Gallery of Canadian Fishes

ROYAL ONTARIO MUSEUM OF
ZOOLOGY & PALAEONTOLOGY

GALLERY OF CANADIAN FISHES

A GALLERY displaying Canada's fishes and her vast wealth of fishery resources is now open to the public in the Royal Ontario Museum of Zoology and Palaeontology in Toronto.

The purpose of the exhibit is to acquaint Canadians with the magnitude of this resource. It is appropriate that this exhibit dealing with Canada's most important wildlife resource should be located in the heart of one of the most densely populated sections of the country. The half a million people who annually view the Museum's exhibits will not only have the opportunity of seeing the various species of fish which occur in our streams, lakes, and oceans, but will also be able to view some of them in their natural environments. Familiarity with the number and variety of fishes, gained from this exhibit, will impress the observer with the amazing array of available food, sport, and other native fishes, and it is hoped that this knowledge will help Canadians to enrich their tables, their minds, and even their leisure hours.

This exhibit has been made possible as a result of the combined efforts of the Canadian Department of Fisheries in Ottawa and the Royal Ontario Museum of Zoology and Palaeontology. The Department has supplied specially designed and equipped cases and other cabinet work, scale models of fishing vessels, murals, and an automatic slide projector. The Museum has provided its staff of artists and scientists whose work has resulted in the production of the art work and a series of nearly 200 accurate fish casts, each of which is accompanied by a concise and informative

account of its range, habits, and relation to man. As a result of this co-operation between a Federal Department and an Ontario institution, there is now available an exhibit which is informative and entertaining to the public and of educational value to the students of the elementary and secondary schools of Ontario, some 50,000 of whom are conducted through the Museum annually.

To house this exhibit, the Museum has allotted almost 2,000 square feet of floor space which has been partitioned off from the main gallery. All overhead lighting has been removed from this area and interior case lighting substituted, and the walls and ceiling have been painted a soft blue-green, providing a more natural atmosphere for the subject.

The oak cases, designed specially for this exhibit by the Fairbairn Studio of Ottawa under the joint direction of the Department of Fisheries and the Royal Ontario Museum of Zoology and Palaeontology, were constructed by the Carling Woodcraft Company and are fine examples of Canadian craftsmanship. They are made of rift-sliced Canadian oak, and their clean, graceful lines accentuate the displayed material without competing for attention. Each case is lighted by cold cathode tubing, chosen for its uniform white light which shows the fishes in their true colours.

Four introductory panels, designed to provide basic information about fishes, are located at the entrance. These panels deal with such subjects as body form, colour adaptations, breathing, reproduction, and development. One section, for example, is devoted to the study of the scales of fishes and shows how scales protect the fish from injury, and how in turn they may be used to determine the age of a fish. In a sense some fishes carry their autobiography with them in their scales.

Following the introductory panels are 15 cases devoted to a display of the different kinds of fishes which occur in Canadian salt and fresh waters. Every major group of

Curator of the Museum's Division of Ichthyology, Dr. W. B. Scott, discusses details of a cast with T. M. Shortt, Chief of Division of Art and Exhibits. This is one of the panels devoted to the descriptive series of Canadian Fishes

fishes which occurs in these waters is represented, from the infamous sea lamprey which has caused so much damage to the fisheries of the upper Great Lakes to the bizarre angler fish of the Atlantic Coast. In this series of cases particular attention has been paid to those fishes of commercial, game, or biological interest.

Field trips to both coasts and to many inland waters were necessary in order to obtain colour notes, sketches, and

A typical panel from the descriptive series, showing some members of the Salmon family

The Perch family is illustrated by means of accurate casts and maps showing its occurrence in Canada

other data of live fishes. Plaster moulds of fresh specimens were made in the field and transported to the Museum where the final casts were prepared. These casts are made of plaster, celluloid, or liquid rubber which on drying produces a light, flexible, and durable body. The model is completed by means of the application of pearl essence lacquer (a fish scale by-product) and artists' oil paints to simulate the natural colouring of the fish. The result is a life-like reproduction of the original fish, correct even to the number of scales. The fins may be made of a rubber compound or, for certain species which have clear or translucent fins, plastics such as cellulose acetate are used.

Arranged within the descriptive series illustrating the kinds of fishes are four large diorama, or habitat cases, each showing a particular group of fishes in their natural environment. The four groups of fishes chosen are: two freshwater habitats depicting the lake trout-whitefish association and the muskellunge-black bass group, and two salt water scenes showing the cod-haddock-flatfish association and the albacore-herring group.

Each of these four cases is 8 feet wide, 5 feet deep and 11 feet high. The background is a half circle on which is painted a representation of an underwater landscape. The foreground, emulating the ocean or lake floor, is built up of

Members of the Museum's Division of Art and Exhibits freeing a rubber cast from its plaster mould. The specimen is an Albacore which will be seen in one of the marine groups. The fine specimen from which the mould was made was secured by the Department of Fisheries and shipped from the west coast to the Museum in a frozen condition

wire screening and papier maché, modelled and coloured to represent the mud or rock bottom. It is carefully blended with the background painting and an exaggerated perspective is introduced in an attempt to create the illusion of greater distance.

The lighting in a display of this type is made as nearly uniform as possible, so that highlights and shadows, when painted in, can create the illusion of a distant light source. By using coloured filters a cool, uniform light is produced

Museum artist Archie Reid trims excess rubber from the cast of the Albacore, which will be painted and form the focal point of the Tuna group

Archie Reid shows the completed two-piece mould of a Rainbow Trout

of the intensity and colour necessary for the particular depth portrayed. The fish shown in these habitat groups appear to be without supports, but actually the supports are ingeniously located and cleverly painted to avoid detection. In one instance a section of gill net has been introduced to illustrate how this type of gear ensnares and holds the fish captive. These underwater scenes offer the observer a glimpse of the fishes' private world and create the impression that one is looking through the glass window of a diving bell. They are truly fine examples of the artists' ability.

A school of Pacific Herring is painted on the background of one of the marine groups by T. M. Shortt

Archie Reid places a rubber cast of an Albacore in position in one of the marine groups

Facing the descriptive displays of fishes and the habitat groups are 10 cases containing models of fishing vessels of various types. The models are built to scale, $\frac{1}{4}$ inch to the foot, and are facsimiles of actual vessels now in use on the Pacific Coast, Atlantic Coast, and the inland fresh waters. Models and sketches illustrate the types of fishing gear employed by each vessel. The shape and other characteristics of each vessel shown have arisen as a result of the fishermen's experience over the years, so that every line and flair has a meaning and thus the design of modern

Herring-Albacore marine group

Museum artist Eric Thorn paints in shadows on a Cod in the groundfish group. The fishes in the groups are coloured to represent their appearance under water, not as they appear when caught and removed from the water

vessels has been proven, usually by bitter experience, to be the best available.

Mounted above the cases housing the fishing vessels are two decorative murals. These are the work of the Fairbairn Studio and the subject matter has been treated in simple outline of old gold on a dark red background. The dramatic effect of modern styling has been stressed rather than realism. The first mural depicts the fishing methods of the aborigines: the east coast Indians with their spears, weirs,

One of the three panels of the decorative mural which illustrates the fishing methods of Canadian aborigines

and fire drying for storage; the Eskimo ice-fishing with hook and line, and corraling and spearing; and the western Indians who employed baskets, nets, spears, and rakes for gathering in the natural harvest. The second mural traces the growth and development of the Canadian fishing industry from the days when itinerant European fishermen visited the Grand Banks to the present day with its applications of highly technical devices such as echo-sounders, radar, and ship-to-shore communications.

Arranged in the centre of the display of fishing vessels is an automatic slide projector. This projector will be used to augment the whole exhibit by means of coloured and descriptive slides. Various phases of the fishing industry will be featured, such as the Pacific salmon fishery, the herring fisheries, Newfoundland's famous cod fishery, the gill net and trap net fisheries of the Great Lakes, the processing of fishery products, and related subjects, such as the sea lamprey investigation currently being conducted on the Great Lakes.

It is the sincere hope of the planners and workers of the Canadian Department of Fisheries and the Royal Ontario Museum of Zoology and Palaeontology that Canadians will derive both pleasure and useful knowledge from this display of an important and historic natural resource.

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