

CENSUS; WITH BRIEF DESCRIPTIONS OF THE MARINE SHELLS OF TASMANIA AND THE ADJACENT ISLANDS.

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NOTE.—All the measurements are given in French millimetres, and the greatest measurement in each direction is always meant. The letters N., S., E., and W. will be used to denote, the north, south, east, and west coasts of the island respectively; B. St., Bass' Straits; S.E.A., South-east Australia, as far as Port Jackson inclusive; E.A., the whole of the East Australian coast; S.A., the whole of the South Australian coast as far as Spencer's Gulf; W.A., Western Australia, as far as Swan River; V. will mean Victoria from Cape Howe to Portland Bay.

CLASS CEPHALAPODA.

ARGONAUTA ORYZATA. *Meush. Mus. Gev.* 252, 133. This well-known shell, the "Paper Nautilus" of collectors is rarely found in Tasmania. Two species are found in E.A., not uncommon in S.A.

SPIRULA LEVIS. *Gray, Cat. Moll. Brit. Mus. Pt. 1, p. 116.* S.A., E.A., and W.A., rather uncommon.

SEPIA. Two species at least, not determined, and others of Octopus, Cistopus, Onychoteuthis, etc.

CLASS GASTEROPODA.

MUREX TRIFORMIS. *Reeve, Icon. pl. 13, fig. 53.* Somewhat common but generally worn and imperfect specimens only. The shell seems as if its growth were stunted by its southern habitat, while in South Australia the varices expand into beautiful and delicate frills.

MUREX ZONATUS. *Tenison-Woods.*

MUREX ANGASI. *Crosse, Jour. de Conch.* 1863, p. 86, pl. 1, fig. 2. Two small specimens of this rare shell have been shown to me from the W. Coast. It has three varices which are canaliculately hooked at the upper part. There are three tubercles between each varix on the upper part of the whorl. One is strongly inclined to regard this as allied to *M. acanthopterus*, *M. pinniger*, *M. phyllopterus*, and *M. falcatus*. Common in the dredge at Long Bay. W. F. Petterd.

TYPHIS ARCUATUS. *Hinds, Voy. Sulphur, vide Descr. Novae spec. ab. aue. Reg. Soc. Tas. Proc., 1876.*

TROPHON UMBILICATUS. *Tenison-Woods.* In this and all succeeding references to the author's name, the species will be found described in the Society's Proceedings for 1875 and 1876, and the names in this list are printed thus for the purpose of labelling collections.

TROPHON PETTERDI. *Crosse Jour. Conch., 1864, pl. 5, fig. 20.* Abundant. A yellowish white or brown cancellated shell. Long. 21, lat. 11. Whorls 6. Generally distributed.

TROPHON BRAZIERI. *Tenison-Woods.*

TROPHON ASSISI. *Tenison-Woods.*

TROPHON GOLDSTEINI. *Tenison-Woods.*

TROPHON MARLE. *Tenison-Woods.*

TROPHON HANLEYI. *Angas, Zool. Proc., 1867, p. 110.* This New South Wales shell is said to occur in Tasmania, but I have seen no specimen.

TROPHON AUSTRALIS. *Tenison-Woods.*

FUSUS DILATATA. *Quoy. and Gaim., Voy. de l'Astrolabe.* North Coast. W. F. Petterd.

FUSUS PYRULATUS. *Reeve. Icon., pl. 13, fig. 50.* Described as Tasmanian, but unknown to collectors here. S.A.

FUSUS NOVE-HOLLANDIÆ. *Reeve. Icon. pl. 18, fig. 70.* A very long channelled spindle shell with distant liræ and nodose ribs. Common. Long. 117, lat. 37; whorls 9. That size rare, generally smaller. In Australia it attains 175 mill. in length. S.A.

FUSUS TASMANIENSIS. *Adams and Angas., Zool. Proc., 1863, p. 421.* Rare; N.W. Coast.

FUSUS LEGRANDI. *Tenison-Woods.* Rare.

FUSUS SPICERI. *Tenison-Woods.*

SIPHONALIA CLARKEI. *Tenison-Woods.*

SIPHONALIA CASTANEA. *Tenison-Woods.*

SIPHONALIA PULCHRA. *Tenison-Woods.*

SIPHONALIA TURRITA. *Tenison-Woods.*

SIPHONALIA FUSCOZONATA. *Ad. and Angas., Zool. Proc., 1865, p. 56.* A small white shell with blunt ribs and zones of brown spots. King's Island; not very common. Long. $7\frac{1}{2}$, lat. 3, but South Australian specimens double that size.

PLEUROTOMA (DRILLIA) COXI. *Angas. Zool. Proc., 1867, p. 113.* A turretted nodosely ribbed maculate shell. Long. 25, lat. 10. One specimen only, dredged by Rev. H. D. Atkinson at 7 fathoms. Long Bay, D'Entrecasteaux Channel.

PLEUROTOMA (DRILLIA ?) INCRUSTA. *Tenison-Woods.*

PLEUROTOMA (DRILLIA ?) PSEUDO-CARINATA. *Reeve. Icon. pl. 29, fig. 256.* An ovately pyramidal shell, somewhat indistinctly keeled, plicately ribbed (10 ribs on the body whorl) and transversely finely striate, brownish yellow. Long. 24, lat. 6. King's Island. Sometimes obscurely dotted brown at the top of the ribs.

PLEUROTOMA (DRILLIA ?) ATKINSONI. *Tenison-Woods.*

PLEUROTOMA (DRILLIA ?) MINUTA. *Tenison-Woods.*

PLEUROTOMA (DRILLIA ?) WELDIANA. *Tenison-Woods.*

PLEUROTOMA (DRILLIA) BERAUDIANA. *Cross. Jour. Conch., 1863, p. 88, pl. fig. 6.* S., rare. N.S.W. King's Island, Common. A turretted nodose livid species, about 15 mill. long.

PLEUROTOMA PHILIPINERI. *Tenison-Woods.*

PLEUROTOMA (CLATHURELLA) PHILOMENE. *Tenison-Woods.*

BELA MITRALIS. *Ad. and Angas., Zool. Proc., 1863, p. 420.* An ivory white shell with nacreous fine ribs which become obsolete on the last whorl; finely striate throughout; common. S.E.A. and S.A. Long. 17, lat. 7, whorls 6; sometimes faintly spotted reddish brown.

CYTHARA TASMANICA. *Tenison-Woods.*

DAPHNELLA TASMANICA. *Tenison-Woods,*

DAPHNELLA VARIX. *Tenison-Woods.*

MANGELIA ST. GALLÆ. *Tenison-Woods;* ditto, var. *Benedicte.*

MANGELIA DESALESII. *Tenison-Woods.*

MANGELIA ATKINSONI. *Tenison-Woods.*

MANGELIA MEREDITHIÆ. *Tenison-Woods.*

MANGELIA IMMACULATA. *Tenison-Woods.*

MANGELIA LE-TOURNEUXIANA. *Crosse, Jour. de Conch., 1865, p. 425, pl. 11, fig. 7.* A small attenuated shell of ten whorls, lirate and obscurely few ribbed, generally chocolate brown. Not common. S. and E., and S.E.A.

TRITON CUTACEUS. *Linné., Syst. Nat., 12 Edit., p. 1217.* A large ovate ventricose shell, girdled with sulci and wrinkled ribs of pink color not unlike human skin. A faint plait on the upper part of the columella. Ordinary specimens about a decimeter long. Lamarck gives the Atlantic as its habitat. All the species are so wide spread that I have no doubt of its extending to Australia. Recent deep sea dredging will probably cause some species of *Triton* to be abandoned, their habitat being the only reason for regarding them as distinct.

TRITON SPENGLERI. *Dillwyn, Descrip. Cat. Recent Shells, p. 2.* This appears to me only a variety of the above with a dilated mouth. The young shells are variegated and so finely marked that I believe they have been also mistaken for different species. Kiener thought, but probably incorrectly, that this was the character of *T. tranquebaricus*. S.E.A. and S.H.

TRITON WATERHOUSEI. *Ad. and Ang.* Much smaller than *T. cutaceus*, but difficult to characterize by any other feature.

TRITON QUOYI. *Reeve. Icon. pl. 19, fig. 93.* Common. A small whitish shell with 4 to 5 varices, acute spire, and finely decussated outer lip, toothed within. Long. 25, lat 13, whorls 7. Common in S.A.

TRITON SUBDISTORTUS. *Lamarck., Vol. 9, p. 638.* A larger and more ventricose shell than the preceding; ovately conical, sub-distorted, with fine irregularly noduled transverse ridges; whitish, mottled with brown. Long. 58, lat. 30, whorls 7. Common. E. and V.

TRITONIDEA PETTERDI. *Brazier, 1870.* One specimen only from Bridport, N.E. Coast, now in Melbourne Museum. W. F. Petterd.

RANELLA LEUCOSTOMA. *Lam., Vol. 9, p. 542. Triton leucostoma Quoy, Voy. Astrol., t. 3, 546, pl. 40, fig. 3.* An ovately conical shell, with varices scarcely regular enough for a *Ranella*; transversely striate and a row of tubercles on each whorl; scorched deep livid brown, the varices banded brown and white; mouth very white. Long. 72, lat. 43, whorls 6, decollated. Common. S.E.A., S.A.

RANELLA VEXILLUM. *Sowerby, Conch., Illust. Ranella, fig. 3.* A fusiformly ovate shell, depressed, with fine transverse and irregularly noduled ridges; brownish, regularly banded with reddish brown lines; outer lip minutely toothed. Long. 40, lat. 26, whorls 5. Common. Reeve gives another figure and habitat, and, therefore, I doubt if the Tasmanian one is *R. vexillum* of Sow.

RANELLA EPITREMA. *Tenison-Woods.*

PISANIA RETICULATA. *A. Adams, Zool. Proc. 1854, p. 138.* An oblong turretted shell, densely reticulated and of uniform purple brown color; upper whorls granulated; seldom more than one varix at the lip. Long. 30, lat. 12, whorls 7. Rather common; V. Said by Mr. Adams to occur in New Caledonia.

PISANIA TASMANICA. *Tenison-Woods.* Smaller than the preceding, and white with irregular varices. It seems, however, doubtful to me whether this is more than a variety.

COMINELLA TENUISCOSTATA. *Tenison-Woods.*

COMINELLA ALVEOLATA. *Kiener, Spec. Conch., Buccinum, fig. 13 (var. lineolata).* A handsomely striate nodose shell, chequered black and white; very variable; specimens from King's Island are banded green and brown, and have an appearance not unlike an *Ancillaria*. Common. S.A., S.E.A. Long. 30, lat. 15.

COMINELLA LACTEA. *Reeve, Icon., Buccinum, fig. 117.* This certainly appears to be no more than a greenish white variety of the last very variable shell, as also *C. quoyana*, A. Adams, *Zool. Proc.*, 1854, p. 313. It occurs in New Zealand.

COMINELLA TASMANICA. *Tenison-Woods.*

COMINELLA COSTATA. *Quoy. Voy. Astrol., Vol. 2, p. 417.* Very variable in color but generally of a reddish brown hue, spire acute and nodose; about the same dimensions as *C. alveolata*. B. Sts.; common. Rare on S. Coast.

COMINELLA ANGASI. *Crosse. Journ. de Conch., 1864, p. 275.* I cannot regard this as more than a dark variety of the preceding, as also *C. Adelaidensis* (*Crosse loc. cit.*) which, however, is not found in Tasmania.

ADAMSIA TYPICA. *Dunker, Zool. Pro., 1860, p. 421.* This generic name may have to be changed as it is pre-occupied by one of Prof. E. Forbes' genera of *Helianthoid anthozoa* with tubular retractile tentacles. Is the genus a good one? Mr. Angas says that the operculum is *purpuroid*. As we have a *Dunkeria* in conchology we cannot re-name it after the founder. I propose if the genus is to be maintained that it be called *Agnewia*, after the distinguished Secretary of the Society to which Tasmanian science is so largely indebted. A coarsely ribbed conspicuously lirate shell like a *Cominella*, but with a purpuroid operculum. The Tasmanian species are banded with purple or chestnut. Rare, N; in S.A., and S.E.A. Long. 32, lat. 17.

NASSA FASCIATA. *Lam. Vol. 10, p. 169.* Our largest Australian species, and probably the most common (except in Tasmania) in all extra tropical Australia. Very ornamental with ribs and granulation, besides being very prettily banded with lines varying in different specimens from brown to light yellow. The coloring of the whole genus is extremely variable, and must not be regarded as of specific importance. Long. 18, lat. 11.

NASSA PAUPERATA. *Lamarck, Vol. 10, p. 183.* Common, and found widely distributed like the preceding. It is smaller, more squat and sordid in appearance. Generally darker in color, but sometimes even white or covered with a greenish periostraca. Long. 18, lat. 13.

NASSA RUFOCINCTA. *A. Adams., Zool. Proc., 1851, p. 106.* A very small subturretted chesnut banded species with 11 to 13 ribs on the last whorl. Long. 10; rare. B. Sts., S.E.A. (Pig Island, Tamar; R. M. Johnston.)

NASSA JACKSONIANA. *Kiener, Mon. Bucc., pl. 19, f. 73.* Not uncommon. A white, thin, poor shell, smaller than *N. pauperata*; often found almost transparent. S.E.A. Long. 12, lat. 10.

NASSA TASMANICA. *Tenison-Woods.*

PURPURA TEXTILOSA. *Lamarck, Vol. 10, p. 77.* A coarse whitish shell, coarsely granulated and transversely ribbed, which the French naturalist somewhat fancifully compared to canvas; about 50 to 60 long by 37 to 42 wide; very common in all extra-tropical Australia.

PURPURA HUMILIS. *Crosse, Journ. Conch. 1865, p. 51.* Common in S. A. A small yellowish shell with equidistant red nodules. Long. 10.; lat. 7.

PURPURA SUCCINCTA. *Martyn Univers., Conch., 2 Vol. pl. 45.* Deeply sulcate and without granules. A doubtfully distinct species from *P. textilosa*, the gradations from one form to the other being readily found. The Tasmanian specimens are intermediate between *P. textilosa* and the extreme form of *P. succincta* as found in N.S. Wales and New Zealand. Reeve, perhaps on the authority of Krauss (*Sudafricanische Mollusken p. 118*), quotes this shell as being found at the Cape of Good Hope. Dr. E. Von Martens, however, states that in the South African shells examined by Krauss, sent to the Museum of Stuttgart by Baron Von Ludwig, there were a good many Australian species, and that Krauss was not aware of this.

PURPURA MADREPORARUM. *Sowerby, Gen. of Shells, fig. 12?* Shell irregular,

spire short or concealed, very finely striate, aperture partly stained violet purple. Long. 31, lat. 25. Rare. Extreme south of Bruni Island. Said to occur in the Eastern Seas upon madrepores.

PURPURA LITTORINOIDES. *Tenison-Woods.* An examination of many individuals has shown me that the outer lip is toothed, and the shell approaches a *Nassa*, especially in examples from S. Coast of Australia, where it is common. It may possibly require a new genus for its reception.

PURPURA PROPINQUA. *Tenison-Woods.*

EBURNA (ZEMIRA) AUSTRALIS. *Sow. Conch. Illust. fig. 5.* A small shining ovate shell with short spire, finely grooved, one rather deep groove on the lower third of body whorl; light chestnut spots at the edge of the channel. Long. 17, lat. 10, whorls 5. E. Rather rare. Common in S.A.

CANCELLARIA LEVIGATA. *Sow. Conch. Illust. fig. 24.* An almost smooth shell with faint spiral grooves on the upper whorls. Strongly grooved within the aperture. Long. 27, lat. 16, whorls 6. Not common. S.A.

CANCELLARIA UNDULATA. *Sow. Zool. Proc. 1878, p. 136.* Erect and sharply turreted, ribbed throughout with somewhat distant and obliquely waved ribs. Long. 40, lat. 23. Somewhat rare. It is said that a variety of this shell, *C. truncata*, occurs in the Philippines, *C. granosa* should probably be included with it. It has been doubted if this and the last shell occur in Tasmania, but I have seen many specimens, and some from Portland Bay, Victoria.

CANCELLARIA TASMANICA. *Tenison-Woods.*

CANCELLARIA EXCAVATA. *Sow.* Rare. N.W. Coast. W.F. Petterd.

ANCILLARIA MUCRONATA. *Sow., Thes., Conch., Anc., p. 63, p. 211.* This is believed to have been described from a fossil from the lower cainozoic beds at Table Cape. Mr. Legrand informs me that he has never found it but as a fossil. My reference to it in my paper on the Tertiary Fossils of Table Cape (see Proc., 1875) will need correction as the shell is there stated to be still living.

ANCILLARIA MARGINATA. *Lamarck, Vol. 10, p. 591.* Neatly margined at the suture with a broad orange brown band and a spiral ridge which is more defined as it reaches the apex. Long. 32, lat. 16. Rather common. Var. *Tasmanica* mihi. A smaller white shell.

OLIVA HIEROGLYPHICA. *Reeve, Icon. pl. 24, fig. 68.* A small oblong somewhat tumid shell, ivory white and shining, encircled with three bands of pale brown undulating and branching marks. The only Tasmanian Olive known. Rare. Brown's River. One specimen only from the East Coast. Long. 12, lat. 5, whorls 5.

FASCIOLARIA FUSIFORMIS. *Valenc. in Kiener, Icon. Cog. Viv., p. 13, pl. 4, fig. 2.* Smallest spire, varying considerably in size and with an *arcuate* columella; sometimes coronate or with faint tubercles on the upper whorls. Pale brown, with very little enamel on the columella, in which respect it differs from the two following. Common. Long. 50, lat. 20.

FASCIOLARIA CORONATA. *Lamarck, Vol. 9, p. 433.* Coronate fleshy white with scorched spots; variable in size sometimes, long. 170, lat. 85.

FASCIOLARIA TRAPEZIUM. *Linne, Syst. Nat., 12 Ed., p. 1224.* See references in *Lam., Vol. 9, p. 433.* This shell is variously described by many authors. It is found in the Indian Ocean of large size, and is said by Sowerby to occur in the East and West Indies. The Tasmanian examples are thick, ovately fusiform, shell crowned with few blunt tubercles; encircled with fine double lines and very minutely cancellate. Channelled in the posterior part of the mouth; periostraca sordid, olive brown; smaller than *F. coronata*, and not twisted; never larger than long. 100, lat. 50. Reeve seems to regard the Tasmanian species as varieties of *F. coronata*, but they are very different.

VOLUTA ANGASI. *Sow., Thes., fig 99, sp. 73.* Common. This species was long confounded with *V. undulata*, which it closely resembles; it is smaller, and the brown lines or zebra-like markings are different.

VOLUTA FUSIFORMIS. *Swainson, Appendix to Bligh. Cat. (not Kiener, see Reeve, Icon. Voluta).* A conspicuous smooth brownish shell, netted with darker triangular lines; upper whorls with undulating lines; interior reddish orange. Long. 180, lat. 70. Common. N.W.

VOLUTA PAPILLARIS. *Swainson, Exotic Conch.* A Ponderous shell, very papillary at the apex; fulvous; netted and banded fulvous chestnut; columella solid, 3 to 5 plaited. Long. 136, lat. 12. A pale variety also. Rare. Macquarie Harbour, and in S.A.

VOLUTA MITRÆFORMIS. *Lamarck, Vol. 10, p. 104, V. Multicostata, Broderip.* A small shell, rarely seen in B. Sts. Found also in Java. Distinguished by numerous close longitudinal ribs, spotted brown and transversed by reddish lines; base transversely striate. Long. 40 to 50. Victorian coasts also.

VOLUTA MAMILLA. *Gray in Sow., Thes., p. 207, pl. 50, fig. 57.* The largest of our volutes. Extremely rare. N. only. Long. 265, lat. 154.

VOLUTA KINGII. *Cox., Zool. Proc., 1871, p. 324.* Probably only a pale variety of *V. angasi*, peculiar to the Islands of Bass' Straits.

VOLUTA SCLATERI. *Cox., Zool. Proc., 1869, p. 358.* Flinders Island.

MITRA BADIA. *Reeve, Icon., pl. 20, fig. 157.* This very variable and very common shell is found of almost every shade, from pale yellow to dark purple brown; smooth or polished aperture less than spire, plaits 4. Long. 26, lat. 10.

MITRA GLABRA. *Swainson, Exotic Conch. p. 24, pl. 18.* Elongately fusiform, smooth, flesh colored, with sordid periostraca. Long. 50 to 70, lat. about $\frac{1}{2}$. Rare in Tasmania but common in S.A.

MITRA AUSTRALIS. *Swainson, Zool. Illus. 1st Series, p. 18.* Deep brown or even black with white bands, smooth; columellar plaits $3\frac{1}{2}$; posterior prominent. Long. 27, lat. 11, whorls 8. Rather rare. N. and E., S.A.

MITRA PICA. *Reeve, p. 31, fig. 247.* Smooth, somewhat inflated, delicately mottled, but generally found worn to chocolate color, with white undulating band above. Long. 20, lat. 9. Rather common.

MITRA DECLIVIS. *Reeve, pl. 31, fig. 44.* Smaller than *M. glabra* but very similar. It may be only a variety. Long. 55, lat. 18. Rare. E. only.

MITRA WELDII. n.s. This shell was given to me by Mr. Legrand as *M. vincta*, but I have been unable to trace it. Small banded orange and dark brown; translucent with faint ribs on upper whorls. Long. 10, lat. 4. Rather common. Long Bay and Blackman's Bay, and S.E.A.

MITRA TASMANICA. *Tenison-Woods.*

MITRA SCALARIFORMIS. *Tenison-Woods.*

MITRA LEGRANDI. *Tenison-Woods.*

MITRA TERESLE. *Tenison-Woods.*

MITRA SCITA. *Tenison-Woods.*

MITRA GRANATINA. *Swainson and Tenison-Woods.*

MITRA FRANCISCANA. *Tenison-Woods.*

MITRA SEMILIVIDA. *Tenison-Woods.*

MARGINELLA MUSCARIA. *Lamarck, Vol. 10, p. 441.* Ovately oblong, shining, diaphanous, pale orange with white margin; quadriplicate. Long. 15, lat. 8. Very common.

MARGINELLA TURBINATA. *Sow. Thes. p. 385, pl. 75, fig. 70.* Tumid with short spire and faintly crenulated suture. Long. 9, lat. 6. Rare. S.

MARGINELLA FORMICULA. *Lamarck, Vol. 10, p. 441.* Smaller, and very

pale yellow, with plicate nodules on upper part of whorls. Common. Long. 10, lat. 5½.

MARGINELLA VOLUTIFORMIS. *Reeve, Icon. pl. 24, fig. 131.* An ovate ivory white shining shell, whorls tumid above, lip varicosely reflected; quadruplicate. The figure in *Reeve* much too large. Long. 7, lat. 4. Somewhat common.

MARGINELLA TASMANICA. *Tenison-Woods.*

MARGINELLA STANISLAS. *Tenison-Woods.*

MARGINELLA MINUTISSIMA. *Tenison-Woods.*

MARGINELLA ALLPORTI. *Tenison-Woods.*

COLUMBELLA SEMI-CONVEXA. *Lamarck, Vol. 10, p. 171.* The large common *Columbella* of extra tropical Australia and Tasmania. It is found of almost every color, variously marked, and even pure white; outer lip denticulate. With this species must be united the *C. saccharata*, *Reeve*, which is only one of the many variations to which it is subject. Long. 18, lat. 8, whorls 6.

COLUMBELLA LINCOLNENSIS. *Reeve, Icon. pl. 29, fig. 184.* An acuminate solid shell; white, variously marked with pale chestnut and reddish brown. Common. S.A. Long. 12, lat. 4, whorls 7.

COLUMBELLA IRRORATA. *Reeve, Icon. pl. 25, fig. 153.* Distinguished by its acicular form and color of yellow dotted with orange, encircled beneath the suture with snowy spots shaded with orange. King's Island. Very common.

COLUMBELLA ROBLINI. *Tenison-Woods.*

COLUMBELLA XAVIERANA. *Tenison-Woods.*

COLUMBELLA LEGRANDI. *Tenison-Woods.*

COLUMBELLA MILTOSTOMA. *Tenison-Woods.*

COLUMBELLA BADIA. *Tenison-Woods.*

COLUMBELLA (ÆSOPUS) PILOSA. *Angas, Proc. Zool. Soc., 1867, p. 111.* A small turretted lirate species, with zone of faint brown spots. N.C., rare; and S.E.A.

COLUMBELLA MINIMA. *Angas.* This shell is probably *C. interrupta*, *Angas*. It has a mamillated *Natica*-like apex, as in that shell, and is striated at the base, but the coloring is sometimes different. The specific name chosen by Mr. *Angas* is pre-occupied (see *Zool. Proc.*, 1851) and as his own name has already been bestowed in the genus, my designation may be retained.

NATICA CONICA. *Lamarck, Vol. 8, p. 632.* A smooth, polished, conical shell, pale pinkish, banded darker on the upper part of the whorls. Long. 41, lat. 25. Very common. S.A., S.E.A.

NATICA POLITA. *Tenison-Woods, Proceed. of Society, 1875,* where it is described as a fossil among those of Table Cape. It has since been found by Rev. H. D. Atkinson, W. Legrand, and others about Bruni Island. Small, white, deeply channelled at the suture.

NATICA TASMANICA. *Tenison-Woods.* More nearly resembling *Natica leucophaea*, *Reeve*, than any other, but that shell is a dull brown and lead color, with a deep red enamel all round the mouth and callus, the latter closing the umbilicus. It occurs at Port Jackson.

NATICA NANA. *Tenison-Woods.*

RUMA UMBILICATA. *Quoy, Voy. de l'Astrol., Vol. 2, p. 224, pl. 66, fig. 22.* A thin, milky shell, yellowish white, with three bands of chestnut spots. Common, and S.A.

RUMA GLOBOSA. *Tenison-Woods.* I now doubt if this shell is more than a white variety of the preceding.

SIGARETUS ZONALIS. *Quoy, loc. cit. Vol. 5, p. 2, pl. 66, fig. 1 to 3.* Ovate, depressed, obsoletely striate, with a short, scarcely prominent spire, milky white; columella thin, arcuate, with an umbilicus covered. Long. and lat. 18. Common and in S.A., as far as King George's Sound, where Quoy obtained it. S. Hanley describes *S. australis* (Conchologists' Book of Species, London, 1842, pl. 1, p. 57) which Reeve (Icon., pl. 3, fig. 15 and 16) considers a different species, being more constricted at the spire. I cannot see any difference in all the specimens examined by me.

CASSIS SEMIGRANOSA. *Lamarck, vol 10, p. 37.* A white or brownish shell, granulated at the upper part. The granulations commence in the posterior portion of the last whorl, and then extend over all the spire. Common, and in S.A.

CASSIS PYRUM. *Lamarck, Vol. 10, p. 33.* An ovate, ventricose, smooth shell, pale brown pink, last whorl nodulous at the angle. About 50 long. Common and in New Zealand and S.A. *Mueller and Frauenfeld.*

CASSIS NIVEA. *Brazier, Zool. Proc., 1872, p. 6.6.* I cannot regard this as more than a white variety of *C. pyrum*. It is a variable shell in color, sometimes being banded and without nodules. W.

CASSIS PAUCIRUGIS *Menke, Mollusc., Nov. Hollandiæ, p. 23, sp. 107.* N. Coast only.

SCALA AUSTRALIS. *Lamarck, Vol. 9, p. 76.* A turretted white shell, with an acute spire, ribs very straight, resting on a keel at last whorl. Long. 25, lat. 9. A large quantity of brilliant blue pigment is yielded by the animal. Common and S.A.

SCALA (CIRSOTREMA) VARICOSA. *Lamarck, Vol. 9, p. 3.* Tamar Heads, rare. W. F. Petterd. The specimen submitted to me was decollated, and the apex closed with a hemispherical septum.

SCALA GRANULOSA. *Quoy, Voy. de l'Astrol., Vol. 2, p. 75.* The ribs in this white shell are almost obsolete, and the shell more ovate. It is often mistaken for a worn specimen of *S. australis*. Long. 28, lat. 13. B. Straits only.

SCALA ACULEATA. *Sow. Zool. Proc., 1844, p. 12.* A small, white, narrow shell, with prominent distant varices following each other at the suture; outer lip anteriorly emarginate and lobed. Long. 15, lat. 7, whorls 7. Rather uncommon, B. Sts. only. Found also at Hong Kong, Macassar, Malacca, Amboyna, (*Hinds*); Philippines generally. *Cuming.*

SCALA DELICATULA. *Crosse, Journ. Conch., 1864.* A Minute, translucent, shining, acuminate shell, but I cannot guarantee the identification. N. and S.A.

SCALA JUKESIANA. *Forbes, Append. Voy. Rattlesnake, p. 383, fig. 7.* A small, white, polished shell, with very distinct varices. Long. 11, lat. 3, whorls 9. Rare. If this identification is correct, this species ranges from tropical N.A. to Tasmania.

SCALA LINEOLATA. *Sow. Zool. Proc., 1844, p. 11.* A short, stout, dusky shell, with pale brown bands. Long. 15, lat. 6, whorls 7. Rare. N.

SCALA PHILIPPINARUM. *Sow. Zool. Proc., 1844, p. 12.* The shell that is thus named in Tasmania and N.S.W. does not quite agree with Mr. Sowerby's diagnosis. The varices are thin and reflexed.

CROSSEA LABIATA. *Tenison-Woods.*

ACUS BICOLOR. *Angas, Zool. Proc., 1867, p. 111.* A delicate, smooth, shining, faintly coloured shell, the lower half of the first whorl pale chocolate and obsoletely grooved with lines of growth. Long 17½, lat. 5, whorls 10.

TEREBRA (HASTULA) BRAZIERI. *Angas, Zool. Proc., 1871, p. 16, pl. 1,*

fig. 15. Stout, sharply ribbed and polished, and longitudinally marked with flexuous chestnut lines. E., common; S.E.A., Port Stephens; Port Jackson, Brisbane Water, *Brazier*; Port Elliot, S.A., *Bednall*.

TEREBRA. *Tenison-Woods*.

TEREBRA ADDITA. *Deshayes, Jour. Conchy., 1857*. A very elegant plicate shell, with the ribs divided in the middle of the whorl by a groove. I am not sure of this identification; it was only from a figure in *Reeve*, which is smaller and darker in color. Port Arthur; rare. Long. 21, lat. 5, whorls 8.

TEREBRA KIENERI. *Desh. Zool. Proc., 1859, p. 294*. I have not been able to identify this shell, which from its description would appear to be only a variety of the preceding. It is not known in Tasmania.

TEREBRA NITIDA, *Hinds, Zool. Proc., 1843, p. 152* (*Reeve's* citation of *Hinds, Z. p., 1852*, is wrong). Unknown in Tasmania. In this and in the preceding cases the habitat given by *Deshayes* is "Terre de Van Dieman." Some part of N. Australia bears that name also, and there the genus is much better represented than in Tasmania. The species occurs abundantly in Port Phillip.

RINGICULA AUSTRALIS. *Crosse*.

STYLOPTYGMA TASMANICA. *Tenison-Woods*.

STYLIFER TASMANICA. *Tenison-Woods*.

EULIMA TASMANICA. *Tenison-Woods*.

EULIMA MICANS. *Tenison-Woods*.

EULIMA PROXIMA. *Sow. in Reeve, Icon., pl. 6, fig. 28*. White, polished, smooth, the outer lip produced in the middle. Long. 12, lat. 4, whorls 16. B. St. Rare.

ODONTOSTOMA TASMANICA. *Tenison-Woods*.

ODONTOSTOMA LACTEA. *Angas, Zool. Proc., 1867, p. 112*. Thin, pellucid, milky. Long. $6\frac{1}{2}$, lat. 3, whorls 6. Rare.

TURBONILLA ANGASI. *Angas (T. nitida), Zool. Proc., 1867, p. 112*. White, shining, closely ribbed. Long. 10, lat. 3. Rare; S.E.A. I have doubts if the specimens seen by me really came from Tasmania. Mr. *Angas* has described this shell as *T. nitida*, but that name is pre-occupied (see *Ann. Nat. Hist., Dec., 1860, p. 419, T. nitida, A. Adams, from Japan*). I have therefore much pleasure in substituting the name of one who has rendered such good service to Australian conchology.

TURBONILLA MARLE. *Tenison-Woods*.

TURBONILLA MACLEAYANA. *Tenison-Woods*.

TURBONILLA TASMANICA. *Tenison-Woods*.

CINGULINA AUSTRALIS. *Tenison-Woods*.

ELUSA BIFASCIATA. *Tenison-Woods*.

SYRNOLA MICHAELI. *Tenison-Woods*.

SYRNOLA BIFASCIATA. *Tenison-Woods*.

PARTHENIA TASMANICA. *Tenison-Woods*.

ACLIS TRISTRIATA. *Tenison-Woods*.

CONUS NOVE HOLLANDIÆ. *A. Adams, Zool. Proc., 1853, p. 118*. Common. and extending as far as W.A. The only species collectors are likely to find in Tasmania.

CONUS PONTIFICALIS. *Lamarck, Vol. 7, p. 459*. Assigned to Tasmania by *Lamarck* and *Dellessert*, but I have met with no one who has seen the species there.

CONUS TASMANIÆ. *Sow. Supp. Thes. Con. Tasmania, Z.*

CONUS MACLEAYANA. *Tenison-Woods*. This was described by me as

Tasmanicus, but that name I find is pre-occupied. I name it after W. McLeay, Esq., F.L.S.

CONUS CARMELI. *Tenison-Woods.*

CYPRÆA ANNULUS. *Linné, 12 Edit., p. 1179.* A highly enamelled shell, somewhat like *C. moneta*, but has an orange circle on the back. Long. 22, lat. 17. Though Von. Martens discredits the statement that any *Cypræa* has been found in New Zealand, yet Mr. Legrand assures me that he has received specimens of this shell from thence. It is said to occur in the Molucas, and Lamarck gives also Alexandria as a habitat.

CYPRÆA ANGUSTATA. *Gray as of Gmelin, Zool. Journ. (London, 1824), Vol. 1, p. 497.* Purple brown with whitish margin on which only are smeared dark brown dots. Long. 30, lat. 19. Common. S.A.

CYPRÆA PIPERATA. *Solander, MS. teste Gray, loc. cit., p. 498.* A paler shell than the preceding, and spotted all over the back, with minute smeared chestnut dots. Reeve's figure is from a young specimen, which is banded, but the bands disappear with age. Long. 28, lat. 17. Not common. S.E.A.

CYPRÆA COMPTONI. *Gray, loc. cit.?* Rich brown, faintly banded, with the margins and base paler and spotted. Generally smaller in size than the two preceding. Somewhat common. S.A.

CYPRÆA (CYPROVULA) UMBLICATA. *Sowerby in Tank., Cat. 2260.* Deeply umbilicate and thickly spotted with pale chestnut, base white, highly enamelled. Long., in rather a small species, 88, lat. 50. Rare. N. Coast, and Barren Island. Thirty pounds have been given for this shell.

CYPRÆA SCOTTL. *Brod. Zool. Jour., Vol. 5, p. 330, pl. 14, fig. 1 and 2.* I cannot find any trace of this species among collections. Reeve gives Swan River and Port Lincoln as its habitat. In more than one work it is spoken of as Tasmanian.

TRIVIA AUSTRALIS. *Lamarck, Vol. 10, p. 545.* A finely ribbed white or pinkish shell, singularly marked with livid brown patches. Common and S.A. Long. 15, lat. 11.

BIROSTRA MACCOYL. *Tenison-Woods, Transactions Royal Society, Victoria, 1877.* A unique specimen in National Museum, Melbourne, found at Tamar Heads by W. F. Petterd.

CERITHIUM DUBIUM. *Reeve, Icon. pl. 12, fig. 78.* A pyramidal shell with varices angulated at the middle of each whorl, fulvous brown and spotted. Common. Long. 18, lat. 8, whorls 8.

CERITHIUM RHODOSTOMA. *Adams in Sow., Thes., Cerith., sp. 49, fig. 105.* A small turretted granular shell with the channel almost closed like in *Cerithidea*. Our specimens are white. Described by Reeve as from Tasmania but not common. Not uncommon in B. Strait, Victoria, and S.E.A. Long. 8, lat. 3½, whorls 8.

CERITHIUM SEROTINA. *A. Adams in Sowerby's Thes., sp. 48, fig. 102.* Not known to collectors here, unless, as I suspect, it is a variety of *Bittium granarium*.

LAMPANIA AUSTRALIS. *Quoy, Voy. de l'Astrol., pl. 55, fig. 7.* Rather swollen, blackish, ribbed irregularly, and spirally grooved, whorls rounded beneath, aperture obliquely subquadrate, outer lip produced in the middle, thickened and channelled at the columella, sometimes prettily variegated with white bands. Long. 35, lat. 16. Common, and S.E.A. and V.

BITTIUM GRANARIUM. *Kiener, Icon. Con. Viv. p. 72, pl. 19, fig. 3.* Oblong, cylindrical, solid, reddish brown, faintly plaited and spirally girt with distant granular reddish ribs. Common, and S.A. Long. 26, lat. 8, whorls 8 to 16.

BITTIUM TURRITELLA. *Quoy, Voy. de l'Astrol.* Much larger, with regular rounded plaits and deep transverse striae. Very common and S.A.

BITTIUM LAWLEYANUM. *Crosse, Journ. de Conch., 1863, p. 87.* Small,

elongate, turreted, numerous spiral keels, sordid brown. Long. 8, lat. 2, whorls 7 to 8. Common. S.

CERITHIOPSIS ATKINSONI. Var., *Tenison-Woods*. Perhaps no more than a variety of *Cerithiopsis crocea*, *Angas, Zool., Proc.*, 1872. It is not, however, orange in color, and it is a narrower shell. Long Bay, dredged from sand at 10 fathoms by Rev. H. D. Atkinson. Rare.

CERITHIOPSIS ALBOSUTURA. *Tenison-Woods*.

TRIFORIS TASMANICA. *Tenison-Woods*. var. a.

TURRITELLA TASMANICA. *Reeve, Icon., pl. 9, fig. 42*. An acuminate shell with flattened whorls and two or three inconspicuous keels, forming a raised area to the centre of the whorl. Long. 45, lat. 10, whorls 16. Common, and in S.A.

TURRITELLA GRANULIFERA. *Tenison-Woods*.

TURRITELLA TASMANIENSIS. *Tenison-Woods*.

TURRITELLA ACUTA. *Tenison-Woods*.

TURRITELLA SINUATA. *Reeve, pl. 11, fig. 62*. Two keels, and deeply but broadly sinuate at the mouth; fleshy brown. Long. 21, lat. 7, whorls 14. Common.

VERMETUS DENTIFERUS. *Lamarck, Vol. 9, p. 65*. Common in B. Sta. Our only species and therefore easily distinguished.

TENAGODUS AUSTRALIS. *Quoy, Voy. de l'Astrol., Vol. 3, p. 302*. This is what is generally known as the large *Siliquaria* of our coasts, with a line of round dotted perforations along the slit. Common. N. Good specimens 65 mil. with 4 to 5 convolutions.

TENAGODUS WELDII. *Tenison-Woods*.

DENTALIUM TASMANIENSIS. *Tenison-Woods*.

DENTALIUM WELDIIANA. *Tenison-Woods*.

LITTORINA UNIFASCIATA. *Gray, King's Voyage in Australia, Appendix, Vol. 2*. Ovately conical, white or bluish white, whorls sub-convex, last sub-angular, throat brown-purple with anterior white spiral bands, spire acute. Long. 26, lat. 12. Common, and in all extra-tropical Australia.

LITTORINA PALUDINELLA. *Reeve, Icon., pl. 16, fig. 84*. Minute, dark olive, horny, apex acute, aperture dilated. Diam. 1 to 5 mil. Common.

LITTORINA HISSEYANA. *Tenison-Woods*.

LITTORINA UNDULATA. *Gray in King's Voy. loc. cit.* Like *L. unifasciata* but more globose and with zigzag lines. Probably only a variety, for in a good series of specimens every gradation of one form to the other can be traced. A careful investigation of large collections of *Littorinas* would, in my opinion reduce the number of species considerably.

LITTORINA PHILIPPI. *Carpenter, Cat. Maz. Shells, p. 349*. Is said to occur in Tasmania as well as S. Australia, but I believe the identification in both cases to be very doubtful.

RISELLA NANA. *Lamarck, Vol. 9, p. 150*. A small, corroded, sharply angulated shell with zebra-like markings. Very common and in V. This shell is the female of the two following. See *Proc. Lin. Soc., N.S.W.*, 1876.

RISELLA AURATA. *H. and A. Adams, Gen. Moll., pl. 33, fig. 5*. A yellow mouthed acutely angled species, nodular at the suture and larger than the last. Common on N. Coast, and in S.A. Long. 24, lat. 18. I quite agree with Mr. Angas in regarding this as only a variety of the following.

RISELLA MELANOSTOMA. *Gmelin, p. 3581, No. 90*. The black mouth and lugubrious habit may distinguish this shell which is near in form to the preceding. This or the *R. aurata* is figured in Woodward's Manual as *R. nana*, pl. 9, fig. 14. Common. Gmelin states that this shell has a deep

black mouth; Deshayes says brownish. There is a *Risella (Trochus) melanostoma* described by Reeve, Zool. Proc., 1842, p. 185, which seems the same.

AMPULLARINA FRAGILIS. *Quoy, Voy. de l'Astrol., Vol. 2, pp. 15, ps. 10 to 16.* A thin paludina-like shell, fawn colour, with faint brown bands. Long. 13, lat. 15, whorls, 4-5. Common, and in all extra-tropical Australia. Brackish water, estuaries, and the coast salt lakes. It is also common as a fossil in the raised beaches of S.A.

AMPULLARINA QUOYANA. *Deshayes.* A coarser species of doubtful distinctness. S.E.A.

AMPULLARINA MINUTA. *Tenison-Woods.*

FOSSARINA PETTERDI. *Crosse, Jour. Conch., 1864.* Abundant on the Southern Coasts at low water. W. F. Petterd.

FOSSARUS TASMANICUS. *Tenison-Woods.*

FOSSARUS BULLMOIDES. *Tenison-Woods.*

SOLARIUM LUTEUM. *Lamarck, Vol. 9, p. 100.*

SOLARIUM ? Two specimens of this genus from Recherche are in Mr. Legrand's collection, apparently they are new but too worn for determination.

DIALA TESSELATA. *Tenison-Woods.*

DIALA PUNCTATA. *Tenison-Woods.*

DIALA TUMIDA. *Tenison-Woods.*

RISSEO AGNEWI. *Tenison-Woods.*

RISSEO CYCLOSTOMA. *Tenison-Woods. Var. a Rosea.*

RISSEO MELANURA. *Tenison-Woods.*

RISSEO ANGELI. *Tenison-Woods.*

RISSEO (CERATIA) MACCOYI. *Tenison-Woods.*

RISSEO (CERATIA) MARLÆ. *Tenison-Woods.*

RISSEO (CINGULA) MARLÆ. *Tenison-Woods.*

RISSEO (CINGULA) ATRINSONI. *Tenison-Wood.*

RISSEO (ALVANIA) CHEILOSTOMA. *Tenison-Woods.*

RISSEO (ALVANIA) FASCIATA. *Tenison-Woods.*

RISSEO (SETIA) BRAZIERI. *Tenison-Woods.*

RISSEO (SETIA) SIENNÆ. *Tenison-Woods.*

RISSOINA ST. CLARÆ. *Tenison-Woods.*

RISSOINA FLINDERSII. *Tenison-Woods.*

RISSOINA CONCATENATA. *Tenison-Woods.*

RISSOINA VARIEGATA. *Angas, Zool. Proc., 1867, p. 113.* Solid, white, banded with livid markings, plicate, and finely striate. Long. 7, lat. 3.

RISSOINA CINCTA. *Angas, Zool. Proc., 1867, p. 114.* A pretty chestnut banded species. Rare. Long. 6, lat. 3, whorls 6. Rare, and in S.E.A.

RISSOINA NIVEA. *A. Adams, Zool. Proc., 1851, p. 264.* White, opaque, with numerous straight ribs and faint raised liræ. Long. 11, lat. 4, whorls 7. Common.

RISSOINA GERTRUDIS. *Tenison-Woods.*

RISSOINA TURRICULA. *Angas, Zool. Proc., 1867, p. 114.* A turriculate, minute, white shell, with coronate whorls and distinct rounded ribs, mouth anteriorly produced with a spiral keel behind. Long. 6, lat. 2. Common, and S.E.A.

TRUNCATELLA MARGINATA. *Kuster. Bass' Straits.*

TRUNCATELLA SCALARINA. *Cox. Bass' Straits.*

TRUNCATELLA TASMANICA. *Tenison-Woods*. Bass' Straits.

TROCHITA CALYPTREFORMIS. *Lamarck*, Vol. 7, p. 627 (*Trochella*, *Gray*, *Zool. Proc.*, 1867, p. 735). Spirally much convoluted, with velvet-like periostraca; white, tinged purple inside.

AMALTHEA CONICA. *Schumacher Essai, d'un Nouveau, Syst. des Habitations des Vers. testaces*, Copenhagen, 1817, p. 181, also pl. 21, fig. 4, a, b, c. Common. Parasitic on other shells, and varying much in form and color.

COCHLOLEPAS FOLIACEA. *Quoy*, loc. cit., Vol. 3, plate 72.

COCHLOLEPAS SUBRUFa. *Sow*. Very plentiful at low water, Tamar Heads.

NERITA ATRATA. *Quoy*, *Voy. de l'Astrol.*, pl. 65, fig. 41 and 42. A black, rounded species, common in all extra-tropical Australia. N. Coast of Tasmania only. Long. 21, lat. 24. This shell has been identified with *N. atrata*, *Chem.*, which is said to occur in the Atlantic within the tropics. *Gray*, in the Appendix to *King's Voyages*, probably originated this. *Reeve* gives New Zealand as habitat. Many authors speak of a blackish *Nerita* from those islands, but the specimens I have seen are not different from *N. punctata*, a S. American species, with which *E. Von Martens* identifies our Australian shell. Very common in Portland, Victoria.

PHASIANELLA TRITONIS. *Chemnitz, Conch.*, Cat. 9 to 120, figs. 1033-34. The common pheasant shell of the Southern Coasts of Australia and all Tasmania. It attains to a large size and varies exceedingly both in shape and color. From this fact many of the species created are surely no more than varieties. Long., in the largest specimens, 9, lat. 39.

PHASIANELLA VENUSTA. *Reeve, Icon.*, pl. 2, fig. 2. A variety only.

PHASIANELLA SANGUINEA. *Reeve, Icon.*, pl. 3, fig. 3. A solid shell of five rounded whorls. Bright red with pale zigzag lines shaded with brown. Long. 40, lat. 25, but sometimes larger. B. Sts., but common in S.A.

PHASIANELLA ZEBRA. *Gray, Reeve*, pl. 3, fig. 4. Only a variety of the last with broad diagonal bands.

PHASIANELLA VENOSA. *Reeve*, pl. 3, fig. 5. A rare variety with brown banded lines on a lighter ground.

PHASIANELLA VENTRICOSA. *Quoy, Voy. de l'Astrol.*, pl. 59, figs. 8 and 9. Another variety. King's Island. Rare.

PHASIANELLA RETICULATA. *Reeve*, pl. 3, fig. 7. A rare reticulated variety.

PHASIANELLA ANGASI. *Jour. Conch.*, 1864, p. 344, pl. 13. A small, narrow, reticulated shell. Very rare. The identification in Tasmania is doubtful. S.A.

PHASIANELLA ROSEA. *Angas, Zool. Proc.*, 1867, p. 114. A minute, thin, shining species of uniform rose color. Long. 2, lat. 1½, whorls few. In sand from islands in B. Sts., and Blackman's Bay. W. F. Petterd.

PHASIANELLA DELICATULA. *Tenison-Woods*. This shell was described by me in *Proc. Tas. Roy. Soc.*, 1876, as *P. pulchella*, but that is the name of the British species.

TURBO (LUNELLA) UNDULATUS. *Chemnitz, Conch. Cat.*, Vol. 10, pl. 169, fig. 1640, etc. A fine globose umbilicate shell with dark green undulating lines, nacreous inside. It has a smooth solid spiral operculum sometimes an inch in length, the shell itself attaining to a great size in S.A. In Tasmania it is smaller. A common fossil in the raised beaches in Australia, where its numbers and size are extraordinary.

TURBO SIMSONI. *Tenison-Woods*. A doubtful species, possibly young of preceding.

TURBO (SENECTUS) CIRCULARIS. *Reeve*, pl. 10, fig. 46. A non-nacreous, deeply channelled, and granulosely ribbed shell; color, pink and mottled

with red ; no umbilicus, columella white. King's Island only. Long. 28, lat. 30. Not larger in S.A., where it is not common.

TURBO STRAMINEA. *Martyn*. See *Proc.* 1876. Rare.

CARINIDEA FIMBRIATA. *Swainson, Proc. Roy. Soc. Tasmania, Vol. 3, p. 39*. A trochiform, nacreous shell, concave at the base and the whorls flattened at the edge to a kind of flange ; transverse ridges with small scales. This shell occurs in Australia, where it has received the name of *Uvanilla squamifera*, *Kock, in Philippi, Abbild. uber Besch., Conch., pl. 4, fig. 9* ; but Swainson's name and genus have priority. Besides, this species would not belong to Gray's genus *Uvanilla*, which was proposed for shells with the edges of the whorls spinous. Swainson's genus is thus characterized (*Lard, Cat. Cyclop. Shells and Shellfish, by W. Swainson, Lond., 1840, p. 350*) : Operculum shelly, imperforate, spire pyramidal, acute, base concave and carinated, aperture oval, entire, slightly angulate anteriorly, columella turned inward.

CARINIDEA TASMANICA. *Tenison-Woods*. Possibly only young of the following.

CARINIDEA AUREA. *Jonas Zeit., f. Mal., 1844*. Nacreous, pale, yellow, depressed, with diagonal ribs, which divide and become granular at the base. *C. granulata*, *Sow., Proc. Roy. Soc. Tas., 1854, p. 40*. Mr. Angas follows Jonas in placing this shell in the genus *Labio*, but Oken's *Labio*, which Gray follows, would include *Trochocochlea*. See *Gray's Brit. Mus. Cat.* Common, and S.A. Alt. 11, lat. 17. The shelly operculum is a generic distinction of much importance.

ASTELE SUBCARINATUS. *Swainson, Proc. Roy. Soc. Tasmania, Vol. 3, p. 36, pl. 6, figs. 1 and 2*. This shell, of which only very few specimens have ever been found, was made the type of a new genus, *Astele*, by Swainson. I subjoin his remarks on the genus. Diam. 28, alt. 23, whorls 7. E. Shell nacreous, pyramidal or trochiform, unarmed, body whorl convex below, no columella, umbilicus large, closed only by the terminal whorl of the spire, aperture broader than high, margin of lips thin. *A. Adams (Zool. Proc., 1863, p. 506)* has made a new genus named *Eutrochus* for the same species, not knowing of Swainson's description. The genus approaches very near to *Solarium*, and has a wide perspective umbilicus reaching to the apex.

LIOTIA TASMANICA. *Tenison-Woods*.

LIOTIA INCERTA. *Tenison-Woods*.

LIOTIA DISCOIDEA. *Reeve, Zool. Proc., 1844*. Latticed with transverse ribs and longitudinal bars, besides being finely striate. Very like the preceding, but without the curious squamose nodæ. Maj. diam. 6½, min. 5. Common and in Philippine Islands.

LIOTIA AUSTRALIS. *Kiener, Spec. Conc. pl. 4, fig. 7*. A depressed white discoid shell with prominent ribs, and longitudinal very fine divaricating liræ ; mouth broadly reflected and coarsely ribbed. Diam. 14, whorls 4. Rare.

LIOTIA ANGASII. *Crosse*. Moderately plentiful ; Pittwater. W. F. Petterd.

CYCLOSTREMA KINGII. *Brazier MS. ?* I cite this shell, which I have not seen, on the authority of Mr. Legrand.

CYCLOSTREMA JOSEPHI. *Tenison-Woods*.

CYCLOSTREMA MICRA. *Tenison-Woods*.

CYCLOSTREMA WELDII. *Tenison-Woods*.

CYCLOSTREMA SUSONIS. *Tenison-Woods*.

CYCLOSTREMA SPINOSA. *Tenison-Woods*.

CYCLOSTREMA IMMACULATA. *Tenison-Woods*.

MONILEA ROSEA. *Tenison-Woods*.

MONILEA TURBINATA. *Tenison-Woods.*

ETHALIA TASMANICA. *Tenison-Woods.*

ADEORBIS PICTA. *Tenison-Woods.*

MINOLIA TASMANICA. *Tenison-Woods.*

CLANCULUS NODULOSUS. *A. Adams, Zool. Proc., 1854, p. 39.* I have not seen this shell, which is white, variegated with red, but the whorls are nodulous and not granular.

CLANCULUS ALOYSII. *Tenison-Woods.*

CLANCULUS PHILOMENA. *Tenison-Woods.*

CLANCULUS DOMINICANA. *Tenison-Woods.*

CLANCULUS RAPHAELI. *Tenison-Woods.*

CLANCULUS ANGELI. *Tenison-Woods.*

CLANCULUS CONSPERSUS. *A. Adams, Zool. Proc., 1851, p. 163.* A trochiform, coarsely granular shell, with last whorl sub-angular, variegated red and white; toothed on the outer lip. Long. 11, lat. 13, whorls $4\frac{1}{2}$. B. Sts., and N.E.

CLANCULUS RUBENS. *A. Adams.* A deep red coarsely granulated shell which I believe to be the *C. rubens* quoted by G. F. Angas (*Zool. Proc., 1865, p. 178*) as of A. Adams, but with no reference. I cannot find that Mr. Adams published his description. Rare. Bass' Straits. Dimensions same as last.

CLANCULUS UNDATUS. *Lamarck, Enc. Meth., pl. 447, fig. 3.* A large, handsome, solid, purple, red shell, with small black spots on the granulations. The enamel of the mouth is often much spread over the base as a transparent film. Common, and in S.A.

CLANCULUS MAUGERI. *Adams, Zool. Proc.* A dull, brown shell, more conical than the last and sometimes larger. Rare in Tasmania and Victoria, not uncommon in New South Wales.

CLANCULUS VARIEGATUS. *Adams, Zool. Proc., 1851, p. 160.* A rather thin, depressedly conical shell, acutely angulate at the base, which is flat, granular, with oblique microscopic striae between; pale brownish red; larger than any of our species except the two preceding. 18 to 20 mill. in diam., whorls 5. Very common, and S.A. I cannot distinguish this shell from *C. zebroides* of the same author.

CLANCULUS GIBBOSUS. *A. Adams, Zool. Proc., 1851, p. 162.* A depressed shell, granulated, white, and irregularly banded with zigzag reddish brown lines; tooth bifid and umbilicus almost like a *Solarium*; diam. 10 to 18. Common. N. only and V.

CLANCULUS NODO-LIRATUS. *A. Adams, loc. cit.* Smaller than the last, pink or reddish, variegated with lines of white and dark spots; small granular ribs with fine striae on the interstices; diam. 8 to 10. Tooth small. Common.

EUCHELUS CANALICULATUS. *Lamarck, Vol. 9, p. 181.* A somewhat small, turbinated shell, obsoletely toothed and nacreous, with numerous fine granular liræ, pinkish white with minute brown spots. Long. 17, lat. 17, whorls 5. *E. baccatus*, Menke, which occurs in extra-tropical Australia may be identical with this species, but it seems to me a larger, more depressed shell, and paler in color.

EUCHELUS TASMANICUS. *Tenison-Woods.* The smallest species, but exactly like the above in form, color, etc.

EUCHELUS SCABRIUSCULUS. *Ad. and Ang. MS., and Zool. Proc., 1867, p. 215, sp. 181.* A dusky umbilicated shell. Long. 6, lat. $4\frac{1}{2}$. Long Bay. Common. Rev. H. D. Atkinson. There are two *Euchelus* shells from Samoa, which show very distinctly the peculiar features of the genus. *E.*

instructus and *E. atratus*. *E. scabriusculus* is very similar to both these but smaller. S.E.A.

THALOTIA CONICA. *Gray, in King's Voy., Append., Vol. 2, p. 479.* A solid conical shell, light red, with finely granular lines, regularly spotted purple red. Long. 20, lat. 13. Common. B. Sts., and N.E. only, but very common in S.A.

THALOTIA PICTA. *Wood's Index Testaceologicus, Suppl., pl. 6, fig. 28.* More acute than the preceding, with very fine liræ, and elegantly flamed with carmine and white. *T. ramburi*, Crosse (S.A.), may be only a variety of this. Rare. N. only.

THALOTIA MARLE. *Tenison-Woods, Proc. Roy. Soc. Vict., 1877.* Common in Victoria. Rare in Tasmania and N. only.

THALOTIA DOLOROSA. *Tenison-Woods.*

ZIZYPHINUS ALLFORTI. *Tenison-Woods.*

ZIZYPHINUS LEGRANDI. *Tenison-Woods.*

ZIZYPHINUS GRANULATUS. *Born. Test. Mus. Cæs. Vind., p. 337, pl. 12.* A British species said to occur in Tasmania, but if my identification of the shell is correct, it is only a variety of *Z. armillatus*, differing from age.

ZIZYPHINUS EUGLYPTUS. *Adams, Zool. Proc., 1854, p. 58.* This, at best, is only a variety of the following.

ZIZYPHINUS ARMILLATUS. *Wood, Index Test. Suppl., pl. 9, fig. 5.* Of pinkish red colour, transversely grooved and granulate; apex often with a beautiful bluish green metallic lustre. A fine large, conical shell, varying considerably in size and depth of color. Large specimens long. 33, lat. 32, whorls 8. Rather common and S.A.

ZIZYPHINUS FRAGUM. *Philippi, Zeit. Mal., p. 106.* Shell conical, dull white, faintly tessellated with brown, whorls convexly sloping and spirally closely granular. Its name is not inaptly suggested by its resemblance to a strawberry. Alt. 10, diam. 13, whorls 6. Rare. Islands in B. Sts.

ZIZYPHINUS INCERTUS. *Reeve, Icon., pl. 5, fig. 28.* This is a reversed shell, which was thought by Reeve to be an accidental variety. It is, however, always found thus. This fact and the somewhat convex base show anatomic peculiarities which ought to be of generic value.

ELENCHUS BADIUS. *Wood, Index Test., Suppl., pl. 6, fig. 46.* A very common, smooth, brown shell, common in all S. Australia. This shell, the largest of the genus, with many synonyms, is the one principally used for ornamental purposes; the outer shell is dissolved by weak acid, exposing the brilliant violet nacre. Swainson named it *splendidulus*, from its great beauty. Long. 30, lat. 15, whorls 6. *Elenchus fulmineus*, *Kiener*, is a variety distantly banded with diagonal zigzag greenish white lines. *Elenchus lineatus*, *Lamarck, Vol. 9, p. 181*, is another variety, very closely variegated with diagonal lines. *Elenchus roseus*, *Lamarck, loc. cit.*, is a rose red variety. But none of these distinctions are of specific value, for almost every intermediate grade can be found in a handful of specimens.

ELENCHUS BELLULUS. *Dunker, Phil. Abbild., t. 7, fig. 6.* A highly enamelled tumid solid shell, brown, with transverse lines, which are curiously connected with double short white lines, shaded with vermilion. These lines extend in fascia round the spire. Long. 17, lat. 10, whorls 6. Uncommon. B. Sts. only and in S.A.

ELENCHUS IRISODONTES. *Quoy., Voy. de l'Astrol, Vol. III., p. 246, t. 63, figs. 7 to 12.* *Monodonta virgata*, *Menke*. Much smaller than *E. badius*, beautifully variegated with bands and lines of various shades of green and white; nacre apple green. Used also for ornamental purposes. Long. 12, lat. 7, whorls 5. Common.

ELENCHUS NITIDULUS. *Phil. Kust. Conch. Cat., pl. 43, fig. 10*, as *Trochus*

n. Cantharidus n., Adams *Zool. Proc.*, 1851, p. 169. About the size of *E. bellulus*, with a produced aperture, the enamel minutely dotted in sloping lines, last whorl angular, throat brilliant green. Long. 18, lat. 13, whorls 7. One of the commonest species.

BANKIVIA VARIANS. Beck in Krauss *Sudafric. Moll.*, 1848. "This species" says Mr. Angas (*Zool. Proc.*, 1865, p. 181) "is very abundant on all shores of extra-tropical Australia. It varies in color from green to white brown, purple and rose, besides being banded and striped in an infinity of patterns." H. and A. Adams describe (*Gen. Moll.*, p. 425) another species *B. major*, as Tasmanian. I have been unable to find the shell. Some authors give the name *purpurascens* after Deshayes (*Manuel de Conch.*). It was supposed to occur also in S. Africa (*Phil. Handb. Conch.*, p. 212) but this arose, as I have already noted, from Baron Von Ludwig sending to Stuttgart, Australian with African shells. It has, however, been found in America. One very young specimen *teste* Carpenter, *Brit. Mus. Cat. Maz. Shells*, p. 226. The affinities of this singular shell are very doubtful. Woodward (*Manual Moll.*, p. 144) says it would be called *Chemnitzia* (?) if fossilized. Very common.

GIBBULA MULTICARINATA. *Tenison-Woods.*

GIBBULA COXI. Angas, *Zool. Proc.*, 1867, p. 115, pl. 13, fig. 26
Orbicularly conical, deeply umbilicated, solid, whitish, shining, marbled olive and pink, whorls biangular, with two prominent rounded keels. Rare, and S.E.A. About 8 mil. in diam. Varies much in coloring.

GIBBULA SULCOSA. A. Adams, *Zool. Proc.*, 1851, p. 186. Rare. A small conical shell about 8 mill. high, umbilicate, sulcate, and faintly obliquely striate, spotted with rosy lines and dots. It is found as far north as the tropics of Australia.

GIBBULA WELDII. *Tenison-Woods.*

GIBBULA AUREA. *Tenison-Woods.*

GIBBULA DEPRESSA. *Tenison-Woods.*

TROCHOCOCHLEA AUSTRALIS. Favanne, *Conch.*, pl. 8, fig. A1 (*le ratelier*). There is such confusion about this shell that I shall give what I believe to be its synonymy. Chemnitz *Conch. tom. 11, tab. 196, fig. 1890. Monodonta australis*, Lamarck *ani.*, s. vert. tome. 7, p. 30, No. 11. *T. concamerata*. Gray and Wood *Ind. Test. Sup. pl. 6, fig. 35. T. striolatus*, Quoy and Gaim., *Zool. de l'Astrol.*, Vol. 3, p. 253. *T. striolatus*, Angas, *P.Z.S.*, 1865, p. 182, No. 170. *Encyclop. Methodique His. Nat. des Vers.*, *T. australis*. Mr. F. G. Angas says in his notice of the shell (*loc. cit.*), "Faintly edged, and painted with irregular wavy longitudinal lines of yellow on a black ground. *L.* (*sic.* perhaps a misprint for *T.*) *striolatus* of Quoy from Tasmania and S. Australia is much more depressed and has a tessellated style of painting, although regarded as a synonym by Mr. Hanley in his edition of Wood's *Index.*" I think Mr. Angas would alter his opinion in Tasmania where every variety of form and every variety of color from pale yellow to green, and from white to black, and every variety of tessellation may be found on the same beach.

TROCHOCOCHLEA CONSTRICTA. Lamarck, *Vol. 9, p. 180.* The largest species, oblique, obtuse, conical, dull flesh color, or sordid white, or yellowish, often a reddish pink; whorls 4-5, tumidly convex, furnished with rounded very conspicuous keels, 8 on body whorls, 2 on the others, the whole shell traversed with oblique fine lines of growth; mouth subcircular; outer lip double, outer margin calcareous pinkish white, channelled at the origin of the keels, where it is often stained deep black which sometimes continues in a line round the mouth; mouth nacreous, in a well-defined line, with prominent liræ; nacre silvery, columella purely white, terminating in a blunt tubercle; enamel spread slightly over base, on which 3 or 4 ribs are often

marked with black spiral lines. Height 20 to 70 mil. Common in all Tasmania and extra-tropical Australia.

TROCHOCOCHLEA TENIATA. *Quoy and Gaim., loc. cit., p. 251, pl. 63, fig. 15.* (There is reason, however, for thinking that the figure refers to Lamarck's *T. constricta*.) Small, smoother and much less conspicuous keels, 3 to 6 (at most) in body whorl; color, long zigzag streaks of white and blue, black, greenish, or even red (especially on dead, old, and dry shells), outer lip generally margined with black, throat of dark pinkish nacre, seldom lirated, columella brownish, tubercle obsolete. Long. 18, lat. 16 mil. Always smaller than the preceding, and with the same geographical distribution. With this shell I unite *T. multicarinata*, Q. and G., and *T. porcata*, Adams, and even then it is only a doubtful species.

TROCHOCOCHLEA COMPTA. *Tenison-Woods.*

TROCHUS (DILOMA) ODONTIS. *Wood. Index, Test, Suppl., pl. 6, fig. 37.* Small, depressed, dark blue, with lines of fine yellow spots. Mouth nacre rose color, with green margin. Common, and in all extra-tropical Australia. *Diloma* is a questionable genus of Philippi not admitted by Gray. The horny operculum, the animal, and all the habits of this shell would unite it with *Trochocochlea*; but the shell itself is smooth; the interior especially of the upper whorls is a brilliant rosy nacre; the foot lappets fringed and they are spotted yellow like the shell.

TROCHUS (DILOMA) AUSTRALIS. *Tenison-Woods. Proc. Roy. Soc. Vic., 1877.*

STOMATELLA IMBRIGATA. *Lamarck, Encycl. Meth., pl. 450, fig. 2.* Elegantly grooved and striate, and densely imbricate with raised scales; dull, white, nacreous inside. Maj. diam. 29, min. 23. B Sts., rare, and in S.A.

GENA STRIGOSA. *A. Adams, Zool. Proc., 1850, p. 37.* The only species known in Tasmania. Oblique, and variously striped with green, red, etc.; outer lip slightly sinuate. Long. 21, lat. 11, alt. 5. Bass' Sts., rare, and in S. A. The figure in *Reeve, pl. 2, fig. 12*, is very defective.

HALIOTIS NEVOSA. *Martyn, Univer. Conch., v. t. 11, fig. 63.* This common ear-shell of the coasts of Australia and Tasmania has received a host of names. It is even now, I believe, unnecessarily divided into two or three species. Some of its varieties extend into the genus *Padollus*, as it is frequently found with the mesial spiral rib. *H. coccoradiata*, *Reeve*, is another variety. A scabrous irregularly rugose shell, variously whorled, red brown being the prevailing shade, and very nacreous within.

HALIOTIS GLABRA. *Swainson, Cat. Bligh Collection; (H. albicans of Quoy, Angas, etc., but Swainson's name was published in 1830).* A very large, solid, smooth species, generally worn white, but in young shells banded or broadly rayed with chestnut or green; lines of growth few, deep, and irregular. N. and in S.A.

HALIOTIS CARINATA. *Martini, tab. 14, fig. 140.* This species or variety, for it is uncertain which, was described by Swainson in the Bligh Catalogue, and again by Dr. Gray (*teste Angas loc. cit.*, who gives the reference, *Gray, MS., Brit. Mus.*) as *H. emme*. Somewhat common, and S.A.

HALIOTIS ELEGANS. *Koch. in Philippi. Abbild und Besch, Conch. Haliotis, pl. 4, figs. 1 and 2, Teinotis elegans, Gray.* Swainson says he found this species in the islands in Bass' Straits. *Proc. Roy. Soc., Vol. 3, part 1, p. 49.*

SCHISMOPE ATKINSONI. *My Scissurella atkinsoni.* See *Proc. Roy. Soc. Tas., 1876.*

IANTHINA COMMUNIS. *Lamarck, Vol. 9, p. 4.* Occasionally drifted on to the East Coast, as also, probably

IANTHINA EXIGUA. *Lamarck, Vol. 9, p. 5.* A small elegantly striate species. "It is necessary that more material should be collected and the

animals observed before a decided opinion can be expressed on the species of this genus. Some reduce all the forms to *one* or *two* species. Dr. Gray conjectures that two, *I. fragilis* and *I. prolongata*, are the sexes of one species."—*Carpenter, Cat. Maz. Shells, p. 185.*

IANTHINA BIPARTITA. *Gray?*

CREPIDULA ———? East Coast. W. F. Petterd.

CREPIDULA ———! Frederick Henry Bay. W. F. Petterd.

FISSURELLA SCUTELLA. *Gray, Brit. Mus. Cat. Fissurella, No. 42.* A trapeziform, ovate, flattened, concentrically ridged shell; pink, with brown rays. Somewhat common in S.A. Long. 29, lat. 23.

FISSURELLA AUSTRALIS. *Krauss, Sudafric. Moll., p. 67, pl. 4, fig. 10.* Deeply nodosely latticed with ribs and riblets, orifice small, ovate, obscurely blotch rayed with light rust brown. Long. 18, lat. 14, alt. 8. Rare, E. only; but it occurs in N.E. Australia. Described by Krauss as from Natal, but for the reasons already given (vide *Purpura textilosa*) his specimen probably came from Australia.

FISSURELLA NIGRITA. *Sowerby.* North Coast and Blackman's Bay. W. F. Petterd. A small, black, flattened shell.

FISSURELLA CONCATENATA. *Crosse, Jour. Conch, 1863.* Long Bay, Rev. H. D. Atkinson; N.W. Coast, R. Gunn; George Town, W. F. Petterd. Deeply pitted all over with hexagonal markings. Rare.

MACROSCHISMA TASMANICA. *Tenison-Woods, var. a Rosea.*

EMARGINULA EMARGINATA. *Blainville, Malac., p. 48, fig. 2, E. australis, of Quoy.* A coarsely sculptured white shell with very prominent curved anterior ribs. Common. V. The largest Tasmanian species. Long. 23, lat. 18, alt. 14.

EMARGINULA RUGOSA. (*Quoy?*) *Sowerby, Thes. Conch., Fissurellidæ Emarginata, sp. 49, fig. 72.* White, rayed with nodose unequal ribs, the fissural one prominent, fissure short and narrow. Long. 16, lat. 12, alt. 8. Not common.

EMARGINULA TASMANIÆ. *Sowerby, loc. cit.* Variety of preceding.

EMARGINULA TENUICOSTATA. *Sow. loc. cit.* Another variety.

SCUTUS ELONGATUS. *Blainville, Bulletin des Sciences Nat. Feb., 1817, p. 28; Parmophorus australis* of Lamarck. A large white shell with orange markings on the inside enamel. Somewhat common; S.A., S.E.A. Long. 110, lat. 55. The animal larger than the shell; black, with long tentacles, whence it is known as the "Elephant" by sea side visitors.

TUGALIA AUSTRALIS. *Sow. Thes., Fissur., pl. 14, fig. 18.* Whitish, oblong, depressed, with very fine ribs, and minute anterior notch, Long. 17, lat. 10. Rare. S.E.A. The specimens of this shell I have seen from Sydney, Victoria, etc., have been identified with *T. ossea*, Gould, do not correspond with Gould's description, which, moreover, he refers to N. Caledonia, Fiji, etc. I, therefore, propose the name of *Tugalia australis*.

TUGALIA TASMANICA. *Tenison-Woods.*

ACMÆA SEPTIFORMIS. *Quoy, Voy. de l' Astrol., pl. 71, figs. 43, 44.* Oval, gray, spotted with pale olive and dark brown margin within. Long. 15, lat. 11, alt. 5. Somewhat common. S.E.A.

ACMÆA MARMORATA. *Tenison-Woods.*

ACMÆA CRUCIS. *Tenison-Woods.*

ACMÆA COSTATA. *Sow. Zool. Voy. Beagle, (so in Angas' list, which I have not been able to verify).* My own idea is that the shell is different, and was never described until Angas himself did so as *Patella alticostata*. (See Proc. Zool. Soc., 1865.) Solid, depressed, corroded, very irregularly ribbed, often transversely barred in the interstices. One of the commonest

mpets in all extra-tropical Australia. Ribs about 17, interior white and brown stained. Long. 32, lat. 26, alt. 10.

ACMÆA CANTHARUS. *Reeve, Icon., pl. 4, fig. 131.* Ovate, smooth, thin, convex, apex anterior and generally corroded, smooth, reticulated black and white; interior like tortoise shell. Long. 24, lat. 19. Common in Australia and New Zealand.

ACMÆA FLAMMÆA. *Quoy and G., Vol. de l'Ast., Vol. 3, p. 354.* This is probably the same as *A. subundulata*, *Angas, Zool. Proc., 1865, p. 155.* Somewhat high, apex anterior, faintly ribbed, white with brown striae, often radiating in the form of a cross.

ACMÆA CONOIDEA. *Quoy, Voy. de l'Astrol., Vol. 8, pl. 71, figs. 5 to 7.* A small, high, conoid shell, generally eroded; apex very obtuse. Long. 10, lat. 8, alt. 7. Common, S. and E.

ACMÆA PETTERDI. *Tenison-Woods.*

ACMÆA ALBA. *Tenison-Woods.*

PATELLA ACULEATA. *Reeve, pl. 32, fig. 90.* A deeply convex shell, rayed with many ribs, scaly or prickly and narrowly compressed. Recherche Bay, common. Reeve gives no habitat for this shell, which is also found in Port Jackson; generally covered with harsh brown spongy tissue, not unlike some algæ, but which may be an appendage to the animal. Long. 40, lat. 33.

PATELLA TRAMOSERICA. *Martyn, Univer. Conch., ed. Chem., pl. 5, fig. 3, (pl. 16 in original).* Ribs close set, obscurely nodosely tuberculated yellowish orange or vermilion, and rayed with black, with white spots on the interstices, interior bluish white, silky or metallic at the margin. By transmitted light distinctly coloured crimson and yellow. Long. 57, lat. 50. Generally depressed, but this varies as well as the shape of the shell, which is oblong to orbicular. Common, and in Australia and New Zealand. A most variable shell in size and coloring. I have found every size, and almost every color, especially in the interior, which ranges from pale indigo to golden. In some there is no spathule, or it is black or blue and varied in every way. The most constant characters are, the silky lustre of the interior, and the crimson streaks on orange ground as seen by transmitted light. *P. limbata*, *Phil.*, is a synonym, or, at best, a N. Australian variety, it is a (*Philippi, Abbild. in Besch., Conch., pl. 3, fig. 1*) subconoid shell, with wide radiating ribs indistinctly noded, interstices narrow and black, deep orange exterior, interior orange at the margin, blotched with black, nucleus blue. Long. 55, lat. 45. Common. I regard this shell as a variety or not even a variety of the preceding. The somewhat broader ribs may distinguish it.

PATELLA DECORA. *Philippi, Icon. pl. 3, fig. 13.* A peculiar semi-globose ribbed form, with apex very much inclined to the anterior, blotched black and blood-like. Rare, and in New Zealand. Long. 40, lat. 32, though the Tasmanian identification is very doubtful.

PATELLA USTULATA. *Reeve, Icon., pl. 31, fig. 88.* Depressed apex, submarginal, coarsely ribbed, with many fine riblets in the interstices, scorched with rich brown, often corroded, white inside with narrow fringe of brown and yellow. Long. 35, lat. 29. Somewhat common, S. and E. Coasts. Reeve's species described from worn shells.

PATELLA TASMANICA. *Tenison-Woods.*

PATELLA CHAPMANI. *Tenison-Woods.*

PATELLA RADIANS. *Gmelin, 13th edit., Linne's Syst. Nat., p. 3720, also Sow. (Lottia radians) Genera Shells, Vol. 2, pl. 5, fig. 3; P. argentea, Quoy, Voy. Astrol., Vol. 3, p. 345, pl. 70, figs. 16 and 17.* Oval, narrow in front, apex anterior, distant radiating ribs, greenish black, or yellow with blackish

markings, silvery inside. Long. 23, lat. 19, alt. 6½. Very variable. Rare. E. Coast only, and in N. Zealand. A doubtful identification.

CHITON (LOPHYRUS) AUSTRALIS. *Mag. Nat. Hist.*, 1840, *Conch. Illust.*, fig. 46, and probably fig. 139; *Reeve*, pl. 2, fig. 10. An oblong rounded form of dark green color, with the lateral areas radiately ridged; margin bordered with small scales. The genus *Lophyrus* was proposed by Poli (*Testacea utriusque, Siciliae*, 1791 to 1795) for *Chitons* with the borders of the mantle covered with rounded scales regularly imbricated. I do not know of any other reliable species, though I would easily assign certain varieties, or very young or worn shells to the following species:—*Concentricus*, *muricatus*, *smaragdinus*. The *Chitons* vary wonderfully in color according to their age, and according to the rock to which they adhere to which they are in a remarkable manner assimilated.

CHITON (LEPIDOPLEURUS) LIRATUS. *Ad. and Angas, Zool. Proc.*, 1864, p. 193. A small, somewhat pale shell, with undulating decussate striae, the back of the valves being like an engine-turned watch.

CHITON (LEPIDOPLEURUS) SPECIOSUS. *Ad. and Ang. loc. cit.*, p. 192. It is with very considerable diffidence that I differ from such high authorities, but I would suggest that this and the preceding are varieties of *C. ustulatus*, *Quoy. Voy. Astrol.*, Vol. 3, p. 393, pl. 75, figs. 19, 24. And I must frankly repeat my opinion already given, that I believe we have very few species of *Chiton*, instead of the number which naturalists have described, and that they are very variable and world-wide in their distribution. We might have hundreds more than the hundreds we have, if we were to take fairly into account the endless varieties of color, form, or marking to which different individuals of the same species are subject. The following species have also been attributed to Tasmania, though, as I have failed to trace them, I shall merely give the names and authorities.

CHITON PICEUS. *Gmel.*

CHITON PROTEUS. *Reeve.*

CHITON SINCLAIRI. *Gray in Dieffenbach's Travels*, Vol. 2, p. 263. A New Zealand shell whose Tasmanian habitat is doubtful.

CHITON GLAUCUS. *Gray.*

CHITON (PLANIFORA) PETHOLATUS. *Sow. Mag. Nat. Hist.*, 1840. A large greenish-blue species, with a rough coarsely hirsute margin. The interior of the valves a transparent light blue, while exteriorly they are finely granulated in undulating lines. I am perfectly confident that with this species must be united *C. (Plaxiphora) ciliata*, *Sow., Conch. Illust.*, p. 79.) Absolutely the only differences are the age and size by which the external markings are changed. I do not pronounce this opinion hastily, as it is nearly 20 years since I first became acquainted with the species, and have examined hundreds of specimens from all the S.A. Coasts south of the Murray, Portland Bay, Bass' Straits, and Tasmania.

CHITON (ACANTHOCHÆLES) ZELANDIUS. *Quoy, Voy. de l'Astrol.*, Vol. 3, p. 400. A species with little tufts of transparent spiculæ at the base of each plate. Isthmus Bay from 30 to 50 mill. long., common. I believe this shell to be identical with *C. crinitas*, Pennant, and *C. fascicularis*, the first of Britain, the second of the Mediterranean.

CRYPTOPLAX GUNNI. *Reeve, Icon. fig. 5 (as Chitonellus)*. From 1 to 2 inches long. N., common, and S.A.

CRYPTOPLAX SPINOSA. *H. Adams, Zool. Pro.*, 1861, p. 385. Animal with a large mantle and spinous plates, with a broad smooth central ridge. Long. 88, lat. 25.

SIPHONARIA DIEMANENSIS. *Quoy. Voy. de l'Astrol.*, Vol. 2, p. 327, pl. 25, fig. 1, etc. Sharply conical, radiately white ribbed, interstices rich brown,

interior highly polished with purple brown. Long. 21, lat. 15, alt. 10. Very common, and S.A., and S.E.A.

SIPHONARIA DENTICULATA. *Q. and G., loc. cit.* Variety of preceding. Pale inside and generally corroded. Long. 24, lat. 20, alt. 11. Not common, and S.E.A. and S.A.

SIPHONARIA ZONATA. *Tenison-Woods.*

CYLICHNA ARACHIS. *Quoy, and Sow., Thes., p. 590.* Solid, cylindrical, white, with ferruginous periostraca; easily distinguished by its very fine undulating striae. Long. 22, lat. 9. Rare. Long Bay. Rev. H. D. Atkinson.

CYLICHNA ATKINSONI. *Tenison-Woods.*

APLYSIA CONCAVA. *Sow. Gen. of Shells, and Reeve, pl. 6, figs. 24, a and b.* Small, horny, very concave and strongly incurved, sub-auriculate on both sides of the apex, not very common. Cloudy Bay Lagoon, Bruni Island. Long. 7, lat. 5.

APLYSIA TASMANICA. *Tenison-Woods.*

TORNATINA MARIE. *Tenison-Woods.*

BULLA OBLONGA. *A. Adams, Sow., Thes. Bulla, sp. 50, pl. 123.* A large shell, reddish brown with pink spots and zoned indistinctly with 3 or 4 broad blue-black bands; has been mistaken for Quoy's *B. australis*; it is said to occur in the Philippines (*H. Cuming*), probably only a variety of *B. ampulla*. In S.A. (Guichen Bay, Lake Eliza, raised beaches, etc.), it is a common pleistocene fossil where it attains a large size. Long. 55, lat. 31.

PHILINE APERTA. *Linne Syst. Nat., 12 ed., 1378; Reeve 1, fig. 3.* A milky, translucent, very open shell. Long. 24, lat. 16. A large specimen of this is *P. angasi* of Crosse. Rare, and S.A.

HAMINEA OBESA. *Sow. in Reeve Icon., 16, fig. 13.* Milky and transparent. Long. 11, lat. 8. Rare. Islands in Bass' Straits, and S.A.

MARINULA PELLUCIDA. *Cooper, Mag. Zool. Br., Vol. 2.* A somewhat globose, pink pellucid shell with three prominent unequal plaits. Common, and in Australia.

OPHICARDELUS CORNEA. *Swainson, Proc. Roy. Soc. Van Diemen's Land, Vol. 3, p. 43.* An ovate, thin, light shell, covered with a periostraca and a thickened spire, olive brown with darker transverse bands. Amphibious. Oyster Cove. I suspect this is the same shell as that called *O. australis*, Quoy, in N.S. Wales.

OPHICARDELUS PARVA. *Swainson, loc. cit.* Like the last, but smaller, and more slender, and the plaits proportionately much larger. Long. 7, lat. 3. South Coast in swamps of brackish water.

AURICULA DYERANA. *Tenison-Woods.*

CONCHIFERA, LAMARCK.

ORDER PHOLALACEA.

BARNEA AUSTRALASIE. *Gray MS. Brit. Mus., Sow. Thes., pl. 107, fig. 73.* Very like *B. similis*, Gray, and in *Hutton's Cat. Moll., New Zealand*, except that it is rounded anteriorly and not acuminate. Rather uncommon. Long. 25, lat. 68.

TEREDO NAVALIS. *Linné, Syst. Nat., ed. 12, p. 1267.* Rare, and probably introduced.

GASTEROCHÆNA TASMANICA. *Tenison-Woods.*

HUMPHREYIA STRANGEL. *Ad. and Angas, Zool. Proc., 1852, p. 91.* Our only Australian *Aspergillum*, though another species, occurs in New Zealand. White, curved, and obsolete carinate on each side. Rare, N.; also Islands in Bass' Straits.

SOLEA VAGINOIDES. *Lamarck, Vol. 6, p. 55.* Mottled with purple and flesh color; differing from *S. sloanii*, Gray, of N.S. Wales, in its curved form and greater width. Common. Long. 12, lat. 85.

SAXICAVA AUSTRALIS. *Lamarck, Vol. 6, p. 153.* No definite shape or color can be assigned to this shell, except that it takes every form according to the rock on which it lives. Lamarck made two genera, and three species of the above which occurs also in Australia. Not common. Long Bay. Rev. H. D. Atkinson.

PANOPÆA AUSTRALIS. *Sow. Genera of Shells, No. 40, fig. 2.* Ovate oblong, handsome, wider anteriorly, posterior oblique, truncated, concentrically wrinkled. Rare, and even then seldom found alive. Long. 44, lat. 75.

CORBULA ZELANDICA. *Quoy, Voy. Astrol. Zool., Vol. 3, p. 511, pl. 85, figs. 12, 14.* I am very doubtful if this shell has been found in Tasmania. It occurs in New South Wales and New Zealand, and as the whole known species are great wanderers it may occur here. The genus is, however, unknown in South Australia, and the Tasmanian fauna is generally more similar to that coast than N.S. Wales.

CORBULA ERYTHRODON. *Lamarck, Vol. 6, p. 138.* The same remarks apply to this shell. It is, not, however, known in N.S. Wales, but undoubtedly occurs in China, Japan, and New Zealand. See *Von Martens, Crit., List Moll., N. Zealand, p. 4.*

ANATINA ANSERIFERA. *Spengler, Schrift., Nat. Ges. Z.U. Copenhagen, Vol. 3, p. 32, No. 8. Chemnitz, Vol. 19, p. 193.* Squarely oblong, sides nearly equally granuled; much larger and more square looking than the other Tasmanian species. Long. 32, lat. 70. Very rare.

ANATINA CRECCINA. *Valenciennes teste, Reeve, Icon. pl. 2, fig. 12.* Elongately oblong, thin, hyaline, minutely granuled, wrinkled near the umbones, anterior sides shorter, alternately beaked, gaping roundly, extremities reflected. Long. 32, lat. 68, alt. 19, but this is rather large. Rare, North Coast, Kelso, W. Legrand. Occurs also in S.A. and S.E.A., but much smaller.

ANATINA TASMANICA. *Reeve, Icon. pl. 3, fig. 20.* Ovate, umbones nearly central, translucent, shell widely gaping. Long. 25, lat. 50, alt. 17. Not common. S.E.A. also, but smaller.

ANATINA ANGASI. *Crosse, Jour. de Conch, 1864, Vol. 4, p. 349.* An oval, inequivalve species, split at the umbones, thin, and almost regularly rugosely striate. Rare, Oyster Bay, Frederick Henry Bay. W. Legrand. Long. 43, lat. 60, alt. 22.

NEERA TASMANICA. *Tenison-Woods.*

MYODORA BREVIS. *Stutchbury, Zool. Jour, Vol. 5, p. 99. Tab. Sup. p. 43, figs. 1 and 2.* A short, triangular shell, faintly flexuously ribbed, convex on one side, and flat on the other. Long. 25, lat. 28, alt. 5. Rare, S. Coast. W. Legrand.

MYODORA OVATA. *Reeve, Zool. Proc., 1844, p. 92.* This shell was described as coming from the Philippines, I doubt much if our species is the same. Like the following, but stouter, with somewhat prominent ribs on both sides.

MYODORA PANDORIFORMIS. *Stutchbury, loc. cit., figs. 3 and 4.* Oblong, ribbed on one side only. Long. 11, lat. 16, alt. 5. Rare, S. and E. coast.

MYODORA TASMANICA. *Tenison-Woods.*

MYODORA ALBIDA. *Tenison-Woods.*

MYOCHAMA ANOMIOIDES. *Stutchbury, loc. cit., pl. 42, figs. 1 to 4.* A pink, wrinkled, parasitic shell with the lower valve always attached to some other

mollusc. I have found them on many different shells. Rare, but somewhat common in S.E.A.

MYOCHAMA SP? Parasitic on Pectens at Long Bay. W. F. Petterd.

CHAMOSTREA ALBIDA. *Lamarck, Vol. 6, p. 585 (Cleidothærus chamoides Sow., Genera of Shells, figs. 1, 2, 3.)* Somewhat common in shallow places, such as Sorell, Pittwater, etc. This curious shell, which is always attached, was made the type of a very interesting genus by Sowerby, because of the loose ossicle in the hinge. The size varies from 20 to 50, or even 60 mil., but the latter size only in N.S. Wales.

MACTRA RUFESCENS. *Lamarck, Vol. 6, p. 102.* A solid, flexuously wrinkled shell, of pale brown color, but stained with purple inside and out. Long. 62, lat. 55, alt. 28. Common.

MACTRA PURA. *Deshayes, Zool. Proc., 1853, p. 15.* Solid, white, with thin, silky periostraca, triangular, equilateral, obtusely angled, posteriorly and obsoletely striate. Extends through Bass' Straits to W.A. Not common, E. and S. Coasts. Long. 46, lat. 50, alt. 27.

MACTRA CRETACEA. *Angas., Proc. Zool. Soc., 1867, p. 909 (as Spisula).* Small, transversely trigonal, chalky-looking white species, without any periostraca, and a distinct posterior angle. Long. 16, lat. 12½, alt. 8. Tamar Heads.

ANAPA TRIQUETRUM. *Hanley, Zool. Proc., 1843, p. 101.* A very thick, triangular tumid shell, whitish and concentrically striate. Long. 30, lat. 31, alt. 25. Rare in Tasmania, habitat very doubtful, though Mr. Hanley quotes it as from Tasmania. Very common in S.A., Guichen Bay especially. Mr. H. says, "I know of no species which could possibly be confounded with this extraordinary shell, which from the peculiar triangular cavity between the beak may prove the type of a sub-genus."

ANAPA TASMANICA. *Mihi.* Possibly only a small variety of preceding.

TELLINA DELTOIDALIS. *Lamarck, Vol. 6, p. 206.* Rather smooth, deltoid, compressed, arcuate, beaked anteriorly. Long. 38, lat. 46, alt. 11; much smaller in S.E.A. "This species varies greatly in size and aspect, and has a wide range over the south portions of Australia, Tasmania, and New Zealand."—*Angas, Zool. Proc., 1865.*

TELLINA ALBINELLA. *Lamarck, Vol. 6, p. 194.* The rose-colored and white zoned variety of this shell is the common species in Tasmania. Long. 30, lat. 54, alt. 5. On all exposed surf-beaten beaches. Very common at the mouth of the Murray, in S. Australia.

TELLINA DIEMANENSIS. *Deshayes, Zool. Proc., 1854, p. 361.* A much lighter, thinner, and more curved shell than *T. deltoidalis*, and of pale fawn color. Very rare. I have not been able to meet with the species.

TELLINA TRISTIS. *Deshayes, loc. cit.* Trigonal with eroded periostraca. Not known to me.

TELLINA (ARCOFAGIA) DECUSSATA. *Lamarck, Vol. 6, p. 205.* An orbicularly trigonal shell, subequilateral, conspicuously decussate. B. Sts. only. Long. 38, lat. 43, alt. 20. Common in S.A.

TELLINA MARLE. *Tenison-Woods.*

GARI COMPTA. *Deshayes, Zool. Proc., 1854, p. 321.* A species reticulated with cross striae, and with red-violet rays, which I have not seen.

GARI STRIATA. *Deshayes, Zool. Proc., 1854, p. 321.* Shining, compressed, finely striate, zoned with livid brown and purple. Long. 15, lat. 20, alt. 5. Common.

GARI ZONALIS. *Lamarck, Vol. 6, p. 182.* Smooth, compressed, very finely striate, with livid zones. Reeve, on the authority of R. C. Gunn, gives N. Tasmania as the habitat, but his figures and descriptions do not agree with those of Lamarck.

GARI ATKINSONI. *Brazier*. This is a manuscript name given by Mr. J. Brazier to a shell dredged by the Rev. Mr. Atkinson, Long Bay. I have not yet seen the shell, but these particulars were furnished me by Mr. Legrand.

HIATULA EPIDERMIA. *Deshayes, MS. Mus. Cum. teste Reeve, Icon. (Soletellina nymphalis), pl. 1*. Oval, somewhat solid, purplish at the umbones, covered with an olive, shining, horny periostraca. Common, shallow estuaries. "This species ranges from Port Jackson to Swan River."—*Angas*. Long. 36, lat. 60, alt. 18.

HIATULA VITREA. *Deshayes, Zool. Proc., 1854, p. 326*. Thin, white, glassy, and transparent. Said by Mr. Angas to occur in Tasmania, but I have met no traces of it, so it must be very rare. Common in S.A.

SEMELE DECORA. *A. Adams, Zool. Proc., July, 1853*. Orbicular, somewhat inflated, densely reticulated with small radiating and concentric ridges. Long. 28, lat. 31, alt. 14½. I strongly suspect that this shell is no more than a small form of *Tellina decussata*.

SEMELE EXIGUA. *H. Adams, Zool. Proc., 1861, p. 385*. Mr. Adams describes as from Tasmania an oblong transverse inequilateral shell, shining, thin, white, finely concentrically striate, posteriorly subangulate, with a strong fold continued to the ventral margin. I have never seen the shell, and it is not known to Tasmanian collectors.

SEMELE WARBURTONI. *Tenison-Woods*.

DONACILLA ELONGATA. *Deshayes, Mus. Cum. teste. Reeve, Icon., pl. 1, fig. 5*. Oblong, very truncate anteriorly, with shining yellow periostraca. Long. 20, lat. 33, alt. 10. Very common, and S.A., and S.E.A.

MESODESMA ERYCINA. *Lamarck, Vol. 6, p. 134*. Compressed, ovate, periostraca rich olive. Common and in E. I. Archipelago. Long. 25, lat. 33, alt. 15.

MESODESMA PRÆCISA. *Deshayes, MS. Mus. Cum. teste. Reeve, Icon., pl. 4, fig. 31*. Solid, white, shining, abruptly truncated anteriorly; periostraca slight. Long. 20, lat. 23, alt. 12. Very common.

LUTRARIA DISSIMILIS. *Deshayes, Zool. Proc., 1854*. A large, straight, thick species, with a periostraca. Long. 100, lat. 46, alt. 24. Dead valves only washed ashore on the North-east Coast. W. F. Petterd.

CRASSATELLA KINGICOLA. *Lamarck, Vol. 6, p. 109*. Whitish, umbones strongly ridged, periostraca sordid, deep brown. Long. 80, lat. 85, alt. 45. Common, N. *C. castanea* of Australia is more transverse.

CRASSATELLA AURORA. *Ad. and Angas, Zool. Proc., 1863, p. 426*. "This charming species is of compressed ovate form, and of a pale fulvous color, delicately marked with chestnut and crimson."—*Angas*. Long. 17, lat. 23. Bank's Straits, Tasmania.

CRASSATELLA BANKSII. *Ad. and Ang., loc. cit.* This species is of a pale flesh color, fading into white bands towards the beaks, with two yellowish brown bands radiating to the ventral margin. Long. 11, lat. 17. Banks' Straits.

VENUS (CHIONE) HUMPHREYI. *Donovan Nat. Repository, Vol. 3, pl. 78*. Shaped like *V. conularis* and similarly striate, very shining, reticulated with angular rufous lines. "Lately discovered by Mr. Humphrey, on the sea coast of Van Diemen's Land, very near *V. striatulus* of Europe."—*Donovan, loc. cit.* The character above given appears so constant, that I think the species should be admitted. Common. Long. 29, lat. 36, alt. 19.

VENUS (CHIONE) CONULARIS. *Lamarck, Vol. 6, p. 368*. The well-known common *Venus* of South Australia and Tasmania. All must agree with Mr. Deshayes (see note to *Lamarck, loc. cit.*) in regarding this species and *V. strigosa*, *aphrodina*, *Peronii*, *aphrodinoides* and *elegantina* as mere

varieties in color, size, and, to some extent, shape, of the above. I have examined thousands of specimens and could find no single character in one species, which did not pass insensibly into another. In the raised beaches of S. Australia it abounds in extraordinary quantities, and is burnt for lime.

VENUS (CHIONE) LAMELLATA. *Lamarck, Vol. 6, p. 349.* The most beautiful of our bivalves, distinguished by its transverse elevated undulose frills, which are striate on the lower side, and of pink color, not unlike the gills of a mushroom. Common in Tasmania, and extending, though rarely to Port Jackson, and S. Australia as far as Guichen Bay. Long. 40, lat. 55, alt. 22, frills 6 at that size.

VENUS (CHIONE) STUTCHBURYI. *Gray.*

VENUS (CHIONE) ROBORATA. *Hanley, Zool. Proc., 1844, p. 161.* Solid, with numerous smooth, concentric, thick ridges, curved inwards, white, broadly rayed with pale pink at times. Common, and S.E.A. Long. and lat. 45, alt. 15.

VENUS (CHIONE) GALLINULA. *Lamarck, Vol. 6, p. 348.* Cordately elliptical, elegantly and closely covered with stout recurved ribs, margin finely dentate, whitish, sometimes rayed with sharply angulate red lines, interior of a uniform violet purple. Common, and V. Long. 30, lat. 39, alt. 20.

VENUS (CHIONE) MACLEAYANA. *Tenison-Woods.*

VENUS (CHIONE) STRIATISSIMA. *Sowerby, Thes. Conch., pl. 157, fig. 103, etc.* Small, oblong, ovate beautifully sculptured with radiating ribs and transverse lamellæ; mottled with red and brown. D'Entrecasteaux's Channel, W. Legrand, and in S.E.A. Long. $8\frac{1}{2}$, lat. $11\frac{1}{2}$, alt. 5.

VENUS (CHIONE) AUSTRALIS. *Sowerby, Zool. Proc., 1835, p. 22.* Like a *Corbis*, nearly latticed, fawn color with brown rays, differing from the last in the size, closeness and thickness of the lamellæ, which are also recurved. Long. 10, lat. 28, alt. 12. These dimensions agree with Sowerby's, but the N.S. Wales and S.A. specimens are much smaller. Rare. B.Sts. and S. Coast.

VENUS (CHIONE) SCALARINA. *Lamarck, Venus nitida, Quoy.* A variety of *V. conularis* only. q.v.

VENUS (CHIONE) LÆVIGATA. *Sowerby, Thes. Conch., pl. 159, p. 156.* Smooth, shining, ovate, acuminate produced posteriorly, and grooved; dusky fawn, with two or three smoky broad rays. Rather common, V. as far as Portland Bay. Long. 26, lat. 39, alt. 18. This is the measurement of specimens taken on the E. Coast. Elsewhere it is smaller.

VENUS (CHIONE) FUMIGATA. *Sowerby (as Tapes).* Is only a large dusky variety, the posterior grooving being either present or absent on different specimens.

CALLISTA DIEMANENSIS. *Hanley, Zool. Proc., 1844, p. 110.* Oblong, ovate, solid, rather variable in color, but generally fulvous bay, more or less rayed with ashy purple. Hanley says it is easily distinguished by the ashy purple ray under the umbones inside; this, however, disappears with age. Long. 24, lat. 33, alt. 15. This species was described by Deshayes (*Brit. Mus. Cat. Conch., sp. 25, p. 64*) as new and named *Dione multistriata*, under which name, but as *Callista*, it is quoted as a New Zealand shell by Hutton (*Cat. Mar. Moll. N. Zealand*). It is found sometimes double the size given, and then the colors are very pale.

CALLISTA PLANATELLA. A flat shell described by Lamarck from specimens in his possession, but previously described by Chemnitz, *Conch. Cat., 7, t. 43, litt. B? (sic in Lam)*. Said by *Philippi (in Abbild. Conch., p. 199, pl. 3, fig. 6)* to come from "Terra Van Diemanensis," which may refer to N. Australia. Deshayes (*Brit. Mus. Cat. Conchif., part 1, p. 59*) doubts if the shell is the same. Unknown in Tasmania.

CALLISTA CANDIDA. *Deshayes, loc. cit., ut. Sup. p. 60.* Habitat given as above. Unknown to Tasmanian collectors.

CALLISTA DISRUPTA. *Sow. Thes. Conch., p. 117, pl. 163, figs. 208 and 209.* Transverse, ovate, shining, striate, yellowish, but much variegated with purple brown. Long. 14, lat. 18, alt. 10. Rare; Long Bay; Rev. H. D. Atkinson.

CALLISTA CITRINA. *Lamarck, Vol. 6, p. 306.* Pale yellow, about the size of *C. rutila*, and said to occur in Tasmania, but I have not seen a specimen.

CALLISTA RUTILA. *Deshayes*, who gives in the *Brit. Mus. Catalogue*, "*Proc. Zool.*, 1852," as his reference, but no such name occurs. In *Reeve's Icon., pl. 5, fig. 18*, the description does not correspond with *Deshayes's loc. cit.*, nor does the figure. He refers to *Sowerby's Thes., p. 743, pl. 103, fig. 205*, who gives no habitat. The shell usually regarded as such in Australia and Tasmania, I believe to be new, and have described it under the following name.

CALLISTA VICTORLE. *Tenison-Woods.*

DOSINIA IMMACULATA. *Tenison-Woods.*

DOSINIA GRATA. *Deshayes, Brit. Mus. Cat. Conchifera, part 1, p. 8.* White, orbicular, with close, regular, almost lamellar concentric lines, and microscopically very closely radiately striate. Stained rusty with age. Common, and in Australia. I believe *Dosinia cydippe*, *A. Adams, Zool. Proc.*, 1855, p. 224 is the same shell. Long. 51, lat. 56, alt. 37.

DOSINIA JAPONICA. *Reeve, Icon., pl. 3, fig. 17.* South Coast, Southport, etc. This appears to me to be only a large specimen of the preceding, nor can I regard it either as distinct from *D. lamellata*, *Reeve, D. scabriuscula*, *Phil.*, or *D. incisa*, *Reeve*. They are all from N. Australia.

DOSINIA CORYNE. *A. Adams, Zool. Proc.*, 1855, p. 223. Solid, smooth, compressed, and shining, striae very slightly elevated, pale yellowish white, I have not seen this shell.

DOSINIA CROCEA. *Deshayes, loc. cit.* Very near *D. japonica*, as above but has the lamellae reflexed near the umbones, and a beautiful saffron inside. Flinder's Island is the habitat given, but it is not known in Tasmania. There is another Flinder's Island off S. Coast of Australia.

TAPES UNDULATA. *Born. Testacea., Musei. Caesarei Vindobonensis, 1780, p. 67.* A peculiar oblong, shining, fawn coloured shell, almost equilateral, and with zigzag purple markings on the corselet. Said to be identical with Born's shell from the China Seas, but I strongly incline to the opinion that it is a different and undescribed species. Rare, Bass' Straits only, and E.A. Long. 28, lat. 36, alt. 13.

RUPELLARIA DIEMANENSIS. *Quoy and G., Voy. Astrol., pl. 84, figs. 25, 26.* Oblong, quadrate, ventricose, somewhat solid, radiately and transversely ribbed. The transverse ribs lamellose on the posterior margin. Long. 14, lat. 20, alt. 9. Common. Is this *Deshayes' Venerupis mitis*? See *Zool. Proc.*, 1853, p. 5.

RUPELLARIA BREVIS. *Quoy and G., loc. cit., Vol. 3, p. 534, pl. 84, figs. 21, 23.* An ovately quadrate shell, strongly plicate at the base, and transversely striate, which I have not met with.

RUPELLARIA RETICULATA. *Tenison-Woods.*

RUPELLARIA CRENATA. *Lam., Vol. 6, p. 164.* Globose, irregular, oblong, imbricately sculptured and irregularly frilled. "It may be easily recognised," says Mr. Angas, (*Zool. Proc.*, 1867, p. 924) "by its peculiar chalky appearance, blotched here and there with lilac," (or pink). Not common. S.A. also, common, Long. 25, lat. 44, alt. 19, but this is large.

RUPELLARIA SUBDECUSSATA. *Deshayes, Brit. Mus. Cat. Conch., part 1,*

p. 196, No. 18. Dull white, ovate, thin, very finely ribbed, and decussate, with irregular lines of growth. Not common. Long. 25, lat. 44, alt. 18.

RUPELLARIA CARDITOIDES. *Lamarck, Vol. 6, p. 164.* Oblong, square, ribbed, and concentrically regularly exfoliate. Not common, and in S.A. Long. 28, lat. 37, alt. 17.

CARDIUM TENUICOSTATUM. *Lamarck, Vol. 6, p. 372.* Ventricose, finely ribbed and somewhat shining, with sometimes a bristly periostraca, which appears under the microscope as a corrugated scurfy curved fringe along the ribs. Very common, and in all extra-tropical Australia. Long. 40, lat. 35, alt. 35. But often much larger.

CARDIUM PULCHELLUM. *Reeve, Icon. pl. 8, fig. 42.* Small, finely ribbed, and posteriorly tuberculated, whitish, handsomely rayed with orange. It occurs in S.E.A., but the Tasmanian specimens are much smaller, measuring only long. 8, lat. 9, alt. 5.

CARDIUM PAPIRACEUM. *Chemnitz, Conch. Cab., Vol. 6, p. 190, pl. 18, fig. 184.* I believe that this shell has been found in Tasmania, but all the specimens lately shown as such to me I can only regard as varieties of *C. tenuicostatum*.

CARDIUM CYGNORUM. *Deshayes.* River Mersey, and Tamar Heads. W. F. Petterd.

CHAMA ——— ? Circular Head. W. F. Petterd.

LUCINA DIVARICATA. *Linné, Syst. Nat., 12 edit., p. 1120.* A very pretty globose orbicular, waxy white shell, divaricately striate. Common, and in S.A. Long. 26, lat. 27, alt. 15. Found almost all over the world. It was found first in the Mediterranean, and, until lately, when found elsewhere, was thought to be another species. This is Von Marten's opinion (*Crit. List. Moll. N. Zealand, p. 46*), but the species are great wanderers, and the opinions of naturalists, as to the range of certain shells, have wonderfully changed since the revelations of deep sea dredgings.

LUCINA MINIMA. *Tenison-Woods.*

LUCINA PECTEN. *Lamarck, Vol. 6, p. 230.* Small, white, somewhat transverse and depressed, with numerous fine bifurcating striate ribs. Long. 14, lat. 13, alt. 8. Rare. King's Island. This shell occurs in the Mediterranean, West Indies, E. Coast of Africa, but I believe has never been detected in Australian waters before. There can be no doubt of the identification, as I have compared our shell with type specimens from Europe. Sowerby proposed to make a new species of the western forms, considering them distinct because of the remote habitat.

LORIPES ICTERICA. *Reeve, Icon., Lucina, pl. 10, fig. 60.* "A small white shell, finely concentrically (under the lens) radiately striate; ligament internal."—*Angas.* There is great difficulty in detecting the radiating striae in the Tasmanian specimens. Long. 8, lat. 9, alt. 5. Common.

DIPLODONTA TASMANICA. *Tenison-Woods.*

PORONIA AUSTRALIS. *Sowerby, Jour. de Conch., 1863, p. 287, pl. 12, fig. 8.* Very small, nearly smooth, tinged rose at the margins. Common everywhere, and in Australia. Long. 3, lat. 4, alt. 2. The generic name *Lasca*, of Leach, was anticipated by Recluz, and Leach himself abandoned it for *Autonoë*. Of his *Lasca*, Gwyn Jeffreys says, "he says nothing of the animal, and scarcely more of the shell."

PORONIA SCALARIS. *Phil.* Common, S. Coast, under stones at low water. W. F. Petterd.

PYTHINA TASMANICA. *Tenison-Woods.*

GOULDIA PETTERDI. *Tenison-Woods.*

KELLIA ATKINSONI. *Tenison-Woods.*

CARDITA RAOULI. *Angas, Zool. Proc., 1872, p. 613.* White, tinted with rose, 13 ribs, which are scaly, nodulous, and spinous. South Coast. Long. 23, lat. 19, alt. 11.

CARDITA QUOYI. *Deshayes, Zool. Proc., 1852, p. 103.* Coarse, transverse, globose, whitish with ribs obsolete and irregularly nodose. Badger Island, not common. Long. 30, lat. 36, alt. 20.

CARDITA GUNNI. *Deshayes, Zool. Proc., 1852, p. 101.* This is my *C. Atkinsoni*, described in last year's Proceedings. It is often rayed with red streaks on a dusky ground. Small, transverse, ribs 16, regularly imbricately nodose.

CARDITA AMABILIS. *Deshayes, Zool. Proc., 1852, p. 102, pl. 17, fig. 89.* Suborbicular, with about 28 regularly crenately nodose ribs spotted chestnut, with a periostraca. Long. 16, lat. 17, alt. 10. South Coast, rather uncommon. *Deshayes* gives New Zealand as the habitat, but it does not occur in *Hutton's* list.

MYTILICARDIA EXCAVATA. *Deshayes, loc. cit., p. 100.* Oblong, with radiate ribs, supporting long irregular, lamellar arched scales. Tasmanian specimens from D'Entrecasteaux's Channel are dull yellow in color, while those from Sydney are orange and larger. Moderately common. Long. 9, lat. 16, alt. 10. Is this *Lamarck's Cardita aviculina*, which was thought to be identical with *C. calyculata* (?) *Brugieres*? *Lamarck* says that his specimens came from King's Island and Sealer's Cove. There is at any rate no resemblance between our species and *Brugiere's* shell.

MYTILICARDIA TASMANICA. *Tenison-Woods.*

MYTILUS LATUS. *Lamk. Hist. Nat., s. v., Vol. 7, p. 41.* This shell in its young state is sometimes almost an emerald green, but is always rayed with purple by transmitted light, it is depressed, with an acute edge, and well preserved specimens are covered with a bright olive shining periostraca. When old and worn it is solid, somewhat smooth, purple black, and shining, margins enamelled, and dull green, with scattered, coarse, black hairs, set in a kind of white calcareous disc. Very common on wharves, piles, etc., Hobart Town. Long. 96, lat. 50, alt. 40. Common in New Zealand. It has in Tasmania been confounded with the American *M. obesus*, *Dunker*, through a mistaken habitat given by *Reeve*.*

MYTILUS TASMANICUS. *Tenison-Woods.* This shell, like the last, has a green enamel, but it is of a beautiful clear glassy green. It has also scattered black hairs, but they are set in a horny disc. It is tumid, and perhaps the largest species known. Not common, deep water. Long. 19, lat. 8, alt. 5, centimetres. I hardly doubt now that it is a darker, larger variety of the last species.

MYTILUS DUNKERI. *Reeve, Icon., pl. 5, fig. 17.* Said by Mr. *Angas* to be a Tasmanian species, but I have not met with it. Common in Port Phillip. More gibbous than *M. latus*, of which I regard it as a variety.

MYTILUS ROSTRATUS. *Dunker, MS., Mus. Cum., teste. Reeve, Icon. pl. 5, fig. 15.* Rather elongated and attenuate towards the umbones, reddish purple, and nacreous. Lines of growth conspicuously raised; surface covered with very fine, divaricating ribs. Common. Long. 39, lat. 8, alt. 19?

MYTILUS HIRSUTUS. *Lamarck, Vol. 7, p. 38.* Purple brown, sulcate, radiately striate throughout, and covered with long hairs, the shafts of which are prickly. Rare, but common in S.A. and S.E.A. and N. Zealand. Long. 40, lat. 24, alt. 18.

* In my second series of New Tasmanian shells in the Roy. Soc. Tas. Proc. for 1876, *Mytilus dunkeri* is referred to as the shell whose habitat is given wrongly by *Reeve*. This is a misprint for *M. obesus*.

MYTILUS CRASSUS. *Tenison-Woods.*

MODIOLA AUSTRALIS. *Gray, Appendix to King's Voyage in Australia, p. 477.* Short and contracted posteriorly or convexly dilated anteriorly, sparingly bearded. Common, and in Australia, north and south. Often 70 to 80 mil. long. Every conchologist has doubts whether this shell is distinct from *M. tulipa*. Knowing what we now do of the range of shells, I am inclined to think it is not.

MODIOLA ALBICOSTATA. *Lamarck Vol. 7, p. 19.* Large, smooth, shining, dark chestnut, with darker rays. The central white rib described by Lam. is only seen on worn specimens. Common. Long. 71 (?), lat. 31, alt. 25. Var. 1. *polita*; var. 2. *nebulosa, Mihi.*

MODIOLA ARBORESCENS. *Chemnitz Conch. Cab., Vol. 2, p. 198, fig. 2016; Lamarck (M. picta), Vol. 7, pl. 21; Sowerby, Genera of Shells fig. 1* (the latter the best figure); also *Reeve*. A flattened yellowish white shell, clouded with red and arborescent black markings on the edge. Very rare. Long Bay, Rev. H. D. Atkinson. About 45 mil. long.

MODIOLA CUMINGIANA. *Dunker, MS. Mus. Cum. teste. Reeve, Icon., pl. 9, fig. 63.* Oblong, wedge shaped, curved, gibbous, tumid anteriorly, finely striate and obtusely angled, but conspicuously smooth in the middle; dark, horny with shining periostraca. Not common. Long. 14, lat. 22, alt. 12. Long Bay, Rev. H. D. Atkinson. Tamar Heads, W. F. Petterd.

VULSELLA TASMANICA. *Reeve, Icon. pl. 1, fig. 3.* Pale, horny, squamose, and closely striate, uncouth and very variable in shape. Relative measurements vary, as it takes every shape. About 30 to 18 is the average. Common, and S.A.

AVICULA PULCHELLA. *Reeve Icon., pl. 8, fig. 22.* "An exceedingly transparent shell, curiously painted with interrupted rays of black spots, narrow red flames, and fine opaque white spots."—*Reeve*. Very variable, the brown and white spots alone visible sometimes. Common, and V., and all the East Coast of Australia. Said to occur in the Philippines. In Tasmania it is almost always found on seaweed. Long. 23, lat. 3, alt. 11.

PINNA TASMANICA. *Tenison-Woods.*

ORDER PECTINACEÆ.

TRIGONIA MARGARITACEA. *Lamarck, Vol. 6, p. 514.* The largest of the few Australian *Trigonia*, and the only one found in Tasmania.

ARCA TRAPEZIA. *Desh. (lobata, Reeve.)* Very plentiful, Tamar Heads, at low water, not found on the south side of the island. Found also in W. Indies.

ARCA FASCIATA. *Reeve Zool. Proc., 1844, p. 125, and Icon., pl. 15, fig. 99.* Closely ribbed, and transversely finely striate, shell white with faint brown, transverse bands, and having periostraca on the edges. Common. Islands in Bass' Straits, S. Tasmania, Tamar Heads, always much worn. Long. 27, lat. 51, alt. 18.

PECTUNCULUS RADIANUS. *Lamarck, Vol. 6, p. 495.* A reddish rayed ribbed shell, very common here, and in S.A. Long. 34, lat. 37, alt. 21.

PECTUNCULUS OBLIQUUS. *Reeve? N.E. Coast.*

PECTUNCULUS FLABELLATA. *Tenison-Woods, Trans. Roy. Soc. Vict., 1877.*

NUCULA GRAYI. *D'Orbigny, Amerique Meridionale, p. 53.* Ovate, very transverse, acuminate at both ends, thin, inflated, very smooth, olive and shining. Very rare. Long Bay, Rev. H. D. Atkinson. *Reeve* gives New Zealand as the habitat, but it is not known there.

NUCULA MINUTA. *Tenison-Woods.*

LEDA CRASSA. *Hinds, Zool. Proc., 1843, p. 99 (descr. Nucula).* Solid,

white, ventricose, with thick, rounded, concentric ridges, and brownish black epidermis, a depressed area under the beak, marked by a notch in the ventral valve. Rather uncommon. Long. 17, lat. 29, alt. 12.

LIMOPSIS TENISONI, *Mihi*. This shell was named by me *L. cancellata* in Roy. Soc. Proc. Tas., 1876, but I find the name has been given by Reeve. I therefore dedicate the shell to Colonel Tenison, of Kilonan Castle, Lord Lieutenant of the County of Roscommon, Ireland.

PECTEN FUMATUS. *Linné, Syst. Nat.*, 12 *edit.*, p. 1144. This I regard as identical with *P. laticostatus*, *Gray*, which occurs also in New Zealand. They would have been recognised as identical long ago, but for the foregone conclusion that the common shells were necessarily different because of the different habitat. Facts, proving exceptions to the rule, have been evaded by the creation of new species, by which science has been burdened and retarded.

PECTEN ASPERRIMUS. *Lamarck, Vol. 7, p. 145*. Very common in all S.A. and Tasmania. Wonderfully variable in color; specimens of every hue,—violet, orange, yellow, scarlet, and purple, may be found; gracefully ribbed, each main rib having smaller ones beside it, and all studded with small spines, always regular in form, and never disturbed with lines of growth. It has received many names from its varieties, such as *P. australis*, *P. rubrum*, *etc.* Fossil specimens are very common in the pliocene rocks of Government House quarry, Adelaide.

PECTEN BIFRONS. *Lamarck, Vol. 7, p. 131*. Common and in S.A. A depressed oblique shell, about the dimensions of *P. laticostatus*, but variable in form. It has a few radiating main plaits upon the valves, which are thickly lined with fine radiating riblets. The surface is finely shagreened in a reticulate manner, and the insides of the valves are deeply saturated with violet purple; the ribs vary very much, sometimes they are few, and like flattened keels; for this reason I cannot distinguish Messrs. Adams and Angas's *P. tasmanicus* (*Zool. Proc.*, 1863, p. 428), whose specific character as distinguished from *P. bifrons* is merely in the form of the ribs.

PECTEN MARIE. *Tenison-Woods*.

RADULA LIMA. *Linné, Syst. Nat.*, 12 *edit.*, p. 1147. Waxy white, with many lamellose or spinous ribs. Not common and very small, though in S.E.A. it is often found 120 mil. long.

RADULA BULLATA. *Born. Sow. Gen.*, fig. 3. Narrow, inflated, white, faintly rayed, ears small. Long. 25, lat. 15, alt. 12, N. Coast only, Not very common.

PLACUNANOMIA ——— ? A broken valve adhering to *Mytilus latus*, but too imperfect for determination, was shown to me. It had some of the characters of *P. zelandica* (*Gray in Dieffenbach's, N.Z. Vol. 2, p. 260.*)

OSTREA EDULIS. *Linné, loc. cit.*, p. 1148. The common species, world-wide in its distribution, with the upper valve flat, and the lamellæ of the lower forming imbricated folds. There are specimens in the Museum of the Royal Society of Tasmania, from N.W. Bay, measuring 185 long. by 123 mil. wide. The variety of *P. purpurescens*, of S.A., is not known here, neither is *O. virescens*, *Angas*.

OSTREA MORDAX. *Gould, Proc. Bost. Soc.*, Vol. 3, p. 345. The "rock oyster" of N.S. Wales. Not common, being found in one or two places only on the E. Coast.

OSTREA RUTUPINA. *Jeff. var O. edulis*. The small, regularly formed variety, not flaky, to which the "native oyster" belongs. Not common.

OSTREA ANGASII. *Sowerby in Reeve's Icon. pl. 13, fig. 23, species 27*. An inequivalve, laminately frilled species. Rare. The Tasmanian species are smaller than Reeve's figure.

SPONDYLUS TENELLUS. *Reeve, Icon., pl. 18, fig. 67.* Ovate, finely radiately ridged, minutely striated and imbricated; scales irregular, white and pale transparent rose color. Rare, N. Coast only and in S.A. This may be a different species from that of the name from the Pacific and, therefore, new. Long. and lat. 70, alt. 45.

CLASS BRACHIOPODA.

WALDHEIMIA FLAVESCENS. *Lamarck, Vol. 7, p. 330.* This well known gregarious ribbed species, scarcely needs description. It is very variable. Found in all Southern Australia, but only on the N. Coast of Tasmania.

KRAUSSIA LAMARCKIANA. *Davidson, Zool. Proc., 1852, p. 80.* Very small and radiately ribbed. In great abundance under stones at low water, Tamar Heads. Occurs also in S.E.A., and New Zealand, and occasionally found at Long Bay. W. F. Petterd.

KRAUSSIA ATKINSONI. *Nobis.* This is a shell about the size of the last, but more depressed and with a smooth valve. Mr. Davidson says it belongs to the genus *Kraussia* or *Kraussina*, and he believes it to be new. Long Bay, Rev. H. D. Atkinson.