H.—15.

In addition to the fish taken for hatchery purposes, 147 male and 216 female salmon were taken and liberated above the rack to spawn naturally in the Hakataramea River. Thirty-six male and twenty-two female brown trout, together with a single rainbow trout, were also trapped and liberated above the rack.

Consignments amounting to 400,000 quinnat salmon (eyed) ova were sent to the Westland Acclimatization Society for the stocking of West Coast waters. From the rest of the ova approximately 585,000 fry were planted in the Hakataramea River, being distributed in the portion between fourteen and twenty-five miles above the hatchery. Fifteen thousand were placed in the five rearing-ponds, to be liberated as yearlings after marking. As in the preceding year, there was again an unusually late run of fish seen in the Waitaki River, some of which entered the Hakataramea. The definite run was observed on 22nd July and odd pairs of fish were seen entering the Hakataramea and spawning in the month of October.

The Fish Culturist paid his usual visit for the inspection of Deep Creek, a tributary of the Rangitata River formerly used as a spawning-place by considerable numbers of quinnat salmon. Very few redds and spawning fish were seen, although the Rangitata run had been much better than average, and it is evident that the change in the character of the confluence of Deep Creek with the main river brought about by the shifting of the course of the Rangitata and the disappearance of the former deep channel with one strong stream of water into the main channel of the Rangitata has depreciated the value of Deep Creek as a spawning and nursery ground for Rangitata salmon.

Reports from the Clutha state that an unusually large number of spawning salmon were seen in that river above Cromwell, and many redds were exposed to view by the abnormally low level to which the water fell in the winter of 1937.

In all the snow-fed rivers of Canterbury there were practically continuous floods throughout February and March, 1938, and salmon-anglers had a very poor fishing-season in consequence. Records kept by Mr. F. W. Pellett for the Rangitata show that from 1st February to 31st March there were forty-six days on which the river was too turbid to be fishable. Twenty-one salmon were caught in the Rangitata in February and twenty-four during March, but one of 18 lb. had been caught near Arundel as early as December. The Opihi, however, was fishable for most of the period of the principal salmon-runs. Records of fish caught at the mouth of the Opihi show that 124 quinnat salmon were caught by thirty-four anglers between 26th January and 11th April. The total weight of these fish was 2,507 lb., the largest fish caught was 36 lb., and the average weight was 20·2 lb. This season anglers on the Opihi were more successful in the month of February than they were in the same month last year, but the most productive period was the first half of March as in 1937.

The returns sent in by holders of selling licenses have been tabulated in the usual form, and with the net-fishing returns, are summarized in the table that follows:—

Quinnat Salmon, 1938.								
					Males.	Females.	Sex not given.	Totals.
9			Return	from H	Rods.			
Opihi River, 16/2/38 t	o 15/3/3	38 (one re	od)—			1		I
Number of fish car		`	,				7	7
m 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1							152 lb.	152 lb.
							21·7 lb.	$21 \cdot 7$ lb.
Rakaia River, 3/2/38 t	50.18/3/3							
Number of fish car	$_{ m ight}^{'}$	`			35	56		91
713 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					693 lb.	889 lb.		1,582 lb.
, , , , , , , , , , , , , , , , , , , ,					19.8 lb.	15.9 lb.		17.4 lb.
Rangitata River, 26/1/	/38 to 17	7/3/38 (t	en rods)—	-				
Number of fish car					10	14	. 2	26
rrs . 1 . 1	.,				225 lb.	251 lb.	52 lb.	528 lb.
4 ~ 1,					$22 \cdot 5$ lb.	17.9 lb.	$26 \cdot 0 \text{ lb.}$	20·3 lb.
Waimakariri River, 8/5	3/38 (on	e rod)—						
Number of fish cau					2	1		3
FY3 . 3 . 4 . 7 .					33 lb.	16 lb.		49 lb.
					16·5 lb.	16.0 lb.		$16 \cdot 3$ lb.
Waitaki River, 1/5/38	to 15/5,	/38 (two	rods)					
Number of fish car	ight '				20	4	6	30
Total weight					482 lb.	76 lb.	74 lb.	632 lb.
Average weight					24 · 1 lb.	19·0 lb.	$12 \cdot 3 \text{ lb.}$	21 · 7 lb.
Combined Rivers, 26/1	/38 to 1	5/5/38 (e	eighteen r	ods)—		1		
Number of fish cau					67	75	15	157
					1,433 lb.	1,232 lb.	278 lb.	2,943 lb.
Average weight							18·5 lb.	18·7 lb.
			Returns	from I	${ m V} ets.$			
Waimakariri River, 27/	1/38 to	31/3/38	(three ne	ts)—				
Number of fish cau					251	228		479
	٠٠.				3,132 lb.	3,104 lb.		6,236 lb.
Average weight			• •		12.5 lb.	13.6 lb.		13.0 lb.
-1,01000			, .		== 0 10.	10 0 1//	• •	10 0 10.