

Calcochloris obtusirostris – Yellow Golden Mole

Photograph
wanted

Regional Red List status (2016)	Near Threatened B1ab(iii)
National Red List status (2004)	Vulnerable B1ab(ii,iii) + B2ab(ii,iii)
Reasons for change	Non-genuine change: Application of the regional criterion
Global Red List status (2015)	Least Concern
TOPS listing (NEMBA)	None
CITES listing	None
Endemic	Edge of range

This is the only golden mole with orange-yellow underfur (greyish in other species), hence its colloquial name.

obtusirostris and *C. tytonis* [*incertae sedis*]. Three subspecies are recognized, *C. o. obtusirostris*, *C. o. chrysillus*, and *C. o. limpopoensis*, all of which were once considered valid species. Subspecies are discriminated by subtle morphological differences, but intergrade in size, making distinguishing among them difficult (Bronner 2013).

Assessment Rationale

This is an edge of range species within the assessment region, occurring in two isolated subpopulations in northern KwaZulu-Natal and north-eastern Limpopo, which correspond to the two subspecies *C. o. obtusirostris* and *C. o. chrysillus* respectively. The total combined (for both subspecies) extent of occurrence is estimated to be 11,970 km² and area of occupancy is 5,218 km², which would qualify the species as Vulnerable B1ab(iii) due to local habitat degradation from overgrazing and fuelwood harvesting. Assessing each subspecies separately would qualify *C. o. obtusirostris* as Vulnerable B2ab(iii), as there is presumably no habitat degradation in the area where *C. o. chrysillus* occurs. However, we do not assess at subspecies level as both subspecies occur in transfrontier conservation areas (Great Limpopo Transfrontier Park and Lubombo Transfrontier Conservation and Resource Area for *C. o. obtusirostris* and *C. o. chrysillus* respectively) that connect the assessment region to the bulk of the global population in Mozambique and Zimbabwe. As such, habitat loss is not a major threat within the assessment region. Globally, the species is widespread, tolerates mild habitat alteration and is not heavily impacted by human activities, so the presumably large global population is unlikely to be in decline. Thus we employ the regional criterion and list the species as Near Threatened B1ab(iii) because the global population is unlikely to decline and the assessment region subspecies are connected to the global population.

Regional population effects: Dispersal is possible. The Lebombo Transfrontier Conservation Area (South Africa, Mozambique and Swaziland) between the Lebombo Mountains and the Indian Ocean now connects (as of 2011) the Maputo Elephant Reserve through the Futi Corridor and Lubombo Conservancy to Tembe Elephant Park and protects large areas of suitable habitat of this subspecies. Similarly, the Great Limpopo Transfrontier Park connects the northern subpopulations of this species. Thus, although the dispersal capability of this species is poor and limited by soil type and high energetic costs associated with digging, dispersal is possible through transfrontier conservation areas across the northern KwaZulu-Natal–Swaziland–Mozambique border and the north-eastern Limpopo–Zimbabwe–Mozambique border.

Distribution

The Yellow Golden Mole is largely restricted to the Mozambique sand plain. It ranges from Inhambane district in Mozambique southwards to northern KwaZulu-Natal,

Taxonomy

Calcochloris obtusirostris (Peters 1851)

ANIMALIA - CHORDATA - MAMMALIA - AFROSORICIDA - CHRYSOCHLORIDAE - *Calcochloris obtusirostris*

Synonyms: *Chrysochloris obtusirostris* (Peters 1851)

Common names: Yellow Golden Mole (English), Geel Gouemol (Afrikaans)

Taxonomic status: Species

Taxonomic notes: This genus has been variably assigned to *Chrysochloris* (Broom 1907), *Amblysomus* (Simonetta 1968; Petter 1981) or *Calcochloris* (Meester 1974; Bronner 1995). The name *Calcochloris* predates *Chrysotricha* (Broom 1907), commonly used for this genus until 1953 (Ellerman et al. 1953; Meester 1974). Bronner (1995) placed *Calcochloris obtusirostris* in the subgenus *Calcochloris*, and *Calcochloris leucorhinus* in the subgenus *Huetia*, which previously included *Calcochloris tytonis* [*incertae sedis*]. *Huetia* has been elevated to full generic status based on phylogenetic analyses of combined morphological and molecular characters (Asher et al. 2010), leaving *Calcochloris* to include only *C.*

Recommended citation: Maree S, Bronner GN. 2016. A conservation assessment of *Calcochloris obtusirostris*. 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.

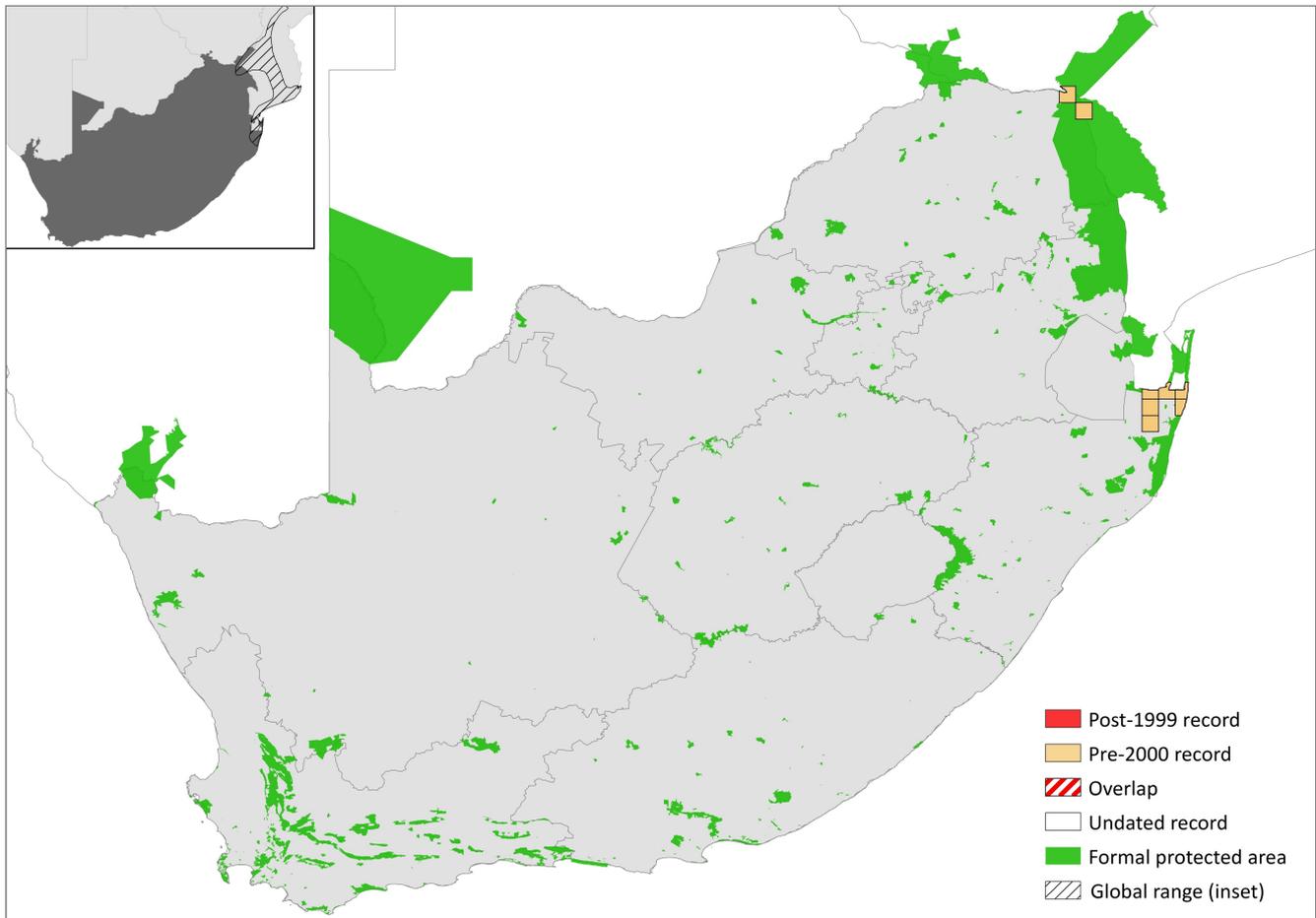


Figure 1. Distribution records for Yellow Golden Mole (*Calcochloris obtusirostris*) within the assessment region

Table 1. Countries of occurrence within southern Africa

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

South Africa (Figure 1), and inland to the eastern slopes of the Lebombo Mountains and the south-eastern Lowveld of Zimbabwe.

Calcochloris o. obtusirostris occurs in the Inhambane and Gaza districts of Mozambique, extends westwards along the Changane and Save river systems to marginally intrude into south-eastern Zimbabwe and the Nyadu Sandveld in northern Kruger National Park (Limpopo Province, South Africa). *Calcochloris o. limpopoensis* occurs in the Masiene district in Mozambique southwards to the southern Mozambiquan coastal plains near Maputo where it is replaced by *C. o. chrysillus*. *Calcochloris o. chrysillus* occurs from Maputo southwards to Maputaland (north of St Lucia) and in the Ingwavuma and Ubombo districts in northern KwaZulu-Natal. Parts of the geographic ranges of *C. o. obtusirostris* and *C. o. chrysillus* are within protected areas, but this is not the case for *C. o. limpopoensis* (see **Threats**).

The extent of occurrence for the species overall was calculated at 11,970 km², by clipping the minimum convex polygon of the South African records to the assessment region, which includes the area of the Lebombo Transfrontier Conservation Area in which the species occurs. The area of occupancy was calculated by summing the quarter degree grid cells in which the species occurs within the assessment region, yielding 5,218 km² overall, and 1,356 km² and 3,863 km² for *C. o. obtusirostris* and *C. o. chrysillus*, respectively.

Population

This species is locally common in suitable sandy habitats on the coastal plains of Mozambique and northern KwaZulu-Natal (South Africa).

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: Two

Severely fragmented: No, occurs in well-connected protected areas.

Habitats and Ecology

This species is strictly fossorial, restricted to light sandy soils, sandy alluvium and coastal sand dunes in southern African subtropical forest and savannah woodland

transitions and mosaics, particularly close to rivers and waterways. *Calcochloris o. chrysellus* occurs in coastal forest and savannah (woodland) transitions and mosaics from southern coastal Mozambique to northern KwaZulu-Natal. *Calcochloris o. limpopoensis* occurs in the miombo savannah (woodland) of eastern Mozambique. *Calcochloris o. obtusirostris* inhabits *Acacia* and Mopane savannah (thornveld woodland) in south-eastern Mozambique, westwards along the Changane and Save river systems into the Lowveld grasslands of south-eastern Zimbabwe, and the Nyadu Sandveld in northern Kruger National Park, Limpopo Province. The species lives in close proximity to human settlements and thrives in rural and urban gardens. It also occurs in cultivated and pastoral land and commercial forestry plantations, but the latter is considered suboptimal habitat for the species.

Predominantly insectivorous, they are highly sensitive to vibrations produced by live insect prey, which include tenebreonid larvae, termites, grasshoppers, flies, moths and also small lizards. Shallow subsurface foraging tunnels are linked to nest chambers amongst roots of trees. Yellow Golden Moles occupy deep nesting chambers at the base of trees up to 20 cm below the soil surface, and create subsurface runs to foraging sites which have been recorded at distances of up to 50 m away from nesting chambers (Roberts 1936). Breeding is suggested to be limited to the wet summer season (Taylor 1998; Skinner & Chimimba 2005).

Use and Trade

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

Threats

There are no known major threats to this species. Minor threats may arise from rural settlement and small-holder ranching expansion, which includes housing and associated roads infrastructure, which may increase rates of habitat degradation through overgrazing and logging. Agriculture and commercial forestry operations no doubt contribute to degradation, fragmentation and loss of its natural soil habitat. However, these are localised threats.

Current habitat trend: Stable. This species is found in numerous protected areas, including two transfrontier parks, and can thrive in modified landscapes. However,

local declines in habitat quality may occur due to overgrazing and fuelwood extraction around forests. These effects should be monitored. Rural settlements expanded by 1% in KwaZulu-Natal between 2000 and 2013 (GeoTerralimage 2015), but agricultural expansion was a primary cause in the loss of 7.6% of the province's natural vegetation between 2005 and 2011 (Jewitt et al. 2015).

Conservation

Its cryptic and adaptable nature allows the Yellow Golden Mole to coexist successfully with humans. *Calcochloris o. chrysellus* is adequately protected in KwaZulu-Natal at Ndumu Game Reserve, Greater St Lucia Wetland Park, Tembe Elephant Park, Kosi Bay Nature Reserve, Lake Sibaya Nature Reserve, and the Maputaland Coastal Forest Reserve. In Mozambique, this subspecies occurs in the Maputo Elephant Reserve. The Transfrontier Conservation Area (South Africa, Mozambique and Swaziland) between the Lebombo Mountains and the Indian Ocean now connects the Maputo Elephant Reserve through the Futi Corridor and Lubombo Conservancy to Tembe Elephant Park and protects large areas of suitable habitat of this subspecies. *Calcochloris o. obtusirostris* has been recorded from the Nyadu Sandveld in north-eastern corner of Kruger National Park in South Africa, Gonarezhou National Park in south-eastern Zimbabwe and northern part of the Limpopo National Park in Mozambique. These protected areas are part of the Great Limpopo Transfrontier Park. No specific conservation interventions are currently necessary.

Recommendations for land managers and practitioners:

- Monitoring of existing subpopulations, particularly in KwaZulu-Natal, to assess population trends.
- Field surveys to discover additional subpopulations and to establish the distributional limits of subspecies.
- Incentivise landowners and communities to de-stock to reduce overgrazing impacts.

Research priorities:

- Subpopulation trends within and outside protected areas.
- Evidence for rescue effect from transfrontier parks.

Table 2. Threats to the Yellow Golden Mole (*Calcochloris obtusirostris*) 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	<i>1.1 Housing & Urban Areas:</i> increased habitat degradation from residential and urban development. Current stresses <i>1.1 Ecosystem Conversion</i> and <i>1.2 Ecosystem Degradation:</i> direct conversion of the ecosystem and degradation through logging.	GeoTerralimage 2015	Indirect (land change from remote sensing)	Regional	Increasing
2	<i>2.3.2 Small-holder Grazing, Ranching or Farming:</i> habitat loss through agricultural expansion. Current stress <i>1.2 Ecosystem Degradation:</i> habitat degradation from overgrazing.	Jewitt et al. 2015	Indirect (land change from remote sensing)	Regional	Increasing
3	<i>2.2.2 Agro-industry Plantations:</i> habitat loss from forestry plantations.	Jewitt et al. 2015	Indirect (land change from remote sensing)	Regional	Increasing

- Field studies to determine the life history traits and ecological tolerances of the species.
- Field surveys to discover additional subpopulations and to establish the distributional limits of subspecies.
- Studies assessing the severity of threats outside of protected 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 native vegetation gardens.

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Data Sources and Quality

Table 3. Information and interpretation qualifiers for the Yellow Golden Mole (*Calcochloris obtusirostris*) assessment

Data sources	Museum records, indirect information (literature, expert knowledge)
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*.