

Nassarius boucheti spec. nov., a deep water species from the western Pacific
(Gastropoda, Prosobranchia, Nassariidae)

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A new *Nassarius* deep water species is described from the western Pacific. The material was collected during several expeditions of the Muséum national d'Histoire naturelle, Paris.

Key words: Gastropoda, Prosobranchia, Nassariidae, *Nassarius*, taxonomy, western Pacific, Chesterfield Islands, New Caledonia, Vanuatu, Fiji Islands, Tonga Islands.

During several expeditions of the Muséum national d'Histoire naturelle, Paris, samples of a *Nassarius* species were collected from deep waters in the western Pacific. A new species is described on the basis of this material.

Abbreviations: HHK, collection H.H. Kool, Dieren, The Netherlands; MNHN, Muséum national d'Histoire naturel, Paris; RMNH, Nationaal Natuurhistorisch Museum, Leiden, The Netherlands; ZMA, Zoölogisch Museum, University of Amsterdam, The Netherlands.

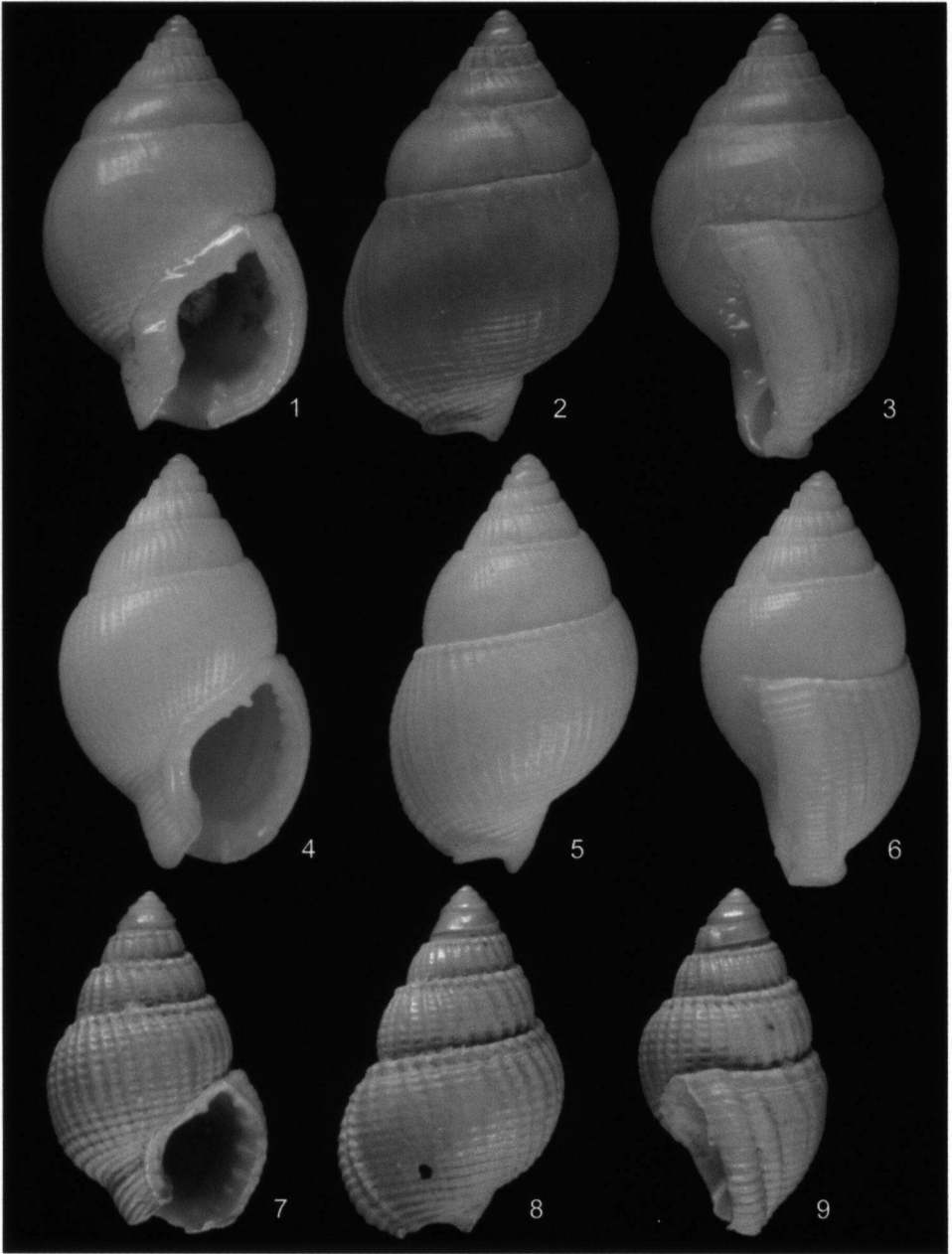
Subfamily Nassariinae Iredale, 1916
Genus *Nassarius* Duméril, 1806

Nassarius boucheti spec. nov. (figs 1-6)

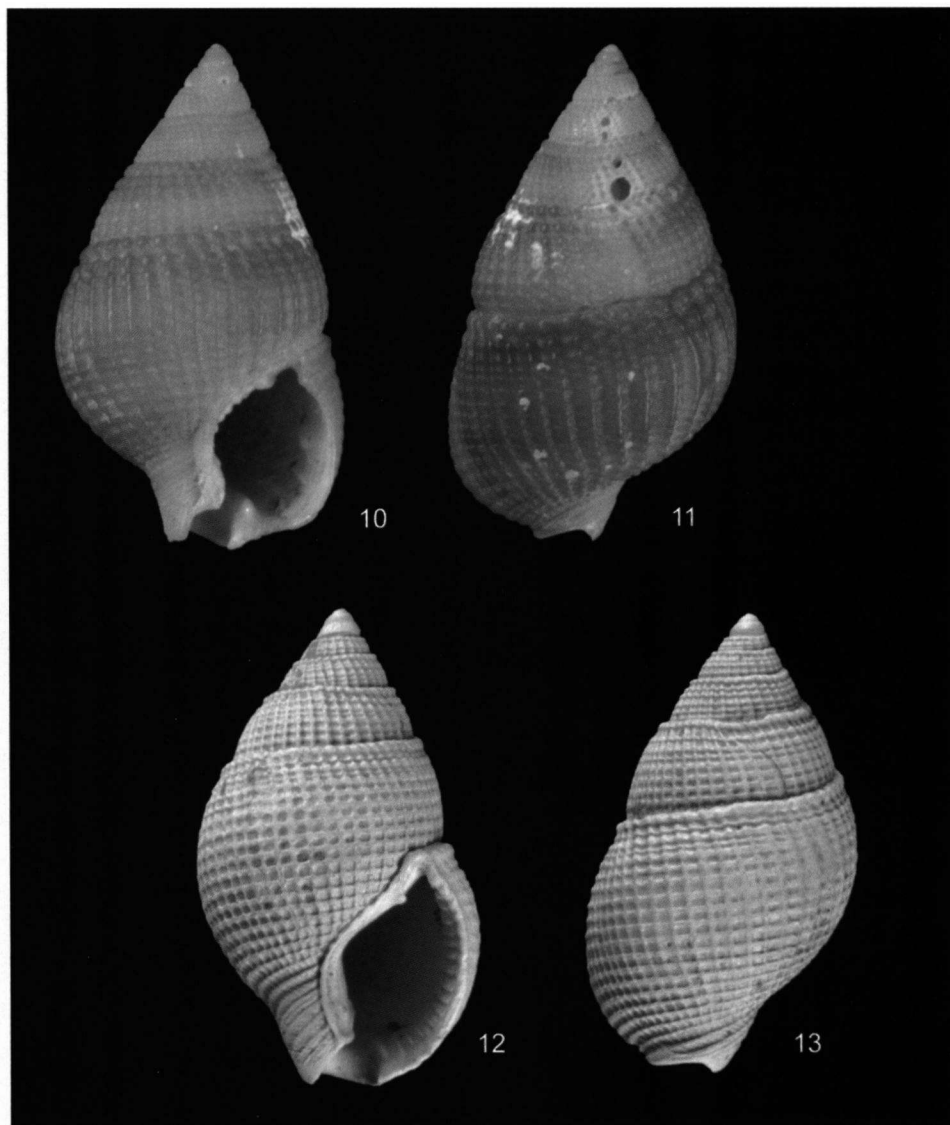
Material examined (paratypes, unless indicated otherwise); the co-ordinates of the localities are preceded by the station codes. – New Caledonia, campagne BATHUS 1, CP 698, east coast, 20°34'S 164°57'E, 491-533 m, 17.iii.1993 (MNHN [no number] holotype, 27; ZMA Moll. 4.04.005/1; RMNH 97441/1; HHK 104.01/2).

Chesterfield Islands: MUSORSTOM 5, 381, 19°38'S 158°47'E, 620 m, 21.x.1986 (MNHN/1, '*Nassarius crebricostatus* [Schepman]').

New Caledonia: campagne BATHUS 1: CP 656, 21°13'S 165°54'E, 452-460 m (MNHN/1; HHK 104.04/2); CP 658, 21°13'S 165°55'E, 515-580 m, 12.iii.1993 (MNHN/1); DW 683, 20°35'S 165.07'E, 380-400 m, 16.iii.1993 (MNHN/4); CP 695, 20°36'S 164°58'E, 410-430 m, 17.iii.1993 (MNHN/7, 1 in alc.); CP 698, 20°34'S 164°57'E, 491-533 m, 17.iii.1993 (MNHN/2 in alc.); CP 702, 20°35'S 165°35'E, 591-660 m, 18.iii.1993 (MNHN/2); CP 707, 21°43'S 166°36'E, 347-375 m, 19.iii.1993 (MNHN/1). BATHUS 2: DW 731, 22°49'S 166°45'E, 300-370 m, 13.v.1993 (MNHN/1); DW 733, 22°55'S 166°49'E, 520 m, 13.v.1993 (MNHN/1); DW 754, 22°23'S 166°13'E, 577-780 m, 16.v.1993 (MNHN/1); CP 760, 22°19'S 166°11'E, 455 m, 16.v.1993 (MNHN/1); CP 761, 22°19'S 168°11'E, 490-500 m, 16.v.1993 (MNHN/1); CP 770, 22°10'S 166°04'E, 400-402 m, 18.v.1993 (MNHN/1). BATHUS 4: DW 885, 22°05'S 165°58'E, 250-300 m, 1.viii.1994 (MNHN/1); DW 887, 21°07'S 164°28'E, 320-344 m, 2.viii.1994 (MNHN/1); DW 945, 20°12'S 164°34'E, 530-620 m, 9.viii.1994 (MNHN/2); CP 947, 20°34'S 164°58'E, 470-490 m, 10.viii.1994 (MNHN/7); CP 948, 20°33'S 164°57'E, 10.viii.1994 (MNHN/9, 3 in alc.). MUSORSTOM 4: CC 246, 22°08'S 167°11'E, 410-420 m, 3.x.1985 (MNHN/8, 2 in alc.); CC 247, 22°09'S 167°13'E, 435-460 m, 4.x.1986 (MNHN/1, 1 in alc.; both '*N. crebricostatus* [Schepman, 1911]'). BIOGECAL DW 253, 21°32'S 166°29'E, 310-315 m, 16.iv.1987 (MNHN/1, '*Nassarius abyssicohus* A. Adams, 1852'; MNHN/2). BIOCAL: DW 104, 21°31'S 166°21'E, 375-450 m, 8.ix.1985 (MNHN/1, '*Nassarius crebricostatus* [Schepman, 1911]', B. Richer-ORSTOM coll., Passe de Boulari, 400 m, 20.iii.1988; MNHN/1). MUSORSTOM 6: 20°48'S 167°10'E, 420 m, 13.ii.1989 (MNHN/1, '*Nassarius abyssico-*



Figs 1-9. *Nassarius* spec. 1-6, *N. boucheti* spec. nov. 1-3, holotype (MNHN), New Caledonia, Campagne BALT-HUS 1, CP 698, east coast, 20°34'S 164°57'E, 491-533 m, 17.iii.1993, length 9.6 mm; 4-6, paratype (MNHN), Coral Sea, Chesterfield, MUSORSTOM 5, 381, 19°38'S 158°47'E, 620 m, 21.x.1986, length 9.9 mm. 7-9, *N. crebricostatus* (Schepman, 1911), lectotype (ZMA Moll. 3.11.051), Indonesia, SIBOGA Expedition, 139, Molucca Passage, 0°11'S 127°25'E, 397 m, 22.ii.1900, length 6.7 mm.



Figs 10-13. *Nassarius* spec. 10-11, *N. abyssicolus* (A. Adams, 1852), expédition MONTROUZIER, New Caledonia, Sector of Koumac, Passe Deverd, 1319, 2°044.7'S 164°15.5'E, 15-20 m, ix/x.1993, length 12 mm (MNHN). 12-13, *N. nakayamai* (Habe, 1958), TAIWAN 2001, CP 102, NE-coast Taiwan, off Tashi, 24°48.4'N 122°08.0'E, 326-331 m, length 10.9 mm (MNHN).

lus [A.Adams, 1852]). HALIPRO 1: CP 865, 21°26'S 166°17'E, 550 m, 22.iii.1994 (MNHN/1). VAUBAN: 40, 22°30'S 166°24'E, 250-350 m, (MNHN/1, '*Nassarius abyssicolus* [A. Adams, 1852] smooth form').

Vanuatu: MUSORSTOM 8, DW 1060, 16°14'S 167°21'E, 375-397 m, 2.x.1994 (MNHN/2).

Fiji Islands: MUSORSTOM 10: CP 1316, 17°14'5"S 178°22'0"E, 478-494 m, 6.viii.1998 (MNHN/1); CP 1348, 17°30'2"E, 353-390 m, 11.viii.1998 (MNHN/1); CP 1360, 17°59'04"S 178°48'04"E, 402-444 m, 13.viii.1998 (MNHN/4); DW 1365, 18°12'04"S 178°32'02", 295-302 m, 15.viii.1998 (MNHN/1). BORDAU 1: CP 1468, 18°16'S 178°41'W, 478-500 m, 7.iii.1999 (MNHN/2; HHK 104.02/2); CP 1503, 18°12'S 178°35'W, 430 m, 13.iii.1999 (MNHN/1); DW 1425, 17°17'S 179°01'W, 400-416 m, 1.iii.1999 (MNHN/1); DW 1489, 18°53'S 178°30'W, 440-450 m, 11.iii.1999 (MNHN/1); DW 1499, 389-400 m (MNHN/1).

Tonga Islands: BORDAU 2: CP 1510, 461-497 m (MNHN/1); CP 1644, 21°05'S 175°23'W, 501 m, 22.vi.2000 (MNHN/1); DW 1520, 21°25'S 175°03'W, 447-450 m, 1.vi.2000 (MNHN/1); DW 1569, 21°02'S 175°19'W, 433 m (MNHN/1; HHK 104.03/1; MNHN/1); DW 1570, 21°02'S 175°19'W, 533-578 m, 10.vi.2000 (MNHN/1); DW 1601, 20°50'S 174°57'W, 200-487 m, 15.vi.2000 (MNHN/1).

Description of holotype.— Shell height 9.6 mm, width 5.7 mm. Protoconch with 2 1/2 broad, strongly keeled whorls; teleoconch of 4 1/3 convex whorls. The initial 1 1/3 teleoconch whorls with rather prominent ribs, which become obsolete on the next 1/2 whorl; following 2 1/2 whorls microscopically, axially striate, inflated and rotund, slightly ledged at suture. All whorls of the teleoconch with a weak subsutural incision. Axial striae on the body whorl, becoming stronger near the broad varix. From the periphery to the base about 11 weak spiral incisions, strongest near and on the varix; siphonal area with 5-6 cords. Outer lip with 7 denticles inside, most prominent at the periphery and near the siphonal canal. Aperture ovate; columellar callus extending partly over the body whorl and the plicate parietal wall. The last 'fold' is a moderate to strong parietal denticle. Anal canal prominent. Colour of fresh specimens orange yellowish, somewhat darker at dorsum. Dead specimens whitish. Aperture yellowish or white, outer lip and columella shiny white. Operculum yellow, small, and partly serrated.

Habitat.— *Nassarius boucheti* spec. nov. is a deep water species, known from 250-780 m. Live taken specimens are from 491-533 m.

Ethymology.— Named after Dr. Philippe Bouchet, curator of Mollusca in MNHN, leader of many malacological expeditions to New Caledonia and other western Pacific countries.

Variability.— The species is not very variable. The shell height varies between 8.3 and 11.7 mm. The shells are very uniform in shape and colour. Some specimens have macroscopic spiral incisions all over the body whorl, most prominent in the paratype from the Chesterfield Islands (figs 4-6), which has a somewhat stronger axial and spiral sculpture over the entire shell, however, without forming beads or nodules.

Distribution.— Chesterfield Islands, New Caledonia, Vanuatu, Fiji Islands, Tonga Islands.

Discussion.— The new species is somewhat similar in shape to *Nassarius barsdelli* Ladd, 1976, also a deeper water species from New Caledonia, but it differs clearly in size and sculpture so that misidentification is impossible. Former incorrect identifications of the new species are *Nassarius (Zeuxis) abyssicolus* (A. Adams, 1852) and *N. crebricostatus* (Schepman, 1911) (Cernohorsky, 1991: 200).

N. abyssicolus (A. Adams, 1852) (figs 10-11), is also a species from the Philippines, additionally occurring in New Caledonia. The holotype is figured by Cernohorsky (1984: pl. 35-1), a syntype by Kaicher (card 3482). The species has some similarity with the new species. It is "sculptured with almost equal sized axial riblets and bisecting spiral threads which produce a sculpture of small regular nodules..." (Cernohorsky, 1984: 166). The

axial sculpture of the new species consists of broader ribs only on the first $1\frac{1}{3}$ postnuclear whorls and very fine axial striae on the next whorls. The whorls of *N. boucheti spec. nov.* are more convex, which makes the shell more bulbous than the more flat-sided *N. abyssicolus* (A. Adams, 1852). The differences make it impossible to consider *N. boucheti spec. nov.* a smooth form of *N. abyssicolus* (A. Adams, 1852). Intermediate specimens have not been found.

Nassarius crebricostatus (Schepman, 1911) (figs 7-9), a small species, figured by Cernohorsky (1984: pl. 33 figs 3, 4), and Richard et al. (1984: 9, figs 11-12) differs strongly in size, shape and sculpture. For unknown reasons Cernohorsky did not designate the specimen figured by Schepman as lectotype of *N. crebricostatus*. The lectotype has convex, rounded whorls, whereas the shell figured by Schepman (1911: pl. 19-3a,b) has a somewhat triangular straight shape. Both specimens are in the ZMA-collection.

Two other deep water species that are somewhat similar in size and shape are *Nassarius (Zeuxis) noguchii* (Habe, 1958), holotype figured by Cernohorsky (1984: pl. 35 fig. 6) and Kaicher (1985, card 4189), and *N. (Zeuxis) nakayamai* (Habe, 1958) (figs 12-13), the holotype of which is figured by Cernohorsky (1984: pl. 35 fig. 7) and Kaicher (1985, card 4197). Both species differ by the axial and spiral structure all over the shells and by the absence of the strong denticles inside the outer lip.

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REFERENCES

- CERNOHORSKY, W.O., 1984. Systematics of the family Nassariidae (Mollusca: Gastropoda). — Bulletin of the Auckland Institute and Museum 14: 1-356.
- CERNOHORSKY, W.O., 1991. Mollusca Gastropoda: On a collection of Nassariidae from New Caledonian waters. — Résultats des Campagnes Musorstom 7: 187-204.
- KAICHER, S.D., 1983. Card catalogue of world-wide shells. — Pack #34 Nassariidae part II, cards 3453-3558.
- KAICHER, S.D., 1985. Card catalogue of world-wide shells. — Pack #41 Nassariidae part III, cards 4044-4199.
- RICHARD, G.R., J. TRONDLÉ & B. SALVAT, 1984. Nassariidae de Polynésie Française. — Xenophora 21: 7-17.
- SCHEPMAN, M.M., 1911. The Prosobranchia of the Siboga Expedition. Part IV. Rachiglossa. — Siboga-Expedition 49d: 247-363, pls 18-24.