

A NEW "METULA" SPECIES FROM THE INDO-WEST PACIFIC  
(PROSOBRANCHIA: BUCCINIDAE)

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*Abstract.*—A new Indo-Pacific species, belonging to the "Metula" group, family Buccinidae, is described and allocated to the genus *Acamptochetus* Cossmann, herein considered synonymous with *Antemetula* Rehder. The new species, *Acamptochetus inflatus*, is larger and has more widely inflated whorls than any other living Indo-Pacific species. It closely resembles *Bartschia* Rehder, a *Metula*-like genus from the Western Atlantic.

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Numerous specimens of a large "Metula" species, dredged by the R/V *Albatross* from deep water from a number of stations in the Philippines are in the mollusk collection of the National Museum of Natural History, Smithsonian Institution. Although none of the specimens was taken alive, the empty shells afford a range of shell variation and sufficient comparative material to establish that these specimens represent an undescribed species of "Metula." A survey of the literature shows that nothing similar to these specimens has been previously described. The new taxon is described herein, and referred to the genus *Acamptochetus*. A review of the taxonomic problems of the "Metula" group follows.

## Family Buccinidae

Subfamily Pisaniinae Tryon, 1881

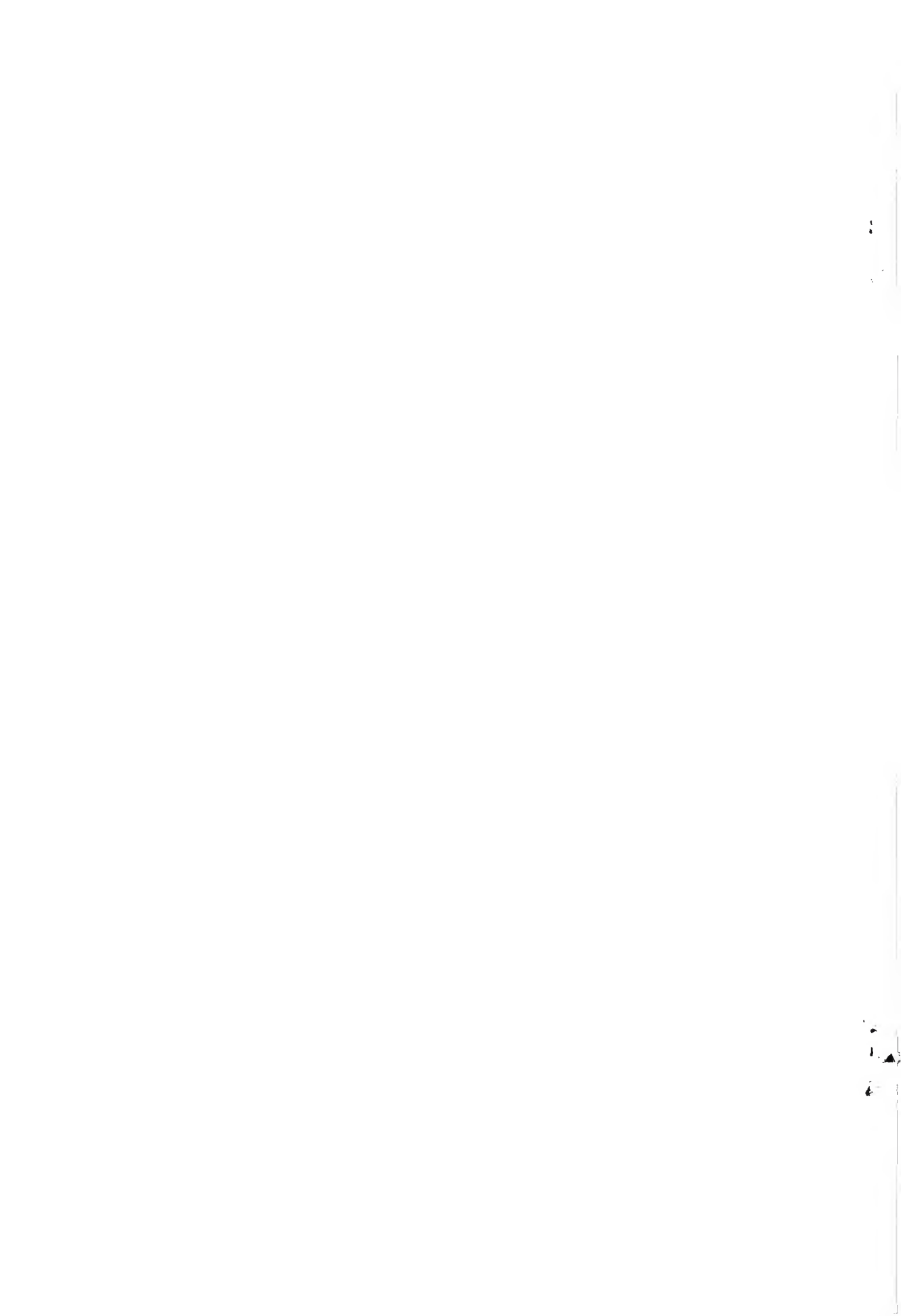
*Acamptochetus* Cossmann, 1901

*Acamptochetus* Cossmann, 1901:123. Type-species by original designation: *Murex mitraeformis* Brocchi, 1814; mid-Pliocene of Europe.

*Antemetula* Rehder, 1943:199. Type-species by original designation: *Buccinum metula* Hinds, 1844; Recent, west coast of Panama.

*Metula* H. and A. Adams, 1853:84. Type-species by subsequent designation (Kobelt 1876): *Metula clathrata* Adams & Reeve = *Buccinum clathratum* Adams & Reeve, 1850 (not Kiener, 1834, nor Anton, 1839); Recent, Cape of Good Hope (erroneous citation—see Tomlin 1927 = Gorgona Is, off Colombia, west coast South America).

*Remarks.*—The problems surrounding the identity of the type-species of *Metula*, *Buccinum clathratum* Adams and Reeve, 1850, have been fully discussed by Rehder (1943), Regteren Altena (1949), Cernohorsky (1971), Olsson and Bayer (1972), and Kilburn (1975). I follow the solution of Cernohorsky (1971) who suggested using the generic name *Acamptochetus* Cossmann, 1901, for *Metula* and *Antemetula* Rehder, 1943. Although *Acamptochetus* was proposed for mid-Tertiary European fossil species, I concur that it is congeneric with *Antemetula* and agree with Cernohorsky (1971) who was unable to find a single diagnostic character that would allow separation of *Antemetula* from *Acamptochetus*. Cernohorsky (1971) has provided an adequate diagnosis of the genus *Acamptochetus*.



The “*Metula*” group in the Indo-Pacific was reviewed by Regteren Altena (1949) who recognized nine Recent and fossil species. Since that review, another species has been described (Kilburn 1975:594). Olsson and Bayer (1972) reviewed Recent and fossil species known from the American faunas and recognized four subgenera and 16 species. As to the number of taxa in the group on a worldwide basis, the extent of available material is often insufficient to establish the range of variability of most species (Regteren Altena 1949:393); consequently, their number and validity is uncertain.

Although the anatomy of *Acamptochetus* (= *Metula*) is unknown, Ponder (1968) described the anatomy of *Ratifusus* Iredale, 1919, and *Iredalula* Finlay, 1927, which, according to Cernohorsky (1971:152), are closely related to the “*Metula*” group.

Very little is known of the biology of *Acamptochetus* species, but the anatomical information provided by Ponder (1968) on the closely related genera discussed above suggests that they are predators or scavengers. The radula of only one species, “*Metula*” *mitrella* (Adams & Reeve, 1848), is known and was figured by Troschel (1867). It is rachiglossate, has a rachidian tooth with five cusps, and laterals with three, of which the medial is the largest. According to Cernohorsky (1971:152), the radula is very similar to those of tropical Pisaninae.

As Olsson & Bayer (1972:900–901) have pointed out, the fossil record of the “*Metula*” group is impressive, and the main occurrence, on a worldwide basis, is in the Upper Tertiary.

*Acamptochetus inflatus*, new species

Fig. 1

*Description.*—Shell (Table 1): Shell solid, fusiform-elongate, reaching 45.5 mm in length and 17 mm in width, comprising 9 moderately inflated whorls. Body whorl high, over half total shell length. Sculpture finely cancellate, produced by nearly equal, narrow axial and spiral cords, intersections of which beaded and intervals deeply pitted. Body whorl with 25 spiral cords; teleoconch with 9 spiral cords per whorl. First 4 spirals separated by wide interspaces but remaining spirals closer together. All spiral cords of equal size and no varices present save for thickened varix at edge of outer lip. Former resting marks evident. Suture distinct and impressed. Slight sutural ramp on posterior of each whorl. Protoconch of 2½ smooth whorls with sinuous lip. First 2 whorls of teleoconch nearly smooth but with weak axial ribs. Spiral elements appear on fourth whorl becoming progressively more distinct. Aperture narrow, acutely angled at each end, little less than one-half shell length. Siphonal canal narrow, slightly reflexed and twisted at end. Slight columellar keel present at siphonal constriction. Columella concave, angulate at center, with moderately enamelled callus. Outer lip sinuous, thickened at edge. Interior of outer lip with about 20 denticles. Ground color light chestnut with 2 lighter banded areas on body whorl. Darkest chestnut color at base of shell and at base of each whorl. All beads tan; interspaces lighter or white. Peristome white. Periostracum tan, moderately thick on upper whorls. Radula, operculum, and animal unknown.

*Type-locality.*—Off Lubigon, Bohol, Philippines, USFS *Albatross* Sta 5419 (9°58'30"N, 123°46'E), 320 m.

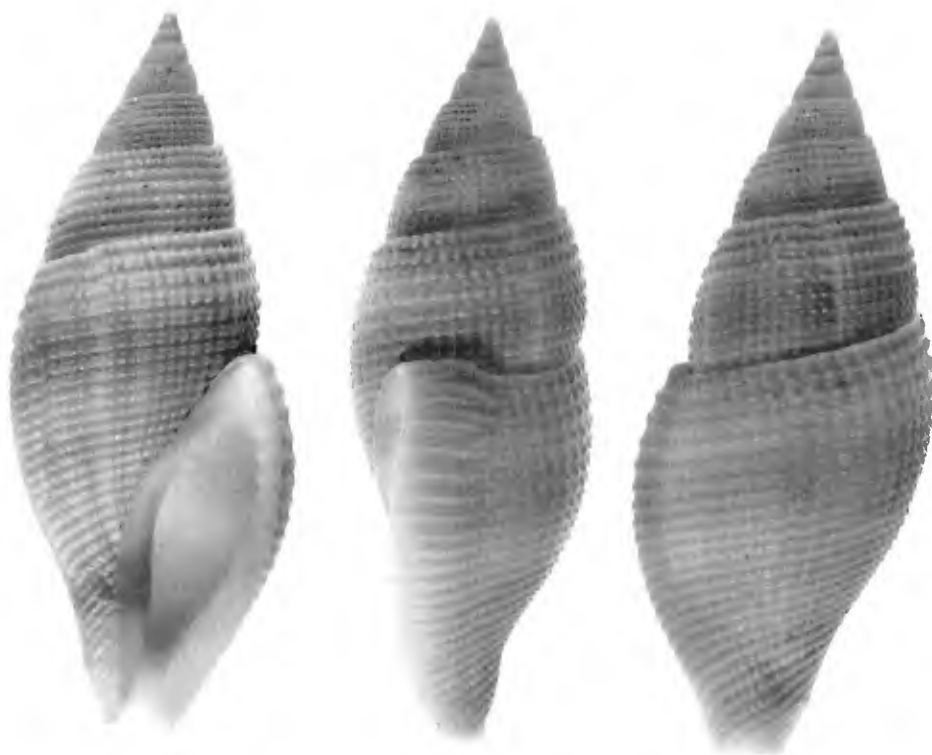


Fig. 1. Apertural, lateral, and dorsal views of holotype of *Acamptochetus inflatus*, USNM 229183, 38.8 × 15 mm.

*Type-material.*—Holotype (Fig. 1): USNM 229183, length 38.8 mm, width 15 mm; Paratype: USNM 820185, length 45.5 mm, width 16.9 mm. Locality as above.

*Etymology.*—From the Latin adjective *inflatus*, inflated, in reference to the wide, inflated lower whorls.

*Material examined.*—Philippines: United States National Museum 240424, USFS sta 5403, off Abgao, Leyte (11°10'N, 124°17'15"E), 333 m; 238660, 238671, USFS sta 5502, off Opol, Mindanao (8°37'37"N, 124°35'E), 391 m; 238823, USFS sta 5519, NE off Tagalo Pt., Mindanao (8°47'N, 123°31'15"E), 333 m; 238817, USFS sta 5517, off Tagalo Pt., Mindanao (8°45'30"N, 123°33'45"E), 309 m; 238812, USFS sta 5516, off Tagalo Pt., Mindanao (8°46'N, 123°32'30"E), 320 m; 238300, USFS sta 5409, W of Pacyan Is (10°38'N, 124°13'08"E), 346 m; 238103, USFS sta 5374, Tayabas Bay, Luzon (13°46'45"N, 121°35'08"E), 347 m; 235376, USFS sta 5118, Balayan Bay, Luzon (13°48'45"N, 120°41'51"E), 291 m; 238322, USFS sta 5411, off Luis Pt., Cebu (10°10'30"N, 123°51'15"E), 265 m; 238387, USFS sta 5418, off Luis Pt., Cebu (10°08'50"N, 123°52'30"E), 291 m; 230989, USFS sta 5412, SE of Tabisayo, Cebu (10°09'15"N, 123°52'E), 89 m; 237058, USFS sta 5222, Taybas Bay, off San Andreas Is (10°31'N, 122°18'45"E), 357 m.—Andaman Sea: Academy of Natural Sciences, Philadelphia 291929, *Anton Brunn* sta 22B, (10°39'N, 97°06'E), 30 m W Twin Is, S. Burma.

Table 1.—Statistical summary of shell parameters of *Acamptochetus inflatus*. (Measurements in mm).

Statistic (n = 20)	$\bar{x}$	SD	Range
Shell length	40.93	2.92	35.3–45.5
Shell width	14.58	3.39	13.2–17
Aperture length	21.55	1.41	18.1–23.4
Aperture width	8.26	0.68	6.6–9.2
Number of whorls	9	0	8–9

*Remarks.*—This species is easily separated from its Indo-Pacific congeners by the widely inflated body whorl and thick, heavy shell. It is one of the largest of *Acamptochetus* species. All other species of *Acamptochetus* are more narrowly fusiform, but the fine, lattice-like sculpture is typical of the genus. The shell shape and sculpture resemble those of two species assigned to the western Atlantic subgenus *Agassitula* Olsson and Bayer, 1972: *Acamptochetus* (*A.*) *agassizi* (Clench and Aguayo, 1941), and *Acamptochetus* (*A.*) *guppyi*, (Olsson & Bayer, 1972). The suture of *Acamptochetus inflatus*, is not as deeply impressed as in the latter two species, and, in contrast to *A. agassitula*, there is banding in the color pattern.

Western Atlantic species of *Bartschia* Rehder, 1943, have inflated, thick shells very similar in shape to *Acamptochetus inflatus*, but are heavier, wider, and have twisted siphonal canals that are less attenuated than in *Acamptochetus inflatus*. Cernohorsky (1971:151) suggested that *Bartschia* should be allocated to the Pisaniinae, near the “*Metula*” group.

Collection data indicate that *Acamptochetus inflatus* occurs on coarse, sandy substrates at an average depth of 284 m and a depth range of 89 to 391 m.

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#### Literature Cited

- Adams, A., and L. Reeve. 1848–1850. The zoology of the voyage of H.M.S. *Samarang*, under the command of Captain Sir Edward Belcher during the years 1843–1846. Mollusca, pt. 2: 25–44, pls. 10–17 (1850). London.
- Cernohorsky, W. O. 1971. Indo-Pacific Pisaniinae (Mollusca: Gastropoda) and related buccinid genera.—Records of the Auckland Institute and Museum 8:137–167.
- Kilburn, R. N. 1975. Taxonomic notes on South African marine Mollusca (5): Including descriptions of new taxa of Rissoidae, Cerithiidae, Tonnidae, Cassididae, Buccinidae, Fascioliariidae, Turbinellidae, Turridae, Architectonicidae, Epitoniidae, Limidae and Thraciidae.—Annals of the Natal Museum 22(2):577–622.
- Olsson, A. A., and F. M. Bayer. 1972. American metulas (Gastropoda: Buccinidae).—Bulletin of Marine Science 22(4):900–925.

- Ponder, W. F. 1968. Anatomical notes on two Species of the Colubrariidae (Mollusca, Prosobranchia).—Transactions of the Royal Society of New Zealand 10(24):217–223.
- Regteren Altena, C. O. van. 1949. The genus *Antemetula* Rehder in the Indo-West Pacific area, with the description of two new fossil species.—Bijdragen Tot de Dierkunde 28:385–393.
- Rehder, H. A. 1943. New marine mollusks from the Antillean region.—Proceedings of the United States National Museum 93(3161):187–203, pls. 19–20.
- Tomlin, J. R. le B. 1927. The Mollusca of the “St. George” Expedition.—Journal of Conchology 18(6):153–170.
- Troschel, F. H. 1867. Das Gebiss der Schnecken zur Begründung einer natürlichen classification 2(2):51–96, pls. 5–8. Berlin.

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