

skilled aid of officials, the results could be put into shape for the service of the public. Legislation has done much in regard to the fisheries, but it has often proceeded somewhat hazardingly and without a trustworthy basis of knowledge. Hence conflicting regulations, alterations and amendments have too frequently followed. Special forms of fishing apparatus have been encouraged, others discouraged or prohibited, while the meshes of the various nets have been altered, according to law, at different times. Such legislation may have worked harshly in many instances, though on the whole it has been admittedly beneficial, yet no adequate experiments have ever been carried on with the object of demonstrating for instance the actual effect of mesh regulations. On the one hand, it has been argued that the size of mesh has little effect upon the capture of particular sizes of fish, in the case of certain species; while on the other hand the opposite view has been just as strongly urged. It is patent that such disputed questions could readily be settled by experiments carried on at a scientific station and an unquestionable basis of proved facts provided for future legislative action. Scientific investigations carried on by competent experimenters, would decide, once and for all, these debatable matters. The comparative efficiency, destructiveness, and wastefulness of various methods of fishing, could be ascertained in the same way. Other work would fall within the scope of a marine station, all having a most direct bearing upon the practical and mercantile aspects of the fishing industries. The investigation of the resources of the various areas along the lengthy coast of the Dominion, the thorough examination of extensive regions of the sea bottom and the determination of fishes and special products, peculiar to these various regions, are calculated to place in the fisherman's hands precisely the information which will be most valuable to him. Such knowledge directs him to new and unsuspected grounds, saves him from fruitless trials of unproductive areas, and may even bring before him valuable fishes of whose value and abundance he was not aware. The deterioration of areas once productive, the partial or total disappearance of certain fish, these and other problems can only be solved by the accurate and systematic work carried on from some central station on the coast. The results of such investigation show the causes of deterioration and may lead in some cases to practical methods of restoration to former productiveness. The introduction of new species of great market value and the creation of new industries is one of the readiest and most apparent ways in which science is able to benefit the fisheries. The nature of the food, the conditions of breeding and embryonic life, the presence or absence of enemies and hurtful influences, in short, all the conditions influencing the welfare, growth, and increase of such transferred or newly introduced species, are matters for scientific investigation, preliminary to practical steps. The introduction of the European sole (*Solea vulgaris*) is one of the first experiments which would suggest itself, after the preliminary investigations had been completed. A trial has been made in the United States, but the results have not proved very satisfactory. No doubt many sandy areas, on our own coast, are well adapted for the experiment, and the English sole is now one of the most valuable of food fishes. The London market is being supplied from Norwegian and more distant waters, so inadequate is the supply obtainable in British waters. It is a species, like all the Pleuronectidae, extremely tenacious of life, and its value in the English markets is so high that the introduction of such a fish, if successful, would prove a source of wealth to the fishing population on our coasts. Soles could no doubt be conveyed alive to the London markets, for the voyage is little longer than that of the Norwegian boats, which at present carry on a highly remunerative British trade in this delicious and esteemed fish. But the experimental introduction of new fishes, ranking high in economic importance, is secondary to the full development of the fishing resources of our waters as they at present exist. There is every probability that the thorough and systematic investigation of the fauna of our Atlantic coast, carried on from such a Marine station as Canada ought to possess, would lead to the discovery of fishes of economic value at present existing in our waters though unrecognized and unappreciated. The anchovy has been recorded, though probably determined on insufficient grounds, on the Pacific coast of the Dominion. It is highly