Scotophilus dinganii – African Yellow Bat


Merlin Tuttle

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

This is a probably a species complex comprised of multiple cryptic species from West, East and southern Africa (Jacobs et al. 2006; Trujillo et al. 2009), and further research is needed to resolve its taxonomic status.

Taxonomy

Scotophilus dinganii (A. Smith 1833)

ANIMALIA - CHORDATA - MAMMALIA - CHIROPTERA - VESPERTILIONIDAE - *Scotophilus* - *dinganii*

Synonyms: *colias, herero, planirostris, pondoensis*

Common names: African Yellow Bat, African Yellow House Bat, Dingan's Bat, Yellow House Bat, Yellow-bellied House Bat (English), Geel Dakvlermuis (Afrikaans)

Taxonomic status: Species complex

Taxonomic notes: The entire genus needs revision (Monadjem et al. 2010b). Historically referred to as *Scotophilus nigrita* until Robbins (1978) clarified the appropriate name for the smaller specimens is *S. dinganii*. However, the specific status of *S. dinganii* has not been in dispute since multivariate analysis of *Scotophilus* species by Robbins et al. (1985). There are three subspecies listed for the southern African region by Meester et al. (1986) but the validity of these are uncertain (Monadjem et al. 2010b). Molecular and echolocation evidence suggests *S. dinganii* is a species complex (Jacobs et al. 2006; Trujillo et al. 2009), with at least two cryptic species in East and West Africa, but finer scale geographical sampling is needed to test for cryptic species in southern Africa (Trujillo et al. 2009; Monadjem et al. 2010b).

Assessment Rationale

Listed as Least Concern in view of its wide distribution within the assessments, its tolerance of a broad range of habitats, including human habitation and modified habitats, its presumed large population, it being recorded in several protected areas (including Great Limpopo Transfrontier Park and Greater Mapungubwe Transfrontier Conservation Area) and because there are no major identified threats that could cause widespread population decline. Taxonomic resolution of the genus is required to delineate geographical boundaries more accurately.

Regional population effects: It has high wing-loading (Norberg & Rayner 1987; Schoeman & Jacobs 2008), and thus dispersal capacity is assumed to be good. It also occurs in Greater Mapungubwe Transfrontier Conservation Area and Great Limpopo Transfrontier Park and thus habitat is connected across regions. Rescue effects are thus possible.

Distribution

This species is widely distributed in sub-Saharan Africa, recorded from most biotic zones and countries. It ranges from Senegal and the Gambia in the west, through West Africa and parts of Central Africa, to Sudan, Eritrea, Djibouti and Ethiopia in the east; from here it ranges south through much of East Africa and southern Africa, being recorded as far south as eastern South Africa, including Swaziland. Within the assessment region, it has been recorded in the Eastern Cape and KwaZulu-Natal provinces, and Swaziland, through to northern South Africa, Zimbabwe, eastern and northern Botswana, northern Namibia, Zambia and Malawi (Monadjem et al. 2010b). It is absent from the plateau grassland and Karoo regions of South Africa and the Kalahari (Monadjem et al. 2010b), and has not been recorded from Lesotho (Monadjem et al. 2010b; ACR 2015). The estimated extent of occurrence is 622,509 km^2.

Population

Little information is available on the abundance or population size of this species but, as many records of this bat exist within the assessment region, it is suspected to be common. The African Yellow Bat roosts singly or in small groups of up to 30 individuals (Skinner & Chimimba 2005), so population size is presumed to be large. Additionally, it is well represented in museums, with over 700 records examined in Monadjem et al. (2010b), which is partly due to its habit of roosting in fabricated structures, including roofs of houses, making it easy to collect.

Current population trend: Stable

Continuing decline in mature individuals: No

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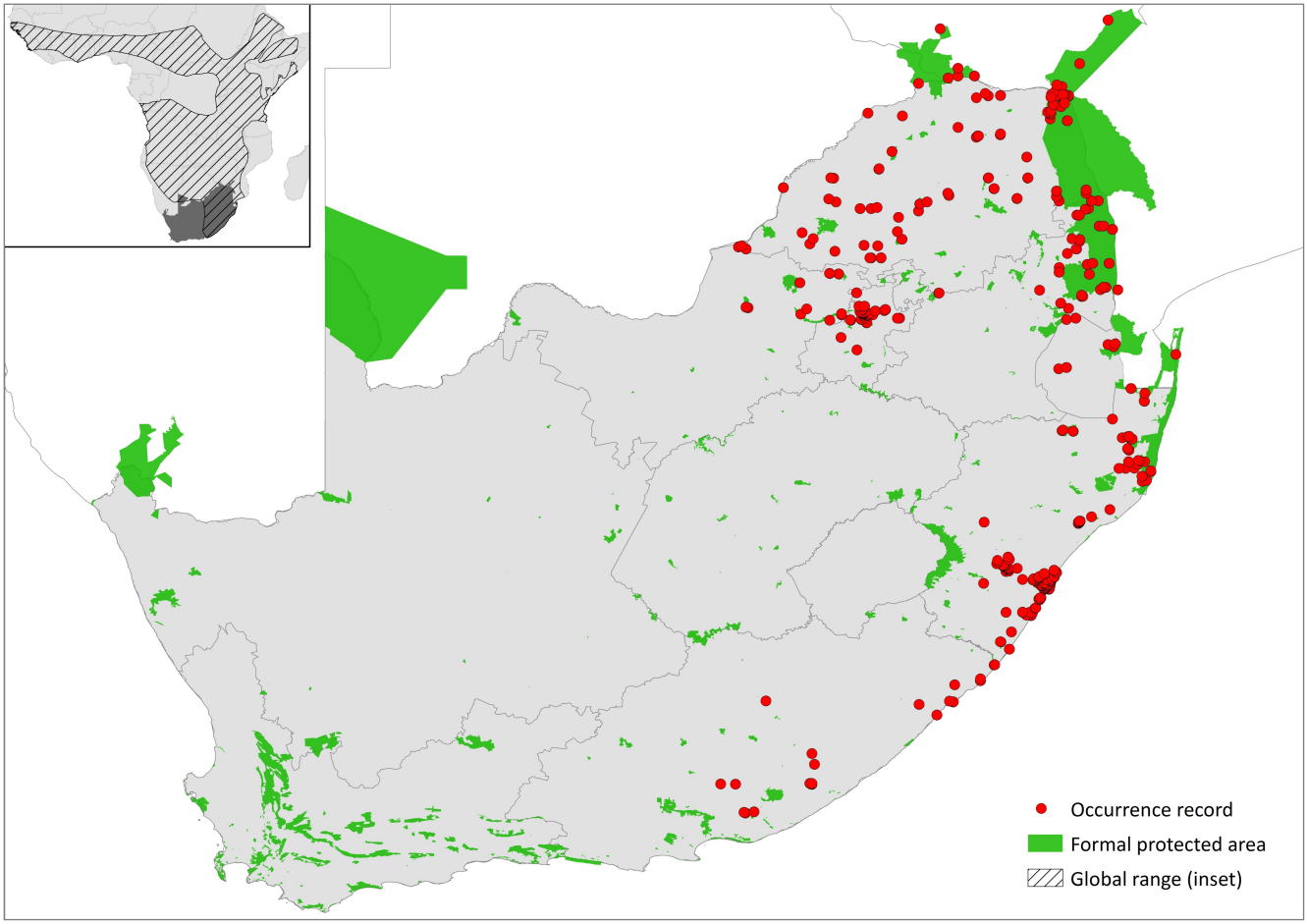

Figure 1. Distribution records for African Yellow Bat (*Scotophilus dinganii*) within the assessment region

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 mature individuals in population: Unknown

Number of mature individuals in largest subpopulation: Unknown

Number of subpopulations: Unknown

Severely fragmented: No

Habitats and Ecology

Found in most habitats south of the Sahara but predominantly recorded from both dry and moist woodland savannah. It occurs throughout the Savannah Biome, but avoids open habitats such as grasslands and Karoo scrub (Monadjem et al. 2010b). The habitat of this wide-ranging species is not easy to classify, but it appears to be tied to the presence of trees (Monadjem et al. 2010b), and thus its absence from open habitats may reflect the lack of roost sites. It roosts in hollow trees, such as *Combretum imberbe* (Monadjem et al. 2010a), roofs (Monadjem et al. 2010b), and other dark places in houses. It may roost in buildings as a way to avoid inter-specific competition with sympatric *Scotophilus* species (Jacobs & Barclay 2009). Although it may roost singly, small groups up to 30 bats are not uncommon (Happold et al. 1987; Skinner & Chimimba 2005). It is a clutter-edge forager, feeding mainly on medium-sized Coleoptera but also other insect species (Monadjem et al. 2010b).

Ecosystem and cultural services: As this species is insectivorous, it may contribute to controlling insect species that damage crops (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

This species is not known to be utilised or traded.

Threats

There appear to be no major current threats to this species as a whole. Local threats may include the removal of roosting trees for fuelwood, such as in the Soutpansberg Mountains of Limpopo (Munyati & Kabanda 2009; Taylor et al. 2013).

Current habitat trend: Stable. The Savannah Biome is well protected within the assessment region (Driver et al. 2012).

Table 2. Threats to the African Yellow Bat (*Scotophilus dinganii*) 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	5.3.3 *Logging & Wood Harvesting*: removal of roost sites through fuelwood harvesting and deforestation. Current stress *1.2 Ecosystem Degradation*.	Munyati & Kabanda 2009	Indirect (remote sensing)	Regional	Increasing

Table 3. Conservation interventions for the African Yellow Bat (*Scotophilus dinganii*) 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*: protection of key roost sites.	-	Anecdotal	-	-	-

Conservation

The species is recorded from many protected areas within the assessment region (at least 27 across its range), including Kruger and Mapungubwe National Parks, Hluhluwe-iMfolozi Game Reserve and iSimangaliso Wetland Park. No direct conservation measures are currently needed for this species in the assessment region. However, protecting large trees, and thus limiting disturbance to key roost sites, will benefit this, and other, species.

Recommendations for land managers and practitioners:

- Protect large (especially hollow) trees as roosting sites.

Research priorities:

- Taxonomic resolution through molecular and morphometric research.

Encouraged citizen actions:

- Report sightings on virtual museum platforms (for example, iSpot and MammalMAP), especially outside protected areas.
- Deposit any dead specimens to the Durban Natural Science Museum or Ditsong Museum of Natural History.

Data Sources and Quality

Table 4. Information and interpretation qualifiers for the African Yellow Bat (*Scotophilus dinganii*) assessment

Data sources	Field study (unpublished), museum records
Data quality (max)	Estimated
Data quality (min)	Inferred
Uncertainty resolution	Best estimate
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.*