Cryptochloris wintoni – De Winton's Golden Mole

Photograph wanted

Regional Red List status (2016)	Critically Endangered (Possibly Extinct) B1ab(iii)+2ab(iii)*
National Red List status (2004)	Critically Endangered B1ab(iii), B2ab(iii), D
Reasons for change	No change
Global Red List status (2015)	Critically Endangered (Possibly Extinct) B1ab(iii)+2ab(iii)
TOPS listing (NEMBA)	None
CITES listing	None
Endemic	Yes

*Watch-list Data

The long, slender foreclaws of this species are an adaptation to hold legless lizards which, together with insect larvae, are their preferred prey.

Taxonomy

Cryptochloris wintoni (Broom 1907)

ANIMALIA - CHORDATA - MAMMALIA - AFROSORICIDA -CHRYSOCHLORIDAE - Cryptochloris - wintoni

Common names: De Winton's Golden Mole (English), De Winton se Gouemol, De Winton se Kruipmol (Afrikaans)

Taxonomic status: Species

Taxonomic notes: Some authors (for example, Simonetta 1968) treated this taxon as only subspecifically distinct from *C. zyli*, but these taxa differ consistently in pelage colour and malleus morphology, indicating that they are not conspecific (Meester 1974). Recent (but unpublished) phylogenetic analyses based on both morphological and genetic data support the allocation of these taxa to separate species, and justify synonymizing *Cryptochloris* as a subgenus of *Chrysochloris*, corroborating the close phylogenetic association of these taxa reported by Asher et al. (2010).

This species is easily confused with Grant's Golden Mole (*Eremitalpa granti*). A specimen in the Smithsonian Institution collected near Garies (181 km south-east of the type locality) is a misidentified *Eremitalpa granti*. Conversely, several specimens of this taxon in the Swedish Museum of Natural History, Museum of Comparative Zoology (Harvard) and Natural History Museum (London) are incorrectly identified as *Eremitalpa granti* (Asher & Avery 2010). Although externally similar to *E. granti*, radiographs make *Cryptochloris* easy to recognize based on malleus shape, vertebral count, and length of humeral medial epicondyle (Asher & Avery 2010).

Assessment Rationale

De Winton's Golden Mole is known from only the type locality, and not recorded for more than 50 years (last recorded in the wild in 1937). The existing evidence is that it is a valid species, and occurs in an area of high threat owing to radical habitat transformation by alluvial diamond mining, so it is listed as Critically Endangered under criteria B1ab(iii)+2ab(iii) (Possibly Extinct), notwithstanding that its cryptic and trap-shy nature may obscure a more common and widespread occurrence. Once further field surveys have been undertaken, this species should be reassessed.

Distribution

This species is endemic to South Africa, and has been recorded only from the type locality at Port Nolloth, Northern Cape Province (Figure 1). It may occur more widely, but further field surveys are needed to confirm this.

Population

This species is considered extremely rare. *Cryptochloris wintoni* is sympatric with *E. granti* and possibly underestimated due to external resemblance thereto. All of the golden moles in the Namaqualand coastal region are exceptionally difficult to catch, so this species could be more common or widespread than current records indicate.

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: Yes

Habitats and Ecology

This species occurs in the coastal dunes and adjacent sandy areas in the Strandveld of the Namaqualand coastal plain (Nama-Karoo biome) of the Northern Cape (Bronner

Recommended citation: Bronner GN, Asher R. 2016. A conservation assessment of *Cryptochloris wintoni*. 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 De Winton's Golden Mole (Cryptochloris wintoni) within the assessment region

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

Table 1. Countries of occurrence within southern Africa

2013). They construct subsurface runs, which can extend for 50–60 m, often ranging under vegetation, where their prey is more abundant. Their prey includes insects (including pupae and larvae), and legless lizards (Roberts 1951).

Ecosystem and cultural services: This species is not known to provide any ecosystem services, but this may simply reflect the paucity of information available for this poorly-known species.

Use and Trade

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

Threats

Diamond mining along the west coast has significantly reduced habitat for this species and will continue to do so (Smithers 1986). Specifically, habitat alteration as a result of mining of coastal sands for alluvial diamonds in the Port Nolloth district poses a direct threat to this species. The type locality is near Port Nolloth, an important regional harbour that is being expanded to establish more fish processing plants and abalone mariculture, so infrastructural developments with increased human densities can also be considered a possible threat (urban development has expanded by 13% in the Northern Cape between 2000 and 2013; Geoterralmage 2015).

Current habitat trend: Declining in area and quality.

Conservation

This species has not been recorded from any protected areas. No conservation interventions are possible until new localities are documented, which can be incorporated into protected areas. The coastal plain between Kleinsee and Alexander Bay is in urgent need of surveying.

Recommendations for land managers and practitioners:

- Fieldwork to survey for subpopulations and assess the extent of anthropogenic threats is urgently needed.
- Monitoring the only known population at Port Nolloth, to determine densities, ecological requirements and niche tolerances.

Table 2. Threats to the De Winton's Golden Mole (*Cryptochloris wintoni*) 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	1.2 Commercial & Industrial Areas: habitat loss from development of commercial & industrial areas associated with Port Nolloth harbour.	-	Anecdotal	-	Increasing
2	1.1 Housing & Urban Areas and 1.2 Commercial & Industrial Areas: Urban and industrial expansion in Port Nolloth.	GeoTerralmage 2015	Indirect (land use change from remote sensing)	Regional	Increasing
3	3.2 Mining & Quarrying: habitat loss owing to diamond mining in coastal sands.	-	Anecdotal	-	Unknown
4	2.4 Marine & Freshwater Aquaculture: habitat loss and degradation owing to industrial abalone mariculture operations around Port Nolloth.	-	Anecdotal	-	Unknown

Research priorities:

- Research to determine distribution limits, basic ecology, life history traits and habitat tolerances is a priority.
- Monitoring recolonisation of rehabilitated mining areas and population viability needed to assess efficacy of remedial rehabilitation actions.

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.

References

Asher RJ, Avery DM. 2010. New golden moles (Afrotheria, Chrysochloridae) from the Early Pliocene of South Africa. Palaeontol Electronica **13**:12.

Asher RJ, Maree S, Bronner G, Bennett NC, Bloomer P, Czechowski P, Meyer M, Hofreiter M. 2010. A phylogenetic estimate for golden moles (Mammalia, Afrotheria, Chrysochloridae). BMC Evolutionary Biology **10**:69.

Bronner GN. 2013. *Cryptochloris wintoni* De Winton's Goldenmole. Pages 250–251 in Kingdon J, Happold D, Hoffmann M, Butynski T, Happold M, Kalina J, editors. Mammals of Africa, Volume I: Introductory Chapters and Afrotheria. Bloomsbury Publishing, London, UK.

Meester J. 1974. Family Chrysochloridae. Smithsonian Institution Press, Washington, DC, USA.

Roberts A. 1951. The Mammals of South Africa. The Trustees of the Mammals of South Africa, Central News Agency, Johannesburg, South Africa.

Simonetta AM. 1968. A new golden mole from Somalia with an appendix on the taxonomy of the family Chrysochloridae (Mammalia, Insectivora). Monitore Zoologico Italiano. Supplemento **2**:27–55.

Smithers RHN. 1986. South African Red Data Book – Terrestrial Mammals. Page 216. Technical Report SANSP Report 125. CSIR, National Scientific Programmes Unit, Pretoria, South Africa.

Data Sources and Quality

 Table 3. Information and interpretation qualifiers for the De

 Winton's Golden Mole (Cryptochloris wintoni) assessment

Data sources	Museum records, field surveys (unpublished)
Data quality (max)	Suspected
Data quality (min)	Suspected
Uncertainty resolution	Expert consensus
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.*