

MAINE STATE LEGISLATURE

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PUBLIC DOCUMENTS OF MAINE

1913

BEING THE

ANNUAL REPORTS

OF THE VARIOUS

DEPARTMENTS AND INSTITUTIONS

For the Year 1912

VOLUME II



WATERVILLE

SENTINEL PUBLISHING COMPANY

1914



Lobster Hatchery at Boothbay Harbor. Maine

THIRTY-SECOND REPORT OF

Commissioner of Sea and
Shore Fisheries

STATE OF MAINE

1911 and 1912

JAMES DONAHUE, Commissioner.
Rockland, Maine.



WATERVILLE
SENTINEL PUBLISHING COMPANY

1913



STATE OF MAINE.

DEPARTMENT OF SEA AND SHORE FISHERIES.

ROCKLAND, MAINE, December 27, 1912.

To His Excellency, Frederick W. Plaisted, Governor of Maine:

I herewith submit as required by law, the thirty-second report of Commissioner of Sea and Shore Fisheries, for the two years ending November 30, 1912.

Respectfully,

JAMES DONAHUE,
Commissioner.



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PRESENT AND COMPARATIVE VALUE TO THE
STATE OF MAINE OF THE SEA AND
SHORE FISHERIES.

1900	.....	\$2,784,000
1904	.....	3,380,000
1908	.....	3,850,000
1909	.....	4,595,000
1910	.....	5,864,000
1911	.....	5,863,000
1912	.....	5,954,000

The above shows the value of the catch of the raw material as taken from the water by the fishermen year by year; and the comparison shows that the industry is gradually increasing, having more than doubled since 1900.

If the amount invested in boats, fish stands, factories, smoke houses, etc., and the amount paid for labor in handling, curing and packing the product were included, with allied interests, the total would represent more than \$10,000,000; the addition being:

1912.

Value of plants, boats, gear, etc.....	\$3,187,396
Amount paid for labor in handling, curing and packing fish, not including amount paid for labor in sardine factories	235,278
Number of men employed	12,326
Number of persons dependent on this industry, approximately	50,000

GENERAL REMARKS.

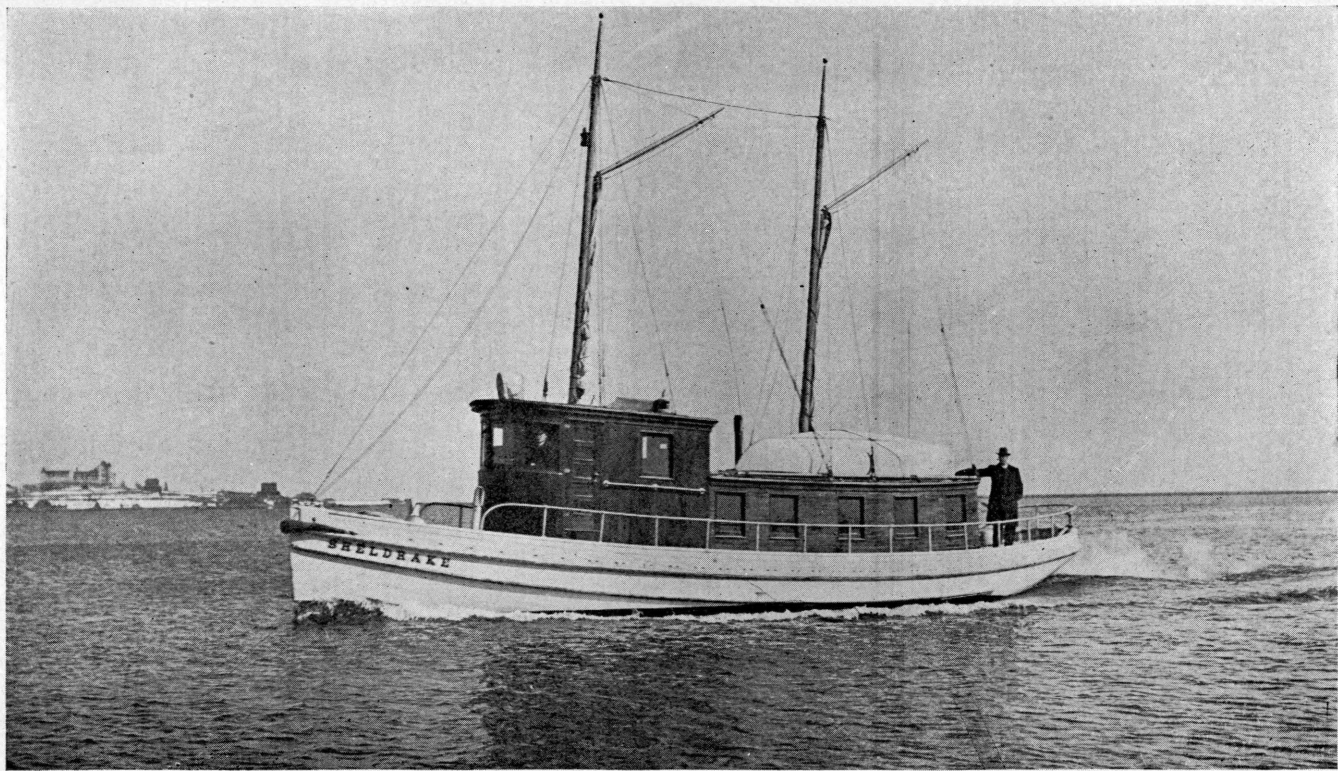
The Department of Sea and Shore Fisheries is one of the most important in the State from a commercial standpoint. It is also a department the importance of which comparatively few of the people of the State realize.

The statistics for the year 1912 show that there are more than 12,000 men employed in the fisheries and practically as many more employed in handling, curing and packing the product. The value of the product as taken from the water this year is nearly \$6,000,000; and the amount paid out for labor at fish stands, cold storage plants, canning factories, etc., is nearly \$250,000. This sum does not include the amount paid for labor in the packing of sardines, as the law of the State provides that no statement or estimate of the number of cases packed shall be made. The value of the vessels, boats, buildings, wharves, etc., used in connection with the fishing industry, is more than \$3,000,000.

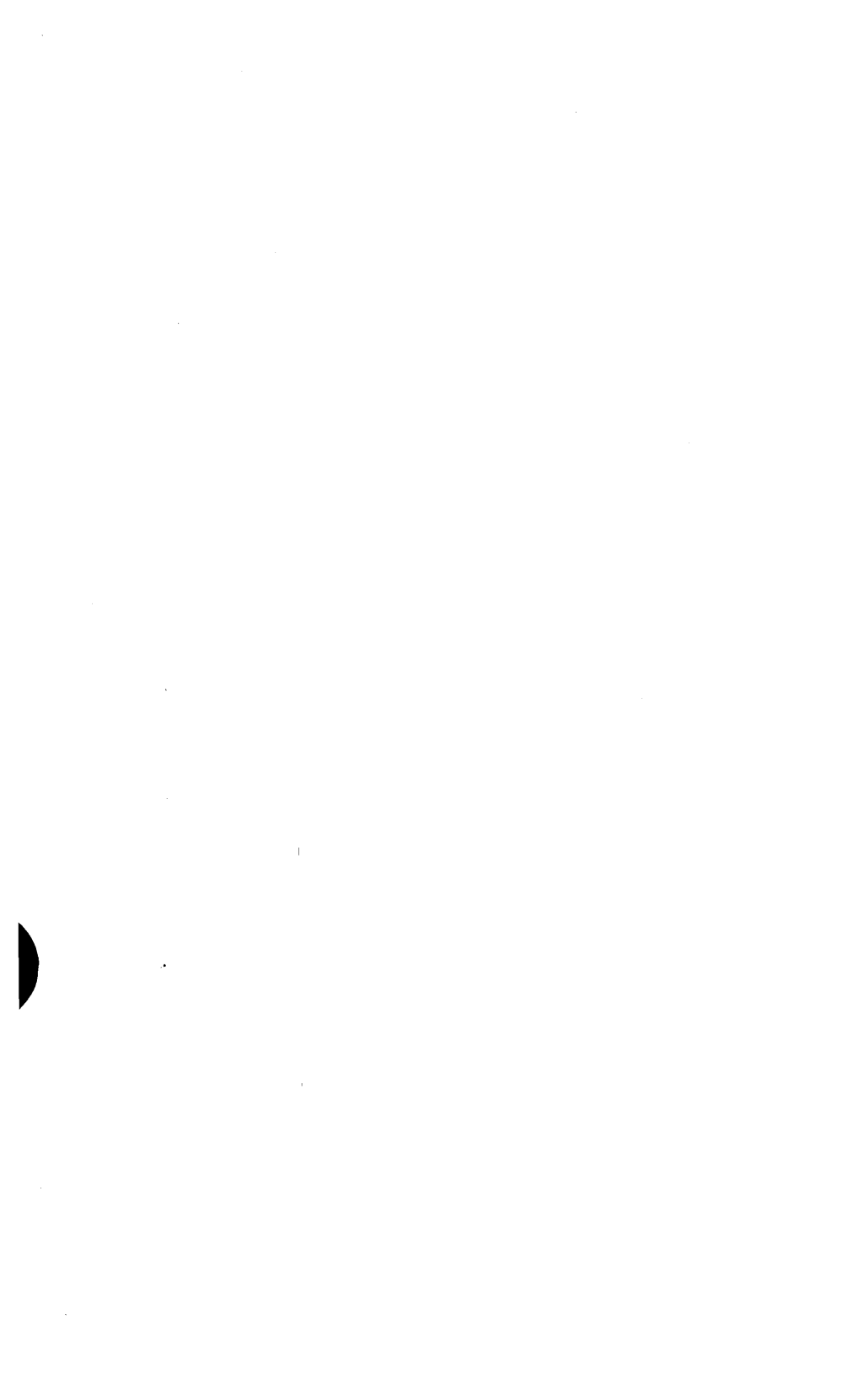
These figures show that the industry has increased year by year; and with the natural but undeveloped resources of the water front of the State, if the present methods of regulating the fisheries are continued, the returns will show still larger increase, as the report now shows the value has increased more than double since 1900.

The Department as at present constituted consists of one commissioner appointed by the governor, and about twenty wardens who are recommended by the commissioner, appointed by the governor and confirmed by the council; also in some instances deputy wardens are appointed who are responsible directly to the commissioner. This number of wardens is insufficient at times to properly handle the work of the Department; but on account of the amount of the appropriation it is impossible sometimes to provide the Department with the services of the number of wardens necessary to furnish the protection that is desired. In making up the estimate for the needs of the Department for the next two years, the Commissioner advises an increase in the appropriation for warden service of \$2,500; the present appropriation being \$15,000, which is not sufficient to properly have the laws enforced.

The Department has a system of annual, monthly and weekly reports from each warden, which give very complete and



Maine Seed Lobster Boat, Sheldrake



thorough information as to every branch of the fisheries, viz: production, value, shipments, violation of laws, etc.; in fact, all information that is of use to the Department. Each warden forwards to the commissioner at the end of each week a report of just what he did each day, what conditions he found and observed. By this method the commissioner is in constant and close touch with the whole seacoast through the warden service. These weekly and daily reports are of greatest value not only in giving accurate information but in locating each warden at a given time and thereby checking up any particular territory as being covered or not by the warden service. It is from these reports that the tables in this report are made. Each warden's report is carefully tabulated; so that the percentage of error in them would be very small, inconsiderable in fact; but the figures will always be too small rather than too large, as some small lots of fish may not come to the attention of the warden; but for all practical purposes the tables are considered as entirely accurate.

It is the present policy of the Department to furnish all possible information to those interested in the fisheries. Explanations of the use and purpose of laws are given, with the belief that if people understand the laws they will see that as a whole they are wise laws and it is for the best interest of all to observe them.

Up to a comparatively recent date it was the general opinion that the sea and shore fisheries were inexhaustible, and laws regulating them were looked upon by the fishermen as restrictive and burdensome. At the present time, however, it has been shown beyond a doubt that the fisheries, like every other resource, require care and attention in order that they may be preserved. I believe that today all interested acknowledge and believe that enforcement of laws is necessary and that it is the proper way to handle the situation; and I am pleased to report that the public in general approve of the methods adopted by the Department.

For the purpose of this report it is neither necessary nor practicable to give detailed information as to all the smaller branches of the fishing industry, although each variety of fish is carefully tabulated whether the amount is large or small; but on the other hand, some of the most important should be con-

sidered and recommendation made as to corrective and additional legislation. These will be taken up in alphabetical order; and for the benefit of those who are not familiar with the nature of the different species I will touch upon each separately, showing how they breed and how best to propagate them, and will advise adoption of approved methods whereby better results than at present may be obtained.

ALEWIVES.

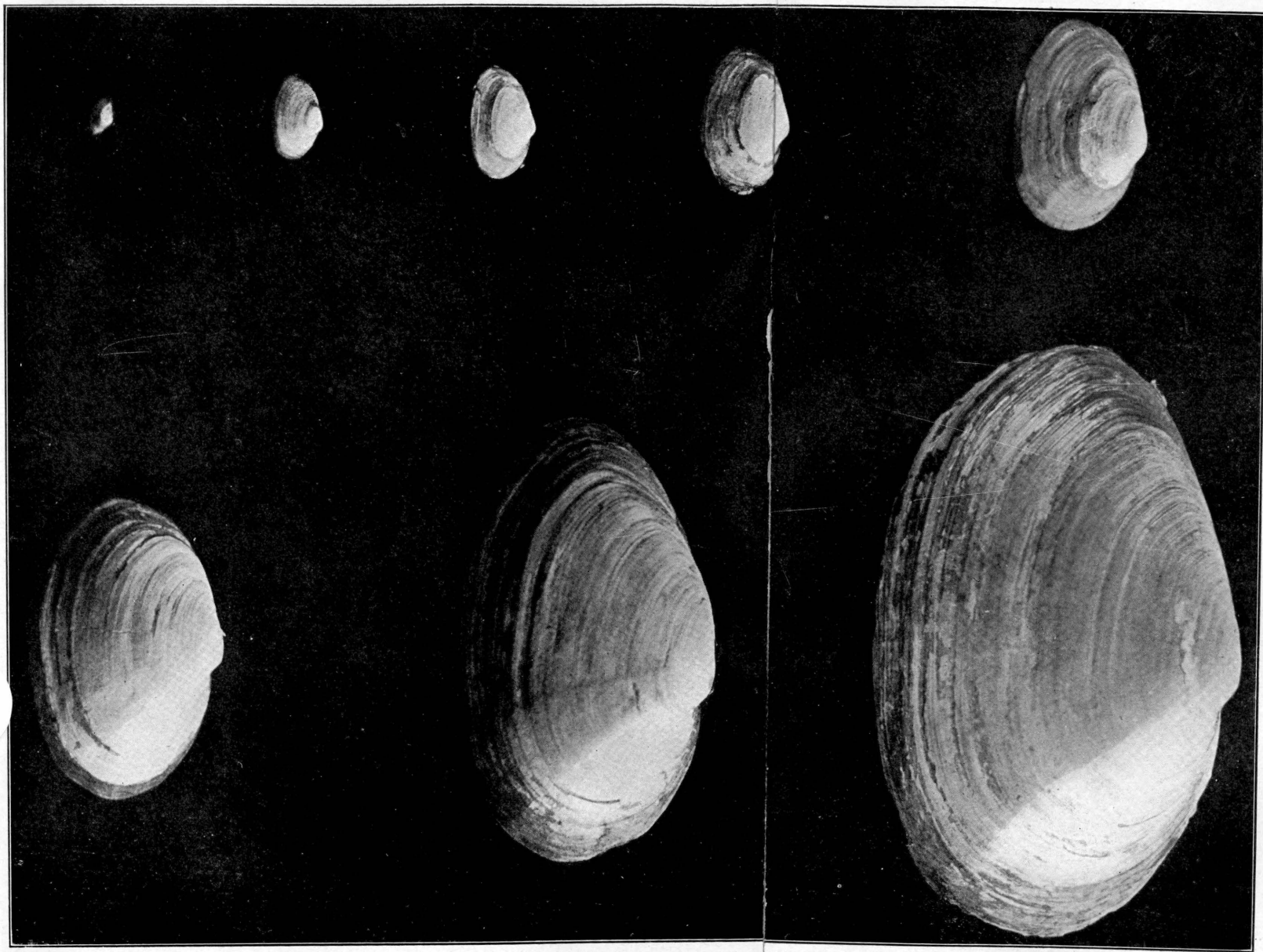
The alewife is a fish that is found in nearly all the rivers along the coast, in some more plentifully than others. The nature of the alewife is to leave the salt water in the spring and work up the rivers where there is a chance to get into a lake or pond the outlet of which is into the river. In order that the fish may be able to get from the river to the pond to breed it is necessary to have suitable fishways. By acts of the legislature the management of the alewife fishery has been given to the towns in which are located the ponds where the alewives breed. The rule generally adopted by towns having control of this fishery is to appoint a fish committee at their annual town meeting to look after the interests of the town and to see to it that the fish have proper access to the breeding-grounds, and also to arrange so that the fish can go back to salt water at the proper time. Some of the towns attend to this matter fairly well; while others do not give it the attention that it deserves. The condition of unsuitable ways is brought about often by the fact that the fishway is in a dam through which the water runs and in some cases the dam is also used for mill purposes, and in years when water is scarce the fishway is closed in order to save the water for the mill. Cases of this kind are very detrimental to the fishery; but I am pleased to state that within the past few years cases of this kind that have come to my notice have been discussed with all parties interested and conditions improved; so much so that the alewife catch for the past two years, 1911 and 1912, has shown a marked increase.

I have other locations in mind that will be improved the coming year.

The value of the catch in 1912 was practically \$33,000.

Growth in four months from five-sixteenths of an inch to one and

one-half inches in length



Growth in sixteen months from two inches to four

inches in length

This fish is used largely by the people of the State fresh and smoked; the surplus is salted and packed in barrels the same as herring or mackerel and sold in the south and to the foreign trade.

BASS.

This is one of the minor varieties; the amount caught each year is comparatively small, although they are a very nice food fish. As they are not plentiful enough to warrant a regular business of catching, there is not very much attention paid to them at the present time; although the demand is increasing annually.

CLAMS.

This is a shell fish that is of great importance and value; as the clam is to Maine practically what the oyster is to Rhode Island, Connecticut and other states farther south.

The clam is used in various ways. As a food product in the State it is much sought for baking and for the famous clam chowder and stew. It is also used largely for bait for fishermen, and in the winter months there are thousands of barrels of clams dug and shelled and shipped away in barrels, usually to Portugal to be used there for fish-bait. In the State there are also located innumerable clam factories in which the clams are packed in different ways, mostly in cans and glass jars. In these packages they are sold all over the country; and you will find the Maine clams in cans on the shelves of nearly every retail grocery store in every state. In some locations, usually those in the vicinity of clam factories, also near summer hotels and cottages, the supply has been greatly depleted; so much so that at the present time there are but few clams to be found in some of the flats that were previously very productive.

Actual experiments show that nearly all of the flats along the coast can be easily replenished by systematic planting, the Department having within the past few years had several beds planted in different parts of the State; and results show that it is practicable to plant clams on barren or depleted flats.

For the information of those not familiar with the breeding of clams I will state that the spawning season extends through the months of May, June and July; at this season a great ma-

majority of the eggs are laid. The eggs of the clam, which are extremely minute, are thrown out from the siphon or snout of the female clam into the water, where they are fertilized by sperm which the male clam expels in a similar manner. The free swimming period usually ends the last of July. If eel-grass and sea-weed are carefully examined at this time, large numbers of these little clams will be found hanging to the stalks by slender threads. They attach themselves also to drift-wood, piles, stones, etc.

Clams begin to burrow as soon as they find a favorable location. This may be soon after they have ceased swimming, or when they have finally settled upon the ground or flats.

Clams are beset from the very beginning by numerous enemies. The eggs and free swimming fry furnish food for many varieties of fish. But after all has been said concerning the physical condition and destructive enemies of the clam, the fact remains that clams have held their own in abundance along our shores until a comparatively recent date. The decrease is without question a direct result of unlimited and unreasonable digging. There is no evidence that the physical condition or natural enemies have recently become more destructive; nor can more than a small part of the responsibility be charged to the manufacturers who allow detrimental waste products to pour into the bays and rivers. The decrease is quite as well marked in regions where the water is good and where the clams if left to themselves thrive well. They would undoubtedly continue to propagate if the practice when digging of picking up very small clams is discontinued.

I have always been of the opinion that it would be wise for the State to lease a portion of the clam flats to individuals for private planting and cultivating; and in accordance with my recommendation the legislature of 1911 passed a law giving the selectmen of each town the right to lease one-quarter of the clam flats within its limits, the other three-quarters to be left in common for the public. I am somewhat surprised to know that this law has not been taken advantage of more than it has up to the present time; although there are quite a few places in different parts of the State where people have leased portions of the flats for private planting, and at the present time there are numerous inquiries as to just what procedure is

necessary in order to get control of a portion of the flats. The selectmen of the towns, whose duty it is to lease the flats, evidently have not given it much attention; and cases have been brought to my notice where selectmen of towns did not know that there was such a law. But the matter is attracting more attention now, and I expect within a few years to see a large portion of the flats leased for private planting. If one-quarter of the flats in each town were leased and seeded and cultivated as they should be, the benefits derived by the three-quarters reserved for the public would be of great value; as the spawn coming from the cultivated pieces would drift and settle on the public flats, thereby increasing the product of all.

For the benefit of those not familiar with the method of planting clams, I will say that there are many things which must be taken into consideration: the size and condition of the clams, kind of soil, time of day, time of tide, etc. The main point in planting is to get the largest possible proportion of the clams well installed in their burrows. Where the flats are quite hard a furrower drawn by horses, that will dig several furrows about one foot apart at a time, should be used. Then have the clams dropped into the furrows. When the tide comes in it will wash the dirt back into the furrows and cover the clams. Or if the party planting thinks best, turn the furrower upside down and drag it over the furrows, which will move the earth back into the furrows. Another method of planting is sowing on the surface, which has been tried with good success, especially in the case of small clams, usually up to one inch in length. This method has two distinct advantages: first, it is very rapid; second, when the clams have burrowed they are in their proper position and at the natural depth.

Clams sown on the flood tide have an advantage of an immediate chance to burrow; whereas those sown on the bare ground rarely succeed in burrowing until the tide has risen to cover them. It is not advisable to plant clams in the late afternoon, because with the approach of darkness the eels, crabs and other enemies come inshore.

Clams can also be sown from a boat on the flood tide after the flats are covered with water.

The value of the clams taken in the State in 1912 was \$768,303.

EELS.

Not many fishermen follow catching eels as a business. There are a few men, however, who make good wages. The most successful way is with traps, although there are comparatively large quantities of them caught with spears from boats, and also in the winter time with spears through the ice.

Lincoln, Washington, Sagadahoc and Cumberland are the largest eel-producing counties in the State.

The total value this year of the eel fishery was about \$29,000.

GROUND FISH.

Cod, haddock, hake, pollock and cusk are the principal varieties that come under this head. The ground fisheries give employment to a very large number of people. It is one of the largest under the Department. Being deep-water fish, it has not been necessary to have any restrictive laws for protection. The catch varies from year to year, caused principally by conditions of the weather, lack of bait, and the ravages of the dog fish, which some years are very much more plentiful than others but always more plentiful than welcome.

The value of the ground fish is gradually increasing; it is in more demand year by year. Haddock, hake and pollock only a few years ago were considered of but very little value; while today the haddock is considered one of the best fresh fish on the market, and the pollock are used very largely in making slack-salted dry fish for domestic trade and are also used largely heavy-salted and dried hard for the foreign trade. The same is true of the hake, which is considered by many the best variety from which to make corned fish. They are also used by packers for boneless fish; and very large quantities of them are sold in Cuba, Porto Rico and Trinidad, dried hard and packed in small barrels or what is commonly termed drums. The cod are the most valuable of the ground fish and are used fresh, and very extensively as boneless fish packed in cartons after the skins and bones have been removed.

The value of the ground fish catch in the State this year is practically \$1,114,000.

HERRING.

The herring is the most numerous variety of fish caught on this coast, and directly and indirectly probably of the greatest money and economic value. The indirect value of the fish comes from the fact that the ground fish industry and the lobster industry are almost entirely dependent upon the herring for bait, and the failure of the herring catch always works a serious hardship to these fishermen. A direct value of the fish comes from their enormous use when packed as sardines. Large herring are also used for pickling and smoking. Small sizes are packed in boxes, also made into boneless, so called, packed in glass jars and cartons. Large and medium are put in cold storage in the summer time to be used later as bloaters for smoking, and for use as bait for fishermen in the winter months. On account of this enormous direct and indirect use, and from the fact that herring are always caught in schools, there has always been more or less friction as to rights to catch them between two classes of fishermen known as weirmen and seiners; and anyone who has been around the State legislature when in session will readily recall the bitter fights that have been carried on between the two factions. The legislature of 1911 was no exception to this rule. It passed a law that was not entirely satisfactory to either faction; both sides claimed an advantage; but in 1911 about the time the fish commenced to come to the shores the different interests got together and made an agreement to abide by the laws and not infringe on the others' rights, and for the past two years there has been less friction in the herring fishery than in any two years that I can remember for the past twenty. I trust present conditions will continue, and the spirit of fairness and the motto of "Live and let live" will be observed in the future by all interested in this fishery.

The supply of herring is very uncertain on this coast, varying from year to year. There has been no satisfactory explanation of this fact; but it has been noted that if in the early part of the season there are very few storms and the prevalent winds are light, the schools of fish lay off in the bay, not coming in toward the shores or coves, and almost always with the coming of the fall winds the schools move inward and are then caught in both seines and weirs. There is another reason, in my opinion, why the fish do not come to the shores earlier in

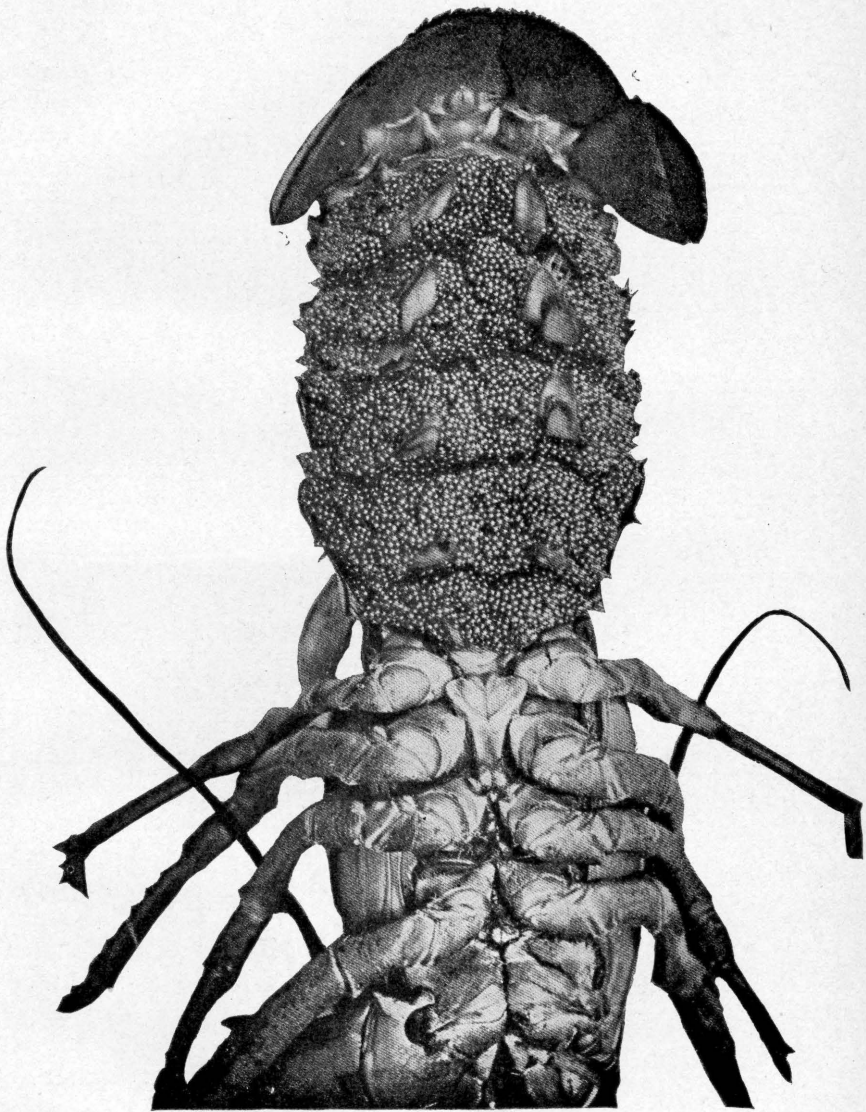
pleasant weather; and that is, if fine weather prevails through the summer the coast of Maine from one end to the other is patrolled by pleasure boats and fishing boats of all kinds and especially the lobster boats that ply along the coast, practically all of which now use gasolene engines. That constant chugging of the engine would have a tendency to frighten the fish and would naturally keep them off-shore; whereas if the weather is stormy the boats are not out and the fish work in at that time.

The use of the herring for bait by the deep-sea and lobster fishermen is of the utmost importance. If they can obtain sufficient herring for bait their burdens are much lightened and they can ply their vocation regularly. If, on the contrary, they are obliged to depend on other substitute baits, such as sculpins, squid, flounders, clams, scallop rims or refuse trimmings from other kinds of market fish such as can be obtained, they lose a great deal of time in procuring a much poorer bait and the proceeds of their season's work are much smaller.

The value of the herring catch of the State in 1912 amounts to a little over \$1,000,000. There is no immediate danger of the extermination of the herring, notwithstanding the statements that were made in some of the heated hearings before the legislature of 1911.

LOBSTERS.

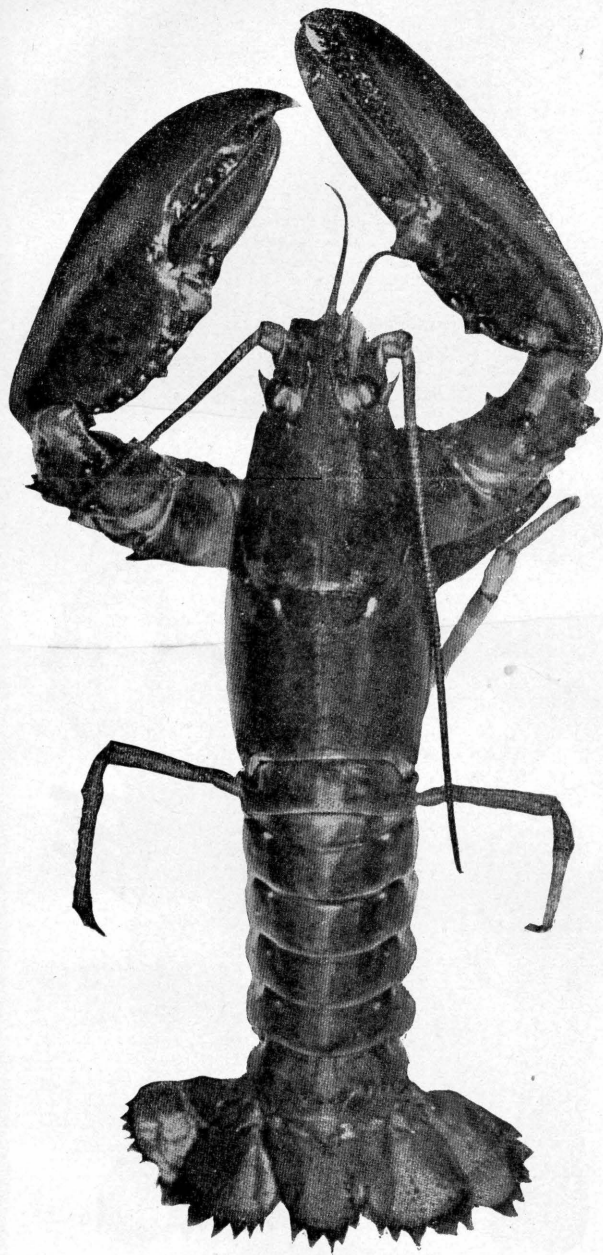
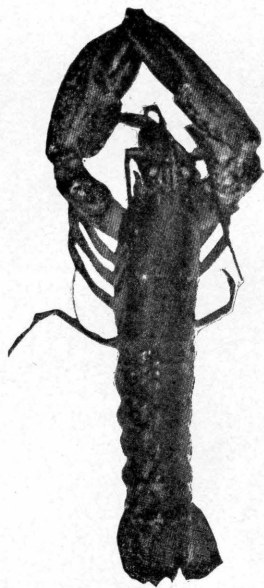
This branch of the fishery for the past two years shows very satisfactory results, as the total value of the catch paid to the fishermen exceeds \$2,000,000 in each year and the average price per pound for 1912 was a little less than the average for 1911. There has always been and probably always will be a difference of opinion as to the best methods to adopt for the protection of the lobster; but from results of experiments that have been made I believe that the present methods are right and that there is no danger of a depletion of the industry so long as present methods are maintained. The State of Maine is producing more lobsters and receiving more money from them than all the other states of the Union combined; and while some advocate a change of our laws to conform with laws in the other states, the experience in all cases would not seem to warrant such change, but rather that the other states should



Mother Lobster

An adult female lobster in "berry," so-called, or bearing the egg-clusters under the tail
(Photograph from life)





Three lobsters of the same age, illustrating the differences in the rate
photographed alive October 23, 1902. Age about one

of growth. They were hatched in the summer of 1901, and
year and four months. Life size

change their laws to conform with ours, for the very good reason that while under the Maine method of handling the lobster situation an increase is shown, the other states under their method show a decrease.

The system of handling breeding lobsters as adopted by this State is now almost universally acknowledged to be the best yet devised; and for the benefit of those who are not familiar with the system I will make an explanation.

The State law authorizes the commissioner to buy the seed or egg-bearing lobsters from the fishermen, after which they are to be liberated or taken to the hatchery pound and held there until the following spring, when the eggs become ripe and are fit for hatching. The lobsters are then taken to the hatchery and stripped of their eggs; the mother lobsters are then returned to the vicinity from which they were originally taken and there liberated, thereby not decreasing the stock of breeding lobsters in any particular locality. After the young lobsters are hatched and in proper condition for liberating they are taken to the locality from which the mother lobsters originally came and liberated in proportion of about 15,000 to every mother lobster. It is generally believed that this system is of great benefit to such localities and it is at present having the hearty coöperation of the fishermen, who report large numbers of very small lobsters as being caught in their traps in the vicinity where such plantings were made. They attribute this condition to the planting of small lobsters from the hatchery. The number of small lobsters liberated along the coast this year is 183,000,000. There have also been collected and now held in the pound near the hatchery nearly 16,000 egg-bearing lobsters. This is the largest number ever collected in the history of the Department; and the product of these when hatched in 1913 will amount to more than 200,000,000. Many of the fishermen have in the past believed that it was better to allow the lobsters to hatch naturally in their native waters; but since they have learned that all young lobsters whether hatched naturally or artificially remain on the surface and drift about subject to the elements and enemies for the first several days of their life, they have decided that the artificial way of hatching and planting is an improvement on nature. The Department method of planting the young lobsters is to hold them in the jars until

they are several days old, thus carrying them past the floating stage. They are then taken to the different localities and liberated in the protected coves and harbors among the eel-grass, thereby avoiding the possibility of their being destroyed by drifting ashore or being eaten by gulls or surface-swimming fishes, as at this stage they immediately sink to the bottom among the eel-grass, which other fishes do not frequent and which is a real paradise for the young lobsters. The number of young lobsters thus planted that survive is of course problematical and can only be judged by the amount of very small lobsters that are caught in the fishermen's traps; although that is not a very satisfactory way of obtaining such information for the reason that the openings between the laths in the traps are so large that the small lobsters could easily leave the traps while they are being hauled up to the boat from the bottom. While it is impossible to give any accurate information as to the mortality of the young stock, it is satisfactory at least to know that under the present conditions the value of the lobster fishery shows a large increase within the past ten years.

MACKEREL.

This is one of our choicest varieties of salt water fish, and at one time was very plentiful along the New England coast; but for the past twenty years has shown a large falling-off in numbers. The reason for this decrease is more or less problematical; but it is generally conceded that the method of catching mackerel with seines has had a very bad effect. Before the seines came into general use the mackerel were caught principally with hook and line, although some were caught in mesh nets. The method of fishing with hook and line was to throw on the water from the vessel's deck what was called toll-bait, made of porgies, herring, clams and such fish mixed together and chopped fine; this attracted the mackerel in schools around the vessels and boats, where they were caught by baited hook and line. Large amounts of the toll-bait would settle to the bottom; and as it was usually thrown in bays where mackerel frequently schooled in large numbers, it would have a tendency to attract and hold the mackerel in those localities and also make excellent food for the fish. But with the advent of the purse seine they used the same method of getting the mackerel

to the surface in schools,—namely, throwing toll-bait,—and then run the seine around them and pursed it up at the botton, enclosing practically the whole school, which were then taken aboard the vessel; and as the small mackerel were of but little value for salting they were culled out and thrown overboard, thus causing a wholesale destruction of what is now considered a very valuable fish.

The habits of the mackerel during the winter months is a mystery up to the present time. We know, however, that the first mackerel are seen in the spring, usually in large schools in southern waters, working north toward the spawning beds. These schools are met off Cape Hatteras and vicinity by a fleet of seiners and drag-netters, and if the weather is suitable large catches are often made. Examination of these fish when put upon the market shows that they are mostly loaded with spawn; and being caught at this time both fish and spawn are destroyed. Therefore it seems logical that this method of catching in the early spring is one reason why the mackerel fishery has declined. It is a question over which the states have no jurisdiction, and it is wholly a national or international question as to passing some law to prohibit the catching or landing of these fish at that season of the year.

MENHADDEN OR PORGY.

This variety of fish in the past was very numerous on the Maine coast. They were caught in very large numbers and used principally for making oil, from which a large return was received each year. But for the past ten years or thereabout they have not frequented the Maine coast as in former years, although they have been caught in large numbers in the waters farther south. The reason for this change is probably the location in which they find food while working north from their winter quarters. Some years they are very numerous in Massachusetts bay; and last year, 1911, there were large quantities of them on the Maine coast, and there were taken by boats and steamers owned by the Atlantic Fertilizer & Oil Company of New York 10,000,000 pounds of porgies, valued at \$100,000. Mr. Church, the Superintendent of the Company, informed me that if they had been equipped on the Maine coast as in former years there could have been taken more than a million dollars'

worth, as the fish never were seen in larger numbers in the history of the fishery on the coast of Maine. In 1912 but comparatively few were taken in Maine waters, the total value of which was a little over \$10,000; but there were large quantities taken in Rhode Island and Massachusetts waters.

Aside from food, no other fish product of the United States is so valuable commercially as that provided by the utilization of the menhaden herring along the Atlantic coast. It includes a high grade fish oil which is utilized for many purposes and a fertilizer which has to a large extent supplanted the guano which was formerly imported in such large quantities from the western coast of South America. The average annual catch of menhaden is 600,000,000 fish, from which is produced about 70,000 tons of fertilizer and over 35,000 barrels of oil, together amounting to at least a million and a half of dollars in value. There are now 32 menhaden factories in this country which engage about 70 steamers in taking the fish.

OYSTERS.

In recent years several small beds of oysters have been planted in the State as an experiment to demonstrate whether oysters can be successfully grown on this coast. The experiments show that they can. After this fact was proven, the Department took steps to locate suitable grounds for planting oysters on a large scale; and much to the surprise of the investigators it was found that there was but very little of the bottom along the coast suitable for oyster culture on account of its being in most places very rocky and the water deep, and in other places where the depth of water was favorable the bottom was found to be covered by marine growth which made it entirely unsuitable for oyster culture. There are, however, numerous small pieces of bottom along the coast on which oysters could be raised; but the area of these places is so small that they would not be suitable for oyster-planting as a mercantile proposition. Examination of other sections, particularly at or near the mouth of rivers,—such locations being best adapted to the growth of oysters on account of the amount of fresh water that comes down the river and mixes with the salt,—showed that where there was not so much trouble from marine growth on the bottoms they were almost invariably found to be covered



The class of boats used in Lobster, Scallop and Haddock Fishery in Maine

with a thick coating of black, soft mud, evidently the result of sawdust and mill-waste that came down the rivers and settled and rotted on the bottom, making a soft mud on which it would be impossible to plant oysters successfully; except, at considerable expense, by covering the bottom with a thick coating of gravel or shells or some hard substance that would keep the oysters when deposited on the bottom from sinking in the mud and being smothered. The expense of preparing a bottom of that kind would be so great that there is a question whether it would ever be profitable.

The proper bottom for raising oysters is a clean gravelly bottom free from all marine growth, located near or at the mouth of rivers where there is a good supply of fresh water running.

It is also necessary in order to make the business profitable, to have a large area of flat bottom with not more than ten to twenty feet of water covering the beds; as oysters grow in shallow water very much faster than in deep water, and it is also much easier to dredge them and keep the beds in proper condition. Shelling the bottoms each year before the oysters spawn is practically a necessity in order to get good results. It is necessary to have substances like shells put in the water at the spawning time in order to catch the spat so that the small oysters may attach thereto and grow.

The investigation proved a great disappointment to this Department, finding the bottoms in such condition; as it was hoped that Maine might add another valuable branch to the sea and shore fisheries. It is possible, however, to raise oysters in Maine on a small scale, as before mentioned.

SALMON.

This is a variety of fish that at one time was quite numerous in nearly all the rivers of the State; but on account of the many dams built in the rivers for manufacturing purposes, oftentimes without fishways by which the fish could get up the river to the spawning ground; with the immense amount of mill-waste allowed to run into the rivers, this fishery was seriously diminished, to the extent that but very few have been taken within the last twenty years. There has, however, always been a few of the big sea salmon caught, particularly in the Penob-

scot and St. Croix rivers; and a strenuous effort is being made to arrange proper facilities so that what are left can get to the spawning beds in these rivers and also to open up and prepare some of the other rivers for their culture, notably Denny's river in Washington county. This river at one time abounded with salmon; but on account of reasons above stated the supply has been very seriously diminished. Efforts are now being made, however, to put Denny's river in proper condition for the migration of the fish at the proper time.

Another method of assisting and increasing the breeding is now being conducted at the hatchery at East Orland by the federal government. Large salmon are bought from the fishermen who catch them in weirs and take them alive. After being taken from the weirs with nets, they are immediately put into cars made of small dories bored full of holes so that they will fill with water and covered so that the fish cannot jump out. After being deposited in the cars they are delivered to the hatchery, put in enclosures and kept there until the spawning time, when they are stripped of the eggs, which are then hatched, and the small salmon are liberated in the river. The catch of salmon for this purpose in 1912 was 1,133, from which has just been taken about 4,000,000 eggs. These will probably produce about 3,000,000 young salmon to be liberated in 1913. The number liberated in 1912 was nearly 2,000,000. In 1911 more than 2,000,000 were liberated.

The total catch of sea salmon in 1912 was 151,000 pounds, of a cash value of \$28,600. These figures show a marked increase in value for this fish within the past few years; the value in 1910 was \$16,234. There is no doubt that with proper regulations the receipts can be made very much larger.

The catch and number of fish seen at the Bangor pool in 1912 was the largest in the history of the fly fishing. As a sporting proposition the sea salmon is the king of all the sporting, hard-fighting fish that are taken in this State. If conditions were such that salmon were more abundant in the pools at Bangor and Calais, it would be of great financial benefit to those cities; as the people who catch fish with rod and fly would come to those locations during the fishing season in large numbers, which would be of great benefit to the guides

REPORT FOR YEAR ENDING NOV. 30, 1911.

FISHERY AND PRODUCT.	WASHINGTON COUNTY.		HANCOCK COUNTY.		PENOBSCOT COUNTY.		WALDO COUNTY.		KNOX COUNTY.		LINCOLN COUNTY.		SAGADAHOE COUNTY.		CUMBERLAND COUNTY.		YORK COUNTY.		TOTALS				
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.			
Alewife.....	246,000	\$1,369	166,000	\$4,415	10,000	\$125			372,000	\$6,625	1,234,000	\$11,975								2,128,000	Alewife.....	\$24,509	
Bass.....					250	30					4,000	1,200			88,625	\$963					92,875	Bass.....	2,193
Clam.....	5,523,970	129,311	6,60,425	199,680			500,000	\$3,750	7,388,830	102,542	3,643,200	44,940	515,800	\$5,111	5,826,300	78,915	1,300,000	\$16,250			31,303,525	Clam.....	580,499
Halibut.....	41,060	3,586	84,800	5,288					126,685	10,042			300	24	1,336,970	114,449	500	60			1,570,315	Halibut.....	133,449
Eel.....	15,000	1,200	11,500	3,130	10,000	900			9,540	763	89,700	8,950	152,640	9,158	51,875	4,797	10,000	800			370,255	Eel.....	29,698
Flounder.....	15,750	718	147,600	4,850					70,500	1,763	4,600	208			34,155	573					272,605	Flounder.....	8,112
Ground fish.....	4,491,877	70,640	11,389,820	164,754					19,773,556	328,455	185,100	3,660	2,038,464	30,020	17,358,827	386,238	1,296,008	35,075			56,533,652	Ground fish.....	1,018,842
Ground fish oil.....	15,672	352	259,800	8,767					271,500	7,314	10,800	360	14,100	353	109,200	3,820	15,000	375			696,072	Ground fish oil.....	21,341
Fish glue.....									255,000	38,151											255,000	Fish glue.....	38,151
Herring (fresh, salted and smoked).....	95,047,350	719,168	50,066,600	425,029			3,700,000	22,200	15,262,000	117,937	8,169,000	66,430	1,564,000	12,702	4,750,740	34,520	340,000	1,875			178,889,690	Herring.....	1,399,861
Herring oil.....	196,800	1,330									827,136	27,571									1,023,936	Herring oil.....	31,901
Porgy.....											5,000,000	50,000			5,000,000	50,000					10,000,000	Porgy.....	100,000
Lobster.....	2,483,484	24,278	2,935,800	346,383			59,080	8,862	6,625,036	901,577	1,882,994	213,329	472,450	56,802	1,078,190	134,984	642,190	96,170			16,189,224	Lobster.....	2,052,385
Mackerel (fresh and salted).....									410,400	35,541	90,600	6,434	4,000	280	141,400	12,758	20,000	1,520			666,400	Mackerel.....	56,533
Oyster.....											18,750	375									18,750	Oyster.....	375
Salmon.....	47,364	6,096	52,800	11,616	38,620	9,258	7,260	1,850						1,755	363						147,799	Salmon.....	29,183
Shad.....	110,000	4,300	120,000	1,800	400	20			110,000	1,575	87,400	4,682	388,000	13,580	570,600	6,295					1,386,400	Shad.....	32,252
Scallop.....	180	13	445,770	49,030					1,008,000	89,600	378	24			342	38	7,000	350			1,461,670	Scallop.....	139,056
Smelt.....	292,790	12,183	334,257	35,496	16,000	1,440			96,750	7,085	125,200	21,520	60,310	7,645	242,785	19,642					1,168,092	Smelt.....	125,011
Sword fish.....															341,797	23,295	1,200	120			342,997	Sword fish.....	23,415
Sounds, hake.....	3,550	255	24,700	1,300					86,982	5,669	3,600	288	5,520	525	30,885	2,014					155,237	Sounds, hake.....	10,071
Sturgeon.....					7,500	1,000								12,400	1,059						19,900	Sturgeon.....	2,059
Tongues and sounds.....	500	28	20,000	1,000					4,025	242											24,525	Tongues and sounds.....	1,270
Tomcod.....	7,450	449	5,000	100	140,000	1,400			15,300	612					11,500	375					179,250	Tomcod.....	2,936
County totals.....	108,549,797	\$1,268,276	72,754,872	\$1,262,638	222,770	\$14,173	4,206,340	\$36,662	51,886,104	\$1,655,513	21,381,458	\$461,946	5,229,739	\$137,622	36,974,191	\$673,676	3,631,898	\$152,595			304,896,169		
Grand total yield and value.....																							\$5,863,101
Value of plants, boats, gear, etc.....		\$682,281		\$569,434		\$805		\$15,165		\$379,283		\$213,939		\$61,401		\$413,746		\$93,290					\$2,929,344
Number men employed.....	2,352		3,272		36		79		2,280		1,606		679		1,498		391						12,193
Amount paid for labor by fish stand, factories, etc. (Not including sardine factories.).....		\$55,811		\$31,474						\$81,299		\$39,989		\$475		\$33,572		\$1,400					\$234,020

REPORT FOR YEAR ENDING NOV. 30, 1912.

FISHERY AND PRODUCT.	WASHINGTON COUNTY.		HANCOCK COUNTY.		PENOBSCOT COUNTY.		WALDO COUNTY.		KNOX COUNTY.		LINCOLN COUNTY.		SAGADAHOC COUNTY.		CUMBERLAND COUNTY.		YORK COUNTY.		TOTALS			
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.		
Alewife.....	296,800	\$1,560	593,000	\$10,280	354,000	\$2,540			185,000	\$3,700	1,914,000	\$14,130	96,000	\$720					3,438,800	Alewife.....	\$32,930	
Bass.....			3,000	60							6,000	1,800			65,785	\$1,228			74,785	Bass.....	3,088	
Clam.....	7,314,330	167,467	7,463,900	297,560			880,000	\$6,600	9,528,210	125,884	4,677,770	58,049	970,200	7,881	5,957,070	87,834	1,314,000	\$17,028	38,105,480	Clam.....	768,303	
Halibut.....	45,313	4,592	83,100	6,852					61,685	5,256	60	6	250	30	1,981,495	156,344			2,171,903	Halibut.....	173,080	
Eel.....	98,700	6,116	18,000	1,680	12,500	875			9,770	782	79,700	6,770	130,960	7,857	38,500	3,748	12,000	960	400,130	Eel.....	28,788	
Flounder.....	52,325	624	98,000	2,280					65,200	1,840	16,250	340			23,120	333			254,895	Flounder.....	5,417	
Ground fish.....	7,580,521	103,099	16,271,020	253,854	372,000	14,880			14,114,126	227,256	645,430	11,843	1,341,790	31,007	13,021,875	290,651	7,163,600	181,263	60,510,362	Ground fish.....	1,113,853	
Ground fish oil.....	77,160	2,426	501,204	12,948					193,680	6,641	30,000	925	15,480	387	103,800	3,114	20,400	561	941,724	Ground fish oil.....	27,002	
Fish glue.....									255,000	38,151									255,000	Fish glue.....	38,151	
Herring (fresh, salted and smoked).....	78,297,150	597,925	37,780,000	348,599			5,114,000	31,963	8,140,000	69,255	6,623,600	45,298	1,121,000	5,765	4,966,000	27,996	60,000	600	142,101,750	Herring.....	1,127,401	
Herring oil.....																					Herring oil.....	
Porgy.....											2,136,400	10,682							2,136,400	Porgy.....	10,682	
Lobster.....	2,792,354	319,961	3,000,900	377,179			57,280	8,592	6,681,800	841,593	1,521,644	196,669	546,470	67,844	1,173,822	152,443	524,100	77,374	16,298,370	Lobster.....	2,041,655	
Mackerel (fresh and salted).....	16,000	1,000	2,600	195					386,000	22,750	79,800	4,092	31,000	2,300	387,200	27,049	9,000	1,050	911,600	Mackerel.....	58,436	
Oyster.....											24,975	500							24,975	Oyster.....	500	
Salmon.....	63,390	6,593	48,000	11,520	29,820	8,090	8,420	2,105					1,440	295					151,070	Salmon.....	28,603	
Shad.....	87,000	4,540	363,000	5,520	1,400	98			1,856,000	14,505	107,000	5,175	525,000	26,250	356,600	5,012			3,296,000	Shad.....	61,100	
Scallop.....	180	13	708,300	85,145					1,147,500	140,250	315	20			1,008	146			1,857,303	Scallop.....	225,574	
Smelt.....	317,675	40,754	131,700	14,265	15,700	1,413			61,500	4,340	185,000	25,000	66,635	4,445	211,935	16,134			990,145	Smelt.....	106,351	
Sword fish.....			200	16							300	39			820,090	71,568	141,100	14,132	961,690	Sword fish.....	85,755	
Sounds, hake.....	2,863	114	21,100	1,235					60,410	4,171	5,772	712	6,720	675	51,625	4,178			148,490	Sounds, hake.....	11,085	
Sturgeon.....					7,600	1,240							12,400	1,059					20,000	Sturgeon.....	2,299	
Tongues and sounds.....	50	3							8,000	640									8,050	Tongues and sounds.....	643	
Tomcod.....	39,400	852	18,000	400	150,000	1,500			18,400	850					4,500	135			230,300	Tomcod.....	3,737	
County totals.....	97,081,211	\$1,257,639	67,105,024	\$1,429,588	943,020	\$30,636	6,059,700	\$49,260	42,772,281	\$1,507,864	18,054,016	\$382,050	4,865,345	\$156,515	29,164,425	\$347,913	9,244,200	\$292,968				
Grand total yield and value.....																			275,289,222		\$5,954,433	
Value of plants, boats, gear, etc.....		\$732,719		\$631,235		\$6,775		\$20,600		\$973,870		\$221,662		\$72,335		\$425,931		\$102,269			\$3,187,396	
Number men employed.....	2,434		2,987		28		92		2,533		1,714		700		1,509		329				12,326	
Amount paid for labor by fish stands, factories, etc. (Not including sardine factories.).....		\$61,674		\$39,720						\$78,089		\$14,530		\$650		\$39,215		\$1,400			\$235,278	

and hotels. Any man who has ever caught a sea salmon on a rod will admit that there is no fishing sport that equals it.

SCALLOPS.

The scallop fishery has developed into quite an industry by itself, as it employs a large number of men during the season. The records of 1912 show that there was nearly 2,000,000 pounds of scallops taken, of a value of more than \$225,000.

The principal beds of scallops thus far discovered are in the East and West Penobscot bays and in Bluehill bay and its tributaries, although scallops have been caught in other sections of the State.

They are growing in favor, and the demand is increasing each year. The supply, however, does not seem to increase; as the reports show that the same boats with the same equipment are not getting as many scallops at the present time, December 15, 1912, as they did on the same grounds in March of this year. No one can tell just why this is so, and different reasons are advanced for the condition; but it is quite evident that the scallops have changed from the beds on which they were found the first of the year, but may work back to them later.

They are caught in very deep water by means of a dredge dragged on the bottom by a large gasoline-engine boat. Fishing for scallops was impracticable until the advent of the gas engine.

The number of men employed in this fishery in the season varies from 300 to 500; and ordinarily it is a very profitable business.

SHAD.

The shad are much sought for in the spring months, the first catches bringing exorbitant prices; but as the season progresses and the fish become more plentiful, the demand decreases, and the surplus caught at that time is generally put into cold storage and taken out and used later as demand requires. For the past few years large schools of shad have been caught in the outer bays along the coast by seiners, and those catches are practically all taken to cold storage plants.

The Kennebec river has always been considered the best spawning ground for the shad, and there are probably more

large shad caught in that river in the early part of the season than any of the other rivers of the State.

The report shows a large increase in 1912 over previous years, which would indicate that the obstructions in the rivers and on the spawning beds are not of so serious a nature and that the fish are now on the increase. The total number of pounds caught this year was nearly 1,500,000, with a cash value of about \$33,000.

SMELTS.

This is one of the smallest, also one of the best food fish. While its commercial value is not so large as that of some others, it amounted to \$125,000 in the year 1912.

There are innumerable laws, both general and special, governing the catching of smelts; and it is practically impossible for smelt fishermen when changing from one section to another to know when they are violating the laws, as the law between two specific points on the coast in one section is entirely different from that in another section but a few miles distant. The legislature of 1911 passed a law that prohibited taking smelts in any other way than by hook and line or weirs or set nets through the ice, within one-half mile of the coast line at mean high water mark, from Cape Small Point on the west bank of the Kennebec river and continuing easterly along the coast of Maine to Owl's Head in Penobscot bay. This law is very unsatisfactory and working great injury to the smelt fishery in the rivers between those two stated points, as it allows the fish to be taken in weirs and with set nets through the ice in the rivers which are so narrow that such devices catch practically all the fish that come into them. I would advise that that law be repealed; and that a new general law be passed, prohibiting the catching of smelts in any river or bay the entrance to which or any part thereof is less than one-half mile in width, in any other way than by hook and line. The present method of catching, viz: with nets and weirs, in those small rivers and bays which the smelts frequent for the purpose of spawning, will ultimately destroy the species.

There seems to be no good reason why one general law cannot be framed that will apply to all sections of the State.

UNUSED AND ABANDONED WEIRS.

There was a law passed by the legislature of 1911 making it obligatory upon people wishing to build weirs to get permission from the owner of land in front of which the weir is to be built; also a license from the selectmen of the town in which the weir is to be located, said license to be issued only after a hearing on the spot to all interested parties; and the selectmen are also obliged under the law to procure bond from the licensee, the conditions of which are that upon discontinuing the use of the weir, all poles, stakes, and other material used in its construction shall be removed from the water. This matter is entirely in the hands of the selectmen of the towns, and they are probably granting licenses in conformity with the law.

There is, however, a nuisance along the coast that is complained of largely by people who own motor boats; that is, the old abandoned weirs that were built previous to 1911, and in innumerable cases where those old weirs were constructed there now stand the old posts and stakes that were used in the construction, which are a constant menace to people going about the waterfront in boats. Some action should be taken to have those stakes removed. Usually the locations are on the sides of the river or bay away from the main channel, so that the federal government hardly considers them an obstruction to navigation; but when the tide is full in a great many of the locations there is plenty of water for an ordinary power boat or yacht, and numerous cases have been reported of valuable boats having been destroyed by coming in contact with old submerged posts. I trust the incoming legislature will take some action to the end that this menace may be removed.

SUMMARY.

The following summary tables in this report are believed to contain in a condensed form all valuable data pertaining to the fisheries. From these tables it is possible for anyone interested to make up other tables showing the value of the products in any particular locality. The entire report has been condensed as much as possible consistent with clearness.

The Department has in its office a large quantity of detailed figures which have been used in making up the tables appended. Those figures are furnished monthly by the wardens, it being

their duty to get a report of the catch of all the different kinds of fish caught on territory over which they have jurisdiction and report to the commissioner at the end of each month.

The Department is not only willing but always pleased to receive communications asking for or giving information on any subject pertaining to the fisheries.

LIST OF FISH WARDENS NOW IN COMMISSION.

YORK.

J. F. Goldthwaite Biddeford

CUMBERLAND.

George A. Dow Portland

I. H. Snow Brunswick

J. R. Wallace Long Island

SAGadahoc.

A. C. Johnson Ashdale

LINCOLN.

C. A. Fossett Boothbay Harbor

E. E. Bailey New Harbor

R. T. York Damariscotta Mills

KNOX.

C. S. Coughlin Rockland

A. J. Rawley Tenant's Harbor

PENOBSCOT.

T. E. Sullivan Bangor

HANCOCK.

Leander R. Bunker Cranberry Isles

James A. Hill West Gouldsboro

F. L. Hodgkins Lamoine

W. B. Thurlow Stonington

WASHINGTON.

W. W. Blood Milbridge

F. W. Bowker Machias

D. O. French Jonesport

W. A. Henderson Cutler

J. L. Parker Eastport

F. A. Townsend Calais

LIST OF INSPECTORS OF PICKLED FISH.

Name.	Residence.	Date of Commission
A. E. Nickerson,	Boothbay Harbor.....	December 11, 1908
J. R. Holmes,	Eastport	December 11, 1908
William Teel,	Long Island Pl.....	November 11, 1909
Clarence E. McIntire,	Long Island.....	April 22, 1910
William H. Shurtleff,	Portland.....	November 29, 1910
Lyman H. Merry,	Boothbay Harbor.....	June 16, 1911
William E. Durgan,	Lubec.....	June 16, 1911
Thomas E. Raye,	Eastport.....	December 26, 1911
James E. Brennan,	Port Clyde.....	July 23, 1912

The above are commissioned for five years.

BOOTHBAY HARBOR (MAINE) STATION.

Record of Lobster Propagation—1912.

Date 1912	Number of Fry	Where Planted
June 4	2,000,000	North Haven Harbor, North Haven, Maine.
4	2,000,000	Mackerel Cove, Swan Island, Maine.
4	2,000,000	Pigeon Hill Bay, East Steuben, Maine.
4	2,000,000	Cape Split Harbor, Jonesport, Maine.
4	2,000,000	Englishmen's Bay, Jonesport, Maine.
4	2,000,000	Starboard Is'l Harbor, Machiasport, Maine.
4	2,000,000	North West Harbor, Machiasport, Maine.
4	2,000,000	North East Harbor, Machiasport, Maine.
5	4,000,000	Shackford Cove, Eastport, Maine.
5	5,000,000	Boothbay Harbor, off McKown's Point.
6	6,000,000	Ebenecook Harbor, Southport, Maine.
7	5,000,000	Head of Linekin's Bay, East Boothbay, Maine.
7	2,000,000	Cape Porpoise Harbor, Maine.
7	2,000,000	The Creek, Cape Porpoise, Maine.
7	2,000,000	Kennebunkport Harbor, Maine.
7	2,000,000	Wells Bay, Wells, Maine.
7	2,000,000	Perkin Cove, Ogunquit, Maine.
7	2,000,000	York Harbor, Maine.
7	2,000,000	Little New Harbor, New Castle, N. H.
7	2,000,000	Pepperell Cove, Kittery, Maine.
7	2,000,000	Hampton Harbor, Hampton, N. H.
7	2,000,000	Isle-of-Shoals Harbor.
8	6,000,000	Pemaquid Harbor, Pemaquid, Maine.
10	2,000,000	Townsend Gut, Boothbay Harbor, Maine.
11	250,000	Penobscot Bay, Vinalhaven, Maine.
11	750,000	Vinalhaven Harbor.
11	1,000,000	Crockett's Harbor, North Haven, Maine.
12	125,000	Camden Harbor.
12	125,000	Lincolnton Harbor.
12	125,000	Lazell's Is'l Harbor, Camden, Maine.
12	250,000	Pulpit Harbor.
12	125,000	Marsh Cove, Pulpit Harbor, Maine.
12	500,000	Swain Cove, Deer Isle, Maine.
12	750,000	W. Penobscot Bay, Eagle, Maine.
12	250,000	South West Harbor, Deer Isle, Maine.
12	3,000,000	Christmas Cove, S. Bristol, Maine.

	13	2,000,000	Seal Harbor, South Thomaston, Maine.
	13	3,000,000	Stonington Harbor.
	13	500,000	Minturn Harbor, Swan Island, Maine.
	13	2,000,000	Old Harbor, Swan Island, Maine.
	13	250,000	Frenchboro Harbor, Long Island, Maine.
	13	2,000,000	Bass Harbor, Mount Desert, Maine.
	14	3,250,000	Islesford Harbor, Cranberry Island, Maine.
	14	500,000	Seal Harbor, Seal Harbor, Maine.
	14	500,000	Duck Harbor, Mount Desert, Maine.
	13	3,000,000	Goose Rock Passage, Stonington, Maine.
	15	3,000,000	New Harbor.
	17	1,500,000	Boothbay Harbor, off McKown's Point.
	17	1,000,000	Quohog Bay, Orr's Island, Maine.
	17	4,000,000	Casco Bay, Freeport, Maine.
	19	1,000,000	Pig Cove, Southport, Maine.
	20	2,000,000	Matinic Is'l Harbor, St. George, Maine.
	20	3,000,000	Port Clyde Harbor, St. George, Maine.
	20	3,000,000	Friendship Harbor.
	20	2,000,000	Delano Cove, Lawry, Maine.
	21	2,000,000	Damariscotta River, Damariscotta, Maine.
	22	2,000,000	Five Islands Harbor, Georgetown, Maine.
	24	4,750,000	Prospect Harbor, Gouldsboro, Maine.
	24	2,125,000	Gouldsboro Bay, Corea, Maine.
	24	125,000	Frenchman's Bay, Sorrento, Maine.
	24	3,000,000	Frenchman's Bay, S. Hancock, Maine.
	25	6,000,000	Boothbay Harbor, Ocean Point, Boothbay, Maine.
	26	5,000,000	Biddeford Pool Harbor.
	26	5,000,000	Wood Island Harbor, Biddeford Pool, Maine.
	27	7,000,000	Linekin's Bay, Boothbay, Maine.
	30	1,000,000	Gray's Cove, Brooklyn, Maine.
	30	1,000,000	Eggemoggin Reach, Brooklyn, Maine.
	30	1,000,000	Union River, Ellsworth, Maine.
	30	1,000,000	Dyer's Bay, Millbridge, Maine.
	30	1,000,000	Wasco Cove, South Addison, Maine.
	30	5,000,000	Wheeler's Bay, Tenant's Harbor, Maine.
July	1	500,000	Boothbay Harbor, Maine.
	3	500,000	Boothbay Harbor, Maine.
	5	1,000,000	Monhegan, Harbor, Monhegan, Maine.
	5	1,000,000	Rockland Harbor, Rockland, Maine.
	8	1,000,000	New Meadows River, West Bath.
	8	1,000,000	Sagadahoc Bay, Phippsburg, Maine.
	9	300,000	Prospect Harbor, Gouldsboro, Maine.
	9	200,000	Corea, Gouldsboro, Maine.
	10	1,000,000	Rye Harbor, Hampton, N. H.
	12	2,000,000	Harman Harbor, Georgetown, Maine.
	15	1,000,000	Boothbay Harbor, Boothbay Harbor, Maine.
	16	1,000,000	Matinic Harbor, Matinic, Maine.
	16	1,000,000	Rockland Harbor, Rockland, Maine.

17	1,500,000	Pig Cove, Southport, Maine.
18	1,000,000	Portland Harbor, Portland, Maine.
19	1,000,000	Boothbay Harbor, Boothbay Harbor, Maine.
20	500,000	Sheepscot River, Wiscasset, Maine.
22	500,000	Boothbay Harbor, Boothbay Harbor, Maine.
23	1,000,000	Wood Island, Biddeford, Maine.
24	500,000	Ebenecook Harbor, Southport, Maine.
26	500,000	Squirrel Island, Boothbay Harbor, Maine.
30	1,500,000	Harpwell Sound, Harpswell, Maine.
31	1,500,000	Portland Harbor, Portland, Maine.
Aug. 2	2,500,000	Pemaquid Harbor, Pemaquid Harbor, Maine.
5	1,000,000	Linekin's Bay, East Boothbay.
7	500,000	Monhegan Harbor, Monhegan, Maine.
8	1,000,000	John's Bay, Bristol, Maine.
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	188,500,000	

There was also hatched and planted in the waters of the State in 1912 over 6,000,000 cod fry, nearly 12,000,000 haddock fry, and 490,000,000 flat-fish or flounder fry.