

especially in the southern rivers, provided about 74 per cent. of the production for the 1943 season, but for most South Island rivers reports of better runs than average were received. An exception was North Canterbury, where the fishing was not so good as last year. In the North Island inclement weather interfered with the fishing quite considerably. In the past thirteen years the estimated totals have three times exceeded 4,000 cwt. and closely approached 5,000 cwt. Five years have provided totals between 3,000 cwt. and 4,000 cwt., two between 2,000 cwt. and 3,000 cwt., and three times the total has fallen below 2,000 cwt. It is not possible to say with certainty what factors are responsible for these variations. It might be mainly a matter of successful survival of spawn or of total quantity of spawn deposited, which will depend on the number of adults (a matter of escapement from fishermen and other predators) that survive to spawn and that can find access to a suitable spawning-ground, in all of which weather plays an important part. Other factors concerned are the survival of the young during their period, presumably about half a year, of sea life. This will be affected by the abundance of suitable food organisms as well as by the presence of predators. All these factors are capable of being elucidated by appropriate methods of investigation which it is hoped to undertake in the future. The most immediate requirement is the provision of a really comprehensive record of the catches that are made by fishermen, as is now done in connection with sea-fishing operations. For this reason it is recommended that a system for whitebait-fishing licenses should be established as early as practicable. The majority of the whitebaiters themselves have for a long time expressed a desire for this, as well as the local Inspectors, who have the onerous duty of attending to the enforcement of regulations which, from the nature of this fishery, are necessarily somewhat complicated.

FRESH-WATER FISHERIES

Quinnat Salmon

The quinnat-salmon hatchery at Hakataramea was not in operation for the 1943 season.

The 1943-44 fishing season opened promisingly with an early appearance of salmon at the mouths of some of the North Canterbury rivers, 2 fish being taken in the Ashley River mouth on 8th November. By the middle of January quinnat were running in fair numbers in the Waimakariri and Rakaia Rivers. During the months of February, March, and April, when the best runs normally take place, the big rivers were almost continuously in flood and very little successful angling was possible. In contrast to the rivers which are fed by the melting snow and mountain rains of the Southern Alps, the Ophi River, for instance, provided fairly good fishing throughout the season, 1 fish being caught in January, 31 in February, 111 in March, and 53 in April, the average weights for the successive months being 22, 14.9, 16.4, and 15.3 lb., with a general average of 16.0 lb. These figures relate to rod-fishing at the mouth of the river only, and are available from records kept by Mr. Owen Hanifin and reported by the local Inspector of Fisheries, Mr. F. W. Pellett.

The records obtained from returns sent in by persons holding licenses for selling salmon are summarized in the statement given below :—

Quinnat Salmon, 1944

	Males.	Females.	Sex not given.	Totals
<i>Returns from Rods</i>				
Ashburton River, 4/4/44 to 17/4/44 (one rod) —				
Number of fish caught	..	2	..	2
Total weight	..	24 lb.	..	24 lb.
Average weight	..	12 lb.	..	21 lb.
Rangitata River, 15/1/44 to 15/5/44 (five rods)—				
Number of fish caught	14	11	8	33
Total weight	214 lb.	161 lb.	110 lb.	485 lb.
Average weight	15.3 lb.	14.6 lb.	13.5 lb.	14.7 lb.
Ophi River, 28/2/44 to 30/4/44 (one rod) —				
Number of fish caught	..	..	29	29
Total weight	..	..	438 lb.	438 lb.
Average weight	..	..	15.1 lb.	15.1 lb.
Rakaia River, 14/2/44 to 15/5/44 (six rods)				
Number of fish caught	12	22	1	35
Total weight	179 lb.	268 lb.	4 lb.	451 lb.
Average weight	14.9 lb.	12.2 lb.	4 lb.	12.9 lb.
Combined rivers, 15/1/44 to 15/5/44 (eleven rods)—*				
Number of fish caught	26	35	38	99
Total weight	393 lb.	453 lb.	552 lb.	1,398 lb.
Average weight	15.1 lb.	13 lb.	14.52 lb.	14.13 lb.
<i>Returns from Nets</i>				
Waimakariri River, 2/2/44 to 31/3/44 (one net) —				
Number of fish caught	25	15	..	40
Total weight	271.5 lb.	151.5 lb.	..	423 lb.
Average weight	10.86 lb.	10.1 lb.	..	10.6 lb.

* Two rods fished on two rivers during season.