

# **Mammals of Goegap Nature Reserve**

**By Carola Schneider**

## **Introduction:**

### **Common information about mammals:**

The mammal group is a very small one. It contains between 4000 and 4500 living species in the world while the birds contain approximately about 8900 species. Mammals have a number of common characteristics that set them apart from other vertebrates: they breathe with lungs; they possess a four-chambered heart; they have three delicate bones in the middle ear; females have mammary glands that produce milk for suckling young; and nearly all species have a covering of body hair. In South Africa more than 340 species are currently known.

### **Information about Goegap:**

Goegap Nature Reserve lies in the northern part of South Africa, called Namaqualand. It is a 15.000 ha big area and includes 46 mammal species (most of them are small rodents/mammals). Namaqualand is a succulent karoo. It consists mainly of rocky plains and isolated hills and hill ranges, with vegetation comprising low, woody shrubs and succulents.

### **Mammal adaptations in Succulent Karoo:**

The mammals who live in this area are well/have to be adapted at their environment because the living conditions are very hard – rainfall only in winter, very high temperatures and sparse vegetation. The vast majority of desert herbivores can maintain their independence of freestanding water by actively seeking out plants with a high water content (Springbok, Steenbok, Gemsbok). Many are nocturnal because they are quite attuned to the fact that the water content of plants increases at night. It therefore makes sense for ungulates to feed at night in order to maximize their water intake when feeding.

But in Goegap Nature Reserve there are some species who need water availability, and can only occur in the reserve because of the presence of waterholes (black-backed jackal, savanna baboon).

### **Family introductions:**

Insectivores (Order Insectivora)  
Sengis or elephant shrews (Order Macroscelidea)  
Bats (Order Chirotera)  
Primates (Order Primates)  
Hares and Rabbits (Order Lagomorpha)  
Rodents (Order Rodentia)  
Carnivores (Order Carnivora)  
Aardvark (Order Tubulidentata)  
Dassies (Order Hyracoidea)  
Odd-toed Ungulates (Order Perissodactyla)  
Even-toed Ungulates (Order Artiodactyla)

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## Macroscelides:

Rounded-eared Elephant shrew *Macroscelides proboscideus*  
Ronde-oor klaasneus Kurzohrrüsselspringer

Total length 23 cm; tail 12 cm; mass 31-47 g

**Identification:** elongated, trunk-like snout; hind legs and feet are considerably larger than the forelegs and –feet

**Habitat:** occur in areas with sandy soils

**Behaviour:** partly nocturnal; terrestrial; usually solitary; lives in burrows

**Food:** insects and other invertebrates – marked preference for ants and termites, green plant matter, soft shoots and fruit

**Where seen:** Field Site

**Adaptation:** this species does not drink, obtaining its moisture from food instead. Sweet glands on the feet serve thermoregulatory functions. Thermal biology is well developed: They are able to maintain high body temperatures and metabolic rates, and some are capable of spontaneous and adaptive daily torpor



Cape Rock Elephant shrew *Elephantulus edwardii*  
Kaap se klipklaasneus Kap–Klippen–Elefantenspitzmaus

Total length 25 cm; tail 13 cm; mass 50g

**Identification:** elongated, trunk-like snout; hind legs and feet are considerably larger than the forelegs and –feet

**Habitat:** restricted to rocky environments

**Behaviour:** partly nocturnal; terrestrial; usually solitary;

**Food:** insects and other invertebrates – marked preference to ants and termites

**Where seen:** Field Site

**Adaptation:** The nocturnal life style protect them from extreme heat. Thermal biology is well developed: They are able to maintain high body temperatures and metabolic rates, and some are capable of spontaneous and adaptive daily torpor

## Baboons, Monkeys and Bushbabies:

Savanna Baboon *Papio cynocephalus ursinus*  
Kaapse bobbejaan Steppenpavian

Male: total length 120-160 cm; tail 60-85 cm; mass 25-45 (average 32) kg

Female: total length 100-120 cm; tail 50-60 cm; mass 12-20 (average 16) kg

**Identification:** long, dog-like snout in adults; uniform grey to grey-brown colour; males larger than females



**Habitat:** Wide habitat tolerance but it requires rocky cliffs or tall trees to which to retreat at night or when threatened. Drinking water is essential. It inhabits mountains, hill ranges and riverine woodland

**Behaviour:** social species who lives in troops;

**Food:** Omnivorous; digs for roots and bulbs; eats wild fruit, seeds, leaves and flowers, insects and other invertebrates. Will eat young antelope, hares, mice and birds if encountered

**Where seen:** Near the Research Station

**Adaptation:** ?

## Hares and Rabbits:

Scrub Hare *Lepus saxatilis*

Kolhaas Strauchhase

Total length 45-65 cm; tail 7-17 cm; mass 1,5-4,5 kg

**Identification:** long ears; hind legs much longer than forelegs and short fluffy tail; upper parts more greyish

**Habitat:** occurs in woodland and scrub cover where there is grass. Commonly seen in cultivated areas.

**Behaviour:** nocturnal but some early morning and late afternoon activity may occur. Rely on their camouflage when approached, only getting up and running off at the last minute

**Food:** Predominantly grazers but will feed on other plants

**Where seen:** Field Site

**Adaptation:** rests in a form during the day and is active at night, emerging at sunset to feed

Cape Hare *Lepus capensis*

Vlakhaas Kaphase

Total length 45-60 cm; tail 7-14 cm; mass 1,4-2,5 kg

**Identification:** long ears; hind legs much longer than forelegs and short fluffy tail; upperparts more brown

**Habitat:** prefers drier open habitat

**Behaviour:** nocturnal but some early morning and late afternoon activity may occur. Rely on their camouflage when approached, only getting up and running off at the last minute

**Food:** Predominantly grazers but will feed on other plants

**Where seen:** Field Site

**Adaptation:** during the day it lies up in shallow depressions, which it scrapes with the forepaws at the base of shrubs or tufts of grass. These forms usually face away from the sun and the prevailing wind. The large ears play a role in regulation body temperature. On hot days they are held away from the body and appear flushed, whereas during cold weather the exposed skin on the back of the ears is held firmly against the body to prevent heat loss.

Smith's Red Rock Rabbit *Pronolagus rupestris*

Smith se rooiklipkonyn Smith Rotkaninchen

Total length 43-65 cm; tail 5-11 cm; mass 1,3-2,0 kg

**Identification:** Rump and back legs are bright red-brown; tail is dark to red-brown with a black tip; sides of face are grayish



**Habitat:** Rocky habitats from isolated outcrops to mountain ranges

**Behaviour:** essentially nocturnal, but may feed on overcast days. Normally rest up in rock crevices or in dense vegetation cover. Usually single.

**Food:** Grazers

**Where seen:** During night drive

**Adaptation:** nocturnal

## Rodents:

Hairy-footed Gerbil *Gerbillurus paeba*

Haarpotnagmuis Zwergrennmaus

Total length 20 cm; tail 11 cm; mass 25 g

**Identification:** Fairly small size; long tails; large hindfeet with hairy soles

**Habitat:** Sandy soils in arid areas, although Hairy-footed Gerbil extends into moister environment of southern coastal zone

**Behaviour:** nocturnal; excavate their own burrows; lives in smaller groups

**Food:** seed-eater, but include some insects in his diet

**Where seen:** Field Site

**Adaptation:** They compensate for water scarcity by manufacturing very concentrated urine in their specialized kidney. They have low resting metabolic rates and good fur insulation and they are nocturnal.

Striped mouse *Rhabdomys pumilio*

Streepmuis Striemengrasmaus

(Streifengrasmaus)

Total length 18-21 cm; tail 8-11 cm; mass 30-55 g

**Identification:** Four dark stripes down the back

**Habitat:** wide-ranging, from desert fringe to high-rainfall mountain areas.

**Behaviour:** diurnal; lives in burrows of the Bosh Karoo Rat

**Food:** seeds, plant parts; insects

**Where seen:** Field Site

**Adaptation:** They practice belly-basking in the shade to keep cool. They are mainly active in early morning and late afternoon and resting in the bushes in the heat of the day.



Brant's whistling rat *Paratomys brantsii*

Brants se fluitrot Brant's Pfeiffratte

Total length 25 cm; tail 10 cm; mass 120 g

**Identification:** stocky built; tails shorter than the length of head and body; body colour ranges from pale reddish-yellow with white underparts to a brownish or grayish yellow with grey underparts

**Habitat:** arid, sandy environments

**Behaviour:** diurnal; terrestrial; may live solitary in burrows but commonly in colonies; when alarmed they stand on their hind legs, in close proximity to the burrow, and give a shrill whistling calls before disappearing down the burrow

**Food:** eating the leaves of succulents and other green plant food as well as seeds and flowers

Littledale's whistling rat *Paratomys littledalei*  
Littldale se fluitrot Littledale-Pfeiffratte

Total length 25 cm; tail 10 cm; mass 120 g

**Identification:** stocky built; tails shorter than the length of head and body; body colour ranges from pale reddish-yellow with white underparts to a brownish or grayish yellow with grey underparts

**Habitat:** arid, sandy environments

**Behaviour:** diurnal; terrestrial; solitary; when alarmed they stand on their hind legs, in close proximity to the burrow, and give a shrill whistling calls before disappearing down the burrow

**Food:** eating the leaves of succulents and other green plant food as well as seeds and flowers

**Adaptation:** They do not need to drink because sufficient water is provided in the diet

Karoo bush rat *Otomys unisulcatus*  
Karooose bosrot Karoo-Lamellenzahnratte

Total length 24 cm; tail 9cm; mass 125 g

**Identification:** robust, stocky appearance; short tail; blunt muzzles; rounded ears; grooved upper incisors

**Habitat:** moist, marshy habitats, can also be found in drier habitats

**Behaviour:** predominantly diurnal and live singly, in pair or small family parties. Construct nests of grass and other vegetation

**Food:** Shoots and stems of grass, sedges, reeds and other plants

**Where seen:** Near Research Station



**Adaptation:** Succulent plants comprise more than 30% of the diet and provide sufficient water. They built large lodges which are having a good climate (cool in summer and warm in winter)

## Carnivores:

Black-backed Jackal *Canis mesomelas*  
Rooijakkals Schabrackenschakal

Total length 96-110 cm; tail 28-37 cm; shoulder height 38 cm; mass 6-10 kg

**Identification:** Dog-like appearance; dark, white-flecked on the back; black tail

**Habitat:** from coastal Namib Desert to moist Drakensberg, prefers drier areas

**Behaviour:** Mainly nocturnal when in conflict with man, but in protected areas is frequently seen during day. Normally solitary or in pairs but also occurs in family parties. Pairs form long-term pair bonds, with both the male and the female marking and defending a territory, which varies considerably in size, depending on the availability of



food and competition with other jackals.

**Food:** extremely wide range of food items, from young antelope, rodents, hares, birds, reptiles and insects to wild fruits and berries

**Where seen:** Night drive

**Adaptation:** Omnivorous, eating almost everything that is available. Water is essential.

Aardwolf *Proteles cristatus*

Aardwolf Erdwolf

Total length 84-100 cm; shoulder height 50 cm; mass 6-11kg

**Identification:** Hyaena-like appearance; pale-buff background color with dark vertical body stripes

**Habitat:** very wide habitat tolerance, occurring in both low-and high-rainfall regions. Prefers open habitats and avoids forest. Its distribution is dictated by the availability of termites, its principal food

**Behaviour:** mainly active at night but it may be seen during the early morning and late afternoon and on overcast days. It occurs singly, in pairs, or in family parties. Home range may be occupied by two or more animals in several females may drop their pups in the same den.

**Food:** Mostly termites but will occasionally take other insects

**Where seen:** Night drive



**Adaptation:** It survives by being almost totally inactive during cold spells, preferring to stay a metre underground in the relative warmth of the burrows, where the temperature never falls below 12 °C. It also saves energy by allowing its body temperature to drop to as low as 31 °C. During winter frequently active by day, in summer active by night.

African Wild Cat *Felis silvestris lybica*

Vaalboskat Afrikanische Wildkatze

Total length 85-100 cm; tail 25-37 cm; shoulder height 35 cm; mass 2,5-6,0 kg

**Identification:** Distinguishable from the domestic cat by the rich reddish-brown colour of back of ears, over belly and on back of hind legs

**Habitat:** Wide habitat tolerance but requires cover

**Behaviour:** Solitary except when mating or when female is tending kittens

**Food:** Mainly small rodents but also other small mammals, birds, reptiles, amphibians, insects and other invertebrates

**Where seen:** During night drive



**Adaptation:** nocturnal

Suricate                    *Suricata suricatta*  
Stokstertmeerkat      Surikate (Erdmännchen)

Total length 45-55 cm; tail 20-24 cm; mass 620-960 g

**Identification:** Small size; pale body color with several irregular transverse bands on the back; thinly haired tail, usually with darker tip

**Habitat:** Open, arid, lightly vegetated country

**Behaviour:** diurnal; lives in groups; will dig its own burrow complexes but will also make use of those dug by Ground Squirrels and Yellow Mongooses, often living in harmony with both of these species; often use the tail as a fifth leg when standing on hind legs

**Food:** Predominantly insects and other invertebrates, but it will also eat reptiles and birds

**Where seen:** Open area near picnic stations



**Adaptation:** They have a low resting metabolic rate (about 45% lower than normal) but don't need good insulation because they are active during day. They emerge from their burrows after sunrise and bask in the morning sun, soaking up its warmth before they set off to forage. They have a communal life style in their underground burrows, where even in winter the temperature is unlikely to drop below 18°C, and at night, being highly social, they huddle close to each other for warmth. When their body temperature becomes too high, they move into the shade of a bush or grass clump, scrape away the warmer surface sand layers to reveal cooler sand and lie down at full stretch on their sparsely haired bellies. Their excess body heat is thus 'offloaded' via their bellies by direct conduction with the cooler sand.

Yellow Mongoose    *Cynictis penicillata*  
Witkwasmuishond    Fuchsmanguste

Total length 40-60 cm; tail 18-25 cm; mass 450-900 g

**Identification:** small size; yellowish body and tail with white tail-tip

**Habitat:** open habitats, short grassland, and semi-desert scrub

**Behaviour:** diurnal; usually seen alone but lives communally in warrens of 5 to 10 individuals. It dig its own burrows but will occupy those dug by the Suricate and Ground Squirrels

**Food:** Mostly insects and invertebrates, but take also small rodents, amphibians and reptiles and occasionally carrion

**Where seen:** Open area near picnic stations



**Adaptation:** ?

### Aardvark:

Total length 1,40-1,80 m; tail 45-60 cm; mass 40-70 kg

**Identification:** long, pig-like snout; elongated tubular ears; generally heavy build; walks with back arched

**Habitat:** preference for open woodland, sparse scrub and grassland

**Behaviour:** mainly nocturnal, rarely seen during the day. Normally solitary, females may be accompanied by a single young. They excavate extensive burrow-systems. Occupied burrows are often





characterized by numerous small flies in the entrance-way. In areas where the Aardvark is present, numerous termite-mounds have holes excavated at their bases.

**Food:** Mainly ants and termites. Termites predominate in the diet in the rainy season, and ants during the dry season

**Where seen:** Night drive

**Adaptation:** During the day it lies in a burrow and is active at night.

## Dassies:

Rock Dassie *Procavia capensis*

Klipdassie Klippschliefer

Total length 45-60 cm; mass 2,5-4,6 kg

**Identification:** small but stocky build; no tail; small rounded ears

**Habitat:** Rocky areas, from mountain ranges to isolated rock outcrops

**Behaviour:** Predominantly diurnal but on warm, moonlit nights they may emerge to feed. Normally they only become active after sunrise when they lie for some time on the rocks in the sun to warm up before moving off to feed. While the group basks in the sun an adult animal keep watch for predators. If disturbed, the guard gives a sharp cry and the dassies scuttle for cover amongst the rocks.

**Food:** Grazers and browsers

**Where seen:** Tganagas se poort

**Adaptation:** Taking more grass when wet, and more browse when dry. They practice belly-basking to keep cool.

## Odd-toed Ungulates:

Hartmann's mountain zebra *Equus zebra hartmannae*

Hartmanse Bergsebra Hartmann Bergzebra

Shoulder height 1,5 m; tail 40 cm; mass 250-350 kg

**Identification:** black and white stripes without shadow stripes; a dewlap is present on the throat (does not occur in other zebras)

**Habitat:** Mountainous areas adjacent flats

**Behaviour:** Breeding herds consist of an adult stallion with mares and their foals and usually number 4 or 5 but occasionally more. In the dry season, however, they may congregate in loose associations of up to 40; diurnal

**Food:** Predominantly grazers but also browse occasionally

**Where seen:** Night drive and open area near picnic places



**Adaptation:** As the food supply dwindles on the mountainsides towards the end of the dry season, it moves onto the plains, returning when the grazing improves. Mainly active at early morning and late afternoon. Drink daily, but when surface water is not available, it will dig for water by scraping holes up to a metre deep with its front hooves.

## Even-toed Ungulates:

Gemsbok *Oryx gazelle*

Gemsbok Spiessbock (Oryx)

Shoulder height 1,2 m; mass 240 kg (bull), 210 kg (cow); average horn length 85 cm

**Identification:** distinct black facial and body markings; long horse-like tail and long straight horns; heavily built with thick neck

**Habitat:** Open, dry country but also open woodland, grassveld and dune country

**Behaviour:** Gregarious, occurring in herds of about 15, during rain often in larger numbers. They may occur in mixed herds (bulls, cows and young) or nursery herds (cows and young) – solitary bulls are often seen. A territorial bull will herd a mixed or nursery herd into his territory and only he will mate with receptive cows.

**Food:** Although mainly grazers they also include browse, seed-pods and fruits such as tsamma melons in their diet

**Where seen:** Near the tourist route



**Adaptation:** A gemsbok allows its body temperature to rise by 7-43 °C, and then unloads the excess heat when air temperatures fall at night. Its deep body temperature actually rises high enough to cause brain damage, but blood on its way to the brain passes through a mesh of veins and arteries called the carotid rete, where it is cooled by heat exchange with blood returning from the nasal membranes, where it was cooled by evaporation.

Springbok *Antidorcas marsupialis*

Springbok Springbock

Shoulder height 75 cm; tail 25 cm; mass 41 kg (ram), 37 kg (ewe); average horn length (ram) 35 cm

**Identification:** dark brown band separating upper-from underparts; short lyrate horns in both sexes; broad white crest on back visible

**Habitat:** Open, arid plains

**Behaviour:** Activity during the cooler daylight hours but also partly at night. Normally in smaller herds but when moving to new feeding-grounds may congregate in herds of many thousands.

**Food:** Grass and browse; will dig for roots and bulbs

**Where seen:** Near the tourist route



**Adaptation:** When water scarce, supplements water requirements by eating moisture-rich roots and tubers

Steenbok *Rapherus campestris*  
Steenbok Steinantilope

Shoulder height 50 cm; mass 11 kg; average horn length 9cm

**Identification:** long ears; only ram has short, vertical horns; very short tail

**Habitat:** Open country but some cover required. In arid areas inhabit dry riverbed associations

**Behaviour:** Occurs singly or in pairs. Territorial. Lie up in cover during heat of the day, feeding in early morning and late afternoon. Also active at night, particularly in areas where they suffer disturbance.

**Food:** Mixed feeders taking grasses, browse, seed-pods and fruit. Dig for bulbs and roots with the front hoofs

**Where seen:** Night drive

**Adaptation:** Highly selective for green material: prefers young leaves, shoot tips, flowers and fruits of various plants. This selectivity is related to its availability to exist independently of free water. During dry month steenbok rare the ground, even digging shoulder-deep, to expose roots, tubers and bulbs which are nutritious and have a high moisture content.

Klipspringer *Oreotragus oreotragus*  
Klipspringer Klipspringer

Shoulder height 60 cm; tail 8 cm; mass 10 kg (ram), 13 kg (ewe); average horn length 8 cm

**Identification:** small stocky antelope; ears are rounded, broad and bordered with black; walks on tips of hoofs; only ram has horns

**Habitat:** Rocky habitat only

**Behaviour:** Active in morning and in later afternoon but throughout the day when cool. Occur in pairs or small family groups. Adult ram is territorial. Extremely agile in moving across rocky terrain and up steep rock-covered slopes.

**Food:** Principally browse, but take a wide range of plant food

**Where seen:** During night drive



**Adaptation:** The hair is coarse and thick, which protects the klipspringer if it falls and it is also a good insulator for the extremes of hot and cold temperatures.

Common duiker *Sylvicapra grimmia*  
Gewone duiker Kronenducker

Shoulder height 50 cm; tail 12 cm; mass 18 kg (ram), 21 kg (ewe); average horn length 11 cm

**Identification:** black baze of variable length on face; ram has well-ringed, sharp-pointed horns

**Habitat:** Prefers scrub and bush-covered country

**Behaviour:** Usually single but sometimes in pairs. Activity takes place in early morning and late afternoon but also at night. Lies low when disturbed but on too-close approach takes off at fast zigzag-run.

**Food:** Wide variety of browse species; also agricultural crops.

**Where seen:** During night drive

**Adaptation:** It is not dependent on water (will drink if available).

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