

Conservation of the Halibut Fisheries

Inadequacy of Halibut Convention Between United States and Canada Calls Attention to the Solution of Mr. Thompson, Proposed Four Years Ago, a Resume of Which Is in the Fisheries Report for British Columbia, 1920.

The halibut-catch landed at Provincial ports during 1919 totalled 19,198,565 pounds, as against 16,697,000 pounds in 1918. Prince Rupert again leads in the landing, with a total of 16,476,270 pounds, to Vancouver's 2,722,395 pounds.

As a result of the investigations and deliberations of the American-Canadian Fisheries Conference of 1918, a treaty has been signed by the high contracting parties and is now before the United States Senate awaiting action. Its important provisions include a closed season on halibut-fishing by Canadian and American vessels from November 16th to February 15th, and reciprocal port privileges. The effect of such a closed season as that suggested is doubtful in the judgment of William F. Thompson, the expert employed by this Department to investigate the halibut-fishery and who in his report published in 1916 has this to say on the subject:

"Recognizing the urgency of the situation, there has been, among fishermen and dealers, a strong sentiment in favor of the imposition of a close season of two months, December and January. This has been perhaps the most widely approved measure of any proposed, and in view of the widespread adoption of closed seasons in conserving other species is worthy of careful consideration.

"To be worthy of adoption, however, it is imperative that a measure be shown capable of conserving the numbers of the species as a whole or in threatened areas, or adequate to increase the number of spawning fish where it has fallen below the margin of safety. The question in any case is simply one of ensuring the existence of a sufficient number of breeding males and females in those large areas now lacking them.

"It is a serious question whether the closed season would not simply result in a more intense fishery during the open portions of the year. It must be remembered that the cold-storage facilities now available render it possible to deliver a supply of halibut all the year round, with or without a close season. There is no question, then, of an interruption of the demand from the consumer, with a consequent lessening of the total called for; and there is, as we shall see, every reason to believe that this demand will be satisfied, whether there is a close season or not.

"The cost of catching is but a small part of the cost of transporting, preserving, and marketing. It could increase manifold before being felt greatly. If the fish may be purchased on the docks in Seattle at 5 cents per pound, as has been done, and sold by the retailers at 25 cents, then an increase of 2½ cents, or 50 per cent of the original cost, would be but 10 per cent of the retail price. Something essentially similar to this has taken place in the fishery, the length of a voyage, and with that the expense of obtaining a cargo, having increased by about 100 per cent in the ten years between 1904 to 1914. That means that the yield per vessel has fallen to a half, yet the total catch landed by the fleet has steadily increased in response to the demand. Such being the case, it is hardly to be expected that the reduction of the fishing-time by a sixth would have much effect even if it were capable of being accepted at its face value.

"The apparent value of the close season during the winter is greatly modified by certain considerations. One of the most prominent of these is the fact that during the two months of December and January the catch is but half that prevailing during the summer months, as is shown on the chart. That is, the effectiveness of such a close season would be half that of a similar one in the summer. Furthermore, the decrease in total catch is in accordance with the diminished catch per unit of gear, and indicates with it the

fact that the two proposed months are the most expensive. Providing the far greater consideration of the future of the banks were not in question, there would be no possible objection to legislating away the unprofitable part of a business year. But, aside from the fact that it is not the bona-fide object of the proposed legislation to increase the immediate prosperity of the industry, it can be shown to have a really detrimental effect on the condition of the banks. The proposed close season would surely put vessels on a better financial basis, encouraging the building of more and rendering them capable of profitable operation on smaller summer catches than is now the case. This would mean the enlargement of the fleet and the closer fishing of the banks, including those considered the least profitable.

"Fishing on these more depleted southern banks off the coast of British Columbia is prevalent mostly in summer, because the catch per unit of gear is at that time highest, and the reliance is on young fish almost entirely. It has been shown that it is these banks which need protection, and if they are to have it, it must come while fishing is being done on them. Instead of that, as has been pointed out above, a winter close season will intensify the fishery, the more so as the most depleted banks are nearer to market than the less depleted.

"Cold-storage plants play an important part in intensifying this result of the closure. They not merely maintain the demand, but tend to counteract the extensive natural increase in price in winter and the decrease during the summer. This results from the absorption of surplus fish in summer for freezing and its sale during seasons of scarcity. There is in the winter, nevertheless, a considerable catch of fresh fish with which the frozen product must compete. The elimination of this catch during several months would without the cold-storage plants apparently stop the consumption, but with them could simply force the laying-by of more extensive stocks of fish frozen during the summer. It is obvious that this has a tendency to impel still better prices in summer and poorer in winter. In other words, there would ensue a more profitable summer fishery, hence a more intensive one. It should be observed in this connection that the near-by banks off the coast of British Columbia yield a medium of small-sized immature fish (chicken halibut) very suitable for freezing. These banks are those fished most intensely in summer and need better, not poorer, protection. A certain measure of the harm might, it is evident, be averted by forbidding the sale of cold-storage halibut during the close season.

"The most generally held reason for supporting a winter close season is that it is designed to protect the halibut during its spawning period. The assumption is that the fleet resorts to 'spawning-grounds' on which are to be found spawning fish congregated from other localities, and that the catch consists to an unusual degree of such fish. However reasonable this may sound, it is impossible to find any basis of scientific fact behind it. On the contrary, so-called spawning-banks are those less depleted than others because less accessible, or because it pays to resort to them only during the winter seasons. It has been demonstrated that at one time the banks now characterized by small immature fish had a population of large, undoubtedly mature, fish, and that their absence is due to the effects of commercial fishing. We therefore come to the anomalous conclusion that protection is proposed for banks which show exhaustion least, as they have a more nearly adequate supply of breeding fish.

"If, however, the claim had been that within the confines of each bank winter fishing was carried on in areas characterized by spawning fish, more weight might be given it. As a matter of fact, however, no proof of such congregation has been found, and observation has not yet disclosed any annual change in average size in one portion of a bank which did not take place in another. The shift in the fish-