Graphiurus platyops – Rock Dormouse

Photograph wanted

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 (2016)	Least Concern
TOPS listing (NEMBA) (2007)	None
CITES listing	None
Endemic	No

This species of dormouse is, to a greater extent, associated with rocky habitat when compared with the other species within this group.

Taxonomy

Graphiurus platyops Thomas 1897

ANIMALIA - CHORDATA - MAMMALIA - RODENTIA - GLIRIDAE - *Graphiurus* - *platyops*

Common names: Rock Dormouse, Flat-headed African Dormouse (English), Klipwaaierstertmuis (Afrikaans), Tsititsiki (Sepedi), Mmanthuhê (Tswana), Tshitema-namana, Tshitema-phulu (Venda)

Taxonomic status: Species

Taxonomic notes: Two subspecies in southern Africa were recognised by Meester et al. (1986), including the nominate *Graphiurus platyops platyops* occurring across northern South Africa (including the Limpopo, North West, Gauteng and Mpumalanga provinces), into Zimbabwe and marginally into central Mozambique and eastern Botswana; and the isolated *G. p. rupicola* (Thomas & Hinton 1925), which is found along the central plateau of Namibia, and extending, at the edge of its range, into the Northern Cape Province. However, more recently these subspecies have been reclassified as the distinct species: *G. platyops* and *G. rupicola* (Holden 2005).

Assessment Rationale

Listed as Least Concern as the species is widespread, and, although no field surveys have been conducted recently in most areas of its range, it is thought to be fairly common in suitable habitat (especially in the northern parts of its range). Recently (2007 and 2014), it has been recorded from Tswalu Kalahari Reserve in the Northern Cape Province, significantly extending its known range westwards. There are not suspected to be any major threats as the species occupies inaccessible habitats not prone to transformation and there seems to be no reason to believe that the population is declining. More work is necessary to discern its distribution from other *Graphiurus* spp. and to vet museum specimens pertaining to both this species and *Graphiurus rupicola*.

Regional population effects: Possible immigration from areas where habitat is continuous into South Africa from Zimbabwe and Botswana, but the Swaziland subpopulation is isolated.

Distribution

This species is patchily distributed in the northeastern savannahs of southern Africa (Monadjem et al. 2015), and has been recorded from Zambia, southern Malawi, much of Zimbabwe, central Mozambique, eastern Botswana, northeastern South Africa and the highveld of Swaziland. It was previously thought to occur in central Botswana (de Graaff 1981), but the museum specimen was found to be *G. microtis* (Holden 2005).

Within the assessment region, the species has been recorded at Tswalu Kalahari Reserve, Northern Cape Province on two occasions in 2007 and 2014 (D. MacFadyen unpubl. data), which extends its range west. Similarly, in Limpopo Province, D. MacFadyen (unpubl. data) trapped two individuals at Musina Nature Reserve in the reserve accommodation. In North West Province, although museum records exist for the Magaliesberg and Witwatersberg regions, it was not recorded in a recent field survey despite much sampling effort in rocky habitats (Power 2014). They are suspected to occur in the Pilanesberg hills as the Norite Koppies Bushveld offers suitable habitat. It was not recorded from the Rocky Highveld Grasslands of Telperion Nature Reserve (Mpumalanga Province) or Ezemvelo Nature Reserve (Gauteng Province) (MacFadyen 2014).

Population

There is little information on population size and there are only *c*. 50 museum specimens for the species with usually only one or two specimens trapped at each locality suggesting that densities are not high even in suitable habitat (Holden 2013). However, it is probably more abundant in the northern part of its range than what current data reveal. For example, they are relatively common in Musina Nature Reserve, Limpopo Province (D. MacFadyen unpubl. data). It is apparently trap shy and difficult to capture (Rautenbach 1978).

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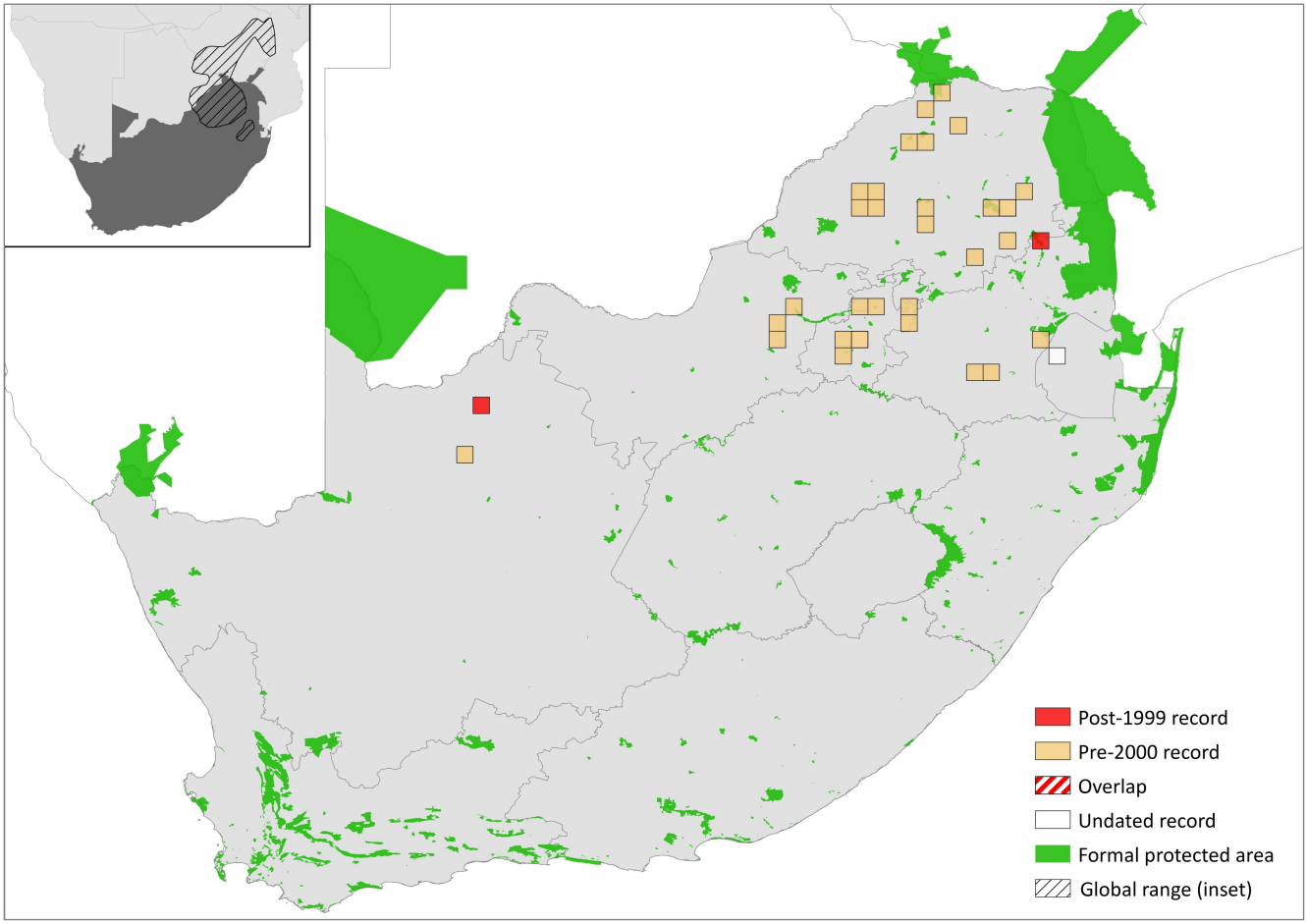

Figure 1. Distribution records for Rock Dormouse (*Graphiurus platyops*) within the assessment region

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

Current population trend: Unknown

Continuing decline in mature individuals: Unknown

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

The Rock Dormouse generally occurs in rocky terrain, especially granite outcrops, living in rock crevices and in piles of boulders. In parts of their distributional range, where rocky habitats are unavailable, they live in trees (Ansell 1960; Smithers & Lobao-Tello 1976). They are sometimes found in association with dassies (*Heterohyrax* and *Procavia* spp.) and three individuals were trapped in caves in South Africa (Holden 2013). Its flattened cranium allows the species to move through narrow rock crevices where they are most commonly found (Holden 2013). D. MacFadyen (unpubl. data) collected them in the research accommodation at Musina Nature Reserve, confirming the fact that they may be found in buildings.

They are solitary and omnivorous (Holden 2013). In Botswana and Zimbabwe, specimens were found to have consumed seeds, vegetable matter and insects, such as moths (Skinner & Chimimba 2005). Although nocturnal, they may be crepuscular in habit, especially on overcast days. Little information is available for their reproductive ecology in the assessment region. However, in Zambia, Ansell (1960) documented a female carrying six foetuses in January, and juveniles have been recorded in November and December. They possibly use scent trails and are aggressive, whipping their tails as a visual signal (Holden 2013).

Ecosystem and cultural services: No specific ecosystem services have been identified for this species. However, this may simply reflect the paucity of information available for this poorly-known species (Holden 2013).

Use and Trade

This species is not known to be traded or utilised in any form. It has potential to be trafficked for the pet trade, but this is unconfirmed.

Table 2. Threats to the Rock Dormouse (*Graphiurus platyops*) 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	*3.2 Mining & Quarrying*: habitat destruction due to granite mining and crushing of rock. Current stress *1.1 Ecosystem Conversion*.	-	Anecdotal	-	Unknown

Threats

There are unlikely to be any major threats to this species. They generally occur in rocky habitat unsuitable for agriculture and thus habitat is unlikely to decline. Increased mining of granite and the crushing of rock within its distribution range potentially has a negative impact on local subpopulations.

Current habitat trend: Stable

Conservation

This species has been recorded from several protected areas, including Musina Nature Reserve and, more recently, Tswalu Kalahari Reserve (D. MacFadyen unpubl. data). No specific conservation measures are currently necessary, but additional studies and surveys are needed to better determine the taxonomy, distribution, natural history and possible threats to this species. Furthermore, it is important to investigate how sensitive this species is to change in habitat: there are records of them living in buildings, thus this species could be a generalist. This species would benefit from the expansion of protected areas in the Limpopo Province, and continued regulation of mining practices throughout the northern regions of South Africa, ensuring that areas of suitable habitat are protected through provincial stewardship programmes.

Recommendations for land managers and practitioners:

- Areas zoned for mining rock should include mining-free zones as corridors of suitable habitat to connect adjacent areas.

Research priorities:

- Research into the impacts of the mining of granite and the crushing of rock on the population.
- Field surveys to determine distribution range and area of occupancy.
- Studies to determine the population densities across this species distribution range.
- Determine the taxonomy, distribution, natural history and possible threats to this species.
- Populations should be referenced to distinguish distribution maps and to discern genetic markers, and isolated subpopulations need to be assessed taxonomically.

Encouraged citizen actions:

- Report sightings on virtual museum platforms (for example, iSpot and MammalMAP), especially outside protected areas.
- Public pressure to curb granite mining and rock crushing within this species distribution range.

Data Sources and Quality

Table 4. Information and interpretation qualifiers for the Rock Dormouse (*Graphiurus platyops*) assessment

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

References

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Table 3. Conservation interventions for the Rock Dormouse (*Graphiurus platyops*) 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*: protected area expansion to connect rocky habitats.	-	Anecdotal	-	-	-
2	*5.2 Policies & Regulations*: regulate certain mining practices to ensure that suitable habitats are connected through corridors.	-	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.*