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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 THE BRACHIOPODA.

BY WILLIAM HEALEY DALE.

SMITHSONIAN  
MAY 10 1989  
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WITH TWENTY-TWO PLATES.

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OCTOBER, 1908.

and protractive axial ribs which extend from the suture to the canal except over the last half of the last whorl; the constriction which indicates the anal fasciole gives the posterior edge of the whorl a marginate appearance, but does not interrupt the ribs, which are very prominent in front of the fasciole at the shoulder; the whole surface is evenly sculptured by strongly incised, almost channelled lines, with wider, flat, strap-like interspaces; near the canal these become narrower and cord-like and the channels wider, diminishing again toward the end of the canal; the spiral sculpture does not nodulate the ribs, but is minutely crenulated on the eminences by fine, even, incremental lines; aperture short, wide, with a deep rounded anal sulcus next the suture, a thin and much produced outer lip, a short, slightly recurved, flaring canal, an arcuate callous pillar, white and smooth, with a conspicuous nodule on the body between the sulcus and the suture; operculum wanting. Lon., 14; of last whorl, 8; of aperture, 5.5; max. diam. 6 mm.

U. S. S. "Albatross," station 3391, in the Gulf of Panama, 153 fathoms, mud, bottom temperature 55°.8 F. U. S. N. Mus. 123,104.

The species was also dredged at station 2804, in Panama Bay, in 47 fathoms, mud, bottom temperature 64° F. U. S. N. Mus. 122,771.

The first half of the last whorl in the adult ends in a node or varix, indicating a previous resting stage with developed outer lip; beyond this the whorl is destitute of ribs.

#### ***Clathurella plicatella* DALL, n. sp.**

Shell very small, acute, eight-whorled, flesh color or pinkish white, polished; nucleus turbinata, blunt, polished, smooth, of about two whorls; subsequent whorls axially sculptured with (on the last whorl behind the node) ten sharp, more or less sigmoid, slightly protractive ribs extending from the suture to the canal, or on the spire from suture to suture, with wide interspaces; suture appressed; in front of it is a very slight constriction corresponding to an anal fasciole, though no actual fasciole is visible; aperture moderate, anal sulcus large for the size of the shell, rounded and deep; lip in front of it rounded and produced; on the body a small mass of callus limits the posterior edge of the sulcus; the body is smooth and callous, the enamel extending upon the pillar, which is short and attenuated; canal short, recurved, on the back finely, sharply, spirally striated, but these striae do not extend over the rotundity of the whorl. Length of shell, 7.0; of last whorl, 3.5; of aperture, 2.5; max. diam. 2.5 mm.

U. S. S. "Albatross," station 2799, in Panama Bay, in 29½ fathoms, mud.

This pretty little species is a typical *Clathurella*.

#### **GLYPHOSTOMA GABB.**

##### ***Glyphostoma immaculata* DALL, n. sp.**

Plate 1, figure 9.

Shell small, white, with a faint brownish or pinkish flush on the last whorl brilliantly polished and with no perceptible periostracum or operculum; nucleus

three-whorled, white, polished, with a peripheral carina on the third whorl which terminates abruptly; subsequent whorls four and a half, strongly sculptured; suture distinct, simple; whorls with 12-14 strong axial, slightly protractive ribs, faint on the anal fasciole, strong at the shoulder, and gradually attenuated over the base; these are crossed by (on the last whorl about fourteen) strong, subequal, equidistant channelled sulci, absent on the fasciole, obsolete in the depressions between the ribs, but cutting the summits of the ribs into squarish nodules; the fasciole is smooth and polished, but shows about four alternate opaque and translucent spiral bands of white, which at first look like threads; aperture narrow, anal sulcus strong, not deep, surrounded with a heavy callus; outer lip callous, forming a heavy varix, with six or seven internal lirae strongest and dentiform at the margin; body with a heavy and prominent anal callus separated by a gap from eight or nine dentiform lirae on the straight pillar; canal short, wide, at the anterior margin flaring. Lon. of shell, 10.4; of last whorl, 7.0; of aperture, 6.0; max. diam. 5.0 mm.

U. S. S. "Albatross," station 3391, Gulf of Panama, in 153 fathoms, mud, bottom temperature 55° 8 F. U. S. N. Mus. 123,115.

I do not feel certain that the existing nuclear shell is not an internal cast of a very thin, perhaps differently sculptured, larval shell, of which in one specimen I fancy traces are visible near the suture.

*Glyphostoma thalassoma* DALL, n. sp.

Shell slender, acute, eight-whorled, beside a nucleus of about a whorl and a half; the spire longer than the aperture, whorls gently rounded, suture appressed, not deep; axial sculpture of (on the penultimate whorl twenty-one) feeble, narrow, protractive ribs, concavely arcuate where they pass over the anal fasciole, and at the other end becoming obsolete on the base of the whorl, their interspaces narrower or subequal to the ribs; these are crossed by (between the sutures five or six, on the last whorl about eighteen) rounded, equal, strong spiral threads, with narrower interspaces, and hardly enlarged where they intersect the ribs; the anal fasciole is rather obscure and sculptured with incremental lines, and on the anterior edge about three very fine spiral threads; on the canal beyond the major threads are about fifteen minor spirals closely crowded; outer lip with a strong varix and conspicuous rounded anal sulcus, behind which on the body is an arcuate mass of callus; edge of the outer lip thin, strongly lirate within, the anterior margin denticulate; inner lip thinly callous, with a marginal row of small pustules opposite the lirae; canal constricted, deeply sulcate, somewhat recurved; shell discolored, probably originally whitish. Length of shell, 19.5; of last whorl, 12.0; of aperture, 9.0; max. diam. 6.5 mm.

U. S. S. "Albatross," station 3017, off Cape Lobos, Gulf of California, in 58 fathoms, mud, bottom temperature 61° 8 F. U. S. N. Mus. 110,612.

It is possible that, with greater age, the armature of the inner lip might be more conspicuous, as the shell may not be completely mature.

PLATE 1.

- FIG. 1. *Pleurotomella (Phymorhynchus) castanea* Dall; alt. 53 mm.; p. 284.  
FIG. 2. *Cancellaria (Merica) io* Dall; alt. 43 mm.; p. 295.  
FIG. 3. *Pleurotomella (Phymorhynchus?) clarinda* Dall; alt. 39.0 mm.; p. 285.  
FIG. 4. *Cancellaria (Merica) corbicula* Dall; alt. 21.5 mm.; p. 294.  
FIG. 5. *Borsonia (Borsonella) agassizii* Dall; alt. 23.0 mm.; p. 275.  
FIG. 6. *Pleurotomella (Gymnobela) agonia* Dall; alt. 25 mm.; p. 278.  
FIG. 7. *Gemmula benthima* Dall; alt. 28.0 mm.; p. 267.  
FIG. 8. *Cancellaria (Merica) centrota* Dall; alt. 35 mm.; p. 295.  
FIG. 9. *Glyphostoma immaculata* Dall; alt. 10.4 mm.; p. 289.

The drawings for this plate were made by the late Dr. J. C. McConnell.



