

The Tortoises and Terrapins of the Orange Free State: Part 1

TORTOISES

M.F. Bates

Tortoises, terrapins and turtles belong to the order Chelonia. Tortoises are found on land, terrapins in or near fresh water, and turtles in the sea. A characteristic of the group is a protective shell, consisting of a carapace above and a plastron below.

Tortoises

Of the world's forty species of tortoise, twelve occur in Southern Africa, and three in the Orange Free State.

Tortoises are active during the day, and spend much of their time feeding on plants. They do not have teeth, but use their horny jaws to bite off pieces of plant matter, which are swallowed whole. Some species of tortoise occasionally feed on dead animal matter, while many species chew old bones in order to obtain calcium, needed for bone, shell and egg development. During the heat of day and at night, tortoises remain in shelters. They are active during summer when food is plentiful, but hibernate during the cold winter. Depending on the species, the hibernation site may be between rocks, under logs or branches, or in a hole.

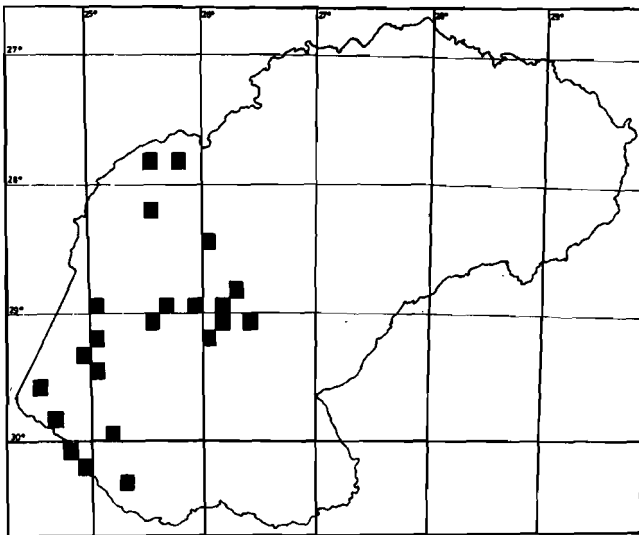
When the weather warms up, usually in September, the tortoises become active again, and mating takes place. After pushing each other around for a while, the male will mount the female in order to copulate. This is possible as males have concave plastrons. The plastron of the female is flat. From one to three months later, the female digs a shallow hole or nest for her eggs, often between low-growing plants. She uses her hind legs, and periodically urinates to soften the ground and make digging easier. After the roundish white eggs are laid (they vary in number), the hole is covered and the ground pressed down by the hind legs and plastron of the female. Within a day of laying, the female can



The Leopard Tortoise.

mate again, although females of some species can store sperm for up to four years. More than one clutch can be laid in a season. Depending on the species or conditions, eggs take from four to fifteen months to hatch. A hatchling tortoise has the approximate circumference of a fifty cent piece.

Despite their protective shells, tortoises have many enemies. Adults are preyed on by large carnivores and birds of prey, while the young are eaten by smaller carnivores, various birds, monitor lizards, rats and even ants. Birds of prey and crows are known to pick up a tortoise in their claws or beak respectively, and drop it from a height so as to smash open the shell and expose the flesh. Tortoise eggs are dug up and eaten by various mammals (including domestic dogs) and monitor lizards. A great many tortoises die in veld fires, while others fall to their deaths by slipping off rocks or hillsides. Many are parasitized by ticks, while others suffer from any one of a variety of diseases. Despite all this, man is the greatest enemy. He acquires this title by destroying natural habitat, starting fires, keeping tortoises as pets (many of which die as a result of



Distribution of the Leopard Tortoise in the Orange Free State.

calcium deficiency) and killing them for food, jewelry and ornamentation. In addition, many tortoises are killed on roads. Already the geometric tortoise of the southern Cape is vulnerable and on its way to extinction.

The following is an account of one of the three tortoise species found in the Orange Free State.

Leopard or mountain tortoise (Bergskilpad) *Geochelone pardalis*

Distribution

Widespread in Africa from Ethiopia south throughout most non-forested areas of the eastern half of Africa, to large parts of Southern Africa. In the O.F.S. it occurs in the west and south-west.

Description

The horny plates of the carapace are beautifully marked in contrasting yellow and black blotches, especially in young specimens. This gives a leopard-skin effect. The plastron is more uniformly straw-coloured, with irregular black markings. Older specimens develop a more drab colour. The carapace may be lumpy and the marginals flared, or it may be relatively smooth. The species is easily identified by the absence of a nuchal shield.*

Size, mass and age

This is the largest tortoise species in Southern Africa, exceptionally attaining a length of 60 cm, a mass of 40 kg and an age of thirty years or more. However, an average adult in the O.F.S.

has a length of about 30 cm and a mass of about 10 kg. The largest specimens occur in the eastern Cape Province.

Habitat

Occupies a great range of habitats, from wetter coastal areas to the arid eastern Karoo. In the O.F.S. they occur in sweet grassveld, bushveld and karoo veld types.

Feeding

Plant material is the main food, and includes succulent plants, young grass shoots, toad stools and fallen fruit. Occasionally dead animal matter is eaten.

Reproduction

Mating occurs from October to February, usually after rain. Two to three months later, 4-30 eggs (usually 6-12) are laid in a hole of up to 25 cm deep and 15 cm in diameter. The eggs have a diameter of 36-48 mm, and usually hatch 10-13 months later.

Enemies

Predators on adults and young in the O.F.S. probably include hyaenas, jackals, foxes, eagle owls and eagles, while the young may also be preyed on by mongooses, domestic dogs, monitor lizards, crows, secretary birds, buzzards, rats and ants. In the O.F.S. and elsewhere, eggs may be dug up and sucked out by jackals, mongooses, domestic dogs and monitor lizards. Outside the O.F.S., old lions, honey badgers, hornbills and maraboe storks have been recorded as additional enemies of adults and young. Directly and indirectly, man is also an important enemy.



Part II will deal with the other two species of tortoise, as well as the only specie of terrapin found in the O.F.S.

* Anterior shield or plate of the chelonian carapace, found at the nape of the neck.

BIBLIOGRAPHY

- COMRIE-GREIG, J. 1985. Land tortoises of Southern Africa. *African Wildlife* 39: (5): 180.
COMRIE-GREIG, J. 1986. Land tortoises of Southern Africa. *African Wildlife* 39: (6): 221.
AUERBACH, R.D. 1985. *The Reptiles of Gaborone*. Gaborone: Botswana Book Centre.
DE V. PIENAAR, U., HAACKE, W.D., JACOBSEN, N.H.G. 1983.