

sense that they work continuously at this fishery throughout the year, and there is of course a considerable variation in the amount of fishing done by those returned under the "part-time" category. The returns of the quantities landed have more significance, but these figures also require to be read bearing in mind the fact that it has been impossible to get anything like complete records. Except for the fishing port of Moeraki, there are no statistics of crayfish-landings for the whole Otago District, although from our general information it is known that a considerable amount of crayfishing was carried on at Puketeraki, Taieri Mouth, and Port Chalmers, and considerable quantities of crayfish were frozen for export at Port Chalmers and Dunedin. Crayfish were also canned at this centre.

The Comptroller of Customs has provided the following information regarding the quantity of frozen crayfish exported from New Zealand during the year ended 31st March, 1934 :—

Exporting Port.			Quantity.	Value.
			Cwt.	£
Auckland	..	..	409	1,490
Lyttelton	..	..	297	1,367
Dunedin	..	..	2,022	6,431
Total	..	..	2,728	£9,288

The increased intensity of fishing arising from the demand for export may best be shown by taking four of the principal crayfish ports and comparing them for the two last years :—

Port.				1932-33.		1933-34.	
				Quantity.	Value.	Quantity.	Value.
				Cwt.	£	Cwt.	£
Auckland	..	..	..	1,051	1,033	1,587	1,420
Mercury Bay	..	..	..	148	147	2,348	1,072
Akaroa	..	..	..	50	25	1,197	834
Moeraki	..	..	..	50	20	2,600	1,260
Totals	..	..	..	1,299	1,255	7,712	4,586

The total quantity for those four ports has increased nearly 500 per cent. and the total value by nearly 300 per cent. The relative increase for Auckland is not so great, because this has always been an important retailing centre. Canning, as well as freezing for export, has stimulated the demand at Mercury Bay, where a considerable quantity was taken for the Zealandia Packing Co.'s factory at Whangaroa, and at Akaroa where Messrs. Irvine and Stevenson have resumed canning operations: the same company also obtained supplies from Moeraki for their Dunedin factory. It is interesting to note that an increased demand for the retail trade has also been indicated—probably owing to the availability of more steady supplies.

With the increased intensity of fishing, the question of whether it was not desirable to place some restrictions on the fishing in order to conserve the stocks became one of some urgency. There was ample evidence of a decline from the abundance of earlier years in cases where the crayfish grounds had been continuously fished. Two ways of "rationalizing" the fishery were suggested—(1) A size-limit (prohibiting the taking of crayfish below a certain length); (2) the protection of spawn by prohibiting the taking of female crayfish bearing spawn. Inquiries showed that the imposition of a size-limit would fall with different weight on the fishermen of different places. At one place, where crayfishing was the principal means of livelihood for the fishermen, a very high proportion of small crayfish occurred in the catches, and the suggested limit of 9 in. would have been a sore handicap to the none too prosperous fishermen. At other places the catches consisted almost entirely of large crayfish, and a size-limit would have made no difference. With regard to the spawn-bearing females, owing to seasonal migrations these occur in proportions which vary widely according to the season and the locality of the ground. In many cases the fishermen themselves voluntarily return to the water most if not all of the crayfish in this condition. Other fishermen cannot afford to do so.

A very comprehensive knowledge of the fishery and the habits of crayfish off different parts of the coast is necessary to enable one to apply restrictions that will be correct from the standpoint of conservation and not unnecessarily hampering to the fishermen, most of whom are at the present time only making a bare living out of their work. It seems likely, however, that in the near future it will be advisable to make regulations prescribing a size-limit and also providing for the protection of spawn-bearing females, or, alternatively, to have a close season, which, however, would require to cover a different period for different areas. Arrangements for a regular system of statistical returns of crayfish-landings are also very desirable.