A NEW MERICELLA (MOLLUSCA: GASTROPODA: CANCELLARIIDAE) FROM NORTHEASTERN AFRICA

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Abstract. – Mericella bozzettii, new species is described from nine shells trawled off Cape Ras Hafun, Somalia in shrimp and lobster nets at a depth of 200–250 m. This new species may be distinguished from its western Indian Ocean congeners by its large size and coarsely cancellate sculpture.

Thiele (1929) originally erected Mericella, as a subgenus of Cancellaria, to contain a single Recent species from bathyal depths off Tanzania that he had previously attributed (Thiele 1925) to Cancellaria (Merica). Mericella paschalis (Thiele, 1925), a closely related species from the Zanzibar Channel that was described in the same publication as the type species, has not previously been ascribed to this genus. Olsson & Bayer (1972) proposed the generic name Gerdiella to accommodate three newly discovered Recent species taken in bathyal depths (516-897 m) of the northern Caribbean Sea and the Straits of Florida. They recognized that Gerdiella was closely related to, and possibly congeneric with, Mericella, but distinguished these taxa on the basis of size and geographical distribution. Subsequent authors have assigned Cancellaria (Merica) corbicula Dall, 1908, which occurs in bathyal to abyssal depths off southern California, to Mericella (Abbott 1974:247) or Gerdiella (Kaicher 1978). Due to the rarity of material, the genus Mericella has received little subsequent attention. An additional species of Mericella, known from shells of nine specimens collected by shrimp trawlers off the coast of Somalia, is described in this report.

Abbreviations used in the text: AMNH, American Museum of Natural History, New York; MNHN, Museum national d'Histoire naturelle, Paris; USNM, National Museum of Natural History, Smithsonian Institution, Washington, D.C.

Mericella bozzettii, new species Figs. 1–3, Table 1

Diagnosis. – A large species with thick, high-spired, coarsely cancellate shell with irregularly spaced varices. Aperture exceeds half the shell length, with weak denticles along flaring, strongly sinuate outer lip.

Description. - Shell (Fig. 1, Table 1) large for genus, reaching 37 mm, heavy, with tall, conical spire, rounded anterior. Protoconch (Figs. 2-3) conical, of 21/4 smooth, rounded whorls, aligned with coiling axis, increasing in diameter from 368 µm to 1.87 mm. Transition to teleoconch (Figs. 2-3, arrow) abrupt, demarcated by weak varix, followed immediately by four faint spiral cords, and within 1/4 whorl by axial costae. Teleoconch with up to five strongly convex whorls. Suture impressed. Shoulder indistinct or absent. Spiral sculpture of 23-25 strong cords on body whorl, 8-9 on penultimate whorl, lacking intervening threads. Axial sculpture of 25-28 rounded, regularly-spaced, sinuate, opisthocline, axial costae on body whorl (16-18 on first teleoconch whorl) producing beaded, cancellate appearance at intersections with spiral cords, with four to six fine axial lamellae in intervening concave spaces. Varices up to seven in number, initially



Figs. 1-3. Mericella bozzettii, new species. 1, Apertural, lateral and dorsal views of holotype. Scale bar = 1 cm. 2, Lateral and 3, apical views of the protoconch. Scale bars = $500 \mu m$.

weak and irregularly placed (90–270° apart), more prominent and regularly spaced ($\approx 220^\circ$) on third and subsequent teleoconch whorls. Aperture elongate, elliptical, deflected from coiling axis by 13–16°. Outer lip thickened, forming flaring, strongly sinuate varix, with 12–18 weak denticles limited to the base of the varix. Inner lip adpressed posteriorly, with an angle of 153– 157° between parietal region and columella. Columella with two weak columellar folds and siphonal fold, posteriormost fold most

Character			
	Mean	σ	Range
Shell length (SL)	30.6	3.9	22.1-37.0
Aperture length (AL)	16.9	2.3	12.2-20.3
AL/SL	0.553	0.018	0.512-0.578
No. of whorls, protoconch ^a	1.92	0.12	1.75-2.0
No. of whorls, teleoconch	4.72	0.27	4.0-5.0
No. of varices	7.0	0.0	7.0
No. of axial ribs between			
varices 5-6	14.1	2.0	11-18
No. of axial ribs between			
varices 6-7	17.4	3.1	13-24
No. spiral cords on			
penultimate whorl	7.8	0.6	7–9
No. of spiral cords on			
whorl 5–6	7.0	0.8	5-8
No. of teeth on outer lip	13.3	2.0	10–16

Table 1.—*Mericella bozzettii*, new species. Measurements of shell characters. Linear measurements in mm (n = 9).

^a n = 3 for this character.

pronounced. Anterior slope of shell rounded, lacking clear distinction between body whorl and siphonal canal. Shell color uniformly white. Periostracum, soft parts unknown.

Material examined.—Holotype, USNM 860315, 28.7 mm; Paratype 1, AMNH 226453; Paratype 2, MNHN; Paratype 3; Petit collection; Paratypes 4–8, Bozzetti collection; all from the type locality.

Type locality.—Off Cape Ras Hafun, approximately 150 km S of Cape Guardafni, Somalia. Trawled in shrimp and lobster nets at 200–250 m.

Etymology.—This species is named in honor of Mr. Luigi Bozzetti, who first brought it to our attention and kindly provided the type material.

Remarks.—Although this new species corresponds more closely in size to species of the western Atlantic genus *Gerdiella*, it is placed in *Mericella* because of its large aperture (> $\frac{1}{2}$ shell length), smooth protoconch lacking axial sculpture, as well as because of its geographic proximity to other species of *Mericella*. It is readily distinguished from *Mericella jucunda* and *M. paschalis* on the basis of its large size, much broader axial costae, thick shell and white color. *Mericella corbicula* more closely approaches *M. bozzettii* in size, but differs in having a more finely reticulate surface sculpture, a lower spire, and a chalky shell surface.

Although Olsson & Bayer (1972:880) confirmed the inclusion of the closely related genus *Gerdiella* in Cancellariidae on the basis of the morphology of the radula of the type species, nothing is known of the anatomy or radular morphology of any species of *Mericella*. *Mericella bozzettii* occurs in somewhat shallower depths (200–250 m) than other species of *Mericella* (404–2012 m).

Literature Cited

- Abbott, R. T. 1974. American seashells, second edition. Van Nostrand Reinhold, New York, 663 pp., 24 pls.
- Dall, W. H. 1908. [Reports on the dredging operations off the west coast of Central America to the Galapagos, to the west coast of Mexico, and in the Gulf of California, in charge of Alexander Agassiz, carried on by the U.S. Fish Commission Steamer "Albatross," during 1891, Lieut. Commander Z. L. Tanner, U.S.N., commanding. XXXVII. Reports on the scientific results of the expedition to the eastern tropical Pacific, in charge of Alexander Agassiz, by the U.S. Fish

Commission Steamer "Albatross," from October 1904, to March, 1905, Lieut. Commander L. M. Garrett, U.S.N., commanding. XIV] The Mollusca and Brachiopoda.—Bulletin of the Museum of Comparative Zoology 43(6):205– 487, pls. 1–22.

- Kaicher, S. D. 1978. Card catalogue of world-wide shells. Pack no. 19-Cancellariidae. Privately published, St. Petersburg, Florida. Card nos. 1859-1964.
- Olsson, A. A., & F. M. Bayer. 1972. *Gerdiella*, a new genus of deep-water cancellariids.—Bulletin of Marine Science 22:875–880.

- Thiele, J. 1925. Gastropoda der Deutschen Tiefsee-Expedition. II.-Deutsche Tiefsee-Expedition 17:35-382 + pls. 13-46.
 - -. 1929. Handbuch der systematischen Weichtierkunde.-Gustav Fischer, Jenna 1:1-376.

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