

THE TERMITE-EATERS

C.D. Lynch

Entomologists long ago warned that the number of termites on farms should not exceed the dangermark as they are "good friends, but bad bosses".

In 1959, at an entomological conference, it was reported that 214 000 hectare grazing veld in Zululand had been "devoured" by Harvester Termites (*Grasdraertermiete*) and that during 1954 Harvester Termites ate up grassland which was sufficient to carry 60 000 head of cattle (Mostert *et al.* 1971). In the Koffiefontein district of the Orange Free State surveys have indicated that the Snouted Termite (*Miershooptermiet*) removed up to 60% of the grass cover during a dry year. In addition to this loss, is the area covered by their mounds, e.g. densities of 110 mounds per hectare and sizes of 8,5 metres in circumference and 1,2 metres high have been recorded (Coaton 1958).

Conditions such as those cited above mainly arise because of veld-deterioration. Observations showed that when termites dispersed during nuptial flights, these reproducers established themselves better in areas where there was little cover, i.e. in overgrazed veld, than in well developed grassland (Coaton 1947).

An additional reason why termite numbers may become critical is that many of the following termite-consuming animals are eradicated or their numbers are drastically reduced:

Mammals:

Aardwolf (*Maanhaarjakkals*): almost exclusively eats termites; one stomach contained 1 204 g of termites (= c. 36 570 termites)

Antbear (*Aardvark*): ants and termites are almost exclusively eaten and, considering the size of the *Aardvark* (mass \pm 50 kg *cf.* *Aardwolf* \pm 9 kg), a considerable amount must be consumed daily.

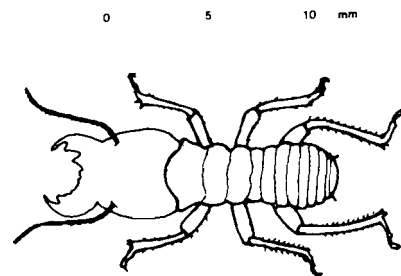
Yellow mongoose (*Rooimeerkat*): predominantly eats termites; in a sample of 156 stomachs, 74% contained Snouted-Termites while in 83 stomachs examined, 60% were filled exclusively with termites; one stomach contained 77g of termites (= c. 2 300 termites) (Lynch 1980).

12

Bat-eared fox (*Bakoorvos*): in a sample of 50 stomachs more than 50% contained termites (Smithers 1971).

Pangolin (*Ietermagog*): ants and termites are exclusively eaten.

Other species which also consume termites are the Cape fox (*Silwervos*), Genet (*Muskejaatkat*), Suricate (*Stokstertmeerkat*), Cape grey mongoose (*Kaapse grysmuishond*), Slender mongoose (*Swartkwasmuishond*), Hedgehog (*Krimpvarkie*), Elephant Shrew species (*Klaasneusoor*), etc.



A Harvester soldier; these and the other members have their nest system well below the soil surface; the workers are usually active during the day.

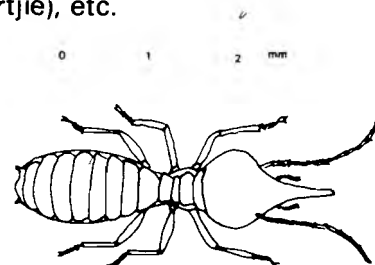
Birds:

Rowan (1970) found that over 40% of the 657 species of birds investigated, feed on termites.

Korhaan: Milstein (1964) recorded that a Black Korhaan had eaten 1 900 Harvester Termites and a Blue Korhaan 1 500 termites.

Guineafowl (*Tarentaal*): Steyn (1967) removed 5 100 Harvester Termites from the crop of a Guineafowl. These presumably constituted a single "meal".

Other species whose diet also includes termites are Partridge (*Patrys*), Sandgrouse (*Sandpatrys*), Cattle Egret (*Veereier*), Lark (*Lewerkie*), Ant-eating Chat (*Swartpiek*), Pipit (*Koester*), Courser (*Drawwertjie*), etc.



A Snouted soldier; these and the other members inhabit a dome-shaped mound situated mainly above the soil surface; the workers collect the food only at night.

Lower-vertebrates (Reptiles and Amphibians): Many lizard and frog species consume large quantities of termites especially when these are dispersing during nuptial flights. A bullfrog was observed literally "gorging" himself on "flying-ants" when these appeared after a rain-shower.

Termites are therefore "good friends" insofar as they are important and sometimes essential sources of food for many animal species; but they may become "bad bosses" when, as a result of improper landuse and the eradication or reduction of preying animals, they start damaging valuable grazing land. For a farmer this has financial implications as there is a reduction of livestock production.

It must be remembered, that "veld" constitutes a biotic community of naturally occurring assemblages of plants and animals which are mutually sustaining and interdependent and form part of a larger whole, the ecosystem.

Furthermore, each plant and animal species in such a community occupies a particular functional niche, and among these species only a few may dominate the rest of the community; usually plants govern and influence the total species component. Therefore, if a stable and diverse ecosystem is desired, look after the vegetation (and the rest will follow). However, beware if this is misused, for if the corner-stone (which may consist of several components) is disturbed, a catastrophe invariably results.

P.S. Termites are also a very good and cheap source of protein to man, and these can, according to Shaxson *et al.* (1979), be prepared as follows:

Method 1: Heat a pan and fry the flying termites (e.g.) of the genus *Macrotermes*) dry. Remove from the pan, dry in the sun and winnow them to remove the wings. Pick over carefully to remove any stones. Heat the pan with or without a little fat, add the flying termites and a little salt and fry until done. Serve with nsima (thick mealie-meal porridge) or as an appetiser.

Method 2: Wash the flying termites in water and leave to drain for a short while. Add salt and fry them without oil, stirring all the time, until the wings are burnt. Remove them from the heat and keep them in a warm place for about 5 minutes to dry completely. They may be fried again in oil if desired.

Variation: If oil is used, add a little chopped onion and chopped tomatoes to the pan. Groundnut flour may also be added.

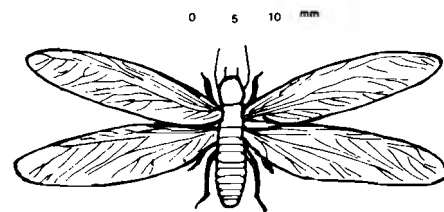
Termites are also alleged to have medicinal value e.g. in "Oupa and Ouma se Boererate" the following remedies are given.

"Tandpyn: *Neem 'n miershoop wat nog vol miere is, gooi daar kookwater op en stoom jou dan daaroor. Draai die kop en gesig dan warm toe, sit 'n fyn kruinaeltjie in die tand en dit maak hom gesond."*

"Infeksie: *Vat die sug op met lappe, begrawe dit in 'n miershoop. So vinnig as die miere die lappe opeet, so vinnig word die swere gesond."*

"Verkoue: *Neem 'n stuk mierhoop, sit dit in die vuur tot dit goed warm is, laat die sieke sit, gooi 'n kombers oor die kop, sit die mierhoop in 'n skottel voor die sieke en gee hom 'n beker kou water wat hy self elke maal bietjes op die stuk mierhoop moet gooi. Hy moet ver 'n uur so sit tot die wasim verswak. Dit sal dit sieke laat sweet. Laat hom dan in die bed klim, maak die sieke goed toe. Dit sal sommar dadelik help."*

"Inflammasie: *As iemand inflemasie in die maag of dikderm het, neem die kroon van 'n miershoop met miere en gras en die grond natuurlik. Gooi daar kookwater op, drink elke 2 ure 'n koppievol, en binne 'n paar minute is die inflemasie gebreek."* ●



A winged reproducer; their mission in life is to establish new colonies.

References:

- COATON, W.G.H. 1947. Die grasdraertermietvraagstuk in S.A. *Pamf. Dept. Landb.-teg. Dienste.* Nr. 292.
- 1958. Die Hodotermitied van Suid-Afrika. *Wet. Pamf. Dep. Landb.* Nr. 375.
- LYNCH, C.D. 1980. Ecology of the suricate, *Suricata suricatta* and yellow mongoose, *Cynictis penicillata* with special reference to their reproduction *Mem. nas. Mus., Bloemfontein.* 14: 1-145.
- MILSTEIN, P. le S. 1964. Birds and agriculture. *Lantern* 14: 40-44.
- MOSTERT, J.W.C., ROBERTS, B.R., HESLINGA, C.F. & COETZEE, P.G.F. 1971. Veldbestuur in die O.V.S.-streek. *Pamf. Dep. Landb.-teg. Dienste.* Nr. 391.
- Oupa en Ouma se Boererate.* 1962. Tafelberg-Uitgewers Kaapstad.
- ROWAN, M.K. 1971. The food of South African birds. *Ostrich, Suppl.* 8: 343-356.
- SHAXSON, A., DICKSON, P., & WALKER, J. 1979. *The Malawi cookbook.* Govt. Printer, Zomba, Malawi.
- SMITHERS, R.H.N. 1971. The mammals of Botswana. *Mus. Mem.* No. 4. The Trustees of the National Museums of Rhodesia, Salisbury.
- STEYN, P. 1967. Crop content of crowned Guinea fowl *Numida meleagris.* *Ostrich* 38: 286.