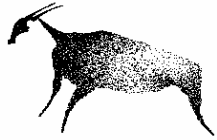




Endangered Wildlife Trust



CONSERVATION BREEDING
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SOUTHERN AFRICA



SPECIES SURVIVAL COMMISSION



Endangered Wildlife Trust



Red Data Book of the Mammals of South Africa: A Conservation Assessment



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THE RED DATA BOOK OF THE MAMMALS OF SOUTH AFRICA: A CONSERVATION ASSESSMENT

INTRODUCTION

South Africa has been ranked the third most biologically diverse country on Earth based on an index of species diversity and endemism, and is one of 12 megadiverse countries which collectively contain more than two-thirds of global biodiversity (World Conservation Monitoring Centre, 1992). Located at the southern extremity of Africa, South Africa has a total land surface area of 1 219 912 km² and the national territory includes the sub-Atlantic Marion and Prince Edward islands. Despite the majority of the country being semi-arid to arid with an average national rainfall of 500mm (DEAT, 1999, cited in Rossouw et al. 2003), South Africa is host to a wide variety of ecosystems. Agriculture is the dominant land use, contributing about 3.2% to the Gross Domestic Product and urban areas comprise approximately 1.14% of the land. In 2001, 44.8 million people lived in South Africa.

South Africa is a signatory to, among others, the RAMSAR Convention on Wetland Conservation, the Convention on International Trade in Endangered Species (CITES) and ratified the Convention on Biological Diversity (CBD) in 1995. This convention, originating at the 1992 Earth Summit in Rio de Janeiro, put biodiversity conservation onto the political agenda of participating countries, and is today the most "signed up" international treaty with 187 countries as parties. As host to the 2002 World Summit on Sustainable Development and the 2003 World Parks Congress, South Africa has expanded its role as a global participant in furthering the cause for species and ecosystems conservation. The promulgation of our National Environmental Management Biodiversity Bill is further evidence of South Africa's intention to identify, inventorise and conserve our invaluable natural heritage, and the right of every individual to a healthy, well protected and ecologically sustainable environment is enshrined in the Constitution of South Africa (Act 108 of 1996).

A primary objective of the CBD is to document and highlight potential and realised global biodiversity losses at the level of genes, species and ecosystems. Specifically, the Convention refers to a country's obligation to:

Article 7:

"Identify components of biological diversity important for ... conservation and sustainable use . . . " **and**

"Maintain and organise, by any mechanism, data derived from identification and monitoring activities pursuant to . . . biodiversity . . . conservation"

A comprehensive, scientifically-sound publication providing updated information on the status of South African mammals was identified by the local conservation community as a critical step towards setting conservation and management priorities, identifying threatened species and their habitats and ensuring more effective conservation and management of species and their habitats. Furthermore, it contributes towards creating an increased awareness of critical conservation issues and threats, directing conservation action towards species in greatest danger of extinction and encouraging improved collaboration and resource utilisation. Ultimately, as an index of the state of biodiversity loss in South Africa, it has the potential to become an invaluable tool measuring the success or failure of our conservation programmes.

IUCN (World Conservation Union) Red Data Books explicitly document and highlight biodiversity losses at the species level and are important tools for guiding the conservation activities of governments and conservation organisations. Red Data Books are furthermore widely recognised as the most comprehensive, apolitical evaluation of the conservation status of plant and animal species as well as measures of the success or failure of various conservation initiatives. Several species in fact, owe their continued existence or improvement in fortunes to the attention they have received as a result of appearing on these lists (Barnes, 2000). The previous South African Red Data Book for Mammals was published in 1986 (Smithers, 1986) and covered terrestrial mammals only. Since this publication, South Africa has experienced changes to its provincial borders, amendments to the taxonomic classification of many species have been made, our knowledge and understanding of species and trends has improved, the tools at our disposal for data accumulation and management have improved immeasurably and the IUCN Red List categories and criteria applied in the process of assessing and assigning threat status to species have changed. Hence the absolute need for a comprehensively updated publication assessing all terrestrial and marine mammals in South Africa.

A Conservation Assessment and Management Plan (CAMP) is a tool developed by the Conservation Breeding Specialist Group (CBSG - of the IUCN's Species Survival Commission - SSC) for strategic conservation planning and the management of species and their habitat. A CAMP is a broad-based, comprehensive and scientifically-sound assessment of the taxonomic groups of a region or country using the IUCN's Red List criteria to categorise the level of threat facing species.

As a means of updating the South African Red Data Book for Mammals, the CBSG's CAMP process was identified as a comprehensive and scientifically-sound means of assessing species and CBSG Southern Africa, a regional CBSG

network in partnership with the Endangered Wildlife Trust (EWT) coordinated and managed the project. The entire project was sponsored by Vodacom, the National Research Foundation and the Lomas Wildlife Trust.

Very importantly, this publication does not simply cover the threatened mammals but includes a conservation assessment for every terrestrial and marine mammal in South Africa. This decision to cover all South African mammals was taken for several important reasons: Firstly, whilst determining which threatened species should be assessed may be relatively easy, there are a number of “grey” areas where it is not so easy to determine where the line between threatened and not threatened lies. Secondly and perhaps more importantly, for this publication to serve as a useful indicator of biodiversity trends, including allowing trends in species populations and habitat to be effectively tracked, baseline data for every mammal species are essential. Therefore, in assessing all mammal species and developing a baseline dataset for each, future updates of these assessment will provide a means of determining trends, measuring conservation success or failures and identifying areas of biodiversity conservation concern highlighted by trends in both the common as well as the threatened mammals.

A total of 295 terrestrial and marine species and subspecies of mammals were reviewed. Species were evaluated within South African borders only, excluding Swaziland and Lesotho.

CAMP BACKGROUND

In January 2002, almost 90 South African mammal conservationists, biologists and taxonomists were invited to participate in the South African Mammal Conservation Assessment and Management Plan (CAMP). Participants collected relevant data on species within their areas of expertise and these data were accumulated in CBSG-developed CAMP taxon datasheets (TDS). Data pertained to species’ distribution, habitat, population status and trends, breeding and feeding characteristics and included all available references and research findings.

35 Organisations contributed to this publication, including South African National Parks, various Provincial Parks and Conservation Authorities, non-governmental organisations, national and provincial museums, academic institutions, private organisations and governmental departments.

The South African Mammal CAMP workshop was held in Johannesburg and during the course of the workshop, participants evaluated and compared the data submitted for each species in working groups, based on taxonomic groupings. A final, all-inclusive taxon datasheet for each species was drafted thereafter, an individual TDS for each species or subspecies was finalised and entered into the electronic CAMP database. Distribution maps, using

Geographical Information System (GIS) technology, were compiled for all terrestrial species during and after the workshop.

ASSESSMENT RESULTS

Taxon Data Sheets and distribution maps for each of the **295** species and subspecies of South African mammals evaluated and **57 (19.3%)** were assigned threat categories according to the IUCN Red List criteria (version 3.1, www.redlist.org) as follows:

- **10 (3.4%)** Critically Endangered
- **18 (6.1%)** Endangered and
- **29 (9.8%)** Vulnerable

53 (18%) Species were assessed as being **Data Deficient** and therefore, a threat category could not be assigned to these species. **38 (12.9%)** Species were assessed as being **Near Threatened** and **147 (49.8%)** as **Least Concern**.

A summary of the management recommendations for all species is as follows:

• Population and Habitat Viability Assessments:	27
• Captive breeding:	8
• Wild population management:	79
• Habitat management:	136
• Research:	248
• Monitoring:	182

Primary threats impacting negatively on many mammals include habitat loss and land transformation through deforestation, agriculture, timber planting and urban and industrial development. Poisoning, pollution and hunting have also been listed as having a negative impact on a number of mammals.

CONCLUSION

In line with CBSG’s motto of “Catalysing Conservation Action”, it is intended that *The Red Data Book of the Mammals of South Africa: A Conservation Assessment* publication fulfils its role of directing conservation research and action in a concerted effort to better conserve not only the mammals of South Africa, but also their habitats which are critical to the very survival of humankind in this country.

Grateful thanks to the following for their support of, and participation in this project:

Vodacom, the National Research Foundation, the Lomas Wildlife Trust, the Endangered Wildlife Trust staff and colleagues, the CBSG (SSC / IUCN) staff and associates, the Red List Office of the IUCN / SSC, all CAMP participants, all CAMP contributors, the participating organisations and all editorial contributors.

COMMON NAME: Black Rhinoceros—arid ecotype
SCIENTIFIC NAME: *Diceros bicornis bicornis*
ASSIGNED STATUS: Critically Endangered
PREVIOUS STATUS: Vulnerable

POPULATION DATA: The number of *D.b.bicornis* in SA is extremely low and there are currently less than 50 mature individuals in only two protected areas and a single private reserve at present. There are currently efforts to increase numbers within national parks through the introduction of further individuals from Namibia.

HABITAT: Browser occurring in the arid and semi arid regions of the Northern and Western Cape extending into the xeric and mesic thicket of the Eastern Cape.

PRIMARY CAUSE OF HABITAT CHANGE: Some increase in areas as rhino are relocated to additional suitable areas. Possible loss of available habitat beyond current area of occupancy through agriculture and livestock ranching (specifically desertification in thicket habitats of the Eastern Cape).

THREATS:

Habitat Loss (Human Induced)

Agriculture and livestock ranching. Habitat modification by goats in the Eastern Cape may reduce areas available for inclusion and expansion of existing protected areas for rhino. Recovery of these habitats may not be possible.

Direct Loss/Exploitation

Illegal Trade: Poaching levels currently sustainable and well policed but declines in capacity could lead to future increases in poaching incidents. Currently no sport hunting permitted.

Indirect Effects

Ecological imbalance. Competitors Potential conflict with elephant and conspecifics, particularly in high density and small areas. Local declines: small areas run the risk of rhinoceros numbers exceeding ECC, which could affect habitat and population performance. Pathogens/parasites: concern over the incidence of TB in black rhinoceros which could affect the major populations in the KNP.

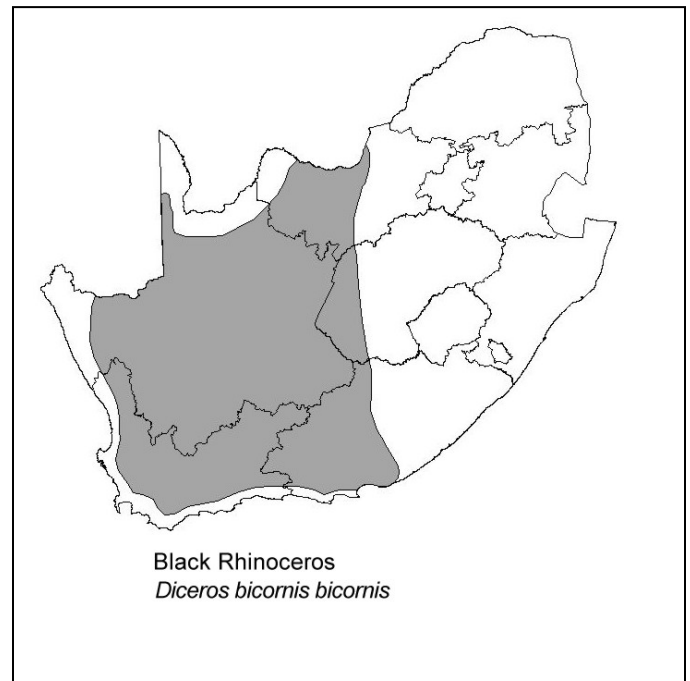
Intrinsic

Genetic Inbreeding is a potential threat in small isolated populations. Genetic analyses in HUP and Mkuze have shown high levels of heterozygosity.

Notes: Biggest threat remains illegal demand for rhino horn, which feeds the poaching of the species. Adequate security and intensive monitoring can counter the effects of poaching incidents, but this is dependant on continued conservation effort and sufficient resources. There are localised concerns over habitat modification in the Eastern Cape.



© Guy Castley



- Museum Records and Personal Observations
- Extent of Occurrence

COMMON NAME: De Winton's Golden Mole
SCIENTIFIC NAME: *Cryptochloris wintoni*
ASSIGNED STATUS: Critically Endangered
PREVIOUS STATUS: Indeterminate

Endemic to South Africa

Possibly Extinct. However, assessed as Critically Endangered because decline in habitat quality is largely assumed.

HABITAT: Temperate, Strandveld Succulent Karoo, Subterranean Habitats; Sand, Shingle or Pebble Shores (includes sand bars, spits, sandy islets, dune systems).

Extent of Occurrence: < 100 sq kilometres
Area of Occupancy: < 10 sq Kilometres

POPULATION DATA: < 50 mature individuals and declining.

THREATS:

Habitat Loss (Human Induced)
Extraction mining

Intrinsic
Poor dispersal



- Museum Records and Personal Observations
- Extent of Occurrence

COMMON NAME: Visagie's Golden Mole
SCIENTIFIC NAME: *Chrysochloris visagiei*
ASSIGNED STATUS: Critically Endangered
PREVIOUS STATUS: Indeterminate

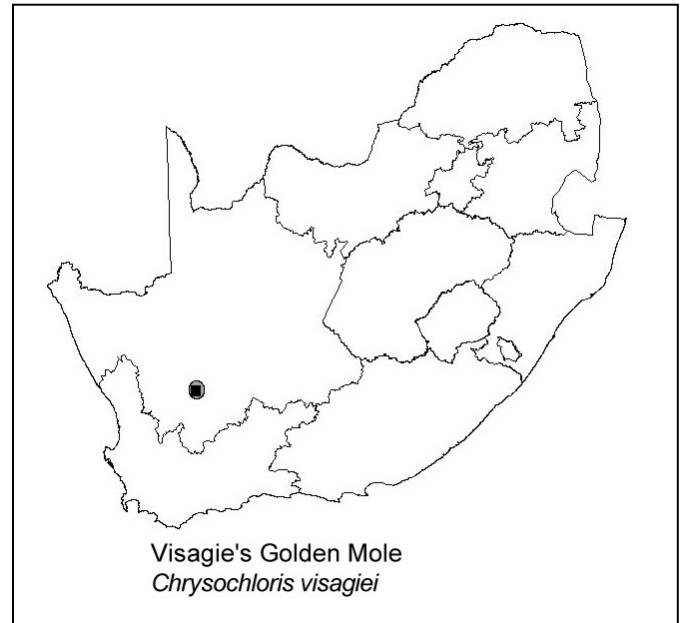
Endemic to South Africa

Possibly Extinct. Taxonomic study necessary to clarify if it is a subspecies of *C. asiatica*.

HABITAT: Current geographic extent is subterranean habitats: Bushmanland Nama-Karoo. Gouna, 86km East of Calvinia, Northern Cape.

Extent of Occurrence: < 100 sq kilometres
Area of Occupancy: < 10 sq Kilometres

POPULATION DATA: < 50 mature individuals – unknown trends.



- Museum Records and Personal Observations
- Extent of Occurrence

COMMON NAME: Juliana's Golden Mole
SCIENTIFIC NAME: *Neamblysomus julianae*
(*Pretoria subpopulation*)
ASSIGNED STATUS: Critically Endangered
PREVIOUS STATUS: Indeterminate

Endemic to South Africa

HABITAT: All Latitudes; Rocky Highveld Grassland
Subterranean Habitats; gardens.

Extent of Occurrence: < 100 sq kilometres
Area of Occupancy: < 10 sq Kilometres

PRIMARY CAUSE OF HABITAT CHANGE:
Urbanisation, sand mining. Habitat quality and quantity is decreasing.

POPULATION DATA: Unknown population size but decrease is estimated to be >80% and declining.

THREATS:

Habitat Loss (Human Induced)

Extraction: mining

Development: human settlement

Direct Loss/Exploitation

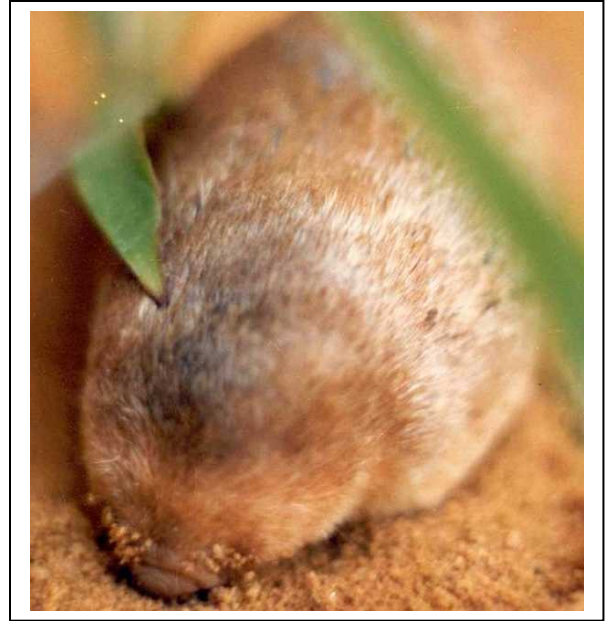
Exploitation - intentional poisoning

Indirect Effects

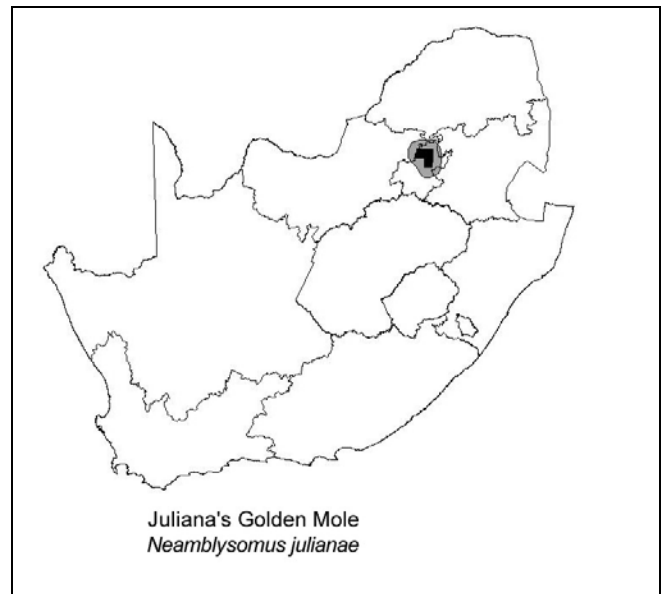
Alien invasive species and predators

Intrinsic

Poor dispersal



© Gary Bronner



- Museum Records and Personal Observations
- Extent of Occurrence

COMMON NAME: Rendall's Serotine Bat
SCIENTIFIC NAME: *Neoromicia rendalli*
ASSIGNED STATUS: Critically Endangered
PREVIOUS STATUS: Not listed

HABITAT: Savannah, Lala palm. Aerial insectivore, roosts in rock crevices, caves, mine tunnels.

Extent of Occurrence: 101-5,000 sq kilometres
Area of Occupancy: < 10 sq Kilometres

Only a single locality known within South Africa. Their single known locality is in Bonamanzi Game Reserve. This species does occur north of SA, however we do not know if there is any contact with populations beyond the border of SA.



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POPULATION DATA: Population size estimated to be fewer than 250 mature individuals, with unknown trends.

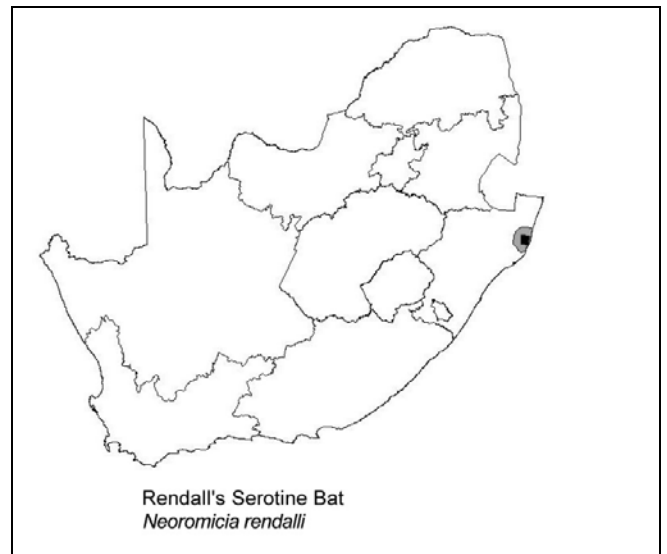
THREATS:

Habitat Loss (Human Induced)

Unspecified causes

Deforestation: clearing of Lala palms is a threat to their habitat.

PROTECTION: "Specially protected" in 1999 KwaZulu Natal Conservation Ordinance.



- Museum Records and Personal Observations
- Extent of Occurrence

COMMON NAME: Riverine Rabbit
SCIENTIFIC NAME: *Bunolagus monticularis*
ASSIGNED STATUS: Critically Endangered
PREVIOUS STATUS: Endangered

Endemic to South Africa

HABITAT: Desert, temperate; Nama Karoo. Riverine vegetation on alluvial soils adjacent to seasonal rivers.

Habitat highly fragmented and transformed, studies show habitat to be 67% fragmented in certain areas that can be considered representative of the entire distribution. Decrease in both habitat quality and quantity occurring and predicted to continue. Subpopulations isolated from each other by jackal-proof fencing and severe land transformation through agricultural practices.

PRIMARY CAUSE OF HABITAT CHANGE: Cultivation and livestock farming.

POPULATION DATA: Less than 250 mature individuals. Rapid decline of population due to loss of 50-60% of habitat in the past 70 years. This decline may have been arrested due to decrease in cultivation, public awareness and establishment of conservancies. No subpopulation estimated to contain more than 50 individuals, and these subpopulations appear to be isolated due to anthropogenic barriers to dispersal. Quantitative analysis shows that the probability of extinction in the wild is more than 50% within the next 100 years.

THREATS:

Habitat Loss (Human Induced)

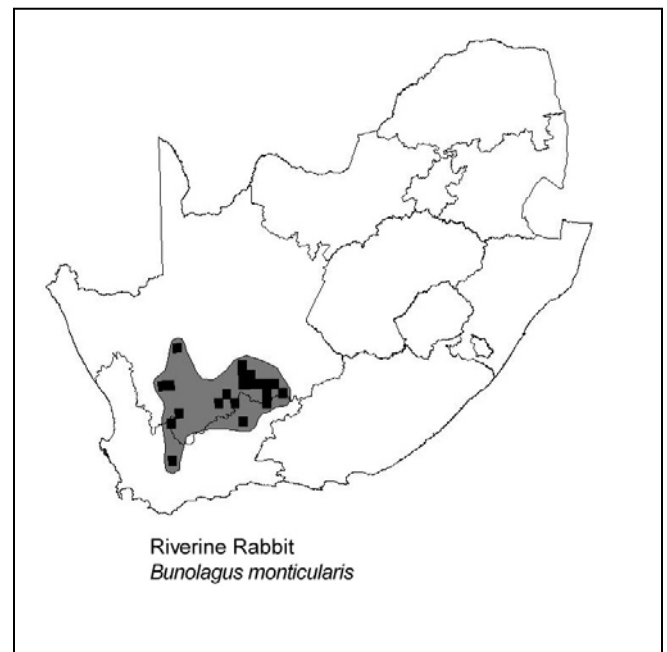
Agriculture: overgrazing by livestock
Crop plantations: habitat loss due to cultivation occurred mostly in the past

Direct Loss/Exploitation

Exploitation: hunting for sport, and by farm labourers with dogs
Accidental mortality: trapping, *Bunolagus* caught in traps set for 'pest' animals on farmlands.



© Tony Camacho



- Museum Records and Personal Observations
- Extent of Occurrence

COMMON NAME: Rough-haired Golden Mole
SCIENTIFIC NAME: *Chrysothalax villosus*
ASSIGNED STATUS: Critically Endangered
PREVIOUS STATUS: Vulnerable

Endemic to South Africa

Change in status from 1996 is based on population size, continuing decline and population structure which qualifies the species to be considered as CR.

HABITAT: Temperate Bogs, Marshes, Swamps, Fens, Peatlands; Subterranean habitats; Rural Gardens; Urban Areas. E Cape to KZN, inland to Mpumalanga and Pretoria District, Gauteng.

Decrease in both quality and quantity of habitat.

PRIMARY CAUSE OF HABITAT CHANGE: Overgrazing, urbanisation, wetland draining.

POPULATION DATA: <50 mature individuals and population is declining. Based on population size, continuing decline and population structure, this species is assessed as being Critically Endangered.

THREATS:

Habitat Loss (Human Induced)

Agriculture and grazing

Timber plantations

Development: human settlement

Unspecified causes: drainage/ filling in of wetlands/ coastlines

Direct Loss/Exploitation

Exploitation: intentional poisoning

Indirect Effects

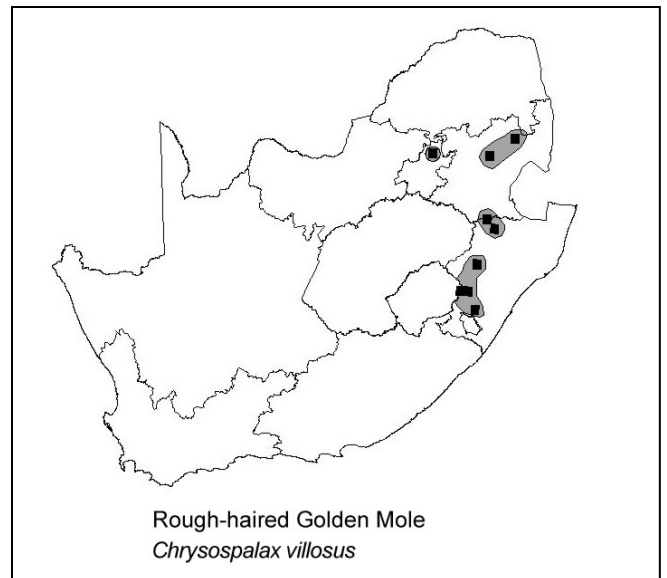
Alien invasive species and predators

Intrinsic

Poor dispersal



© Sarita Maree



- Museum Records and Personal Observations
- Extent of Occurrence

COMMON NAME: Short-eared Trident Bat
SCIENTIFIC NAME: *Cloeotis percivali*
ASSIGNED STATUS: Critically Endangered
PREVIOUS STATUS: Indeterminate

The tendency of this species to roost in large numbers in a few, highly localised sites, places it at risk of future population declines.

HABITAT: Caves and Subterranean Habitats (non-aquatic); Savannah; mixed woodland savannah. Aerial insectivore, caves and subterranean habitat. In South Africa, found in North West Province, Gauteng, Limpopo, Mpumalanga and KwaZulu-Natal. This species known only from two roosts.

PRIMARY CAUSE OF HABITAT CHANGE: Human interference, loss/disturbance of suitable natural roosting sites, possible alteration of local vegetation conditions which may influence prey populations.

POPULATION DATA: <2 500 mature individuals and population declining. Given the population reduction reported at Jozini Dam the status has been changed from Vulnerable to Critically Endangered

THREATS:

Habitat Loss (Human Induced)

Agriculture: decrease in food availability (loss of insect populations).

Groundwater extraction: affects cave structure.

Human settlement: disturbance of caves, closing of mines, human settlement etc. Effects of associated loss of vegetation etc. not understood.

Tourism: disturbance of maternity and wintering caves

Indirect Effects

Human interference: recreation/tourism and Research

Ecological imbalance: loss of prey base, of particular concern to maternity and wintering roosts

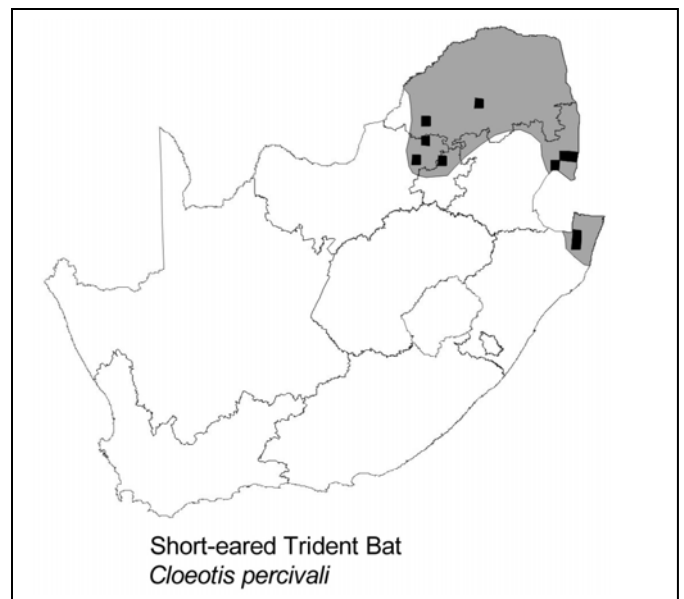
Pollution: chemical pesticides/chemical pollution

Intrinsic

Regeneration: poor recruitment/ reproduction/ regeneration. Single young born annually.



© Ernest Seamark



■ Museum Records and Personal Observations
 ■ Extent of Occurrence

COMMON NAME: Van Zyl's Golden Mole
SCIENTIFIC NAME: *Cryptochloris zyli*
ASSIGNED STATUS: Critically Endangered
PREVIOUS STATUS: Indeterminate

Endemic to South Africa

HABITAT: Temperate; Strandveld Succulent Karoo (Sand, shingle or pebble shores (includes sand bars, spits, sandy islets, dune systems); Subterranean habitats. Lambert's Bay area.

Extent of Occurrence: < 100 sq kilometres
Area of Occupancy: < 10 sq Kilometres

POPULATION DATA: <50 mature individuals and unknown population trends.

THREATS:

Habitat Loss (Human Induced)

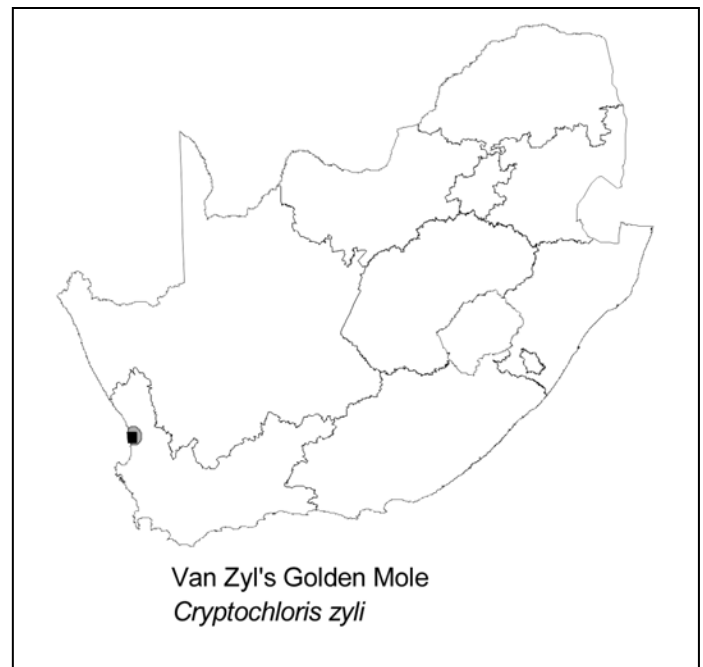
Agriculture: threats include agriculture (overgrazing, increasing crop cultivation through irrigation, mining operations to the north of town. Continuing decline could be inferred based on habitat quality and extent.

Intrinsic

Poor dispersal



© Jenny Jarvis



- Museum Records and Personal Observations
- Extent of Occurrence

COMMON NAME: Ongoye Red Squirrel
SCIENTIFIC NAME: *Paraxerus palliatus ornatus*
ASSIGNED STATUS: Critically Endangered
PREVIOUS STATUS: Vulnerable

Endemic to South Africa

Critically Endangered status is assigned on the basis of limited extent of occurrence, small area of occupancy (found at one location of <100 sq km only) and limited numbers of mature individuals.

HABITAT: Moist evergreen forest;
Subtropical/Tropical Moist; (Coastal Scarp forest).

Population has been isolated for at least 6000 years and has coastal tropical origins, although it is located within a forest of afro-montane origin. One of a few local endemics found in Ngoye Forest. Home range males: 3.2-4.2ha, females: 1.2-2.2ha. Litters 1-2 young. Seasonal breeders: August to March but may be throughout the year. Locally abundant and conspicuous species due largely to habit of tail-flicking and staccato calling when perturbed.

PRIMARY CAUSE OF HABITAT CHANGE: Ngoye Forest one of the best examples of coastal scarp forest under some pressure from rural communities for fuel wood and building materials but this harvesting has not significantly altered forest quality from the squirrel's perspective.

POPULATION DATA: < 250 Breeding pairs and < 2 500 mature individuals.

THREATS:

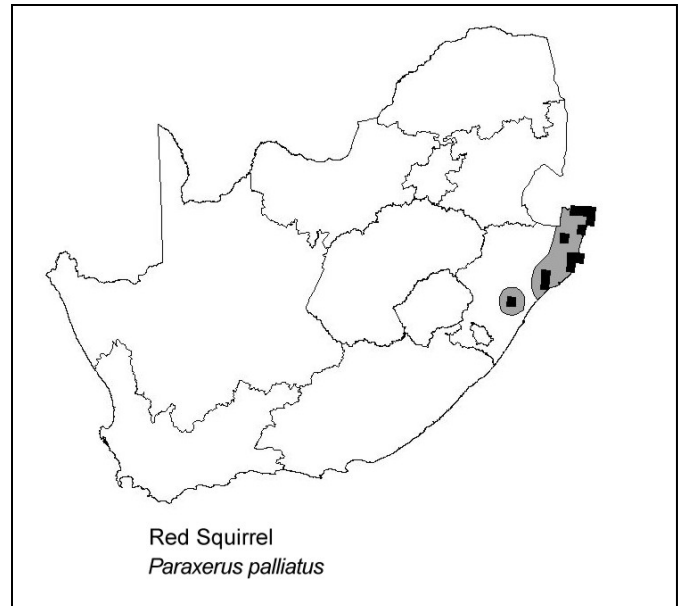
Habitat Loss (Human Induced)

Extraction

Firewood and charcoal production: not severe threat at this time.

Harvesting non-woody vegetation: not severe threat at this time.

PROTECTION: The Ngoye Forest is protected under the national Forestry Act and the KwaZulu Nature Conservation Act.



- Museum Records and Personal Observations
- Extent of Occurrence

ENDANGERED: 33.33% of EN species are endemic to South Africa.

	Common Name	Scientific Name	Criteria
1.	African Wild Dog	<i>Lycaon pictus</i>	D
2.	Antarctic "True" Blue Whale	<i>Balaenoptera musculus intermedia</i>	D
3.	Cape Mole-rat	<i>Georychus capensis</i> (KZN)	D
4.	Damara Woolly Bat	<i>Kerivoula argentata</i>	B1ab (iii) & 2ab (iii)
5.	Four-toed Elephant-shrew	<i>Petrodromus tetradactylus</i>	D
6.	Gunning's Golden Mole	<i>Neamblysomus gunningi</i>	B1ab(i-iv) B2ab(i-iv)
7.	Hartmann's Mountain Zebra	<i>Equus zebra hartmannae</i>	D
8.	Indian Ocean Bottlenose Dolphin	<i>Tursiops aduncus</i> (migratory subpop)	C2 a(ii)
9.	Marley's Golden Mole	<i>Amblysomus marleyi</i>	B2ab (ii,iii)
10.	Oribi	<i>Ourebia ourebi</i>	C2a(ii)
11.	Robust Golden Mole	<i>Amblysomus robustus</i>	B1ab (i-iv) B2ab (i-iv)
12.	Samango Monkey ssp. Labiatus	<i>Cercopithecus mitis labiatus</i>	B1ab (ii,iii,iv,v)
13.	Sclater's Forest Shrew	<i>Myosorex sclateri</i>	B1b(ii,iii), c(iv)+2b(ii,iii), c(iv)
14.	Southern Elephant Seal	<i>Mirounga leonina</i>	A 2b
15.	Swinny's Horseshoe Bat	<i>Rhinolophus swinnyi</i>	C2a(i)
16.	Tonga Red Bush Squirrel ssp.	<i>Paraxerus palliatus tongensis</i>	B1,B2ab (ii,iii, iv,v)
17.	Tsessebe	<i>Damaliscus lunatus lunatus</i>	A2ac, C2a(i)
18.	White-tailed Rat	<i>Mystromys albicaudatus</i>	A3c

VULNERABLE: 13.75 % of VU species are endemic to South Africa.

	Common Name	Scientific Name	Criteria
1.	Angolan Wing-gland Bat	<i>Cistugo seabrai</i>	D2
2.	Black Rhinoceros	<i>Diceros bicornis minor</i>	D1
3.	Blue Duiker	<i>Philantomba monticola</i>	C1, C2a(i)
4.	Bontebok	<i>Damaliscus pygargus pygargus</i>	D1
5.	Botswana Long-eared Bat	<i>Laephotis botswanae</i>	D2
6.	Bryde's Whale	<i>Balaenoptera brydei</i>	D1
7.	Cape Mountain Zebra	<i>Equus zebra zebra</i>	D1
8.	Cheetah	<i>Acinonyx jubatus</i>	D1
9.	De Winton's Long-eared Bat	<i>Laephotis wintoni</i>	D2
10.	Giant Golden Mole	<i>Chrysospalax trevelyani</i>	B2 ab (ii,iii, iv)
11.	Giant Rat	<i>Cricetomys gambianus</i>	C1
12.	Grant's Golden Mole	<i>Eremitalpa granti</i>	B2ab (ii,iii,iv)
13.	Indo-Pacific Humpback Dolphin	<i>Sousa plumbea</i>	B1 ab(ii iii)
14.	Indian Ocean Bottlenose Dolphin	<i>Tursiops aduncus</i>	B2 ab(ii,iii,v); C2a(ii)
15.	Juliana's Golden Mole	<i>Neamblysomus julianae</i>	B2 ab (ii,iii)
16.	Large-eared free-tailed bat	<i>Otomops martiensseni</i>	D2
17.	Lion	<i>Panthera leo</i>	D1
18.	Maquassie Musk Shrew	<i>Crocidura maquassiensis</i>	B2a,c(ii,iv)
19.	Pangolin	<i>Manis temminckii</i>	C1
20.	Peak-saddle Horseshoe Bat	<i>Rhinolophus blasii</i>	D2
21.	Roan Antelope	<i>Hippotragus equinus</i>	D1
22.	Sable Antelope	<i>Hippotragus niger niger</i>	C1 + 2a(i)
23.	Samango Monkey	<i>Cercopithecus mitis</i>	B1ab (ii,iii,iv)
24.	Samango Monkey	<i>Cercopithecus mitis erythrarchus</i>	B1ab(i, ii, iii)+2abi,ii,iii)
25.	Sperm Whale	<i>Physeter macrocephalus</i>	A2 b d
26.	Suni	<i>Neotragus moschatus zuluensis</i>	B1ab (ii,iii,iv,v)
27.	Thomas' House Bat	<i>Scotoecus albofuscus</i>	D2
28.	Tree Hyrax	<i>Dendrohyrax arboreus arboreus</i>	B1ab(iii) + 2ab(iii), C1
29.	Yellow Golden Mole	<i>Calcochloris obtusirostris</i>	B1ab(ii,iii),B2ab(ii,iii)

NEAR THREATENED:

	Common Name	Scientific Name
1.	Anchieta's Pipistrelle	<i>Pipistrellus anchietae</i>
2.	Antarctic Fur Seal	<i>Arctocephalus gazella</i>
3.	Brown Hyaena	<i>Hyaena brunnea</i>
4.	Butterfly Bat	<i>Glauconycteris variegatus</i>
5.	Cape Horseshoe Bat	<i>Rhinolophus capensis</i>
6.	Darling's Horseshoe Bat	<i>Rhinolophus darlingi</i>
7.	Dassie Rat	<i>Petromus typicus</i>
8.	Dent's Horseshoe Bat	<i>Rhinolophus denti</i>
9.	Fynbos Golden Mole	<i>Amblysomus corriae</i>
10.	Geoffroy's Horseshoe Bat	<i>Rhinolophus clivosus</i>
11.	Hairy Slit-faced Bat	<i>Nycteris hispida</i>
12.	Highveld Golden Mole	<i>Amblysomus septentrionalis</i>
13.	Hildebrandt's Horseshoe Bat	<i>Rhinolophus hildebrandtii</i>
14.	Honey Badger	<i>Mellivora capensis</i>
15.	Humpback Whale	<i>Megaptera novaeangliae</i>
16.	Lander's Horseshoe Bat	<i>Rhinolophus landeri</i>
17.	Lesser Long-fingered Bat	<i>Miniopterus fraterculus</i>
18.	Lesser Woolly Bat	<i>Kerivoula lanosa</i>
19.	Lesueur's Wing-gland Bat	<i>Cistugo lesueuri</i>
20.	Littledale's Whistling Rat	<i>Parotomys littledalei</i>
21.	Long-tailed Forest Shrew	<i>Myosorex longicaudatus</i>
22.	Mountain Ground Squirrel	<i>Xerus princeps</i>
23.	Namaqua Dune Mole-rat	<i>Bathyergus janetta</i>
24.	Nyika Climbing Mouse	<i>Dendromus nyikae</i>
25.	Red Squirrel	<i>Paraxerus palliatus</i>
26.	Rüppell's Horseshoe Bat	<i>Rhinolophus fumigatus</i>
27.	Rusty Bat	<i>Pipistrellus rusticus</i>
28.	Schreibers' Long-fingered Bat	<i>Miniopterus schreibersii</i>
29.	Serval	<i>Leptailurus serval</i>
30.	Sharp's Grysbok	<i>Raphicerus sharpei</i>
31.	Side-striped Jackal	<i>Canis adustus</i>
32.	South African Hedgehog	<i>Atelerix frontalis</i>
33.	Spotted Hyaena	<i>Crocuta crocuta</i>
34.	Spotted-necked Otter	<i>Lutra maculicollis</i>
35.	Temminck's Hairy Bat	<i>Myotis tricolor</i>
36.	Water Rat	<i>Dasymys incomtus</i>
37.	Welwitsch's Hairy Bat	<i>Myotis welwitschii</i>
38.	Wood's Slit-faced Bat	<i>Nycteris woodi</i>

LEAST CONCERN:

	Common Name	Scientific Name
1.	Aardvark	<i>Orycteropus afer</i>
2.	Aardwolf	<i>Proteles cristatus</i>
3.	African Civet	<i>Civettictis civetta</i>
4.	African Elephant	<i>Loxodonta africana</i>
5.	African Pipistrelle	<i>Pipistrellus hesperidus</i>
6.	African Wild Cat	<i>Felis silvestris</i>
7.	Aloe Bat	<i>Neoromicia zuluensis</i>
8.	Angolan Free-tailed Bat	<i>Mops condylurus</i>
9.	Angoni Vlei Rat	<i>Otomys angoniensis</i>
10.	Ansorge's Free-tailed Bat	<i>Chaerephon ansorgei</i>
11.	Antarctic Minke Whale	<i>Balaenoptera bonaerensis</i>
12.	Banana Bat	<i>Neoromicia nanus</i>
13.	Banded Mongoose	<i>Mungos mungo</i>
14.	Barbour's Rock Mouse	<i>Petromyscus barbouri</i>
15.	Bat-eared Fox	<i>Otocyon megalotis</i>
16.	Black Wildebeest	<i>Connochaetes gnou</i>
17.	Black-backed Jackal	<i>Canis mesomelas</i>
18.	Black-footed Cat	<i>Felis nigripes</i>
19.	Black-tailed Tree Rat	<i>Thallomys nigricauda</i>
20.	Blesbok	<i>Damaliscus pygargus phillipsi</i>
21.	Blue Wildebeest	<i>Connochaetes taurinus taurinus</i>
22.	Brant's Climbing Mouse	<i>Dendromus mesomelas</i>
23.	Brants' Whistling Rat	<i>Parotomys brantsii</i>
24.	Brush-tailed Hairy-footed Gerbil	<i>Gerbillurus vallinus</i>
25.	Bushbuck	<i>Tragelaphus scriptus</i>
26.	Bushpig	<i>Potamochoerus porcus koiropotamus</i>
27.	Bushveld Horseshoe Bat	<i>Rhinolophus simulator</i>
28.	Cape Buffalo	<i>Syncerus caffer</i>
29.	Cape Clawless Otter	<i>Aonyx capensis</i>
30.	Cape Dune Mole-rat	<i>Bathyergus suillus</i>
31.	Cape Fox	<i>Vulpes chama</i>
32.	Cape Fur Seal	<i>Arctocephalus pusillus pusillus</i>
33.	Cape Gerbil	<i>Tatera afra</i>
34.	Cape Ground Squirrel	<i>Xerus inauris</i>
35.	Cape Grysbok	<i>Raphicerus melanotis</i>
36.	Cape Hare / Desert Hare	<i>Lepus capensis</i>
37.	Cape Mole-rat	<i>Georychus capensis</i>
38.	Cape Rock Elephant-shrew	<i>Elephantulus edwardii</i>
39.	Cape Serotine Bat	<i>Neoromicia capensis</i>
40.	Cape Spiny Mouse	<i>Acomys subspinosus</i>
41.	Caracal	<i>Caracal caracal</i>
42.	Chacma Baboon	<i>Papio ursinus</i>
43.	Chestnut Climbing Mouse	<i>Dendromus mystacalis</i>
44.	Common Duiker	<i>Sylvicapra grimmia</i>
45.	Common Mole-rat	<i>Cryptomys hottentotus</i>

46.	Damaraland Mole-rat	<i>Cryptomys damarensis</i>
47.	Desert Pygmy Mouse	<i>Mus indutus</i>
48.	Duthie's Golden Mole	<i>Chlorotalpa duthieae</i>
49.	Dwarf Mongoose	<i>Helogale parvula</i>
50.	Dwarf Sperm Whale	<i>Kogia sima</i>
51.	Egyptian Free-tailed Bat	<i>Tadarida aegyptiaca</i>
52.	Egyptian Fruit Bat	<i>Rousettus aegyptiacus</i>
53.	Egyptian Slit-faced Bat	<i>Nycteris thebaica</i>
54.	Eland	<i>Taurotragus oryx</i>
55.	False Killer Whale	<i>Pseudorca crassidens</i>
56.	Fat Mouse	<i>Steatomys pratensis</i>
57.	Flat-headed Free-tail Bat	<i>Sauromys petrophilus</i>
58.	Gemsbok	<i>Oryx gazella</i>
59.	Giraffe	<i>Giraffa camelopardalis</i>
60.	Grant's Rock Mouse	<i>Aethomys granti</i>
61.	Greater Cane Rat	<i>Thryonomys swinderianus</i>
62.	Grey Climbing Mouse	<i>Dendromus melanotis</i>
63.	Grey Rhebok	<i>Pelea capreolus</i>
64.	Hairy-footed Gerbil	<i>Gerbillurus paeba</i>
65.	Hewitt's Red Rock Rabbit	<i>Pronolagus saundersiae</i>
66.	Highveld Gerbil	<i>Tatera brantsii</i>
67.	Hippopotamus	<i>Hippopotamus amphibius</i>
68.	Impala	<i>Aepyceros melampus</i>
69.	Jameson's Red Rock Rabbit	<i>Pronolagus randensis</i>
70.	Karoo Bush Rat	<i>Otomys unisulcatus</i>
71.	Klipspringer	<i>Oreotragus oreotragus</i>
72.	Krebs' Fat Mouse	<i>Steatomys krebsii</i>
73.	Kudu	<i>Tragelaphus strepsiceros</i>
74.	Laminate Vlei Rat	<i>Otomys laminatus</i>
75.	Large Grey Mongoose	<i>Herpestes ichneumon</i>
76.	Large-eared Mouse	<i>Malacothrix typica</i>
77.	Large-spotted Genet	<i>Genetta tigrina</i>
78.	Leopard	<i>Panthera pardus</i>
79.	Lesser Yellow House Bat	<i>Scotophilus viridis</i>
80.	Little Free-tailed Bat	<i>Chaerephon pumila</i>
81.	Longbeaked Common Dolphin	<i>Delphinus capensis</i>
82.	Long-finned Pilot Whale	<i>Globicephala melas edwardii</i>
83.	Long-tailed Serotine Bat	<i>Eptesicus hottentotus</i>
84.	Mauritian Tomb Bat	<i>Taphozous mauritanus</i>
85.	Melonheaded Whale	<i>Peponocephala electra</i>
86.	Midas Free-tailed Bat	<i>Mops midas</i>
87.	Mountain Reedbuck	<i>Redunca fulvorufula</i>
88.	Multimammate Mouse	<i>Mastomys coucha</i>
89.	Namaqua Rock Mouse	<i>Aethomys namaquensis</i>
90.	Natal Multimammate Mouse	<i>Mastomys natalensis</i>
91.	Natal Red Rock Rabbit	<i>Pronolagus crassicaudatus</i>
92.	Nyala	<i>Tragelaphus angasii</i>
93.	Plains Zebra	<i>Equus burchellii</i>

94.	Porcupine	<i>Hystrix africaeaustralis</i>
95.	Pouched Mouse	<i>Saccostomus campestris</i>
96.	Pygmy Mouse	<i>Mus minutoides</i>
97.	Pygmy Right Whale	<i>Caperea marginata</i>
98.	Pygmy Rock Mouse	<i>Petromyscus collinus</i>
99.	Pygmy Sperm Whale	<i>Kogia breviceps</i>
100.	Red Duiker	<i>Cephalophus natalensis</i>
101.	Red Hartebeest	<i>Alcelaphus buselaphus</i>
102.	Red Veld Rat	<i>Aethomys chrysophilus</i>
103.	Reedbuck	<i>Redunca arundinum</i>
104.	Rock Elephant-shrew	<i>Elephantulus myurus</i>
105.	Rock Hyrax	<i>Procavia capensis</i>
106.	Round-eared Elephant-shrew	<i>Macroscelides proboscideus</i>
107.	Saunders' Vlei Rat	<i>Otomys saundersiae</i>
108.	Schlieffen's Bat	<i>Nycticeinops schlieffeni</i>
109.	Scrub / Savannah Hare	<i>Lepus saxatilis</i>
110.	Shortbeaked Common Dolphin	<i>Delphinus delphis</i>
111.	Short-tailed Gerbil	<i>Desmodillus auricularis</i>
112.	Slender Mongoose	<i>Galerella sanguinea</i>
113.	Small Grey Mongoose	<i>Galerella pulverulenta</i>
114.	Small-spotted Genet	<i>Genetta genetta</i>
115.	Smith's Red Rock Rabbit	<i>Pronolagus rupestris</i>
116.	Smith's Rock Elephant Shrew	<i>Elephantulus rupestris</i>
117.	Southern Bottlenose Whale	<i>Hyperoodon planifrons</i>
118.	Southern Lesser Galago	<i>Galago moholi</i>
119.	Southern Right Whale	<i>Eubalaena australis</i>
120.	Spectacled Dormouse	<i>Graphiurus ocellatus</i>
121.	Spiny Mouse	<i>Acomys spinosissimus</i>
122.	Springbok	<i>Antidorcas marsupialis</i>
123.	Springhare	<i>Pedetes capensis</i>
124.	Steenbok	<i>Raphicerus campestris</i>
125.	Striped Dolphin	<i>Stenella coeruleoalba</i>
126.	Striped Mouse	<i>Rhabdomys pumilio</i>
127.	Striped Polecat	<i>Ictonyx striatus</i>
128.	Subantarctic Fur Seal	<i>Arctocephalus tropicalis</i>
129.	Suricate	<i>Suricata suricatta</i>
130.	Tete Veld Rat	<i>Aethomys ineptus</i>
131.	Thick-tailed Bushbaby	<i>Otolemur crassicaudatus</i>
132.	Tree Rat	<i>Thallomys paedulus</i>
133.	Tree Squirrel	<i>Paraxerus cepapi</i>
134.	Verreaux's Mouse	<i>Myomyscus verreauxi</i>
135.	Vervet Monkey	<i>Cercopithecus aethiops pygerythrus</i>
136.	Vlei Rat	<i>Otomys irroratus</i>
137.	Wahlberg's Epauletted Fruit Bat	<i>Epomophorus wahlbergi</i>
138.	Warthog	<i>Phacochoerus africanus</i>
139.	Water Mongoose	<i>Atilax paludinosus</i>
140.	Waterbuck	<i>Kobus ellipsiprymnus ellipsiprymnus</i>
141.	White Rhinoceros	<i>Ceratotherium simum</i>

142.	White-tailed Mongoose	<i>Ichneumia albicauda</i>
143.	Woodland Dormouse	<i>Graphiurus murinus</i>
144.	Woosnam's Desert Rat	<i>Zelotomys woosnami</i>
145.	Yellow House Bat	<i>Scotophilus dinganii</i>
146.	Yellow Mongoose	<i>Cynictis penicillata</i>
147.	Yellow-spotted Rock Hyrax	<i>Heterohyrax brucei</i>

DATA DEFICIENT:

	Common taxon name	Scientific taxon name
1.	African Weasel	<i>Poecilogale albinucha</i>
2.	Arnoux's Beaked Whale	<i>Berardius arnuxii</i>
3.	Blainville's Beaked Whale	<i>Mesoplodon densirostris</i>
4.	Bottlenose Dolphin	<i>Tursiops truncatus</i>
5.	Bushveld Elephant-shrew	<i>Elephantulus intufi</i>
6.	Bushveld Gerbil	<i>Tatera leucogaster</i>
7.	Cape Golden Mole	<i>Chrysochloris asiatica</i>
8.	Cuvier's Beaked Whale	<i>Ziphius cavirostris</i>
9.	Dark-Footed Forest Shrew	<i>Myosorex cafer</i>
10.	Dusky Dolphin	<i>Lagenorhynchus obscurus</i>
11.	Dwarf Minke Whale	<i>Balaenoptera acutorostrata subsp.</i>
12.	Forest Shrew	<i>Myosorex varius</i>
13.	Fraser's Dolphin	<i>Lagenodelphis hosei</i>
14.	Free State Pygmy Mouse	<i>Mus orangiae</i>
15.	Gambian Epauletted Fruit Bat	<i>Epomophorus gambianus crypturus</i>
16.	Gray's Beaked Whale	<i>Mesoplodon grayi</i>
17.	Greater Dwarf Shrew	<i>Suncus lixus</i>
18.	Greater Musk Shrew	<i>Crocidura flavescens</i>
19.	Heaviside's Dolphin	<i>Cephalorhynchus heavisidii</i>
20.	Hector's Beaked Whale	<i>Mesoplodon hectori</i>
21.	Hottentot's Golden Mole	<i>Amblysomus hottentotus</i>
22.	Killer Whale	<i>Orcinus orca</i>
23.	Layard's Beaked Whale	<i>Mesoplodon layardii</i>
24.	Least Dwarf Shrew	<i>Suncus infinitesimus</i>
25.	Lesser Dwarf Shrew	<i>Suncus varilla</i>
26.	Lesser Grey-brown Musk Shrew	<i>Crocidura silacea</i>
27.	Lesser Red Musk Shrew	<i>Crocidura hirta</i>
28.	Longman's Beaked Whale	<i>Indopacetus pacificus</i>
29.	Meller's Mongoose	<i>Rhynchogale melleri</i>
30.	Mozambique Woodland Mouse	<i>Grammomys cometes</i>
31.	Pantropical Spotted Dolphin	<i>Stenella attenuata</i>
32.	Pygmy Blue Whale	<i>Balaenoptera musculus brevicauda</i>
33.	Pygmy Killer Whale	<i>Feresa attenuata</i>
34.	Reddish-grey Musk Shrew	<i>Crocidura cyanea</i>
35.	Risso's Dolphin	<i>Grampus griseus</i>
36.	Rock Dormouse	<i>Graphiurus platyops</i>

37.	Rough-toothed Dolphin	<i>Steno bredanensis</i>
38.	Rufous Hairy Bat	<i>Myotis bocagei</i>
39.	Sclater's Golden Mole	<i>Chlorotalpa sclateri</i>
40.	Sei Whale	<i>Balaenoptera borealis schlegellii</i>
41.	Selous' Mongoose	<i>Paracynictis selousi</i>
42.	Short-finned Pilot Whale	<i>Globicephala macrorhynchus</i>
43.	Short-snouted Elephant-shrew	<i>Elephantulus brachyrhynchus</i>
44.	Single-striped Mouse	<i>Lemniscomys rosalia</i>
45.	Sloggett's Rat	<i>Otomys sloggetti</i>
46.	Southern Hemisphere Fin Whale	<i>Balaenoptera physalus quoyi</i>
47.	Spinner Dolphin	<i>Stenella longirostris longirostris</i>
48.	Sundevall's Leaf-nosed Bat	<i>Hipposideros caffer</i>
49.	Swamp Musk Shrew	<i>Crocidura mariquensis</i>
50.	Thomas' Pygmy Mouse	<i>Mus neavei</i>
51.	Tiny Musk Shrew	<i>Crocidura fuscomurina</i>
52.	True's Beaked Whale	<i>Mesoplodon mirus</i>
53.	Woodland Mouse	<i>Grammomys dolichurus</i>

Summary of Assigned National IUCN Categories

Order	Species Considered	Critical	Endangered	Vulnerable	Near threatened	Least concern	Data deficient	Extinct
Artiodactyla	33	0	2	5	1	25	0	0
Carnivora	38	0	2	2	7	24	3	0
Cetacea	42	0	2	4	1	12	23	0
Chiroptera	50	2	2	6	18	19	3	0
Hyracoidea	3	0	0	1	0	2	0	0
Insectivora	33	5	4	5	4	1	14	0
Lagomorpha	7	1	0	0	0	6	0	0
Macroscelidae	7	0	1	0	0	4	2	0
Perissodactyla	6	1	1	2	0	2	0	0
Pholidota	1	0	0	1	0	0	0	0
Primates	7	0	1	2	0	4	0	0
Proboscidea	1	0	0	0	0	1	0	0
Rodentia	66	1	3	1	7	46	8	0
Tubulidentata	1	0	0	0	0	1	0	0
	295	10	18	29	38	147	53	0

Vodacom's colours turn Red!

The Vodacom Foundation was established to manage Vodacom's corporate social investment programme and the philosophy behind it is embodied in the line from the company mission statement that reads: "*Vodacom is a caring company...*". The conservation of Africa's biodiversity requires a multi-disciplinary approach, committed teamwork and the development of collaborative partnerships between organisations, both locally and around the world. The transfer of skills and tools between biodiversity conservation organisations is critical, as is the sharing of resources and organisational capacity. Vodacom recognises this and has been a team player in biodiversity conservation for a number of years. Through a very effective partnership with the Endangered Wildlife Trust, Vodacom has been able to fulfil part of its commitment to conserving South African natural resources for almost nine years. Vodacom's concern for South Africa's natural heritage is the reason the company sponsored this project, a critical initiative to review and update South Africa's Red Data book for both land and sea mammals. The final product will prove an invaluable tool for biodiversity conservation in our country and Vodacom is proud to be associated with this landmark publication.

The Endangered Wildlife Trust

The Endangered Wildlife Trust (EWT) is one of the largest non-governmental conservation organisations in Southern Africa and was established in 1973. Widely recognised by its prominent red Cheetah spoor logo, the EWT conserves biodiversity through the hands-on conservation of species and their habitats, in a sustainable and responsible manner. Coordinating more than 100 field-based conservation projects and with 18 Working Groups operating throughout Southern Africa, Endangered Wildlife Trust programmes cover a wide variety of species and eco-systems and play a pivotal role in conserving southern African biodiversity and natural resources.

The Conservation Breeding Specialist Group (CBSG) is one of more than 125 IUCN Species Survival Commission (SSC) Specialist Groups and CBSG Southern Africa operates as a regional CBSG network under the banner of the Endangered Wildlife Trust. Regional CBSG networks are developed in regions requiring intensive conservation action and each network operates in a manner best suited to the region and local species and conservation issues.

CBSG Southern Africa serves regional conservation need through the provision of capacity building courses, Action Planning workshops, species-based Population and Habitat Viability Assessments, CAMP workshops, communication networks, species assessments and a host of other CBSG processes for species and ecosystem conservation.

CBSG Southern Africa's mission is: *To catalyse conservation action in southern Africa by assisting in the development of integrated and scientifically sound conservation programmes for species and ecosystems, building capacity in the regional conservation community and incorporating practical and globally endorsed tools and processes into current and future conservation programmes.*

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