MARINE FOOD FISHES.

Scientific men and skilled experts could alone conduct operations successfully; and as these were performing a work which was designed for the benefit of the community at large, it was felt to be right that the cost should be met out of the public funds.

National fish-culture has thus obtained a recognized place, and is steadily advancing in most civilized countries. Water-farming may, in the near future, under the guidance of science, approach the dignity and importance which are now attached to the cultivation of the soil. Food-factories will no longer be confined to the land, but, at the bidding of science, the waters will "bring forth abundantly the moving creature that hath life," and with fresh emphasis the ancient precept will be repeated, " cast thy bread " (or seed) " upon the waters, thou shalt find it after many days."

The first efforts of fish-culturists were limited to fresh water food fishes, such as trout, or to the anadromous species such as the salmon. By far the most extensive operations were conducted in the artificial breeding of salmon as being a money-yielding fish of great commercial value. Strikingly successful results were reached, both in Europe and America, in restocking exhausted rivers with salmon, in keeping up the supply where heavy drafts threatened scarcity or depletion, and even in establishing fisheries in waters where salmon were previously unknown. Of course, due protection was combined with artificial breeding. Judicions legislative enactments were adopted to regulate the times and modes of fishing and to secure the removal of obstructions to the ascent of the fish to their spawning grounds. The salmon rivers of Scotland, such as the Tay, where salmonculture has been carried on for many years, present the most striking instances of the value of artificial breeding ; while the Doohullah Lakes in Ireland furnish an example of the creation of a valuable fishery by placing artificially bred salmon fry in waters where no salmon had been previously seen.

Similar successful results have been reached in many of the rivers of continental Europe. Still more remarkable have been the results of fish-culture on this side of the Every state in the Great Republic has now its Fichery Commission and Atlantie. numerous hatcheries with qualified experts in charge; while in connection with the United States Fishery Commission-a national institution-a band of scientific men devote their energies to the investigation of fish-life in all its varieties, and a study of the physics of the sea. The work accomplished by this commission has called forth the admiration of the civilized world. The founder-the late Professor Baird-a man of the highest attainments as a naturalist-has been succeeded by Colonel Marshall Macdonald, whose great ability and matchless zeal are admitted on all hands. The Canadian Department of Fisheries has accomplished a work only second to that of the United States Commission; and in the intelligent organization and guardianship of the fisheries, and the practical improvements it has introduced, it has shown what science and practical skill can do in the guidance of these great national industries. Under the veteran fishculturist, Mr. S. Wilmot-a man of European reputation-Canadian pisciculture now compares not unfavourably with that of any other country.

In the United States fish-culture has been for years carried on in salmon, shad, alewives, whitefish and carp. In Canada the artificial propagation of salmon and of the valuable whitefish in the great lakes, has been conducted on a large scale and with successful results. Both the United States and Canada contribute to the maintenance of the highly valuable whitefish fishery of the great lakes by planting each year in their