

SPECIES MANAGEMENT PROFILE

Parvulastra vivipara Live-bearing Seastar

Group: Echinodermata (echinoderms, starfish), Asteroidea (starfish, sea stars), Valvatida (starfish), Asterinidae

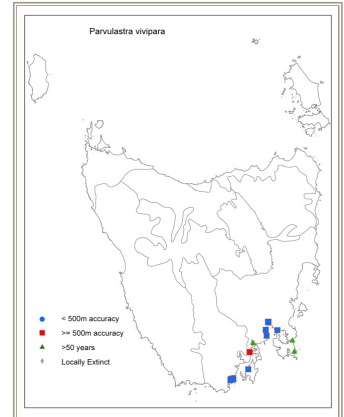
Status: *Threatened Species Protection Act 1995*: vulnerable
Environment Protection and Biodiversity Conservation Act 1999: Vulnerable

Endemic: Found only in Tasmania

Status:



The Live-bearing Seastar (*Parvulastra vivipara*) is a small orange-yellow seastar, up to 15 mm across, with five arms and a rounded pentagonal shape. Endemic to Tasmania, the species is known only from waters between the high and low tide mark (littoral waters) in the southeast. The seastar is unusual as it is one of very few seastars worldwide that brood their eggs then give birth to live young (viviparous). The main threats to the species are competition, displacement and possibly predation from introduced seastars such as the New Zealand Seastar and the Northern Pacific Seastar, and habitat modification. Many subpopulations of the species are close to populated areas and have been impacted by removal of habitat and run-off of pollutants. The objectives for management of the species include protection of known localities and increasing understanding of the species' ecology and habitat requirements.



Key Points

- Important:** Is this species in your area? Do you need a permit? Ensure you've covered all the issues by checking the Planning Ahead page.
- Important:** Different threatened species may have different requirements. For any activity you are considering, read the Activity Advice pages for background information and important advice about managing around the needs of multiple threatened species.

Habitat

- 'Habitat' refers to both known habitat for the species (i.e. in or near habitat where the species has been recorded) and potential habitat (i.e. areas of habitat with appropriate characteristics for the species and within the species' potential range which have not yet been adequately surveyed).
- If in doubt about whether a site represents potential habitat for this species, contact the Threatened Species Section for further advice.
- The Live-bearing Seastar lives between rocks or in crevices that are covered at high tide and uncovered at low tide. They appear to have a water depth limit, being found from just below the high water mark to a depth of approximately 1.2 m at high water. The species prefers gently sloping, sheltered shores which contain rocks 20 to 30 cm high.
- The known range of the Live-bearing Seastar includes 13 locations in the southeast. The potential range of the species is unlikely to extend beyond the currently known range.
- The distribution of the Live-bearing Seastar is severely fragmented and all known localities are separated by distances that exceed the presumed dispersal capacity of the species.

What to avoid

- Further spread of introduced seastars (New Zealand Seastar and Northern Pacific Seastar)
- Removal of substrates (e.g. rocks) from the intertidal zone
- Polluting the ocean

Surveying

Key	Survey reliability more info
M	Peak survey period
M	Potential survey period
M	Non-survey period

To ensure you follow the law - check whether your survey requires a permit. Always report any new records to the Natural Values Atlas, or send the information direct to the Threatened Species Section. Refer to the Activity Advice: Surveying page for background information.

Species	Spring						Summer					Autumn				Winter								
Live-bearing Seastar	S	S	O	O	N	N	D	D	J	J	F	F	M	M	A	A	M	M	J	J	J	J	A	A

- Surveys can be conducted year-round. Some researchers advocate surveying at night or on overcast days when seastars

are likely to be more visible as they emerge from cover to feed.

- Surveys generally consist of observers walking the area between the high and low tide mark, visually searching for the species. Please note that surveys which involve turning over rocks have the capacity to damage this species.
- If you are considering conducting a survey contact the Threatened Species Section for more information on obtaining a permit.

Helping the species

- Learn how to distinguish the Live-bearing seastar from the more common introduced seastars such as the New Zealand Seastar and the Northern Pacific Seastar.
- If you live or work in the area where the species occurs (see distribution map, above), look out for and record any observations of the species. All records of this species can provide important information on distribution and abundance.
- Please do not disturb Live-bearing Seastars - a permit is required from the Threatened Species Section to handle any threatened species including the Live-bearing Seastar.
- Important! Always report any observations of the species to the NRE Natural Values Atlas, or else provide the data direct to the Threatened Species Section. Records stored on the NVA are a permanent record and are accessible to other people interested in this species.
- Consider the needs of the whole habitat. Preserving a threatened species' habitat is the best way to manage both the species and the environment in which it lives.
- Join a local community group and become a champion for the Live-bearing Seastar!
- See the 'What is Needed' section in the Live-bearing Seastar Listing Statement for a full list of conservation management actions for this species.

Construction

- Construction activities in the intertidal zone (for example, bridges, jetties, causeways) can have direct impacts on habitat for this species by disturbing or removing substrate (rocks, crevices).
- Construction activities within or adjacent to the intertidal zone may also inadvertently lead to water pollution through input of chemicals or silt into the ocean from the construction site.
- To avoid loss or degradation of intertidal habitat - avoid construction activities in the vicinity of known localities.

Changing water flow / quality

- Avenues for pollution which are relevant to the Live-bearing Seastar include ground water seepage from urban (including sewerage), industrial and agricultural land uses. This can lead to an increase in nutrients such as phosphates and nitrates which promote excessive algal growth.
- To prevent degradation of intertidal habitat - avoid activities in the vicinity of known localities which can lead to impacts on water quality, including pollutants arising from application of fertilisers, herbicides and insecticides, and seepage from sewerage.

Use of chemicals

- To prevent degradation of intertidal habitat - avoid using chemicals such as fertilisers, herbicides and insecticides in areas that may enter ground water and flow into the ocean.

Further information

Check also for listing statement or notesheet pdf above (below the species image).

Conservation Advice

Cite as: Threatened Species Section (2023). *Live-bearing Seastar (Parvulastra vivipara): Species Management Profile for Tasmania's Threatened Species Link*. <https://www.threatenedspecieslink.tas.gov.au/Pages/Tasmanian-Live-bearing-Seastar.aspx> Department of Natural Resources and Environment Tasmania. Accessed on 30/3/2023.

Contact details: Threatened Species Section, Department of Natural Resources and Environment Tasmania, GPO Box 44, Hobart, Tasmania, Australia, 7001. Phone (1300 368 550).

Permit: A permit is required under the Tasmanian *Threatened Species Protection Act 1995* to 'take' (which includes kill, injure, catch, damage, destroy and collect), keep, trade in or process any specimen or products of a listed species. Additional permits may also be required under other Acts or regulations to take, disturb or interfere with any form of wildlife or its products, (e.g. dens, nests, bones). This may also depend on the tenure of the land and other agreements relating to its management.