colour between the nucleus and the crust is very common. In addition, the tourmaline is characterised by its insolubility in hydrofluoric acid and its intense reaction with beracic acid.

The binding material of the breccia consists of a crystalline and granular mixture of quartz and tourmaline. The quartz is concentrated in more or less extensive round patches of a white colour, and is finely granular. Here and there are also found isolated larger quartz crystals. The binding material contains many minute hollow spaces, the walls of which are covered by minute quartz crystals and hair-like tourmaline needles.

Attempts to find topaz in this breccia were productive of no definite result.

It remains undecided, therefore, whether the Tasmanian tourmaline-quarzit slate has undergone a transformation into topaz, as is the case in that of Saxony.

THE TROCHIDÆ AND OTHER GENERA OF MOLLUSCA FROM TASMANIA, WITH THEIR SYNONYMS.

Part I.

By John Brazier, F.L.S., C.M.Z.S., C.M. Royal Soc., Tasmania.

Having paid considerable attention to the Molluscan Fauna of Tasmania during the last 30 years, it is my intention, from time to time, to give to the Royal Society of Tasmania the benefit of my investigations. I now send my first paper on *Trochidæ* and other Genera of Mollusca :—

Part 1.—The coast of Tasmania is rich in *Trochidæ.* The Rev. Tenison-Woods appears to have done some good work in the recent species in his Census in the Proc. of the Society, 1877, published 1878. Some of the species are incorrectly identified, for instance, he quotes *Thalotia picta,* Wood. The *Thalotia* so quoted is a very narrow form of *Trochus* (*Thalotia*) *conicus,* Gray. The *Thalotia picta* of Tenison-Woods is the *Phasianella elegans* of Lamarck. Kiener, in his Coquilles Vivantes, having charge of Lamarck's collection, found out that it belonged to *Trochidæ,* and called it *Trochus elegans.* There being already in the genus Trochus, an *elegans,* Dr. Fischer named it *Trochus Lesueuri.* The *Thalotia mariæ,* Tenison-Woods, is the *Trochus pulcherrimus,* Gray, well

figured by Wood in 1828, and by Dr. Phillippi in 1845. Then we have the grand *Zizyphinus*, always been quoted by Tasmanian concologists as *Zizyphinus armillatus*, Woods. The Tasmanian shell is quite distinct from *Trochus armillatus*, of Wood's Index Test, 1828. The Tasmanian species is the *Trochus* (*Zizyphinus*) *Meyeri*, Philippi, described in 1848. The other little *Trochus* quoted as *Trochus* (*Clanculus*) *rubens*, A. Adams, is the *Trochus* (*Clanculus*) *Dunkeri* of Koch described in 1842. A. Adams never described a *Clanculus* as *rubens*. *Trochus Australis*, Tenison-Woods, is the *Trochus Adelaidæ*, Phillippi, described about 1846 or 1855. The *Trochus conicus*, Gray, is the *Trochus pictus*, Wood, and *Monodonta turrita*. Menke is *Trochus Lehmanni*, Kiener, and also of Homb et Jacq it is the *Thalotia picta*, Tenison-Woods. The other species are enumerated in another part of my paper, and I need not mention them here. I am informed by the energetic curator, Mr. A. Morton, that the shells in the Tasmanian Museum from Tasmania are simply labelled "Tasmania," a very wide term. I presume that Mr. Legrand had the same idea that the late Mr. Cuming had to destroy the correct locality, necessitating hunting the works up in which it was described before you could find the correct and exact locality or the information required, a rather roundabout way to get at the desired information. I am under much obligation, with many thanks, to Mr. W. F. Petterd, of Launceston; Lieut. C. E. Beddome, of Hobart; Rev. H. D. Atkinson, of Circular Head; Mr. A. Simson, George Town, North Tasmania; the late Mr. J. F. Bailey, of Melbourne; Mr. J. H. Gatliff, Melbourne; Mr. W. T. Bednall and Professor Tate, of South Australia, for exact localities and numerous specimens sent for determination.

1. Trochus (Cantharidus) Lesueuri. Fischer, sp.

1822 *Phasianella elegans*, Lam, Anim. sans Vert, vol. 7, p. 53 No. 4.

1843 *Phasianella elegans*, Lam 2nd edition (Deshayes), vol. 9, p. 243.

* *Trochus elegans*, Kiener, Species Genus Trochus Coq. Vivantes, pl. 45, fig. 2 (non *Trochus elegans*, Gmelin).

1843 *Trochus Lehmanni*, Menke, Moll. Novæ Hollandiæ, p. 18, No. 70 (non *Trochus Lehmanni*, Kiener).

1845 *Trochus Lehmanni*, Menke, Phillippi in Abbild Besch neuer Conch., vol. 2, heft. 2, p. 37, pl. 7 (Trochus), fig. 2 (non *Trochus Lehmanni*, Kiener).

* The date of publication of the first portion of Kiener's Genus Trochus in the Coquilles Vivantes I have not been able to trace out. That continued by Dr. P. Fischer was published in 1880.

1845 *Trochus Lehmanni*, Menke, Catlow and Reeve, Conchologists' Nomenclator, p. 217, No. 75.

* 1849 *Trochus pictus*, Phillippi in Conch. Cab., 2nd edition, p. 139, No. 166, pl. 23, fig. 18-19 (non *Trochus pictus*, Wood).

1851 *Thalotia Lehmanni*, A. Adams, Proc. Zool. Soc., p. 172, No. 4.

1854 *Thalotia Lehmanni*, H. and A. Adams, Genera of Recent Mollusca, vol. 1, p. 420.

1859 *Gibbula* (*Forskalia*) *elegans*, Chenu, Manuel de Conchyliologie, tome 1, p. 362, fig. 2,690.

1865 *Thalotia picta*, Angas, Molluscan Fauna of South Australia. Proc. Zool. Soc., p. 179, No. 150 (non *Trochus pictus*, Wood).

1873 *Thalotia Lehmanni*, Paetel, Catalog der Conch-Sammlung, p. 73.

1877 *Thalotia picta*, Tenison-Woods, Papers and Proc. Royal Soc., Tasmania, p. 41 (non *Trochus pictus*, Wood).

1880 *Trochus Lesueuri*, Fischer in Kiener, Coq. Vivantes, pp. 129-420.

Shell imperforate, thick-conoidal or conical, acute at the apex, ornamented with elegant flames, alternately brown and white; whorls 7, a little convex, swollen and carinated at the lower part; the first 2 whorls, nearly always decorticated, are pink or reddish; the others have numerous spiral striæ (about 10 on the penultimate whorl), articulated or spotted with red, and brown or white longitudinal flames; last whorl flattened at the upper part, swollen in the middle and sometimes subcarinated; base ornamented with numerous concentric liarœ; aperture oval; peristome thickened, bordered with red or pink at the upper part; the red colouring also extends outside of the columellar margin; interior of the aperture lirate, nacreous. Height 16, width 12 millimetres. Others measure in height 12, and width 9 millimetres.

This species was described first by Lamarck as *Phasianella elegans*. Kiener, in his Coquilles Vivantes placed it in the genus *Trochus* under the name of *Trochus elegans*, the name of *elegans* already being used by Gmelin for a species from New Zealand, and which is a synonym of *Trochus purpuratus*, Martyn. Lamarck's species is also the *Trochus Lehmanni*, Menke; also the *Trochus pictus*, Phillippi-non-Wood. My late lamented friend, Mr. Angas and the Rev. Tenison-Woods quotes it as *Thalotia picta*, Wood. The *Trochus* (*Thalotia*) *pictus* of Wood is the *Trochus conicus*, Gray.

* The title page of the Genus Trochus, with the date of publication in the Conchylien Cabinet, is wanting in the volume contained in the Australian Museum Library. In an old book catalogue and the Zeitschrift fur Malakazoologie, I have traced the publication of the Monograph, by Dr. Philippi, from 1846, 1855.

Mr. A. Adams, in his list of TROCHIDÆ, Proc. Zool. Soc, 1851, p. 172, No. 4, had an idea that (?) *Phasianella elegans*, Lam., was the same as *Trochus Lehmanni*, Menke. In that view Adams was quite correct, but he was doubtful of it being a *Phasianella*. Dr. Fischer points out in Kiener, p. 129, that the figure of *Trochus pictus*, Wood, is a very doubtful one; a new specific name being required for Lamarck's species, he names it *Trochus Lesueuri.*

Hab.—Coast of Australia (*Peron and Lesueur*), Se, Vincent's Gulf, South Australia (*G. F. Angas*); Cape Richt. King George's Sound (*Brazier*); Tasmania (*Tenison-Woods, W. F. Petterd, C. E. Beddome*); South Australia (*Professor Tate, W. T. Bednall*).

2. TROCHUS (CANTHARDIUS) PULCHERRIMUS. Gray, sp.

1828 *Trochus pulcherrimus*, Gray; Wood, Index Test. Supplement, p. 18, pl. 6, fig. 45. *Monodonta pulcherrima*, Gray, p. 44.

1843 *Trochus Preissii*, Menke, Moll. Nov. Hollandiæ, p. 17, No. 69.

1845 *Trochus pulcherrimus*, Wood, Phillippi Abbild neuer Conch., vol. 2, heft. 2. Trochus, p. 37, pl. 7. fig. 1.

1849 *Trochus pulcherrimus*, Wood; Phillippi in Martini and Chem, 2nd edition (Kuster), p. 132, No. 153, pl. 23, fig. 4.

1850 *Trochus pulcherrimus*, Wood; Jay's, Catalogue of Shells, 4th edition, p. 306, No. 7,440.

1851 *Thalotia pulcherrima*, Wood; A. Adams, Proc. Zool. Soc., p. 172, No. 2.

1854 *Thalotia pulcherrima*, Wood; H. and A. Adams, Genera of Recent Mollusca, vol. 1, p. 420.

1856 *Trochus pulcherrimus*, Gray; Wood, Index Test. (Hanley's Edition), p. 221, pl. 6, fig. 5, very bad.

1865 *Thalotia pulcherrima*, Wood; Angas, Molluscan Fauna of South Australia. Proc. Zool. Soc., p. 179, No. 151.

1873 *Thalotia pulcherrima*, Wood; Paetel, Catalog der Conch. Sammlung, pp. 11-73.

1877 *Thalotia mariæ*, Tenison-Woods, Proc. Roy. Soc., Victoria, p. 58.

1877 *Thalotia mariæ*, Tenison-Woods, Papers and Proc. Royal Soc., Tasmania, p. 41.

1880 *Trochus pulcherrimus*, Wood; Fischer in Kiener, Coq. Vivantes, p. 137, pl. 46, fig. 4-4a.

Shell imperforate, conoid, elongated, rather thick; whorls $6\frac{1}{2}$, embryonic whorls smooth, purple-brown; the next shiningn, a little convex with transverse girdles or belts nearly flat, 3 to 5 in number, and of in equal width; girdles ornamented with subgranular spots purple or brown, obliquely articulated with white, nearly always in the direction of the spots, different on the upper and lower girdles or belts; last whorl rounded or subcarinate; upper part ornamented with 4 broad girdles or belts; base with 4-7 belts divided by a shallow groove; aperture rhomboidal, peristome bordered with intense reddish pink; interior white, more or less shaded with greenish, and vividly iridescent; columellar scarcely arcuate, simple, not denticulated. Height 17, width 11-12 millimetres.

Hab.—Swan River, Western Australia (*Preiss*); Rossiter Bay, Recherche Archipelago, Great Australian Bight (*Captain Thomas Rossiter*, 1841); Cape Riche, King George's Sound (*Brazier*); Holdfast and Aldinga Bays, South Australia (*G. F. Angas*); South Australia (*Professor Tate, W. T. Bednall*); Northern Tasmania (*Tenison-Woods, W. F. Petterd*).

3. Trochus (Thalotia) conicus, Gray, sp.

1827 *Monodonta conica*, Gray in Captain King's Survey of Australia. Appendix vol. 2, p. 479, No. 28.

1828 *Trochus pictus*, Wood, Index Testaceologious. Supplement, p. 17, pl. 5 (Trochus), fig. 28.

1843 *Monodonta turrita*, Menke, Moll. Novæ Hollandiæ, p. 15, No. 57.

Trochus Lehmanni, Kiener, Coq. Vivantes species, Genus Trochus, pl. 46, fig. 2 (non *Trochus Lehmanni*, Menke).

1849 *Trochus conicus*, Phillippi, Conch. Cab. 2nd edition, p. 172, No. 150, pl. 23, fig. 1.

1849 *Trochus turritus* (Monodonta), Menke = *conicus*, Gray. Phillippi in Conch. Cabinet, 2nd edition, p. 372, Index.

1851 *Thalotia picta*, A. Adams, Proc. Zool. Soc., p. 172, No. 1.

1854 *Thalotia conica*, H. and A. Adams, Genera of Recent Mollusca, vol. 1, p. 420, plate 48, fig. 1.

1854 *Thalotia picta*, H. and A. Adams, Genera of Recent Mollusca, vol. 1, p. 420.

1854 *Trochus Lehmanni*, Hombron and Jacquinot, Voyage au Pole-Sud, Zoologie, vol. 5, p. 54; atlas plates Mollusca, pl. 14, figs. 7-8 (non *Trochus Lehmanni*, Menke).

1856 *Trochus pictus*, Gray; Wood, Index Test Supplement. (Hanley's Edition), p. 220, Trochus plate 5, fig. 28.

1859 *Trochus (Thalotia) Lehmanni*, Chenu, Manual de Conch., tome 1, p. 359, fig. 2,659 (non *Trochus Lehmanni*, Menke).

1865 *Thalotia conica*, Angas, Molluscan Fauna of South Australia. Proc. Zool. Soc., p. 179, No. 148.

1865 *Thalotia picta*, Angas (as of Wood). Molluscan Fauna of South Australia. Proc. Zool. Soc., p. 179, No. 150.

1873 *Thalotia conica* (Sowerby!!). Paetel, Catalog der Conch. Sammlung, p. 73.

1873 *Thalotia picta*, Wood; Paetel, Catalog der Conch., Samm., p. 73.

1873 *Zizyphinus conicus*, Gray; Paetel, Catalog., p. 74.

1877 *Thalotia picta*, Tenison-Wood's (as of Wood) Papers and Proc. Royal Soc., Tasmania, p. 41.

1880 *Trochus conicus*, Fischer in Kiener, Coq. Vivantes, p. 135.

1881 *Monodonta turrita*, Menke = *Thalotia conica*, Tate, Proc. Linn. Society, N.S.W., vol. 6, p. 394.

1883 *Trochus (Thalotia) conicus*, Gray; Tryon, Structural and Systematic Conchology, vol. 2, p. 312, pl. 81, fig. 52, bad.

Shell imperforate, conical, acute at the apex; whorls 6-7, a little convex, the embryonic whorls rosy or reddish, the lower whorls having 5-6 transverse granulose liræ, and obsolete brownish spots forming longitudinal narrow bands; last whorl rounded or obtusely carinated, base convex, encircled with 5-6 granulose liræ; aperture rhomboidal; columellar arched, having numerous corrugations or tuberculosus ridges, truncated at the base; basal margin plicated inside, as well as the right margin, which is thickened, interior of the aperture greenish or vividly iridescent. Height 21-22, width 15-16 millimetres.

Hab.—New Holland (*Captain Phillip P. King*); King's Island, Bass Strait (*Peron and Lesueur*); Western Australia (*Dr. Preiss*); New Holland (*Hombron and Jacquinot*); St. Vincent's Gulf, South Australia (*G. F. Angas*); Bass Straits and North-east Tasmania (*Tenison-Woods*).

4. Trochus (Diloma) odontis. Gray, sp.

1828 *Trochus odontis*, Gray; Wood, Index Test. Supplement, p. 37, pl. 6. Trochus, fig. 37. *Monodonta Odontis*, Gray, l.c., p. 44.

1849 *Trochus odontis*, Wood; Phillippi in Conch. Cab., 2nd edition, p. 144, No. 174, pl. 24, fig. 7.

1851 *Chlorostoma odontis*, A. Adams, Proc. Zool. Society, p. 182, No. 22.

1854 *Diloma odontis*, H. and A. Adams, Genera of Recent Mollusca, vol. 1, p. 420.

1856 *Trochus odontis*, Gray; Hanley's Edition of Wood Index Test. Supplement, p. 221, pl. 6, fig. 37.

1865 *Diloma odontis*, Angas, Molluscan Fauna of the Province of South Australia. Proc. Zool. Soc., p. 182, No, 173.

1873 *Gibbula odontis*, Paetel, Catalog der Conch.-Samm-lung, p. 75.

1877 *Trochus (diloma) odontis*, Tenison-Woods, Papers and Proc. Royal Society of Tasmania, p. 43.

1880 *Trochus odontis*, Wood; Fischer in Kiener Coq. Vivantes. Trochus, p. 313, No. 180, pl. 99, fig. 1

This well-known species cannot be confounded with any other *Diloma* found either in New Zealand, Tasmania, or Australia. It is of a very smooth, dark-blue colour, with fine zig-zag lines and yellow spots; interior of the aperture iridescent-green, pea-green round the columella margin. The genus *Diloma* was founded by Dr. Phillippi in 1845 to receive Conoidal shells, smooth, not umbilicated; whorls rather few, convex; aperture subrotund; columellar lip excavated in the middle and expanded over the umbilical region, produced laterally to join the outer lip; outer lip thin, unarmed.

Hab.—"———?" (*J. F. Gray*); New Holland (*Philippi, Paetel*); Port Phillip, on the rocks at low water (*J. B. Jukes*); Cape of Good Hope??? (*Hanley*); Port Western, Victoria (*Quoy and Gaimard*); Port Sorell, North Tasmania (*C. E. Beddome*); Wallaroo, South Australia (*G. T. Rossiter*, 1861); rocks at low water St Vincent's Gulf, South Australia (*Professor Tate*); St. Kilda Beach, Hobson's Bay (*J. H. Gatliff*); Hobson's Bay, Victoria (*G. T. Rossiter*, 1862); Brighton, Victoria (*J. F. Bailey*); Blackmans Bay, Tasman's Peninsula, Port Davey, Swansea, Tamar Heads, Tasmania (*W. F. Petterd*); Patriarchs, East Coast of Flinders Island, Bass Straits (*Mr. A. Simson*).

5. Trochus (Diloma) Adelaidæ. Philippi, sp.

1849 *Trochus Adelaidæ*, Phillippi in Conch. Cab., 2nd edition, p. 140, No. 168, pl. 24, fig. 1.

1851 *Gibbula Adelaidæ*, A. Adams, Proc. Zool. Soc., p. 186, No. 22.

1854 *Oxystele Adelaidæ*, H. and A. Adams, Genera of Recent Mollusca, vol. 1, p. 427.

1873 *Oxystele Adelaidæ*, Phil; Paetel, Catalog der Conch. Samınlung, p. 74.

1876 *Diloma australis*, Tenison-Woods, Papers and Proc. Royal Soc., Tasmania, p. 145.

1877 *Trochus (diloma) australis*, Tenison-Woods, Proc. Royal Soc., Tasmania, p. 43.

1889 *Trochus Adelaidæ*, Phillippi; Fischer in Kiener Coq. Vivantes. Genus Trochus, p. 210

1884 *Diloma australis*, Tenison-Woods; Hutton, Proc. Linn. Soc., N.S.W., vol. 9, p. 368.

I have the original specimens of this species and many other forms collected by my father-in-law, Captain Thomas Rossiter, in 1841, the year that he saved Mr. John Eyre (now Sir John Eyre) from starvation, when on his ever memorable trip overland from Adelaide to King George's Sound Specimens of this I distributed some years ago under the name of *Trochus Adelaidæ*, Phil, they having been identified by the late Messrs. H. and A. Adams, but for some unknown reason the Rev. Tenison-Woods redescribes it as *Trochus australis*. I have seen it in collections named *Trochus odontis* variety, Gray. The *Trochus Adelaidæ* is spiraly sulcated and ornamented with pale yellow and numerous pale brown undulating lines, margin of the peristome tinged with green. This species has evidently been taken for the young of *Trochus (Trocochochlea) concameratus*, Gray, not *Trochocochlea striolatus*, Wood!! as quoted by the Rev. Tenison-Woods. Professor Hutton described another *Diloma*, in 1878, as *Trochocochlea mimetica* from Auckland, New Zealand. It was first described by Dr. Phillippi, in 1848, as *Trochus (Phorcus) crinitus*, said to have been found in New Holland, an error for certain. I have a specimen of it, collected by Mr. G. T. Rossiter, at Nelson, New Zealand, in 1860. Hutton makes it a new sub-genus Latona of Monodonta. He says:—"Shell as in Diloma, but perforated." This character is of very little value to make a sub-genus of. I have handled hundreds of specimens of *Diloma odontis* and *Adelaidæ*, and find that specimens in both are perforated, as well as imperforate, and that the three species—*Diloma odontis*, Gray; *Adelaidæ*, Phillippi; *crinitus*, Phillippi = *mimetica*, Hutton—have the region of the columella tinged with bright pea-green, and the interior of the aperture bright iridescent green I found a splendid specimen of *Trochus Adelaidæ*, Phillippi, in a lot of *Trochus odontis*, collected by Mr. A. Simson, at Patriarchs, East Coast of Flinders Island, Bass Strait.

Hab.—Rossiter Bay, Recherche Archipelago, Great Australian Bight (*Captain Thomas Rossiter*, 1841); Adelaide in New Holland (*Philippi*); St. Vincent's Gulf, South Australia, sent by Bednall some years ago as *Trochus odontis*? Wood; rocks at low tide Great Australian Bight (*Professor Tate*); Cape Riche, King George's Sound, S.W. Coast of Australia (*J. Brazier*); St. Vincent's Gulf, off the Semaphore in Largs Bay, South Australia (*W. T. Bednall*, 1865); Portland, Victoria (*J. H. Gatliff*); North Coast of Tasmania and Islands in Bass Straits (*W. F. Petterd*); Patriarchs, East Coast of Flinders Island, Bass Straits (*Mr A. Simson*).

6. Trochus (Zizyphinus) Meyeri, Philippi, sp.

1848 *Trochus Meyeri*, Phillippi, Zeitscher fur Malak,p.101.

1849 *Trochus Meyeri*, Phillippi in Conch. Cab., 2nd edition, p. 279, No. 362, pl. 41, fig. 4.

Trochus armillatus, Kiener, Coq. Vivantes Genre Trochus, pl. 17, fig. 2 (non *Trochus armillatus*, Wood).

1854 *Trochus levis*, Hombron et Jacquinot, Voyage au Pole Sud, vol. 5 Zoologie, p. 56; Atlas plates Mollusca, pl. 14, figs. 17-18.

1863 *Zizyphinus armillatus*, Reeve, Conch. Icon., pl. 3, fig. 19, very bad (non *Trochus armillatus*, Wood).

1865 *Zizyphinus armillatus*, Angas, Molluscan Fauna of the Province of South Australia. Proc. Zool. Soc., p. 180 (non *Trochus armillatus*, Wood).

1873 *Zizyphinus armillatus*, Paetel, Catalog der Conch.-Sammlung, p. 73 (non *Trochus armillatus*, Wood).

1873 *Zizyphinus Meyeri* (Dunker!!), Paetel, Catalog der Conch.-Sammlung, p. 74.

1877 *Zizyphinus armillatus*, Tenison-Woods, Papers and Proc. Royal Soc., Tasmania, p. 41 (non *Trochus. armillatus*, Wood).

1880 *Trochus Meyeri*, Phillippi, Fischer in Kiener's Coq. Vivantes, p. 76, No. 10.

This beautiful Zizyphinus has always been called *armillatus*, Wood. If any naturalist will take a specimen and compare it with the *Trochus armillatus*, Wood, figured in the Supplement to the Index Testaceologicus, pl. 5, Trochus, fig. 5, 1828, he will at once see that the Tasmanian shell is quite distinct in being more conical, and with flatter whorls than Wood's shell. I append description from a Tasmanian example:—Shell imperforate, conical, yellowish, fawn or brown spotted, whorls 8 to 9 flat, ornamented with seven spiral rows of granulous liræ, separated by smooth

interstices; last whorl carinated, scarcely convex at the base, ornamented with distinct brownish radiating flexuous markings,the granulous liræ concentric to the columellar axis, about ten in number, more granulous near the centre, interstices pinkish; aperture rhomboidal; umbilical region depressed. Alt., 33; breadth, 30; least breadth, 29 millimetres. Paetel in his Catalogue erroneously attributes this species to Dunker.

Hab.—King's Island, Bass Strait (*Peron and Lesueurer*); Encounter and Guichen Bays, South Australia (*G. F. Angas*); New Holland (*Hombron and Jacquinot*); Australian Sea (*Paetel*); Tasmania (*Paetel*); Port Western, Victoria (*J. H. Gatliff*); Tasmania (*W. F. Petterd*).

7. Trochus (Clanculus) Dunkeri, Koch, sp.

1843 *Trochus (Monodonta) Dunkeri*, Koch, in Philippi. Abbild und Besch neuer Conch., vol. 1, heft 3, p. 6, pl. 2, fig. 5. Trochus.

1849 *Trochus Dunkeri*, Koch, Phillippi Conch. Cab., ed. 2, p. 237, No. 300, pl. 36, fig. 5.

1851 *Monodonta Dunkeri*, Koch; A. Adams, Proc. Zool. Soc., p. 174, No. 10.

1854 *Euchelus Dunkeri*, H. and A. Adams, Genera of Recent Mollusca, vol. 1, p. 419.

1865 *Clanculus rubens*, A. Adams; Angas, Molluscan Fauna of South Australia, Proc. Zool. Soc., p. 178, No. 144.

1873 *Clanculus Dunkeri*, Paetel, Catalog der Conchylien-Sammlung, p. 73.

1877 *Clanculus rubens*, A. Adams; Tenison-Woods Papers and Proc. Royal Soc., Tasmania, p. 40.

1880 *Trochus Dunkeri*, Fischer in Kiener, Coq. Vivantes, p. 301, No. 171, pl. 96, fig. 2.

Shell imperforate, having a little hollow or depression at the place of the umbilicus, orbicularly conoid, sub-depressed, thick, whorls 5; the first whitish often eroded; the last brownish or reddish, obliquely striated and ornamented with transverse or spiral granulose liræ, 3 on the penultimate whorl, last angular a little convex, ornamented with 4 granulus beaded liræ, separated by well-marked interstices; base with 5-6 concentric granose liræ; aperture oblique, rhomboidal, with plications far in the interior; peristome thickened, plicated, denticulated at the upper part; columellar oblique, ending with an acute and narrow tooth; columellar callosity scarcely developed, plicated. Height, 8; width, 11 millimetres.

Some specimens are 9 long, breadth 12-13 millimetres.

Hab.—"——?" (*Koch*); Adelaide in New Holland (*Phillippi*); St. Vincent's Gulf, South Australia (*G. F. Angas*); Cape Riche, south-west coast of Australia (*J. Brazier*); Bass Strait (*Tenison-Woods*); Australia (*Paetel*).

Mr. Angas always returned this species named as *Clanculus rubens* of A. Adams. There was no such species as *Clanculus rubens* ever described by A. Adams. Mr. Angas was the first who published the name in Proceedings of the Zoological Society of London, 1865, p. 178.

The first record of its being described was by Koch, in 1843, as *Trochus* (*Monodonta*) *Dunkeri*. The specimen figured by Fischer in Kiener's Coquilles Vivantes was from specimens sent by Angas to Monsieur Crosse in Paris.

8. Diala lauta. A. Adams, sp.

1862 *Diala lauta*, A. Adams, Ann. Nat. Hist., vol. 10, 3rd series, p. 298, No. 5.

1865 *Diala lauta*, A. Adams; Angas, Molluscan Fauna of South Australia. Proc. Zool. Soc., p. 173, No. 111.

1873 *Diala lauta*, A. Adams; Paetel, Catalog der Conch.-Sammlung, pp. 6-49.

1875 *Diala punctata*, Tenison-Woods, Papers and Proc. Royal Soc., Tasmania, p. 147.

1875 *Diala lauta*, A. Adams; E. A. Smith, Proc. Zool. Soc., p. 538.

1877 *Diala punctata*, Tenison-Woods, Papers and Proc. Royal Soc., Tasmania, p. 37.

I received specimens of *Diala lauta* from the Rev. Mr. Atkinson, labelled *Diala tessellata*, Tenison-Woods.

Hab.—Port Adelaide (*A. Adams*); St. Vincent's Gulf, often in shell sand at the head of Spencer's Gulf, South Australia, along with Truncatella and Bittium in vast numbers (*G. F. Angas*); D'Entrecasteaux Channel, South Tasmania (*Rev. H. D. Atkinson*).

9. Diala monile. A. Adams, sp.

1862 *Alaba monile*, A. Adams, Ann. Nat. Hist., vol. 10, 3rd series, p. 296, No. 17.

1865 *Alaba monile*, A. Adams; Angas, Molluscan Fauna of South Australia. Proc. Zool. Soc., p. 173, No. 109.

1875 *Diala tessellata*, Tenison-Woods, Papers and Proc. Royal Soc., Tasmania, p. 147.

1875 *Diala monile*, A. Adams; E. A. Smith, Proc. Zool. Soc., p. 538.

1877 *Diala tessellata*, Tenison-Woods, Papers and Proc. Royal Soc., Tasmania, p. 37.

Hab.—Port Lincoln, South Australia (*W. Metcalfe, A. Adams*); Port Lincoln, in shell sand (*G. F. Angas*); Tasmania (*Tenison-Woods*); mouth of Crookhaven River, N.S.W., in shell sand (*J. Brazier*).

10. CERITHIUM (POTAMIDES) MONACHUS. Crosse and Fischer, sp.

1855 *Cerithium dubium*, Sowerby, Thes. Conch., vol. 2, p. 864, No. 62, pl. 181, fig. 120 (non *Cerithium dubium*. Sowerby Mineral Conchology, 1816).

1865 *Cerithium monachus*, Crosse and Fischer, Journal de Conchology, p. 347, pl. 3, figs. 17-18.

1865 *Potamides monachus*, Angas, Molluscan Fauna of South Australia. Proc. Zool. Soc., p. 171.

1865 *Cerithium dubium*, Sowerby; Reeve, Conch. Icon., pl. 12, sp. 78 a.b.

1877 *Cerithium dubium* (Reeve !!) Tenison-Woods, Papers and Proc. Royal Soc., Tasmania, p. 35.

1880 *Cerithium eludens*, Bayle, Journal de Conchology, vol. 27, 3rd series, p. 245, No. 9.

This species was described first by Mr. Sowerby, in 1855, as *Cerithium dubium* from Van Diemen's Land, now Tasmania. Crosse and Fischer described it again, in 1864, under the name of *Cerithium monachus* from specimens collected by Mr. Angas in South Australia. Monsieur Bale, in the French Journal de Conch., 1880, gives it a new specific name as *Cerithium eludens* to replace the one given by Sowerby, in 1855, Sowerby, in 1816, having used *dubium* for a fossil species, Bale not knowing that Crosse and Fischer had described it in 1864 as *Cerithium monachus*, therefore Bale's name must be placed amongst the synonyms. Tenison-Woods erroneously attributes this species to Reeve.

Hab.—Van Diemen's Land (*Sowerby*); Yorke's Peninsula, Adelaide Creek, South Australia; St. Kilda, near Melbourne (*G. F. Angas*); Tasmania (*Tenison-Woods*); Hobson's Bay, Victoria (*R. C. Rossiter*, 1861).

11. CASSIS SEMIGRANOSA. Lam., sp.

1822 *Cassis semigranosa*, Lam, Hist. Anim sans Vert, tome 7, p. 228, No. 23.

1824 *Cassis semigranosa*, Lam; Dubois', Epitome of Lamarck's Arrangement of Testacea, p. 253.

1828 *Buccinum semigranosum*, Wood, Index Test. Supplement, p. 11, pl. 4, fig. 2.

Cassis semigranosa, Lam; Kiener, Icon. Cq. Viv., p. 36, No. 23, pl. 14, fig. 29.

1844 *Cassis semigranosa*, Lam, Anim. sans Vert (Deshayes' ed.), vol. 10, p. 37.

1845 *Cassis semigranosus*, Lam; Catlow and Reeve, Conchologists' Nomenclator, p. 263, No. 37.

1848 *Cassis semigranosa*, Lam; Reeve, Conch. Icon, vol. 5, pl. 1, species 3.

1850 *Cassis semigranosum*, Jay, Catalogue of Shells, 4th edition, p. 345, No. 8,736.

1853 *Semicassis semigranosa*, H. and A. Adams, Genera of Recent Mollusca, vol. 1, p. 216.

1856 *Buccinum (Cassis) semigranosum*, Hanley in Wood Index Test. Supplement, p. 212, pl. 4, fig. 2.

1857 *Cassis semigranosa*, Wood; Kuster in Martini and Chem., 2nd edition, p. 24, pl. 44, figs. 6-7.

1859 *Cassis semigranosus* (Semicassis), Chenu, Manual de Conch., tome 1, p. 206, fig. 1,124.

1860 *Cassis semigranosa*, Lam; W. Theobald, Catalogue of the Recent Shells in the Museum Asiatic Society of Bengal, p. 18, No. 10.

1865 *Semicassis semigranosa*, Lam; Angas, Molluscan Fauna of South Australia, Proc. Zool. Soc., p. 168, No. 75.

1873 *Cassis (Phalium) semigranosa*, Lam; Paetel, Catlog der Conch., Sammlung, pp. 5-44.

1877 *Cassis semigranosa*, Lam; Tenison-Woods, Papers and Proc. Royal Soc., Tasmania, p. 33.

1885 *Cassis (Semicassis) semigranosa*, Wood; Tryon in Manual of Conchology, p. 275, pl. 3, fig. 60.

This well-known *Cassis* was first described by the great French author, Chevalier de Lamarck, in 1822, and figured by Wood in his Supplement to the Index Testaceologicus, 1828, as *Buccinum semigranosum*, from the British Museum. It is quoted by Kiener in his Spécies Général et Iconagraphie des Coquilles Vivantes as of Lamarck until 1857, when Dr. Kuster, in the second edition of the Conchylien Cabinet, quotes Wood as the authority. Other authors have quoted Lamarck. In 1885 Mr. Tryon quotes Wood, and then quotes Reeve Conch. Icon. for his information. The information

that I have found in Reeve Conchologia Iconica is that he quotes *Cassis semigranosa*, Lamarck, Anim. sans Vert (Deshayes' edit.), vol. x, p. 37. There is not any mention of Wood in the matter—probably an oversight on the part of Dr. Kuster and Mr. Tryon. These errors are are very misleading to those who do not possess a large library of works to consult for information. I have received the *Cassis semigranosa* from many Australian collectors quoted both as of Lamarck and of Wood. I trust this list which I have drawn up will clear up many points of authorship, and be of value to my Tasmanian friends.

Hab.—Seas of New Holland (*Lamarck*); "——?" (*Wood*); coast of New Holland (*Kiener*, *Kuster*); Van Diemen's Land, now Tasmania (*Hanley*, *Reeve*); Tasmania (*Tenison-Woods*); Aldinga Bay, Encounter Bay, South Australia (*G. F. Angas*).

12. Mitra Capensis. Dunker, sp.

1845 *Mitra Capensis*, Dunker Reeve, Conch. Icon. Mitra, pl. 7, figs. 33-268.

1848 *Mitra Capensis*, Dunker; Krauss, Sudafrikanschen Mollusken, p. 125.

1851 *Mitra rufocincta*, A. Adams, Proc. Zool. Soc., p. 134.

1854 *Volutamitra vincta*, A. Adams, Proc. Zool. Soc., p. 134.

1873 *Mitra (Pusio) Capensis*, Paetel, Catalog.-Conch., Sammlung, p. 39.

1873 *Mitra (Volutamitra) vincta*, Paetel, Catalog.-Conch., Sammlung, p. 40.

1874 *Mitra Capensis*, Dunker; Sowerby, Thes. Conch., vol. 3, p. 25; Mitra, pl. 28, fig. 654.

1874 *Mitra rufocincta*, A. Adams; Sowerby, Thes. Conch., vol. 3, p. 25, pl. 20, fig. 420, pl. 28, fig. 653.

1874 *Mitra vincta* (C. B. Adams!!). Sowerby, Thes. Conch., p. 25, pl. 23, figs. 520-521.

1877 *Mitra weldii*, Tenison-Woods, Papers and Proc. Royal Soc., Tasmania, p. 31.

1882 *Mitra Capensis*, Dunker; Tryon, Manual of Conchology, vol. 4, p. 125, pl. 37, figs. 95-92-94; *Mitra Weldi*, Tenison-Wood, l.c., p. 125.

Many years ago I sent specimens of this species to the late Mr. H. Adams, and they were duly returned, named *Mitra vincta*, A. Ad. Some time after I received a number of specimens from Mr. Legrand, of Hobart. I returned

specimens to him named *Mitra vincta* for the Tasmanian examples banded with dark orange and brown.

Tenison-Woods, in 1877, says:—"This shell was given to him by Mr. Legrand as *M. vincta*, but was unable to trace it," probably through not having works of reference at his command.

Mr. W. F. Petterd informs me that *Mitra vincta = Weldii* is a very common species at Long Bay and Blackmans Bay, and from the number of specimens that I have received at various times it shows it to be a very variable species.

I very much doubt its being found at the Cape of Good Hope, as quoted by Reeve. The variety named by A. Adams as *Mitra rufocincta* was described from a single specimen, slightly sea worn, locality not known, and the variety *Mitra vincta*, A. Ad. is said to have come from Cape Natal. Paetel, in his Catalog der Conchylien-Sammlung, 1873, quotes it from New Caledonia; I have never seen it from there. Mr. Sowerby, in the Thesaurus Conchyliorum, erroneously attributes this species to C. B. Adams, and the locality Jamaica. The two specimens figured by Sowerby No. 520, 521, are evidently true Tasmanian shells, and are the so-called *Mitra Weldii*, Tenison-Woods. If it is proved that *Mitra Capensis*, Dunker, is not found at the Cape of Good Hope, the name is a misnomer, and that *Mitra rufocincta*, A. Adams, should replace it.

Hab.—Cape of Good Hope (*Reeve*); Natal, South Africa, (*Tryon*); Long Bay and Blackmans Bay, Tasmania (*W. F. Petterd, Rev. H. D. Atkinson*); Hobson's Bay, Victoria (*J. F. Bailey*).

NOTES ON THE DISCOVERY OF A NEW EUCALYPTUS.

By T. B. Moore.

A few notes on the discovery of a new Eucalypt may be of some interest to the Fellows of the Royal Society, especially the introductory remarks, for which I am greatly indebted to our illustrious honorary member—Baron von Mueller—who thus forwards his determination on what he considers a most important botanical discovery.

During a recent exploration, for the Government, of the country situated between the townships of New Norfolk and Victoria, an Eucalypt which had never come under my observa-