

8 GEORGE V, A. 1918

direction. When the region had been injured either in capture or transport, the nearest uninjured region to this was used. The scales were stored in envelopes on which the length of the fish and other data were written. For microscopic study the scales were cleaned and flattened between two slides. In calculating the proportional lengths from the position of the winter rings, the positions of the outer edges of the winter rings were marked on strips of paper so placed that the edge of the paper coincided with the camera lucida image of the antero-posterior diameter of the scale in its anterior part. These strips were then placed on the apparatus devised by Hjort and the proportional lengths read off. For each fish, at least two scales were examined in this way.

### III.—THE FIRST YEAR'S GROWTH.

A number of small Pollock, shown by their scales to be in their first year of growth were obtained. The greater number of these were caught in a shore seine about two fathoms in depth and twenty fathoms in length. The hauls were made in two localities and were as follows:

*A.*—North of Wilson's beach, Campobello island. Wilson's beach is on the western side of Campobello island and faces a stretch of tidal water lying between this island and the islands to the west of it, often called by the fishermen "The River". The Western shore of Campobello island descends somewhat abruptly, and, in consequence, the tidal current comes close to the shore. The hauls were made at about the time of low water on the morning of August 4, at which time many small pollock ranging around 35 cm. in length were seen in schools inshore. The results of these five hauls all made within a mile or two of each other, are grouped together and labelled catch No. 19. The separate hauls are given below.

*Haul No. 1.*—The seine was set a considerable distance from the shore so that the corks went under. The catch consisted of four pollock under 11 cm. and 1 pollock 42 cm. total length, and one flounder.

*Haul No. 2.*—The seine was set so that the cords just remained afloat. The catch consisted of seventeen pollock between 28 and 47 cm. total length, and no other fish.

*Haul No. 3.*—This was a short haul, the seine being set at about its own depth. The catch consisted of a few flounders and skulpins.

*Haul No. 4.*—This was a deep haul, the seine being set at about twice its own depth, the corks being completely under, on a beach covered with kelp. The catch consisted of fifteen pollock under 11 cm. total length, four skulpins, four flounders, and two sea ravens.

*Haul No. 5.*—This haul was made in shallow water and went foul of rocks. The catch consisted of a few flounders and a few skulpins.

*B.*—Bliss island. These hauls were made on the shores of a small island in the bay of Fundy, northeast of Campobello island and southwest of L'Etang harbour, where, as in the case of Wilson's beach, strong tides run. In all, six hauls were made and the catches numbered 28 to 33. Three hauls were made at low water on the evening of August 16, the seine being set in about its own depth. The hauls yielded the following small gadoids:—

*Haul No. 1.*—Two hake.

*Haul No. 2.*—Two pollock, forty-four cod, numerous hake.

*Haul No. 3.*—One pollock, two cod.