

under a Fish Culture Branch of the Department of Mines and Fisheries, with headquarters at McGill University. In 1931, Laval University established "la Station Biologique du St-Laurent à Trois-Pistoles" for marine investigations. In 1937 the Quebec Government formed "la Commission de Québec pour l'Etude du Saumon", which is conducting an investigation of the salmon of the Gulf of St. Lawrence. The Biological Board carried on investigations of lakes in the Prairie Provinces from 1926 until 1930, when these provinces took over the administration of their natural resources. For several years afterwards Manitoba attempted to continue these investigations in its own waters.

**Research Conducted in Recent Years.**—The Fisheries Research Board of Canada investigates the fishery problems of the Maritime Provinces and British Columbia, the only provinces at present whose fisheries are administered by the Dominion. The work is done at and from four principal stations, located at St. Andrews, N.B., Nanaimo, B.C., Halifax, N.S., and Prince Rupert, B.C., with a subsidiary station for oyster research at Ellerslie, P.E.I. The Board also operates a station at Grand River, Que., for the fish-handling problems of the French-speaking population of Quebec and northern New Brunswick, and a sub-station at Cultus Lake, B.C., for salmon investigations.

In co-operation with the National Research Council, the Board sponsors a National Committee on Fish Culture, which arranges for grants to university investigators and co-ordinates fish cultural investigations throughout Canada. The two bodies also sponsor a Canadian Committee on Oceanography, to co-ordinate and develop oceanographic and related research.

Research on hydrography, the physical background for the production of fish, includes studies of: (1) The nature, seasonal character, and movements of the waters on the Scotian shelf (continental shelf outside Nova Scotia). (2) Changes in the northern edge of the Gulf Stream. (3) River influence in the Atlantic related to salmon return. (4) The characteristics and movements of the waters of the Strait of Georgia and the Strait of Juan de Fuca over which the Fraser River exerts a dominant influence.

In confined inland waters, susceptible to control, the investigations include: (1) The effects of fertilizing water by adding fertilizers or by flooding land covered with vegetation. (2) "Fallowing" the water, preparatory to planting with desirable fish, by destroying other fish with derris root powder. (3) Making artificial freshets to distribute salmon suitably. (4) Prevention of pollution inimical to fish.

**Ocean Fisheries.**—Those investigated have been: (1) The erratic pilchard fishery of British Columbia (this failed in 1939 and Canadian boats had to go south to the Washington coast). These fish, by means of metal tags placed inside them, have been shown to be part of a stock taken as young off the Californian coast for canning as sardines. (2) The expanding herring fishery of British Columbia, which on the outer coast of Vancouver Island, however, has been steadily declining (the local populations are fairly distinct, mingling but little). (3) The Pacific ling cod, smelt, oulachon, and anchovy fisheries, the last-named a new development in 1939. (4) The Atlantic cod, which has somewhat local populations, in part spawning at different seasons, and with some complicated migrations. (5) The Atlantic haddock, (also with local populations and complicated migrations) which is heavily fished and seems to be decreasing. (6) The Atlantic lobster, more heavily fished than ever in some places (perhaps 60 p.c. of those of catchable size being taken each year as shown by tagging). (7) The Pacific halibut fishery, with limits set to the amounts