Eremitalpa granti granti – Grant's Golden Mole

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Regional Red List status (2016)	**Vulnerable B1ab(iii)+B2ab(iii)**
National Red List status (2004)	Vulnerable B2ab(ii,iii,iv)
Reasons for change	No change
Global Red List status (2015)	*E. granti* ~ Least Concern
TOPS listing (NEMBA)	None
CITES listing	None
Endemic	Yes

This species has a unique mode of locomotion called "sand swimming" and individuals may move considerable distances on the sand surface at night, intermittently dipping their heads into the sand to listen for seismic clues used for navigation and prey detection.

Taxonomy

Eremitalpa granti granti (Broom 1907)

ANIMALIA - CHORDATA - MAMMALIA - AFROSORICIDA - CHRYSOCHLORIDAE - *Eremitalpa - granti - granti*

Synonyms: *Chrysochloris granti* (Broom 1907)

Common names: Grant's Golden Mole, Grant's Desert Golden Mole (English), Grant se Gouemol, Woestynkruipmol (Afrikaans)

Taxonomic status: Subspecies

Taxonomic notes: Revised by Meester (1964). Two subspecies are recognized: *E. g. granti* and *E. g. namibensis* based on differences in skull shape and pelage (Bronner 2013). Recent cytogenetic data (Gilbert et al. 2008) and ongoing phylogenetic analyses based on molecular, cytogenetic and morphological characters indicate that the subspecies are highly divergent and may represent cryptic species (S. Maree unpubl. data).

Assessment Rationale

This endemic subspecies is known from at least five locations along the coasts of the Western and Northern Cape provinces, with an estimated area of occupancy of 80 km^2 (assuming a 16 km^2 grid cell area), partially sufficient to warrant Endangered status under criteria B2ab(iii,iv). However, it is probably more widespread than current records suggest, as the northernmost (Port Nolloth) and southernmost (St Helena Bay) localities are 630 km apart on the continuous Namaqua Coastal Plain, and this subspecies is known to occur at least 20 km inland (for example, at Compagnies Drift near Lamberts Bay). Populations are probably not severely fragmented and the extent of occurrence is likely to be > 12,000 km^2. Although subject to some habitat loss and disturbance at a few locations due to mining of coastal dunes for alluvial diamonds along the Northern Cape coastline (Kleinsee to Alexander Bay), the amount of available habitat remaining within the entire subspecies range is deemed to exceed the thresholds for Endangered listing under criterion B1b (iii). It is conserved in one protected area, so overall declines in area of occupancy, numbers of populations and population sizes are unlikely. However, listing of this subspecies as Vulnerable under criteria B1ab(iii) and/or B2ab(iii) is warranted given the estimates for area of occupancy and extent of occurrence above. Further field surveys are required to more accurately delimit range and occupancy.

Regional population effects: The Namibian subspecies is likely to be elevated to species status, rendering the South African subspecies as an endemic species as the Orange River poses a barrier to dispersal. Thus, no rescue effect is possible.

Distribution

This subspecies is confined to the west coast of southern Africa, from St Helena Bay (Western Cape Province, South Africa) northwards to Port Nolloth (and possibly as far north as Alexander Bay), and inland to Garies and the Biedouw Valley on the north-western aspect of the Cedarberg Mountains (Perrin & Fielden 1999; Bronner 2013). The Orange River is likely to be the major biogeographical barrier that prevents gene flow and which has led to differentiation of *E. g. granti* and *E. g. namibensis*.

Population

Little is known about the population biology of the South African subspecies (*E. g. granti*). Numerous studies on *E. g. namibensis* in the Namib Desert indicate that densities are low (0.014–1.19 individual / ha) and home ranges large (3.1–12.3 ha) owing to the arid, energy-sparse conditions of their environment and widely dispersed prey availability. Although adults are solitary, spatial home range overlap is tolerated (Perrin & Fielden 1999).

Current population trend: Unknown

Recommended citation: Maree S, Bronner GN. 2016. A conservation assessment of *Eremitalpa granti granti*. In Child MF, Roxburgh L, Do Linh San E, Raimondo D, Davies-Mostert HT, editors. The Red List of Mammals of South Africa, Swaziland and Lesotho. South African National Biodiversity Institute and Endangered Wildlife Trust, South Africa.

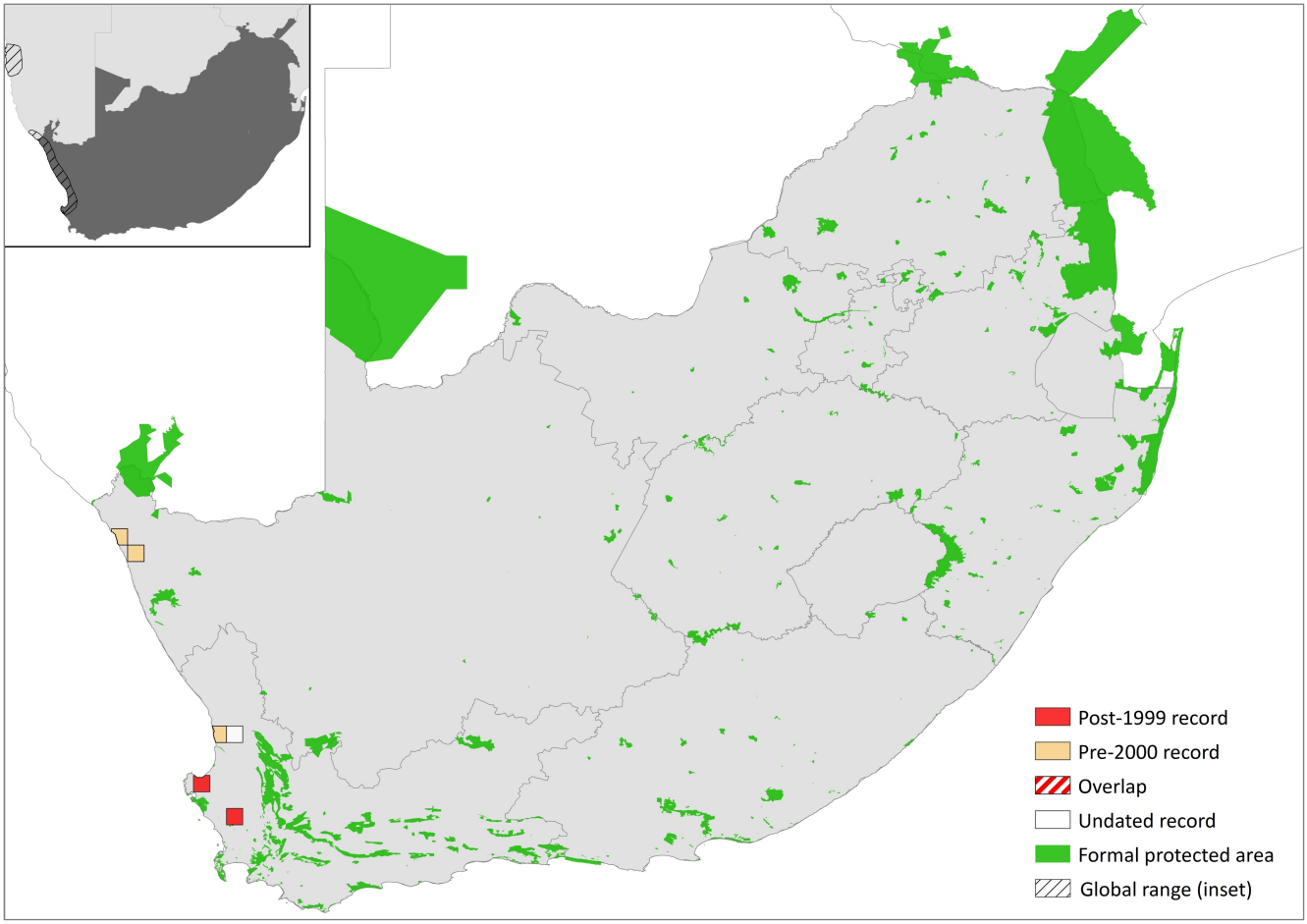

Figure 1. Distribution records for Grant's Golden Mole (*Eremitalpa granti granti*) within the assessment region

Table 1. Countries of occurrence within southern Africa

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

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: Unknown, may be fragmented by diamond mining activities and poor dispersal capacity.

Habitats and Ecology

Eremitalpa g. granti are limited to the Strandveld and Succulent Karoo biomes of South Africa. They prefer soft sands of coastal dune crests but are also present in inter-dune swales with quite dense vegetation as long as sand is not too consolidated. Areas containing scattered clumps of the Dune Grass (*Aristida sabulicola*), Ostrich Grass (*Cladoraphis spinosa*) and Long Bushman Grass (*Stipagrostis ciliata*), are the preferred habitats for this subspecies. The young are thought to be born in tunnels constructed by adults, but they lack a proper burrow system. Resting sites are usually under vegetation. It is a nocturnal surface forager that specializes on termites, but also consumes other invertebrates and small vertebrates (legless lizards, web-footed geckos and sand-burrowing skinks). It is nocturnal during hot summer months, with greater diurnal activity observed during winter (Fielden et al. 1990a, 1990b, 1992; Rathbun & Rathbun 2007). It has occasionally been recorded from arable land and rural gardens (for example, near Lamberts Bay).

Ecosystem and cultural services: This subspecies is not known to provide any specific ecosystem services, but this may simply reflect the paucity of information available for this poorly known subspecies. *Eremitalpa granti* has, however, commonly been recorded as a prey species for Barn Owls (*Tyto alba*). Additional predators such as Pied Crows (*Corvus alba*), Pale Chanting Goshawks (*Melierax canorus*), Spotted Eagle Owls (*Bubo africanus*), Striped Polecats (*Ictonyx striatus*) and Black-backed Jackals (*Canis mesomelas*) have also been documented (Skinner & Chimimba 2005).

Use and Trade

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

Table 2. Threats to the Grant's Golden Mole (*Eremitalpa granti granti*) 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 loss and degradation from diamond mining in coastal areas.	-	Anecdotal	-	-
2	*1.1 Housing & Urban Areas*: habitat loss from settlement expansion.	GeoTerraImage 2015	Indirect (land change from remote sensing)	Regional	Increasing
3	*1 2 Commercial & Industrial Areas*: habitat loss from ongoing development.	GeoTerraImage 2015	Indirect (land change from remote sensing)	Regional	Increasing
4	*2.1.3 Agro-industry Farming*: habitat loss from agricultural expansion.	Pence 2014	Indirect (land change from remote sensing)	Regional	Increasing

Threats

Alluvial diamond mining in coastal areas in Northern Cape (Kleinsee and Port Nolloth) results in marked alteration and fragmentation of habitats at some locations due to the removal of topsoil (Smithers 1986). These threats are, however, localised. Much of the range of this subspecies coincides with coastal desert where human influence on habitats is not substantial, so the overall population is probably not in decline. Coastal tourism developments along the south-western coast of South Africa (St Helena Bay to Lambert's Bay), and agricultural practices on the Namaqualand coastal plain (and associated inland valleys) have resulted in some habitat alteration, but threats are considered minor as this subspecies can survive in mildly transformed habitats. Although rehabilitation of mined areas may be partially mitigating habitat loss, these localised impacts, together with the few known populations and limited EOO and AOO of the subspecies, are sufficient for threatened listing.

Current habitat trend: Declining in area and quality. For example, rural and urban settlement expansion in the Northern Cape has increased by 9% and 15% respectively between 2000 and 2013 (GeoTerraImage 2015). Similarly, in the Western Cape, Pence (2014) calculated that between 2006 and 2011, 536 km^2 of land was converted to agriculture (107 km^2 / year, which equates to 0.08% of the surface area of the province per year).

Conservation

This subspecies is protected in the Namaqua National Park in South Africa, as well as some smaller privately owned conservation areas. No specific conservation interventions are necessary at present. Although much of its range coincides with coastal desert where human influences on habitats are not substantial (including coastal tourism development and agricultural practices on the Namaqualand coastal plains), it can survive in mildly transformed habitats.

Recommendations for land managers and practitioners:

- Field surveys to locate additional subpopulations.
- Surveys into the population viability within rehabilitated mining areas.
- Assessment of connectivity among subpopulations.

Research priorities:

- Ecological requirements and niche tolerances.
- Systematic surveying to accurately assess accurate distribution limits of this subspecies.
- Population genetic analysis including representatives of all known subpopulations representative of entire distribution range to identify and quantify population substructure and levels of historic and current gene flow.
- Studies assessing subpopulation trends and the severity of threats outside of protected areas.
- Research into population recoveries in rehabilitated mined areas.

Encouraged citizen actions:

- Report sightings on virtual museum platforms (for example, iSpot and MammalMAP), especially outside protected areas.
- Deposit any dead specimens found in a state or provincial museum, together with information on the date and site where found.
- Create indigenous vegetation gardens.

Data Sources and Quality

Table 3. Information and interpretation qualifiers for the Grant's Golden Mole (*Eremitalpa granti granti*) assessment

Data sources	Museum records, field study (unpublished), indirect information (unpublished)
Data quality (max)	Inferred
Data quality (min)	Suspected
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.*