

THE BRUSH-TAILED GERBILLE *GERBILLURUS VALLINUS* IN THE KALAHARI GEMSBOK NATIONAL PARK

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As with many of the other national parks in the Republic of South Africa, an effort has been made to determine the species of small mammals in the Kalahari Gemsbok National Park (KGNP) (Rautenbach 1971; Rautenbach and Nel 1975). An additional feature of such species inventories has been the use of owl pellets to determine the occurrence of small mammals in a given area. This has been done in the KGNP as well as other parts of southern Africa (Davis 1958; Nel and Nolte 1965; Nel 1969; Vernon 1972; Coetzee 1972). Such inventories of species of small mammals are critical as the KGNP has become an important study site for desert rodent ecology (Nel 1967; Nel and Rautenbach 1974; Nel 1975; Nel and Rautenbach 1975).

Because of their numbers and consequent biomass, gerbillines are an important component of the small mammal fauna of areas such as the KGNP (Nel and Rautenbach 1975). However, the taxonomic relationship of the species of gerbillines is unclear at this time with this problem being especially acute in the case of the genus *Gerbillurus* (Coetzee 1972; Schlitter 1973; Davis 1974, 1975).

In the case of the KGNP, it has been reported that only one species of *Gerbillurus* occurred in both the South African and Botswana portions of the Park (Davis 1958; Nel and Nolte 1965; Rautenbach 1971; Smithers 1971; Nel and Rautenbach 1975). However, during the course of examining extant specimens as part of a systematic review of the species of *Gerbillurus*, a single specimen of *Gerbillurus vallinus* was found in the collection of *G. paeba* housed in the Transvaal Museum. This specimen, TM 16858, is a subadult male taken at Twee Rivieren on 1970.01.24 by I. L. Rautenbach and L. J. Lombaard. Of the 140 specimens of *Gerbillurus* preserved as voucher specimens and housed in the Transvaal

Museum, only this single individual was identifiable as *G. vallinus*, all of the remainder are clearly *G. paeba*.

The identification of species of the genus *Gerbillurus* is relatively difficult unless reference specimens of each species are at hand. Separation of the two species groups, namely the "*paeba*" and the "*vallinus*" groups, can be done on the basis of the longer tail, larger hindfeet and more massive skulls with relatively more highly inflated bullae, particularly the mastoidal portion, in the "*vallinus*" group (Schlitter 1973).

The occurrence of *G. vallinus* in the Park is not unexpected in view of the presence of the species at Hakskeenpan, Upington District (SE 2620Cc). U. B. Chivers collected a juvenile male (TM 6898) at this vlei on 1930.07.04 and this specimen was the easternmost record of the species (Davis 1974).

The specimen of *G. vallinus* from the Park was captured at night about 1,6 km west of the Twee Rivieren rest camp in a museum special snap trap set in a dune street. This capture site was characterized by scattered clumps of bunch grass and occasional bushes.

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REFERENCES

- COETZEE, C. G. 1972. The identification of southern African small mammal remains in owl pellets. *Cimbebasia* (A)2:53-64.
- DAVIS, D. H. S. 1958. Notes on small mammals in the Kalahari Gemsbok National Park, with special reference to those preyed upon by barn owls. *Koedoe* 1:184-188.
- DAVIS, D. H. S. 1974. The distribution of some small southern African mammals (Mammalia: Insectivora, Rodentia). *Ann. Transv. Mus.* 29(9):135-184.
- DAVIS, D. H. S. 1975. Part 6,4. Genera *Tatera* and *Gerbillurus*. In: MEESTER, J. and H. W. SETZER Eds.: *The Mammals of Africa - an identification manual*. City of Washington: Smithsonian Institution Press (for 1971).
- NEL, J. A. J. 1967. Burrow systems of *Desmodillus auricularis* in the Kalahari Gemsbok National Park. *Koedoe* 10:118-121.
- NEL, J. A. J. 1969. The prey of owls in the Namib desert. I. The spotted eagle owl, *Bubo africanus*, at Sossus Vlei. *Scient. Pap. Namib desert res. Stn.* 37-53:55-58.
- NEL, J. A. J. 1975. Aspects of the social ethology of some Kalahari rodents. *Z. Tierpsychol.* 37:322-331.
- NEL, J. A. J. and H. NOLTE. 1965. Notes on the prey of owls in the

- Kalahari Gemsbok National Park, with special reference to the small mammals. *Koedoe* 8:75-81.
- NEL, J. A. J. and I. L. RAUTENBACH. 1974. Notes on the activity patterns, food and feeding behaviour of *Parotomys brantsi* (Smith, 1840). *Mammalia* 38:6-13.
- NEL, J. A. J. and I. L. RAUTENBACH. 1975. Habitat use and community structure of rodents in the southern Kalahari. *Mammalia* 39:9-29.
- RAUTENBACH, I. L. 1971. Notes on the small mammals of the Kalahari Gemsbok National Park. *Koedoe* 14:137-143.
- RAUTENBACH, I. L. and J. A. J. NEL. 1975. Further records of smaller mammals from the Kalahari Gemsbok National Park. *Koedoe* 18:195-198.
- SCHLITTER, D. A. 1973. A new species of gerbil from South West Africa with remarks on *Gerbillus tytonis* Bauer and Niethammer, 1959 (Rodentia: Gerbillinae). *Bull. south Calif. Acad. Sci.* 72:13-18.
- SMITHERS, R. H. N. 1971. *The mammals of Botswana*. Mus. Mem. 4. Salisbury: The Trustees of the National Museums of Rhodesia.
- VERNON, C. J. 1972. An analysis of owl pellets collected in southern Africa. *Ostrich* 43:109-124.