

ADDITIONS TO THE CATALOGUE OF THE MARINE SHELLS OF TASMANIA.

BY W. L. MAY.

(Read August 8th, 1910.)

In the Proceedings of this Society for 1908 I published a list of additional species, and since that date a considerable number of new forms have come under my notice, which it is the object of this paper to place on record.

The greater number of the following species were obtained during the Easter camp-out of the Tasmanian Field Naturalists' Club at Freycinet Peninsula, in March, 1910.

The s.s. Koonookarra, Captain R. Holyman, had been chartered by the Club, and was available for dredging, much of the success of the operations being due to the ability and active interest of the genial skipper. I had provided suitable dredges and 200 fathoms of wire rope, and on the two days (March 26 and 27), assisted by several interested friends, I dredged in Geography Strait and due east from there in 15, 40, 60, and 80 fathoms, the greatest depth being some ten miles off the coast. The nature of the bottom was very similar to that off Cape Pillar, explored by Mr. C. Hedley and myself in 1907, but not quite so hard, and there is probably considerably less current. Broken up polyzoa was very abundant. As was to be expected, many of the same species occurred which were taken off Cape Pillar in 100 fathoms; but, partly owing to shallower water being explored, and to the station being some sixty miles further north, many new species were taken, and also several most southern records of known Tasmanian shells, previously only known from Bass Strait.

These researches go to show more than ever the wide distribution of species on our Australian Continental shelf. Several recently described from deep water off both Sydney and Adelaide were here taken.

Besides the record of species new to our list I include others which, although recorded, have hitherto been extremely rare or of doubtful occurrence—in the latter case confirming the previous record. Altogether over 50 species are here added to our list.

It is my intention to place as complete a series as possible of these new shells in the Tasmanian Museum collection.

In addition to the species here listed, I have a number that appear new to science, some of which I hope to describe at a later period in these Proceedings.

I have to thank my friends, Mr. C. Hedley (of Sydney Museum), and Dr. Verco (of Adelaide) for kind help in identification

LIST OF SPECIES, WITH NOTES.

Sepia braggi, Verco; T.R.S., S.A., 1907. Specimens are in the Tasmanian Museum collection wrongly named *S. elongata* D'Orb, on which authority it was included by Tate and May in their Revised Census. I also possess a Tasmanian specimen.

Trophon recurvatus, Verco; T.R.S., S.A., 1909. Several examples in 80 fathoms off Schouten Island; also off Cape Pillar in 100 fathoms.

Fascinus typicus, Hedley; Mem. Aus. Mus. IV. Several adult specimens in 40 fathoms off Schouten Island; previously only known here by a single immature specimen.

Mitra bellapicta, Verco; T.R.S., S.A., 1909. Frederick Henry Bay, a few specimens taken from kelp roots washed ashore from deep water.

Mitra retrocurvata, Veco; op. cit. A number were taken off Cape Pillar in 100 fathoms. They vary somewhat from the type, and the same varieties also occur in South Australia.

Terebra lauretanæ, Tenison-Woods; P.L.S., N.S.W., 1878. A single adult specimen from 40 fathoms off Schouten Island adds this fine species to our list. It has considerable resemblance to some tropical forms.

Hedley (Rec. Aus. Mus., Vol. VI.) has recently figured the species from a specimen taken in 300 fathoms off Sydney.

Drillia lacteola, Verco; T.R.S., S.A., 1909. Numerous examples in 80 fathoms off Schouten Island, also plentiful off Cape Pillar in 100 fathoms. The commonest species of its family in the deeper water of our Continental shelf.

Drillia saxea, Sowerby; P. Mal. Soc., 1896. A number were taken in 100 fathoms off Cape Pillar, and several in 40 fathoms off Schouten Island.

Drillia tricarinata, Tenison-Woods; P.L.S., N.S.W., 1878. Taken in 40, 60, and 80 fathoms off Schouten Island; most numerous in the shallower water. It shows here the same variation recorded by Verco (T.R.S., S.A., 1909).

Mangilia connectens, Sowerby; Pro. Mal. Soc., 1896. A common shell in D'Entrecasteaux Channel, but hitherto unidentified.

Mangilia fallaciosa, Sowerby; P.M.S., 1896 (*Daphnella*). Many specimens in fine condition were taken in 100 fathoms off Cape Pillar.

Daphnella bathentoma, Verco; T.R.S., S.A., 1909. Two specimens from 100 fathoms off Cape Pillar.

Daphnella lamellosa, Sowerby; P. Mal. Soc., 1896 (*Clathurella*). Several examples of this beautiful little shell were taken in 40 fathoms off Schouten Island; also fragments in 100 fathoms off Cape Pillar.

Daphnella triseriata, Verco; T.R.S., S.A., 1909. Several specimens from 40 fathoms off Schouten Island.

Mitromorpha angusta, Verco; T.R.S., S.A., 1909. Numerous in 100 fathoms off Cape Pillar.

Leucosyrinx recta, Hedley; Mem. Aus. Mus., IV. Three examples from 80 fathoms off Schouten Island. Add a genus and species to our list.

Larina (?) *turbinata*, Gat. and Gab.; P.R.S., Vic., 1909. Three specimens (the largest living) occurred in 40 fathoms off Schouten Island. It was previously recorded by the authors from our North Coast. This shell probably requires a new genus for its reception.

Scala invalida, Verco; T.R.S., S.A., 1906. Several specimens from 100 fathoms off Cape Pillar.

Stylifer brazieri, Angas; P.Z.S., 1877. I have a specimen taken by the trawler "Endeavour" in about 30 fathoms, Storm Bay, 1909.

Lippistes gracilenta, Brazier; P.L.S., N.S.W., 1877. One specimen in 40 fathoms off Schouten Island adds a genus and a most interesting species to our list. The type was from Darnley Island, Torres Straits, and this capture gives it a surprisingly long range in latitude.

Lippistes meridionalis, Verco; T.R.S., S.A., 1906. Two specimens in 80 fathoms off Schouten Island.

Bittium turritelliformis, Angas; P.Z.S., 1877. One individual from 40 fathoms off Schouten Island.

Triphora cana, Verco; T.R.S., S.A., 1909. One perfect specimen from Frederick Henry Bay, taken many years since. Another immature specimen from 40 fathoms off Schouten Island.

Triphora epallaxa. Verco; op. cit. Two examples from 80 fathoms off Schouten Island; a very distinct form, and remarkable in the genus as being dextral.

Triphora albovittata, Hedley; P.L.S., N.S.W., 1902. I have a specimen collected by Dr. Verco on our northern coast.

Triphora cinerea, Hedley; op. cit. Several immature specimens collected on the North Coast.

Triphora spina, Verco; op. cit. Three specimens from 40 fathoms off Schouten Island; a very elongated form.

Triphora disjuncta, Verco; op. cit. Several specimens from 80 fathoms off Schouten Island; probably a variety of *T. tasmanica* (Ten.-Woods). Another variety, viz., *lilacina*, Verco, op. cit., was taken in 10 fathoms off Pilot Station, d'Entrecasteaux Channel.

Rissoa (*Scrobs*) *jacksoni*, Brazier; P.L.S., N.S.W., 1895. Numerous in 10 fathoms off Pilot Station; it is very minute.

Rissoa filocincta, Hedley; Rec. Aus. Mus., Vol. VI. Taken in 40 and 80 fathoms off Schouten Island; several specimens at each station.

Cyclostrema jaffaensis, Verco; T.R.S., S.A., 1909. One perfect shell from 80 fathoms off Schouten Island adds this fine and peculiar form to our list. The type was from 90 fathoms off Cape Jaffa, South Australia.

Cyclostrema denselaminata, Verco; T.R.S., S.A., 1907. Several from various stations off Schouten Island. It varies considerably, some examples being fairly typical.

Gena terminalis, Verco; T.R.S., S.A., 1905. One example from 40 fathoms off Schouten Island.

Emarglnuia superba, Hedley; Rec. Aus. Mus., Vol. VI. Taken in 40 fathoms off Schouten Island. Several specimens, the largest being 27 mill. in length by 21 mill. broad, and is thus larger than the type which was taken in 300 fathoms off Sydney. This fine species, one of the largest known, was included in the Cape Pillar mollusca (P.L.S., N.S.W., 1908). Owing to a mistaken identification, the species then taken for it, is not uncommon in deep water, and is so far unidentified, having a strong resemblance to *E. tenuicostata*, Sowerby.

Puncturella demissa, Hedley; Rec. A. M., 1904. Several specimens from 15 fathoms Geography Strait. This species ranges to New Zealand.

Lepidopluerus inquinatus, Reeve, Conch. Icon. The type in British Museum is assigned to Tasmania. It was not, so far as I know, in any local collection until taken recently by myself in 10 fathoms off Pilot Station, where about a dozen examples occurred.

Chiton quoyi, Desh., An. Sans. Vert., VII. Taken under stones at Bellerive Bluff, February 12th, 1910. This New Zealand species was included by Tenison-Woods in his Census, under its synonym of *C. glaucus* (Gray), but without giving habitat or any remarks, and for want of confirmation it was omitted by Tate and May in their revision. It is now satisfactorily reinstated. It is curious that its habitat should be so restricted as it appears to be. Such a conspicuous form would not easily be overlooked; possibly it has been introduced on imported New Zealand oysters.

Actæon retusus, Verco; T.R.S., S.A., 1907. One example from 40 fathoms off Schouten Island.

Cylichna protumeda, Hedley; Mem. A. M., 1903, Var. Numerous in 40 fathoms off Schouten Island. These shells have exactly the form of the type, but are quite smooth, showing none of the fine revolving sculpture which is typical.

Pugnus parvus, Hedley; Rec. A. M., 1896. Five specimens from 40 and 80 fathoms off Schouten Island add this interesting little genus and species to our list. It has a wide geographical range.

Cavolina inflexa, Lesueur, 1813. One specimen from 80 fathoms off Schouten Island adds another species to our recorded list of Pteropods.

Atlanta, sp. indet. One example of this genus was taken in 80 fathoms off Schouten Island, but is too imperfect for specific determination. This is the first record for Tasmania of the class Heteropoda.

Cuspidaria exarata, Verco; T.R.S., S.A., 1908. A pair and several valves from 40 fathoms off Schouten Island. This is an unusually large form, one of the valves measuring over 30 mill. in length.

Ectorisma granulata, Tate; T.R.S., S.A., 1892. Two valves (a pair) taken by the trawler Endeavour in Storm Bay in about 30 fathoms. Two separate valves in 40 fathoms off Schouten Island. Mr. Hedley (Rec. A. M., VI.), says this is a *Poromya*, and the specific name is pre-occupied in the genus, but it may possibly be identical with *P. lævis* (Smith), Challenger report.

Thracia myodoroides, Smith, Challenger report, 1885. One valve in 40 fathoms off Schouten Island.

Myodora pandoræformis, Stutchbury. This species has long been on our list, but seems to have been unknown to local collectors. Many separate valves were taken in 40 fathoms off Schouten Island.

Dosinia histrio, Gmel., var. One valve occurred in 40 fathoms off Schouten Island.

Cardium pulchellum, Reeve. A yellow variety; was numerous in 40 fathoms off Schouten Island amongst hundreds of specimens of the usual colour. This is one

of the most plentiful and widely distributed species in our waters, being commonly dredged in all depths from 10 to 100 fathoms.

Lucina crassilirata, Tate, 1886. A number of living examples were taken in Geography Strait in 15 fathoms; small dead valves in 40 fathoms three miles seaward.

Rochefortia lactea, Hedley; Mem. Aus. Mus., IV. Geography Strait, 15 fathoms; several specimens.

Crassatellites aurora, Angas; P.Z.S., 1863. Several valves occurred in both 40 and 80 fathoms off Schouten Island. This is the most southern record. The type was from Banks Strait.

Cardita raouli, Angas; P.Z.S., 1872. Several valves of this very distinct species were taken in 40 fathoms off Schouten Island. Another species on our list which appears to have been unknown to local workers.

Cardita delicata, Verco; T.R.S., S.A., 1908. Numerous valves in 100 fathoms off Cape Pillar.

Carditella exulata, Smith; Challenger report. Several examples taken at various times in Frederick Henry Bay; usually from kelp roots.

Nuculina ((*cyrilla*)) *concentrica*, Verco; T.R.S., S.A., 1907. Several living specimens and valves add an interesting genus and species to our list; from 40 fathoms off Schouten Island.

Leda ensicula, Angas, P.Z.S., 1877. Numerous living and dead in 40 fathoms off Schouten Island. This species in external appearance is exactly similar to *Leda lefroyi*, Beddome, which is found in d'Entrecasteaux Channel. but the hinge teeth are very different.

Leda miliacea, Hedley; Mem. Aus. Mus., IV. Several single valves of this small but distinct species were taken in 80 fathoms off Schouten Island.

Limopsis eucosmus, Verco; T.R.S., S.A., 1907. Two valves occurred in 80 fathoms off Schouten Island.

Trigonia margaretaea, Lamk.; Var. *acuticostata*, McCoy. Some perfect specimens and numerous valves were taken in 40 fathoms off Schouten Island. The ribs in this variety are closely set with short spines, giving it a very distinct appearance.

Modiola linea, Hedley; Rec. Aus. Mus., VI. Several living and valves from 40 fathoms off Schouten Island. The species is very small, and very distinct from our other forms, but most nearly approaching *M. arborescens*.

Philobrya tatei, Hedley; Rec. Aus. Mus., 1901. A number of single valves occurred in 80 fathoms off Schouten Island. Identified by the author.

Philobrya pectinata, Hedley; Mem. Aus. Mus., IV. Also numerous as single valves in 40 fathoms off Schouten Island.

Cyclopecten favus, Hedley; op. cit. Several valves were taken in 40 fathoms off Schouten Island.