deteriorate the trout-fishing, such as an increase in the number of anglers, a succession of unsuccessful spawning seasons, insufficient stocking, or diminution of food-supplies. It is obvious that the appearance of millions of young quinnat in the tributary streams will have some effect on the growth of young trout by the additional competition for food which is thus introduced. At the same time, these young quinnat will afford an addition to the food-supply of big trout. There may be competition between quinnat and trout for the most suitable spawning-beds; the quinnat may drive away trout from their wonted spawning-grounds just as rainbow trout have been known to drive off brown trout. There is need for direct information on these points, and it can only be obtained from proper observations. Unfortunately, we have insufficient facilities for making such observations, although we may expect some progress in this direction from the recently organized efforts in fresh-water fishery research which are being made in connection with the Acclimatization Societies' Association's scheme. If acclimatization enterprises are to be regarded as anything more than gambling with the forces of nature, the initiation of such enterprises must carry with it more responsibility than has hitherto been recognized — responsibility for the scientific consideration of possible results and the scientific observation of actual results.

Atlantic Salmon.

For the capture of salmon to provide eggs for the hatchery at Te Anau a rack was placed at the usual site in the Upokororo River. In previous years one of the chief difficulties experienced during floods was the undermining of the base of the rack. This season the shingle holding down the foot of the rack on the lower side was enclosed in wire netting to prevent scouring. However, it so happened that the weather was particularly dry, and there was no considerable flood to test the efficacy of this arrangement.

While the rack was being erected a pound net was fixed in the river. The first salmon came into it on the 10th April. The rack was completed on the 17th April. The run of salmon was poor and of shorter duration than usual. Between the 9th July and the 22nd August only seventeen salmon were trapped. The total number of fish taken was 255 (169 males and 86 females). From these 240,000 eggs were collected and laid down in the hatchery at Te Anau. These were handed over to the officers of the Southland Acclimatization Society, at whose hatchery the final stages of incubation were conducted and by whose staff the fry were distributed in the Upokororo and Mararoa Rivers.

Owing to the evident depletion of the stock of this species in Lake Te Anau and the associated rivers, it was decided that more restrictions on the fishing were desirable. Amended regulations were therefore gazetted in September, 1930, which aimed at diminishing the total abstractions of Atlantic salmon, and especially at preserving the recently spent or nearly ripe fish.

The Upokororo River was closed to fishing except for the period from the 19th December to the last day in February, and all other methods except fly fishing were debarred, and a limit of three fish per day was placed on the catch. Boat fishing for Atlantic salmon was prohibited during the month of October.

The fishing season was considerably affected by the unusually wet summer of 1930-31. This rendered certain waters unfishable, or fishable only with difficulty, and diminished the number of anglers who went out. The Southland Acclimatization Society estimates the total number of salmon taken by anglers at Te Anau as between 300 and 400 for the season—a considerable reduction on the previous year's total.

As to the cause of the depletion in the Atlantic salmon stock of Te Anau, there is no doubt but that the two most important factors which have been operating throughout the last eight years have been the taking of eggs for the stocking of the Wanganui River, which unfortunately has produced no apparent results, and the increased attention which has been paid by anglers to this fishing. With rapidly improving transport facilities, the number of anglers visiting Lake Te Anau has increased very considerably from year to year until last season.

With a view to establishing a fresh sea-running stock in the Waiau River system, the project of making a further importation of Atlantic-salmon ova from Britain was proposed by the Southland Acclimatization Society, whose council offered to share half the cost with the Government. It seems likely that good results would be achieved by such an importation, but further consideration of the project has been deferred owing to financial conditions.

Whitebait.

The whitebait season compared unfavourably with that of the previous year. The decline in catch, however, may be attributable rather to the wet, cold, and unfavourable weather than to any reduction in the runs of fish. Statistics of catches in the strict sense of the word are not available, but our returns from the Westland centres are believed to be approximately correct, and are shown below in comparison with those of previous years:—

——	1927.	1928.	1929.	1930.
	Cwt.	Cwt.	Cwt.	Cwt.
Hokitika and neighbourhood ..	925	463	1,319	914
Greymouth and neighbourhood ..	160	100	252	230
Westport and neighbourhood ..	538	600	No return obtained.	200

Generally speaking, the whitebait catches in other parts of the Dominion show a decline. The problem of these fisheries is further discussed in the section of this report dealing with scientific investigations (p. 23).