

REPORT  
ON THE  
ZOOLOGICAL COLLECTIONS

MADE IN THE  
INDO-PACIFIC OCEAN

DURING THE  
VOYAGE OF H.M.S. 'ALERT'  
1881-2.

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## MOLLUSCA.

BY

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With the exception of Mr. John Brazier's report on the Mollusca of the 'Chevert' expedition \* there does not appear to have been published any work of importance treating exclusively on the forms of North and North-eastern Australia. Dr. Tapparone-Canefri has written a few papers on the fauna of Papua, and a large number of species have, at various times, been described in different works and periodicals by Reeve, A. Adams, Watson, and others, from Port Essington, Torres Straits, and the coast of Queensland.

Many of the species found in this district range as far as, or even further north than, the Philippine Islands, and westward to Swan River, and, even in a few cases, to Ceylon and the Mauritius; but the general character of the fauna may be regarded as Malayan, although many of the species appear to be limited in their distribution and not as yet met with in the Archipelago.

## I. CEPHALOPODA.

1. *Octopus polyzenia*. (PLATE IV. figs. A-A 3.)

Gray, *Cat. Cephal. Anteped. Brit. Mus.* p. 13.

Animal small (perhaps young), minutely and closely granulated upon the back of the body, head, arms, and connecting web; the lower surface of the body, head, funnel, and web above it being more sparsely granulated. Body (in spirit) wider than long, rounded at the end, exhibiting a faint central ventral groove from the opening at the neck to the extremity. Head broad but narrower than the body, with a single papilla near the upper hinder edge of the ocular opening. Arms not very long; three upper pairs subequal in length, ventral pair rather longer. Lower surface and membrane between them very minutely granulous. Membrane between the arms extending about one third their length and also in a narrow strip up the side of them, but between the dorsal pair it is almost entirely wanting. Cups on the upper arms gradually decreasing in size from near the mouth to the extremity, on the three other pairs of arms enlarging gradually as far as the sixth pair (these being nearly twice as large as any on the dorsal pair), and then gradually

\* Proc. Linn. Soc. New South Wales, vols. ii. and iii.

lessening in diameter towards the tips; about one hundred in number on the longest arms, rather prominent, especially the largest, alternating in two series, almost, if not quite, from the commencement. Length from end of the body to angle between the upper arms 20 millim., width of body 13, length from subsiphonal opening to the extremity only 10; largest arm, from mouth to tip, 40 millim.

*Hab.* Thursday Island, Torres Straits, 4-5 fathoms, sandy bottom ('Alert'); Port Essington (*B. Mus.*).

This species (in spirit) is of a pale dirty olive tint on the ventral surface and very much darker above. The inner surface of the arms is also light olive, the suckers having a brown hue. At first I was inclined to consider that this olive colour might be the result of staining by the juices of an *Aplysia* which was contained in the same bottle. On examining the type from Port Essington, which I had not an opportunity of doing when drawing up the above description, I find that the same colour prevails.

2. *Octopus tenebricus*. (PLATE IV. figs. B-B 3.)

Animal of a uniform dark purplish chocolate-colour. Body (in spirit) longer than wide, smooth, bearing upon the back and sides scattered cirri. Head as broad as the body, very prominent at the eyes, much constricted in front and behind in the cervical region; also ornamented with a few tufts, the largest one being placed above but slightly behind each eye. A small one in front of each eye and a similar one just behind them appear to be constant in position; these are simple elongate papillæ, whilst the larger ones are branched. The web between the arms is rather small, externally papillose, and extends in a narrow strip up the back of the arms, forming a sort of acute carina. Upper or dorsal pair of arms smallest and shortest, the two lateral pairs about equal and the ventral only a trifle shorter, all gradually tapering to very fine points. Lower surfaces narrower, bearing two rows of very prominent suckers, of which the first four form a single series, the rest (about 120 on the longest arms) alternating in position. The first cup is very small, the next a trifle larger, and so on until about the tenth is reached, when they attain their greatest diameter, namely  $1\frac{1}{2}$  millim.; this size is maintained a short distance up the arm, when the cups gradually diminish as the extremity is approached.

*Dimensions.* Body, from base of funnel to extremity, 13 millim., width 11; longest arm 72 millim., shortest 50 in length.

*Hab.* Port Denison, N.E. Australia, 3-4 fathoms, sand and rock bottom.

This species bears considerable resemblance to *O. aculeatus* of d'Orbigny, but may be distinguished by the difference of colour, the different relative length of the arms, the narrowness of their lower surface, the greater prominence of the suckers, the regularity of the uniserial four at the base, and the smaller number of the external cirri or papillæ.

3. *Octopus maculosus*. (PLATE IV. fig. C.)

*Hoyle, Trans. Roy. Physical Soc. Edinb.* 1884.

Body short, about as broad as long, dirty buff beneath, of a dark bluish slate-colour upon the back, minutely dotted on both sides, the dots being scarcely visible to the naked eye except upon the pale ventral surface, smooth below and above, merely wrinkled by contraction of the skin, without granulation or cirri. Head narrower than the body, a little prominent at the sides or eyes, of the same colour above as the body. Siphuncle buff. Arms alternately banded with dark slaty blue and buff, the former colour predominating, ornamented here and there with pale, more or less ovate rings upon some of the dark bands. Dorsal pair rather shorter than the rest, which are subequal, connected by a strong interbrachial membrane, which joins the two ventral arms a little lower down than these and the two adjoining. Cups alternating in two rows, very slightly prominent, close together, buff on a slaty-blue ground, and thus conspicuous, about one hundred in number on the longest arms and a few less on the dorsal pair, of the same size on all the arms, the largest of them situated towards the lower part, the rest gradually lessening towards the extremity.

Length of body 22 millim., diam. 26; length from end of body to membrane between lower pair of arms 43 millim.; diam. of head 20; length of longest arm from the mouth to the tip 78 millim.; largest cup  $1\frac{3}{4}$  wide.

*Hab.* Port Jackson.

The peculiarity of the colour of this species readily distinguishes it from all others previously described.

## II. GASTROPODA.

1. *Conus lizardensis*.

*Crosse, Journ. de Conch.* 1865, vol. xiii. p. 305, pl. ix. fig. 5; *Sowerby, Thes. Con.* iii. pl. 288. fig. 642.

*Hab.* Lizard Island, N.E. Australia (*Crosse*); Arafura Sea, N. Australia, 32-36 fath. (*Coppinger*).

The single specimen from the latter locality is about the same size as the type described by M. Crosse, but differs in having the spire less elevated, although consisting of an equal number of whorls. The twofold character of the spiral ridges, the strong raised lines of increment, and the fine sculpture upon the top of the volutions are all maintained.

2. *Conus aculeiformis*.

*Reeve, Conch. Icon.* pl. 44. figs. 240 a, b; *Sowerby, Thes. Conch.* iii. pl. 202. fig. 370.

*Hab.* Island of Mindanao, Philippines (*Cuming*); Arafura Sea, 32-36 fath. (*Coppinger*).

In form the specimen obtained by Dr. Coppinger agrees to a great extent with *C. aculeiformis*, Reeve, but almost entirely lacks the lateral inclination of the anterior narrowed extremity. The spiral sulci on the body-whorl are narrower, and exhibit a decidedly less amount of subpunctate sculpture caused by the impressed lines of growth. The raised interstices are markedly flatter and broader, and do not exhibit the brown dotting so characteristic of Reeve's species. These differences may probably be accounted for by the younger state of the single specimen from the Arafura Sea, which, being dredged in a dead condition, has in a great degree lost its coloration. The spire offers scarcely any differences, the proportionate height, the coronation of three or four whorls succeeding the smooth glossy nucleus, the smooth ridge immediately below the suture, the finer lira beneath it in the concavity of the whorls, and the elevated margin beneath this being precisely as in the larger shell described by Reeve, with the exception of the ridge beneath the suture, which is rather broader and more flattened.

3. *Terebra exigua*.

*Deshayes, Proc. Zool. Soc.* 1850, p. 301; *Reeve, Conch. Icon.* pl. 26. fig. 84.

*Hab.* Thursday Island, Torres Straits (*Coppinger*); East Australia (*Deshayes*); Andaman Islands (*Colonel Wilmer* in Brit. Mus.).

The type of this species is described as having a length of 19 millimetres, but the single shell in the Cumingian collection is scarcely 15 long. One from the Andaman Islands measures 21 millimetres, and the one now recorded from Torres Straits exceeds that in length by four.

4. *Pleurotoma (Drillia) torresiana*. (PLATE IV. figs. D-D1.)

Shell fusiform, strong, robust, longitudinally costate and spirally lirate, having the ribs white or yellow, stained either with bright red or brownish black in the interstices, and ornamented with two bands of the same colour upon the last whorl. Volutions 12, having a duplex wavy ridge above, beneath which they are excavated and then convex at the sides; the concavity is rather deep and traversed by three or four spiral striæ. The costæ are obsolete in the concavity, a trifle oblique, thickest above, attenuating inferiorly, thirteen in number on the last two whorls, two of them on each being large swollen white varices. The ribs are crossed by spiral liræ, there being seven or eight on the penultimate, and about twenty-four on the last whorl, besides one or more finer ones in the interstices between them. The columella is smooth, covered with a thin callus, developed into a tubercle at the upper part. Labral sinus deepish in the concavity above. Length 34 millim., width 10; aperture 13 long.

*Hab.* Friday Island, Torres Straits, and Prince of Wales Channel, 7-9 fathoms.

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TAYLOR BROS, HUNSLET NEW ROAD.

*Limax agrestis* var. *reticulata* Müll. in Britain.—This variety should be added to the British list. Individuals belonging to it are I believe not uncommon. I have just had a number sent to me by Mr. R. Renton, of Faus, near Earlston, Berwickshire, which agree very well with Moquin's and Pini's descriptions. The latter author (Molluschi del Territorio d'Esino) gives the description thus:—Animal ash-brown with the back covered with an irregular reticulation of brown colour, sometimes reddish; shield unicolorous, paler, irregularly maculated with brown. The appearance of a fine network arises from the circumstance that the interstices between the rugæ of the body are much darker than the rugæ themselves (often nearly black). The variety has been recorded for France (Moquin-Tandon), and Northern Italy (Lessona and Pollonera); while Pini speaks of it as being rare at Esino, but a prevalent form in the plain of Lombardy.—W. DENISON ROEBUCK, Sep. 22nd, 1883.

*Limnæa palustris* var. *obesa* n. v. (Pl. i., fig. 5.)

Among some shells collected at Faversham by Miss Fairbrass, and kindly sent by her for my examination, I detected this interesting form, which she has generously added to my collection. It is remarkable for its obesity, the dimensions of the type specimen being alt.  $23\frac{1}{2}$  mill., diam.  $14\frac{1}{2}$  mill.; apert. alt.  $12\frac{1}{2}$  mill., diam. 8 mill.

This variety has some affinity with the var. *corvus* of Gmelin, but is pale brown instead of purplish-brown, and is much stouter in proportion to its length. I have not yet seen a perfectly characteristic British specimen of the var. *corvus*.—JOHN W. TAYLOR, Sep. 24th, 1883.

DESCRIPTION OF NEW TASMANIAN SHELLS.

By W. F. PETERD.

[Read before the Conchological Society.]

1. *Liotia compacta* n. sp. Shell minute, dull, white, discoid, spire flattened, regularly and distantly ribbed, ribs rounded and prominent, covered with concentric fine striæ, ribs also striated, nucleus smooth; whorls  $3\frac{1}{2}$ , rounded, aperture expanded, umbilicus open, freely showing the spiral whorls, sculptured same as upper surface. Long.  $1\frac{1}{4}$  mill., lat.  $\frac{3}{4}$  mill.  
Habitat, Leven Heads, (Miss Lodder).  
Of this pretty little shell I have seen but one example—the type—and that is in the collection of Miss Lodder, a very careful and enthusiastic collector.
2. *Liotia Lodderæ* n. sp. Shell small, discoidal, white; whorls  $4\frac{1}{2}$ , ornamented with several spiral sub-obsolete liræ; umbilicus open, aperture almost circular, reflexed and thickened. Long. 2 mill., lat. 1 mill.  
Habitat, Leven Heads (Miss Lodder).  
Apparently abundant at the locality given.
3. *Turritella Higginsi* n. sp. Shell acuminate turreted, rather thin, reddish brown; whorls 15, excavate at the suture, ornamented with spiral lines, and three transverse keels; aperture ovate, labrum with a very deep open sinus in the middle. Long. 30 mill., lat. 9 mill.  
Habitat, Tamar Heads.  
A very fine form, quite distinct from any existing species. Professor Ralph Tate informs me that it is

A pretty tumid species, but rarely obtained. It comes nearer *Murex scalaris* A. Adams (the *Trophon umbilicatus* of Tenison Woods), than any other of our numerous forms of the genus, but may be distinguished by its swollen form, beautiful sculpture and colour. I have never collected any species like it in the south.

27. *Trophon eburnea* n. sp. Shell fusiform, white, dull; whorls,  $4\frac{1}{2}$ , rounded, suture impressed, irregularly marked with lines of growth, ornamented with very fine numerous spiral lines, interspaces decussate; aperture somewhat large, ovate, outer lip thin; canal short and open. Long. 16 mill., lat. 8 mill.

Habitat, Tamar Heads.

A plain milk-white, finely cancellated fusiform species, totally different from any other described from our coasts. It has much the aspect of a *Fusus*. Professor Tate obtained a single specimen at Aldinga Bay, South Australia.

28. *Terebra Beddomei* n. sp. Shell elongate, white, smooth, apex blunt, suture scarcely impressed, whorls 6-7, very slightly convex. Long.  $6\frac{1}{2}$  mill., lat. 2 mill.

Habitat, Brown's River.

A plain form without ornamentation.

29. *Cerithiopsis Johnstoni* n. sp. Shell elongate, turreted, white, somewhat translucent; whorls 14 (?), decollate, suture excavate, with spiral grooves on each whorl, grooves very finely transversely striate; aperture obliquely quadrate, slightly reflexed, narrowed anteriorly. Long. 9 mill., lat.  $2\frac{1}{2}$  mill.

Habitat, Circular Head, Tamar Heads, and other localities on the North Coast. Somewhat rare.

May be known from *C. crocea* Angas, by its altogether different sculpture and want of colour.

30. *Volvaria lubrica* n. sp. Shell minute, ovately cylindrical, brownish, smooth, shining, translucent; whorls 3, rounded; aperture narrow, slightly increasing in width towards anterior margin, where there is a single fold forming its reflexed margin; outer lip simple; spire scarcely elevated. Long. 2 mill., lat.  $1\frac{1}{2}$  mill.

Habitat, Brown's River, dredged in about 6 fathoms.

31. *Marginella mixta* n. sp. Shell small, elliptical, polished, yellowish-brown; whorls 4, spire but little elevated, apex obtuse; aperture long and narrow, columella with three plaits, outer lip somewhat thickened. Long. 7 mill., lat. 3 mill.

Habitat, Southern and Eastern coasts.

Somewhat plentiful in accumulated shell sand.

Comes near *M. stanilas* Tenison Woods, but may be separated by its narrow elongated form and triplicate aperture.

32. *Marginella Beddomei* n. sp. Shell small, ovate, rather thick, shining, white; spire rounded; aperture narrow, wider anteriorly, columella 3-plicate and dentate above, outer lip thickened and thickly dentate. Long.  $3\frac{1}{2}$  mill., lat. 2 mill.

Habitat, Southern coasts, with the preceding.

A small ovate species, with dentate aperture, It is not at all uncommon.

33. *Marginella Johnstoni* n. sp. Shell thick, oblong, ovate, pale yellowish-white, with a thick white callous expansion over the front, polished; whorls  $4\frac{1}{2}$ ; spire