

## NEW MARINE MOLLUSKS FROM BERMUDA.

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Some time ago the United States National Museum received a lot of mollusks for determination from Mr. Arthur Haycock, collected by him at Bermuda. Among these were quite a number of new species, which were described by Dr. William H. Dall and the present writer in the Proceedings of the U. S. National Museum, vol. 40, pp. 277 to 288, pl. 35, May, 1911. Since then several other lots have been examined, and among these the following new forms were found:

### CERITHIOPSIS HERO, new species.

Plate 28, fig. 1.

Shell large, elongate-conic, chestnut brown, nuclear whorls at least 3, well rounded, smooth, scarcely increasing in size, forming a cylindrical apex; post-nuclear whorls moderately rounded, ornamented with 3 strong spiral cords, and quite regular somewhat retractive axial ribs. Of the axial ribs, 16 occur upon the first and second; 18 upon the third; 20 upon the fourth; 22 upon the fifth to ninth; 24 upon the tenth, and 26 upon the penultimate turn. The intersections of the axial ribs and the spiral cords form strong tubercles, of which those on the cord at the summit are somewhat elongated and well rounded, while those on the median and supra-sutural cords are truncated posteriorly, sloping gently anteriorly. Sutures strongly channeled. Periphery of the last whorl marked by a channel as broad as that which separates the supra sutural from the median spiral cord. This channel is crossed by the continuation of the axial ribs, which terminate at the posterior border of the flattened spiral cord, that bounds the sulcus anteriorly. Base slightly concave, marked by a very feeble spiral cord at the insertion of the columella. Entire surface of spire and base marked with numerous very fine lines of growth, and exceedingly fine spiral striations. Aperture irregularly oval, strongly channeled anteriorly and feebly so at the posterior angle; outer lip rendered decidedly sinuous by the spiral cords; columella very stout, somewhat curved, and partly covered by the reflected inner lip; parietal wall covered with a thick callus.

Seven specimens of this species, collected by Mr. Arthur Haycock, at Bermuda, are before us. Two of these may be considered cotypes. One of these, which has lost part of the nucleus, has 12 post-nuclear whorls, and measures: length, 7.6 mm., diameter 2 mm. The other has a complete nucleus and 8 post-nuclear whorls, and measures: length, 5 mm. and diameter 1.5 mm. The remaining five are young individuals. The smaller cotype and two of the young specimens form Catalogue No. 226450 of the United States National Museum collection.

**CERITHIOPSIS CYNTHIA, new species.**

Plate 28, fig. 5.

Shell small, elongate-conic, chestnut brown, excepting the early nuclear whorls, which are white. Nuclear whorls a little more than 4, well rounded, smooth, forming a mucronated apex. Post-nuclear whorls moderately rounded, marked by 3 strong spiral cords, and strongly retractive axial ribs. Of these, 16 occur upon the first; 18 upon the second to fifth, and 20 upon the sixth and the penultimate turn. The intersections of the spiral cords and the axial ribs form strong tubercles, which are truncated posteriorly and slope gently anteriorly; while the spaces inclosed between them appear as strongly impressed rounded pits. Sutures moderately constricted. Periphery of the last whorl marked by a sulcus as wide as that which separates the supra sutural from the median cord and like this crossed by the continuations of the axial ribs. Base marked with a strong, broad, rounded spiral cord, adjoining the peripheral sulcus, which is rendered feebly tuberculated by the continuations of the axial ribs. Anterior to this cord there is a strong spiral sulcus which equals the subsutural cord in width. Entire surface of spire and base marked by numerous very fine lines of growth, and exceedingly fine spiral striations. Aperture irregularly oval, strongly channeled anteriorly, feebly so posteriorly; outer lip thin, showing the external sculpture within, rendered sinuous at the edge by the external sculpture; columella very stout, twisted, and somewhat curved; inner lip reflected over the columella; parietal wall glazed with a thin callus.

The type and seven specimens (Cat. No. 226449, U.S.N.M.) were collected by Mr. Arthur Haycock in Bermuda. The type, a perfect specimen, has seven and one-half post-nuclear whorls, and measures: length 3.9 mm. and diameter 1.1 mm.

**CERITHIOPSIS IONTHA, new species.**

Plate 28, fig. 3.

Shell very minute, elongate-conic, golden brown, excepting the apex, which is white. Nuclear whorls 2, well rounded, smooth. Post-nuclear whorls well rounded, marked by 3 strong spiral cords,

and slightly retractive axial ribs, of the latter 18 occur upon the first; 20 upon the second and third, and 24 upon the fourth and penultimate turn. The intersections of the axial ribs and spiral cords form strong tubercles, of which those on the cord at the summit and those on the median cord are truncated both anteriorly and posteriorly, while those on the supra-sutural cord are truncated posteriorly, sloping gently anteriorly. The spaces inclosed between the axial ribs and spiral cords are strongly impressed squarish pits. Sutures strongly constricted. Periphery of the last whorl marked by a sulcus as wide as that which separates the supra sutural from the median cord. The sulcus is crossed by the feeble continuations of the axial ribs. Base moderately rounded, marked by a broad, low spiral cord, which limits the peripheral sulcus posteriorly, and a second tumid low spiral cord at the insertion of the columella. Entire surface of spire and base marked by numerous fine lines of growth, and exceedingly fine spiral striations. Aperture irregularly oval, strongly channeled anteriorly, feebly posteriorly; outer lip thin, somewhat patulous, rendered wavy by the external sculpture; columella stout and somewhat curved; inner lip reflected over the columella; parietal wall covered with a thick callus.

Three specimens of this species were collected by Mr. Arthur Haycock in Bermuda. These may be considered cotypes. The specimen figured has a little more than five post-nuclear whorls, and measures: 2.1 mm. in length and 0.9 mm. in diameter. One of the three is Cat. No. 226451, U.S.N.M. The other two are in the Bermuda Museum.

**TRIPHORIS BERMUDENSIS, new species.**

Plate 28, figs. 2 and 4.

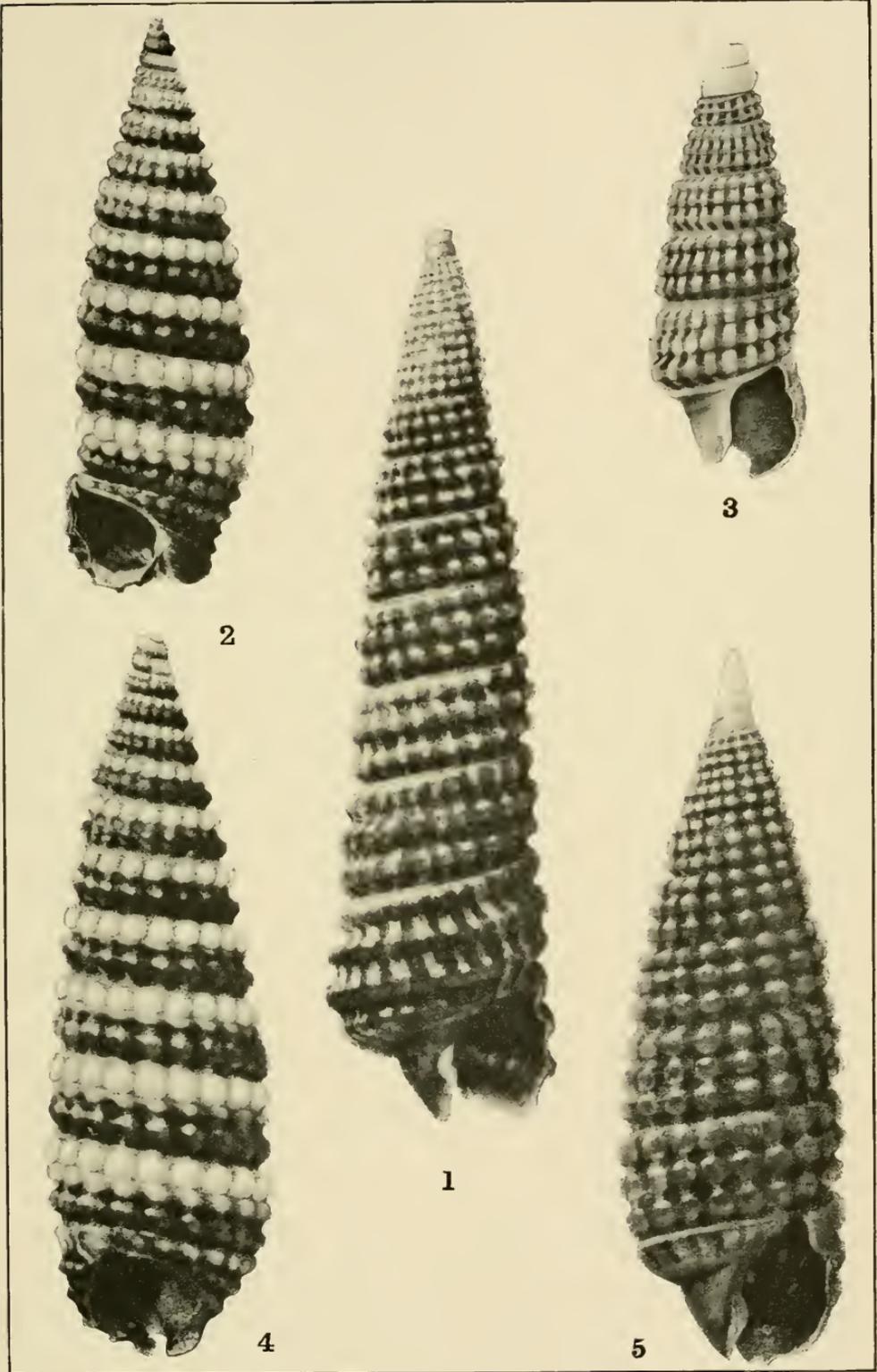
Shell elongate-conic, marked by alternate spiral bands of white and brown. Nuclear whorls moderately rounded, forming a conic apex, the first turn smooth, the second marked by a raised spiral thread which is a little nearer the suture than the summit. On the third whorl a second spiral thread is present, between the first and the summit, being a little nearer to the neighboring thread than the summit. In addition to these spiral threads the last two nuclear whorls are marked by 28 slender, very regular, threadlike axial ribs, which equal the spiral threads in strength. Post-nuclear whorls moderately rounded, the early ones marked with two strong tuberculated spiral cords, one of which is at the summit, and the other a little posterior to the suture. On the later turns a third slender tuberculated spiral cord makes its appearance between the other two, being a little nearer to the cord at the summit than to the supra-sutural cord. In addition to the spiral sculpture the post-nuclear whorls are marked by strong axial ribs, of which 16 occur upon the first; 18 upon the second to fifth; 20 upon the sixth to eighth; and 22 upon

the remaining whorls. The intersections of the spiral cords and the axial ribs form strong tubercles, of which those at the summit are well rounded, while those of the supra-sutural spiral cord are somewhat truncated posteriorly. The spiral cord at the summit is white, while the supra-sutural and median cords are brown. Periphery of the last whorl marked by a tuberculated spiral cord, which is as strong as its posterior neighbor, from which it is separated by a sulcus as wide as that which separates the supra sutural from the median spiral cord. Base moderately rounded, marked by two broad spiral cords, of which the posterior is feebly tuberculated. The entire base is light brown, the peripheral cord being of a little lighter shade of brown than the base. Entire surface of the spire and base marked by numerous very fine lines of growth and spiral striations. Aperture irregular, decidedly channeled anteriorly and posteriorly; outer lip produced into a clawlike element anteriorly; columella very stout and twisted; inner lip adnate to the base of the shell; parietal wall covered with a thick callus, which joins the inner lip with the outer at the posterior angle of the aperture rendering the peritreme complete.

Nine specimens of this species (Cat. No. 226452, U.S.N.M.) were collected by Mr. Arthur Haycock at Bermuda. One of these, a perfect individual, has 10 post-nuclear whorls, and measures: length 4.9 mm., diameter 1.5 mm. Another having 11 post-nuclear whorls measures: length 6.1 mm., diameter 2 mm.

#### EXPLANATION OF PLATE 28.

- FIG. 1. *Cerithiopsis hero* Bartsch, p. 303; cotype; long. 7.6 mm.  
2. *Triphoris bermudensis* Bartsch, p. 305; cotype; long. 4.9 mm.  
3. *Cerithiopsis iontha* Bartsch, p. 304; cotype; long. 2.1 mm.  
4. *Triphoris bermudensis* Bartsch, p. 305; cotype; long. 6.1 mm.  
5. *Cerithiopsis cynthia* Bartsch, p. 304; type; long. 3.9 mm.



NEW BERMUDA MOLLUSKS.

FOR EXPLANATION OF PLATE SEE PAGE 306

