

interference with the process. Still, however, these fish have become comparatively very scarce on our coast, so that our people are forced to resort to far distant regions to obtain the supply which formerly could be secured almost within sight of their homes.

It is now a well established fact that the movements of the fishes of the cod family are determined; first, by the search after suitable places for the deposit of their eggs; second, by their quest of food. Thus, the cod, as a summer fish, is comparatively little known on the coasts of northern Europe; but as winter approaches, the schools begin to make their appearance on the northwestern coast of Norway, especially around the Loffoden Islands, arriving there finally in so great numbers that the fishermen are said to determine their presence by feeling the sounding lead strike on the backs of the fish.

Here they spend several months in the process of reproduction, the eggs being deposited in January, and the fishery being prosecuted at the same time. Twenty-five to thirty thousand men are employed in this business for several months; at the end of which the fish disappear, and the fishermen return to their alternate occupations as farmers and mechanics. The fish are supposed to move off in a body to the Grand Banks, which they reach in early summer, and where they fatten up and feed until it is time for them to return to the northeast. It is believed that the great attraction to the cod on the Banks, consists in great part of the immense schools of herring or other wandering fish, that come in from the region of the Labrador and New Foundland seas, and which they frequently follow close in to the shore, so that they are easily captured.

It is well known that the presence or absence of herring determines the abundance of hake and cod on the Grand Manan Fishing Banks, the fishes of the first mentioned family having a peculiar attraction to carnivorous fish of all kinds. It is, however, the anadromous fishes of the coast which bring the cod and other fishes of that family close upon our shores. The sea herring is but little known outside the region of the Bay of Fundy, excepting in September and October, when they visit the entire coast from Grand Manan to Scituate, for the purpose of depositing their spawn; this act depending upon their finding water sufficiently cold for their purposes, a condition which of course occurs later and later in the season, in going south.

In the early spring, the alewives formerly made their appearance on the coast, crowding along our shores and ascended the rivers in order to deposit their spawn, being followed later in the season by the shad and salmon. Returning when their eggs were laid, these fish spend the summer along the coast; and in the course of a few months were joined by their young, which formed immense schools in every direction, extending outward, in some instances, for many miles. It was in pursuit of these and other summer fish, that the cod and other species referred to, came in to the shores; but with the decrease of the former in number the attraction became less and less, and the deep sea fishes have now, we may say, almost disappeared along the coast.

It is therefore perfectly safe to assume that the improvement of the line fishing along the coast of Maine is closely connected with the increase in number of alewives, shad and salmon; and that, whatever measures are taken to facilitate the restoration of these last mentioned fish, to their pristine abundance, will act, in an equal ratio, upon the first mentioned interest. The most important of the steps in question are the proper protection of these spring fish, and the giving to them every facility needed for passing up the streams to their original spawning grounds; this is to be done of course by the construction of suitable fishways and ladders. The real question at issue in regard to the construction of these fishways is, therefore, after all, not whether salmon shall become more plentiful, so that the sportsman can capture them with the fly, or the man of means be able to procure a coveted delicacy in large quantities and at moderate expense. This is simply an incident; the more important consideration is, really, whether the alewife and shad shall be made as abundant as before, and whether the cod or other equally desirable sea fish shall be brought back to our coast, so that any one who may be so inclined, can readily capture several hundred weight in a day.

The value of the alewife is not fully appreciated in our country. It is in many respects superior to the sea herring as an article of food; is if anything, more valuable for