On some deepsea mollusks from Bermuda

by

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Very few mollusks indeed are known from the abyssal ocean depth near the Bermuda Islands. The Challenger Expedition collected some 25 species of bottom living deepsea mollusks in the Bermuda region, upon which most of our knowledge of the abyssal malacofauna had rested. The Chicago Natural History Museum Bermuda Deepsea Expedition 1948, of which I was leader, was mostly interested in securing benthonic deepsea fishes and invertebrates and its nets hit the bottom of the deepsea only twice and only by accident. The bottom material, however, gathered at these two occasions contained 7 species of mollusks, none of them known from Bermudian waters, and 4 of them, furthermore, new to science, a remarkable addition to our knowledge.

The 6 first of the species listed and described below, stem from haul 50 of our expedition boat, the «Caryn» ; the details of this locality are : 32° 0.8.2′ N., 64° 33′ W., 1700 fathoms deep, pteropod ooze ; August 20, 1948. The locality of species No. 7 follows the name.

I am greatly indebted to Dr. Harald A. REHDER, Curator of the Division of Mollusks of the Smithsonian Institution in Washington, D. C., for his constant help ad the suggestions given to me during the study of these Bermudan deepsea mollusks.

1. **Coralliophila profundicola** n. sp.

Figs. 1 - 2

Type. — Chicago Natural History Museum No. 31655.

Diagnosis. — A species of **Coralliophila**, characterized by its high aperture, the slightly twisted canal, and the lack of an umbilical chink.

Comparison.—None of the many shallow-water species of the genus **Coralliophila** seem to be closely related to this novelty ; it resembles **C. aedonius** (Watson) from Tristan da Cunha, collected in 100-150 fathoms, but has a wider and much higher aperture.

Description. — Shell solid, biconical, with about 6 ½ rather inflated whorls separated by an obscure, appressed suture; their sculpture consisting of heavy, rounded longitudinal ribs (8 on the last whorl, including the border of the aperture), which are crossed by numerous (22 on the last whorl) low spiral riblets. The basic color of the shell is a greyish white, but the spiral ribs, which are slightly narrower than their interstices, are blackish. The aperture slightly exceeds the height of the spire, broad above and narrower in the canal, which is slightly twisted backward; the columella is curved and there is no umbilocal chink behind it.

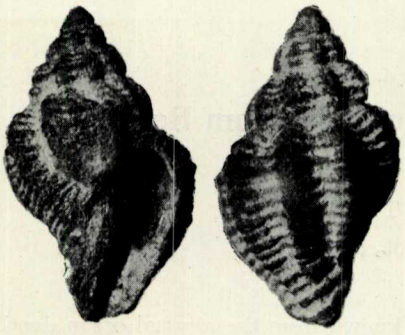

FIG. 1 FIG. 2

FIGS. 1-2. *Coralliophila profundicola* HAAS, 3 times natural size; fig. 1, front view; fig. 2, seen from behind

Dimensions. — Height 12.8 mm., width 7.6 mm., height of aperture 7.3 mm., width of aperture 2.2 mm.

Remarks. — The substance of the shell of the type offers a finely cinder-like appearance, but this may be due to the state preservation of the only individual, collected dead.

Discussion. — The vast majority of the species of **Coralliophila** are confined to shallow water and only **C. aedonius** (Watson) and this n. sp. have been found in the deeper layers of the ocean; since they are known only from the shell, they may not belong to **Coralliophila** at all, but may constitute a genus or a subgenus of their own.

2. **Bathybermudia carynae** n. gen., n. sp.
Figs. 3 - 4

Type. — Chicago Natural History Museum No. 31656.

Diagnosis. — A shell of the family Turridae, characterized by a peripherical row of pointed nodules, by a short and rather straight canal, and by the fine rib-sculpture of the oldest whorls.

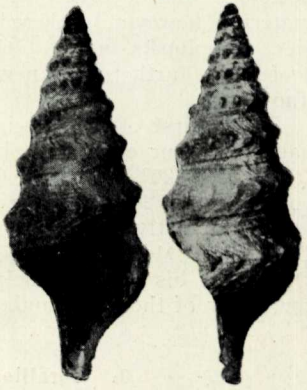

FIG. 3 FIG. 4

FIGS. 3-4. *Bathybermudia carynae* HAAS, about 3 times natural size; fig. 3, front view; fig. 4, seen from behind

Comparisons. — While there exists a superficial similarity with the shell of **Pleurotomella** Verrill, the rib-sculpture of the nepionic

whorls points toward a closer relationship with **Ptychosyrinx** Thiele, which is similarly shaped, but which is characterized by 2 folds on the outer margin of the aperture absent in this novelty, which thus apparently constitutes a new genus; for it I propose the name **Bathybermudia** (1) based upon the only species **carynae** (named after the ketch «Caryn» chartered by our expedition), described below.

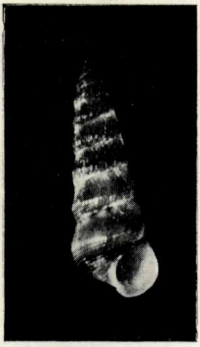

FIG. 5. *Alabina longinqua* HAAS, 6 times natural size; front view

Description. — Shell thin but solid, grayish olive, turrited with a small aperture and a short, rather straight canal. Whorls 10, the first 3 radially rib-sculptured, the following ones bearing a peripheral row of pointed nodules, with slight spiral striae above and below it, the ultimate with definite spiral lirae on its underside down to the tip of the canal. This surface sculpture is crossed by growth lines that recede angularly at the row of nodules. Aperture pear-shaped, with straigth, thin edges and a small but evident notch at the periphery, at the end of the row of nodules.

Dimensions. — Height 14.9 mm., width 6.0 mm., height of aperture plus canal 6.6 mm., width of aperture 2.2 mm.

Remarks on the paratype. — No. 31657, Chicago Natural History Museum, a specimen collected dead, with the top of the shell broken of and the right margin of the aperture damaged, but otherwise typical.

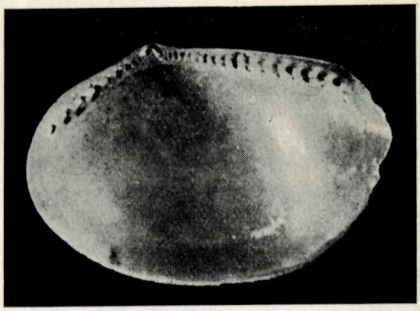

FIG. 6. *Malletia (Malletia) bermudensis* HAAS, 6 times natural size, right valve seen from inside

3. **Alabina longinqua** n. sp.
Fig. 5

Type. — Chicago Natural History Museum, No. 31660.

Diagnosis.—A species of the cerithiid genus **Alabina** Dall, characterized by its long and slender shell.

Comparisons. — Among its congeners, of which none seems to be known from the abyssal, this deepsea species in closest to **A. cerithioides** (Dall), which, however, is smaller, stouter and more turrited and more translucent.

(1) βαθύς, deep, and Bermudia, a native of Bermuda.

Description. — Shell almost opaque, subsolid, subulate, with a small, roundish aperture. Whorls 10, the 3 first transparent, glossy, brown, with a sculpture of vertical ribs and spiral lirae of equal width which cross at right angles, resulting in a regular pattern of cancellation ; the following whorls are opaque, dark brown, with equal vertical ribs slightly retractive and with a few faint lirae near the bottom ; the last 3 whorls offer only the sculpture of heavy retractive ribs about as wide as their interstices, and only the last whorl shows a system of spiral lirae below its periphery. All the whorls are slightly swollen and separated by a superficial suture ; only the last whorl is flattened on its upper, rounded on its lower half. The color of the last two whorls is olive grey. The aperture is small, without any trace of a canal, and whit simple, sharp edges ; there is an umbilical chink behind the columellar margin of the aperture.

Dimensions. — Height 5.1 mm., width 1.8 mm., height of aperture 0.9 mm., width of aperture 0.75 mm.

Remarks. — **Alabina longinqua** is, to the best of my knowledge, the first deepsea species within the genus.

4. **Malletia (Malletia) bermudensis** n. sp.

Fig. 6

Type. — Chicago Natural History Museum, No. 31658, a right valve.

Diagnosis. — A species of the typical subgenus of **Malletia**, recognizable from its broad subelliptic shape, the relatively strong angle betwen the two rows of teeth, and by the number of these teeth, 9 in the anterior and 18 in the posterior row.

Comparisons. — There seem to exist no close relatives of this new species. Among the abyssal forms of **Malletia** from the Indopacific and the South Atlantic, some, like **M. pallida** E. A. Smith resemble it as far as the outlines are concerned, but differ sharply in the shape and the number of hinge-teeth ; the only other Bermudian **Malletia** known, **M. veneriformis** E. A. Smith, has an entirely different shape and cannot be considered a close relative to **M. bermudensis.**

Description. — Shell inaequilateral, milky white, subtransparent, rather smooth, rather swollen, broadly elliptical with almost parallel upper and lower margins, rounded in front, bluntly angular behind ; umbo swollen, prominent ; both the anterior and the posterior upper margin sloping, the anterior more so. Tooth-line angulated, uninterrupted, the uniting bridge under the umbo comparatively wide. Teeth V-shaped, especially the distal ones, which are rather wide and which gradually pass into the narrow proximal ones ; there are 9 teeth in the anterior and 18 in the posterior row. Sinus narrow, reaching almost under the umbo, blunt behind.

Dimensions. — Length 7.2 mm., height 4.4 mm., depth of single shell 1.8 mm.

Remarks on the paratypes. — No. 31659, 2 right valves, very similar to the type, but slightly larger and more elongated ; the longest specimen has the following measurements : Length 7.7 mm., height 4.9 mm., depth of single valve 2.0 mm. — No. 31665, 1 left valve.

5. **Nucula (Brevinucula) verrillii** Dall.

6. **Poromya (Poromya) sublevis microdonta** Dall.

7. **Cuspidaria (Cuspidaria) wollastonii** (E. A. Smith) ; haul 24, 32° 0.5′ N., 65° 20′ W., bottom just off the 1000 fathoms shelf East of Challenger Bank and North of Plantagenet ; coral clay. July 23, 1948.