

GENERAL STATION WORK.

Messrs. Adams and Broadley have made excursions every week, weather permitting, to the observation station two miles east of Otago Heads, and either down the coast to Cape Saunders or north to Blueskin Bay. Trawling to a depth of 15 fathoms was carried out on all the ground worked by the local trawlers. Line fishing, mostly in the vicinity of Cape Saunders, was also carried out in order to obtain blue cod, red cod, wrasse, &c. From the fish captured, stomach-contents, otoliths, and scales were secured, preserved, and handed over to Dr. Finlay for examination. A sharp lookout was kept for pilchards and sprats, but the fish were not seen on the surface, though the latter especially were commonly found in the stomachs of the larger fish which were taken. Mr. Adams's observations on these fish are recorded elsewhere. He reports further as follows: "Whale-feed (*Munida gregaria*) first made their appearance in the harbour during the latter part of November, and have since been more plentiful than during the past three years. Red cod, no doubt following the whale-feed, have also been in the harbour in larger numbers than for some time past. The set-net was put down in the deep-water channel close to the station for the first time early in August, but it was not until the 28th September that a kelp-fish was caught, and a moki was not taken before the 1st December. The continued stormy weather and low temperature of the sea-water would no doubt account for the scarcity of school-fish until well on in the summer months. During the last three months both kelp-fish and moki were plentiful in most parts of the harbour. Stormy weather prevailed throughout the spawning season of the flat fish. The trawling-grounds in August and September were foul with loose weed, and in consequence the catches taken by the trawlers were poor. Although soles have by no means been plentiful during the year, the catches have been larger than those of the previous three years. In May soles were fairly plentiful in the shallow water between Hayward's Point and the Heads. The trawlers being prohibited from trawling on the inside of these two points, the greater part of the grounds where the fish were could not be worked except with seine nets worked from the beach."

Owing to the weather conditions referred to, the collection of eggs of flat fish was not undertaken to any extent last spawning season.

In regard to the kelp-fish, the ovaries are scarcely developed during the whole time the fish are in the harbour—that is, through the summer months. To arrive at some knowledge of the spawning habits of this fish it would seem to be necessary to take them during the winter months, if possible. This could only be done outside the harbour in the warmer water of the open sea, and, as the fish do not take bait, and are chiefly caught in set-nets, this is not a means which can be readily used by the staff of the station, as set-nets should be always taken up within twenty-four hours of setting.

Mr. W. J. Phillipps, in "Notes on the Edible Fishes of New Zealand" (*Journal of Science and Technology*, Vol. 4, p. 115), states that he "has found examples with fully developed ova during February and August." As a rule fish have a somewhat limited spawning season, and this occurrence of mature eggs both in the middle of winter and the middle of summer is very unusual.

Mr. Broadley, in his capacity of Inspector of Fisheries for the Otago District, periodically visits the fishing-stations from Moeraki to the Nuggets. He also visits the Dunedin Fish-market regularly, recording the supply, prices, &c. Owing to illness he was incapacitated from work for the greater part of September.

The library of the station has received several additions during the year, notably a complete set of the hydrographic papers and pamphlets issued by the Scripps Institution of Oceanography of the University of California. These were forwarded through the kindness of Dr. T. Wayland Vaughan, Director of the Institution. The card-cataloguing of the pamphlets has been kept up to date. These number about one thousand eight hundred, and are stored in nearly a hundred cases. In addition, Mr. Young, while at the station, card-catalogued all articles dealing with marine and fishery matters in such publications as the Bulletin of the British Marine Biological Station, the annual volumes issued by the New Zealand Institute, the *New Zealand Journal of Science and Technology*, the annual reports of the Royal Societies of South Australia and of Tasmania, and many other periodicals.

During the year a great deal of repair and renewal work has been carried out at the station to buildings, launch, and plant, and the whole is kept in a very satisfactory and excellent working condition.

I have, &c.,

GEO. M. THOMSON,

Chairman of the Board.

The Hon. the Minister of Marine, Wellington.