**Petromyiscus barbouri** – Barbour’s Rock Mouse

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**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**  Yes

*Previously listed as a subspecies of *Petromyiscus collinus*, this taxon has been recently elevated to species status, and can be distinguished from the former by several minor morphological attributes (Monadjem et al. 2015).

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**Taxonomy**

*Petromyiscus barbouri* Shortridge & Carter, 1938

**ANIMALIA** - **CHORDATA** - **MAMMALIA** - **RODENTIA** - **NESOMYIDAE** - *Petromyiscus* - *barbouri*

**Common names:** Barbour’s Rock Mouse (English), Barbour se Klipmuis (Afrikaans)

**Taxonomic status:** Species

**Taxonomic notes:** Barbour’s Rock Mouse was formerly classified as a subspecies of *Petromyiscus collinus* (Shortridge & Carter 1938; de Graaf 1981), but was elevated to species status by Musser and Carleton (2005), which is accepted by Monadjem et al. (2015). Although *P. barbouri* occur sympatrically with *P. collinus*, they can be comparatively distinguished by a shorter, bicoloured tail, smaller skull and shorter rostrum (Musser & Carleton 2005). Further taxonomic research is required.

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**Assessment Rationale**

Although this species is endemic to northwest South Africa, and has a relatively small distributional range, we list it as Least Concern because most of its habitat falls within protected areas, its current population is considered stable, it exists in rocky areas unlikely to be transformed and no current major threats have been identified. Calculated using the available natural habitat within its geographic range, the estimated area of occupancy is 20,725 km². While the extensive construction of solar and wind projects across the Northern Cape may become a threat to this species, the effects should be minimal since much of the distribution is in protected areas. However, outside these areas, extensive alternative energy projects may be problematic. Additionally, goat farming could have harmful and destructive effects on the habitat outside protected areas due to the grazing and browsing of goats amongst the rocks. Thus, all impacts should be carefully monitored. Additionally, extreme climate change may represent an emerging threat, especially due to its restricted range. Further field surveys, vetting of museum records and molecular research is necessary to resolve the distribution of this species and to quantify potential threats. This species should be reassessed once such data are available.

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**Distribution**

Endemic to the arid northwestern region of South Africa (Monadjem et al. 2015), this species has been identified from the Namaqua National Park, Skilpad Nature Reserve and Goegap Nature Reserve in the region of Springbok (Northern Cape) (Coetzee 2013), southeastwards to the Tankwa Karoo National Park (Western and Northern Cape) (Figure 1). It appears to be widely distributed in Namaqualand (Shortridge 1942; Coetzee 2013). In the lower Orange River basin, it is sympatric or parapatric with *P. collinus* and *P. monticularis* (Coetzee 2013). It ranges at altitudes between 100 m and 700 m asl. Further vetting of museum records is necessary to delimit distribution more accurately.

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**Population**

The population size or density of the species is unknown. Although the geographic range of this species is limited, it is not considered uncommon within its range. However, Coetzee (2013) considers it to be rare.

**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

**Number of subpopulations:** Unknown

**Severely fragmented:** No

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**Habitats and Ecology**

As a nocturnal and solitary species (Skinner & Chimimba 2005), the Barbour’s Rock Mouse is restricted to the arid

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**Petromyscus barbouri**

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**Figure 1. Distribution records for Barbour’s Rock Mouse (Petromyscus barbouri) within the assessment region**

Regions of western South Africa, specifically within rocky areas of succulent shrubland. It is mainly granivorous (Coetzee 2013). There is limited research pertaining to its diet, reproduction and behaviour.

**Ecosystem and cultural services:** This species is not known to provide any specific cultural services, but as a small rodent of the Succulent Karoo, it may be a valuable prey species for small predators and birds of prey, and may also contribute to seed dispersal.

**Use and Trade**

This species does not appear to be utilised or traded in any form.

**Threats**

There are no major threats that have been recognised for this species. However, overgrazing by nomadic livestock, in particular goats, may become a threat in parts of its range as they graze and browse the vegetation amongst the rocks (sensu Anderson & Hoffman 2007; Coetzee 2013). Additionally, alternative energy projects are expanding across much of the Northern Cape (van der Westhuizen 2013), and may pose a threat in the form of habitat fragmentation and/or alteration in areas outside of projected areas. Finally, climate change is predicted to affect resource availability and distribution in the region of the Succulent Karoo (Hoffman et al. 2009), which may have negative implications for this species.

**Current habitat trend:** Stable

**Conservation**

Barbour’s Rock Mouse is present within at least four protected areas within the assessment region, namely: Goegap Nature Reserve, Namaqua National Park, Skilpad Nature Reserve and the Tankwa Karoo National Park. Currently, no species-specific conservation interventions are necessary. However, further research is necessary to delineate the population dynamics, quantify current and potential threats, and investigate the general ecology and life history traits of this species.

**Recommendations for land managers and practitioners:**

- Systematic surveys needed to gather information on population size, trend and distribution.

**Research priorities:**

- Accurate distribution mapping and the identification of population size and trend estimates is necessary.
Potential threats to this species, as well as the implications and type of habitat loss and fragmentation impacting this species. For example, an analysis of the impact of alternative energy projects.

Understanding the life history and ecology, paying particular attention to food and dispersal mechanisms.

Research into the reproductive rate and breeding success of this species.

Species contribution to ecosystem functioning.

Vetting of museum records to delimit distribution more accurately.

Encouraged citizen actions:

- Report sightings on virtual museum platforms (for example, iSpot and MammalMAP), especially outside protected areas.
- Save electricity and fuel to mitigate CO₂ emissions and hence the rate of climate change.

References


Data Sources and Quality

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<tr>
<th>Data source</th>
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Details of the methods used to make this assessment can be found in Mammal Red List 2016: Introduction and Methodology.