Neamblysomus gunningi – Gunning's Golden Mole


Gary Bronner

Regional Red List status (2016)	**Endangered B1ab(iii)+2ab(iii)**
National Red List status (2004)	Endangered B1ab(i-iv) B2ab(i-iv)
Reasons for change	No change
Global Red List status (2015)	Endangered B1ab(iii)+2ab(iii)
TOPS listing (NEMBA)	None
CITES listing	None
Endemic	Yes

This species resembles the Hottentot and Highveld Golden Moles (*Amblysomus hottentotus* and *A. septentrionalis*, respectively), but can be distinguished by its gracile claws and the presence of a 3rd molar.

Taxonomy

Neamblysomus gunningi (Broom 1908)

ANIMALIA - CHORDATA - MAMMALIA - AFROSORICIDA - CHRYSOCHLORIDAE - *Neamblysomus* - *gunningi*

Synonyms: *Amblysomus gunningi* (Broom 1908)

Common names: Gunning's Golden Mole (English), Gunning se Gouemol (Afrikaans)

Taxonomic status: Species

Taxonomic notes: Included in *Amblysomus* by Simonetta (1968), Meester (1974), Petter (1981) and Meester *et al.* (1986). Bronner (1995a, 1995b) elevated it to the genus *Neamblysomus* and retained it as such (Bronner 2013). Externally this species resembles the Hottentot Golden Mole (*A. hottentotus*) and the Highveld Golden Mole (*A. septentrionalis*), and has been misidentified as such by some authors. There are no recognised subspecies.

Assessment Rationale

Known from only six sites which probably represent a single location, this species has a restricted distributional range estimated at 1,327 km^2 with an area of occupancy estimated at 96 km^2 (using a 16 km^2 grid area). The main threat to this fossorial species is the continuous decline in the quality and extent of its preferred natural habitats within low-lying and high-altitude indigenous Afromontane forests in the Grootbos-Magoebaskloof area (Northern Mistbelt Forests; Wolkberg Afromontane Forest Belt) and adjoining montane grasslands. Commercial forestry operations and associated roads infrastructure cause severe degradation and fragmentation of natural forests. Only small fragments of its habitat are protected in state-controlled forest reserves. However, protection measures on the ground are dubious and do not target management of this species. Increasing privatisation of some state forests brings the continued protection of this species' habitat in doubt. Agriculture, rural and urban housing and tourism infrastructure development around Haenertsburg are additional, but more localised, causes of habitat destruction, fragmentation and loss. This species is therefore listed as Endangered using under criterion B2ab(iii).

Distribution

Gunning's Golden Mole has been recorded from only six localities in the Grootbos-Magoebaskloof area (Woodbush-De Hoek) of the far Northern Eastern Escarpment (Drakensberg) between Haenertsburg, New Agatha and Tzaneen in Limpopo Province (South Africa). Three of six confirmed localities fall within protected indigenous forest reserves (De Hoek, Woodbush and New Agatha). All of these records fall within the southern section of the Northern Mistbelt Forests (Envirotek 2003) and Wolkberg Afromontane Forest Belt.

Population

This species has an extremely localised population, but is considered locally common. They are most numerous in moist sandy loam soils associated with high altitude riverine forests near watercourses and ponds.

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: One

Severely fragmented: No

Habitats and Ecology

It occurs in moist sandy loam soils along watercourses in low and high altitude moist Afromontane forests (Northern

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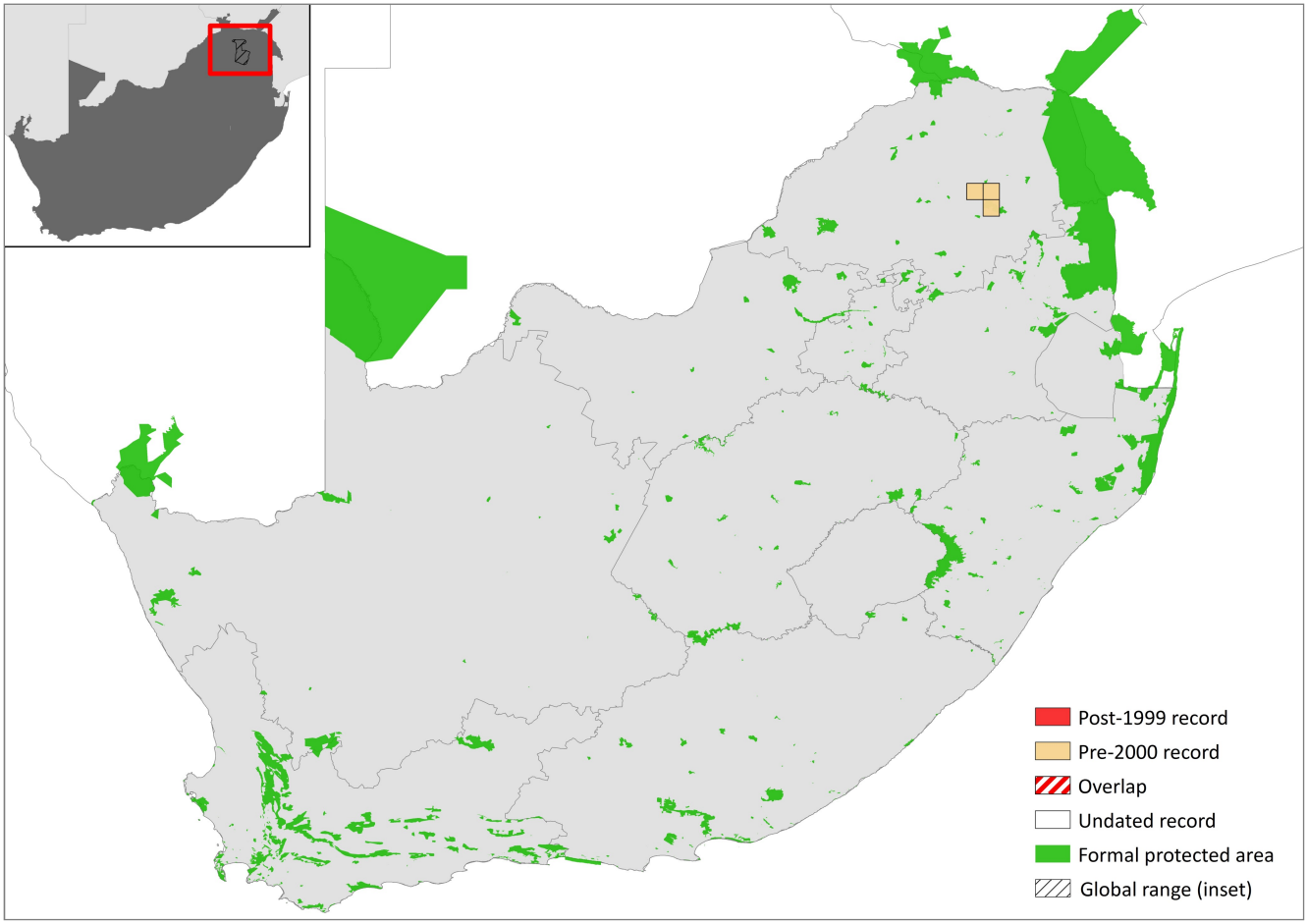

Figure 1. Distribution records for Gunning's Golden Mole (*Neamblysomus gunningi*) within the assessment region

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	-

Mistbelt Forests) and surrounding north-eastern Mountain Grassland of Limpopo Province (Savannah Biome). It also occurs in pastoral and cultivated lands (livestock and tea farming) and young pine plantations, where it coexists with the Common Mole-rat (*Cryptomys hottentotus*). This species thrives in rural and urban gardens and uses stretches of suitable soil on road edges as movement corridors. Nocturnal foraging takes place in shallow subsurface tunnels; with increased activity after rain. Adults are solitary, except mothers with young. Little is known about the ecology of this species.

Table 2. Threats to the Gunning's Golden Mole (*Neamblysomus gunningi*) 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	*2.2 Wood & Pulp Plantations*: habitat loss from commercial forestry plantations and associated development.	Armstrong & van Hensbergen 1996	Indirect	Regional	Stable
2	*1.1 Housing & Urban Areas*: habitat loss and degradation from residential and urban development.	GeoTerraImage 2015	Indirect (land change from remote sensing)	Regional	Increasing
3	*2.3 Livestock Farming & Ranching*: habitat degradation from overgrazing.	-	Anecdotal	-	-
4	*5.3.3 Logging & Wood Harvesting*: habitat degradation from selective fuelwood harvesting.	-	Anecdotal	-	-

Use and Trade

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

Threats

Within its extent of occurrence, the distribution of populations is highly localised and naturally fragmented due to a preference for soft sandy loam soils along watercourses, especially in indigenous forests. Inferred major threats are severe habitat alteration and fragmentation of Afromontane forest and adjoining grasslands by commercial forestry operations and associated roads infrastructure (Armstrong & van Hensbergen 1996; Armstrong et al. 1998). Although somewhat limited, expanding rural and urban housing, commercial and tourism infrastructure developments in the last five years have resulted in areas of suitable habitat being cleared or severely transformed. Minor threats include overgrazing of pastoral land along watercourses, predation by pets and persecution by gardeners in rural and urban settlements

Current habitat trend: Declining in area and quality. Ongoing deforestation and habitat degradation is inferred to be increasing along with expanding urban and rural settlements, which increased by 15% and 9% respectively between 2000 and 2013 in Limpopo Province (GeoTerraImage 2015).

Conservation

This species is protected in the De Hoek, New Agatha and Woodbush Forest Reserves. In the former Transvaal Province (South Africa), a large geopolitical area now comprising the Gauteng, Limpopo, North-West and Mpumalanga provinces, this species was given the highest regional priority score for mammals (Freitag & van Jaarsveld 1997). It currently ranks among the top 100 mammalian species (no. 73) of the EDGE of Existence Programme (Zoological Society of London), which aims to conserve the world's Evolutionary Distinct and Globally Endangered species (Isaac et al. 2007). The species is not receiving dedicated conservation attention at present.

Protected area expansion and biodiversity stewardship schemes are crucial interventions needed to conserve remaining habitat patches and connect subpopulations of this species. Additionally, stricter law enforcement for poaching and harvesting inside protected Forest Reserves should be established.

Recommendations for land managers and practitioners:

- Field surveys to discover other subpopulations and key sites for priority protection.
- A systematic monitoring scheme should be established to determine subpopulation trends within key protected areas.
- A Biodiversity Management Plan should be developed for this species.
- Incentivise landowners to de-stock to reduce overgrazing impacts.

Research priorities:

- Research needed to document most aspects of natural history, ecology, evolutionary relationships, phylogeography and population genetics of this species.
- Subpopulation trends and threat quantified impacts from agroforestry activities.

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 native-vegetation gardens.

Data Sources and Quality

Table 4. Information and interpretation qualifiers for the Gunning's Golden Mole (*Neamblysomus gunningi*) assessment

Data sources	Museum records, field study (unpublished), indirect information (unpublished, literature)
Data quality (max)	Inferred
Data quality (min)	Suspected
Uncertainty resolution	Best estimate
Risk tolerance	Evidentiary

Table 3. Conservation interventions for the Gunning's Golden Mole (*Neamblysomus gunningi*) 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 in the Afromontane forest network.	-	Anecdotal	-	-	-
2	*1.2 Resource & Habitat Protection*: biodiversity stewardship schemes to conserve key habitat patches.	-	Anecdotal	-	-	-
3	*5.1.2 Legislation*: stricter law enforcement of Forest Reserves.	-	Anecdotal	-	-	-

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Assessors and Reviewers

Sarita Maree[1], Gary Bronner[2]

[1]University of Pretoria, [2]University of Cape Town

Contributors

Nigel C. Bennett[1], Andrew Taylor[2], Claire Relton[2], Matthew F. Child[2]

[1]University of Pretoria, [2]Endangered Wildlife Trust

Details of the methods used to make this assessment can be found in *Mammal Red List 2016: Introduction and Methodology.*