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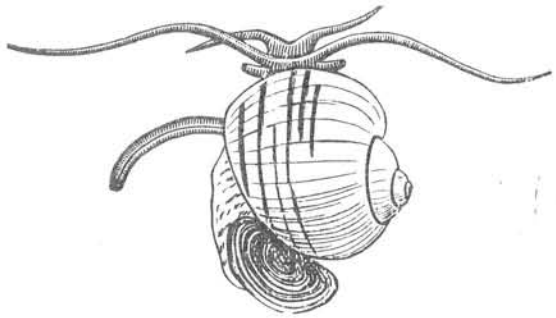

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distances from the edge of the aperture. As appears to be invariably the case in the genus, it is pure white and porcellanous, and the inner surface is coated with a mucous film which has quite a white pearly lustre. The slit is situated at the upper, or posterior, end, and looks exactly as if a knife had been thrust through from the outside so as to force the substance out into a ridge, which is slit down the middle, on the under surface. This slit is all but closed [1] in both of the specimens examined. Such a solid structure as this would largely help to prevent evaporation during periods of great heat and dryness, thus retaining within the shell the moisture so necessary for the life of the inhabitant. It would equally serve as a defensive barrier against insects and other enemies during these seasons of torpidity.

The use of the slit during æstivation, when life is almost suspended, is doubtless for the purpose of conveying air for respiration, although the breathing orifice is probably all but closed at such times. An examination of a retracted animal reveals a slit-like opening in the mantle leading to the respiratory orifice which would receive the perforated ridge on the epiphragm.

[1] The epiphragm of *Helix pomatia* and of *H. aperta* does not appear to be perforated.

NOTES ON SOME MARINE SHELLS FROM NORTH-WEST AUSTRALIA, WITH DESCRIPTIONS OF NEW SPECIES.

By Edgar A. Smith, F.Z.S., etc.

Read 12*th May*, 1899.

1. Cancellaria Reeveana, Crosse.

Hab.—Roebuck Bay, North-west Australia (J. J. Walker).

A single specimen from this locality, collected by Mr. J. J. Walker, of H.M.S. "Penguin," is interesting on account of the total absence of colour, being snow-white both externally and within the aperture. In form and sculpture it is quite normal. The typical form occurs at the Philippines and Japan. Mr. Tryon, in his monograph of this genus, placed this species as a variety of *C. asperella*, Lam., and also included under that species *C. Sinensis*, Reeve, and *C. melanostoma*, Sby., from Aden.[1]

Although they exhibit a general resemblance to one another, I certainly think these forms may be separated. The distinction between *C. asperella* and *C. Reeveana* has already been pointed out by Crosse,[2] and *C. melanostoma* has differences of form, sculpture, and colour. *C. Sinensis* is very unsatisfactory, being founded on a single distorted shell in the Cuming Collection. It certainly very closely approaches *C. melanostoma* in many respects, but has not the characteristic brown callus on the columellar side of the aperture.

2. Coralliobia fimbriata, A. Adams. Fig. II.

Concholepas (*Coralliobia*) *fimbriata*, A. Ad.: Proc. Zool. Soc., 1852, p. 93.

Magilus fimbriatus (A. Ad.): Sowerby, Conch. Icon., vol. xviii, pl. iii, figs. 9*a*, *b*.

Hab.—Mindanao, Philippines (Cuming); Mauritius (Robillard); Macclesfield Bank, China Sea, 30–50 fathoms (Bassett-Smith).

A specimen from the last-named locality is of interest as showing the character of the upper whorls and only very little of the cancellation, which is characteristic of the typical specimens. The spire consists of four very small whorls, of which the apical one is smooth and globose, the second has a single keel or angle, whilst the third and fourth have two spiral ridges. The body-whorl, which is enormous in comparison with the spire, spreads out into a subcircular, much flattened disc, and is very finely radiately striated, only the first

[1] Smith: Proc. Zool. Soc., 1891, p. 410.
[2] Journ. de Conch., 1861, p. 237.

convex portion showing some indication of cancellation. A feature which seems to have escaped attention is that the last scale of the lowermost transverse rib is formed into an open tube (Fig. II), apparently as a means for conveying water for respiration when the mollusc is closely adhering to corals or other substances. The anterior end of the aperture is narrowed and channelled, and then produced into the open tube above referred to. This also occurs in the variety *Robillardi*.[1]

3. Calliostoma deceptum, n.sp. Fig. V.

Testa parva, conica, imperforata, rubescenti-albida, seriebus spiralibus granulorum parvorum acutorum (in anfractu penultimo circiter 6) ornata; spira mediocriter acuta; anfractus 7 lente accrescentes, primus lævis, globosus, cæteri in medio subangulati, leviter gradati, supra et infra angulum planiusculi, ultimus basi angulatus, infra seriebus granulorum 7–8 instructus; apertura irregulariter subquadrata, intus sulcata; columella incrassata, extus callo prominente marginata. Diam. 7, alt. 9 mm.

Hab.—Holothuria Bank, 15–34 fathoms, and Baleine Bank, North-west Australia (J. J. Walker).

In the report on the zoological collections of H.M.S. "Alert," p. 72, some young examples of this species were erroneously considered to belong to *C. rubro-punctatum* (A. Adams). Full-grown specimens, although showing some similarity to that species, prove that the two forms are distinct. In the present species the series of granules are more numerous, the granules themselves not so acutely conical, and the base more closely granulated. Some examples exhibit scattered pale-brown dots, whilst others are uniformly of a very pale flesh tint.

4. Terebra Walkeri, n.sp. Fig. I.

Testa subulata, alba, liris spiralibus granulosis inæqualibus, quarum 3–4 cæteris majores, lirisque longitudinalibus gracillimis obliquis cancellata; anfractus 12, primus magnus, obtusus, lævis, secundus longitudinaliter fortiter costatus, in medio obtuse angulatus, haud spiraliter liratus, cæteri convexiusculi, sutura obliqua sejuncti, ultimus infra medium angulatus, infra concavus, liris 3–4 tenuibus incrementique lineis fortibus granose cancellatus; apertura irregulariter quadrata; canalis anterior obliquus, subrecurvus. Long. 26, diam. 6 mm.

Hab.—Holothuria Bank, North-west Australia, 10–30 fathoms (J. J. Walker).

Readily distinguishable by the unusual style of sculpture and the character of the apex. Upon the penultimate whorl there are seven spiral granose liræ, four of which are more prominent than the rest.

[1] *Leptoconchus Robillardi*, Liénard: Journ. de Conch., 1870, p. 305; 1871, p. 73, pl. i, figs. 5, 5*a*.

The body-whorl has one more, forming the angle at the periphery. Beneath this the surface is somewhat concave, and finely cancellated with three or four concentric liræ and strong lines of growth.

5. Cancellaria pallida, n.sp. Fig. IV.

Testa parva, ovato-fusiformis, rimata, alba; spira elongata, ad apicem obtusa; anfractus 6–7, superiores duo læves, globosi, pellucidi, cæteri convexi, costis arcuatis tenuibus lirisque spiralibus filiformibus eleganter cancellati, ultimus costis paucis, hic illic aliis majoribus, instructus; apertura auriformis, longit. totius ⅓ haud æquans; labrum varice extus incrassatum, intus liris tenuibus circiter 12 ornatum;

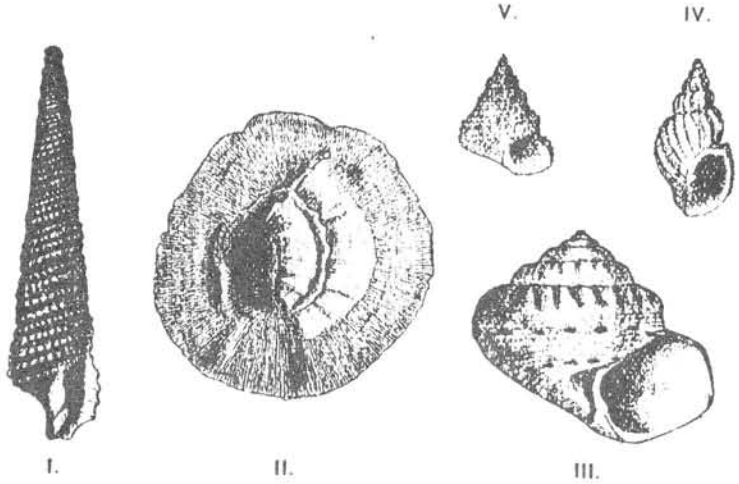

Fig. I. *Terebra Walkeri*, n.sp. × 2.
,, II. *Coralliobia fimbriata*, A. Ad. × 2.
,, III. *Monilia simulans*, n.sp. × 2.
,, IV. *Cancellaria pallida*, n.sp. × 2.
,, V. *Calliostoma deceptum*, n.sp. × 2.

columella triplicata, callo libero superne labro juncta, intus infra suturam lira subtuberculiformi instructa; sutura profunda, in anfractu ultimo antice fere canaliculata. Long. 10·5, diam. maj. 6 mm.; apertura 4·5 mm. longa.

Hab.—Cassini Island, North-west Australia, 25 fathoms (J. J. Walker).

In the single example of this little species the fine costæ number thirteen upon the penultimate whorl, and the spiral liræ about eight. Here and there a few of the costæ are stouter than the rest, probably indicating periods of arrested growth. Very fine incremental striæ cover the entire surface.