

human and other enemies; and it is very necessary to shed the optimistic views formerly so freely expressed as to the early development of a big salmon industry, and rather to pursue a cautious and conservative policy. One significant fact about the salmon of the Waimakariri is that this river, like all the Canterbury rivers, has been stocked entirely by the natural migration of adult salmon which had been spawned in the more southern rivers. It is reasonable to assume that this recruitment is still taking place, and unless the abstractions by fishing can be shown to result in an undue check upon the increase of the stock in this river, there appears to be no ground for the further restriction of the netting at present allowed. It may be, and probably will be, necessary to modify our administrative policy with respect to the quinnat fishing, and to alter the regulations for both net and rod fishing in accordance with future needs. A more scientific study of the whole conditions with the object not only of conserving but of increasing the stock is our first duty. The prevention of illegal and unsportsmanlike methods of taking these fish is a further necessity. The restriction of netting licenses to the *bona fide* professional fisherman and the cutting-out of the amateur net man has certainly been a step in the right direction. But to abolish netting entirely for the benefit of anglers and on the ground that special rod licenses would yield a bigger revenue is not a policy to be recommended.

ATLANTIC SALMON.

The winter run of fish to the Upokororo River was again depended upon for the capture of salmon required for purposes of artificial propagation. A total of 411 fish was taken for stripping—200 males and 211 females. The conditions for trapping spawners were rendered difficult by the prevalence of floods throughout the greater part of the season; but in spite of this the results showed an improvement on those of the previous year. The salmon were reported to be on the whole slightly larger in size and in better condition than in any season previous, and the yield of eggs per fish averaged 3,300, as against 2,800 for the preceding season. The total number of eggs collected was 659,000. The eggs were apparently not up to the usual standard of vitality, the loss of incubation amounting to 61,000. Of the fry hatched out and liberated 571,000 were planted in the Kakahi River and other tributary streams for the stocking of the Wanganui, and 27,000 were liberated in the Mararoa River for the purpose of helping the run of smolts to the tidal waters of the Wairau. In addition 15,000 fry were hatched out and liberated by the Southland Acclimatization Society at the head of little Lake Mavora. Of the stripped fish 150 were marked with tags obtained through the High Commissioner. These tags are of the pattern used in Scotland and England. Being more difficult to apply, and thus causing more distress to the fish, they did not commend themselves to the hatchery staff, who expressed a preference for the Irish pattern previously used. During the fishing season some 700 to 800 Atlantic salmon were taken by anglers in Te Anau Lake. The majority, as usual, were caught at the outlet of the Waiau, but this season the lake at the mouth of the Upokororo River has also been successfully fished. A few fish were caught in tidal waters near the mouth of the Waiau.

WHITEBAIT.

Generally speaking the 1927 season was much more productive than the average of recent years. Especially good catches were reported from the west coast rivers of the South Island. The fishing in the North Island also showed an improvement on recent years. Most of the east coast rivers of the South Island, however, yielded comparatively poor results. Owing to the difficulty of collecting data it is impossible to give comprehensive statistical returns, but the following returns give an approximate idea of the yield from some of the localities where whitebaiting is carried on as an industry: Napier, 27 cwt.; Westport, 538 cwt.; Greymouth, 160 cwt.; Hokitika, 925 cwt.; Ashley River (partial return—five nets only), 21 cwt.; Kaiapoi, 340 cwt.; Invercargill, 100 cwt. The returns show an average market value per hundredweight varying between £3 15s. and £13 16s. for different ports.

Early in the year a questionnaire was sent to acclimatization societies with a view to obtaining information as to the necessity for instituting a close season for this fishing. Owing to the inaccessibility of many whitebait-fishing localities the information so obtained is not so complete in many cases as is desirable as a basis for regulations. The matter is further complicated by the seasonal and local variations in the run of whitebait, and by the widely differing conditions under which the fisheries are carried on. Compared with the conditions in earlier years there is no doubt but that depletion has been almost universal, but its effects are more evident in some rivers than in others. I think there can be no doubt about the benefits to be derived from a limited fishing season. Most of the acclimatization societies and many of the whitebait-fishers are in agreement with this policy. Proposals for a comprehensive modification of whitebait-fishing regulations will be submitted at an early date.

SCIENTIFIC INVESTIGATIONS.

Mr. M. W. Young, who was appointed as Marine Biologist to the Marine Department in April, 1926, while engaged at the Marine Biological Station, Portobello, was transferred in September, 1927, to Wellington, where he has been enabled to work in closer touch with departmental headquarters and within easier access to the north, where the more urgent of our fishery biological problems are to be found. His services have been of considerable benefit to the Department, especially in view of the fact that administrative duties have in the last twelve months left me very little time for the continuous and detailed work necessitated by scientific research.

Danish Seining Investigations in Hauraki Gulf.

As mentioned in my previous reports, an inquiry into the condition of the snapper fishery in Hauraki Gulf was commenced at the end of 1925, when, with the help of the Auckland Inspectors of Fisheries, measurements and other observations of the catches of commercial fishing-vessels were