

# MAINE STATE LEGISLATURE

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MAINE PUBLIC DOCUMENTS

1944-1946

(in three volumes)

VOLUME II

STATE OF MAINE

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Fourteenth Biennial Report

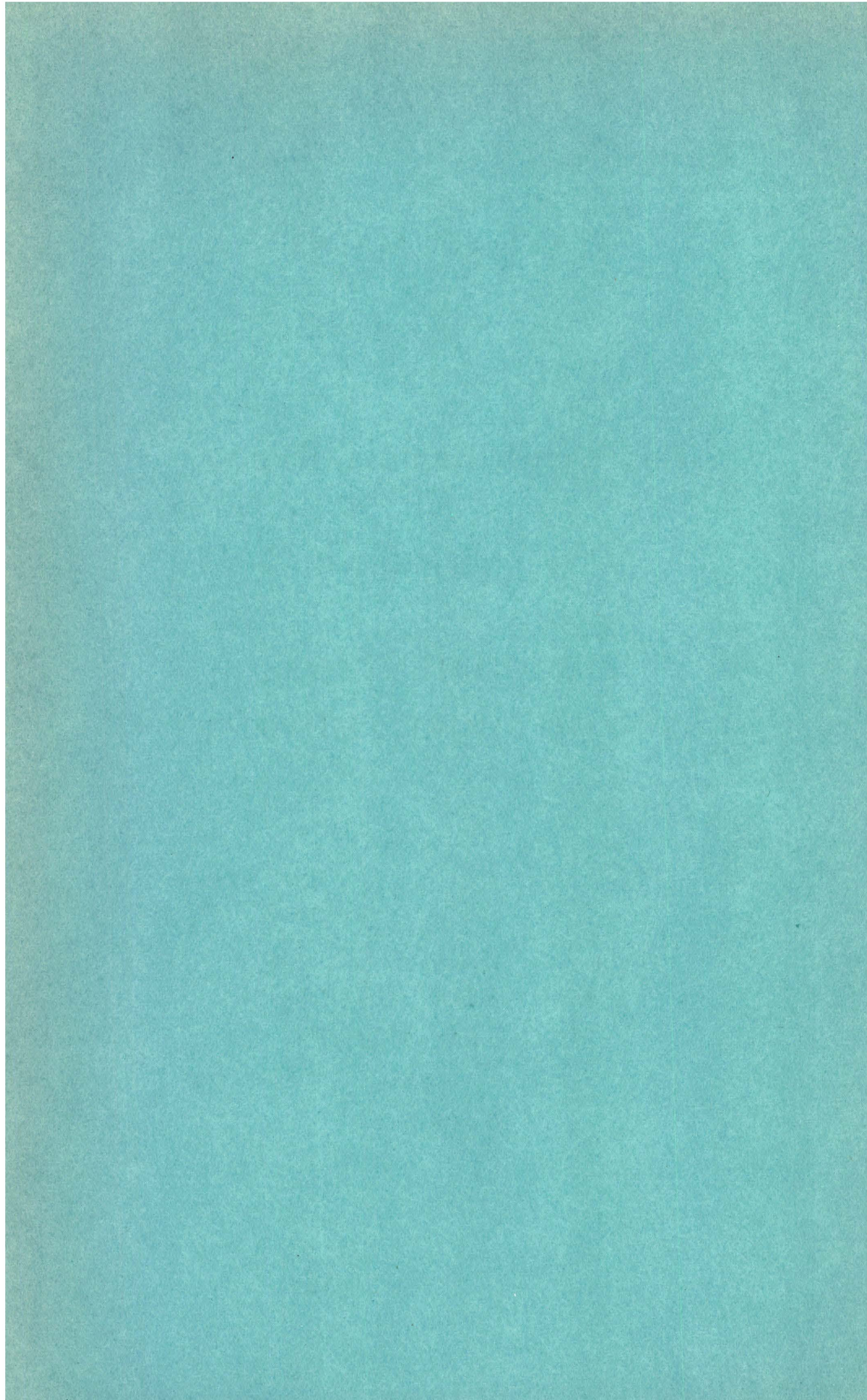
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DEPARTMENT OF  
SEA AND SHORE FISHERIES

VICKERY-HILL BUILDING  
AUGUSTA, MAINE

1947





STATE OF MAINE

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Fourteenth Biennial Report

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SEA AND SHORE FISHERIES

VICKERY-HILL BUILDING  
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**STATE OF MAINE**

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

Augusta, Maine

To the Honorable Governor and Executive Council:

Sirs:

I herewith transmit, in compliance with the law, the report of the Department of Sea and Shore Fisheries, for the two years ending June 30, 1946 together with statistics and other pertinent data.

**RICHARD E. REED,**  
*Commissioner.*

## COMMISSIONER'S REPORT

This fourteenth biennial report is brief as during most of the period which it covers, the affairs of the department were administered by the late Commissioner Arthur R. Greenleaf who was unable to continue many of his progressive activities because of illness and exceedingly difficult conditions that always accompany a period of war.

Appointed by Governor Hildreth, the writer assumed the post of Commissioner, February 6, 1946, after four years in the service and was confronted with the job of converting the department and assisting the fishing industry in its conversion from war to peacetime conditions.

One of the first major moves was the transfer of the department offices from Boothbay Harbor to Augusta. This action had the full support of the Governor and Council, who believed, as the writer did, that closer liaison with other state agencies and the Legislature was highly desirable for the welfare of the department. After six months at the seat of state government I still honestly feel that the move was for the best interests of the fishing industry and the state in general.

We were required to engage an entirely new office staff which had no background of fisheries problems but we were very fortunate in our selection of personnel and soon got administrative activities operating on a smooth basis. We were also fortunate to secure the service of Daniel Malloy, former chief warden of the department of Inland Fisheries and Game, to take charge of our warden force.

Several of the activities during our brief period of office which are covered by this report are taken up in more detail on following pages.

It is quite apparent that this department is not set up to provide a maximum of efficient and progressive service to the great Maine fishing industry and therefore modernization and reorganization is the goal that we will seek at the coming sessions of Legislature.

It is difficult for me to believe that any informed and responsible person has concluded that law enforcement and the administration of routine fishery affairs should be the limit of this department's responsibilities.

We are charged with the governmental obligations of promoting and protecting one of our greatest of natural resources. To prostitute these obligations would be an act of criminal negligence and utter disregard for the rights and welfare for the thousands of persons whom we serve.

Even superficial examination of the present structure of this department will show that it is not set up to foster promotion and development of the industry or to help meet our ever increasing conservation and marketing problems in a businesslike manner. This statement is made with all due respect to my predecessors who were handicapped by lack of funds and firmly entrenched precedents.

As a governmental representative for the industry we are as a department, many, many years behind the times, but by the study of progressive attitudes and activities adopted by the other coastal states and our Canadian neighbors, and by an estimate of our own delinquencies we hope to correct this situation.

Our chief need in adopting a program to fit the times is funds with which to work, and we firmly believe that the time has arrived when the industry should give serious consideration to contributing more generously in the form of license fees or other direct financial assistance to the department.

The Maine fishing industry has never had the advantage of scientific research, of skilled marketing promotion and assistance, of its share of Federal expenditures for study of fisheries problems, of progressive development of by-products and elimination of waste, of comprehensive statistical data, of an up to the minute informational service, of intelligent management of conservation and propagation, of an efficient and well trained warden force or of the fundamental attention and protection of its rights and needs.

We aim to make this department a conscientious, hard working, live-wire organization with our only goal the preservation



of our industry and better working and earning and thereby better living conditions for our fishermen and those who work to put their products on the dinner tables of America.

This is not idle talk because it can be done. We do not believe that we can prevent declines in catches and price fluctuations and other natural and economic upheavals but we do know that we can, with the proper amount of cooperation, give the Maine fishing industry a valuable service that it has deserved and needed but has never had before.

The only way that streamlining and reorganizing to meet the new demands of the Atomic Age can be effected is through funds that will permit us to hire experts to work for the industry and to give them tools with which to work.

We will strive to raise these funds through Legislative action and it is our sincere hope that the fishing industry will see fit to do its share to help build a representative and aggressive department.

I want to take this opportunity to express my appreciation and thanks to Governor Hildreth and his Executive Council for their wonderful cooperation and their sympathetic and generous assistance in helping us to meet many of our problems.

RICHARD E. REED,

*Commissioner.*

**FINANCIAL STATEMENT**

**EXPENDITURES**

**July 1, 1944 to July 1, 1945**

Administration.....	\$11,881.03
Wardens' Service.....	80,996.07
Patrol Boats.....	5,405.62
Operation of Lobster Rearing Station, Boothbay Harbor.....	16,757.52
Propagation of Shell Fish.....	4,903.36
	\$119,943.60

**July 1, 1945 to July 1, 1946**

Administration.....	13,638.65
Wardens' Service.....	85,846.90
Patrol Boats.....	4,870.78
Operation of Lobster Rearing Station, Boothbay Harbor.....	17,667.85
Propagation of Shell Fish.....	7,908.32
	\$129,932.50

**FUNDS DEPOSITED IN STATE TREASURY**

**FROM FINES, LICENSES, ETC.**

	July 1, 1944 to July 1, 1945	July 1, 1945 to July 1, 1946
Lobster Licenses.....	\$6,856.00	\$8,700.00
Clam Shippers' Licenses.....	95.00	250.00
Sea Moss Licenses.....	17.50	34.00
Clam Worm Licenses.....	—	1,410.00
Clam and Quahaug Cultivation Fees.....	20.00	20.00
Sale of Clam Rings.....	.55	9.90
Fines.....	2,427.35	2,622.29
Other Revenue.....	—	533.00
	\$9,416.40	\$13,579.19

	July 1, 1944 to July 1, 1945	July 1, 1945 to July 1, 1946
<b>Violations of Sea and Shore Fisheries Laws</b>		
Possession Illegal Lobsters.....	39	36
Traps in water after license suspended.....		1
Fishing Lobsters without a License.....	5	3
Illegal Possession of Lobsters.....	2	
Hauling Another's Lobster Traps.....	5	3
Stealing Lobster Traps.....	2	
Fraudulently Obtaining Lobster License.....		1
Buying and Selling Lobsters without License.....		1
Small Clams.....		10
Taking Clams from Sorrento.....		3
Digging Clams in Closed Area.....	2	48
Interstate Transportation of Clams without License.....	1	1
Digging Clamworms without a License.....		7
Catching Scallops in Closed Season.....	1	
Taking Smelts Illegally.....		7
Selling Lobster Meat without License.....	1	
Lobster Trap Buoy not Properly Marked.....		2
Lobster Traps not properly Marked.....		1
	57.	124

#### NUMBERS AND TYPES OF LICENSES ISSUED

	July 1, 1944 to July 1, 1945	July 1, 1945 to July 1, 1946
<b>Lobster Licenses:</b>		
Fishermen.....	4926	6241
Merchants.....	363	411
Servers (Hotels and Restaurants).....	509	596
Smackmen or Truckmen(Domestic).....	107	177
Shippers.....	176	205
Foreign Smacks and Trucks.....	89	140
Lobster Meat Permits.....	33	37
Permits to set Traps on Trawls.....	167	337
Sea Moss Licenses.....	35	68
	6405	8212
	June 1, 1944 to June 1, 1945	June 1, 1945 to June 1, 1946
<b>Clam Licenses:</b>		
Clam Shippers.....	19	50
Clam and Quahaug Cultivation.....	2	2
	21	52
	April 1, 1944 to April 1, 1945	April 1, 1945 to April 1, 1946
<b>Ground Fishermen's Licenses.....</b>	508	419
	Feb. 1, 1944 to July 1, 1945	July 1, 1945 to July 1, 1946
<b>Clam Worm Licenses.....</b>	No records	282

STATE OF MAINE FISHERIES LANDINGS BY COUNTIES FOR YEAR 1944

Compiled by Sea and Shore Fisheries

Species	York	Cumberland	Sagadahoc	Lincoln	Knox	Hancock	Washington	Total Pounds	Total Value
Cod—large.....	22,079	1,369,479	16,138	50,119	509,788	427,543	460,033	2,855,179	\$193,010.09
market.....	2,494	727,874	1,400	22,316	547,150	306,043	9,353	1,616,630	97,159.46
scrod.....	105	54,964	—	4,590	112,246	58,313	7,114	237,332	10,490.07
Haddock—large.....	9,500	438,870	5,630	10,253	366,858	740,285	200,552	1,771,948	137,857.55
scrod.....	—	6,692	—	250	13,020	3,419	—	23,381	1,592.25
Hake—large.....	846	504,981	5,400	35,659	1,401,751	2,707,797	351,904	5,008,333	325,541.97
medium.....	—	632,687	—	—	1,597	417	—	634,701	33,004.45
small.....	—	60,909	—	12,014	102,841	176,613	500	352,877	14,115.08
Pollock.....	—	1,653,015	—	12,887	639,454	197,578	222,734	2,725,668	119,384.26
Cusk.....	1,265	86,128	3,040	2,026	136,672	83,868	20,669	333,668	18,018.07
Redfish—rosefish.....	—	10,784,014	—	1,223,772	12,202,576	55,774	1,815	24,267,951	849,378.29
Flounders—greysole.....	—	214,346	2,157	18,649	320,274	129,682	33,472	718,580	49,941.31
blackbacks.....	—	13,732	—	12,084	129,937	1,073,902	276,194	1,505,849	71,527.28
dabs.....	475	235,700	—	545	225,974	66,188	9,482	538,364	20,619.34
yellowtails.....	—	16,590	—	—	—	13,222	—	29,312	849.64
lemonsole.....	—	250	—	410	—	934	—	1,594	87.67
Halibut.....	164	2,158	100	110	2,338	2,914	2,196	9,980	1,614.76
Wolffish—catfish.....	113	21,233	—	1,225	56,940	102,527	18,137	200,175	6,465.65
Sharks.....	22	36,136	—	—	1,363	2,399	145	40,065	3,605.85
Smelts.....	—	143,903	81,218	61,734	38,149	149,488	36,899	511,391	92,050.38
Shad.....	—	6,356	—	—	617	445,576	—	452,549	22,627.45
Whiting—round.....	—	1,049,599	—	651,876	1,105	—	—	1,702,580	35,583.92
dressed.....	—	687,168	—	10,073	—	—	—	697,241	24,333.71
Mackerel—large.....	54,570	316,967	17,630	154,412	253,971	175,227	186	972,963	68,107.41
medium.....	11,090	56,000	500	492,207	484,140	39,627	112,336	1,195,900	37,072.90
small.....	2,140	40,986	1,500	29,768	935	66,099	18,900	160,328	3,687.54
Tunafish.....	43,401	81,439	181,780	4,648	400	—	992	317,660	38,119.20
Alewives.....	—	124,950	31,150	315,840	176,894	1,003,450	347,830	2,000,114	11,420.40
Monkfish.....	—	4,687	—	—	—	—	—	4,687	234.35
Bluefish.....	46	—	—	—	—	—	—	46	5.52
Misc.....	—	8,749	—	2,200	2,495	1,015	—	14,459	1,301.31
Herring.....	—	8,206,535	—	5,926,410	13,045,130	19,558,520	24,826,040	71,562,635	965,590.08
Salmon.....	18	—	—	116	41	1,519	5,859	7,553	3,549.91
Swordfish.....	—	—	—	55	—	—	—	55	16.50
<b>Total Fish.....</b>	<b>153,328</b>	<b>27,587,097</b>	<b>347,643</b>	<b>9,056,248</b>	<b>30,774,656</b>	<b>27,589,939</b>	<b>26,963,342</b>	<b>122,472,253</b>	<b>\$3,257,963.62</b>

(Continued on next page)

**STATE OF MAINE FISHERIES LANDINGS BY COUNTIES FOR YEAR 1944**  
**Compiled by Sea and Shore Fisheries**

Species	York	Cumberland	Sagadahoc	Lincoln	Knox	Hancock	Washington	Total Pounds	Total Value
Crabs .....	—	12,535	5,003	7,462	229,432	15,213	4,000	273,645	\$ 6,927.86
Clams .....	776,230	6,202,240	2,088,820	1,036,295	643,910	6,518,040	4,333,155	21,598,690	415,415.65
Lobsters—Maine .....	555,605	2,516,006	484,702	1,130,267	3,887,724	3,674,178	1,808,313	14,056,795	4,675,290.02
Canadian .....	—	203,363	—	—	6,456	—	586,521	796,340	285,647.16
Scallops .....	30	2,215	180	—	19,304	35,460	43,503	100,692	36,249.12
Mussels .....	—	—	—	104,790	1,264,830	8,678,630	1,319,195	11,367,445	65,086.83
Periwinkles .....	—	—	—	38,501	104	—	5,550	44,155	4,857.05
Shrimp .....	—	3,265	—	236,212	155,240	—	—	394,717	15,788.68
Sea Eggs—Sea Urchins .....	—	—	10,135	68,310	—	—	300	78,745	3,937.25
Quahaugs .....	—	153,350	33,000	—	—	—	—	186,350	5,049.00
<b>Total Shellfish .....</b>	<b>1,331,865</b>	<b>9,092,974</b>	<b>2,621,840</b>	<b>2,621,837</b>	<b>6,207,000</b>	<b>18,921,521</b>	<b>8,100,537</b>	<b>48,897,574</b>	<b>5,514,248.12</b>
Livers .....	—	157,034	—	2,466	84,473	123,482	41,796	409,251	16,861.14
Blood and Sand worms .....	—	—	290,000	1,119,687	—	421,823	—	1,831,510	66,311.00
Spawn .....	—	21,882	—	—	410	269	—	22,561	2,427.56
Sea Moss .....	—	—	500,000	—	—	—	—	500,000	10,000.00
<b>Total Misc. ....</b>	<b>—</b>	<b>178,916</b>	<b>790,000</b>	<b>1,122,153</b>	<b>84,883</b>	<b>545,574</b>	<b>41,796</b>	<b>2,763,322</b>	<b>95,599.70</b>
<b>Totals .....</b>	<b>1,485,193</b>	<b>36,858,987</b>	<b>3,759,483</b>	<b>12,800,238</b>	<b>37,066,539</b>	<b>47,057,034</b>	<b>35,105,675</b>	<b>174,133,149</b>	<b>\$8,867,811.44</b>

STATE OF MAINE FISHERIES LANDINGS BY COUNTIES FOR YEAR 1945

Compiled by Sea and Shore Fisheries

Species	York	Cumberland	Sagadahoc	Lincoln	Knox	Hancock	Washington	Total Pounds	Total Value
Cod—large.....	54,690	1,855,608	116,927	33,846	1,177,206	474,401	244,399	3,957,077	\$250,482.97
market.....	21,648	643,101	35,357	3,548	876,231	257,519	11,727	1,849,131	110,947.86
scrod.....	40	7,076	—	1,954	110,723	21,116	—	140,909	7,919.09
Haddock—large.....	26,555	602,813	16,715	8,829	1,022,330	416,941	73,781	2,167,964	160,429.34
scrod.....	51	1,320	—	75	16,844	21,240	—	39,530	2,549.69
Hake—large.....	22,320	979,439	73,232	19,737	715,649	2,719,240	75,558	4,605,175	262,494.98
medium.....	—	664,369	—	2,520	15,588	20,117	—	702,594	36,394.37
small.....	160	148,860	—	885	47,939	50,524	—	248,368	10,928.19
Pollock.....	2,958	1,758,335	370	13,044	1,634,066	377,489	619,697	4,405,959	187,253.26
Cusk.....	4,352	129,339	42,329	2,250	95,319	22,576	214	296,379	16,152.66
Redfish-Rosefish.....	—	11,463,498	—	1,655,463	11,935,727	2,745,362	6,549	27,806,599	1,042,747.46
Flounders—greysole.....	15	242,131	5,000	3,090	243,445	246,702	42,418	782,801	54,796.07
blackbacks.....	—	36,476	1,950	400	136,780	1,040,983	234,867	1,451,456	72,572.80
dabs.....	—	140,783	—	10,280	246,852	77,747	8,242	483,904	18,533.52
yellowtails.....	—	82,995	—	—	12,757	2,735	—	98,487	5,170.57
lemonsole.....	—	—	—	925	4,107	300	—	5,332	304.46
Halibut.....	61	1,039	—	125	6,435	9,082	4,289	21,031	3,627.85
Wolfish-Catfish.....	—	11,072	505	410	69,057	98,599	14,063	193,706	8,619.92
Sharks.....	662	33,688	1,652	—	245	637	72	36,956	3,326.04
Shad.....	—	6,432	—	—	—	631,188	—	637,620	32,901.19
Whiting—round.....	—	3,621,161	—	250,345	740	90,590	—	3,962,836	115,714.81
dressed.....	—	209,507	—	52,493	—	331	—	262,331	9,732.48
Mackerel—large.....	315,892	473,529	125,332	9,400	2,060	7,975	400	934,588	52,897.68
medium.....	482,882	81,117	25,000	25,464	35,255	400	—	650,118	27,955.07
small.....	605	—	24,795	5,208	20,902	228	4,000	55,738	1,672.14
Tunafish.....	40,642	71,563	292,556	—	—	—	—	404,761	89,047.42
Alewives.....	—	4,920	7,895	128,500	201,001	84,500	112,560	539,376	8,090.64
Monkfish.....	—	4,090	—	—	—	—	—	4,090	245.40
Eels.....	45	—	—	—	—	—	—	45	6.30
Pogies.....	—	84,000	—	—	—	—	—	84,000	84.00
Herring.....	—	5,151,470	1,046,430	2,358,090	6,058,700	25,532,670	38,992,870	79,140,230	1,111,694.40
Salmon.....	—	—	—	—	—	—	8,261	8,261	4,130.50
Misc. Fish.....	—	35,841	837	2,165	11,328	18,049	10,000	78,220	3,128.80
Sturgeon.....	—	250	—	—	125	31	—	406	64.96
Smelts.....	6,659	175,104	79,816	49,782	267,085	84,086	90,086	752,618	156,770.33
<b>Total Fish.....</b>	<b>980,237</b>	<b>28,720,926</b>	<b>1,896,698</b>	<b>4,638,828</b>	<b>24,964,496</b>	<b>35,053,358</b>	<b>40,554,053</b>	<b>136,808,596</b>	<b>\$3,859,387.22</b>



(Continued from Page 10)

Species	York	Cumberland	Sagadahoc	Lincoln	Knox	Hancock	Washington	Total Pounds	Total Value
Scallops.....	—	4,709	1,395	—	337	47,134	51,733	105,308	\$40,017.04
Crabs.....	—	47,442	18,551	32,185	117,778	33,946	8,333	258,235	11,620.58
Clams.....	859,950	10,280,470	1,726,745	227,565	1,731,494	6,674,270	3,731,389	25,231,883	776,366.00
Lobsters—Maine.....	1,073,260	4,115,644	437,945	1,613,237	5,306,000	4,494,939	2,087,994	19,129,019	7,938,542.89
Canadian.....	—	250,674	—	—	944,522	302,160	136,934	1,634,290	702,744.70
Mussels.....	—	—	—	—	557,250	9,236,735	2,222,430	12,016,415	60,940.37
Periwinkles.....	—	—	—	43,436	—	—	7,348	50,784	5,413.57
Shrimp.....	—	35,410	—	383,541	132,346	3,002	—	554,299	27,714.95
Sea Eggs.....	—	—	29,375	35,411	—	—	—	64,786	1,295.72
Quahaugs.....	—	1,527,645	242,795	—	—	—	—	1,770,440	56,701.44
<b>Total Shellfish.....</b>	<b>1,933,210</b>	<b>16,261,994</b>	<b>2,456,806</b>	<b>2,335,375</b>	<b>8,789,727</b>	<b>20,792,186</b>	<b>8,246,161</b>	<b>60,815,459</b>	<b>9,621,357.26</b>
Livers.....	—	222,115	—	871	22,458	26,520	17,005	288,969	14,448.45
Blood and Sand Worms.....	—	219,800	4,650	385,215	—	259,007	—	868,672	95,359.20
Spawn.....	202	10,539	—	—	505	—	—	11,246	1,059.37
Sea Moss.....	—	—	500,000	—	—	—	—	500,000	10,000.00
<b>Total Misc.....</b>	<b>202</b>	<b>452,454</b>	<b>504,650</b>	<b>386,086</b>	<b>22,963</b>	<b>285,527</b>	<b>17,005</b>	<b>1,668,887</b>	<b>120,867.02</b>
<b>Grand Totals.....</b>	<b>2,913,649</b>	<b>45,435,374</b>	<b>4,858,154</b>	<b>7,360,289</b>	<b>33,777,186</b>	<b>56,131,071</b>	<b>48,817,219</b>	<b>199,292,942</b>	<b>\$13,611,611.50</b>

AVERAGE PRICES PAID TO FISHERMEN IN 1944 AND 1945

Species	1944 Average Price	1945 Average Price
Cod—large.....	\$.0676 lb.	\$.0633 lb.
“ market.....	.0601 “	.06 “
“ scrod.....	.0442 “	.0562 “
Haddock—large.....	.0778 “	.074 “
“ scrod.....	.0681 “	.0645 “
Hake—large.....	.0650 “	.057 “
“ medium.....	.052 “	.0518 “
“ small.....	.04 “	.044 “
Pollock.....	.0438 “	.0425 “
Cusk.....	.054 “	.0545 “
Redfish—rosefish.....	.0350 “	.0375 “
Flounders—greysole.....	.0695 “	.07 “
“ blackbacks.....	.0475 “	.05 “
“ dabs.....	.0383 “	.0383 “
“ yellowtails.....	.0285 “	.0525 “
“ lemonsole.....	.0550 “	.0571 “
Halibut.....	.1618 “	.1725 “
Wolfish—catfish.....	.0323 “	.0445 “
Sharks.....	.09 “	.09 “
Smelts.....	.18 “	.2083 “
Shad.....	.05 “	.0516 “
Whiting—round.....	.0209 “	.0292 “
“ dressed.....	.0349 “	.0371 “
Mackerel—large.....	.07 “	.0566 “
“ medium.....	.031 “	.043 “
“ small.....	.023 “	.03 “
Tunafish.....	.12 “	.22 “
Alewives.....	.40 bu.	.015 “
Monkfish.....	.05 lb.	.06 “
Bluefish.....	.12 “	.16 “
Misc.....	.09 “	.04 “
Herring.....	.96 bu.	.9833 bu.
Salmon.....	.47 lb.	.50 lb.
Swordfish.....	.30 “	.00 “
Crabs.....	.0125 ea.	.015 ea.
Clams.....	1.85 bu.	2.00 bu.
Lobsters—Maine.....	.3326 lb.	.415 lb.
“ Canadian.....	.3587 “	.43 “
Scallops.....	.36 “	.38 “
Mussels.....	.37 bu.	.355 bu.
Periwinkles.....	.11 lb.	.1066 lb.
Shrimp.....	.04 “	.05 “
Sea Eggs—Sea Urchins.....	.05 “	.02 “
Quahaugs.....	1.80 bu.	2.07 bu.
Livers.....	.0412 lb.	.05 lb.
Blood and Sand Worms.....	.0175 ea.	.02 ea.
Spawn.....	.1076 lb.	.0942 lb.
Sea Moss.....	.02 “	.02 “
Eels.....	.0000 “	
Pogies.....	.0000 “	

## WARDEN FORCE

A complete reorganization of the warden force is underway and when it is completed we hope to have a vigorous, intelligent group of men in the field who can serve the industry in many capacities.

We believe that a warden should be more than an enforcement officer and that he should be trained to carry on duties in the fields of conservation education, statistics, public relations, propagation and elementary research.

On February 6, 1946 there were 34 wardens on the payroll. At the end of the biennium this number had dropped to 29 and included three GI apprentice trainees. Every man over 70 years of age had been retired.

Under the direction of Chief Warden Malloy, rules and regulations were set up to govern performance of duties and discipline of the force and to promote greater unity of action. In order to assure a better balanced force the age limits for all new wardens was set at 21 to 40 years.

Examinations were set up for all new wardens and promotions to supervisor and this plan appears to be very successful. The examinations are conducted under the supervision of the department of Personnel.

The coast is divided into five districts, each of which is the immediate responsibility of a supervisor. Monthly district meetings are held and the supervisors confer with the Commissioner and chief warden at regular intervals.

One of the chief obstacles for an efficient force is the lack of a logical plan of distribution of the men and we intend to correct this situation. There has been too much duplication of effort and too little thought given to strategically locating officers so that they could do their work at a minimum cost and with maximum efficiency.

New uniforms have been ordered to replace the present outfits of our wardens which are badly worn and of a variety of colors and styles.

The department purchased two motorcycles from the department of Inland Fisheries and Game last spring for the use of wardens who could not obtain automobiles.

We are recommending to Legislature that funds be provided to increase the pay of our warden force, as these men have performed their duties for a long time at a wage that is decidedly below standard and not comparable with that of officers of other state law enforcement agencies. In order to obtain good men we must pay them a decent living wage and we hope to be able to do this.

We will also ask Legislature to put our wardens on a retirement basis similar to that now available to state police, Inland Fisheries and Game wardens and State Prison guards.

In the Spring of 1947 we hope to hold a school for wardens at which they will be given instructions in new legislation, conservation, law enforcement, court procedures, propagation and other phases of fisheries work.

We believe that one of the greatest needs for our force is a unified plan under which the men will be well informed and able to work together as a team.

## LOBSTER REARING STATION

If lobster rearing is going to be continued on an efficient basis the expenditure of a considerable sum of money for improvement of the Boothbay Harbor station is imperative.

Since the station was built in 1939 the department has found, by trial and error, many flaws in the initial plan for producing fourth stage lobsters. The improved techniques and unforeseen difficulties have clearly demonstrated that the plant as originally built was entirely inadequate to produce healthy young crustaceans in large and low cost volume.

At the present time we have a potential production capacity of about 450,000 fourth stagers annually and that figure can be reached only if we have perfect performance and luck. The annual cost of running the station is approximately \$16,500.

We are operating on a cooperative arrangement with the United States Fish and Wildlife Service. The eggs are hatched at the Federal plant which is close to ours and reared to the fourth stage in our station.

After the first couple of years it was revealed that pre-heating of water for the rearing tanks was essential during the first few weeks of the season if any volume was to be maintained. Unfortunately the heating plant was not able to handle an additional load and that problem still exists today.

It is estimated that at least \$25,000 is necessary to put the plant on a production basis. This money would provide for oil burning boilers and other necessary piping and equipment which would bring our potential production up to about 2,000,000 fourth stagers a year at practically no increase in operating costs.

Many fisheries experts are of the opinion that the overall problem of lobster rearing and propagation needs a great deal more concentrated and intelligent study and that much more could be accomplished in the long run if the Boothbay Harbor station was put on a completely experimental basis for several years.

In 1941 Legislature appropriated \$40,000 for another rearing station and a site was selected at Lamoine for this operation. World War II precluded construction but some equipment was obtained and a set of hatching and rearing tanks was built. This equipment is now in storage, but at least another \$35,000 must be made available before the plant can be built. It is also necessary that additional appropriations of at least \$17,000 a year be made available for its operation.



## PATROL BOATS

The department has two patrol boats, the 53-foot diesel powered "Maine" and the 28-foot gasoline powered "Lively Lady", which are stationed at Rockland and McKinley, respectively. The larger craft, manned by a captain and engineer, is used for general patrol along the entire coast, for law enforcement and contact work on the offshore islands and to carry on a number of conservation, research and propagation activities. The "Lively Lady" serves as a patrol boat for the wardens of district 4, who use her to cover a number of offshore islands and for checking and contacting several coastal areas.

During the busier seasons wardens are authorized to hire private boats for special situations that may arise but such a plan is not entirely satisfactory. Until recent years many wardens owned boats which they rented to the state on a per diem basis but at the present time a warden in the Casco Bay area is the only man on the force who has a boat available.

The "Maine," which was built as a pleasure craft and purchased second hand by the department in 1938, is not adequate for our needs. We want eventually to dispose of this craft and replace her with a combination work and patrol boat that can be used for research, experimental fishing, law enforcement, propagation and other necessary activities.

The ultimate set-up that we hope to obtain is to have one combination boat as outlined in the preceding paragraph and five boats similar to the "Lively Lady" to be based at Portland, Boothbay Harbor, Rockland, McKinley and Jonesport for the use of wardens in the various districts.

We definitely need to replace the "Maine" and to obtain at least two smaller boats at the present time.

## SHELLFISH RESEARCH

The need for a long term program of management and development of our clam, quahaug and mussel resources becomes more evident each year.

These phases of the shellfish fishery are of utmost economic importance, but because of an existing jumble of state and town regulations and the lack of general information and scientific data, the situation is getting progressively worse.

Nationally known shellfish experts freely predict that with the right kind of management program Maine could increase its return from the clam industry alone, at least three times. In 1946 diggers received more than \$1,000,000 from their clam harvest.

Early in 1946, the department engaged Richard DuWors, an economist, to make a study of the shellfish resources. He has recommended that a statewide management plan be put into effect immediately.

DuWors found that the industry and the department were woefully lacking in information and that nobody had a very good idea of what should be done or how to go about doing it.

Accepting his suggestion we engaged Dana Wallace as a full time shellfish specialist. This was possible through the cooperation of the Maine Development Commission which is financing the project.

Wallace is now making a complete study of our shellfish resources. He is gathering information about the latest management methods employed in Massachusetts and Canada and endeavoring to find out just where we stand as to possible production, depleted flats and the advisability of large scale propagation and control.

We will seek funds at the coming session of Legislature to employ a permanent shellfish specialist and to put into effect many of the progressive measures which have been proved by our neighboring states and Provinces.

Closer cooperation between the towns and the state, rotation of open and closed flats, propagation, review of the laws, better marketing information and a general statewide management program are all points that seem to be worthwhile.

We hope to be able to organize the shellfish industry so that it will grow, instead of decrease, in importance each year and to put it on a permanent basis of development.

Records of the department show that very little attention has been given to our shellfish industry during the past 50 years.

## REVISION OF THE LAWS

There appears to be a great need for bringing our fisheries laws up to date as well as for clarification of many of them and a complete revision will be presented for Legislative consideration.

This project has been assigned to Chief Warden Malloy who has had considerable legal training and he is working closely with members of the warden force and the Revisor of Statutes. Careful consideration is being given to the opinions of fishermen, dealers and packers in this work.

There are many provisions in the present laws that definitely do not apply to present day conditions and we plan to ask Legislature to repeal them. Others are hopelessly garbled so that they are totally useless. We believe that if a law is on the books it should be enforced and that if it is a bad and useless law that it should be eliminated.

Our hope is to have a set of laws that are simply written so that they can be easily understood by all. The department believes that regulation of our great fisheries resources should be fairly and impartially carried out for the general good of all concerned.

We are also going to ask Legislature to provide for a biennial revision of the Sea and Shore laws so that they can be continuously kept up to date and so that the present hopeless tangle can never occur again.

## CLOSED CLAM AREAS

At present we have 58 areas which are closed to the taking of clams because of water pollution. These areas represent about 20% of our flats and 40% of our best sources of production. It is a serious problem which is costing the industry at least a half million dollars a year.

Flats that must be closed are so determined by biological tests which are conducted to conform with standards promulgated by the U. S. Public Health Service. Clams taken from closed areas are not acceptable in interstate trade and, unless rigid enforcement is maintained, the industry faces an embargo of all shipments of Maine clams out of the state.

The tests are made under the supervision of the Commissioner of Agriculture and enforcement of the closed areas is the responsibility of the Commissioner of Sea and Shore Fisheries. Constant checks are made of the testing and the enforcement by agents of the U. S. Public Health Service.

A new survey is now being conducted but the results are not encouraging. The department is appreciative of the cooperation of the Sanitary Water Board which has undertaken the biological work without charge and if it had not been for this assistance, the survey could not have been undertaken.

The only answer to this problem appears to be for the cities and towns to improve their sewerage facilities and unless immediate steps are taken it is likely that other areas will have to be closed.

Clam purification plants can be helpful but they are expensive and must be stationary which poses a transportation problem.

## SCALLOPS

Research on the causes for the decline of our scallop fishery and possible ways and means of bringing this species back to its former abundance appears to be a worthwhile project.

No comprehensive study of the reasons for the rapid decline and failure of the beds to revive has ever been attempted.

What was once a major industry providing a good winter's work for hundreds of fishermen is now a comparatively negligible factor in our fishing industry.

## QUAHAUGS

We have a very valuable quahaug fishery in Maquoit Bay in the towns of Freeport and Brunswick.

Shellfish experts believe that this species can be transplanted to other sections of the coast where quahaugs would develop into a sizeable resource.

The department plans to undertake some experimental plantings to determine the advisability of large scale activity.

## SEED LOBSTERS

It is clear that one of our greatest obligations to the lobster industry is the protection of seed bearing females,

We would like to see the department supplied with sufficient funds so that we could purchase and release all "seeders" that develop in storage pounds and tanks.

We believe that fishermen should want to protect their industry enough to release immediately all "seeders" as soon as they are taken from the traps.

For better protection a small V should be cut in the middle flipper of every lobster released.

Undersized and oversized lobsters should also be given full protection and our wardens have been instructed to enforce sternly these phases of the conservation laws.

The department spends about five thousand dollars annually for the purchase of seeders, an amount that is entirely inadequate.

## SEALS

The department believes that every effort should be made to settle the question of seal control once and for all.

Although it is evident that the mammals are responsible for considerable damage to the commercial fisheries, the case against them has never been made strong enough to gain widespread legislative and public support.

A program of research into the problem by the department seems to be the logical approach. If it can be proved that seals are as great a menace as they are now believed to be, suitable control measures could probably be devised and financed.

At the present time we are investigating the commercial possibilities of a seal fishery.

## SPORTS FISHING

Prior to the war the department, in cooperation with the Maine Development Commission, made considerable progress in promoting salt water sports fishing along the coast. This activity was at a virtual standstill during the period of hostilities but efforts to revive the sport on an even greater scale will soon be launched.

It is generally conceded that Maine has some of the best salt water angling on the Atlantic seaboard, and that this sport can be developed into a major recreational attraction, bringing thousands of sportsmen to the coastal communities annually.

Among the greatest needs are more charter boats and better wharf and supply facilities.

The department has produced maps showing all of the best fishing grounds and a Commission appointed by Legislature is now making a study of ways and means to improve our Atlantic salmon facilities.



Seabird shooting is another attraction that can stand a lot of promotion.

In view of the fact that there are several million salt water anglers in America, Maine certainly would be missing a good opportunity if no attempt is made to capture its share of this lucrative business.

Promotion will be in the form of publicity, education, advertising, tournaments and other activities.

## NEW INDUSTRIES

The department will seek to encourage and help to develop new industries for utilization of our salt water resources.

Considerable progress along those lines has been shown during the past ten years and there is excellent opportunity for expansion. At the present time we have plants using kelp, sea moss, herring scales for pearl essence, fish waste for meal, fertilizer, oils and vitamins and in view of new developments the surface is hardly scratched.

Several firms are putting out fancy packs of fish spreads, paste, nectars and appetizers, and there are continuing developments in packaging, filleting and quick freezing.

A study of fisheries activities in the so-called "have not" nations, reveals that we have too long wasted our possibilities in the by-products fields.

## A FISHERIES DEPARTMENT

An analysis of the expenditures and activities of this department for the past 10 years reveals that about 95% of its efforts has been devoted to service to the lobster industry with consequent neglect of all other phases of our fisheries.

This appears to be a lop-sided arrangement which is neither logical, necessary or economically sound.

A well-rounded program in which equitable service could be rendered to all branches of the industry might well be expected of a state department.

We believe that such a program should be put into effect as soon as possible.

## UNIVERSITY OF MAINE

A movement to promote closer cooperation between the University of Maine and the fishing industry was launched in late spring when Governor Hildreth and his Executive Council made \$10,000 available from the Contingent Fund for this work.

The groundwork is now being laid for what is hoped will eventually lead to a College of Fisheries at Orono and allied activities in the fields of research, marketing and conservation. It has long been felt by responsible citizens of the state that facilities of the University should be utilized for assistance to the commercial fisheries as well as for agriculture, forestry, fish and game and other natural resources.

Dr. Thomas Pedlow of the College of Agriculture has been put in charge of this work and he is keeping close liaison with the department and the industry in general.

At the time this report was prepared the program was not well enough advanced to show definite results but it is felt that a good start has been made.

A major lobster research problem is now in the hands of University experts and other projects are pending. Students are showing an interest in the program and, if and when fisheries courses are set up, the industry will doubtlessly be provided with a constant source of trained young personnel.

We believe this to be one of the most progressive steps ever undertaken by the department.

## REORGANIZATION

Our present goal is to reorganize the department and to put it on a modern, businesslike basis so that it can perform a series of overall services for the industry.

The plan calls for three subdivisions under the Commissioner as follows: Warden Force, Division of Conservation and Propagation and Division of Marketing and Development.

Each of these sections would be headed by a competent man who would be responsible for their operation.

A chief warden would handle all law enforcement through general supervision of the wardens in the field and the other duties of the force.

The Conservation and Propagation Division would deal with all activities along those lines including research and cooperation with the Fish and Wildlife Service.

The Division of Marketing and Development would include statistics, advertising, publicity, an information service to the industry, consumer and marketing research, new industries, economics, development of by-products, utilization of waste products, technological improvements, new markets and numerous other activities.

With this set-up wardens would be the field agents of each division and their activities would include many other duties in addition to law enforcement.

**DEPARTMENT PERSONNEL AS OF DECEMBER 15, 1946**

**Administrative**

	Residence	Telephone
Richard E. Reed, Commissioner	Hotel Worster, Hallowell	1615
Daniel T. Malloy, Chief Warden	93 Grove St., Augusta	2570
†Robert Dow, Marketing and Development	Box 174, Augusta	2838-J
Louis Cates, Statistician	153 Camden St., Rockland	562-W
†Dana Wallace, Shellfish Research	North Ellsworth	488M14
Miss Mary Shirley, Office Manager	11½ Western Ave., Augusta	2063-R
Ronald Green, Capt. of the "Maine"	Box 283, Rockland	
Clayton Simmons, Engineer	10 Laurel St., Rockland	
Merlin Gray, Hatchery Superintendent	Boothbay Harbor	260

**COASTAL WARDENS**

**First District**

		Telephone
<b>Dwight W. Underwood, Supervisor:</b>	70 Middle Street, Saco	869-Biddeford
Elwin G. Doughty	151A Congress Street, Portland	None
Harold Ricker	24 Williams Street, Portland	35-332
*Albert Hamilton	134 Fessenden Street, Portland	None
Elmore Wallace	Box 263 Pearl St., Sta., Portland	4588-7

**Second District**

<b>Warren A. Hume, Supervisor:</b>	Boothbay Harbor	440
Joseph T. West	Damariscotta	142-5
Owen Richardson	West Point	8-M3-Phippsburg
James W. Thurston	Orr's Island	58-Harpswell
Daniel Davis	Boothbay Harbor	427-M
John Stevens	Friendship	126-4-Waldoboro
Swansea Burns	22 Potter St., Brunswick	244-M

**Third District**

<b>Frank G. Hallowell, Supervisor:</b>	124 Main Street, Thomaston	143
Fred McGlauffin	Friendship	Call C. L. Fales Store at Thomaston
Merle F. Dobbins	110 Limerock St., Rockland	1048-W
*Donald R. Hickey	Clark Island (Call T. Williams)	21-14-Rockland

**Fourth District**

<b>William H. Thurston, Supervisor:</b>	McKinley	232-2 So. West Harbor
Oscar W. Ford	Brooklin	39-4-Sedgwick
Ralph Pinkham	67 High St., Ellsworth	206-M
Lester A. Stubbs	Hampden Highlands	13-3
Roy D. Stewart	Birch Harbor	88-22-Winter Harbor
*Chester Brown	52 Dean St., Ellsworth	181-2

**Fifth District**

<b>Ernest V. Woodward, Supervisor:</b>	Jonesport	63
Robin T. Henderson—Cutler (Can be Reached at Chas. Smith's)		9319-2 Machias
Daniel Johnson	Lubec	105-2
Bertram Davis	South Addison	4-3-Columbia
Herbert Morang, Sr.	Jonesport	None

\*Warden Trainee.

†Trainee.

Sea and Shore Fisheries Department, Augusta—Call Augusta 1200, Extensions 42 or 77.

## ANALYSIS OF EQUIPMENT

### STATISTICS ON MAINE LOBSTER FISHERY

The following figures were compiled from approximately 6000 applications for lobster fishing licenses issued from July 1, 1946 to October 15, 1946.

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(Compiled by the Department of Sea and Shore Fisheries, Augusta, Me.)

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#### August 1946

Total Number of Boats.....	5950	Total Number of Engines....	4163
		Row Boats.....	1787

Size of Boats	Number	Size of Engines	Number
0-20 Ft.	1075	0-20 HP	920
20-30 Ft.	3361	20-30 HP	1371
30-40 Ft.	1347	30-40 HP	288
40-50 Ft.	63	40-50 HP	190
50 Ft. & Up	4	50 HP and Up	958
No Size Given	100	No HP Given	300
		Outboards	136
Total Number of Traps Fished		472,918	

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Note:—The above figures should be reasonably accurate as fishermen are required by law to give the above information on their applications.