

NOTES ON THE SMALL MAMMALS OF THE KALAHARI GEMSBOK NATIONAL PARK

by

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Introduction

The object of the present study is to produce a check list of the smaller mammals of the Kalahari Gemsbok National Park. It was thought desirable to publish the results obtained to date, since more detailed studies on ecological and distributional aspects of some of the small mammals of the Park have already been initiated.

Several workers have to date collected in the Kalahari Gemsbok National Park. Davis (1958) and Nel and Nolte (1965) analysed owl-pellet material collected in the Park together with a small number of trapped specimens to gain insight into the distribution, ecology and taxonomy of the smaller mammals. Sporadic collecting was undertaken by J. Meester in 1957, C. G. Coetzee during 1965 and 1966, and J. A. J. Nel in 1970. In collaboration with J. A. J. Nel and L. J. Lombaard, the author started an intensive collecting program. Visits to the Park were made during November/December 1967, January/February 1970, and May 1971. All collecting was done in the South African portion of the park.

This paper presents the findings of all the above expeditions insofar that the findings were either published, or that material collected is housed in the Transvaal Museum. In addition, sight records by J. du P. Bothma during June/July 1970 were used where specimens of that species had not yet been collected or recorded.

Smithers (1968) reported on an intensive mammal survey of Botswana. The present paper should therefore be seen as an extension of his work, and his taxonomic approach has consequently been followed wherever appropriate, especially on the sub-specific level. The Smithsonian Institution Preliminary Identification Manual for African Mammals was also consulted. Personal decisions regarding taxonomic status were only made where the above-mentioned sources differ.

The main collecting sites were within a radius of approximately five miles of the three rest camps, namely Twee Rivieren, Mata Mata and Nossob. Incidental collecting was done between these sites, as is mentioned below. Collecting was only done on the river beds, river banks and the dune and dune streets closest to the rivers. Since more intensive work on

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distribution and habitat preference is under way, only brief reference is made in this work to these subjects.

Methods

Rodents were mainly collected by means of traplines consisting of 200 or more traps. The traplines were set diagonally across the rivers so as to sample the adjoining dunes and dune streets as well. Traps were baited with either fresh peanuts, or with peanut-butter and oatmeal mixed into a paste. Some rodents, bats and most carnivores were shot with appropriate calibre shotguns (i.e. .22 dust, 410 and 12-bore shotguns) or a .22 rifle. Trapping of carnivores has proved very unsuccessful to date, with only two *Cynictis penicillata* trapped out of 80 trap nights. Mist nets erected for capturing bats yielded no results. "Macabee" traps were employed to capture rodent moles wherever mounds were encountered.

Results

The following mammals were recorded from the Park. The localities where each species was recorded are also given.

Order Insectivora

Macroscelides proboscideus

Short-eared Elephant Shrew. Kortoorklaasneus.

Two specimens were caught on a calcareous outcrop with sparse vegetation at the junction of the Auob and Nossob rivers (Samevloeing). Corbet (1966) believes that . . . "there is little evidence of discontinuous subspecific variation." However, Smithers (1968) records a northward range extension of the species in the south-western tip of Botswana, and recognises it as *M.p. chiversi*.

Elephantulus intufi

Bushveld Elephant Shrew. Bosveldklaasneus.

Collected on the sand dunes adjacent to the riverbeds near Twee Rivieren and Nossob camps.

Crocidura hirta deserti

Desert Musk Shrew. Kalahari-skeerbekmuis.

An uncatalogued specimen of a female *C.h. deserti*, found in the Transval Museum collection, had been collected by D. H. S. Davis at Dikbaardskolk, on the Nossob river on 17/5/56. Nel and Nolte (1965) found skulls of this species in owl pellets collected at five localities in both the Auob and Nossob rivers in the southern part of the Park.

Chrysochloris asiatica

Cape Golden Mole. Kaapse Kruipmol.

Nel and Nolte (1965) found a claw of what they believe belongs to *Chrysochloris damarensis* Ogilby, 1838, in owl pellets from Craiglockhart on the Auob river. Meester (1968) regards *C. damarensis* as a synonym of

C. asiatica. No further evidence of the occurrence of golden moles in the Park has been found since.

Erinaceus frontalis

Hedgehog. Krimpvarkie.

The presence of this species in the Park was always doubted until E. A. N. le Riche donated a specimen that was killed by a car at Nossob camp.

Order Chiroptera

Tadarida (T.) aegyptiaca bocagei

Egyptian Free-tailed Bat. Egiptiese Losstertvlermuis

A colony was found in crevices of a calcareous outcrop on the Nossob riverbank near Twee Rivieren. Nel and Nolte (1965) report two more localities—one on the Auob river (Auchterlonie) and one on the Nossob river (Kransbrak).

Nycteris thebaica

Egyptian Slit-faced Bat. Egiptiese Langoorvlermuis.

A series of specimens exist in the Transvaal Museum collection that were collected by C. G. Coetzee and W. D. Haacke at Twee Rivieren. Hayman (1967) is of opinion that no subspecies can be upheld.

Eptesicus (E.) capensis

Cape Serotine Bat. Kaapse Dakvlermuis.

A few specimens were found in the dam at Kaspersdraai on the Nossob river, where they are believed to have drowned while attempting to drink water in flight. Smithers (1968) recorded a specimen from a locality in Botswana on the east bank of the Nossob river (approximately 26° S), which he regards as *E.c. damarensis*.

Order Primates

Cercopithecus aethiops

Vervet Monkey. Blou-aap.

A female was recorded and photographed during the last visit, on the Auob river 48 miles North of Twee Rivieren. Although the possibility exists that this animal was released in the park by visitors, the le Riche brothers can recall about six other instances where they encountered specimens of this species in the Park during their lifetime.

Order Carnivora

Otocyon megalotis megalotis

Bat-eared Fox. Bakoorkakkals.

Widely distributed. Specimens were collected on the river beds near Twee Rivieren and Nossob camps.

Vulpes chama

Silver Jackal. Silwer Jakkals.

A specimen was collected on the river bank 3 km South of Nossob Camp.

Canis mesomelas arenarum

Black-backed Jackal. Rooijakkals.

Widely distributed. Specimens were collected at Twee Rivieren and Nossob camps.

Ictonyx striatus

Cape Polecat. Kaapse Stinkmuishond.

Only one specimen has been collected so far, on the river bed near Mata Mata camp.

Mellivora capensis capensis

Honey Badger. Ratel.

Sight records from Twee Rivieren and Garakap (Unions End). E. A. N. le Riche has tamed an animal at Nossob camp that has been caught on the Nossob river South of the camp.

Genetta genetta pulchra

Small-spotted Genet. Kleinkol-muskejaatkat.

Two specimens have been collected, from Nossob and Mata Mata camp vicinities.

Herpestes sanguineus

Slender Mongoose. Rooimuishond.

Two sight records of this species in Twee Rivieren camp, both in the late afternoon.

Cynictis penicillata

Yellow Mongoose. Geelmeerkat.

Specimens were collected from Nossob and Mata Mata camp vicinities.

Suricata suricatta suricatta

Suricate. Graaitjiemeerkat.

Several specimens were collected on the Nossob river between Twee Rivieren and Nossob camps. Widely distributed.

Felis libyca

African Wild Cat. Vaalboskat.

Two sight records by J. du P. Bothma at Dankbaar, and 32 km south of Nossob camp on the river bed.

Felis nigripes nigripes

Black-footed Cat. Swartpoot-wildekat.

Two unconfirmed sight records on the Nossob river approximately 24 km North of Twee Rivieren camp.

Felis caracal

Caracal. Rooikat.

Recorded from Twee Rivieren and photographed by C. Haagner.

Order Tubulidentata

Orycteropus afer

African Antbear. Aardvark.

Recorded from Mata Mata and photographed by C. Haagner. Appears to be distributed throughout the Park.

Order Lagomorpha

Lepus capensis kalaharicus

Cape Hare. Vlakhaas.

Widely distributed. Specimens were collected on river beds or river banks near Twee Rivieren, Mata Mata and Nossob camps.

Order Rodentia

Hystrix africae-australis

Porcupine. Ystervark.

A group of five individuals were seen by Nel and Bothma during 1970 in the Nossob river 38 km North of Twee Rivieren. The barbs of this animal were found in the calcareous outcrops on the river banks near Twee Rivieren as further evidence of its occurrence in the Park.

Xerus inauris

Ground Squirrel. Waaierstertmeerkat.

Particularly abundant wherever hard sand is available such as river banks. Specimens were collected in the vicinities of Twee Rivieren, Mata Mata and Nossob camps.

Pedetes capensis

Spring Hare. Springhaas.

Widespread and common. Specimens were collected in the vicinities of the three rest camps.

Cryptomys hottentotus damarensis

Damara Mole-rat. Damaralandse Tandmol.

De Graaff (*pers. comm.*) regards *damarensis* as a subspecies of *C. hottentotus*. Specimens were collected in dune streets near Twee Rivieren and Mata Mata camps where the ground is firm and rather flat.

Thallomys paedulcus nigricauda

Black-tailed Tree Rat. Swartstert-boomrot.

Recorded from Nossob camp, Dankbaar and Kwang. Several nests believed to have been constructed by this species were examined, but were all deserted. The specimens collected all occurred in hollow Acacia trees where they apparently stayed for long periods judging from the large amount of droppings in the nest and at the base of the tree.

Rhabdomys pumilio griquae

Striped Field Mouse. Streepmuis.

Collected on river beds and dune streets alike near all three camps and at Dankbaar, in the middle block. Where found it was particularly abundant near fallen Acacia trees which provided ample cover.

Mus minutoides

Pygmy Mouse. Dwergmuis.

A small series was collected on the river bed three miles North of Nossob camp.

Saccostomus campestris

Pouched Mouse. Wangsakmuis.

Two females were collected near Nossob camp on the East bank of the river, on white sand.

Dendromus melanotis

Grass-climbing Mouse. Grasklimmuis.

Nel and Nolte (1965) record an incidence of this species in owl pellets from Auchterlonie on the Auob river. No other record of the occurrence of this species in the Park exists.

Malacothrix typica kalaharicus

Large-eared Mouse. Grootoormuis.

Specimens from Twee Rivieren were collected on the hard river bed and calcareous outcrops on the East bank. Specimens from Nossob camp were collected on white sand of the river bank amongst three-thorn shrub.

Parotomys brantsi deserti

Brant's Karroo Rat. Brantse Karoo-rot.

Collected in vicinities of all three rest camps and Dankbaar. Were mainly collected on firm sand of river banks.

Desmodillus auricularis

Namaqualand Gerbil. Namakwalandse Nagmuis

Recorded from all three main collecting sites.

Gerbillurus paeba paeba

Lesser Gerbil. Klein Nagmuis.

Very common species. Collected on dune slopes, dune summits and dune streets in the vicinity of the three rest camps and Dankbaar.

Tatera brantsi griqua

Brant's Gerbil. Basoetolandse Nagmuis.

Collected near Twee Rivieren, Nossob and Mata Mata rest camps, and at Dankbaar on sandy dune slopes, dune streets and in the river beds.

Acknowledgements

I wish to thank the National Parks Board for permission to collect material from the Kalahari Gemsbok National Park. My sincere thanks are due to the staff of the Park for friendly advice and assistance rendered. The late Dr. Nico van der Merwe initiated the project, and Dr. G. de Graaff encouraged the continuation of the work, and rendered assistance whenever needed. Drs. J. A. J. Nel and J. du P. Bothma kindly made available their personal records. This project was carried out with the permission of the Director of the Transvaal Museum, Dr. C. K. Brain.

REFERENCES

- CORBET, C. B. 1966. Menotyphla. In: J. Meester (ed.) *Preliminary Identification Manual for African Mammals*. Washington, D.C.: Smithsonian Institution.
- 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.

- MEESTER, J. 1968. Lipotyphla: Chrysochloridae. In: J. Meester (ed.) *Preliminary Identification Manual for African Mammals*. Washington, D.C.: Smithsonian Institution.
- 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.
- SMITHERS, R. H. N. 1968. *A check list of the mammals of Botswana*. Published by the Trustees of the National Museums of Rhodesia.