

MAINE STATE LEGISLATURE

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MAINE PUBLIC DOCUMENTS

July 1, 1938 - June 30, 1940

STATE OF MAINE

Eleventh Biennial Report

**DEPARTMENT OF
SEA and SHORE FISHERIES**



BOOTHBAY HARBOR, MAINE
Arthur R. Greenleaf, Comm.

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STATE OF MAINE

**BIENNIAL REPORT OF
DEPARTMENT OF SEA AND SHORE FISHERIES**

Boothbay Harbor, Maine

To the Honorable Governor and Executive Council:

Sirs:

I have the honor to herewith transmit, in compliance with the law, the report of the Department of Sea and Shore Fisheries, for the two years ending June 30, 1940, together with statistics and other important data.

ARTHUR R. GREENLEAF,
Commissioner

BRIEF HISTORY OF THE DEPARTMENT OF SEA AND SHORE FISHERIES

Prior to 1867 there was no official head to this Department but the Governor of the State appointed Wardens to enforce the laws. In 1867 by legislative resolve entitled "Resolve Relating to Restoration of Sea Fish through the Rivers and Inland Waters of Maine," was passed. You will note that the two departments, the Inland, and the Sea and Shore Fisheries were one and continued as such until 1895. Under the Resolve of 1867, Nathan W. Foster, of East Machias, and Charles G. Atkins of Orland, were appointed Commissioners.

Charles G. Atkins of Orland was appointed Commissioner and served until 1872 when E. M. Stilwell of Bangor and Henry O. Stanley of Dixfield were appointed. In 1879 E. M. Stilwell and Everett Smith of Portland were appointed Commissioners of Fisheries and Game. (Authority over Game was given this Commission on March 9th, 1880.)

In 1881 Henry O. Stanley served alone for a time, until Mr. Stilwell's re-appointment.

In 1885 the law was amended so that in addition to the two persons appointed Commissioners of Fisheries and Game, the Governor should appoint one other Commissioner to have general supervision of the Sea and Shore Fisheries, and E. W. Counce of Thomaston was first appointed, and served with Messrs. Stanley and Stilwell, until 1891, when Edwin W. Gould of Searsport was appointed.

In 1893 Orrin B. Whitten of Portland was appointed to succeed Mr. Gould, and Thomas H. Whitten of Bradford and Henry O. Stanley served as Commissioners of Fisheries and Game.

In 1895 by legislative act, the departments were entirely separated and Mr. Whitten served as Commissioner of Sea and Shore Fisheries until Alonzo Nickerson of Boothbay Harbor was appointed on Feb. 23rd, 1898.

On Feb. 6th, 1907, Mr. Nickerson was succeeded by James Donahue of Rockland.

On March 5th, 1913, Henry D. S. Woodbury of South Portland succeeded Mr. Donahue.

On March 1st, 1916, William Brennan of Port Clyde succeeded Mr. Woodbury. Mr. Brennan resigned, and on December 29th, 1916, Oscar H. Dunbar of Jonesport was appointed.

The Legislature of 1917 abolished the office of Commissioner of Sea and Shore Fisheries and created in place thereof a Sea and Shore Fisheries Commission; the Commission to appoint a Director of Sea and Shore Fisheries with all the powers and duties of the former Commissioner. This law was held up for some time after July 7th, when it would have taken effect, because of an effort being made to invoke the referendum, but on Dec. 26, 1917, the Governor decided that sufficient number had not legally petitioned him to refer the law to the people, and on January 3rd, 1918, H. D. Crie of Castine, H. C. Wilbur of Portland and E. W. Gould of Rockland were appointed Commissioners with a salary of \$5 a day for what time actually employed. The Commissioners appointed Oscar H. Dunbar of Jonesport as director, at a salary of \$2000. Mr. Dunbar resigned and in April, 1918, Harry L. Sanborn of Vinalhaven was appointed to this position.

In 1920, H. D. Crie was appointed Director and served until 1931 when the Commission was abolished. Mr. Crie was then appointed Commissioner with "power, with the approval of the governor and council, to organize the work of the Department in such manner as he may deem necessary for its efficient and economical administration."

In 1934, Rodney E. Feyler of Thomaston was appointed Commissioner to serve for 3 years under the same set-up as was created in 1931.

In January 1937, Arthur R. Greenleaf of Boothbay Harbor was appointed to succeed Mr. Feyler for a three year term. In 1939 the legislature extended the length of service of the Commissioner to a four year term and Commissioner Greenleaf was re-named to serve until 1943.

The department maintains a force of 33 wardens, general offices at Boothbay Harbor, two patrol boats, a statistician, a machine shop and a lobster rearing station. It also owns a lobster pound at Beals Island near Jonesport.

The Commissioner directs the activity of the department with the assistance of five warden supervisors who are assigned to the various districts. Close coöperation with other state departments and the various Federal agencies has proven to be most valuable.

THE MAINE FISHING INDUSTRY WHAT IT REPRESENTS

It is estimated that nearly 50,000 persons are dependent upon the fishing industry for a livelihood. This represents the fishermen, their families, the dealers and their employees, peddlers, marketmen and factory workers.

This is now a \$25,000,000 industry which ranks second only to agriculture in importance, in that it furnishes food and keeps so many small communities alive and prosperous. It is truly the backbone of the Maine coast.

Annual landings are close to 100,000,000 pounds of fish and shellfish with the catches valued at several millions of dollars. For instance the sardine pack in 1939 was valued at well over \$6,000,000 with that large amount of new money being brought into the state.

The production of packaged and frozen fish in 1939 was valued at nearly one half million while the lobster catch brought in well over a million dollars. Incidentally the investment in lobster gear, boats, smacks and plants represents several millions.

Along our coast we have many long established communities which came into existence through fishing. These communities like our rural towns are the backbone of Maine's thrift and solidarity and must be maintained for the good of the state at large.

We have thousands of able bodied, law abiding citizens who have made fishing their life work and who have learned no other occupations. They depend upon the sea for a living and should be given every encouragement.

If the fishing industry is allowed to decline, to any greater extent, the state will find itself faced with a very serious situation. These 50,000 persons must live. If they moved to the industrial centers the situation would of course become acute.

We have dozens of abandoned fish plants of all kinds that could be put back into operation at little cost. Our job is to find ways and reasons for rehabilitating these plants and consequently providing work for many more of our citizens.

In our fisheries we have a great natural heritage. Let's promote the products of that heritage in such a way that they will do the most good for the most people and still never fail to realize the necessity of preserving while promoting.

FINANCIAL STATEMENT**EXPENDITURES****July 1, 1938 to July 1, 1939**

Salary and Clerk Hire	\$6,130.01
General Office Expenses	4,757.87
Pay and Expenses of Wardens	65,593.00
Propagation of Shell Fish	3,569.25
Shrimp Research	2,623.55
Lobster Rearing Station	28,777.30
Seal Bounties	425.00
Salmon Rearing Pool	351.52
	<hr/>
	\$112,227.50

July 1, 1939 to July 1, 1940

Salary and Clerk Hire	\$7,967.08
General Office Expenses	4,280.27
Commissioner's Expenses	1,363.98
Pay and Expenses of Wardens	3,041.22
Service of Wardens	44,342.59
Expense of Wardens	16,892.46
Outfits for Wardens	1,615.94
Patrol Boats	21,450.49
Shop	517.61
Promotion and Publicity Expense	1,750.66
Propagation of Shell Fish	1,406.12
Purchase of Seed Lobsters	5,484.06
State Hatchery	8,825.73
Laboratory	4.08
Lobster Pound	25.55
Lobster Food	317.19
Bangor Salmon Pool	4.10
Purchase of Lobster Measures	270.00
Experimental Study of Fish Disease	1,000.00
Beals Island Lobster Pound	8,000.00
Seal Bounties	1,028.00
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	\$129,587.13

FUNDS DEPOSITED IN STATE TREASURY FROM FINES, LICENSES, ETC.

	July 1, 1938 to July 1, 1939	July 1, 1939 to July 1, 1940
Lobster Licenses.....	\$5,638.00	\$5,843.00
Clam Licenses.....	85.00	90.00
Gasoline Rebate.....	265.62	184.03
Insurance Rebate.....		23.10
Quahaug Permits.....	30.00	10.00
Fines.....	760.00	346.00
Sale of Commodities.....	421.70	1,040.85
Sale of Shrimp, Nets, etc.....	59.71	
P.W.A. Grants.....		7,765.00
Draft from Insurance Co. for fire damage to "Maine".....		1,762.46
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	\$7,260.03	\$17,064.44

DIFFERENT KINDS OF LICENSES ISSUED

	July 1, 1938 to July 1, 1939	July 1, 1939 to July 1, 1940
Lobster Licenses		
Fishermen.....	3592	3722
Merchants.....	340	380
Servers (Hotels and Restaurants) ..	834	868
Smackmen or truckmen (Domestic) ..	66	70
Shippers.....	191	193
Foreign smacks and trucks.....	71	68
Lobster Meat Permits.....	26	27
Permits to set traps on trawls.....	123	113
	<hr/>	<hr/>
	5243	5441

	June 1, 1938 to June 1, 1939	June 1, 1939 to June 1, 1940
Clam Licenses		
Clam Shippers	17	18
Clam and Quohaug Cultivation	3	1
	—	—
	20	19
	Apr. 1, 1938 to Apr. 1, 1939	Apr. 1, 1939 to Apr. 1, 1940
Ground Fishermen's Licenses	1273	777
	Aug. 1, 1938 to Aug. 1, 1939	Aug. 1, 1939 to Aug. 1, 1940
Clam Worm Licenses	444	471
	July 1, 1938 to July 1, 1939	July 1, 1939 to July 1, 1940
Violations of Sea and Shore Fisheries Laws	69	75

LOBSTER INDUSTRY FOR 1938

Data taken from lobster fishermen's applications received July 1, 1939 to July 1, 1940.

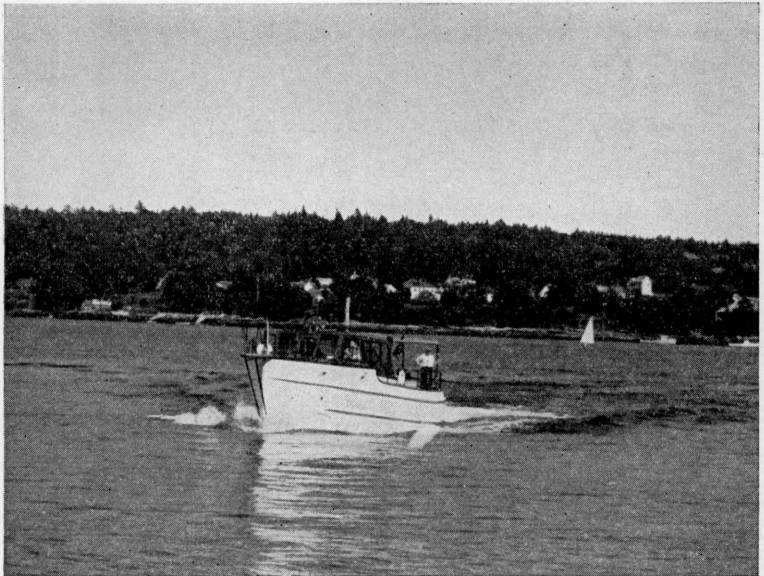
Note: All fishermen are required to give figures of their past 12 months activities in applying for new license.

	Totals
Number of boats.....	5,736
Value of boats	\$697,500.25
Number of traps.....	257,599
Value of traps	\$464,320.79
Number of lobster cars	3,008
Value of lobster cars	\$24,905.00
Number of pounds of lobsters caught.....	7,200,231
Amount received for lobsters caught.....	\$1,228,693.17
Number of gallons of gasoline used.....	925,100
Amount paid for gasoline bought.....	\$164,143.87
Number of bushel of bait used.....	267,822
Amount paid for bait used.....	\$146,670.13



CLAM FARMING AT CHEBEAGUE ISLAND

Photo shows method of planting clams now being practiced by the department. Several hundred acres will be worked during 1941.



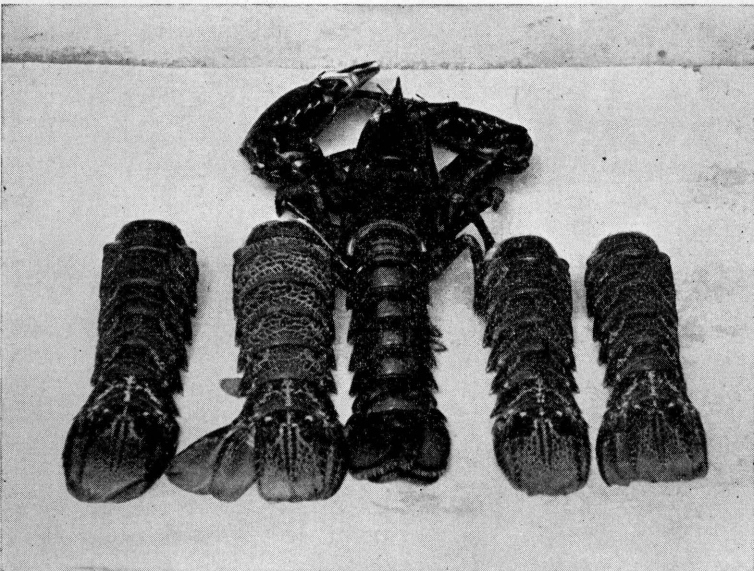
NEW PATROL BOAT MAINE UNDERWAY

The department's big patrol boat MAINE is capable of running in all kinds of weather, summer and winter



GETTING READY TO RELEASE LOBSTERS

Scene taken in rearing station shows method used to remove fourth stage lobsters from the rearing tanks for releasing



LOBSTERS VS. CRAWFISH

Comparison between lobster and crawfish tails is shown above. Millions of pounds of the tails are shipped from Africa each year and sometimes sold as "lobster."

COMPLETE STATISTICAL REPORT

Compiled by Statistician Arthur McKown for Year 1939

LANDINGS AT MAINE PORTS

Species	Number	Pounds	Bushels	Average Price	Total Value
Cod (large)		3,622,402		.0291	105,667.02
Cod (market)		3,467,029		.0204	50,331.28
Cod (scrod)		284,811		.0105	3,006.56
Haddock (large)		4,291,295		.0455	195,494.53
Haddock (scrod)		506,199		.0193	9,805.69
Hake (large)		2,863,133		.0182	52,379.05
Hake (medium)		1,929,417		.0282	55,579.72
Hake (small)		125,382		.0124	1,564.17
Pollock		2,401,762		.0134	33,284.57
Cusk (large)		1,799,166		.0304	54,705.67
Cusk (small)		144,288		.0104	1,511.77
Rosefish "redfish"		5,419,935		.0114	61,980.37
Spawn		10,751		.0445	478.56
Flounders (ray sole)		832,523		.0396	33,037.28
Flounders (blackbacks)		607,943		.0198	11,995.07
Halibut		49,092		.1992	9,780.63
Crabs	3,358,777			.0067	22,723.92
Herring—Maine			794,224	.5661	449,617.82
Whiting (dressed)		726,747		.0077	5,622.58
Whiting (round)		3,668,897		.0036	13,367.66
Bloodworms and sandworms	15,024,235			100 at .75	112,781.56
Sharks		29,952		.0200	601.16
Livers		73,907		.0149	1,108.53
Clams		331,961		.6317	209,711.63
Alewives (bluebacks)		1,665,556		.0103	17,162.44
Lobsters (Maine)		6,625,409		.1563	1,036,155.31
Lobsters (Canadian)		1,382,402		.1511	208,924.02
Mackerel (large)		443,834		.0507	22,551.06
Mackerel (medium)		1,150,035		.0316	36,349.62
Smelts		62,384		.0831	5,187.45
Scallops		394,965		.1411	55,766.81
Wolfish		41,260		.0131	541.11
Sea Eggs		54,417		.0047	260.09
Butterfish		52,155		.0368	1,909.40
Shrimp		19,864		.0425	845.18
Shad		9,266		.0532	493.16
Tuna		94,590		.0401	3,797.40
Swordfish		57,993		.1938	11,241.90
Salmon		7,562		.26	1,966.12
Quohaugs			30 $\frac{1}{4}$.50	15.13
Total Value for the Year					\$2,899,303.00

COMPLETE STATISTICAL REPORT

Compiled by Statistician Arthur McKown for Year 1940

LANDINGS AT MAINE PORTS

Species	Number	Pounds	Bushels	Average Price	Total Value
Cod (large)		4,306,731		.0314	135,383.09
Cod (market)		994,179		.0265	26,321.68
Cod (serod)		224,445		.0149	3,353.10
Haddock (large)		6,139,126		.0457	280,997.52
Haddock (serod)		1,299,556		.0284	35,954.91
Hake (large)		3,303,868		.0185	61,423.71
Hake (medium)		1,608,043		.0246	39,717.10
Hake (small)		154,973		.0163	2,527.31
Pollock		3,607,511		.0161	58,166.14
Cusk (large)		1,719,900		.0385	65,331.66
Cusk (small)		37,353		.0176	658.28
Rosefish—Redfish		7,891,864		.0121	95,603.30
Wolffish—Catfish		67,299		.0134	907.47
Flounders (Gray Sole)		729,598		.0419	30,622.83
Flounders (Blackbacks)		257,342		.0273	7,144.01
Flounders (lemon sole)		32,750		.0254	824.93
Flounders (dabs)		374,139		.0152	5,699.48
Halibut		51,355		.2025	10,390.30
Sharks		15,225		.0200	304.50
Whiting—Round		5,419,748		.0050	27,161.88
Whiting (dressed)		121,945		.0088	1,080.13
Shad		32,164		.0122	395.17
Herring			322,847	.5999	199,684.05
Lobsters—Maine		7,643,005		.1625	1,236,676.02
Lobsters (Canadian)		1,323,766		.1412	186,960.78
Crabs	2,727,777			.0075	20,458.32
Clams			397,908	.5958	237,093.26
Scallops—Sea		485,424		.1701	82,589.79
Periwinkles		48,853		.0258	1,263.89
Livers		557,850		.0214	11,975.52
Smelts (large)		225,548		.0996	22,482.22
Smelts (medium)		35,094		.0800	2,807.52
Smelts (small)		69,666		.0500	3,483.30
Spawn		33,713		.0477	1,611.25
Blood and Sand Worms	9,478,485			100 at 75	71,088.67
Sea Eggs		104,961		.0092	969.30
Shrimp		8,610		.0526	452.94
Quahogs			335	1.00	335.00
Mackerel (large)		297,969		.0309	9,221.81
Mackerel (medium)		85,199		.0205	1,751.58
Mackerel (tinkers)		965,727		.0118	11,020.13
Salmon		20,523		.1973	4,049.66
Tuna		53,734		.0321	1,729.00
Swordfish		92,711		.1743	16,987.26
Butterfish		67,286		.0200	1,345.72
Sturgeon		223		.1000	22.30
Alewives—bluebacks		805,258		.0059	4,816.08
Total Value for Year					\$3,020,843.87

DEPARTMENT STAFF**Commissioner, ARTHUR R. GREENLEAF****OFFICE FORCE**

Helen L. Hallowell, Chief Clerk and Senior Secretary
 Blanche T. Marshall, Int. Clerk Stenographer
 Adda Bell Rice, Junior Clerk Stenographer

WARDENS AND SUPERVISORS**First District**

Milton Chapman, Box 2121, So. Portland	Dwight W. Underwood, 70 Middle St., Saco
Elwin G. Doughty, Long Island, Portland	Elmore L. Wallace, 76 Morning St., Portland
Harley G. Ellis, York Beach	

Second District

Fred Duplisey, New Harbor	Warren A. Hume, Supervisor
Merlin Gray, Boothbay Harbor	Owen Richardson, West Point
Joseph T. West, Damariscotta	James W. Thurston, Orr's Island
	John Stevens, Cundy's Harbor

Third District

Charles Carver, 52 Cedar St., Rockland	Charles S. Coughlin, Supervisor
Frank G. Hallowell, Thomaston	Eugene Loud, Vinalhaven
Walter Drinkwater, Spruce Head	A. J. Smalley, Tenant's Harbor
Fred McGlauffin, Friendship	B. R. Smalley, Tenant's Harbor

Fourth District

Forest L. Albee, Bernard	William H. Thurston, Supervisor
Oscar W. Ford, Brooklin	Lester A. Stubbs, Hampden Highlands
Charles H. Joyce, Swan's Island	David T. Thurlow, Stonington

Fifth District

Swansea G. Burns, Jonesport	Ernest V. Woodward, Supervisor
Robin T. Henderson, Cutler	Daniel Johnson, R.F.D. 1, Lubec
	Roy D. Stewart, Corea

PATROL BOATS**"MAINE"**

Capt. Clarence A. Meservey,
Boothbay Harbor
 Engineer, Clayton A. Simmons, Southport

"LIVELY LADY"

Capt. Daniel Davis
Boothbay Harbor

HATCHERY AND MACHINE SHOP

Superintendent, Thomas T. McKinney
 Fish Culturist, Victor T. McKinney
 Fish Culturist, Sherburn F. Hodgdon

A Brief Report of the Activities of the Department during 1939-1940

Other than the regular administrative and law enforcement activities the department sponsored a number of important developments during this period. Since I was appointed commissioner I have always believed that progress and profit were natural team mates and have done my best to take advantage of every project that looked as though it might be beneficial to the fishing industry. Many have not turned out so well while others have been immensely profitable. All in all I firmly believe that it is the job of us in the department to leave no stones unturned in our efforts to merit the trust that has been put in us.

Following I will deal briefly with some of our projects. Space does not permit elaborate and lengthy discussion but full details are available at the department offices.

STUDY OF HERRING DISEASE

For the past two summers we have been coöperating with the Mount Desert Island Biological Laboratory on a survey of herring diseases, especially emphasizing the troublesome redfeet menace. The department has supplied the laboratory with funds and equipment and skillful biologists have made an exhaustive study of all phases of the disease.

In a lengthy report director William H. Cole has outlined the work and has provided sardine men with valuable data in which they may better combat the disease and has given the department a basis upon which it may proceed towards further study. We consider this work as the most important of its kind ever done and feel that it never would have been done without the support of our department.

OYSTER SURVEY

For many years it has been contended that oysters were once abundant along the Maine coast and that a propagation program would revive the industry. We were greatly interested in the theories and planted an experimental bed at Southport. When it did not show signs of spreading or producing young stock we decided that a survey by oyster experts was advisable before any more time or money was expended.

The U. S. Fish and Wildlife Service kindly loaned us Doctors Paul S. Galtsoff and Walter A. Chipman Jr., who using our boats and our wardens as assistants made careful surveys of many logical oyster areas along the coast. After several weeks of work they reached the conclusion, and this was based on scientific data, that oysters could not be profitably propagated on the Maine coast and advised the department against attempting any more work along those lines.

We have taken the advice of these men and other planned experimental projects have been dropped. The full report of Galtsoff and Chipman is available at department offices.

STRIPED BASS SURVEY

Endeavoring to develop our salt water sports fishing so that it may become a great recreational attraction, with the resultant increase of revenue, we engaged Sumner Towne of Brookline, Mass., to survey the striped bass situation last summer. Towne, a widely known authority, spent six weeks along the coast conducting tests and experimental fishing in a number of tidal streams and rivers. Our theory was that if we are going to properly develop a bass fishery we must approach the subject from a scientific and practical angle.

Upon the completion of his work Towne filed a comprehensive report which we are circulating in printed form. He has supplied us with a great deal of information as to where the fish can be found, how and when they should be caught and the future prospects for the fishery.

During the coming summer we hope to have Towne continue his work until the entire coast has been covered. Sportsmen have shown a great interest in Towne's work and we feel that we are now much better equipped to go ahead with the future development and promotion of the fishery.

SHRIMP SURVEY

Many fishermen contended that shrimp were off the Maine coast during the summer months and that a fishery should be developed. In that shrimping in Maine is a comparatively new industry we felt that a survey of the summer prospects was worthwhile. Capt. Carl Reed of Owls Head was engaged to carry on an experimental fishery and the results were as illuminating as they were disappointing. During several weeks of

work Captain Reed found nothing that would lead the department to believe that a summer fishery could be profitable.

In getting this information we not only saved many fishermen the expense and trouble of trying to get shrimp in the summer but satisfied ourselves that shrimping must remain a winter endeavor.

SCALLOP EXPERIMENT

When scallops practically disappeared from the prolific Penobscot Bay beds some years ago a number of theories were advanced as to the reason. Most acceptable of these theories was that the bi-valves had been killed off by starfish. At the request of the scallop industry we conducted an experimental project of destroying the starfish over a fairly large area. Once again we engaged Capt. Carl Reed and he worked for several weeks dragging up the predators by the millions and destroying them.

There has not been time to properly weigh the results although experimental dragging on the cleaned area this winter did show that there were less starfish and more young scallops. Whether or not this work would be profitable on a large scale is problematical. It would seem that the results would never warrant the cost unless some cheaper method could be devised to eliminate the starfish on areas of several square miles in size.

LOBSTER REARING STATION

The Governor Barrows lobster rearing station completed in 1938 is in readiness for its third season of operation and we expect to produce at least 1,000,000 fourth stage lobsters for distribution this year. Since the opening ceremonies a great deal of work has been done to iron out the kinks in our system of rearing and the improvements have been many and amazing. In fact the station is now much more efficient than when operations first started and we have every reason to believe that even more improvements are possible.

As superintendent of the station veteran warden Thomas McKinney has been well schooled by experience, biologists and Federal experts and is now considered one of the nation's foremost lobster rearing authorities.

The department believes that the one station does not have the production capacity to do a satisfactory job in propagating the beds all along the coast. As a result I asked legislature for an appropriation to build another station and specified that it

should be located in either Washington or Hancock counties. At the present time investigations and surveys are being made and we fully expect to have the new plant in operation by the summer of 1942. Legislature was very receptive to the plan and it passed both houses without a dissenting vote.

I want to take this opportunity to publicly thank Supt. Thomas Dorr of the Federal hatchery at Boothbay Harbor for his wonderful cooperation in helping to make our lobster rearing work both possible and successful.

LOBSTER BIOLOGIST

The department was very fortunate in securing the services of biologist Leslie Scattergood, in 1938, to carry on a study of the lobster, lobster rearing and other phases of the industry. His work has made available important and valuable data that is enormously helpful in the conservation and propagation of this species. At the present time he is preparing charts and figures that will be extremely enlightening to all and which will be ready for distribution in the near future.

Although he has been under the direct supervision of the U. S. Fish & Wildlife Service he has made his headquarters at the laboratory in our rearing station and most of his work has been done along the Maine coast. This is the first time that Maine or any other state has employed a full time lobster biologist and his employment has proven to be a great forward step.

I would like to say here that Maine lobster fishermen would do well to visit Mr. Scattergood's laboratory and learn about some of the interesting data he has prepared.

RE-ORGANIZATION OF WARDEN FORCE

In the interest of efficiency we divided the warden force into five supervisory districts in 1939 and promoted men from the ranks to act as supervisors. Each of these five men have a district and the wardens in those districts are directly under them. Once a month the supervisors meet with me at headquarters. I have found this system to be more economical and much more efficient.

CLAM PROPAGATION

For the first time in history the department started a program of clam propagation last summer and is continuing this work on

a much larger scale at the present time. In the summer of '40 we employed a boat and an experienced clam man who planted a number of acres in Cumberland, Sagadahoc and Lincoln counties. The system used was the same as that which has produced exceptional results in Massachusetts and other states.

Barren areas that scientific testing proved to be capable of producing clams were found and closed for a period of two years. Most of these areas had formerly offered good production but has been exhausted by overdigging. Seed clams were taken from overseeded areas and transplanted on these areas. Growth should be at the rate of 14 bushels for every bushel planted within a year.

During the winter we made a deal with the National Youth Administration to put a large crew to work in Washington and Hancock counties on clam propagation. The total cost to the department is very small and more than 130 acres will be seeded. This should produce at least 2000 acres of excellent clamming within two years. At the present time we also have a small crew working in Sagadahoc, Lincoln, Knox and Waldo counties. As time goes on and the results of this work become evident we expect to be able to work out a revolving plan whereby a large number of acres can be propagated each year and thereby increase Maine's clam production by thousands of barrels.

STATISTICS

One of our most forward steps was the setting up of a division of statistics in 1939 with Arthur McKown in charge. The purpose of this was to keep an accurate check on the production of all species of fish and shellfish and from such a check we can reach many conclusions as to what steps we should take for the protection and propagation of the various species. Working closely with the Federal fisheries bureau we have been able to show the true picture of the production end of the Maine fishing industry as never before. Elsewhere in this report will be found some of the statistical tables.

McKown makes a thorough canvass of the entire coast each month and finds the dealers and fishermen very helpful and coöperative. According to the Federal bureau, Maine has the most comprehensive and accurate system of gathering statistics of any state on the Atlantic seaboard.

NEW PATROL BOAT

Late in 1938 we purchased a new 60 foot patrol boat, finally providing the department with a piece of equipment that could be used in winter and summer. Previously none of the boats were suitable for heavy weather and the warden force was often tied up for days at a time. The present boat is equipped with a radio telephone and is at the service of the entire industry. She maintains a coastal patrol all winter and has come in very handy in breaking ice and towing disabled fishing boats to port.

A smaller 35 foot cruiser is used for inshore work and has proven invaluable in law enforcement and survey work.

THE CANADIAN SITUATION

Realizing as most of the fishermen do that Canadian competition is the lobster industry's biggest problem we have been doing everything possible to try to remedy the difficult situation. Our activities have included conferences with Canadian officials, negotiations in Washington and close coöperation with the North Atlantic Lobster Conference. Although no definite results have been shown we believe that we are on the right track and that some concrete agreement may be reached within the next few months.

Canada has a bad situation in her lobster fisheries and is more than willing to coöperate if and when a suitable compromise can be worked out.

Incidentally the department recently banned the sale of canned Canadian lobster meat in Maine, in that investigation has shown that a large percentage of the meat is from lobster which were below our legal measure in size.

PROMOTION

In the promotion field we have worked closely with the Maine Development Commission and other agencies in developing better markets for our seafoods and increasing activities in our sports fisheries. For a while last year we had a sea food demonstrator in Maine stores and we also carried out an extensive sea food advertising campaign. We put on a Sea and Shore Fisheries exhibit at the Boston and New York Sportsmen Shows and have given all encouragement and help possible in developing Atlantic salmon fishing, tuna clubs and other worthwhile activities. I believe in the future of our sports fisheries and think that money used for their development is money well spent.

U. S. FISH AND WILDLIFE SERVICE

Before completing this brief round-up of our activities I want to express my appreciation of the wonderful coöperation I have received at all times from Dr. William C. Herrington and his associates of the U. S. Fish and Wildlife Service. They have always been more than willing to assist in every worthy undertaking and the department and state of Maine owes much to these brilliant and conscientious men.

The department and the industry owes a debt of gratitude to Gov. Sewall and the Executive Council for their sympathetic understanding of the problems confronting the fisheries and their always evident desire to help whenever possible.

In closing I want to say that my one desire has been to run this department for the best interests of the largest number of people. Every decision I have made has been with the utmost regard for the good of the whole industry and no individual or individuals in particular. The department has grown in the past few years, both in prestige and service, and in submitting this report my wish is that this healthy growth will continue.

ARTHUR R. GREENLEAF,
Commissioner