Epomophorus crypturus – Peters' Epauletted Fruit Bat


Merlin Tuttle

Regional Red List status (2016)	**Least Concern**
National Red List status (2004)	Data Deficient
Reasons for change	Non-genuine: New information
Global Red List status (2016)	Least Concern
TOPS listing (NEMBA) (2007)	None
CITES listing	None
Endemic	No

This species is associated with woodland and forest habitats, particularly riparian forests, and appears to prefer drier conditions than *E. wahlbergi* (Monadjem et al. 2010).

Taxonomy

Epomophorus crypturus Peters 1852

ANIMALIA - CHORDATA - MAMMALIA - CHIROPTERA - PTEROPODIDAE - *Epomophorus* - *crypturus*

Common names: Peters' Epauletted Fruit Bat, Peters' Gambian Fruit Bat, Smaller Epauletted Fruit Bat, Gambian Epauletted Bat (English), Peters se Witkolvrugtevlermuis, Klein Vrugtevlermuis (Afrikaans)

Taxonomic status: Species

Taxonomic notes: This taxon has frequently been included within *Epomophorus gambianus*. However, we follow Simmons (2005) and Monadjem et al. (2010) in recognising *E. crypturus* as a distinct species. Adult *E. crypturus* can be distinguished from sympatric *E. wahlbergi* by the presence of two post-dental palatal ridges (Photo 1) (only one in *E. wahlbergi*) and its narrower muzzle (Taylor & Monadjem 2008).

Assessment Rationale

This species is listed as Least Concern due to its wide distribution within the savannah regions of South Africa and Swaziland (estimated extent of occurrence is 174,992 km^2), its occurrence in several protected areas (including the Kruger National Park, Mapungubwe National Park, Entabeni Nature Reserve) and its presumed large population size. The savannah biome is well protected within the assessment region and this species can tolerate some habitat modification. There is enough information to list as Least Concern.

Regional population effects: Common in the region with much dispersal between subpopulations within and outside of the assessment region.

Distribution

This species is widespread in southern Africa. Its distribution ranges from the southern parts of the Democratic Republic of the Congo and southern Tanzania, to the eastern coastline of South Africa. It ranges from eastern Angola and northern Botswana to the southeastern African coastline. It has been recorded at elevations of up to 2,185 m above sea level, although it has mostly been collected between 500 and 1,500 m above sea level (Mickleburgh et al. 2008). In the assessment region, the species is recorded from Limpopo, Mpumalanga and the northern reaches of KwaZulu-Natal (Monadjem et al. 2010). The species also occurs throughout Swaziland but is absent from Lesotho (Monadjem et al. 2010). It appears to be absent from coastal forest in southern Mozambique (Monadjem et al. 2010).

Population

This species is widespread and abundant in the northeastern parts of the assessment region (namely the Limpopo and Mpumalanga provinces). It forms loose colonies of fewer than a 100 individuals in each colony (Monadjem et al. 2010). It is well represented in museums,


Photo 1. Roof of the mouth of *Epomophorus crypturus* showing the two palatal ridges behind the last molar (Ara Monadjem)

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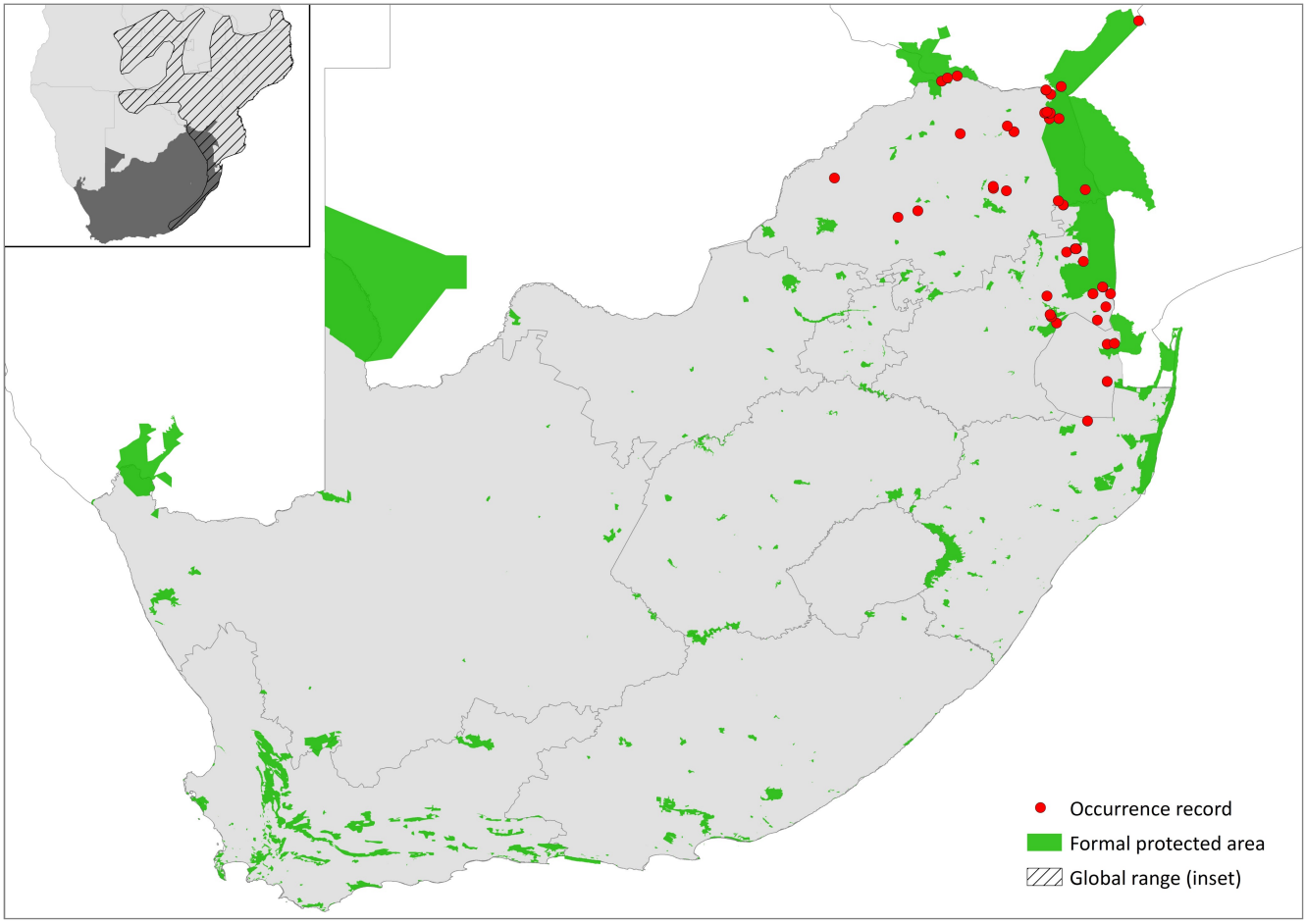

Figure 1. Distribution records for Peters' Epauletted Fruit Bat (*Epomophorus crypturus*) within the assessment region

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	Extant	Native
Zimbabwe	Extant	Native

with over 160 records examined in Monadjem et al. (2010). It may occur sympatrically with *E. wahlbergi*, but usually one or the other species is numerically dominant (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: Unknown. As this species moves vast distances, defining subpopulations is difficult.

Number of subpopulations: Unknown

Severely fragmented: No

Habitats and Ecology

This species is generally associated with dry savannah and riverine forest with fruit-bearing trees. It roosts singly or in small groups in the dense foliage of large, leafy trees (Photo 2) and may travel several kilometres each night to reach fruiting trees (Monadjem et al. 2010). They may also come into towns and feed on crops and fruit trees (ACR 2015). It is associated with forest and forest-edge habitats, particularly riparian forest which extensively incises savannahs in the eastern part of the region. However, it appears to prefer drier conditions than *E. wahlbergi*, hence its absence from coastal forests in Mozambique and South Africa (Monadjem et al. 2010).

It feeds on a wide variety of fruit and flowers (Smithers 1983), being 'wasteful feeders' by often discarding uneaten skins, pips, unchewed pulp and seeds on the ground below their feeding site. Fig trees appear to be favoured food resources; for example, in Kruger National Park, it specialises on the fruits of *Ficus sycomorus* (Bonaccorso et al. 2014), where mean foraging range and core use area changes significantly with season, year, and fig abundance (Bonaccorso et al. 2014). Where this species is sympatric with *E. wahlbergi*, differences in mating vocalisations may be used by both species to avoid cross-mating (Adams & Snode 2015).

Ecosystem and cultural services: The role of frugivorous bats is crucial in ecosystems as these species perform key functions as pollinators and seed dispersers (Fujita & Tuttle 1991; Hodgkison et al. 2003). For example, Hodgkison et al. (2003) found that 13.7% of trees in a botanical survey of a 1 ha old-growth forest, were partially

dependent on bats for pollination and seed dispersal. It is a key seed disperser for *Ficus sycomorus* within the assessment region (Bonaccorso et al. 2014).

Use and Trade

The species is not known to be traded for commercial or subsistence use.

Threats

There appear to be no major threats to this species as a whole. Some populations outside of the assessment region may be impacted by general persecution as crop pests and loss of habitat due to deforestation (ACR 2015). Roost disturbance and removal of large trees used as roost sites are also plausible threats in some parts of its range.

Current habitat trend: Stable. The Savannah Biome is well protected within the assessment region (Driver et al. 2012). However, local declines in habitat quality are likely. For example, recent land-cover analysis reveals that 20% of forest and woodland cover was lost from 1990 to 2006 in the Soutpansberg Mountain region due to logging, residential expansion and pine/eucalyptus plantations (Munyati & Kabanda 2009).

Conservation

It has been recorded from many protected areas within the assessment region, although these remain to be fully listed. Currently, it is recorded from the protected Kruger National Park, Mapungubwe National Park, Entabeni Nature Reserve, Songimvelo Nature Reserve as well as Mlawula Nature Reserve in Swaziland. No direct conservation measures are needed for this widespread and adaptable species as a whole.

Recommendations for land managers and practitioners:

- Protect large fruit bearing trees.

Research priorities:

- Determine how climate change will affect this species.
- Identify key roost sites and undertake systematic monitoring to determine subpopulation trends.

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. This species is easily confused with *E. wahlbergi* but can be distinguished by by the presence of two post-dental palatal ridges (Photo 1) (only one in *E. wahlbergi*) (Taylor & Monadjem 2008).

Photo 2. *Epomophorus crypturus* roosting in dense foliage of a large tree (Trevor Morgan)

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Table 2. Threats to the Peters' Epauletted Fruit Bat (*Epomophorus crypturus*) 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:* loss of large trees used for roosting.	Munyati & Kabanda 2009	Indirect	Regional	Increasing

Table 3. Conservation interventions for the Peters' Epauletted Fruit Bat (*Epomophorus crypturus*) 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	*1.1 Site/Area Protection*: identify key roost sites for protection.	-	Anecdotal	-	-	-

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Data Sources and Quality

Table 4. Information and interpretation qualifiers for the Peters' Epauletted Fruit Bat (*Epomophorus crypturus*) assessment

Data sources	Field study (unpublished), indirect information (literature, expert knowledge), 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.*