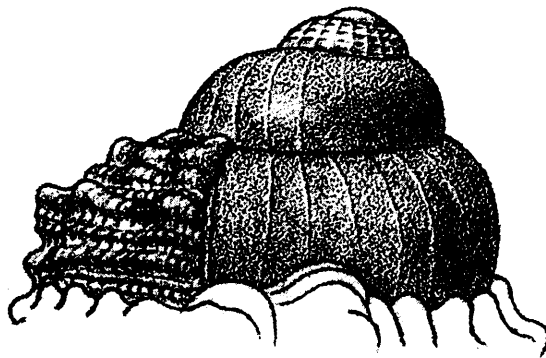


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*Indo-West Pacific Ranellidae, Bursidae  
and Personidae (Mollusca: Gastropoda)*

*A monograph of the New Caledonian fauna  
and revisions of related taxa*



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70 figs

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*Résultats des Campagnes MUSORSTOM, Volume 19*

***Indo-West Pacific  
Ranellidae, Bursidae and Personidae  
(Mollusca: Gastropoda)***  
*A monograph of the New Caledonian fauna  
and revisions of related taxa*

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ÉDITIONS  
DU MUSÉUM  
PARIS

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DIMENSIONS. — Kusui, Nada-cho, NZGS WM15544: H 35.0, D 16.4. - Off Tanabe, NZGS WM13843: H 38.9, D 18.0. - Off Cape Ashizuri, Shikoku, NSMT 48848: H 64.4, D 27.8. - Bohol Straits, NZGS WM15037: H 62.8, D 25.4. - Punta Engaño, Cebu, NZGS WM13184: H 55.9, D 20.0. - New Caledonia, SMIB 4: sta. DW53: H 49.7 (incomplete), D 22.0. - SMIB 8: sta. DW154: H 61.4, D 25.4.

REMARKS. — Specimens here included in *Cymatium tenuiliratum* are quite variable in a number of characters. Most specimens I have seen from Japan are distinctive in having all primary spiral cords deeply subdivided into two closely spaced cords by a deep median groove, but one specimen (NZGS WM15544) has only the uppermost, peripheral cord subdivided, and the rest single. Japanese specimens are also distinctive in their generally darker, warm pale red-brown coloration than Philippines shells (most of which are cream to pale fawn), and their slightly lower spires, less compressed nodules, and thicker varices than specimens from outside Japan. A specimen in the Whitehead Colln from 50-60 m, Tokyo Bay, is particularly robust and heavily nodulous, with an unusually short spire and unusually prominent spiral cords, so that it strongly resembles in almost all characters the Italian Pliocene *C. distortum* (Brocchi, 1814). *C. distortum* has the bifid cords, elongate shape and flat-faced, thin varices of *C. tenuiliratum*, but differs in having the two uppermost spiral cords much more closely spaced than the others, whereas they are all equally spaced in *C. tenuiliratum*; this has the effect of forming a raised peripheral zone bearing four closely spaced, narrow cords in some specimens of *C. distortum*. It appears feasible that *C. distortum* was the immediate ancestor of *C. tenuiliratum*.

Whereas most Philippines specimens assigned to *Cymatium tenuiliratum* differ from Japanese ones in their undivided or, at most, very faintly grooved spiral cords, as well as their paler coloration, more elongate shape, narrower nodules, and thinner, more expanded varices, all seven specimens in the present collections from New Caledonia have all primary and spiral cords on the last whorl and on the siphonal canal finely subdivided by a very narrow, shallow median groove. The single Indian Ocean specimen seen (NZGS WM13152) is a small shell (H 21.4, including an unusually large, tall protoconch) which also has all primary cords weakly subdivided by a shallow median groove. At first it appeared likely that Japanese, Philippines and New Caledonian shells represent three distinct species, but this range of variation is difficult to interpret until more material is available from a wider area and the variation of Japanese shells is better known, and at present it seems best to treat all these specimens as falling into the single species *C. tenuiliratum*. It is possible that the apparent differences result largely from Japanese specimens having been collected in shallower water than most others.

KURODA *et al.* (1971: 127) and OYAMA (1973: 36) referred this species to *Reticutriton*, where it had also been mentioned by HABE & KOSUGE (1966b: 315, Japanese text only). *Cymatium (Reticutriton)* is regarded here as a useful subgenus for a few species with unusually numerous spiral cords - the type species, *C. pfeifferianum*, has 10-11 prominent, narrow cords on the terminal varix and, correspondingly, 11-12 high, narrow ridges inside the outer lip. The only other included species are *C. lineatum* (Broderip, 1833), Galapagos Islands, and its close relative, the Californian Pliocene "*Gyrineum*" *elsmerense* English (1914: 215). The *C. tenuiliratum* group has the characters of tall species of *C. (Monoplex)* and in my opinion its resemblance to *C. pfeifferianum* is superficial.

### *Cymatium (Monoplex) pharcidum* (Dall, 1889)

*Lampusia? pharcida* Dall, 1889: 227, pl. 36, fig. 2.

*Cymatium pharcidum* - GARCIA-TALAVERA, 1983: 115, pl. 4, fig. 4. — FINLAY & VINK, 1982: 133. — GARCIA-TALAVERA, 1987: 251, pl. 2, fig. 2.  
*Cymatium (Septa) krebsii* - CLENCH & TURNER, 1957: 220, pl. 124, fig. 3 (in part; not *Triton krebsii* Mörch, 1877).  
*Cymatium (Cabestana) tenuiliratum* - NORDSIECK & GARCIA-TALAVERA, 1979: 120, pl. 25, fig. 14.  
*Cymatium (Turrutriton) tenuiliratum* - BEU, 1985: 60. — HENNING & HEMMEN, 1993: 104 (in part).

TYPE DATA. — Holotype USNM 94887, from "Blake" sta. 293, 150 m, off Barbados, Caribbean.

OTHER MATERIAL EXAMINED. — **Bermuda**, 2.5 miles off the southern shore of Bermuda, 220 m, coll. A. Guest & J.R.H. Lightbourn (1 DMNH 96981; 5 DMNH). — Same data, pres. R. Jensen (1 NZGS WM12447).

DISTRIBUTION. — Western Atlantic, seen only from Barbados and Bermuda, but probably sparsely distributed through the western Caribbean; eastern Atlantic: La Palma, Canary Islands (NORDSIECK & GARCIA-TALAVERA, 1979: 120; GARCIA-TALAVERA, 1983: 115, pl. 4, fig. 4; 1987: 251).



FIG. 42. — *Cymatium* (*Reticutriton*) and *C. (Turrutriton)* species. — a-g, *Cymatium (Reticutriton) pfeifferianum* (Reeve). a-c, syntypes of *Triton pfeifferianus*, BMNH 1967596, without locality, x0.9. a, c, paralectotypes. b, lectotype, BMNH 1967596/1, REEVE's figured syntype. d, typical large adult, NZGS WM13877, trawled, Gulf of Carpentaria, northern Australia, x1. e, juvenile to show large *C. (Reticutriton)* protoconch, NZGS WM14250, Mactan I., Cebu, Philippines, x3. f-g, lectotype (f) and paralectotype (both figured by REEVE) of *Triton gracilis* Reeve, BMNH 1966543/1 & 2, "Philippine Islands", x1.5. — h-l, *Cymatium (Reticutriton) elsmerense* (English), LACM Invert. Paleo. locality 305, K Ranch, Palm City, near Mexican border, San Diego Co., California, Pliocene, all x1.5. — m-o, *Cymatium (Turrutriton) labiosum* (Wood), all x2. m, LAGON: sta. 296, Grand Récif Sud, New Caledonia, 26 m. n, LAGON: sta. 1143, Belep Islands, New Caledonia, 54 m. o, SMIB 6: sta. DW106, Grand Passage, New Caledonia, 165-195 m.

h = 12787.  
i, j, k = 12788.  
l = 12789.



species REEVE (1844a) named *Triton pfeifferianus*. As first reviser, I select *Triton pfeifferianus* as the valid name to be used for the species named both *Triton pfeifferianus* and *Triton gracilis* by REEVE (1844a).

*Cymatium pfeifferianum* is easily recognised by its elongate form, with both a tall spire and a long anterior siphonal canal, by its obvious but fine, reticulate sculpture of many, narrow spiral cords crossed by numerous low, closely spaced axial ridges, by bearing an unusually large number (11-12) of narrow, prominent, closely spaced, long transverse ridges inside the outer lip, by its strongly convex whorls, and by its large, obvious protoconch (Fig. 42 e), conical and multiwhorled as in other *Cymatium* species, but much lower and wider than in most others. It is moderately variable in spire height, in the presence and prominence of nodules (some specimens have 2 or 3 prominent nodules in each intervariceal interval, whereas others lack them) and in the prominence of the fine axial ridges. The holotype of *Cymatium bayeri* is a very short, stout specimen of *C. pfeifferianum* with unusually weak axial ridges, but similar specimens can be found in modern samples. Several other species, occurring fossil in the Philippine Islands, have since been misidentified as *C. bayeri* (*C. vespaceum*, KANNO *et al.*, 1982; *C. aquatile*, POPNOE & KLEINPELL, 1978).

The endemic Galapagos Islands species *Cymatium lineatum* is the only other living species that seems referable to *C. (Reticutriton)*. It differs from *C. pfeifferianum* in its wider and shorter shape and its darker purplish red-brown colour, but has similarly inflated whorls and reticulate sculpture, 10-12 ridges inside the outer lip, and a widely conical protoconch. The only other species I am aware of that is referable to *C. (Reticutriton)* is "*Gyrineum*" *elsmerense* English (1914: 215), from the Pliocene of San Diego, California; it is similar to *C. pfeifferianum* in many characters, but shorter, with slightly coarser reticulate sculpture, and with very prominent varices (Figs 42 h-l).

#### Subgenus *SEPTA* Perry, 1810

*Septa* Perry, 1810: caption to pl. 2. Type species (by monotypy): *Septa scarlatina* Perry, 1810 [= *Murex rubecula* Linné, 1758], Recent, Indo-West Pacific.

*Simpulum* Mörch, 1852: 108. Type species (SD by CLENCH & TURNER, 1957: 214): *Murex rubecula* Linné, 1758. [Not a junior homonym of *Simpulum* Fabricius, 1823, introduced in a work placed on the Official Index by ICZN Opinion 521].

REMARKS. — The species of *Cymatium (Septa)* were revised by BEU (1987: 274-291). ARTHUR & GARCIA-TALAVERA (1990) have since added the species *C. mixtum*. Little new can be added here to these reviews.

#### *Cymatium (Septa) hepaticum* (Röding, 1798)

Fig. 23 p

*Tritonium hepaticum* Röding, 1798: 126.

*Triton rubecula* var.  $\gamma$  - REEVE, 1844 a: pl. 9, fig. 29 d.

*Triton rubecula* - KIENER, 1842: 20, pl. 18, fig. 2.

*Cymatium hepaticum* - KURODA & HABA, 1952: 51. — CERNOHORSKY, 1967a: 317, pl. 44, fig. 14; 1967b: 48, pl. 4, fig. 14. — HINTON, 1972: 12, pl. 6, fig. 10. — SALVAT & RIVES, 1975: 305, fig. 170 (in part, second fig. only). — HINTON, 1978: pl. 30, fig. 6. — ABBOTT & DANCE, 1982: 123, second fig. from left in bottom row. — SALVAT *et al.*, 1988: 103, pl. 13, fig. 6.

*Septa hepatica* - RIPPINGALE & MCMICHAEL, 1961: 63, pl. 6, fig. 29. — HABA, 1964: 72, pl. 22, fig. 11. — HABA & KOSUGE, 1966: 42, pl. 15, fig. 9. — WILSON & GILLET, 1971: 78, pl. 53, figs 11-11 a.

*Cymatium (Septa) hepaticum* - SHIKAMA, 1963: pl. 47, fig. 4. — ARTHUR, 1983a: 8 (in part). — BEU, 1985: 59. — SPRINGSTEEN & LEOBRERA, 1986: 113, pl. 30, fig. 19. — BEU, 1987: 282, figs 29-36. — ARTHUR & GARCIA-TALAVERA, 1990: 5-6, fig. in row 3, D-E, 8. — HENNING & HEMMEN, 1993: 92, pl. 19, fig. 9. — WILSON, 1993: 247, pl. 42, figs 16 a-b.

TYPE DATA. — Neotype (designated by BEU, 1987: 282), USNM 124168, from Mauritius I., Indian Ocean.

NEW CALEDONIA RECORDS. — New Caledonia. EXPÉDITION LAGON DE NOUMÉA: sta. 1352.  
MONTROUZIER: sta. 1245, 1290 (Fig. 23 p), 1311, 1316, 1318, 1331. — Local depth range intertidal to 27 m (alive).

DISTRIBUTION. — *Cymatium hepaticum* occurs throughout the Indo-West Pacific province, from the southern Great Barrier Reef north to the Ryukyu Islands, southern Japan, and from East Africa eastwards to eastern Polynesia (SALVAT & RIVES, 1975: 305, left fig. in fig.-170; Marquesas Islands) but I am aware of no records