

their heads to the southward and in the winter months with their heads to the northward. A steam tug is always ready to tow them into their proper berths and lay out their anchors for them, weighing them again when they are ready to proceed to sea. On all ships calling here a hospital charge of ten cents per ton is levied, and should they remain to receive or discharge cargo a charge of ten cents per ton is levied as light dues.

Fort San Antonio, the observing station of Fitzroy, no longer exists, and as a road runs over its former site, observations could not be taken there, so the observations were taken at the battery immediately over the custom house, about 200 yards N.W. of Fitzroy's station.

Supplies of every description are plentiful in this port, and it possesses two floating docks capable of lifting almost any vessel; they are moored at the head of the west side of the bay close to the landing place.

The ship remained at Valparaiso from the 19th November until the 11th December, the crew being occupied in refitting the ship, fitting a new set of sails, and making other repairs; and during this time the members of the Expedition visited Santiago and other places of interest in Chili. During the stay the temperature of the air varied from 53° to 78°, but the sea surface was from 54° to 60°·5, the coldest temperature being registered after a strong southerly wind. The general temperature of the surface water was from 56° to 59°.

The Reports on the Copepoda¹ and Ostracoda,² by Dr. George S. Brady, F.R.S., have already been published, and from them the following notes have been prepared:—

The Copepoda.—The Copepoda are almost universal in their distribution, and include both free-swimming and parasitic forms. The sea, from the Equator to the Poles, supports such vast numbers of them, that it is often coloured by wide bands for distances of many miles. But the appearance of these minute creatures at the surface depends upon conditions, the nature of which is scarcely at all understood. In confirmation of this, the Naturalists of the Expedition noted an extraordinary profusion of *Corycæus pellucidus* for two days in the surface water, but after that no more could be seen. Night on the whole seems more favourable than daytime for their approach to the surface, but it would appear that there is no very great difference between the nocturnal and diurnal species in this group. In the Polar Seas some species, especially *Calanus finmarchicus*, are present at times in such great abundance as to constitute an important item in the food of Penguins and Whales. As regards number and size of individuals, the cold water of the Arctic and Antarctic Oceans is even more favourable to the growth of the Copepoda than the warmer seas of the tropics. In the cold Polar Seas, *Calanus*

¹ Report on the Copepoda, by Geo. S. Brady, F.R.S., Zool. Chall. Exp., part xxiii., 1883.

² Report on the Ostracoda, by Geo. S. Brady, F.R.S., Zool. Chall. Exp., part iii., 1880.