Taphozous perforatus – Egyptian Tomb Bat


Wendy White

Regional Red List status (2016)	**Near Threatened D2**
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 Egyptian Tomb Bat was so named as the first specimen was collected from a royal tomb in Egypt by Geoffroy Saint-Hilaire in 1818 (Skinner & Chimimba 2005).

Taxonomy

Taphozous perforatus É. Geoffroy Saint-Hilaire 1818

ANIMALIA - CHORDATA - MAMMALIA - CHIROPTERA - EMBALLONURIDAE - *Taphozous - perforatus*

Common names: Egyptian Tomb Bat, Geoffroy's Tomb Bat, Perforated Taphozous Bat, African Taphozous, Tomb Bat (English), Egiptiese Witlyfvlermuis (Afrikaans)

Taxonomic status: Species

Taxonomic notes: Meester et al. (1986) recognised three subspecies, including the nominate subspecies (*Taphozous perforatus perforatus*) from Egypt (where this species was initially described), *T. p. sudani* Thomas 1915 from Sudan, and *T. p. haedinus* Thomas 1915 from Kenya. However, it remains uncertain how the geographically isolated southern African population (named *T. p. rhodesiae*, and described from the Shashi-Limpopo confluence; Harrison 1964) is related to these subspecies (Monadjem et al. 2010). *T. p. rhodesiae* was originally recognised as a subspecies of *T. sudani* (*T. sudani australis*), which was previously identified as a distinct species from *T. perforatus* (ACR 2015).

Assessment Rationale

Although widespread throughout sub-Saharan Africa, the Arabian Peninsula and the Indian subcontinent, the species is only recorded from two isolated subpopulations in the assessment region (the Border Cave along the Lebombo escarpment on the South Africa-Swaziland border, and the Limpopo and Shashi confluence along the borders of South Africa and southern Zimbabwe, with no evidence of more localities within the assessment region); this is likely the southernmost limit of the range of the species in sub-Saharan Africa. The nearest known colonies are in southern Zimbabwe and adjacent Mozambique. Specific threats and population trends are unknown. However, monitoring data from the Border Cave colony indicates a stable or increasing subpopulation between 2011 and 2014. Although this species qualifies for Vulnerable D2 based on two locations, it is uncertain whether there are any plausible threats and thus we list as Near Threatened D2 due to the regional criterion.

Regional population effects: It has high wing loading (Norberg & Rayner 1987) and thus dispersal capacity is assumed to be good. However, the population is sparsely distributed in southern Africa and it is unclear whether significant rescue effects are possible. For the purpose of this assessment, we assume rescue effects are possible.

Distribution

The Egyptian Tomb Bat occurs widely throughout northern and sub-Saharan Africa, the Arabian Peninsula, and east to the Indian subcontinent. In sub-Saharan Africa, records extend along the Nile and east to Ethiopia and northern Somalia, and west to Mauritania, Senegal, Gambia, Guinea-Bissau, Ghana, Burkina Faso, Benin, Niger, and northern Nigeria, and south to Kenya (including Lamu Island), Tanzania, Democratic Republic of the Congo, Zambia, Zimbabwe, Mozambique and Botswana (Kock et al. 2008; Monadjem et al. 2010; ACR 2015). However, it is patchily distributed in southern Africa, occurring in southern Zimbabwe, Mozambique and an isolated subpopulation in the Okavango Delta of Botswana (Monadjem et al. 2010). In the assessment region, the species appears to be peripheral, recorded from Border Cave along the Lebombo escarpment on the South Africa-Swaziland border (specimen records of the Durban Natural Science Museum), and from the northern borders of the Limpopo and Shashi confluence along the borders of South Africa and southern Zimbabwe (Figure 1; Harrison 1962; Skinner & Chimimba 2005).

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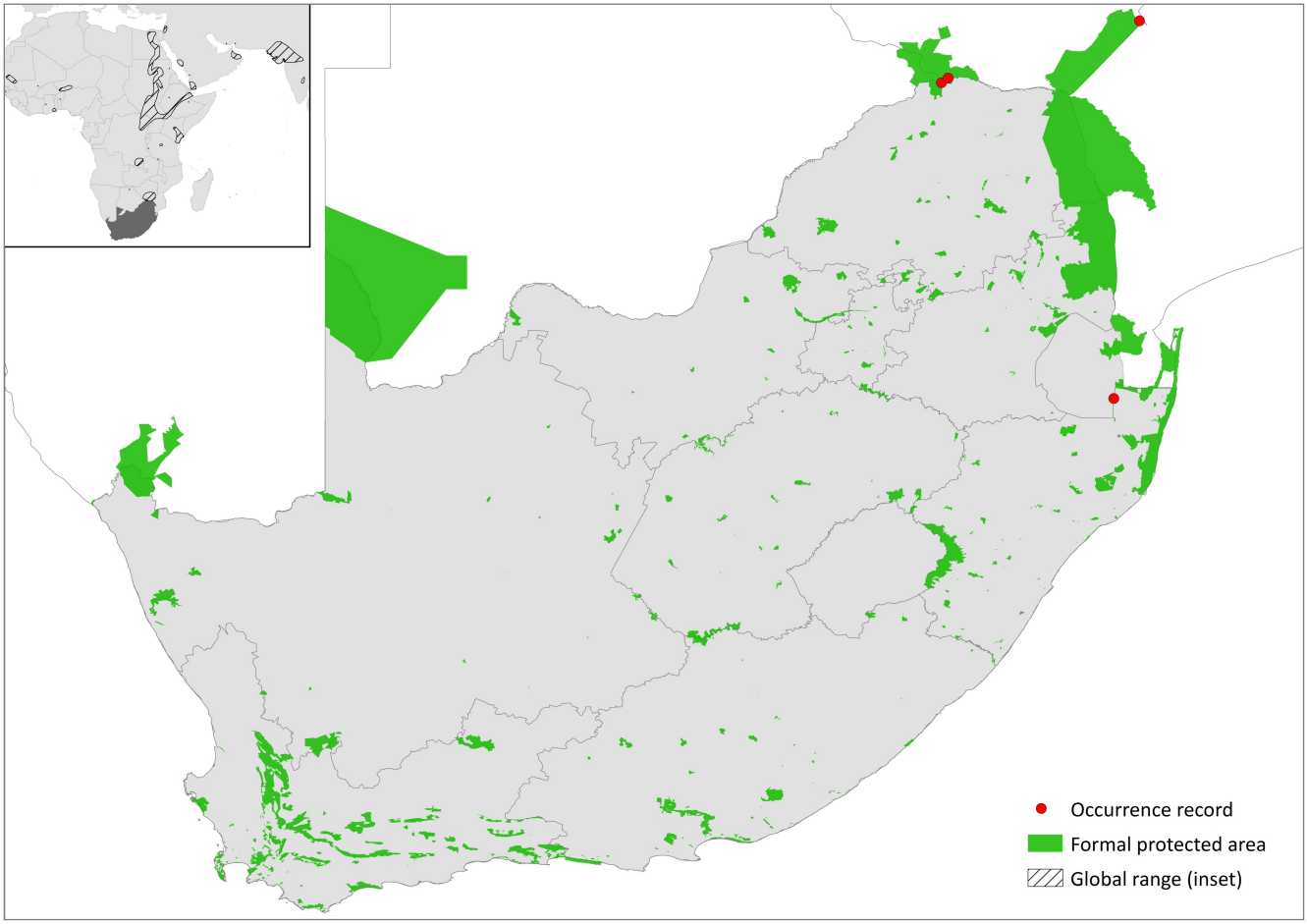

Figure 1. Distribution records for Egyptian Tomb Bat (*Taphozous perforatus*) within the assessment region

Table 1. Countries of occurrence within southern Africa

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

Population

The Egyptian Tomb Bat is common in parts of its African range, but is less common elsewhere. It is found in small colonies (between six to eight individuals) in the southern African subregion (Harrison 1962; Skinner & Chimimba 2005; Monadjem et al. 2010), but can number in the hundreds in southern Zimbabwe (Monadjem et al. 2010). In South Asia the abundance, population size and trends for this species are not known, and the species has only been recorded from a few localities (Bates & Harrison 1997). Direct observation and counting of individuals at Border Cave (border between South Africa and Swaziland) over a three period, suggests that the population may be increasing. In 2014, it contained between 25–30 individuals (L.R. Richards unpubl. data), from an estimated 10–15 individuals originally observed in 2011 (White 2011). The southern African population of this species is poorly represented in museums, with just 28 records used in Monadjem et al. (2010).

Current population trend: Unknown

Continuing decline in mature individuals: Unknown

Number of mature individuals in largest subpopulation: Unknown, but possibly < 30 individuals.

Number of subpopulations: Unknown

Severely fragmented: No

Habitats and Ecology

Throughout its range, this species is commonly associated with open woodland habitats, frequently found along rivers in wooded savannah, but avoids forest, semi-desert and desert areas (Skinner & Chimimba 2005) and prefers open areas where suitable day-roosts are present (Monadjem et al. 2010). It requires the shelter of dark crevices or corners in caves, rock overhangs, stone buildings or rocky outcrops, in which to roost during the day (Skinner & Chimimba 2005; Monadjem et al. 2010). Individuals collected at the Shashi-Limpopo confluence were located near a range of sandstone hills, associated with *Acacia* woodland, alongside dry river beds (Skinner & Chimimba 2005). Within southern Africa, the species is seldom found in colonies of more than eight, although in West Africa colonies can number hundreds of individuals (Skinner & Chimimba 2005). In southern Zimbabwe, colonies have also been found to number in the hundreds (Monadjem et al. 2010). It is an open-air forager with high wing-loading (Norberg & Rayner 1987; Monadjem et al.

Table 2. Threats to the Egyptian Tomb Bat (*Taphozous perforatus*) 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 disturbance, due to anthropogenic activities, such as traditional ceremonies.	Molur et al. 2002	Indirect	International	Unknown

2010). While no feeding ecology data are available for the assessment region, the species has been found to feed predominantly on Lepidoptera, Isoptera and Coleoptera species (Skinner & Chimimba 2005; Monadjem et al. 2010).

Ecosystem and cultural services: As this species is insectivorous, it plays an important role in controlling insect populations (Boyles et al. 2011; Kunz et al. 2011). Often, bats prey on the insect species that destroy crops (Boyles et al. 2011; Kunz et al. 2011). Ensuring a healthy population of insectivorous bats can result in a decrease in the use of pesticides.

Use and Trade

There is no evidence to suggest that the species is traded or utilised in any form.

Threats

Human disturbance has been highlighted as a threat to the Egyptian Tomb Bat, but overall it is unlikely that this species is significantly threatened across its very wide range. In South Asia it is threatened by clearing of thorn forests for agricultural purposes, or for mining and stone quarrying. Roost disturbance due to human interference and development of old buildings for tourism purposes are also considered serious threats (C. Srinivasulu pers. comm.; Molur et al. 2002). Within the assessment region, threats to this species have not been quantified. However, climate change is recognised as a potential threat to most bat species, as climate is known to influence the biogeography of bats, the availability of food, energetic expenditure, as well as the timing and duration of important processes such as reproduction, hibernation, development and torpor (Sherwin et al. 2013). However, this remains to be verified as a threat to the species within the assessment region.

Current habitat trend: Stable. As this species predominantly occurs within protected areas, it is expected that the current habitat trend is stable. Savannah woodlands are not threatened within the assessment region (Driver et al. 2012).

Conservation

There are no direct interventions necessary for this species within the assessment region. It occurs within Mapungubwe National Park and possibly Venetia Limpopo Nature Reserve (both protected areas occurring in the northern region of the Limpopo Province).

Recommendations for land managers and practitioners:

- Reduce pesticide use in agricultural landscapes.

Research priorities:

- Research is needed on the population trends, distribution and specific threats facing the species (Kock et al. 2008).
- Its life history and ecology needs to be further studied (Kock et al. 2008).

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. The Egyptian Tomb Bat is almost identical in body size to that of the Mauritian Tomb Bat (*T. mauritianus*), but these species can be distinguished by their distinctive colourations. The Egyptian Tomb Bat has a darker back, and lacks the greyish-brown (grizzled) colouration of the Mauritian Tomb Bat.

Data Sources and Quality

Table 4. Information and interpretation qualifiers for the Egyptian Tomb Bat (*Taphozous perforatus*) assessment

Data sources	Field study (unpublished), indirect information (expert knowledge), museum records
Data quality (max)	Inferred
Data quality (min)	Inferred
Uncertainty resolution	Best estimate
Risk tolerance	Evidentiary

Table 3. Conservation interventions for the Egyptian Tomb Bat (*Taphozous perforatus*) 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	*2.1. Site/Area Management*: reduce human disturbance of key roost sites.	-	Anecdotal	-	-	-

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Assessors and Reviewers

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

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

Contributors

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

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

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