Eptesicus hottentotus – Long-tailed Serotine Bat


Ara Monadjem

Regional Red List status (2016)	**Least Concern**
National Red List status (2004)	Least Concern
Reasons for change	No change
Global Red List status (2016)	Least Concern
TOPS listing (NEMBA) (2007)	None
CITES listing	None
Endemic	No

There are two to three subspecies recognised within southern Africa and more molecular research is needed to resolve its taxonomy (Monadjem et al. 2010).

Taxonomy

Eptesicus hottentotus (A. Smith 1833)

ANIMALIA - CHORDATA - MAMMALIA - CHIROPTERA - VESPERTILIONIDAE - *Eptesicus* - *hottentotus*

Synonyms: *augusticeps, bensoni, megalurus, pallidor, portavernus, smithii*

Common names: Long-tailed Serotine Bat, Hottentot Bat, Hottentot Serotine Bat, Long-tailed Greater Serotine Bat, Long-tailed House Bat (English), Langstert-dakvlermuis (Afrikaans)

Taxonomic status: Species

Taxonomic notes: According to Monadjem et al. (2010), three species have previously been recognised in southern Africa: *Eptesicus hottentotus hottentotus* from the Eastern and Western Cape (Meester et al. 1986), *E. h. pallidor* from the Northern Cape and Namibia (Meester et al. 1986), and *E. h. bensoni* from Zimbabwe, Mozambique and eastern South Africa (Skinner & Chimimba 2005). However, *E. h. pallidor* is considered a synonym of *E. h. hottentotus* by Schlitter and Aggundey (1986). Conversely, based on mitochondrial and nuclear DNA analyses, Juste et al. (2013) retain only *R. h. hottentotus* and *R. h. pallidior* (but they only included material from South Africa). Further molecular studies are required. Morphological and molecular research supports the notion that *E. hottentotus* is the only member of the genus in southern Africa (Kearney et al. 2002).

Assessment Rationale

Listed as Least Concern in view of its wide distribution, its occurrence in many protected areas across its range and because there are no major identified threats that could cause widespread population decline. Although this species is often found in low numbers in the assessment region with groups of fewer than five animals, more than 50 subpopulations are currently known and it occurs in at least eight protected areas. No declines have been recorded.

Regional population effects: The population is continuous in countries neighbouring the assessment region and the species has intermediate wing-loading (Schoeman & Jacobs 2008), which indicates that dispersal and rescue effects are possible.

Distribution

This largely Southern African species ranges from southern Angola in the west, through parts of Namibia, South Africa, southern Lesotho, Botswana, Zimbabwe, Mozambique, Malawi and Zambia, with a single record as far north as southwestern Kenya (ACR 2015). It occurs widely but sparsely in southern Africa, from western Namibia and extreme southwestern Angola, south to the Northern and Western Cape, east to Lesotho and KwaZulu-Natal, and north to Zimbabwe, with isolated records in Zambia, central Mozambique, and southern Malawi (Kearney et al. 2008). In the assessment region, the species occurs in eight provinces of South Africa: Limpopo, Mpumalanga, KwaZulu-Natal, Free State, North West, Northern Cape, Eastern Cape and the Western Cape. It also occurs within Lesotho (Lynch 1994). It is likely to occur in Swaziland based on habitat models (Monadjem et al. 2010). The type specimen is from Uitenhage, Eastern Cape (Monadjem et al. 2010). The estimated extent of occurrence is 1,117,751 km^2.

Population

This species is sparsely distributed but locally common where it does occur. It is more common in some regions of its distribution such as Zimbabwe, but is thought to be rarer in South Africa. The patchy nature of its distribution is probably a function of its roosting requirements (see Habitat and Ecology section) (Monadjem et al. 2010). Shortridge (1942) indicated this bat was not plentiful around Goodhouse in the Northern Cape of South Africa, and only observed half a dozen individuals. In other instances, specimens have either been found singly or in groups of two to five (for example, Herselman & Norton 1985; Watson 1998; ACR 2015). This species is relatively well represented in museums, with over 60 specimens examined in Monadjem et al. (2010).

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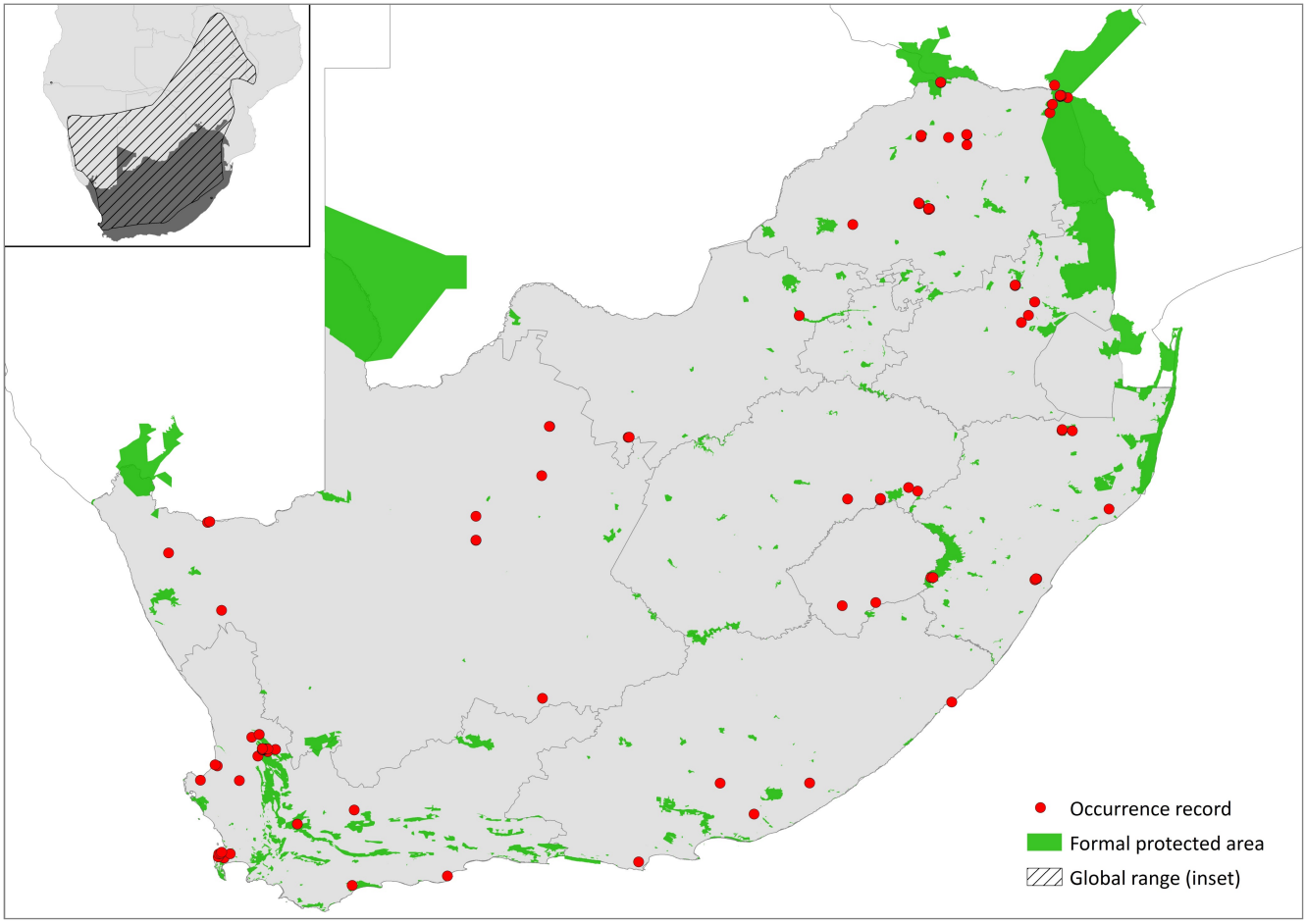

Figure 1. Distribution records for Long-tailed Serotine Bat (*Eptesicus hottentotus*) within the assessment region

Table 1. Countries of occurrence within southern Africa

Country	Presence	Origin
Botswana	Extant	Native
Lesotho	Extant	Native
Mozambique	Extant	Native
Namibia	Extant	Native
South Africa	Extant	Native
Swaziland	Probably extant	Native
Zimbabwe	Extant	Native

Current population trend: Stable

Continuing decline in mature individuals: None

Number of mature individuals in population: Unknown

Number of mature individuals in largest subpopulation: Unknown

Number of subpopulations: > 50

Severely fragmented: No

Habitats and Ecology

This species is often associated with mountainous terrain in close proximity to water (see references in ACR 2015), occurring in a range of habitats including montane grasslands, marshland and well-wooded river banks (Skinner & Chimimba 2005). It roosts in small groups of two to five individuals in caves, mines (Skinner & Chimimba 2005) and rock crevices (Herselman & Norton 1985), suggesting that it may require suitable roosting sites in rocky outcrops. A single specimen was collected hanging on the outside wall of a building in Zimbabwe (Skinner and Chimimba 2005). In Zimbabwe, it occurs in Miombo woodland in gorges and granitic hills (Cotterill 1996), while in South Africa it is usually captured near rocky outcrops (Monadjem et al. 2010). This species is a clutter-edge forager, feeding primarily on coleopteran species (Schoeman & Jacobs 2003; Schoeman 2006).

Ecosystem and cultural services: As this species is insectivorous, it is likely to contribute to controlling insect populations that damage crop plants (Boyles et al. 2011; Kunz et al. 2011). Ensuring a healthy population of insectivorous bats can thus decrease the need for pesticides.

Use and Trade

There is no evidence to indicate that this species is traded within the assessment region.

Threats

Rapid changes in land-use across the assessment region are likely to impact on *E. hottentotus*. One such land-use change is the conversion of agricultural land and rocky grasslands to mining or renewable energy production. Both cause habitat loss and alteration. Additionally, wind energy poses a direct fatality threat to flying bats. However, according to Sowler et al. (2017), *E. hottentotus* is only at medium risk of impact from wind turbine blades. This is further supported by the fact that, to date, no

Table 2. Threats to the Long-tailed Serotine Bat (*Eptesicus hottentotus*) 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	*6.1 Recreational Activities*: roost site disturbance from tourism activities and religious ceremonies. Current stress *2.2 Species Disturbance*.	-	Anecdotal	-	Stable
2	*3.2 Mining & Quarrying*: roost loss and disturbance from re-opening old mines.	-	Anecdotal	-	Unknown
3	*3.3 Renewable Energy*: mortality from collision with wind turbine blades.	-	Anecdotal	-	Unknown

Table 3. Conservation interventions for the Long-tailed Serotine Bat (*Eptesicus hottentotus*) 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	*1.2 Resource & Habitat Protection:* protection of rocky and riverine areas.	-	Anecdotal	-	-	-

E. hottentotus fatalities have been reported at operating wind energy facilities in South Africa. Local declines may occur if roosting sites are disturbed by religious ceremonies, tourism activities or re-opening of old mines.

Current habitat trend: Stable

Conservation

It has been recorded from several protected areas in South Africa including Kruger National Park, Mapungubwe National Park, Magaliesberg Natural Environment, Ithala Game Reserve, Ukahlamba Drakensberg World Heritage Site, Sterkfontein Nature Reserve, Cederberg Wilderness Area and Table Mountain National Park. It is presumably also present in other protected areas within other parts of the species range. No direct interventions are necessary but it would benefit from the protection of larger rocky habitat types, riverine areas and surrounding natural vegetation.

Recommendations for land managers and practitioners:

- Reduce pesticide use in agricultural landscapes.

Research priorities:

- Further studies are needed into the distribution of this species.
- Systematic monitoring of subpopulation trends is required.

Encouraged citizen actions:

- Citizens can assist the conservation of the species by reporting sightings on virtual museum platforms (for example, iSpot and MammalMAP), and therefore contribute to an understanding of the species distribution.

Data Sources and Quality

Table 4. Information and interpretation qualifiers for the Long-tailed Serotine Bat (*Eptesicus hottentotus*) assessment

Data sources	Field study (unpublished), indirect information (literature, expert knowledge), museum records
Data quality (max)	Inferred
Data quality (min)	Suspected
Uncertainty resolution	Expert consensus
Risk tolerance	Evidentiary

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