Hipposideros caffer – Sundevall's Leaf-nosed Bat


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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 (2008)	Least Concern
TOPS listing (NEMBA) (2007)	None
CITES listing	None
Endemic	No

This species is one of the few bat species that exhibits retarded embryonic development, whereby normal mammalian fertilisation and implantation occur, but the embryo's growth is halted during hibernation and will resume once hibernation is over (Monadjem et al. 2010).

Taxonomy

Hipposideros caffer (Sundevall 1846)

ANIMALIA - CHORDATA - MAMMALIA - CHIROPTERA - HIPPOSIDERIDAE - *Hipposideros* - *caffer*

Synonyms: *Rhinolophus caffer*, *Phyllorhina caffra*, *Phyllorrhina gracilis*, *Phyllorhina patellifera*, *Phyllorhina angolensis*, *Hipposideros nanus*

Common names: Sundevall's Leaf-nosed Bat, Common African Leaf-nosed Bat, Lesser Leaf-nosed bat, Cape Leaf-nosed bat, Sundevall's Roundleaf Bat, Sundevall's African Leaf-nosed Bat, South African Lesser Leaf-nosed Bat (English), Sundevall se bladneusvlermuis, Sundevall-bladneusvlermuis, Sundevall se blaarneusvlermuis, Kaapse Blaarneusvlermuis (Afrikaans)

Taxonomic status: Species complex

Taxonomic notes: This species was historically listed under the family *Rhinolophidae*. Taxonomic revision is required as *Hipposideros caffer* is considered a species complex (Kock et al. 2008). Three subspecies have been listed by Simmons (2005), including: *H. c. angolensis* Seabra, 1898; *H. c. nanus* J.A. Allen, 1917; and *H. c. tephrus* Cabrera, 1906. Vallo et al. (2008) recognises several species lineages within the *caffer-ruber* complex throughout Africa, and assign southern African populations to *H. c. caffer*. The presence of multiple cryptic species in this *caffer-ruber* complex is supported by Monadjem et al. (2013). Molecular data are required to resolve the taxonomy.

Assessment Rationale

Listed as Least Concern as this species is widely distributed across the northern and eastern regions of the assessment region, is inferred to have a large population, and because no major threats have been identified that could cause extensive population declines. Like other Chiropteran species, protecting and limiting disturbance to key roost sites will benefit this species.

Regional population effects: This distribution records for this species are continuous between the northeastern section of the assessment region and Mozambique and Zimbabwe. Dispersal into and out of the assessment region is suspected to be ongoing.

Distribution

Sundevall's Leaf-nosed Bat has an extensive distribution across sub-Saharan Africa and the south-western Arabian Peninsula (Simmons 2005). In Africa, there is an isolated population in Morocco, and their distribution extends from Senegal eastwards to Sudan and Ethiopia, southwards into Kenya and Tanzania, but are absent from the central dense forest areas. Their distribution continues southwards along the eastern and western regions of southern Africa, but this is restricted to the nominate *H. c. caffer* lineage (Vallo et al. 2008). Disjunct populations have been recorded in northern and southern Namibia and Botswana, but they are widespread across Zimbabwe and Mozambique. Within the assessment region, the species occurs in Limpopo, Mpumalanga, KwaZulu-Natal and the northern areas of the Eastern Cape Province of South Africa, as well as in Swaziland (Figure 1; Skinner & Chimimba 2005; Monadjem et al. 2010). The type specimen is from Durban, South Africa (BM 1848.6.2.16, Syntype) (Monadjem et al. 2010).

Recommended citation: Monadjem A, Jacobs D, Cohen L, Richards LR, Schoeman C, Sethusa T, Taylor PJ. 2016. A conservation assessment of *Hipposideros caffer*. 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.

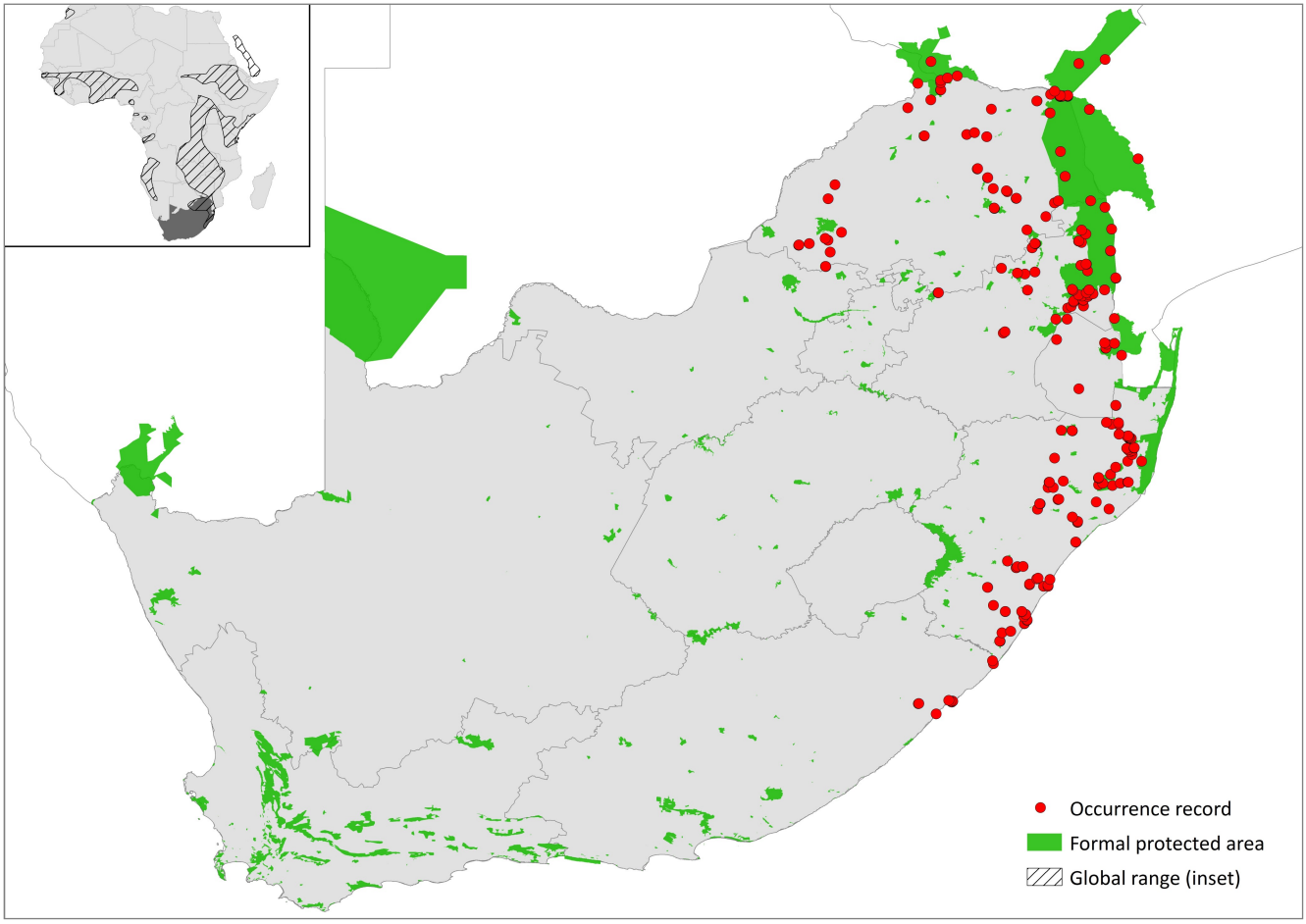

Figure 1. Distribution records for Sundevall's Leaf-nosed Bat (*Hipposideros caffer*) within the assessment region

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

Population

Sundevall's Leaf-nosed Bat is considered a common species, with colonies in the hundreds reported within the assessment region, and is well represented in museums with over 900 specimens examined in Monadjem et al. (2010). The species is extremely gregarious, and forms colonies ranging from less than a dozen to huge colonies of more than 1,000 individuals where there is adequate roosting space (Kock et al. 2008; Monadjem et al. 2010). Occasionally, males may roost solitarily (Monadjem et al. 2010).

Current population trend: Stable

Continuing decline in mature individuals: No

Number of mature individuals in population: Unknown

Number of mature individuals in largest subpopulation: > 100

Number of subpopulations: 50–100

Severely fragmented: No

Habitats and Ecology

The species is generally associated with savannah, bushveld and/or coastal forests, near to rivers and other water sources (Taylor 2000). Nearby caves, sinkholes, rock fissures, hollow trees or cavities (including those created by humans, such as mines and culverts) are essential for roosting during the day (Happold 1987; Monadjem et al. 2010). Roosts are commonly shared with other species, including *Nycteris thebaica* in Swaziland (Monadjem et al. 2010). The species is a clutter-edge forager and feeds predominantly on Lepidoptera, with smaller quantities of Trichoptera and Coleoptera (Monadjem et al. 2010). It has low wing-loading (Monadjem et al. 2010).

This species exhibits seasonal breeding: in KwaZulu-Natal, copulation was found to take place in April, although embryonic development was delayed during winter until the end of September, and females gave birth to a single young in early December (Rautenbach 1997; Skinner & Chimimba 2005). Due to this seasonally delayed embryonic development, the gestation period of this species in KwaZulu-Natal was found to be nearly 100 days longer (~220 days) than populations from the tropics (Bernard & Meester 1982).

Ecosystem and cultural services: The species' feeding ecology makes them important regulators of insect populations (Boyles et al. 2011; Kunz et al. 2011). Bats

Table 2. Threats to the Sundevall's Leaf-nosed Bat (*Hipposideros caffer*) 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

Table 3. Conservation interventions for the Sundevall's Leaf-nosed Bat (*Hipposideros caffer*) 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*: limit disturbance to key roost sites.	-	Anecdotal	-	-	-

particularly feed on species which damage crops, and agricultural areas with bats require less pesticides (Kunz et al. 2011).

Use and Trade

Not known to be utilised or traded in any form.

Threats

Human disturbance at roosting sites (such as religious ceremonies by local communities and cave tourism) has been highlighted as a threat to Sundevall's Leaf-nosed Bat, although this is unlikely to cause significant declines of this species across its distribution.

Current habitat trend: Stable

Conservation

Although, no specific conservation measures are reported to be in place for this species, it is likely that it would benefit from protection of key roost sites. The species occurs in protected areas throughout its range (ACR 2015).

Recommendations for land managers and practitioners:

- Reduce pesticide use in agricultural landscapes.

Research priorities:

- Taxonomic resolution of the *H. caffer-ruber* species complex.

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 Sundevall's Leaf-nosed Bat (*Hipposideros caffer*) assessment

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

References

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