

## NOTES ON A RECENT DREDGING TRIP IN THE DERWENT.

BY A. MORTON, F.L.S.

The Tasmanian Fisheries Commissioners having decided to examine the several bays in the river Derwent, for the purpose of ascertaining whether, as in former times, there still existed natural oyster beds, advantage was taken of the opportunity to pay special attention to the marine fauna that might be obtained by the means of the dredge. Mr. A. Durrand, F.R.M.A., a gentleman on a visit to Tasmania, who has made a collection of Foraminifera from many parts of the southern seas, accompanied us on our trip.

Several bays to the northward of the harbour were tried, but the dredge failed to secure any specimens of oysters, and in only one or two instances did we obtain any dead shells. Although from a commercial point of view the result of the dredging trip proved comparatively a failure, still from a scientific point we were amply rewarded. Instead of finding the Oyster, a large quantity of Pectens or Scallops were obtained. *Pecten meridionalis*, *P. bifrons*, and *P. asperrimus*. As has already been pointed out by Mr. Seager, the Secretary to the Fisheries Commission, a large number of this shell fish can be obtained in the river Derwent by means of the dredge, the quality being equal to the European Scallops, it is to be hoped that steps will be taken by our fishermen to place in the market this class of shell fish that should readily find consumers. As the places we dredged in were rather far up the river, the number of species of Mollusca were naturally limited, those obtained belonging to the genus *Cardium*, *Fusus*, *Triton*, *Elenchus*, and a few others well-known. A large number of a pretty shell known as *Modiolaria Cumingiana*, Dunker, were met with, inhabiting the sponge, and embedded in the larger kind of Ascidians. This shell is common in the Australian waters and also in New Caledonia. Several Crustaceans, chiefly of the smaller kind, were obtained, one kind being found in great numbers inhabiting the common Mussel. This peculiar little Crab, belonging to the genus *Pinnotheridae Pinnotheres pisium*, Leach, I find has a very wide range common in the European seas, and although found inhabiting the Mussel of New Zealand, has not yet, I am informed by Mr. Thos. Whitelegge, the able Zoologist of the Australian Museum, Sydney, been observed in the Mussel found round the New South Wales coast.

Professor Hutton, Professor of Biology of the Christchurch University, New Zealand, on receiving two or three examples of this Crab writes as follows:—

“The male *Pinnotheres pisium* does not live in the bivalve, but wanders about; consequently he is rare, and only got by chance. I do not think the Crabs hurt the Mussels.” I am, however, of opinion that occasionally the male Crab is found frequenting the bivalve, as among some 30 or 40 specimens



obtained by me in the Derwent, three or four were most certainly males. Since receiving Professor Hutton's letter I find, on referring to Mr. Thos. Bell's able work, entitled "A History of the British Stalk-Eyed Crustacea," the following remarks respecting this particular Crab:—"The species of this genus are very remarkable from the peculiarity of their being indebted to animals of a very different class for protection, although not truly parasitic. They are found always to inhabit the shells of the Bivalve Mollusca, principally of the Genera *Mytilus*, *Modiolus*, and *Pinna*, and occasionally also of the *Ostrea*, *Cardium*, and other Genera. The males are always very much smaller than the females." Bell's remark as to the scarcity of males agrees with what came under my notice during the recent dredging trip. He further states:—"This species, *P. pisium*, is very commonly found in the common Mussel, *Mytilus Edulis*, on many parts of our coast, and especially in those which are found in rather deep water. On one occasion I dredged great numbers of these Mollusca on the coast of Dorset, and found by far the greater number of them with one or two of these little soft bodied Crabs within their shells; for the females are much more common than the males. The latter sex I have occasionally taken apart from the Mussel shells, the former never."

A large number of species of a delicate Echini were met with, *Echinocardium Australe*, Gray, described by Gray in 1851. This species is found to have a very wide range, having been obtained in the N.E. and North Coast of Australia, Japan, S.E. Coasts of New Guinea, East Indies, Cape of Good Hope, New Zealand, and New Caledonia. The first specimens obtained in Tasmania were collected by Mr. Ronald Gunn in 1850, and referred to by Gray in the "Annals and Magazines of Natural History," 2nd series, vol. vii., 1851. Two species of *Holothuroidea* were obtained, one species, *Cucumaria*, having five rows of ambulacral feet, the other species, probably a *Psolus*, having only three rows of tube feet on a kind of foot, like that of some Mollusca. I forwarded some specimens of *Cucumaria* and *Psolus* to Mr. Whitelegge, of the Sydney Museum, who is unable to identify them with any species found in the Australian seas, and is of opinion that they may be new species. Several interesting specimens of Hydroid Zoophytes were obtained, chiefly of the following species:—*Sertularella divaricata*, Busk; var. *sub-dichotoma*, Bale.

P. L. S., N.S.W., vol. iii. n.s., page 761. *S. microgonia*, Lendenfeld. Bale, P. L. S., N.S.W., vol. iii. pt. 2., s.s. p. 763, pl. xvi., fig. 8. *Halicornopsis avicularis*, Kirch. Bale, Cal. Hydroida, p. 185, pl. x., fig. 1-2. *Aglaophenia divaricata*, Busk. Bale, l. c. p. 162., pl. xv., fig. 7-8., pl. xvii., fig. 6-7. Several species of Polyzoa were brought up, the follow-



ing species being determined:—*Catenicella Nastata*, Busk, McGillivray, McCoy's Prod. Nat. Hist. of Victoria, pl. 24, fig. 4. *Caberea Darwinii*, Busk, "Voyage of Challenger," vol. x., p. 29, pl. xxxii., fig. 6. *Amphiblestrum cervicorne*, Busk, McGill, McCoy's Prod. Nat. Hist. of Victoria, pl. 25. *Retepora carinata*, McGill, McCoy's Prod. Nat. Hist. Victoria, pl. 97, fig. 7. *R. avicularis*, McGill, l. c. pl. 95, figs. 7-11. *Cellepora rota*, McGill. Trans. Royal Society of Victoria, 1884. *C. albirostris*, Smitt, Busk, "Challenger's" Report, vol. x., p. 193, pl. 34, fig. 7, pl. 35, fig. 3. *Amathia tortuosa*, Tenison-Woods. Trans. Royal Society of Victoria, 1880. *Pustulopora Australis*, Busk, Brit. Mus. Cat. Polyzoa, pt. 111.

Several specimens of an alcyonarian coral were also obtained. *Acanthoisis flabellum*, Wright and Studer, "Challenger's" Report, vol. xxxi. p. 45, pl. xii. fig. 1. Sponges some five or six species were obtained. Examples I intend to have forwarded to Mr. A. Dendy, Demonstrator in Biology, of the University, Melbourne, for identification, who is at present paying considerable attention to the Spongidæ of Australia. Several specimens of Foraminifera were obtained. Mr. Durrand has kindly mounted an excellent slide for the Society, containing several genera.

From the large number of interesting specimens obtained during our recent dredging trip, and considering the very primitive and unsuitable dredge we had to use, I am convinced that a most interesting and valuable collection of marine fauna may be obtained in the Derwent, and have decided that during the summer months I intend to carry out a similar system of dredging to that I was engaged in for the Sydney Museum on the Queensland Coast and Port Jackson during the years 1879, 1881-82.

#### DISCUSSION.

In reply to His Excellency, Mr. MORTON described the localities where the dredging operations were carried on, and said that the biggest haul of scallops was found round the powder hulks near Government House. One gentleman from England described them as equal to the European quality.

Mr. CURZON ALLPORT said he would expect to find the largest bed of oysters near the entrance to the D'Entrecasteaux Channel. He knew oysters had been taken from there, and believed that many of the oysters found at Brown's River had come from that locality. Touching the scallops, they were at one time very numerous and were brought to market in considerable quantities. He now looked upon them as coming back again of late years like the oysters and mussels. Recently some good specimens had been obtained off Long Point, Sandy Bay.

Mr. MORTON said that since the dredging operations three oysters had been brought in from New Town.

Mr. CURZON ALLPORT said he had seen casual ones this side of Kangaroo Point.