Quinnat Salmon.

The run of salmon last season (1920) showed a considerable increase on the two previous seasons. In the early part of the spawning season the prospects of a good run were not at all encouraging, and on that account it was not considered advisable to incur the expense of sending a gang of men to the up-country rivers to collect eggs. The Hakataramea River was unusually low all through the season, and practically no salmon entered that river, but a lot of large fish spawned in branches of the Waitaki, below where the Hakataramea joins that river. Fifty thousand eggs were taken from fish netted in these branches. Reports were received late in the season that large numbers of fish were spawning in the Ahuriri and rivers beyond the head of Lake Ohau. The manager from Hakataramea and an assistant made an inspection of these rivers and found them full of salmon, most of them spent fish, but it was then too late to collect eggs.

A number of salmon went up the Clutha River last season, and spawned in the Clutha above Cromwell and in tributaries of Wanaka Lake. This season (1921) there has been a very large run of salmon in the Waitaki and Rangitata Rivers, and a good many went up the Clutha again this season.

The first salmon were seen in the Waitaki River on the 23rd December, 1920, but it was not until the 19th January that the first was caught by anglers. From that date on to the 6th April they were taken in considerable numbers.

The work of collecting salmon-eggs was commenced on the 1st April. The rivers netted were the Dobson, Ahuriri, Hakataramea, and a branch of the Waitaki. The Hakataramea, which in ordinary seasons has been by far the best river for getting eggs from, was again unusually low all through the season, and on that account very few salmon attempted to come in.

Partly for the purpose of collecting eggs, and also to prove how salmon were running in the Clutha and its tributaries this season, I netted two tributaries of Lake Wanaka—viz., the Matatapu River and Pembroke Creek. Very few salmon came into the creek, but there was a fair run in the Matatapu. We had the nets washed out a good many times, and on that account we were able to get very few fish. Altogether fifty-one salmon of a small average size (about 10 lb. to 12 lb.) were taken, and about 75,000 eggs collected.

The manager at Hakataramea says in his report, "The run of salmon this spawning season is the largest we have experienced in New Zealand. The salmon are also larger in size, many of the fish, both at the Dobson and Ahuriri Rivers, being from 4 ft. to 4 ft. 4 in. in length."

The number of eggs collected is as follows: Hakataramea, 293,000; Ahuriri, 389,000; Dobson, 451,000; and Pembroke, 75,000: total, 1,208,000.

Further evidence of the spread and increase of these salmon along the coast has lately come to hand. Besides the large run in the Waitaki and Rangitata, and also in the Clutha, large numbers of small salmon were caught off the Timaru wharf and breakwater by residents when fishing for sea-fish. It is reported that as many as forty were taken by one man in a day. Schools of salmon-smolts were off Banks Peninsula in October. Fishermen netting in the bays there caught numbers in their nets. The specimens sent for identification were salmon-smolts, from 1 lb. to 2 lb. in weight. The quinnat salmon is now so solidly established that fishermen should be allowed to take them for sale, and I think it is reasonable to expect that in a very few years large quantities will be on the market, and the country will begin to reap a rich return for the money expended in introducing them.

I strongly urge that the work of stocking rivers in different parts of the Dominion be vigorously pushed on. I attach copy of a report from Constable Berry for publication with this report.

Acclimatization of Atlantic Salmon and other Fishes.

The splendid success which has attended the systematic effort made by the Government to establish the quinnat salmon should be sufficient encouragement to persevere with the Atlantic salmon on the same lines. Past experience has shown that, with anadromous migratory fish like the Atlantic salmon, small shipments of eggs brought out at intervals of several years are useless. If the work is carried out systematically—that is, by making importations of from half a million to a million eggs each year for five or six years in succession, and planting the young fish in one of our best rivers—I have no doubt that this splendid fish would be established. I would recommend that the Department approach the acclimatization societies with a view of getting them to provide part of the money required for importing the eggs.

As I have stated in a previous report, apart from what has already been accomplished there is an immense amount of profitable acclimatization work yet to be done, and I would recommend that as soon as money is available attention should be given to the introduction of several of the fishes which I recommended in my report for the year 1919.

Government Salmon-hatcheries.

The buildings, ponds, fences, &c., at the Hakataramea Hatchery have been kept in good order during the year. The manager and his assistant painted all the buildings. They also did a large amount of willow-planting on the river-banks, to prevent erosion at a point near the hatchery. The manager in his report says: "The Public Works completed the river-protection works in April, and the groins and stop-banks are in good order. So far there has not been a flood high enough to test them. The erection of the new hatching-house was completed on time by the contractors, Messrs. James Craig and Co. It is a substantially built, roomy, and well-lighted building. A new concrete intake race for the hatchery water-supply was also put in. The concrete walls of the four ponds which were broken down by the flood of August, 1919, were rebuilt during the year, and all the ponds are now in good order again."

The water-supply flumes at the Pembroke and Maori Creek Hatcheries were repaired, and the hatching-sheds put in order for the coming hatching season.