

THE

P 992

PROCEEDINGS

OF THE

LINNEAN SOCIETY

OF

NEW SOUTH WALES.

VOL. I.

[WITH SEVENTEEN PLATES.]

SYDNEY:

PRINTED & PUBLISHED FOR THE SOCIETY

By GIBBS, SHALLARD, & Co., 108 PITT STREET,

AND SOLD BY THE SOCIETY.

1877.



R. aurata, and the smooth whorls with diagonal lines of color in *R. nana* are the most constant distinction.

R. melanostoma is marked with *R. aurata* by Gray (*loc. cit.*) as variety of one species. This I believe. At any rate, the former is unknown to me. It is the oldest name, but from the imperfect diagnosis of Chemnitz it is impossible to identify the shell meant as a *Risella*.

R. plana, Quoy, is a very depressed solid angular lirate and plicate species with a yellowish white mouth. It is longer than the preceding, and its specific characters seem very constant. The animal I have not seen. The shell is found all round the Australian coast from Port Stephens to S. Vincent's Gulf.

R. lutea, Quoy, I believe to be only a corroded and brackish water or male variety of the preceding; but I know little of the living habits of the species. In Dr. Cox's extensive collection, I noticed the shells named *R. lutea* which appeared to me a common form of *R. nana* or *aurata*, but adult or perhaps more correctly in old age. It is corroded, and the marginal space on the base is not visible. It is common in Tasmania, and breeds readily with *R. nana*. Mr. Angas says (*Zool. Proc.* 1867, p. 209), this species, the most conical of the genus, is common on the rocks outside Port Jackson, and along the coast to Kiama and Jervis Bay. Mr. Crosse (*loc. cit.*, p. 238) says, on the authority of MM. Q. and G., that it is found throughout King George's Sound, but principally in the little salt creeks. The only good figures, says M. Grosse, are those of Kiener, in his monograph of the genus *Trochus*—but there is no description as the work is not completed.

Thus we should have only two species of *Risella*, with male or female varieties of both.

It is possible that these two species may even yet be reduced to one; but I respectfully beg the attention of naturalists to the fact that the sexual differences are marked by differences in the shells. This may open up a most important fact for the whole of our conchological nomenclature. I also call attention to the remarkable

manner of breeding of hermaphrodite mollusca. As yet, we know little or nothing of the physiology of reproduction under these peculiar conditions, and I submit that most important physiological and zoological facts are contained therein, bearing on the whole question of evolution. The subject may be said to be at our doors, and may be studied with the greatest ease by anyone who gives it a careful attention. I have written this paper in the hope of drawing other observers into this most inviting and interesting field.

Shells collected during the Chevert Expedition, with Descriptions of the New Species, by J. BRAZIER, C.M.Z.S.

FAMILY SCALARIDÆ.

1.—SCALARIA REPLICATA.

Scalaria replicata, Sow. Jun., Proc. Zool. Soc., London, 1844, p. 11.

„ „ Sowerby, Thes. Conch., vol. 1, p. 84, pl. 32, f. 23, 24.

Hab. Darnley Island, Torres Straits, 10 fathoms, sandy mud.

2.—SCALARIA PHILIPPINARUM.

Scalaria Phillipinarum, Sowerby, Jun. Proc. Zool. Soc., London, 1844, p. 12.

„ „ Thes. Conch., vol. 1, p. 85, pl. 32, f. 21, 22.

Hab. Darnley Island, Torres Straits, 10 fathoms, sandy mud. This species is also found in Port Jackson.

3.—SCALARIA IRREGULARIS.

Scalaria irregularis, Sowerby, Proc. Zool. Soc., London, 1844, p. 13.

„ „ Thes. Conch., vol. 1, p. 90, pl. 33, f. 40, 60.

Hab. Bet Island, Torres Straits, 11 fathoms, coral and sand. Specimens also found on the beaches inside the reefs after gales.

15.—SCALARIA SP. ?

Hab. Darnley Island, Torres Straits, 20 fathoms. One specimen obtained very much sea-worn

16.—SCALARIA SP. ?

Hab. Cape Grenville, North-East Australia. Two specimens found dead, having all the varices worn off.

17.—SCALARIA VESTALIS.

Scalaria vestalis, Hinds, Proc. Zool. Soc., London, 1843, p. 125.
 " " Sowerby, Thes. Conch., vol. 1, p. 93, pl. 34, f. 97.

Hab. Cape York, North Australia, 11 fathoms, sand and mud. One specimen was found of this beautiful species.

18.—SCALARIA CONCINNA.

Scalaria concinna, Sowerby, Jun., Proc. Zool. Soc., London, 1844, p. 28.
 " " " Thes. Conch., vol. 1, p. 97, pl. 33, f. 63.

Hab. Katow, New Guinea, 8 fathoms, sandy mud. Only one specimen was found of this pretty species.

19.—SCALARIA SP. ?

Hab. Cape Grenville, North-East Australia, 25 fathoms, sand. Specimen having the whole of the aperture, and two or three of the upper whorls broken; what remains of it resembles *Scalaria vulpina* (Hinds).

20.—SCALARIA, SP. ?

Hab. Darnley Island, Torres Straits, 30 fathoms, sandy mud. Small shell, very finely cancellated; somewhat seaworn. One specimen obtained, with the aperture broken.

21.—SCALARIA VARICOSA.

Scalaria varicosa, Lam. Anim. Sans Vert., tome 6, p. 227.
 " *fimbriata*, Lam. Encyclop., pl. 451, f. 4 a, b.

Scalaria varicosa, Sow. Thes. Conch., vol. 1, p. 103, pl. 35, f. 126, 128.

Hab. Darnley Island, Torres Straits, 30 fathoms, white sand. One fine living specimen was found.

FAMILY TEREBRIDÆ.

SUB-FAMILY TEREBRINÆ.

22.—ACUS MACULATUS.

Buccinum maculatum, Linn. Gmel., p. 3499, No. 130.
Terebra maculata, Lam. Anim. Sans Vert., tome 7, p. 283.
 " " Sowerby, Thes. Conch., vol. 1, p. 150, pl. 42, f. 33.
 " " Reeve, Conch. Icon., pl. 1, sp. 4.

Hab. Darnley Island, Torres Straits, found on the sands at low water.

23.—ACUS CHLORATUS.

Terebra chlorata, Lam., Anim. Sans Vert., tome 7, p. 288.
 " *Knorrii*, Gray, Proc. Zool. Soc., London, 1834, p. 59.
 " *chlorata*, Sowerby, Thes. Conch. vol. 1, p. 158, pl. 42, f. 29.
 " " Reeve, Conch. Icon., pl. 3, sp. 11.
Hab. Darnley Island, Torres Straits, found on the sands.

24.—ACUS JUKESEI.

Terebra Jukesi, Deshayes, French Journal de Conch., vol. 6, 1857, p. 95, pl. 5, f. 9.
Hab. Evans Bay, Cape York, North Australia, 6 fathoms, sand.

25.—ACUS (ABRETIA) TENERA.

Terebra tenera, Hinds, Proc. Zool. Soc., London, 1843, p. 158.
 " " Sowerby, Thes. Conch., vol. 1, p. 184, pl. 45, f. 111.
Hab. Evans Bay, Cape York, North-East Australia, 6 fathoms, sand.

26.—HASTULA MARMORATA.

Terebra marmorata, Deshayes, Reeve, Conch. Icon., pl. 19, fig. 91 a, b.

Hab. Cape Grenville, North-East Australia, 20 fathoms, sandy mud; Sue Island, 11 fathoms, sand; Darnley Island, Torres Straits, 20, 30 fathoms.

27. HASTULA SPECTABILIS.

Terebra spectabilis, Hinds, Proc. Zool. Soc., London, 1843, p. 150.

" " Sowerby, Thes. Conch., vol. 1, p. 157, pl. 44, f. 88.

" " Reeve, Conch. Icon., pl. 19, sp. 93 a, b.

Hab. Darnley Island, Torres Straits, 15 fathoms, white sand.

28.—TEREBRA STRAMINEA.

Terebra straminea, Gray, Proc., Zool. Soc., 1834, p. 62.

" " Sowerby, Thes. Conch., vol. 1, p. 169, pl. 42, fig. 22, 23.

" " Reeve, Conch., Icon., pl. 12, sp. 47a, 47b.

Hab. Princess Charlotte Bay, North-East Australia, 14 fathoms, rough sand bottom, one specimen found; Cape Grenville, North-East Australia, 20 fathoms, sandy mud bottom, one specimen found. This is the variety figured by Reeve, 47b. *Terebra acuta* and *circinata* (Deshayes) are quite distinct both in colour, sculpture, and markings. Reeve is wrong in making them and *straminea* one species.

29.—TEREBRA OCULATA.

Terebra oculata, Lam. Anim. Sans Vert., tome 7, p. 286.

" *levis*, Gray, Proc. Zool. Soc., London, 1834 p. 61.

" *oculata*, Sowerby, Thes. Conch., vol. 1, p. 156, pl. 42, f. 31.

" " Reeve, Conch. Icon., pl. 5, sp. 18.

Hab. Darnley Island, Torres Straits, found on the sands. One fine living specimen was obtained 9 inches long.

30.—TEREBRA COPULA.

Terebra copula, Hinds, Proc. Zool. Soc., 1843, p. 151.

" " Sowerby, Thes. Conch., vol. 1, p. 157, pl. 44, f. 76.

" " Reeve, Conch. Icon., pl. 19, sp. 92, a, b.

Hab. Hall Sound, New Guinea, on the sands at low water.

31.—TEREBRA (MYURELLA) UNDULATA.

Terebra undulata, Gray, Proc. Zool. Soc., London, 1834, p. 60.

" " Sowerby, Thes. Conch., vol. 1, p. 172, pl. 43, f. 55.

" " Reeve, Conch. Icon., pl. 18, fig. 84.

Hab. Darnley Island, Torres Straits, on the sands at the edge of low water.

32.—TEREBRA (MYURELLA) CÆLATA.

Terebra cælata, Adams and Reeve, Moll. Voyage, Samarang, p. 30, pl. 10, f. 22.

" " Reeve, Conch. Icon., pl. 15, sp. 64.

Hab. Darnley Island, Torres Straits, 20 fathoms, sandy mud bottom.

33.—TEREBRA (MYURELLA) CANCELLATA.

Terebra cancellata, Quoy and Gaimard, Voyage de l'Astrolabe, p. 471, pl. 36, f. 27, 28.

" " Sowerby, Thes. Conch., vol. 1, p. 178, pl. 44, fig. 80.

Hab. Cape Grenville, North-East Australia, 20 fathoms, sandy mud.

34.—TEREBRA (MYURELLA) COLUMELLARIS.

Terebra columellaris, Hinds, Proc. Zool. Soc., London, 1843, p. 151.

" *areolata*, Adams and Reeve, Moll. Voy. Samarang, p. 30, pl. 10, fig. 23.

" *columellaris*, Sowerby, Thes. Conch., Vol. 1, p. 172, pl. 44, f. 77.

" " Reeve, Conch. Icon., pl. 22, sp. 113.

Hab. Darnley Island, Torres Straits, 15 fathoms, white sand bottom.

35.—TEREBRA (MYURELLA) VIOLASCENS.

Terebra violascens, Hinds, Proc. Zool. Soc. London, 1843, p. 154.
 " " Sow. Thes. Conch., vol. 1, p. 177, pl. 45,
 fig. 98.

" " Reeve, Conch. Icon., pl. 24, sp. 125.
Hab. Katow, New Guinea, sandy mud and fine coral, 8 fathoms.
 One specimen was obtained of this fine shell.

FAMILY PYRAMIDELLIDÆ.

36.—PYRAMIDELLA AURIS-CATI.

Voluta auris-cati, Chem. Conch. fig. 1711, 1712.
Pyramidella plicata, Lam., Anim. Sans Vert., tome 6, p. 223.
 " *auris-cati*, Sowerby, Thes. Conch., vol. 2, p. 812,
 pl. 172, f. 1, 2.
Hab. Darnley Island, Torres Straits. Specimen found on the
 reef.

37.—PYRAMIDELLA SUBULATA.

Pyramidella subulata, A. Adams, Proc. Zool. Soc. 1853, p. 177,
 pl. 20, fig. 6.
 " " Sowerby, Thes. Conch., vol. 2, p. 815,
 pl. 172, fig. 13.
Hab. Cape Grenville, North-East Australia, 15 fathoms, sand;
 Darnley Island, Torres Straits, 20, 30 fathoms, sandy mud. Four
 specimens were found.

38.—PYRAMIDELLA GRACILIS.

Pyramidella gracilis, A. Adams, Proc. Zool. Soc., London, 1853,
 p. 178.
 " " Sowerby, Thes. Conch., vol. 2, p. 815, pl.
 172, fig. 14, 15.
Hab. Darnley Island, Torres Straits, 30 fathoms, sand. One
 specimen found.

39.—OBELISCUS TEREHELLOIDES.

Obeliscus terebelloides, A. Adams, Sowerby, Thes. Conch., vol. 2,
 p. 808, pl. 171, f. 18.

Pyramidella terebelloides, Reeve, Conch. Icon., pl. 1, sp. 8.
Hab. Darnley Island, Torres Straits, 20, 30 fathoms, sandy
 mud.

40.—OBELISCUS TESSELLATUS.

Obeliscus tessellatus, A. Adams, Sowerby, Thes. Conch., vol. 2,
 p. 808, pl. 171, f. 16.
Pyramidella tessellata, Reeve, Conch. Icon., pl. 1, sp. 4 a, b.
Hab. Darnley Island, Torres Straits, 20, 30 fathoms, sandy mud.

41.—OBELISCUS PULCHELLUS.

Obeliscus pulchellus, A. Adams, Sowerby, Thes. Conch., vol. 2,
 p. 808, pl. 171, fig. 20.
Pyramidella pulchella, Reeve, Conch. Icon., pl. 4, sp. 24.
Hab. Cape York, North Australia, 6, 12 fathoms, sand bottom.

42.—OBELISCUS ACLIS.

Obeliscus aclis, A. Adams, Sowerby, Thes. Conch., vol. 1, p. 811,
 pl. 171, fig. 30.
Pyramidella aclis, Reeve, Conch. Icon., pl. 4, sp. 25 a, b.
Hab.—Darnley Island, Torres Straits, 30 fathoms, sandy mud.

43.—TURBONILLA DARNLEYENSIS, N. SP.

Shell elongated, turreted, white, transparent, longitudinally
 ribbed, ribs smooth, interstices between the ribs minutely latticed
 with raised striæ; whorls 16, flattened, suture impressed, last
 whorl below the periphery smooth and shining, slightly convex,
 aperture round, columella thickened, slightly curved, peristome
 thick.

Length $3\frac{1}{2}$ lines, breadth $\frac{3}{4}$ line.

Hab. Darnley Island, Torres Straits, 30 fathoms, sandy mud
 bottom. Seven specimens were found of this species, only one
 perfect in the lot.

44.—TURBONILLA EXIMIA, N. SP.

Shell subulate, turreted, very thin, white, whorls 9, roundly
 convex, longitudinally prominently sharply ribbed, interstices
 smooth, suture deep, the last whorl in front crossed with trans-