

"The method of fish production is no longer an experiment, but a well established fact. The efforts of the Commission in restocking Lake Erie with whitefish have resulted in the largest catch known there in twenty years, and the price of whitefish has been reduced 30 per cent. The same result will be seen in the Delaware with good legislation and proper protection. The Pennsylvania Fish Commission has been greatly encouraged by the growth of public sentiment in its favor. It is an indication that the public recognizes the wisdom existing to protect the propagation of good fishes, which not only aid the community now, but will also secure an endless source of benefit in the future."

OPINIONS OF AUTHORITIES ON FISH CULTURE IN THE UNITED STATES

The following extracts are taken from addresses delivered by Prof. G. Browne Goode, M.A., of the United States Fish Commission:—

"In 1871 the United States Fish Commission was established. Arrangements were at once made for a thorough scientific investigation of the fisheries, and a little later the work of artificial propagation was begun. The operations of this Commission have increased from year to year, and much has been done in extending the range of important food-fish, and in restocking depleted waters.

"Up to 1878 the work of the Commission was confined wholly to fresh water and anadromous species. In this year, however, a station was established for the propagation of marine fishes, and cod, herring and haddock were successfully hatched.

"Besides the improvement of apparatus, radical changes have been made in the methods of fish culture. The most important of these is the building of movable floating hatcheries in the form of barges and steamers by the United States Fish Commission. By means of these, different spawning grounds may be visited during the same season, and the result of the work enormously increased with a comparatively small increase in its cost. The application of steam for pumping the water and for working the apparatus is also of great value. Equally important with these is the improvement in the method of transportation. Formerly the young fish were carried in small quantities in the baggage cars of the passenger trains, but refrigerator cars built expressly for this purpose are now almost exclusively used. Trained experts are placed in charge of these cars, and immense numbers of fish are now distributed with small loss, and at a great reduction in cost as compared with the old method.

"The salmon fishery of the Pacific is an industry peculiar in its methods and extent. The quinnat or king salmon, as often called the California salmon, is the principal object of capture, though other related species are also taken. Though the capture is enormous, it has been demonstrated that the supply can be easily kept up by a small outlay in artificial culture.

"The principal activity of the Fish Commission has been directed to the wholesale replenishment of our depleted waters. The success of fish culture is well recognized in the United States.

"In connection with the work of fish culture, much attention has been paid to embryology. The breeding times and habits of nearly all the fishes have been studied, and their relations to water temperature. The embryological history of a number of species, such as the cod, shad, alewife, salmon, smelt, Spanish mackerel, striped bass, white perch, the silver gars, the clam and the oyster have been obtained under the auspices of the Commission.

"The preservation of the oyster beds is a matter of vital importance to the United States, for oyster fishing unsupported by oyster culture, will, within a short period of time destroy the employment of tens of thousands, and the cheap and favorite food of tens of millions of our people."

"Fishes in ponds, lakes, or streams, are quickly exterminated unless the young fish are protected and the spawning season is undisturbed, and wholesale methods of capture are prohibited.