

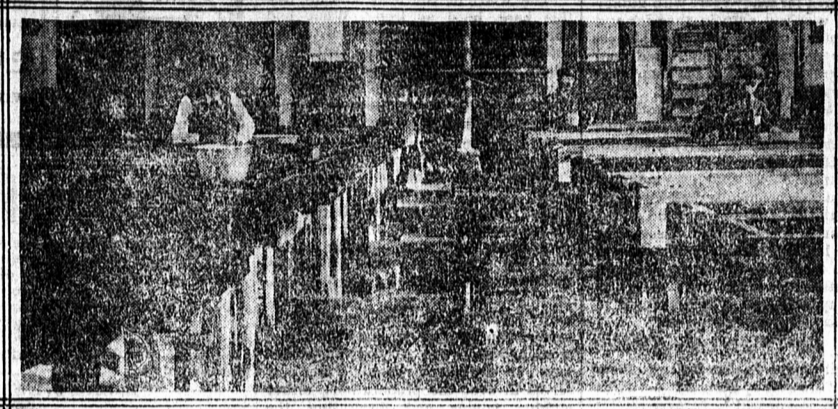
The Fisheries Bureau Schooner Grampus

PROPAGATION OF FOOD FISH

HOW THE GOVERNMENT IS HELPING ONE OF THE GREATEST INDUSTRIES OF THE SEABOARDS
BY THOMAS WILSON



Railway Fish Car



Interior of hatchery Eggs are propagated in tanks to fry and then placed in ponds



Hatchery and laboratory at Woodville House Fish Ponds in foreground

One of the greatest of American industries, in which hundreds of thousands of men are regularly employed, to say nothing of the multitude of amateurs, is fishing. Wherever there is a pond and fish there are anglers, but the greatest fishing grounds are the Atlantic and the Pacific Oceans, the Gulf of Mexico, the Great Lakes and their estuaries, on which the pursuit of the finny tribe is a business.

The latest canvasses show that, not counting those who fish for pleasure, the high-sea, coastwise and interior fisheries of the United States give employment to more than 219,000 persons, involving an investment of over \$38,000,000 and yielding annually a product weighing more than 3,000,000,000 pounds, the value of which is nearly \$57,000,000. The extent of the industry on the two coasts and interior waters is: Atlantic Coast—163,834 persons employed; \$54,380,564 invested; 1,536,075,551 pounds yield; valued at \$87,704,689. Pacific Coast—30,524 persons employed; \$22,672,927 invested; 276,504,118 pounds yield; valued at \$14,011,090. Great Lakes and interior waters—25,201 persons employed; \$11,296,012 invested; 185,187,289 pounds yield; valued at \$5,012,598.

On the Atlantic Coast, Boston and Gloucester are the greatest fish ports, and each year there is landed at these cities cod, haddock, hake, pollock, halibut, mackerel, herring, swordfish, and other varieties, the total value of which is more than \$4,000,000, and fully one-half of the take is from waters adjacent to the New England coast.

Although it would seem that there are just as big fish in the sea as have ever been caught, and that the supply would always be greater than the demand, this is not true, and as far back as 1871 the reports of the scarcity of fish were so

alarming that congress in that year appointed a commissioner of fish and fisheries, whose duty should be to conduct investigations relative to the diminution of the supply of food fish and to make recommendations regarding the subject to congress. From this beginning the bureau's work increased annually until today it has become one of the most important of all the departments under national control.

The Bureau of Fisheries, which since 1903 has been a part of the Department of Commerce and Labor, is peculiarly American in its conception, and its prototype exists in few other countries. It labors directly for the preservation and increase of water animals, and in conjunction with many of the states has placed certain branches of the fisheries on a permanent basis. It has achieved a wide reputation for originality of method and magnitude of operations, and has given this country first place in all matters pertaining to the enrichment of the aquatic food supply by artificial means.

The bureau has had its exhibits at many of the foreign expositions, and has been the recipient of numerous awards for originality and excellence of work.

The operations of the bureau are now extended to three general phases—propagation and distribution of food fish, scientific investigation of the seas, rivers and lakes and their inhabitants and the study of the economic fisheries and the collection of statistics.

The work of increasing the supply of food and game fish by artificial means has become of more importance year by year until now there are maintained by the government 33 specially constructed hatcheries and 10 sub-hatcheries located in 26 states and territories. Of the principal

hatcheries there are on the New England coast, eight on the rivers contiguous to the Atlantic and Pacific Oceans, four are on the Great Lakes and the others on interior streams.

About 39 species are regularly propagated and distributed, while other species are taken up from time to time, or as circumstances require or permit. Among the most important of the food fish handled are cod, pollock, flounder, shad, salmon of various varieties, trout of various kinds, herring, whitefish and catfish. Oysters, lobsters and other shellfish are also given much attention, so that all marine creatures that are fit for food receive more or less attention, according to the need.

One of the branches of the bureau that has proven of immense benefit to the industry has been the introduction of foreign fish into American waters and the transferring of native fish from one section to the other. A noteworthy example of the latter was the transferring of shad and striped bass from the Atlantic to the Pacific. This was first done about 20 years ago, and it well did the fish multiply at the end of 1901 the catch of them had totaled more than 30,000,000 pounds, exceeding in value \$1,000,000. Experiments are now being made in the transfer of the Eastern coast lobsters to the Western coast, and the Western coast salmon to the Eastern coast.

In order that fish and eggs may be transferred quickly and that neither may be injured in transit the bureau has six specially designed railroad cars, each of which is fitted with tanks for the transportation of fish, which includes not only the transportation of fish, but for the experimental work and research, the bureau maintains three vessels, the steamer Albatross and Fish Hawk, and the schooner Grampus. The Albatross recently cruised in the Northern Pacific making surveys and exploring the bottom by means of soundings and dredging. By the latter means hundreds of tons of fishes and vari-

ous forms of sea life never before seen by man have been brought to the surface and studied by the scientists on board. The greatest depth at which living things have been found by the Albatross is 25,038 feet, or more than four miles, while the greatest sounding ever made from the ship was 28,878 feet. The greatest ocean depth known is 6 miles, ascertained by the U. S. S. Nero while using apparatus belonging to the Albatross in the Pacific Ocean near the Island of Guam.

If the statistics of the bureau are interesting, how much more so will be a few but eggs, and the average roe contains 30,000 of them, each one capable of becoming a shad of the same size from which the roe was taken. A cod will average about 2,000,000 eggs, though specimens with as many as 9,000,000 eggs have been found. Brook trout averages 1,000 whitefish 35,000 black bass, 5,000 white perch, 40,000 and herring 30,000. The lobster yields about 10,000 eggs. These eggs vary in size from one twenty-eighth of an inch to one quarter of an inch in diameter.

One would think that with hundreds of thousands of fish laying all these eggs there would be no need for man taking a hand in the propagation, but since these eggs are much sought by other fish than the species laying them, to say nothing of the larger fish making meals of the smaller, or one, millions and millions of eggs and small fish are thus destroyed annually.

There is no set formula for general fish culture, for the peculiarities of the various species, or different varieties, of such that each must be treated in its own way. Descriptions of the shad and salmon culture will give, in a general way, the information as to the methods of raising what is known as "fry" or young fish.

The eggs are taken from the female, and the sperm from the male, and are placed in a pond or stream, and will supply him with the necessary "fry" without cost.

The bureau is also devoting considerable attention to the artificial fattening of the fish industry, it is also willing to aid any individual who wishes to stock a pond or stream, and will supply him with the necessary "fry" without cost.

The bureau is also devoting considerable attention to the artificial fattening of the fish industry, it is also willing to aid any individual who wishes to stock a pond or stream, and will supply him with the necessary "fry" without cost.

THOMAS WILSON

CARTER'S LITTLE LIVER PILLS.

CURE SICK HEAD ACHE

Headache, yet Carter's Little Liver Pills are equally valuable for constipation, curing and preventing this annoying complaint, while they also correct all disorders of the stomach, stimulate the liver and regulate the bowels. Even if they only cured HEAD ACHE.

ACHES

In the hands of so many lives that here is where we make our great boast. Our pills cure it while others do not.

Carter's Little Liver Pills are very small and very easy to take. One or two pills make a dose. They are strictly vegetable and do not grip or purge, but by their gentle action please all who use them.

WALKER MEDICINE CO., NEW YORK.
Small Pill. Small Dose. Small Price.

COULD NOT CURE HIMSELF

Something of the irony of fate is exemplified in an anecdote related by the New York Times concerning Professor Poirier, who until his death was the most famous cancer expert in France.

Professor Poirier gave much of his time without pay to aiding poor people afflicted with cancer. One day there came to him a woman on whom he had operated and who feared the growth was coming again.

"Fear nothing," said the physician when he had made an examination. "It will be some years before you will need a fresh operation—which, by the way, I shall not be able to perform."

"But, doctor, you will not refuse to treat me?"

"No, my poor woman, but I shall not be there to do it. I also have a cancer, and it will be more rapid than yours."

A Counter Charge.

An elegant young man seized a thief on the platform of a train, saying, "Are you not ashamed to follow so disgraceful a profession?"

"And are you not ashamed," demanded the other, "to go so well dressed without a pocketbook about you?"

Both Won.

That the average Broadwayite is a "natural born gambler" was well illustrated the other morning. Two men met, and one confessed the want of breakfast. The other "made good" the deficiency, and during the meal No. 1 remarked that he had received notice that there was a registered letter in the postoffice for him.

"Nobody would send me money," he added, "so it's a waste of car fare to go after it."

"I'll give you a dollar for a half interest," said No. 2.

"You're on if you pay care fare," was the quick reply.

After breakfast the pair went to the postoffice, got the letter, opened it and found a five dollar bill.

"Anyhow I'm \$3.50 ahead," said the owner of the letter as he "split the bill." "That's from a man I never expected to make the loan good."—New York Globe.

Choice Millinery For Easter

A World of Beautiful Hats and Bonnets

Show Continued Today—Thurs da

We Will Be Pleased to Have you Come and Inspect

JAMES PATON & CO., Victoria Row, Opp. Post Office

Wanted Old Picture Frames

If you have any old picture frames drop me a card and I will call and get them, regild or repaint them and send them back to you as good as new. It will not cost you much. 10 cents and up according to size.

AGENTS WANTED

BENJ. PETERS,
159 Kent St., Charlottetown
Successor to Murray & Co.

Tenders FOR SALE

Sealed tenders will be received until Saturday May 2nd for building Mansie at Orwell, Kinross, the contractor to furnish all material, and contractor to complete the building for painting; the work to be done by first of October; the contractor to furnish security for performance of work. Plan and specification to be seen at J. A. McDonald's, Ulge Station.

By Order Committee Kinross.
4-16dmw12w.

TENDERS WANTED

Sealed tenders for the construction of a Presbytery at St. Ann's, Lot 65, will be received by the undersigned up to and on April 24, 1908. Plans and specifications to be seen at P. D. Hagan's, Lot 65, and at the Presbytery, Kelly's Cross.

T. CAMPBELL,
Kelly's Cross.

W.F.H. Carvell, B.A.
Barrister, Solicitor, Notary Public etc.
OFFICE:—
O'Holloran Building,
Corner St. George Street,
ext to Bank of Nova Scotia

F. C. WESLEY CO.
Designers, Engravers, Electrotypers.
St. John N

L. MURPHY & CO. LTD
SYDNEY N.S.
General Commission Merchants and Produce handled on communication.
Prompt returns made
15/1m1yr

McLeod & Bentley
Barristers and Attorneys-at-law.
Solicitors for the Bank of Nova Scotia
Money to loan.
OFFICE—Bank Nova Scotia Chamber

WARBURTON & SHAW
BARRISTERS, ATTORNEYS, NOTARY PUBLIC, Etc.
Office in Cameron Block Charlotte-town, P. E. Island
A. B. Warburton, B.A., D. L.
D. Edgar Shaw
d16m

Arthur J. B. McIlisb, B.A.
(HARVARD)
Barrister and Attorney-at-Law
Cor. Queer and Richmond Sts., Ch'town
Tele phone House 233.