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REPORT: NOTES ON A SPECIES OF HAWAIIAN BRACHIOPOD FROM OAHU, HAWAII

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Report: Notes on a Species of Hawaiian Brachiopod from Oahu, Hawaii

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ABSTRACT

In 1987, a specific colony of the brachiopod *Frenulina sanguinolenta* was identified off the coast of Pokai Bay, Oahu, at a depth of 20 meters. This report details the morphological characteristics of these specimens and distinguishes them from other known Hawaiian brachiopod species based on coloration, shell structure, and habitat.

INTRODUCTION

The specimens were collected in 1987 by a diver at a depth of 20 meters (approximately 60 feet) off Pokai Bay, on the western side of Oahu. Latitude: 21.4442° N, Longitude: -158.1913° W. They were found in a cryptic habitat, forming an isolated colony attached to hard coral reef structures beneath coral slabs. *Frenulina sanguinolenta* is a known inhabitant of the North Central Pacific, including the Hawaiian Islands (Bitner, 2010).

SYSTEMATIC

Domain **Eukaryota**
Kingdom **Animalia**
Phylum **Brachiopoda**
Class **Rhynchonellata**
Order **Terebratulida**
Family **Frenulinidae**
Genus ***Frenulina*** (Dall, 1894)
Species ***Frenulina sanguinolenta*** (Gmelin, 1790)

DESCRIPTION

The specimens exhibit a small, biconvex shell with a somewhat triangular outline and rounded edges (Bitner & Logan, 2016).

- Dimensions: Average size is approximately 6.43 mm (length) × 6.20 mm (width) × 3.53 mm (height).
- Coloration: The shell is translucent tan or white, characterized by distinctive “flame-like” intermittent markings in pink and medium pink. This coloration is significantly more pronounced on the pedicle valve.
- Morphology: The shell surface is smooth with visible growth lines. The beak is suberect, and the foramen (opening) is large and located on the top anterior section (Bitner & Logan, 2016).



Frenulina sanguinolenta

It differs from similar species in Hawaii.

While *Frenulina sanguinolenta* is one of the few brachiopods found in shallow Hawaiian waters (under 100 meters), it can be distinguished from other regional genera:

Feature	***Frenulina sanguinolenta***	***Lingula* spp.**	***Thecidellina* spp.**
Shell Shape	Triangular/ Oval, biconvex	Elongated, oblong/ rectangular	Small, subcircular/ conical
Color	Tan with pink "flame" marks	Greenish to brownish	White to grayish/beige
Habitat	Attaches to coral/slabs	Burrows in sandy sediment	Cemented to hard substrates
Pedicle	Short, through foramen	Long, fleshy (for burrowing	Absent (cemented valve)

RESULTS

The 1987 Pokai Bay specimens confirm the presence of *F. sanguinolenta* in shallow, cryptic reef environments. The measurements (avg. 6.4 mm) align with the typical size range for the species, which generally reaches a maximum length of approximately 9.1 mm (Bitner & Logan, 2016). The "flame-like" pink markings are the most diagnostic feature for field identification in Hawaii.

CONCLUSION

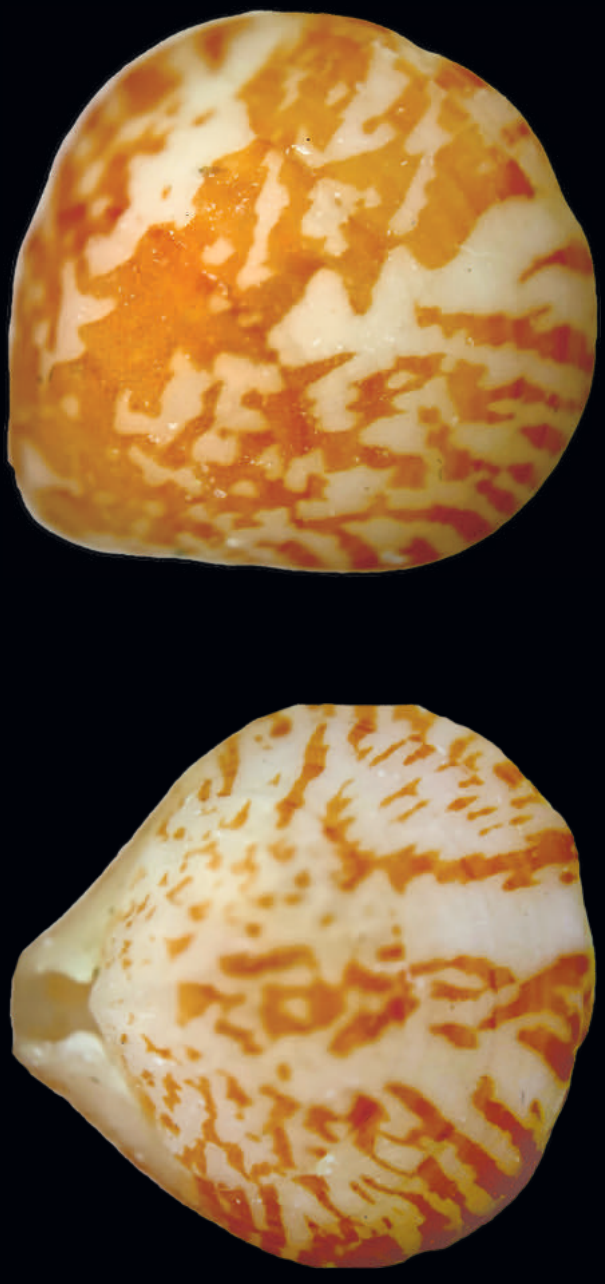
Frenulina sanguinolenta is a distinct component of Hawaii's shallow-water marine benthos. Its preference for the undersides of coral slabs at depths of 20 meters suggests a cryptic lifestyle that may lead to it being under-reported in general reef surveys. Its unique color pattern and terebratulide (loop-bearing) shell structure easily separate it from the lingulides found in Hawaiian soft-bottom habitats.

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PLATE 1



Frenulina sanguinolenta

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