

The rod catch by selling-license holders shows a great decrease in comparison with previous years. The total weight taken in the 1937 season by eleven rods was 5,990 lb. (average catch per rod, 545 lb. or 36.3 fish), and in the 1936 season for eleven rods the corresponding figures are 4,375 lb. (398 lb., or 25.7 fish). This season the total weight of fish caught by eighteen holders of selling licenses was 2,943 lb., with an average catch per rod of 163.5 lb. or 8.7 fish. It will be noticed that the average weight of the salmon is unusually high this year.

The net catches in the Waimakariri River show an improvement on the exceptionally poor results obtained last year, although the water conditions were for the most part unfavourable for successful netting operations. The river-bed, however, was in much better order for netting than it had been during the previous summer, when its contour had been considerably changed by the effects of heavy floods.

ATLANTIC SALMON.

To obtain parent fish for the supply of ova for the hatchery at Te Anau, a rack was constructed in the Upokororo River on the same site as was used last year. Owing to alterations in the contour of the river-bed from the deposit of shingle due to flood effects an appreciable amount of extra work was involved to prepare the site so as to provide a supply of water for the fish-pens and a good flow of water through the trap. This preparatory work was hindered by the effects of a flood on 7th March. The rack was completed on 20th March and the first salmon were taken on 24th March. The best runs of fish come up with a flood that occurred on 12th to 14th April and with another good fresh that came between 2nd May and 8th May. The rack was opened out on 30th July. The largest fish stripped was a female of 8 lb., but bigger female salmon were seen to come up in the month of August. Three male salmon showing the red coloration (normal in British salmon, but abnormal in New Zealand, and which in my opinion indicates sea-run fish) were taken, and several very small males of 1 lb. to 1½ lb. weight came to the rack, but were not kept for stripping. The total take of salmon was much lower than in the previous winter. The following statement shows the numbers of each sex taken each month :—

—				Males.	Females.	Totals.
March	..	..	..	3	6	9
April	..	..	..	26	36	62
May	..	..	..	23	52	75
June	..	..	..	9	6	15
July	..	..	..	4	9	13
				65	109	174

The total number of ova collected was 208,000. They hatched out with little loss, and the resulting fry were liberated in the upper waters of the Upokororo River.

Very little information is available regarding Atlantic-salmon fishing in the 1937-38 season. Some fish were reported to have been caught in tidal waters at the beginning of the season, and in October a salmon of 8¼ lb. weight, but in poor condition, was taken by an angler in the Waiau at Clifden. According to the report of the Angling Committee of the Southland Acclimatization Society, published in that society's annual report for the year ended 31st March, 1938, "A fair number of trout and salmon were got in the Waiau between Lakes Te Anau and Manapouri," and the stock seemed to have been maintained at about its former abundance.

MARINE FISHERY RESEARCH.

Investigational work upon sea fisheries has been conducted by Mr. A. M. Rapson, M.Sc. This department of the work of the Fisheries Branch has for long been in a very rudimentary stage in comparison with what has been done in many other countries, but a definite step forward has been made this year by the allocation of a whole-time worker for marine research and by the provision of the Sydney Street Laboratory to accommodate both the marine and fresh-water biologists. No departmental fishery-research vessel being available, Mr. Rapson has made use of trips on commercial fishing-vessels for the collection of data and material at sea. In the early part of the year he continued his observations on the spawning of the commercial fishes, more particularly the flatfish in Admiralty and Tasman Bays, and also made some special observations in the flatfish stock, with special reference to size and abundance in the lower part of Pelorus Sound. Reference to the Biologist's work in collaboration with the District Inspector of Fisheries in connection with toheroa observations on Waitarere and Muriwai Beaches was made in the Toheroa Section above.

On 8th February, 1938, Mr. Rapson sailed on the Royal Research Ship "Discovery II" to observe and to take part in the work that is being carried out under the auspices of the Discovery Committee of the Colonial Office in connection with whale research in the Antarctic seas. An understanding of the laws governing the occurrence, growth, migrations, and general life-history of whales, and a rational conception of the effects which are produced on the stocks by the commercial exploitation of these marine mammals by man, depends upon marine biological research, which is fundamentally the same for general marine fishery as for whaling problems. The opportunity of making a voyage of about three months' duration under working-conditions on a ship possessing the most modern equipment for marine biological investigations and carrying a highly qualified and experienced staff of scientists has undoubtedly been of considerable benefit to our young Biologist, and hence to the Department and to the Dominion. Incidentally, Mr. Rapson has also profited by the opportunity of making some study of both practical and biological aspects of the whaling and fishing industries in the Falklands, South Georgia, Capetown, Natal, and Australia.