

known as "whale-feed," is only one phase of its existence. But in this swimming stage they appear to be the principal article of food for a considerable part of the year to most species of fish. Hence it is desirable to keep a close record of their occurrence both in Otago waters and in other centres along the coast from the Bluff to the North. The correlation of their occurrence with that of diatoms and Peridineae, which appear to be the basis of all fish-food, together with the variations of temperature and salinity of the waters they frequent, would furnish valuable data towards a knowledge of the seasonal movements and migrations of fish.

HYDROGRAPHIC WORK.

Throughout the year visits to the fixed station—three miles east of Taiaroa Head—have been made as frequently as possible, only interrupted from time to time by spells of bad weather, when the launch could not go out. Surface temperatures and water-samples have been taken, and the salinity of the latter determined by the Government Analyst's department in Dunedin. At the same time the direction of currents, state of tide, and weather conditions have been carefully noted. Similar observations of temperature and collection of water-samples have been regularly made by Mr. Scofield, lightkeeper at Cape Saunders, whose work and assistance are much appreciated by the Board. These observations only touch the fringe of the subject. They are only taken at the surface, as are the collections of animal species. Occasionally dredgings from the bottom of the sea down to 20 fathoms are collected.

With a scientific observer on the staff, such as the Board hopes to secure during the year now to be entered on, it should be possible to take temperatures, water-samples, and collection of plankton at varying depths. Estimation of phosphates and nitrates are also required. Results from all this class of work cannot be utilized at present, but the accumulation of such data must come sooner or later, and these, together with fishery statistics from all parts of the country, will place the fisheries of this country on a scientific basis. At present knowledge of the whole subject is infinitesimal.

During the year 120 drift-bottles were liberated on the ebb tide from one to one and a half miles north of Otago Heads. Up to date twenty-one have been reported, the printed forms giving the date and locality of finding being returned to the station. All the bottles recovered were found on the beaches within six miles of the point of liberation. This only bears out what was found in the drift-bottle experiments of eight years ago, when 450 bottles were set adrift. All liberated within five miles of Otago Heads came ashore on the beaches to the north, one or two inside the harbour. Those set free six miles or more outside the Heads drifted much farther north, and actually four of them were recorded from the Chatham Islands, showing that the set of the north-east current off the east coast of Otago is largely deflected to the east by Banks Peninsula. The chances of a glass bottle being picked up on a sandy beach in such a sparsely peopled region as the Chatham Islands appears very small indeed. This fact of the steady flow of the current along the northern coast, and particularly of its swing into Blueskin Bay from the North Heads, coupled with the fact that lobster larvæ seek the bottom mostly within fifteen days of being hatched, has always appeared to the Board as the strongest argument in favour of liberating larvæ from the station. There is always a probability of some finding lodgment and growing ultimately to maturity in the rocky portions of the coast north of the Heads.

GENERAL STATION WORK.

During the year Mr. S. Broadley, Assistant Curator at the station, in his capacity of Inspector of Fisheries for the Otago District, made two visits of inspection to the outlying fishing-ports from Oamaru to Waikawa. He also visited the Dunedin Fish-market at regular intervals, keeping a record of the fish-supply and prices. This information is reported to the Chief Inspector of Fisheries, Wellington.

Mr. W. Adams, Curator, regularly sends monthly reports of the weather at the station, temperatures, rainfall, &c., to the Director of the Meteorological Office, Wellington. He has kept the buildings, launch and dinghy, and pumping-plant in first-class order throughout the year. The trawl, drift, and seine nets are in good repair, and will not need renewal for some considerable time.

The library continues to receive additions from many outside sources, and the card cataloguing of the pamphlets and articles in journals dealing with marine-fishery problems is kept up to date.

I have, &c.,

GEO. M. THOMSON,

Chairman of the Board.

The Hon. the Minister of Marine, Wellington.