

Threatened Species of the Northern Territory

FITZROY LAND SNAIL

Mesodontrachia fitzroyana

Conservation status

Australia: Endangered

Northern Territory: Critically Endangered



Photo: P. Alderslade & R. Willan

Description

Mesodontrachia fitzroyana is a large camaenid land snail (shell diameter: 17-23 mm, height 10-14 mm). The shell has a medium-yellow horn and a white lip, and has 5-6 whorls. The apex and spire are moderately elevated, somewhat rounded above (Solem 1985).

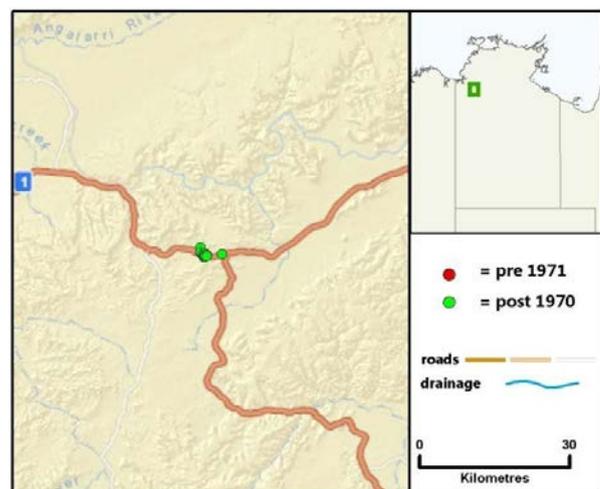
Distribution

This species is endemic to the Northern Territory (NT) and is known from a few low limestone hills on the Ngaliwurru/Nungali Aboriginal Land Trust, both north and south of the Victoria Highway, 24 km east of Timber Creek. The hills are about 8 km long and meet sandstone hills 1-2 km to the south and run out 4-5 km north of the highway (V. Kessner & M. Braby *pers. comm.*).

Conservation reserves where reported:
Gregory National Park.

Ecology

The species is restricted to open eucalyptus woodland and small vine-thicket patches on limestone hills with terraces and steep slopes. Here they spend much of the year dormant under rocks, typically emerging only after heavy rain (V. Kessner & M. Braby *pers. comm.*).



Known locations of *Mesodontrachia fitzroyana*

Conservation assessment

Mesodontrachia fitzroyana is restricted in range, and has specific habitat requirements. There is also evidence that the population density of snails has declined. Vince Kessner collected the species in 1985 and reported being able to find thousands of snails. He made three collecting visits to the area in the late 1990s, when the snails were very difficult to find.

Targeted surveys for snails in the Timber Creek region in 2008 found the species at the known location, and noted that similar but different species occupied nearby habitat patches (M. Braby *pers. comm.*). Braby concluded that the species is confined to the

single location and estimated the area of occupancy at 4 km².

In the NT, this species qualifies as **Critically Endangered** (under criteria B1ab(iii,v)+2ab(iii,v)) based on:

- extent of occurrence <100 km²;
- area of occupancy <10 km²;
- severely fragmented; and
- continuing decline, observed, inferred or projected.

Threatening processes

These snails lie dormant during the Dry season, aestivating among rocks. Frequent Dry season fires in the area have reduced both the quality of habitat and the number of mature individuals (M. Braby *pers. comm.*). Cattle grazing in the area may also result in direct trampling of snails and their exposure when stock overgraze the covering vegetation (V. Kessner *pers. comm.*).

Feral predators such as rats, mice and cane toads can have a significant impact on land snail populations (V. Kessner *pers. comm.*). Cane toads now occur across the region, but their impact is unknown, and there is no evidence that feral rats or mice currently occur at this location.

Conservation objectives and management

There are no existing management programs for land snail species in the NT.

The primary research priority is to quantify specific threats to the known population. A monitoring program should be established. Depending upon assessment of threats, management priorities may include:

- i. to better safeguard the known population through encouragement of

appropriate fire regimes and protection from heavy grazing; and

- ii. to protect them from cane toads, if toads are found to eat the species.

Complied by

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[updated December 2012]

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.