

Aspella pacifica - a New Central Pacific Muricidae

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ABSTRACT Species within the genus *Aspella* are small and sometimes cryptic, but are known throughout the world's oceans. Most often specimens are found dead in sediment at the base of reefs. *Aspella pacifica* is a new species described from the sublittoral zones of Kwajalein Atoll, the Hawaiian Islands and Wake Atoll.

KEY WORDS Mollusca, Gastropoda, Muricidae, *Aspella pacifica*, new species, marine, taxonomy

INTRODUCTION

The genus *Aspella* Mörch, 1877 is in the subfamily Aspellinae Keen, 1971. Members are distinguished by their small lanceolate shell, which becomes dorsoventrally flattened when it matures. Currently, WoRMS (2024) recognizes thirty valid recent and fossil species within *Aspella*.

Aspella pacifica sp. nov. is herein described from several locations located within the Central Pacific Ocean. Although it is known from only a few examples, it is unique and has been positively identified from Gea Island, Kwajalein Atoll; Lanai Island, Hawaiian Islands; and Wilkes Island, Wake Atoll.

Type specimens for the newly described species are deposited in the following collections: Natural History Museum of Los Angeles County, California Academy of Sciences, and the Florida Museum of Natural History.

ABBREVIATIONS

CASIZ: California Academy of Sciences, California, USA

LACM: Natural History Museum of Los Angeles County, California, USA

BPBM: Bernice Pauahi Bishop Museum, Hawaii, USA

RBINS: Royal Belgian Institute of Natural Sciences, Belgium

UF: Florida Museum of Natural History, Florida, USA

SYSTEMATICS

Class	Gastropoda Cuvier, 1795
Subclass	Caenogastropoda Cox, 1960
Superfamily	Muricoidea Rafinesque, 1815
Family	Muricidae Rafinesque, 1815
Subfamily	Aspellinae Keen, 1971

Genus *Aspella* Mörch, 1877

Type species: *Ranella anceps* Lamarck, 1822 [= *Aspella anceps* (Lamarck, 1822)] by monotypy.

Diagnosis. Shell small, moderately narrow, lanceolate, dorsoventrally flattened.

Aspella pacifica Raines & Johnson, new species (Figures 1-4)

Description. Shell moderately small for genus, up to 10.7 mm in length, (holotype 7.6 mm), broadly lanceolate, dorsoventrally flattened. Protoconch large, broad, consisting of 1.75 whorls. Terminal lip thin, weakly curved. Teleoconch with six to seven broad canted whorls. Length/width ratio 1.77. Width/depth ratio 1.53. Suture deeply impressed, partially obscured by broad buttresses connected to preceding whorl. First and second whorls with six almost evenly sized varices, from third to last whorl with two pronounced lateral varices; four ventral and dorsal varices, reduced in size and strength, connected to preceding whorl with broad buttresses. Spiral sculpture of broad, low cords on penultimate and last whorls. White to cream, covered with white cancellate intritacalx of evenly spaced axial threads crossed by spiral threads of alternating strength. Aperture ovate, columellar lip adherent, smooth; outer lip erect, inner side with up to 7 slightly elongate denticles. Siphonal canal moderately long, narrow, recurved, dorsally open. Operculum and radula unknown.

Type Material. Holotype, LACM 3864 from type locality; Paratype 1, LACM 3865 from Wilkes Is., Wake Atoll; Paratype 2, CASIZ 233128 from Manele Harbor, Lanai Is., Hawaii; Paratype 3, UF 566589 from Wilkes Is., Wake Atoll.

Type Locality. Seaward reef slope of Gea Island, Kwajalein Atoll, 16 meters.

Distribution & Habitat. Currently known only from Kwajalein Atoll, the Hawaiian Islands and Wake Atoll at 15 to 20 meters.

Etymology. The name is derived from the region in which it is found.

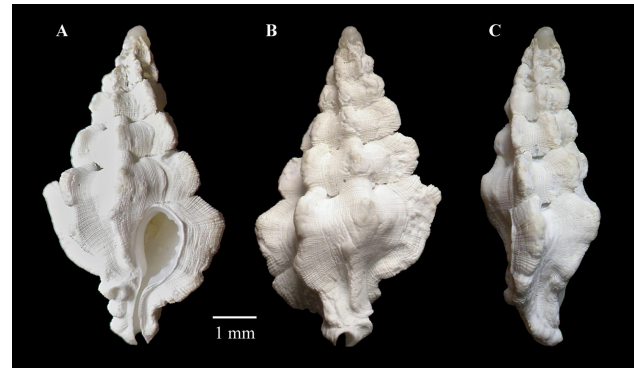


Figure 1. *Aspella pacifica* sp. nov., A-C. Holotype, LACM 3864, 7.6 mm in length.

Discussion. Paratypes show some variation of the varices and spiral sculpture. One shows more rounded varices (Figures 3 A-C), while all the paratypes show somewhat stronger spiral cords on the last teleoconch whorl (Figures 3 A-C, 4 A-B).

Aspella pacifica is characterized by its unique sculpture and broad teleoconch. Of the members of *Aspella* known from the Indo-Pacific, *Aspella producta* (Pease, 1861), *Aspella schroederi* Houart, 1996 and *Aspella hildrunae* Houart & Tröndlé, 2008 can be eliminated immediately due to their planktotrophic larval development (conical multi-whorl protoconch with a sinusigera type terminal lip). A comparison of selected species including the new species can be found in Table 1.

The two species which appear closest to *Aspella pacifica* are *Aspella omanensis* Houart, Gori &

Rosado, 2017 (Type locality: Oman) and *Aspella thomassini* Houart, 1985 (Type locality: Madagascar). *Aspella pacifica* is easily distinguished from *A. omanensis* by its stronger cancellate intritacalx and lack of lobed varices. *Aspella pacifica* is also distinguished from *A. thomassini* by its stronger cancellate intritacalx, numerous broad cords on the last teleoconch whorl, shorter spire and wider varices.

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Taxa	Size (mm)	Protoconch	Spiral cords on last teleoconch whorl	Intritalcalx	L/W ratio
<i>A. pacifica</i> sp. nov.	7.6	Large, broad, with 1.75 whorls. Terminal lip thin, weakly curved	Broad, low cords	Well defined cancellate	1.77
<i>A. helenae</i> Houart & Tröndlé, 2008	8.8	Large, broad, with 1.5 whorls. Terminal lip thin, raised, slightly curved	Faint, broad, low, slightly nodose cords	Evenly cancellate	2.17
<i>A. lozoueti</i> Houart & Tröndlé, 2008	8.2	Large, broad, with minute, rounded pustules, 1.5 whorls. Terminal lip weakly curved	Low, occasionally nodose cords	Minutely cancellate	2.06
<i>A. media</i> Houart, 1987	17.8	Small, rounded with 1.5 whorls. Terminal lip thin, raised, strongly curved	Faint, broad, low, flat cords	Axially & spirally striate	2.32
<i>A. omanensis</i> Houart, Gori & Rosado, 2017	8.2	Large, rounded with 1.5-2 whorls	Faint, broad, low cords	Minutely cancellate	1.75
<i>A. platylaevis</i> Radwin & D'Attilio, 1976	13.6	Small, rounded with 1.5 whorls. Terminal lip thin, slightly curved	Faint, low cords	Axially striate with faint striae	2.39
<i>A. ponderi</i> Radwin & D'Attilio, 1976	9.9	Small with 1.5 whorls	Broad, low cords	Finely cancellate	2.36
<i>A. thomassini</i> Houart, 1985	7.9	Broad with 1.5 whorls	Single, low cord	Finely cancellate	1.98

Table 1. Characteristics of selected *Aspella* from observations and original descriptions. Sizes shown are that of the holotypes.

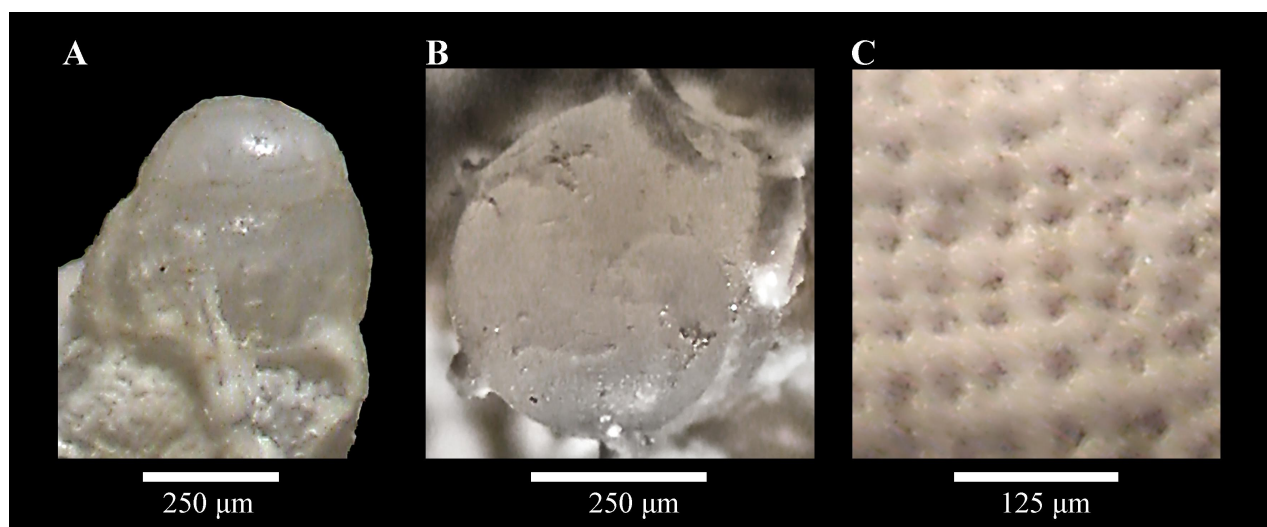


Figure 2. *Aspella pacifica* sp. nov., A-B. Close-up of protoconch; C. Close-up of intritalcalx.

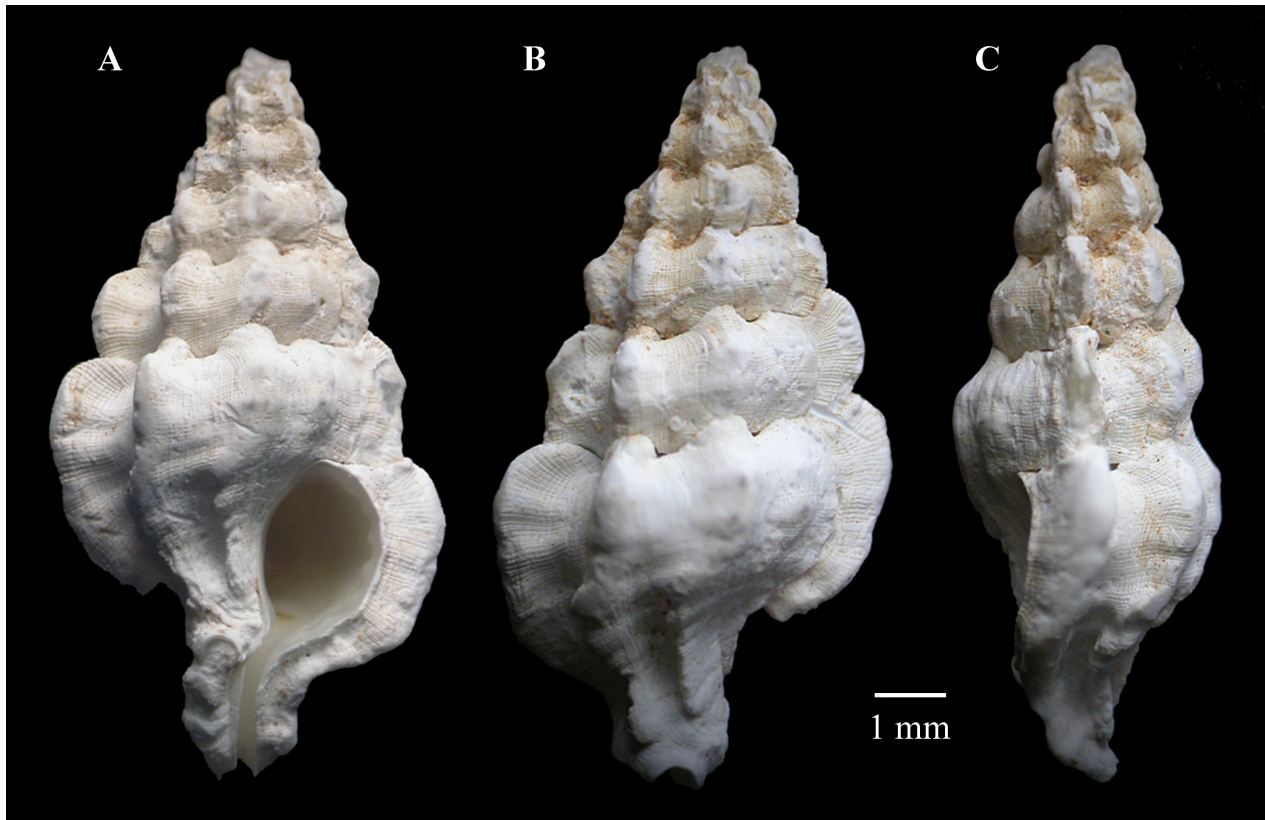


Figure 3. *Aspella pacifica* sp. nov., A-C. Paratype 2, CASIZ 233128, 10.7 mm in length.

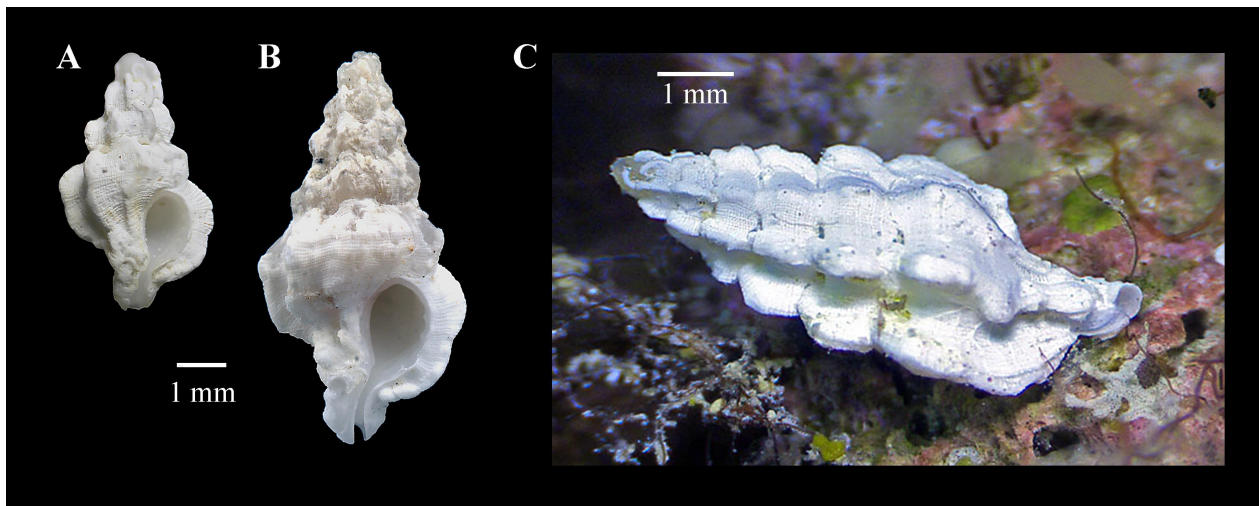


Figure 4. *Aspella pacifica* sp. nov., A. Paratype 1, LACM 3865, 5 mm in length; B. Paratype 3, UF 566589, 8.3 mm in length; C. Holotype, *In situ* on reef.