Neoromicia rendalli – Rendall's Serotine


Erna Balona

Regional Red List status (2016)	Least Concern*
National Red List status (2004)	Critically Endangered B2ab(iii)
Reasons for change	Non-genuine: Change in risk tolerance
Global Red List status (2016)	Least Concern
TOPS listing (NEMBA) (2007)	None
CITES listing	None
Endemic	Edge of range

*Watch-list Data

This species is known from only one locality in the assessment region: Bonamanzi Game Reserve, KwaZulu-Natal Province.

Taxonomy

Neoromicia rendalli (Thomas 1889)

ANIMALIA - CHORDATA - MAMMALIA - CHIROPTERA - VESPERTILIONIDAE - *Neoromicia - rendalli*

Synonyms: *Eptesicus rendalli* (Thomas 1889), *Pipistrellus rendalli* (Thomas 1889), *Vesperugo rendalli* Thomas 1889

Common names: Rendall's Serotine, Rendall's Pipistrelle Bat, Rendall's Pipistrelle (English), Rendall se Dakvlermuis (Afrikaans)

Taxonomic status: Species

Taxonomic notes: Originally named in the genus *Pipistrellus* (ACR 2015). No subspecies are recognised. The possibility that the population from South Africa and Mozambique is taxonomically distinct should be investigated.

Assessment Rationale

This is a widely distributed species outside of the assessment region, found in moist and dry woodland savannah and shrubland and commonly associated with swamps in degraded habitats and can thus occupy habitats that have been disturbed. In southern Africa, it occurs in sparsely separated localities, and has only been recorded in Bonamanzi Game Reserve in northern KwaZulu-Natal Province within the assessment region (despite it being easily sampled with mist nets and extensive surveys having taken place in the region). However, it is possible that it may be more widely distributed in southern coastal Mozambique where suitable habitat abounds. As the sole subpopulation occurs in a protected area with no imminent threats, the locality does not qualify as a location. While the species may technically qualify for a threatened category in the assessment region, this is an extreme edge-of-range species that is common and adaptable elsewhere in Africa. Thus, we list as Least Concern. However, as the population from Mozambique and South Africa is isolated from the rest of the African range, this population may be revealed to be taxonomically distinct, and thus a reassessment will be needed. Additionally, as there are no recent records for the South African population, field surveys are required to determine its continued existence in the assessment region. Once such data are available, reassessment will be necessary.

Regional population effects: This species has been recorded from Palmiera in southern Mozambique and is suspected to occur more extensively in the region. However, it flies low to the ground and has low wing-loading so rescue effects are uncertain.

Distribution

This species has been widely, but patchily, recorded over much of sub-Saharan Africa, ranging from Senegal in the west, through West and Central Africa to Somalia in the east, and as far south as South Africa. It occurs at a few widely separated localities in southern Africa, having been recorded from the southern DRC, south-central Zambia, Chiromo in southern Malawi, the Okavango Delta in northern Botswana (Monadjem et al. 2010), Mana Pools National Park in Zimbabwe (Rautenbach & Fenton 1992), the Tete Province (Skinner & Chimimba 2005) and Palmiera in Mozambique (Monadjem et al. 2010). In the assessment region, the species is only recorded from Bonamanzi Game Reserve (Kearney & Taylor 1997), near Hluhluwe and iSimangaliso Wetland Park in KwaZulu-Natal (Figure 1). Surveys in suitable habitat across the range, including neighbouring protected areas, have revealed no further subpopulations. As this species is relatively easy to sample using conventional capture techniques (e.g. mist nets), it is likely that Bonamanzi represents the only locality.

Population

In southern Africa, this species is very poorly represented in museums, with just 17 records examined in Monadjem et al. (2010). It appears to be a locally rare species, usually occurring as moderately small colonies of several

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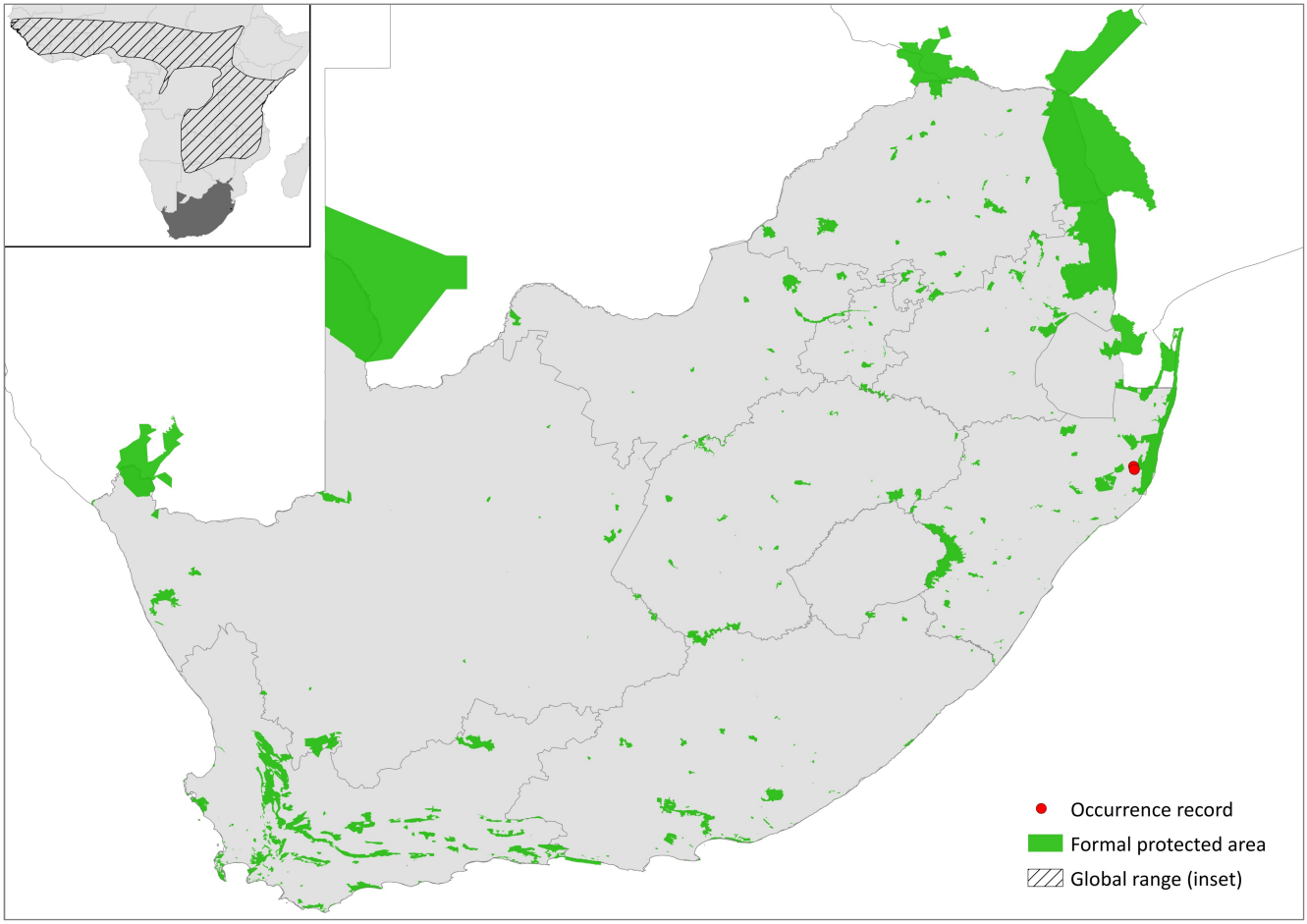

Figure 1. Distribution records for Rendall's Serotine (*Neoromicia rendalli*) within the assessment region

Table 1. Countries of occurrence within southern Africa

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

individuals up to a few dozen animals (ACR 2015). Though only recorded from one locality in the assessment region, this species is widespread and common throughout the rest of the continent.

Current population trend: Stable

Continuing decline in mature individuals: None

Number of mature individuals in population: < 100

Number of mature individuals in largest subpopulation: < 100

Number of subpopulations: 1

Severely fragmented: No

Habitats and Ecology

This species has been recorded from moist and dry woodland savannah, moist and dry tropical shrubland, and deforested areas of formerly tropical moist lowland forest. It is associated with water bodies (Skinner & Chimimba 2005; Monadjem et al. 2010), and appears to be commensal with humans in some areas. In the assessment region, the species is recorded from the Lowveld Bioregion. It appears to be solitary, although several individuals were observed feeding together over a pan at Bonamanzi (P. Taylor and T. Kearney unpubl. data). Nothing is known about its roosting habits in southern Africa, but elsewhere in its range it roosts singly or in small groups; roosting sites include tree holes, dense fronds of palm trees, thatched huts, brick walls and rafters (Rosevear 1965). Similarly, there is no information about its diet in southern Africa. In Kenya, its diet comprised mainly Lepidoptera (Whitaker & Mumford 1978). It flies low, less than 2 m from the ground (Skinner & Chimimba 2005), and thus is easily netted.

Ecosystem and cultural services: None known

Use and Trade

This species is not known to be utilised or traded in any form.

Threats

In some parts of its range, including the one locality in the assessment region, this species is possibly threatened by the conversion of its habitat to agricultural use. For example, clearing lala palms was listed as its major threat in Friedmann and Daly (2004). It is uncertain whether this is occurring within Bonamanzi. Additionally, climate change may represent an emerging threat as anecdotal

Table 2. Threats to the Rendall's Serotine (*Neoromicia rendalli*) 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	*2.1.2 Annual & Perennial Non-timber Crops*: small-holder farming expansion reducing habitat and habitat quality.	Jewitt et al. 2015	Indirect (remote sensing)	Regional	Ongoing
2	*5.3.3 Logging & Wood Harvesting*: habitat loss and degradation from fuelwood harvesting.	-	Anecdotal	-	Possibly increasing due to human settlement expansion.
3	*11.2 Droughts*: increased frequency and duration of droughts from climate change.	-	Anecdotal	-	Increasing

Table 3. Conservation interventions for the Rendall's Serotine (*Neoromicia rendalli*) 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 required.	-	Anecdotal	-	-	-

evidence suggests that the small stream in Bonamanzi, where this species was last found, has not flowed more than intermittently since 2003 due to the extended Zululand drought (W. White unpubl. data).

Current habitat trend: Stable overall, as savannahs are not threatened within the assessment region (Driver et al. 2012), and may not be significantly disturbed by habitat transformation for human residency. However, there is ongoing loss of natural habitat within KwaZulu-Natal Province: there was a 20.4% loss of natural habitat in KwaZulu-Natal from 1994 to 2011, with an average loss of 1.2% per annum due primarily to agriculture (Jewitt et al. 2015). Similarly, human settlement expansion along the edges of protected areas (*sensu* Wittemyer et al. 2008) may increase rates of fuelwood harvesting.

Conservation

No specific conservation interventions can be recommended until more research is conducted to quantity habitat preferences, threats and identify further potential subpopulations. The only known record of this species in South Africa is outside the protected area iSimangaliso Wetland Park but inside Bonamanzi Game Reserve (private). Managers should determine current occupancy inside Bonamanzi and identify key roosting sites and implement measures to protect them.

Recommendations for land managers and practitioners:

- Establish a systematic monitoring programme.
- Protect key roosting sites on Bonamanzi Game Reserve.

Research priorities:

- Further research is needed into the distribution of this patchily recorded species (ACR 2015).
- Studies documenting roosting habits and subpopulation sizes and trends in southern Africa.
- Research quantifying habitat preferences and threats.

Data Sources and Quality

Table 4. Information and interpretation qualifiers for the Rendall's Serotine (*Neoromicia rendalli*) assessment

Data sources	Museum records, indirect information (literature, expert knowledge)
Data quality (max)	Suspected
Data quality (min)	Suspected
Uncertainty resolution	Expert consensus
Risk tolerance	Evidentiary

- Research into taxonomic distinctiveness of the South Africa and Mozambique population.

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