

Australian States with regard to the system of collecting statistics in force in these countries. The most complete system seems to be that supplied by the Fisheries Board of Scotland, which is fully explained in a memorandum which is forwarded along with the statistics forms sent. The information in this connection obtained from these countries will be most helpful in planning a system suitable for this country.

9. The more up to date the methods employed by fishermen are, the more fish he will catch, the higher will his earnings be, and the public will have a more plentiful and regular supply of fish. Trawling has undoubtedly largely increased the fish-supply, and we hope to see a considerable increase in this system of fishing as new grounds are opened up. Trawling is not, however, the only means of capturing fish on a large scale; there are others which might be employed with advantage in this country, and assist in largely increasing the fish-supply. The methods I refer principally to are purse-seining, long-lining, and trammel and drift netting.

The purse seine can be used for taking our pelagic forms of market fishes as well as other kinds, and can be worked on almost any grounds. It is used extensively by the Danish and other fishermen in the North Sea, and on a very large scale by the American fishermen on the Atlantic coast for taking a variety of fishes, and is the principal means employed on the mackerel-fishing grounds. It was introduced into Japan about thirty years ago. Hundreds of these nets are now in use on the southern coast of Japan, where it is used in catching almost all kinds of fish, including sardines and herrings.

Long-line fishing is now being successfully practised by a few fishermen in the Hauraki Gulf and Cook Strait, and I have no doubt but that in a few years it will be in pretty general use on the extensive line-fishing grounds that exist round our coasts.

The objection raised by fishermen a few years ago to long-lining was that sharks were too plentiful, and would take away all the lines. The experience of the few who are now using long lines does not bear this out. Australian fishermen have lately taken to long-lining with satisfactory results, and this system is rapidly extending round the coast of New South Wales.

Of the 4,330 miles which comprises the coast-line of the North, South, and Stewart Islands, I think it is safe to say that quite two-thirds is rocky and weedy, so that we must expect that a very large percentage of our fish-supply must always come from the varieties of fish which inhabit the rock and weed areas of our coast-line. It is therefore important that a good deal of attention should be given to the improvement of the methods of catching fish on these grounds. Besides long-lining, I would also recommend the use of the trammel net, which is used effectively in other countries, and its use, I am convinced, would largely increase the take of fish.

The outfit of the exploration vessel should include a purse-seine, long-line, and trammel-net outfit, and demonstrations in the use of these should be given when working near any of the fishing-ports, fishermen being invited to accompany the vessel for the purpose of acquiring a knowledge of the construction and use of any new gear used.

MOLLUSCS.

Very few countries in the world possess such extensive and prolific natural oyster-beds as New Zealand does, and certainly no country in the Southern Hemisphere can compare with it in this respect. In the north we have extensive rock-oyster beds, and in the south the splendid dredge-oyster beds in Foveaux Strait. Thirty years ago the rock-oyster beds extended from the Bay of Plenty to the North Cape on the east coast—*i.e.*, all the sheltered rocky foreshore along this extent of coast-line was covered with oysters; and on the west coast, in all the estuaries from Cape Maria van Diemen to Kawhia.

The supply of these oysters was considered at one time to be inexhaustible, but indiscriminate waste caused by the system of picking employed soon showed that this idea was a false one, and in time section after section of the coast had to be closed in order to allow the beds to recuperate.

When I made my first fish inspection of the rock-oyster beds in 1900 I realized that in order to prevent their depletion quite a different system of picking would have to be adopted. Leasing in small areas was at first proposed, but there were several objections to this, and I recommended that the Department should undertake the picking and wholesale marketing. There was some delay in giving effect to this system, and it was not until 1908 that it was adopted. From the commencement it has proved a great success; there has been a steady improvement in the beds everywhere; section after section of the foreshore which was depleted under the old system of licensed picking has again become productive, and in a very short time the whole of the one-time oyster-producing foreshore in the Hauraki Gulf will once more produce oysters in abundance. While the most important feature of this system of picking is the conservation of the beds, yet at the same time it allows oysters to be sold wholesale at a reasonable price, and also yields the Department a substantial annual profit.

There are still great possibilities for extending the rock-oyster beds along the coast from Bay of Plenty to the North Cape, by replanting and better protection. The increasing demand for oysters makes it necessary that this work should be steadily persevered with by the Department. It is work which is profitable in every sense of the word, as it provides a considerable amount of employment, increases the supply of a necessary food, and cannot fail to yield a profit to the Department.

Foveaux Strait Oyster-beds.

Oysters were discovered in Foveaux Strait about 1870, and since then the beds have been dredged year after year. In 1906 the Marine Department had a survey made of the beds. Mr. R. Hunter, who was in charge of the work, says in his report to the Department, "We found the beds extending eleven miles W.S.W. from Waipapapa Point to ten miles E.S.E. from Centre Island (with broken intervals between), a distance of twenty-five miles." Mr. Hunter located twelve beds, ranging in size from half a mile to two miles in width, the depth of the water varying from 12 to 20 fathoms.