# *Saccostomus campestris* – Pouched Mouse


Tim Jackson

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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 | No |

The Pouched Mouse is so named from the large cheek pouches in which the animal temporarily stores large quantities of food while foraging; and occasionally females will carry their young in these pouches while traveling (Skinner & Chimimba 2005).

## Taxonomy

*Saccostomus campestris* Peters 1846

ANIMALIA - CHORDATA - MAMMALIA - RODENTIA - NESOMYIDAE - *Saccostomus* - *campestris*

**Common names:** Pouched Mouse, Southern African Pouched Mouse (English), Wangsakmuis (Afrikaans)

**Taxonomic status:** Species complex

**Taxonomic notes:** *Saccostomus campestris* has a remarkably high degree of chromosomal variability across its geographic range, and likely represents a species complex including a number of cryptic species, which currently may not have been recognised (Fadda et al. 2001; Corti et al. 2004, 2005; Perrin 2013). As such, taxonomic resolution of this species complex is required.

## Assessment Rationale

Listed as Least Concern because this is a widespread and locally common species within the assessment region, occurring in several protected areas, including Kruger National Park and Tswalu Kalahari Reserve. This species is adaptable and can live in modified habitats such as rural gardens, and there is no identified threat that could cause widespread population decline. Its wide habitat use allows this species to inhabit semi-deserts, grasslands, savannahs and forests and it has also been recorded on the edges of marshes and vleis.

**Regional population effects**: It is distributed widely in the sub-region, and there is possible movement from Mozambique, Zimbabwe, Botswana and Namibia into South Africa. The ability of this species to utilise transformed habitats, including degraded grassland and agricultural land, increases the rescue effect of this species.

## Distribution

This species occurs extensively across the savannahs of southern Africa (Monadjem et al. 2015), and is present within southwestern Tanzania, Angola (Crawford-Cabral 1998), Zambia, Malawi, Zambia, Zimbabwe, Mozambique, Botswana, Namibia (although they are absent along the coast and in the south), Swaziland and South Africa. Generally, their range extends from 50 m to about 2,000 m asl.

Within the assessment region, the Pouched Mouse occurs in all provinces. This species occurs in high numbers on the northern plains of the Kruger National Park (MacFadyen 2007) in the Limpopo Province, Tswalu Kalahari Reserve in the Northern Cape, and Venetia Limpopo Nature Reserve in the Limpopo Province (MacFadyen pers. comm). It was absent in the Telperion, between Witbank and Bronkhorstspruit (MacFadyen 2014). The species occurs throughout the bushveld parts of the North West Province, and was particularly numerous in the Kuruman Mountain Bushveld vegetation type (Power 2014). In the Free State, this species generally only inhabits the southern portions of the province (Lynch 1983), but has been recorded in the Sandveld Nature Reserve in the western Free State (Avenant & Watson 2002). In Swaziland, this species is abundant in regions of suitable habitat (A. Monadjem pers. comm. 2015).

## Population

This species is relatively common across its range. Numbers fluctuate seasonally with fewer occurring in cool, dry weather (Perrin 2013). It was the second most common species after *Mastomys natalensis* on the northern plains, Kruger National Park, and the population at N'washitshumbe enclosure site in northern Kruger is estimated at 9 animals / ha (MacFadyen 2007). At Tswalu Kalahari Reserve there were 5 animals / ha (D. MacFadyen unpubl. data). Density varies according to habitat and burning regime (see Perrin 2013). In the Acacia woodland habitats of Imfolozi Game Reserve, abundance was found to increase during drought periods (Bowland 1986); however, this region is more mesic compared to the rest of this species' distribution. Following taxonomic resolution, if *S. campestris* is split into separate species, this population status could change.

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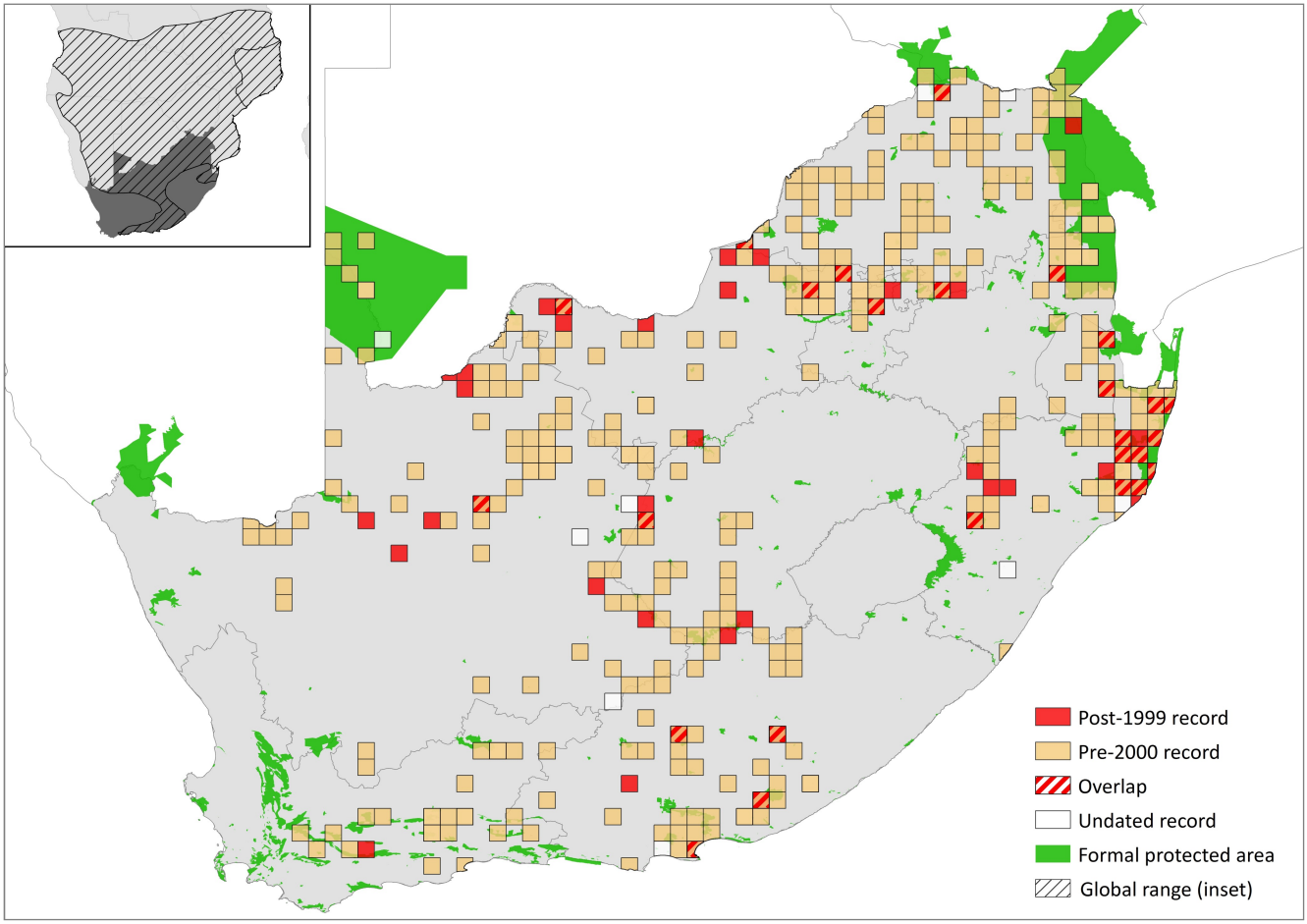


**Figure 1. Distribution records for Pouched Mouse (*Saccostomus campestris*) within the assessment region**

**Table 1. Countries of occurrence within southern Africa**

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

**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:** Unknown

**Severely fragmented:** No

# Habitats and Ecology

The Pouched Mouse is a generalist that inhabits savannah woodland areas across southern Africa, but this species complex may include a number of groups, specifically dependent on various habitat types. For example, in the Kalahari they occur in the short grass habitats surrounding dry pans (Skinner & Chimimba 2005), in Namibia they are present in the arid western regions and along riverbeds of the Namib Desert, but in Tussen-die-Riviere Nature Reserve, Free State, they were caught in shrub grassland regions (Watson 2006). They are also associated with rocky habitats (such as in Rolfontein Nature Reserve, Northern Cape; Jooste & Palmer 1982), lowveld forest edges, closed coastal forests, and marshy habitats (Skinner & Chimimba 2005). Rautenbach et al. (2014) sampled one at Phinda Private Game Reserve, KwaZulu-Natal in *Acacia nilotica*/*Dichrostachys cinera* bushveld. In Hluhluwe-iMfolozi Park, KwaZulu-Natal, they only occurred in areas where large herbivores were absent (Hagenah et al. 2009). This species can also make use of modified landscapes, including degraded grasslands, old lands and gardens.

This species complex is crepuscular or nocturnal in habits, and often trapped shortly after dark (MacFadyen 2007). They are slow moving and mild tempered, and may be handled with ease. It is an important prey species, and regularly recorded from owl pellets (MacFadyen 2007). They usually dig burrows, but also readily use the burrows of other animals (Perrin 2013), and on release readily take refuge in the nearest burrow (MacFadyen 2007). They appear to be affected by cool temperatures, and are often inactive in traps after cold evenings (MacFadyen 2007). They are solitary, with only one individual occupying a single burrow, except during the breeding season when females are found together with their young (Ellison 1993). Reproduction is seasonal, with females giving birth during the warm, wet, summer months (Skinner & Chimimba 2005) following a gestation period of 20–21 days (Earl 1978). Large litters are produced, with an average of 7.1 young (range = 1–10; N = 15) (Smithers 1971; Smithers

**Table 2. Threats to the Pouched Mouse (*Saccostomus campestris*) 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 | *1.1 Housing & Urban Areas*: habitat fragmentation and disturbance due to increased traffic, dogs and urban security practices, i.e. high walls, etc. Current stresses *1.3 Indirect Ecosystem Effects* and *2.1 Species Mortality.* | - | Anecdotal | - | - |
| 2 | *3.2 Mining & Quarrying*: habitat transformation and loss, due to incorrect mining practices. | - | Anecdotal | - | - |
| 3 | *5.1.1 Hunting & Collecting Terrestrial Animals*: harvesting from the wild for pet trade. | - | Anecdotal | - | - |
| 4 | *5.1.1 Hunting & Collecting Terrestrial Animals*: harvesting as bushmeat. | - | Anecdotal | - | - |

& Wilson 1979) and young are weaned after a period of about 25 days (Westlin-van Aarde 1989).

They hoard food opportunistically (Ellison 1993), and are omnivorous, feeding on a variety of seeds, vegetation and insects (Watson 1987; Kerley 1992; Monadjem 1997). Watson (1987) found that in Kruger National Park their diets varied with season, with insects constituting a larger proportion of their diet during drought periods, compared to periods of high rainfall. However, throughout both seasons, seeds formed the dominant food type, compared to both insects and herbage (Watson 1987).

**Ecosystem and cultural services:** This species forms an important prey base for nocturnal carnivores and raptors. As a result of its digging ability, it will be involved in soil nutrition and aeration and is a valuable species for seed dispersal.

# Use and Trade

Although currently unconfirmed, this species may be used for bushmeat, due to its mild nature and slow movements, but this is not suspected to occur on a large scale. There is some potential for this species to enter the pet trade, and they are kept in captivity as pets (D. MacFadyen pers. obs.).

# Threats

There are no major threats to this adaptable species as they are widely distributed and locally common (Perrin 2013). However, the following pressures may cause local population declines:

1. Urbanisation: this species is impacted by traffic, dogs and urban security practices, i.e. high walls, etc.
2. Mining: areas which are transformed by incorrect mining practices would impact abundance and distribution.
3. Pet trade: this species complex behaves similarly to hamsters and are known to habituate well, thus they are occasionally kept as pets. This is, however, expected to have a minimal impact on the population.
4. Bushmeat: it is likely that this species is eaten opportunistically, because they are easily caught and are mild in nature.

**Current habitat trend:** Stable

# Conservation

This species occurs in several protected areas throughout its range, including Kruger National Park, Tswalu Kalahari Reserve, Rooipoort Nature Reserve and Venetia Limpopo Nature Reserve. The threats of hunting and collecting of this species as bushmeat or pets is thought to have limited impact on the population. No specific conservation interventions are necessary at present.

**Recommendations for land managers and practitioners:**

- Develop or maintain corridors of natural vegetation in urban areas.
- Educate communities on the contribution of small mammals to healthy ecosystems.
- Enforce correct mining practices, including post mining rehabilitation practices.
- Monitor the pet trade for trafficking of indigenous species.

**Research priorities:**

- Conduct molecular studies to resolve possible taxonomic issues.
- Determine distribution range based on genetic variations within the species.
- Estimate population densities across its range.

**Encouraged citizen actions:**

- Report sightings on virtual museum platforms (for example, iSpot and MammalMAP), especially outside protected areas
- Educate rural communities on the contribution of small mammals to healthy ecosystems.
- Exert pressure on mining and forestry companies to rehabilitate areas and promote conservation offsets.
- Plant indigenous plants, especially wild grasses, as well as provide corridors of natural vegetation to allow for movement through areas of suitable habitat.

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## Data Sources and Quality

**Table 3. Information and interpretation qualifiers for the Pouched Mouse (*Saccostomus campestris*) assessment**

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|---|---|
| Data sources | Field studies (unpublished), indirect information (literature), 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.*