

scattered throughout the Province, is centred chiefly on the Great Lakes, particularly Lake Erie which is noted for its blue and yellow pickerel, white bass, whitefish and perch. Other principal species of fish taken commercially are: lake trout, herring or cisco, sturgeon, pike, catfish (including bullheads), carp and suckers. Over one hundred smaller inland lakes are commercially fished, principally those in the northwestern portion of the Province, and careful management of these lakes is essential to ensure continued production.

The types of fishing boats in use vary from small craft to 60-foot tugs, and types of gear vary from the most common gill-nets, pound-nets and trap-nets, seines and baited hooks to small hand-operated seines and dip-nets. Fishing methods and equipment have been rapidly modernized during the past few years. Diesel driven steel-hull tugs have replaced steam-driven wooden tugs. Such aids as depth sounding devices, radar, ship-to-shore and ship-to-ship communications have been developed and a better knowledge of the fish and their movements has been established from biological research findings. Modern icing facilities and transportation methods are in use as well as new types of fishing gear. Nylon gill-nets have replaced cotton and linen nets and a very efficient and economical trap-net is gradually replacing the pound-net in Lake Erie and other waters.

Excellent co-operation and understanding of the complex problems involved in the administration and management of Ontario's freshwater fishing industry by the Government and the fishermen, through their local associations and the Ontario Council of Commercial Fisheries, is working to the advantage of the industry as a whole.

*Angling.*—In Ontario with its estimated freshwater area of 78,747 sq. miles, angling constitutes one of the most widely distributed recreations. There are 144 different kinds of fish in the Province including such species as lake, speckled, rainbow and brown trout, yellow pickerel, black bass, pike and maskinonge. It is difficult to measure the value of sport fishing to the Province but the annual revenue from the sale of angling licences alone (mainly to non-residents, as residents require a licence for Provincial Parks only) is in the neighbourhood of \$2,300,000.

To maintain Ontario's reputation for excellent game fishing the wise management of this renewable resource is a prime factor, and a well-trained field staff of conservation officers and biologists is located in the 22 forestry districts of the Province.

*Provincial Hatcheries.*—Ontario operates 21 hatcheries and rearing stations and excellent results have been produced in the culture and distribution of the various species of commercial and game fish. Hundreds of millions of fry, fingerlings and yearlings, comprising whitefish, herring, pickerel, trout (lake, speckled, brown and Kamloops), maskinonge, bass and ouananiche are distributed annually. Three of the finest trout-rearing stations on this Continent are located in Ontario at Dorion near Port Arthur, at Sault Ste. Marie and at Hill Lake near Englehart.

*Fisheries Research.*—Research in Ontario is carried on in the Great Lakes where commercial fisheries problems are being investigated, and in inland waters where game fish populations are being studied. At the South Bay Mouth Station, Manitoulin Island, research biologists are conducting studies relating to the removal and utilization of the less valuable species and the effects of this removal on stocks of the more valuable commercial and game species. In Algonquin Park a careful record of angling quality is kept for a number of test lakes to allow evaluation of management techniques. Certain of the more barren lakes are being treated with fertilizer to determine the effect on microscopic organisms and fish.

The habits of lake trout and eastern brook or speckled trout are being studied to provide additional information on the proper management of these species. Many authorities believe the increase in the sea lamprey and the drastic drop in production of lake trout in recent years in Lake Huron (including Georgian Bay and North Channel) to be directly related and this has led to an International Agreement between Canada and the United States and the establishment of the Great Lakes Fisheries Research Commission