

Threatened Species of the Northern Territory

DESMOND'S LAND SNAIL

Mesodontrachia desmonda

Conservation status

Australia: Not listed

Northern Territory: Critically Endangered

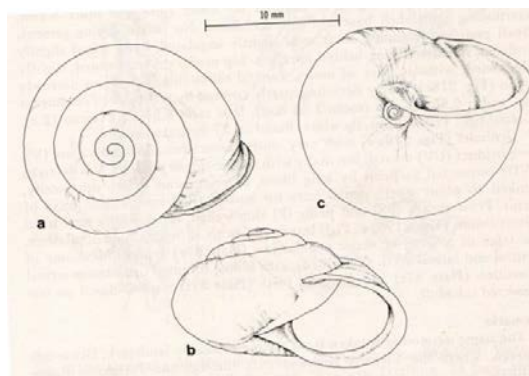


Illustration from Solem (1985)

Description

Mesodontrachia desmonda is a large camaenid land snail (shell diameter: 17-21 mm, height 11-15 mm). The shell has a light yellow horn and a white lip, and has 4.5-5 whorls. The apex and spire are strongly elevated, often rounded above (Solem 1985).

Distribution

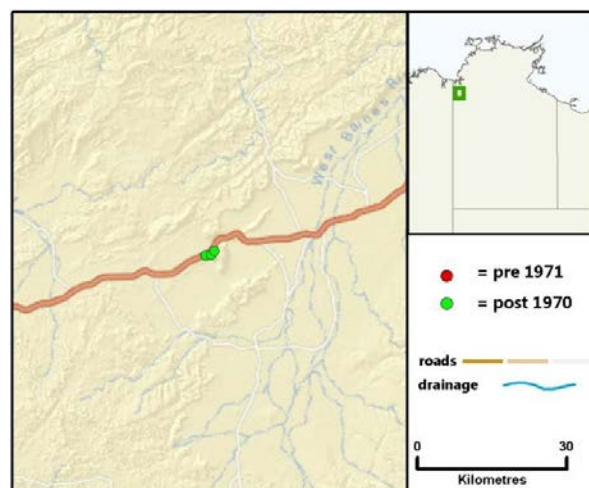
In the Northern Territory (NT), this species is known only from two sites (considered a single location) on Newry Station. Both sites are on a rocky ridge 8 km west of Desmond Passage, south of the Victoria Highway and south-west of the Pinkerton Range. Targeted surveys undertaken during 2008-2010 did not detect the species elsewhere in the Victoria River District. Recent records extend its known range to nearby areas of the south-east Kimberley, Western Australia (WA).

Conservation reserves where reported:
None.

Ecology

The species is found only under large boulders in small patches of vine-thicket amongst boab trees (*Adansonia gregorii*) at the base of steep slopes or cliffs of rocky

sandstone outcrop within which lies a narrow, patchy layer of limestone (V. Kessner and M. Braby *pers. comm.*). Solem (1985) noted that the type locality is marked by an unusual number of large trees.



Known locations of *Mesodontrachia desmonda*

Conservation assessment

Mesodontrachia desmonda is restricted in range and the estimated area of occupancy (AOO) is less than 10 km². There are no quantitative measures of decline but there is evidence that frequent fires degrade habitat and kill snails.

In the NT, this species qualifies as **Endangered** (under criteria B2ab(iii)) based on:

- area of occupancy <500 km²;
- severely fragmented; and
- continuing decline, observed, inferred or projected.

Threatening processes

This species appears to be badly affected by the frequent dry season fires that sweep the ridges (V. Kessner *pers. comm.*). These fires are reducing the extent of Dry rainforest vegetation and organic litter on which the species depends. Since its discovery this species has always been found to occur in very low abundance, but it is not known if it was formerly more abundant prior to alteration of the fire regime.

Feral predators such as rats, mice and cane toads may have a significant impact on land snail populations (V. Kessner *pers. comm.*). Cane toads arrived in this area in 2009, but there is no evidence of feral rats or mice at the sites.

Conservation objectives and management

There are no formal recovery programs for land snail species in the NT. A monitoring program has been established for this species.

Research priorities are to identify specific threats to the known population.

Depending upon assessment of threats, management priorities may include:

- to better safeguard the known population through encouragement of appropriate fire regimes; and
- to protect them from cane toads if toads are found to eat the species.

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References

- Solem, A. (1985). Camaenid land snails from Western and Central Australia (Mollusca: Pulmonata: Camaenidae). V Remaining Kimberley genera and addenda to the Kimberley. *Records of the Western Australian Museum Supplement* 20, 707-981.