

# Four new genera for northeastern Pacific gastropods

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## ABSTRACT

Four new genera for northeastern Pacific Gastropoda are proposed: Velutinidae: *Torellivelutina*, type species "*Torellia*" *ammonia* Dall, 1919; Eulimidae: *Subniso*, type species "*Chemnitzia*" *rangi* de Folin, 1867; Turridae, Clathurellinae: *Retidrillia*, type species "*Suavodrillia*" *willetti* Dall, 1919; Mangeliinae: *Perimangelia*, type species "*Mangelia*" *interfossa* Carpenter, 1864.

*Additional key words:* Gastropoda, Eulimidae, Turridae, Velutinidae.

## INTRODUCTION

This is the third in a series of papers in which new genera for northeastern Pacific gastropods are introduced (see McLean, 1995a, b). I had previously indicated (McLean, 1995a) that a checklist of the northeastern Pacific gastropods was in preparation; however, as indicated in McLean (1996: 2), I am preparing a more complete work rather than a checklist. Taxa described here are to be used in an illustrated revision of all shelled gastropods of the northeastern Pacific, ranging from Arctic Alaska and the Aleutian Islands to central Baja California, Mexico. Description of these genera in advance of the book allows for a more detailed treatment than will be possible in the larger effort. Further papers in this series will describe genera in which the type species or other included species are new.

To distinguish original combinations for type species of the new genera I am here using the convention of placing all citations of original genera within quotation marks. Illustrations are provided here for type species of each new genus.

Although monotypic genera are not encouraged in phylogenetic classifications, I do not refrain from introducing a few such genera where necessary, allowing that additional living or fossil species may yet be discovered that would render those genera no longer monotypic.

Museum acronyms are: LACM, Natural History Museum of Los Angeles County; USNM, National Museum of Natural History, Washington.

## SYSTEMATICS

Family Velutinidae Gray, 1840

Genus *Torellivelutina* new genus

**Type species:** "*Torellia*" *ammonia* Dall, 1919 (Figure 1). The shriveled holotype from offshore depths at the Aleutian Islands, Alaska, was illustrated by Warén (1989: 16, fig. 11f). A more recently collected, preserved specimen from the Aleutian Islands is illustrated here.

**Included species:** The genus is monotypic.

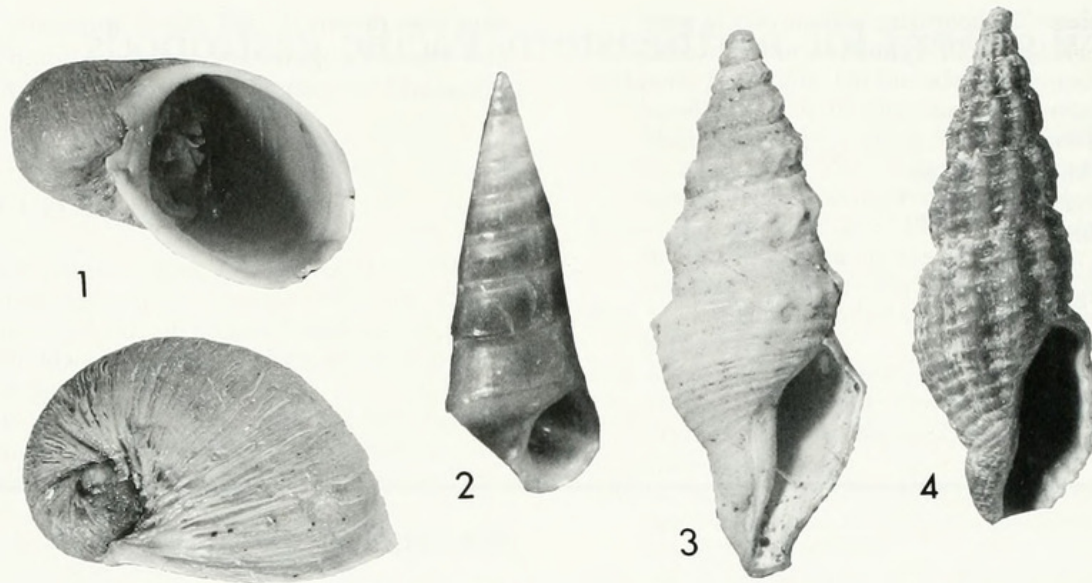
**Diagnosis:** Shell large (to 30 mm diameter), apical whorl depressed, profile nearly planispiral, of two rapidly inflated whorls, calcareous layer lacking in large specimens except for that which borders the apertural lip; shell consisting of chitinous periostracum after attaining 3 mm diameter; protoconch with spiral sculpture (according to original description of Dall); suture deep, umbilicus broad; mature surface composed of thick, chitinous, colabral axial lamellae.

**Remarks:** Warén (1989: 16) examined the type species for purposes of comparison with his then described new genus and species *Pseudotorellia fragilis* from Iceland. He illustrated the radula of "*Torellia*" *ammonia* (*op. cit.*, fig. 11C), which he found to agree with that of other velutinid radulae, and reported that the operculum and other trichotropine features are lacking. Although Warén removed "*T.*" *ammonia* from the trichotropid genus *Torellia*, and transferred it to the Velutinidae, he did not assign it to a genus. *Torellivelutina* is therefore here proposed for "*T.*" *ammonia*. It differs from *Pseudotorellia* in not having a solid calcified shell with spiral sculpture and not having the large, projecting protoconch of *Pseudotorellia*.

Because the calcareous layer is lacking, fresh specimens of *Torellivelutina ammonia* should be retained in fluid preservative and should not be dried, which results in the shrinkage and buckling of the thick periostracal layer.

**Etymology:** The name is a compound of the trichotropid genus *Torellia* and the velutinid genus *Velutina*,





**Figures 1–4.** Type species of new genera. **1.** *Torellivelutina ammonia* (Dall, 1919), apertural and spire views. LACM 152281, Kanaga Pass, between Kanaga Island and Tanaga Island, Andreanof Islands, Aleutian Islands, Alaska, 61 m. Maximum diameter 30 mm. **2.** *Subniso rangi* (de Folin, 1867). LACM 1972-38.7, Punta Penca, N of Bahia Potrero, Guanacaste Prov., Costa Rica, 10 m. Length 3.2 mm. **3.** *Retidrillia willetti* (Dall, 1919). USNM 216409, lectotype. Forrester Island, southeast Alaska, dredged. Length 11.5 mm. **4.** *Perimangelia interfossa* (Carpenter, 1864). LACM 1959-13.42, Granite Creek, Monterey County, California, 10 m. Length 8.5 mm.

to emphasize that it represents a velutinid with the superficial aspect of the trichotropid genus *Torrellia*.

Family Eulimidae Philippi, 1853  
Genus *Subniso* new genus

**Type species:** “*Chemnitzia*” *rangi* de Folin, 1867 (Figure 2). Type locality: Perlas Islands, Panama. Warén (1992: 183) could not locate type material, but the species was well figured by de Folin and subsequently by Warén (1992, figs. 17, 20–22, 25–27, 30, 31), so there is little doubt as to its identity. The species occurs from southern Baja California, Mexico, to Ecuador.

**Included species:** Two species, the type species and “*Niso*” *hipolitensis* Bartsch, 1917, for which the holotype from Punta San Hipolito, Baja California, Mexico, was illustrated by Emerson (1965, fig. 9) and Warén (1992: figs. 19, 23, 24). Both species have previously been placed in *Niso* Risso, 1826, by Emerson (1965) and Warén (1992).

**Diagnosis:** Shell small (length to 4 mm), slender (length to breadth ratio 2.5–2.9), non-umbilicate, basal angulation pronounced, coloration brown, without color pattern.

**Remarks:** The two species of *Subniso* are unlike other species of *Niso* in size, profile, and color. The two species are small, non-umbilicate, and have a basal angulation (strongly projecting in *Subniso rangi*) and a uniform brown coloration. Warén (1992: 185) remarked: “Both *Niso hipolitensis* and *N. rangi* are unusual among the species of *Niso* in their small size, 3–4 mm shell height,

whereas most species of the genus have a shell that is 10–30 mm high, occasionally even higher.” Additionally, I point out that *Niso* species are usually broadly umbilicate, except for the large *N. attilloi* (Hertz and Hertz, 1982), usually not angulate at the base, and have color patterns that may be banded or variegated. Taken together, these differences are sufficient to justify generic recognition of *Subniso*.

Warén (1992: 183) noted that a starfish host is known for one Indo-Pacific species of *Niso*, but nothing is known of the host echinoderm for the two species of *Subniso*.

**Etymology:** The generic name combines the generic name *Niso*, with the prefix *sub*-, to emphasize the small size, compared to *Niso*.

Family Turridae Swainson, 1840  
Subfamily Clathurellinae H. and A. Adams, 1858  
Genus *Retidrillia* new genus

**Type species:** “*Suavodrillia*” *willetti* Dall, 1919 (Figure 3). Type locality: Forrester Island, Southeast Alaska. Until now the species has been unfigured (it was not illustrated by Kosuge, 1972). The here selected lectotype (Figure 7) is the largest (11.3 mm) of seven original syntype specimens in the type lot. The radular tooth of the type species was figured by McLean (1971, fig. 114) (from LACM 66-66, Graham Island, Queen Charlotte Islands, British Columbia). A specimen from the Rae Baxter collection in the LACM extends the distribution to Akutan, Aleutian Islands (LACM 83-345, 263 m depth).



**Included species:** At least three species, the type species and two species from the northeastern Atlantic discussed and illustrated by Bouchet and Warén (1980: 32) in the genus *Drilliola* Locard, 1897: "*D.*" *pruina* (Watson, 1881), and "*D.*" *megalacme* (Sykes, 1906).

**Diagnosis:** Shell profile with concave shoulder and projecting peripheral carination below which base is rounded and has strong spiral sculpture. Anal sinus on concave shoulder, deep and broad. Axial sculpture expressed as nodes, strongest at peripheral carination, more faintly expressed on strong spiral cords of base. Peripheral carination of early whorls at midwhorl. Protoconch paucispiral, with early development of peripheral carination. Radular tooth long, harpoon-like, with broad base.

**Remarks:** The type species was described in the genus *Suavodrillia* Dall, 1918 (type species: "*Drillia*" *kennicotti* Dall, 1871), with which it shares the long harpoon-like radular tooth. Dall (1921: 69) indicated doubt that "*S.*" *willetti* was congeneric by placing a question mark preceding the genus. Differences are that *Retidrillia willetti* and the two additional species here assigned to the genus are half the size of *S. kennicotti*, and have sculpture that is axial and spiral, rather than strictly spiral as in *Suavodrillia*. The newly restricted *Suavodrillia* is monotypic for *S. kennicotti*, a species broadly distributed in the north Pacific from Hokkaido, Japan, the Kurile and Aleutian Islands, and the Gulf of Alaska to Southeastern Alaska.

Bouchet and Warén (1980: 32) retained "a wide variety of species" in *Drilliola*, including those that "look rather different but have a similar radula and operculum." They elected "to keep them in *Drilliola* rather than placing them in any of the perhaps more similar, but anatomically unknown genera listed by Powell (1966) in different subfamilies." Species typical of *Drilliola* are more slender than those of *Retidrillia* and do not have the broad, excavated shoulder. The proposal of *Retidrillia* thus provides a genus with a type species having known radular characters for the two species cited by Bouchet and Warén (1980).

On shell characters, *Retidrillia* resembles species assigned to *Plicisyrinx* Sysoev and Kantor, 1986, in which the radular tooth is of the modified wishbone type, indicative of the less derived turrid subfamily Cochlespiinae.

**Etymology:** The name is a compound of *reti-*, meaning net, with reference to the axial and spiral sculpture, and *Drillia* Gray, 1838, one of the earliest named of turrid genera.

Subfamily Mangeliinae Fischer, 1883  
Genus *Perimangelia* new genus

**Type species:** "*Mangelia*" *interfossa* Carpenter, 1864 (Figure 4). Syntypes were figured by Palmer (1958, pl. 27, figs. 5, 6). Also figured by McLean (1969; 1978, fig.

30-4). Synonym: "*Mangelia*" *interlirata* Stearns, 1872. The species occurs from Clallum County, Washington, to Isla San Geronimo, Baja California, Mexico, based on specimens in the LACM collection.

**Included species:** Two species, the type species and the less familiar "*Mangelia*" *nitens* Carpenter, 1864 (syn-type figured by Palmer, 1958, pl. 28, fig. 1). It ranges from Sonoma County, California, to Ensenada, Baja California.

**Diagnosis:** Shell relatively small and slender with dominant axial sculpture, crossed by narrow spiral cords of lesser strength. Protoconch of 1.5 whorls, strongly projecting, smooth at first, developing fine spiral sculpture after first half whorl, followed by weaker axials (axials more numerous than that of mature sculpture), changing imperceptibly to adult sculpture.

**Remarks:** Earlier (McLean, 1978: 74), I placed the type species of the new genus ("*Mangelia*" *interfossa*) along with "*Daphnella*" *fuscoligata* Dall, 1871 in *Clathromangelia* Monterosato, 1884. I now consider *Clathromangelia* (type species "*Pleurotoma*" *granum* Philippi, 1844; see Powell, 1966: 106) to be appropriate for two species in southern California: "*Daphnella*" *fuscoligata* and "*Mangilia* (*Clathromangelia*)" *rhyssa* Dall, 1919. These two species have coarse clathrate sculpture and relatively low, paucispiral protoconchs.

*Perimangelia* differs from the two species of *Clathromangelia* in having numerous, narrow spiral cords overriding the dominant axial ribs, rather than having coarsely clathrate sculpture with nodes at intersections. Protoconchs differ: the paucispiral protoconch of the two species of *Perimangelia* is strongly projecting, whereas the paucispiral protoconch of the two species of *Clathromangelia* is much lower.

**Etymology:** The name combines the prefix *peri-* (near) with *Mangelia* Risso, 1826, one of the oldest genera in the subfamily Mangeliinae.

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