAAG-AACAGGTCCTTTC----TT
Br.gregaria7157     --------------------------------------------------
Cro.flava7256       --------------------------------------------------
Br.radulosanata7629 --------------------------------------------------
Cl.miniata8095      GAA--AAAAATTTTTTTT-ACCGGAAGAAGAAACAGAGGGTCTTTTCCTT
Cl.miniataRC14      GAA----GAATTTTTT---AC-GGAAGAAG-AACAG-TTCTTTC----TT
Cl.caulescens8092   GAAA---GAAATTTTTTTTACGGAAGGAAG-AACAGGTTCTTTTC---TT
Cl.miniata          --------------------------------------------------
Cl.nobilisRC6b      AAAAA--AAATTTTTT---AC-GGAAGAAAAACAGGGTTCTTTC----TT
Cl.cyrtantiflora8094 GAA----AAATTTTTT---AC-GGAAGAAGAAAGGGTTTTTTTT----TT
Chl.fragrans        --------------------------------------------------
Calo.lutea          --------------------------------------------------
Cr.euchrophyllRC96  GAA----GAATTTTTT---AC-GGAAGAAG-AACAGGTTCTTTC---TTT
Cr.acauleRC106      GAA---GGAATTTTTT---AC-GGAAGAAG-AACAAGGGTTCTTTC--TT
Cr.acaulglaucRC105  --------------------------------------------------
Cr.bulbispermumRC95 GAA----GAATTTTTT---ACGG-AAGAAG-AACAGGT-CTTTC---TTT
Cr.campanulatum7167 GAA----GAATTTTTT---AC-GGAAGAAG-AACAGGTTCTTTCT---TT
Cr.foetidumRC98     GAA----GAATTTTTT---ACGGGAAGAAG-AACAGGGTCTTTC----TT
Cr.graminicola7630  AGAA---GAATTTTTT---ACGG-AAGAAAGAACAGGGTCTTTC----TT
Cr.lugardii7632     AAAAA--AAATTTTTT---ACGGGAAGAAG-AACAGGGTCTTTCC---TT
Cr.macowanii7168    GAAA---GAATTTTTTT--ACGGGAAGAAA-AACAGGGTCTTTC---TTT
Cr.nearmacowanRC100 GAA----GAATTTTTT---AC-GGAAGAAG-AACAGGTTCTTTC----TT
Cr.buphanoidesRC102 GAA----GAATTTTTT---ACGGGAAGGAAGAACAGGGTTCTTTCC-TTT
Cr.acauleRC38       GAA----GAATTTTT----AC-GGAAGAAAGAACAAGTTCTTTC----TT
Cr.buphanoides7631  --------------------------------------------------
Cr.carolschmidRC97  GAA---GAAATTTTTT---ACGGGAAGAAG-AACAGGTCCTTTC----TT
Cr.lineareRC99      GAA----GAATTTTTT---ACGGGA-GAAGA-ACAGGGTCCTTTC---TT
Cr.minimumRC37      GAA----GAATTTTTT---ACGGGAAGAAG-AACAGGGTTCTTTC---TT
Cr.paludosumRC41    GAA----GAATTTTTT---ACGGGAAGAAG-AACAGGGTCTTTCT---TT
Cr.variabileRC44    GAA----GAATTTTTT---TCGGGAAGAAG-AACAGGTTCTTTC----TT
Cr.moorei7921       GAAA---GAAATTTTTT--ACCGGAAGAA----------------------
Cy.elatus7636       --------------------------------------------------
Cy.elatusRC93       --------------------------------------------------
Cy.mackeniiRC87     --------------------------------------------------
Cy.obliquus7278     --------------------------------------------------
Cy.ochroleucus7639  --------------------------------------------------
Cy.sanguineusRC94   --------------------------------------------------
Cy.staadensis7316   --------------------------------------------------
Cy.labiatus7212     --------------------------------------------------
Cy.smithiae7214     GAA----GAATTTTTT---ACGG-AAGAAG-AACA--------------
Cy.elatus7198       --------------------------------------------------
Cy.herreiRC86       --------------------------------------------------
Cy.brachyscyphus7204 --------------------------------------------------
Cy.loddigesianus7203 --------------------------------------------------
Cy.falcatus7637     --------------------------------------------------
Eus.darwini         --------------------------------------------------
Ge.namaquensiAMV635 --------------------------------------------------
Hae.montanus7163    --------------------------------------------------
Hae.coccineusAMV632 --------------------------------------------------
Hae.albiflos7517    --------------------------------------------------
Hae.crispus7252     GAA----GAATTTTTT---ACGG-AAGAAG-AACAGGGTCTTTC-----T
Hae.crispus7260     --------------------------------------------------
Lap.martinezii      GAA----GAATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TT
```

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                        2651                                                2700
Leu.autumnale           GAA----GAATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TT
Ne.bowdenii             --------------------------------------------------
Ne.laticoma8090         GAAA---GAAATTTTTTTT-CGGAAAGAAAAAACAGGTCCTTTC-TTTTG
Na.sp.7607              --------------------------------------------------
Na.sp.7608              GAA----GAATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TT
Na.tazetta              --------------------------------------------------
Pan.canariense          GAA----GAATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TT
Sten.variegatum         --------------------------------------------------
Phae.dubia              --------------------------------------------------
Par.weberbaueri         --------------------------------------------------
Ster.lutea              GAA----GCATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TT
Sc.membranaceus7246     GAAA---GAATTTTTTT--ACGGGAAGAAGAAAGAGGGTCTTTCC----T
Str.salter7245          --------------------------------------------------
Sc.multiflorus7919      --------------------------------------------------
Sc.membranaceus7917     --------------------------------------------------
Va.parviflora           GAA----GAATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TT
Hya.orientalis          --------------------------------------------------
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                        2701                                                2750
Ama.belladonna          --------------------------------------------------
Bo.distich7172          TGATCTTTCCCAAAACAACTCCTTTTA----------------------
Br.gregaria7157         --------------------------------------------------
Cro.flava7256           --------------------------------------------------
Br.radulosanata7629     --------------------------------------------------
Cl.miniata8095          TGATCCTTTCC----C--C-C-----------------------------
Cl.miniataRC14          TGATCTTTCCCAAAACAACTCCTTTTAC-TTTACA-TGGATCGCATAGAG
Cl.caulescens8092       TGATCTTTCCCAAAACAACTCCTTTTACTTTTACC-TGGATCACATAGAG
Cl.miniata              --------------------------------------------------
Cl.nobilisRC6b          TGATCTTTCCCAAAACAACTCCTTT-ACTTTTACA-TGGATCGCATAAAG
Cl.cyrtantiflora8094    TGATCTTT-----------TT-----------------------------
Chl.fragrans            --------------------------------------------------
Calo.lutea              --------------------------------------------------
Cr.euchrophyllRC96      GGATCTTTCCCAAAACAACTCCTTTTAC-TTTACA-TGGATCGCATAGAG
Cr.acauleRC106          TGATCCTTCCCAAAACAACCCCTTTTAC-TTT------------------
Cr.acaulglaucRC105      --------------------------------------------------
Cr.bulbispermumRC95     GGATCTTTCCCCAAACAACTCCTTT-AC-TTTACATGGGATGC-ATAGAG
Cr.campanulatum7167     GGATCTTTCCCAAAACAACTCCTTTTAC-TTTACA-TGGATCGCATAGAG
Cr.foetidumRC98         TGATCTTTCCCAAAACAACTCCTTTTAC-TTTACA-TGGATCGCCTAGAG
Cr.graminicola7630      GGATCTTTCCCAAAACACTCCCTTTTAC-TTTACATGGGATCGCATAGAA
Cr.lugardii7632         GGATCTTTCCCAAAACAACTCCTTTTAC-TTTACATGGGATCGCATAAAA
Cr.macowanii7168        TGACCTTTCCCC--------------------------------------
Cr.nearmacowanRC100     TGATCTTTCCCAAAACAACTCCTTTTAC-TTTAC--TGGATCGCATAGAG
Cr.buphanoidesRC102     GGGTCTTTCCCCAAACAACTCCTTTTAC-TTTACATTGGATCGCATAGAG
Cr.acauleRC38           TGATCTTTCCCAAACCAACTCCTTTTAC-TTTACA-TGGATCGCATAGAG
Cr.buphanoides7631      --------------------------------------------------
Cr.carolschmidRC97      TGATCTTTCCCAAAACAACTCCTTTTACTTTTACA-TGGATCGCATAAAG
Cr.lineareRC99          GGATCTTTCCCAAAACAACTCCTTTTAC-TTT-CATTGGATCGCATAGAA
Cr.minimumRC37          TGATCTTTCCCAAAACCAACTCCTTTTACTTTACATGGGATCGCATAGAG
Cr.paludosumRC41        GGATCTTTCCCAAAACAACTCCTTTTAC-TTTACA-TGGATCGCATAGAG
Cr.variabileRC44        TGATCTTTCCCAAAACAACTCCTTTTAC-TTTACATGGGATCGCATAGAG
Cr.moorei7921           --------------------------------------------------
Cy.elatus7636           --------------------------------------------------
Cy.elatusRC93           --------------------------------------------------
Cy.mackeniiRC87         --------------------------------------------------
Cy.obliquus7278         --------------------------------------------------
Cy.ochroleucus7639      --------------------------------------------------
Cy.sanguineusRC94       --------------------------------------------------
Cy.staadensis7316       --------------------------------------------------
Cy.labiatus7212         --------------------------------------------------
Cy.smithiae7214         --------------------------------------------------
Cy.elatus7198           --------------------------------------------------
Cy.herreiRC86           --------------------------------------------------
Cy.brachyscyphus7204    --------------------------------------------------
Cy.loddigesianus7203    --------------------------------------------------
Cy.falcatus7637         --------------------------------------------------
Eus.darwini             --------------------------------------------------
Ge.namaquensiAMV635     --------------------------------------------------
Hae.montanus7163        --------------------------------------------------
Hae.coccineusAMV632     --------------------------------------------------
Hae.albiflos7517        --------------------------------------------------
Hae.crispus7252         TGATCTTTCCCAAA-C-ACTCCTTTTAC-TTTACA-TGGGATGCATAGAG
Hae.crispus7260         --------------------------------------------------
Lap.martinezii          TGATGTTTCCCAAAACAACTCCTTTTAC-TTTACA-TGGATCACATAGAG
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                      2701                                                2750
Leu.autumnale         TGATGTTTCCCAAAACAACTTCTTTTAC-TTTACA-TGGATCACATAGAG
Ne.bowdenii           --------------------------------------------------
Ne.laticoma8090       GACCTTTTCCCAAAACC--TC-TTTT---TT------------------
Na.sp.7607            --------------------------------------------------
Na.sp.7608            TGATGTTTCCCAAAACCACTCCTTTGAC-TTTACA-TGGATCACA-----
Na.tazetta            --------------------------------------------------
Pan.canariense        TGATGTTTCCCAAAACAACTCCTTTTAC-TTTACA-TGGATCACATAGAG
Sten.variegatum       --------------------------------------------------
Phae.dubia            --------------------------------------------------
Par.weberbaueri       --------------------------------------------------
Ster.lutea            TGATGTTTCCCAAAACAACTCTTTTTAC-TTTACA-TGGATCACATAGAG
Sc.membranaceus7246   TGATCCTT----------------------------------------
Str.salter7245        --------------------------------------------------
Sc.multiflorus7919    --------------------------------------------------
Sc.membranaceus7917   --------------------------------------------------
Va.parviflora         TGATGTTTCCAAAAACAACTCCTTTTAC-TTTACA-TGGATCACATAGAG
Hya.orientalis        --------------------------------------------------
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                    2751                                                2800
Ama.belladonna      --------------------------------------------------
Bo.distich7172      --------------------------------------------------
Br.gregaria7157     --------------------------------------------------
Cro.flava7256       --------------------------------------------------
Br.radulosanata7629 --------------------------------------------------
Cl.miniata8095      --------------------------------------------------
Cl.miniataRC14      AACGTATTTGGGTTTTGGATA--TTTTC-CGTATTAATGACC--TAGGGA
Cl.caulescens8092   AACGTA----------------------------------------------
Cl.miniata          --------------------------------------------------
Cl.nobilisRC6b      AACGTATTTTGGGTTTTGGGAAATTA-----------------------
Cl.cyrtantiflora8094 --------------------------------------------------
Chl.fragrans        --------------------------------------------------
Calo.lutea          --------------------------------------------------
Cr.euchrophyllRC96  AACGTATTTGGGTATTGGATA--TTATC-C-------------------
Cr.acauleRC106      --------------------------------------------------
Cr.acaulglaucRC105  --------------------------------------------------
Cr.bulbispermumRC95 AACGCATTTGGGATTTGGGATA-TTATC-CGCATTAATGGACCCAGG-AA
Cr.campanulatum7167 AACGTATTTGGTATTTGGAT---T-------------------------
Cr.foetidumRC98     AACGTATTTGGGGATTGGATA--TTATC-CGTATTAATGGACC-TAGGGA
Cr.graminicola7630  AACGTATTTGGTATTGGGATA--TTATC-CGGAATTAAGGACC-TAGGGA
Cr.lugardii7632     AACGAATTTGGGATTTGGGATA-TTATCCCGTATTTAAT-----------
Cr.macowanii7168    --------------------------------------------------
Cr.nearmacowanRC100 AACGTATTTGGTATTTGGATA--TTATC-CGTATTAATG-ACCTAAGTGA
Cr.buphanoidesRC102 GAA-----------------------------------------------
Cr.acauleRC38       AACGTATTTGGTATTTGGATA-TTTATC-CGGATTAATGACC--TAAGGA
Cr.buphanoides7631  --------------------------------------------------
Cr.carolschmidRC97  AACGTATTTGGGATTTGGATA-TTTATCCCGTATTAATGG-----A----
Cr.lineareRC99      AACGTATTTGGTATTG--------------------------------
Cr.minimumRC37      AACGGATTTGGGAATTTGGGATATTATC-CTGATTAATGGACC-TAGTGA
Cr.paludosumRC41    AACGTATTTGG-------------------------------------
Cr.variabileRC44    AACGTATTTGGTATTTGGGATA-TTATCCCGTATTAATGG-CCTAGGGGA
Cr.moorei7921       --------------------------------------------------
Cy.elatus7636       --------------------------------------------------
Cy.elatusRC93       --------------------------------------------------
Cy.mackeniiRC87     --------------------------------------------------
Cy.obliquus7278     --------------------------------------------------
Cy.ochroleucus7639  --------------------------------------------------
Cy.sanguineusRC94   --------------------------------------------------
Cy.staadensis7316   --------------------------------------------------
Cy.labiatus7212     --------------------------------------------------
Cy.smithiae7214     --------------------------------------------------
Cy.elatus7198       --------------------------------------------------
Cy.herreiRC86       --------------------------------------------------
Cy.brachyscyphus7204 --------------------------------------------------
Cy.loddigesianus7203 --------------------------------------------------
Cy.falcatus7637     --------------------------------------------------
Eus.darwini         --------------------------------------------------
Ge.namaquensiAMV635 --------------------------------------------------
Hae.montanus7163    --------------------------------------------------
Hae.coccineusAMV632 --------------------------------------------------
Hae.albiflos7517    --------------------------------------------------
Hae.crispus7252     AACGTATTTGGTTTTGGGATA--TTATC-CGCATTAATGGACC-TAGGGA
Hae.crispus7260     --------------------------------------------------
Lap.martinezii      AACGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGACC--TAGTGA
```

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                    2751                                                2800
Leu.autumnale       AACGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGACC--TAGTGA
Ne.bowdenii         ---------------------------------------------------
Ne.laticoma8090     ---------------------------------------------------
Na.sp.7607          ---------------------------------------------------
Na.sp.7608          ---------------------------------------------------
Na.tazetta          ---------------------------------------------------
Pan.canariense      AACGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGACC--TAGCGA
Sten.variegatum     ---------------------------------------------------
Phae.dubia          ---------------------------------------------------
Par.weberbaueri     ---------------------------------------------------
Ster.lutea          AACGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGACC--TAGTGA
Sc.membranaceus7246 ---------------------------------------------------
Str.salter7245      ---------------------------------------------------
Sc.multiflorus7919  ---------------------------------------------------
Sc.membranaceus7917 ---------------------------------------------------
Va.parviflora       AACGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGACC--TAGTGA
Hya.orientalis      ---------------------------------------------------
```

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                    2801                                                2850
Ama.belladonna      --------------------------------------------------
Bo.distich7172      --------------------------------------------------
Br.gregaria7157     --------------------------------------------------
Cro.flava7256       --------------------------------------------------
Br.radulosanata7629 --------------------------------------------------
Cl.miniata8095      --------------------------------------------------
Cl.miniataRC14      ATCGT-CATGA-TGG--------CC--------T--------G----GAA
Cl.caulescens8092   --------------------------------------------------
Cl.miniata          --------------------------------------------------
Cl.nobilisRC6b      --------------------------------------------------
Cl.cyrtantiflora8094 -------------------------------------------------
Chl.fragrans        --------------------------------------------------
Calo.lutea          --------------------------------------------------
Cr.euchrophyllRC96  --------------------------------------------------
Cr.acauleRC106      --------------------------------------------------
Cr.acaulglaucRC105  --------------------------------------------------
Cr.bulbispermumRC95 A-CGGTCCTGA-TGGGCC-TA-ACCCC------TCCTACCTAG-------
Cr.campanulatum7167 --------------------------------------------------
Cr.foetidumRC98     ATCGTCCTGGATTGGGCAT-A-ACCCC------TTCTAACT---------
Cr.graminicola7630  ACCGTTCATGAATGGCCAT-A-ACCC-------TTCTAACTAGAAGGGAA
Cr.lugardii7632     --------------------------------------------------
Cr.macowanii7168    --------------------------------------------------
Cr.nearmacowanRC100 ATCGTCC-TGAATGGGCCATA-ACCCC------TTCTAACTA--------
Cr.buphanoidesRC102 --------------------------------------------------
Cr.acauleRC38       ACCGTTCATGAATGGGCAT-AAACCCC------TTCTAACT---------
Cr.buphanoides7631  --------------------------------------------------
Cr.carolschmidRC97  --------------------------------------------------
Cr.lineareRC99      --------------------------------------------------
Cr.minimumRC37      ATCGTTCATGATTGGGCCT-AAACACC------TTCT------------
Cr.paludosumRC41    --------------------------------------------------
Cr.variabileRC44    ATCGGTCCTGGATTGGCCATA-ACACCC-----TTCT------------
Cr.moorei7921       --------------------------------------------------
Cy.elatus7636       --------------------------------------------------
Cy.elatusRC93       --------------------------------------------------
Cy.mackeniiRC87     --------------------------------------------------
Cy.obliquus7278     --------------------------------------------------
Cy.ochroleucus7639  --------------------------------------------------
Cy.sanguineusRC94   --------------------------------------------------
Cy.staadensis7316   --------------------------------------------------
Cy.labiatus7212     --------------------------------------------------
Cy.smithiae7214     --------------------------------------------------
Cy.elatus7198       --------------------------------------------------
Cy.herreiRC86       --------------------------------------------------
Cy.brachyscyphus7204 -------------------------------------------------
Cy.loddigesianus7203 -------------------------------------------------
Cy.falcatus7637     --------------------------------------------------
Eus.darwini         --------------------------------------------------
Ge.namaquensiAMV635 --------------------------------------------------
Hae.montanus7163    --------------------------------------------------
Hae.coccineusAMV632 --------------------------------------------------
Hae.albiflos7517    --------------------------------------------------
Hae.crispus7252     TCNGTTCATGATTGGCCATGAAACC-------TTCTACCTAGAACAGAA
Hae.crispus7260     --------------------------------------------------
Lap.martinezii      ATCGTTCATGATTGGTCATGATACC-------TTCTAACTAGAACAGAA
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                      2801                                                2850
Leu.autumnale         ATCGTTCATGATTGGTTATGATACC--------TTCTAACTAGAACAGAA
Ne.bowdenii           --------------------------------------------------
Ne.laticoma8090       --------------------------------------------------
Na.sp.7607            --------------------------------------------------
Na.sp.7608            --------------------------------------------------
Na.tazetta            --------------------------------------------------
Pan.canariense        ATCATTCATGATTGGTCATGATACC--------TTCTAACTAGAACAGAA
Sten.variegatum       --------------------------------------------------
Phae.dubia            --------------------------------------------------
Par.weberbaueri       --------------------------------------------------
Ster.lutea            ATCGTTCATGATTGGTCATGATACC--------TTCTAACTAGAACAGAA
Sc.membranaceus7246   --------------------------------------------------
Str.salter7245        --------------------------------------------------
Sc.multiflorus7919    --------------------------------------------------
Sc.membranaceus7917   --------------------------------------------------
Va.parviflora         ATCGTTCATGATTGGTCATGATACC--------CTCTAACTAGAACAGAA
Hya.orientalis        --------------------------------------------------
```

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                    2851                                                2900
Ama.belladonna      --------------------------------------------------
Bo.distich7172      --------------------------------------------------
Br.gregaria7157     --------------------------------------------------
Cro.flava7256       --------------------------------------------------
Br.radulosanata7629 --------------------------------------------------
Cl.miniata8095      --------------------------------------------------
Cl.miniataRC14      A-CCTC-----------A-------------------------------
Cl.caulescens8092   --------------------------------------------------
Cl.miniata          --------------------------------------------------
Cl.nobilisRC6b      --------------------------------------------------
Cl.cyrtantiflora8094 -------------------------------------------------
Chl.fragrans        --------------------------------------------------
Calo.lutea          --------------------------------------------------
Cr.euchrophyllRC96  --------------------------------------------------
Cr.acauleRC106      --------------------------------------------------
Cr.acaulglaucRC105  --------------------------------------------------
Cr.bulbispermumRC95 --------------------------------------------------
Cr.campanulatum7167 --------------------------------------------------
Cr.foetidumRC98     --------------------------------------------------
Cr.graminicola7630  A-------------------------------------------------
Cr.lugardii7632     --------------------------------------------------
Cr.macowanii7168    --------------------------------------------------
Cr.nearmacowanRC100 --------------------------------------------------
Cr.buphanoidesRC102 --------------------------------------------------
Cr.acauleRC38       -T-A------------------------------------------------
Cr.buphanoides7631  --------------------------------------------------
Cr.carolschmidRC97  --------------------------------------------------
Cr.lineareRC99      --------------------------------------------------
Cr.minimumRC37      --------------------------------------------------
Cr.paludosumRC41    --------------------------------------------------
Cr.variabileRC44    --------------------------------------------------
Cr.moorei7921       --------------------------------------------------
Cy.elatus7636       --------------------------------------------------
Cy.elatusRC93       --------------------------------------------------
Cy.mackeniiRC87     --------------------------------------------------
Cy.obliquus7278     --------------------------------------------------
Cy.ochroleucus7639  --------------------------------------------------
Cy.sanguineusRC94   --------------------------------------------------
Cy.staadensis7316   --------------------------------------------------
Cy.labiatus7212     --------------------------------------------------
Cy.smithiae7214     --------------------------------------------------
Cy.elatus7198       --------------------------------------------------
Cy.herreiRC86       --------------------------------------------------
Cy.brachyscyphus7204 -------------------------------------------------
Cy.loddigesianus7203 -------------------------------------------------
Cy.falcatus7637     --------------------------------------------------
Eus.darwini         --------------------------------------------------
Ge.namaquensiAMV635 --------------------------------------------------
Hae.montanus7163    --------------------------------------------------
Hae.coccineusAMV632 --------------------------------------------------
Hae.albiflos7517    --------------------------------------------------
Hae.crispus7252     ATGATCTT---------TTAATTAACCAA--GATTAAACCAGAAGATCCT
Hae.crispus7260     --------------------------------------------------
Lap.martinezii      ATGAGAAATGATCT---ATAAATAATCAAAAGAGAAAACAAGAAGATTCA
```

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                    2851                                                2900
Leu.autumnale       ATGATCT----------ATAAATAATCAAAGGAGAAAACAAGAAGATTAA
Ne.bowdenii         --------------------------------------------------
Ne.laticoma8090     --------------------------------------------------
Na.sp.7607          --------------------------------------------------
Na.sp.7608          --------------------------------------------------
Na.tazetta          --------------------------------------------------
Pan.canariense      ATGATCT----------ATCAATAATCAAAAGAGAAAACAAGAAGATTCA
Sten.variegatum     --------------------------------------------------
Phae.dubia          --------------------------------------------------
Par.weberbaueri     --------------------------------------------------
Ster.lutea          ATGATCT----------ATCAATAATCAAAAGAGAAAACAAGAAGATTCA
Sc.membranaceus7246 --------------------------------------------------
Str.salter7245      --------------------------------------------------
Sc.multiflorus7919  --------------------------------------------------
Sc.membranaceus7917 --------------------------------------------------
Va.parviflora       ATGATCT----------ATAAATAATCAAAAGATAAACCAAGAAGATTCA
Hya.orientalis      --------------------------------------------------
```

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                    2901                                                2950
Ama.belladonna      --------------------------------------------------
Bo.distich7172      --------------------------------------------------
Br.gregaria7157     --------------------------------------------------
Cro.flava7256       --------------------------------------------------
Br.radulosanata7629 --------------------------------------------------
Cl.miniata8095      --------------------------------------------------
Cl.miniataRC14      --------------------------------------------------
Cl.caulescens8092   --------------------------------------------------
Cl.miniata          --------------------------------------------------
Cl.nobilisRC6b      --------------------------------------------------
Cl.cyrtantiflora8094 -------------------------------------------------
Chl.fragrans        --------------------------------------------------
Calo.lutea          --------------------------------------------------
Cr.euchrophyllRC96  --------------------------------------------------
Cr.acauleRC106      --------------------------------------------------
Cr.acaulglaucRC105  --------------------------------------------------
Cr.bulbispermumRC95 --------------------------------------------------
Cr.campanulatum7167 --------------------------------------------------
Cr.foetidumRC98     --------------------------------------------------
Cr.graminicola7630  --------------------------------------------------
Cr.lugardii7632     --------------------------------------------------
Cr.macowanii7168    --------------------------------------------------
Cr.nearmacowanRC100 --------------------------------------------------
Cr.buphanoidesRC102 --------------------------------------------------
Cr.acauleRC38       --------------------------------------------------
Cr.buphanoides7631  --------------------------------------------------
Cr.carolschmidRC97  --------------------------------------------------
Cr.lineareRC99      --------------------------------------------------
Cr.minimumRC37      --------------------------------------------------
Cr.paludosumRC41    --------------------------------------------------
Cr.variabileRC44    --------------------------------------------------
Cr.moorei7921       --------------------------------------------------
Cy.elatus7636       --------------------------------------------------
Cy.elatusRC93       --------------------------------------------------
Cy.mackeniiRC87     --------------------------------------------------
Cy.obliquus7278     --------------------------------------------------
Cy.ochroleucus7639  --------------------------------------------------
Cy.sanguineusRC94   --------------------------------------------------
Cy.staadensis7316   ------------------------------------------------
Cy.labiatus7212     --------------------------------------------------
Cy.smithiae7214     --------------------------------------------------
Cy.elatus7198       --------------------------------------------------
Cy.herreiRC86       --------------------------------------------------
Cy.brachyscyphus7204 -------------------------------------------------
Cy.loddigesianus7203 -------------------------------------------------
Cy.falcatus7637     --------------------------------------------------
Eus.darwini         --------------------------------------------------
Ge.namaquensiAMV635 --------------------------------------------------
Hae.montanus7163    --------------------------------------------------
Hae.coccineusAMV632 --------------------------------------------------
Hae.albiflos7517    --------------------------------------------------
Hae.crispus7252     GGAATTTGCATTCTGAA----------------------------------
Hae.crispus7260     --------------------------------------------------
Lap.martinezii      TGAATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTAT
```

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                    2901                                                2950
Leu.autumnale       TGAATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTAT
Ne.bowdenii         --------------------------------------------------
Ne.laticoma8090     --------------------------------------------------
Na.sp.7607          --------------------------------------------------
Na.sp.7608          --------------------------------------------------
Na.tazetta          --------------------------------------------------
Pan.canariense      TGAATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTAT
Sten.variegatum     --------------------------------------------------
Phae.dubia          --------------------------------------------------
Par.weberbaueri     --------------------------------------------------
Ster.lutea          TGAATTTTCATTTTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTAT
Sc.membranaceus7246 --------------------------------------------------
Str.salter7245      --------------------------------------------------
Sc.multiflorus7919  --------------------------------------------------
Sc.membranaceus7917 --------------------------------------------------
Va.parviflora       TGAATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTAT
Hya.orientalis      --------------------------------------------------
```

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                    2951                                                3000
Ama.belladonna      --------------------------------------------------
Bo.distich7172      --------------------------------------------------
Br.gregaria7157     --------------------------------------------------
Cro.flava7256       --------------------------------------------------
Br.radulosanata7629 --------------------------------------------------
Cl.miniata8095      --------------------------------------------------
Cl.miniataRC14      --------------------------------------------------
Cl.caulescens8092   --------------------------------------------------
Cl.miniata          --------------------------------------------------
Cl.nobilisRC6b      --------------------------------------------------
Cl.cyrtantiflora8094 -------------------------------------------------
Chl.fragrans        --------------------------------------------------
Calo.lutea          --------------------------------------------------
Cr.euchrophyllRC96  --------------------------------------------------
Cr.acauleRC106      --------------------------------------------------
Cr.acaulglaucRC105  --------------------------------------------------
Cr.bulbispermumRC95 --------------------------------------------------
Cr.campanulatum7167 --------------------------------------------------
Cr.foetidumRC98     --------------------------------------------------
Cr.graminicola7630  --------------------------------------------------
Cr.lugardii7632     --------------------------------------------------
Cr.macowanii7168    --------------------------------------------------
Cr.nearmacowanRC100 --------------------------------------------------
Cr.buphanoidesRC102 --------------------------------------------------
Cr.acauleRC38       --------------------------------------------------
Cr.buphanoides7631  --------------------------------------------------
Cr.carolschmidRC97  --------------------------------------------------
Cr.lineareRC99      --------------------------------------------------
Cr.minimumRC37      --------------------------------------------------
Cr.paludosumRC41    --------------------------------------------------
Cr.variabileRC44    --------------------------------------------------
Cr.moorei7921       --------------------------------------------------
Cy.elatus7636       --------------------------------------------------
Cy.elatusRC93       --------------------------------------------------
Cy.mackeniiRC87     --------------------------------------------------
Cy.obliquus7278     --------------------------------------------------
Cy.ochroleucus7639  --------------------------------------------------
Cy.sanguineusRC94   --------------------------------------------------
Cy.staadensis7316   --------------------------------------------------
Cy.labiatus7212     --------------------------------------------------
Cy.smithiae7214     --------------------------------------------------
Cy.elatus7198       --------------------------------------------------
Cy.herreiRC86       --------------------------------------------------
Cy.brachyscyphus7204 -------------------------------------------------
Cy.loddigesianus7203 -------------------------------------------------
Cy.falcatus7637     --------------------------------------------------
Eus.darwini         --------------------------------------------------
Ge.namaquensiAMV635 --------------------------------------------------
Hae.montanus7163    --------------------------------------------------
Hae.coccineusAMV632 --------------------------------------------------
Hae.albiflos7517    --------------------------------------------------
Hae.crispus7252     --------------------------------------------------
Hae.crispus7260     --------------------------------------------------
Lap.martinezii      TCAAAATTCTTAGACTTTCTTCCCGGTATGTATTTTTTTTT----ATATG
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                    2951                                                 3000
Leu.autumnale       TCAAAACTCTTAGACTTTCTTCTCGGTATGTATTTTTTT-------TATG
Ne.bowdenii         --------------------------------------------------
Ne.laticoma8090     --------------------------------------------------
Na.sp.7607          --------------------------------------------------
Na.sp.7608          --------------------------------------------------
Na.tazetta          --------------------------------------------------
Pan.canariense      TCAAAATTCTTAGACTTTCTTCTCGGTATGTATTTTTTTT-----ATATG
Sten.variegatum     --------------------------------------------------
Phae.dubia          --------------------------------------------------
Par.weberbaueri     --------------------------------------------------
Ster.lutea          TCAAAATTCTTAGACTTTCTTCTCGGTATGTCTTTTTTTT------T-TG
Sc.membranaceus7246 --------------------------------------------------
Str.salter7245      --------------------------------------------------
Sc.multiflorus7919  --------------------------------------------------
Sc.membranaceus7917 --------------------------------------------------
Va.parviflora       TCGAAATTCTTAGACTTTGTTCTCGATATGT-------------------
Hya.orientalis      --------------------------------------------------
```

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                    3001                                                3050
Ama.belladonna      --------------------------------------------------
Bo.distich7172      --------------------------------------------------
Br.gregaria7157     --------------------------------------------------
Cro.flava7256       --------------------------------------------------
Br.radulosanata7629 --------------------------------------------------
Cl.miniata8095      --------------------------------------------------
Cl.miniataRC14      --------------------------------------------------
Cl.caulescens8092   --------------------------------------------------
Cl.miniata          --------------------------------------------------
Cl.nobilisRC6b      --------------------------------------------------
Cl.cyrtantiflora8094 -------------------------------------------------
Chl.fragrans        --------------------------------------------------
Calo.lutea          --------------------------------------------------
Cr.euchrophyllRC96  --------------------------------------------------
Cr.acauleRC106      --------------------------------------------------
Cr.acaulglaucRC105  --------------------------------------------------
Cr.bulbispermumRC95 --------------------------------------------------
Cr.campanulatum7167 --------------------------------------------------
Cr.foetidumRC98     --------------------------------------------------
Cr.graminicola7630  --------------------------------------------------
Cr.lugardii7632     --------------------------------------------------
Cr.macowanii7168    --------------------------------------------------
Cr.nearmacowanRC100 --------------------------------------------------
Cr.buphanoidesRC102 --------------------------------------------------
Cr.acauleRC38       --------------------------------------------------
Cr.buphanoides7631  --------------------------------------------------
Cr.carolschmidRC97  --------------------------------------------------
Cr.lineareRC99      --------------------------------------------------
Cr.minimumRC37      --------------------------------------------------
Cr.paludosumRC41    --------------------------------------------------
Cr.variabileRC44    --------------------------------------------------
Cr.moorei7921       --------------------------------------------------
Cy.elatus7636       --------------------------------------------------
Cy.elatusRC93       --------------------------------------------------
Cy.mackeniiRC87     --------------------------------------------------
Cy.obliquus7278     --------------------------------------------------
Cy.ochroleucus7639  --------------------------------------------------
Cy.sanguineusRC94   --------------------------------------------------
Cy.staadensis7316   --------------------------------------------------
Cy.labiatus7212     --------------------------------------------------
Cy.smithiae7214     --------------------------------------------------
Cy.elatus7198       --------------------------------------------------
Cy.herreiRC86       --------------------------------------------------
Cy.brachyscyphus7204 -------------------------------------------------
Cy.loddigesianus7203 -------------------------------------------------
Cy.falcatus7637     --------------------------------------------------
Eus.darwini         --------------------------------------------------
Ge.namaquensiAMV635 --------------------------------------------------
Hae.montanus7163    --------------------------------------------------
Hae.coccineusAMV632 --------------------------------------------------
Hae.albiflos7517    --------------------------------------------------
Hae.crispus7252     --------------------------------------------------
Hae.crispus7260     --------------------------------------------------
Lap.martinezii      TATAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGCACGGTT
```

```
                      3001                                                3050
Leu.autumnale         TATAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGCACGGTT
Ne.bowdenii           --------------------------------------------------
Ne.laticoma8090       --------------------------------------------------
Na.sp.7607            --------------------------------------------------
Na.sp.7608            --------------------------------------------------
Na.tazetta            --------------------------------------------------
Pan.canariense        TATAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGCACGGTT
Sten.variegatum       --------------------------------------------------
Phae.dubia            --------------------------------------------------
Par.weberbaueri       --------------------------------------------------
Ster.lutea            TATAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGCACGGTT
Sc.membranaceus7246   --------------------------------------------------
Str.salter7245        --------------------------------------------------
Sc.multiflorus7919    --------------------------------------------------
Sc.membranaceus7917   --------------------------------------------------
Va.parviflora         --------------------------------------------------
Hya.orientalis        --------------------------------------------------
```

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                        3051                    3078
Ama.belladonna          ----------------------------
Bo.distich7172          ----------------------------
Br.gregaria7157         ----------------------------
Cro.flava7256           ----------------------------
Br.radulosanata7629     ----------------------------
Cl.miniata8095          ----------------------------
Cl.miniataRC14          ----------------------------
Cl.caulescens8092       ----------------------------
Cl.miniata              ----------------------------
Cl.nobilisRC6b          ----------------------------
Cl.cyrtantiflora8094    ----------------------------
Chl.fragrans            ----------------------------
Calo.lutea              ----------------------------
Cr.euchrophyllRC96      ----------------------------
Cr.acauleRC106          ----------------------------
Cr.acaulglaucRC105      ----------------------------
Cr.bulbispermumRC95     ----------------------------
Cr.campanulatum7167     ----------------------------
Cr.foetidumRC98         ----------------------------
Cr.graminicola7630      ----------------------------
Cr.lugardii7632         ----------------------------
Cr.macowanii7168        ----------------------------
Cr.nearmacowanRC100     ----------------------------
Cr.buphanoidesRC102     ----------------------------
Cr.acauleRC38           ----------------------------
Cr.buphanoides7631      ----------------------------
Cr.carolschmidRC97      ----------------------------
Cr.lineareRC99          ----------------------------
Cr.minimumRC37          ----------------------------
Cr.paludosumRC41        ----------------------------
Cr.variabileRC44        ----------------------------
Cr.moorei7921           ----------------------------
Cy.elatus7636           ----------------------------
Cy.elatusRC93           ----------------------------
Cy.mackeniiRC87         ----------------------------
Cy.obliquus7278         ----------------------------
Cy.ochroleucus7639      ----------------------------
Cy.sanguineusRC94       ----------------------------
Cy.staadensis7316       ----------------------------
Cy.labiatus7212         ----------------------------
Cy.smithiae7214         ----------------------------
Cy.elatus7198           ----------------------------
Cy.herreiRC86           ----------------------------
Cy.brachyscyphus7204    ----------------------------
Cy.loddigesianus7203    ----------------------------
Cy.falcatus7637         ----------------------------
Eus.darwini             ----------------------------
Ge.namaquensiAMV635     ----------------------------
Hae.montanus7163        ----------------------------
Hae.coccineusAMV632     ----------------------------
Hae.albiflos7517        ----------------------------
Hae.crispus7252         ----------------------------
Hae.crispus7260         ----------------------------
Lap.martinezii          TG--------------------------
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                        3051                    3078
Leu.autumnale           TGGGGAGGGTTAATTTTCCTG-GG-TTC
Ne.bowdenii             ----------------------------
Ne.laticoma8090         ----------------------------
Na.sp.7607              ----------------------------
Na.sp.7608              ----------------------------
Na.tazetta              ----------------------------
Pan.canariense          TGGGGAGGGGTCTTTTTCGTGT--ATT-
Sten.variegatum         ----------------------------
Phae.dubia              ----------------------------
Par.weberbaueri         ----------------------------
Ster.lutea              TGGGGAGGGGTAT---------------
Sc.membranaceus7246     ----------------------------
Str.salter7245          ----------------------------
Sc.multiflorus7919      ----------------------------
Sc.membranaceus7917     ----------------------------
Va.parviflora           ----------------------------
Hya.orientalis          ----------------------------
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APPENDIX F Aligned sequences of the combined *trnL-F*, *matK* and ITS matrix for Amaryllidaceae.

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                          1                                                  50
Ama.belladonna            GAAGTTAA------AGGAAGAATCGAA-TATTCG-----GTGATC--AAA
Br.gregaria7157           GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATA--AAA
Cro.flava7256             GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GCGATC--AAA
Br.radulosanata7629       GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GCGATA--AAA
Cl.miniataRC14            GAAGTTAAGTTAA-AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cl.miniata                GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Chl.fragrans              GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GCGATC--AAA
Cr.euchrophyllRC96        GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.acauleRC106            GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.acaulglaucRC105        GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.bulbispermumRC95       GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.foetidumRC98           GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.graminicola7630        GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.buphanoidesRC102       GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.acauleRC38             GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.carolschmidRC97        GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cr.moorei7921             GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.elatus7636             GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.mackeniiRC87           GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.obliquus7278           GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.ochroleucus7639        GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.sanguineusRC94         GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.staadensis7316         GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC-AAAT
Cy.labiatus7212           GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.smithiae7214           GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Cy.herreiRC86             ------------------------------------------------
Cy.falcatus7637           GAAGTTAA------AGGAAGAATCGAA-TATTCCC----GGGATC--AAA
Eus.darwini               GAAGTTCA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Ge.namaquensiAMV635       GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC---AA
Hae.coccineusAMV632       GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GCGATC--AAA
Hae.crispus7252           ----------------------------------------ATA--AAA
Hae.crispus7260           GAAGTTAA------AGGAAGAATCGAA-TATTCCA----GTGATCC-AAA
Lap.martinezii            GAAGTTAA------AGGAAGAATCGAATAGAATATTCA-GTGATC--AAA
Leu.autumnale             GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Na.sp.7608                GAAGTTAA------AGGAAGAATCGAA-TATTCA-----ATGATC--AAA
Pan.canariense            GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Par.weberbaueri           GAAGTTAA------AAGAAGAATCGAA-TATTCA-----GTGATC--AAA
Ster.lutea                GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Sc.membranaceus7246       GAAGTTAA------AGAAAGAATCGAA-TATTCA-----GTGATC--AAA
Str.salter7245            GAAGTGAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Sc.membranaceus7917       ---------------AAAGAATCGAA-TATTCA-----GTATC---AAA
Va.parviflora             GAAGTTAA------AGGAAGAATCGAA-TATTCA-----GTGATC--AAA
Aco.calamus               CAAGTTGA------AGGAAGAATCAAA-TATTCA-----GTGATC--AAA
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                        51                                                  100
Ama.belladonna          TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Br.gregaria7157         TCGTTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cro.flava7256           TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Br.radulosanata7629     TCGTTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cl.miniataRC14          TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cl.miniata              TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Chl.fragrans            TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Cr.euchrophyllRC96      TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.acauleRC106          TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.acaulglaucRC105      TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.bulbispermumRC95     TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.foetidumRC98         TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.graminicola7630      TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.buphanoidesRC102     TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.acauleRC38           TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.carolschmidRC97      TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cr.moorei7921           TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Cy.elatus7636           TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cy.mackeniiRC87         TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTTTTTTGAA--
Cy.obliquus7278         TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cy.ochroleucus7639      TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTTTTTGAA---
Cy.sanguineusRC94       TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cy.staadensis7316       CCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cy.labiatus7212         TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cy.smithiae7214         TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Cy.herreiRC86           ------------------------------------------------
Cy.falcatus7637         TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Eus.darwini             TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Ge.namaquensiAMV635     TC-TTC-T-TCCCA----GAGTTTGA-TAGACC-TTTTTTTT-GAA----
Hae.coccineusAMV632     TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTTTT-------
Hae.crispus7252         TCGTTCAT-TCCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Hae.crispus7260         TCATTCCA-TTCCA----GAGTTTGA-TAGACC-TTTTTTTTT-------
Lap.martinezii          TCATTCAT--TCCA----GAGTTTGA-TAGACCATTTTT----GAA----
Leu.autumnale           TCATTCAT--TCCA----GAGTTTGA-TAGACCATTTTT----GAA----
Na.sp.7608              TCATTCAT--TCCA----GAGTTTGA-TAGACCATTTTT----GCA----
Pan.canariense          TCATTCAT--TCCA----GAGTTTGA-TAGACCATTTTT----GAA----
Par.weberbaueri         TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTT---GAA----
Ster.lutea              TCATTCAT--TCCA----GAGTTTGA-TAGATCATTTTT----GAA----
Sc.membranaceus7246     TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTT--GAA----
Str.salter7245          TCATTCAT--TCCA----GAGTTTGA-TAGACT-TTTTT----GAA----
Sc.membranaceus7917     TCATTCAT--TCCA----GAGTTTGA-TAGACC-TTTTTTTT-GAA----
Va.parviflora           TCATTCAT--TCCA----GAGTTTGA-TAGACCATTTTT----GAA----
Aco.calamus             TAATTCAC--TCCA----GAATATGC-TAGATC--TTTT----GAA----
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                        101                                                 150
Ama.belladonna          ----AA--AATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Br.gregaria7157         ----AA--AATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cro.flava7256           ----AA--AATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Br.radulosanata7629     ----AA--AATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cl.miniataRC14          --AAAAAAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cl.miniata              --AAAAAAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Chl.fragrans            ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.euchrophyllRC96      ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.acauleRC106          ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.acaulglaucRC105      ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.bulbispermumRC95     ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.foetidumRC98         ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.graminicola7630      ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.buphanoidesRC102     ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.acauleRC38           ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.carolschmidRC97      ------AAAATGATTAATCGGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cr.moorei7921           ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.elatus7636           ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.mackeniiRC87         ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.obliquus7278         -AAAATGATTAGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.ochroleucus7639      -------AAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.sanguineusRC94       -AAAATGATTAGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.staadensis7316       -AAAATGATTAGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.labiatus7212         ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.smithiae7214         -AAAATGATTAGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Cy.herreiRC86           ---------------------------------------------CCCT
Cy.falcatus7637         -AAAATGATTAGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Eus.darwini             ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Ge.namaquensiAMV635     AAAAAAAAAATGATTAGT-CGGAC-GAGAATAAA-GAGAGAG-TTCCCAT
Hae.coccineusAMV632     --------AATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Hae.crispus7252         ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Hae.crispus7260         --------AATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Lap.martinezii          ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG---TCCAT
Leu.autumnale           ------AAAATGATTAAT-TGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Na.sp.7608              ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Pan.canariense          ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Par.weberbaueri         ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Ster.lutea              ----AAAAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Sc.membranaceus7246     --AAAAAAAATGATTAAT-CGGGC-GAGAATAAA-GAGAGAG--TCCCAT
Str.salter7245          ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Sc.membranaceus7917     AAAAAAAAAATGATTAAT-CGGGC-GAGAATAAA-GAGAGAG--TCCCAT
Va.parviflora           ------AAAATGATTAAT-CGGAC-GAGAATAAA-GAGAGAG--TCCCAT
Aco.calamus             ------AAACTGATTAAT-CCGAC-GAGAATAAA-GATAGAG--TCCCAT
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                        151                                                 200
Ama.belladonna          T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Br.gregaria7157         T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cro.flava7256           T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Br.radulosanata7629     T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGGAAA-TTATAG--
Cl.miniataRC14          T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cl.miniata              T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Chl.fragrans            TTCTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.euchrophyllRC96      T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.acauleRC106          T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.acaulglaucRC105      T-CTACA--TGTCCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.bulbispermumRC95     T-TCTAC--ATGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.foetidumRC98         T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.graminicola7630      T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.buphanoidesRC102     T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.acauleRC38           T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cr.carolschmidRC97      T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGGAAATTTATAG--
Cr.moorei7921           T-CTACA---TGTCA----ATA-CCGAC--AC-AATGAAAT-TTATAG--
Cy.elatus7636           T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.mackeniiRC87         T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.obliquus7278         T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.ochroleucus7639      T-CTACA---TGTCA----ATA-CCGAC--AC-AATGAAAT-TTATAG--
Cy.sanguineusRC94       T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.staadensis7316       T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.labiatus7212         T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.smithiae7214         TTCTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.herreiRC86           TTTTACCA--TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Cy.falcatus7637         TTCTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Eus.darwini             T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Ge.namaquensiAMV635     TTCTAACA--TGTCCA---ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Hae.coccineusAMV632     TTCTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Hae.crispus7252         TTCTA-CA--TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Hae.crispus7260         TTCTAACA--TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Lap.martinezii          T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Leu.autumnale           T-CTGCA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Na.sp.7608              T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Pan.canariense          T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Par.weberbaueri         T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Ster.lutea              T-CTACA---TGTCT----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Sc.membranaceus7246     T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Str.salter7245          T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Sc.membranaceus7917     T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
Va.parviflora           T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAATT--TATAG--
Aco.calamus             T-CTACA---TGTCA----ATA-CCGAC-AAC-AATGAAAT-TTATAG--
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                        201                                                250
Ama.belladonna          TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Br.gregaria7157         TAAGAGGAAAATCCGTCGTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cro.flava7256           TAAGAGGAAAATCCC--GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Br.radulosanata7629     TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cl.miniataRC14          TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cl.miniata              TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Chl.fragrans            TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.euchrophyllRC96      TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.acauleRC106          TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGGG---TTCAA
Cr.acaulglaucRC105      TAAGAGGAAAATCC--GTCCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.bulbispermumRC95     TA-GGGGAAA-TCC---GTCGACTTAGAA---TCGTGAGGG----TTCAA
Cr.foetidumRC98         TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.graminicola7630      TAAGAGGAAAATCCC--GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.buphanoidesRC102     TAAGAGGAAAATCC---GTCGACT-TAGAAA-TCGTGAGGG---TTCCAA
Cr.acauleRC38           TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGGGAGGG----TTCAA
Cr.carolschmidRC97      TAAGAGGAAAATCC--GTCCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cr.moorei7921           TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.elatus7636           TAAGAGGAAA-TCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.mackeniiRC87         TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.obliquus7278         TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.ochroleucus7639      TA-GAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG-----TCAA
Cy.sanguineusRC94       TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.staadensis7316       TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.labiatus7212         TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.smithiae7214         TA-GAGGAAAATCCC--GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Cy.herreiRC86           TAAGAGGAAAATTCC--GTCGAACTTTAGAAATCGTGAGGG----TTCAA
Cy.falcatus7637         TAAGAGGAAAATCC-----------------------------------
Eus.darwini             TAAGAGGAAACTCC---GTCGACTTTAGAATATCGTGAGGG----TTCAA
Ge.namaquensiAMV635     TA-----------------------------------------------
Hae.coccineusAMV632     TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Hae.crispus7252         TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Hae.crispus7260         TAAGAGGAAAATCC----TCG------G--------GA------------
Lap.martinezii          TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Leu.autumnale           TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGGAGGG---GTTAA
Na.sp.7608              TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Pan.canariense          TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Par.weberbaueri         TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Ster.lutea              TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Sc.membranaceus7246     TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG----TTCAA
Str.salter7245          TAAGAGGAAATCC----GTCGACTTTAGAAA-TCGTGAGGGG---TTCAA
Sc.membranaceus7917     TAAGAGGAAAATCC----TCGACTTTAGAAA-TCGTGAGGG----TTCAA
Va.parviflora           TAAGAGAAGAGTGATCCATAAACTGAGAGAA-TCGGGAGGG----TTCA-
Aco.calamus             TAAGAGGAAAATCC---GTCGACTTTAGAAA-TCGTGAGGG-----TCAA
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                        251                                                 300
Ama.belladonna          GTCC----TCTATCCCCA-GATAAAAAGCCC-ATTT-C---ACTTCCT-A
Br.gregaria7157         GTCCC---TCTATCCCCA--GTAAAAAGCCC-ACTT-T---TCTTCTT-A
Cro.flava7256           GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Br.radulosanata7629     GTCCC---TCTATCCCCA--GTAAAAAGCCC-ACTT-T---TCTCCT--A
Cl.miniataRC14          GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cl.miniata              GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Chl.fragrans            GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTA-A
Cr.euchrophyllRC96      GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.acauleRC106          GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.acaulglaucRC105      GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.bulbispermumRC95     GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.foetidumRC98         GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.graminicola7630      GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.buphanoidesRC102     GTCCC---TCTATCCCCCA-GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.acauleRC38           GTCCC---TCTATCCCCCA-GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.carolschmidRC97      GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTT-A
Cr.moorei7921           GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-T---TCTTCTCAA
Cy.elatus7636           GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.mackeniiRC87         GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.obliquus7278         GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT--
Cy.ochroleucus7639      GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.sanguineusRC94       GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.staadensis7316       GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.labiatus7212         GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.smithiae7214         GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.herreiRC86           GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Cy.falcatus7637         ------------------------------------------------
Eus.darwini             GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Ge.namaquensiAMV635     ------------------------------------------------
Hae.coccineusAMV632     GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Hae.crispus7252         GTCCC---TCTATCCCCA--GTAAAAAGCCCACTTT-T----CTTCTT-A
Hae.crispus7260         ------------------------------------------------
Lap.martinezii          GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTTTT-A
Leu.autumnale           TTCCC---TCTTTCCCCC--GTAAAAACCCCCATTA-A---AATT-TT-A
Na.sp.7608              GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Pan.canariense          GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Par.weberbaueri         GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Ster.lutea              GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Sc.membranaceus7246     GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Str.salter7245          GTCCC---TCTATCCCCG--GTAAAAAGCCC-ATTT-T--TCCTTCTT-A
Sc.membranaceus7917     GTCCC---TCTATCCCCA--GTAAAAAGCCC-ATTT-C---ACTTCTT-A
Va.parviflora           GTCCC---TCTTTCCCCA-GATTAAAAGCCCATGATTC---ACTTCTT-A
Aco.calamus             GTCC----TCTATCCCCA--ATAAAAAGCTT-GTTT-G---ACTTACT-A
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                        301                                                 350
Ama.belladonna          ACTATGTATC----------CT-CTTTTTTTT-CAT-AA---------CA
Br.gregaria7157         ACTATTTATCTATTTAT---CTTCTTTTTTTTTCAT-AAGCGGT---TCA
Cro.flava7256           ACTATTTATCTATTTAT---CTTCTTTTTTTTTCAT-AAGCGGT---TCA
Br.radulosanata7629     ACTATTTATCTATT-AT-----CTCTTTTTTTTCAA-AAGCGGT---TCA
Cl.miniataRC14          ACTATTTATCC-----------TCTTTTTTTTTCAT-AAGTGGT---TAA
Cl.miniata              ACTATTTATCC-----------TCTTTTTTTTTCAT-AAGTGGT---TAA
Chl.fragrans            ACTATTTATCT------------TCTTTTTTTTCAT-AAGCAGT---TCA
Cr.euchrophyllRC96      ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.acauleRC106          ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.acaulglaucRC105      ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.bulbispermumRC95     ACTATTTATCTGGG-ACTA--CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.foetidumRC98         ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.graminicola7630      ACTATTTATCTATTATC-----TTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.buphanoidesRC102     ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.acauleRC38           ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.carolschmidRC97      ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cr.moorei7921           ACTATTTATCTATTTAT----CTTCTTTTTTTTCAT-AAGCGGT---TCA
Cy.elatus7636           ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGT---TCA
Cy.mackeniiRC87         ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGT---TCA
Cy.obliquus7278         ACTATTTAT-----------------TTTTTTTCAT-AAGCGGT---TCA
Cy.ochroleucus7639      ACTATTTATCT-----------TCTTTTTTTTGCAT-AAGCGGT---TCA
Cy.sanguineusRC94       ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGT---TCA
Cy.staadensis7316       ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGT---TCA
Cy.labiatus7212         ACTATACTATCTA---------TCCTTTTTTTTCAT-AAGCGGT---TCA
Cy.smithiae7214         ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGT---TCA
Cy.herreiRC86           ACAATTTATAC-----------TTCTTTTTTTTCAT-AAGCGGT---TCA
Cy.falcatus7637         --------------------------------------------------
Eus.darwini             ACTATTTATCT------------TCTTTTTTTTCAT-AAGCAGT---TCA
Ge.namaquensiAMV635     --------------------------------------------------
Hae.coccineusAMV632     ACTATTTATCC---------TCTTTTTTTTTTTCAT-AAGCGGT---TCA
Hae.crispus7252         ACTATTTATCTATTTATCT---TCTTTTTTTTTCAT-AAGCGGTT--CAA
Hae.crispus7260         --------------------------------------------------
Lap.martinezii          ACTATTTATCT-----------TCTTTTATTTTCAT-AAGCGGT---TCA
Leu.autumnale           AAAATTTTTTTTT---------TTTTTTTTTTTCAA-AGGCGGT---TCA
Na.sp.7608              ACTATTTATCT------------TCTTTTTTTTCAT-AAGCGGT---TCA
Pan.canariense          ACTATTTATCT-----------TCTTTTTTTTTCAG-AAGCGGT---TCA
Par.weberbaueri         ACTATTTATCT----------TCTTTTTTTTTTCAT-AAGCAGT---TCA
Ster.lutea              ACTATTTATCT--------------TCTTTTTTCAT-AAGCGGT---TCA
Sc.membranaceus7246     ACTATACTATTTA---------TCCTCTTTTTTCAT-AAGCGGT---TCA
Str.salter7245          ACTATTTATCT---------TCTTTTTTTTTTTCAT-AAGCGGT---TCA
Sc.membranaceus7917     ACTATTTATCC--------------TCTTTTTTCAT-AAGCGGT---TCA
Va.parviflora           ACTATGTATCT----------TCTTTTTTTTTTCAT-AAGCGGT---TCA
Aco.calamus             ACTATCTATCC-------------TCTTTGTTTTGT-CAGCGGTT--CCA
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                        351                                                 400
Ama.belladonna          AAGAAAATTC-GATATC---TTTCT-CATTC-------ATT-CTACT--T
Br.gregaria7157         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cro.flava7256           AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Br.radulosanata7629     AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cl.miniataRC14          AATAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cl.miniata              AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Chl.fragrans            AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.euchrophyllRC96      AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.acauleRC106          AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.acaulglaucRC105      AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.bulbispermumRC95     AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.foetidumRC98         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.graminicola7630      AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.buphanoidesRC102     AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.acauleRC38           AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.carolschmidRC97      AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cr.moorei7921           AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.elatus7636           AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.mackeniiRC87         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.obliquus7278         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.ochroleucus7639      AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.sanguineusRC94       AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.staadensis7316       AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.labiatus7212         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.smithiae7214         AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.herreiRC86           AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Cy.falcatus7637         --------------------------------------------------
Eus.darwini             AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Ge.namaquensiAMV635     --------------------------------------------------
Hae.coccineusAMV632     AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Hae.crispus7252         AGAAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Hae.crispus7260         --------------------------------------------------
Lap.martinezii          AAGAAAATTC-AAAATC---TTTCT-CATTC-------ATT-CAACT--C
Leu.autumnale           AAGGAAAATC-AAAATT---TTTTT-CATTC-------ATT-TGGGT--T
Na.sp.7608              AAGAAAATTC-AATATC---TTTC-------------------------
Pan.canariense          AAGAAAATTC-AATATC---TTTCT-CATTC-------ATC-CTACT--C
Par.weberbaueri         AAAGAAAATTCAATATC---TTTCT-CATTC-------ATT-CTACT--C
Ster.lutea              AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Sc.membranaceus7246     AAGAAAAATTCAATATC---TTTCT-CATTC-------ATT-CTACT--C
Str.salter7245          AAGAAAATTC-AATATC---TTTCT-CATTC-------ATT-CTACT--C
Sc.membranaceus7917     AAGAAAATTC-AATATC-------------------------------
Va.parviflora           AAGAAAATTC-AATATC---TTTCT-CATCC-------ATT-CTACT--C
Aco.calamus             AATTAAATTG-GCTATG---TTTCTTTTTG--------ACT-CTATT-TT
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                        401                                                 450
Ama.belladonna          CTTC--ACAAATGG-ATCCGAA---CATAAA---TCTGTTGA-----T-C
Br.gregaria7157         TTTC--ACAAATGG-ACCCGAA---CATAA-------TTTGA-----T-C
Cro.flava7256           TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Br.radulosanata7629     TTTC--ACAAATGG-ACCCGAA---CATAA-------TTTGA-----T-C
Cl.miniataRC14          TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cl.miniata              TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Chl.fragrans            TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.euchrophyllRC96      TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.acauleRC106          TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.acaulglaucRC105      TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.bulbispermumRC95     TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.foetidumRC98         TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.graminicola7630      TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.buphanoidesRC102     TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.acauleRC38           TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.carolschmidRC97      TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cr.moorei7921           TTTC--ACAAATGG-ACCCGAA---CATAAA---TCTTTTGA-----T-C
Cy.elatus7636           TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cy.mackeniiRC87         TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cy.obliquus7278         TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCCTTTGA-----T-C
Cy.ochroleucus7639      TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cy.sanguineusRC94       TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCCTTTGA-----T-C
Cy.staadensis7316       TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCCTTTGA-----T-C
Cy.labiatus7212         TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cy.smithiae7214         TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCCTTTGA-----T-C
Cy.herreiRC86           TTTC--ACAAAAGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Cy.falcatus7637         --------------------------------------------------
Eus.darwini             TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Ge.namaquensiAMV635     --------------------------------------------------
Hae.coccineusAMV632     TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGATCTTAT-C
Hae.crispus7252         TTTC--ACAAATGGGACCCGAA---CATAAA---TCTTTTGA-----T-C
Hae.crispus7260         --------------------------------------------------
Lap.martinezii          GTTC--CCAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Leu.autumnale           TTTC--ACAAACGG-ATCCGGAG--GAAAA----TTTTTGGA-----T-T
Na.sp.7608              ------ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Pan.canariense          TTTC--ACAAATGG-ATCCGAA---CATAAG-------TTGA-----T-C
Par.weberbaueri         TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTTGA-----T-C
Ster.lutea              TTTC--ACAAATGG-ATCCGAA---CATAAA---TCTTTGGA-----T-C
Sc.membranaceus7246     TTTC--ACAAATGG-ATCCGAAA--CATAAA---TCTTTTGA-----T-C
Str.salter7245          TTTC--ACAAATGG--CCCGAA---CATAAA---TCTTTTGA-----T-C
Sc.membranaceus7917     --------------------------------------------------
Va.parviflora           TATC--ACAAATGG-ATCCGAA---CATAAA---TCTTTGGA-----T-C
Aco.calamus             TCACAAATAAATGC-ATCGGAGT--CAAAAT-----TTTTGAA-------
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                        451                                                 500
Ama.belladonna          TTATACC--AATTTGGTTGGAA-----TAGATATGATACCCGT--ACAAA
Br.gregaria7157         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cro.flava7256           TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Br.radulosanata7629     TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cl.miniataRC14          TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cl.miniata              TTATACC--AATTTGGTTTGAA-----TAGATATGATCCCCGT--ACAAA
Chl.fragrans            TTATACC--AATTTGGTTTGAA-----TAGATATGATAGCCGT--ACAAA
Cr.euchrophyllRC96      TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.acauleRC106          TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.acaulglaucRC105      TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.bulbispermumRC95     TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.foetidumRC98         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.graminicola7630      TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.buphanoidesRC102     TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.acauleRC38           TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.carolschmidRC97      TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cr.moorei7921           TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.elatus7636           TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.mackeniiRC87         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.obliquus7278         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.ochroleucus7639      TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.sanguineusRC94       TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.staadensis7316       TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.labiatus7212         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.smithiae7214         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.herreiRC86           TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Cy.falcatus7637         --------------------------------------------------
Eus.darwini             TTATACC--AATTTGGTTTGAA-----TAGATATGATAGCCGT--ACAAA
Ge.namaquensiAMV635     --------------------------------------------------
Hae.coccineusAMV632     TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Hae.crispus7252         TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Hae.crispus7260         --------------------------------------------------
Lap.martinezii          TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Leu.autumnale           TTAAATC-AAATTGGTTGGGAA------AGATATGAAACCCCT--ACAAA
Na.sp.7608              TTATACC--CATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Pan.canariense          TTATACC--AATTTGGTTTGAA-----TAGATATGATACCGTA---C-AA
Par.weberbaueri         TTATACC--AATTTGGTTTGAA-----TAGATATGATAGCCGT--ACAAA
Ster.lutea              TTATACC--AATTTGGTTGGAA-----TAGATATGATACCCGT--ACAAA
Sc.membranaceus7246     TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Str.salter7245          TTATACC--AATTTGGTTTGAA-----TAGATATGATACCCGT--ACAAA
Sc.membranaceus7917     --------------------------------------------------
Va.parviflora           TTATACC--AATTTGGTGGGAA-----TAGATATGATACCCGT--ACAAA
Aco.calamus             TCTTATCAAAAGTC--TTGTGA-----TAGATACGATATACGT--ACAAA
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                        501                                                 550
Ama.belladonna          TGAAC----ATATACGGT-CAAGG-AATTCATTCCCATTGTTG-AATCAC
Br.gregaria7157         TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cro.flava7256           TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Br.radulosanata7629     TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cl.miniataRC14          TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cl.miniata              TGAAC----ATATATGGT-CAAGG-----GATTCCCATTATTG-AATCAT
Chl.fragrans            TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Cr.euchrophyllRC96      TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.acauleRC106          TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.acaulglaucRC105      TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.bulbispermumRC95     TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.foetidumRC98         TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.graminicola7630      TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.buphanoidesRC102     TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.acauleRC38           TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.carolschmidRC97      TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cr.moorei7921           TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.elatus7636           TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.mackeniiRC87         TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.obliquus7278         TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.ochroleucus7639      TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.sanguineusRC94       TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.staadensis7316       TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.labiatus7212         TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.smithiae7214         TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.herreiRC86           TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Cy.falcatus7637         --------------------------------------------------
Eus.darwini             TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Ge.namaquensiAMV635     --------------------------------------------------
Hae.coccineusAMV632     TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Hae.crispus7252         TGAAC----ATATATGGT-CAAGG-----AATTCCCATTATTG-AATCAT
Hae.crispus7260         --------------------------------------------------
Lap.martinezii          TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Leu.autumnale           TGAAA----AAAAATGGT-CATGG-----GATTCCCATTATGG-AATCAG
Na.sp.7608              TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Pan.canariense          TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Par.weberbaueri         TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Ster.lutea              TGAAT----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Sc.membranaceus7246     TGAAAC---ATATATGGT-CAAGGG----AATTCCCATTATTG-AATCAT
Str.salter7245          TGAGC----ATATATGGT-CAAGT-----AATTCCCATTATTG-AATCAT
Sc.membranaceus7917     --------------------------------------------------
Va.parviflora           TGAAC----ATATATGGT-CATGG-----AATTCCCATTATTG-AATCAT
Aco.calamus             TGCAC----ATATCTGGG-CAAGG-----AATCCCCATTATTG-AATCAT
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                         551                                                600
Ama.belladonna           TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Br.gregaria7157          TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cro.flava7256            TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Br.radulosanata7629      TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cl.miniataRC14           TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cl.miniata               TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Chl.fragrans             TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cr.euchrophyllRC96       TTACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.acauleRC106           TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.acaulglaucRC105       TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.bulbispermumRC95      TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.foetidumRC98          TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.graminicola7630       TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.buphanoidesRC102      TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.acauleRC38            TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.carolschmidRC97       TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cr.moorei7921            TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Cy.elatus7636            TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.mackeniiRC87          TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.obliquus7278          TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.ochroleucus7639       TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.sanguineusRC94        TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.staadensis7316        TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.labiatus7212          TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.smithiae7214          TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.herreiRC86            TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Cy.falcatus7637          --------------------------------------------------
Eus.darwini              TCACAG-TCCATATT-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Ge.namaquensiAMV635      --------------------------------------------------
Hae.coccineusAMV632      TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAGG-AAAGTCT
Hae.crispus7252          TCACAG-TCCATATC-ATTATTCTTAC-----ATTCACAAAG-AAAGTCT
Hae.crispus7260          --------------------------------------------------
Lap.martinezii           TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAGAGAGAGTCTT
Leu.autumnale            TCACAG-CCCAAATC-ATTATCCCAAC-----ATTCACAAAGGAAGTTTT
Na.sp.7608               TCACAG-TCCGTATC-ATTACCCTTAC-----ATTCACAAGG-AAAGTCT
Pan.canariense           TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAGA--AAGTCT
Par.weberbaueri          TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Ster.lutea               TCACAG-TCCATAGC-ATTATCCTTAC-----ATTCACAAAG-AATGTCT
Sc.membranaceus7246      TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGTCT
Str.salter7245           TCACAA-TCCATATC-ATTATTCTTAAC----ATTCACAAAG-AAAGTCT
Sc.membranaceus7917      ----------------------CTTAC-----ATTCACAAAG-AAAGTCT
Va.parviflora            TCACAG-TCCATATC-ATTATCCTTAC-----ATTCACAAAG-AAAGCCT
Aco.calamus              TCACAG-TTCATATG-ATTACCCTTTT-----ACTTAGAAGT-AAAGTCT
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                        601                                                 650
Ama.belladonna          TCTTTTT-GAAAATCTAAGAAATT-CGGGGAGTAGGT--CAAAATTTTTA
Br.gregaria7157         TCTTTTT-GAAAATGTAAGAAATT-CGGGGACTAGGT--CAAAATTTTTA
Cro.flava7256           TCTTCTT-AAAAATCTAAGAAATTTCGGGGACTAGGT--CAAAATTTTTA
Br.radulosanata7629     TCTTTTT-GAAAATGTAAGAAATT-CGGGGACTAGGT--CAAAATTTTTA
Cl.miniataRC14          TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT--CCAAATTTTTA
Cl.miniata              TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT--CCAAATTTTTA
Chl.fragrans            TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT--CAAAATTTTTA
Cr.euchrophyllRC96      TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.acauleRC106          TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.acaulglaucRC105      TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.bulbispermumRC95     TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.foetidumRC98         TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.graminicola7630      TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.buphanoidesRC102     TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.acauleRC38           TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.carolschmidRC97      TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cr.moorei7921           TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cy.elatus7636           TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cy.mackeniiRC87         TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cy.obliquus7278         TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cy.ochroleucus7639      TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cy.sanguineusRC94       TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cy.staadensis7316       TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTGGAA
Cy.labiatus7212         TCTTTTT-GAAAATCTAAKAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cy.smithiae7214         TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTGGAA
Cy.herreiRC86           TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Cy.falcatus7637         --------------------------------------------------
Eus.darwini             TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Ge.namaquensiAMV635     --------------------------------------------------
Hae.coccineusAMV632     TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Hae.crispus7252         TCTTTTT-GAAAATGTAAGAAATT-CGGGGACTAGGT-CAAAATTTGTAA
Hae.crispus7260         --------------------------------------------------
Lap.martinezii          CCTTCTTTGAAAATTTAAGAAATATCGGGGACTAGGT-CCAAATATTAAA
Leu.autumnale           TTTTTTTTTTTTATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Na.sp.7608              TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Pan.canariense          -CTTTT--G-AAATCTAAGAAATT-CGGGGACTAGGT-CAAA--------
Par.weberbaueri         TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTTAA
Ster.lutea              TCTTTTT-AAAAATCTAAGAAATT-TGGGGACTAGGT-CAAAATTTTTAA
Sc.membranaceus7246     TCTTTTT-GAAAATCTAATAAATTTCGGGGACTAGGT-CAAAATTTTTAA
Str.salter7245          TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTTGAA
Sc.membranaceus7917     TCTTTTTT-AAAATCTAATAAATT-CGGGGACTAGGT-AAAAATTTTTAA
Va.parviflora           TCTTTTT-GAAAATCTAAGAAATT-CGGGGACTAGGT-CAAAATTTGGAA
Aco.calamus             TCTCTTTTTGAAAATGAAAAAACTCAAAAGGCGGGGT--AAGATTTTGGA
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                        651                                                 700
Ama.belladonna          AGACCTTTTTTTT-----------AGT-----CTATTTAATTTACAT--
Br.gregaria7157         ATACTTTTTTTG------------AGTTTAGTCTATTTAATTTACAT--
Cro.flava7256           ATACTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Br.radulosanata7629     ATACTTTTTTTG------------AGTTTAGTCTATTTAATTTACAT--
Cl.miniataRC14          AGACCTTTTTT-----------------TTAGTCTATTTAATTTACAT--
Cl.miniata              AGACCTTTTTT-----------------TTAGTCTATTTAATTTACAT--
Chl.fragrans            ATACTTTTTTT-----------------TAGTCTATTTAATTTAACAT-
Cr.euchrophyllRC96      TACTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.acauleRC106          TACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.acaulglaucRC105      TACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.bulbispermumRC95     TACTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.foetidumRC98         TACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.graminicola7630      TACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.buphanoidesRC102     TACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.acauleRC38           TACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.carolschmidRC97      TACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cr.moorei7921           TACTTTTTTTTT------------AGTTTAGTCTATTTAATTTACAT--
Cy.elatus7636           TACTTTTTTT--------------------AGTCTATTTAATTTACAT--
Cy.mackeniiRC87         TACTTTTTTT--------------------AGTCTATTTAATTTACAT--
Cy.obliquus7278         TACTTTTTTT--------------------AGTCTATTTAATTTACAT--
Cy.ochroleucus7639      TACTTTTTTT--------------------AGTCTATTTAATTTACAT--
Cy.sanguineusRC94       TACTTTTTTTAGTCTATTTAATTTATTTTTAGTCTATTTAATTTACATTT
Cy.staadensis7316       TACTTTTTTTAGTCTATTTAATTTATTTTTAGTCTATTTAATTTACATTT
Cy.labiatus7212         TACCTTTTTT-------------------TAGTCTATTTAATTTACAT--
Cy.smithiae7214         TACTTTTTTTAGTCTATTTAATTTATTTTTAGTCTATTTAATTTACATTT
Cy.herreiRC86           TACTTTTTTTAGTCTATT-------TTTTTACTCTATTTAATTTACAT--
Cy.falcatus7637         --------------------------------------------------
Eus.darwini             TACTTTTTTT-------------------TAGTCTATTTCATTTACAT--
Ge.namaquensiAMV635     --------------------------------------------------
Hae.coccineusAMV632     GACCTTTTTT------------------TTAGTCTATTTAATTTACAG--
Hae.crispus7252         TACTTTTTTT--------------GAGTTTAGTCTATTTAATTTACAT--
Hae.crispus7260         --------------------------------------------------
Lap.martinezii          TAAT--------------------GATTTGTGGTTTACTAATTAACAT--
Leu.autumnale           TACTTTTTTT--------------------AGTCTATTTCATTTATAT--
Na.sp.7608              TACTTTTTTT-------------------TAGTCTATTTAATTTACAT--
Pan.canariense          --------------------------------------------------
Par.weberbaueri         TACTTTTTTT-------------------TAGTCTATTTAATTTACAT--
Ster.lutea              TACTTTTTTT-------------------TAGTCTATTTAATTTACAT--
Sc.membranaceus7246     GACCTTTTTT------------------TTAGTCTATTTAATTTACAT--
Str.salter7245          TACTTTTTTT--------------GAGTTTAGTCTATTTAATTTACAT--
Sc.membranaceus7917     GACCTTTTTTT------------------TAGTCTATTTAATTTACAT--
Va.parviflora           GACCTTTTTT-------------------TAGTCTATTTAATTTACAT--
Aco.calamus             ATACAATTTC--------------------GATCTCTTTAATTTA-ATTG
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                        701                                                 750
Ama.belladonna          ----AGATAC-A--T-TT-----ACT-------C-T--------AA--T-
Br.gregaria7157         ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cro.flava7256           ----AGATAC-AAGTATTTCT--ACTAGGAT--GATGCGCGGG-AAA-T-
Br.radulosanata7629     ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cl.miniataRC14          ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cl.miniata              ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Chl.fragrans            ----AGATAC-AAATACTCT---ATTTAGGAT-GATG------------
Cr.euchrophyllRC96      ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.acauleRC106          ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.acaulglaucRC105      ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.bulbispermumRC95     ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.foetidumRC98         ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.graminicola7630      ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.buphanoidesRC102     ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.acauleRC38           ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.carolschmidRC97      ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cr.moorei7921           ----AGATAC-AAGTATTGTACTCCCCGGAT--GATGCGCGGGGAAA-TC
Cy.elatus7636           ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.mackeniiRC87         ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.obliquus7278         ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAATCC
Cy.ochroleucus7639      ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.sanguineusRC94       ACATAGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.staadensis7316       ACATAGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.labiatus7212         ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.smithiae7214         ACATAGATAC-AAATACTCT---ACTAGGAT--GATGC--GGG-AAAATC
Cy.herreiRC86           ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Cy.falcatus7637         --------------------------------------------------
Eus.darwini             ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGC--------
Ge.namaquensiAMV635     --------------------------------------------------
Hae.coccineusAMV632     ----AGATAC-AAATACTCT---ACCGGTTATTATGATGCCGGGAAAATC
Hae.crispus7252         ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Hae.crispus7260         --------------------------------------------------
Lap.martinezii          ----AGAGTAGCGTGATACTGTAGTAGAGCATGAGTGCGCGGG--AA-TA
Leu.autumnale           ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGAG-GAA-TC
Na.sp.7608              ----AGATAC-AAATACTTT---ACTAGGAT--GATGCGCGGGGCAA-TC
Pan.canariense          --------------------------------------------------
Par.weberbaueri         ----AGATAC-AAATACTCT---ACTAGGAT--GATGTGCGGG-AA--TC
Ster.lutea              ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGGGGG-AA--TC
Sc.membranaceus7246     ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Str.salter7245          ----AGATAC-AAGTATTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Sc.membranaceus7917     ----AGATAC-AAATACTCT---ACTAGGAT--GATGCGCGGG-AAA-TC
Va.parviflora           ----AGATAC-AAATACTCT---ACTAGGAT--GATTCACGGG-AA--TG
Aco.calamus             ACAAAAACAC-AAATACTCT---AGTAAGAT--GATCTATCGG-GAA-TA
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                    751                                                 800
Ama.belladonna      --------------------------------------------------
Br.gregaria7157     GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cro.flava7256       --------------------------------------------------
Br.radulosanata7629 GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cl.miniataRC14      GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cl.miniata          GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Chl.fragrans        --------------------------------------------------
Cr.euchrophyllRC96  GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cr.acauleRC106      GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-T---------
Cr.acaulglaucRC105  GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAA------------
Cr.bulbispermumRC95 GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cr.foetidumRC98     GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cr.graminicola7630  GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCG----
Cr.buphanoidesRC102 GTCGGGATAGCTCAG-TTGGTAGA-C-------TGCTAAGTGGT------
Cr.acauleRC38       GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cr.carolschmidRC97  GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cr.moorei7921       GTCGGGATAACTCAG-T-GGGAGAGCAAAGGACTGAA---TCC-------
Cy.elatus7636       GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.mackeniiRC87     GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.obliquus7278     GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.ochroleucus7639  GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.sanguineusRC94   GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.staadensis7316   GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.labiatus7212     GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.smithiae7214     G-------------------------------------------------
Cy.herreiRC86       GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Cy.falcatus7637     --------------------------------------------------
Eus.darwini         --------------------------------------------------
Ge.namaquensiAMV635 --------------------------------------------------
Hae.coccineusAMV632 GCCGGGATAGCTCA-GTTGGTAGAGCAAAGGACTGAAAAATCCTCGTGTC
Hae.crispus7252     GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Hae.crispus7260     --------------------------------------------------
Lap.martinezii      GTCGCGATAGAT-----------------------------------------
Leu.autumnale       GTCGGGATAGCT-----------------------------------------
Na.sp.7608          GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Pan.canariense      --------------------------------------------------
Par.weberbaueri     GTCGGGATAGCT-----------------------------------------
Ster.lutea          GTCGGGATAGCT-----------------------------------------
Sc.membranaceus7246 GTCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
Str.salter7245      GTCG------------------------------------------------
Sc.membranaceus7917 TCGGGAGTAGCTCAG-TTGGTAGAGCAGAGGACTG-AAAATCCTCGTGTC
Va.parviflora       GTCGG-ATAGCT-----------------------------------------
Aco.calamus         GCCGGGATAGCTCAG-TTGGTAGAGCAGAGGACTGAAAA-TCCTCGTGTC
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                        801                                                 850
Ama.belladonna          --------------------------------------------------
Br.gregaria7157         ACC-----------------------------------------------
Cro.flava7256           --------------------------------------------------
Br.radulosanata7629     ACC-----------------------------------------------
Cl.miniataRC14          ACCAGTTCAA--A---GATAATCCCA-GAA-TGCCTATTGTTTCTGGTTC
Cl.miniata              A-------------------------------------------------
Chl.fragrans            --------------------------------------------------
Cr.euchrophyllRC96      -CCAGTTCAA-TAA--GATAATCC-AAGAAATGCCTATTGTTTCTGGTTC
Cr.acauleRC106          ------------------------------------------------C
Cr.acaulglaucRC105      --------------------------------------------------
Cr.bulbispermumRC95     ACCAGTTCAAATA--------------------------------------
Cr.foetidumRC98         ACCAGTTC--------GATAATCCCAAGAAA-GCCTATTGTTTCTGGTTC
Cr.graminicola7630      ----------------GATAATCCCAAGAAATGCCTATTGTTTCTGGTTC
Cr.buphanoidesRC102     A--ACTTCAAAT----GATAATCC-AAGAAATGCCTATTGTTTCTGGTTC
Cr.acauleRC38           ACCAGTTCAAAT-----A-AATCCCAAGAAAGGCCTATTTTTTCTGGTTC
Cr.carolschmidRC97      ----------------GATAATCCCAGGAA-GGCCTATTGTTTCTGGTTC
Cr.moorei7921           ------------------A-ACCCAAGGAAATGCCTATTGTTTCCTGGTT
Cy.elatus7636           -CC-----------------------------------------------
Cy.mackeniiRC87         ACCA----A-------------------------------------------
Cy.obliquus7278         -CCA------------------------------------------------
Cy.ochroleucus7639      AC-A------------------------------------------------
Cy.sanguineusRC94       AC--------------------------------------------------
Cy.staadensis7316       ACCA-TTTC-------------------------------------------
Cy.labiatus7212         ACC-------------------------------------------------
Cy.smithiae7214         --------------------------------------------------
Cy.herreiRC86           -C--------------------------------------------------
Cy.falcatus7637         --------------------------------------------------
Eus.darwini             --------------------------------------------------
Ge.namaquensiAMV635     --------------------------------------------------
Hae.coccineusAMV632     ACCAGTTTCAAA-AA-------------------------------------
Hae.crispus7252         AC-A--TTC------------------------------TTTCTGGTTC
Hae.crispus7260         --------------------------------------------------
Lap.martinezii          -------------------------AGAAATGCCTATTGTTTCTGGTTC
Leu.autumnale           ---------------------ATT-AACAAATGCCTATTGTTTCTGGTTC
Na.sp.7608              ACCAGTTCCAAATA--------------------------------------
Pan.canariense          ----------------------------------------TTTCTGGTTC
Par.weberbaueri         --------------------------------------------------
Ster.lutea              --------------------GATTAAAGAACCGCCTATTGTTTCTGGTTC
Sc.membranaceus7246     A--------------GATAATCCCAAGAAATGCCTATTGTTTCCGGTTC
Str.salter7245          --------------------------------------------------
Sc.membranaceus7917     -C--------------------------------------------------
Va.parviflora           ----------------------------------TATTGTTTCTGGTTC
Aco.calamus             AC--------------------------------------------------
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                      851                                                900
Ama.belladonna        --------------------------------------------------
Br.gregaria7157       --------------------------------------------------
Cro.flava7256         --------------------------------------------------
Br.radulosanata7629   --------------------------------------------------
Cl.miniataRC14        AA--GTAGAAA-TGTAAGTCAATGGAAGAATTAC-----AAGGATATTTA
Cl.miniata            --------------------------------------------------
Chl.fragrans          --------------------------------------------------
Cr.euchrophyllRC96    AA--GTAGAAA-TGTAAGTCAATGGAAGAATTAC-----AAAGATATTTA
Cr.acauleRC106        AA-GGTAGGAAATGTAAGTCCATGGAAGGATTTCC---AAAGGTTTTTTG
Cr.acaulglaucRC105    --------------------------------------------------
Cr.bulbispermumRC95   ----------------------------------------AAAGATATTTG
Cr.foetidumRC98       AA--GTAGAAA-TGTAAGTCAATGGAAGAATTAC-----AAAGATATTTA
Cr.graminicola7630    AA--GTAGAAA-TGTAAGTCAATGGAAGAATTAC-----AAAGATATTTA
Cr.buphanoidesRC102   CAAGGTAGAAA-TGTAAGTCAATGGAAGAATTACC----AAAGATATTTA
Cr.acauleRC38         AA--GTAGGAAATGTAAGTCCATGGAAGGATTAC----AAAGGATATTTA
Cr.carolschmidRC97    AA--GTAGAAA-TGTAAGTCAATGGAAGAATTAC-----AAAGATATTTA
Cr.moorei7921         CAAGGTAGAAAAGGTAAGTCCATGG-AGGAATTTAC---AAAGATATTTA
Cy.elatus7636         --------------------------------------------------
Cy.mackeniiRC87       --------------------------------------------------
Cy.obliquus7278       --------------------------------------------------
Cy.ochroleucus7639    --------------------------------------------------
Cy.sanguineusRC94     --------------------------------------------------
Cy.staadensis7316     --------------------------------------------------
Cy.labiatus7212       --------------------------------------------------
Cy.smithiae7214       --------------------------------------------------
Cy.herreiRC86         --------------------------------------------------
Cy.falcatus7637       --------------------------------------------------
Eus.darwini           --------------------------------------------------
Ge.namaquensiAMV635   --------------------------------------------------
Hae.coccineusAMV632   --------------------------------------------------
Hae.crispus7252       CA--GTAGAAA-TGTAAGTCAATGGAAGAATTCCA----AAGGATATTTA
Hae.crispus7260       --------------------------------------------------
Lap.martinezii        AA--GTAGAAA-TGTAAGTCAATGGAAGAATTAC-----AAGGATATTTA
Leu.autumnale         AA--GTAGAAA-TGTAAGTCAATGGAAGAATTAC-----AAGGATATTTA
Na.sp.7608            --------------------------------------------------
Pan.canariense        AA--GTAGAAA-TGTAAGTCAATGGAAGAATTAC-----AAGGATATTTA
Par.weberbaueri       --------------------------------------------------
Ster.lutea            AA--GTAGAAA-TGTAAGTCAATGGAAGAATTAC-----AAGGATATTTA
Sc.membranaceus7246   AA-GGTAGAAA-TGTAAGCCAATGGAAGGAATTCC----AAGGATATTTA
Str.salter7245        --------------------------------------------------
Sc.membranaceus7917   --------------------------------------------------
Va.parviflora         AA--GTAGAAA-TGTAAGTCAATGGAAGAATTAC-----AAGGATATTTA
Aco.calamus           --------------------ATGGAAGAATT-C----AAAGTCTATTTC
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                        901                                                 950
Ama.belladonna          --------------------------------------------------
Br.gregaria7157         --------------------------------------------------
Cro.flava7256           --------------------------------------------------
Br.radulosanata7629     --------------------------------------------------
Cl.miniataRC14          G-AAAAGGATAGA--TCTCGGCAACAACACTTCC-TATACCC-GCTAC--
Cl.miniata              --------------------------------------------------
Chl.fragrans            --------------------------------------------------
Cr.euchrophyllRC96      G-AAAAGGATAGA--TCTCGGCAACAACACTTCC-TATATCC-GCTAC--
Cr.acauleRC106          GAAAAGGGATAGATTTTCGGGCAACCACCACTTCCTATATCC-GCTACTT
Cr.acaulglaucRC105      ----------------T-----------TTCCCTATATCC-GCTAC-T
Cr.bulbispermumRC95     GGAAAGGGATAGA-TCTCCGGCAACAACCACTTCCTATATCC-GCTAC--
Cr.foetidumRC98         G-AAAAGGATAGA--TCTCGGCAACAACACTTCC-TATATCC-GCTAC--
Cr.graminicola7630      G-AAAAGGATAGA--TCTCGGCAACAACACTTCC-TATATCC-GCTAC--
Cr.buphanoidesRC102     G-AAAAGGATAGA-TCTCGGGCAACAACACTTCCCTATATCC-GCTAC--
Cr.acauleRC38           GAAAAAGGATAGA--TCTCGGCAACAACCACTTCCTATATCC-GCTAC--
Cr.carolschmidRC97      G-AAAAGGATAGA--TCTCGGCAACAACACTTCC-TATATCC-GCTAC--
Cr.moorei7921           GGAAAAGGATAGA--TCTCGGCAACAACACTTCC-TATATCC-GCTAC--
Cy.elatus7636           ----------------------------------------------------T
Cy.mackeniiRC87         --------------------------------------------------
Cy.obliquus7278         --------------------------------------------------
Cy.ochroleucus7639      --------------------------------------------------
Cy.sanguineusRC94       --------------------------------------------------
Cy.staadensis7316       --------------------------------------------------
Cy.labiatus7212         --------------------------------------------------
Cy.smithiae7214         --------------------------------------------------
Cy.herreiRC86           --------------------------------------------------
Cy.falcatus7637         --------------------------------------------------
Eus.darwini             --------------------------------------------------
Ge.namaquensiAMV635     ----------------CT-----------TTCCCAATA-CCCGCTAC--
Hae.coccineusAMV632     --------------------------------------------------
Hae.crispus7252         G-AAAAGGAGGGA--TCTCGGCAACCAGCAATTCCTATACCC-GGTAC--
Hae.crispus7260         --------------------------------------------------
Lap.martinezii          G-AAAAGGATAGA--TCTCGGCAACAACACTTCC-TATATCC-GCTAC--
Leu.autumnale           G-AAAAGGATAGA--TCTCGGCAACAACACTTCC-TGTATCC-ACTAC--
Na.sp.7608              --------------------------------------------------
Pan.canariense          G-AAAAGGATAGA--TCTCGGCAACAACACTTCC-TATATCC-GCTAC--
Par.weberbaueri         --------------------------------------------------
Ster.lutea              G-AAAAGGATAGA--TCTCGGCAACAACACTTCC-TATATCC-GCTAC--
Sc.membranaceus7246     GTAAA-GGATAGG--TCTCGGCAACAACACTTCC-TATATCC-GCTAC--
Str.salter7245          --------------------------------------------------
Sc.membranaceus7917     --------------------------------------------------
Va.parviflora           G-AAAAGGATAGA--TCTCGGCAACAACACTTCC-TATATCC-GCTAC--
Aco.calamus             G-AAAAAGATGGG--TCTCGTCAACAATACTTCC-TATATCC-ACTTC--
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                        951                                                1000
Ama.belladonna          --------------------------------------------------
Br.gregaria7157         --------------------------------------------------
Cro.flava7256           --------------------------------------------------
Br.radulosanata7629     --------------------------------------------------
Cl.miniataRC14          TCTTTCAGGAGTATATTTATGCAC-TTGC-TCATG---ATTATGGTTT--
Cl.miniata              --------------------------------------------------
Chl.fragrans            --------------------------------------------------
Cr.euchrophyllRC96      TCTTTCAGGAGTATATTTATGCAC-TTGC-TCATG---ATTATGGTTT--
Cr.acauleRC106          TTTCTTGGAGGATATTTAATGCAC-TTGC-CCAGG---ATAAGGGTT--A
Cr.acaulglaucRC105      TCTTTCAGGAGTATATTTATGCACCTTCCTTCATG--AATTATGGTTTT-
Cr.bulbispermumRC95     TCTTTCCGGAGTATATTTATGCAC-TTGGCGCATGG--ATTATGGTGT--
Cr.foetidumRC98         TCTTTCAGGAGTATATTTATGCAC-TTGC-TCATG---ATTATGGTTT--
Cr.graminicola7630      TCTTTCAGGAGTATATTTATGCAC-TTGC-TCATG---ATTATGGTTT--
Cr.buphanoidesRC102     TCTTTGCAGGAGTATATTTATGCACTTGC-TCATG---ATTATGGTTT--
Cr.acauleRC38           TCTTTCCAGGAGTATATTTATGCACTTGCCTCATG---ATTATGGTTT--
Cr.carolschmidRC97      TCTTTCAGGAGTATATTTATGCAC-TTGC-TCATG---ATTATGGTTT--
Cr.moorei7921           TCTTTCAGGAGTATA-TTATGCAC-TTGC-TCATG---ATTATGGTTT--
Cy.elatus7636           CTTTCCAGGAGTATATTTATGCAC-TTGCTCCATG---ATTATGGTTT--
Cy.mackeniiRC87         -----------------TA-GCAC-TTGCTCCATG---ATTATGGTTT--
Cy.obliquus7278         --------------------------------------------------
Cy.ochroleucus7639      --------------------------------------------------
Cy.sanguineusRC94       ------------------------------------------AT-------
Cy.staadensis7316       --------------------G------GCTCCATG--ATTTATGGTTTT-
Cy.labiatus7212         --------------------------------------------------
Cy.smithiae7214         --------------------------------------------------
Cy.herreiRC86           --------------------------------------------------
Cy.falcatus7637         ---------A-TAT-TT-ATGCAC-TTGCTCCATG---ATTATGGTTT--
Eus.darwini             --------------------------------------------------
Ge.namaquensiAMV635     TCTTTCAGGAGTATATTTATGCAC-TTGCTCCATG---ATTATGGTTT--
Hae.coccineusAMV632     --------------------------------------------------
Hae.crispus7252         TCTTTCAGGAGTATATTTATGCACCTTGC-TCATG---ATTATGGTTT--
Hae.crispus7260         --------------------------------------------------
Lap.martinezii          TCTTTCAGGAGTATATTTATGCGC-TTGC-CCATG---ATTATGGTTT--
Leu.autumnale           TCTTTCAGGAGTATATTTATGCGC-TTGC-TCATT---ATTATGGTTT--
Na.sp.7608              --------------------------------------------------
Pan.canariense          TCTTTCAGGAGTATATTTATGCAC-TTGC-TCATG---ATTATGGTTT--
Par.weberbaueri         --------------------------------------------------
Ster.lutea              TCTTTCAGGAGTATATTTATGCAC-TTGC-CCATG---ATTATGATTT--
Sc.membranaceus7246     TCTTTCAGGAGTATATTTATGCAC-TTGC-TCAGG---ATTATGGTTT--
Str.salter7245          T-TTCCAGGAGAATATTTATGCCACTTGCCTCATG---ATTATGGTTT--
Sc.membranaceus7917     --------------------------------------------------
Va.parviflora           TCTTTCAGGAGTATATTTATGCAC-TTGC-TCATT---ATTATGGTTT--
Aco.calamus             TCTTTCAGGAGTACATCTACGCAC-TTGC-TCATA---ATCATGTTTT--
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                    1001                                                1050
Ama.belladonna      ------------------------------------------TTGG-
Br.gregaria7157     --------------------------------------------------
Cro.flava7256       ---------CGA---TTTTTTACGAACCCC-----GCGGGAGTTCTTGG-
Br.radulosanata7629 --------------------------------------------------
Cl.miniataRC14      -AAATGGTTCGA---TTTTTTACGAATCT------GCGGAAGTTTTTGG-
Cl.miniata          ------------------------------------------TTGG-
Chl.fragrans        ------------------------------------------TTGG-
Cr.euchrophyllRC96  -AAATGGTTCGA---TTTTTTACGAACCC------GCGGGAGTTCTTGG-
Cr.acauleRC106      AAAAGGGTTCGA--TTTTTTTACGAACCC-----GCGGGA-GTTCTTGG-
Cr.acaulglaucRC105  -AAATGTTTCGA--TTTTTTTACGAACCTC-----GCGGGAGTTCTTGGG
Cr.bulbispermumRC95 -AAATGGGGC-A---TTTTTGGGGGGCCC------GCGG-AATTCTTGG-
Cr.foetidumRC98     -AAATGGTTCGA---TTTTTTACGAACCCG-----CGGGAGTTTCTTGG-
Cr.graminicola7630  -AAATGGTTCGA---TTTTTTACGAACCC------GCGGGAGTTCTTGG-
Cr.buphanoidesRC102 -AAATGGTTCGA---TTTTTTACGAACCC------GCGGGAGTTCTTGG-
Cr.acauleRC38       -AAATGGTTCGA---TTTTTTACGAACCC-----GCGGGAGTTTCTTGG-
Cr.carolschmidRC97  -AAATGGTTCGA---TTTTTTACGAACCC------GCGGGAGTTCTTGG-
Cr.moorei7921       -AAATGGTTCGA---TTTTTTACGAACCC------GCGGGAGTTCTTGG-
Cy.elatus7636       -AAATGGTTCGA---TTTTTTACGAATCC------GCGGAAGTTTTTGG-
Cy.mackeniiRC87     -AAATGTTTCCAA--TTTTTTACGAATCC------GCGGAAGTTTTTGG-
Cy.obliquus7278     --------------------------------------------------
Cy.ochroleucus7639  --------------------------------------------------
Cy.sanguineusRC94   -A-------C-AA--TTTTTTACGAATCC------GCGGAAGTTTTTTGG
Cy.staadensis7316   AAATGGGTTCCAATTTTTTAACGAA-TCC------GCGGAAGTTTCTGG-
Cy.labiatus7212     --------------------------------------------------
Cy.smithiae7214     --------------------------------------------------
Cy.herreiRC86       --------------------------------------------------
Cy.falcatus7637     -AAATGGTTC-AA-TTTTTTTACGAATCC------GCGGAAGTTTTTGG-
Eus.darwini         ------------------------------------------TTGG-
Ge.namaquensiAMV635 -AAATGGTTCGA---TTTTTTACGAATCCT-----GCGGAAGTTTTTGG-
Hae.coccineusAMV632 --------------------------------------------------
Hae.crispus7252     -AAATGGTTCGGA--TTTTTTATGAATCT------GCGGAAGTTTTTGG-
Hae.crispus7260     ---------C------------CGAATC-T-----GCGGAAGTTTTTGG-
Lap.martinezii      -AAATGGTTCGA---TTTTTTACGAATCC------GCGGAAGTTTTTGG-
Leu.autumnale       -AAATGTTTCAA---TTTTTTACGAATCT------GCAGAAGTTTTTGG-
Na.sp.7608          --------------------------------------------------
Pan.canariense      -AAATGATTCGA---TTTTTTACGAATCC------GCGGAAGTTTTTGG-
Par.weberbaueri     ------------------------------------------TTGG-
Ster.lutea          -AAATGATTCGA---TTTTTTACGAATCC------GCGGAAGTTTTTGG-
Sc.membranaceus7246 -AAATGGTTCGA---TTTTTTACGAATCT------GCGGAAGTTTTTGG-
Str.salter7245      -AAATGGTTCGA---TTTTTTACGAACCC------GCGGGAGTTTCTTGG
Sc.membranaceus7917 --------------------------------------------------
Va.parviflora       -AAATGGTTCGA---TTTTTTACGAATTC------GCGGAAGTTTTTGG-
Aco.calamus         -AAATGGATTGA---TTTTTTACGAATCCT------CGGAAAATTTC-GT
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                        1051                                                1100
Ama.belladonna          TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Br.gregaria7157         --------------------------------------------------
Cro.flava7256           TTATGACAATAAATCCTAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Br.radulosanata7629     --------------------------------------------------
Cl.miniataRC14          TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cl.miniata              TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Chl.fragrans            TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cr.euchrophyllRC96      TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cr.acauleRC106          TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cr.acaulglaucRC105      TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cr.bulbispermumRC95     TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cr.foetidumRC98         TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cr.graminicola7630      TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cr.buphanoidesRC102     TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cr.acauleRC38           TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cr.carolschmidRC97      TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cr.moorei7921           TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cy.elatus7636           TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cy.mackeniiRC87         TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cy.obliquus7278         --------------------------------------------------
Cy.ochroleucus7639      --------------------------------------------------
Cy.sanguineusRC94       GTATGACAATAAATCTGGTTTGGGCACTTGTA--AAACGTTTAATTACT-
Cy.staadensis7316       TTATGACAATAAATCCTAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Cy.labiatus7212         --------------------------------------------------
Cy.smithiae7214         --------------------------------------------------
Cy.herreiRC86           --------------------------------------------------
Cy.falcatus7637         TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Eus.darwini             TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Ge.namaquensiAMV635     TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Hae.coccineusAMV632     --------------------------------------------------
Hae.crispus7252         TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Hae.crispus7260         TTATGACAATAAATTCTAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Lap.martinezii          TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Leu.autumnale           TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Na.sp.7608              --------------------------------------------------
Pan.canariense          TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Par.weberbaueri         TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Ster.lutea              TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Sc.membranaceus7246     TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Str.salter7245          TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACC-
Sc.membranaceus7917     --------------------------------------------------
Va.parviflora           TTATGACAATAAATC-TAGTTTAGCACTTGTA--AAACGTTTAATTACT-
Aco.calamus             TTATGATAATAAATT-TAGTTTAATAATTGTA--AAACGTTTAATTACT-
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                        1101                                                1150
Ama.belladonna          CGAATCTATC-AACAGAATTCTTTGATTTC------TTTGGTTAATGATT
Br.gregaria7157         --------------------------------------------------
Cro.flava7256           CGAATCTATC-AACAGAATTCTTTGATTTCC-----TTTGGTTAATGATT
Br.radulosanata7629     --------------------------------------------------
Cl.miniataRC14          CGAATCTATC-AACAGAAATCAAAGATTTC------TTTGGTTAATGATT
Cl.miniata              CGAATCTATC-AACAGAAATCAAAGATTTC------TTTGGTTAATGATT
Chl.fragrans            CGAATCTATC-AACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Cr.euchrophyllRC96      CGAATCTATC-AACAGAATTCTTTGATTTC------TTTGGTTAATGATT
Cr.acauleRC106          CGAATCTATC-AACAGAATTCTTTGATTTC------TTTGGTTAATGATT
Cr.acaulglaucRC105      CGAATCTATCCAACAGAATTCTTTGATTTC-----TTTTGGTTAATGATT
Cr.bulbispermumRC95     CGAATCTATC-AACAGAATTCTTTGATTTC------TTTGGTTAATGATT
Cr.foetidumRC98         CGAATCTATC-AACAGAATTCTTTGATTTC------TTTGGTTAATGATT
Cr.graminicola7630      CGAATCTATC-AACAGAATTCTTTGATTTC------TTTGGTTAATGATT
Cr.buphanoidesRC102     CGAATCTATC-AACAGAATTCTTTGATTTC------TTTGGTTAATGATT
Cr.acauleRC38           CGAATCTATC-AACAGAATTCCTTTGATTTC-----TTTGGTTAATGATT
Cr.carolschmidRC97      CGAATCTATC-AACAGAATTCTTTGATTTC------TTTGGTTAATGATT
Cr.moorei7921           CGAATCTATC-AACAGAATTCTTTGATTTC------TTTGGTTAATGATT
Cy.elatus7636           CGAATCTATC-AACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Cy.mackeniiRC87         CGAATCTATC-AACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Cy.obliquus7278         --------------------------------------------------
Cy.ochroleucus7639      --------------------------------------------------
Cy.sanguineusRC94       GGAATCTATC-AACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Cy.staadensis7316       CGAATCTAT-CAACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Cy.labiatus7212         --------------------------------------------------
Cy.smithiae7214         --------------------------------------------------
Cy.herreiRC86           --------------------------------------------------
Cy.falcatus7637         GAATGCTATACAACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Eus.darwini             CGAATCTATC-AACAGAAATCCTTGATTTC------TTTGGTTAATGATT
Ge.namaquensiAMV635     CGAATCTATC-AACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Hae.coccineusAMV632     --------------------------------------------------
Hae.crispus7252         CGAATCTATC-AACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Hae.crispus7260         CGAATCTATC-AACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Lap.martinezii          CGAATCTATC-AACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Leu.autumnale           CGAATCTATC-AACAGAAATCTTTGATTTC------TTTGGTTAATTATT
Na.sp.7608              --------------------------------------------------
Pan.canariense          CGAATCTATC-AACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Par.weberbaueri         CGAATCTATC-AACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Ster.lutea              CGAATCTATC-AACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Sc.membranaceus7246     CGAATCTATC-AACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Str.salter7245          CGAATCTATC-AACAGAATTCTTTAATTTC------TTTGGTTAATGATT
Sc.membranaceus7917     --------------------------------------------------
Va.parviflora           CGAATCTATC-AACAGAAATCTTTGATTTC------TTTGGTTAATGATT
Aco.calamus             CAAATGTATC-AAAAGAATTCTTTGAGTAA------TTTGGTTAATGATT
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                        1151                                                1200
Ama.belladonna          -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Br.gregaria7157         --------------------------------------------------
Cro.flava7256           -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Br.radulosanata7629     --------------------------------------------------
Cl.miniataRC14          -CTAA-CCAAAATCG--ATTTGTTGGA-C--ACACCCACAACAA---TTT
Cl.miniata              -CTAA-CCAAAATCG--ATTTGTTGGA-C--ACACCCACAACAA---TTT
Chl.fragrans            -CTAA-CCAAAATCG--ATTTGTTGGG-T--ACACCCACAACAA---TTT
Cr.euchrophyllRC96      -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cr.acauleRC106          -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cr.acaulglaucRC105      -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cr.bulbispermumRC95     -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cr.foetidumRC98         -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cr.graminicola7630      -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cr.buphanoidesRC102     -CTAA-CCAAAATCG--ATTTGGTGGG-C--ACACCCACAACAA---TTT
Cr.acauleRC38           -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cr.carolschmidRC97      -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cr.moorei7921           -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cy.elatus7636           -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cy.mackeniiRC87         -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cy.obliquus7278         --------------------------------------------------
Cy.ochroleucus7639      --------------------------------------------------
Cy.sanguineusRC94       ACTAA-CCAAAATCG--ATTTGGTTGGGC--ACACCCACAACAA--TTTT
Cy.staadensis7316       -CTAA-CCAAAATCCG-ATTTGTTGGG-C--ACACCCACAACAA---TTT
Cy.labiatus7212         --------------------------------------------------
Cy.smithiae7214         --------------------------------------------------
Cy.herreiRC86           --------------------------------------------------
Cy.falcatus7637         -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Eus.darwini             -CTAA-CCAAAATCG--ATTTGTTGGG-T--ACACCCACAACAA---TTT
Ge.namaquensiAMV635     -CTAA-CCAAAATCG--ATTTGTTGAG-C--ACACCCACAACAA---TTT
Hae.coccineusAMV632     --------------------------------------------------
Hae.crispus7252         -CTAA-CCAAAATCG--ATTTGTTGAG-C--ACACCCACAACAA---TTT
Hae.crispus7260         -CTAA-CCAAAATCG--ATTTGTTGAG-C--ACACCCACAACAA---TTT
Lap.martinezii          -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACTCACAACAA---TTT
Leu.autumnale           -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Na.sp.7608              --------------------------------------------------
Pan.canariense          -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Par.weberbaueri         -CTAA-CCAAAATCG--ATTTGTTGGG-T--ACACCCACAACAA---TTT
Ster.lutea              -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Sc.membranaceus7246     -CTAA-CCAAAATCG--ATTTGTTGAG-C--ACACCCACAACAA---TTT
Str.salter7245          -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Sc.membranaceus7917     --------------------------------------------------
Va.parviflora           -CTAA-CCAAAATCG--ATTTGTTGGG-C--ACACCCACAACAA---TTT
Aco.calamus             -CTAA-CCGAAATCG--ATTAGTTCGG-C--AAAA---CAAGAA---TTT
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                        1201                                                1250
Ama.belladonna          TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Br.gregaria7157         --------------------------------------------------
Cro.flava7256           TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Br.radulosanata7629     --------------------------------------------------
Cl.miniataRC14          TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cl.miniata              TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Chl.fragrans            TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cr.euchrophyllRC96      TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cr.acauleRC106          TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cr.acaulglaucRC105      TTTTTATTCTC--GTTTTTATTCTCCAAATGAT--ATCCAGAAAGTTTTT
Cr.bulbispermumRC95     TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cr.foetidumRC98         TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cr.graminicola7630      TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cr.buphanoidesRC102     TTTTTATTCTGC-GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cr.acauleRC38           TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cr.carolschmidRC97      TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cr.moorei7921           TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cy.elatus7636           TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cy.mackeniiRC87         TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cy.obliquus7278         --------------------------------------------------
Cy.ochroleucus7639      --------------------------------------------------
Cy.sanguineusRC94       TTTTTATTACTCGGTTTTTATTCCTCAAATGAT--ATCCAGAAAGTTTTT
Cy.staadensis7316       TTTTTATTCTCC-GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Cy.labiatus7212         --------------------------------------------------
Cy.smithiae7214         --------------------------------------------------
Cy.herreiRC86           --------------------------------------------------
Cy.falcatus7637         TTTTTATTC----GTTTTTATTCCTCAAATGAT--ATC-AGAAAGTTTTT
Eus.darwini             TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTCT
Ge.namaquensiAMV635     TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Hae.coccineusAMV632     --------------------------------------------------
Hae.crispus7252         TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Hae.crispus7260         TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Lap.martinezii          TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Leu.autumnale           TTTTTATTCCC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Na.sp.7608              --------------------------------------------------
Pan.canariense          TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Par.weberbaueri         TTTTTATTTTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Ster.lutea              TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Sc.membranaceus7246     TTTTTATTCCTC-GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Str.salter7245          TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Sc.membranaceus7917     --------------------------------------------------
Va.parviflora           TTTTTATTCTC--GTTTTTATTCTCAAATG-AT--ATC-AGAAAGTTTTT
Aco.calamus             TT---ATT-----AT---------CAAACG-AT--ATT-AGAGGGTTTTT
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                        1251                                                1300
Ama.belladonna          -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTACCTTATTTC
Br.gregaria7157         --------------------------------------------------
Cro.flava7256           -CAATTATTGCAGAAATT-CCATTC-TCGCTGCGATTAGTACCTTATTTC
Br.radulosanata7629     --------------------------------------------------
Cl.miniataRC14          -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTATCTTATTTC
Cl.miniata              -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTATCTTATTTC
Chl.fragrans            -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTATCTTATTTC
Cr.euchrophyllRC96      -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTACCTTATTTC
Cr.acauleRC106          -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTACCTTATTTC
Cr.acaulglaucRC105      GCAATTATTGTAGAAATT-CCCATTCCTCCTGCGATTAGTACCTTATTTC
Cr.bulbispermumRC95     -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTACCTTATTTC
Cr.foetidumRC98         -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTACCTTATTTC
Cr.graminicola7630      -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTACCTTATTTC
Cr.buphanoidesRC102     -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTACCTTATTTC
Cr.acauleRC38           -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTACCTTATTTC
Cr.carolschmidRC97      -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTACCTTATTTC
Cr.moorei7921           -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTACCTTATTTC
Cy.elatus7636           -CAATTATTGTAGAAATT-CCATTTCTCGCTGCGATTAGTATCTTATTTC
Cy.mackeniiRC87         -CCATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTATCTTATTTC
Cy.obliquus7278         --------------------------------------------------
Cy.ochroleucus7639      --------------------------------------------------
Cy.sanguineusRC94       CCCATTATTGTAGAAATTACCATTCCTCGCTGCGATTAGTATCTTATTTC
Cy.staadensis7316       -CCATTATTGTAGAAATTCCCATTC-TCGCTGCGATTAGTATCTTATTTC
Cy.labiatus7212         --------------------------------------------------
Cy.smithiae7214         --------------------------------------------------
Cy.herreiRC86           --------------------------------------------------
Cy.falcatus7637         -CCATTATTGTAGAAATT-CCATTCCTCGCTGCGATTAGTATCCTTTTTC
Eus.darwini             -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTATCTTATTTC
Ge.namaquensiAMV635     -CAATTATTGTAGAAATT-CCATTCCTCGCTGCGGTTAGTATCTTATTTC
Hae.coccineusAMV632     --------------------------------------------------
Hae.crispus7252         -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGGTTAGTATCTTATTTC
Hae.crispus7260         -CAATTATTGTAGAAATT-CCATTCCTCGCTGCGGTTAGTATCTTATTTC
Lap.martinezii          -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTATCTTATTTC
Leu.autumnale           -CTATTATTGTTGAAATT-CCATTC-TCGCTGCGATTAGTATCTTATTTC
Na.sp.7608              --------------------------------------------------
Pan.canariense          -CAATTATTGTAGAAATT-TCATTC-TCGCTGCGATTAGTATCTTATTTC
Par.weberbaueri         -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTATCTTATTTC
Ster.lutea              -CAATTATTGTAGAAATT-TTATTC-TCGCTGCAATTAGTATCTTATTTC
Sc.membranaceus7246     -CAATTATTGTAGAAATTCCATTGCTCCGCTGCGGTTAGTATCTTATTTC
Str.salter7245          -CAATTATTGTAGAAATT-CCATTCCTCGCTGCGATTAGTACCTTATTTC
Sc.membranaceus7917     --------------------------------------------------
Va.parviflora           -CAATTATTGTAGAAATT-CCATTC-TCGCTGCGATTAGTATCTTATTTC
Aco.calamus             -CAGTCATTATGGAAATT-CCATTCTCGATAATATTTTTATCTTCCGTTG
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                        1301                                                1350
Ama.belladonna          -GAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Br.gregaria7157         --------------------------------------------------
Cro.flava7256           -GAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Br.radulosanata7629     --------------------------------------------------
Cl.miniataRC14          -AAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Cl.miniata              -AAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Chl.fragrans            -AAAGAGAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Cr.euchrophyllRC96      -GAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Cr.acauleRC106          -GAAGAAAAAGAAATACCAAAATATC--AT--AATTT--CGAT-CAATTC
Cr.acaulglaucRC105      -GAAGAAAAAGAAATCCCCAAAATATCCAT--AATTTATCGAT-CAATTC
Cr.bulbispermumRC95     -GAAGAAAAAGAAATACCAAAATATCC-AT--AATTT--CGAT-CAATTC
Cr.foetidumRC98         -GAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Cr.graminicola7630      -GAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Cr.buphanoidesRC102     -GAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CCAATT
Cr.acauleRC38           -GAAGAAAAAGAAATACCAAAATATCA-TA--ATTTAG-CGAT-CAATTC
Cr.carolschmidRC97      -GAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Cr.moorei7921           -GAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Cy.elatus7636           -AAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Cy.mackeniiRC87         -AAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Cy.obliquus7278         --------------------------------------------------
Cy.ochroleucus7639      --------------------------------------------------
Cy.sanguineusRC94       CAAAGAAAAAGAAATACCAAAATATGC-AT--ACTCCCCCGATGCAATTC
Cy.staadensis7316       -AAAGAAAAAGAAATACCAAAATATCC-AT--AATCCCCCGGT-CAATTC
Cy.labiatus7212         --------------------------------------------------
Cy.smithiae7214         --------------------------------------------------
Cy.herreiRC86           --------------------------------------------------
Cy.falcatus7637         -AAAGAAAAAGAAATACCAAAATATC--AT--AACCCC-GC-T-CAATTC
Eus.darwini             -AAAGAGAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Ge.namaquensiAMV635     -AAAGAAAAAGAAATACCAAAATATGC-AT--AATTTA-CGATCCAATTC
Hae.coccineusAMV632     --------------------------------------------------
Hae.crispus7252         -AAAGAAAAAGAAAT-CCAAAATATC--AT--AATTTA-CGAT-CAATTC
Hae.crispus7260         -AAAGAAAAAGAAATACCAAAATATGC-AT--AATTTA-CGATCCAATTC
Lap.martinezii          -AAAGAAAAAGAAATACAAAAATATC--AT--AATTTA-CGAT-CAATTC
Leu.autumnale           -AAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Na.sp.7608              --------------------------------------------------
Pan.canariense          -AAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Par.weberbaueri         -AAAGAGAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Ster.lutea              -AAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Sc.membranaceus7246     -AAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Str.salter7245          -GAAGAAAAAGAAATACAAAAATATC--AT--AATTTA-CGATCCAATTC
Sc.membranaceus7917     --------------------------------------------------
Va.parviflora           -AAAGAAAAAGAAATACCAAAATATC--AT--AATTTA-CGAT-CAATTC
Aco.calamus             AAGAAAAAAAAGCAAAAATACCAAAAATTCAGAATTTA-CGAT-CTATTC
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                        1351                                                1400
Ama.belladonna          A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Br.gregaria7157         --------------------------------------------------
Cro.flava7256           CATTCCAATTTTT--CTTTTTTTAGAGGACAAATTATCC---GCATTTAA
Br.radulosanata7629     -----------------C-----------C---TTATCC---GCATTTAA
Cl.miniataRC14          A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cl.miniata              A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Chl.fragrans            A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cr.euchrophyllRC96      A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cr.acauleRC106          A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cr.acaulglaucRC105      A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cr.bulbispermumRC95     A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cr.foetidumRC98         A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cr.graminicola7630      A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cr.buphanoidesRC102     CA-TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cr.acauleRC38           A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cr.carolschmidRC97      A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cr.moorei7921           A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cy.elatus7636           A--TTCAATTTTT--CCCTTTTTAGAGGACAAAT-ATCT---GCATTTAA
Cy.mackeniiRC87         A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATCC---GCATTTAA
Cy.obliquus7278         --------------------------------------------------
Cy.ochroleucus7639      --------------------------------------------------
Cy.sanguineusRC94       A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Cy.staadensis7316       A-CCCCCACTTTT--GCCTTTTGAGAGGGCAAATTATCC---GCATTTAA
Cy.labiatus7212         --------------------------------------------------
Cy.smithiae7214         --------------------------------------------------
Cy.herreiRC86           --------------------------------------------------
Cy.falcatus7637         A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTCTAC---GCATTTAA
Eus.darwini             A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Ge.namaquensiAMV635     A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Hae.coccineusAMV632     --------------------------------------------------
Hae.crispus7252         A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCGTTTAA
Hae.crispus7260         A-TTCCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCGTTTAA
Lap.martinezii          A--TTCAATTTTT--CCCTTTTTAGAGGATAAATTATC----GCATTTAA
Leu.autumnale           A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Na.sp.7608              --------------------------------------------------
Pan.canariense          A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Par.weberbaueri         A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----GCATTTAA
Ster.lutea              A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----ACATTTAA
Sc.membranaceus7246     A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTATC----TCATTTAA
Str.salter7245          CATTCCAATTTTT--CCCTTTTTAGAGGACAAATTATCC---GCATTTAA
Sc.membranaceus7917     --------------------------------------------------
Va.parviflora           A--TTCAATTTTT--CCCTTTTTAGAGGACAAATTCTC----GCATTTAA
Aco.calamus             A--TACAACATTT--CCCTTTTTAGAAGACAAATTATC----ACATTTAA
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                        1401                                                1450
Ama.belladonna          A-TTATATCTC-AGATATAC-TAATACCTTATCCC-ATACATA--TGGAA
Br.gregaria7157         ------------------------------------------------A
Cro.flava7256           A-TTATATCTCCAGATATAC-TAATACCCCATCCCCATACATA--TGGAA
Br.radulosanata7629     AATTATGTCTCCAGATATAC-TAATACCTCCTTCCCATCCATA--TGGAA
Cl.miniataRC14          A-TTATGTCTC-AGATATAC-TAATACCCCATCCC-ATCCATA--TGGAA
Cl.miniata              A-TTATGTCTC-AGATATAC-TAATACCCCATCCC-ATCCATA--TGGAA
Chl.fragrans            A-TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAA
Cr.euchrophyllRC96      A-TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAA
Cr.acauleRC106          A-TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAA
Cr.acaulglaucRC105      A-TTATATCTC-AGATATAC-TAATACCTCATCCCCATACATA--TGGAA
Cr.bulbispermumRC95     A-TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAA
Cr.foetidumRC98         A-TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAA
Cr.graminicola7630      A-TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAA
Cr.buphanoidesRC102     A-TTATAT-TC-AGATATAC-TAATACCTCCATCCCATACATA--TGGAA
Cr.acauleRC38           A-TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAA
Cr.carolschmidRC97      A-TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAA
Cr.moorei7921           A-TTATATCTC-AGATATAC-TAATACCTCATCCC-ATACATA--TGGAA
Cy.elatus7636           A-TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAA
Cy.mackeniiRC87         A-TTATGTCTC-AGATATAC-TAATACCTCCATCCCATCCATA--TGGAA
Cy.obliquus7278         ------------------------------------------------
Cy.ochroleucus7639      ------------------------------------------------
Cy.sanguineusRC94       A-TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAA
Cy.staadensis7316       A-TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAA
Cy.labiatus7212         ------------------------------------------------
Cy.smithiae7214         ------------------------------------------------
Cy.herreiRC86           ------------------------------------------------
Cy.falcatus7637         A-TTAT-TCTC-AG-TATA----------------------------
Eus.darwini             A-TTATGTCTC-AGATATGC-TAATACCTCATCCT-ATCCATA--TGGAA
Ge.namaquensiAMV635     A-TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAA
Hae.coccineusAMV632     ------------------------------------------------
Hae.crispus7252         A-TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAA
Hae.crispus7260         A-TTATGTCTC-AGATATAC-TAATACCTCATCCCCATCCATA--TGGAA
Lap.martinezii          A-TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAA
Leu.autumnale           A-TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAA
Na.sp.7608              ------------------------------------------------
Pan.canariense          A-TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAA
Par.weberbaueri         A-TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAA
Ster.lutea              A-TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCACA--TGGAA
Sc.membranaceus7246     A-TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAA
Str.salter7245          A-TTATATCTC-AGATATAACTAATACCTCATCCCATAACATA--TGGAA
Sc.membranaceus7917     ------------------------------------------------
Va.parviflora           A-TTATGTCTC-AGATATAC-TAATACCTCATCCC-ATCCATA--TGGAA
Aco.calamus             A-TCATGTATC-AGATATAT-TAATACCCTATCCC-ATCCATC--TCGAA
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                        1451                                                1500
Ama.belladonna          ATCTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC
Br.gregaria7157         ATCTT-------------CT-----------GG-T-C-A---GA-GT-A-
Cro.flava7256           ATCTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC
Br.radulosanata7629     ATCTTGG---TTCAAATTTCTTCCAATGC-TGGGTTCCA--AGATGTTCC
Cl.miniataRC14          ATCTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC
Cl.miniata              ATCTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC
Chl.fragrans            ATCTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC
Cr.euchrophyllRC96      ATCTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC
Cr.acauleRC106          ATCTTGG---TTCAAATTCTT--CAATGT-TGGATTCCA--AGATGTTCC
Cr.acaulglaucRC105      ATCTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC
Cr.bulbispermumRC95     ATCTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGAGGTTCC
Cr.foetidumRC98         ATCTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC
Cr.graminicola7630      ATCTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC
Cr.buphanoidesRC102     ATCCTTGG--TTCAAATTCTT--CAATGTTTGGATTTCA--AGATGTTCC
Cr.acauleRC38           ATCTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC
Cr.carolschmidRC97      ATCTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC
Cr.moorei7921           ATCTTGG---TTCAAATTCTT--CAATGT-TGGATTC-A--AGATGTTCC
Cy.elatus7636           -TCTTGG---TTCAAATTCTT--CAATGC-TGGAT-C-A--AGATGTTCC
Cy.mackeniiRC87         ATCTTGGT--TCCAAATTCTT-CCAATGC-TGGATCC-A--AGATGT-CC
Cy.obliquus7278         --------------------------------------------------
Cy.ochroleucus7639      ------------CAA-T-CTT--C--TCC-TGGA--C-A---GA-G--CA
Cy.sanguineusRC94       ATCTTGG---TTCAAATTCTT-CCAATGC-TGGATTCCA--AGATGTTCC
Cy.staadensis7316       ATCTTGG---TTCA----C-----AAT------AT-C-------TG----
Cy.labiatus7212         --------------------------------------------------
Cy.smithiae7214         --------------------------------------------------
Cy.herreiRC86           --------------AATTCTT--CAATGC-TGGATTC-A--AGATGTTCC
Cy.falcatus7637         --------------------------------------------------
Eus.darwini             ATCTTGG---TTAAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC
Ge.namaquensiAMV635     ATCTTGG---TTGCAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC
Hae.coccineusAMV632     ------------------------------------------TT--
Hae.crispus7252         ATCTTGG---TTCAAATTCCTTCCAATGC-TGGATTCCA--AGATGTTCT
Hae.crispus7260         ATGCTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCT
Lap.martinezii          ATCTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC
Leu.autumnale           ATCTTGG---TTCAAATTCTT--CAATGC-TGGATCC-A--AGATGTTCC
Na.sp.7608              -----------T--AATTCT---C-AGGC--GGATTC-C---GA-GTTCC
Pan.canariense          ATCTTGGG---TCAAATTCTT--CAATGC-TGGATGC-A--AGATGTTCC
Par.weberbaueri         ATCTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC
Ster.lutea              ATCTTGG----TCAAATTCTT--CAATGC-TGGATCC-A--AGATGTTCC
Sc.membranaceus7246     ATCTTGG---TTCAAATTCTT--CAATGC-CGGATTC-A--AGATGTTCC
Str.salter7245          ATCTTGG---TTCAAATTCTT--GCA--C-T--ATT--A---GAT-T-C-
Sc.membranaceus7917     --C---------CAAA-------GAA-------ATTC-AA-AGAT-T-C-
Va.parviflora           ATCTTGG---TTCAAATTCTT--CAATGC-TGGATTC-A--AGATGTTCC
Aco.calamus             ATCCTGG---TTCAAGTTCTT--CAAGGC-TGGATAC-A--AGATGTTCC
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                        1501                                                1550
Ama.belladonna          --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Br.gregaria7157         --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cro.flava7256           --CCTTTTTGCCATT-TATT--GCGATTCCTTTCTTC-ACGAATATC--A
Br.radulosanata7629     --TTTTTTG--CATT-TATT--GCGATTC-TTTCTTCCACGAATATC--A
Cl.miniataRC14          --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cl.miniata              --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Chl.fragrans            --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cr.euchrophyllRC96      --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cr.acauleRC106          --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cr.acaulglaucRC105      --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cr.bulbispermumRC95     --CTTTTTG--CATT-TATT--GCGAATTCTTTCTTC-ACGAATATC--A
Cr.foetidumRC98         --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cr.graminicola7630      --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cr.buphanoidesRC102     --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cr.acauleRC38           --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cr.carolschmidRC97      --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cr.moorei7921           --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cy.elatus7636           --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTCCACGAATATC--A
Cy.mackeniiRC87         ---TTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cy.obliquus7278         -------------------------------------------------
Cy.ochroleucus7639      --CCTTAAG--CATT-TCTT--GCGATTC-TTTCTTC-ACGAATAAC--A
Cy.sanguineusRC94       --CTTTTTG--CAT--TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cy.staadensis7316       -----------CA----AT---GC-------------------------
Cy.labiatus7212         ---------------------------------------------ATC--A
Cy.smithiae7214         -------------------------------------------------
Cy.herreiRC86           --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Cy.falcatus7637         -------------------------------------------------
Eus.darwini             --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Ge.namaquensiAMV635     --TTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATCTC--A
Hae.coccineusAMV632     ---TTTTTG--CATT-TATT--GCGCATTCTTTCTTC-ACGAATCTC--A
Hae.crispus7252         --TTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATCTC--A
Hae.crispus7260         --TTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATCTC--A
Lap.martinezii          --CCTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Leu.autumnale           --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Na.sp.7608              --CTTTTTG--C-TT-TATT--TCGAT-C-TGTCTTC-ACGAATATC--A
Pan.canariense          ---TTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Par.weberbaueri         --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Ster.lutea              --CTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATATC--A
Sc.membranaceus7246     --TTTTTTG--CATT-TATT--GCGATTC-TTTCTTC-ACGAATCTC--A
Str.salter7245          -----------A----------CGAT----------------ATC--A
Sc.membranaceus7917     --TTTTTTG--CATT-TATT--GCGATTC-TTTCTTCACGGAATCTC--A
Va.parviflora           --CTTTTTG--CATT--ATT--GCGATTC-TTTCTTC-ACGAATATC--A
Aco.calamus             --GTCTTTA--CATT-TATT--GCGATTC-TTTCTCC-ATGAGTTTC--A
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                          1551                                                1600
Ama.belladonna            TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Br.gregaria7157           TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cro.flava7256             TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Br.radulosanata7629       TAATTGGAATAG--T-CTTCTCATTATCTCAGAAGA--AATCC-ATTTAG
Cl.miniataRC14            TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cl.miniata                TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Chl.fragrans              TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTT-
Cr.euchrophyllRC96        TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cr.acauleRC106            TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cr.acaulglaucRC105        TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cr.bulbispermumRC95       TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cr.foetidumRC98           TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cr.graminicola7630        TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cr.buphanoidesRC102       TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cr.acauleRC38             TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cr.carolschmidRC97        TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cr.moorei7921             TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cy.elatus7636             TAATTGGAATAG--TCTTCCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cy.mackeniiRC87           TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cy.obliquus7278           ------------------------------------------------
Cy.ochroleucus7639        TAATTGGTATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC--TTTA-
Cy.sanguineusRC94         TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cy.staadensis7316         ----TGG-ATAGA-G-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cy.labiatus7212           TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cy.smithiae7214           TAA--G---TGC--TTGCTC-CATTCCTCCAGAAGAA-ATTCCCATTTTA
Cy.herreiRC86             TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Cy.falcatus7637           ------------------------------------------------
Eus.darwini               TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTT-
Ge.namaquensiAMV635       TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Hae.coccineusAMV632       TAATTGGAATAG--T-CTTCTCATTA-CTCATAAGA--AATCC-ATTTA-
Hae.crispus7252           TAATTGGAATAG--T-CTTCTCATTA-CTCATAAGA--AATCC-ATTTA-
Hae.crispus7260           TAATTGGAATAG--T-CTTCTCATTA-CTCATAAGA--AATCC-ATTTA-
Lap.martinezii            TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTT-
Leu.autumnale             TAATTGGAATAG--T-TTTCTCATTA-CTCAAAAAA--AATCC-ATTTT-
Na.sp.7608                TAATTGGAATAG--T-CTTCTCATTA-CTCAGAATA--AATCC-ATTTT-
Pan.canariense            TAATTGGAATAG--T-CTTCTCATTC-CTCAGAAGA--AATCC-ATTT--
Par.weberbaueri           TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTT-
Ster.lutea                TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AACCC-ATTT--
Sc.membranaceus7246       TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Str.salter7245            TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Sc.membranaceus7917       TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCC-ATTTA-
Va.parviflora             TAATTGGAATAG--T-CTTCTCATTA-CTCAGAAGA--AATCT-ATTTT-
Aco.calamus               TAATTGGAATAG--T-CT---CATTA-CTCCAAAGA--AATCC-ATTTCT
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                        1601                                              1650
Ama.belladonna          CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Br.gregaria7157         CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cro.flava7256           CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Br.radulosanata7629     CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTCTGGTTC-CCTA
Cl.miniataRC14          CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cl.miniata              CGTTTTTTC----AAAAGAAAATAA--AAG-ACTCTTTC--GGTT-CCTA
Chl.fragrans            CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cr.euchrophyllRC96      CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cr.acauleRC106          CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cr.acaulglaucRC105      CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cr.bulbispermumRC95     CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cr.foetidumRC98         CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cr.graminicola7630      CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cr.buphanoidesRC102     CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cr.acauleRC38           CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cr.carolschmidRC97      CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cr.moorei7921           CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cy.elatus7636           CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cy.mackeniiRC87         CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cy.obliquus7278         ------------------------------------------------
Cy.ochroleucus7639      CGTTTTTTC---AAAAGGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cy.sanguineusRC94       CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cy.staadensis7316       CGTTTTTTC----AAAAGAAAATAA--AAG-GCTATTTC--GGTT-CCTA
Cy.labiatus7212         CGTTTTTTC----AAAAGAAAATAA--AAGACTGATTTC--GGTT-CCTA
Cy.smithiae7214         CGTTTTATT--CAAAAAGAAAATTA--AAAGACTATTTGC-GGTTCCCTA
Cy.herreiRC86           CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Cy.falcatus7637         ------------------------------------------------
Eus.darwini             CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Ge.namaquensiAMV635     CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Hae.coccineusAMV632     CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Hae.crispus7252         CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Hae.crispus7260         CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Lap.martinezii          CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Leu.autumnale           CATTTTTTC----AAAAGAAAATAA--AAG-ACTATTCG--GGTT-CATA
Na.sp.7608              CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTGC--GGTT-CCTA
Pan.canariense          CGGTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Par.weberbaueri         CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Ster.lutea              CTTTTTTTC----AAAAGAAAATAA--AAA-ACGATTTC--GGTT-CATA
Sc.membranaceus7246     CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Str.salter7245          CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Sc.membranaceus7917     CGTTTTTTC----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Va.parviflora           CGTTTTT-C----AAAAGAAAATAA--AAG-ACTATTTC--GGTT-CCTA
Aco.calamus             TTTCTTTTTTC--AAAAGGGAATCA--AAG-ACTCTTCTT--GTT-CTTA
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                        1651                                                1700
Ama.belladonna          TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Br.gregaria7157         TAC---AATTTTTATG-TATTTGAATGTGCAATTTT---TATT-TGTTTT
Cro.flava7256           TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Br.radulosanata7629     TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Cl.miniataRC14          TAC---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Cl.miniata              TAC---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Chl.fragrans            TAC---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Cr.euchrophyllRC96      TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Cr.acauleRC106          TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Cr.acaulglaucRC105      TAC---AATTTTTATG-TATTTGAATG--GAATTTT---TATT-TGTTTT
Cr.bulbispermumRC95     TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Cr.foetidumRC98         TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Cr.graminicola7630      TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Cr.buphanoidesRC102     TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Cr.acauleRC38           TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Cr.carolschmidRC97      TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Cr.moorei7921           TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Cy.elatus7636           TAC---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Cy.mackeniiRC87         TAC---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Cy.obliquus7278         ------------------------------------------------
Cy.ochroleucus7639      TAC----ATTTTTATG-TGTTTGAATGTGCAATTTT---TATT-TGTTTT
Cy.sanguineusRC94       TAC---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Cy.staadensis7316       TAC---AATTTTTATG-TGTTTGAATG--GAATTTT---TATT--GTTTT
Cy.labiatus7212         TAC---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Cy.smithiae7214         TGAC--AATTTTTATGGTGTTTGAATG-TGAATTAT--TTATTGTGTTTT
Cy.herreiRC86           TAC---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Cy.falcatus7637         ------------------------------------------------
Eus.darwini             TAC---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Ge.namaquensiAMV635     TAC---AATTTTTATG-TGTTTGAGTG-TGAATTTT---TATT-TGTTTT
Hae.coccineusAMV632     TAC---AATTTTTATG-TGTTTGAGTG-TGAATTTT---TATT-TGTTTT
Hae.crispus7252         TAC---AATTTTTATG-TGTTTGAGTG-TGAATTTT---TATT-TGTTTT
Hae.crispus7260         TAC---AATTTTTATG-TGTTTGAGTG-TGAATTTT---TATT-TGTTTT
Lap.martinezii          TAC---AATTTTTATG-TGTTTGGAATGTGAATTTG---TATT-TGGTTT
Leu.autumnale           TAC---AATTTTTATG-TGGTTGAATG-TGAATTTT----ATT-TCTTTT
Na.sp.7608              TAC---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Pan.canariense          TAC---AA-TTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Par.weberbaueri         TAC---AATTTTTATG-TGTTTGAATG-TGAATTTG---TATT-TGTTTT
Ster.lutea              TAC---AATTTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Sc.membranaceus7246     TAC---AATTTTTATG-TGTTTGAGTG-TGAATTTT---TATT-TGTTTT
Str.salter7245          TAC---AATTTTTATG-TATTTGAATG-TGAATTTT---TATT-TGTTTT
Sc.membranaceus7917     TAC---AATTTTTATG-TGTTTGAGTG-TGAATTTT---TATT-TGTTTT
Va.parviflora           TAC---AA-TTTTATG-TGTTTGAATG-TGAATTTT---TATT-TGTTTT
Aco.calamus             TAT---AATTCTTATG-TATTTGAGTG-TGAATCCG---CATT-AGTCTT
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                        1701                                                1750
Ama.belladonna          -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Br.gregaria7157         -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cro.flava7256           -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Br.radulosanata7629     -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cl.miniataRC14          -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cl.miniata              -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Chl.fragrans            -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Cr.euchrophyllRC96      -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cr.acauleRC106          -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cr.acaulglaucRC105      -TATTCGATAAACAAT---CTTCTTATTTACGATT---AACAT-CTTGTT
Cr.bulbispermumRC95     -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cr.foetidumRC98         -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cr.graminicola7630      -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cr.buphanoidesRC102     -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cr.acauleRC38           -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cr.carolschmidRC97      -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cr.moorei7921           -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Cy.elatus7636           -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Cy.mackeniiRC87         -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Cy.obliquus7278         ----------------------TATTTGGGATT---AACAT-CTT-TT
Cy.ochroleucus7639      -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACCT-CTTTTG
Cy.sanguineusRC94       -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Cy.staadensis7316       --ATTCG-TAAACAAT--CCTCTCTATTTACGATT---AACAT-CTT--T
Cy.labiatus7212         -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Cy.smithiae7214         TAATTGGTAAGACAAT-GCATATTTATTTACGATT--AAACATGCTTGTT
Cy.herreiRC86           -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Cy.falcatus7637         ------------CAAT---CCTCTTATTT-CGATT---AACAT-CTT-TT
Eus.darwini             -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Ge.namaquensiAMV635     -TATTCG-TAAACAAG---CCTCTTATTTACGATT---AACAT-CTT-TT
Hae.coccineusAMV632     -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Hae.crispus7252         -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Hae.crispus7260         -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Lap.martinezii          -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Leu.autumnale           -TATTCG-TAAACAAT---CCTCTTATTTACGAT----AACAT-CTT-TT
Na.sp.7608              -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Pan.canariense          -AATTCG-TAA-CAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Par.weberbaueri         -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AAAAT-CTT-TT
Ster.lutea              -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Sc.membranaceus7246     -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Str.salter7245          -TATTCG-TAAACAAT---CTTCTTATTTACGATT---AACAT-CTT-TT
Sc.membranaceus7917     -TATTCG-TAAACAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Va.parviflora           -TATTCG-TAACCAAT---CCTCTTATTTACGATT---AACAT-CTT-TT
Aco.calamus             -TCTCCG-TAAACAAT---CCTTTTATTTACGATC---AACAT-CTT-TT
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                         1751                                                1800
Ama.belladonna           GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Br.gregaria7157          GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cro.flava7256            GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Br.radulosanata7629      GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cl.miniataRC14           GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cl.miniata               GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Chl.fragrans             GGAACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGA
Cr.euchrophyllRC96       GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cr.acauleRC106           GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cr.acaulglaucRC105       GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cr.bulbispermumRC95      GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cr.foetidumRC98          GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cr.graminicola7630       GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cr.buphanoidesRC102      GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cr.acauleRC38            GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cr.carolschmidRC97       GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cr.moorei7921            GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cy.elatus7636            GGAACTT----TTGCTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cy.mackeniiRC87          GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cy.obliquus7278          GGAACTT----TT--TTGAGCG--AGGACATTTTCTATGG-AAAAATAGA
Cy.ochroleucus7639       GGAACTT----TT-CTTGAGCGT-AACACATTT-CTATCG-AAAAATAGG
Cy.sanguineusRC94        GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cy.staadensis7316        GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cy.labiatus7212          GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cy.smithiae7214          GGATCTT----TTTCTTGGAGCG-AACACATTTTCTATGG-AAAAATAGA
Cy.herreiRC86            GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Cy.falcatus7637          GGAACTT----TT--TTGAGCG--AACACATTTCCTATGG-AAAAATAGA
Eus.darwini              GGAACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGA
Ge.namaquensiAMV635      GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Hae.coccineusAMV632      GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Hae.crispus7252          GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Hae.crispus7260          GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Lap.martinezii           GGAACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGA
Leu.autumnale            GGAACTC----TT-CTTGAACG--AACACATT--CTATGG--AAAATAGA
Na.sp.7608               GGAACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGA
Pan.canariense           GGAACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATGGA
Par.weberbaueri          GGAACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGA
Ster.lutea               GGAACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGA
Sc.membranaceus7246      GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Str.salter7245           GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Sc.membranaceus7917      GGAACTT----TT-CTTGAGCG--AACACATTT-CTATGG-AAAAATAGA
Va.parviflora            GGAACTT----TT-CTTGAACG--AACACATTT-CTATGG-AAAAATAGA
Aco.calamus              GGAACCT----TT-GTTGAGCG--AACACATTT-CTATGT-AAAAATAGA
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                        1801                                                1850
Ama.belladonna          A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Br.gregaria7157         A--CAT-CTTCAAATAG--AAAATTTTATAATA-ATATGTC------GTA
Cro.flava7256           A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Br.radulosanata7629     A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Cl.miniataRC14          A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Cl.miniata              A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Chl.fragrans            A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Cr.euchrophyllRC96      A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Cr.acauleRC106          A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Cr.acaulglaucRC105      A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Cr.bulbispermumRC95     A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Cr.foetidumRC98         A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Cr.graminicola7630      A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Cr.buphanoidesRC102     A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Cr.acauleRC38           A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Cr.carolschmidRC97      A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Cr.moorei7921           A--CAT-CTTCAAATAG--AAAATTTTATAGTA-ATATGTC------GTA
Cy.elatus7636           A--CAT-CTTAAAATAG--AAAAATTTATAGTA-ATATGTCC-----GTA
Cy.mackeniiRC87         A--CAT-CTTAAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Cy.obliquus7278         A--C-TTCTTAAAATAG-AAAAATTGTATAGTA-ATAAGGC------GTA
Cy.ochroleucus7639      AACCAT-CTTAAAATAA---AAAATTTATAGCA-ATATGTC------GTA
Cy.sanguineusRC94       A--CAT-CTTAAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Cy.staadensis7316       A--CAT-CTTAAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Cy.labiatus7212         A--CAT-CTTAAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Cy.smithiae7214         A--CATGCTTAAAATAGG-AAAAATTTATAATA-ATATGTCC----GCTA
Cy.herreiRC86           A--CAT-CTTAAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Cy.falcatus7637         A--CATGCTTTAAATAG-AAAAATTTGATAGTA-ATA-CTC--------A
Eus.darwini             A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Ge.namaquensiAMV635     A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTCG-----CTA
Hae.coccineusAMV632     A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Hae.crispus7252         A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Hae.crispus7260         A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Lap.martinezii          A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATTTGTC------G-A
Leu.autumnale           ---CAT-CTTCAA-TAG---AAAATTTATAGTA-ATT-GTC------GTA
Na.sp.7608              A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATTTGTC------GTA
Pan.canariense          A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATTTGCT------GGA
Par.weberbaueri         A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Ster.lutea              A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATTTGTC------GTA
Sc.membranaceus7246     A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GTA
Str.salter7245          A--CAT-CTTAAAATAG--GAAATTTTATAGTA-ATATGTC------GTA
Sc.membranaceus7917     A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATATGTC------GCC
Va.parviflora           A--CAT-CTTCAAATAG--AAAAATTTATAGTA-ATTTGTC------GTA
Aco.calamus             G--CAT----------------A--TTGTAGTA-GTGCGTA------GGA
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                        1851                                                1900
Ama.belladonna          AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Br.gregaria7157         AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cro.flava7256           AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Br.radulosanata7629     AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTTT-C
Cl.miniataRC14          AC--AATTTTCATAG--GACCTTATGGTT-CTT-CAA-GGATCCTTT--T
Cl.miniata              AC--AATTTTCATAG--GACCTTATGGTT-CTT-CAA-GGATCCTTT--T
Chl.fragrans            AC--GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--C
Cr.euchrophyllRC96      AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cr.acauleRC106          AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cr.acaulglaucRC105      ACC-GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cr.bulbispermumRC95     AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-GGATCCTTT--C
Cr.foetidumRC98         AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cr.graminicola7630      AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cr.buphanoidesRC102     AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cr.acauleRC38           AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cr.carolschmidRC97      AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cr.moorei7921           AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cy.elatus7636           AC--GATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cy.mackeniiRC87         AC--GATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cy.obliquus7278         GC--GATTTTGATACG-TTCCTCATGGCT-CTTACAGAGGA---------
Cy.ochroleucus7639      ACG-GATTTTCATAG--GACCTTATGGATTCTT-CAA-AGATCCTTTC-C
Cy.sanguineusRC94       AC--GATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cy.staadensis7316       ACC-GATTTTCATAG--GACCTTATGGTG-CTT-CAA-AGATCCTTTA-C
Cy.labiatus7212         AC--GATTTTCACTAG-GACCTTATGGTTTCTT-CAA-AGATCCTTT--C
Cy.smithiae7214         AC-GAATTTTACATAG-GACCTTATGGTTGCTTTCAAGAGATACCTTTGC
Cy.herreiRC86           AC--GATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Cy.falcatus7637         AC--GATTTTCATAG--GACCTTATGGTT-CTTACAA-AATACCTTT--C
Eus.darwini             AC--GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--C
Ge.namaquensiAMV635     AC--AATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--T
Hae.coccineusAMV632     AC--AATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--T
Hae.crispus7252         AC--AATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--T
Hae.crispus7260         AC--AATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--T
Lap.martinezii          AC--GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--C
Leu.autumnale           AC--GATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Na.sp.7608              AC--GATTTTCATAGG-GACCTTCTGGTT-CTT-CAA-AGATCCTTT--C
Pan.canariense          AC--GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--C
Par.weberbaueri         AC--GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--C
Ster.lutea              AC--GATTTTCATAG--GACCCTCTGGTT-CTT-CAA-AGATCCTTT--C
Sc.membranaceus7246     AC--AATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--T
Str.salter7245          AC--GATTTTCATAG--AACCTTATGGTT-CTT-CAA-AGATCCTTT--C
Sc.membranaceus7917     AC--AATTTTCATAG--GACCTTATGGTT-CTT-CAA-AGATCCTTT--T
Va.parviflora           AC--GATTTTCATAG--GACCTTCTGGTT-CTT-CAA-AGATCCTTT--C
Aco.calamus             AT--AATTTTCAAAA--GGCCTTATCTTT-GTT-CAA-AGATCCTTT--C
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                        1901                                                1950
Ama.belladonna          ATG--CATTATGTT-CGATAT-CGAGGA-AAAGCAAT----TCTTG----
Br.gregaria7157         ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Cro.flava7256           ATG--CATTATGTT-CGATAT-CGGGGA-AAAGTAAT----TCTTG----
Br.radulosanata7629     ATGA-CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Cl.miniataRC14          ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Cl.miniata              ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Chl.fragrans            ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Cr.euchrophyllRC96      ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Cr.acauleRC106          ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Cr.acaulglaucRC105      ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Cr.bulbispermumRC95     ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Cr.foetidumRC98         ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Cr.graminicola7630      ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Cr.buphanoidesRC102     ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Cr.acauleRC38           ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Cr.carolschmidRC97      ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Cr.moorei7921           ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Cy.elatus7636           ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Cy.mackeniiRC87         ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Cy.obliquus7278         ------------------------------------------------
Cy.ochroleucus7639      ATGG-CATTATGTT-CGATAT-CAAGGGCAATACAGTCAAGTCTTG----
Cy.sanguineusRC94       ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Cy.staadensis7316       ATG--CATTATGTT-CGATAT-CAAGGA-AAACGCAAT---TCTTG----
Cy.labiatus7212         ATCG-CATTATGTC--GATAT-CAAGGA-AAAGCAATT--CTTGCG----
Cy.smithiae7214         ATG--CATTATGTTGCGATAT-CAAGGA-AAAGCAAT--TCCCTAG----
Cy.herreiRC86           ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Cy.falcatus7637         ATG--CAT-ATGTT--GAT-T-CAAGGA-AAAGCAAT----TCTTG----
Eus.darwini             ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Ge.namaquensiAMV635     ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Hae.coccineusAMV632     ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Hae.crispus7252         ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Hae.crispus7260         ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Lap.martinezii          ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Leu.autumnale           ATG--CATTATGTT-CGACAT-CAAGGA-AAAGCCAT----TCTTG----
Na.sp.7608              ATG--CATTATGTT-CGATAT-CA-GGA-AAAGCAAT----TCTTG----
Pan.canariense          ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TGTTG----
Par.weberbaueri         ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Ster.lutea              ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Sc.membranaceus7246     ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Str.salter7245          ATG--CATTATGTT-CGATAT-CGGGGA-AAAGCAAT----TCTTG----
Sc.membranaceus7917     ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCT-G----
Va.parviflora           ATG--CATTATGTT-CGATAT-CAAGGA-AAAGCAAT----TCTTG----
Aco.calamus             ATC--CATTATATC-CGATAT-AAAGGA-AAATCAAT----TCTGG----
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                        1951                                                2000
Ama.belladonna          -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Br.gregaria7157         -TTTCAA--GGG---ACTCATCTTCTG-ATGAAGAAAA-TGG-AAAT---
Cro.flava7256           -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Br.radulosanata7629     -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAAA-TGGTAAAT---
Cl.miniataRC14          -CTTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT---
Cl.miniata              -CTTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT---
Chl.fragrans            -CTTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT---
Cr.euchrophyllRC96      -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Cr.acauleRC106          -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Cr.acaulglaucRC105      -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Cr.bulbispermumRC95     -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Cr.foetidumRC98         -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Cr.graminicola7630      -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Cr.buphanoidesRC102     -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Cr.acauleRC38           -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGGAAAAT---
Cr.carolschmidRC97      -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Cr.moorei7921           -TTTCAAAGGGG---ACTCATCTTCTG-ATGAAGAAA--TGG-AAAT---
Cy.elatus7636           -CTTCAAAGGGG---ACTCGTCTTCTG-ATGACGAAA--TGG-AAAT---
Cy.mackeniiRC87         -CTTCAAAGGGG---ACTCGTCTTCTG-ATGACGAAA--TGG-AAAT---
Cy.obliquus7278         ------------------------------------------------
Cy.ochroleucus7639      -CTTCAAA--GGA--ACTCGTCTTCTG-ATGACGAAA--TGGCAAAT---
Cy.sanguineusRC94       -CTTCAAAGGGG---ACTCGTCTTCTGTATGACGAAA--TGGGAAAT---
Cy.staadensis7316       -CTTCAAAGGGG---ACTCGTCTTCTG-CTGACGAAAA-TGAGAAAT---
Cy.labiatus7212         -GTTCAAAGGGGGG-ACTCGTCTTCTGAATGACGAAAA-TGGGAAAT---
Cy.smithiae7214         -CTTACATGGGG---ACTCGTCTTCTG-ATGACGAAA--TGG-AAAT---
Cy.herreiRC86           -CTTCAAAGGGG---ACTCGTCTTCTG-ATGACGAAA--TGGGAAAT---
Cy.falcatus7637         -CTTCAAAGGGG---ACTCGTCTT-TG-ATGACGAAA--TGG-AAAT---
Eus.darwini             -CTTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT---
Ge.namaquensiAMV635     -CTTCAAAGGGG---ACTCATCTTCTGATGCACGAAA--TGGTAAAT---
Hae.coccineusAMV632     -CTTCAAGGGGG---ACTCATCTTCTGATGGACGAAA--TGGGAAAT---
Hae.crispus7252         -CTTCAAGGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT---
Hae.crispus7260         -CTTCAAGGGGG---ACTGCATCTTCTGATGTACGAA--TGG--AAT---
Lap.martinezii          -CTTCAAAGGGG---ACTAATCTTCTG-ATGACGAAA--TGG-AAAT---
Leu.autumnale           -CTTCAAAAGGG---ACTCATCTTTTG-ATGACGAAA--TGG-AAAT---
Na.sp.7608              -CTTCAAAGGGT---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT---
Pan.canariense          -GTTCAAAGGGT---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT---
Par.weberbaueri         -CTTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT---
Ster.lutea              -CTTCAAAGGGT---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT---
Sc.membranaceus7246     -CTTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT---
Str.salter7245          -TTTCAAAGGGG---ACTTATCTTCTG-ATGAAGAAA--TGG-AAAT---
Sc.membranaceus7917     -CTTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT---
Va.parviflora           -CTTCAAAGGGG---ACTCATCTTCTG-ATGACGAAA--TGG-AAAT---
Aco.calamus             -CTTCAAAGGGG---ACTGATTTTCTG-ATGAAGAAA--TGG-AAAT---
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                        2001                                                2050
Ama.belladonna          --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TCATT
Br.gregaria7157         --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cro.flava7256           --ATCAT----TTTG---TCAATTTCTGGCAG-ATA---------TTATT
Br.radulosanata7629     --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cl.miniataRC14          --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cl.miniata              --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Chl.fragrans            --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cr.euchrophyllRC96      --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cr.acauleRC106          --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cr.acaulglaucRC105      --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cr.bulbispermumRC95     --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cr.foetidumRC98         --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cr.graminicola7630      --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cr.buphanoidesRC102     --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cr.acauleRC38           --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cr.carolschmidRC97      --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cr.moorei7921           --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cy.elatus7636           --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cy.mackeniiRC87         --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cy.obliquus7278         ------------------------------------------------
Cy.ochroleucus7639      --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cy.sanguineusRC94       --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cy.staadensis7316       --ATCAT----TTTG----CAATTTCTGGCA--ATA---------TTATT
Cy.labiatus7212         --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cy.smithiae7214         --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cy.herreiRC86           --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Cy.falcatus7637         --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Eus.darwini             --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Ge.namaquensiAMV635     --ATCAT----TTTG----CAATTTCTGGCCA-ATA---------TTATT
Hae.coccineusAMV632     --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Hae.crispus7252         --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Hae.crispus7260         --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Lap.martinezii          --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Leu.autumnale           --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Na.sp.7608              --ATCAT----TTTG---TCAATTTATGGCA--ATA---------TTATT
Pan.canariense          --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Par.weberbaueri         --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Ster.lutea              --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Sc.membranaceus7246     --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Str.salter7245          --ATCAT-----TTG---TCAA-TTCTGGCA--ATA---------TAATT
Sc.membranaceus7917     --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Va.parviflora           --ATCAT----TTTG---TCAATTTCTGGCA--ATA---------TTATT
Aco.calamus             --ATCAC----CNTC---TAAATTTCTGGCA--ATG---------TCATT
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                        2051                                                2100
Ama.belladonna          TT----AACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Br.gregaria7157         TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cro.flava7256           TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Br.radulosanata7629     TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cl.miniataRC14          TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATAA
Cl.miniata              TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATAA
Chl.fragrans            TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cr.euchrophyllRC96      TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cr.acauleRC106          TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cr.acaulglaucRC105      TT----CACTTTTGG--TCTCAACC-GTTACAG-GA-TCCATATAAATCA
Cr.bulbispermumRC95     TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cr.foetidumRC98         TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cr.graminicola7630      TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cr.buphanoidesRC102     TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cr.acauleRC38           TT----CACTTTTGG--TCTCAACC-GTTACAG-GA-TCCATATAAATCA
Cr.carolschmidRC97      TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cr.moorei7921           TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cy.elatus7636           TT----CACTTTTGG--TCTCAACC-GTTACAG-GA-TCCATATAAATCA
Cy.mackeniiRC87         TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cy.obliquus7278         ------------------------------------------------
Cy.ochroleucus7639      TT----CACTTTTGG--TCTCAACC-GT-ACAGGGA-TCCATATAAATCA
Cy.sanguineusRC94       TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cy.staadensis7316       TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCC-TATAAATCA
Cy.labiatus7212         TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cy.smithiae7214         TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Cy.herreiRC86           TT----CACTTTTGG---------------------------------
Cy.falcatus7637         TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Eus.darwini             TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCC
Ge.namaquensiAMV635     TT----CGCTTTTGG--TCTCAACC-GT-ACAG-GA-CCCATATAAATCA
Hae.coccineusAMV632     TT----CACTTTTGG--TCTCAACC-GT-ACAGGGA-TCCATATAAATCA
Hae.crispus7252         TT----CACTTTTGG--TCTCAACC-GT-GCAG-GA-TCCATATAAATCA
Hae.crispus7260         TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Lap.martinezii          TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCC
Leu.autumnale           TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Na.sp.7608              TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Pan.canariense          TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Par.weberbaueri         TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TTCATATAAATCA
Ster.lutea              TT----AACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCGTATAAATCA
Sc.membranaceus7246     TT----AACTTTTGG--TCTCAACC-GT-ACAG-GA-CCCATATAAATCA
Str.salter7245          TT----CACTTTTGG--TCTCAACCGGT-ACAG-GA-TCCATATAAATCA
Sc.membranaceus7917     TT----CACTTTTGG--TCTCAACC-G--ACAG-GA-CTCATATAAATCA
Va.parviflora           TT----CACTTTTGG--TCTCAACC-GT-ACAG-GA-TCCATATAAATCA
Aco.calamus             TT----CACTTTTGG--TCTCAACC-GC-ATAG-GA-TTCATATAAACCG
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                        2101                                                2150
Ama.belladonna          A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Br.gregaria7157         A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cro.flava7256           A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Br.radulosanata7629     A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cl.miniataRC14          A-TTCTC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cl.miniata              A-TTCTC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Chl.fragrans            A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cr.euchrophyllRC96      A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cr.acauleRC106          A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cr.acaulglaucRC105      A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGGATTATCTTTC
Cr.bulbispermumRC95     A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cr.foetidumRC98         A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cr.graminicola7630      A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cr.buphanoidesRC102     A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cr.acauleRC38           A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cr.carolschmidRC97      A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cr.moorei7921           A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cy.elatus7636           A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cy.mackeniiRC87         A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cy.obliquus7278         ------------------------------------------------
Cy.ochroleucus7639      A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cy.sanguineusRC94       A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cy.staadensis7316       A-TTATCG----GGACTA-TTCTTTC-TATTTTCT--GGG-GTATCTTTC
Cy.labiatus7212         A-TTATCA----GGACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Cy.smithiae7214         A-TTATC-----AAACTA-TTCTTTC-GATTTTCT--GGG-TTATCTTTC
Cy.herreiRC86           ------------------------------------------------
Cy.falcatus7637         A-TTATC-----AAACTA-TTCTTTC-TAGTTTCT--GGG-TTATCTTTC
Eus.darwini             A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Ge.namaquensiAMV635     A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Hae.coccineusAMV632     ATTTATC------AACTA-TTCTTAC-TATTTCCA--GGG--TATCTTTC
Hae.crispus7252         A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Hae.crispus7260         A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Lap.martinezii          A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATTTTTC
Leu.autumnale           A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Na.sp.7608              A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG--TATCTTTC
Pan.canariense          A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Par.weberbaueri         A-TTATC-----AAACTA-TTCTTTC-TATTTTTT--GGG-TTATCTTTC
Ster.lutea              A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Sc.membranaceus7246     A-TTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Str.salter7245          A-CTATC-----AAACTA-TTCTTTC-TATTTTCT--AGG-TTATCTTTC
Sc.membranaceus7917     A-TTATC------AACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Va.parviflora           A-GTATC-----AAACTA-TTCTTTC-TATTTTCT--GGG-TTATCTTTC
Aco.calamus             N-NTATC-----AAATCG-TTCTTTC-TATTTTAT--GGG-CTATCTTTC
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                        2151                                                2200
Ama.belladonna          AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Br.gregaria7157         AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cro.flava7256           AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Br.radulosanata7629     AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cl.miniataRC14          AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cl.miniata              AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Chl.fragrans            AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cr.euchrophyllRC96      AAG----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cr.acauleRC106          AAG----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cr.acaulglaucRC105      AAG----TCTACTAATA-ATTTCTTCGGCA-GTAAGGCAA-TCAAATGTT
Cr.bulbispermumRC95     AAG----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cr.foetidumRC98         AAG----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cr.graminicola7630      AAG----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cr.buphanoidesRC102     AAG----TCTACTAATA-ATTTCTTCGGCA-GTAAGGGAA-TCAAATGTT
Cr.acauleRC38           AAG----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cr.carolschmidRC97      AAG----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cr.moorei7921           AAG----TCTACTAATA-ATTTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cy.elatus7636           AAG----TCTACTAAAA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cy.mackeniiRC87         AAG----TTTACTAAAA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cy.obliquus7278         -------------------------------------------------
Cy.ochroleucus7639      AAG----TTTACTAAAA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cy.sanguineusRC94       AAG----TCTACTAAAA-AATTCTTCGGCA-GTAAGGGAA-TCAAATGTT
Cy.staadensis7316       AAG-----CTACTAAAA-AATTCTTCGGGG-G-AAGGGAA-TCAAATGTT
Cy.labiatus7212         AAG----TCTACTAAAA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cy.smithiae7214         AAG----TCTACTAAAA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Cy.herreiRC86           -------------------------------------------------
Cy.falcatus7637         AAG----TCTACTAAAA-AA-TCTTCGGCA-GTAAGGGAA-TCAAATGTT
Eus.darwini             AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Ge.namaquensiAMV635     AAG----TCTACTAATA-AATTCTTCGACA-GTAAGG-AA-TCAAATGTT
Hae.coccineusAMV632     A-G----TCTGCTCATG--ATTA-T-GGC--------------------
Hae.crispus7252         AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Hae.crispus7260         AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGGTAA-TCAAATGTT
Lap.martinezii          AAG----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Leu.autumnale           AAG----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Na.sp.7608              AAG----TCTACTAAGA-AATTCTTCGGCA-GTAAGGGAA-TCAAATGTT
Pan.canariense          AAG----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Par.weberbaueri         AAG----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Ster.lutea              AAG----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Sc.membranaceus7246     AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Str.salter7245          AAG----TCTACTAATA-AATTCTTCGACA-GTAAGGGAA-TCAAATGTT
Sc.membranaceus7917     AAG----TCTACTAATA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Va.parviflora           AAG----TCTACTAAGA-AATTCTTCGGCA-GTAAGG-AA-TCAAATGTT
Aco.calamus             AAG----TGTACGAATC-AATTTTTCAACG-GTAAGG-AG-TCAAATGCT
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                        2201                                                2250
Ama.belladonna          AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Br.gregaria7157         AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cro.flava7256           AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Br.radulosanata7629     AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cl.miniataRC14          AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cl.miniata              AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Chl.fragrans            AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cr.euchrophyllRC96      AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cr.acauleRC106          AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cr.acaulglaucRC105      AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cr.bulbispermumRC95     AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cr.foetidumRC98         AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cr.graminicola7630      AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cr.buphanoidesRC102     AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cr.acauleRC38           AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cr.carolschmidRC97      AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cr.moorei7921           AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cy.elatus7636           AG-AG--AATTCTTTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cy.mackeniiRC87         AG-AG--AATTCTTTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cy.obliquus7278         -------------------------------------------------
Cy.ochroleucus7639      AG-AG--AATTCTTTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cy.sanguineusRC94       AG-AG--AATTCTTTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cy.staadensis7316       AGGAG--AATTCTTTTCTA--AT-AG-ATACCGTTA-----CTAAGGAAA
Cy.labiatus7212         AG-AG--AATTCTTTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cy.smithiae7214         AG-AG--AATTCTTTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Cy.herreiRC86           -------------------------------------------------
Cy.falcatus7637         AG-AG--AATTCTTTTCTAA-TA-GG-ATACCGTTA-----CTAAG-AAA
Eus.darwini             AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Ge.namaquensiAMV635     AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Hae.coccineusAMV632     -------------------------------------------------
Hae.crispus7252         AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Hae.crispus7260         AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Lap.martinezii          AG-AG--AATTCATTTATA--AC-AG-ATACCGTTA-----CTAAG-AAA
Leu.autumnale           AG-AG--AATTCATTTATA--AT-AG-ATACCCTTA-----CTAAG-AAA
Na.sp.7608              AG-AG--AATTCATTTAGA--AT-AG-ATACTGTTA-----CTAAG-AAA
Pan.canariense          AG-AG--AATTCATTTATA--AT-AG-ATTCCGTTA-----CTAAG-AAA
Par.weberbaueri         AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Ster.lutea              AG-AT--AATTCATTTATA--AT-AG-ATACCGTTA-----CTAAT-AAA
Sc.membranaceus7246     AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Str.salter7245          AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAG-AAA
Sc.membranaceus7917     AG-AG--AATTCATTTCTA--AT-AG-ATACCGTTA-----CTAAGAAAA
Va.parviflora           AG-AG--AATTCATTTATA--AT-AG-ATACCGTTA-----CTAAG-AAA
Aco.calamus             AG-AG--AGTTCATTTCTA--AT-GG-ATACTCCTA-----CTAAA-AAA
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                        2251                                                2300
Ama.belladonna          T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Br.gregaria7157         T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Cro.flava7256           T---TT----GATACCG--TAGT-----CCCGG---TTATTCTTCTT--A
Br.radulosanata7629     T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Cl.miniataRC14          T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Cl.miniata              T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Chl.fragrans            T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Cr.euchrophyllRC96      T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Cr.acauleRC106          T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Cr.acaulglaucRC105      T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Cr.bulbispermumRC95     T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Cr.foetidumRC98         T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Cr.graminicola7630      T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Cr.buphanoidesRC102     T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Cr.acauleRC38           T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Cr.carolschmidRC97      T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Cr.moorei7921           T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Cy.elatus7636           T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Cy.mackeniiRC87         T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Cy.obliquus7278         ------------------------------------------------
Cy.ochroleucus7639      T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Cy.sanguineusRC94       T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Cy.staadensis7316       T---TT---GGATACCA--TAGCT----CCCAG---TTATTCTTCTT--A
Cy.labiatus7212         T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Cy.smithiae7214         T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Cy.herreiRC86           ------------------------------------------------
Cy.falcatus7637         T---TTG---GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Eus.darwini             T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Ge.namaquensiAMV635     T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Hae.coccineusAMV632     ------------------------------------------------
Hae.crispus7252         T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Hae.crispus7260         T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Lap.martinezii          T---TT----GATACCA--TAGT-----CCCTG---TTATTCTTCTT--A
Leu.autumnale           T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Na.sp.7608              T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Pan.canariense          T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Par.weberbaueri         T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Ster.lutea              T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Sc.membranaceus7246     T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Str.salter7245          T---TT----GATACCA--TAGT-----CCCGG---TTATTCTTCTT--A
Sc.membranaceus7917     T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Va.parviflora           T---TT----GATACCA--TAGT-----CCCAG---TTATTCTTCTT--A
Aco.calamus             T---TC----GATACTA--TAGT-----CCCAA---TTATTCCTCTA--A
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                        2301                                                2350
Ama.belladonna          TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Br.gregaria7157         TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cro.flava7256           TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Br.radulosanata7629     TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cl.miniataRC14          TTGG---GTCCTTGT-----CTAAAG-CG-AAATTTTG---TACCGT--A
Cl.miniata              TTGG---GTCCTTGT-----CTAAAG-CG-AAATTTTG---TACCGT--A
Chl.fragrans            TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cr.euchrophyllRC96      TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cr.acauleRC106          TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cr.acaulglaucRC105      TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---T-CCGT--A
Cr.bulbispermumRC95     TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cr.foetidumRC98         TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGAT-A
Cr.graminicola7630      TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cr.buphanoidesRC102     TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cr.acauleRC38           TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cr.carolschmidRC97      TTGG---ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cr.moorei7921           TTGGC--ATCCCTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cy.elatus7636           TTGG---ATCCTTGT-----CTAAAG-CG-AAATTTTG---TACCGT--A
Cy.mackeniiRC87         TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cy.obliquus7278         ------------------------------------------------
Cy.ochroleucus7639      TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cy.sanguineusRC94       TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cy.staadensis7316       TTGGG--ATCCTTGGT----CTAAAGGCTAAAATTTTG---TACCGGT-A
Cy.labiatus7212         TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cy.smithiae7214         TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Cy.herreiRC86           ------------------------------------------------
Cy.falcatus7637         TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Eus.darwini             TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Ge.namaquensiAMV635     TTGG---ATCCTTGT-----CTAAAG-TT-AAATTTTG---TACCGT--A
Hae.coccineusAMV632     ------------------------------------------------
Hae.crispus7252         TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Hae.crispus7260         TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Lap.martinezii          TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Leu.autumnale           TCGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Na.sp.7608              TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCAT--A
Pan.canariense          TTGG---ATCCTTGT-----CTAAAG-GT-AAATTTTG---TACCGT--A
Par.weberbaueri         TTGG---ATCCTTGT-----CTAAAG-CG-AAATTTTG---TACTGT--A
Ster.lutea              TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Sc.membranaceus7246     TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Str.salter7245          TTGG---ATCCCTGT-----TTAAAG-CT-AAATTTTG---TACCGT--A
Sc.membranaceus7917     TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Va.parviflora           TTGG---ATCCTTGT-----CTAAAG-CT-AAATTTTG---TACCGT--A
Aco.calamus             TCGG---ATCATTGG-----TTAAAG-CT-AAGTTTTG---TAACGT--A
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                        2351                                                2400
Ama.belladonna          TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Br.gregaria7157         TCGGG---CC-ACCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cro.flava7256           TCGGG---CC-ATCCTA---TTAGT---AAGCCGGA--TCTGG--GCCGA
Br.radulosanata7629     TCGGG---CC-ACCCTA---TTAGT---AAGCCGGA--TCTGG--GCCGA
Cl.miniataRC14          TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cl.miniata              TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Chl.fragrans            TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cr.euchrophyllRC96      TTGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cr.acauleRC106          TCGGG---CC-ATCCTA---TTAGT---AAGCCGGA--TCTGG--GCCGA
Cr.acaulglaucRC105      TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cr.bulbispermumRC95     TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cr.foetidumRC98         TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cr.graminicola7630      TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cr.buphanoidesRC102     TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cr.acauleRC38           TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cr.carolschmidRC97      TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cr.moorei7921           TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cy.elatus7636           TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cy.mackeniiRC87         TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cy.obliquus7278         ------------------------------------------------
Cy.ochroleucus7639      TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cy.sanguineusRC94       TCGGG---CC-ATTCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cy.staadensis7316       TCGGG---GCCATCCTA---TTAGGTA-AGGCCGGA--TCTGGGGGCCGA
Cy.labiatus7212         TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cy.smithiae7214         TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Cy.herreiRC86           ------------------------------------------------
Cy.falcatus7637         TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Eus.darwini             TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Ge.namaquensiAMV635     TCGGG---CC-ATCCTA---TTAGT---AAGCCGGA--TCTGG--GCCGA
Hae.coccineusAMV632     ------------------------------------------------
Hae.crispus7252         TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Hae.crispus7260         TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Lap.martinezii          TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Leu.autumnale           TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Na.sp.7608              TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Pan.canariense          TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Par.weberbaueri         TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Ster.lutea              TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Sc.membranaceus7246     TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Str.salter7245          TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG-GCCGGA
Sc.membranaceus7917     TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Va.parviflora           TCGGG---CC-ATCCTA---TTAGT---AAGCCG-A--TCTGG--GCCGA
Aco.calamus             TCGGG---GC-ATCCTG---TTAGT---AAGCCG-G--TCTGG--GCTGA
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```
                        2401                                                2450
Ama.belladonna          TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Br.gregaria7157         TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cro.flava7256           TTTATCAGG----ATTCTG-AT---ATTC---TTGGATCG--ATTCGGTC
Br.radulosanata7629     TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cl.miniataRC14          TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cl.miniata              TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Chl.fragrans            TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cr.euchrophyllRC96      TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cr.acauleRC106          TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cr.acaulglaucRC105      TTTATCAAA----ATCCTG-AT---ATTC---TTGATCGG--ATTCGGAC
Cr.bulbispermumRC95     TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cr.foetidumRC98         TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cr.graminicola7630      TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cr.buphanoidesRC102     TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cr.acauleRC38           TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cr.carolschmidRC97      TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cr.moorei7921           TTTATCAG-----ATTCTG-AT---ATTC---TTGATCGG--ATTCGGGC
Cy.elatus7636           TTTCTCAG-----ATTCTG-AT---ATTC---TTGGATCG--ATTCGGTC
Cy.mackeniiRC87         TTTCTCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cy.obliquus7278         ------------------------------------------------
Cy.ochroleucus7639      TTTCTCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Cy.sanguineusRC94       TTTCTCAG-----ATTCTG-AT---ATTC---TTGGATCG--ATTCGGTC
Cy.staadensis7316       TTTCTCAGG----ATTCTGGAT---ATTTCCTTGGATCGGATGTCGGGTC
Cy.labiatus7212         TTTCTCAG-----ATTCTG-AT---ATTC---TTGGATCG--ATTCGGTC
Cy.smithiae7214         TTTCTCAG-----ATTCTG-AT---ATTC---TTGGATCG--ATTCGGCC
Cy.herreiRC86           ------------------------------------------------
Cy.falcatus7637         TTTCTCAG-----ATTCTG-AT---ATTC---TTGGACG---ATTCGGTC
Eus.darwini             TTTATCAG-----ATTCTT-AT---ATTC---TTGATCG---ATTCGGCC
Ge.namaquensiAMV635     TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGG-C
Hae.coccineusAMV632     ------------------------------------------------
Hae.crispus7252         TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Hae.crispus7260         TTTATCAG-----ATTCTG-AT---ATTC---TTGGTCG---ATTCGGCC
Lap.martinezii          TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ACTCGGTC
Leu.autumnale           TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Na.sp.7608              TTTATCAG-----ATTTTG-AT---ATTC---TTGATCG---ATTCGGTC
Pan.canariense          TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Par.weberbaueri         TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Ster.lutea              TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Sc.membranaceus7246     TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Str.salter7245          TTTATCAG-----ATTCTG-AT---ATTC--TTGGATCG---ATTCGGTC
Sc.membranaceus7917     TTTATCA----------------------------------------
Va.parviflora           TTTATCAG-----ATTCTG-AT---ATTC---TTGATCG---ATTCGGTC
Aco.calamus             TTTGTCAG-----ATGCTG-AT---ATTA---TCGATCG---ATTTGGAC
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                        2451                                                2500
Ama.belladonna          ---GG-AT---ATG---TAGAAA-TCTTTCT------------------
Br.gregaria7157         ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Cro.flava7256           ---GGGAT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGGG-A
Br.radulosanata7629     ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGGG-A
Cl.miniataRC14          ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGGG-A
Cl.miniata              ---GG-AT---ATG---TAGAAA-TCTTTCT------------------
Chl.fragrans            ---GG-AT---ATG---TAGAAA-TCTTTTT-----------------
Cr.euchrophyllRC96      ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Cr.acauleRC106          ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGGG-A
Cr.acaulglaucRC105      ---GGGAT---ATGG--TAGAAAATCTTTCCG-ATTATCCACAGGGGG-A
Cr.bulbispermumRC95     ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGGGG--A
Cr.foetidumRC98         ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Cr.graminicola7630      ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGGG-A
Cr.buphanoidesRC102     ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Cr.acauleRC38           ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Cr.carolschmidRC97      ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Cr.moorei7921           ---CGGAT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGGGGG-A
Cy.elatus7636           ---GG-AT---ATG---TAGAAAATCTTTCTC-ATTATC-ACAGTGGG-A
Cy.mackeniiRC87         ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Cy.obliquus7278         -------------------------------------------------
Cy.ochroleucus7639      ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Cy.sanguineusRC94       ---GGAAT---GTA-----GAAA-TCTTTCTC-ATTATC-ACAGTGGA-A
Cy.staadensis7316       ---GGGATT--ATG-----G-----------------------------
Cy.labiatus7212         ---GGGAT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGGGGG-A
Cy.smithiae7214         ---GGGAT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Cy.herreiRC86           -------------------------------------------------
Cy.falcatus7637         ---GG-AT---ATG---TAGAAA--CTTTCTC-ATTATC-ACAGTGG--A
Eus.darwini             ---GG-AT---ATG---TAGAAA-TCTTTTT------------------
Ge.namaquensiAMV635     ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Hae.coccineusAMV632     -------------------------------------------------
Hae.crispus7252         ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Hae.crispus7260         ---GGGAT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG---
Lap.martinezii          ---GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--A
Leu.autumnale           ---GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--A
Na.sp.7608              ---GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--A
Pan.canariense          ---GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--A
Par.weberbaueri         ---GG-AT---ATG---TAGAAA-TCTTTTT------------------
Ster.lutea              ---GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--A
Sc.membranaceus7246     ---GGGAT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
Str.salter7245          ---GG-AT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGGG-A
Sc.membranaceus7917     -------------------------------------------------
Va.parviflora           ---GG-AT---ATG---TAGAAA-TCTTTTTC-ATTATC-ACAGTGG--A
Aco.calamus             ----GAAT---ATG---TAGAAA-TCTTTCTC-ATTATC-ACAGTGG--A
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                    2501                                                2550
Ama.belladonna      --------------------------------------------------
Br.gregaria7157     TCCTCAAAAAAAC--AGGG-TT-TGTATCGAATAAA-GTATATACTTCGA
Cro.flava7256       TCCTCAAAAAAAC--GGGG-TT-TGTATCGAATAAA-GTATATACTTCGA
Br.radulosanata7629 TCCTCAAAAAAAC--AGGGCTT-TGTATCGAATAAAAGTATATACTTCGA
Cl.miniataRC14      TCCTCAAAAAAAC--AGGG-TT-TGTATCGAATAAA-GTATATACTTCGA
Cl.miniata          --------------------------------------------------
Chl.fragrans        --------------------------------------------------
Cr.euchrophyllRC96  TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Cr.acauleRC106      TCCTCAAAAAAAC--AGGGGTT--GTATCGAATAAA-GTATATACTTCGA
Cr.acaulglaucRC105  TCCTCAGAAAAAC--AGGGGTTTTGTATCGCAATCAAGCATATTACTCCA
Cr.bulbispermumRC95 TCCTCAAAAAAAC--AGGGG-TTTGTATCGAATAAA-GTATATACTTCGA
Cr.foetidumRC98     TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Cr.graminicola7630  TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Cr.buphanoidesRC102 TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Cr.acauleRC38       TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Cr.carolschmidRC97  TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GCATATACTTCGA
Cr.moorei7921       TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Cy.elatus7636       TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAAAGTATATACTTC--
Cy.mackeniiRC87     CCTCAAAAAAAAC--AGGG--TTTGTATCGAAATAAAGTATATACT-C--
Cy.obliquus7278     --------------------------------------------------
Cy.ochroleucus7639  TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Cy.sanguineusRC94   CCCTCAAAAAAAC--AGGGG-TTGGTATCGAATAAAGGTATAAACTCCGA
Cy.staadensis7316   --------------------------------------------------
Cy.labiatus7212     TCCTCAAAAAAAC--AGAGGTATTGTAT---AT----------------
Cy.smithiae7214     TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Cy.herreiRC86       --------------------------------------------------
Cy.falcatus7637     TCCTCAAAAAAAC--AGGG------------------------------
Eus.darwini         --------------------------------------------------
Ge.namaquensiAMV635 TCCTCAAAAAAAC--AGGG--CTTGTATCGAATAAA-GTATATACCTTCG
Hae.coccineusAMV632 --------------------------------------------------
Hae.crispus7252     TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Hae.crispus7260     --------------------------------------------------
Lap.martinezii      TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Leu.autumnale       TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Na.sp.7608          TCCTCAAAAAAGC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Pan.canariense      TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Par.weberbaueri     --------------------------------------------------
Ster.lutea          TCTTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Sc.membranaceus7246 TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Str.salter7245      TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Sc.membranaceus7917 --------------------------------------------------
Va.parviflora       TCCTCAAAAAAAC--AGGG--TTTGTATCGAATAAA-GTATATACTTCGA
Aco.calamus         TCCTCAAAAAAAC--AGAG--TTTGTATCGAGTAAA-GTATATACTTCGC
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                      2551                                                 2600
Ama.belladonna        --------------------------------------------------
Br.gregaria7157       CTTT--CTTGTCAGAGTATATTTA-------------------------
Cro.flava7256         CTTTT-CGTGTGCTAGAA-CTTTA---GCCCGGTAAACATAAAAAGTAC-
Br.radulosanata7629   CTTTT-CGTGTGCTAGAAACTTTA---GCCCG-TAAACATTAAAAGTACG
Cl.miniataRC14        CTTT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAGCATAAAA-GTACG
Cl.miniata            --------------------------------------------------
Chl.fragrans          --------------------------------------------------
Cr.euchrophyllRC96    CTTT--CGTGTGCTAGAA-CTTTA---GCCCG-TAAACATAAAA-GTACG
Cr.acauleRC106        CTTT--CGTGTGCTAGAA-CTTTA---GCCCG-TAAACATTAAAAGTACG
Cr.acaulglaucRC105    CTTTTGGGGGGGGCCAAAACTTTAAA-GCCGG-TAAACA-A----C-A--
Cr.bulbispermumRC95   CTTT--CGTG-GCTAGAA-CTTTA---GCCCGTAAAACATAAAA-GTACG
Cr.foetidumRC98       CTTT--CGTGTGCTAGAA-CTTTA---GCCCG-TAAACATAAAA-GTACG
Cr.graminicola7630    CTTT--CGTGTGCTAGAA-CTTTA---GCCCG-TAAACATTAAAAGTACG
Cr.buphanoidesRC102   CTTT--CGTGTGCTAGAA-CTTTA---GCCCG-TAAACATAAAA-GTACG
Cr.acauleRC38         CTTT---CGGGGCTAGAA-CTTTA---GCCCG-TAAACATAAAA-GTACG
Cr.carolschmidRC97    CTTT---CGGTGCTAGAA-CTTTA---GCCCG-TAAACATAAAA-GTACG
Cr.moorei7921         CTTT--CGTGTGCTAGAA-CTTTA---GCCCGTAAAACATAAAAGGTACG
Cy.elatus7636         --------------------------------------------------
Cy.mackeniiRC87       --------------------------------------------------
Cy.obliquus7278       --------------------------------------------------
Cy.ochroleucus7639    CTTT--CTTGTG-AAAAAACTTTAAAA----------------------
Cy.sanguineusRC94     CTTTT-CG-G-G-------------------------------------
Cy.staadensis7316     --------------------------------------------------
Cy.labiatus7212       --------------------------------------------------
Cy.smithiae7214       CTTT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACG
Cy.herreiRC86         --------------------------------------------------
Cy.falcatus7637       --------------------------------------------------
Eus.darwini           --------------------------------------------------
Ge.namaquensiAMV635   ACTTT-CGTGCGCCAGAAACTTTA---GC----T---C------------
Hae.coccineusAMV632   --------------------------------------------------
Hae.crispus7252       CTTT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAGCATAAAA-GTACG
Hae.crispus7260       --------------------------------------------------
Lap.martinezii        CTTT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACG
Leu.autumnale         CTTT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACG
Na.sp.7608            CTTT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACG
Pan.canariense        CTTT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACG
Par.weberbaueri       --------------------------------------------------
Ster.lutea            CTTT--CGTGTGCTAGAA-CTTTA---GCTAG-TAAACATAAAA-GTACG
Sc.membranaceus7246   CTTT--CGTGCGGCTAGAACTTTA---GCTCG-TAAACATAAAA-GTACG
Str.salter7245        CTTT--CGTGTGCTAGAA-CT----------------------------
Sc.membranaceus7917   --------------------------------------------------
Va.parviflora         CTTT--CGTGTGCTAGAA-CTTTA---GCTCG-TAAACATAAAA-GTACG
Aco.calamus           CTTT--CGTGTGCGAGAA-CTTTG---GCCCG-TAAACATAAAA-GTACA
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                        2601                                                2650
Ama.belladonna          --------------------------------------------------
Br.gregaria7157         --------------------------------------------------
Cro.flava7256           --------------------------------------------------
Br.radulosanata7629     GTG--CGGCACTTTTTTGGCGAAGACTTA--------------------
Cl.miniataRC14          GTA--CG-CACCTTTTTGCG-AAG-ATTA---GTTCGGGG----TTATTA
Cl.miniata              --------------------------------------------------
Chl.fragrans            --------------------------------------------------
Cr.euchrophyllRC96      GTG--CG-CACTTTTTTGCG-AAG-ATTA--GGTTCGGGG----TTATTA
Cr.acauleRC106          GTG--CG-CACTTTTTTGCG-AAG-ATTTAGGGTTCGGGGG---TTATTA
Cr.acaulglaucRC105      -T-------A-----------AAA-A--A--------------------
Cr.bulbispermumRC95     GTG--CG-CACTTTTTTTGCGAAG-ATTA---GGTCGGGGG---TATTTA
Cr.foetidumRC98         GTG--CG-CACTTTTTTGCG-AAG-ATTA--GGTTCGGGG----TTATTA
Cr.graminicola7630      GTG--CG-CACTTTTTTGCG-AAG-ATTAA-GGTTCGGGGG---TTATTT
Cr.buphanoidesRC102     GTG--CG-CACTTTTTTGCG-AAG-ATTA--GGTTCGGGG----TTATTA
Cr.acauleRC38           GTG--CG-CACTTTTTTGCG-AAG-ATTA--GGTTCGGGGG---TTATTA
Cr.carolschmidRC97      GTG--CG-CACTTTTTTGCCGAAG-ATTAA-GGTTCGGGGG---TTATTA
Cr.moorei7921           GTG--CCGCACTTTTTTGCGAAAA-ATTA--GGTTCCGGGGG--TTATTA
Cy.elatus7636           --------------------------------------------------
Cy.mackeniiRC87         --------------------------------------------------
Cy.obliquus7278         --------------------------------------------------
Cy.ochroleucus7639      --------------------------------------------------
Cy.sanguineusRC94       --------------------------------------------------
Cy.staadensis7316       --------------------------------------------------
Cy.labiatus7212         --------------------------------------------------
Cy.smithiae7214         GTA--CG--CACCTTTTGCGAAGA-AT-A---GTTCGGGG----TTATTA
Cy.herreiRC86           --------------------------------------------------
Cy.falcatus7637         --------------------------------------------------
Eus.darwini             --------------------------------------------------
Ge.namaquensiAMV635     --------------------------------------------------
Hae.coccineusAMV632     --------------------------------------------------
Hae.crispus7252         GTA--CG-CACCTTTTTGC-GAAG-ATTA--GGTTCGGGGG---TTATTA
Hae.crispus7260         --------------------------------------------------
Lap.martinezii          GTA--CG-CACCTTTTTGC-GAAG-ATTA---GTTCGGGG----TTATTA
Leu.autumnale           GTA--CG-CACTTTTTTGC-GAAG-ATTA---GGTTCGGGG---TTATTA
Na.sp.7608              GTA--CG-CACCTTTTTGC-GAAG-ATTA----GTTCGGGG---TTCTTA
Pan.canariense          GTA--CG-CACCTTTTTGC-GAAG-ATTA---GGTTCGGGG---TTCTTA
Par.weberbaueri         --------------------------------------------------
Ster.lutea              GTA--CG-CACCTTTTTGC-GAAG-ATTA---GGTTCGGGG---TTATTA
Sc.membranaceus7246     GTA--CG-CACCCTTTTGCCGAAG-ATTAA--GGTTCGGGG---TCATTA
Str.salter7245          --------------------------------------------------
Sc.membranaceus7917     --------------------------------------------------
Va.parviflora           GTA--CG-CACCTTTTTGC-GAAG-ATTA---GGTTCGGGG---TTATTA
Aco.calamus             GTG-----CGCGCTTTTTTCAAACGATTA--GGTTCAGAA----TTCTTA
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                    2651                                                2700
Ama.belladonna      --------------------------------------------------
Br.gregaria7157     --------------------------------------------------
Cro.flava7256       --------------------------------------------------
Br.radulosanata7629 --------------------------------------------------
Cl.miniataRC14      GAA----GAATTTTTT---AC-GGAAGAAG-AACAG-TTCTTTC----TT
Cl.miniata          --------------------------------------------------
Chl.fragrans        --------------------------------------------------
Cr.euchrophyllRC96  GAA----GAATTTTTT---AC-GGAAGAAG-AACAGGTTCTTTC---TTT
Cr.acauleRC106      GAA---GGAATTTTTT---AC-GGAAGAAG-AACAAGGGTTCTTTC--TT
Cr.acaulglaucRC105  --------------------------------------------------
Cr.bulbispermumRC95 GAA----GAATTTTTT---ACGG-AAGAAG-AACAGGT-CTTTC---TTT
Cr.foetidumRC98     GAA----GAATTTTTT---ACGGGAAGAAG-AACAGGGTCTTTC----TT
Cr.graminicola7630  AGAA---GAATTTTTT---ACGG-AAGAAAGAACAGGGTCTTTC----TT
Cr.buphanoidesRC102 GAA----GAATTTTTT---ACGGGAAGGAAGAACAGGGTTCTTTCC-TTT
Cr.acauleRC38       GAA----GAATTTTT----AC-GGAAGAAAGAACAAGTTCTTTC----TT
Cr.carolschmidRC97  GAA---GAAATTTTTT---ACGGGAAGAAG-AACAGGTCCTTTC----TT
Cr.moorei7921       GAAA---GAAATTTTTT--ACCGGAAGAA----------------------
Cy.elatus7636       --------------------------------------------------
Cy.mackeniiRC87     --------------------------------------------------
Cy.obliquus7278     --------------------------------------------------
Cy.ochroleucus7639  --------------------------------------------------
Cy.sanguineusRC94   --------------------------------------------------
Cy.staadensis7316   --------------------------------------------------
Cy.labiatus7212     --------------------------------------------------
Cy.smithiae7214     GAA----GAATTTTTT---ACGG-AAGAAG-AACA--------------
Cy.herreiRC86       --------------------------------------------------
Cy.falcatus7637     --------------------------------------------------
Eus.darwini         --------------------------------------------------
Ge.namaquensiAMV635 --------------------------------------------------
Hae.coccineusAMV632 --------------------------------------------------
Hae.crispus7252     GAA----GAATTTTTT---ACGG-AAGAAG-AACAGGGTCTTTC-----T
Hae.crispus7260     --------------------------------------------------
Lap.martinezii      GAA----GAATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TT
Leu.autumnale       GAA----GAATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TT
Na.sp.7608          GAA----GAATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TT
Pan.canariense      GAA----GAATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TT
Par.weberbaueri     --------------------------------------------------
Ster.lutea          GAA----GCATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TT
Sc.membranaceus7246 GAAA---GAATTTTTTT--ACGGGAAGAAGAAAGAGGGTCTTTCC----T
Str.salter7245      --------------------------------------------------
Sc.membranaceus7917 --------------------------------------------------
Va.parviflora       GAA----GAATTTTTT---ACGG-AAGAAG-AAGAGGTTCTTTC----TT
Aco.calamus         GAC----GAATTCTTT-----ACGGATAAAGAACAAGTTCTTTC----TT
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                          2701                                                 2750
Ama.belladonna            --------------------------------------------------
Br.gregaria7157           --------------------------------------------------
Cro.flava7256             --------------------------------------------------
Br.radulosanata7629       --------------------------------------------------
Cl.miniataRC14            TGATCTTTCCCAAAACAACTCCTTTTAC-TTTACA-TGGATCGCATAGAG
Cl.miniata                --------------------------------------------------
Chl.fragrans              --------------------------------------------------
Cr.euchrophyllRC96        GGATCTTTCCCAAAACAACTCCTTTTAC-TTTACA-TGGATCGCATAGAG
Cr.acauleRC106            TGATCCTTCCCAAAACAACCCCTTTTAC-TTT-----------------
Cr.acaulglaucRC105        --------------------------------------------------
Cr.bulbispermumRC95       GGATCTTTCCCCAAACAACTCCTTT-AC-TTTACATGGGATGC-ATAGAG
Cr.foetidumRC98           TGATCTTTCCCAAAACAACTCCTTTTAC-TTTACA-TGGATCGCCTAGAG
Cr.graminicola7630        GGATCTTTCCCAAAACACTCCCTTTTAC-TTTACATGGGATCGCATAGAA
Cr.buphanoidesRC102       GGGTCTTTCCCCAAACAACTCCTTTTAC-TTTACATTGGATCGCATAGAG
Cr.acauleRC38             TGATCTTTCCCAAACCAACTCCTTTTAC-TTTACA-TGGATCGCATAGAG
Cr.carolschmidRC97        TGATCTTTCCCAAAACAACTCCTTTTACTTTTACA-TGGATCGCATAAAG
Cr.moorei7921             --------------------------------------------------
Cy.elatus7636             --------------------------------------------------
Cy.mackeniiRC87           --------------------------------------------------
Cy.obliquus7278           --------------------------------------------------
Cy.ochroleucus7639        --------------------------------------------------
Cy.sanguineusRC94         --------------------------------------------------
Cy.staadensis7316         --------------------------------------------------
Cy.labiatus7212           --------------------------------------------------
Cy.smithiae7214           --------------------------------------------------
Cy.herreiRC86             --------------------------------------------------
Cy.falcatus7637           --------------------------------------------------
Eus.darwini               --------------------------------------------------
Ge.namaquensiAMV635       --------------------------------------------------
Hae.coccineusAMV632       --------------------------------------------------
Hae.crispus7252           TGATCTTTCCCAAA-C-ACTCCTTTTAC-TTTACA-TGGGATGCATAGAG
Hae.crispus7260           --------------------------------------------------
Lap.martinezii            TGATGTTTCCCAAAACAACTCCTTTTAC-TTTACA-TGGATCACATAGAG
Leu.autumnale             TGATGTTTCCCAAAACAACTTCTTTTAC-TTTACA-TGGATCACATAGAG
Na.sp.7608                TGATGTTTCCCAAAACCACTCCTTTGAC-TTTACA-TGGATCACA-----
Pan.canariense            TGATGTTTCCCAAAACAACTCCTTTTAC-TTTACA-TGGATCACATAGAG
Par.weberbaueri           --------------------------------------------------
Ster.lutea                TGATGTTTCCCAAAACAACTCTTTTTAC-TTTACA-TGGATCACATAGAG
Sc.membranaceus7246       TGATCCTT----------------------------------------
Str.salter7245            --------------------------------------------------
Sc.membranaceus7917       --------------------------------------------------
Va.parviflora             TGATGTTTCCAAAAACAACTCCTTTTAC-TTTACA-TGGATCACATAGAG
Aco.calamus               TGATCTTCCCT--TCCCTTCGTTCACCTTCACACAGGGTCCATAAAGGAG
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                        2751                                                2800
Ama.belladonna          --------------------------------------------------
Br.gregaria7157         --------------------------------------------------
Cro.flava7256           --------------------------------------------------
Br.radulosanata7629     --------------------------------------------------
Cl.miniataRC14          AACGTATTTGGGTTTTGGATA--TTTTC-CGTATTAATGACC--TAGGGA
Cl.miniata              --------------------------------------------------
Chl.fragrans            --------------------------------------------------
Cr.euchrophyllRC96      AACGTATTTGGGTATTGGATA--TTATC-C------------------
Cr.acauleRC106          --------------------------------------------------
Cr.acaulglaucRC105      --------------------------------------------------
Cr.bulbispermumRC95     AACGCATTTGGGATTTGGGATA-TTATC-CGCATTAATGGACCCAGG-AA
Cr.foetidumRC98         AACGTATTTGGGGATTGGATA--TTATC-CGTATTAATGGACC-TAGGGA
Cr.graminicola7630      AACGTATTTGGTATTGGGATA--TTATC-CGGAATTAAGGACC-TAGGGA
Cr.buphanoidesRC102     GAA-------------------------------------------------
Cr.acauleRC38           AACGTATTTGGTATTTGGATA-TTTATC-CGGATTAATGACC--TAAGGA
Cr.carolschmidRC97      AACGTATTTGGGATTTGGATA-TTTATCCCGTATTAATGG-----A----
Cr.moorei7921           --------------------------------------------------
Cy.elatus7636           --------------------------------------------------
Cy.mackeniiRC87         --------------------------------------------------
Cy.obliquus7278         --------------------------------------------------
Cy.ochroleucus7639      --------------------------------------------------
Cy.sanguineusRC94       --------------------------------------------------
Cy.staadensis7316       --------------------------------------------------
Cy.labiatus7212         --------------------------------------------------
Cy.smithiae7214         --------------------------------------------------
Cy.herreiRC86           --------------------------------------------------
Cy.falcatus7637         --------------------------------------------------
Eus.darwini             --------------------------------------------------
Ge.namaquensiAMV635     --------------------------------------------------
Hae.coccineusAMV632     --------------------------------------------------
Hae.crispus7252         AACGTATTTGGTTTTGGGATA--TTATC-CGCATTAATGGACC-TAGGGA
Hae.crispus7260         --------------------------------------------------
Lap.martinezii          AACGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGACC--TAGTGA
Leu.autumnale           AACGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGACC--TAGTGA
Na.sp.7608              --------------------------------------------------
Pan.canariense          AACGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGACC--TAGCGA
Par.weberbaueri         --------------------------------------------------
Ster.lutea              AACGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGACC--TAGTGA
Sc.membranaceus7246     --------------------------------------------------
Str.salter7245          --------------------------------------------------
Sc.membranaceus7917     --------------------------------------------------
Va.parviflora           AACGTATTTGGTTTTTGGATA--TTATC-CGTATTAATGACC--TAGTGA
Aco.calamus             AACGTATTTGGTATTTGGATA--TTATA-CGTATCAATGACC--TGGTGA
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                        2801                                                2850
Ama.belladonna          --------------------------------------------------
Br.gregaria7157         --------------------------------------------------
Cro.flava7256           --------------------------------------------------
Br.radulosanata7629     --------------------------------------------------
Cl.miniataRC14          ATCGT-CATGA-TGG--------CC--------T--------G----GAA
Cl.miniata              --------------------------------------------------
Chl.fragrans            --------------------------------------------------
Cr.euchrophyllRC96      --------------------------------------------------
Cr.acauleRC106          --------------------------------------------------
Cr.acaulglaucRC105      --------------------------------------------------
Cr.bulbispermumRC95     A-CGGTCCTGA-TGGGCC-TA-ACCCC------TCCTACCTAG-------
Cr.foetidumRC98         ATCGTCCTGGATTGGGCAT-A-ACCCC------TTCTAACT---------
Cr.graminicola7630      ACCGTTCATGAATGGCCAT-A-ACCC-------TTCTAACTAGAAGGGAA
Cr.buphanoidesRC102     --------------------------------------------------
Cr.acauleRC38           ACCGTTCATGAATGGGCAT-AAACCCC------TTCTAACT---------
Cr.carolschmidRC97      --------------------------------------------------
Cr.moorei7921           --------------------------------------------------
Cy.elatus7636           --------------------------------------------------
Cy.mackeniiRC87         --------------------------------------------------
Cy.obliquus7278         --------------------------------------------------
Cy.ochroleucus7639      --------------------------------------------------
Cy.sanguineusRC94       --------------------------------------------------
Cy.staadensis7316       --------------------------------------------------
Cy.labiatus7212         --------------------------------------------------
Cy.smithiae7214         --------------------------------------------------
Cy.herreiRC86           --------------------------------------------------
Cy.falcatus7637         --------------------------------------------------
Eus.darwini             --------------------------------------------------
Ge.namaquensiAMV635     --------------------------------------------------
Hae.coccineusAMV632     --------------------------------------------------
Hae.crispus7252         TCNGTTCATGATTGGCCATGAAACC--------TTCTACCTAGAACAGAA
Hae.crispus7260         --------------------------------------------------
Lap.martinezii          ATCGTTCATGATTGGTCATGATACC--------TTCTAACTAGAACAGAA
Leu.autumnale           ATCGTTCATGATTGGTTATGATACC--------TTCTAACTAGAACAGAA
Na.sp.7608              --------------------------------------------------
Pan.canariense          ATCATTCATGATTGGTCATGATACC--------TTCTAACTAGAACAGAA
Par.weberbaueri         --------------------------------------------------
Ster.lutea              ATCGTTCATGATTGGTCATGATACC--------TTCTAACTAGAACAGAA
Sc.membranaceus7246     --------------------------------------------------
Str.salter7245          --------------------------------------------------
Sc.membranaceus7917     --------------------------------------------------
Va.parviflora           ATCGTTCATGATTGGTCATGATACC--------CTCTAACTAGAACAGAA
Aco.calamus             ATAATTCATGATTTGTCATGGGAC---------TT---------------
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                      2851                                                2900
Ama.belladonna        --------------------------------------------------
Br.gregaria7157       --------------------------------------------------
Cro.flava7256         --------------------------------------------------
Br.radulosanata7629   --------------------------------------------------
Cl.miniataRC14        A-CCTC-----------A-------------------------------
Cl.miniata            --------------------------------------------------
Chl.fragrans          --------------------------------------------------
Cr.euchrophyllRC96    --------------------------------------------------
Cr.acauleRC106        --------------------------------------------------
Cr.acaulglaucRC105    --------------------------------------------------
Cr.bulbispermumRC95   --------------------------------------------------
Cr.foetidumRC98       --------------------------------------------------
Cr.graminicola7630    A-------------------------------------------------
Cr.buphanoidesRC102   --------------------------------------------------
Cr.acauleRC38         -T-A-----------------------------------------------
Cr.carolschmidRC97    --------------------------------------------------
Cr.moorei7921         --------------------------------------------------
Cy.elatus7636         --------------------------------------------------
Cy.mackeniiRC87       --------------------------------------------------
Cy.obliquus7278       --------------------------------------------------
Cy.ochroleucus7639    --------------------------------------------------
Cy.sanguineusRC94     --------------------------------------------------
Cy.staadensis7316     --------------------------------------------------
Cy.labiatus7212       --------------------------------------------------
Cy.smithiae7214       --------------------------------------------------
Cy.herreiRC86         --------------------------------------------------
Cy.falcatus7637       --------------------------------------------------
Eus.darwini           --------------------------------------------------
Ge.namaquensiAMV635   --------------------------------------------------
Hae.coccineusAMV632   --------------------------------------------------
Hae.crispus7252       ATGATCTT---------TTAATTAACCAA--GATTAAACCAGAAGATCCT
Hae.crispus7260       --------------------------------------------------
Lap.martinezii        ATGAGAAATGATCT---ATAAATAATCAAAAGAGAAAACAAGAAGATTCA
Leu.autumnale         ATGATCT----------ATAAATAATCAAAGGAGAAAACAAGAAGATTAA
Na.sp.7608            --------------------------------------------------
Pan.canariense        ATGATCT----------ATCAATAATCAAAAGAGAAAACAAGAAGATTCA
Par.weberbaueri       --------------------------------------------------
Ster.lutea            ATGATCT----------ATCAATAATCAAAAGAGAAAACAAGAAGATTCA
Sc.membranaceus7246   --------------------------------------------------
Str.salter7245        --------------------------------------------------
Sc.membranaceus7917   --------------------------------------------------
Va.parviflora         ATGATCT----------ATAAATAATCAAAAGATAAACCAAGAAGATTCA
Aco.calamus           --------------------------------------------------
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                        2901                                                2950
Ama.belladonna          --------------------------------------------------
Br.gregaria7157         --------------------------------------------------
Cro.flava7256           --------------------------------------------------
Br.radulosanata7629     --------------------------------------------------
Cl.miniataRC14          --------------------------------------------------
Cl.miniata              --------------------------------------------------
Chl.fragrans            --------------------------------------------------
Cr.euchrophyllRC96      --------------------------------------------------
Cr.acauleRC106          --------------------------------------------------
Cr.acaulglaucRC105      --------------------------------------------------
Cr.bulbispermumRC95     --------------------------------------------------
Cr.foetidumRC98         --------------------------------------------------
Cr.graminicola7630      --------------------------------------------------
Cr.buphanoidesRC102     --------------------------------------------------
Cr.acauleRC38           --------------------------------------------------
Cr.carolschmidRC97      --------------------------------------------------
Cr.moorei7921           --------------------------------------------------
Cy.elatus7636           --------------------------------------------------
Cy.mackeniiRC87         --------------------------------------------------
Cy.obliquus7278         --------------------------------------------------
Cy.ochroleucus7639      --------------------------------------------------
Cy.sanguineusRC94       --------------------------------------------------
Cy.staadensis7316       --------------------------------------------------
Cy.labiatus7212         --------------------------------------------------
Cy.smithiae7214         --------------------------------------------------
Cy.herreiRC86           --------------------------------------------------
Cy.falcatus7637         --------------------------------------------------
Eus.darwini             --------------------------------------------------
Ge.namaquensiAMV635     --------------------------------------------------
Hae.coccineusAMV632     --------------------------------------------------
Hae.crispus7252         GGAATTTGCATTCTGAA--------------------------------
Hae.crispus7260         --------------------------------------------------
Lap.martinezii          TGAATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTAT
Leu.autumnale           TGAATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTAT
Na.sp.7608              --------------------------------------------------
Pan.canariense          TGAATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTAT
Par.weberbaueri         --------------------------------------------------
Ster.lutea              TGAATTTTCATTTTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTAT
Sc.membranaceus7246     --------------------------------------------------
Str.salter7245          --------------------------------------------------
Sc.membranaceus7917     --------------------------------------------------
Va.parviflora           TGAATTTTCATTCTGAAATGCCCATGTA-GTGGTTGAATCCACTGAGTAT
Aco.calamus             --------------------------------------------------
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                    2951                                                 3000
Ama.belladonna      --------------------------------------------------
Br.gregaria7157     --------------------------------------------------
Cro.flava7256       --------------------------------------------------
Br.radulosanata7629 --------------------------------------------------
Cl.miniataRC14      --------------------------------------------------
Cl.miniata          --------------------------------------------------
Chl.fragrans        --------------------------------------------------
Cr.euchrophyllRC96  --------------------------------------------------
Cr.acauleRC106      --------------------------------------------------
Cr.acaulglaucRC105  --------------------------------------------------
Cr.bulbispermumRC95 --------------------------------------------------
Cr.foetidumRC98     --------------------------------------------------
Cr.graminicola7630  --------------------------------------------------
Cr.buphanoidesRC102 --------------------------------------------------
Cr.acauleRC38       --------------------------------------------------
Cr.carolschmidRC97  --------------------------------------------------
Cr.moorei7921       --------------------------------------------------
Cy.elatus7636       --------------------------------------------------
Cy.mackeniiRC87     --------------------------------------------------
Cy.obliquus7278     --------------------------------------------------
Cy.ochroleucus7639  --------------------------------------------------
Cy.sanguineusRC94   --------------------------------------------------
Cy.staadensis7316   --------------------------------------------------
Cy.labiatus7212     --------------------------------------------------
Cy.smithiae7214     --------------------------------------------------
Cy.herreiRC86       --------------------------------------------------
Cy.falcatus7637     --------------------------------------------------
Eus.darwini         --------------------------------------------------
Ge.namaquensiAMV635 --------------------------------------------------
Hae.coccineusAMV632 --------------------------------------------------
Hae.crispus7252     --------------------------------------------------
Hae.crispus7260     --------------------------------------------------
Lap.martinezii      TCAAAATTCTTAGACTTTCTTCCCGGTATGTATTTTTTTTT----ATATG
Leu.autumnale       TCAAAACTCTTAGACTTTCTTCTCGGTATGTATTTTTTT-------TATG
Na.sp.7608          --------------------------------------------------
Pan.canariense      TCAAAATTCTTAGACTTTCTTCTCGGTATGTATTTTTTTT-----ATATG
Par.weberbaueri     --------------------------------------------------
Ster.lutea          TCAAAATTCTTAGACTTTCTTCTCGGTATGTCTTTTTTTT------T-TG
Sc.membranaceus7246 --------------------------------------------------
Str.salter7245      --------------------------------------------------
Sc.membranaceus7917 --------------------------------------------------
Va.parviflora       TCGAAATTCTTAGACTTTGTTCTCGATATGT------------------
Aco.calamus         --------------------------------------------------
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                    3001                                                3050
Ama.belladonna      --------------------------------------------------
Br.gregaria7157     --------------------------------------------------
Cro.flava7256       --------------------------------------------------
Br.radulosanata7629 --------------------------------------------------
Cl.miniataRC14      --------------------------------------------------
Cl.miniata          --------------------------------------------------
Chl.fragrans        --------------------------------------------------
Cr.euchrophyllRC96  --------------------------------------------------
Cr.acauleRC106      --------------------------------------------------
Cr.acaulglaucRC105  --------------------------------------------------
Cr.bulbispermumRC95 --------------------------------------------------
Cr.foetidumRC98     --------------------------------------------------
Cr.graminicola7630  --------------------------------------------------
Cr.buphanoidesRC102 --------------------------------------------------
Cr.acauleRC38       --------------------------------------------------
Cr.carolschmidRC97  --------------------------------------------------
Cr.moorei7921       --------------------------------------------------
Cy.elatus7636       --------------------------------------------------
Cy.mackeniiRC87     --------------------------------------------------
Cy.obliquus7278     --------------------------------------------------
Cy.ochroleucus7639  --------------------------------------------------
Cy.sanguineusRC94   --------------------------------------------------
Cy.staadensis7316   --------------------------------------------------
Cy.labiatus7212     --------------------------------------------------
Cy.smithiae7214     --------------------------------------------------
Cy.herreiRC86       --------------------------------------------------
Cy.falcatus7637     --------------------------------------------------
Eus.darwini         --------------------------------------------------
Ge.namaquensiAMV635 --------------------------------------------------
Hae.coccineusAMV632 --------------------------------------------------
Hae.crispus7252     --------------------------------------------------
Hae.crispus7260     --------------------------------------------------
Lap.martinezii      TATAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGCACGGTT
Leu.autumnale       TATAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGCACGGTT
Na.sp.7608          --------------------------------------------------
Pan.canariense      TATAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGCACGGTT
Par.weberbaueri     --------------------------------------------------
Ster.lutea          TATAC---ATAGGGAAAGTCGTGTGCAA--TGAAAAATGCAAGCACGGTT
Sc.membranaceus7246 --------------------------------------------------
Str.salter7245      --------------------------------------------------
Sc.membranaceus7917 --------------------------------------------------
Va.parviflora       --------------------------------------------------
Aco.calamus         --------------------------------------------------
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                    3051                                                3100
Ama.belladonna      ---------------------------------TAGAGGAAGGAGA-AGT
Br.gregaria7157     -----------------------------------TTTTTAGGAGATAGT
Cro.flava7256       -------------------------------------TTTAGGAGA-A-T
Br.radulosanata7629 ---------------------------------CCCTTTTTAGGAGA-AGT
Cl.miniataRC14      ----------------------------------AGGTTTAGGAGA-AGT
Cl.miniata          ---------------------------------TAGAGGAAGGAGA-AGT
Chl.fragrans        --------------------------------------------------
Cr.euchrophyllRC96  -------------------------------------TTTAGGAGA-AGT
Cr.acauleRC106      ------------------------------------G-TTTAGGAGA-A-T
Cr.acaulglaucRC105  -------------------------------TCAGTTTTTAGGAGAAAGT
Cr.bulbispermumRC95 -----------------------------------TTTTTAGGAGAAAGT
Cr.foetidumRC98     -------------------------------------TTAGGAGA-AGT
Cr.graminicola7630  ----------------------------------TTTTTAGGAGA-AAT
Cr.buphanoidesRC102 --------------------------------------------------
Cr.acauleRC38       -------------------------------------TTAGGAGA-AGT
Cr.carolschmidRC97  ----------------------------------TTTTTAGGAGA-A-T
Cr.moorei7921       ----------------------------------TTTTAGGAGA--GT
Cy.elatus7636       -------------------------------------TTAGGAGA-A-T
Cy.mackeniiRC87     ----------------------------------TTTTAGGAAG-AAT
Cy.obliquus7278     -------------------------------------TTAGGAGA-AGT
Cy.ochroleucus7639  --------------------------------------------------
Cy.sanguineusRC94   ---------------------------TACAAGGGTATTAGGAGA-AGT
Cy.staadensis7316   ----------------------------------TTTTAGGAGA-AGT
Cy.labiatus7212     --------------------------------CAG-CTTAGGAGA-A-T
Cy.smithiae7214     ----------------------------------G-TTTAGGAGA-AGT
Cy.herreiRC86       ----------------------------------TTTTAGGAGA-AGT
Cy.falcatus7637     ----------------------------------TTTTTAGGAGA-AGT
Eus.darwini         --------------------------------------------------
Ge.namaquensiAMV635 -------------------------------------TTTAGGAGA-AGT
Hae.coccineusAMV632 ----------------------------------TTTTTAGGAGA-AAT
Hae.crispus7252     -------------------------------------------------T
Hae.crispus7260     -------------------------------------TTTAG-AGA-AGT
Lap.martinezii      TG-----------------------------------------------
Leu.autumnale       TGGGGAGGGTTAATTTTCCTG-GG-TTC---------------------
Na.sp.7608          --------------------------------------------------
Pan.canariense      TGGGGAGGGGTCTTTTTCGTGT--ATT----------------------
Par.weberbaueri     --------------------------------------------------
Ster.lutea          TGGGGAGGGGTAT------------------------------------
Sc.membranaceus7246 ----------------------------------GGCTTAGGAGA-AGT
Str.salter7245      ----------------------------------GCTTTAGGAGA-AGT
Sc.membranaceus7917 --------------------------------------------------
Va.parviflora       --------------------------------------------------
Aco.calamus         --------------------------------------------------
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                      3101                                                 3150
Ama.belladonna        CGTAACAAGGTTTCC-GTAGGTGAACCTGCGGAAGGATC-ATTGTCGTGG
Br.gregaria7157       CGTAACAAGGTTTCC-GTAGGTGAACCTGCGGAAGGATC-ATTGTCGTAG
Cro.flava7256         CGTAACAAGGTTTCC-GTAGGTGAACCTGCGGAAGGATC-ATTGTCGTCG
Br.radulosanata7629   CGTAACAAGGTTTCC-GTAGGTGAACCTGCGGAAGGATC-ATTGTCGTAG
Cl.miniataRC14        CGTAACAAGGTTTCC-GTAGGTGAACCTGCGGAAGGATC-ATTGTCGAGG
Cl.miniata            CGTAACAAGGTTTCC-GTAGGTGAACCTGCGGAAGGATC-ATTGTCGAGG
Chl.fragrans          ----------------------------------------TCGAGC
Cr.euchrophyllRC96    CGTAACAAGGTTTCC-GTAGGTGAACCTGCGGAAGGATC-ATTGTCGTCG
Cr.acauleRC106        CGTAACAAGGTTTCC-GTAGGTGAACCTGCGGAAGGATC-ATTGTCGTTG
Cr.acaulglaucRC105    CGTAACAAGGTTTCC-GTAGGTGAACCTGCGGAAGGATC-ATTGTCGTTG
Cr.bulbispermumRC95   CGTAACAAGGTTTCC-GTAGGTGA-CCTGCGGAAGGATC-ATTGTCGTCG
Cr.foetidumRC98       CGTAACAAGGTTTCC-GTAGGTGAACCTGCGGAAGGATC-ATTGTCGTCG
Cr.graminicola7630    CGTAACAAGGTTTCC-GTAGGTGAACCTGCGGAAGGATC-ATTGTCGTTG
Cr.buphanoidesRC102   ------------------------------------------------
Cr.acauleRC38         CGTAACAAGGTTTGCCGTAGGTGAACCTGCGGAAGGATC-ATTGTCGTCG
Cr.carolschmidRC97    CGTAACAAGGTTTCC-GTAGGTGAACCTGCGGAAGGATC-ATTGTCGTCG
Cr.moorei7921         TGTAACAAGGTTTCC-GTAGGTGAACCTGCGGAAGGATGCATTGTCGTCG
Cy.elatus7636         CGTAACAAGGTTTCC-GTAGGTGAACCTGCGGAAGGATC-ATTGTCGAGG
Cy.mackeniiRC87       CGTAACAAGGTTTCC-GTAGGTGAACCTGCGGAAGGATC-ATTGTCGAGG
Cy.obliquus7278       CGTAACAAGGTTTCC-GTAGGTGAACCTGCGGAAGGATC-ATTGTCGAGG
Cy.ochroleucus7639    ------------------------------------------------
Cy.sanguineusRC94     GGTAACAAGGTTCACCGTAGGTGAACCTGCGGAAGGATGCATTGTCCGAG
Cy.staadensis7316     CGTAACAAGGTTTCC-GTAGGTGAACCTGCGGAAGGATC-ATTGTCGAGG
Cy.labiatus7212       CGTAACAAGGTTTCC-GTAGGTGAACCTGCGGAAGGATC-ATTGTCGTGG
Cy.smithiae7214       CGTAACAAGGTTTCC-GTAGGTGAACCTGCGGAAGGATC-ATTGTCGAAG
Cy.herreiRC86         CGTAACAAGGTTTCC-GTAGGTGAACCTGCGGAAGGATC-ATTGTCGAGG
Cy.falcatus7637       CGTAACAAGGTTTCC-GTAGGTGAACCTGCGGAAGGATC-ATTGTCGAGG
Eus.darwini           ----------------------------------------TCGAGG
Ge.namaquensiAMV635   CGTAACAAGGTTTACCGTAGGAGAAC-TGCGGAAGGATGCATTGTCGAGG
Hae.coccineusAMV632   CGTAACAAGGTTTCC-GTAGGTGAACCTGCGGAAGGATC-ATTGTCGATG
Hae.crispus7252       --TA-CAAGGTTTCC-GTAGGTGAACCTGCGGAAGGATC-ATTGTCGATG
Hae.crispus7260       -GTAACAAGGTTTCC-GTAGGTGAACCTGCGGAAGGATC-ATTGTTGATG
Lap.martinezii        ----------------------AACCTGCGGAACGATC-ATTGTCGAGG
Leu.autumnale         -------------------------CTGCGGAAG-ATC-ATTGTCGAGG
Na.sp.7608            ------------------------------------------------
Pan.canariense        --------------------TGAACCTGCGGAAGGATC-ATTGTCGAGG
Par.weberbaueri       ----------------------------------------TCGAGG
Ster.lutea            ----------------TTAGGTGAACCTGCGGAAGGATC-ATTGTCGAGG
Sc.membranaceus7246   CGTAACAAGGTTTCC-GTAGGTGAACCTGCGGAAGGATC-ATTGTCGAGG
Str.salter7245        CGTAACAAGGTTTCC-GTAGGTGAACCTGCGGAAGGATC-ATTGTTGTCG
Sc.membranaceus7917   ------------------------------------------------
Va.parviflora         --------------------------------AGGATC-ATTGTCGAGG
Aco.calamus           AGGCCCACGGACGAGAACCACCCCAAGAGAACCCGTCATCAACGTCGCCG
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                        3151                                                 3200
Ama.belladonna          CCC-----GAATAGACG-ATCGC-GAACT-CGTAGAGCA-CC-TGTAGGG
Br.gregaria7157         CCC-----GAATAGATG-CTTGC-AAACT-TGTAGAGCA-CC-TGTAGGG
Cro.flava7256           CCC-----GAATAGATG-CTTGC-GAACT-TGTAGAGCA-CC-TGTAGGG
Br.radulosanata7629     CCC-----GAATAGATG-CTTGC-AAACT-TGTAGAGCA-CC-TGTAGGG
Cl.miniataRC14          CCC-----GAACGGACG-ATCGT-GAACT-CGTAGAGC--CC-CGTGGGG
Cl.miniata              CCC-----GAACGGACG-ATCGT-GAACT-CGTAGAGCA-CC-CGTGGGG
Chl.fragrans            CCC-----GAACGGAAGGATCGC-GAACT-CGTTGAGCA-CC-C-TAGGG
Cr.euchrophyllRC96      TCA-----GAATAGAAT-ATCGT-GGACT-CGTAGAGCA-CC-TGCACGG
Cr.acauleRC106          TCA-----GAATAGAAT-ATCGT-GGACT-CGTAGAGCA-CC-TGCACGG
Cr.acaulglaucRC105      TCA-----GAATAGAAT-ATCGT-GGACT-CGTAGAGCA-CC-TGCACGG
Cr.bulbispermumRC95     TCA-----GAATAGAAT-ATCGT-GGACT-CGTAGAGCA-CC-TGCACGG
Cr.foetidumRC98         TCA-----GAATAGAAT-ATCGT-GGACT-CGTAGAGCA-CC-TGCACGG
Cr.graminicola7630      TCA-----GAATAGAAT-ATCGT-GGACT-CGTAGAGCA-CC-TGCACGG
Cr.buphanoidesRC102     ------------------------------------------------
Cr.acauleRC38           TCA-----GAATAGAATATGCGT-GGACTGCGTAGAGCA-CC-TGCACGG
Cr.carolschmidRC97      TCA-----GAATAGAAT-AT-GT-GGTCT-CGTAGAGCA-CC-TGCACGG
Cr.moorei7921           TCA-----GAATAGAAT-ATCGT-GGACT--GTAGAGCA-CC-TGCACGG
Cy.elatus7636           CCC-----GAACGGACG-ATCGT-GAACT-CGTTGTGCA-CC-CGTGGGG
Cy.mackeniiRC87         CCC-----GAACGGACG-ATCGC-GAACT-CGTTGAGCA-CC-CGTGGGG
Cy.obliquus7278         CCC-----GA-CGGACG-ATCGT-GAACT-CGTTGAGCA-CC-CGTGGGG
Cy.ochroleucus7639      ------------------------------------------------
Cy.sanguineusRC94       GCCC----GAACGAACGATTCGT-GAACTCCGTTGAGCA-CCCCGTGGGG
Cy.staadensis7316       CCC-----GAACGAACG-ATCGT-GAACT-CGTTGAGCA-CC-CGTGGGG
Cy.labiatus7212         CCC-----GAACGGACG-ATCGT-GAACT-CGTTGTGCA-CC-CGTGGGG
Cy.smithiae7214         GCCC----GAACGAACG-ATCGT-GAACT-CGTTGAGCA-CC-CGTGGGG
Cy.herreiRC86           CCC-----GAACGGACG-ATCGT-GAACT-CGTTGAGCA-CC-CGTGGGG
Cy.falcatus7637         CCC-----GAACGGACG-ATCGT-GAACT-CGTTGAGCA-CC-CGTGGGG
Eus.darwini             CCC-----GAACGATCG-ATCTT-GAACT-TGTAGAGCA-CC-C------
Ge.namaquensiAMV635     CCCC----GAA-GGACG-ATCGT-GAACT-CGTAGAGCA-CC-TGCGGGG
Hae.coccineusAMV632     CCT-----GAACGGACG-ACCGT-GAACT-TGTAGAGCA-CC-TGTGGGG
Hae.crispus7252         CCT-----GAACGGACG-ACCGT-GAACT-TGTAGAGCA-CC-TGTGGGG
Hae.crispus7260         CCT-----GAACGGACG-ACCGT-GAACCTCGTAGAGCA-CC-TGTGGGG
Lap.martinezii          CCC-----GAACGGACG-ATCGC-GAACC-CGTAGAGCACCC--GTGGGG
Leu.autumnale           CCC-----GAACGGACG-ACCGC-GAACC-CGTAGAGCACCC--GTGGGG
Na.sp.7608              ------------------------------------------------
Pan.canariense          CCC-----GAACGGACG-ATCGC-AAACC-CGTAGAGCGCCC--GTGGGG
Par.weberbaueri         CCC-----GAACGGACG-ATCGC-GAACT-CGTAGAGCACCC--GTGGCG
Ster.lutea              CCC-----GAACGGACG-ATCGT-GAACC-AGTTGAGCA-C-TGGTAAGG
Sc.membranaceus7246     CCC-----GAACGGACG-ATCGT-GAACT-CGTAAAGCA-CC-TGTGGGG
Str.salter7245          CCT-----GAATAGACG-CTTGG-GAACC-AGTAGTGCA-CC-TGTAGGG
Sc.membranaceus7917     ------------------------------------------------
Va.parviflora           CCC-----GAACGGAAG-ATCGT-GAACC-CGTAAAGCACCC--GTGGGG
Aco.calamus             GGGAGCAGGCCCGGGGCGGAGCCACGCGTGCGCGTGGCGCCCGCCCCCCC
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                        3201                                                3250
Ama.belladonna          AGC-GAAGAGGCTGT--GGC--GATTGC-----TGCACGCCTCTGCCT-C
Br.gregaria7157         ATC-GCATAGGCTGT--GGC--GATAGC-----TGC-CGCCTCTGCCT-C
Cro.flava7256           ATC-GCAGAGGCTGT--GGC--GATTGC-----TGC-CGCCTCTGCCT-C
Br.radulosanata7629     ATC-GCATAGGCTGT--GGC--GATAGC-----TGC-CGCCTCTGCCTGC
Cl.miniataRC14          AGG-AGAAGAGGG---AGGC--GATGGC-----CGACATCGTTTGCCT-C
Cl.miniata              AGG-AGAA--GGGGG-AGGC--GATGGC-----CGACATCGTTTGCCT-C
Chl.fragrans            -G--GCAT---C----AG------TTGC---------CG--T-TCG---C
Cr.euchrophyllRC96      ATC-GCAGAGGCTGT--GGC--GATTGC-----TGCCCGCCTATGCCTCC
Cr.acauleRC106          ATC-GCTGAGGTTGT--GGC--GATTGC-----TGCCCGCCTATGCCT-C
Cr.acaulglaucRC105      ATC-GCTGAGGTTGT--GGC--GATTGC-----TGCCCGCCTATGCCT-C
Cr.bulbispermumRC95     ATC-GCAGAGGCTGT--GGC--GATTGC-----TGCCCGCCTATGCCTCC
Cr.foetidumRC98         ATC-GCAGAGGCTGT--GGC--GATTGC-----TGTCCGCCTATGCCC-C
Cr.graminicola7630      ATC-GCTGAGGTTGT--GGC--GATTGC-----TGCCCGCTTATGCCT-C
Cr.buphanoidesRC102     ------------------------------------------GCCT-C
Cr.acauleRC38           ATCCGCAGAGGCTGT--GGC--GATTGTC----TGTCCGCCTATGCCC-C
Cr.carolschmidRC97      ATT-GCAGAGGCTGT--GGC--GATTGC-----TGCCCGCCTATGCCT-C
Cr.moorei7921           ATC-GCAGAGGCTGT--GGC--GATTGC-----TGCCCGCCTATGCCT-C
Cy.elatus7636           AGGAGAAAGGGGAG----GC--GATTGC-----CGCCCTCCTTTGCCA-A
Cy.mackeniiRC87         AGGAGAAGGGGGAG----GC--GACCGC-----CGCCCTCCTTTGCCA-C
Cy.obliquus7278         AGGAGAAGGGGGAG----GC--GATTGC-----CACCCTCCTTTGCCA-C
Cy.ochroleucus7639      ------------------------------------------------
Cy.sanguineusRC94       AGGAGAAGGGGGAG----GC--GATTGC-----CGCCCTCCTTTGCCA-C
Cy.staadensis7316       AGGAGAAGGGGGAG----GC--GATTGC-----TGCCCTCCTTTGCCA-C
Cy.labiatus7212         AGGAGAAGGGGGAG----GC--GATTGC-----CGCCCTCCTTTGCCA-A
Cy.smithiae7214         AGGAGAAGGGGGAG----GC--GATTGC-----TGCCCTCCTTTGCCA-C
Cy.herreiRC86           AGGAGAAAGGGGAG----GC--GTTTGC-----CGCCCTCCTTTGCCA-C
Cy.falcatus7637         AGGAGAAGGGGGAG----GC--GATTGC-----CGCCCTCCTTTGCCG-C
Eus.darwini             -A---TA-GG--AG--------GGTAGC-------A--GTCGTCGTCTGC
Ge.namaquensiAMV635     GAGGGGAAGGGGCAG-A-GT--GATCGAC----CGACCTCCTTTGCCT-C
Hae.coccineusAMV632     AGGGG-AAGA-AGGT--GGT--GATCGC-----CAGTCTCCTTTGCCT-C
Hae.crispus7252         AGGGG-AAGA-AGGT--GGT--GATCGC-----CA-TCTCCTTTGCCT-C
Hae.crispus7260         AGGGG-AAGA-AGGT--GGT--GATCAC-----CAGTCTCCTTTGCCT-C
Lap.martinezii          AGCGGTA-GGG-GGC--GGC---ATCCC-----CCGTCGCCTCTGCCT-C
Leu.autumnale           AGCGGCGAGGGGGGC--AAC--AACCGC-----CGTC-GCCGCTGCCA-C
Na.sp.7608              ------------------------------------------------
Pan.canariense          AGCGGTAAGGG-GGC--GGC--ACCCGC-----CGTC-GCCTTTGCCT-C
Par.weberbaueri         GGCAGCA-G---------------TCGT-----CGTTCGCCAT-------
Ster.lutea              AGCGGTAAGTGGGGC--GGC--GCCCGT-----CGT-TGCCACAGCCT-C
Sc.membranaceus7246     AGGGTAAGGGGGA----GGT--GATCGC-----CGGCTTCCTTTACCT-C
Str.salter7245          ATT-GCTGAGGGTGT--GGC--GATTGC-----TC-TTACCCCCGCCTCC
Sc.membranaceus7917     ------------------------------------------------
Va.parviflora           AGCGGTAAGGCGGC---AGC--AATTGC-----CGTC-GCCTCTGCCT-C
Aco.calamus             TGTTCACCCGGTGCCGCCCCTCCCCGCGCGCGGGGAGGGGAAAACAAAAA
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                        3251                                                 3300
Ama.belladonna          CTTTGGTGCCACT--GCTGCTGCCACCGTCTTG-CACTGGCTG------C
Br.gregaria7157         CCTGGGTGCCATTTTGCTGCTGCCGTCGCCTTG-CACTGGCTGGCTG--C
Cro.flava7256           CTTGGTTGCCCATT-GCTGCTGCCTTCGCCTCG-CGCTGGCTG------C
Br.radulosanata7629     CCTGGGTGCCATTTTGCTGCTGCCGTCGCCTTCTCACTGGCTGGCTG--C
Cl.miniataRC14          CTTGGGTGCCCCG--GCCGCTGCCTT--CCCTG-CACAACGTG------C
Cl.miniata              CTTGGGTGCCCCG--GCCGCTGCCTT--CCCTG-CACAACGTG------C
Chl.fragrans            CTTGGGTG-CATCA-GCCACCGTCGA---CCTG-CACGTCGTG------C
Cr.euchrophyllRC96      CTTGGGTGCCATT--GCTGCTGCCATCGTCT-G-AATTGGCTGG-T----
Cr.acauleRC106          CTTGGGTGCCATT--GCTGCTGCCATCGTCCTTGAACTGGCTGG-T----
Cr.acaulglaucRC105      CTTGGGTGCCATT--GCTGCTGCCATCGTCTTG-AACTGGCTGG-T----
Cr.bulbispermumRC95     CTTGGGTGCCATT--GCTGTCGCCATCGTCT-G-AACTGGCTGG-T----
Cr.foetidumRC98         CTTGGGTGCCATT--GCTGCTGCCATCGCCTCC-AACTGGTTGG-T----
Cr.graminicola7630      CTTGGGTGCCATT--GCTGCTGCCATCGTCTTG-AACTGGCTGG-T----
Cr.buphanoidesRC102     CTTGGGTGCCATT--GCTGCCACCATTGTTTTG-AACCTGCTGG--GG-G
Cr.acauleRC38           CTTGGGTGCCATCT-GCTGCTGCCATTGCCTTC-CCTTGACTGG-TGGT-
Cr.carolschmidRC97      CTTGGGTGCCATT--GCTGCTGCCATCGTCTTG-AACTGGCTGG-T----
Cr.moorei7921           CTTGGGTGCCATT--GCTGCTGCCATCGTCTTG-AACTGGCTGG-T----
Cy.elatus7636           CTTGGGTGCC-T----CGGCCGCCCCCGCCCTG-CACGACGTGC--G---
Cy.mackeniiRC87         CTTGGGTGCC-T----CGGCTGCCCCC-CCCTG-CACGACGTGC--GG--
Cy.obliquus7278         CTTGGGTGCC-T----CGGCCGCCCCCGCCATG-CACGACGTGC--G---
Cy.ochroleucus7639      ------------------CCGCCCCCGCCCTG-CA-GACGTGC--GG--
Cy.sanguineusRC94       CTTGGGTGCC-T----CGGCCGCCCTCCCCCCTGCACGACGTGC--G---
Cy.staadensis7316       CTTGGGTGC--T----CGGCCGCCCTCGCC-TG-CACGACGTGC--G---
Cy.labiatus7212         CTTGGGTGCC-T----CGGCCGCCCCCGCCCTG-CACGACGTGC--G---
Cy.smithiae7214         CTTGGGTGCC-T----CGGCCGCCCTCCCCCTG-CACGACGTGC--G---
Cy.herreiRC86           CTTGGGCGCC-T----CGGCCGCCCCC-CCCTG-CACGACGTGC--G---
Cy.falcatus7637         CTTGGGTGCC-T----CGGCCGCCCCCCCCCTG-CACGACGTGC--G---
Eus.darwini             CTTGGGTGCCC-----CAGCCGTCGTCGTCCTG-CACGTCGTGC------
Ge.namaquensiAMV635     CCTGGGTGCCC-----CGGCCGCCGCCCCCCTG-CACAACGTGC------
Hae.coccineusAMV632     CTTAGGTGCCC-----CAGCCGCTGCCGTCCTG-CATAATGTGC------
Hae.crispus7252         CTTAGGTGCCC-----CAGCCGCTGCCGTCCTG-CATAATGTGC------
Hae.crispus7260         CTTAGGTGCCC-----CAGCCGCTGCCGTCCTG-CATAATGTGC------
Lap.martinezii          CTTGGGTGCCC-----CTGCCGTCGCCGCCCCG-CACGTCGTGC------
Leu.autumnale           CTTGGGGGCCC-----CTGCCGTCGTCGCCCTG-CACGCCGTGT------
Na.sp.7608              --------------------------------------------------
Pan.canariense          CTTGGGTGCCC-----CTGCCGCCGCCGCCCTG-CA--------------
Par.weberbaueri         ---GGGTGCCA-----CAGCCGTCGCCGGCTTG-CACCTCGTGC------
Ster.lutea              CTTGGGTGCCC-----CTGCCGTCGCCGCCCTG-CACGTGCTGC------
Sc.membranaceus7246     CTTGGGTGCCC----CCGGCCGCTGCCGCCTTG-CACAATGTGC------
Str.salter7245          CTTGGGTGCCATT--GCTGCTGCCTTC-CCTTG-CACTGGTTGC------
Sc.membranaceus7917     --------------------------------------------------
Va.parviflora           CTTGGGTGCCC-----CTACCGTCGCAGCCCAG-CACGTCGTAC------
Aco.calamus             ACAACCCCGGCGCGGTCTGCGCCAAGGAGCTCTCTTGAGAGGAATGAAAG
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                        3301                                                3350
Ama.belladonna          GGGAGGGGGCGGCGG---GAAC-AAACATCC---GGCGCGGTGTGC-GTC
Br.gregaria7157         GGGAGGGGGCAGTGG---GAAC-AAACATCC---GGCGCGGTGTGC-GCC
Cro.flava7256           GGGAGGGGGCAGTGG---GAAC-AAACATCC---GGCGTGGTGTGC-GCC
Br.radulosanata7629     GGGAGGGGGCAGTGG---GAAC-AAACATCC---GGCGCGGTGTGC-GCC
Cl.miniataRC14          GGGATGAG-CAAAAA---GAAC-AATT-TCCC--GGCGCGGCGTGC-GCC
Cl.miniata              GGGATGAG-CAGTGG---GAAC-AA-T-TTCC--GGCGCGGCGTGC-GCC
Chl.fragrans            GGGATGAA-GGGTGG---GAAC-AA-T-TTTC--GGCGTGTTGCGC-GCC
Cr.euchrophyllRC96      -GGAGGGG-CGGTGG---GGAC-AAACATCC---GGCGCGGTGTGC-GCC
Cr.acauleRC106          -GGAGGGG-CGGTGG---GGAC-AAACATCC---GGCGCGGTGTGC-GCC
Cr.acaulglaucRC105      -GGAGGGG-CGGTGG---GGAC-AAACATCC---GGCGCGGTGTGC-GCC
Cr.bulbispermumRC95     -GGAGGGG-CGGTGG---GGAC-AAACATCC---GGCGCGGTGTGC-GCC
Cr.foetidumRC98         -GGAGGGG-CGGTGG---GGAC-AAACATCCC--GGCGTGGTGTGC-GCC
Cr.graminicola7630      -GGAGGGG-C-GTGG---GGAC-AAACATCCC--GGCGCGGTGTGC-GCC
Cr.buphanoidesRC102     GGGTGGGGGTGGCGG---GAAC-AAACATTC---GGCGCGGTGTGC-GCC
Cr.acauleRC38           -GGAGGGG-CGGTGG---GGAC-AAACATCC---GGCGTGGTGTGC-GCC
Cr.carolschmidRC97      -GGAGGGG-CGGTGG---GGAC-AAACTTCC---GGCGCGGTGTGC-GCC
Cr.moorei7921           -GGAGGGG-CGGTGG---GGAC-AAACATCC---GGCGCGGTGTGC-GCC
Cy.elatus7636           -AGACGAG-CGGCGG---GAAC--AATTTCC---GGCGCGGTGTGC-GCC
Cy.mackeniiRC87         --GACGAG-CGGCGG---GAAC--AATTTCC---GGCGCGGTGTGC-GCC
Cy.obliquus7278         -AGACGAG-CGGCGG---GAAC--AATTTCC---GGCGCGGTGTGC-GCC
Cy.ochroleucus7639      --GACGAG-CGGCGG---GAAC--ATTTTCC---GGCGCGGTGTGC-GCC
Cy.sanguineusRC94       -AGACGAG-CGGCGG---GAAC--AATTTCC---GGCGCGGTGTGC-GCC
Cy.staadensis7316       -AGACGAG-CGGCGG---GAAC--AATTTCC---GGCGCGGTGTGC-GCC
Cy.labiatus7212         -AGACGAG-CGGCGG---GAAC--AATTTCC---GGCGCGGTGTGC-GCC
Cy.smithiae7214         -AGACGAG-CGGCGG---GAAC--AATTTTCC--GGCGCGGTGTGC-GCC
Cy.herreiRC86           -AGGCGAG-CGGCGG---GAAC--AATTTTC---GGCGCGGTGTGC-GCC
Cy.falcatus7637         -AGACGAG-CGGCGG---GAAC--AATTTTC---GGCGCGGTGTGC-GCC
Eus.darwini             GGGATGAG-GGACGG---GAAC--AATTTTC---GGCGTGTTGCAC-GCC
Ge.namaquensiAMV635     AGGACGAG-CAGCGG---GAAC--AATTTTCC--GGCGCGGTGTGC-GCC
Hae.coccineusAMV632     AGGACGAG-CGGCGA---GAAC--AATTTCC---GGCGCGGTGTGC-GCC
Hae.crispus7252         AGGACGAG-CGGCGA---GAAC--AATTTCC---GGCGCGGTGTGC-GCC
Hae.crispus7260         AGGACGAG-CGGCGA---GAAC--AATTTCC---GGCGCGGTGTGC-GCC
Lap.martinezii          GGGGCGAG-CGGCGG---GAAC--AATTTCC---GGCGCGGTGCGC-GCC
Leu.autumnale           GGGACGAG-CGGCGG---GAAC--ATTTTCC---GGCGCGGTGCGC-GCC
Na.sp.7608              --------------------------------------------------
Pan.canariense          -GGACGAG-CGGCGG---GAAC--AATTTCC---GGCGCGGTGCGC-GCC
Par.weberbaueri         GGGACGAG-CGGAGG---GAAC--ATTTTTC---GGCGCGTCGTGC-GCC
Ster.lutea              GGGACGAG-CGGTGG---GAAC-AATTTCC----GGCGCGGTGCGC-GCC
Sc.membranaceus7246     ATGACGAG-CAGCGG---GAAC-AACTTTCC---GGCGCCGTGTGC-GCC
Str.salter7245          GGGAGGGGGCGGTGG---GAAC-AAACATCC---GGCGAGTTCGGC-GCC
Sc.membranaceus7917     --------------------------------------------------
Va.parviflora           GGGACGTG-CGACGG---GAAC-AATTTTC----GGCGCAGTGCGC-GCC
Aco.calamus             CGGGCGCGGCGCGTGGCACCGGCCCCTCACCCACCCCGCGGGCTTGCCGG
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                        3351                                                 3400
Ama.belladonna          AAGGAGCAA-GACCCGTT---GGAGAGCAGAGCGTGC----CGGCACGCT
Br.gregaria7157         AAGGAGAGA-TACTTGAT---GGAGAGCAGAGCGTGC----TGGCATGCT
Cro.flava7256           AGGGATCAA-GACCTGTT---GGAGAGCAGAGCATGC----CGGTAAGCC
Br.radulosanata7629     AAGGAGAGA-TACTTGAT---GGAGAGCAGAGCGTGC----TGGCATGCT
Cl.miniataRC14          AAGGAGCA--GACCCATTT--GGAGCGCGGAGTGTGC-----GGCACGCT
Cl.miniata              AAGGAGCA--GACCCATTT--GGAGCGCGGAGTGTGC-----GGCACGCT
Chl.fragrans            AAGGAACAA-CCCCGTTT---GGAGAGCGGAGCGTGC-----GGCAAGCT
Cr.euchrophyllRC96      AAGGAGCAG-GACCTGTT---GGAGAGCAGAGTGTGC----CAGCATGCA
Cr.acauleRC106          AAGGGGCAA-GACCTGTT---GGAGAGCAGAGTGTGC----CAGCATGCA
Cr.acaulglaucRC105      AAGGGGCAA-GACCTGTT---GGAGAGCAGAGTGTGC----CAGCATGCA
Cr.bulbispermumRC95     AAGGAGCAA-GACCTGTT---GGAGAGCAGAGTGTGC----CAGCATGCA
Cr.foetidumRC98         AAGGAGCAA-GACCTGTT---GGAGAGCAGGGTGTGC----CAGCATGCA
Cr.graminicola7630      AAGGGGCAA-GACCTGTT---GTAGAGCAGAGTGTGC----CAGCATGTA
Cr.buphanoidesRC102     AAGGAGCAAAGGCCCGTT---GGGGAGCAGAGTGTGC----CAGCATGCT
Cr.acauleRC38           AAGGAGCAA-GACCTGTT---GGAGAGCAG-GTGTGC----CAGCATGCA
Cr.carolschmidRC97      AAGGAGCAA-GACCTGTT---GGAGAGCAGAGTGTGC----CAGCATGCG
Cr.moorei7921           AAGGAGCAA-GACCTGTT---GGAGAGCAGAGTGTGC----CAGCATGCA
Cy.elatus7636           AAGGAGCAG--ACCCATTT--GGAGAGAGGAGCGTGC-----GGCATGCT
Cy.mackeniiRC87         AAGGAGCAG--ACCCATTT--GGAGAGAGGAGCGTGC-----GGCATGCT
Cy.obliquus7278         AAGGAGCAG--ACCCATTT--GGAGAGAGGAGCGTGC-----GGCATGCT
Cy.ochroleucus7639      AAGGAGCAG--ACCCATTT---GAGAGAGGAGCGTGC-----GGCATGCT
Cy.sanguineusRC94       AAGGAGCAG--ACCCATTT--GGAGAGAGGAGCGTGC-----GGCATGCC
Cy.staadensis7316       AAGGAGCAG--ACCCATTT--GGAGAGAGGAGCGTGC-----GGCATGCC
Cy.labiatus7212         AAGGAGCAG--ACCCATTT--GGAGAGAGGAGCGTGC-----GGCATGCT
Cy.smithiae7214         AAGGAGCAG--ACCCATTT--GGAGAGAGGAGCGTGC-----GGCATGCC
Cy.herreiRC86           AAGGAGCAG--ACCCATTT--GGAGAGAGGAGCGTGC-----GGCATGCT
Cy.falcatus7637         AAGGAGCAG--ACCCATTT--GGAGAGAGGAGCGTGC-----GGCATGCT
Eus.darwini             AAGGAGCAG--CCCCGTTT--GGAGAGCGGAGCGTGC-----GGCAAGCT
Ge.namaquensiAMV635     AAGGAGCAG--ACCCATTT--GGAGTGCGGAGCTTGC-----TGCACGCT
Hae.coccineusAMV632     AAGGAATTG--ACCCATTT--GGAGAGTGGAGCTTGC-----TGCACGCC
Hae.crispus7252         AAGGAATTG--ACCCATTT--GGAGAGTGGAGCTTGC-----TGCACGCC
Hae.crispus7260         AAGGAATGA---CCCATTT--GGAGAGTGGAGCTTGC-----TGCACGCC
Lap.martinezii          AAGGAGCAG--CCATGTTT--GGATGGCGTAGCGTGC-----GGCGAGCG
Leu.autumnale           AAGGAGCAG--CCCTGTTT--GGATGGCGCAGCGTGC-----GTGAAGCG
Na.sp.7608              ------------------------------CGCGT-----GGCGAGCA
Pan.canariense          AAGGAGCAG--CCCTGTTT--GGATAGCGTAGCGTGC-----GGCGAGCG
Par.weberbaueri         AAGGAGCAG-TCCCGGTT---GGAGAGCGCGTCGTGC-----TGCAAGCT
Ster.lutea              AAGGAGCAA--CCCTGTTT--GGATAGCGCAGCGTGC-----GGCGAGCG
Sc.membranaceus7246     AAGGAGCAT--ACCCATTC--GGAGAGTGGAGCTTGC-----TGCACGCC
Str.salter7245          AAGGAGCAA--GACCAGTT--GGAGAGCAGAGCTTGC----ATGCATTTG
Sc.membranaceus7917     --------------------GGAGAGTGGAGCTTGC---TGCGCACGCC
Va.parviflora           AAGGAGTAG--CCTTGTTT--GTATAGCGTAGCATGC-----GTCAAGCA
Aco.calamus             CCACGGCAACTCCCGGGGC-GGCTGGGACGGCGGTGC----CACCAAGCC
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                    3401                                                3450
Ama.belladonna      T--AGTGCTCG-------AGCT-TGCGAT-GCGATCC-TGGTA--CATCA
Br.gregaria7157     --AGGTGCTCG-------AGCT-TGCGAT-GCGATCT-TGGTA--CTTCA
Cro.flava7256       --AGGTGCTTG-------AGCT-TGCGAT-GCGATCT-TGGTT--CATCA
Br.radulosanata7629 --AGGTGCTCG-------AGCT-TGCGAT-GCGATCT-TGGTA--CTTCA
Cl.miniataRC14      T--TGTGCTGC-------AGCA-CGCGAT-GCGATCT-TGGTA--CGTC-
Cl.miniata          T--TGTGCTGC-------AGCA-CGCGAT-GCGATCT-TGGTA--CGTC-
Chl.fragrans        T--TGCGCAGC-------AGCA-CGCGGC-GCTATCC-CGGTA--CGTC-
Cr.euchrophyllRC96  T--GGTGCTAG-------AGCT-TGCGAT-GCGATCT-TGGTA--CATCA
Cr.acauleRC106      T--GGTGCTAG-------AGCT-TGCGAT-GCGATCT-TGGTA--CATCA
Cr.acaulglaucRC105  T--GGTGCTAG-------AGCT-TGCGAT-GCGATCT-TGGTA--CATCA
Cr.bulbispermumRC95 T--GGTGCTAG-------AGCT-TGCGAT-GCGATCT-TGGTA--CATCA
Cr.foetidumRC98     T--GGTGCTAG-------AGCT-TGCGAT-GCGATCT-TGGTA--CATCA
Cr.graminicola7630  T--GGTGCTAG-------AGCT--------------------------
Cr.buphanoidesRC102 T--GGTGCTAG-------AGCT-TGCGAT-GCGACCT-TGGTA--CATCA
Cr.acauleRC38       T--GGTGCTAG-------AGCT--GCGAT-GCGATCT-TGGTA--CATCA
Cr.carolschmidRC97  T--GGTGCTAG-------AGCT-TGCGATAGCGATCT-TGGTA--CATCA
Cr.moorei7921       T--GGTGCTAG-------AGCT-TGCGAT-GCGATCT-TGGTA--CATCA
Cy.elatus7636       T--AGTGCTGT-------AGCA-CGCGAC-GCGATGCCTGGTA--CGTC-
Cy.mackeniiRC87     T--AGTGCTGT-------AGCA-CGCGAC-GCGATCC-TGGTA--CGTC-
Cy.obliquus7278     A--AGTGCTGT-------AGCA-CGCGAC-GCGATCC-TGGTA--CGTC-
Cy.ochroleucus7639  T--AGTGCTGTGT-----AGCA-CGCGAC-GCGATCC-TG-TA--CGTC-
Cy.sanguineusRC94   T--AGCGCTGT-------AACA-CGCGAC-GCGATCC-TGGTA--CGTC-
Cy.staadensis7316   C--AGCGCTGT-------AACA-CGCGAC-GCGATCC-TGGTA--CGAC-
Cy.labiatus7212     T--AGTGCTGT-------AGCA-CGCGAC-GCGATCC-TGGTA--CGTC-
Cy.smithiae7214     T--AGCGCTGT-------AACA-CGCGAC-GCGATCC-TGGTA--CGTC-
Cy.herreiRC86       T--AGTGCTGT-------AGCA-CGCGAC-GCGATCC-TGGTA--CGTC-
Cy.falcatus7637     T--AGTGCTGT-------AGCA-CGCGAC-GCGATCC-TGGTA--CGTC-
Eus.darwini         T--AGTGCAGC-------AGCA-CGCGAC-GCCATCC-TGGTA--AGTC-
Ge.namaquensiAMV635 T----TG-TGCC-------GCA-CGCGAC-GCGATCC-TGGTA--CGTA-
Hae.coccineusAMV632 T--AGTGATGCT-------GTA-GGCGAC-GTGATCC-TGGTA--CGTT-
Hae.crispus7252     T--AGTGATGCT-------GTA-GGCGAC-GTGATCC-TGGTA--CGTT-
Hae.crispus7260     T--AGTGATGCT-------GTA-GGCGAC-GTGATCC-TGGTA--CGTT-
Lap.martinezii      T--AGCATCGC-------AGCG-CGCGAC-GCGATCC-CGGTA--CGTT-
Leu.autumnale       T--AGCATCGC-------AGCA-CGCGGC-GCGATCC-TGAAA--AGTC-
Na.sp.7608          C--TGTATCGC-------AACG-C-CGAC-GCCATCT-TTGTA--CGTC-
Pan.canariense      C--GGCATCGC-------AGCG-CGCGAC-GCGATCC-TGGTA--CGTC-
Par.weberbaueri     T--AGTGCCGC-------AGCG-GGCGAG-GCGATCA-TGGTA--CGTC-
Ster.lutea          C--ACCATCGC-------AGCG-CGCGAC-GCGATCC-TGGTA--CGCC-
Sc.membranaceus7246 T--TGTGCTGC-------CGCA-CGCGAC-GCGATCC-TGGTAA-CGTC-
Str.salter7245      T--GGTGCTTG-------AGCT-TGCGAT-GCGATCT-TGGTA--CTTCA
Sc.membranaceus7917 T--TGTGCTGC-------CGCA-CGCGAC-GCGATCC-TGGTAA-CGTC-
Va.parviflora       TGTAGCATCGC-------AACA-TGCGAC-GCGATCC-AGGTA--CGTC-
Aco.calamus         ---GCGCGGCG-------CGCA-TCGAAT--C-A-------TAA---TGG
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                        3451                                                 3500
Ama.belladonna          TAAAACC-TGCAT-GACT----CCCGGCAACG-GATATCTTGG--CTCTC
Br.gregaria7157         TA--AC--------GACT----CTCGGCAACG-GATATCTTGG--CTCTC
Cro.flava7256           TA---------AT-GACT----CTCGGCAACG-GATATCTTGG--CTCTC
Br.radulosanata7629     TA--AC--------GACT----CTCGGCAACG-GATATCTTGG--CTCTC
Cl.miniataRC14          TATAACC-TGCAT-GAACT---CTCGGCAACG-GAAATCTTGGG-CTCTC
Cl.miniata              TATAACC-TGCAT-GACT----CTCGGCAACG-GATATCTTGG--CTCTC
Chl.fragrans            TA--ACC-TGCAT-GACT----CTCGGCAACG-GATATCTTGG--CTCTC
Cr.euchrophyllRC96      TAACACC-TACAT-GACT----CCCGGCAATG-GATATCTTGG--CTCTC
Cr.acauleRC106          TAACACC-TACAT-GACT----CCCGGCAATG-GATATCTTGG--CTCTC
Cr.acaulglaucRC105      TAACACC-TACAT-GACT----CCCGGCAATG-GATATCTTGG--CTCTC
Cr.bulbispermumRC95     TAACACC-TACAT-GACT----CCCGGCAATG-GATATCTTGG--CTCTC
Cr.foetidumRC98         TAACACC-TACAT-GACT----CCCGGCAATG-GATATCTTGG--CTCTC
Cr.graminicola7630      ------------------------------------------------
Cr.buphanoidesRC102     TAACACC-TACAT-GACT----CCCGGCAATG-GATATCTTGG--CTCTC
Cr.acauleRC38           TAACACC-TACAT-GACT----CCCGGCAATG-GATATCTTGG--CTCTC
Cr.carolschmidRC97      TAACA-C-TACAT-GACT---CCCCGGCAATG-GATATCTTGG--CTCTC
Cr.moorei7921           TAACACC-TACAT-GACT----CCCGGCAATG-GATATCTTGG--CTCTC
Cy.elatus7636           TAAC-T--TGCAT-GACT----CTCGGCAGAG-GATTTCTTGG--CTCTC
Cy.mackeniiRC87         TAAC-T--TGCAT-GACT-----TCGG-AACG-GATATCTTGG--CTCTC
Cy.obliquus7278         TAAC-T--TGAAT-GACT----CTTGGCAACG-GATATCTTGG--CTCTC
Cy.ochroleucus7639      TAAC-T--TGCAT-GACT----CTCG-CAACG-GATATCTTGG--CTCTC
Cy.sanguineusRC94       TAAC-T--TGCAT-GACT----CTCGGCAACG-GATATCTTGG--CTCCT
Cy.staadensis7316       TAAC-T--TGCAT-GACT----CTCGGCAACG-GATATCTTGG--CTCTC
Cy.labiatus7212         TAAC-T--TGCAT-GACT----CTCGGCAACG-GATATCTTGG--CTCTC
Cy.smithiae7214         TAAC-T--TGCAT-GACT-----TCGGCAACG-GATAT-TTGG--CTCTC
Cy.herreiRC86           TAAC-T--TGCAT-GACT-----TCGGCAACG-GATATCTTGG--CTCTC
Cy.falcatus7637         TAAC----TGCAT-GACT----CTCGGCAACG-GATATCTTGG--CTCTC
Eus.darwini             TAAC-C--TGCAT-GACT----CTCGGCAACG-GATATCTTGG--CTCTC
Ge.namaquensiAMV635     TAAC-C--TGCAT-GACT----CTCGGCAACG-GATATCTTGG--CTCTC
Hae.coccineusAMV632     TAAC-T--TGTAC-GACT----CTCGGCAACG-GATATCTTGG--CTCTC
Hae.crispus7252         TAAC-T--TGTAC-GACT----CTCGGCAACG-GATATCTTGG--CTCTC
Hae.crispus7260         TAAC-T--TGTAC-GACT----CTCGGCAACG-GATATCTTGG--CTCTC
Lap.martinezii          TAACA---TGCAT-GACT----CTCGGCAACG-GATATCTTGG--CTCTC
Leu.autumnale           TAACA---TGCAT-GACT----CTCGACAACG-GATATCTTGG--CTCTC
Na.sp.7608              TAACTT--TGCAT-GACT----CTCGGCAACG-GATATCTTGG--CTCTC
Pan.canariense          TGAC-C--TGCAT-GACT----CTCGGCAACG-GATATCTTGG--CTCTC
Par.weberbaueri         TAAC-C--TGCAC-GACT----CTCGGCAACG-GATATCTTGG--CTCTC
Ster.lutea              TAAC-C--TGCAT-GACT----CTCGGCAACG-GATATCTTGG--CTCTC
Sc.membranaceus7246     TAAC-C--TGCAT-GACT----CTCGGCAACG-GATATCTTGG--CTCTC
Str.salter7245          TA---------AT-GACT----CTCGGCAACG-GATATCTTGG--CTCTC
Sc.membranaceus7917     TAAC-C--TGCAT-GACT----CTCGGCAA-G-GATATCTTGG--CTCTC
Va.parviflora           AAAC-C--TGCAC-GACT----CTCGGCAACG-GATATCTTGG--CTCTC
Aco.calamus             AAAC-----G-AT-GACT----CTCGGCAACG-GATATCTAGG--CTCTC
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                        3501                                                 3550
Ama.belladonna          GCATC-GATGAAGGA-CGTA--GCGAAATGC-GATACTT-GGTGTGAATT
Br.gregaria7157         GCATC-GATGAAGAA-CGTA--GCGAAATGC-GATACTT-GGTGTGAATT
Cro.flava7256           GCATC-GATGAAGGA-CGTA--GCGAAATGC-GATACTT-GGTGTGAATT
Br.radulosanata7629     GCATC-GATGAAGGA-CGTA--GCGAAATGC-GATACTT-GGTGTGAATT
Cl.miniataRC14          GCAT--GATGAAGAA-CGTA--GCGAAATGC-GATACTT-GGTGTGAATT
Cl.miniata              GCATC-GATGAAGAA-CGTA--GCAGAATGC-GATACTT-GGTGTGAATT
Chl.fragrans            GCATC-GATGAAGAA-CGTA--GCGAAATGC-GATACTT-GGTGTGAATT
Cr.euchrophyllRC96      GCATC-GATGAAGGA-CGTA--GCGAAATGC-GATACTT-GGTGTGAATT
Cr.acauleRC106          GCATC-GATGAAGGA-CGTA--GCGAAATGC-GATACTT-GGTGTGAATT
Cr.acaulglaucRC105      GCATC-GATGAAGGA-CGTA--GCGAAATGC-GATACTT-GGTGTGAATT
Cr.bulbispermumRC95     GCATC-GATGAAGGA-CGTA--GCGAAATGC-GATACTT-GGTGTGAATT
Cr.foetidumRC98         GCATC-GTTAAAGGA-CGTAA-GCGAAATGC-GATACTT-GGTGTGAATT
Cr.graminicola7630      ----------------------------TGC-GA----------------
Cr.buphanoidesRC102     GCATC-GATGAAGGA-CGTA--GCGAAATGC-GATACTT-GGTGTGAATT
Cr.acauleRC38           GCATC-GATGAAGGA-CGTA--GCGAAATGC-GATACTT-GGTGTGAATT
Cr.carolschmidRC97      GCATC-GATGAAGGA-CGTA--GCGAAATGC-GATACTT-GGTGTGAATT
Cr.moorei7921           GCATC-GATGAAGGA-CGTA--GCGAAATGC-GATACTT-GGTGTGAATT
Cy.elatus7636           GCATCCGATGAAGAATCGTAA-GCGAAATGCCGATACTTTGGTGTGAATT
Cy.mackeniiRC87         GCATC-GATGAAGAA-CGTA--GCGAAATGC-GATACTT-GGTGTGAATT
Cy.obliquus7278         TCATC-AATGAAGAA-CGTA--GCGAAATGC-GATACTT-GGTGTGAATT
Cy.ochroleucus7639      GCATC-GATGAAGAA-CGTA--GCGAAATGC-GATACTT-GGTGTGAATT
Cy.sanguineusRC94       GCATC-GATGAAGAA-CGTAG-CCGAAATGC-GATACTT-GGTGTGAATT
Cy.staadensis7316       GCATC-GATGAAGAA-CGTA--GCGAAATGC-GATACTT-GGTGTGAATT
Cy.labiatus7212         GCATC-GATGAAGAA-CGTA--GCGAAATGC-GATACTT-GGTGTGAATT
Cy.smithiae7214         GCATC-GATGAAGAA-CGTA--GCGAAATGC-GATACTT-GGTGTGAATT
Cy.herreiRC86           GCATC-GATGAAGAA-CGTA--GCGAAATGC-GATACTT-GGTGTGAATT
Cy.falcatus7637         GCATC-GATGAAGAA-CGTA--GCGAAATGC-GATACTT-GGTGTGAATT
Eus.darwini             GCATC-GATGAAGAA-CGTA--GCGAAATGC-GATACTT-GGTGTGAATT
Ge.namaquensiAMV635     GCATC-GATGAAGAA-CGTA--GCGAAATGC-GATACTT-GGTGTGAATT
Hae.coccineusAMV632     GCATC-GATGAAGAA-CGTA---CGAAATGC-GATACCT-GGTGTGAATT
Hae.crispus7252         GCATC-GATGAAAAA-CGTA--CCGAAATGC-GATACCT-GGGGTGAATT
Hae.crispus7260         GCATC-GATGAAGAA-CGTA--GCGAAATGC-GATACCT-GGTGTGAATT
Lap.martinezii          GCATC-GATGAAGAA-CGTA--GCGAAATGC-GATACTT-GGTGTGAATT
Leu.autumnale           GCATC-GATGAAGAA-CGTA--GCGAAATGC-GATACTT-GGTGTGAATT
Na.sp.7608              GCATC-GAT-AATAA-CGTT---CGAAACGC-GATACTT-GGTGTGATTT
Pan.canariense          GCATC-GATGAAGAG-CGTA--GCGAAATGC-GATACTT-GGTGTGAATT
Par.weberbaueri         GCATC-GATGAAGAA-CGTA--GCGAAATGC-GATACTT-GGTGTGAATT
Ster.lutea              GCATC-GATGAAGAA-CGTA--GCGAAATGC-GATACTT-GGTGTGAATT
Sc.membranaceus7246     GCATC-GATGAAGAA-CGTA--GCGAAATGC-GATACTT-GGTGTGAATT
Str.salter7245          GCATC-GATGAAGGA-CGTA---CGAAATGC-GATACTT-GGTGTGAATT
Sc.membranaceus7917     GCATC-GATGAAGAA-CGTA--GCGAAATGC-GATACTT-GGTGTGAATT
Va.parviflora           GCATC-GATGAAGAA-CGTA--GCGAAATGC-GATACTT-GGTGTGAATT
Aco.calamus             GCATC-GATGAAGAA-CGTA--GCGAAATGC-GATACTT-GGTGTGAATT
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                          3551                                                 3600
Ama.belladonna            G--CAGAA---TCCC-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTT
Br.gregaria7157           G--CAGAA---TCCC-GTGAAC--CATC--AGTCTTTGAAC-GC-AAGTT
Cro.flava7256             G--CAGAA---TCCC-GTGAAC--CATTG-AGTCTTCGAAC-GC-AAGTT
Br.radulosanata7629       G--CAGAA---TCCC-GTGAAC--CATCG-AGTCTTTGAACTAC-AAGTT
Cl.miniataRC14            G--CAGAA---TCCC-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTT
Cl.miniata                G--CAGAA---TCCC-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTT
Chl.fragrans              G--CAGAA---TCCC-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTT
Cr.euchrophyllRC96        G--CAGAA---TCCC-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTT
Cr.acauleRC106            G--AAAAA---TCCC-GTGAACC-CATCG-AATTTTTGAAC-CC-AA-TT
Cr.acaulglaucRC105        G--CAGAA---TCCC-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTT
Cr.bulbispermumRC95       G--CAGAA---TCCC-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTT
Cr.foetidumRC98           G--CAGAA---TCCC-GTGAACC-CATCG-AGTCTTTGAAC-GC-AAGTT
Cr.graminicola7630        -------------CC-ATG--------CG-AGTCTTTGAAC-TC-A--TT
Cr.buphanoidesRC102       G--CAGAA---TCTC-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTT
Cr.acauleRC38             G--CAGAA---TCCC-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTT
Cr.carolschmidRC97        G--CAGAA---TCCCCGTGAAC--CATCG-TGTCTTTGAAC-GC-AAGTT
Cr.moorei7921             G--CAGAA---TCCC-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTT
Cy.elatus7636             G--CAGAA---TCTCCGTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTT
Cy.mackeniiRC87           G--CAGAA---TCC--GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTT
Cy.obliquus7278           G--CAGAA---TCCC-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTT
Cy.ochroleucus7639        G--CAGAA---TCCC-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTT
Cy.sanguineusRC94         G--CAGAA---TCCC-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTT
Cy.staadensis7316         G--CAGAA---TCCC-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTT
Cy.labiatus7212           G--CAGAA---TCCC-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTT
Cy.smithiae7214           G--CAGAA---TCCC-GTGAAC--CAT-G-AGT-TTTGAAC--C-AAGTT
Cy.herreiRC86             G--CAGAA---TCCC-GTGAAC--CATCG-AGTCTTTGATC-GC-AAGTT
Cy.falcatus7637           G--CAGAA---TCCC-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTT
Eus.darwini               G--CAGAA---TCCC-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTT
Ge.namaquensiAMV635       G--CAGAA---TCCC-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTT
Hae.coccineusAMV632       G--CAGAA---TCCC-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTT
Hae.crispus7252           G--CAGAA---TCC--GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTT
Hae.crispus7260           G--CAGAA---TCCC-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTT
Lap.martinezii            G--CAGAA---TCCC-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTT
Leu.autumnale             G--CAGAA---TCCC-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTT
Na.sp.7608                G--CA-AA---TCCC-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTT
Pan.canariense            G--CAGAA---TCCC-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTT
Par.weberbaueri           G--CAGAA---TCCC-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTT
Ster.lutea                G--CAGAA---TCCC-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTT
Sc.membranaceus7246       G--CAGAA---TCCC-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTT
Str.salter7245            G--CAGAA---TCCC-GTGAAC--CATTG-AGTTTTTGAAC-GC-AAGTT
Sc.membranaceus7917       G--CAGAA---TCCC-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTT
Va.parviflora             G--CAGAA---TCCC-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTT
Aco.calamus               G--CAGAA---TCCC-GTGAAC--CATCG-AGTCTTTGAAC-GC-AAGTT
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                        3601                                                3650
Ama.belladonna          GCGCCCGAG-GCTATC-CG------GCCAAGGGCAC--GCCTGCCTGGGC
Br.gregaria7157         GCGCCCGAG-GCTATC-TG------GCTGAGGGCAC--GCCTTCCTGGCC
Cro.flava7256           GCGCCCGAG-GCTATC-TG------GCTAAGGGCAC--GCCTGCCTGGGC
Br.radulosanata7629     GCGCCCGAG-GCTATT-TG------G-TGAGGGCAC--GCCTGC-TGGGC
Cl.miniataRC14          GCGCCCGAGTGCTATC-TG------GCCAAGGGC-C--GCCTGCCTGGGC
Cl.miniata              GCGCCCGAG-GCTATC-TG------GCCAAGGGCAC--GCCTGCCTGGGC
Chl.fragrans            GCGCCTGAG-GCTATC-TG------GTCAAGGGCAC--GCCTGCCTGGGC
Cr.euchrophyllRC96      GCGCCCGAG-GCTATC-TG------GCTAAGGGCAC--GCCTGCCTGGGC
Cr.acauleRC106          GCCCCCGAG-GTT-TC-T-------GGTAAGGGCAC--GCCTGCCTGGGC
Cr.acaulglaucRC105      GCGCCCGAG-GCTATC-TG------GCTAAGGGCAC--GCCTGCCTGGGC
Cr.bulbispermumRC95     GCGCCCGAG-GCTATC-TG------GCTAAGGGCAC--GCCTGCCTGGGC
Cr.foetidumRC98         GCGCCCGAG-GCTATC-TG------GCTAAGGGCAC--GCTT--CTGGGC
Cr.graminicola7630      GCGCCCGAG-GCTATCCTG------GCTAAGGGCAC--GCCTGCCTGGGC
Cr.buphanoidesRC102     GCGCCCGAG-GTTATC-TG------GCCAAGGGCAC--GCCTGCCTGGGC
Cr.acauleRC38           GCGCCCGAG-GCTATC-TG------GCTAAGGGCAC--GCCTTCCTGGGC
Cr.carolschmidRC97      GCGCCCGAG-GCTATC-TG------GCTAAGGGCAC--GCCTGCCTGGGC
Cr.moorei7921           GCGCCCGAG-GCTATCCTG------GCTAAGGGCAC--ACCTGCCTGGGC
Cy.elatus7636           GCGCCCGAG-GCTATC-TG------GCCAAGGGCAC--GCCTGCCTGGGC
Cy.mackeniiRC87         GCGCCTGAG-GCTATC-TG------GCCAAGGGCAC--GCCTGCCTGGGC
Cy.obliquus7278         GCGCCCGAG-GCTATC-TG------GCCAAGGGCAT--GCCTGCCTGGGC
Cy.ochroleucus7639      GCGCCCGAG-GCTATC-TG------GCCAAGGGCAC--GCCTGCCTGGGC
Cy.sanguineusRC94       GCGCCCGAG-GCTATC-TG------GCCAAGGGCAT--GCCTGCCTGGGC
Cy.staadensis7316       GCGCCCGAG-GCTATC-TG------GCCAAGGGCAT--GCCTGCCTGGGC
Cy.labiatus7212         GCGCCCGAG-GCTATC-TG------GCCAAGGGCAC--GCCTGCCTGGGC
Cy.smithiae7214         GCGCCCGAG-GCTATC-TG------GCCAAGGGCAT--GCCTGCTTGGGC
Cy.herreiRC86           GCGCCTGAG-GCTATC-TG------GCCAAGGGCAC--GCCTGCCTGGGC
Cy.falcatus7637         GCGCCCGAG-GCTATC-TG------GCCAAGGGCAC--GCCTGCCTGGGC
Eus.darwini             GCGCCCGAG-GCTATC-TG------GTCAAGGGCAC--GTCTGCCTGGGC
Ge.namaquensiAMV635     GCGCCCGAG-GCTATC-TG------GC-GAGGGCAC--GCCTGCCTGGGC
Hae.coccineusAMV632     GCGCCCGAG-GCTATC-TG------GTCGAGGGCAC--GCCTGCCTGGG-
Hae.crispus7252         GCGCCCGAG-GCTATC-TG------GTCGAGGGCAC--GCCTGCCTGGGC
Hae.crispus7260         GCGCCCGAG-GCTATC-TG------GTCGAGGGCAC--GCCTGCCTGGGC
Lap.martinezii          GCGCCCGAG-GCTATC-TG------GTCAAGGGCAC--GCCTGCCTGGGC
Leu.autumnale           GCGCCCGAG-GCTATC-TG------GCCAAGGGCAC--GCCTGCCTGGGC
Na.sp.7608              GCGCCCGAG-GCCGTC-TG------GCCAAGGGCAC--GCCTGCCTGGGC
Pan.canariense          GCGCCCGAG-GCTATC-TG------GCCAAGGGCAC--GCCTGCCTGGGC
Par.weberbaueri         GCGCTCGAG-GCTATC-TG------GCCAAGGGCAC--GCCTGCCTGGGC
Ster.lutea              GCGCCCGAG-GCTATC-TG------GCCAAGGGCAC--GCCTGCCTGGGC
Sc.membranaceus7246     GCGCCCGAG-GCTATC-TG------GCCGAGGGCAC--GCCTGCCTGGGC
Str.salter7245          GCGCCCGGG--CTATT-TG------GCTGGGGGCAC--GTTTGCCTGGGC
Sc.membranaceus7917     GCGCCCGAG-GCTATC-TG------GCCGAGGGCAC--GCCTGCCTGGGC
Va.parviflora           GCGCCTGAG-GCCATC-TG------GCCAAGGGCAC--GCCTGCCTGGGC
Aco.calamus             GCGCCCGAGACCCATC-GG------GTCGAGGGCAC--GCCTGCCTGGGC
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                        3651                                                 3700
Ama.belladonna          AT-CACGCCTCGCGA-CGCTT-CGTGCCCCTTGC-------CCCCCA---
Br.gregaria7157         AT-CACGTCTCGCGA-CGCTT-C-TGCCAC-TGC------CCCCTCA---
Cro.flava7256           AT-CACGCCTCGCGA-CGCTT-CGTGCCACCTGC-------CCTTTG---
Br.radulosanata7629     AT-CACGTCTCGCGA-CGCTTGCGTGCCACCTGC-------CCCTCA---
Cl.miniataRC14          GTACACGCTAGCTGA-CGC-C-CGTGCCTCT-GC------CCCTCCA---
Cl.miniata              GT-CACGCCTACTGA-CGCTC-CGTGCCTCTTGC------CCCCTCA---
Chl.fragrans            GT-CACGCCTATCGA-CGCTC-CCTGCCTCTTAC--CCCTCCCCCCG---
Cr.euchrophyllRC96      AT-CACGCCTCGTGA-CGCTT-CGCGCCCCTTGC-------CCCTTA---
Cr.acauleRC106          AT-CACGCCTCGTGA-CG-TT-CGCGCC-TTTGC-------CCCTTA---
Cr.acaulglaucRC105      AT-CACGCCTCGTGA-CGCTT-CGCGCCCTTTGC-------CCCTTA---
Cr.bulbispermumRC95     AT-CACGCCT-GTGA-CGCTT-CGCGCCCCTTGC-------CCCTTA---
Cr.foetidumRC98         AT-CACGCCT-GTGA-CGCTT-CGCGCCCCTTGC--------CCTTA---
Cr.graminicola7630      ATCCACGCCTCGTGA-CGCTT-CGCACCCTTTGC-------CCCTTA---
Cr.buphanoidesRC102     AT-CACGCCTCGTGA-CGCTT-CGCGCCCCTTGC-------CCCTGA---
Cr.acauleRC38           AT-CACGCCTCGTGA-CGCTT-CGCGCCCCTTGC-------CCCTTA---
Cr.carolschmidRC97      AT-CACGCCTCGTGA-CGCTT-CGCGCCCCTTGC-------CCCTTA---
Cr.moorei7921           AT-CACGCCT-GTGA-CGCTT-CGCGCCCCTTGC-------CCCTTA---
Cy.elatus7636           GT-CACGCCTACCTG-CGCTC-CGAGCCTCTTGC------CCCCTCA---
Cy.mackeniiRC87         GT-CACGCCTAC-TG-CGCTC-CGAGCCTCTTGC------CCCCTCA---
Cy.obliquus7278         GT-CACGCCTACCTG-TGCTT-CGAGCCTCTTGC------CCCCTCA---
Cy.ochroleucus7639      GT-CACGCCTACCTG-CGCTC-CGAGCCTCTTGC------CCCCTCA---
Cy.sanguineusRC94       GT-CACGCCTACCTG-TGCTC-CGAGCCTCTTGC------CCCCTCA---
Cy.staadensis7316       GT-CACGCCTACCTG-TGCTC-CGAGCCTCTTGC------CCCCTCA---
Cy.labiatus7212         GT-CACGCCTACCTG-CGCTC-CGAGCCTCTTGC------CCCCTCA---
Cy.smithiae7214         GT-CACGCCTACCTG-TGTTC-CGAGCCTCTTGC------CCCCTCA---
Cy.herreiRC86           GT-CACGCCTACATG-TGCTC-CGAGCCTCTTGC------CCCCTCG---
Cy.falcatus7637         GT-CACGCCTACCTG-TGCTC-CGAGCCTCTCGC------CCCTTCA---
Eus.darwini             GT-CAC--ACGACCGACGCTC-CGTGCCTCCTGCCC---ACCCCTCT---
Ge.namaquensiAMV635     GT-CACGCCTACTGG-CGCTC-TGTGCT-CTTGC------ACCATCA---
Hae.coccineusAMV632     GT-CACGCCTACTGG-CGCTC-AGTGCCTCTTGC------ACCATCA---
Hae.crispus7252         GT-CATGCCTACTGG-CGCTC-AGTGCCTCTTGC------ACCATC----
Hae.crispus7260         GT-CACGCCTACTGG-CGCTC-AGTGCCTCTTGC------ACCATCA---
Lap.martinezii          GT-CACGCCCACCGA-CGCTC-TGTGCCTCCTGC--CCCTCCCCCCG---
Leu.autumnale           GT-CACGCCTACCGA-CGCTC-CGTGGCTCTT-C----CCCCTTCCG---
Na.sp.7608              GT-CACGCCTGCCGA-CGCTC-ATTGCCCCCTTC--------CCCTG---
Pan.canariense          GT-CACGCCTACCGA-CGCTC-CGTGCCTCCTGC-------CCCTCA--C
Par.weberbaueri         GT-CTCGCCTACCGA-CGCTC-CATGCCTCCTGC----------------
Ster.lutea              GT--ACGCCTACCGA-CGCTC-CGTGCCTCCTGC--CCCCTCCCCTG---
Sc.membranaceus7246     GT-CACGCCTACTGA-CGCTC-TGTGCCTCTTGC------ACCATCA---
Str.salter7245          AT-CAACCCT-A-GA-TGCTT-TGTGCCCCC----------CTTTCA---
Sc.membranaceus7917     GT-CACGCCTACTGA-CGCTC-TGTGCCTCTTGC------ACCATCA---
Va.parviflora           GT-CATGCCTACTGA-CGCTT-CGTGCCTCTTGCGC--CTCCCCACG---
Aco.calamus             GT-CACGCCTTCCGT-CGCTC-CGCGGCACCATC---------CCCG---
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                        3701                                                3750
Ama.belladonna          ---ATTGGTGCGG-GCG-GCAACTGGCTCAAACGCGGAGATT--GGCCCC
Br.gregaria7157         ---CCTGGTGCAT-GCG-ACAACTGGCGCGAACGCGGAGATT--GGCCCC
Cro.flava7256           ---TCTGGTGCA--GCG-ACAGCTGGCGCAAACGCGGAGATT--GGCTCC
Br.radulosanata7629     ---CCTGGTGCAT-GCG-ACAACTGGCGCGAACGCGGAGATT--GGCCCC
Cl.miniataRC14          --CCCT-GCGCGGTACG-GCGGCAGGCACGGATGCGGAGATT--GGCCCC
Cl.miniata              --CCCT-GCGCGG-TCG-GCGGCAGGCACGGATGCGGAGATT--GGCCCC
Chl.fragrans            --CCATG-TGCGGTTCG-ACGGTAGGCACGGATGCGGAGATTT-GGCCTC
Cr.euchrophyllRC96      ---CCTGGTGCAG-GTG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC
Cr.acauleRC106          ---CCTGGTGCAG-GTG-GCAACTGGTCCAAACGTGGAGATT--GGCCCC
Cr.acaulglaucRC105      ---CCTGGTGCAG-GTG-GCAACTGGTCCAAACGTGGAGATT--GGCCCC
Cr.bulbispermumRC95     ---CCTGGTGTAG-GTG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC
Cr.foetidumRC98         ---CCTGGTGCAG-GTG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC
Cr.graminicola7630      ---CCTGATGCAG-GTG-GCAACTGGTCCAAACGTGGAGATT--GGCCCC
Cr.buphanoidesRC102     ---TCTGGTGCAG-GCG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC
Cr.acauleRC38           ---CCTGGTGCAG-GTG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC
Cr.carolschmidRC97      ---CCTGGTGCAG-GTG-GCACTTGGTTCGAACGTGGAGATT--GGCCCC
Cr.moorei7921           ---CCTGGTGCAG-GTG-GCAACTGGTTCGAACGTGGAGATT--GGCCCC
Cy.elatus7636           ---CGTCGTGCGG-TCG-GCTGCGGGCACGGATGCGGAGATT--GGCCCC
Cy.mackeniiRC87         ---CGCCGTGCGG-GCG-GCGGCGGGCACGGATGCGGAGATT--GGCCCC
Cy.obliquus7278         ---CGCCGTGCGG-TCG-GCGGCGGGCACGGATGCGGAGATT--GGCCCC
Cy.ochroleucus7639      ---CGCCGTGCGG-GCG-GCGGCGGGCACGGATGCGGAGATT--GGCCCC
Cy.sanguineusRC94       ---CGCCGTGCGG-TCG-GCGGCGGGCACGGATGCGGAGATT--GGCCCC
Cy.staadensis7316       ---CGCCGTGCGG-TCG-GCGGCGGGCACGGATGCGGAGATT--GGCCTC
Cy.labiatus7212         ---CGCCGTGCGG-TCG-GCGGCGGGCACGGATGCGGAGATT--GGCCCC
Cy.smithiae7214         ---CGCCTTGCGT-TCG-GCGGCGGGCACGGTTGCGGAGATT--GGCCCC
Cy.herreiRC86           ---CGTCGTGCGA-TCG-GCGGCGGGCACGGATGCGGAGATT--GGCCCC
Cy.falcatus7637         ---CACCGTGCGG-TCG-GCGGCGGGCATGGATGCGGAGATT--GGCCCC
Eus.darwini             ---CACTGTGCGGTTCG-GCGGCAGGCACGGATGCGGAGATTT-GACCCC
Ge.namaquensiAMV635     ---CCTTGTGCGG-TCG-GCGATAGGCACGGAAGCGGAGATT--GGCCCC
Hae.coccineusAMV632     ---CCTTATGTTG-TTG-GTGA-AGGCACGGATGC-GAGATT--GGCCTC
Hae.crispus7252         ---CCTTATGTTG-TTG-GTGAGAGGCACGGATGCGGAGATT--GGCCTC
Hae.crispus7260         ---CCTTATGTTG-TTG-GTGAGAGGCACGGATGCGGAGATT--GGCCTC
Lap.martinezii          ---CCATGTGCGGTTCG-GCGGCAGGCACTGATGCGGAGATT--GGCCCC
Leu.autumnale           --TCGTCGCGCGGTTCG-GTGGAAGGCACTGATGCGGAGATT--GGCCCC
Na.sp.7608              ---CCTCGTGCGGTTCG-GCGGCTGGCATTGATGCGGAGAGT--GGCCCC
Pan.canariense          CCCGCCCGTGCGATTCG-GCGGCAGGCACCGATGCGGAGATT--GGCCCC
Par.weberbaueri         ----CCCGTGCGGTTCG-GCGGTAGGCACGGATGCGGAGATT--GGCCCG
Ster.lutea              ---CCA-GTGCAGTTCG-GCGGCAGGCACTGATGCGGAGATT--GGCCCC
Sc.membranaceus7246     ---CCTTGTGCGG-TCG-GCGATAGGCACGGATGCGGAGATT--GGCCCC
Str.salter7245          ---CCTAGTAGAGGGGG-ATAAATGGC-CGAACGTTGAGATT--GGTTCC
Sc.membranaceus7917     ---CCTTGTGCGT-TCG-GCGATAGGCACGGATGCGGAGATT--GGCCCC
Va.parviflora           --CCCT-GTGCGGTTCG-GCAGCAGGCACTGATGCGGAGATT--GGCCCC
Aco.calamus             ---CCCGATGGCG-----GGGCTCGTCCCGGATGCGGATGTT--GGCCCT
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                        3751                                                 3800
Ama.belladonna          ---CCGTGCGTCG-TCGT-GCGGTGGG--TTGAAGTGCGGGCT--GTTGG
Br.gregaria7157         ---TCGTGCGTCATCGTG-ACGGTGGG--TTAAAGTGTGGCCT--GTTGG
Cro.flava7256           ---CTGTGCGTCA-TCGT-GCGGTGGG--CTGAAGTGTGGGCC--GTTGG
Br.radulosanata7629     ---TCGTGCGTCA-TCGT-GCGGTGGG--TTAAAGTGTGGGCT--GTTGG
Cl.miniataRC14          ---C-ACGCATCGACTGC-GCGGCGGG--TCGAAGTGCGGGCC--GCCGG
Cl.miniata              ---CCACGCATCG-CTGC-GCGGCGGG--TCAAAGTGCGGGCC--GCCGG
Chl.fragrans            ---CCACGCTTCG-TCGC-GTGGTGGG--TCGAAGTGCGGGCC--GTCGG
Cr.euchrophyllRC96      ---CTGTGCATCA-TCGC-GCGGTGGG--TTGAAGTGTGGCCC--GTTGG
Cr.acauleRC106          ---CTGTGCATCA-TCGT-GCGGTGGG--TTGAAGTGTGGGCC--GTTGG
Cr.acaulglaucRC105      ---CTGTGCATCCATCGT-GCGGTGGG--TTGAAGTGTGGGCC--GTTGG
Cr.bulbispermumRC95     ---CTGTGCATCA-TCGC-GCGGTGGG--TTGAAGTGTGGGCC--GTTGG
Cr.foetidumRC98         ---CTGTGCATCCATCGC-GCGGTGGG--TTGAAGTGCGGGTC--GTTGG
Cr.graminicola7630      ---CTGTGCATCA-TCGT-GCGGTGGG--TTGAAGTGTGGCCC--GTTGG
Cr.buphanoidesRC102     ---CTGTGCGTCA-TCGC-GCGGTGGG--TTGAAGTGTGGGTC--GTTGG
Cr.acauleRC38           ---CTGTGCATCA-TCGC-GCGGTGGG--TTGAAGTG-GGGCC--GTTGG
Cr.carolschmidRC97      ---CTGTGCATCCATCGC-GCGGTGGG--TTGAACTCTGGGTC--GTTGG
Cr.moorei7921           ---CTGTGCATCA-TCGC-GCGGTGGG--TTGAAGTGTGCCCCC-GTTGG
Cy.elatus7636           ---CCACGCATCG-CTGC-GTGGCGGG--TCGAAGTGCGGGCC--GTCGG
Cy.mackeniiRC87         ---CCACGCATCG-CTGC-GTGGCGGG--TCGAAGTGCGGGCC--GTCGG
Cy.obliquus7278         ---CCACGCATCG-CTGC-GTGGCGGG--TCGAAGTGCGGGCC--GTCGG
Cy.ochroleucus7639      ---CCACGCATCG-CTGC-GTGGCGGG--TCGAAGTGCGGGCC---TCGG
Cy.sanguineusRC94       ---CCACGCATCG-CTGC-GTGGTCGGG-TCGAAG-GCGGGC---GTCGG
Cy.staadensis7316       ---CCACGCATCG-CTGC-GTGGCGGG--TCGAAGTGCGGGCC--GTCGG
Cy.labiatus7212         ---CCACGCATCG-CTGC-GTGGCGGG--TCGAAGTGCGGGCC--GTCGG
Cy.smithiae7214         ---CCACGCATCG-TTGC-GTGGCGGT--TCTAATTGCGGGCCC--CCGG
Cy.herreiRC86           ---CCACGCATCG-CTGC-GTGGCGGG--TCGAAGTGCGGGCC--GTCAG
Cy.falcatus7637         ---CCACGCGTCG-CTGC-GTGGCGGG--TCGAAGTGCGGGCC--GTCGG
Eus.darwini             ---CCACGCTTTG-TTGC-GTGGCGGG--TAGAAGTGCGGGCC--ATCGG
Ge.namaquensiAMV635     ---CCACGCATCG-CTGC-GCGGCGGG--TCGAAGTGCGGGCC--GTTGG
Hae.coccineusAMV632     ---CCGCGCATCG-CTGC-GTGGCAGG--TCGAAGTGCGGGCC--GTTGT
Hae.crispus7252         ---CCGCGCATCG-CTGC-GTGGCGGG--TCGAAGTGCGGGCC--GTTGT
Hae.crispus7260         ---CCGCGCATCG-CTGC-GTGGCGGG--TCGAAGTGCGGGCC--GTTGT
Lap.martinezii          ---CCACGCATCG-TTGC-GTGGCGGG--TCGAAGTGCGGGCC--GCCGG
Leu.autumnale           ---CCACGCGTCG-TTGC-GTGGCGGG--CCGAAGTGCGGGTC--GCCGG
Na.sp.7608              ---CCGCGCATCC-TTGC-GTGGCGGG---TGAAGTGCGGGTC--GCCGG
Pan.canariense          C--CCACGCGTCG-TTGC-GTGGCGGG--TCTAAGTGCGGGCC--GTCGG
Par.weberbaueri         ---CCACGCATCG-CTGC-GCGGCGGG--TTGAAGTGTGGGCC--GTCGG
Ster.lutea              ---TCACGCATCG-TTGC-GTGGCGGG--TCGAAGTGCGGGTC--GCCGG
Sc.membranaceus7246     ---CCACGCATCG-CTGC-GCGGCGGG--TCGAAGTGCGGGCC--GTCGA
Str.salter7245          C--CTGTGGTTCA-TTGT-GCGGTGGG--TTAAA-TGTGGCCC---TTGG
Sc.membranaceus7917     ---CCACGCATCG-CTGC-GCGGCGGG--TCGAAGTGCGGGCC--GTCGA
Va.parviflora           ---CCACGCATTG-TTGC-GTGGTGGG--TCGAAGTGCGGGC---GCCGG
Aco.calamus             ---CCGTTCCCCC-GTGG-GCGGTCGG--CTGAAACCCAAGGT---CCGC
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                        3801                                                3850
Ama.belladonna          T--GGGCCGGATGCG-GCGA-GTGGTGGAAAA-GACACGCACG-GCGT-C
Br.gregaria7157         C--GT-CTGGATGCG-GCGA-GTGGTGGAGAA-CACACGCACG-ACGTAC
Cro.flava7256           C--GGGCCGGATGCG-GCGA-GTGGTGGAGAA-CACACGTGCG-ACGT-C
Br.radulosanata7629     C--GTGCTGGATGCG-GTGA-GTGGTGGAGAA-CACACGCACG-ACGTGC
Cl.miniataRC14          CA-GGGTCAGACGCG-GCGATCTGTTGGATT-GATCGCGCACG-ACGG-C
Cl.miniata              CA-GGGTCAGACGCG-GCGA-CTGTTGGATT--GACACGCACG-ACGC-C
Chl.fragrans            TC-GGGTCGGACGCG-GCGA-GTGGTGGATT--GACACGCACG-TCGT-C
Cr.euchrophyllRC96      C--GGGCCGGATGCG-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-C
Cr.acauleRC106          C--GGGCCGGATGCG-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-C
Cr.acaulglaucRC105      C--GGGCCGGATGCG-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-C
Cr.bulbispermumRC95     C--GGGCCGGATGCG-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-C
Cr.foetidumRC98         C--AGGTCGGATGCG-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-C
Cr.graminicola7630      C--GGGCCGGATGCG-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-C
Cr.buphanoidesRC102     C--GGGTCGGATGCG-ACGA-GTGGTGGAGAA-GACACGCACG-GCGT-C
Cr.acauleRC38           C--AGGCCGGATGCG-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-C
Cr.carolschmidRC97      C--GGGCTGGATGCG-GCGA-GTGGTGGAGAA-GACACGCACG-GCGTAC
Cr.moorei7921           C--GGCCCGGATGCG-GCGA-GTGGTGGAGAA-GACACGCACG-GCGT-C
Cy.elatus7636           T--TGGCCGGACGCG-GCGA-GTGGTGGATG--GACACGCACG-ACGT-C
Cy.mackeniiRC87         CT-GGGCCGGACGCG-GCGA-GTGGTGGATT--GACACGCACG-ACGT-C
Cy.obliquus7278         TT-GGGCCGGACGCG-GCGA-GTGGTGGATT--GACACGCACG-ACGT-C
Cy.ochroleucus7639      CT-GGGCCGGACGCG-GCGA-GTGGTGGATT--GACACGCACG-ACGT-C
Cy.sanguineusRC94       TT-GGGCCGGACGCGTGCGA-GTGGTGGATT--GACACGCACG-ACGT-C
Cy.staadensis7316       TT-GGGCCGGACGCG-GCGA-GTGGTGGATT--GACACGCACG-ACGT-C
Cy.labiatus7212         TT-GGGCCGGATGCG-GCGA-GTGGTGGATT--GACACGCACG-ACGT-C
Cy.smithiae7214         TT-GGGCCGGACGTG-GCGA-TTGGTGGATT--TACACGCACG-ACGT-G
Cy.herreiRC86           TT-GGGCCGAACGCG-GCGA-GTGGTGGATT--GACACGCACG-ACGT-C
Cy.falcatus7637         TT-GGGTCGGACGCG-GCGA-GTGGTGGATT--GACACGCACG-ACGT-C
Eus.darwini             TC-GGGTCAGAAGCG-GCGA-GTGGTGGATT--GACACGCACG-TCGC-C
Ge.namaquensiAMV635     CT-GGGCCAGACGCG-GCGA-GTGGTGGATT--GACACGCACG-ACGC-C
Hae.coccineusAMV632     CT--GGTCA-ACGTG-GCGA-GTGGTGGATT--GACAC-----------
Hae.crispus7252         CT-GGGTCAGACGTG-GCGA-GTGGTGGATT--GACACGCACG-CTGT-C
Hae.crispus7260         CT-GGGTCAGACGTG-GCGA-GTGGTGGATT--GACACGCACG-CTGT-C
Lap.martinezii          CC-GGGCCGGACGCG-GCGA-GCGGTGGATT--GACACGCACG-CCGC-C
Leu.autumnale           TC-GGGCCGGACGTG-GCGA-GCGGTGGATT--GACACGCGCG-CCGT-C
Na.sp.7608              TC-GGGCTTGACGCG--CGA-GCGATGGACT--GACGCGCACG-CTGT-C
Pan.canariense          CC-GGGCTGGACGCG-GCGA-GCGGTGGATT--GTCTCGCGCG-CCGC-C
Par.weberbaueri         CT-GGGCCAGACGCG-GTGA-GTGGTGGATT--GACATGCACG-ACGC-C
Ster.lutea              TC-GGGTCGGACGCA-GCGA-GCGGTGGATC--GACACGCGCG-TTGC-C
Sc.membranaceus7246     CT-GGGTTAGACGCG-GCGA-GTGGTGGATT--GACACGCACG-ACGC-C
Str.salter7245          CC--GGCTGGAT-CG-GCGA-ATGGTGGAGAA-CCCGCGCCCG-ACGT-T
Sc.membranaceus7917     CT-GGGTTAGACGCG-GCGA-GTGGTGGATT--GACACGCACG-ACGC-C
Va.parviflora           TC-AGACCGGACGTG-GCGA-GCGGTGGATT--GACACGCACG-TCGT-C
Aco.calamus             TGCGGGTCGCGGCAC-GGCATGCGGTGGCCT--GAGAGGCAGA-GTCCCT
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                        3851                                                3900
Ama.belladonna          GC--------TGGAGGTGCCCT--GTCCTGAAC-----GGTGCACTGGAG
Br.gregaria7157         GT--------TGGAGTTGCCCT--GCCCCGAAC-----GGTGCATTGGAG
Cro.flava7256           GT--------CGAAGTTGCCCC--ACCCCGAAC-----GGTGCATTGGAG
Br.radulosanata7629     GT--------TGGAGTTGCCCT--GCCCCGAAC-----GGTGCATTGGAG
Cl.miniataRC14          GC--------TGAAGTGACCCTC-TGATCGGGC-----GTTGCACC----
Cl.miniata              GC--------TGAAGTGACCCT--AGATCGGGC-----GGTGCACCGGAG
Chl.fragrans            GC--------CGAAG-CGACAT--GGATCGAGC-----GGTGCACTGGAG
Cr.euchrophyllRC96      GT--------TGAAGTTGCCCT--GCTATGAAC-----GGTGCATTGGAG
Cr.acauleRC106          GT---------GAAGTTGCCCT--GCTCTGACC-----GTTGCATTGGAG
Cr.acaulglaucRC105      GT--------TGAAGTTGCCCT--GCTCTGAAC-----GGTGCATTGGAG
Cr.bulbispermumRC95     GT--------TGAAGTTGCC-T--GCTCTGAAC-----GGTGCATTGGAG
Cr.foetidumRC98         GT--------TGAAGTTGCCCT--GCTCTGAAC-----GGTGCATTGGAG
Cr.graminicola7630      GT--------TGAAGTTGCCCT--GCTCTGAAC-----GGTGCATTGGAG
Cr.buphanoidesRC102     GT--------TGAAGTGGCTTT--GCTCTGAAC-----GGTGCATTGGAG
Cr.acauleRC38           GT--------TGAAGTTGCCCT--GCTCTGAAC-----GGTGCATTGGAG
Cr.carolschmidRC97      GT--------TGAAGTTGCCTT--GCTCTGAAC-----GGTGCATTGGAG
Cr.moorei7921           GT--------TGAAGTTGCCCT--GCTCTGAAC-----GGTGCATTGGAG
Cy.elatus7636           GC--------TGAAGTGACCCT--AGCTCGGGC-----GGTGCATCGGGG
Cy.mackeniiRC87         GC--------TGATGTGACCCT--AG-TCGGGC-----GGCGACTCTGGG
Cy.obliquus7278         GC--------TGAAGTGTCCCT--AGCTCGGGC-----GGTGCATCGGGG
Cy.ochroleucus7639      GC--------TGATGTGACCCT--AGCTCGGGC-----GGCGACTCGGGG
Cy.sanguineusRC94       GC--------TGAAGTGACCC---AGCTCGGGC-----GGTGCATCAGGG
Cy.staadensis7316       GC--------TGAAGTGACCC---AGCTCGGGC-----GGTGCATCAGGG
Cy.labiatus7212         GC--------TGAAGTGACCCT--AGCTCGGGC-----GGTGCATCGGGG
Cy.smithiae7214         CG--------TGAAGTGACCC---AGCTACGGGT----GCTGCATACAGG
Cy.herreiRC86           GC--------TGAAGTGACCCT--AGCTCGGGC-----GGTGCATCGGGG
Cy.falcatus7637         GC--------TGAAGTGACCCT--AGCTCGGGC-----GGTGCAACGGGG
Eus.darwini             GT--------CTAAGCGACA-T--GGCTTGGGC-----GGTGCACTAAAG
Ge.namaquensiAMV635     GT--------TGAGGGAACC-T--AGCTCGGGC-----GGTGCA-CGGAG
Hae.coccineusAMV632     ------------------------------------------------
Hae.crispus7252         GT--------TGAGCGTACC-T--AGCCCGGGC-----GGCGCACCGGAG
Hae.crispus7260         GT--------TGAGCGACCC-T--AGCCCGGGC-----GGCGCACCGGAG
Lap.martinezii          GC--------AGAAGTGTCCC---GGCTCGGGC-----GATGCGCCGGAG
Leu.autumnale           GC--------TGAAGTGCCCC---GGCTCGGGC-----GTTGCACCGGAG
Na.sp.7608              GC--------CGATGTGACCC---GACTCGGTC-----GATGCACAGAAG
Pan.canariense          GC--------CGAAGTGACTC---GGCTCGT-C-----GATGCACCGGAG
Par.weberbaueri         GT--------CGAAGCGGCC-T--GGGTCGGGC-----GGTGCACCGGGG
Ster.lutea              GC--------CGGAGTGACCC---GACTCGAGC-----GATGCACCGGAG
Sc.membranaceus7246     GT-------------TG-CC-T--AGCTCGGGC-----GGTGCACCGGAG
Str.salter7245          GT--------TGTAGTTGCCCT--GCCCTGAAC-----GATGCATTGGAT
Sc.membranaceus7917     GT-------------TG-CC-T--AGCTCGGGC-----GGTGCACCGGAG
Va.parviflora           GC--------CGAAGTGATCC---GGCTCGGGC-----GATGCATCGGAG
Aco.calamus             ACCACTCGCGTCGGATGCCTTGCCCGGCCGCGCGTCACAGCGGGCCCGTA
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                        3901                                                 3950
Ama.belladonna          GAA-----CCCATGC-CGGTGG-GCGCGAGC-TGAGCGC-CC--TTGGAA
Br.gregaria7157         GAA----TCCCACGC-TGGTGG-GCGCAAGTGCGAGCGT-CC--TTGGAA
Cro.flava7256           GAA-----TCCACGC-TGGTGG-GCGCAAGC-TGAGCGC-CC--TTGGAA
Br.radulosanata7629     GAA----TCCCACGC-TGGTGG-GCGCAAGT-CGAGCGT-CC--TTGGAA
Cl.miniataRC14          ----------------------------------------------------
Cl.miniata              GAA-----CCCACGC-CGACGG-GCGCCATG-TGAGCGT-CCA-TTGGAA
Chl.fragrans            GAA-----CCCATGC-CGACGG-GAGCCA-------CGC-CC--TTGGAA
Cr.euchrophyllRC96      GAA-----CCCATGC-TGGTGG-GTGCGAGT-TGA--------------
Cr.acauleRC106          GAA-----CCCACGC-TGGTGG-GTGCGAGT-TGT-CAC-CC--TTG---
Cr.acaulglaucRC105      GAA-----CCCACGC-TGGTGG-GTGCGAGT-TGTGCAC-CC--TTGGAA
Cr.bulbispermumRC95     GA------CCCATGC-TGGT-G-GTGCGAGT-TGAGCTC-CC--TTG-AA
Cr.foetidumRC98         GAA-----CCCATGC-TGGTGG-GTGCGAGT-TGAGCAC-CC--TTG-AA
Cr.graminicola7630      GGA-----CCCACGC-TGGTGG-GTGCGAGT-TGA--------------
Cr.buphanoidesRC102     GAA-----CCCATGC-TGGTGG-TTGCGAGT-TGTGCAC-CA--TTGGAA
Cr.acauleRC38           GAA-----CCCATGC-TGGT-G-GTGCGAGT-TGAGCTC-CC--TTGGAA
Cr.carolschmidRC97      GAA-----CCCATGC-TGGT-G-GTGCGAGT-TGATCAC-CC--TTGG--
Cr.moorei7921           GAA-----CCCATGC-TGGTG----------------------------
Cy.elatus7636           GAA-----CCCACATACGACGG-GCGCC---------------------
Cy.mackeniiRC87         GAA-----CCCACGT-CGACGG-GCGCCATG-CGAGCGTCCC--TTGGAA
Cy.obliquus7278         GAA-----CCCACGT-CGACGG-GCGCCATG-TGAGCGTCCC--TTGGAA
Cy.ochroleucus7639      GAA-----CCCACGT-CGACGG-GCGCCATG-CGAGCGTCCC--TTGGAA
Cy.sanguineusRC94       GAA-----CCCACGT-CGACGG-GCGCCATG-TGAGCGTCCC--TTGGAA
Cy.staadensis7316       GAA-----CCCACGT-CGACGG-GTGCCATG-TGAGCGCCCC--TTGGAA
Cy.labiatus7212         GAA-----CCCACGT-CGACGG-GCGCCATG-TGAGCGTCCC--TTGGAA
Cy.smithiae7214         GGAA---CCCATCGTACGACGG--C----T--TG----------T-----
Cy.herreiRC86           GAA-----CCCACGT-CGACGG-GCGCCATG-TGAGCGTCCC--TTGGAA
Cy.falcatus7637         GAA-----CCCACGT-CGACGG-GCGCCATG-TGAGCGTCCC--TTGGAA
Eus.darwini             GAG-----CCCATGT-CGAGGG--CGCCACG-TGAGCGCACC--CTTGAA
Ge.namaquensiAMV635     GAA-----CCCACGT-CGACGG-GCGCCATG-CGAGCGCCCG--TTGGAA
Hae.coccineusAMV632     ----------------------------------------------------
Hae.crispus7252         GAA-----CCCTCGC-CGACAG-GCGCCACC-TAAGAGTCCC--GTAGAA
Hae.crispus7260         GAA-----CCCACGC-CGACAG-GCGCCACT-TGAGCGTCCC--TTGGAA
Lap.martinezii          GAA-----CCCACGC-CGACGG-GCGCCACG-TGAGCGCTCA--TCGGAA
Leu.autumnale           GAA-----CCTATGT-CGAGGG-GCGCCACG-TTAGCGCCCC--TTGGAA
Na.sp.7608              GAA-----CCTACGT-CGATGG-GCGCCACG-CGGGCGCTCC--TCGAAA
Pan.canariense          GAA-----CCCACGCCGAGTGG--CGCCGCGTTGAGCGCTCC--TCGGAA
Par.weberbaueri         GAA-----CCCACGT-CGACGG-GCGCCACG-TGAGCGCTCGC-TTAGAA
Ster.lutea              GAA-----CCCACGC--GACGG-GCGCTACGTTGTGCGCTCC--TCGGAA
Sc.membranaceus7246     GAA-----CCCATGC-CGACGG-GCGCTATG-TGAGCGTCCC--TTGGAA
Str.salter7245          GTG-----TCCACGC-TGGTGG-GCGCAAGT-TGAGAGGGCCCCTTGGAA
Sc.membranaceus7917     GAA-----CCCATGC-CGACGG-GCGCTATG-TGAGCGTCCC--TTGGAA
Va.parviflora           GAA-----CCCACGT-CGACGG-GCGCCACG-CGGGCGCTCC--TCGGAA
Aco.calamus             TGAACCCCACCATCG-CCACCGTCCGCAACGGGCCGGTGGCGGTCTGGAT
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                        3951                                                4000
Ama.belladonna          C-------------------------------------------------
Br.gregaria7157         C---AA-GATCGCAGGTCAGGCTGG-A----------------------
Cro.flava7256           C---AA-GATCCCAG-TCAGGC---------------------------
Br.radulosanata7629     C---AA-GATGCCAG----------------------------------
Cl.miniataRC14          -------------------------------------------------
Cl.miniata              C-------------------------------------------------
Chl.fragrans            C-------------------------------------------------
Cr.euchrophyllRC96      -------------------------------------------------
Cr.acauleRC106          -------------------------------------------------
Cr.acaulglaucRC105      C---AA-GATC--------------------------------------
Cr.bulbispermumRC95     C---AA-GATCGCAGGTCAG-----------------------------
Cr.foetidumRC98         C---AG-GATACC------------------------------------
Cr.graminicola7630      -------------------------------------------------
Cr.buphanoidesRC102     C---AA-GATGCCAGGTCAGGT------------T-------------
Cr.acauleRC38           C---AA-GATCCCAG-TCAGG----------------------------
Cr.carolschmidRC97      -------------------------------------------------
Cr.moorei7921           -------------------------------------------------
Cy.elatus7636           -------------------------------------------------
Cy.mackeniiRC87         C---AC-GAACC-AGGTC-------------------------------
Cy.obliquus7278         C---AT-GACCCCAGGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATA
Cy.ochroleucus7639      C---AC-GACCCCAGGTCAGGCG--------------------------
Cy.sanguineusRC94       C---AC-GACCCCAGGTCAGGCGGGGACACCCGCCTGAGTTTAAGGCATA
Cy.staadensis7316       C---AC-GACCCCAGGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATA
Cy.labiatus7212         C---AC-GACCCCAGGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATA
Cy.smithiae7214         C---A-----------T--G---------------T-------------
Cy.herreiRC86           C---AC-GACCCCAGGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATA
Cy.falcatus7637         C---AC-GACCCCAGGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATA
Eus.darwini             C-------------------------------------------------
Ge.namaquensiAMV635     C---AC-GACC--------------------------------------
Hae.coccineusAMV632     -------------------------------------------------
Hae.crispus7252         C---AC-G-TCC----TCA--C------------T-------------
Hae.crispus7260         C---AC-GACCCCAG-TCAGGCGG-A-------G---------------
Lap.martinezii          C---AC-GACCCCAGGTCAGGCGGGAACAC-------------------
Leu.autumnale           C---AC-GACCCCAGGTCAGGCGGGGAC---------------------
Na.sp.7608              A---AC-GACCCCAGGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATA
Pan.canariense          C---AC-GACCCCAGGTCAGGCGGGG-------G---------------
Par.weberbaueri         C-------------------------------------------------
Ster.lutea              C---AC-GACCCCAGTTCAGGCGGGGACA--------------------
Sc.membranaceus7246     T---AC-GACCCCAG-TCAGGCTGG-AGACC-CCCTGA-----------
Str.salter7245          C---A--GATCCCAG-TCAGGC---------------------------
Sc.membranaceus7917     T---AC-GACCCCAGGTCAGGCGGGGACACC-CGCTGAGTTTAAG-CATA
Va.parviflora           C---AC-GACCCCAGGTCAG-----------------------------
Aco.calamus             C---GC-GAC---------------------------------------
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                    4001                                    4038
Ama.belladonna      ----------------------------------------
Br.gregaria7157     ----------------------------------------
Cro.flava7256       ----------------------------------------
Br.radulosanata7629 ----------------------------------------
Cl.miniataRC14      ----------------------------------------
Cl.miniata          ----------------------------------------
Chl.fragrans        ----------------------------------------
Cr.euchrophyllRC96  ----------------------------------------
Cr.acauleRC106      ----------------------------------------
Cr.acaulglaucRC105  ----------------------------------------
Cr.bulbispermumRC95 ----------------------------------------
Cr.foetidumRC98     ----------------------------------------
Cr.graminicola7630  ----------------------------------------
Cr.buphanoidesRC102 ----------------------------------------
Cr.acauleRC38       ----------------------------------------
Cr.carolschmidRC97  ----------------------------------------
Cr.moorei7921       ----------------------------------------
Cy.elatus7636       ----------------------------------------
Cy.mackeniiRC87     ----------------------------------------
Cy.obliquus7278     TCAATAAGCGGAGGAAAAGAAAC--A--A---------
Cy.ochroleucus7639  ----------------------------------------
Cy.sanguineusRC94   TCAATAATCG-AGGA-AA-AAA---AC-A---------
Cy.staadensis7316   TCAATAAGCGGAGGAAAAGAAAC--A------------
Cy.labiatus7212     TCAATAAGCGGAGGA-AA--------------------
Cy.smithiae7214     ----------------------------------------
Cy.herreiRC86       TCAATAAGCGGAGGAAAAGAAAC--A-AAGG----CCT
Cy.falcatus7637     TCAATAAGCGGAGGAAAAAAAAC--A--A--A------
Eus.darwini         ----------------------------------------
Ge.namaquensiAMV635 ----------------------------------------
Hae.coccineusAMV632 ----------------------------------------
Hae.crispus7252     ----------------------------------------
Hae.crispus7260     ----------------------------------------
Lap.martinezii      ----------------------------------------
Leu.autumnale       ----------------------------------------
Na.sp.7608          TCAATAAGCGGAGGAAA-GAAAC--A------------
Pan.canariense      ----------------------------------------
Par.weberbaueri     ----------------------------------------
Ster.lutea          ----------------------------------------
Sc.membranaceus7246 ----------------------------------------
Str.salter7245      ----------------------------------------
Sc.membranaceus7917 TCAATAAGCGG--------------------------
Va.parviflora       ----------------------------------------
Aco.calamus         ----------------------------------------
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