# Elephantulus edwardii - Cape Rock Sengi



Regional Red List status (2016) Least Concern

National Red List status (2004)

Reasons for change

Global Red List status (2015)

TOPS listing (NEMBA)

CITES listing **Endemic** 

Least Concern

No change

Least Concern

None

None

Yes

This sengi belongs to a rock-dwelling guild in South Africa.

## **Taxonomy**

Elephantulus edwardii (Smith 1839)

ANIMALIA - CHORDATA - MAMMALIA - MACROSCELIDEA -MACROSCELIDIDAE - Elephantulus - edwardii

Synonyms: Elephantulus edwardi (Smith 1839)

Common names: Cape Rock Sengi, Cape Rock Elephant-shrew (English), Kaapse Klipklaasneus (Afrikaans)

Taxonomic status: Species

Taxonomic notes: In the past the single family was included in the order Insectivora, but now the family is in the monophyletic order Macroscelidea and the newly created super-cohort Afrotheria (Smit et al. 2008). Currently, there are 19 living species recognized in four genera. The soft-furred sengis or elephant-shrews include three genera: Petrodromus is monospecific, Macroscelides has three species, and Elephantulus contains 11 species. The four species of giant sengis belong to the genus Rhynchocyon. The common name "sengi" is being used in place of elephant-shrew by many biologists to try and disassociate the Macroscelidea from the true shrews (family Soricidae) in the order Soricomorpha. See the IUCN SSC Afrotheria Specialist Group web site and www.sengis.org for additional information.

The original description of this species was spelled E. edwardii, which is considered by some to be an outdated form. Corbet and Hanks (1968) used the more modern spelling E. edwardi. Apparently either is correct; although IUCN is using the spelling of the original description. Molecular genetics and morphology suggests that Elephantulus rozeti from northern Africa and Petrodromus spp. are more closely related to each other than E. rozeti is to any of the other species of Elephantulus, suggesting that a new genus perhaps should be established for these two taxa (Douady et al. 2003; Smit et al. 2011).

## Assessment Rationale

This species is listed as Least Concern. Although not abundant, it is widespread in suitable habitats over an area greater than 130,000 km². As the species occupies rocky habitats which are arid and will not support most development, there are no known threats to the large area occupied by the Cape Rock Sengi. Areas close to rivers or reliable sources of water may have been developed, or may be developed in the future, as urban areas. For example, alluvial areas along rivers in the Cedarberg Mountains of South Africa (Western Cape) have been developed for agriculture, but these habitats are not usually occupied by Cape Rock Sengis, and these areas are relatively small compared to the overall distribution of this species. Small areas also may be impacted by intensive goat and sheep grazing as well as mineral extraction activities, but these types of disturbances are confined to small areas compared to the overall distribution of the species. Past, current and future development in this region of Africa is not expected to have a significant impact on this Sengi or its habitats.

### Distribution

The Cape Rock Sengi is endemic to the western and southern parts of South Africa, occurring only in the Eastern Cape, Western Cape and south-western regions of the Northern Cape (Corbet & Hanks 1968; Rathbun 2005). Although many older distribution maps show it as having two separate areas of occurrence, recent data indicate that the species is continuously distributed (Stuart & Stuart 2001). It has not been recorded in Namibia, and is not suspected to occur north of the Orange River.

## **Population**

The Cape Rock Sengi is not considered abundant, but is widespread in suitable habitats and is locally common within its range. Current population trends are not known, but there is no reason to believe that numbers are increasing or decreasing significantly due to any factors other than natural variation in environmental conditions in the rocky and arid environments where they occur.

**Current population trend: Stable** 

Continuing decline in mature individuals: Unknown

Recommended citation: Rathbun G, Smit-Robinson H. 2016. A conservation assessment of Elephantulus edwardii. In Child MF, Roxburgh L, Do Linh San E, Raimondo D, Davies-Mostert HT, editors. The Red List of Mammals of South Africa, Swaziland and Lesotho. South African National Biodiversity Institute and Endangered Wildlife Trust, South Africa.

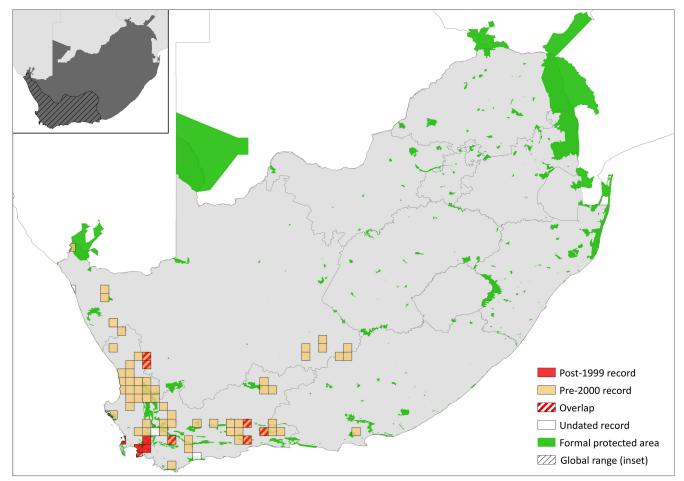


Figure 1. Distribution records for Cape Rock Sengi (Elephantulus edwardii) within the assessment region

Table 1. Countries of occurrence within southern Africa

Country	Presence	Origin
Botswana	Absent	-
Lesotho	Absent	-
Mozambique	Absent	-
Namibia	Absent	-
South Africa	Extant	Native
Swaziland	Absent	-
Zimbabwe	Absent	-

Number of mature individuals in population: Unknown

Number of mature individuals in largest subpopulation: Unknown

Number of subpopulations: Unknown

**Severely fragmented:** No. The habitats this species occupies are largely intact and connected across regions so dispersal is possible.

## Habitats and Ecology

The Cape Rock Sengi occupies rocky habitats, often with many large boulders and many crevices, and its habitat association and genetics are further discussed by Smit et al. (2007a, 2007b). It is widespread in suitable habitats over an area greater than 130,000 km². Because it occupies rocky habitats that are arid and will not support

most development, there are no known threats to the large area occupied by the Cape Rock Sengi. In the southwestern Cape (Overberg region – Western Cape Province) the species is often found in mountainous terrain (H.A. Smit-Robinson pers. obs.). This species does not seem to be dependent on a specific habitat type as they are found from hard sandy ground sparsely covered with vegetation and in the Cederberg Mountains they are recorded on rocky slopes with or without vegetation cover (Skinner & Smithers 1990). Key vegetation types for this species include: Fynbos, Succulent and Nama Karoo Biomes

**Ecosystem and cultural services:** Sengi species, including the Cape Rock Sengi, are thought to be included in San art and are therefore subject to local folklore. This particular Sengi species can also be considered a flagship species for the Fynbos Biome.

#### **Use and Trade**

There is no evidence that this species is used for local or international trade.

### **Threats**

There are no known major threats to the species. Habitat modification to relatively small areas may occur near rivers and human population centres due to small-holder and industrial agriculture, mineral extraction, and urban development. However, these are not currently considered major threats to the population. Small areas also may be impacted by intensive goat and sheep grazing as well as

Table 2. Threats to the Cape Rock Sengi (*Elephantulus edwardii*) ranked in order of severity with corresponding evidence (based on IUCN threat categories, with regional context)

Rank	Threat description	Evidence in the scientific literature	Data quality	Scale of study	Current trend
1	2.1.3 Agro-industry Farming: habitat loss from agricultural expansion.	-	Anecdotal	-	Ongoing
2	2.3.2 Small-holder Grazing, Ranching or Farming: habitat loss from agricultural expansion. Current stress 1.2 Ecosystem Degradation: overgrazing leading to loss of ground cover.	-	Anecdotal	-	Ongoing
3	3.2 Mining & Quarrying: habitat loss from mineral extraction.	-	Anecdotal	-	Ongoing
	1.1 Housing & Urban Areas: habitat loss near rivers from settlement expansion.	-	Anecdotal	-	Ongoing

Table 3. Conservation interventions for the Cape Rock Sengi (*Elephantulus edwardii*) ranked in order of effectiveness with corresponding evidence (based on IUCN action categories, with regional context)

Rank	Intervention description	Evidence in the scientific literature	Data quality	Scale of evidence	Demonstrated impact	Current conservation projects
1	1.1 Site/Area Protection: protected area expansion.	-	Anecdotal	-	-	-
2	2.3. Habitat & Natural Process Restoration: rehabilitation of mining areas.	-	Anecdotal	-	-	-

mineral extraction activities, but these disturbances are confined to small areas compared to the overall distribution of the species.

Current habitat trend: Stable

## Conservation

The species occurs in protected areas, but no details have been documented or assembled. Key protected areas include: Cedarberg Wilderness Area, Goegap Nature Reserve and several other nature reserves in the Western Cape. Because of the very minor threats facing this taxon, no conservation measures are needed or recommended at present or in the foreseeable future. However, the species would presumably benefit from protected area expansion and mine rehabilitation.

# Recommendations for land managers and practitioners:

- Expansion of the protected area network.
- Land managers should stock cattle or wildlife at ecologically sustainable levels.

#### Research priorities:

- Severity of anthropogenic threats on the population needs to be better understood.
- Estimates of densities across the species' distribution range.
- Determine if there is any sympatric co-occurrence with the two other rock sengis with overlapping ranges, E. pilicaudus and E. rupestris.

#### **Encouraged citizen actions:**

 Citizens are encouraged to report sightings on virtual museum platforms (for example, iSpot and MammalMAP) with photographic confirmation.

## **Data Sources and Quality**

Table 4. Information and interpretation qualifiers for the Cape Rock Sengi (*Elephantulus edwardii*) assessment

Data sources Indirect information (expert knowledge), museum records

Data quality (max) Inferred

Data quality (min) Suspected

Uncertainty resolution Expert consensus

Risk tolerance Evidentiary

## References

Corbet GB, Hanks J. 1968. A revision of the elephant-shrews, family Macroscelididae. Bulletin of the British Museum of Natural History (Zoology) **16**:5–11.

Douady CJ, Catzeflis F, Raman J, Springer MS, Stanhope MJ. 2003. The Sahara as a vicariant agent, and the role of Miocene climatic events, in the diversification of the mammalian order Macroscelidea (elephant shrews). Proceedings of the National Academy of Sciences 100:8325–8330.

Rathbun GB, subeditor. 2005. Macroscelidea. Pages 22–34 in Skinner JD, Chimimba CT, editors. The Mammals of Southern Africa Subregion. Third edition. Cambridge University Press, Cambridge. UK.

Skinner JD, Chimimba CT. 2005. The Mammals of the Southern African Subregion. Third edition. Cambridge University Press, Cambridge, UK.

Smit HA, Jansen van Vuuren B, O'Brien PCM, Ferguson-Smith M, Yang F, Robinson TJ. 2011. Phylogenetic relationships of elephant-shrews (Afrotheria, Macroscelididae). Journal of Zoology **284**:133–143.

Smit HA, Robinson TJ, Jansen van Vuuren B. 2007a. Coalescence methods reveal the impact of vicariance on the spatial genetic structure of the Cape rock elephant-shrew (Afrotheria, Macroscelidea). Molecular Ecology **16**:2680–2692.

Smit HA, Robinson TJ, Jansen van Vuuren B. 2007b. Vicariance and the endemic Cape rock sengi (*Elephantulus edwardii*): are these two linked? Afrotherian Conservation **5**:5–7.

Smit HA, Robinson TJ, Watson J, van Vuuren BJ. 2008. A new species of elephant-shrew (Afrotheria: Macroscelidea: *Elephantulus*) from South Africa. Journal of Mammalogy **89**:1257–1269.

Stuart C, Stuart T. 2001. Field Guide to Mammals of Southern Africa. Struik Publishers, Cape Town, South Africa.

#### **Assessors and Reviewers**

Galen Rathbun<sup>1†</sup>, Hanneline Smit-Robinson<sup>2,3†</sup>

<sup>1</sup>California Academy of Sciences, <sup>2</sup>BirdLife South Africa, <sup>3</sup>University of the Witwatersrand

†IUCN SSC Afrotheria Specialist Group

#### **Contributors**

Andrew Taylor<sup>1†</sup>, Samantha Page-Nicholson<sup>1</sup>, Matthew F. Child<sup>1</sup>

<sup>1</sup>Endangered Wildlife Trust

†IUCN SSC Afrotheria Specialist Group

Details of the methods used to make this assessment can be found in *Mammal Red List 2016: Introduction and Methodology.*