Laephotis wintoni – De Winton's Long-eared Bat


Trevor Morgan

Regional Red List status (2016)	**Vulnerable D1***
National Red List status (2004)	Vulnerable D2
Reasons for change	No change
Global Red List status (2016)	Least Concern
TOPS listing (NEMBA) (2007)	None
CITES listing	None
Endemic	No

*Watch-list Data

Based on external characteristics, this species is physically indistinguishable from *Laephotis namibensis*, with which it may be conspecific (Monadjem et al. 2010).

Taxonomy

Laephotis wintoni Thomas 1901

ANIMALIA - CHORDATA - MAMMALIA - CHIROPTERA - VESPERTILIONIDAE - *Laephotis* - *wintoni*

Common names: De Winton's Long-eared Bat, Winton's Long-eared Bat (English), De Winton se Langoorvlermuis (Afrikaans)

Taxonomic status: Species

Taxonomic notes: Based on morphometric data (Jacobs et al. 2005; Kearney & Seamark 2005), this species may be conspecific with *Laephotis namibensis* (Monadjem et al. 2010; Kearney 2013), where *L. namibensis* might constitute the paler, western race of *L. wintoni* (Peterson 1973; Monadjem et al. 2010). Molecular studies are recommended to clarify the taxonomic relationships within this genus (Monadjem et al. 2010).

Assessment Rationale

This species has been confirmed in only two localities within the assessment region: the Clarens district in the eastern Free State and the Maloti-Drakensberg Transfrontier Park on the Lesotho side. The record from Hella Hella Game Reserve in KwaZulu-Natal Province has been reassigned to *L. botswanae* and a recent record from Hogsback in the Eastern Cape Province requires verification from genetic analysis. While morphometric analysis identifies these specimens more closely to *L. wintoni* from East Africa, ongoing molecular research is needed to distinguish the specific status between *L. namibensis* and *L.* cf. *wintoni*, as the latter species may be a South African endemic. Although it potentially qualifies for Vulnerable D2 based on only two locations, there are no plausible threats because the species occurs chiefly in a protected area, presumably inhabits inaccessible rock crevices as day roosts, and may occur more widely than thought. As it is rare, there are likely fewer than 1,000 mature individuals and thus we list as Vulnerable D1 under a precautionary purview. Ongoing molecular research and further field surveys are needed and this species should be reassessed once such data are available.

Regional population effects: We assume no rescue effects are possible as there is a disjunct distribution between the assessment region and the rest of its African range and molecular research may reveal this species to be endemic.

Distribution

De Winton's Long-eared Bat is endemic to Africa and has a widespread range, extending from Ethiopia southwards through Kenya, Tanzania (Kock & Howell 1988; Stanley & Kock 2004), and into southern Zambia. The populations from eastern Lesotho and South Africa are apparently isolated (ACR 2015). Within the assessment region, records have been confirmed from montane grasslands on the Lesotho side of Maloti-Drakensberg Transfrontier Park (Lynch 1994; Kearney & Seamark 2005), and the Clarens District of the eastern Free State (Farm Schapplaas) (Kearney & Seamark 2005). Recently, a record was obtained from the Hogsback region of the Eastern Cape but it requires validation (C. Schoeman unpubl. data). Previous specimens from the KwaZulu-Natal Province (Hella Hella, Richmond) listed as *L.* cf. *wintoni* (Kearney & Taylor 1997) have been reassigned to *L. botswanae* (Kearney & Seamark 2005). Similarly, original specimens collected from Algeria Forest, Western Cape (Rautenbach & Nel 1978) were subsequently reassigned as *L. namibensis* (Skinner & Smithers 1990). However, new specimens from Algeria have been referred to as *L. wintoni* (based on Rautenbach & Nel 1978) by Jacobs et al. (2005). Taxonomic revision is required to determine whether this species and *L. namibensis* are conspecific. If not, *L. wintoni* may be endemic to the assessment region, as there is a significant geographic divide between specimens from the assessment region and other populations across Africa.

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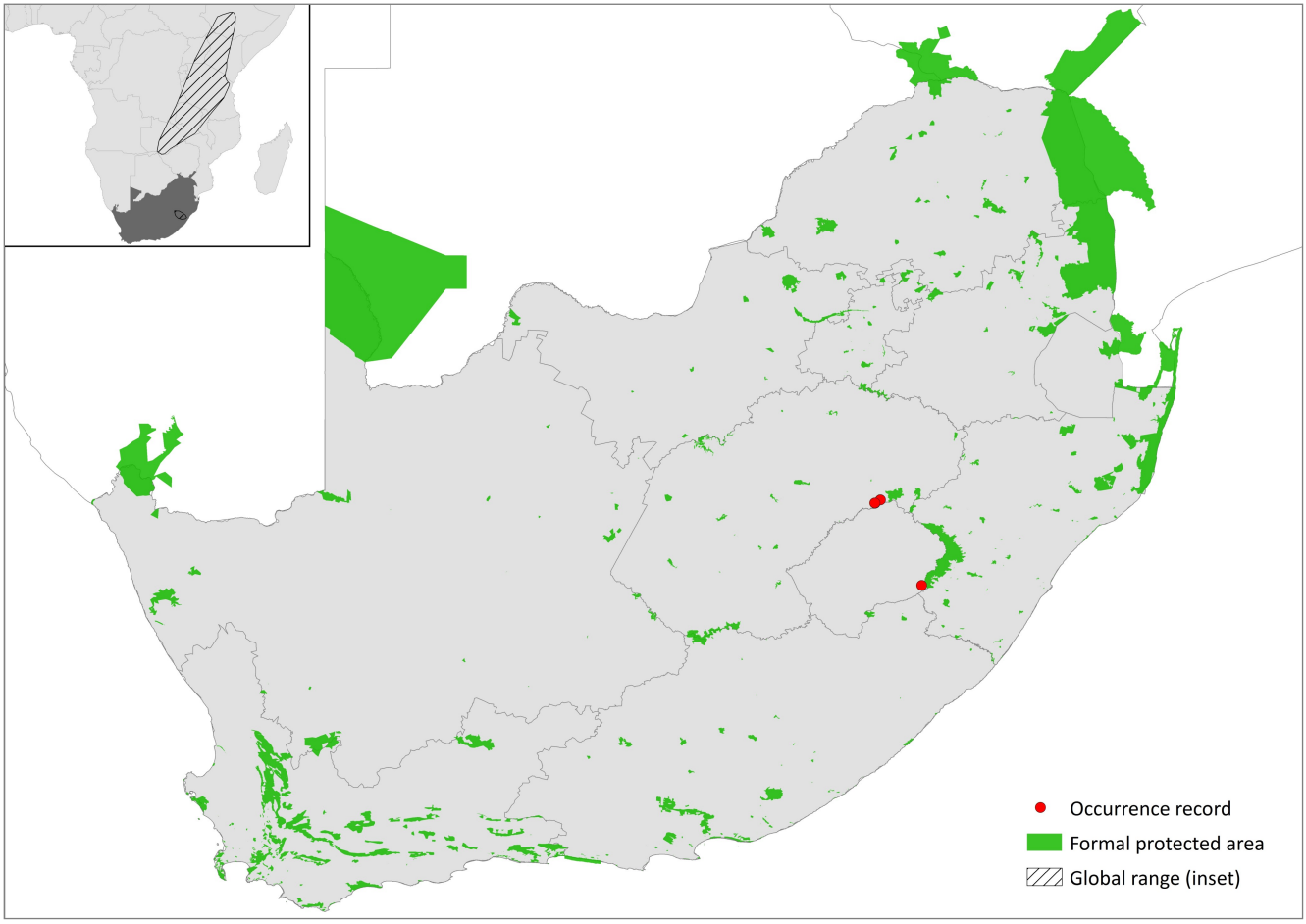

Figure 1. Distribution records for De Winton's Long-eared Bat (*Laephotis wintoni*) within the assessment region

Table 1. Countries of occurrence within southern Africa

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

Population

It appears to be an uncommon species, which possibly exhibits large population fluctuations (ACR 2015). It is poorly represented in museums, and only seven individuals were examined in Monadjem et al. (2010). Five individuals were caught by Lynch (1994) in Lesotho. Although its range is widespread across East Africa, it is not considered common throughout the rest of its range (Kearney & Seamark 2005).

Current population trend: Stable

Continuing decline in mature individuals: Unknown

Number of mature individuals in population: Unknown

Number of mature individuals in largest subpopulation: Unknown

Number of subpopulations: Two

Severely fragmented: No

Habitats and Ecology

Within the assessment region, this species appears to prefer highland, mountainous grassland regions (Kearney 2013). In East Africa, it has also been recorded from mountainous areas within mosaics of evergreen bushland, secondary wooded grasslands and farmlands, and forests (Kearney 2013). In Ethiopia, it has been recorded at 1,700 m asl in a reservoir of the African Rift Valley bordered by degraded *Acacia* woodland (Largen et al. 1974). Both records of this species in the assessment region are from high altitudes (> 1,500 m asl) (Kearney & Seamark 2005). In Lesotho, specimens were caught over a small dam surrounded by a vlei (Lynch & Watson 1990; Lynch 1994). In the Free State, specimens were caught among exotic trees along a drainage line bordered by sandstone cliffs (Watson 1990).

The diurnal roosts of this species are unknown. However, similar to *L. namibensis*, it is assumed that they make use of rock crevices (Jacobs et al. 2005). For example, one individual was found under exfoliating rock (Kearney 2013). Currently, there is no information pertaining to the diet and feeding ecology of this species (Monadjem et al. 2010). Similarly, limited data exists for the reproductive ecology of this species, although, in Lesotho, one pregnant female was netted in November (Lynch 1994).

Ecosystem and cultural services: Although limited data is available, similar to *L. namibensis*, this is presumably an

Table 2. Threats to the De Winton's Long-eared Bat (*Laephotis wintoni*) 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	*9.3.3 Agricultural & Forestry Effluents:* loss of prey base from pesticide use.	-	Anecdotal	-	Unknown
2	*2.3.2 Livestock Farming & Ranching*. Current stress *1.2 Ecosystem Degradation*: loss of prey base from overgrazing.	-	Anecdotal	-	Unknown
3	*11.1 Habitat Shifting & Alteration*: decline in food availability and variation in reproductive timing due to global climate change.	Sherwin et al. 2013	Review	International	Unknown

insectivorous bat, thus it is likely to play an important role in controlling insect populations (Boyles et al. 2011; Kunz et al. 2011).

Use and Trade

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

Threats

No major threats have been identified for this poorly known species. It occurs primarily in a protected area in Lesotho and is believed to inhabit inaccessible rock crevices as day roosts. It is possible that a reduction in insect prey base through pesticide use or overgrazing the vegetation surrounding wetlands and vleis may cause local declines, but this remains to be investigated. Additionally, as this species is rare, and is known from only two localities in high-altitude grassland regions, their vulnerability to climate change should be investigated, as this has been identified as an increasing global threat to other bat species (Sherwin et al. 2013). Although potentially occurring in areas of high wind farm density, this species has a low risk of impact with turbines (Sowler et al. 2017). If this species is revealed to have a wider distribution than currently known, threats will have to be reassessed.

Current habitat trend: Stable

Conservation

De Winton's Long-eared Bat has been recorded from the Maloti-Drakensberg Transfrontier Park. No direct conservation interventions are possible until more is known about its distribution, ecology and population status. However, this species would benefit from the long-term protection of additional key roost sites when identified, as well as holistic land management that reduces pesticide use and conserves buffer strips of natural vegetation (especially around wetlands).

Recommendations for land managers and practitioners:

- Reduce pesticide use in agricultural landscapes and maintain buffer strips of natural vegetation.

Research priorities:

- Taxonomic resolution of the species and its relationship with *L. namibensis* through molecular research.
- Systematic monitoring to identify key roost sites, measure population size and trends.
- Studies into habitat selection, foraging and reproductive ecology.

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 De Winton's Long-eared Bat (*Laephotis wintoni*) 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

Table 3. Conservation interventions for the De Winton's Long-eared Bat (*Laephotis wintoni*) 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	-	-	-
2	*2.3 Habitat & Natural Process Restoration*: reduction of pesticide use in agricultural landscapes and conservation of buffer strips of natural vegetation.	-	Anecdotal	-	-	-

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