Herpestes sanguineus – Slender Mongoose


Emmanuel Do Linh San

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

In the northwestern parts of the North West Province and the Northern Cape, a "red", hairy form (Photo 1) of this species is present, and it is referred to by the locals as the "Kalahari Muishond"; while in the eastern, mesic areas, and elsewhere in the distribution range, a grizzled brown form (see picture above) is present (Power 2014).

Taxonomy

Herpestes sanguineus (Rüppell 1835)

ANIMALIA - CHORDATA - MAMMALIA - CARNIVORA - HERPESTIDAE - *Herpestes* - *sanguineus*

Synonyms: *Galerella sanguinea* (Rüppell 1836)

Common names: Slender Mongoose, Black-tipped Mongoose, Common Slender Mongoose (English), Rooimuishond, Swartkwasmuishond (Afrikaans), Iwobo (Ndebele), Kgano (Sesotho, Setswana), Kganwe, Khano, Ramotsibodi (Setswana), Chakidze (Swati), Mangovo (Tsonga), Khohe, Khoke (Venda), Uchakide (Zulu)

Taxonomic status: Species

Taxonomic notes: This species is sometimes included in the genus *Galerella* (e.g. Meester et al. 1986; Wozencraft 1993, 2005; Veron et al. in press). In accordance with Hoffman and Taylor (2013) this assessment does not include *Herpestes ochraceus*, which is regarded as a separate species by many authors, notably Taylor (2013).

Assessment Rationale

The Slender Mongoose is listed as Least Concern as it is common and widespread in a variety of habitats (including human modified landscapes), there are no major threats that could cause rapid population decline, and it is present in several protected areas (notably Kruger National Park and the Kgalagadi Transfrontier Park) across its distribution range within the assessment region.

Regional population effects: Dispersal is likely between regions, as this species' range is continuous across southern Africa from northern South Africa to Botswana, Namibia, Zimbabwe and Mozambique south of the Zambezi River. The Slender Mongoose is not limited by fences, and is also present within a number of transfrontier reserves, including the Greater Mapungubwe Transfrontier Conservation Area.

Distribution

One of the most widely distributed African mongooses, ranging from Senegal in the west to the Red Sea coast of Sudan in the east and south to the Northern Cape in South Africa (Hoffmann & Taylor 2013). Bahaa-el-din et al. (2013) recently obtained the first records of Slender Mongoose in Gabon, > 350 km outside of its previous known range. Past records of this species on the Cape Verde archipelago are an error (Masseti 2010; Hazevoet & Masseti 2011) and are in fact based on confusion with occurrence on the mainland Cape Verde itself. Stuart (1981) mentions a museum record of this species from Mountain Zebra National Park, but this specimen is not mentioned in the studies of Watson and Dippenaar (1987) and Watson (1990), and the most southerly distribution limit is probably the far eastern part of the Eastern Cape in South Africa (Hoffmann & Taylor 2013). This species also occurs in Zanzibar (Stuart & Stuart 1998; Goldman & Winther-Hansen 2003). It ranges from sea level to 2,700 m asl in the Ethiopian Highlands (Yalden et al. 1996).

Within the assessment region, the Slender Mongoose occurs across all savannah habitats north of the Orange River, but is absent from montane grassland. This includes Limpopo, North West, Gauteng and Mpumalanga provinces, much of eastern KwaZulu-Natal Province, the central and northwestern areas of the Free State Province, along part of the east coast of the Eastern Cape Province, as well as Swaziland (Skinner & Chimimba 2005). In the Kalahari, it occurs especially amongst calcrete outcrops and not in the dunes (Mills et al. 1984).

Population

Slender Mongooses are among the most common mongooses in Africa. In the Serengeti National Park, Tanzania, population densities between 1975 and 1990 ranged from 3–6 individuals / km^2 (Waser et al. 1995). In the Kalahari, South Africa, based on data collected between 2007 and 2011, population density was around 1.6–2.0 adults / km^2 (B. Graw et al. unpubl. data). In Vernon Crookes Nature Reserve, KwaZulu-Natal,

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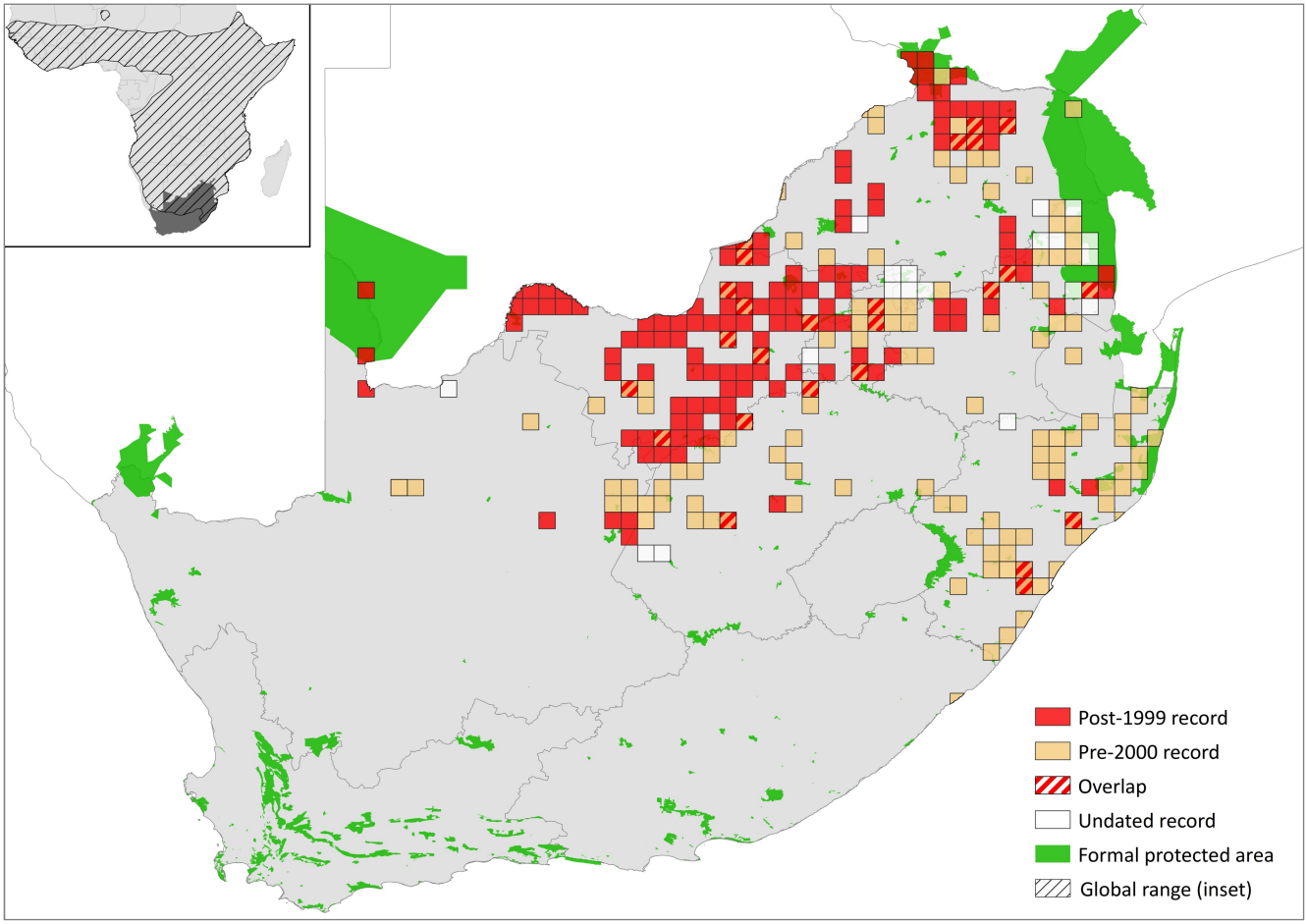

Figure 1. Distribution records for Slender Mongoose (*Herpestes sanguineus*) within the assessment region

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

Maddock (1988) estimated a density of 7.3 individuals / km^2. Considering the wide distribution of this species and a minimum average density of at least 0.1 individual / km^2, we estimate that there are well over 10,000 individuals in the assessment region.

Current population trend: Stable, based on wide habitat tolerance and extent of occurrence.

Continuing decline in mature individuals: Unknown, but probably not.

Number of mature individuals in population: Probably > 10,000

Number of mature individuals in largest subpopulation: Unknown

Number of subpopulations: It is not currently possible to determine the extent or number of subpopulations.

Severely fragmented: No. Favourable habitat is largely connected across the species' range.

Habitats and Ecology

Slender Mongooses are present in a wide variety of habitats, but absent from true deserts, such as the Namib Desert, and in sub-desertic parts of the Sahara such as Aïr, Niger. They occur on forest fringes, and may penetrate into forests along roads and are sometimes found around villages (Hoffmann & Taylor 2013). They are also absent from the greater parts of the karroid regions of the Northern, Western and Eastern Cape. This is speculated to be as a result of competitive exclusion by the Cape Grey Mongoose (*H. pulverulentus*; Skinner & Chimimba 2005). There is, however, some range overlap between these species at the perimeter of the Slender Mongoose's range (Skinner & Chimimba 2005). They occur in open habitats, as long as there is some cover (Ramesh & Downs 2014), such as hollow logs, rocks, fallen trees or disused Aardvark (*Orycteropus afer*) holes. They have also been recorded among rocky outcrops (Rautenbach 1982; Rood 1989; E. Do Linh San pers. obs. 2015–2016). In farmland landscapes within the Drakensberg Midlands, KwaZulu-Natal, the detection likelihood of this species with camera-traps was positively correlated with bushland cover and human abundance; possibly due to a reduction in natural predator density and increased food and water resources (Ramesh & Downs 2014).

Slender Mongooses are diurnal, and as generalist carnivores, their diet comprises small vertebrates (rodents, insectivores, reptiles, amphibians, birds), invertebrates

Photo 1. "Red", hairy form of the Slender Mongoose (*Herpestes sanguineus*) photographed in the South African section of the Kgalagadi Transfrontier Park (Emmanuel Do Linh San)

(insects, spiders, millipedes) and fruit (Maddock 1988; Graw & Manser 2017). While this species is largely terrestrial, it is more arboreal than most other mongoose species (Hoffmann & Taylor 2013). Although individuals are predominantly solitary, occasionally up to four – related and unrelated – males form loose coalitions within the same home range, which overlaps with the home ranges of several females (Rood 1989; Waser et al. 1994; Graw et al. 2016). In the Serengeti, male home ranges vary from 70–80 ha, while females occupy smaller ranges of 30–50 ha (Rood & Waser 1978). However, home range sizes are larger in the Kalahari (South Africa), with 183 ha on average for males and 106 ha for females (B. Graw & M.B. Manser unpubl. data).

Young are born during the wet, summer months (October–March), which coincides with a peak in the abundance of insectivorous prey. Females regularly begin reproducing at 1 year of age (Waser et al. 1995) and after a gestation period of 60–70 days, one to four pups are born (Taylor 1969, 1975; Graw & Manser 2017). One to two litters are produced per reproductive season, with on average 130 days between the birth of each litter (Graw & Manser 2017). Pups are born in hollow trees or rock crevices, emerge for the first time between 4–6 weeks, and start foraging with their mother 6–9 weeks after their birth. Weaning likely takes place at the age of 7–12 weeks, and juveniles become independent when 3–5 months old (Graw & Manser 2017). Dispersing sex and dispersal age and distances vary greatly. In the Serengeti, juveniles typically disperse within their first 6 months with males dispersing earlier and further than females (Rood & Waser 1978; Waser et al. 1994). In contrast, in a study conducted in the Kalahari, none of the females remained in their natal range past the age of 10 months, while genetic analyses demonstrated that 93% of males were philopatric, and anecdotal field evidence suggested that males disperse less often and possibly later but further than females (Graw et al. 2016). In the Tanzanian study juveniles had a survival rate of 0.63, whereas adults of both sexes had higher survival rates, namely 0.82 for males and 0.79 for females (Waser et al. 1995). Similar results were obtained in the Kalahari (Graw & Manser 2017). In the wild, both male and female Slender Mongooses have a maximum lifespan of 8–10 years (Waser et al. 1995; Graw & Manser 2017).

Ecosystem and cultural services: This species may be a valuable predator of agricultural pest species, such as grasshoppers, termites, beetles and possibly rodents. Further research is required to quantify this effect.

Use and Trade

Slender Mongooses have been recorded in bushmeat markets in West Africa (e.g. Colyn et al. 2004) and Cunningham and Zondi (1991) listed this species among those used in traditional medicine in KwaZulu-Natal, South Africa.

Threats

There are no major threats to this species. As stated above, Slender Mongooses are locally used as bushmeat and in traditional medicine. Although wildlife ranching and the private sector have possibly had a positive effect on this species due to the conservation and connection of suitable habitats (e.g. in the Waterberg), this small carnivore may be accidentally caught as bycatch in

Table 2. Use and trade summary for the Slender Mongoose (*Herpestes sanguineus*)

Category	Applicable?	Rationale	Proportion of total harvest	Trend
Subsistence use	Yes	Used as bushmeat and for traditional medicine.	Unknown	Unknown, but probably stable.
Commercial use	No	-	-	-
Harvest from wild population	No	-	-	-
Harvest from ranched population	No	-	-	-
Harvest from captive population	No	-	-	-

Table 3. Threats to the Slender Mongoose (*Herpestes sanguineus*) 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	*5.1.1 Hunting & Collecting Terrestrial Animals*: bushmeat hunting and use in traditional medicine.	Colyn et al. 2004	Indirect	National	Unknown
		Cunningham & Zondi 1991	Indirect	National	Unknown
2	*5.1.2 Hunting & Collecting Terrestrial Animals*: species poisoned accidently as bycatch in predator and rodent control programmes.	-	Anecdotal	-	Probably minimal and stable.

predator and rodent control programmes using poisons. It is however unlikely that these consumptive uses and accidental mortalities have a substantial effect on the population.

Current habitat trend: Stable

Conservation

This species is present in numerous protected areas across its range, notably in Kruger National Park and the Kgalagadi Transfrontier Park. No conservation interventions are currently deemed necessary within the assessment region; however, this species is likely to benefit from the expansion of protected areas to connect suitable habitat patches.

Recommendations for land managers and practitioners:

- Create conservancies to protect and connect habitat.

Research priorities:

- Monitoring subpopulations to detect trends across various land uses.
- General studies on the biology and ecology of this species in different habitat types.

A team of researchers at the University of Fort Hare, University of South Africa and University of the Witwatersrand is currently studying the ecology and behaviour of the Slender Mongoose in Telperion Nature Reserve (Mpumalanga). The project aims to describe the spatial behaviour, habitat use, activity patterns, diet and use of latrines by this relatively unstudied mongoose. Contact details of the research coordinator: Prof. Emmanuel Do Linh San, Department of Zoology and Entomology, University of Fort Hare, Alice, 5700, South Africa. Email: Edolinhsan@ufh.ac.za. Website: http://www.ascaris.org.

Encouraged citizen actions:

- Report sightings on virtual museum platforms (for example, iSpot and MammalMAP), especially outside protected areas.

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Table 4. Conservation interventions for the Slender Mongoose (*Herpestes sanguineus*) 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 suitable habitat patches.	-	Anecdotal	-	-	-

Data Sources and Quality

Table 5. Information and interpretation qualifiers for the Slender Mongoose (*Herpestes sanguineus*) assessment

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