Tadarida fulminans – Malagasy Free-tailed Bat


Ara Monadjem

Regional Red List status (2016)	**Least Concern**
National Red List status (2004)	Not Evaluated
Reasons for change	Non-genuine change: New information
Global Red List status (2016)	Least Concern
TOPS listing (NEMBA) (2007)	None
CITES listing	None
Endemic	Edge of range

The high-flying molossid Malagasy Free-tailed Bat (*Tadarida fulminans*) is unique amongst known bats, as females lactate over the cool, dry season (Cotterill & Fergusson 1993).

Taxonomy

Tadarida fulminans (Thomas 1903)

ANIMALIA - CHORDATA - MAMMALIA - CHIROPTERA - MOLOSSIDAE - *Tadarida - fulminans*

Synonyms: *Nyctinomus fulminans* (Thomas 1903)

Common names: Malagasy Free-tailed Bat, Madagascan Large Free-tailed Bat, Large Free-tailed Bat, Lightning Guano Bat, Large Guano Bat (English), Madagaskarse Groot Losstertvlermuis (Afrikaans)

Taxonomic status: Species

Taxonomic notes: The African mainland population of the Malagasy Free-tailed Bat is geographically separated from the Madagascar population, and although these populations show overlap in morphological characteristics, they may ultimately be identified as separate species (Goodman & Cardiff 2004; Monadjem et al. 2010). In this case, the mainland population could be reclassified *Nyctinomus mastersoni* (Roberts 1946) (Monadjem et al. 2010). Currently, no subspecies of *T. fulminans* are recognised (Skinner & Chimimba 2005). The three large *Tadarida* species are easily distinguished from other large Molossid species by their unwrinkled upper lips (Monadjem et al. 2010).

Assessment Rationale

Although the species has a very restricted range within the assessment region, being recorded only from the Pafuri region of Kruger National Park, it is widespread (although patchily distributed) elsewhere in Zimbabwe and East Africa. Because it occurs exclusively in a protected area, and there are no plausible threats within the assessment region or throughout its range, it does not qualify for Vulnerable D2. Its population size is unknown but is assumed to be stable inside Kruger National Park. Thus we list this species as Least Concern.

Regional population effects: It has a high wing loading (Monadjem et al. 2010), and thus we assume dispersal and rescue effects are possible.

Distribution

This species ranges through East Africa, southern Africa and a few localities on the island of Madagascar (Monadjem et al. 2016). It has been recorded from a number of regions in eastern and southeastern Africa, along the border of Kenya and Uganda, as far south as Zimbabwe, central and northern Mozambique, southern Malawi, the very northern reaches of South Africa, with an isolated record in northeast Zambia (Monadjem et al. 2010, 2016). Specimens from eastern Democratic Republic of the Congo form the most westerly records (Monadjem et al. 2010). In Madagascar, this species is predominantly restricted to the central-southern region near to Fianarantsoa and Isalo National Park, and there are records from Tolagnaro near the southeast coast (Jenkins et al. 2007; Cotterill et al. 2008). Its altitudinal range extends from about sea level (at Fort Dauphin in Madagascar) to close to 2,000 m asl (in the Albertine Rift of East Africa). In the assessment region, the species is recorded only from the northern areas of the Limpopo Province of South Africa in Pafuri, Kruger National Park (Figure 1). The estimated extent of occurrence is 19.05 km^2.

Population

Although sporadically distributed in mainland Africa, it is considered locally common. It roosts communally in small to medium-sized groups, which may number over 30 individuals (Cotterill 2001), but do not exceed 100 individuals (ACR 2015; Monadjem et al. 2016).

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

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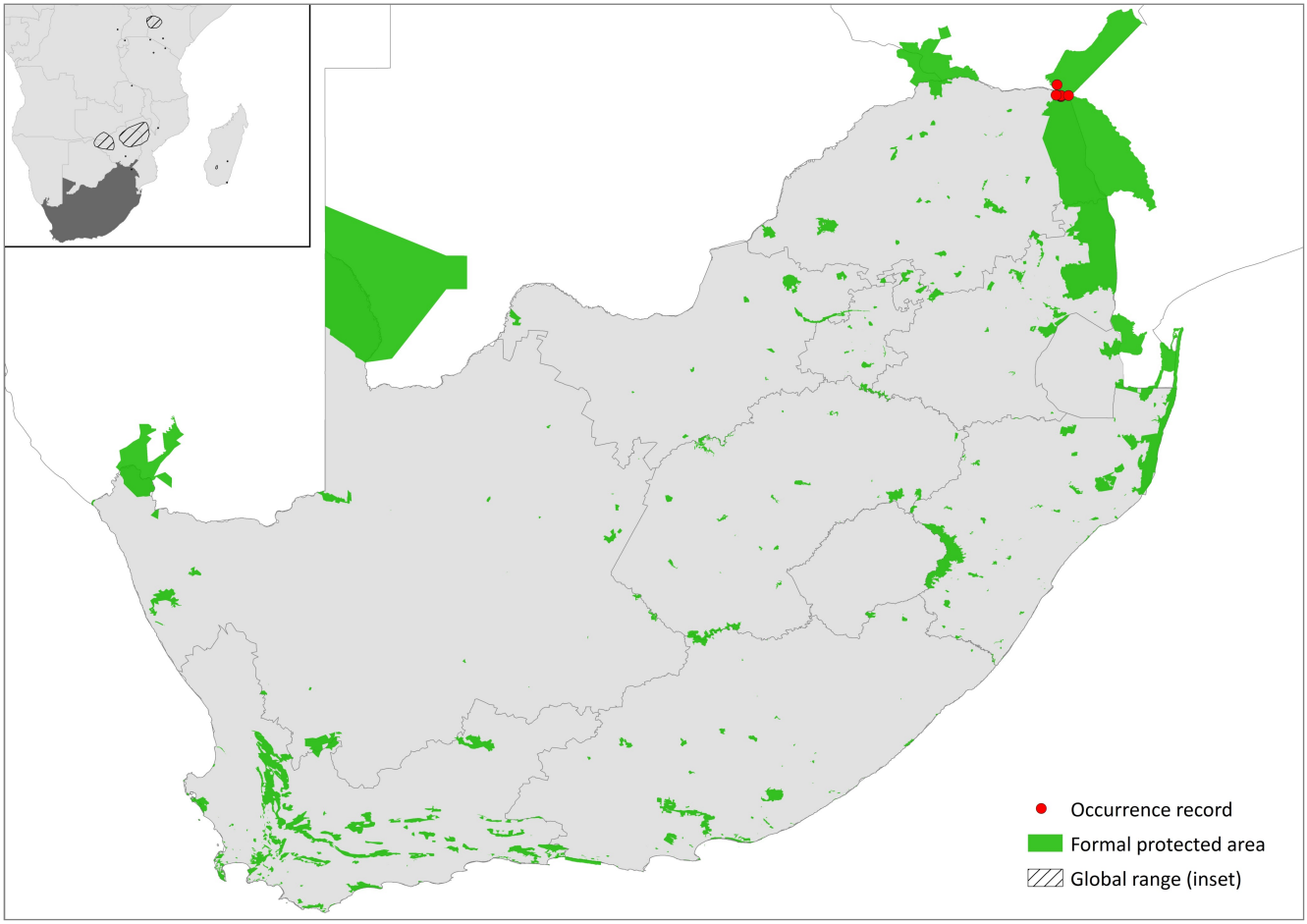

Figure 1. Distribution records for Malagasy Free-tailed Bat (*Tadarida fulminans*) within the assessment region

Table 1. Countries of occurrence within southern Africa

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

Number of subpopulations: Unknown

Severely fragmented: No

Habitats and Ecology

The Malagasy Free-tailed Bat is typically a savannah species; found in both dry and moist savannah habitats (Monadjem et al. 2016). It is not thought to be dependent on caves, but is found in rocky areas, such as basalt, dolomite and especially granite outcrops, which are common throughout southern and eastern Zimbabwe (Cotterill 1996). This species is commonly associated with miombo and mopane savannah woodlands, interspersed with steep-sided mountains ridges or inselbergs (Cotterill 2001; Monadjem et al. 2010). In the assessment region, the species is recorded from the Lowveld and Mopane bioregions.

It is a communal rooster and roosts in crevices in vertical rock faces, which may occur more than 60 m above the ground (Cotterill & Fergusson 1993) and in spaces under exfoliating rock (Cotterill 2001). It is an open-air forager. Together with *T. ventralis*, the Malagasy Free-tailed Bat has the longest, narrowest wing tips of all Molossid bat species (Monadjem et al. 2010), which is an adaptation for fast and agile flight. In southern Africa, there is no information on the diet of this species (Skinner & Chimimba 2005; Monadjem et al. 2010). However, in Sengwa (Zimbabwe) the species diet consists of Lepidoptera and Coleoptera (Skinner & Chimimba 2005).

Ecosystem and cultural services: None recorded

Use and Trade

There is no evidence to suggest that this species is traded or harvested within the assessment region.

Threats

Across its range there are no major threats to this species (ACR 2015; Monadjem et al. 2016). Considering it occurs exclusively within a protected area (Kruger National Park) in the assessment region, no plausible threats have been identified.

Current habitat trend: Stable

Conservation

There are currently no active conservation measures necessary for this species. It occurs exclusively within the protected Kruger National Park in South Africa.

Research priorities:

- Additional studies into the geographic range and taxonomic status of individuals allocated to *T. fulminans* are required (Monadjem et al. 2016), and particularly the relationship between African mainland and Madagascan populations needs to be investigated.

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.

References

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Data Sources and Quality

Table 2. Information and interpretation qualifiers for the Malagasy Free-tailed Bat (*Tadarida fulminans*) assessment

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

Assessors and Reviewers

Ara Monadjem[1], Corrie Schoeman[2], Lientjie Cohen[3], David Jacobs[4], Kate MacEwan[5], Leigh Richards[6], Theresa Sethusa[7], Peter Taylor[8]

[1]University of Swaziland, [2]University of KwaZulu-Natal, [3]Mpumalanga Tourism and Parks Agency, [4]University of Cape Town, [5]Inkululeko Wildlife Services, [6]Durban Natural Science Museum, [7]South African National Biodiversity Institute, [8]University of Venda

Contributors

Samantha Page-Nicholson[1], Claire Relton[1], Domitilla Raimondo[2]

[1]Endangered Wildlife Trust, [2]South African National Biodiversity Institute

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