Elephantulus brachyrhynchus – Short-snouted Sengi


Andrew Keys

Regional Red List status (2016)	**Least Concern**
National Red List status (2004)	Data Deficient
Reasons for change	Non-genuine change: New information
Global Red List status (2015)	Least Concern
TOPS listing (NEMBA)	None
CITES listing	None
Endemic	No

This species survives savannah fires by sheltering in termite mounds and is found in thickets over grasslands in burned landscapes to avoid predation, which highlights the need for fire management to conserve patches of unburned vegetation (Yarnell et al. 2008).

Taxonomy

Elephantulus brachyrhynchus (Smith 1834)

ANIMALIA - CHORDATA - MAMMALIA - MACROSCELIDEA - MACROSCELIDIDAE - *Elephantulus* - *brachyrhynchus*

Synonyms: *Macroscelides brachyrhynchus* (Smith 1836)

Common names: Short-snouted Sengi, Short-snouted Elephant-shrew (English), Kortneus Klaasneus (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. 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. For general biological information, please consult Perrin and Rathbun (2013) and Rathbun (2005, 2013).

Assessment Rationale

The species is listed as Least Concern. Although this species is not abundant, it is widespread in suitable habitats across the northeastern reaches of South Africa. Similar to other species in the genera *Elephantulus* and *Macroscelides*, it occupies habitats that are arid and will not support many types of human development. There are no known major threats to this species or its habitats. Although there are no specific data available on population trends, 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 relatively arid habitats that this species occupies. It is possible that desertification and bush encroachment due to various anthropogenic factors might impact this species, but without specific data this is speculation. Habitat loss through agriculture and mining developments in the assessment region may also cause local declines, but this is not expected to be threatening the population overall. More field surveys are required to affirm these suspicions.

Regional population effects: The habitats this species occupies are largely intact and connected across regions so dispersal is possible.

Distribution

The most widespread species of Sengi, but it is among the most localized in South Africa (Rathbun 2005). The species is found from northern South Africa through northeast Namibia (where they are confined to the north-east), east and central Botswana, Angola, Zimbabwe, Malawi, Zambia, Mozambique north to Democratic Republic of Congo. In East Africa, found in Tanzania, Kenya and Uganda. Within the assessment region, it occurs mostly in Limpopo Province, but also in North West, Gauteng, and Mpumalanga provinces (Figure 1). It is also recorded from Swaziland (Monadjem 1998). There are no range shifts recorded.

Population

This species, although widespread, is only locally common. It also occurs in fallow agricultural lands and grazed lands. No national population estimates are available but the population is expected to be stable.

Current population trend: Stable

Continuing decline in mature individuals: No

Number of mature individuals in population: Unknown

Number of mature individuals in largest subpopulation: Unknown

Recommended citation: Rathbun G, Smit-Robinson H. 2016. A conservation assessment of *Elephantulus brachyrhynchus*. 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.

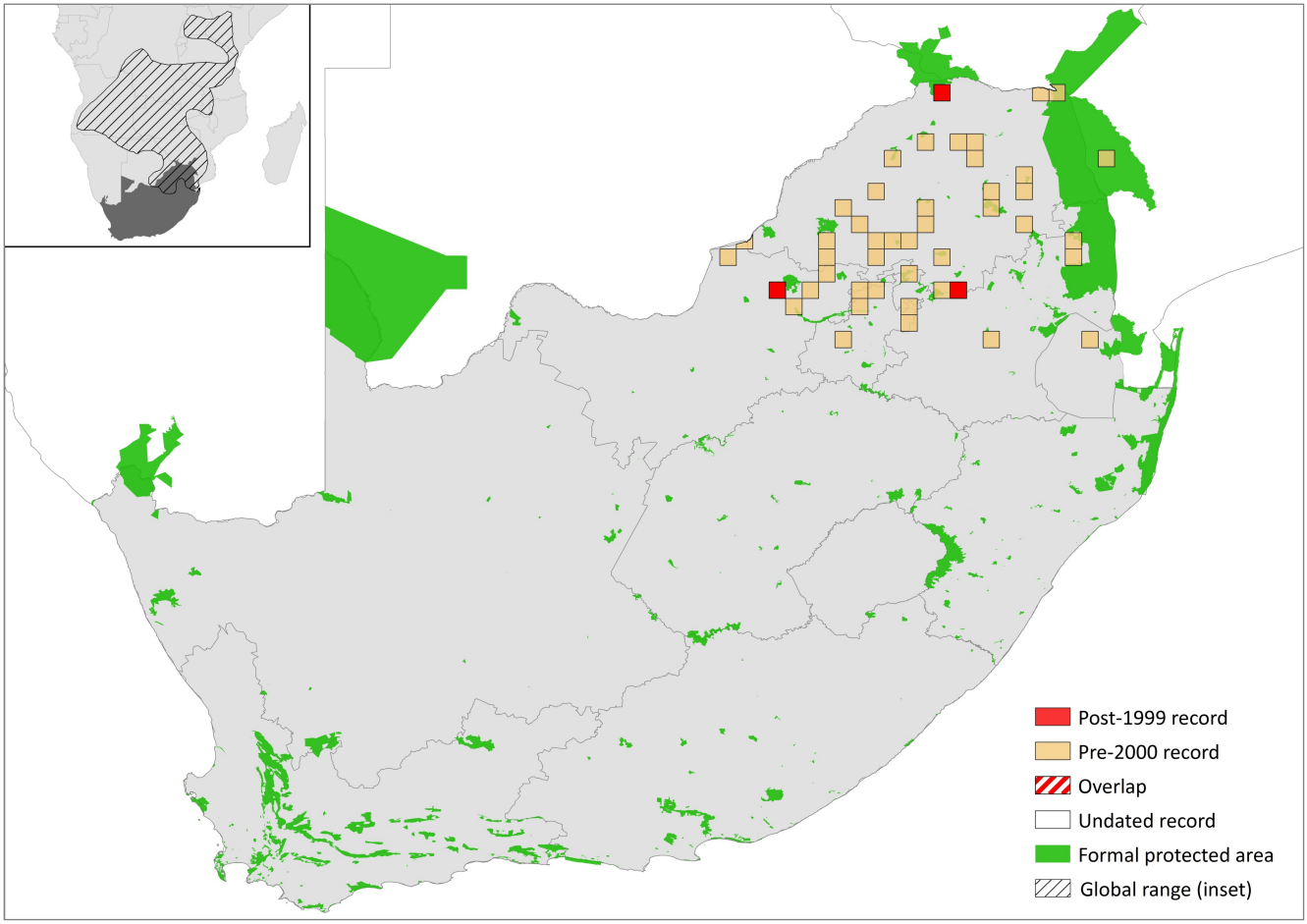

Figure 1. Distribution records for Short-snouted Sengi (*Elephantulus brachyrhynchus*) within the assessment region

Table 1. Countries of occurrence within southern Africa

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

Number of subpopulations: Unknown

Severely fragmented: No, can occur in multiple land-use types.

Habitats and Ecology

It occurs in Steppe and savannah woodlands within the Savanna Biome. The species prefers a habitat of dense grass cover, with scrub bush and scattered trees, which is denser than areas where the Bushveld Sengi (*Elephantulus intufi*) is found. In some parts of their distribution Short-snouted Sengis are found on rocky hillsides (Rathbun 2005). In the North West Province, they were sampled in the Mabeskraal area and the southwestern parts of Pilanesberg National Park all within Zeerust Thornveld (Mucina & Rutherford 2006), where the specific habitat was mixed *Olea* spp. woodland on a pediment (Power 2014). Interestingly, they were not sampled in the Borakalalo area where one would expect to capture them based on historical occurrence (Rautenbach 1982; Power 2014). In Swaziland, it was sampled in moist savannah in an acacia thicket on an overgrazed field with compacted soil (Monadjem 1998). Generally, the nature of the ground/soil does not seem to be a factor which limits their distribution. For example; this species occurs on sandy ground or sandy alluvium or, in stark contrast, on the hard substrate of Mopane scrub (Rathbun 2005). The species has home ranges up to 0.25 ha, and they use termitaria to escape fire (Yarnell et al. 2008), which is uncommon in most *Elephantulus* spp. (Rathbun 2005) and may be an adaptation to fire. Although they are sympatric with *E. myurus* and *E. intufi*, they are segregated by their habitat requirements as they prefer denser vegetation than other species (Rathbun 2005). They are omnivorous, but mostly consume insects with a small amount of fruit and seeds consumed (Leirs et al. 1995).

Ecosystem and cultural services: Sengi species are thought to be included in San art and are therefore subject to local folklore.

Use and Trade

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

Threats

There are no major identified threats to the species within the assessment region. However, expansion of crop agriculture, overgrazing on cattle and game farms and

Table 2. Threats to the Short-snouted Sengi (*Elephantulus brachyrhynchus*) 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*: loss of habitat and ground cover from industrial farming.	-	Anecdotal	-	Increasing
2	*7.1.1 Increase in Fire Frequency/Intensity*: removal of ground cover due to incorrect fire regime.	Yarnell et al. 2008	Empirical	Local	Unknown
3	*2.3.2 Small-holder Grazing, Ranching or Farming*: current stress *1.2 Ecosystem Degradation*: overgrazing leading to loss of ground cover.	-	Anecdotal	-	Unknown
4	*3.2. Mining & Quarrying*: loss of habitat from increased mining activity.	-	Anecdotal	-	Increasing

mining activity – particularly in North West and Limpopo provinces – may lead to local declines. As this species needs dense ground cover, imprudent fire regimes and overgrazing may be detrimental, which is corroborated by results that demonstrate they significantly prefer unburnt areas following fires (Yarnell et al. 2008).

Current habitat trend: The savannah ecosystem is well protected within the assessment region. Additionally, the conversion of livestock to wildlife ranches may be creating additional habitat, as long as such areas are well managed.

Conservation

The species is expected to occur in protected areas within the assessment region (for example, Pilanesberg National Park, North West Province), but these records must be more formally documented and confirmed. Although no specific interventions are necessary at present, this species is suspected to benefit from protected area expansion and mine rehabilitation or biodiversity offsets. Yarnell et al. (2008) studied this species by radio-tracking 11 individuals on the Mankwe Wildlife Reserve, east of Pilanesberg National Park and recording their response to fire. All individuals were found immediately sheltering in termite mounds after fires, which suggests that landowners should protect such microhabitats as a key refuge area for this species and other small mammals. As individuals were restricted to patches of unburned vegetation following fire, an important intervention is to design fire management strategies that leave sufficient patches of unburned vegetation (Yarnell et al. 2008).

Recommendations for land managers and practitioners:

- Land managers should stock cattle or wildlife at ecological levels, employ natural fire regimes and protect termite mounds as refugia for small mammals during fire.

Research priorities:

- Further filed surveys to refine distribution mapping within the assessment region and determine occupancy across different land uses.
- Determine the impact of anthropogenic land modifications on sengi populations.

Encouraged citizen actions:

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

References

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Monadjem A. 1998. Distributional patterns and conservation status of mammals of Swaziland, southern Africa. Koedoe **41**:45–59.

Mucina L, Rutherford MC. 2006. The Vegetation of South Africa, Lesotho and Swaziland. South African National Biodiversity Institute, Pretoria, South Africa.

Table 3. Conservation interventions for the Short-snouted Sengi (*Elephantulus brachyrhynchus*) 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	*2.3. Habitat & Natural Process Restoration*: mining rehabilitation and conservancy formation.	-	Anecdotal	-	-	-
2	*1.1 Site/Area Protection*: protected area expansion of savannah ecosystems, including biodiversity offsets.	-	Anecdotal	-	-	-
3	*2.1 Site/Area Management*: mimic natural fire frequency/intensity and conserve termitaria on ranchlands.	-	Anecdotal	-	-	-

Data Sources and Quality

Table 4. Information and interpretation qualifiers for the Short-snouted Sengi (*Elephantulus brachyrhynchus*) assessment

Data sources	Indirect information (expert knowledge), museum records
Data quality (max)	Inferred
Data quality (min)	Suspected
Uncertainty resolution	Expert consensus
Risk tolerance	Evidentiary

Perrin M, Rathbun GB. 2013. Species accounts: Order Macroscelidea, Family Macroscelididae, Genus *Elephantulus*, *E. edwardii*, *E. intufi*, *E. myurus*, *E. rozeti*, *E. rufescens*; Genus *Macroscelides*; *M. proboscideus*. Pages 261–278 in Kingdon J, Happold D, Hoffmann M, Butynski T, Happold M, Kalina J, editors. Mammals of Africa, Volume I. Bloomsbury Publishing, London, UK.

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Rautenbach IL. 1982. Mammals of the Transvaal. No. 1, Ecoplan Monograph. Pretoria, South Africa.

Yarnell RW, Metcalfe DJ, Dunstone N, Burnside N, Scott DM. 2008. The impact of fire on habitat use by the short-snouted elephant shrew (*Elephantulus brachyrhynchus*) in North West Province, South Africa. African Zoology **43**:45–52.

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