

Approved Conservation Advice
(s266B of the *Environment Protection and Biodiversity Conservation Act 1999*)

Approved Conservation Advice for
Sinumelon bednalli

This Conservation Advice has been developed based on the best available information at the time this conservation advice was approved.

Description

Sinumelon bednalli, Family Camaenidae, also known as Bednall's Land Snail, is greenish-yellow with a weak reddish spiral colour band. Its shell is approximately 20–26 mm in diameter with 4–5 whorls. The apex and spire are usually strongly and evenly elevated (DIPE, 2006). Camaenid snails mature in their second wet season and may live for 10–15 years (TSSC, 2006b).

Conservation Status

Sinumelon bednalli is listed as **endangered**. This species is eligible for listing as endangered under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act) as, in 2006, the Minister considered the Threatened Species Scientific Committee's (TSSC) advice under section 189 of the EPBC Act and amended the list under section 184 to include *Sinumelon bednalli*. The TSSC determined that this species met Criterion 2 of their eligibility criteria (TSSC, 2006b). The species is also listed as critically endangered under the *Territory Wildlife Protection and Conservation Act (2000)* (Northern Territory).

Distribution and Habitat

Sinumelon bednalli is endemic to the Northern Territory and has been collected at seven sites in the MacDonnell Ranges: at Hugh Gorge, 60 km west of Alice Springs; Trepkina Gorge, 50 km east of Alice Springs; and a location 25 km south of Alice Springs (Ward et al., 2006). The distribution of *S. bednalli* is fragmented and widely scattered. The species' extent of occurrence is 2100 km² and it has a 15 km² area of occupancy (TSSC, 2006b). Recorded locations of *S. bednalli* include Alice Springs Telegraph Station Historical Reserve, Owen Springs Reserve, Trepkina Gorge Nature Park and the West MacDonnell National Park (Ward et al., 2006).

Habitat preferences of *S. bednalli* are poorly known. The species is found under fig trees (*Ficus* spp.) where it aestivates (lies dormant) in loose litter (TSSC, 2006a). This species occurs within the Northern Territory Natural Resource Management Region.

The distribution of this species is not known to overlap with any EPBC Act-listed threatened ecological communities.

Threats

The main identified threats to *S. bednalli* are urban expansion and altered fire regimes due to the spread of weeds such as Buffel Grass (*Cenchrus ciliaris*). It has almost disappeared from one site near Alice Springs owing to urban development (DIPE, 2006; Woinarski et al., 2007).

Research Priorities

Research priorities that would inform future regional and local priority actions include:

- Design and implement a monitoring program (TSSC, 2006a).
- More precisely assess population size, distribution, ecological requirements and the relative impacts of threatening processes (TSSC, 2006a).

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- Undertake survey work in suitable habitat and potential habitat to locate any additional populations/occurrences/remnants (Woinarski et al., 2007).

Regional and Local Priority Actions

The following priority recovery and threat abatement actions can be done to support the recovery of *Sinumelon bednalli*.

Habitat Loss, Disturbance and Modification

- Monitor known populations to identify key threats (Woinarski et al., 2007).
- Monitor the progress of recovery, including the effectiveness of management actions and the need to adapt them if necessary.
- Control access routes to suitably constrain public access to known sites on public land.
- Minimise adverse impacts from land use at known sites.
- Identify populations of high conservation priority.
- Manage threats to areas of vegetation that contain populations/occurrences/remnants of *S. bednalli*. The snail would benefit from the protection of fig trees through fire management and the control of Buffel Grass (DIPE, 2006).
- Ensure chemicals or other mechanisms used to eradicate weeds do not have a significant adverse impact on *S. bednalli*.
- Ensure infrastructure or development activities in areas where *S. bednalli* occurs do not adversely impact on known populations (Woinarski et al., 2007).

Fire

- Develop and implement a suitable fire management strategy for protection of habitat (TSSC, 2006a).
- Provide maps of known occurrences to local and state rural fire services and seek inclusion of mitigative measures in bush fire risk management plans, risk register and/or operation maps.

Invasive Weeds

- Develop and implement a management plan for the control of Buffel Grass in the local region (TSSC, 2006a).
- Manage sites to prevent introduction of invasive weeds, which could become a threat to *S. bednalli*, using appropriate methods (Woinarski et al., 2007).

Conservation Information

- Raise awareness of *S. bednalli* within the local community.

This list does not necessarily encompass all actions that may be of benefit to *Sinumelon bednalli*, but highlights those that are considered to be of highest priority at the time of preparing the conservation advice.

Existing Plans/Management Prescriptions that are Relevant to the Species

- Alice Springs Telegraph Station Historical Reserve Plan of Management (PWC, 2001).

This prescription was current at the time of publishing; please refer to the relevant agency's website for any updated versions.

Information Sources:

Department of Infrastructure, Planning and Environment (DIPE) 2006, Biodiversity Conservation Section, Northern Territory Government.

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Woinarski, J, Pavey, C, Kerrigan, R, Cowie, I & Ward, S 2007, *Lost From Our Landscape*, Northern Territory Department of Natural Resources, Environment and The Arts, Northern Territory Government Printing Office.