

Marine Invertebrates

Miscellaneous Filter Feeders

Brachiopod

Lingula reevii

Yellow crust bryozoan

Parasmittina sp.



Ascidians

Aplidium crateriferum

Aplidium sp.

SPECIES STATUS:

IUCN Red List – Not considered
Endemic

SPECIES INFORMATION: All of these species are filter-feeders. *Lingula reevii* reproduces asexually and has low dispersal potential. Like other *Lingula*, it resides in burrows in sand or mud. Yellow crust bryozoan (*Parasmittina sp.*), cratered aplidium (*Aplidium crateriferum*), and gold ring aplidium (*Aplidium sp.*) are part of the “fouling community” that grows especially well on boat hulls and other man-made structures. Yellow crust bryozoan is colonial and also reproduces asexually. The ascidians are hermaphrodites and brood their eggs internally. Once the eggs hatch, the next stage is a tadpole-like larvae.

DISTRIBUTION: *Lingula reevii* is found only in Kāneʻohe Bay, Oʻahu. The yellow crust bryozoan is found throughout the Main Hawaiian Islands, but is abundant at Molokini Islet, Maui. Cratered aplidium is found throughout the Main Hawaiian Islands and the Northwestern Hawaiian Islands, but it is most common on the North Shore of Oʻahu. Gold ring aplidium is found at Makena and Molokini Islet, Maui.

ABUNDANCE: *Lingula reevii* is declining based on Division of Aquatic Resources surveys in Kāneʻohe Bay, but abundances are unknown for the other species.

LOCATION AND CONDITION OF KEY HABITAT: *Lingula reevii* primary habitat is the sandy reef flats of Kāneʻohe Bay, Oʻahu, and this habitat is degraded. Yellow crust bryozoan primary habitat includes corals, shells, and stones onto which they encrust. Cratered aplidium

prefers crevices and the underside of overhangs on vertical walls that are exposed. Gold ring aplidium occurs at “scuba depths.”

THREATS:

- Habitat degradation due to urbanization and sedimentation of Kāneʻohe Bay, Oʻahu threatens *Lingula reevii*;
- Aquarium trade collectors harvest *Lingula reeviii*.

CONSERVATION ACTIONS: The goals of conservation actions are to not only protect current populations, but to also establish further populations to reduce the risk of extinction. In addition to common state-wide and island conservation actions, specific actions include:

- Restore habitat of *Lingula*;
- Maintain healthy populations with appropriate aquarium fishing regulations, enforcement, and education.

MONITORING:

- Continue to survey for populations and distribution in known and likely habitats.

RESEARCH PRIORITIES:

- Improve understanding of factors affecting the species population size and distribution;
- Support aquaculture research to develop captive breeding for *Lingula*'s use in the aquarium trade.

References:

- Gulko D. 2004. Hawaiian marine species for ESA Candidate listing revised Candidate list. Honolulu, HI: Division of Aquatic Resources, State of Hawai`i.
- Hoover JP. 1998. Hawaii's sea creatures, A guide to Hawaii's marine invertebrates. Honolulu, HI: Mutual Publishing. 366 pp.