

## 2.—STATISTICAL REVIEW OF THE COAST FISHERIES OF THE UNITED STATES.

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### I.—EXPLANATORY NOTES.

*Limitation of space.*—It seems proper to explain at the outset that the space available for the publication of this review limits the descriptive notes to the smallest proportions, and has also made it necessary to abridge the statistical statements more than was at first contemplated. The material available is sufficient to show in much greater detail the principal features of the fisheries, particularly so far as minor civil divisions are concerned.

*Scope and objects of the review.*—This report is limited chiefly to the coast fisheries of the United States. As a rule, inquiries have been prosecuted on the coast rivers only to the head of tidewater, though in some cases (especially on the Pacific slope) the canvass was carried sufficiently high to embrace all commercial fishing. In general, the statistics may be said to cover only the coast and sea fisheries, but their scope will appear more clearly in subsequent explanations under each State.

In most cases the period covered by the tables embraces the calendar years of 1887 and 1888. Exceptions to this are the Pacific States and some of the Gulf States, for which figures for 1888 alone are presented.

The review has been compiled with the object of showing the status of the fisheries from various points of view, some of which are novel, so far at least as their application to the whole coast is concerned. The general plan of the arrangement of the tables is as follows:

1. A series of general tables exhibits by States and geographical sections the most prominent features of the fisheries, such as the persons employed in various capacities; the character, quantity, and value of apparatus; the products and values by fisheries. In these tables are also introduced certain comparative statements which are thought to be interesting and valuable as well as novel.

2. A series of tables for each State presents in considerable detail the following points:

- a. Persons employed in different capacities.
- b. The vessels, boats, and apparatus employed, and the capital invested.
- c. The products and values by species.
- d. The products and values by vessel and shore fisheries.
- e. The products and values by apparatus and species.

In the New England States, where the vessel fisheries are so extensive and diversified, additional tables are given to show the relative importance of the fishing grounds and the fisheries prosecuted thereon by New England vessels. Under the head of each prominent fishing ground the following data are shown:

- f. Number and nationality of fishermen.
- g. Number, tonnage, and value of vessels.
- h. The quantities and values of each species taken.
- i. In the mackerel fishery, the relative catch by different forms of apparatus—seines, lines, and gill nets.

In all States having important vessel fisheries, detailed tables are presented showing their extent by customs districts.

No attempt has heretofore been made to show all of these different phases of the fisheries upon a comprehensive scale. Thus, not only is it possible to understand the relative importance of the principal fishing grounds, but these tables exhibit many features of interest in connection with special fisheries for cod, mackerel, etc. A continuation of this system will make it possible to note the changes that occur from year to year in fisheries and fishing grounds, and will furnish valuable assistance in solving the many difficult and intricate international problems arising in connection with the sea fisheries.

*Sources of information.*—With limited exceptions, the statistics herewith presented are based upon data gathered by the special agents of the U. S. Fish Commission. In some sections, however—notably in the Middle States—the information obtained on Treasury Circular, “Statistics of the Fisheries,” has materially aided the Commission in making the compilations complete.

The length of coast line covered by these tables, including the rivers, amounts to an approximate aggregate of 25,215 miles.

*General basis for tabulation.*—In order to clearly show in one total the entire summation of different branches of the fisheries (by sections or States), it has been found necessary to reduce to the common unit of a pound certain products that are not usually handled on such a basis in the trade. While this is a departure from the ordinary method, it is thought that the end in view justifies it, and it is believed that the explanations that follow will prevent any misunderstanding. —

In reading the tables, the principal points to be borne in mind may be briefly summarized as follows :

Oysters : The weight given is for the edible part (meats and liquor) ; 7 pounds to the bushel.

Round clams or quohaugs (*Venus mercenaria*) : Same as oysters ; 8 pounds to a bushel.

Long clams (*Mya arenaria*) : Same as oysters ; 10 pounds to a bushel.

Scallops (*Pecten irradians* and *P. magellanicus*) : Weight of "eye" or muscle (the edible portion) is given ; 3½ pounds to a bushel.

Oil (whale, seal, and fish) : 7½ pounds to a gallon.

The boats carried on vessels are not shown separately, but are included with the outfit.

The values of products are in all cases based on the prices paid the fishermen, or the original cost.

## II.—GENERAL STATISTICS.

The series of tables presented under this head exhibits in the most condensed form the information shown in greater detail for each State and for particular fisheries. Special attention is also directed to certain phases of those industries that could not properly be included elsewhere. This arrangement makes it possible to note the salient points at a glance, and besides is convenient for purposes of general comparison.

The tables have been prepared with a view to show by States and by geographical sections the following: (a) Persons employed; (b) apparatus and capital; (c) products and values; (d) special features; (e) comparative data.

The comparative statements deserve special consideration, and some explanation may be necessary to prevent misapprehensions. In the comparisons which are considered in this discussion an effort has been made to bring the figures of 1880 to cover practically the same area as is included in these tables. It has, however, not always been practicable to do this, and in some cases the figures of the coast fisheries for 1888 have had to stand against totals for States in 1880.

Table 8, which exhibits by States certain averages for vessels employed in fishing in 1888, may be explained as follows :

The large size of the vessels sailing from California and their high relative value is due to the fact that they are mostly whalers, and many of them costly auxiliary steamers. The majority of the vessels in the cod fishery are large as compared with Atlantic fishing craft, and carry more men in their crews. In Massachusetts the vessels average much smaller in size and less in relative value. The explanation for this is found in the fact that many small vessels are employed in the so-called "shore fishery," a branch of fishery as yet not engaged in to any considerable extent by California vessels. The ocean fisheries of New England also employ chiefly sailing vessels less than 100 tons, and this, together with the fact that property of this kind is not held at such high

figures as on the Pacific coast, accounts for the difference that appears in the relative values per ton. It will be seen that the vessels of Washington carry large crews in proportion to their tonnage. Most of these engage in the pelagic seal fishery, and their crews (chiefly Indians) go out from the vessels to hunt in boats.

Table 9, showing the relative rank of the coast States in 1888, based on the value of products in the more important branches of the fisheries, is very suggestive, and brings out certain facts that otherwise might be unsuspected. The most striking of these, perhaps, are the following:

Maryland, which for so many years held unquestioned supremacy in the shellfish fisheries, including the oyster, now takes second place, being surpassed by New Jersey. The material advance which has taken place in the shellfish fisheries of the latter State in recent years has been due to the activity manifested in the artificial planting of oysters and to the large output of clams.

Another notable change is found in the whale fishery. Massachusetts, which has led in this industry since its establishment in America, now drops to second place, and California takes precedence. This is due to the fact that, since the Pacific railroads were built, it has been found most convenient and profitable for the Arctic and Pacific whaling fleets to rendezvous in San Francisco, and vessels belonging to the Atlantic ports have generally shipped their products home by rail instead of sending them by the long and tedious passage "around the Horn." This naturally led to the transfer of vessels and business from New Bedford and other Massachusetts ports to San Francisco, until, in 1888, the result shown in the table has been reached. It may be explained that the trade in California resulting from the landing of cargoes by Massachusetts vessels in San Francisco has not been considered in preparing this statement; the table shows only the relative standing of the two States as based upon the actual value of whale products taken by its vessels or in its shore fisheries.

California also takes a prominent position in the crustacean fishery, while Massachusetts, succeeded by Maryland in rank, has dropped from the second to the fourth place; the loss of position is due entirely to the decline in the lobster fishery.

Among the most striking exhibits of this table may be included the advanced positions taken by the States of Louisiana, Mississippi, and Texas in recent years, particularly in the oyster fishery; Louisiana also holds high rank in the crustacean fishery, ranking fifth on the list, and standing first among the reptile-producing States.

The advance which has been made by Connecticut in the oyster fishery since 1880 deserves to be classed among the most remarkable events connected with our coast fisheries. This State now ranks next to Virginia in the value of the shellfish fisheries, and stands fifth in position. (See Notes on the Oyster Fishery of Connecticut, by J. W. Collins, vol. IX, Bulletin U. S. Fish Commission.)

In connection with the general comparison with 1880 it is worthy of remark that only one of the New England States, New Hampshire, has lost its relative rank; Massachusetts maintains its preëminence; Maine and Rhode Island retain their places as the seventh and eleventh States respectively, while Connecticut advances one position.

Of the Middle Atlantic States, New Jersey takes the lead, assuming third place, which was held by New York in 1880, while the latter State now occupies the fifth place, which New Jersey formerly held. The most noticeable change in this section is that of Delaware, which, on account of the decline in the natural oyster beds of Delaware Bay and consequent loss to the State, has declined from the eighth to the eighteenth place. Pennsylvania has advanced one place, Maryland has dropped from second to fourth place, and Virginia remains in the sixth position.

In the South Atlantic region, North Carolina has dropped back three places, from tenth to thirteenth; South Carolina two places, from seventeenth to nineteenth; and Georgia one place, from twentieth to twenty-first. Only one State, Florida, maintains its former rank.

On the Gulf of Mexico, excluding Florida, there has been considerable shifting of positions. Alabama has been reduced one point, but all the other States have advanced from one to five places.

The Pacific States have materially benefited their relative standing, California changing from fourth to second place, and Oregon and Washington advancing together from the thirteenth and fourteenth positions to the ninth and tenth.

Table 10, showing the percentage of increase or decrease since 1880 will be found instructive. In discussing it we deem it advisable to consider the great geographical sections rather than to speak of the several States in detail, since the same information can be conveyed in this manner without unnecessary elaboration. It will be noticed that there has been a general increase in the personnel and capital employed, amounting to 18 per cent. in the former and 27 per cent. in the latter. Nevertheless, there has been an apparent decline of 1 per cent. in the value of the catch, although there has been an increase in the quantity of products.

The decrease of 11 per cent. in the value of the catch in the New England States may be attributed entirely to the recent exceptional scarcity of mackerel and to the decline in the whale fishery. The decline in the New England whale fishery alone since 1880 amounts to more than the general decrease of 1 per cent. in the coast fisheries of the United States. With these exceptions there has been a general and gratifying increase in the fisheries of this section.

The decline of 9 per cent. in the fisheries of the Middle Atlantic States is attributable to the marked decadence in the oyster fishery, this being the result of more or less unrestricted fishing, particularly in the Delaware and Chesapeake Bays. The general fisheries of this region have improved materially.

The 5 per cent. decrease in the value of the yield of the South Atlantic States is ascribable to practically the same cause as has been mentioned for the Middle States, viz: a marked falling off in the shellfish fishery. Eastern Florida shows an increase in the output of oysters and general products of the fisheries, but there has been a decrease in the three States north of it. In all of these States there has been a slight decline in the value of products of the general fisheries, but the decrease in oysters is most noticeable.

The marked increase of 48 per cent. in the catch of the Gulf States and a still greater advance in the persons and capital employed are due to the development of large areas of new fishing grounds, especially in the oyster industry. The abundance of oysters in certain sections in this region, together with the decrease that has occurred on the coast of the Middle States, has induced capital and labor to seek profitable employment along the Gulf.

On the Pacific Coast the increase in the value of the catch takes precedence of any other section, it being 50 per cent. The advance in the persons employed and capital invested, while large, is less than on the Gulf Coast. The increase is most noticeable in the whale fishery, the shellfish industry, the crustacean products, and the market fishery.

Tables 11 and 12 are comparative statements by States and sections of the quantities and values of shad taken in 1880 and 1888. This comparison has a special interest, since it may fairly be taken as a basis for estimating the effect of artificial propagation of certain species of food-fish which, under natural conditions, have become noticeably depleted. It is proper to state that the supply of shad had been so much reduced by overfishing that in the years immediately succeeding 1880 there was reason to fear that the species would soon become so scarce that it would no longer be available as a reasonably cheap article of food or the object of a profitable fishery.

In order to comprehend the full significance of this comparison, it is well to remember that the artificial propagation of shad on a large scale by the U. S. Fish Commission was not undertaken until 1881; therefore the effect of it upon the abundance of the species could not be felt or observed until 1885, when the artificially hatched fish attained maturity and returned to the rivers for reproductive purposes. It will thus be seen that the excess of the catch of 1888 over that of 1880 practically shows the result attained by artificial propagation of shad in the third season after its effects could, by natural limitations, be observed; and the very important facts are shown that the yield of the fishery was almost doubled, and that its value, based on the prices obtained in 1880, was increased nearly \$700,000.

It may be admitted that the increased catch has to some degree been due to the use of larger quantities of apparatus, but it is evident that without a marked increase in the abundance of shad, as a result of arti-

ficial hatching, the profitable employment of additional fishing gear would not be possible. But the fact should not be lost sight of that each year a larger proportion of shad is caught in the bays, estuaries, and lower reaches of the rivers, where pound nets and other gear have been multiplied to such an extent in recent years as to largely prevent anadromous species from ascending to their natural spawning grounds in the headwaters of the streams. For this reason the maintenance of the abundance of shad is more dependent now than ever before upon artificial propagation.

A comparison of the catch of the shad with that of the alewife for the years named will prove instructive, inasmuch as the latter is not hatched artificially, and these species are practically taken in the same waters on the Atlantic Coast and to a large extent at the same season and in the same forms of apparatus. It is only just to say, however, that it is claimed by good authority that the alewife has an advantage over the shad; when it is caught it is commonly in a ripe condition, the adhesive eggs are pressed out in great quantities when the fish are taken in pound nets, and masses of them can generally be seen attached to the apparatus. Nevertheless, the comparative figures in tables 13 and 14 show the alewife catch to have increased only about 23 per cent., while the value of the fish to the fishermen has declined about 5 per cent. This relatively slight augmentation of the catch in 1888, as compared with 1880, indicates an actual diminution in the supply, when the increased quantities of apparatus used for the capture of this species are taken into consideration.

Tables 15 and 16 present an interesting comparative statement of the yield and value of the oyster fishery in the years 1880 and 1888. The preservation of our oyster fishery has become an important economic question, and much attention is now given to it in nearly all coast sections where it is feasible to produce oysters abundantly. In some States laws have been enacted giving certain proprietary rights in areas of sea or river bottom for the cultivation of oysters, and the results have been such as to demand the serious attention of legislators in other States where no such regulations are in force and where there has recently been an alarming depletion of this highly prized article of food.

Taking the country as a whole, there has been only a slight falling off in the oyster product, but this is due to a somewhat remarkable increase in certain sections, which nearly counterbalances the decrease elsewhere. The depletion of the grounds in the most important oyster regions has led capitalists to seek other fields for exploitation, and in this way the oyster industry in the Gulf States has been improved and in some cases created. In other States, as in New England and New York, the increased output is due to wise legislation. It is not practicable to enter into an elaborate discussion of the subject. It will perhaps suffice to call attention to the figures for the Chesapeake Bay region (Maryland

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and Virginia) and to Delaware, where the depletion has been most noticeable, and to those for Connecticut, New York, and the Gulf States, where the increase is specially marked. It is also worthy of notice that Pennsylvania on the Atlantic, and California and Oregon on the Pacific, which had no oyster fishery in 1880, according to the census, now make quite a showing, particularly the two former States. The oyster fishery of Washington has also increased in value from \$10,000 to \$86,574. But, while three of the States have entered upon the oyster fishery since the census year, the State of New Hampshire has abandoned it, though this makes slight difference.

1. Table showing by States the number of persons employed in the coast fisheries of the United States in 1888.

States.	Vessel fishermen.	Shore fishermen.	Shoresmen and factory hands.	Total.
Alabama.....	63	195	60	318
California.....	1,543	3,188	607	5,338
Connecticut.....	1,040	1,256	741	3,037
Delaware.....	145	1,818	131	2,094
Florida.....	1,055	2,576	286	3,917
Georgia.....	32	492	114	638
Louisiana.....	319	3,068	371	3,758
Maine.....	2,081	6,280	5,901	15,171
Maryland.....	9,449	14,246	8,256	31,951
Massachusetts.....	11,091	2,681	3,265	17,037
Mississippi.....	143	437	800	1,380
New Hampshire.....	132	197	33	362
New Jersey.....	1,940	8,112	424	10,476
New York.....	2,256	3,608	1,193	7,057
North Carolina.....	288	6,315	1,101	7,704
Oregon.....	53	3,045	1,584	4,682
Pennsylvania.....	529	1,174	308	2,011
Rhode Island.....	417	875	411	1,703
South Carolina.....	74	1,247	25	1,346
Texas.....	69	833	119	1,021
Virginia.....	3,006	6,545	2,161	12,715
Washington.....	283	2,571	976	3,830
Total.....	37,811	70,708	28,867	137,446

2. Table showing by sections the number of persons employed in the coast fisheries of the United States in 1888.

Section.	Vessel fishermen.	Shore fishermen.	Shoresmen and factory hands.	Total.
New England States.....	15,661	11,298	10,351	37,310
Middle Atlantic States.....	18,228	35,503	12,473	66,204
South Atlantic States.....	404	8,799	1,336	10,539
Gulf States.....	1,630	6,364	1,540	9,534
Pacific States.....	1,879	8,804	3,167	13,850
Total.....	37,811	70,708	28,867	137,446



3. Table showing by States the number and value of vessels and boats, the quantity and value of apparatus, and the amount of shore property and cash capital employed in the coast fisheries of the United States in 1888.

States.	Vessels.				Boats.	
	No.	Net tonnage.	Value.	Value of outfit.	No.	Value.
Alabama	26	265.44	\$22,400	\$5,350	131	\$6,810
California	94	12,108.81	1,046,600	447,475	1,354	245,010
Connecticut	221	5,254.56	543,955	140,534	1,354	101,770
Delaware	43	667.13	44,550	2,277	1,019	38,800
Florida	144	2,486.37	230,675	123,474	1,641	139,148
Georgia	12	120.41	8,875	2,040	468	5,240
Louisiana	410	672.46	55,895	22,074	2,347	146,444
Maine	116	14,106.64	689,415	200,454	5,907	235,037
Maryland	1,018	33,456.44	1,436,365	340,725	7,778	392,239
Massachusetts	825	60,129.74	3,047,823	1,541,630	3,353	251,070
Mississippi	42	374.42	24,600	9,305	256	14,528
New Hampshire	14	482.42	27,150	9,901	75	4,220
New Jersey	378	8,708.14	589,385	51,017	5,257	354,325
New York	738	10,053.93	1,000,215	293,755	3,590	210,805
North Carolina	104	1,081.02	93,520	9,375	3,151	170,189
Oregon	13	422.30	74,050	11,400	1,545	201,095
Pennsylvania	81	1,985.54	167,350	23,020	374	15,120
Rhode Island	73	1,481.51	197,375	29,565	749	91,679
South Carolina	17	257.85	22,350	5,300	528	19,454
Texas	19	185.08	12,085	3,600	752	92,739
Virginia	894	14,007.14	740,020	153,979	4,486	293,793
Washington	17	752.73	71,600	81,520	1,202	145,880
Total	6,099	170,126.08	10,116,153	3,459,096	47,195	3,082,395

States.	Apparatus of capture.					Shore and other property.	Cash capital.	Total.
	No. of seines.	No. of gill nets.	No. of pound nets, etc.	No. of pots, fykes, and other small traps.	Value of foregoing and all other apparatus.			
Alabama	6				\$5,100	\$14,184	\$8,000	\$61,904
California	1,629	2,367		1,490	354,075	323,050	207,500	2,684,210
Connecticut	56	61	118	12,140	107,020	1,622,135	353,000	2,869,314
Delaware	229	1,454	11	1,687	65,897	49,080	30,500	232,004
Florida	138	1,042	3		59,904	143,145	30,000	723,408
Georgia	26	159	6	14	11,395	27,100	10,000	65,556
Louisiana	153			4,280	42,267	234,047	164,200	664,927
Maine	173	4,328	002	112,902	415,699	766,710	716,600	3,023,921
Maryland	479	7,460	509	11,402	336,488	1,753,659	2,029,493	6,288,969
Massachusetts	378	4,750	218	29,363	908,298	3,050,738	4,251,200	13,110,765
Mississippi	44	14		8	7,457	93,194	180,550	329,632
New Hampshire	8	152	13	2,290	22,873	38,000	5,000	107,144
New Jersey	424	2,903	136	6,114	290,054	201,054	59,009	1,544,835
New York	287	812	190	21,655	206,384	1,620,160	1,196,180	4,527,489
North Carolina	732	61,630	797	133	287,344	192,946	78,100	801,474
Oregon	25	2,545	56		437,943	616,294	952,850	2,996,032
Pennsylvania	91	190		2,077	43,326	380,450	597,000	1,227,166
Rhode Island	59	105	166	6,049	115,742	353,485	245,000	1,022,876
South Carolina	32	229		32	15,585	22,500	12,000	97,189
Texas	125			481	21,237	62,210	23,150	214,511
Virginia	191	1,890	901	219	339,930	464,203	306,300	2,208,225
Washington	50	1,130	159		402,177	333,220	533,000	1,517,397
Total	6,827	93,281	4,134	212,536	4,557,815	12,365,460	12,038,623	45,619,546

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4. Table showing by sections the number and value of vessels and boats, the quantity and value of apparatus, and the amount of shore property and cash capital employed in the coast fisheries of the United States in 1888.

Section.	Vessels.				Boats.	
	No.	Net tonnage.	Value.	Value of outfit.	No.	Value.
New England States.....	1,543	81,470.87	\$4,505,718	\$1,922,120	11,418	\$683,770
Middle Atlantic States.....	3,952	69,776.32	3,977,885	865,673	22,604	1,215,082
South Atlantic States.....	136	1,501.99	97,945	18,715	4,527	220,224
Gulf States.....	344	4,093.06	342,455	162,193	4,675	371,332
Pacific States.....	124	13,283.84	1,192,150	490,395	4,101	591,985
Total.....	6,099	170,126.08	10,116,153	3,459,096	47,195	3,082,399

  

Section.	Apparatus of capture.					Shore and other property.	Cash capital.	Total.
	No. of seines.	No. of gill nets.	No. of pound nets, etc.	No. of pots, fykes, and other small traps.	Value of foregoing and all other apparatus.			
New England States.....	674	9,396	1,177	162,744	\$1,630,532	\$5,831,074	\$5,560,800	\$20,134,020
Middle Atlantic States.....	1,684	14,769	1,936	43,354	1,282,070	4,469,496	4,218,473	10,028,688
South Atlantic States.....	835	62,439	803	179	343,159	283,746	110,100	1,073,889
Gulf States.....	421	635	3	4,769	107,250	505,580	395,900	1,884,710
Pacific States.....	1,713	6,042	215	1,400	1,194,795	1,275,564	1,763,350	6,498,239
Total.....	5,327	93,281	4,134	212,536	4,557,815	12,365,460	12,038,623	45,619,546

5. Table showing by States the values of the various coast fisheries of the United States in 1888.

States.	General fisheries.	Oyster and other shellfish fisheries.	Reptilian fisheries.	Crustacean fisheries.	Mon- haden fish- ery.	Whale and por- poise fish- eries.	Seal, wal- rus, and sea-otter fisheries.	Spongo fishery.	Total.
Alabama.....	\$32,386	\$32,174	.....	\$11,000	.....	.....	.....	.....	\$75,560
California.....	1,091,398	679,655	\$15,060	186,883	.....	\$690,720	\$1,709,644	.....	4,463,869
Connecticut.....	261,255	1,066,008	1,200	86,023	\$89,499	10,784	11,200	.....	1,526,059
Delaware.....	173,456	20,160	2,297	13,640	.....	.....	.....	.....	209,563
Florida.....	408,292	57,552	16,854	5,694	.....	.....	.....	.....	802,282
Georgia.....	39,923	29,370	6,075	7,542	.....	.....	.....	.....	82,010
Louisiana.....	200,215	230,820	60,738	121,047	.....	.....	.....	.....	612,820
Maine.....	1,533,910	239,043	.....	516,073	3,017	.....	.....	.....	2,292,043
Maryland.....	650,455	2,889,080	22,237	108,769	52,678	.....	.....	.....	3,813,199
Massachusetts.....	5,242,051	257,589	.....	173,386	6,250	676,210	.....	.....	6,355,495
Mississippi.....	40,930	157,463	.....	24,194	.....	.....	.....	825	231,712
New Hampshire.....	82,638	150	.....	6,258	.....	.....	.....	.....	90,044
New Jersey.....	984,370	3,120,067	1,652	78,570	7,885	.....	.....	.....	4,198,550
New York.....	676,486	2,286,889	1,230	69,137	314,118	.....	.....	.....	3,347,851
North Carolina.....	680,312	52,459	4,536	5,760	17,247	16,125	.....	.....	776,439
Oregon.....	1,010,813	13,575	.....	716	.....	.....	.....	.....	1,025,134
Pennsylvania.....	163,306	165,339	.....	.....	15,359	.....	.....	.....	344,004
Rhode Island.....	288,932	311,836	.....	20,047	195,277	.....	.....	.....	825,082
South Carolina.....	121,256	19,146	3,485	10,770	.....	.....	.....	.....	163,057
Texas.....	134,094	109,033	14,280	12,350	.....	.....	.....	.....	271,257
Virginia.....	609,622	1,020,918	17,672	24,609	97,274	.....	.....	.....	1,830,155
Washington.....	767,108	89,774	.....	1,070	.....	.....	32,998	.....	890,860
Total.....	15,323,447	12,860,671	167,406	1,591,796	798,604	1,393,854	1,843,732	254,515	*34,234,045

\* The total value of the yield of the coast fisheries, including the rivers that were not canvassed in their entirety but for which approximate figures are given under each State, was \$35,222,929, or \$988,884 more than represented in this table. The combined sum has been used in making comparisons with 1880.

6. Table showing by sections the values of the various coast fisheries of the United States in 1888.

Section.	General fisheries.	Oyster and other shellfish fisheries.	Reptilian fisheries.	Crustacean fisheries.	Menhaden fishery.	Whale and porpoise fisheries.	Seal, walrus, and sea-otter fisheries.	Sponge fishery.	Total.
Middle Atlantic States	3,317,701	9,514,424	45,088	384,785	487,314			13,749,312	
South Atlantic States	990,503	114,079	10,972	38,966	17,247	16,125		1,106,892	
Gulf States	736,105	574,538	85,906	168,591			\$251,515	1,819,145	
Pacific States	2,869,349	783,004	15,060	188,669		600,729	1,832,552	6,379,363	
Total	15,323,447	12,860,671	167,406	1,691,796	798,004	1,393,854	1,843,752	254,515	34,234,045

7. Table showing by States the extent of the menhaden industry in 1887 and 1888.

States.	No. of factories in operation.		Number of persons employed.				Value of plants.		Cash capital.	
			Factorymen.		Fishermen.		1887.	1888.	1887.	1888.
	1887.	1888.	1887.	1888.	1887.	1888.				
Maine		1		40		22		\$20,000		\$5,000
Rhode Island	3	3	177	246	259	225	\$193,000	193,000	\$60,000	70,000
Connecticut	3	3	53	51	141	111	\$4,200	34,200	16,000	10,200
New York	11	11	428	465	378	451	\$177,500	203,300	129,000	197,000
New Jersey	8	7	110	92	139	110	\$8,800	73,800	57,300	49,000
Delaware	2	2	88	88	107	81	\$43,300	43,500	40,000	30,000
Maryland	3	3	48	55	81	71	\$17,800	27,800	28,500	30,500
Virginia	26	19	437	345	778	644	\$170,950	161,150	205,300	182,300
North Carolina	8	6	109	94	142	119	\$34,700	30,900	26,100	24,100
Total	64	55	1,456	1,476	1,918	1,763	761,250	787,650	571,200	604,100

Steamers.

States.	No.		Net tonnage.		Value.		Value of apparatus and outfit.		
			1887.	1888.	1887.	1888.	1887.	1888.	
	1887.	1888.							
Maine		(*)							
Rhode Island	11	11	766.88	747.56	\$126,000	\$135,000	\$30,000	\$29,000	
Connecticut	7	5	487.49	365.11	63,300	51,600	16,800	8,600	
New York	18	22	978.99	1,296.39	176,000	218,750	40,050	48,730	
New Jersey	5	3	186.70	114.25	47,500	27,000	8,250	4,950	
Delaware	5	4	368.11	305.57	49,000	41,000	8,400	6,900	
Maryland	2	3	136.26	198.80	14,000	20,000	4,800	5,600	
Virginia	10	11	423.14	505.35	48,800	64,000	19,900	20,600	
North Carolina	1	1	44.15	44.15	9,000	9,000	2,000	2,000	
Total	54	55	3,023.52	3,181.61	486,000	525,350	115,800	119,380	

Sailing vessels.

States.	No.		Net tonnage.		Value.		Value of apparatus and outfit.	
			1887.	1888.	1887.	1888.	1887.	1888.
	1887.	1888.						
Maine		3		90.59		\$1,700		\$2,400
Rhode Island		1		27.50	22.44	\$1,500	1,000	\$1,000
Connecticut								
New York		5		92.78	92.08	6,400	6,150	4,380
New Jersey		6		110.79	120.00	4,800	5,800	6,830
Delaware								
Maryland		3		111.53	58.10	5,100	3,300	3,500
Virginia		4		1,691.05	1,263.00	80,750	52,850	57,950
North Carolina		12		107.37	124.79	9,300	7,800	10,075
Total		81		2,207.02	1,771.86	107,850	81,600	83,735

\* The figures for Maine do not include the fisherman and vessels from another State that devoted a portion of their time to fishing in Maine waters but were chiefly engaged elsewhere.  
 † These figures have been included under Connecticut and do not appear in the footings. Delaware has no fishermen or vessels engaged in the menhaden fishery.

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7. Table showing by States the extent of the menhaden industry in 1887 and 1888—Cont'd

States.	Sailing vessels used as lighters.								Total capital invested in the industry.	
	No.		Net tonnage.		Value.		Value of outfit.		1887.	1888.
	1887.	1888.	1887.	1888.	1887.	1888.	1887.	1888.		
Maine	3	1		6.83		\$160		\$50		\$32,310
Rhode Island	3	5	42.32	64.08	\$1,400	1,825	\$180	265	\$422,080	430,780
Connecticut	3	3	30.51	30.51	1,500	1,435	240	240	128,040	112,175
New York	5	6	62.65	69.55	3,900	4,600	350	425	537,580	683,155
New Jersey	10	9	126.21	105.77	6,050	6,250	710	650	221,840	173,200
Delaware									83,300	73,500
Maryland	4	3	94.35	63.10	4,800	3,500	250	200	78,750	93,100
Virginia	31	20	964.61	717.49	45,050	31,150	2,400	2,000	631,100	553,400
North Carolina	12	9	106.46	78.71	5,900	5,550	600	450	97,675	88,125
<b>Total</b>	<b>68</b>	<b>56</b>	<b>1,426.11</b>	<b>1,236.04</b>	<b>69,200</b>	<b>54,370</b>	<b>4,730</b>	<b>4,280</b>	<b>2,200,395</b>	<b>2,239,755</b>

States.	Menhaden handled.				Oil manufactured.			
	Number.		Value to fishermen.		Gallons.		Value.	
	1887.	1888.	1887.	1888.	1887.	1888.	1887.	1888.
Maine		6,666,000		\$7,000		79,000		\$16,500
Rhode Island	60,901,670	127,169,670	\$73,072	135,004	538,623	762,360	\$129,539	168,418
Connecticut	54,000,000	50,620,000	71,133	80,990	94,389	143,600	24,155	37,960
New York	114,633,200	219,970,910	166,409	314,118	814,671	1,248,008	170,979	349,454
New Jersey	27,915,000	27,252,000	31,265	30,512	176,600	86,768	38,809	26,214
Delaware	34,400,000	24,000,000	46,521	32,940	232,300	153,870	61,829	48,572
Maryland	12,210,000	18,974,050	16,789	21,345	71,500	44,850	16,115	12,008
Virginia	128,415,000	103,099,300	175,928	115,471	759,187	249,241	138,414	65,893
North Carolina	24,594,000	22,964,000	18,440	17,247	98,200	59,400	24,550	12,600
<b>Total</b>	<b>457,128,870</b>	<b>609,715,930</b>	<b>599,563</b>	<b>774,627</b>	<b>2,785,461</b>	<b>2,818,097</b>	<b>604,480</b>	<b>737,709</b>

States.	Scrap prepared.								Total value of manufactured products.	
	Crude and acidulated.		Dry.		Total.		Value.		1887.	1888.
	1887.	1888.	1887.	1888.	1887.	1888.	1887.	1888.		
Maine	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.		\$5,400		\$21,000
Rhode Island	1,380	2,951	2,450	5,000	3,810	8,551	\$81,010	106,268	\$210,540	334,666
Connecticut	515	1,170	730	670	1,245	1,840	23,310	30,570	47,465	68,530
New York	100	7,455	8,580	13,045	8,086	20,600	198,076	421,895	309,955	771,289
New Jersey	783	1,534	1,460	2,243	2,243	3,777	47,455	41,035	86,354	67,249
Delaware	1,330	1,250	1,070	550	3,000	1,800	67,020	30,700	118,869	79,272
Maryland	615	1,205	510	638	1,125	1,843	18,900	28,134	35,015	40,142
Virginia	1,752	2,778	7,842	5,159	9,594	7,938	191,961	155,394	330,405	221,287
North Carolina	60		1,638	1,555	1,698	1,565	42,000	38,875	60,610	51,476
<b>Total</b>	<b>6,515</b>	<b>18,883</b>	<b>24,886</b>	<b>29,460</b>	<b>31,401</b>	<b>48,344</b>	<b>660,732</b>	<b>918,211</b>	<b>1,265,212</b>	<b>1,655,920</b>

8. Table showing by States certain average figures for the vessels employed in the coast fisheries of the United States in 1888.

States.	Number of crew.	Net tonnage.	Value of vessel.	Value of apparatus and outfit.	Stock per vessel.	Stock per man.
Alabama.....	6.0	30.42	\$2,000	\$1,011	\$2,880	\$481
California.....	20.2	138.32	10,748	5,394	12,812	640
Connecticut.....	4.8	24.76	2,531	816	3,855	789
Delaware.....	3.7	12.38	965	172	1,080	291
Florida.....	7.7	17.82	1,031	934	2,402	324
Georgia.....	2.7	10.78	740	285	802	301
Louisiana.....	2.7	7.22	454	193	820	309
Maine.....	7.8	41.10	1,725	1,075	2,305	297
Maryland.....	6.4	17.76	774	324	1,318	205
Massachusetts.....	13.0	73.62	3,735	2,717	6,375	469
Mississippi.....	3.4	8.91	586	288	1,517	446
New Hampshire.....	9.4	35.60	1,030	1,868	3,906	414
New Jersey.....	3.4	14.28	960	172	1,153	337
New York.....	3.2	13.22	1,414	534	2,954	914
North Carolina.....	4.3	10.76	783	323	662	154
Oregon.....	6.9	24.91	2,107	460	3,197	460
Pennsylvania.....	6.3	21.08	3,034	679	4,679	733
Rhode Island.....	4.6	16.03	1,037	331	1,162	253
South Carolina.....	3.0	9.90	630	265	1,171	322
Texas.....	5.1	14.59	740	317	925	182
Virginia.....	20.5	52.47	4,038	2,208	4,230	206
Washington.....						

9. Table showing by fisheries the relative rank, based on value of products, of the coast States in 1888, together with a general comparison with 1880.

Rank.	General fisheries.	Oyster and other shellfish fisheries.	Reptilian fisheries.	Crustacean fisheries.	Menhaden fishery.	Whale and porpoise fisheries.	Seal, walrus, and sea-otter fisheries.	Sponge fishery.	Total.	
									1888.	1880.
1	Mass.	N. J.	La.	Mo.	N. Y.	Cal.	Cal.	Fla.	Mass.	Mass.
2	Me.	Md.	Md.	Md.	R. I.	Mass.	Wash.	Miss.	Cal.	Md.
3	Cal.	N. Y.	Va.	Cal.	Va.	N. C.	Conn.		N. J.	N. Y.
4	Oregon.	Va.	Fla.	Mass.	Conn.	Conn.			Md.	Cal.
5	N. J.	Conn.	Cal.	La.	Md.				N. Y.	N. J.
6	Va.	Cal.	Tex.	Conn.	N. C.				Va.	Va.
7	Md.	R. I.	Ga.	N. J.	Penn.				Me.	Me.
8	N. Y.	Mass.	N. C.	N. Y.	N. J.				Conn.	Del.
9	Wash.	Me.	S. C.	R. I.	Mass.				Oregon.	Conn.
10	N. C.	La.	Del.	Va.	Me.				Wash.	N. C.
11	Fla.	Penn.	N. J.	Miss.					R. I.	R. I.
12	R. I.	Miss.	Conn.	S. C.	Del.				Fla.	Fla.
13	Conn.	Tox.	N. Y.						N. C.	Oregon.
14	La.	Wash.		Tox.					La.	Wash.
15	Del.	Fla.		Ala.					Penn.	La.
16	Penn.	N. C.		Ga.					Tex.	Penn.
17	Tex.	Ala.		N. H.					Miss.	S. C.
18	S. C.	Ga.		Fla.					Del.	N. H.
19	N. H.	Del.		N. C.					S. C.	Tex.
20	Miss.	S. C.		Wash.					N. H.	Ga.
21	Ga.	Oregon.		Oregon.					Ga.	Ala.
22	Ala.	N. H.							Ala.	Miss.

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## 10. Percentages of increase or decrease in 1888 as compared with 1880.

States.	Persons employed.	Capital invested.	Value of catch.
Alabama.....	- 50	+ 62	- 37
California.....	+ 72	+ 136	+ 38
Connecticut.....	- 3	+ 102	+ 63
Delaware.....	+ 5	- 14	- 79
Florida.....	+ 58	+ 78	+ 25
Georgia.....	- 29	- 17	- 31
Louisiana.....	+ 135	+ 610	+ 56
Maine.....	+ 37	- 10	- 16
Maryland.....	+ 26	+ 3	- 21
Massachusetts.....	- 15	- 9	- 20
Mississippi.....	+ 642	+ 3,646	+ 928
New Hampshire.....	- 13	- 40	- 49
New Jersey.....	+ 68	+ 4	+ 35
New York.....	+ 21	+ 77	- 8
North Carolina.....	+ 46	+ 58	- 8
Oregon.....	- 12	+ 170	+ 09
Pennsylvania.....	+ 345	+ 1,194	+ 286
Rhode Island.....	- 26	+ 73	+ 18
South Carolina.....	+ 34	+ 47	- 23
Texas.....	+ 70	+ 406	+ 111
Virginia.....	- 20	+ 24	- 20
Washington.....	+ 71	+ 359	+ 113
Net increase or decrease.....	+ 18	+ 27	- 1

  

Sections.	Persons employed.	Capital invested.	Value of catch.
New England States.....	+ 1	+ 1	- 11
Middle Atlantic States.....	+ 17	+ 28	- 9
South Atlantic States.....	+ 39	+ 54	- 5
Gulf States.....	+ 80	+ 245	+ 48
Pacific States.....	+ 28	+ 182	+ 50
Net increase or decrease.....	+ 18	+ 27	- 1

## 11. Comparative statement by States of the catch of shad in 1880 and 1888.

States.	1880.		1888.	
	Pounds.	Value.	Pounds.	Value.
Alabama.....				
California.....			90,871	\$6,513
Connecticut.....	1,318,032	\$65,002	365,036	23,786
Delaware.....	1,050,000	52,600	1,380,216	51,999
Florida.....	251,700	20,136	1,448,000	89,630
Georgia.....	252,000	17,941	263,200	19,000
Louisiana.....				
Maine.....	580,319	11,876	840,023	24,368
Maryland.....	3,759,428	140,326	5,505,735	218,230
Massachusetts.....	164,524	8,226	179,606	6,312
Mississippi.....				
New Hampshire.....	6,417	321	80	3
New Jersey.....	750,000	35,000	6,523,447	307,411
New York.....	2,733,600	136,680	3,445,639	150,882
North Carolina.....	3,221,203	329,569	5,630,769	292,409
Oregon.....			10,000	500
Pennsylvania.....	550,600	27,980	1,367,200	70,942
Rhode Island.....	48,100	2,405	17,400	1,213
South Carolina.....	207,600	12,432	432,800	27,050
Texas.....				
Virginia.....	3,171,953	134,496	8,106,823	376,944
Washington.....				
Total.....	18,074,534	995,790	35,730,585	1,672,192

## 12. Comparative statement by sections of the catch of shad in 1880 and 1888.

Sections.	1880.		1888.	
	Pounds.	Value.	Pounds.	Value.
New England States.....	2, 117, 392	\$88, 730	1, 412, 945	\$54, 682
Middle Atlantic States.....	12, 024, 579	526, 982	26, 448, 060	1, 182, 408
South Atlantic States.....	3, 932, 563	380, 078	7, 774, 709	428, 080
Gulf States.....			100, 871	7, 013
Pacific States.....				
Total.....	18, 074, 534	995, 790	35, 736, 585	1, 672, 192

## 13. Comparative statement by States of the catch of alewives in 1880 and 1888.

States.	1880.		1888.	
	Pounds.	Value.	Pounds.	Value.
Alabama.....				
California.....				
Connecticut.....	770, 000	\$8, 700	125, 200	\$1, 253
Delaware.....	2, 390, 700	30, 475	941, 983	10, 925
Florida.....	10, 000	200		
Georgia.....	125, 000	3, 750	24, 360	365
Louisiana.....				
Maine.....	1, 804, 202	35, 823	3, 079, 994	30, 103
Maryland.....	9, 124, 959	139, 667	12, 835, 524	110, 291
Massachusetts.....	3, 751, 059	35, 802	6, 291, 937	83, 530
Mississippi.....				
New Hampshire.....	425, 000	8, 500	140, 750	3, 080
New Jersey.....	1, 200, 000	17, 335	2, 717, 520	26, 924
New York.....	250, 000	3, 750	223, 000	2, 670
North Carolina.....	15, 520, 000	142, 784	20, 463, 340	161, 073
Oregon.....				
Pennsylvania.....			811, 657	8, 365
Rhode Island.....	2, 078, 000	14, 460	1, 739, 300	21, 165
South Carolina.....	400, 000	0, 000		
Texas.....				
Virginia.....	6, 025, 413	76, 300	6, 757, 105	40, 369
Washington.....				
Total.....	45, 684, 333	526, 546	56, 157, 073	500, 713

## 14. Comparative statement by sections of the catch of alewives in 1880 and 1888.

Sections.	1880.		1888.	
	Pounds.	Value.	Pounds.	Value.
New England States.....	9, 728, 261	\$103, 285	11, 883, 181	\$139, 131
Middle Atlantic States.....	19, 901, 072	267, 527	24, 280, 792	199, 544
South Atlantic States.....	16, 055, 000	155, 734	20, 487, 700	162, 038
Gulf States.....				
Pacific States.....				
Total.....	45, 684, 333	526, 546	56, 157, 673	500, 713

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15. Comparative statement by States of the yield of oysters in 1880 and 1888.

States.	1880.		1888.	
	Bushels.	Value.	Bushels.	Value.
Alabama .....	104, 600	\$44, 950	76, 125	\$32, 174
California .....			130, 000	509, 175
Connecticut .....	336, 450	386, 025	1 509, 867	1, 012, 259
Delaware .....	300, 000	325, 000	41, 855	17, 020
Florida .....	78, 600	15, 650	239, 197	57, 398
Georgia .....	70, 000	35, 000	120, 600	29, 370
Louisiana .....	295, 000	260, 000	719, 992	230, 820
Maine .....				
Maryland .....	10, 600, 000	4, 730, 476	8, 957, 058	3, 056, 458
Massachusetts .....	36, 000	41, 850	45, 631	60, 453
Mississippi .....	25, 000	10, 000	767, 205	157, 463
New Hampshire .....	1, 000	800		
New Jersey .....	1, 975, 000	2, 080, 025	2, 524, 511	2, 245, 659
New York .....	1, 043, 300	1, 577, 050	1, 001, 120	1, 893, 085
North Carolina .....	170, 000	60, 000	204, 703	40, 120
Oregon .....			4, 125	0, 250
Pennsylvania .....			227, 453	165, 339
Rhode Island .....	163, 200	225, 500	189, 255	252, 601
South Carolina .....	50, 000	20, 000	40, 242	19, 146
Texas .....	95, 825	47, 300	341, 275	109, 633
Virginia .....	6, 837, 240	2, 218, 376	3, 664, 433	1, 336, 012
Washington .....	15, 000	10, 000	60, 993	80, 574
Total .....	22, 195, 915	12, 029, 502	21, 765, 640	11, 329, 918

16. Comparative statement by sections of the yield of oysters in 1880 and 1888.

Sections.	1880.		1888.	
	Bushels.	Value.	Bushels.	Value.
New England States .....	530, 650	\$654, 775	1, 744, 753	\$1, 331, 313
Middle Atlantic States .....	20, 755, 540	10, 931, 527	17, 316, 430	8, 714, 473
South Atlantic States .....	310, 000	120, 000	423, 295	107, 595
Gulf States .....	578, 725	313, 200	2, 086, 044	574, 538
Pacific States .....	15, 000	10, 000	195, 118	601, 990
Total .....	22, 195, 915	12, 029, 502	21, 765, 640	11, 329, 918

III.—FISHERIES OF THE NEW ENGLAND STATES.

The length of the coast line of this section, as represented by the area canvassed by the agents of the Commission, and therefore covered by the statistics, including the rivers, is about 3,460 miles, divided as follows among the different States: Maine, 2,140; New Hampshire, 35; Massachusetts, 750; Rhode Island, 245; Connecticut, 290.

The fisheries of this division are characterized by certain features which distinguish them from all others on the Atlantic coast, notably the vessel fisheries on the ocean banks and high seas, which are of great extent and vast importance. So far as the amount of capital invested and the quantity and value of the general food fish fisheries are concerned, this section ranks first, although in the items of persons employed and the total quantity and value of fishery products, the Middle States take precedence.



In 1888, there were engaged in the fisheries of the New England States 37,261 persons, of whom 15,612 were vessel fishermen, 11,298 shore and boat fishermen, and 10,351 shoresmen, preparators, and factory hands. The capital invested was \$20,109,220, divided as follows: Vessels and outfits, \$6,408,038; boats, \$683,776; apparatus of capture, \$1,630,532; shore property and circulating capital, \$11,391,874. The value of the products at first hand was \$11,074,501, of which amount nearly three-fourths represented the general food-fish products.

The series of special tables for this section, which show in more detail (by fisheries and fishing grounds) the importance of the vessel fisheries needs some little explanation. By the arrangement giving the extent of the fisheries by fishing grounds each vessel is credited to all the fisheries in which it was engaged during any portion of the year, together with its tonnage, value, and crew. It is therefore duplicated to that extent. No duplication of the catch, however, occurs. The following definitions of some of the more important fisheries recognized will add to the clearness of the tables. The other fisheries will no doubt be readily understood.

**Shore fishery:** Vessels engaging in this branch are mostly small craft frequenting waters adjacent to the New England shore and catching so-called ground fish, which are sold either fresh or salted.

**Market fishery:** Vessels credited to this fishery are of medium or large size and take fish on the banks lying to the westward (George's, Brown's, etc.) or off the New England coast. The catch consists mostly of cod, haddock, pollock, and halibut, and is landed in a fresh condition.

**Halibut fishery:** Vessels incidentally taking small quantities of halibut in the bank, market, and shore fisheries have not been classed under the halibut fishery, which designation has been reserved for vessels making special trips for that species and landing the fares in a fresh condition or fletched and salted.

That somewhat isolated branch of the fisheries known as the frozen-herring trade, which is engaged in by vessels from Maine and Massachusetts, can be best introduced in statistical form in this place. The table presents the leading features of the industry as prosecuted by American vessels in 1888. The vessels that engage in this trade in winter are those which at other seasons follow some other branch of fishing. The herring are purchased of the resident fishermen at a price agreed upon (which often varies) and sold for bait or food in the American markets, principally Gloucester, Boston, and New York, at rates that fluctuate materially in some seasons. The stock of a vessel is the difference between the buying and selling price. The crews are much smaller than are carried when fishing, averaging less than half as many men.

17. Table showing the extent of the frozen-herring trade with the British Provinces in 1888, as carried on by American fishing vessels.

[This table does not include the fish brought into United States territory over regular steamship lines, nor the trade maintained between various ports in the New England and Middle States.]

Where obtained.	Vessels.						Number of herring transported.	
	Number.		Net tonnage.		Value.		Maine.	Massachusetts.
	Maine.	Massachusetts.	Maine.	Massachusetts.	Maine.	Massachusetts.		
New Brunswick .....	4	10	129.34	645.29	\$9,800	\$29,532	1,282,000	*2,677,000
Nova Scotia .....	1		58.09		1,400		380,000	
Newfoundland .....		38		3,347.03		218,020		12,927,000
Total .....	5	48	187.43	3,992.92	11,200	247,558	1,662,000	15,604,000

\* Including 150,000 fish from New Brunswick landed by vessels that also went to Newfoundland and got most of their cargo there.

**MAINE.**

The data here presented cover all the coast fisheries of Maine, including the rivers, which were canvassed as high as fishing was prosecuted upon a commercial basis. Thus, the St. Croix was investigated to Calais, the Penobscot to Bangor, the Sheepscot to Wiscasset, and the Kennebec to Woolwich.

In the matter of persons employed, the returns for Maine show an increase over 1880 of 4,252 in 1887 and 4,100 in 1888. There has been a small decrease in the capital invested and in the extent and value of the vessel fisheries. There has been a marked decline in the number of vessels, but the value of the fishing fleet has not materially changed, owing to the increase in the size and cost of the vessels. The general fisheries, as a rule, were quite as profitable in 1887 and 1888 as in 1880. Some branches were notably prosperous, including the lobster fishery, the pound-net and weir fishery, and the sardine industry; but the mackerel fishery was a marked failure as compared with previous years, and the meager results obtained from it made the general summation for the year much smaller than it otherwise might have been.

18. Table of persons employed.

How engaged.	1887.	1888.
On fishing vessels .....	3,293	2,878
On transporting vessels .....	76	103
On transporting boats .....	143	149
In shore fisheries* .....	6,080	6,140
On shore, in canneries, factories, etc .....	5,722	5,001
	15,323	15,171

\* Including 2,615 semi-professionals in 1887, and 2,650 in 1888.

19. Table of apparatus and capital.

Designation.	1887.		1888.	
	Number.	Value.	Number.	Value.
Vessels fishing* .....	386	\$703,715	371	\$629,915
Outfit .....		218,525		102,569
Vessels transporting † .....	32	39,350	39	50,500
Outfit .....		6,480		7,885
Boats (not including those on vessels) .....	5,537	201,112	5,810	209,117
Boats transporting only .....	87	23,170	97	25,920
Apparatus of capture—vessel fisheries:				
Seine .....	130	69,500	80	40,000
Gill nets .....	897	9,025	1,057	10,636
Trawls .....	1,076	78,537	1,090	77,896
Lines .....	4,203	13,824	4,118	14,102
Pots .....	4,750	4,750	5,150	5,150
Dredges .....	14	168	7	84
Harpoons .....	27	405	28	420
Rakes .....	34	21	28	17
Apparatus of capture—shore fisheries:				
Weirs .....	238	43,280	287	55,772
Trap pots .....	344	34,045	343	33,720
Pound nets .....	27	13,125	32	14,865
Gill nets .....	2,026	27,796	3,271	29,929
Seine .....	70	5,795	93	7,025
Lobster pots .....	100,540	98,061	107,482	96,294
Eel pots .....	136	153	135	148
Eel and flounder spears .....	313	322	283	294
Fyke nets .....	135	580	135	580
Bag nets .....	257	10,720	286	11,700
Hand lines and trawl lines .....		13,590		13,098
Clamming apparatus .....		1,693		1,671
Miscellaneous nets .....	123	408	106	357
Dredges .....	87	1,131	102	1,297
Shore property .....		779,852		706,716
Cash capital .....		600,100		716,600
Total .....		3,179,233		3,023,921

\* Tonnage in 1887, 14,834.41; in 1888, 13,052.99.

† Tonnage in 1887, 747.26; in 1888, 1,053.65.

20. Table of products.

Species.	1887.		1888.	
	Pounds.	Value.	Pounds.	Value.
Mackerel, fresh .....	1,486,934	\$79,100	573,509	\$40,703
Mackerel, salted .....	3,023,000	159,784	1,121,000	73,000
Cod, fresh .....	7,790,221	151,030	7,414,181	144,956
Cod, salted .....	18,614,702	475,863	16,418,684	452,125
Hallbut, fresh .....	629,807	39,243	549,347	34,025
Hallbut, salted .....			1,000	50
Haddock, fresh .....	5,567,168	84,192	5,693,979	94,422
Haddock, salted .....	1,006,748	22,644	1,482,496	21,556
Hake, fresh .....	3,104,258	28,480	2,993,637	26,251
Hake, salted .....	5,478,072	62,545	5,977,041	74,904
Pollock, fresh .....	692,843	7,043	922,303	9,474
Pollock, salted .....	995,305	10,413	1,226,570	12,943
Cusk, fresh .....	456,046	5,288	442,582	5,372
Cusk, salted .....	110,041	1,090	136,059	1,412
Red snapper, fresh .....	129,500	4,069	188,809	6,238
Grouper, fresh .....	8,400	231	16,500	462
Herring, fresh .....	23,946,855	96,239	28,094,454	112,008
Herring, salted .....	3,731,800	37,346	4,928,000	54,620
Herring, smoked .....	2,012,800	67,030	2,207,745	73,315
Alowives, fresh .....	897,042	7,436	974,399	8,343
Alowives, salted .....	779,960	13,581	916,450	14,319
Alowives, smoked .....	229,279	7,140	244,140	7,441
Menhaden, fresh .....	702,000	1,765	3,121,200	14,001
Menhaden, salted .....			2,900	18
Shad, fresh .....	1,087,720	27,010	807,256	22,868
Shad, salted .....	8,000	320	32,000	1,500
Cunners or perch, fresh .....	62,200	1,065	71,647	2,058
Flounders, fresh .....	658,526	11,778	828,995	15,590
Eels, fresh .....	107,285	9,105	127,140	10,080
Swordfish, fresh .....	234,721	10,679	440,523	18,691
Salmon, fresh .....	185,037	36,398	205,140	41,209
Smelt, fresh .....	1,205,150	87,977	1,279,550	94,927

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20. Table of products—Continued.

Species.	1887.		1888.	
	Pounds.	Value.	Pounds.	Value.
Tomcod or froatfish, fresh .....	477,300	\$3,309	474,560	\$3,772
Butterfish, fresh .....	5,000	75	22,000	360
Bream ( <i>Sebastes marinus</i> ), fresh .....	25,000	256	26,000	270
Catfish ( <i>Anarrichas</i> ), fresh .....	6,000	120	6,200	124
Waste fish, fresh .....	484,000	1,782	446,200	1,785
Clams (soft), fresh .....	1,886,540	75,536	1,803,950	76,665
Clams (soft), salted .....	4,201,260	152,954	4,142,600	151,000
Quahaugs, fresh .....	800	100	800	100
Scallops, fresh .....	221,132	13,994	180,006	11,278
Mussels, fresh .....	6,450	189	6,540	193
Lobsters, fresh .....	22,018,642	512,044	21,694,781	515,880
Tongues (cod) .....	267,630	6,022	232,812	4,646
Sounds (cod and hake, green) .....	113,018	22,733	118,041	9,516
Oil (fish, whale, porpoise, and seal) .....	679,110	21,586	676,707	21,432
Seaweed .....	14,500,000	7,115	12,700,000	6,215
Total .....	131,379,591	2,364,906	132,929,594	2,292,043

21. Summary by customs districts of the vessel fisheries of Maine in 1887 and 1888.

FISHING VESSELS.

Customs districts.	No. of vessels.		Net tonnage.		Value of ves- sels.		Value of apparatus and outfit.		No. of fishermen.		Value of catch.*	
	1887.	1888.	1887.	1888.	1887.	1888.	1887.	1888.	1887.	1888.	1887.	1888.
	Passamaquoddy .....	8	6	254.73	141.95	\$17,600	\$7,000	\$6,475	\$2,850	66	40	\$12,520
Machias .....	17	23	298.41	335.98	8,375	10,100	6,080	6,870	87	101	13,424	14,978
Frenchman's Bay .....	31	36	1,698.00	1,846.15	80,775	72,025	50,370	58,855	306	348	115,477	125,461
Castine .....	48	53	2,165.52	2,091.29	87,900	75,300	67,000	59,710	436	417	125,948	139,183
Belfast .....	30	23	1,208.16	761.74	58,750	35,925	30,445	18,675	293	194	50,159	39,282
Waldoborough .....	78	75	1,662.82	1,489.34	75,731	60,085	33,105	27,880	397	384	117,174	104,515
Wiscasset .....	39	35	1,690.73	1,594.30	105,600	99,075	50,825	48,730	309	355	118,514	88,112
Bath .....	7	6	104.46	92.71	3,859	2,655	2,765	1,450	31	23	5,394	4,032
Portland .....	113	98	5,563.88	4,499.89	340,225	257,023	136,899	108,025	1,197	949	377,741	311,030
Saco .....	5	3	80.27	24.35	7,250	1,775	3,408	1,575	27	14	12,373	4,100
Kennebunk .....	8	9	152.62	159.41	7,150	7,550	6,118	6,168	48	48	22,224	16,038
York .....	2	2	15.82	15.82	500	500	275	280	6	5	705	1,101
Total .....	380	371	14,834.41	13,052.99	793,715	629,915	394,765	340,868	3,293	2,878	971,653	855,112

\* In addition to the values given, \$32,779 in 1887 and \$23,149 in 1888 should be added for value of oil, cod tongues, and sounds.

TRANSPORTING VESSELS.

Customs districts.	No. of vessels.		Net tonnage.		Value of vessels.		Value of outfit.		No. of fishermen.	
	1887.	1888.	1887.	1888.	1887.	1888.	1887.	1888.	1887.	1888.
Passamaquoddy .....	12	16	317.05	628.13	\$13,950	\$30,250	\$2,850	\$3,140	31	51
Machias .....	2	3	17.31	26.96	6,000	9,000	900	1,470	4	7
Frenchman's Bay .....	3	1	156.11	51.91	3,400	800	425	225	8	3
Castine .....	4	5	43.47	65.65	7,200	7,350	1,300	1,275	9	11
Belfast .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Waldoborough .....	7	6	140.66	120.94	5,900	5,000	675	550	16	14
Wiscasset .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bath .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland .....	4	8	72.66	160.06	2,000	7,100	600	1,225	8	17
Saco .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kennebunk .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
York .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total .....	22	39	747.26	1,053.65	39,350	59,500	6,480	7,285	76	103

22. Table showing by customs districts the number and nationality of the vessel fishermen of Maine.

Customs districts.	1887.				1888.			
	Ameri- cans.	British provin- cials.	All others.	Total.	Ameri- cans.	British provin- cials.	All others.	Total.
<i>Fishing vessels.</i>								
Passamaquoddy .....	56	10		66	36	4		40
Machias .....	87			87	101			101
Frenchman's Bay .....	236	60	1	306	273	71	4	348
Castine .....	409	26	1	436	386	31		417
Belfast .....	248	43	2	293	178	13	3	194
Waldoborough .....	396	1		397	373	7	4	384
Wiscasset .....	304	95		399	245		110	355
Bath .....	31			31	23			23
Portland .....	1,042	70	85	1,197	809	122	18	949
Saco .....	22	5		27	14			14
Kennebunk .....	47		1	48	48			48
York .....	6			6	5			5
<b>Total .....</b>	<b>2,881</b>	<b>310</b>	<b>90</b>	<b>3,293</b>	<b>2,491</b>	<b>248</b>	<b>139</b>	<b>2,878</b>
<i>Transporting vessels.</i>								
Passamaquoddy .....	29	2		31	48	3		51
Machias .....	4			4	7			7
Frenchman's Bay .....	8			8	3			3
Castine .....	9			9	11			11
Belfast .....								
Waldoborough .....	16			16	14			14
Wiscasset .....								
Bath .....								
Portland .....	8			8	17			17
Saco .....								
Kennebunk .....								
York .....								
<b>Total .....</b>	<b>74</b>	<b>2</b>		<b>76</b>	<b>100</b>	<b>3</b>		<b>103</b>
<b>Grand total .....</b>	<b>2,958</b>	<b>321</b>	<b>90</b>	<b>3,369</b>	<b>2,591</b>	<b>251</b>	<b>139</b>	<b>2,981</b>

23. Table showing by species and customs districts the yield of the vessel fisheries of Maine.

Species.	Passamaquoddy.		Machias.		Frenchman's Bay.		Castine.	
	1887.	1888.	1887.	1888.	1887.	1888.	1887.	1888.
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
Mackerel, fresh .....						3,300		
Mackerel, salted .....	31,000				1,600		428,800	194,200
Cod, fresh .....	225,000		29,556	27,232	10,200	58,000	4,571	6,450
Cod, salted .....	198,800	59,256	275,179	233,795	3,803,089	3,205,139	3,048,638	3,240,013
Halibut, fresh .....	4,000	4,500	13,800	16,120	21,100	42,365	15,071	
Halibut, salted .....								1,000
Haddock, fresh .....			1,000	16,600	9,135	12,135	16,300	1,000
Haddock, salted .....	5,000		30,886	20,384	20,500	32,800	89,920	103,071
Hake, fresh .....			15,110	1,000		3,500	600	5,700
Hake, salted .....	55,000		154,010	221,053	394,670	604,394	287,094	592,871
Pollock, salted .....	18,400		37,021	29,814	138,047	176,500	21,000	110,200
Cusk, salted .....			167		48,000	44,000		
Herring, fresh .....	67,000		10,000	10,000	12,500	46,000	13,000	9,600
Herring, salted .....		380,000	64,400	221,000	80,800	144,000	163,400	413,400
Lobsters, fresh .....			96,978	90,300	10,560	12,400	13,200	1,400
Clams, fresh .....			70	4,580		180		
Scallops, fresh .....					30,875	1,188	59,850	13,272
<b>Total .....</b>	<b>604,200</b>	<b>443,760</b>	<b>720,977</b>	<b>892,778</b>	<b>4,581,266</b>	<b>4,385,631</b>	<b>4,162,053</b>	<b>4,694,777</b>

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23. Table showing by species and customs districts the yield of the vessel fisheries of Maine—Continued.

Species.	Belfast.		Waldoborough.		Wiscasset.		Bath.	
	1887.	1888.	1887.	1888.	1887.	1888.	1887.	1888.
	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>
Mackerel, fresh .....	11,500	182,800	141,560	110,000	22,000	1,500	.....	.....
Mackerel, salted .....	417,800	159,400	3,400	414,800	124,000	.....	.....	.....
Cod, fresh .....	163,875	560,373	352,320	413,150	165,949	241,049	134,353	21,100
Cod, salted .....	479,865	723,100	1,479,036	715,420	3,093,119	2,380,101	58,513	82,674
Halibut, fresh .....	5,300	110	137,571	45,100	14,485	16,815	4,172	2,200
Haddock, fresh .....	263,075	53,087	83,214	272,917	258,127	454,473	25,206	11,100
Haddock, salted .....	127,661	107,500	309,381	130,983	3,000	3,000	15,208	0,608
Hake, fresh .....	.....	.....	528,007	460,122	.....	.....	22,500	.....
Hake, salted .....	747,515	650,700	1,440,502	1,524,283	120,436	175,916	40,609	23,641
Pollock, fresh .....	.....	.....	7,000	.....	.....	.....	.....	.....
Pollock, salted .....	15,950	3,000	111,341	33,633	92,500	182,000	26,108	24,400
Cusk, salted .....	.....	.....	28,400	55,000	.....	.....	.....	.....
Herring, fresh .....	11,725	.....	181,000	139,400	.....	.....	2,400	.....
Herring, salted .....	81,600	137,000	1,584,200	1,300,200	128,000	428,000	1,000	30,000
Menhaden, fresh .....	.....	.....	.....	344,000	.....	1,200,000	.....	.....
Menhaden, salted .....	.....	.....	.....	2,000	.....	.....	.....	.....
Alowives, fresh .....	.....	.....	.....	5,000	.....	.....	.....	8,000
Alowives, salted .....	.....	.....	.....	4,600	.....	.....	.....	4,000
Eels, fresh .....	.....	.....	.....	.....	.....	.....	.....	.....
Swordfish, fresh .....	.....	5,100	.....	52,000	.....	.....	.....	.....
Lobsters, fresh .....	.....	12,000	206,302	153,122	14,000	7,000	.....	.....
Clams, fresh .....	670	200	2,750	770	19,160	13,080	190	.....
Total .....	2,326,536	2,311,570	6,655,224	5,842,660	4,433,576	5,248,434	340,049	208,873

Species.	Portland.		Saco.		Kennebunk.		York.	
	1887.	1888.	1887.	1888.	1887.	1888.	1887.	1888.
	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>
Mackerel, fresh .....	700,272	137,841	2,500	.....	3,242	13,058	.....	.....
Mackerel, salted .....	1,709,600	640,000	.....	.....	.....	.....	.....	.....
Cod, fresh .....	3,349,762	3,329,174	142,467	41,000	723,404	305,028	15,600	13,000
Cod, salted .....	4,574,411	3,940,953	2,883	.....	174,611	292,044	.....	.....
Halibut, fresh .....	267,252	278,402	.....	.....	2,171	.....	.....	.....
Haddock, fresh .....	2,056,888	2,303,440	193,000	1,400	141,428	70,293	3,500	27,000
Haddock, salted .....	278,792	285,447	.....	.....	17,500	20,917	.....	.....
Hake, fresh .....	492,798	343,233	.....	.....	23,282	58,417	2,800	.....
Hake, salted .....	558,663	500,125	.....	.....	162,176	137,455	.....	.....
Pollock, fresh .....	8,500	119,540	.....	.....	.....	.....	.....	.....
Pollock, salted .....	227,776	326,343	3,130	.....	5,978	7,300	.....	.....
Cusk, fresh .....	98,200	118,632	.....	.....	.....	.....	.....	.....
Cusk, salted .....	6,588	.....	.....	.....	.....	.....	.....	.....
Red snapper, fresh .....	129,500	188,809	.....	.....	.....	.....	.....	.....
Grouper, fresh .....	8,400	16,500	.....	.....	.....	.....	.....	.....
Herring, fresh .....	88,050	33,625	875	200	12,000	48,000	20,125	23,000
Herring, salted .....	171,800	194,000	.....	.....	26,600	4,000	3,600	6,600
Menhaden, fresh .....	700,000	18,200	.....	.....	.....	8,000	.....	.....
Shad, salted .....	8,000	32,000	.....	.....	.....	.....	.....	.....
Cunners, fresh .....	.....	19,247	.....	.....	.....	.....	.....	.....
Eels, fresh .....	.....	10,000	.....	.....	.....	.....	.....	.....
Swordfish, fresh .....	175,538	337,073	29,300	8,350	20,883	38,000	.....	.....
Lobsters, fresh .....	9,070	15,524	151,304	92,000	7,414	41,166	.....	.....
Clams, fresh .....	11,010	7,800	.....	.....	.....	12,800	700	900
Mussels, fresh .....	450	340	.....	.....	.....	.....	.....	.....
Total .....	15,631,320	13,271,218	525,459	143,850	1,329,689	1,064,878	46,325	70,500

23. Table showing by species and customs districts the yield of the vessel fisheries of Maine—Continued.

Species.	Total pounds.		Total value.	
	1887.	1888.	1887.	1888.
Mackerel, fresh	1,011,814	318,359	\$54,809	\$22,517
Mackerel, salted	3,023,000	1,121,000	150,784	73,900
Cod, fresh	5,317,057	5,017,446	104,220	98,680
Cod, salted	17,188,144	14,909,389	430,609	413,227
Halibut, fresh	484,922	405,562	30,473	25,992
Halibut, salted	1,000	1,000	50	50
Haddock, fresh	3,050,873	3,224,045	44,668	54,099
Haddock, salted	897,857	730,710	9,444	8,456
Hake, fresh	1,085,097	871,972	9,971	7,550
Hake, salted	3,971,175	4,391,248	42,957	54,289
Pollock, fresh	8,500	126,540	106	1,275
Pollock, salted	698,451	893,310	6,860	8,943
Cusk, fresh	98,200	118,632	884	1,000
Cusk, salted	83,155	99,000	807	1,000
Red snapper, fresh	129,500	188,809	4,069	5,238
Grouper, fresh	8,400	16,600	231	462
Herring, fresh	418,675	309,825	3,504	2,144
Herring, salted	2,305,400	3,259,200	24,042	36,796
Menhaden, fresh	700,000	1,570,200	1,750	3,017
Menhaden, salted	.....	2,000	.....	18
Alewives, fresh	.....	5,000	.....	25
Alewives, salted	.....	4,600	.....	34
Shad, salted	8,000	32,000	320	1,500
Cunners, fresh	.....	19,247	.....	885
Eels, fresh	8,000	23,000	480	1,380
Swordfish, fresh	234,721	440,523	10,679	18,691
Lobsters, fresh	508,828	424,912	10,401	12,360
Clams, fresh	34,720	40,130	823	1,327
Scallops, fresh	60,654	14,460	4,763	750
Mussels, fresh	407,805	450	9	9
<b>Total</b>	<b>41,365,604</b>	<b>38,578,949</b>	<b>671,653</b>	<b>855,112</b>

The above table does not include the following secondary products: In 1887—407,805 pounds of oil, \$13,641; 66,604 pounds of hake sounds, \$13,330; 258,120 pounds of cod tongues, \$5,808. In 1888—391,007 pounds of oil, \$13,143; 69,508 pounds of hake sounds, \$5,561; 222,760 pounds of cod tongues, \$4,445.

24. Table showing by species the products of the vessel fisheries of Maine.

Species.	1887.				1888.			
	Fresh.		Salted.		Fresh.		Salted.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Mackerel	1,011,814	\$54,809	3,023,000	\$159,784	318,359	\$22,517	1,121,000	\$73,900
Cod	5,317,057	104,220	17,188,144	430,609	5,017,446	99,865	14,850,139	412,042
Halibut	484,922	30,473	.....	.....	405,562	25,992	1,000	50
Herring	418,675	3,504	2,305,400	24,042	309,825	2,144	3,259,200	36,796
Haddock	3,050,873	44,668	897,857	9,444	3,224,045	54,069	730,710	8,456
Pollock	8,500	106	698,451	6,860	126,540	1,275	893,310	8,943
Hake	1,085,097	9,971	3,971,175	42,957	871,972	7,550	4,391,248	54,289
Cusk	98,200	884	83,155	807	118,632	1,000	99,000	1,000
Swordfish	234,721	10,679	.....	.....	440,523	18,691	.....	.....
Eels	8,000	480	.....	.....	23,000	1,380	.....	.....
Shad	.....	.....	8,000	320	.....	.....	32,000	1,500
Menhaden	700,000	1,750	.....	.....	1,570,200	3,017	2,000	18
Red snapper	129,500	4,069	.....	.....	188,809	5,238	.....	.....
Grouper	8,400	231	.....	.....	16,500	462	.....	.....
Alewives	.....	.....	.....	.....	5,000	25	4,600	34
Cunners or perch	.....	.....	.....	.....	19,247	885	.....	.....
Lobsters	508,828	10,401	.....	.....	424,912	12,360	.....	.....
Scallops	60,654	4,763	.....	.....	14,460	750	.....	.....
Clams (soft)	34,720	823	.....	.....	40,130	1,327	.....	.....
Mussels	450	9	.....	.....	340	7	.....	.....
Hake sounds	60,654	13,330	.....	.....	69,508	5,561	.....	.....
Tongues	258,120	5,808	.....	.....	222,760	4,445	.....	.....
Oil	407,805	13,641	.....	.....	391,007	13,143	.....	.....
<b>Total</b>	<b>13,923,061</b>	<b>320,610</b>	<b>28,175,182</b>	<b>683,813</b>	<b>13,878,007</b>	<b>281,233</b>	<b>25,384,207</b>	<b>597,028</b>

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25. Table showing by apparatus and species the products of the vessel fisheries of Maine.

[The weights given represent the fish, etc., as sold, regardless of the condition in which marketed.]

Apparatus and species.	1887.		1888.	
	Pou nds.	Value.	Pounds.	Value.
<b>Hand lines and trawls:</b>				
Mackerel.....	21,600	\$1,152	5,300	\$371
Cod.....	22,495,201	543,654	10,914,035	511,698
Halibut.....	484,922	30,473	406,552	26,042
Haddock.....	3,948,730	54,112	3,054,755	62,555
Hake.....	5,058,272	52,928	5,263,220	61,839
Pollock.....	706,061	6,956	1,019,850	10,218
Cusk.....	181,355	1,691	217,632	2,000
Red snapper.....	129,500	4,069	188,809	5,238
Grouper.....	8,400	231	16,500	492
Swordfish.....	6,000	270	11,000	452
<b>Total.....</b>	<b>33,038,931</b>	<b>695,536</b>	<b>30,098,553</b>	<b>680,875</b>
<b>Purse seines:</b>				
Mackerel.....	3,615,372	192,223	1,180,041	79,535
Menhaden.....	700,000	1,750	1,572,200	3,035
Shad.....	8,000	320	32,000	1,500
<b>Total.....</b>	<b>4,323,372</b>	<b>194,293</b>	<b>2,784,241</b>	<b>84,070</b>
<b>Gill nets:</b>				
Mackerel.....	397,842	21,218	254,018	16,511
Cod.....	10,000	175	11,800	209
Herring.....	2,724,075	27,546	3,569,025	38,940
Alwives.....			9,600	59
Cunners.....			19,247	385
<b>Total.....</b>	<b>3,131,917</b>	<b>48,939</b>	<b>3,863,790</b>	<b>56,104</b>
<b>Traps and pots:</b>				
Eels.....	8,000	480	23,000	1,380
Lobsters.....	508,828	16,401	424,912	12,560
<b>Total.....</b>	<b>516,828</b>	<b>16,881</b>	<b>447,912</b>	<b>13,740</b>
<b>Harpoons:</b>				
Swordfish.....	228,721	10,409	420,523	18,239
<b>Dredges and rakes:</b>				
Clams.....	34,720	823	40,130	1,327
Mussels.....	450	9	340	7
Scallops.....	90,725	4,763	14,460	750
<b>Total.....</b>	<b>125,895</b>	<b>5,595</b>	<b>54,930</b>	<b>2,084</b>
<b>Grand total.....</b>	<b>41,365,064</b>	<b>971,653</b>	<b>38,578,949</b>	<b>855,112</b>

26. Table showing the number of vessels engaged in each fishery in Maine, in 1888, together with their tonnage, value, and number of crew.

Fishery	No. of vessels engaged.	Net tonnage.	Value of vessels.	Number and nationality of fisherman.			
				Amer-icans.	British provin-cials.	All others.	Total.
Cod on banks, east of 65° W. longitude.....	66	5,350.06	\$247,400	730	289	5	1,004
Halibut.....	4	348.29	28,000	43	10	5	58
Mackerel, Gulf of St. Lawrence.....	7	512.13	35,300	97	14	1	112
Mackerel, New England shore.....	65	2,595.75	162,575	471	62	37	570
Shore.....	211	4,498.86	194,115	993	44	3	1,040
Market.....	35	2,013.86	116,200	349	63		412
Herring.....	118	2,281.10	79,090	418	8		426
Swordfish.....	24	751.25	38,600	155	16		171
Menhaden.....	5	184.08	11,200	41			41
Clam.....	19	330.52	13,725	93			93
Scallop.....	3	41.08	1,140	14			14
Mussel.....	2	74.31	4,500	17			17
Lobster.....	28	370.34	13,050	98			98



27. Table showing by fisheries and species the yield of the vessel fisheries of Maine in 1888.

[This table does not include 391,007 pounds of oil, valued at \$13,143.40; 60,568 pounds of hake sounds, valued at \$5,561; 222,750 pounds of tongues, valued at \$4,445.]

Fisheries and species.	Pounds.	Value.	Fisheries and species.	Pounds.	Value.
<b>Shore:</b>			<b>Market:</b>		
Alewives.....	5,000	\$25	Cod.....	2,772,773	\$55,454
Alewives, salted.....	4,000	34	Cod, salted.....	208,500	4,691
Cod.....	2,244,073	43,226	Groupers.....	16,500	462
Cod, salted.....	4,246,618	95,548	Haddock.....	2,089,603	34,015
Cunners.....	19,247	385	Haddock, salted.....	25,000	288
Cusk.....	118,632	1,000	Hake, salted.....	20,800	872
Cusk, salted.....	99,000	1,000	Halibut.....	32,754	2,292
Eels.....	23,000	1,380	Pollock, salted.....	118,338	1,183
Haddock.....	1,137,442	20,084	Red snapper.....	188,809	5,238
Haddock, salted.....	704,846	8,180	<b>Total.....</b>	<b>5,479,077</b>	<b>103,993</b>
Hake.....	871,972	7,550			
Hake, salted.....	4,361,448	53,917	Halibut.....	271,280	17,505
Halibut.....	97,018	5,820	Menhaden.....	1,570,200	3,017
Halibut, salted.....	1,000	50	Swordfish.....	440,523	18,691
Herring.....	7,000	56			
Pollock.....	126,540	1,275	<b>Herring:</b>		
Pollock, salted.....	774,972	7,760	Herring.....	302,825	2,088
Menhaden, salted.....	2,000	18	Herring, salted.....	3,259,200	36,796
Shad, salted.....	32,000	1,500	<b>Total.....</b>	<b>3,562,025</b>	<b>36,884</b>
<b>Total.....</b>	<b>14,877,008</b>	<b>248,788</b>			
			<b>Mollusk:</b>		
<b>Mackerel:</b>			Mussels.....	340	7
Mackerel.....	318,359	22,517	Clams.....	40,130	1,327
Mackerel, salted.....	1,121,000	73,900	Scallops.....	14,460	750
<b>Total.....</b>	<b>1,439,359</b>	<b>96,417</b>	<b>Total.....</b>	<b>54,930</b>	<b>2,084</b>
			<b>Crustacean:</b>		
<b>Bank:</b>			Lobsters.....	424,912	12,360
Cod, salted.....	10,454,271	312,988			
Haddock, salted.....	864	10	<b>Grand total.....</b>	<b>38,578,949</b>	<b>855,112</b>
Halibut.....	4,500	315			
<b>Total.....</b>	<b>10,459,635</b>	<b>313,313</b>			

28. Table showing by fishing grounds the catch of the mackerel (by apparatus) and bank cod fleets of Maine in 1888.

Fishery.	New England shore.		Gulf of St. Lawrence.		East of 65° W. longitude.		Total.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
<b>Mackerel caught with seines:</b>								
Fresh.....	107,841	\$7,540					107,841	\$7,540
Salted.....	927,400	50,613	162,200	\$12,165			1,089,600	71,776
<b>Mackerel caught with nets:</b>								
Fresh.....	210,518	14,968					210,518	14,968
Salted.....	8,200	498					8,200	498
<b>Mackerel caught with lines:</b>								
Salted.....	23,200	1,624					23,200	1,624
<b>Cod, salted.....</b>					10,454,271	\$312,988	10,454,271	312,988
<b>Total.....</b>	<b>1,277,159</b>	<b>84,252</b>	<b>162,200</b>	<b>12,165</b>	<b>10,454,271</b>	<b>312,988</b>	<b>11,893,630</b>	<b>409,405</b>

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29. Table showing by species the products of the shore fisheries of Maine.

Species.	1887.		1888.	
	Pounds.	Value.	Pounds.	Value.
Mackerel, fresh.....	475, 120	\$24, 291	255, 150	\$18, 166
Cod, fresh.....	2, 473, 164	47, 410	2, 398, 735	46, 276
Cod, salted.....	1, 420, 558	30, 254	1, 500, 205	38, 908
Hake, fresh.....	2, 019, 161	18, 509	2, 121, 665	18, 701
Hake, salted.....	1, 506, 897	19, 588	1, 585, 793	20, 615
Haddock, fresh.....	2, 516, 295	39, 524	2, 409, 934	40, 323
Haddock, salted.....	768, 891	13, 200	751, 788	13, 100
Cusk, fresh.....	357, 846	4, 404	323, 950	4, 372
Cusk, salted.....	26, 886	292	27, 059	412
Pollock, fresh.....	684, 343	6, 937	795, 763	8, 199
Pollock, salted.....	200, 944	3, 563	333, 200	4, 000
Halibut, fresh.....	141, 885	8, 770	143, 795	8, 033
Herring, fresh.....	23, 528, 180	92, 735	28, 684, 629	109, 804
Herring, pickled.....	1, 420, 400	13, 304	1, 668, 800	17, 830
Herring, smoked.....	2, 012, 800	67, 030	2, 207, 745	73, 315
Alwives, fresh.....	897, 042	7, 435	969, 399	8, 318
Alwives, pickled.....	779, 960	13, 581	910, 850	14, 285
Alwives, smoked.....	229, 279	7, 140	244, 140	7, 441
Menhaden, fresh.....	2, 000	15	1, 551, 000	10, 984
Shad, fresh.....	1, 087, 720	27, 010	807, 250	22, 868
Smolt, fresh.....	1, 205, 150	87, 977	1, 270, 550	94, 927
Tomcod or frostfish, fresh.....	477, 300	3, 309	474, 500	3, 772
Cunners or porch, fresh.....	52, 200	1, 865	52, 400	1, 673
Salmon, fresh.....	185, 637	30, 398	205, 149	41, 209
Eels, fresh.....	99, 285	8, 625	104, 140	8, 710
Flounders, fresh.....	658, 525	11, 778	828, 995	15, 590
Butterfish, fresh.....	5, 000	75	22, 000	360
Bream, fresh.....	26, 000	255	26, 000	270
Catfish, fresh.....	6, 000	120	6, 200	124
Waste or refuse fish, fresh.....	484, 000	1, 782	440, 200	1, 785
Lobsters, fresh.....	22, 407, 814	495, 643	21, 269, 819	503, 520
Clams (soft), fresh.....	1, 851, 820	74, 713	1, 823, 820	75, 338
Clams (soft), salted.....	4, 201, 260	152, 054	4, 142, 800	151, 000
Quohags, fresh.....	800	100	800	100
Scallops, fresh.....	130, 407	9, 231	165, 546	10, 528
Mussels, fresh.....	6, 000	180	6, 200	186
Oil (fish, whale, porpoise, and seal).....	271, 305	7, 045	285, 700	8, 289
Hake and cod sounds, green.....	47, 014	9, 403	40, 433	3, 956
Cod tongues.....	9, 510	214	10, 062	201
Seaweed.....	14, 500, 000	7, 115	12, 700, 000	6, 215
Total.....	89, 281, 398	1, 360, 474	93, 607, 380	1, 413, 782

30. Table showing by apparatus and species the yield of the shore fisheries of Maine in 1887, exclusive of the shellfish and lobster fisheries.

Apparatus and species.	Pounds.	Value.	Apparatus and species.	Pounds.	Value.
<b>Hand lines and trawl lines:</b>			<b>Seines:</b>		
Mackerel.....	90, 000	\$1, 300	Mackerel.....	4, 000	\$240
Cod.....	2, 370, 014	45, 042	Flounders.....	280, 500	5, 199
Cod, salted.....	1, 420, 558	36, 254	Smelt.....	142, 300	9, 640
Haddock.....	2, 516, 295	39, 524	Herring.....	23, 000	200
Haddock, salted.....	768, 891	13, 200	Waste and refuse fish.....	104, 000	620
Hake.....	2, 019, 161	18, 509	<b>Total.....</b>	<b>559, 800</b>	<b>15, 799</b>
Hake, salted.....	1, 506, 897	19, 588			
Pollock.....	627, 343	6, 823	<b>Weirs, pound nets, and trap nets:</b>		
Pollock, salted.....	296, 944	3, 563	Mackerel.....	308, 020	15, 156
Cusk.....	357, 846	4, 404	Cod.....	3, 000	05
Cusk, salted.....	26, 886	292	Pollock.....	57, 000	114
Halibut.....	141, 885	8, 770	Cunners.....	35, 000	1, 025
Cunners.....	17, 200	640	Flounders.....	5, 000	75
Flounders.....	10, 000	160	Smelt.....	79, 650	3, 437
Bream.....	25, 000	255	Menhaden.....	2, 000	15
Catfish.....	6, 000	120	Shad.....	559, 700	14, 034
Smolt.....	569, 105	43, 223	Herring.....	21, 438, 460	79, 894
<b>Total.....</b>	<b>12, 790, 025</b>	<b>244, 607</b>	Herring, smoked.....	1, 987, 800	66, 340
<b>Gill nets:</b>			Alwives.....	607, 187	6, 181
Mackerel.....	73, 100	4, 595	Alwives, salted.....	30, 360	505
Cod.....	100, 150	2, 303	Alwives, smoked.....	101, 503	8, 390
Shad.....	528, 020	12, 976	Salmon.....	182, 013	35, 416
Herring.....	2, 066, 720	12, 641	Tomcod or frostfish.....	24, 100	40
Herring, salted.....	1, 420, 400	13, 304	Butterfish.....	5, 000	75
Herring, smoked.....	25, 500	690	Waste and refuse fish.....	240, 000	1, 000
Salmon.....	2, 374	925	<b>Total.....</b>	<b>25, 726, 173</b>	<b>220, 762</b>
<b>Total.....</b>	<b>4, 222, 264</b>	<b>47, 434</b>			

\* Mostly waste fish.

† Including the quantity subsequently canned.

30. Table showing by apparatus and species the yield of the shore fisheries of Maine in 1887, exclusive of the shellfish and lobster fisheries—Continued.

Apparatus and species.	Pounds.	Value.	Apparatus and species.	Pounds.	Value.
<b>Bag nets:</b>			<b>Dip nets:</b>		
Flounders.....	27,050	\$788	Smelt.....	2,350	\$71
Smelt.....	368,145	31,422	Alewives.....	212,500	1,104
Frostfish or tomcod.....	446,700	3,234	Alewives, salted.....	743,600	13,076
Waste and refuse fish.....	140,000	262	Alewives, smoked.....	107,484	3,126
<b>Total.....</b>	<b>1,001,895</b>	<b>35,706</b>	Salmon.....	350	57
			Frostfish or tomcod.....	4,000	25
			<b>Total.....</b>	<b>1,076,204</b>	<b>17,450</b>
<b>Fyke nets:</b>			<b>Spears:</b>		
Flounders.....	110,000	1,177	Flounders.....	219,975	4,379
Smelt.....	3,600	184	Eels.....	78,935	7,103
Frostfish or tomcod.....	2,500	10	<b>Total.....</b>	<b>298,910</b>	<b>11,482</b>
<b>Total.....</b>	<b>116,100</b>	<b>1,371</b>	<b>Grand total.....</b>	<b>45,817,781</b>	<b>602,202</b>
<b>Pots:</b>					
Eels.....	20,350	1,522			

31. Table showing by apparatus and species the yield of the shore fisheries of Maine in 1888, exclusive of the shellfish and lobster fisheries.

Apparatus and species.	Pounds.	Value.	Apparatus and species.	Pounds.	Value.
<b>Hand lines and trawl lines:</b>			<b>Weirs, pound nets, and trap nets:</b>		
Mackerel.....	47,400	\$3,450	Mackerel.....	162,710	\$11,015
Cod.....	2,356,035	45,417	Cod.....	12,500	255
Cod, salted.....	1,509,295	38,908	Pollock.....	63,000	126
Haddock.....	2,469,934	49,323	Cunners.....	34,900	1,023
Haddock, salted.....	751,788	13,100	Flounders.....	5,000	75
Hake.....	2,121,685	18,701	Smelt.....	93,600	4,156
Hake, salted.....	1,585,793	20,615	Menhaden.....	32,400	293
Pollock.....	732,763	8,073	Shad.....	528,984	15,408
Pollock, salted.....	333,260	4,000	Herring.....	26,863,664	98,275
Cusk.....	323,950	4,372	Herring, smoked.....	2,189,745	72,775
Cusk, salted.....	87,059	412	Alewives.....	632,829	6,332
Halibut.....	143,795	8,033	Alewives, salted.....	20,550	370
Cunners.....	17,500	650	Alewives, smoked.....	133,525	4,379
Flounders.....	10,800	172	Salmon.....	202,692	40,246
Bream.....	26,000	270	Frostfish or tomcod.....	25,200	55
Catfish.....	6,200	124	Butterfish.....	22,000	300
Smelt.....	601,812	47,394	Waste and refuse fish.....	198,400	902
<b>Total.....</b>	<b>13,075,049</b>	<b>254,014</b>	<b>Total.....</b>	<b>31,221,699</b>	<b>256,135</b>
<b>Gill nets:</b>			<b>Dip nets:</b>		
Mackerel.....	44,040	3,646	Smelt.....	2,000	75
Cod.....	28,200	604	Alewives.....	350,070	1,986
Menhaden.....	1,518,600	10,691	Alewives, salted.....	890,300	13,915
Shad.....	278,272	7,400	Alewives, smoked.....	110,615	3,062
Herring.....	1,812,965	11,519	Salmon.....	175	29
Herring, salted.....	1,668,800	17,830	Frostfish or tomcod.....	4,000	25
Herring, smoked.....	18,000	540	<b>Total.....</b>	<b>1,357,100</b>	<b>19,092</b>
Salmon.....	2,282	934	<b>Fyke nets:</b>		
<b>Total.....</b>	<b>5,371,159</b>	<b>53,224</b>	Flounders.....	106,000	1,217
<b>Eels:</b>			Smelt.....	5,000	240
Mackerel.....	1,000	75	Frostfish or tomcod.....	12,500	50
Flounders.....	455,150	8,907	<b>Total.....</b>	<b>123,500</b>	<b>1,507</b>
Smelt.....	179,600	11,368	<b>Pots:</b>		
Herring.....	8,000	70	Eels.....	23,340	1,650
Waste and refuse fish.....	105,000	625	<b>Spears:</b>		
<b>Total.....</b>	<b>748,750</b>	<b>20,043</b>	Flounders.....	222,075	4,362
<b>Bag nets:</b>			Eels.....	80,800	7,060
Flounders.....	29,970	857	<b>Total.....</b>	<b>302,875</b>	<b>11,422</b>
Smelt.....	397,534	31,096	<b>Grand total.....</b>	<b>53,228,700</b>	<b>654,450</b>
Frostfish or tomcod.....	432,860	3,642			
Waste and refuse fish.....	142,890	268			
<b>Total.....</b>	<b>1,003,168</b>	<b>36,463</b>			

\*Mostly waste fish.

†Including the quantity subsequently canned.

## NEW HAMPSHIRE.

There has been a considerable diminution in the fisheries of this State in persons employed, the amount of capital invested, and the quantity and value of products. Fishing, however, has never been an important industry of the State, as compared with Maine and Massachusetts, because of its short coast line. Portsmouth and New Castle are the only fishing centers of any importance.

The decrease has been wholly in the vessel fishery, there having been only 12 vessels in 1887 and 14 in 1888, against 23 in 1880. There has been an increase of 30 men in the boat fishery, but as no separate figures were given of capital and products for the shore fishery in 1880 there is no basis for comparison of these items.

In 1880 the total catch was 10,400,294 pounds, valued at \$176,684, while in 1888 it reached 3,843,479 pounds, worth \$90,044.

32. Table of persons employed.

How engaged.	1887.	1888.
In vessel fisheries.....	108	132
In shore fisheries.....	197	197
On shore.....	41	83
Total.....	346	362

33. Table of apparatus and capital.

Designation.	1887.		1888.	
	No.	Value.	No.	Value.
Vessels *.....	12	\$26,550	14	\$27,150
Outfit.....		5,470		9,901
Boats.....	75	4,220	75	4,220
Apparatus of capture—vessel fisheries:				
Purse seines.....	5	2,600	5	2,730
Hand and trawl lines.....		10,975		12,502
Gill nets.....	35	420	45	540
Harpoons.....	7	105	10	150
Lobster pots.....	250	350	225	325
Apparatus of capture—shore fisheries:				
Haul seines.....	3	150	3	136
Gill nets.....	95	1,150	107	1,246
Pound nets.....	1	1,000	1	1,000
Weirs.....	10	750	12	860
Lobster pots.....	2,045	2,510	2,065	2,540
Hand and trawl lines.....		840		825
Spears, clamming outfits, etc.....		20		20
Shore property.....		40,000		38,000
Cash capital.....		5,000		5,000
Total.....		108,110		107,144

\* Tonnage in 1887, 415.67; in 1888, 498.42.

34. Table of products.

Species.	Vessel fisheries.				Shore fisheries.			
	1887.		1888.		1887.		1888.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives					100,450	\$1,960	146,750	\$3,080
Cod, fresh	1,428,622	\$28,901	892,582	\$18,908	488,000	8,010	458,000	7,695
Cod, salted	120,313	3,007	75,197	1,881				
Eels					10,000	1,000	10,000	1,100
Haddock, fresh	351,746	6,255	407,498	8,150	640,000	10,445	632,000	10,050
Haddock, salted	11,313	226	9,697	194				
Hake, fresh	176,787	1,500	209,992	1,880				
Hake, salted	11,613	140	9,700	121				
Hallbut, fresh	155,777	11,758	143,467	11,577				
Herring, fresh			60,000	600	77,000	680	148,000	1,260
Herring, salted	10,000	113						
Herring, etc., for bait					136,000	1,000	150,200	1,200
Mackerel, fresh	140,817	8,449	53,116	3,718	3,560	400	3,560	400
Mackerel, salted	49,600	2,728	43,400	3,348				
Menhaden							21,000	180
Perch					8,000	400	10,000	500
Pollock, fresh	64,100	854	38,000	508				
Sea bass					500	40	500	40
Shad					30	4	80	3
Smelt					36,000	3,600	36,000	3,600
Swordfish, fresh	14,275	714	43,450	1,955				
Miscellaneous fish, fresh	70,000	870	82,000	1,030				
Clams					2,800	140	3,000	150
Lobsters	15,824	868	12,600	756	127,500	5,400	123,750	5,500
<b>Total</b>	<b>2,620,287</b>	<b>66,881</b>	<b>2,080,699</b>	<b>54,686</b>	<b>1,634,440</b>	<b>33,079</b>	<b>1,762,780</b>	<b>35,358</b>

Species.	Total.			
	1887.		1888.	
	Pounds.	Value.	Pounds.	Value.
Alewives	100,450	\$1,960	146,750	\$3,080
Cod, fresh	1,915,222	36,911	1,350,582	26,663
Cod, salted	120,313	3,007	75,197	1,881
Eels	10,000	1,000	10,000	1,100
Haddock, fresh	997,746	16,700	1,059,498	18,800
Haddock, salted	11,313	226	9,697	194
Hake, fresh	176,787	1,500	209,992	1,880
Hake, salted	11,613	140	9,700	121
Hallbut, fresh	155,777	11,758	143,467	11,577
Herring, fresh	77,000	680	208,000	1,860
Herring, salted	10,000	113		
Herring, etc., for bait	136,000	1,000	150,200	1,200
Mackerel, fresh	144,377	8,849	56,616	4,118
Mackerel, salted	49,600	2,728	43,400	3,348
Menhaden			21,000	180
Perch	8,000	400	10,000	500
Pollock, fresh	64,100	854	38,000	508
Sea bass	500	40	500	40
Shad	30	4	80	3
Smelt	36,000	3,600	36,000	3,600
Swordfish, fresh	14,275	714	43,450	1,955
Miscellaneous fish, fresh	70,000	870	82,000	1,030
Clams	2,800	140	3,000	150
Lobsters	142,824	6,268	136,350	6,256
<b>Total</b>	<b>4,254,727</b>	<b>99,460</b>	<b>3,843,479</b>	<b>90,044</b>

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35. Table showing the number of vessels engaged in each fishery in New Hampshire in 1888, together with their tonnage, value, and number of crew.

Fishery.	No. of vessels engaged.	Net tonnage.	Value of vessels.	Number and nationality of fishermen.			
				Americans.	British provincials.	All others.	Total.
Shore .....	13	429.40	\$24,350	106	0	3	118
Mackerel, New England shore .....	6	195.32	13,650	46	4	2	52
Halibut .....	2	90.73	3,600	14	.....	7	21
Swordfish .....	7	191.07	9,700	53	6	2	61
Herring .....	1	30.93	1,800	7	3	.....	10
Lobsters .....	1	19.41	1,500	6	.....	.....	6

36. Table showing by fisheries and species the yield of the vessel fisheries of New Hampshire in 1888.

Fisheries and species.	Pounds.	Value.	Fisheries and species.	Pounds.	Value.
Shore:			Mackerel, New England shore:		
Cod .....	892,582	\$18,068	Mackerel, caught with seine, fresh .....	41,713	\$2,920
Cod, salted .....	75,197	1,881	Mackerel, caught with seine, salted .....	43,400	3,348
Haddock .....	407,498	8,150	Mackerel, caught with nets, fresh .....	9,400	658
Haddock, salted .....	9,697	194	Mackerel, caught with lines, fresh .....	2,000	140
Hake .....	209,992	1,880	Total .....	96,516	7,066
Hake, salted .....	9,700	121	Lobster .....	12,600	756
Pollock .....	38,000	508	Grand total .....	2,080,699	54,686
Miscellaneous fish .....	82,000	1,030			
Total .....	1,724,666	32,732			
Swordfish .....	43,450	1,955			
Herring .....	60,000	600			
Halibut .....	143,467	11,577			

MASSACHUSETTS.

Notwithstanding the marked decadence in the whale fishery and the phenomenal scarcity of mackerel during the two years under consideration, Massachusetts still stands at the head of all the States in the value and importance of its fisheries. Elsewhere the percentage of increase or decrease in the general fisheries of the State has been shown under the head of persons employed, capital invested, value of products, etc. Here it only remains to discuss such phases of these industries as are brought out in greater detail in these tables.

As in the other New England States already considered, there has been a decided falling off in the number of vessels employed, particularly in the whale fishery, where the fleet declined from 161 vessels in 1880 to 74 in 1888. But, although there has been a decrease in the number of vessels engaged in the general fisheries (other than for whales), this has been more than offset by the increase in size and value, there having been an actual increase of more than 5,000 tons in this class of shipping since 1880.

The table showing the catch of mackerel, cod, and halibut by fishing grounds and by condition when landed, is very instructive and suggestive. It throws much light on matters of international consequence, particularly when taken in connection with similar tables for the other

New England States. It may be explained that the term "Nova Scotia shore," used here, means that the fish were taken off the coast of that province, in the open sea outside of jurisdictional waters. The same can be said of the Gulf of St. Lawrence and all other fishing grounds, except the "New England shore." While American fishing vessels have the right to fish inshore over the greater part of the region included under the head of "West of 65° W. longitude," it may be stated that this is a bank fishery prosecuted at considerable distances from the coast. It is proper, however, to call attention to the fact that while the mackerel catch off the New England shore in 1888 was 8,322,943 pounds, worth \$558,146, the combined catch off the Nova Scotia coast and in the Gulf of St. Lawrence reached an aggregate of only 2,144,200 pounds, with a value of \$178,682.

For this State as well as for others the products of the fisheries are shown in great detail by species and by special fisheries in a manner more complete than has heretofore been attempted, including even the secondary products, such as roe, fish oil, etc.

37. Table of persons employed.

How engaged.	1887.	1888.
On fishing vessels.....	11,182	11,062
On transporting vessels.....	28	29
On boats.....	2,618	2,681
On shore, in factories, fish houses, etc.....	3,235	3,265
Total.....	17,053	17,037

38. Table of apparatus and capital.

Designation.	1887.		1888.	
	No.	Value.	No.	Value.
Vessels fishing *.....	830	\$3,118,006	814	\$3,040,323
Outfit.....		1,015,239		1,539,596
Vessels transporting †.....	11	7,150	11	7,500
Outfit.....		2,050		2,100
Boats.....	3,310	245,699	3,333	251,070
Apparatus of capture—vessel fisheries:				
Seines.....	382	191,000	332	167,700
Trawl lines, hand lines, etc.....		469,949		494,478
Gill nets.....	614	7,576	628	8,288
Snap nets.....	20	60	20	60
Pots.....	560	980	785	1,455
Dredges and rakes.....	30	115	26	100
Apparatus of capture—shore fisheries:				
Haul seines.....	42	3,205	46	3,805
Pound nets, trap nets, and weirs.....	200	171,721	218	189,829
Gill nets.....	4,031	46,103	4,122	47,794
Fyke nets.....	41	630	46	680
Trammel nets.....	2	35	2	35
Snap nets and dip nets.....	495	911	500	921
Pots.....	26,970	37,605	28,532	40,086
Trawl lines and hand lines.....		2,092		2,800
Dredges and tongs.....	1,082	3,490	1,225	3,840
Harpoons, spears, etc.....	282	544	297	571
Rakes and hoes.....		5,146		5,766
Shore property.....		3,036,544		3,050,738
Cash capital.....		4,236,200		4,251,200
Total.....		13,205,050		13,110,765

\* Tonnage in 1887, 61,376.48; in 1888, 59,939.83.

† Tonnage in 1887, 180.31; in 1888, 189.01.

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39. Table of products.

Species.	1887.		1888.	
	Pounds.	Value.	Pounds.	Value.
Albicare.....	40,000	\$125	40,900	\$134
Alowives.....	1,900,339	28,194	2,983,424	39,674
Alowives, salted.....	1,486,625	36,492	2,205,675	43,856
Bluefish.....	706,882	61,158	689,904	69,744
Bonito.....	55,307	1,787	130,605	5,715
Bonito, salted.....			1,400	84
Butterfish.....	503,929	14,198	513,447	14,508
Cod.....	24,904,116	476,305	23,427,182	516,170
Cod, salted.....	66,384,295	1,712,703	64,369,603	1,762,061
Cusk.....	275,554	3,080	344,890	4,676
Cusk, salted.....	84,070	800	175,586	1,938
Eels.....	411,904	23,926	424,793	24,346
Flourders.....	840,710	16,982	853,527	17,091
Grouper.....			8,280	212
Haddock.....	28,932,885	453,408	35,750,801	651,835
Haddock, salted.....	794,948	10,311	525,571	5,642
Hake.....	4,489,682	39,684	3,961,725	39,157
Hake, salted.....	790,492	7,020	923,684	9,711
Halibut.....	9,034,947	468,554	9,207,065	540,393
Halibut, salted.....	666,332	41,646	1,336,971	75,671
Herring.....	7,177,431	60,313	8,224,270	70,838
Herring, salted.....	1,227,400	13,977	2,007,975	25,938
Hickory shad.....	6,300	173	3,964	86
Kingfish.....	3,630	194	6,561	372
Mackerel.....	5,890,092	287,657	4,756,925	268,800
Mackerel, salted.....	15,084,500	870,625	8,920,050	659,520
Menhaden.....	372,740	2,630	3,551,221	12,419
Menhaden, salted.....	85,200	3,200	708,200	15,058
Perch or cunners.....	329,946	16,640	316,276	16,184
Pollock.....	1,707,822	17,495	2,742,640	29,461
Pollock, salted.....	1,036,877	11,195	1,131,666	12,482
Red snapper.....	214,735	5,841	153,377	4,772
Scup.....	2,322,331	72,445	1,785,839	53,456
Sea bass.....	390,762	22,977	472,573	20,070
Shad.....	63,319	2,802	179,606	5,312
Shad, salted.....	69,200	1,948	80,480	2,301
Smelt.....	11,500	1,233	10,800	1,152
Spanish mackerel.....	3,988	801	2,199	487
Squeteague.....	129,671	6,629	170,544	8,972
Striped bass.....	20,267	2,160	32,024	3,113
Sturgeon.....	6,400	64	4,500	171
Swordfish.....	223,050	9,495	204,407	12,549
Swordfish, salted.....	3,800	171	40,000	1,562
Tautog.....	744,344	26,576	633,192	24,094
Whiting ( <i>Merluccius</i> ).....	45,901	782	69,608	1,223
Miscellaneous fish.....	22,279	232	22,127	241
Refuse fish.....	1,010,000	976	1,110,250	992
Clams ( <i>Mya arenaria</i> ).....	1,940,380	110,396	2,107,770	117,938
Clams, salted.....	300,210	10,806	330,000	9,900
Quahaugs ( <i>Venus mercenaria</i> ).....	284,320	21,363	209,320	14,822
Oysters.....	302,281	64,115	319,417	66,453
Scallops.....	251,783	38,933	167,011	43,202
Lobsters.....	3,511,075	156,204	3,743,475	172,936
Shrimps.....	1,000	325	1,250	450
Squid.....	511,400	5,279	480,200	5,274
Halibut fins.....	20,000	1,053	70,400	3,402
Sounds.....	37,206	7,440	38,722	5,808
Tongues.....	335,512	10,045	315,590	9,469
Roe.....			5,000	200
Oil, fish.....	2,256,130	79,462	1,962,535	72,385
Oil, whale.....	6,794,180	455,169	4,049,954	328,148
Ambergris.....	197	22,000	424	9,930
Whalebone.....	222,567	564,901	124,676	338,138
Algae.....	102,203,600	80,941	102,150,000	76,178
<b>Total.....</b>	<b>290,544,343</b>	<b>6,464,396</b>	<b>302,045,686</b>	<b>6,355,495</b>



40. Summary by customs districts of the vessel fisheries of Massachusetts in 1887 and 1888.

Customs district.	No. of vessels fishing.		Net tonnage.		Value of vessels.		Value of outfit, gear, provisions, fuel, etc.		Number and nationality of fishermen.						Value of catch.		
	1887.	1888.	1887.	1888.	1887.	1888.	1887.	1888.	1887.			1888.			1887.	1888.	
									Americans.	British pro- vincials.	All others.	Americans.	British pro- vincials.	All others.			Total.
Newburyport.....	6	4	141.61	115.40	\$5,750	\$6,200	\$11,437	\$7,800	40	31	3	43	30	1	31	\$15,974	\$13,754
Gloucester.....	417	412	27,085.20	26,465.17	1,575,756.1	1,509,921.1	1,107,560.1	1,082,712	3,415	3,387	1,270	5,368	3,387	649	5,306	2,795,229.2	2,948,987
Salem and Beverly.....	18	14	539.49	469.61	28,000	24,550	19,710	19,250	96	21	2	119	66	40	108	46,255	54,008
Marblehead.....	27	21	934.18	736.89	61,950	50,400	55,842	47,225	231	9	2	240	192	10	203	113,969	91,301
Boston.....	59	61	3,264.12	3,742.63	205,250	241,870	154,760	173,210	543	124	76	743	657	110	873	383,973	527,485
Plymouth.....	2	1	135.37	44.65	7,000	3,300	4,100	2,000	26	10	26	10	10	3	120	3,120	3,600
Barnstable.....	193	193	12,705.87	12,668.11	571,770	558,232	342,847	325,327	1,758	479	251	2,488	1,759	465	2,458	982,265	897,350
Nantucket.....	11	13	85.19	90.21	6,175	6,725	22,591	23,151	83	22	16	131	104	22	17	854	2,719
Edgartown.....	11	18	638.83	729.13	25,400	28,075	27,977	27,977	93	22	16	131	104	22	17	143	2,745
New Bedford.....	85	77	15,846.62	14,878.02	628,955	611,050	565,075	530,275	837	315	845	1,997	800	285	815	1,901,030	369,634,003
Total.....	830	814	81,376.48	89,939.83	3,118,066.3	3,040,323.2	2,284,919.2	2,211,617	7,066	2,176	1,940	11,183	7,036	2,200	1,826	11,027,537	12,188,982

Customs districts.	No. of ves- sels trans- porting.		Net tonnage.		Value of vessels.		Value of provis- ions, fuel, etc.		Number and nationality of crew.						Value of products transported.		
	1887.	1888.	1887.	1888.	1887.	1888.	1887.	1888.	1887.			1888.			1887.	1888.	
									Americans.	British pro- vincials.	All others.	Americans.	British pro- vincials.	All others.			Total.
Newburyport.....	1	1	8.55	8.55	\$550	\$100	\$100	\$100	3	3	3	3	3	3	3	\$9,203	\$10,050
Gloucester.....	1	1	49.41	49.41	1,000	300	300	300	4	4	4	4	4	4	4	5,600	8,260
Salem and Beverly.....	1	1	8.67	18.27	200	600	100	150	2	2	2	2	3	3	3	2,500	5,000
Marblehead.....	3	3	43.64	43.64	2,000	2,000	650	650	9	9	9	9	9	9	9	18,500	20,000
Plymouth.....	5	5	70.04	70.04	3,400	3,400	900	900	10	10	10	10	10	10	10	12,800	12,140
Barnstable.....	11	11	180.31	189.91	7,150	7,500	2,050	2,100	28	28	28	28	29	29	29	48,003	55,450
Total.....	11	11	180.31	189.91	7,150	7,500	2,050	2,100	28	28	28	28	29	29	29	48,003	55,450

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41. Table showing by species and customs districts the yield of the vessel fisheries of Massachusetts in 1887.

Species.	Newburyport.		Gloucester.		Salem and Beverly.		Marblehead.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives			48,000	\$260				
Cod	683,325	\$10,860	9,446,356	165,301	467,320	\$8,178	1,982,516	\$33,042
Cod, salted			48,798,873	1,208,000	1,580,925	32,158	80,000	2,000
Cusk			54,093	510			35,417	335
Cusk, salted			84,070	800				
Haddock	113,000	1,695	15,031,318	226,370	30,000	470		
Haddock, salted			261,028	2,550	21,000	215	507,670	7,443
Halibut			8,409,805	422,400	3,680	221	22,518	1,126
Halibut, salted			660,332	41,646				
Hake	31,000	265	1,487,291	12,641			69,217	652
Hake, salted			748,930	7,500				
Herring			820,058	5,740	4,000	30	47,500	357
Herring, salted			485,800	6,070	91,000	1,024		
Mackerel	14,000	700	1,904,120	82,521			1,174,300	52,844
Mackerel, salted	44,400	2,338	9,414,200	515,230	17,000	935	100,000	6,000
Menhaden			10,400	485				
Menhaden, salted			80,200	3,070				
Pollock			712,755	7,160			323,860	3,170
Pollock, salted			832,848	8,160	20,000	185	7,000	70
Red snapper			41,750	1,250			172,985	4,691
Scup			16,000	460				
Swordfish			114,030	4,561				
Swordfish, salted			3,800	171				
Lobsters			7,130	214	40,530	1,733	10,000	290
Clams							20,000	1,800
Squid			15,000	37				
Halibut fins			20,000	1,053				
Sounds	530	116	28,555	5,580			1,617	349
Tongues			213,756	6,383				
Oil, fish			1,685,635	58,996	10,252	327		
Algae					14,137	469		
					5,400	300		
Total	886,264	15,974	101,511,113	2,795,229	2,314,244	46,255	4,554,600	113,969

Species.	Boston.		Plymouth.		Barnstable.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Bluefish					72,679	\$5,902
Bonito					125	5
Butterfish					1,500	45
Cod	5,827,097	\$116,542			4,542,905	106,190
Cod, salted	608,592	14,590			14,435,696	420,932
Cusk	50,194	485			134,600	1,740
Flounders					15,850	285
Haddock	8,503,761	148,816			4,368,861	66,054
Haddock, salted	250	3			5,000	100
Halibut	302,124	19,638			296,400	25,477
Hake	1,569,574	14,120			664,900	6,890
Hake, salted	41,562	420				
Herring	131,000	910				
Herring, salted	20,000	225				
Mackerel	324,500	16,225	40,900	\$3,400	410,522	21,346
Mackerel, salted	754,800	43,731	12,000	720	4,160,800	250,532
Perch or cunners	1,091	109				
Pollock	261,707	2,800			404,000	4,300
Pollock, salted	5,829	60			171,200	2,710
Sea bass					3,235	131
Scup					44,021	638
Shad					10,000	400
Shad, salted					68,000	1,900
Striped baas					1,161	245
Squeteague					3,235	131
Swordfish					2,000	75
Tautog					30,762	922
Lobsters	73,182	2,035				465
Sounds	4,330	930			2,165	465
Tongues	2,813	82			106,678	3,101
Oil, fish	10,418	375			19,622	19,622
Oil, whale	21,262	1,871			545,040	26,158
Ambergris					369,563	10,000
					107	
Total	18,514,086	383,973	61,900	3,120	30,867,914	982,265

41. Table showing by species and customs districts the yield of the vessel fisheries of Massachusetts in 1887—Continued.

Species.	Nantucket.		Edgartown.		New Bedford.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Bluefish .....	15,580	\$1,014	7,882	\$668	7,600	\$438
Cod .....	1,100	40	2,000	100	47,150	1,534
Cod, salted .....	15,000	600			138,000	4,175
Haddock .....	350	7				
Herring .....					3,500	70
Mackerel .....	1,300	130			60,750	3,974
Mackerel, salted .....	3,000	300	15,000	1,027	84,400	4,095
Sea bass .....			7,000	590	10,000	800
Scup .....					13,000	480
Swordfish .....			9,000	360	77,050	3,602
Tautog .....					58,000	2,670
Lobsters .....					59,725	3,423
Scallops .....	9,009	1,757			6,181	1,005
Tongues .....					1,813	62
Oil, whale .....					0,383,355	427,140
Ambergris .....					90	12,000
Whalebone .....					222,567	564,901
<b>Total .....</b>	<b>45,339</b>	<b>3,854</b>	<b>40,882</b>	<b>2,745</b>	<b>7,173,181</b>	<b>1,030,369</b>

SUMMARY.

Species.	Pounds.	Value.	Species.	Pounds.	Value.
Alewives .....	48,000	\$260	Red snapper .....	214,735	\$5,841
Bluefish .....	103,741	8,022	Sea bass .....	20,235	1,521
Bonito .....	125	5	Scup .....	73,021	1,898
Butterfish .....	1,500	45	Shad .....	10,000	400
Cod .....	22,999,749	441,793	Shad, salted .....	68,000	1,900
Cod, salted .....	65,657,086	1,688,455	Striped bass .....	1,181	245
Cusk .....	274,304	3,070	Squeteague .....	3,235	131
Cusk, salted .....	84,070	800	Swordfish .....	202,080	8,598
Flounders .....	15,859	285	Swordfish, salted .....	3,800	171
Haddock .....	28,007,290	443,412	Tautog .....	88,762	3,592
Haddock, salted .....	794,948	10,311	Lobsters .....	199,567	7,095
Halibut .....	9,034,527	468,522	Clams .....	20,000	1,800
Halibut, salted .....	606,332	41,646	Scallops .....	15,190	2,702
Hake .....	3,821,982	34,483	Squid .....	15,000	37
Hake, salted .....	700,492	7,020	Halibut fins .....	20,000	1,053
Herring .....	1,006,058	7,107	Sounds .....	37,206	7,440
Herring, salted .....	508,800	7,319	Tongues .....	335,512	10,045
Mackerel .....	3,930,362	180,140	Oil, fish .....	2,256,130	79,402
Mackerel, salted .....	14,611,400	824,908	Oil, whale .....	6,794,180	465,169
Menhaden .....	19,400	485	Ambergris .....	197	22,000
Menhaden, salted .....	80,200	3,070	Whalebone .....	222,567	564,901
Perch or cymnors .....	1,001	109	Alga .....	5,400	300
Pollock .....	1,702,322	17,430	<b>Total .....</b>	<b>165,989,523</b>	<b>5,377,753</b>
Pollock, salted .....	1,036,877	11,193			

42. Table showing by species and customs districts the yield of the vessel fisheries of Massachusetts in 1888.

Species.	Newburyport.		Gloucester.		Salem and Beverly.		Marblehead.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives .....			4,500	\$18				
Alewives, salted .....			3,400	47				
Butterfish .....			8,333	245				
Cod .....	489,225	\$0,189	8,877,701	200,599	520,965	\$10,540	1,309,799	\$23,641
Cod, salted .....	10,000	250	48,373,794	1,285,659	1,432,916	37,616		
Cusk .....			87,740	1,069				
Cusk, salted .....			175,596	1,938				
Haddock .....	105,000	1,080	17,745,664	323,809	110,273	1,654	599,863	7,998
Haddock, salted .....	16,250	100	409,691	4,416	65,000	630		
Halibut .....			8,380,071	474,788	514	31	97,583	4,860
Halibut, salted .....			1,328,236	75,300	7,500	306		
Hake .....			1,202,575	11,870	5,000	38		
Hake, salted .....			923,684	9,711				
Herring .....			181,750	1,737	1,060	6		
Herring, salted .....			1,522,600	19,301	40,000	400	50,000	565
Mackerel .....	5,000	350	209,320	14,237	5,000	300	782,666	41,090

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42. Table showing by species and customs districts the yield of the vessel fisheries of Massachusetts in 1888—Continued.

Species.	Newburyport.		Gloucester.		Salem and Beverly.		Marblehead.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Mackerel, salted ..	28,600	\$2,125	5,310,200	\$405,177	.....	.....	78,000	\$5,460
Menhaden ..	.....	.....	119,200	883	.....	.....	.....	.....
Menhaden, salted ..	.....	.....	680,600	14,375	.....	.....	.....	.....
Pollock ..	.....	.....	1,854,683	20,168	.....	.....	235,757	2,125
Pollock, salted ..	.....	.....	879,627	8,752	11,130	\$105	.....	.....
Red snapper ..	.....	.....	.....	.....	.....	.....	92,500	3,250
Scup ..	.....	.....	8,750	265	.....	.....	.....	.....
Shad, salted ..	.....	.....	17,800	547	.....	.....	.....	.....
Swordfish ..	.....	.....	151,896	7,174	.....	.....	.....	.....
Swordfish, salted ..	.....	.....	37,400	1,482	.....	.....	.....	.....
Lobsters ..	.....	.....	6,600	264	31,470	1,101	22,666	793
Clams ..	.....	.....	.....	.....	750	30	19,000	1,520
Squid ..	.....	.....	18,000	150	.....	.....	.....	.....
Halibut fins ..	.....	.....	70,400	3,402	.....	.....	.....	.....
Sounds ..	.....	.....	23,326	3,483	.....	.....	.....	.....
Tongues ..	.....	.....	198,354	5,050	9,723	295	.....	.....
Roe ..	.....	.....	5,000	200	.....	.....	.....	.....
Oil, fish ..	.....	.....	1,471,450	52,972	28,680	956	.....	.....
<b>Total .....</b>	<b>654,675</b>	<b>13,754</b>	<b>100,288,441</b>	<b>2,948,997</b>	<b>2,278,930</b>	<b>54,008</b>	<b>3,287,834</b>	<b>91,301</b>

Species.	Boston.		Plymouth.		Barnstable.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Bluefish ..	.....	.....	.....	.....	56,294	\$5,582
Bonito ..	.....	.....	.....	.....	315	11
Butterfish ..	.....	.....	.....	.....	1,200	36
Cod ..	4,720,510	\$94,938	70,000	\$1,400	5,487,070	140,234
Cod, salted ..	1,847,230	49,515	.....	.....	11,827,484	360,251
Cusk ..	11,000	148	.....	.....	244,900	3,449
Flounders ..	.....	.....	.....	.....	7,833	165
Grouper ..	.....	.....	.....	.....	8,289	212
Haddock ..	11,089,400	220,775	90,000	1,600	5,182,149	84,231
Haddock, salted ..	33,380	399	.....	.....	1,350	37
Halibut ..	855,000	35,485	.....	.....	372,802	31,183
Halibut, salted ..	235	15	.....	.....	1,000	50
Hake ..	1,128,300	12,100	.....	.....	961,800	9,968
Herring ..	65,000	613	.....	.....	.....	.....
Herring, salted ..	32,000	480	.....	.....	1,000	50
Kingfish ..	.....	.....	.....	.....	833	25
Mackerel ..	678,575	40,783	10,000	600	248,382	14,051
Mackerel, salted ..	758,000	50,556	.....	.....	2,233,760	154,058
Menhaden ..	2,500,000	6,250	.....	.....	116,000	600
Menhaden, salted ..	17,000	440	.....	.....	.....	.....
Perch or cunners ..	8,400	624	.....	.....	.....	.....
Pollock ..	87,000	1,380	.....	.....	554,200	5,658
Pollock, salted ..	.....	.....	.....	.....	240,800	3,625
Red snapper ..	.....	.....	.....	.....	60,877	1,522
Sea bass ..	.....	.....	.....	.....	2,335	140
Scup ..	.....	.....	.....	.....	8,231	228
Shad ..	.....	.....	.....	.....	95,000	2,145
Shad, salted ..	2,000	50	.....	.....	58,000	1,600
Striped bass ..	.....	.....	.....	.....	245	20
Squeteague ..	.....	.....	.....	.....	3,151	124
Swordfish ..	5,500	275	.....	.....	23,800	665
Swordfish, salted ..	.....	.....	.....	.....	2,600	100
Tautog ..	.....	.....	.....	.....	10,808	320
Lobsters ..	152,818	5,853	.....	.....	.....	930
Sounds ..	9,234	1,395	.....	.....	6,162	879
Tongues ..	3,295	98	.....	.....	102,647	3,079
Oil, fish ..	17,737	605	.....	.....	444,608	17,792
Oil, whale ..	25,987	2,148	.....	.....	638,130	47,179
Ambergris ..	.....	.....	.....	.....	93	2,730
Whalebone ..	.....	.....	.....	.....	2,900	4,400
Algae ..	45,000	2,500	.....	.....	.....	.....
<b>Total .....</b>	<b>23,599,201</b>	<b>527,485</b>	<b>170,000</b>	<b>8,600</b>	<b>29,007,184</b>	<b>897,850</b>

42. Table showing by species and customs districts the yield of the vessel fisheries of Massachusetts in 1888—Continued.

Species.	Nantucket.		Edgartown.		New Bedford.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Bluefish	14,400	\$643	27,120	\$2,131	1,600	\$128
Cod			10,554	334	15,500	640
Cod, salted	16,050	642			145,000	4,250
Flounders			1,694	70		
Haddock	1,000	30	3,577	79		
Mackerel	550	45.	11,350	601	13,100	761
Mackerel, salted			23,240	1,554	71,400	5,270
Menhaden			20,000	91	54,000	135
Sea bass			30,600	2,247	2,000	160
Soup	600	14			54,230	1,837
Swordfish			14,446	557	45,345	2,857
Tautog					41,428	1,824
Lobsters					57,000	2,835
Scallops	7,245	1,345	7,753	1,371	931	200
Tongues					1,571	47
Oil, whale			82,687	6,700	3,903,150	272,121
Ambergris					224	7,200
Whalebone					121,775	333,738
Total	39,845	2,719	233,021	15,735	4,528,062½	634,003

SUMMARY.

Species.	Pounds.	Value.	Species.	Pounds.	Value.
Alewives	4,500	\$18	Pollock, salted	1,131,066	\$12,482
Alewives, salted	3,400	47	Red snapper	153,377	4,772
Bluefish	99,414	8,484	Sea bass	34,935	2,547
Bonito	315	11	Scup	71,811	2,342
Butterfish	0,593	283	Shad	95,000	2,145
Cod	21,516,924	481,505	Shad, salted	77,800	2,197
Cod, salted	63,052,474	1,738,183	Striped bass	245	20
Cusk	343,040	4,666	Squeteague	3,151	124
Cusk, salted	175,506	1,938	Swordfish	240,987	11,528
Flounders	9,527	235	Swordfish, salted	40,000	1,582
Groupor	8,289	212	Tautog	52,236	2,144
Haddock	34,926,926	641,856	Lobsters	270,554	10,846
Haddock, salted	525,571	5,642	Clams	10,750	1,550
Hallbut	9,206,570	540,356	Scallops	15,929	2,916
Hallbut, salted	1,336,971	75,671	Squid	18,000	150
Hake	3,297,075	33,985	Halibut fins	70,400	3,402
Hake, salted	923,084	9,711	Sounds	38,722	5,808
Herring	247,750	2,356	Tongues	315,590	9,469
Herring, salted	1,645,600	20,796	Roe	5,000	200
Kingfish	833	25	Oil, fish	1,962,535	72,365
Mackerel	1,963,043	112,718	Oil, whale	4,649,954	328,148
Mackerel, salted	8,503,200	624,200	Ambergris	424	9,930
Menhaden	2,809,200	7,959	Whalebone	124,675	338,138
Menhaden, salted	698,200	14,816	Algae	45,000	2,500
Perch or cunners	8,400	624			
Pollock	2,731,640	20,331	Total	164,037,194½	5,188,952

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43. Table showing by fisheries and species the yield of the vessel fisheries of Massachusetts in 1888.

Fisheries and species.	Pounds.	Value.	Fisheries and species.	Pounds.	Value.
<b>Bank:</b>			<b>Shore—continued:</b>		
Cod .....	157, 629	\$3, 585	Mackerel .....	550	\$45
Cod, salted .....	62, 450, 150	1, 709, 167	Menhaden .....	20, 000	91
Cusk, salted .....	157, 496	1, 627	Perch or owners .....	8, 400	624
Haddock, salted .....	402, 061	4, 314	Pollock .....	1, 428, 092	15, 683
Halibut .....	1, 033, 078	70, 388	Pollock, salted .....	363, 481	4, 857
Halibut, salted .....	245, 353	13, 060	Sea bass .....	34, 935	2, 547
Hake .....	20, 334	200	Scup .....	71, 811	2, 342
Hake, salted .....	710, 457	7, 352	Shad .....	95, 000	2, 145
Pollock .....	1, 700	20	Shad, salted .....	58, 000	1, 600
Pollock, salted .....	768, 185	7, 625	Striped bass .....	245	20
Halibut fins .....	2, 800	135	Squeteague .....	3, 151	124
<b>Total .....</b>	<b>65, 949, 243</b>	<b>1, 817, 473</b>	Swordfish .....	25, 496	1, 155
<b>Market:</b>			Tautog .....	52, 236	2, 144
Cod .....	14, 496, 816	338, 961	Algae .....	45, 000	2, 500
Cod, salted .....	139, 642	4, 072	<b>Total .....</b>	<b>14, 134, 033</b>	<b>272, 265</b>
Cusk .....	302, 900	4, 109	<b>Mackerel:</b>		
Cusk, salted .....	600	6	Herring .....	93, 750	913
Grouper .....	8, 289	212	Herring, salted .....	50, 600	732
Haddock .....	31, 989, 775	592, 203	Mackerel .....	1, 963, 393	112, 673
Halibut .....	770, 240	69, 297	Mackerel, salted .....	8, 503, 200	624, 200
Hake .....	2, 696, 083	28, 169	Menhaden, salted .....	698, 200	14, 815
Hake, salted .....	4, 850	45	Shad, salted .....	2, 000	50
Pollock .....	1, 301, 818	13, 628	Swordfish, salted .....	40, 000	1, 582
Red snapper .....	153, 377	4, 772	Roe .....	5, 000	200
Swordfish .....	2, 309	127	<b>Total .....</b>	<b>11, 356, 143</b>	<b>755, 165</b>
<b>Total .....</b>	<b>51, 866, 729</b>	<b>1, 055, 604</b>	<b>Menhaden (salted) .....</b>		
<b>Halibut:</b>			Swordfish .....	2, 789, 200	7, 868
Cod .....	5, 546	149		213, 182	10, 246
Cod, salted .....	149, 060	3, 543	<b>Herring:</b>		
Halibut .....	7, 267, 920	308, 250	Alewives .....	4, 500	18
Halibut, salted .....	1, 091, 493	62, 603	Alewives, salted .....	3, 400	47
Hake, salted .....	5, 085	60	Herring .....	154, 000	1, 443
Halibut fins .....	67, 600	3, 297	Herring, salted .....	1, 595, 000	20, 064
<b>Total .....</b>	<b>8, 588, 213</b>	<b>468, 872</b>	Shad, salted .....	17, 800	547
<b>Shore:</b>			Squid .....	18, 000	150
Bluefish .....	99, 414	8, 484	<b>Total .....</b>	<b>1, 792, 700</b>	<b>22, 269</b>
Bonito .....	315	11	<b>Mollusk:</b>		
Butterfish .....	9, 593	283	Clams .....	19, 750	1, 550
Cod .....	6, 856, 933	138, 810	Scallops .....	15, 929	2, 010
Cod, salted .....	912, 722	21, 401	<b>Total .....</b>	<b>35, 679</b>	<b>4, 466</b>
Cusk .....	49, 740	357	<b>Lobster .....</b>		
Cusk, salted .....	17, 500	302		270, 554	10, 846
Flounders .....	9, 527	235	<b>Whale:</b>		
Haddock .....	2, 937, 151	49, 653	Whale oil .....	4, 640, 954	328, 148
Haddock, salted .....	123, 510	1, 328	Whalebone .....	124, 075	338, 138
Halibut .....	135, 323	7, 421	Ambergris .....	423	9, 930
Halibut, salted .....	125	8	<b>Total .....</b>	<b>4, 774, 674</b>	<b>676, 216</b>
Hake .....	581, 258	5, 616	<b>NOTE.—This table does not include 1,962,535 pounds of fish oil, valued at \$72,385; 38,722 pounds of sounds, valued at \$5,808; and 315,590 pounds of tongues, valued at \$9,469.</b>		
Hake, salted .....	202, 692	2, 254			
Kingfish ( <i>Scomberomorus</i> ) .....	833	25			

44. Table showing the number of vessels engaged in each fishery in Massachusetts in 1883, together with their tonnage, value, and number of crew.

Fishery.	No. of vessels engaged.	Net tonnage.	Value of vessels.	Number and nationality of fishermen.			
				Americans.	British provincials.	All others.	Total.
Cod, on banks east of 65° W. longitude	196	16,848.20	\$882,329	1,714	986	306	3,006
Cod, on banks west of 65° W. longitude	183	10,405.75	535,100	1,320	524	224	2,068
Cod, Gulf of St. Lawrence	2	122.05	3,080	14	11	.....	25
Halibut, on banks east of 65° W. longitude*	42	3,564.21	235,980	330	170	107	607
Halibut, Greenland and Iceland	6	518.27	29,100	60	11	19	90
Mackerel, New England shore	312	14,212.15	755,724	2,573	497	203	3,273
Mackerel, Nova Scotia shore	28	2,438.87	150,060	350	108	25	483
Mackerel, Gulf of St. Lawrence	53	4,512.24	203,359	619	206	76	900
Whale	75	16,072.26	655,670	933	323	841	2,097
Market	101	10,710.39	640,285	1,588	428	306	2,322
Shore	137	2,876.16	169,588	732	80	48	860
Herring	27	413.61	19,850	119	12	1	132
Swordfish	12	324.21	18,000	84	10	14	108
Menhaden	8	458.61	31,450	05	16	3	114
Lobster	10	135.97	6,950	34	2	8	39
Scallop and clam	8	138.23	5,950	23	4	.....	27

\* The vessels landing fresh cod, haddock, halibut, etc., caught on George's Bank and New England shore are included in the market and shore fisheries.

45. Table showing by fishing grounds the catch of the mackerel (by apparatus), the bank cod, the Grand and Western Bank fresh halibut, and the Greenland and Iceland halibut fleets of Massachusetts in 1888.

Species.	New England shore.		Nova Scotia shore.		Gulf St. Lawrence.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Mackerel caught with seines, fresh	1,583,430	\$90,000	80,000	\$4,800	.....	.....
Mackerel caught with seines, salted	5,847,160	410,200	849,200	61,670	1,215,000	\$112,212
Mackerel caught with nets, fresh	104,920	6,830	.....	.....	.....	.....
Mackerel caught with nets, salted	192,000	12,657	.....	.....	.....	.....
Mackerel caught with lines, fresh	105,593	11,273	.....	.....	.....	.....
Mackerel caught with lines, salted	399,840	27,371	.....	.....	.....	.....
Cod, salted	.....	.....	.....	.....	226,240	8,765
Total	8,322,943	558,146	929,200	66,470	1,441,240	120,967

Species.	East of 65° West longitude.		West of 65° West longitude.		Greenland and Iceland.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Cod, salted	38,562,723	\$1,074,070	23,661,185	\$626,312	2,700	\$75
Halibut, fresh	7,301,432	401,154	.....	.....	1,017,643	60,247
Halibut, salted	181,856	9,509	.....	.....	.....	.....
Total	46,046,013	1,484,733	23,661,185	626,312	1,020,343	60,323

Species.	Total.	
	Pounds.	Value.
Mackerel caught with seines, fresh	1,683,430	\$94,806
Mackerel caught with seines, salted	7,011,360	584,082
Mackerel caught with nets, fresh	104,920	6,830
Mackerel caught with nets, salted	192,000	12,657
Mackerel caught with lines, fresh	195,593	11,273
Mackerel caught with lines, salted	399,840	27,371
Cod, salted	62,452,850	1,709,242
Halibut, fresh	7,301,432	401,154
Halibut, salted	1,199,409	60,765
Total	81,420,924	2,016,980

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46. Table showing by species and condition in which sold the yield of the shore fisheries of Massachusetts in 1887 and 1888.

Species.	1887.		1888.	
	Pounds.	Value.	Pounds.	Value.
<b>Fresh:</b>				
Albicore or horse mackerel .....	40,000	\$125	40,900	\$134
Alewives .....	1,852,339	27,934	2,978,924	39,656
Bluefish .....	603,141	53,136	590,490	52,260
Bonito .....	55,182	1,782	130,290	5,704
Butterfish .....	502,429	14,153	503,854	14,225
Cod .....	1,904,367	34,512	1,910,258	84,065
Cusk .....	1,250	10	1,250	10
Eels .....	411,904	23,926	424,793	24,346
Flounders .....	824,851	16,697	844,000	17,456
Haddock .....	835,595	9,996	832,875	9,979
Hake .....	667,700	5,201	664,050	5,172
Halibut .....	420	32	495	37
Herring .....	6,171,873	53,206	7,076,520	68,482
Hickory shad .....	6,300	173	3,964	80
Kingfish .....	3,630	194	5,728	347
Mackerel .....	1,950,700	107,517	2,791,982	156,082
Menhaden .....	353,340	2,145	742,021	4,460
Perch or cunners .....	328,855	16,531	307,875	15,560
Pollock .....	5,500	65	11,000	130
Scup .....	2,249,310	70,547	1,714,028	51,114
Sea bass .....	370,527	21,456	437,638	26,523
Shad .....	53,319	2,402	84,606	3,167
Spanish mackerel .....	3,988	861	2,199	487
Smelt .....	11,500	1,233	10,800	1,152
Squeteague .....	126,436	6,408	187,393	8,848
Striped bass .....	10,106	1,915	31,770	8,093
Sturgeon .....	6,400	64	4,500	171
Swordfish .....	20,070	897	23,420	1,021
Tautog .....	655,582	22,984	580,056	21,050
Whiting ( <i>Merluccius</i> ) .....	45,901	782	69,608	1,222
Miscellaneous fish .....	22,279	232	22,127	241
Refuse fish .....	1,010,000	976	1,110,250	992
Squid .....	406,400	5,242	468,200	5,124
Lobsters .....	3,311,508	148,508	3,472,821	162,090
Shrimp .....	1,000	325	1,250	450
Oysters .....	302,281	64,115	319,418	66,453
Scallops .....	236,593	36,171	141,082	40,286
Clams .....	1,926,380	108,590	2,028,020	116,368
Quahaugs .....	284,320	21,363	209,320	14,822
Algae .....	102,198,200	80,641	102,105,000	73,678
<b>Total .....</b>	<b>129,870,876</b>	<b>963,144</b>	<b>133,825,782</b>	<b>1,048,063</b>
<b>Salted:</b>				
Alewives .....	1,486,625	30,492	2,202,275	43,800
Bonito .....			1,400	84
Cod .....	727,209	24,248	717,129	23,878
Herring .....	630,600	6,656	452,375	5,142
Mackerel .....	473,100	45,117	416,850	35,320
Menhaden .....	5,000	130	10,000	243
Shad .....	1,200	48	2,680	104
Clams .....	360,210	10,806	330,000	9,900
<b>Total .....</b>	<b>3,683,944</b>	<b>123,499</b>	<b>4,132,709</b>	<b>118,480</b>
<b>Total fresh and salted:</b>				
Albicore or horse mackerel .....	40,000	125	40,900	134
Alewives .....	3,338,964	64,420	5,181,199	83,465
Bluefish .....	603,141	33,136	590,490	52,260
Bonito .....	55,182	1,782	131,690	5,788
Butterfish .....	502,429	14,153	503,854	14,225
Cod .....	2,631,576	68,760	2,627,387	58,543
Cusk .....	1,250	10	1,250	10
Eels .....	411,904	23,926	424,793	24,346
Flounders .....	824,851	16,697	844,000	17,456
Haddock .....	835,595	9,996	832,875	9,979
Hake .....	667,700	5,201	664,050	5,172
Halibut .....	420	32	495	37
Herring .....	6,801,973	59,804	8,428,895	73,624
Hickory shad .....	6,300	173	3,964	86
Kingfish .....	3,630	194	5,728	347
Mackerel .....	2,423,800	152,634	3,208,832	191,402
Menhaden .....	358,340	2,275	752,021	4,703
Perch or cunners .....	328,855	16,531	307,875	15,560
Pollock .....	5,500	65	11,000	130
Scup .....	2,249,310	70,547	1,714,028	51,114
Sea bass .....	370,527	21,456	437,638	26,523



46. Table showing by species and condition in which sold the yield of the shore fisheries of Massachusetts in 1887 and 1888—Continued.

Species.	1887.		1888.	
	Pounds.	Value.	Pounds.	Value.
Total fresh and salted—Continued.				
Shad.....	54, 519	\$2, 450	87, 286	\$3, 271
Spanish mackerel.....	3, 988	861	2, 199	487
Smelt.....	11, 500	1, 233	10, 800	1, 162
Squeteague.....	126, 436	6, 408	167, 393	8, 848
Striped bass.....	19, 106	1, 015	31, 779	3, 093
Sturgeon.....	6, 400	64	4, 500	171
Swordfish.....	20, 970	897	23, 420	1, 021
Tautog.....	655, 582	22, 084	580, 356	21, 950
Whiting ( <i>Merluccius</i> ).....	45, 001	782	69, 608	1, 222
Miscellaneous fish.....	22, 279	232	22, 127	241
Refuse fish.....	1, 010, 000	970	1, 110, 250	992
Squid.....	496, 400	5, 242	408, 200	5, 124
Lobsters.....	3, 311, 508	148, 509	3, 472, 921	162, 090
Shrimp.....	1, 000	325	1, 250	450
Oysters.....	302, 281	64, 115	319, 416	66, 453
Scallops.....	236, 593	36, 171	141, 082	40, 286
Clams.....	2, 286, 590	119, 402	2, 418, 020	126, 288
Quobaugs.....	284, 320	21, 363	209, 320	14, 822
Algae.....	102, 198, 200	80, 041	102, 105, 000	73, 678
Total.....	133, 554, 820	1, 086, 643	137, 958, 491	1, 166, 543

47. Table showing by species the yield of the pound-net fishery of Massachusetts.

Species.	1887.		1888.	
	Pounds.	Value.	Pounds.	Value.
Albicore or horse mackerel.....	40, 000	\$125	40, 900	\$134
Alewives.....	944, 550	11, 711	887, 764	11, 041
Alewives, salted.....	62, 700	803	80, 000	1, 000
Bluefish.....	104, 632	7, 683	104, 212	6, 660
Bonito.....	49, 547	1, 504	119, 505	5, 319
Bonito, salted.....	.....	.....	1, 400	84
Butterfish.....	433, 314	12, 005	421, 172	11, 685
Cod.....	12, 220	327	29, 319	669
Eels.....	19, 105	595	48, 647	2, 334
Flounders.....	664, 654	13, 010	692, 602	13, 918
Herring.....	3, 192, 978	28, 371	5, 181, 870	48, 371
Herring, salted.....	110, 000	1, 275	114, 600	1, 339
Hickory shad.....	6, 300	173	5, 964	86
Kingfish.....	2, 165	121	2, 593	175
Mackerel.....	1, 240, 166	64, 873	1, 763, 881	104, 518
Mackerel, salted.....	245, 400	25, 996	196, 800	16, 156
Menhaden.....	233, 840	1, 107	577, 885	3, 048
Menhaden slivers.....	.....	.....	5, 000	118
Soup.....	1, 703, 092	52, 114	1, 076, 876	32, 067
Sea bass.....	102, 085	11, 087	227, 380	16, 255
Shad.....	46, 137	2, 120	69, 724	2, 887
Shad, salted.....	1, 200	48	2, 680	104
Spanish mackerel.....	3, 888	843	1, 945	423
Smelt.....	2, 500	205	2, 800	255
Squeteague.....	102, 683	5, 388	141, 499	7, 689
Striped bass.....	14, 099	1, 315	14, 551	1, 262
Sturgeon.....	800	32	2, 675	107
Tautog.....	183, 974	4, 839	134, 647	4, 645
Whiting ( <i>Merluccius</i> ).....	45, 761	780	69, 000	1, 214
Miscellaneous fish.....	1, 504	82	1, 342	89
Refuse fish.....	760, 000	776	810, 250	792
Squid.....	491, 600	5, 168	463, 400	5, 050
Total.....	10, 880, 874	254, 785	13, 291, 426	299, 464

## RHODE ISLAND.

The tables presented show many phases of the fisheries not similarly exhibited in the statistics of 1880; it is difficult therefore to institute comparisons in all cases. There has been a large decrease in persons employed, amounting to 26 per cent., and an increase of 73 per cent. in capital invested and 18 per cent. in the catch. This is due to the improvement in the vessels, especially those employed in menhaden fishing, in the menhaden factories, and in the pound-net and trap fisheries. There is not much difference in the value of menhaden vessels; in the aggregate fewer vessels are now employed, but these are of an improved type, and, with fewer men, perform the same work that was done by a larger fleet in 1880.

There has been a gratifying increase in the menhaden industry, the manufactured products of which in 1880 were valued at \$221,748, while in 1888 the amount was \$334,686. This is the most important fishery of the State, taking the value of the manufactured products as a basis, but is excelled by the oyster industry, if we consider only the amount paid to fishermen for their catch. With the exception of the menhaden industry, there is no important vessel fishery; the craft employed are generally small and engaged in shore or market fishing.

48. Table of persons employed.

How engaged.	1887.	1888.
On fishing vessels .....	364	400
On transporting vessels .....	14	17
On boats .....	915	875
On shore, in factories, etc .....	342	411
Total .....	1,635	1,703

49. Table of apparatus and capital.

Designation.	1887.		1888.	
	No.	Value.	No.	Value.
Vessels fishing * .....	55	\$171,400	64	\$194,150
Outfit .....		23,281		29,085
Vessels transporting † .....	7	2,550	9	3,225
Outfit .....		530		510
Boats .....	743	91,324	740	91,679
Apparatus of capture—vessel fisheries:				
Purse seines .....	17	10,950	17	10,800
Hand lines and trawl lines .....		1,750		1,555
Gill nets .....	3	30	9	90
Harpoons .....	20	300	32	480
Pots .....	175	350	225	450
Dredges, rakes, etc .....	72	919	75	975
Apparatus of capture—shore fisheries:				
Haul seines .....	42	2,900	42	2,900
Hand lines and trawl lines .....		180		179
Trap nets and pound nets .....	160	72,400	166	79,870
Fyke nets .....	354	2,570	374	2,670
Gill nets .....	69	6,270	80	6,090
Dredges, tongs, etc .....	999	7,483	493	2,950
Pots .....	5,600	6,798	5,450	6,723
Miscellaneous apparatus .....		12		10
Shore property .....		318,204		353,485
Cash capital .....		242,500		235,000
Total .....		992,761		1,022,876

\* Tonnage in 1887, 1,221.21; in 1888, 1,349.00.

† Tonnage in 1887, 105.80; in 1888, 131.91.

50. Table of products.

Species.	1887.		1888.	
	Pounds.	Value.	Pounds.	Value.
Alewives	682,800	\$10,250	666,800	\$10,215
Alewives, salted	325,000	6,500	415,000	8,500
Alewives, smoked	130,000	2,250	150,000	2,450
Bluefish	3,1,650	22,305	388,850	23,140
Butterfish	260,000	9,320	283,000	9,810
Cod	204,394	6,499	253,250	7,653
Cod, salted	82,558	3,754	53,140	2,009
Eels	318,000	16,950	321,600	17,332
Flounders	420,300	11,406	558,000	13,290
Haddock	87,450	2,468	86,400	2,607
Haddock, salted	4,464	147	4,794	118
Kingfish	8,000	3.0	8,500	298
Mackerel	268,063	18,545	237,100	20,007
Mackerel, salted	500,200	28,541	303,800	23,624
Menhaden	34,035,000	85,088	78,260,800	195,277
Perch	61,000	2,440	60,000	2,400
Pollock, salted	50,960	1,752	50,400	1,800
Scup	3,030,033	75,545	4,207,700	84,480
Sea bass	497,800	13,000	512,400	15,504
Shad	16,700	1,247	17,400	1,213
Smelts	55,000	2,875	61,500	3,135
Squeteague	268,000	10,450	275,000	11,540
Striped bass	61,200	5,324	85,500	7,048
Swordfish	101,452	4,430	217,063	9,718
Tautog	182,000	7,200	187,450	7,608
Miscellaneous fish	83,545	1,289	122,361	1,677
Refuse fish	800,000	1,090	1,396,000	1,756
Lobsters	570,030	27,128	588,500	28,047
Crabs	4,800	1,200	4,000	1,000
Oysters	1,358,210	201,026	1,324,785	252,601
Clams ( <i>Mya arenaria</i> )	258,250	25,030	308,250	30,030
Quahaugs ( <i>Venus mercenaria</i> )	153,720	15,099	264,232	26,375
Scallops	11,284	2,337	4,942	1,130
Total	45,284,872	683,495	91,687,487	825,092

51. Summary by customs districts of the vessel fisheries of Rhode Island in 1887 and 1888.

Designation.	Newport.		Bristol and Warren.		Providence.		Total.	
	1887.	1888.	1887.	1888.	1887.	1888.	1887.	1888.
Number and nationality of fishermen:								
Americans	300	330	10	14	48	50	358	400
All others					6		6	
Total	300	330	10	14	54	50	364	400
Number and nationality of crews on transports:								
Americans	14	17					14	17
Number of vessels fishing	35	40	5	6	15	18	55	64
Number of vessels transporting	7	9					7	9
Net tonnage of vessels fishing	1,045.71	1,080.63	43.25	48.53	132.25	211.45	1,221.21	1,340.60
Net tonnage of vessels transporting	105.30	131.91					105.30	131.91
Value of vessels fishing	\$153,100	\$160,350	\$2,900	\$5,200	\$13,400	\$22,600	\$171,400	\$194,150
Value of vessels transporting	2,550	3,225					2,550	3,225
Value of outfit, gear, provisions, fuel, etc., of vessels fishing	34,555	37,785	475	1,225	2,550	4,425	37,580	43,435
Value of provisions, fuel, etc., of vessels transporting	530	510					530	510
Value of catch of vessels fishing	128,407	230,922	3,060	7,870	42,056	45,271	174,123	293,063
Value of products transported	12,400	13,810					12,400	13,810

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52. Table showing by apparatus and species the yield of the vessel fisheries of Rhode Island in 1887 and 1888.

Apparatus and species.	1887.		1888.	
	Pounds.	Value.	Pounds.	Value.
<b>Hand lines and trawl lines:</b>				
Bluefish.....	12, 150	\$709	42, 200	\$1, 982
Cod.....	133, 894	4, 329	180, 250	5, 408
Cod, salted.....	60, 878	3, 054	38, 580	1, 359
Haddock.....	80, 950	2, 313	80, 480	2, 462
Haddock, salted.....	4, 464	147	4, 704	118
Mackerel.....	43, 063	3, 545	29, 300	2, 037
Mackerel, salted.....	324, 200	17, 981	187, 800	13, 424
Tautog.....			3, 950	158
<b>Total.....</b>	<b>665, 599</b>	<b>32, 078</b>	<b>547, 244</b>	<b>27, 528</b>
<b>Seines:</b>				
Mackerel.....			4, 000	360
Menhaden.....	34, 035, 000	85, 088	78, 269, 800	195, 277
Miscellaneous fish.....	7, 045	141	4, 361	97
<b>Total.....</b>	<b>34, 042, 045</b>	<b>85, 229</b>	<b>78, 278, 161</b>	<b>195, 734</b>
<b>Gill nets:</b>				
Bluefish.....			650	80
Mackerel.....			4, 000	360
Scup.....	2, 833	85	1, 700	50
<b>Total.....</b>	<b>2, 833</b>	<b>85</b>	<b>6, 350</b>	<b>440</b>
<b>Harpoons:</b>				
Swordfish.....	101, 452	4, 430	217, 063	9, 718
<b>Pots:</b>				
Eels.....			4, 100	246
Lobsters.....	20, 039	1, 128	38, 500	2, 047
<b>Total.....</b>	<b>20, 039</b>	<b>1, 128</b>	<b>42, 600</b>	<b>2, 293</b>
<b>Dredges and rakes:</b>				
Oysters.....	239, 710	45, 887	281, 288	53, 645
Quohaugs.....	33, 720	2, 949	24, 238	2, 575
Scallops.....	11, 284	2, 337	4, 942	1, 130
<b>Total.....</b>	<b>284, 714</b>	<b>51, 173</b>	<b>310, 468</b>	<b>57, 350</b>
<b>Grand total.....</b>	<b>35, 116, 082</b>	<b>174, 123</b>	<b>79, 401, 886</b>	<b>293, 063</b>

53. Table showing by fisheries and species the yield of vessel fisheries of Rhode Island in 1888.

Fisheries and species.	Pounds.	Value.	Fisheries and species.	Pounds.	Value.
<b>Shore:</b>			<b>Mackerel:</b>		
Bluefish.....	42, 850	\$1, 992	Mackerel.....	37, 300	\$3, 357
Cod.....	180, 250	5, 408	Mackerel, salted.....	107, 800	13, 424
Cod, salted.....	38, 580	1, 359	Miscellaneous fish.....	4, 361	97
Eels.....	4, 100	246	<b>Total.....</b>	<b>209, 461</b>	<b>16, 878</b>
Haddock.....	80, 480	2, 462	<b>Mollusk:</b>		
Haddock, salted.....	4, 704	118	Oysters.....	281, 288	53, 645
Scup.....	1, 700	50	Quohaugs.....	24, 238	2, 575
Tautog.....	3, 950	158	Scallops.....	4, 942	1, 130
<b>Total.....</b>	<b>356, 594</b>	<b>11, 793</b>	<b>Total.....</b>	<b>310, 468</b>	<b>57, 350</b>
<b>Swordfish.....</b>	<b>101, 452</b>	<b>4, 430</b>	<b>Grand total.....</b>	<b>79, 401, 886</b>	<b>293, 063</b>
<b>Menhaden.....</b>	<b>34, 035, 000</b>	<b>85, 088</b>			
<b>Lobster.....</b>	<b>20, 039</b>	<b>1, 128</b>			

54. Table showing the number of vessels engaged in each fishery in Rhode Island in 1888, together with their tonnage, value, and number of crew.

Fishery.	Number of vessels engaged.	Net tonnage.	Value of vessels.	Number of fishermen.*
Mackerel.....	30	375. 95	\$35,500	119
Menhaden.....	12	770. 00	138,000	225
Shore.....	21	243. 91	20,800	80
Swordfish.....	16	210. 89	25,250	60
Crustacean.....	3	17. 55	1,600	9
Mollusk.....	22	191. 36	24,300	53

\*All American citizens.

55. Table showing by apparatus and species the yield of the shore fisheries of Rhode Island in 1887 and 1888, exclusive of the shellfish and crustacean fisheries.

Apparatus.	Species.	1887.		1888.		
		Pounds.	Value.	Pounds.	Value.	
Pound nets.....	Alewives.....	681,800	\$10,230	664,300	\$10,170	
	Alewives, salted.....	10,000	200	15,600	325	
	Alewives, smoked.....	80,000	1,250	95,000	1,652	
	Bluefish.....	53,500	3,076	65,800	3,948	
	Butterfish.....	202,000	9,240	277,700	9,704	
	Eels.....	75,000	3,000	111,000	5,994	
	Flounders.....	313,300	8,566	408,000	9,545	
	Kingfish.....	8,000	320	8,500	298	
	Scup.....	8,027,200	75,460	4,206,000	84,433	
	Sea bass.....	485,300	12,640	496,300	14,976	
	Shad.....	7,500	562	8,400	688	
	Smelt.....	40,000	2,000	42,200	2,153	
	Squeteague.....	252,000	9,660	255,850	10,692	
	Striped bass.....	50,000	4,250	73,000	6,032	
	Tautog.....	25,000	950	52,000	2,070	
	Miscellaneous fish *.....	76,500	1,148	118,000	1,580	
	Refuse fish †.....	860,000	1,000	1,390,000	1,756	
Total.....	6,307,100	143,642	8,293,650	165,813		
Gill nets.....	Bluefish.....	218,500	10,170	230,700	13,842	
	Butterfish.....	1,000	20	1,800	30	
	Squeteague.....	9,000	410	10,650	373	
	Total.....	228,500	10,600	243,150	14,251	
Fyke nets.....	Flounders.....	93,000	2,410	125,800	3,145	
	Pots.....	108,000	12,250	101,000	8,635	
Haul seines.....	Alewives.....	1,000	20	2,500	45	
	Alewives, salted.....	315,000	6,300	309,400	8,175	
	Alewives, smoked.....	60,000	1,000	55,000	898	
	Bluefish.....	2,500	250	4,000	400	
	Butterfish.....	3,000	60	3,500	70	
	Eels.....	45,000	1,700	45,500	2,467	
	Flounders.....	6,000	120	8,000	200	
	Perch or cunners.....	61,000	2,440	60,000	2,400	
	Sea bass.....	500	20	600	24	
	Shad.....	9,200	685	0,000	625	
	Smelt.....	15,000	875	19,300	982	
	Squeteague.....	7,000	380	8,500	475	
	Striped bass.....	11,200	1,074	12,500	1,016	
	Tautog.....	5,000	250	6,250	312	
	Total.....	531,000	15,174	634,050	18,079	
	Lines.....	Bluefish.....	35,000	2,100	45,500	2,058
		Cod.....	70,500	2,170	73,000	2,245
Cod, salted.....		15,680	700	14,560	650	
Flounders.....		14,000	310	16,200	400	
Haddock.....		6,500	155	6,000	145	
Mackerel.....		225,000	15,000	199,800	16,650	
Mackerel, salted.....		176,000	10,560	130,000	10,200	
Pollock.....		50,000	1,752	50,400	1,800	
Sea bass.....		17,000	430	15,500	504	
Tautog.....		152,000	0,000	125,250	5,068	
Total.....		757,640	39,177	682,210	40,020	
Grand total.....		8,116,640	226,25	10,139,860	250,543	

\* Miscellaneous fish includes the cheaper grades of food-fishes, as flatfish, flounders, scup, squeteague, etc., which have been taken in small quantities and shipped without regard to quantities of different species; also, species of infrequent occurrence not sufficiently important to separate.

† Principally sculpin and menhaden used in the production of oil and fertilizer, and a few other species unfit for market because of their small size or deterioration in quality.

56. Table showing the extent of the menhaden industry of Rhode Island.

Designation.	1887.	1888.
Number of factories in operation .....	3	3
Value of factories .....	\$193,000	\$193,000
Amount of cash capital .....	\$69,000	\$70,000
Number of shoresmen employed .....	177	246
Number of fishermen employed .....	222	225
Number of steam vessels employed .....	11	11
Net tonnage .....	766.88	747.56
Value .....	\$129,000	\$135,000
Value of outfit .....	\$30,000	\$29,000
Number of sailing vessels employed in fishing .....	1	1
Net tonnage .....	27.50	22.44
Value .....	\$1,500	\$1,000
Value of outfit .....	\$1,000	\$700
Number of sailing vessels employed as "carryaways" .....	3	5
Net tonnage .....	42.32	64.08
Value .....	\$1,400	\$1,825
Value of outfit .....	\$180	\$265
Number of menhaden handled .....	60,901,670	127,169,670
Value to fishermen .....	\$73,072	\$155,004
Number of gallons of oil made .....	538,623	762,360
Value as sold .....	\$129,539	\$168,418
Number of tons of scrap produced .....	3,810	8,551
Value as sold .....	\$81,010	\$160,268

## CONNECTICUT.

The river fisheries of this State were investigated to the limits of tidewater except in the case of the Connecticut, which was canvassed for 10 miles above its mouth to Essex.

One of the most noticeable features in the fisheries of Connecticut is the great increase in the oyster industry, which has advanced in value from \$386,625 in 1880 to \$1,012,259. For details see Notes on the Oyster Industry of Connecticut, vol. IX, Bull. U. S. Fish Commission. As an offset to this there has been an equal or greater decrease in some of the other branches of fishery, notably in the Antarctic fur-seal fishery and the menhaden industry. In the former the fleet has declined from 9 vessels to 1, and in the latter there are now employed only 5 vessels against 72 in 1880. The special table for the menhaden industry shows 8 vessels in the menhaden fishery, but it may be explained that while this number was employed in Connecticut only 5 of them belonged to the State.

There has also been a decrease in the ocean food-fish fisheries, but the shore fisheries have improved materially. As an instance of this, the lobster fishery, which is largely carried on from boats, has increased in value from \$27,145 in 1880 to \$85,723 in 1888.

The pound-net fishery has grown rapidly, both in apparatus and catch. In 1880 there were only 58 pound nets in the State, but in 1888 there were 118. The fyke-net fishery also shows improvement, there being an increase in this form of apparatus from 255 to 466 in the years named.

57. Table of persons employed.

How engaged.	1887.	1888.
On fishing vessels .....	1,035	1,018
On transporting vessels .....	30	22
In shore fisheries .....	1,250	1,250
On shore, in factories, packing houses, etc. ....	709	741
Total .....	3,024	3,037

58. Table of apparatus and capital.

Designation.	1887.		1888.	
	No.	Value.	No.	Value.
Vessels fishing* .....	218	\$547,245	211	\$534,300
Outfit .....		143,100		138,099
Vessels transporting† .....	12	12,375	10	9,655
Outfit .....		1,435		1,535
Boats .....	1,365	103,045	1,354	101,770
Apparatus of capture—vessel fisheries:				
Seine .....	12	4,960	10	4,310
Lines .....	790	1,150	760	1,086
Pots .....	1,965	5,615	2,012	5,830
Dredges, etc .....		21,000		22,000
Apparatus of capture—shore fisheries:				
Found nets .....	120	41,875	118	40,180
Haul seines .....	52	4,090	46	3,370
Gill nets .....	67	2,574	61	2,400
Fyke nets .....	524	2,684	466	2,354
Pots .....	9,640	19,459	9,662	19,472
Lines .....		290		280
Spears .....	220	210	210	198
Dredges, rakes, etc .....		0,350		6,440
Shore property .....		1,629,110		1,622,135
Cash capital .....		350,520		353,000
Total .....		2,897,687		2,869,314

\* Tonnage in 1887, 5,223.96; in 1888, 5,085.90.

† Tonnage in 1887, 199.29; in 1888, 168.66.

NOTE.—The following idle vessels are not included in the table: In 1887, 13 vessels, 558.44 tons, valued at \$11,030; in 1888, 12 vessels, 420.89 tons, valued at \$11,245.

59. Table of products.

Species.	Vessel fisheries.			
	1887.		1888.	
	Pounds.	Value.	Pounds.	Value.
Bluefish .....	560,416	\$31,434	433,847	\$22,949
Cod .....	2,233,839	69,241	1,994,992	64,961
Flatfish and flounders .....			5,915	127
Haddock .....	259,726	6,390	237,876	5,851
Hake .....	1,600	20	1,800	20
Halibut .....	472,140	34,784	351,340	26,875
Mackerel .....	21,900	1,490	18,010	1,261
Mackerel, salted .....	59,280	3,046	24,500	2,100
Menhaden .....	34,533,300	67,930	37,733,300	76,964
Pollock .....	13,500	230	13,850	240
Red snapper .....	330,000	11,000	340,000	11,170
Sea bass .....	386,390	24,928	243,665	16,139
Squeteague .....			2,000	75
Striped bass .....			629	85
Swordfish .....	104,007	6,338	180,685	10,024
Tautog .....	54,800	2,598	40,147	2,049
Lobsters .....	533,320	30,349	578,226	34,183
Quahaugs .....	6,240	720	2,400	280
Seal skins .....				*11,200
Whale oil .....	170,650	10,239	198,450	10,784
Total .....	39,750,008	300,746	42,401,612	297,337

\* The value of 1,600 seal skins.

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59. Table of products—Continued.

Species.	Shore fisheries.				Total vessel and shore fisheries.			
	1887.		1888.		1887.		1888.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives.....	17,600	\$150	25,200	\$253	17,600	\$150	25,200	\$253
Bluefish.....	56,640	3,971	62,080	4,476	617,056	35,405	490,527	27,425
Butterfish.....	24,300	613	38,100	1,015	24,300	613	38,100	1,015
Cod.....	6,200	325	5,915	301	2,240,039	69,666	2,000,907	65,262
Cunners.....	5,000	200	5,000	200	5,000	200	5,000	200
Eels.....	328,650	25,985	315,500	25,270	326,650	25,985	315,500	25,270
Flounders.....	554,000	11,100	555,700	10,591	554,000	11,100	541,615	10,718
Frostfish or tomcod.....	123,100	4,840	120,600	4,492	123,100	4,840	120,600	4,492
Haddock.....	5,700	300	5,800	275	205,426	6,099	243,676	6,126
Hake.....					1,600	20	1,800	20
Halibut.....					472,140	34,784	351,340	26,875
Mackerel.....	19,800	1,720	10,150	1,015	41,700	3,210	18,160	2,276
Mackerel, salt.....					59,280	3,046	24,500	2,100
Menhaden.....	7,515,700	15,454	6,233,760	12,535	42,049,000	83,384	43,967,060	89,499
Pollock.....					13,500	230	13,850	240
Red snappers.....					330,000	11,000	340,000	11,170
Salmon.....	430	338	530	426	430	338	530	426
Scup.....	1,600	40	2,400	60	1,600	40	2,400	60
Sea bass.....	38,065	2,472	44,062	2,917	424,465	27,400	287,727	19,056
Shad.....	377,090	23,718	282,077	18,427	377,090	23,718	282,077	18,427
Sheepshead.....	9	2	10	2	9	2	10	2
Smelt.....	8,700	782	9,600	770	8,700	782	9,600	770
Squeteague.....	134,480	6,145	258,560	7,213	134,480	6,145	260,560	7,288
Striped bass.....	45,600	2,983	49,120	3,489	45,600	2,983	49,749	3,574
Swordfish.....					104,007	6,338	180,605	10,024
Tautog.....	105,350	7,690	100,500	8,020	220,150	10,288	230,647	10,969
Whiting.....	1,500	30	17,400	286	1,500	30	17,400	286
Miscellaneous.....	354,030	2,782	521,740	1,955	354,030	2,782	521,749	1,955
Lobsters.....	953,700	52,245	899,000	51,540	1,487,020	82,594	1,477,226	85,723
Crabs.....	83,000	300	83,000	300	83,000	300	83,000	300
Terrapin.....	3,015	1,240	3,075	1,290	3,015	1,240	3,075	1,290
Clams.....	267,350	26,370	265,750	24,270	267,350	25,370	265,750	24,270
Quohags.....	144,856	17,957	148,856	18,449	151,096	18,677	151,256	18,729
Scallops.....	2,100	201		2,160		201		2,160
Oysters.....	11,008,690	998,823	10,569,069	1,012,259	11,008,690	998,823	10,569,069	1,012,259
Oyster shells.....	14,700,000	12,250	12,900,000	10,750	14,700,000	12,250	12,900,000	10,750
Seal skins.....								111,200
Whale oil.....					179,550	10,239	198,450	10,784
Algae.....	18,300,000	5,115	18,350,000	4,976	18,300,000	5,115	18,350,000	4,976
Total.....	55,244,315	1,225,141	51,953,163	1,228,722	64,094,323	1,525,887	64,354,775	1,520,059

\*Owing to the close connection existing between the shore and the vessel fisheries for oysters, it has been found impracticable to separate them, and for convenience the catch is credited to the shore fishery in the table. In other tables, where it has been necessary to separate them, an allowance of one-half has been made for each fishery.

† The figures given represent only the output of the shell beds in the Housatonic River, in addition to which large quantities of shells were also utilized which do not appear in the table because they have already been included in the value of the oysters. In 1887 the amount handled was 40,632,000 pounds, valued at \$36,969; in 1888 the amount was 47,475,000 pounds, valued at \$47,445. These quantities represent 812,640 bushels and 949,500 bushels, respectively.

‡ The value of 1,600 seal skins.



60. Table showing by apparatus and species the yield of the shore fisheries of Connecticut in 1887, exclusive of the shellfish, crustacean, and reptilian fisheries.

Species.	Haul seines.		Pound nets and trap nets.		Gill nets.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives .....	4,000	\$50	13,600	\$100	.....	.....
Bluefish .....	2,900	230	3,400	195	.....	.....
Butterfish .....	.....	.....	24,200	610	4,090	\$231
Eels .....	350	35	.....	.....	100	3
Flatfish and flounders .....	11,500	265	112,700	1,819	.....	.....
Frostfish or tomcod .....	7,600	290	55,000	2,500	.....	.....
Mackerel .....	.....	.....	2,900	290	300	30
Menhaden .....	.....	.....	7,362,000	15,115	87,200	104
Salmon .....	40	26	140	112	250	200
Scup .....	.....	.....	1,600	40	.....	.....
Sea bass .....	.....	.....	1,515	152	.....	.....
Shad .....	71,750	5,168	258,265	15,485	47,075	3,067
Sheepshead .....	.....	.....	0	2	.....	.....
Smelt .....	6,900	642	.....	.....	.....	.....
Squeteague .....	4,980	385	101,300	4,080	.....	.....
Striped bass .....	16,250	1,158	22,400	1,420	14,300	880
Tautog .....	.....	.....	12,350	605	.....	.....
Whiting .....	.....	.....	1,500	30	.....	.....
Miscellaneous fish .....	.....	.....	354,030	2,782	.....	.....
<b>Total .....</b>	<b>126,270</b>	<b>8,247</b>	<b>8,326,909</b>	<b>45,337</b>	<b>153,315</b>	<b>4,575</b>

Species.	Fyke nets.		Pots and spears.		Hand lines.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Bluefish .....	.....	.....	.....	.....	46,250	\$3,315
Cod .....	.....	.....	.....	.....	6,200	325
Cunners .....	.....	.....	.....	.....	5,000	200
Eels .....	.....	.....	326,300	\$25,950	.....	.....
Flatfish and flounders .....	353,700	\$7,046	19,600	445	56,500	1,525
Frostfish or tomcod .....	28,000	700	.....	.....	32,500	1,350
Haddock .....	.....	.....	.....	.....	5,700	300
Mackerel .....	.....	.....	.....	.....	16,600	1,400
Menhaden .....	66,500	175	.....	.....	.....	.....
Sea bass .....	.....	.....	.....	.....	36,550	2,320
Smelt .....	.....	.....	.....	.....	1,800	140
Squeteague .....	.....	.....	.....	.....	13,900	800
Striped bass .....	6,950	405	.....	.....	.....	.....
Tautog .....	7,000	300	.....	.....	146,000	6,785
<b>Total .....</b>	<b>462,150</b>	<b>8,626</b>	<b>845,900</b>	<b>26,305</b>	<b>367,000</b>	<b>18,460</b>

SUMMARY.

Species.	Pounds.	Value.	Species.	Pounds.	Value.
Alewives .....	17,600	\$150	Scup .....	1,600	\$40
Bluefish .....	56,040	3,971	Sea bass .....	38,065	2,472
Butterfish .....	24,300	613	Shad .....	377,090	23,718
Cod .....	6,200	325	Sheepshead .....	9	2
Cunners .....	5,000	200	Smelt .....	8,700	782
Eels .....	326,650	25,985	Squeteague .....	134,480	6,145
Flatfish and flounders .....	554,000	11,100	Striped bass .....	45,600	2,983
Frostfish or tomcod .....	123,100	4,840	Tautog .....	165,350	7,690
Haddock .....	5,700	300	Whiting .....	1,500	30
Mackerel .....	19,800	1,720	Miscellaneous fish .....	354,030	2,782
Menhaden .....	7,515,700	15,454			
Salmon .....	430	338	<b>Total .....</b>	<b>9,781,544</b>	<b>111,640</b>

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61. Table showing by apparatus and species the yield of the shore fisheries of Connecticut in 1888, exclusive of the shellfish, crustacean, and reptilian fisheries.

Species.	Haul seines.		Pound nets and trap nets.		Gill nets.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives			25,200	\$253		
Bluefish	5,900	\$430	7,400	361	930	\$75
Butterfish			38,100	1,015		
Cod			15	1		
Eels	350	35				
Flatfish and flounders	11,000	247	152,300	2,516		
Frostfish or tomcod	8,900	340	48,400	2,010		
Mackerel			3,050	305	150	15
Menhaden			6,136,700	12,297	31,000	63
Salmon	30	19	200	167	300	249
Scup			2,400	60		
Sea bass			1,812	182		
Shad	27,830	2,210	191,156	12,041	63,082	4,176
Sheepshead			10	2		
Smelt	7,400	620				
Squeteague	4,480	205	228,500	5,350	13,180	818
Striped bass	12,150	874	29,150	2,150	620	60
Tautog			18,000	605		
Whiting			17,400	286		
Miscellaneous fish			521,749	1,955		
Total	78,040	5,068	7,421,542	41,646	109,322	5,447

Species.	Fyke nets.		Pots and spears.		Hand lines.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Bluefish					48,450	\$3,610
Cod					5,900	300
Cunners					5,000	200
Eels			315,150	\$25,235		
Flatfish and flounders	309,300	\$6,170	19,100	435	44,000	1,225
Frostfish or tomcod	30,800	792			32,500	1,350
Haddock					5,800	275
Mackerel					6,950	695
Menhaden	60,000	175				
Sea bass					42,250	2,735
Smelt					2,200	150
Squeteague					12,400	760
Striped bass	7,200	405				
Tautog	7,500	325			165,000	7,900
Total	420,800	7,867	334,250	25,670	370,450	19,100

SUMMARY.

Species.	Pounds.	Value.	Species.	Pounds.	Value.
Alewives	25,200	\$253	Scup	2,400	\$60
Bluefish	62,680	4,476	Sea bass	44,062	2,917
Butterfish	38,100	1,015	Shad	282,077	18,427
Cod	5,915	301	Sheepshead	10	2
Cunners	5,000	200	Smelt	9,600	770
Eels	315,500	25,270	Squeteague	258,560	7,213
Flatfish and flounders	535,700	10,591	Striped bass	49,120	3,489
Frostfish or tomcod	129,600	4,492	Tautog	199,500	8,020
Haddock	5,800	275	Whiting	17,400	283
Mackerel	10,150	1,015	Miscellaneous fish	521,749	1,955
Menhaden	6,233,760	12,535	Total	8,784,413	104,888
Salmon	330	426			

62. Summary by customs districts of the vessel fisheries of Connecticut in 1887 and 1888.

Customs districts.	No. of vessels fishing.		Net tonnage.		Value of vessels.		Value of outfit, gear, provisions, fuel, etc.		Number and nationality of fishermen.							
									1887.							
	1887.	1888.	1887.	1888.	1887.	1888.	1887.	1888.	Ameri- cans.	British provin- cials.	All others.	Total.	Ameri- cans.	British provin- cials.	All others.	Total.
Stonington.....	51	52	1,401.59	1,344.34	\$104,450	\$98,365	\$51,620	\$51,010	286	.....	16	302	274	2	16	292
New London.....	47	43	1,407.16	1,225.09	99,800	91,435	43,610	43,560	245	11	54	310	217	9	71	297
New Haven.....	41	39	1,044.56	1,050.62	163,850	167,300	42,103	40,013	153	9	16	183	162	9	12	183
Fairfield.....	79	77	1,370.65	1,365.25	179,145	177,200	39,002	37,942	214	7	19	240	219	8	19	246
Total.....	218	211	5,223.96	5,085.90	547,245	534,300	176,425	172,225	903	27	105	1,035	872	28	118	1,018
Number and nationality of crew.																
1888.																
Customs districts.	No. of ves- sels trans- porting.		Net tonnage.		Value of vessels.		Value of provisions, fuel, etc.		Number and nationality of crew.							
									1887.							
	1887.	1888.	1887.	1888.	1887.	1888.	1887.	1888.	Ameri- cans.	British provin- cials.	All others.	Total.	Ameri- cans.	British provin- cials.	All others.	Total.
Stonington.....	6	4	98.87	68.34	\$6,375	\$3,800	\$860	\$620	16	.....	.....	16	8	.....	.....	8
New London.....	2	2	35.75	33.75	1,400	1,400	250	315	4	.....	.....	4	4	.....	.....	4
New Haven.....	4	4	64.67	64.57	4,600	4,455	325	600	10	.....	.....	10	10	.....	.....	10
Fairfield.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	12	10	199.29	166.66	12,375	9,655	1,435	1,535	30	.....	.....	30	22	.....	.....	22

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63. Table showing the number of vessels engaged in each fishery in Connecticut in 1888, together with their tonnage, value, and number of crew.

Fishery.	No. of vessels engaged.	Net tonnage.	Value of vessels.	Number and nationality of fishermen.			
				Americans.	British provincials.	All others.	Total.
Market.....	11	462.15	\$30,250	58	8	19	85
Halibut.....	3	161.48	10,500	17	2	9	28
Shore.....	57	1,169.75	72,305	214	10	25	249
Menhaden.....	5	365.11	51,000	104	.....	.....	104
Mackerel.....	8	155.97	11,825	26	1	6	33
Swordfish.....	10	150.93	10,700	31	.....	2	33
Crustacean.....	27	296.21	21,840	68	.....	3	71
Mollusk.....	116	2,415.87	218,500	381	11	37	429
Whale and seal.....	4	384.87	17,300	68	14	.....	82

64. Table showing by fisheries and species the yield of the vessel fisheries of Connecticut in 1888.

[This table does not include the products of the whale and seal fisheries. During 1888 the whale products landed amounted to \$10,784, and the seal fishery yielded skins worth \$11,200.]

Fisheries and species.	Pounds.	Value.	Fisheries and species.	Pounds.	Value.
<b>Shore:</b>			<b>Mackerel:</b>		
Bluefish.....	432,847	\$22,940	Mackerel.....	18,010	\$1,261
Cod.....	1,346,992	44,815	Mackerel, salted.....	24,500	2,100
Flatfish and flounders.....	5,915	127	<b>Total.....</b>	<b>42,510</b>	<b>3,361</b>
Haddock.....	152,876	3,781			
Hake.....	1,800	20	<b>Halibut.....</b>	<b>161,800</b>	<b>12,040</b>
Halibut.....	88,540	0,650	<b>Menhaden.....</b>	<b>37,733,300</b>	<b>76,964</b>
Pollock.....	13,850	240	<b>Swordfish.....</b>	<b>179,343</b>	<b>0,037</b>
Sea bass.....	243,065	16,139	<b>Lobster.....</b>	<b>578,220</b>	<b>34,183</b>
Squeteague.....	2,000	75			
Striped bass.....	629	85	<b>Mollusk:</b>		
Swordfish.....	1,322	87	Quahaugs.....	2,400	280
Tautog.....	40,147	2,049	Oysters.....	5,284,534	506,129
<b>Total.....</b>	<b>2,331,583</b>	<b>97,017</b>	<b>Total.....</b>	<b>5,280,934</b>	<b>506,409</b>
<b>Market:</b>					
Cod.....	648,000	20,146	<b>Grand total.....</b>	<b>47,487,000</b>	<b>781,482</b>
Haddock.....	85,000	2,070			
Halibut.....	101,000	8,185			
Red snapper.....	340,000	11,170			
<b>Total.....</b>	<b>1,174,000</b>	<b>41,571</b>			

65. Table showing the extent of the menhaden industry of Connecticut.

Designation.	1887.	1888.
Number of factories in operation.....	3	3
Value of factories.....	\$34,200	\$34,200
Amount of cash capital.....	\$16,000	\$16,200
Number of shoresmen employed.....	53	51
Number of fishermen employed.....	141	111
Number of steam vessels employed.....	7	5
Net tonnage.....	487.40	365.11
Value.....	\$65,300	\$51,600
Value of outfit.....	\$10,800	\$8,500
Number of sailing vessels employed as "carryaways".....	3	3
Net tonnage.....	30.51	30.51
Value.....	\$1,500	\$1,435
Value of outfit.....	\$240	\$240
Number of menhaden handled.....	51,000,000	59,620,000
Value to fishermen.....	\$71,133	\$80,980
Number of gallons of oil made.....	94,380	143,600
Value as sold.....	\$24,165	\$37,960
Number of tons of scrap produced.....	1,245	1,810
Value as sold.....	\$23,310	\$30,570

#### IV.—FISHERIES OF THE MIDDLE ATLANTIC STATES.

The States of New York, New Jersey, Pennsylvania, Delaware, Maryland, and Virginia have been included in this section, which has a coast line of about 5,400 miles, divided as follows: New York, 890 miles; New Jersey, 780 miles; Pennsylvania, 235 miles; Delaware, 180 miles; Maryland, 2,170 miles; Virginia, 1,145 miles.

Three large indentations occur along this coast, which are the centers of fisheries of great extent; these are Princess, Delaware, and Chesapeake Bays, the latter being the most prolific fishing ground of like proportions in the world. The fisheries of this region surpass those of any other section, the value of the catch exceeding that of the New England States by more than \$2,500,000, and of the Pacific States by over \$7,000,000.

This division is the center of the greatest molluscan fisheries of the world, and it is largely owing to them that it has attained its high rank, although the fisheries for other aquatic products are also extensive and second only to those of New England.

The characteristic vessel fisheries of the region are for bluefish and sea bass, carried on chiefly from Greenport, New York, and Philadelphia, Pennsylvania; for oysters in the bays already named; for clams in Princess Bay; and for menhaden, this fishery being particularly important in Long Island, in northern New Jersey, and in the Chesapeake Bay.

The shore fisheries are more important than in any other section, those for oysters, clams, crabs, and anadromous fish being particularly extensive.

The fisheries of the Middle States gave employment in 1888 to 66,204 persons, of whom 18,228 were vessel fishermen, 35,503 shore fishermen, and 12,473 shoresmen, preparators, and factory hands.

Of the capital invested, amounting to \$16,028,688, \$4,843,558 represented vessels, \$1,215,082 boats, \$1,282,079 apparatus of capture, and \$8,687,969 shore property and cash capital.

The yield of the fisheries was valued at \$13,749,312 at first hand, of which amount about three-fourths was the value of oysters and other mollusks.

## NEW YORK.

The fishery interests of this State bordering on salt water are included in the tables. The Hudson River was canvassed to a point a few miles above Yonkers. The fisheries above that place have not been embraced in the tables. Reliable data give about 600 persons in the region not covered by the tables, with boats and apparatus worth \$24,500; the catch, consisting chiefly of shad, was valued at \$113,031.

Some of the fisheries of New York have undergone marked changes since 1880, while others have remained in about the same condition. There has been a substantial advance since 1880 in the number of persons employed and in the amount of invested capital. Especially worthy of mention is the large increase in the fleet of fishing vessels, which numbered 541 sail in 1880 and 738 in 1888.

Notwithstanding the improvement in the fisheries in the respects noted, the products show a decline in value of 8 per cent. The menhaden and soft-clam industries exhibit the most pronounced decrease, while the oyster fishery shows an improvement. Omitting the menhaden fishery, the figures for this State indicate a substantial gain over 1880.

66. Table of persons employed.

How engaged.	1887.	1888.
On fishing vessels .....	1,725	1,913
On transporting vessels .....	331	343
On boats .....	3,502	3,608
On shore, in factories, packing houses, etc .....	1,144	1,193
Total .....	6,706	7,057

67. Table of apparatus and capital.

Designation.	1887.		1888.	
	No.	Value.	No.	Value.
Vessels, fishing* .....	552	\$744,000	502	\$837,510
Outfit .....		231,170		250,340
Vessels, transporting† .....	141	166,100	146	182,675
Outfit .....		30,210		37,415
Boats .....	3,510	204,535	3,560	210,305
Apparatus of capture—vessel fisheries:				
Seine .....	55	26,400	64	30,720
Lines .....	4,420	0,960	4,610	7,106
Dredges, rakes, etc .....		21,050		22,020
Apparatus of capture—shore fisheries:				
Pound nets .....	182	46,565	109	40,835
Haul seines .....	194	13,122	203	13,160
Gill nets .....	821	32,575	812	81,485
Fyke nets .....	3,638	19,787	3,975	21,301
Pots .....	16,773	14,624	17,080	16,040
Lines .....		3,170		3,280
Spears .....		600		600
Dredges, rakes, etc .....		10,400		10,750
Shore property, factories, packing houses, etc .....		1,166,210		1,106,180
Cash capital .....		1,535,450		1,620,150
Total .....		4,260,848		4,527,480

\*Tonnage in 1887, 7,052.49; in 1888, 7,825.34.

†Tonnage in 1887, 2,086.09; in 1888, 2,228.50.

68. Table of products.

Species.	1887.		1888.	
	Pounds.	Value.	Pounds.	Value.
Alewives	249,800	\$2,800	223,000	\$2,870
Bluefish	2,852,310	175,745	3,454,470	199,018
Bonito	20,000	814	18,000	680
Butterfish	329,000	10,385	264,000	7,505
Catfish	20,220	1,355	33,100	2,255
Cod	3,455,240	114,435	3,194,960	103,985
Eels	1,218,730	94,196	1,108,040	93,617
Flounders	1,722,380	61,017	1,736,950	63,847
Halibut	11,160	645	10,000	560
Kingfish	79,270	7,670	78,440	7,528
Mackerel	7,300	805	6,100	780
Menhaden	71,048,370	160,409	134,810,850	314,118
Minnows	347,400	2,085	563,000	2,435
Mullet	22,000	1,230	12,000	740
Perch	252,015	12,626	197,325	11,461
Pike	2,300	201	2,000	185
Sea bass	319,420	26,000	308,900	27,205
Sea-robins	250,300	698	500,000	650
Shad*	627,180	24,051	699,425	24,795
Spanish mackerel	5,330	1,140	7,320	1,110
Squeteague or woukfish	1,504,560	82,587	1,434,870	79,606
Striped bass	115,380	11,050	97,840	9,726
Sturgeon	6,600	530	9,800	600
Tautog	150,000	7,814	150,750	8,190
Tomcod or frostfish	129,950	6,011	131,800	5,205
Miscellaneous fish	192,640	7,430	175,700	6,625
Refuso fish	7,833,300	12,300	7,306,000	11,040
Ostrapin	5,808	1,740	4,215	1,230
Oysters	13,903,050	1,974,625	13,307,840	1,893,085
Clams (soft)	415,000	43,105	413,000	42,606
Quebnags or round clams	2,673,960	290,040	2,598,520	280,390
Scallops	316,785	55,597	199,815	48,640
Shells	18,075,000	14,400	14,085,000	13,100
Mussels	845,250	10,026	891,660	10,787
Lobsters	114,000	6,850	248,000	13,900
Crabs	982,600	35,080	1,287,000	44,340
King crabs	22,000	115	21,000	110
Whales		4,000		2,580
Total	127,320,718	3,273,260	189,666,490	3,347,851

\* Includes the catch in the Hudson River only as far as Yorkers. The yield of the entire State was 3,585,710 pounds in 1887, and 3,445,639 pounds in 1888.

69. Table showing by customs districts the vessel fisheries of New York in 1887 and 1888.

Designation.	Sag Harbor.		New York.		Total.	
	1887.	1888.	1887.	1888.	1887.	1888.
Number and nationality of fishermen:						
Americans	499	615	1,108	1,175	1,607	1,790
Swedes	20	29	12	13	38	42
Portuguese	11	11	11	12	22	23
All others	13	13	45	45	58	58
Total	543	668	1,176	1,245	1,725	1,913
Number and nationality of crews on transports:						
Americans	77	74	244	258	321	832
Swedes	3	4	1	1	4	5
Portuguese	1	1	1	1	2	2
All others	1	1	3	3	4	4
Total	82	80	249	263	331	343
Number of vessels fishing	78	92	474	500	552	592
Number of vessels transporting	20	28	112	118	141	146
Net tonnage of vessels fishing	1,073.84	2,440.27	5,078.65	5,366.07	7,052.40	7,825.34
Net tonnage of vessels transporting	310.16	303.25	1,767.83	1,925.84	2,086.00	2,228.59
Value of vessels fishing	231,150	209,925	513,750	546,616	744,900	837,540
Value of vessels transporting	23,100	20,825	133,000	142,050	166,100	162,075
Value of outfit, gear, provisions, fuel, etc., of vessels fishing	102,550	123,365	183,050	192,005	285,600	316,270
Value of provisions, fuel, etc., of vessels transporting	9,255	8,900	26,655	28,425	36,210	37,415
Value of catch of vessels fishing	395,210	544,804	1,228,483	1,204,160	1,623,693	1,748,964
Value of products transported	87,950	81,840	309,600	376,940	467,550	458,780

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70. Table showing by species and apparatus the yield of the fisheries of New York in 1887, exclusive of the shellfish, crustacean, and reptilian fisheries.

Species.	Semes.		Gill nets.		Pound nets.		Fyke nets.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives	175,000	\$1,950	5,000	\$55	54,000	\$615	15,800	\$180
Bluefish	192,090	12,030	454,670	27,110	564,460	34,925	14,700	890
Bonito	5,000	198			7,800	286		
Butterfish					326,000	10,235	3,000	160
Catfish	3,260	230	4,210	325			5,300	290
Eels	79,705	5,180						
Flounders	118,780	4,128	7,350	256	227,410	7,914	1,088,000	38,495
Halibut								
Kingfish	21,050	2,245	17,000	1,782	28,400	2,554	520	44
Mackerel					3,000	395		
Menhaden	68,936,450	160,832	12,000	55	2,046,600	5,322	53,320	200
Minnows	344,500	1,935						
Mullet	22,000	1,230						
Perch	139,360	6,825	62,565	3,170	2,450	156	43,700	2,225
Pike			2,000	175			300	26
Sea bass	46,560	3,645	31,300	2,552	98,600	6,895		
Sea-robins	117,300	218			233,000	480		
Shad			328,440	12,365	131,600	6,221	167,150	5,465
Spanish mackerel	936	160			2,000	580		
Squeteague or weakfish	281,860	14,274	382,360	20,984	302,720	23,526	66,450	2,908
Striped bass	20,680	1,760	29,120	2,346	8,750	860	28,230	2,973
Sturgeon					9,600	530		
Tautog	4,250	254	12,400	688	27,100	1,600	7,650	398
Tomcod or frostfish	2,250	120	4,500	230	8,000	465	60,200	1,036
Miscellaneous species	46,000	1,480	28,400	915	34,620	1,260	21,200	935
Refuse fish					7,800,000	12,100	133,300	200
<b>Total</b>	<b>70,556,065</b>	<b>218,694</b>	<b>1,381,315</b>	<b>73,008</b>	<b>12,007,910</b>	<b>116,919</b>	<b>1,709,720</b>	<b>57,315</b>

  

Species.	Lines.		Pots.		Spears.		Total.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives							249,800	\$2,800
Bluefish	1,626,390	\$100,790					2,852,310	175,745
Bonito	7,800	330					20,600	814
Butterfish							329,000	10,385
Catfish	7,450	510					20,220	1,355
Cod	3,455,240	114,435					3,455,240	114,435
Eels			879,705	\$60,040	259,320	\$22,976	1,218,780	94,196
Flounders	154,640	6,720			125,300	3,504	1,722,380	61,017
Halibut	11,160	645					11,160	645
Kingfish	12,800	1,045					79,270	7,070
Mackerel	3,700	410					7,300	805
Menhaden							71,048,370	166,409
Minnows	2,900	160					347,400	2,095
Mullet							22,000	1,230
Perch	4,000	250					252,015	12,626
Pike							2,300	201
Sea bass	142,960	13,508					319,420	20,600
Sea-robins							250,300	608
Shad							627,190	24,051
Spanish mackerel	1,800	400					5,330	1,140
Squeteague or weakfish	381,170	20,895					1,504,500	82,587
Striped bass	28,600	3,112					115,380	11,059
Sturgeon							0,600	530
Tautog	98,600	4,874					150,000	7,814
Tomcod or frostfish	54,400	2,260					120,950	5,011
Miscellaneous species	62,320	2,840					192,540	7,430
Refuse fish							7,933,300	12,300
<b>Total</b>	<b>6,055,430</b>	<b>273,102</b>	<b>879,705</b>	<b>66,040</b>	<b>384,620</b>	<b>26,480</b>	<b>92,975,665</b>	<b>837,648</b>



71. Table showing by species and apparatus the yield of fisheries of New York in 1888, exclusive of the shellfish, crustacean, and reptilian fisheries.

Species.	Seines.		Gill nets.		Pound nets.		Fyko nets.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives	160,000	\$1,040			48,000	\$550	15,000	\$180
Bluefish	225,410	13,918	490,400	\$30,450	568,140	34,480	17,700	1,015
Bonito	5,200	205			4,200	180		
Butterfish					261,000	7,340	3,000	105
Catfish	8,000	585	4,000	260	8,000	500	6,500	405
Cod								
Eels	64,800	4,592						
Flounders	115,300	4,140	32,410	1,008	237,200	8,304	1,092,400	30,700
Halibut								
Kingfish	21,000	2,160	18,700	1,898	28,600	2,575	740	70
Mackerel	1,600	180	700	80	1,400	180		
Menhaden	132,252,000	308,098	20,000	90	2,140,600	5,180	421,650	750
Minnnows	563,000	2,435						
Mullet	12,000	740						
Perch	87,700	6,490	60,125	4,340	6,500	435	30,000	1,956
Pike			2,000	165				
Sea bass	45,400	4,150	24,700	2,135	90,100	6,850	2,500	210
Sea robins	200,000	260			300,000	400		
Shad			807,700	13,015	137,550	6,440	154,175	6,340
Spanish mackerel	1,020	170			4,100	540		
Squatengue or weakfish	296,900	15,345	334,000	18,556	366,925	21,790	60,950	2,985
Striped bass	7,440	700	17,600	1,540	9,100	915	28,800	2,890
Sturgeon					9,800	600		
Tautog	4,000	260	11,400	760	25,300	1,740	7,750	470
Tomcod or frostfish	2,400	120	4,000	225	8,300	400	61,200	1,980
Miscellaneous species	44,500	1,770	28,200	550	22,000	910	10,000	755
Refuse fish					7,226,500	10,840	140,000	200
<b>Total</b>	<b>134,118,270</b>	<b>368,306</b>	<b>1,864,905</b>	<b>75,145</b>	<b>11,508,810</b>	<b>111,269</b>	<b>2,061,965</b>	<b>59,131</b>

Species.	Lines.		Pots.		Spears.		Total.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives							223,000	\$2,670
Bluefish	2,152,760	\$110,155					3,454,470	199,016
Bonito	9,200	305					18,600	690
Butterfish							264,000	7,505
Catfish	6,000	385					33,100	2,235
Cod	3,194,960	103,985					3,194,960	103,985
Eels			868,810	\$60,120	204,430	\$22,905	1,198,040	93,617
Flounders	148,740	6,525			110,900	4,050	1,786,950	63,847
Halibut	10,000	560					10,000	560
Kingfish	9,400	825					78,440	7,528
Mackerel	2,400	340					6,100	780
Menhaden							134,840,850	314,118
Minnnows							563,000	2,435
Mullet							12,000	740
Perch	3,400	240					197,325	13,461
Pike							2,000	165
Sea bass	146,200	13,860					308,900	27,205
Sea robins							500,000	650
Shad							599,425	24,795
Spanish mackerel	2,400	400					7,520	1,110
Squatengue or weakfish	376,100	20,830					1,434,870	79,506
Striped bass	34,900	3,015					97,840	9,720
Sturgeon							9,800	600
Tautog	102,300	4,900					150,750	8,190
Tomcod or frostfish	55,900	2,480					131,800	5,205
Miscellaneous species	62,000	2,030					175,700	6,625
Refuse fish							7,366,000	11,040
<b>* Total</b>	<b>6,317,260</b>	<b>281,095</b>	<b>868,810</b>	<b>66,120</b>	<b>376,330</b>	<b>26,055</b>	<b>156,015,440</b>	<b>988,024</b>

72. Table showing the extent of the menhaden industry of New York.

Designation.	1887.	1888.
Number of factories in operation .....	11	11
Value of factories .....	\$177,500	\$203,300
Amount of cash capital .....	\$120,000	\$197,000
Number of shoremen employed .....	428	465
Number of fishermen employed .....	378	451
Number of steam vessels employed .....	18	22
Net tonnage .....	978.90	1,200.39
Value .....	\$170,000	\$218,750
Value of outfit .....	\$40,050	\$48,730
Number of sailing vessels employed in fishing .....	5	5
Net tonnage .....	92.78	92.08
Value .....	\$0,400	\$6,150
Value of outfit .....	\$4,380	\$4,300
Number of sailing vessels employed as "carryaways" .....	5	6
Net tonnage .....	62.65	69.55
Value .....	\$3,900	\$4,500
Value of outfit .....	\$350	\$425
Number of menhaden handled .....	114,633,200	210,970,910
Value to fishermen .....	\$166,490	\$314,118
Number of gallons of oil made .....	814,671	1,248,008
Value as sold .....	\$170,970	\$349,454
Number of tons of scrap produced .....	8,686	20,590
Value as sold .....	\$108,976	\$421,835

Three factories idle in 1887 and 1888 are not included in the above figures. The value of these was \$33,000 in 1887 and \$22,000 in 1888. Four steamers, valued at \$45,000, of 227.49 tons burden, that were idle in 1887, are also omitted.

#### NEW JERSEY.

In this State the figures submitted cover all the fisheries, the rivers having been canvassed as high as commercial fishing was prosecuted.

In many respects the fisheries of New Jersey show a gratifying improvement since 1880. There has been comparatively little increase in capital, because the development has been chiefly in the shore fisheries. In persons employed there has been an increase of more than 4,000.

Among the most noteworthy changes may be mentioned the sturgeon fishery, which has grown to large proportions, its yield being more than tenfold what it was in 1880. The shad fishery has likewise increased enormously—from 750,000 pounds, worth \$35,000 in 1880, to 6,521,447 pounds, with a value of \$307,411 in 1888—a result that is attributed to the beneficial effect of artificial propagation. There has also been a marked advance in the shellfish fishery, resulting in placing this State at the head of the list in this particular industry.

The hook-and-line shore fishery for bluefish and sea bass is more important than in any other State. The pound-net fishery has developed considerably, there being 127 pound nets in 1888 against only 27 in 1880. There has been a decline in the menhaden industry, the value of manufactured products in 1888, being less than half what it was in 1880. The same can be said of the crab fishery, which, in the last year covered by these statistics yielded only about one-third what it was credited with in the census year. Among the elements contributing to the success of the shore fisheries in this State may properly be included the great seaside resorts that have grown up on the coast, and which take large quantities of fish during the summer.

73. Table of persons employed.

How engaged.	1887.	1888.
On fishing vessels .....	1,783	1,727
On transporting vessels .....	238	213
In shore fisheries .....	7,747	8,112
On shore—in factories, etc. ....	438	424
<b>Total</b> .....	<b>10,206</b>	<b>10,476</b>

74. Table of apparatus and capital.

Designation.	1887.		1888.	
	No.	Value.	No.	Value.
Vessels fishing* .....	502	\$511,375	504	\$488,535
Outfit .....		60,159		45,632
Vessels transporting† .....	98	107,800	74	100,850
Outfit .....		5,705		5,385
Boats .....	4,894	335,073	5,257	354,325
Apparatus of capture—vessel fisheries:				
Seine .....	11	4,405	10	3,400
Gill nets .....	12	120		
Lines and trawls .....		53		62
Pots .....	90	68	285	265
Dredges, tongs, and rakes .....	931	34,961	1,103	41,053
Apparatus of capture—shore fisheries:				
Seine .....	401	38,390	414	39,535
Gill nets .....	2,830	135,232	2,063	138,093
Pound nets and weirs .....	84	19,911	136	25,979
Fyke nets .....	1,499	14,404	1,615	14,876
Pots .....	3,755	3,935	4,204	4,329
Tongs, rakes, etc. ....	3,200	18,871	3,309	19,341
Lines and trawls .....	20	2,107	20	2,165
Spears .....	132	151	136	159
Crabbing outfits .....	269	198	268	197
Shore property .....		215,783		201,054
Cash capital .....		67,300		59,000
<b>Total</b> .....		<b>1,560,554</b>		<b>1,544,835</b>

\* Tonnage in 1887, 7,300.85; in 1888, 7,105.06.

† Tonnage in 1887, 1,002.23; in 1888, 1,513.08.

75. Table of products by vessel and shore fisheries.

Species.	1887.		1888.	
	Pounds.	Value.	Pounds.	Value.
<b>Vessel fisheries:</b>				
Bluefish .....	30,100	2,317	51,485	2,630
Cod .....	151,608	5,744	72,095	2,130
Eels .....	8,100	492	21,600	1,140
Menhaden .....	8,777,400	24,690	3,975,000	7,885
Sea bass .....	248,083	11,325	283,567	11,067
Clams ( <i>Venus mercenaria</i> ) .....	663,024	53,992	786,176	60,302
Oysters .....	5,371,831	592,518	4,472,342	482,071
Crabs, hard .....	36,556	1,097	21,867	710
Lobsters .....			90,453	6,112
Shrimp .....			105	5
<b>Total</b> .....	<b>15,205,072</b>	<b>692,175</b>	<b>9,774,690</b>	<b>581,302</b>
<b>Shore fisheries:</b>				
Alewives .....	2,680,818	27,030	2,717,520	26,924
Bluefish .....	4,748,182	202,248	4,005,955	194,371
Bluefish, salted .....	2,000	100	3,500	175
Cod .....	636,000	12,488	654,500	13,200
Catfish .....	120,720	5,484	110,427	5,356
Drum .....	42,000	1,300	43,500	1,360
Eels .....	864,828	66,212	773,845	60,407
Flounders and flatfish .....	367,109	15,021	416,282	18,238
Hake .....	4,500	225	12,140	580
Kingfish .....	48,140	3,925	58,395	4,857

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75. Table of products by vessel and shore fisheries—Continued.

Species.	1887.		1888.	
	Pounds.	Value.	Pounds.	Value.
<b>Shore fisheries—Continued.</b>				
Menhaden	5,259,840	\$8,119	5,070,120	\$7,890
Menhaden, salted	19,600	280	22,400	320
Mullet, salted	1,500	90		
Pike and pickerel	27,625	1,850	30,400	2,066
Perch	692,520	37,235	795,324	40,976
Sea bass	570,570	22,103	532,050	21,004
Shad	6,494,957	308,147	6,523,447	307,411
Sturgeon	3,204,550	42,740	3,681,475	48,453
Suckers	141,142	5,598	121,642	4,868
Striped bass	614,847	69,402	739,122	84,404
Sheepshead	61,820	7,105	33,711	3,425
Spanish mackerel	46,200	9,240	67,150	13,150
Weakfish	2,376,711	87,475	2,845,103	101,324
Miscellaneous fish	149,437	5,849	165,909	5,890
Clams	3,562,346	784,103	3,598,470	814,106
Oysters	12,964,980	1,677,493	13,199,235	1,702,988
Crabs, hard	1,232,000	19,224	1,193,333	18,705
Crabs, soft	220,184	39,375	215,920	38,615
Crabs, king ( <i>Limulus</i> )	2,592,000	6,480	3,004,000	7,510
Lobsters	101,580	7,719	91,235	6,833
Terrapin	5,844	1,620	5,900	1,652
<b>Total</b>	<b>49,950,559</b>	<b>3,475,049</b>	<b>51,340,072</b>	<b>3,617,248</b>
<b>Total vessel and shore fisheries:</b>				
Alwives	2,686,818	27,039	2,717,520	26,924
Bluefish	4,787,282	204,565	4,637,440	197,001
Bluefish, salted	2,000	100	3,500	175
Cod	787,008	18,232	726,595	15,440
Catfish	120,720	5,484	119,427	5,356
Drum	42,000	1,300	43,500	1,350
Eels	872,928	69,704	795,445	61,007
Flounders and flatfish	367,109	15,621	410,238	18,238
Hake	4,500	225	12,140	580
Kingfish	48,140	3,925	58,395	4,857
Menhaden	14,037,240	32,809	9,045,120	15,775
Menhaden, salted	19,600	280	22,400	320
Mullet, salted	1,500	90		
Pike and pickerel	27,625	1,850	30,400	2,066
Perch	692,520	37,235	795,324	40,976
Sea bass	818,653	33,488	815,617	32,671
Shad	6,494,957	308,147	6,523,447	307,411
Sturgeon	3,204,550	42,740	3,681,475	48,453
Suckers	141,142	5,598	121,642	4,868
Striped bass	614,847	69,402	739,122	84,404
Sheepshead	61,820	7,105	33,711	3,425
Spanish mackerel	46,200	9,240	67,150	13,150
Weakfish	2,376,711	87,475	2,845,103	101,324
Miscellaneous fish	149,437	5,849	165,909	5,830
Clams	4,225,370	838,095	4,384,052	880,408
Oysters	18,336,781	2,270,011	17,671,577	2,245,659
Crabs, hard	1,208,566	20,321	1,215,200	19,475
Crabs, soft	220,184	39,375	215,920	38,615
Crabs, king ( <i>Limulus</i> )	2,592,000	6,480	3,004,000	7,510
Lobsters	101,580	7,719	181,688	12,965
Shrimp		105		5
Terrapin	5,844	1,620	5,900	1,652
<b>Total</b>	<b>65,246,231</b>	<b>4,168,124</b>	<b>61,115,662</b>	<b>4,198,550</b>

76. Table of secondary products.

Designation.	1887.		1888.	
	Quantity.	Value.	Quantity.	Value.
Oil (menhaden and sturgeon oil)..... gallons..	186,000	\$41,190	96,768	\$28,514
Fertilizer (menhaden, sturgeon, and king-crab)..... tons..	3,593	84,465	3,778	76,535
Caviare..... pounds..	288,000	28,200	201,750	37,380
<b>Total</b> .....		<b>153,854</b>		<b>142,420</b>

77. Table showing by customs districts the extent of the vessel fisheries of New Jersey in 1887 and 1888.

Customs districts.	No. of ves- sels fishing.		Net tonnage.		Value of vessels.		Value of outfit, gear, provi- sions, fuel, etc.		Number and nationality of fishermen.						Value of catch.	
									1888.							
	1887.	1888.	1887.	1888.	1887.	1888.	1887.	1888.	American, white.	American, colored.	Total.	American, white.	American, colored.	Total.	1887.	1888.
Perth Amboy.....	135	133	1,304.81	1,401.38	\$77,450	\$90,975	\$15,375	\$16,505	312	.....	312	331	1	332	\$166,260	\$150,745
Little Egg Harbor.....	7	7	79.29	79.29	5,200	5,200	2,015	1,605	22	.....	22	22	.....	22	7,226	3,021
Great Egg Harbor.....	19	17	336.46	292.97	41,400	23,700	4,955	3,210	91	.....	91	65	.....	65	33,857	19,851
Bridgeton.....	313	297	5,024.94	4,836.87	340,425	320,210	60,738	57,090	1,217	1	1,218	1,155	.....	1,155	422,322	346,806
Camden.....	27	28	541.44	555.23	46,000	47,050	6,558	7,075	137	.....	137	145	.....	145	61,710	59,129
Burlington.....	1	2	13.91	29.32	900	1,400	100	300	3	.....	3	8	.....	8	800	1,750
Total.....	602	504	7,300.85	7,195.06	511,375	488,535	89,769	86,685	1,782	1	1,783	1,726	1	1,727	692,175	581,302
Customs districts.	No. of ves- sels trans- porting.		Net tonnage.		Value of vessels.		Value of provi- sions, fuel, etc.		Number and nationality of crew.						Value of pro- ducts trans- ported.	
									1888.							
	1887.	1888.	1887.	1888.	1887.	1888.	1887.	1888.	American, white.	American, colored.	Total.	American, white.	American, colored.	Total.	1887.	1888.
Perth Amboy.....	25	17	278.75	250.26	\$20,900	\$17,250	\$1,335	\$1,000	51	.....	52	40	.....	40	\$190,891	\$172,863
Little Egg Harbor.....	14	10	277.35	108.42	24,000	17,000	1,125	875	35	.....	35	27	.....	27	49,700	28,071
Great Egg Harbor.....	23	24	479.83	533.10	34,400	38,000	1,560	1,650	63	.....	63	62	4	66	46,732	41,449
Bridgeton.....	13	11	288.70	303.06	14,100	18,300	875	885	49	.....	49	44	.....	44	22,307	15,575
Camden.....	13	12	277.60	228.24	14,400	10,200	810	875	39	.....	39	36	.....	36	56,291	81,777
Burlington.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	88	74	1,602.23	1,513.08	107,600	100,850	5,705	5,385	237	1	238	209	4	213	365,921	340,355

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78. Table showing by apparatus and species the yield of the shore fisheries of New Jersey in 1888, exclusive of the shellfish, terrapin, crab, and lobster fisheries.

Species.	Hand lines and trawl lines.		Haul seines.		Gill nets.		Pound nets.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives, fresh	3,054,400	\$152,775	2,469,420	\$24,152	243,500	\$3,680	240,925	\$0,707
Bluefish, fresh			400,908	10,152	300,724	15,737		
Bluefish, salted					3,500	175		
Black bass, fresh	139	25						
Butterfish, fresh			4,000	200				
Cod, fresh	654,500	13,260						
Catfish, fresh	26,208	1,102	48,885	2,270	5,500	270		
Chub, fresh					3,025	145		
Drum, fresh	43,500	1,350						
Eels, fresh	33,062	2,514	80,400	7,310				
Flounders, fresh	1,667	50	57,842	3,080	60,070	3,964		
Goody, fresh			4,047	202				
Hake, fresh			12,140	580				
Kingfish, fresh	16,100	1,127	31,875	3,188	10,420	542		
Menhaden, fresh			702,000	635	073,200	920	3,034,920	6,335
Menhaden, salted					22,400	320		
Pike and pickerel, fresh			25,400	1,066	5,000	400		
Perch, fresh	850	50	465,533	25,339	105,611	11,429		
Salmon, fresh					30	13		
Sea bass, fresh	530,050	20,004			2,000	100		
Shad, fresh			928,537	54,160	4,097,527	228,719	249,428	11,099
Sheepshead, fresh	30,841	2,070	120	24	250	50	2,500	375
Spanish mackerel, fresh					22,400	4,480	44,750	8,650
Striped bass, fresh	10,143	1,110	562,417	67,980	100,025	9,303	2,700	216
Sturgeon, fresh					3,081,45	48,453		
Suckers, fresh			118,042	4,748	3,000	120		
Squeteague, fresh	623,785	28,011	1,403,094	51,561	50,882	2,298	730,756	18,193
Miscellaneous, fresh			25,470	513	11,060	350	110,608	4,242
<b>Total</b>	<b>5,625,335</b>	<b>225,320</b>	<b>7,410,608</b>	<b>203,706</b>	<b>10,404,829</b>	<b>330,468</b>	<b>5,022,587</b>	<b>58,817</b>

Species.	Fyke nets.		Pots, traps, etc.		Spears.		Total.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives, fresh	4,600	\$02					2,717,520	\$26,024
Bluefish, fresh							4,605,955	194,371
Bluefish, salted							3,500	175
Black bass, fresh							139	25
Butterfish, fresh							4,000	200
Cod, fresh							654,500	13,200
Catfish, fresh	38,704	1,054					119,427	5,356
Chub, fresh							3,025	145
Drum, fresh							43,500	1,350
Eels, fresh	32,310	3,350	008,017	\$45,694	20,050	\$1,509	773,845	00,407
Flounders, fresh	290,659	11,144					410,238	18,238
Goody, fresh							4,047	202
Hake, fresh							12,140	580
Kingfish, fresh							58,305	4,857
Menhaden, fresh							5,070,120	7,800
Menhaden, salted							22,400	320
Pike and pickerel, fresh							30,400	2,000
Perch, fresh	133,300	4,158					795,324	40,076
Salmon, fresh	330	200					860	213
Sea bass, fresh							532,050	21,004
Shad, fresh	347,955	13,427					6,523,447	307,411
Sheepshead, fresh							33,711	3,425
Spanish mackerel, fresh							07,150	13,150
Striped bass, fresh	57,837	5,789					730,122	84,404
Sturgeon, fresh							3,081,475	48,453
Suckers, fresh							121,042	4,868
Squeteague, fresh	36,688	1,201					2,845,103	101,324
Miscellaneous, fresh							153,738	5,105
<b>Total</b>	<b>941,447</b>	<b>41,075</b>	<b>608,017</b>	<b>45,094</b>	<b>20,050</b>	<b>1,599</b>	<b>30,032,873</b>	<b>006,759</b>

79. Table showing the extent of the menhaden industry of New Jersey.

Designation.	1887.	1888.
Number of factories in operation.....	8	7
Value of factories.....	\$80,800	\$73,800
Amount of cash capital.....	\$57,300	\$49,000
Number of shoresmen employed.....	116	92
Number of dshormen employed.....	139	110
Number of steam vessels employed.....	5	3
Net tonnage.....	186.70	114.25
Value.....	\$47,500	\$27,000
Value of outfit.....	\$8,250	\$4,050
Number of sailing vessels employed in fishing.....	6	6
Net tonnage.....	116.70	120.06
Value.....	\$4,800	\$5,800
Value of outfit.....	\$6,830	\$5,750
Number of sailing vessels employed as "carryaways".....	10	0
Net tonnage.....	126.21	105.77
Value.....	\$6,650	\$6,250
Value of outfit.....	\$710	\$650
Number of menhaden handled.....	27,015,000	27,252,000
Value to fisherman.....	\$31,265	\$30,512
Number of gallons of oil made.....	170,600	66,768
Value as sold.....	\$38,809	\$26,214
Number of tons of scrap produced.....	2,243	2,478
Value as sold.....	\$47,465	\$41,035

PENNSYLVANIA.

The data given for this State include, besides the salt-water fisheries, the figures for the Susquehanna River as far as York and Lancaster Counties, and the Delaware River to the limits of commercial fishing.

There has been a phenomenal increase in some branches, especially in the vessel fishery. In 1880 11 vessels were credited to the State, and these were employed only in the fishery for sea bass; in 1888 there were 81 vessels engaged in different branches, including sea bass, menhaden, and oyster, a very prominent feature at present being the large number of vessels composing the oyster fleet.

While the number of persons employed has increased from 552 to 2,011, the improvement is most marked in the item of capital invested, which is tenfold more than in the census year, as follows: \$119,801 in 1880 and \$1,227,166 in 1888. It is probable that this showing is due to some extent to the fact that the canvass for 1888 included cash capital and other property invested in the wholesale fish trade, of which it is not apparent that account was taken by the census. But even if cash capital and shore property be omitted from consideration, there is still an increase in value of more than 200 per cent.

The value of the catch has increased nearly 300 per cent., while the quantity has advanced from 1,680,000 pounds in 1880 to 12,900,670 in 1888, the latter figure including 7,611,200 pounds of menhaden. Two steamers belonging to this State engage in the menhaden fishery, but land their catch in New Jersey. There was no menhaden fishery from Pennsylvania in 1880.

The mackerel, cod, and haddock credited to Pennsylvania were taken by the schooner *Roulette* of Philadelphia, which fitted from and marketed her catch at Boston, Massachusetts.

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## 80. Table of persons employed.

How engaged.	1887.	1888.
In vessel fisheries.....	442	500
On transporting vessels.....	24	29
In shore fisheries.....	*1,143	*1,174
On shore.....	311	308
<b>Total.....</b>	<b>1,920</b>	<b>2,011</b>

\* Including 270 persons in 1887 and 287 in 1888, who are to be classed as semi-professional.

## 81. Table of apparatus and capital.

Designation.	1887.		1888.	
	No.	Value.	No.	Value.
Vessels fishing*.....	67	\$165,950	72	\$156,000
Outfit.....		21,096		23,470
Vessels transporting†.....	6	8,400	9	11,350
Outfit.....		375		450
Boats.....	369	14,845	374	15,120
Apparatus of capture—vessel fisheries:				
Purse seines.....	4	2,000	4	2,200
Gill nets.....			8	80
Lines and trawls.....		250		310
Dredges and rakes.....	358	7,140	384	7,680
Apparatus of capture—shore fisheries:				
Seines.....	85	6,398	90	6,600
Gill nets.....	190	18,670	182	19,000
Fyke nets, drop fykes, etc.....	1,947	4,301	2,077	4,651
Lines.....		154		160
Baskets.....	262	2,470	262	2,470
Dip nets.....	86	175	86	175
Shore property.....		395,175		380,450
Cash capital.....		690,000		597,000
<b>Total investment.....</b>		<b>1,227,408</b>		<b>1,227,166</b>

\* Tonnage in 1887, 1,700.24; in 1888, 1,793.34.

† Tonnage in 1887, 113.33; in 1888, 100.20.

## 82. Table of products by vessel and shore fisheries.

Species.	1887.		1888.	
	Pounds.	Value.	Pounds.	Value.
<b>Vessel fisheries:</b>				
Bluefish.....	30,000	\$1,350		
Cod.....	30,150	603	20,900	\$418
Haddock.....	28,184	563	20,766	415
Mackerel.....			28,000	2,520
Mackerel, salted.....	150,000	9,000	124,000	7,861
Monkuden.....	2,794,800	4,675	7,611,200	15,359
Perch.....			7,000	563
Sea bass.....	665,750	22,750	738,505	35,302
Striped bass.....			40,000	2,400
Oysters.....	1,565,879	183,168	1,562,171	165,339
<b>Total.....</b>	<b>5,204,763</b>	<b>222,100</b>	<b>10,182,542</b>	<b>230,177</b>
<b>Shore fisheries:</b>				
Alewives.....	452,085	4,910	536,157	5,635
Alewives, salted.....	89,400	2,180	117,000	2,780
Black bass.....	7,280	728	7,680	768
Carp.....	5,200	260	5,500	275
Catfish.....	224,452	10,262	226,756	10,349
Eels.....	200,285	9,134	213,185	9,300
Perch.....	10,600	530	11,200	560
Shad.....	1,423,952	76,175	1,387,200	76,642
Sturgeon.....	61,250	700	63,000	720
Striped bass.....	14,400	1,440	19,100	1,910
Suckers and mullet.....	130,067	4,428	129,150	4,418
Wall-eyed pike.....	2,000	200	2,200	220
<b>Total.....</b>	<b>2,620,971</b>	<b>110,947</b>	<b>2,718,128</b>	<b>113,827</b>



82. Table of products by vessel and shore fisheries—Continued.

Species.	1887.		1888.	
	Pounds.	Value.	Pounds.	Value.
<b>Total vessel and shore fisheries:</b>				
Alewives.....	452,085	\$4,010	536,157	\$5,635
Alewives, salted.....	89,400	2,180	117,000	2,730
Black bass.....	7,280	728	7,680	768
Bluefish.....	30,000	1,350	.....	.....
Carp.....	5,200	.....	5,500	275
Catfish.....	224,452	10,262	226,758	10,340
Cod.....	30,150	603	20,900	418
Eels.....	209,285	9,134	213,185	9,300
Haddock.....	28,184	563	20,766	415
Mackerel.....	.....	.....	29,000	2,520
Mackerel, salted.....	150,000	0,000	124,000	7,861
Menhaden.....	2,794,800	4,675	7,611,200	15,350
Perch.....	10,600	530	18,200	1,123
Sea bass.....	665,750	22,750	738,505	35,302
Shad.....	1,423,952	76,175	1,387,200	76,042
Sturgeon.....	61,250	700	63,000	720
Striped bass.....	14,400	1,440	59,100	4,310
Suckers and mullet.....	130,067	4,428	129,150	4,418
Wall-eyed pike.....	.....	200	.....	220
Oysters.....	1,565,879	183,168	1,592,171	105,330
<b>Total.....</b>	<b>7,894,734</b>	<b>333,056</b>	<b>12,900,670</b>	<b>344,064</b>

83. Table showing by apparatus and species the yield of the shore fisheries of Pennsylvania in 1887 and 1888.

1887.

Species.	Gill nets.		Seines.		Fyke nets.		Lines.		Pots, dip nets, and traps.		Total.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives.....	218,335	\$2,710	233,750	\$2,200	.....	.....	.....	.....	.....	.....	452,085	\$4,010
Alewives, salted.....	.....	.....	89,400	2,180	.....	.....	.....	.....	.....	.....	89,400	2,180
Black bass.....	.....	.....	.....	.....	.....	.....	7,280	\$728	.....	.....	7,280	728
Catfish.....	1,000	80	80,520	4,320	112,720	\$4,064	23,612	602	.....	.....	224,452	10,262
Carp.....	.....	.....	.....	.....	.....	.....	.....	.....	5,200	\$280	5,200	280
Eels.....	.....	.....	10,000	500	21,005	1,328	12,680	806	175,000	7,000	209,285	9,134
Perch.....	.....	.....	.....	.....	.....	.....	600	30	.....	.....	10,600	530
Shad.....	1,053,020	56,102	365,932	20,073	.....	.....	.....	.....	.....	.....	1,423,952	76,175
Striped bass.....	.....	.....	11,900	1,190	.....	.....	2,500	250	.....	.....	14,400	1,440
Sturgeon.....	61,250	700	.....	.....	.....	.....	.....	.....	.....	.....	61,250	700
Suckers.....	.....	.....	85,000	3,400	32,067	768	.....	.....	13,000	260	130,067	4,428
Wall-eyed pike.....	.....	.....	.....	.....	.....	.....	2,000	200	.....	.....	2,000	200
<b>Total.....</b>	<b>1,339,205</b>	<b>59,592</b>	<b>882,502</b>	<b>33,869</b>	<b>196,392</b>	<b>7,060</b>	<b>48,072</b>	<b>2,906</b>	<b>193,200</b>	<b>7,520</b>	<b>2,629,971</b>	<b>110,947</b>

1888.

Alewives.....	227,407	\$2,835	308,750	\$2,800	.....	.....	.....	.....	.....	.....	536,157	\$5,635
Alewives, salted.....	.....	.....	117,000	2,730	.....	.....	.....	.....	.....	.....	117,000	2,730
Black bass.....	.....	.....	.....	.....	.....	.....	7,680	\$768	.....	.....	7,680	768
Catfish.....	400	20	88,000	4,400	112,240	\$4,935	26,116	904	.....	.....	226,758	10,340
Carp.....	.....	.....	.....	.....	.....	.....	.....	.....	5,500	\$275	5,500	275
Eels.....	.....	.....	10,300	515	23,605	1,428	12,080	772	177,500	7,100	213,185	9,300
Perch.....	.....	.....	.....	.....	.....	.....	900	45	.....	.....	18,200	1,123
Shad.....	1,027,608	54,056	359,592	22,286	.....	.....	.....	.....	.....	.....	1,387,200	76,042
Striped bass.....	.....	.....	16,500	1,650	.....	.....	2,600	260	.....	.....	19,100	1,910
Sturgeon.....	63,000	720	.....	.....	.....	.....	.....	.....	.....	.....	63,000	720
Suckers.....	.....	.....	83,750	3,350	32,400	808	.....	.....	18,000	260	128,150	4,418
Wall-eyed pike.....	.....	.....	.....	.....	.....	.....	2,200	220	.....	.....	2,200	220
<b>Total.....</b>	<b>1,318,415</b>	<b>58,231</b>	<b>983,892</b>	<b>37,731</b>	<b>168,245</b>	<b>7,174</b>	<b>51,576</b>	<b>3,050</b>	<b>196,000</b>	<b>7,635</b>	<b>2,712,126</b>	<b>113,827</b>

DELAWARE.

All the commercial fisheries of this State are included in the tables.

There has been little or no change in the general fisheries of Delaware since the census year, except in the oyster industry, in which there has been a remarkable decline, all the more noticeable because of the increase in this fishery in New Jersey, on the opposite side of Delaware Bay \* The oyster yield in 1888 was 41,855 bushels; in 1880 it was 300,000 bushels, or about seven times as large.

A limited menhaden industry has been developed in recent years; two factories have been built by Connecticut capitalists at Lewes; these have been supplied by four or five fishing steamers hailing from Connecticut ports; their catch has necessarily been credited to the localities where they are owned. The shore industry and the output of the factory are assigned to Delaware, where they properly belong.

84. Table of persons employed.

How engaged.	1887.	1888.
On fishing vessels .....	76	97
On transporting vessels .....	53	48
On boats .....	1,847	1,818
On shore—in factories, etc .....	131	131
Total .....	2,107	2,094

85. Table of apparatus and capital.

Designation.	1887.		1888.	
	Number.	Value.	Number.	Value.
Vessels fishing * .....	22	\$24,025	20	\$25,100
Outfit .....		1,117		1,687
Vessels transporting † .....	17	26,800	17	19,450
Outfit .....		045		590
Boats .....	1,021	38,495	1,019	38,800
Apparatus of capture—vessel fisheries:				
Seine .....	1	20		
Dredges and tongs .....	107	2,059	142	2,773
Lines .....	8	4		
Apparatus of capture—shore fisheries:				
Seine .....	220	12,254	229	12,101
Gill nets .....	1,429	40,140	1,454	46,101
Pound nets .....	10	750	11	750
Fyke nets .....	698	1,813	720	1,804
Lobster and eel pots .....	1,237	1,120	1,167	1,056
Cast nets, hoop nets, and dip nets .....	76	221	77	228
Crabbing and terrapin outfits .....	215	113	217	112
Tongs and rakes .....	145	685	146	694
Lines .....		88		99
Miscellaneous apparatus .....	58	113	61	119
Shore property, factories, etc .....		49,700		49,040
Cash capital .....		40,500		30,500
Total capital .....		246,761		232,004

\* Tonnage in 1887, 258.44; in 1888, 321.84.

† Tonnage in 1887, 446.35; in 1888, 315.29.

\* The difference in the results of the oyster fishery in the two States is ascribed to the varying methods of conducting the industry. In Delaware the fishermen have depended chiefly upon the crops from the natural beds, while in New Jersey a large amount of artificial planting is done each season.

86. Table of products.

Species.	1887.		1888.	
	Pounds.	Value.	Pounds.	Value.
<i>Fish.</i>				
Alowives .....	1, 149, 955	\$12, 508	941, 986	\$10, 925
Catfish .....	91, 219	5, 804	92, 406	5, 877
Croakers .....	121, 972	4, 792	97, 887	3, 728
Eels .....	436, 500	22, 887	432, 613	23, 160
Flounders .....	27, 465	989	22, 030	805
Kingfish .....	17, 750	888	22, 400	1, 120
Menhaden .....	227, 502	1, 588	224, 765	1, 598
Mullet .....	17, 026	440	16, 760	438
Perch .....	256, 798	15, 364	242, 868	14, 917
Pike .....	26, 268	2, 073	25, 389	2, 031
Sea bass .....	4, 400	192	1, 560	78
Shad .....	1, 270, 492	47, 020	1, 380, 216	51, 999
Squeteague .....	2, 377, 209	15, 908	2, 451, 731	16, 472
Striped bass .....	110, 001	12, 048	116, 433	11, 780
Sturgeon .....	2, 824, 650	25, 051	2, 800, 350	28, 132
Suckers .....	5, 110	306	5, 050	296
Miscellaneous* .....	8, 195	110	3, 017	91
<i>Shellfish, crustaceans, etc.</i>				
Clams .....	12, 500	2, 139	12, 820	2, 209
Crabs, hard-shell .....	7, 766	123	7, 033	111
Crabs, horse-shoe .....	864, 000	884	810, 000	616
Crabs, soft-shell .....	107, 802	18, 034	144, 560	11, 343
Lobsters .....	39, 000	910	39, 000	910
Maninosees .....	350	31	350	31
Oysters .....	276, 100	17, 526	292, 985	17, 920
Shrimp .....	900	450	920	460
Torrapin .....	20, 484	2, 037	-20, 577	1, 972
Turtle .....	4, 100	318	4, 335	325
<b>Total</b> .....	<b>10, 396, 059</b>	<b>211, 090</b>	<b>10, 225, 941</b>	<b>209, 553</b>

\* Includes bluefish, sheepshead, carp, sunfish, bitterheads, etc.

87. Table of secondary products.

Designation.	1887.		1888.	
	Quantity.	Value.	Quantity.	Value.
Caviare .....	178, 000 pounds..	\$18, 512	183, 000	\$26, 352
Oil .....	232, 300 gallons..	61, 829	153, 870	48, 572
Fertilizer .....	3, 000 tons..	57, 030	1, 820	30, 700
<b>Total</b> .....		<b>137, 371</b>		<b>105, 624</b>

88. Table showing by species the products of the vessel fisheries of Delaware.

Species.	1887.		1888.	
	Pounds.	Value.	Pounds.	Value.
Perch .....	200	\$12	.....	.....
Sea bass .....	8, 506	340	.....	.....
Striped bass .....	200	12	.....	.....
Oysters .....	210, 245	23, 187	280, 303	\$28, 238
<b>Total</b> .....	<b>219, 145</b>	<b>23, 551</b>	<b>280, 303</b>	<b>28, 238</b>

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89. Table showing by apparatus and species the yield of the shore fisheries of Delaware in 1887, exclusive of the shellfish, crustacean, and reptilian fisheries.

Species.	Gill nets.		Haul seines.		Pound nets.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives .....	721,373	\$6,556	424,442	\$5,983		
Catfish .....	3,050	100	10,500	1,194	3,200	\$320
Croakers .....	84,950	3,816	45,022	970		
Eels .....			47,780	4,019	300	15
Flounders .....			26,875	955		
Kingfish .....	17,750	888				
Menhaden .....	162,219	1,128	58,180	231		
Mullet .....	13,825	327	9,333	311		
Perch .....	121,881	8,085	118,406	6,512	5,713	208
Pike .....	20,487	1,667	4,831	330		
Shad .....	1,103,744	42,850	152,868	4,431		
Squeteague .....	43,752	1,976	2,309,047	13,302		
Striped bass .....	45,400	5,967	62,341	5,054	4,807	664
Sturgeon .....	2,824,050	25,051				
Suckers .....	1,200	86	3,910	220		
Miscellaneous* .....			2,500	50	215	11
<b>Total .....</b>	<b>5,464,281</b>	<b>98,557</b>	<b>3,286,035</b>	<b>43,668</b>	<b>14,295</b>	<b>1,218</b>

Species.	Fyke nets.		Pots.		Spears.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives .....	740	\$19				
Catfish .....	36,618	2,370				
Eels .....	9,432	482	120,144	\$8,077	244,850	\$9,794
Mullet .....	1,070	26				
Perch .....	10,498	553				
Pike .....	950	76				
Sea bass .....	1,400	42				
Shad .....	2,000	70				
Striped bass .....	950	106				
<b>Total .....</b>	<b>63,658</b>	<b>3,744</b>	<b>120,144</b>	<b>8,077</b>	<b>244,850</b>	<b>9,794</b>

Species.	Lines.		Minor forms of apparatus.		Total.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives .....			3,600	\$100	1,150,155	\$12,058
Catfish .....	8,322	\$540	20,528	1,220	91,218	5,804
Croakers .....					129,972	4,793
Eels .....	5,000	500			430,506	22,887
Flounders .....			580	34	27,455	983
Kingfish .....					17,750	868
Menhaden .....					220,399	1,359
Mullet .....			300	5	24,528	669
Perch .....			300	6	256,798	15,364
Pike .....					26,268	2,073
Sea bass .....	3,000	150			4,400	192
Shad .....			10,880	278	1,270,492	47,629
Squeteague .....	24,500	630			2,377,299	15,908
Striped bass .....	2,383	289	100	10	116,041	12,087
Sturgeon .....					2,824,050	25,051
Suckers .....					5,110	306
Miscellaneous* .....	500	50			3,215	111
<b>Total .....</b>	<b>43,705</b>	<b>2,156</b>	<b>30,288</b>	<b>1,653</b>	<b>8,982,256</b>	<b>168,797</b>

\* Includes bluefish, sunfish, black bass, sheepshead, carp, and other minor species.

90. Table showing by apparatus and species the yield of the shore fisheries of Delaware in 1888, exclusive of the shellfish, crustacean, and reptilian fisheries.

Species.	Gill nets.		Haul seines.		Pound nets.		Fyke nets.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alowives.....	549,872	\$5,205	389,069	\$5,530			745	\$20
Catfish.....	3,050	100	15,160	982	3,000	\$300	38,692	2,480
Croakers.....	65,453	2,878	32,434	850				
Eels.....			50,830	4,253			10,250	500
Flounders.....	930	50	20,000	715			2,000	40
Kingfish.....	22,400	1,120						
Menhaden.....	157,396	1,093	59,500	246				
Mullet.....	12,860	316	10,550	355			600	18
Porch.....	111,050	7,630	122,478	6,756	1,850	136	7,190	340
Pike.....	20,194	1,667	4,345	296			850	68
Shad.....	1,217,072	46,444	109,984	5,116			2,480	86
Squeteague.....	26,492	1,274	2,410,139	14,736				
Striped bass.....	43,574	5,731	61,983	5,162	5,000	560	375	39
Sturgeon.....	2,800,350	28,132						
Suckers.....	1,200	86	3,850	210				
Miscellaneous*.....			2,518	51	217	11		
Total.....	5,031,802	101,876	3,350,440	45,257	10,007	1,007	63,002	3,650

Species.	Pots.		Spears.		Lines.		Minor forms of apparatus.		Total.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alowives.....							2,500	\$80	942,780	\$10,025
Catfish.....					8,422	\$520	24,172	1,425	92,400	5,877
Croakers.....									97,887	3,728
Eels.....	114,633	\$7,819	251,700	\$10,068	5,200	520			432,613	23,160
Flounders.....									22,930	805
Kingfish.....									22,400	1,120
Menhaden.....									216,895	1,338
Mullet.....							620	9	24,030	698
Porch.....							300	6	242,808	14,917
Pike.....									25,369	2,031
Sea bass.....					1,560	78			1,500	78
Shad.....							12,080	303	1,401,616	51,949
Squeteague.....					15,100	442			2,451,731	16,452
Striped bass.....					2,383	286	100	10	116,415	11,788
Sturgeon.....									2,800,350	28,132
Suckers.....									5,050	296
Miscellaneous*.....					300	30			3,035	92
Total.....	114,633	7,819	251,700	10,068	32,965	1,876	39,772	1,833	8,900,561	173,386

\*Includes bluefish, sunfish, black bass, sheepshead, carp, and other minor species.

91. Table showing the extent of the menhaden industry of Delaware.

Designation.	1887.	1888.
Number of factories in operation.....	2	2
Value of factories.....	\$43,300	\$43,500
Amount of cash capital.....	\$10,000	\$30,000
Number of shoremen employed.....	88	88
Number of fishermen employed.....	107	84
Number of steam vessels employed.....	5	4
Net tonnage.....	368.11	305.57
Value.....	\$49,000	\$41,000
Value of outfit.....	\$8,400	\$9,000
Number of menhaden handled.....	34,400,000	24,000,000
Value to fishermen.....	\$16,521	\$32,040
Number of gallons of oil made.....	232,300	153,870
Value as sold.....	\$61,829	\$48,572
Number of tons of scrap produced.....	3,000	1,800
Value as sold.....	\$57,030	\$30,700

## MARYLAND.

All of the commercial fisheries of the State, with the exception of those of the Potomac River, are included in these tables. Reliable figures show 777 persons to have been engaged in the fisheries of this omitted region in 1888. They had boats and apparatus valued at \$70,890, and took products to the value of \$320,243, chiefly oysters and anadromous fish. These items do not enter into the tables.

Maryland now, as in 1880, leads all other States in number of persons employed, showing an increase since that year of more than 5,000. It is next to Massachusetts in capital invested, and the fishing fleet is much larger than that of any other State; but owing to the decadence in the oyster industry, the most important fishery in the State, the value of its products shows a considerable decline. In some fisheries there has been a gratifying increase, and in a few cases a remarkable advance. One very striking instance of this kind is the pound-net fishery. In 1880 there were reported only 83 pound nets, but in 1888 there were 599 in operation, not including the Potomac River, where there were over 100 more. There has been a large advance in the yield of shad, nearly 2,000,000 pounds more being taken in 1888 than in 1880. Nevertheless, the State has lost rank in this branch; in 1880 it headed the list, but now holds only fourth place.

92. Table of persons employed.

How engaged.	1887.	1888.
On fishing vessels .....	8,353	8,407
On transporting vessels .....	1,118	1,042
On fishing boats .....	13,825	14,195
On transporting boats .....	40	51
On shore .....	8,104	8,256
Total .....	31,449	31,951

93. Table of apparatus and capital.

Designation.	1887.		1888.	
	Number.	Value.	Number.	Value.
Vessels fishing* .....	1,310	\$1,121,020	1,300	\$1,012,785
Outfit .....		310,664		325,495
Vessels transporting† .....	327	518,970	300	423,560
Outfit .....		17,065		15,230
Boats fishing .....	7,517	368,042	7,751	380,030
Boats transporting .....	26	6,050	27	6,200
Apparatus of capture—vessel fisheries:				
Dredges, tongs, etc. ....	3,142	64,538	3,179	80,387
Sennos .....	21	10,500	24	12,200
Hand lines .....	51	17	48	15
Apparatus of capture—shore fisheries:				
Dredges, tongs, rakes, etc. ....	10,095	52,864	10,409	54,053
Pound nets .....	391	36,045	430	38,765
Stake weirs .....	179	2,210	160	2,095
Haul seines .....	425	50,105	455	53,700
Fyke nets .....	7,333	20,052	7,833	30,887
Gill nets .....	7,069	42,098	7,460	44,484
Trammel nets .....	30	2,625	39	2,775
Eel pots .....	2,095	2,735	3,509	3,216
Hand lines, trawl lines, trot lines, etc. ....		1,828		1,783
Miscellaneous nets and minor apparatus .....	3,440	5,228	3,780	6,228
Shore property .....		1,723,820		1,753,659
Cash capital .....		1,956,074		2,020,403
Total .....		6,343,056		6,288,060

\* Tonnage in 1887, 23,659.10; in 1888, 23,242.98.

† Tonnage in 1887, 10,509.52; in 1888, 10,213.46.

94. Table of products by vessel and shore fisheries.

Species.	1887.		1888.	
	Pounds.	Value.	Pounds.	Value.
<b>Vessel fisheries:</b>				
Bluefish.....	1,000	\$10	1,200	\$45
Menhaden.....	22,448,400	43,639	21,473,280	52,678
Sea bass.....	185,000	7,000	150,672	6,170
Spanish mackerel.....	475	95	500	100
Oysters.....	28,475,251	1,487,400	31,356,669	* 1,666,545
<b>Total.....</b>	<b>51,110,120</b>	<b>1,538,174</b>	<b>55,976,321</b>	<b>1,725,536</b>
<b>Shore fisheries:</b>				
Alewives.....	9,405,170	64,336	8,938,374	67,501
Alewives, salted.....	1,044,600	24,772	2,548,400	42,440
Alewives, smoked.....	12,500	165	25,000	350
Bluefish.....	382,259	17,911	574,743	27,249
Catfish.....	1,289,516	42,303	1,262,113	41,878
Eels.....	483,435	22,981	517,449	24,582
Flatfish and flounders.....	18,000	707	16,030	599
Menhaden.....	1,114,800	3,362	1,188,908	3,597
Menhaden, salted.....	44,600	776	49,600	861
Mullet and suckers.....	261,047	5,880	264,963	5,895
Perch, white.....	966,445	46,589	999,278	47,628
Perch, yellow.....	1,093,273	26,847	1,098,696	27,202
Pike.....	521,146	33,496	577,745	37,286
Sea bass.....	24,375	730	28,000	840
Shad.....	4,040,820	146,951	4,868,435	176,655
Sheepshead.....	9,605	662	9,899	677
Spanish mackerel.....	13,770	1,898	15,177	2,024
Spots and croakers.....	316,291	12,654	318,487	12,915
Squeteague.....	524,727	10,477	537,411	18,382
Squeteague, salted.....	3,400	133	7,800	288
Striped bass.....	1,139,950	66,873	1,123,064	66,856
Sturgeon.....	7,800	296	7,800	312
Sunfish.....	107,971	2,656	100,168	2,509
Miscellaneous fish.....	41,647	1,465	44,427	1,543
Clams ( <i>Venus mercenaria</i> ).....	334,976	11,405	326,784	11,270
Oysters.....	28,562,638	1,196,035	28,370,937	1,211,245
Crabs, hard.....	2,757,638	36,969	2,674,675	37,438
Crabs, soft.....	1,636,530	133,788	2,208,829	161,331
Shrimp.....	8,050	3,880	8,050	3,880
Frogs.....	1,875	256	1,875	257
Terrapin.....	77,751	21,322	73,848	20,579
Turtle.....	25,555	1,433	24,947	1,401
<b>Total.....</b>	<b>50,871,850</b>	<b>1,970,008</b>	<b>58,811,792</b>	<b>2,087,601</b>
<b>Total vessel and shore fisheries:</b>				
Alewives.....	9,405,170	64,336	8,938,374	67,501
Alewives, salted.....	1,044,600	24,772	2,548,400	42,440
Alewives, smoked.....	12,500	165	25,000	350
Bluefish.....	382,259	17,951	575,943	27,294
Catfish.....	1,289,516	42,303	1,262,113	41,878
Eels.....	483,435	22,981	517,449	24,582
Flatfish and flounders.....	18,000	707	16,030	599
Menhaden.....	23,563,280	47,001	25,662,188	56,275
Menhaden, salted.....	44,600	776	49,600	861
Mullet and suckers.....	261,047	5,880	264,963	5,895
Perch, white.....	966,445	46,589	999,278	47,628
Perch, yellow.....	1,093,273	26,847	1,098,696	27,202
Pike.....	521,146	33,496	577,745	37,286
Sea bass.....	209,375	7,730	178,672	7,010
Shad.....	4,040,820	146,951	4,868,435	176,655
Sheepshead.....	9,605	662	9,899	677
Spanish mackerel.....	14,245	1,993	15,677	2,124
Spots and croakers.....	316,291	12,654	318,487	12,915
Squeteague.....	524,727	10,477	537,411	18,382
Squeteague, salted.....	3,400	133	7,800	288
Striped bass.....	1,139,950	66,873	1,123,064	66,856
Sturgeon.....	7,800	296	7,800	312
Sunfish.....	107,971	2,656	100,168	2,509
Miscellaneous fish.....	41,647	1,465	44,427	1,543
Clams ( <i>Venus mercenaria</i> ).....	334,976	11,405	326,784	11,270
Oysters.....	57,037,510	2,063,435	56,721,006	2,877,790
Crabs, hard.....	2,757,638	36,969	2,674,675	37,438
Crabs, soft.....	1,636,530	133,788	2,208,829	161,331
Shrimp.....	8,050	3,880	8,050	3,880
Frogs.....	1,875	256	1,875	257
Terrapin.....	77,751	21,322	73,848	20,579
Turtle.....	25,555	1,433	24,947	1,401
<b>Total.....</b>	<b>107,981,976</b>	<b>3,514,182</b>	<b>114,788,113</b>	<b>3,813,199</b>

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95. Table showing by apparatus and species the yield of the shore fisheries of Maryland in 1887, exclusive of the shellfish, crustacean, and reptilian fisheries.

Species.	Haul seines.		Gill nets.		Trammel nets.		Pound nets.		Fyke nets.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alowives .....	3,791,302	\$20,978	977,240	\$13,508	.....	.....	4,293,172	\$21,106	72,256	\$924
Alowives, salted .....	1,018,690	24,327	6,000	95	.....	.....	.....	.....	.....	.....
Bluefish .....	53,040	2,561	241,116	11,678	.....	.....	18,379	1,102	.....	.....
Catfish .....	315,852	10,701	36,532	893	1,720	\$77	140,888	4,141	401,684	15,459
Eels .....	20,367	674	746	23	.....	.....	52,098	2,045	123,968	5,349
Flatfish and flounders .....	3,750	130	.....	.....	.....	.....	11,800	485	1,400	50
Menhaden .....	622,740	1,828	337,020	927	.....	.....	110,100	487	36,000	120
Menhaden, salted .....	42,000	746	.....	.....	.....	.....	.....	.....	2,000	30
Mullet and suckers .....	56,669	1,265	88,943	2,114	2,000	50	69,085	1,409	15,350	315
Perch, white .....	328,842	17,273	179,036	7,884	1,000	50	202,273	9,076	206,670	9,447
Perch, yellow .....	269,825	7,522	81,065	1,352	.....	.....	334,461	8,724	378,361	8,599
Pike .....	139,000	8,583	138,179	7,722	44,024	3,170	92,806	6,306	107,132	7,715
Sea bass .....	21,000	630	.....	.....	.....	.....	1,500	45	.....	.....
Shad .....	992,904	34,913	535,413	90,857	.....	.....	472,789	19,512	39,684	1,669
Spanish mackerel .....	.....	.....	13,770	1,898	.....	.....	.....	.....	.....	.....
Spots and croakers .....	86,071	3,969	9,585	373	.....	.....	.....	.....	.....	.....
Squeteague .....	54,320	2,070	46,887	1,040	.....	.....	10,675	710	1,000	48
Squeteague, salted .....	.....	.....	1,400	63	.....	.....	7,775	410	2,800	112
Striped bass .....	463,640	42,842	171,122	13,964	29,000	2,920	307,276	24,794	83,211	6,834
Sturgeon .....	.....	.....	7,800	296	.....	.....	.....	.....	.....	.....
Sunfish .....	54,211	1,368	3,333	100	3,300	100	11,667	350	35,460	738
Miscellaneous species .....	1,080	68	11,367	530	.....	.....	13,300	372	500	15
<b>Total .....</b>	<b>8,930,408</b>	<b>188,448</b>	<b>4,680,583</b>	<b>150,314</b>	<b>81,044</b>	<b>6,367</b>	<b>6,171,833</b>	<b>102,063</b>	<b>1,697,396</b>	<b>57,424</b>

Species.	Bow nets, scoop nets, and cast nets.		Pots.		Spears.		Lines.		Total.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alowives .....	271,200	\$1,642	.....	.....	.....	.....	.....	.....	9,405,170	\$64,330
Alowives, salted .....	20,000	350	.....	.....	.....	.....	.....	.....	1,644,600	24,772
Alowives, smoked .....	12,500	105	.....	.....	.....	.....	.....	.....	12,500	105
Bluefish .....	.....	.....	.....	.....	.....	.....	69,725	\$2,570	382,250	17,011
Catfish .....	7,600	190	.....	.....	.....	.....	289,260	10,842	1,289,516	42,303
Eels .....	.....	.....	252,539	\$13,213	30,624	\$1,609	2,193	68	483,436	22,931
Flatfish and flounders .....	.....	.....	.....	.....	.....	.....	1,050	42	18,000	707
Menhaden .....	.....	.....	.....	.....	.....	.....	.....	.....	1,114,860	8,362
Menhaden, salted .....	.....	.....	.....	.....	.....	.....	.....	.....	44,600	776
Mullet and suckers .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Perch, white .....	23,200	580	.....	.....	.....	.....	5,800	147	261,047	5,880
Perch, yellow .....	28,930	1,140	.....	.....	.....	.....	19,794	820	906,445	46,589
Pike .....	26,096	595	.....	.....	.....	.....	3,455	55	1,093,273	26,847
Sea bass .....	.....	.....	.....	.....	.....	.....	.....	.....	521,146	33,496
Shad .....	.....	.....	.....	.....	.....	.....	1,875	56	24,375	730
Sheepshead .....	.....	.....	.....	.....	.....	.....	.....	.....	4,040,820	146,951
Spanish mackerel .....	.....	.....	.....	.....	.....	.....	0,605	602	9,605	662
Spots and croakers .....	.....	.....	.....	.....	.....	.....	.....	.....	13,770	1,898
Squeteague .....	.....	.....	.....	.....	.....	.....	203,060	7,554	316,291	12,654
Squeteague, salted .....	.....	.....	.....	.....	.....	.....	412,945	11,936	524,727	10,477
Striped bass .....	13,750	862	.....	.....	.....	.....	2,090	70	3,400	133
Sturgeon .....	.....	.....	.....	.....	.....	.....	71,942	4,657	1,139,950	66,873
Sunfish .....	.....	.....	.....	.....	.....	.....	.....	.....	7,800	296
Miscellaneous species .....	.....	.....	.....	.....	.....	.....	.....	.....	107,971	2,650
<b>Total .....</b>	<b>403,276</b>	<b>5,524</b>	<b>252,539</b>	<b>13,213</b>	<b>30,624</b>	<b>1,609</b>	<b>1,107,604</b>	<b>39,958</b>	<b>23,467,207</b>	<b>570,920</b>



96. Table showing by apparatus and species the yield of the shore fisheries of Maryland in 1888, exclusive of the shellfish, crustacean, and reptilian fisheries.

Species.	Haul seines.		Gill nets.		Trammel nets.		Pound nets.		Fyke nets.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives	3,845,782	\$28,561	988,650	\$13,080			3,751,386	\$22,301	81,956	\$1,016
Alewives, salted	2,522,400	41,095	6,000	95						
Bluefish	54,510	2,660	439,004	21,705			17,129	1,071		
Cattfish	302,941	10,360	40,216	982	1,800	\$61	142,028	4,136	507,168	16,494
Eels	12,601	531	746	23			67,810	2,677	133,965	5,706
Flatfish and flounders	2,375	85					10,880	460	1,525	55
Menhaden	598,048	1,746	349,500	1,032			204,460	690	36,000	120
Menhaden, salted	47,000	831							2,000	30
Mullet and suckers	57,543	1,265	78,575	1,857	2,000	50	80,135	1,628	17,510	360
Perch, white	352,823	18,098	199,935	8,872	1,000	50	192,884	9,183	206,379	9,717
Perch, yellow	258,107	6,974	83,153	1,421			341,620	9,020	387,395	9,159
Pike	154,493	9,159	151,225	8,537	56,024	3,930	101,316	6,939	114,587	8,721
Sea bass	24,000	720					2,500	75		
Shad	1,128,865	39,770	3,171,342	111,709			531,029	23,574	37,199	1,605
Spanish mackorel			15,177	2,024						
Spots and croakers	76,072	3,528	8,310	315			14,120	615	1,400	64
Squeteague	48,090	1,933	69,590	2,855			10,775	453	2,890	112
Squeteague, salted			1,400	63						
Striped bass	444,366	42,537	180,886	15,038	35,800	3,576	295,590	23,490	87,477	7,015
Sturgeon			7,350	312						
Sunfish	46,114	1,106	4,167	125	3,700	111	11,067	350	34,460	718
Miscellaneous species	2,700	121	11,367	530			15,800	422	500	15
Total	9,981,290	212,070	5,806,003	101,481	100,324	7,798	5,701,129	107,060	1,652,321	60,907

Species.	Bow, scoop, and cast nets.		Pots.		Spears.		Lines.		Total.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives	270,000	\$1,634							8,038,374	\$67,501
Alewives, salted	20,000	350							2,548,400	42,440
Alewives, smoked	25,000	350							25,000	350
Bluefish							64,100	\$1,813	574,743	27,249
Cattfish							200,360	9,633	1,262,113	41,878
Eels	7,600	192					1,800	88	517,440	24,582
Flatfish and flounders							1,250	50	16,030	590
Menhaden									1,188,968	3,597
Menhaden, salted									49,000	861
Mullet and suckers							6,000	155	264,963	5,895
Perch, white	23,200	580					10,577	832	999,278	47,827
Perch, yellow	26,680	1,055					4,125	65	1,008,690	27,202
Pike	24,206	554							577,745	37,286
Sea bass							1,500	45	28,000	840
Shad									4,808,435	170,855
Sheephead							9,899	677	9,899	677
Spanish mackorel									15,177	2,024
Spots and croakers							218,880	7,614	318,782	12,136
Squeteague							405,256	13,029	537,411	18,382
Squeteague, salted							6,400	225	7,800	288
Striped bass	12,450	792					60,435	4,399	1,123,004	96,856
Sturgeon									7,350	312
Sunfish									100,108	2,500
Miscellaneous species							14,000	455	44,427	1,543
Total	409,826	5,507	278,399	14,378	22,068	1,209	1,079,042	39,070	25,121,092	639,480

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## 97. Summary by customs districts of the vessel fisheries of Maryland.

Designation.	Eastern.		Baltimore.		Annapolis.		Total.	
	1887.	1888.	1887.	1888.	1887.	1888.	1887.	1888.
<b>Number and nationality of fishermen:</b>								
Americans, white .....	1,607	1,617	2,934	3,350	106	190	4,707	5,160
Americans, colored .....	1,440	1,432	401	404	146	130	2,047	1,972
All others .....	1,093	1,157	495	109	11	.....	1,599	1,266
<b>Total .....</b>	<b>4,140</b>	<b>4,206</b>	<b>3,890</b>	<b>3,869</b>	<b>323</b>	<b>332</b>	<b>8,353</b>	<b>8,407</b>
<b>Number and nationality of crews on transports:</b>								
Americans, white .....	311	247	418	401	76	74	805	732
Americans, colored .....	133	125	148	162	27	24	398	311
All others .....	4	8	1	1	.....	.....	5	9
<b>Total .....</b>	<b>448</b>	<b>380</b>	<b>567</b>	<b>564</b>	<b>103</b>	<b>98</b>	<b>1,111</b>	<b>1,042</b>
Number of vessels fishing .....	710	717	541	527	59	65	1,310	1,309
Number of vessels transporting .....	125	106	170	171	32	32	327	309
Net tonnage of vessels fishing .....	10,775.82	10,473.29	11,971.50	11,925.08	911.78	844.61	23,659.10	23,242.98
Net tonnage of vessels transporting .....	4,182.78	3,743.23	5,684.99	5,785.91	701.78	684.32	10,569.52	10,213.46
Value of vessels fishing .....	\$591,325	\$517,840	\$488,195	\$418,570	\$42,100	\$40,375	\$1,121,620	\$1,012,785
Value of vessels transporting .....	208,915	155,000	273,930	237,630	36,125	30,050	518,970	423,580
Value of outfit, gear, provisions, fuel, etc., of vessels fishing .....	203,764	216,720	192,855	194,290	15,100	13,087	411,719	424,097
Value of provisions, fuel, etc., of vessels transporting .....	6,720	4,705	8,545	8,600	1,800	1,885	17,065	15,230
Value of catch of vessels fishing .....	679,781	789,311	811,881	874,660	46,512	61,567	1,538,174	1,725,533
Value of products transported .....	514,743	477,166	725,950	590,901	88,600	95,331	1,320,293	1,163,398

## 98. Table showing the extent of the menhaden industry of Maryland.

Designation.	1887.	1888.
Number of factories in operation .....	3	3
Value of factories .....	\$17,800	\$27,800
Amount of cash capital .....	\$28,500	\$30,500
Number of shoremen employed .....	48	55
Number of fishermen employed .....	81	71
Number of steam vessels employed .....	2	3
Net tonnage .....	136.28	198.80
Value .....	\$14,000	\$20,000
Value of outfit .....	\$4,800	\$5,000
Number of sailing vessels employed .....	3	2
Net tonnage .....	111.53	58.10
Value .....	\$5,100	\$3,300
Value of outfit .....	\$3,500	\$2,200
Number of vessels employed as "carryaways" .....	4	3
Net tonnage .....	94.35	63.10
Value .....	\$4,800	\$3,100
Value of outfit .....	\$250	\$200
Number of menhaden handled .....	12,210,000	18,974,050
Value to fishermen .....	\$16,789	\$21,345
Number of gallons of oil made .....	71,500	44,850
Value as sold .....	\$10,115	\$12,008
Number of tons of scrap produced .....	1,125	1,643
Value as sold .....	\$18,900	\$28,134

VIRGINIA.

The tables for this State include all commercial fisheries excepting those of the James and Potomac Rivers. Nearly complete data; however, have been obtained for these rivers and furnish a basis for the following estimates, which are in addition to any figures in the tabulated statements: In 1888 the fisheries of these rivers gave employment to 2,512 fishermen and \$162,100 invested capital, and the value of products amounted to \$555,610.

Considered as a whole, there has been a decline since 1880 in the fisheries of this State in the items of persons employed and value of catch, though the capital invested has increased. The decrease is almost entirely attributable to the falling off in the oyster industry. There has been a phenomenal increase in the pound-net fishery, particularly in the quantity of apparatus used. The catch of shad is much larger than formerly; Virginia now takes precedence of all other States in the shad fishery, though in 1880 it ranked third.

99. Table of persons employed.

How engaged.	1887.	1888.
On vessels fishing .....	3,108	2,909
On vessels transporting .....	882	940
On boats .....	5,397	6,545
On shore .....	2,154	2,161
Total .....	11,541	12,615

100. Table of apparatus and capital.

Designation.	1887.		1888.	
	No.	Value.	No.	Value.
Vessels fishing*	622	\$470,234	584	\$432,050
Outfit .....		135,695		128,040
Vessels transporting	281	287,750	310	307,070
Outfit .....		22,475		25,030
Boats .....	3,920	175,225	4,480	203,793
Apparatus of capture—vessel fisheries:				
Purse seines .....	54	28,800	48	26,000
Haul seines .....	7	990	0	1,110
Eel pots .....			40	30
Fyke nets .....			2	30
Dredges and tongs .....	3,702	35,741	3,174	30,704
Apparatus of capture—shore fisheries:				
Seines .....	130	13,767	134	15,457
Pound nets .....	608	164,365	991	227,015
Gill nets .....	1,781	12,014	1,890	12,465
Fyke nets .....	153	5,305	177	6,195
Tongs and rakes .....		18,543		18,990
Minor apparatus (lines, etc.) .....		1,805		2,404
Shore property, factories, etc. ....		1462,957		1404,203
Cash capital .....		300,300		306,300
Total .....		2,141,050		2,208,225

\* Tonnage in 1887, 9,088.01; in 1888, 8,522.43.

† Tonnage in 1887, 5,643.38; in 1888, 6,384.71.

‡ Not including \$26,400 in 1887, and \$33,700 in 1888, value of menhaden factories temporarily idle.

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101. Table of products by vessel and shore fisheries.

Species.	1887.		1888.	
	Pounds.	Value.	Pounds.	Value.
<b>Vessel fisheries:</b>				
Bluefish .....			56,834	\$2,075
Menhaden .....	56,930,400	\$113,863	51,374,965	97,274
Striped bass .....			1,400	126
Spanish mackerel .....			8,700	805
Clams .....	11,856	734	2,904	218
Oysters .....	9,230,709	456,797	8,435,931	434,064
Turtles .....			4,400	52
<b>Total .....</b>	<b>66,172,965</b>	<b>571,394</b>	<b>59,885,134</b>	<b>534,764</b>
<b>Shore fisheries:</b>				
Alowives .....	3,822,635	18,563	5,844,805	28,392
Alowives, salted .....	570,000	11,022	608,200	11,977
Bluefish .....	1,126,100	50,364	1,790,110	86,252
Bluefish, salted .....	80,000	4,000	132,000	6,600
Bonito ( <i>Elacate</i> ) .....	12,500	400	31,250	1,000
Hickory shad .....	174,438	3,424	206,783	3,093
Menhaden .....	4,638,850	11,777	7,471,048	16,441
Menhaden, salted .....	22,200	600	18,200	485
Mullet .....	99,600	1,990	102,600	2,143
Sea bass .....	9,667	282	9,800	294
Shad .....	3,815,126	172,272	7,056,473	321,634
Sheepshead .....	10,190	488	12,195	588
Striped bass .....	505,454	32,758	777,906	49,971
Spanish mackerel .....	108,000	10,240	231,252	20,164
Spots .....	1,270,809	33,419	1,502,524	39,436
Spots, salted .....	180,000	9,000	200,000	10,000
Squeteague .....	1,099,548	50,660	1,103,678	53,514
Squeteague, salted .....	4,950	200	5,175	210
Miscellaneous .....	1,144,722	8,982	1,280,415	13,412
Clams .....	745,304	36,063	769,896	37,468
Crabs .....	626,820	15,470	956,843	24,609
Oysters .....	11,217,288	546,104	11,145,050	555,148
Terrapin .....	140,256	16,800	143,777	16,965
Turtles .....	29,000	530	33,700	615
<b>Total .....</b>	<b>31,462,437</b>	<b>1,035,417</b>	<b>41,433,680</b>	<b>1,301,391</b>
<b>Total vessel and shore fisheries:</b>				
Alowives .....	3,822,635	18,563	5,844,805	28,392
Alowives, salted .....	570,000	11,022	608,200	11,977
Bluefish .....	1,126,100	50,364	1,846,944	88,327
Bluefish, salted .....	80,000	4,000	132,000	6,600
Bonito .....	12,500	400	31,250	1,000
Hickory shad .....	174,438	3,424	206,783	3,093
Menhaden .....	61,569,250	125,640	58,846,013	113,715
Menhaden, salted .....	22,200	600	18,200	485
Mullet .....	99,600	1,990	102,600	2,143
Sea bass .....	9,667	282	9,800	294
Shad .....	3,815,126	172,272	7,056,473	321,634
Sheepshead .....	10,190	488	12,195	588
Striped bass .....	505,454	32,758	779,306	50,097
Spanish mackerel .....	108,000	10,240	239,652	21,079
Spots .....	1,270,809	33,419	1,502,524	39,436
Spots, salted .....	180,000	9,000	200,000	10,000
Squeteague .....	1,099,548	50,660	1,103,678	53,514
Squeteague, salted .....	4,950	200	5,175	210
Miscellaneous .....	1,144,722	8,982	1,280,415	13,412
Clams .....	757,160	36,797	772,800	37,706
Crabs .....	626,820	15,470	956,843	24,609
Oysters .....	20,447,977	1,002,901	19,580,081	980,212
Terrapin .....	140,256	16,800	143,777	16,965
Turtles .....	29,000	530	36,100	707
<b>Total .....</b>	<b>97,635,402</b>	<b>1,006,811</b>	<b>101,318,814</b>	<b>1,836,156</b>

102. Summary by customs districts of the vessel fisheries of Virginia in 1887 and 1888

Customs districts.	No. of vessels fishing.		Net tonnage.		Value of vessels.		Value of outfit, gear, provisions, fuel, etc.		Number and nationality of fishermen.					Value of catch.			
	1887.	1888.	1887.	1888.	1887.	1888.	1887.	1888.	1887.		1888.			1887.	1888.		
									Amer. white.	Amer. colored.	All others.	Total.	Amer. white.			Amer. colored.	All others.
Cherrystone.....	174	181	2,728.95	2,921.32	\$152,012	\$171,530	\$63,230	\$71,778	801	237	1,038	882	314	4	1,180	\$170,834	\$197,103
Alexandria.....	7	7	78.49	78.41	3,750	3,675	3,425	3,350	34	6	40	35	6		41	4,285	5,385
Tappanhook.....	72	65	1,603.12	1,388.89	89,210	74,100	43,986	37,256	315	212	531	252	208		460	116,613	103,284
Yorktown.....	140	121	2,084.04	1,700.40	102,100	73,985	37,401	31,490	318	272	7	262	266		528	110,383	77,456
Norfolk and Forts- mouth.....	203	183	1,852.39	1,706.04	102,662	84,650	43,702	36,504	203	592	795	162	513	1	676	145,885	130,798
Petersburgh.....	3	2	28.52	16.76	1,200	376	375		1	7	8	2	6		8	1,505	1,310
Richmond.....	23	25	712.50	710.61	25,300	22,900	5,542	4,408	54	45	99	42	34		70	26,174	24,721
Total.....	622	564	9,088.01	8,522.43	476,234	432,050	197,662	185,131	1,726	1,371	3,108	1,617	1,347	5	2,969	575,689	540,057

  

Customs districts.	No. of ves- sels trans- porting.		Net tonnage.		Value of vessels.		Value of pro- visions, fuel, etc.		Number and nationality of crew.					Value of pro- ducts transported.			
	1887.	1888.	1887.	1888.	1887.	1888.	1887.	1888.	1887.		1888.			1887.	1888.		
									Amer. white.	Amer. colored.	All others.	Total.	Amer. white.			Amer. colored.	All others.
Cherrystone.....	102	116	1,907.10	2,086.97	\$113,025	\$112,100	\$9,959	\$10,350	255	56	311	275	63		338	\$189,926	\$215,842
Alexandria.....	31	43	518.37	926.67	20,850	46,625	2,600	3,455	68	0	77	101	14		115	82,680	102,100
Tappanhook.....	42	41	1,156.55	1,240.81	43,650	46,350	3,053	3,030	71	58	129	69	62		131	140,940	122,212
Yorktown.....	74	71	1,397.44	1,540.28	78,675	72,420	6,644	6,130	136	104	240	148	76		224	300,080	480,349
Norfolk and Forts- mouth.....	29	35	552.54	510.34	27,550	27,275	3,419	3,352	46	69	115	53	67		120	85,708	72,550
Petersburgh.....	3	4	111.36	113.64	4,000	3,200	346	435	4	6	10	7	5		12	3,364	1,793
Richmond.....	281	310	5,643.38	6,394.71	287,750	307,970	26,021	26,752	580	302	882	653	287		940	862,931	1,013,846
Total.....	622	564	9,088.01	8,522.43	476,234	432,050	197,662	185,131	1,726	1,371	3,108	1,617	1,347	5	2,969	575,689	540,057

\*Although no vessels of this district are exclusively engaged in transporting, one vessel in 1887 transported a small amount of products in addition to her catch.

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103. Table showing by apparatus and species the yield of the shore fisheries of Virginia in 1887, exclusive of the shellfish, crustacean, and reptilian fisheries.

Species.	Seines.		Gill nets.		Pound nets.		Fyke nets.		Lines and minor apparatus.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives	49,600	\$248	128,000	\$568	3,645,035	\$17,747				
Alewives, salted					579,000	11,022				
Bluefish	374,600	15,514	90,700	4,650	657,350	30,054			3,450	\$148
Bluefish, salted			30,000	4,000						
Bonito					12,500	400				
Hickory shad	9,500	180			165,438	3,244				
Menhaden	105,000	1,030	116,850	2,037	4,416,500	8,710				
Menhaden, salted			22,200	600						
Mullet	51,900	1,032	16,000	340	12,800	236			18,000	382
Shad	37,165	2,167	187,810	8,510	3,560,431	161,095	9,720	\$500		
Spots	551,961	14,039	586,800	15,130	108,208	3,190			23,840	1,060
Spots, salted	180,000	9,000								
Striped bass	18,307	1,398	14,360	1,010	410,700	26,742	58,030	4,250	4,051	360
Spanish mackerel	7,500	600	11,000	1,100	89,500	8,540				
Sheephead					7,990	400				
Sea bass	800	16							2,200	88
Squeteague	755,980	32,758	66,205	4,055	177,910	9,093	10,200	506	8,867	286
Squeteague, salted	2,700	120							89,247	3,648
Miscellaneous*	163,302	2,255	6,000	710	952,010	4,790	13,400	579	2,250	80
									10,010	648
<b>Total</b>	<b>2,328,315</b>	<b>80,355</b>	<b>1,325,925</b>	<b>42,710</b>	<b>14,795,878</b>	<b>276,763</b>	<b>91,356</b>	<b>5,835</b>	<b>162,815</b>	<b>6,678</b>

## SUMMARY.

Species.	Pounds.	Value.	Species.	Pounds.	Value.
Alewives	3,822,635	\$18,563	Spots, salted	180,000	\$9,000
Alewives, salted	579,000	11,022	Striped bass	505,454	32,758
Bluefish	1,125,100	50,364	Spanish mackerel	108,000	10,240
Bluefish, salted	80,000	4,000	Sheephead	10,190	488
Bonito	12,500	400	Sea bass	9,667	282
Hickory shad	174,488	3,424	Squeteague	1,099,548	50,660
Menhaden	4,038,850	11,777	Squeteague, salted	4,950	200
Menhaden, salted	22,200	600	Miscellaneous*	1,144,722	8,982
Mullet	99,600	1,990			
Shad	3,815,126	172,272	<b>Total</b>	<b>18,703,789</b>	<b>420,441</b>
Spots	1,270,809	33,419			

\* Includes eels, catfish, sunfish, sturgeon, kingfish, flounders, perch, hogfish, scup, drum, croakers, and other minor species.

104. Table showing by apparatus and species the yield of the shore fisheries of Virginia in 1888, exclusive of the shellfish, crustacean, and reptilian fisheries.

Species.	Seines.		Gill nets.		Pound nets.		Fyke nets.		Lines and minor apparatus.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives	62,400	\$312	135,200	\$601	5,647,205	\$27,479				
Alewives, salted					608,200	11,977				
Bluefish	416,200	20,810	121,900	5,080	1,246,700	59,526			5,250	\$230
Bluefish, salted			132,000	6,600						
Bonito					31,250	1,000				
Hickory shad	7,200	144			190,583	3,849				
Menhaden	80,525	990	87,600	1,352	7,302,923	14,099				
Menhaden, salted			18,200	485						
Mullet	53,100	1,098	15,700	380	14,900	283			18,900	382
Shad	67,277	2,600	242,550	11,240	6,734,588	307,194	12,058	\$900		
Spots	544,891	14,068	749,300	19,190	181,403	4,994			26,840	1,180
Spots, salted	200,000	10,000								
Striped bass	24,513	1,788	17,950	1,267	675,800	42,089	54,067	4,207	5,516	552
Spanish mackerel	10,000	1,000	17,250	1,550	204,002	17,634				
Sheephead					9,095	500				
Sea bass	875	20							2,200	88
Squeteague	648,797	28,974	75,200	4,692	278,074	15,519	13,700	681	8,925	274
Squeteague, salted	2,750	122							89,247	3,648
Miscellaneous*	101,167	2,743	7,850	875	1,145,898	8,461	15,400	679	2,425	88
									10,109	654
<b>Total</b>	<b>2,217,695</b>	<b>84,666</b>	<b>1,620,760</b>	<b>53,918</b>	<b>24,281,331</b>	<b>514,614</b>	<b>95,225</b>	<b>6,227</b>	<b>109,403</b>	<b>7,103</b>

104. Table showing by apparatus and species the yield of the shore fisheries of Virginia in 1888, exclusive of the shellfish, crustacean, and reptilian fisheries—Continued.

SUMMARY.

Species.	Pounds.	Value.	Species. *	Pounds.	Value
Alewives .....	5, 844, 805	\$28, 392	Spots.....	1, 502, 524	\$39, 436
Alewives, salted.....	608, 200	11, 977	Spots, salted.....	200, 000	10, 000
Bluefish.....	1, 790, 110	86, 252	Striped bass.....	777, 906	49, 971
Bluefish, salted.....	132, 000	6, 600	Spanish mackerel.....	231, 252	20, 184
Bonito.....	31, 250	1, 000	Shoepshead.....	12, 195	588
Hickory shad.....	206, 783	3, 993	Sea bass.....	9, 800	294
Menhaden.....	7, 471, 048	16, 441	Squeteague.....	1, 103, 678	53, 514
Menhaden, salted.....	18, 200	485	Squeteague, salted.....	5, 175	210
Mullet ( <i>Mugil</i> ).....	102, 606	2, 143	Miscellaneous*.....	1, 280, 415	13, 412
Shad.....	7, 056, 473	321, 634	Total.....	28, 384, 414	666, 526

\* Includes eels, catfish, sunfish, sturgeon, kingfish, flounders, perch, hogfish, scup, drum, croakers, and other minor species.

105.—Table showing the extent of the menhaden industry of Virginia.

Designation.	1887.	1888.
Number of factories in operation.....	20	19
Value of factories.....	\$170, 950	\$161, 150
Amount of cash capital.....	\$205, 300	\$182, 300
Number of shoresmen employed.....	437	345
Number of fishermen employed.....	778	644
Number of steam vessels employed.....	10	11
Net tonnage.....	423, 14	505, 35
Value.....	\$48, 800	\$64, 000
Value of outfit.....	\$19, 900	\$20, 600
Number of sailing vessels employed in fishing.....	54	40
Net tonnage.....	1, 691, 05	1, 263, 00
Value.....	\$80, 750	\$52, 850
Value of outfit.....	\$57, 950	\$39, 350
Number of sailing vessels employed as "carryaways".....	31	20
Net tonnage.....	664, 61	717, 49
Value.....	\$45, 050	\$31, 150
Value of outfit.....	\$2, 400	\$2, 000
Number of menhaden handled.....	128, 415, 000	103, 099, 300
Value to fishermen.....	\$175, 928	\$115, 471
Number of gallons of oil made.....	759, 187	249, 241
Value as sold.....	\$138, 414	\$65, 893
Number of tons of scrap produced.....	0, 564	7, 938
Value as sold.....	\$101, 991	\$155, 894

THE OYSTER FISHERY OF VIRGINIA, 1888.

The tables presented under this head are somewhat more detailed than have been given elsewhere for this fishery. They were originally prepared for a special purpose connected with contemplated changes in the oyster laws of the State; and, aside from the fact that the itemized figures were thus already available for incorporation in this review, it is thought that the importance of the subject warrants the introduction of such detailed statistics. The products will be found to differ somewhat from the preceding tables for the reason that in this case the entire oyster interests of the State are shown, while, as already explained, the regular tables omit consideration of the important boat oyster fishery in the James and Potomac Rivers. The following tabulations enter into the comparative statements which appear elsewhere.

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106. Table of persons employed.

How engaged.	Number.
Vessel fisheries.....	2, 637
Boat fisheries.....	4, 222
Transporting and transplanting only.....	920
Packing houses, etc.....	1, 668
<b>Total.....</b>	<b>9, 447</b>

107. Table of apparatus and capital.

Designation.	Number.	Value.
Fishing vessels.....	554	\$340, 700
Outfit.....		130, 467
Transporting and planting vessels.....	302	304, 145
Outfit.....		26, 370
Boats, exclusive of those on vessels.....	3, 961	120, 200
Dredges.....	410	13, 300
Tongs, rakes, etc.....	8, 831	48, 644
Shore property*.....		81, 000
Cash capital*.....		88, 000
<b>Total investment.....</b>		<b>1, 167, 426</b>

\* Not including the oyster-packing industry.

108. Table of products.

How taken.	Bushels.	Value.
By vessels.....	1, 206, 033	\$434, 304
By boats.....	2, 458, 400	901, 648
<b>Total.....</b>	<b>3, 664, 433</b>	<b>1, 336, 012</b>

109. Table showing by customs districts the number, tonnage, and value of vessels engaged in dredging, tonging, and transporting and planting oysters.

Customs districts.	Number of vessels.				Tonnage.			
	Dredging.	Tonging.	Trans- porting and planting.	Total.	Dredging.	Tonging.	Trans- porting and planting.	Total.
Cherrystone.....	163	9	110	288	2, 445. 68	102. 86	1, 007. 10	4, 455. 64
Alexandria.....	1	1	39	40	6. 60	880. 11		886. 71
Tappahannock.....	46	8	37	91	943. 16	67. 85	1, 154. 50	2, 165. 51
Yorktown.....	5	112	71	188	69. 91	1, 544. 80	1, 640. 28	3, 155. 08
Norfolk.....		183	35	218		1, 706. 04	510. 34	2, 219. 38
Petersburgh.....		2		2		16. 70		16. 70
Richmond.....		25	4	29		712. 50	113. 04	825. 54
<b>Total.....</b>	<b>214</b>	<b>340</b>	<b>302</b>	<b>856</b>	<b>3, 458. 75</b>	<b>4, 157. 50</b>	<b>6, 105. 07</b>	<b>13, 722. 22</b>

Customs districts.	Value of vessels.				Value of apparatus and outfit.			
	Dredging.	Tonging.	Trans- porting and planting.	Total.	Dredging.	Tonging.	Trans- porting and planting.	Total.
Cherrystone.....	\$120, 010	\$4, 720	\$112, 160	\$236, 830	\$69, 258	\$720	\$10, 350	\$80, 328
Alexandria.....		200	44, 600	44, 700		250	3, 180	3, 430
Tappahannock.....	42, 450	3, 650	43, 650	89, 750	22, 201	815	2, 923	26, 029
Yorktown.....	3, 500	60, 420	72, 420	142, 340	790	25, 810	6, 130	32, 730
Norfolk.....		84, 650	27, 275	111, 925		30, 504	3, 352	39, 856
Petersburgh.....		1, 200		1, 200		375		375
Richmond.....		22, 900	3, 200	26, 100		4, 408	435	4, 843
<b>Total.....</b>	<b>165, 960</b>	<b>183, 740</b>	<b>303, 145</b>	<b>652, 845</b>	<b>92, 330</b>	<b>68, 822</b>	<b>26, 370</b>	<b>187, 591</b>



110. Table showing by customs districts the number of white and colored persons employed in different capacities in the vessel fishery for oysters.

Customs districts.	Dredging.		Tonging.		Transporting and trans-planting.		Total.		
	White.	Colored.	White.	Colored.	White.	Colored.	White.	Colored.	Total.
Cherrystone.....	741	306	20	3	275	63	1,036	372	1,408
Alexandria.....				6	92	12	92	18	110
Tappahannock.....	151	148	11	13	62	60	224	221	445
Yorktown.....	9	8	217	244	148	76	374	328	702
Norfolk.....			163	513	53	67	216	580	796
Petersburgh.....			2	6			2	6	8
Richmond.....			42	34	7	5	49	39	88
Total.....	901	462	455	819	637	283	1,903	1,564	3,557

111. Table showing by customs districts and apparatus of capture the yield of the vessel fishery for oysters.

Customs districts.	Dredges.		Tongs.		Total.	
	Bushels.	Value.	Bushels.	Value.	Bushels.	Value.
Cherrystone.....	408,344	\$150,655	8,891	\$3,171	417,235	\$153,826
Alexandria.....			1,000	300	1,000	300
Tappahannock.....	136,441	48,627	7,450	2,982	143,891	51,609
Yorktown.....	14,700	9,027	163,166	62,923	177,866	71,950
Norfolk.....			387,530	130,648	387,530	130,648
Petersburgh.....			5,900	1,310	6,900	1,310
Richmond.....			72,611	24,721	72,611	24,721
Total.....	559,485	208,300	646,548	226,055	1,206,033	434,364

V.—THE FISHERIES OF THE SOUTH ATLANTIC STATES.

This geographical division embraces the States of North Carolina, South Carolina, and Georgia, and the eastern coast of Florida. The coast line, including the rivers canvassed and all the islands and indentations which support commercial fisheries, is about 5,055 miles long, of which the various States had the following quota: North Carolina, 1,480 miles; South Carolina, 935 miles; Georgia, 1,390 miles; Florida, 1,250 miles.

With the exception of North Carolina this section has no indentations of large size, and the fisheries, except in the rivers, do not attain great importance. The fishery resources of the region are not fully developed, and with the advent of new capital and methods, especially in the oyster and vessel food-fish fisheries, this section will no doubt take a prominent place among the fish-producing regions of the country. One special feature of the fisheries of this region is the extent to which set or staked gill-nets are employed, the number of this form of apparatus being about two-thirds of the number used in the entire coast fisheries of the country.

10,539 persons were engaged in the fisheries and fishery industries of this section in 1888. Of these only a very small proportion, 404, were

in the vessel fisheries; 8,799 were classed as shore fishermen, and 1,336 were shoresmen, factory hands, etc. Of the capital invested, \$116,660 was in vessels, \$220,224 in boats, \$343,159 in apparatus of capture, and \$393,846 in shore property and cash capital. The fishery products of the region had a value to the fishermen of \$1,196,892, of which the general shore fisheries represented the major portion, followed by the oyster and crustacean fisheries.

NORTH CAROLINA.

The statistics for this State cover the coast fisheries proper and the river fisheries to head of tide water, this being practically to the limit of commercial fishing, except in the case of the Roanoke River, which was canvassed to a distance of 30 miles from its mouth.

Comparing the results of the census of 1890 with the figures for 1888, we find a material increase in the persons employed and capital invested, the former being 46 per cent., while the capital had increased 58 per cent. The value of the catch, however, as obtained in 1888, was 8 per cent. less than in 1880, though the yield itself was enormously greater—43,022,854 pounds in 1888 against 32,249,488 pounds in 1880. This increase, however, is largely menhaden, a cheap product that was not taken in 1880, the fishery having been established since then.

The following are some of the most remarkable changes that have occurred since the census year :

There has been a large increase in the pound-net fishery. In 1880 only 117 pound nets, worth \$30,800, were reported, while in 1888 there were 797, with a total value of \$68,463, and the catch amounted to 7,898,075 pounds of fish, with a first value of \$112,877.

The change in the gill-net fishery has been phenomenal. In the census year only 18,796 gill nets were used ; in 1888 the number had reached 61,630.

There has been a gratifying improvement in the yield of the general food-fish fisheries with few exceptions. The output of shad, in which this State ranks among the first, increased from 3,221,263 pounds in 1880 to 5,630,709 pounds in 1888. The catch of mullet has declined almost 50 per cent. There has also been a slight decrease in the oyster fishery.

The porpoise fishery has been established since 1880 ; in 1888 it amounted to \$16,125.

112. Table of persons employed.

How engaged.	1887.	1888.
On fishing vessels.....	172	150
On transporting vessels.....	140	138
On boats * .....	5,931	6,315
On shore, in factories, fish-houses, etc.....	1,109	1,101
Total .....	7,352	7,704

\* 1,256 of these, each year, were semi-professionals.

113. Table of apparatus and capital.

Designation.	1887.		1888.	
	No.	Value.	No.	Value.
Vessels fishing * .....	37	\$20,000	35	\$27,420
Outfit .....		7,135		6,145
Vessels transporting† .....	70	30,425	69	38,100
Outfit .....		3,240		3,230
Boats .....	2,985	157,708	3,151	170,189
Apparatus of capture—vessel fisheries:				
Seine .....	21	5,800	19	5,000
Tongs .....	38	154	39	158
Apparatus of capture—shore fisheries:				
Haul seines .....	684	100,250	713	106,180
Gill nets .....	54,097	89,608	61,630	102,743
Pound nets .....	672	57,538	797	68,463
Skim nets and cast nets .....	701	1,813	721	1,843
Fyke nets .....	15	265	27	505
Turtle nets .....	106	160	106	160
Hand lines .....	515	215	515	215
Tongs and rakes .....	708	2,062	775	2,077
Shore property .....		195,108		192,946
Cash capital .....		80,400		78,100
Total .....		766,881		801,474

\* Tonnage in 1887, 403.73; in 1888, 376.07. † Tonnage in 1887, 604.23; in 1888, 684.35.  
 † Under the classification of boats are included, in 1887, 18 small steam flats worth \$22,550; and, in 1888, 19 worth \$24,000; these are used to "lay out" the large haul seines.

114. Table of products.

Species.	1887.		1888.	
	Pounds.	Value.	Pounds.	Value.
Alewives .....	5,062,650	\$56,180	5,133,900	\$50,836
Alewives, salted .....	11,855,416	116,800	10,211,627	110,717
Alewives, smoked .....		120	4,000	120
Bluefish .....	510,760	16,633	626,025	20,777
Bluefish, salted .....	120,576	4,800	110,550	4,255
Catfish .....	18,814	564	19,381	581
Channel bass .....	129,105	3,740	140,395	3,865
Chub or black bass .....	390,640	18,267	417,672	20,960
Chub, salted .....	1,000	60	1,200	72
Eels .....	5,945	297	7,016	486
Hokory shad .....	106,691	6,062	192,161	6,253
Menhaden* .....	14,756,400	18,446	13,844,400	17,247
Mullet .....	760,275	24,254	783,875	25,035
Mullet, salted .....	1,133,823	43,076	976,150	36,016
Perch .....	385,163	14,353	410,357	15,299
Perch, salted .....	24,700	638	26,450	676
Pike .....	22,412	1,056	27,101	1,303
Sea bass .....	14,785	575	15,115	610
Shad .....	4,673,164	204,635	5,630,709	292,409
Shad, salted .....	73,062	3,434	62,720	2,620
Sheepshead .....	140,585	4,365	155,226	4,707
Sheepshead, salted .....	80,800	1,602	37,550	1,474
Spots and croakers .....	87,730	2,817	80,903	2,906
Squeteague .....	622,340	17,714	676,570	19,885
Squeteague, salted .....	143,355	4,759	135,030	4,309
Striped bass* .....	493,086	24,729	553,954	27,703
Striped bass, salted .....	6,500	215	6,400	218
Starurgeon .....	237,755	5,112	269,050	5,326
Whiting .....	18,075	790	20,000	800
Miscellaneous fish .....	373,420	11,679	510,844	15,793
Miscellaneous fish, salted .....	128,405	4,208	120,560	4,061
Shrimp .....	120,110	4,503	124,000	4,660
Crabs .....	46,520	1,105	46,728	1,110
Terrapin .....	22,500	3,250	24,750	3,400
Turtle .....	22,000	1,230	20,600	1,186
Quoahags* .....	78,010	3,233	148,048	6,150
Scallops .....	3,600	160	4,050	180
Oysters* .....	1,490,860	48,353	1,432,921	46,129
Porpoises .....		9,255		16,125
Total .....	45,124,956	772,957	43,022,855	770,436

\* Of these species, the following quantities and values represent the output of the vessel fisheries, the entire remaining catch being the result of fisheries prosecuted from shore: Menhaden, 14,556,000 pounds, \$18,100, in 1887, and 13,604,400 pounds, \$16,998, in 1888; striped bass, 92,300 pounds, \$2,779, in 1887, and 69,760 pounds, \$2,311, in 1888; quoahags, 2,000 pounds, \$63, in 1887; oysters, 177,835 pounds, \$5,178, in 1887, and 122,241 pounds, \$3,875, in 1888.

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115. Table showing by apparatus and species the yield of the shore fisheries of North Carolina in 1887, exclusive of the shellfish, crustacean, and reptilian fisheries.

Species.	Haul seines.		Gill nets.		Pound nets.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives	2,701,600	\$31,214			3,261,059	\$21,975
Alewives, salted	7,785,440	82,342	71,780	\$677	3,920,186	32,990
Alewives, smoked					4,000	120
Bluefish	202,000	6,500	212,500	6,675	10,200	408
Bluefish, salted	67,500	2,700	53,076	1,980		
Catfish	10,000	300			8,814	264
Channel bass	95,105	2,700	8,000	200		
Chub or black bass	381,360	17,649			9,289	418
Chub, salted	1,000	60				
Eels					5,945	297
Hickory shad	141,420	4,404	14,086	380	34,935	1,253
Menhaden			190,800	250		
Mullet	583,000	18,638	175,625	5,550	1,650	66
Mullet, salted	793,500	30,690	340,323	12,386		
Perch	210,067	7,069			169,096	7,284
Perch, salted	7,700	248	17,000	390		
Pike	21,674	1,023				738
Shad	1,619,012	98,136	2,562,381	106,224	389,921	24,429
Shad, salted	58,100	2,785			14,962	649
Sheepshead	111,585	3,367	12,800	450	950	38
Sheepshead, salted	1,500	30	39,300	1,572		
Spots and croakers	62,230	1,832				
Squeteague	368,030	10,010	182,500	6,225	43,500	658
Squeteague, salted	78,355	2,449	95,000	2,310		
Striped bass	149,422	6,831	46,770	3,491	203,335	11,553
Striped bass, salted						
Sturgeon	47,275	412	188,980	4,670	1,500	30
Miscellaneous fish	200,095	5,743	97,000	2,160	46,325	1,778
Miscellaneous fish, salted	99,155	3,293	28,000	865		
Porpoises		9,255				
<b>Total</b>	<b>15,802,125</b>	<b>349,886</b>	<b>4,291,550</b>	<b>216,670</b>	<b>8,126,415</b>	<b>107,241</b>

Species.	Fyke nets.		Cast nets and skin nets.		Hand lines.		Total.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives							5,962,659	\$50,189
Alewives, salted			78,000	\$890			11,855,416	116,899
Alewives, smoked							4,000	120
Bluefish					95,000	\$3,050	519,700	16,633
Bluefish, salted							120,578	4,680
Catfish							18,814	564
Channel bass					26,000	840	120,105	3,740
Chub or black bass							396,649	18,267
Chub, salted							1,000	60
Eels							5,945	297
Hickory shad	6,250	\$25					106,691	6,062
Menhaden							190,800	250
Mullet							760,275	24,264
Mullet, salted							1,133,823	43,076
Perch							385,163	14,633
Perch, salted							24,700	698
Pike							22,412	1,056
Sea bass					14,785	575	14,785	575
Shad			101,850	5,846			4,673,164	294,635
Shad, salted							73,062	3,434
Sheepshead	250	10			15,000	506	14,585	4,365
Sheepshead, salted							40,800	1,602
Spots and croakers					25,500	985	87,730	2,817
Squeteague	3,250	65			25,000	750	622,340	17,714
Squeteague, salted							143,355	4,759
Striped bass	1,250	75					400,780	21,950
Striped bass, salted							6,500	215
Sturgeon							237,755	5,112
Whiting					18,975	700	18,975	700
Miscellaneous fish					60,000	1,500	373,420	11,579
Miscellaneous fish, salted	1,250	50					128,405	4,208
Porpoises								9,255
<b>Total</b>	<b>12,250</b>	<b>225</b>	<b>179,850</b>	<b>6,736</b>	<b>280,260</b>	<b>9,390</b>	<b>28,692,450</b>	<b>600,148</b>

\* The value of 3,622 porpoises sold by the fishermen to be made into oil and leather.

116. Table showing by apparatus and species the yield of the shore fisheries of North Carolina in 1888, exclusive of the shellfish, crustacean, and reptilian fisheries.

Species.	Haul seines.		Gill nets.		Pound nets.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives	2, 148, 367	\$25, 886			2, 085, 533	\$24, 950
Alewives, salted	6, 235, 147	72, 844	68, 200	\$653	3, 837, 780	30, 382
Alewives, smoked					4, 000	120
Bluefish	210, 200	7, 080	309, 525	10, 435	5, 300	212
Bluefish, salted	57, 500	2, 300	53, 059	1, 955		
Catfish	12, 000	360			7, 381	221
Channel bass	105, 895	2, 805	8, 000	200		
Chub or black bass	406, 922	20, 534			10, 650	426
Chub, salted	1, 200	72				
Eels					7, 016	486
Hickory shad	145, 100	4, 519	13, 956	378	33, 105	1, 356
Menhaden			180, 000	249		
Mullet	608, 375	10, 622	170, 000	5, 350	1, 250	38
Mullet, salted	697, 000	24, 742	308, 550	11, 274		
Perch	210, 393	6, 060			199, 904	8, 339
Perch, salted	8, 350	264	18, 100	412		
Pike	20, 261	1, 263			900	40
Shad	1, 731, 863	83, 763	3, 338, 352	179, 045	433, 269	21, 631
Shad, salted	45, 850	1, 057			16, 870	693
Sheepshead	110, 170	3, 545	22, 000	660	1, 050	42
Sheepshead, salted	1, 400	28	35, 900	1, 436		
Spots and croakers	62, 340	1, 881				
Squeteague	393, 275	10, 901	229, 305	7, 680	24, 200	479
Squeteague, salted	76, 635	2, 420	58, 500	1, 973		
Striped bass	161, 300	6, 438	51, 157	3, 651	270, 487	15, 288
Striped bass, salted			6, 400	218		
Sturgeon	45, 600	421	222, 500	4, 870	1, 050	35
Miscellaneous fish	277, 174	8, 144	91, 000	3, 850	57, 670	2, 160
Miscellaneous fish, salted	93, 235	3, 001	32, 075	1, 010		
Porpoises		*16, 125				
Total	13, 852, 258	327, 881	5, 210, 669	235, 199	7, 898, 075	112, 877

Species.	Fyke nets.		Cast nets and skim nets.		Hand lines.		Total.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives							5, 133, 900	\$50, 830
Alewives, salted			70, 500	\$838			10, 211, 627	110, 717
Alewives, smoked							1, 000	120
Bluefish					95, 000	\$3, 050	628, 025	20, 777
Bluefish, salted							110, 559	4, 255
Catfish							19, 881	581
Channel bass					20, 500	800	140, 395	3, 865
Chub or black bass							417, 572	20, 990
Chub, salted							1, 200	72
Eels							7, 016	486
Hickory shad							102, 161	6, 253
Menhaden							180, 000	240
Mullet							783, 875	25, 035
Mullet, salted	6, 250	\$25					976, 150	30, 016
Perch							410, 337	15, 289
Perch, salted							26, 450	676
Pike							27, 161	1, 203
Sea bass					15, 115	610	15, 115	610
Shad			127, 225	7, 070			5, 630, 709	292, 409
Shad, salted							62, 720	2, 620
Sheepshead					10, 000	550	155, 228	4, 797
Sheepshead, salted	250	10					37, 550	1, 474
Spots and croakers					27, 563	1, 025	89, 903	2, 900
Squeteague	3, 700	75			25, 000	750	675, 570	10, 885
Squeteague, salted							135, 035	4, 309
Striped bass	1, 250	75					484, 184	25, 451
Striped bass, salted							6, 400	218
Sturgeon							269, 950	5, 326
Whiting					20, 000	800	20, 000	800
Miscellaneous fish	2, 000	60			83, 000	2, 570	510, 844	15, 793
Miscellaneous fish, salted	1, 250	50					128, 560	4, 061
Porpoises								16, 125
Total	14, 700	295	197, 725	7, 908	308, 178	10, 215	27, 487, 605	894, 375

\* The value of 6,450 porpoises sold by the fishermen to be made into oil and leather.

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117. Table showing the extent of the menhaden industry of North Carolina.

Designation.	1887.	1888.
Number of factories in operation.....	8	6
Value of factories.....	\$34,700	\$30,000
Amount of cash capital.....	\$20,100	\$24,100
Number of shoresmen employed.....	100	94
Number of fishermen employed.....	142	119
Number of steam vessels employed.....	1	1
Net tonnage.....	44.15	44.15
Value.....	\$0,000	\$9,000
Value of outfit.....	\$2,000	\$2,000
Number of sailing vessels employed in fishing.....	12	9
Net tonnage.....	167.37	124.79
Value.....	\$0,300	\$7,800
Value of outfit.....	\$10,075	\$8,325
Number of vessels employed as "carryaways".....	12	0
Net tonnage.....	106.46	78.71
Value.....	\$5,000	\$5,550
Value of outfit.....	\$600	\$450
Number of menhaden handled.....	24,594,000	22,064,000
Value to fishermen.....	\$18,444	\$17,123
Number of gallons of oil made.....	98,200	50,400
Value as sold.....	\$24,550	\$13,600
Number of tons of scrap produced.....	1,698	1,555
Value as sold.....	\$42,460	\$38,875

SOUTH CAROLINA.

The coast fisheries only are included in these tables; the inquiry prosecuted in the rivers did not generally extend above tide water. For this reason there is not a strictly proper basis for comparison with 1880, but the figures are sufficiently similar in their scope to permit deductions regarding changes, although it should be borne in mind that the information for 1880 covers a wider area than in 1888.

Comparing the figures of 1880 with those for 1888 there appears to have been an increase of 34 per cent. in persons employed and 47 per cent. in capital invested, while the value of the catch has fallen off 23 per cent., the yield of the fisheries declining from 6,143,250 pounds in 1880 to 4,180,848 pounds in 1888.

The shrimp catch has fallen off nearly one-half; the crab product has advanced 65 per cent.; the terrapin yield has increased more than 64 per cent.; there have been less noticeable changes in the output of other species.

118. Table of persons employed.

How engaged.	1887.	1888.
On fishing vessels.....	67	69
On transporting vessels.....	5	5
On boats*.....	1,183	1,247
On shore, in fish-houses, etc.....	25	25
Total.....	1,280	1,846

\* 477 of these, each year, were semi-professionals.

119. Table of apparatus and capital.

Designation.	1887.		1888.	
	No.	Value.	No.	Value.
Vessels fishing * .....	14	\$15,550	15	\$15,850
Outfit .....		4,750		4,850
Vessels transporting † .....	2	6,500	2	6,500
Outfit .....		450		450
Boats .....	485	18,644	526	19,454
Apparatus of capture—vessel fisheries:				
Hand lines .....	280	90	300	100
Tongs* .....			2	10
Apparatus of capture—shore fisheries:				
Haul seines .....	30	2,400	32	3,400
Gill nets .....	208	8,770	223	10,185
Fyke nets .....	15	100	22	220
Cast nets .....	160	750	150	750
Dip nets .....	68	65	68	65
Pots .....	10	10	10	10
Hand lines .....	2,200	220	2,200	220
Tongs .....	120	625	120	625
Shore property .....		22,000		22,500
Cash capital .....		12,000		12,000
Total .....		92,930		97,189

\* Tonnage in 1887, 231.79; in 1888, 240.43.

† Tonnage in 1887, 17.42; in 1888, 17.42.

120. Table of products.\*

Species.	1887.		1888.	
	Pounds.	Value.	Pounds.	Value.
Bluefish .....	158,000	\$4,740	150,605	\$4,518
Catfish .....	19,560	588	19,085	540
Channel bass .....	54,673	1,638	50,000	1,618
Drum .....	90,065	1,600	75,000	1,400
Hickory shad .....	12,625	252	13,000	260
Mullet .....	100,000	3,000	115,065	3,469
Mullet, salted .....	200,000	7,000	150,000	5,200
Red snapper .....	1,200	38	1,305	41
Sea bass .....	880,237	28,522	910,326	29,362
Shad .....	365,772	22,840	432,800	27,050
Sheepshead .....	101,005	3,040	111,060	3,340
Spots and croakers .....	51,606	1,640	57,000	1,740
Squeteague .....	210,005	6,564	200,580	6,200
Striped bass .....	3,500	190	2,865	171
Sturgeon .....	182,058	7,068	251,065	9,633
Whiting ( <i>Menticirrhus</i> ) .....	617,665	16,528	600,080	18,614
Miscellaneous fish .....	293,156	8,800	284,750	8,640
Shrimp .....	358,000	18,400	358,860	18,860
Crabs .....	70,000	1,010	69,320	910
Terrapin .....	40,625	3,550	38,525	3,485
Oysters† .....	264,075	18,581	281,694	10,146
Total .....	4,075,537	157,688	4,180,847	103,057

\* 8,060 pounds of caviare, worth \$936, were made in 1887, and 17,788 pounds, worth \$1,858, in 1888.

† Of these species the following quantities were taken in the vessel fisheries, all of the remaining catch being the result of fisheries prosecuted from the shore: Red snapper, 1,200 pounds, valued at \$38, in 1887, and 1,365 pounds, valued at \$41, in 1888; sea bass, 403,492 pounds, valued at \$15,750, in 1887, and 511,433 pounds, valued at \$17,396, in 1888; oysters, 8,400 pounds, valued at \$240, in 1888.

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121. Table showing by apparatus and species the yield of the shore fisheries of South Carolina in 1887 and 1888, exclusive of crabs, terrapin, and oysters.

Apparatus.	Species.	1887.		1888.	
		Pounds.	Value.	Pounds.	Value.
Haul seines .....	Mullet .....	94,060	\$2,820	93,000	\$2,820
	Mullet, salted .....	200,000	7,000	150,000	5,200
	Sheepshead .....	10,000	300	12,000	360
	Spots and croakers .....	15,000	450	15,000	450
	Squeteague .....	157,000	4,730	147,580	4,450
	Miscellaneous fish .....	50,000	1,500	40,000	1,200
	Shrimp .....	8,000	400	12,000	600
	Total .....	534,000	17,200	470,580	15,080
	Gill nets .....	Hickory shad .....	12,625	252	13,000
Mullet .....		5,000	150	20,065	619
Shad .....		361,772	22,500	428,800	26,800
Sturgeon .....		182,658	7,068	251,005	9,633
Total .....		561,455	30,000	713,530	37,312
Fyke nets .....	Catfish .....	3,000	80	3,000	80
	Striped bass .....	3,500	100	2,865	171
	Miscellaneous fish .....	6,000	240	6,000	240
	Total .....	12,500	510	11,865	491
Cast nets and dip nets.	Mullet .....	1,000	30	1,000	80
	Shad .....	4,000	250	4,000	250
	Squeteague .....	1,000	40	1,000	40
	Shrimp .....	330,000	18,000	246,860	18,260
	Total .....	336,000	18,320	352,860	18,580
Hand lines .....	Bluefish .....	158,000	4,740	150,005	4,518
	Catfish .....	16,500	508	16,085	480
	Chauvel bass .....	54,673	1,638	50,600	1,518
	Drum .....	90,065	1,600	75,060	1,400
	Sea bass .....	425,745	12,772	398,885	11,966
	Sheepshead .....	91,005	2,740	99,060	2,980
	Spots and croakers .....	38,606	1,190	42,000	1,280
	Squeteague .....	58,605	1,704	58,000	1,770
	Whiting ( <i>Menticirrus</i> ) .....	617,685	18,528	600,680	18,014
	Miscellaneous fish .....	237,156	7,150	238,750	7,200
	Total .....	1,786,190	52,669	1,729,675	51,216
	Grand total .....	3,230,145	118,759	3,278,510	122,679

GEORGIA.

The canvass upon which the tables are based covered all coast fisheries and the river fisheries to the head of tide water; this field practically embracing the entire commercial fisheries of the State with the exception of those in the upper Savannah and Altamaha Rivers.

The fisheries of this State have generally declined since 1880, noticeably in personnel, capital invested, and value of catch; but the actual output of the fisheries in 1888 exceeded by about 600,000 pounds the catch reported in 1880.

In the fisheries for sturgeon, alewives, and mullet, there has been a marked decadence; while the vessel fishery shows an increase in material from 1 vessel in 1880 to 12 in 1888. These engage chiefly in the oyster industry, but also fish for red snappers, sea bass, and terrapin.



122. Table of persons employed.

How engaged.	1887.	1888.
In vessel fisheries.....	23	32
In shore fisheries*.....	490	492
On shore.....	114	114
<b>Total.....</b>	<b>627</b>	<b>638</b>

\* 200 of these, each year, were semi-professional.

123. Table of apparatus and capital.

Designation.	1887.		1888.	
	No.	Value.	No.	Value.
Vessels fishing*.....	10	\$5,775	12	\$8,875
Outfit.....		2,540		2,040
Boats.....	367	5,241	368	5,246
Apparatus of capture—vessel fisheries:				
Seine.....	6	360	6	360
Hand lines.....			50	5
Tongs.....	20	100	22	110
Apparatus of capture—shore fisheries:				
Haul seines.....	20	400	20	400
Gill nets.....	157	7,710	150	7,730
Cast nets.....	126	630	126	630
Fyke nets.....	14	310	14	310
Pound nets.....	5	1,000	6	1,200
Hand lines.....	516	80	826	90
Tongs.....	122	560	122	560
Shore property.....		27,100		27,100
Cash capital.....		10,000		10,000
<b>Total.....</b>		<b>61,806</b>		<b>65,556</b>

\* Tonnage in 1887, 90.25; in 1888, 129.41.

124. Table of products.

Species.	1887.		1888.	
	Pounds.	Value.	Pounds.	Value.
Alewives.....	25,065	\$376	24,360	\$365
Bluefish.....	6,850	20	6,895	230
Catfish.....	67,685	1,692	69,890	1,658
Channel bass.....	10,000	440	20,685	470
Drum.....	10,495	312	10,505	345
Hickory shad.....	13,625	260	14,000	267
Mullet.....	46,685	1,900	48,000	1,960
Red snapper*.....			3,000	150
Sea bass*.....	4,500	135	7,250	267
Shad.....	255,200	18,760	263,200	10,000
Sheepshead.....	8,085	265	7,885	258
Spots and croakers.....	10,865	440	10,500	425
Squeteague.....	68,860	2,640	67,068	2,729
Striped bass.....	11,000	880	11,000	880
Sturgeon.....	191,600	8,464	174,250	6,978
Whiting.....	10,900	416	10,000	400
Miscellaneous fish.....	98,565	3,500	90,625	3,544
Shrimp.....	185,000	6,500	190,650	6,800
Terrapin*.....	34,650	5,776	34,950	6,075
Crabs.....	44,600	760	48,866	742
Oysters*.....	770,600	26,050	844,200	29,370
<b>Total.....</b>	<b>1,882,700</b>	<b>80,745</b>	<b>1,957,749</b>	<b>82,010</b>

\* Of these species, the following quantities and values represent the yield of the vessel fisheries: Red snapper, 3,000 pounds, \$150, in 1888; sea bass, 2,000 pounds, \$100, in 1888; terrapin, 23,400 pounds, \$3,000, in 1887, and 20,700 pounds, \$3,460, in 1888; oysters, 148,600 pounds, \$4,200, in 1887, and 267,200 pounds, \$5,920, in 1888.

NOTE.—21,748 pounds of caviare, valued at \$2,008, were prepared in 1887, and 21,412 pounds, valued at \$2,669, in 1888.

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125. Table showing by apparatus and species the yield of the shore fisheries of Georgia in 1887 and 1888, exclusive of oysters and crabs.

Apparatus.	Species.	1887.		1888.	
		Pounds.	Value.	Pounds.	Value.
Gill nets.....	Channel bass.....	10,900	\$240	11,685	\$270
	Hickory shad.....	13,625	260	14,000	267
	Mullet.....	27,685	1,130	27,000	1,110
	Shad.....	252,800	18,580	261,200	18,850
	Squeteague.....	35,860	1,400	36,008	1,480
	Sturgeon.....	191,600	8,464	174,250	6,078
	Miscellaneous fish.....	10,000	400	10,000	400
	Total.....	542,470	30,474	534,203	29,355
	Haul seines.....	Mullet.....	5,000	200	5,000
Spots and croakers.....		2,000	80	2,000	80
Miscellaneous fish.....		6,000	240	6,000	240
Shrimp.....		14,000	700	16,000	800
Terrapin.....		11,250	1,875	14,250	2,625
Total.....		38,250	3,095	43,250	3,945
Cast nets.....	Catfish.....	6,000	120	5,800	115
	Mullet.....	14,000	670	16,000	650
	Miscellaneous fish.....	16,000	600	17,625	704
	Shrimp.....	171,000	5,800	174,650	6,000
	Total.....	206,000	7,090	214,135	7,469
Pound nets and fyke nets.	Alewives.....	25,065	376	24,360	365
	Catfish.....	35,000	900	35,000	900
	Shad.....	2,400	180	2,000	150
	Striped bass.....	11,000	880	11,000	880
	Miscellaneous fish.....	23,000	560	23,000	560
	Total.....	96,465	2,896	95,360	2,855
Hand lines.....	Bluefish.....	6,850	280	5,895	236
	Catfish.....	26,685	672	26,000	643
	Channel bass.....	9,000	200	9,000	200
	Drum.....	10,495	312	10,505	345
	Sea bass.....	4,500	135	5,250	167
	Sheepshead.....	8,085	265	7,885	258
	Spots and croakers.....	8,865	360	8,500	345
	Squeteague.....	31,000	1,240	31,000	1,240
	Whiting.....	10,900	416	10,000	400
	Miscellaneous fish.....	44,565	1,700	43,000	1,640
	Total.....	160,945	5,580	157,035	5,474
	Grand total.....	1,044,130	49,135	1,043,983	49,098

FLORIDA.

The fisheries of the west coast of Florida are so much more important than those on the Atlantic shore of the State that the tables have been discussed under the Gulf fisheries rather than make separate sets of statistics for the two sections. In tables 2, 4, 6, 10, and 16, constituting a portion of the general statistics, in which the geographical divisions of the coast are observed, the figures for the two sides of the State have been included in their respective sections.

The figures which properly belong to the east coast of Florida for the year 1888 may be briefly given as follows :

Persons employed :		
Vessel fishermen .....		10
Shore fishermen .....		745
Shoresmen and factory hands .....		96
Total .....		851
Apparatus and capital :		
Vessels (53.71 tons) .....		3
Boats .....		482
Sieves .....		45
Gill nets .....		421
Total investment, including shore property and cash capital .....	\$100,670	
Value of products :		
General food-fish .....	\$140,012	
Mollusks .....	13,104	
Reptiles .....	5,877	
Crustaceans .....	5,891	
Total .....		173,886

## VI.—FISHERIES OF THE GULF STATES.

The coast-line of the Gulf States has an approximate length of 6,875 miles, including the indentations. Of this amount the western side of Florida contributes 2,820 miles, Alabama 180 miles, Mississippi 215 miles, Louisiana 1,650 miles, and Texas 2,010 miles.

In no other section of the country has the percentage of increase been so marked as in the Gulf States since 1880, although the actual advance has been less than in some other regions. The increase has been especially noticeable in the oyster fishery and in the number of vessels and boats employed, this section ranking next to the Middle and New England States in the latter respect. Next to the general food-fish fisheries, which yield the largest returns, the oyster fishery is of the greatest importance, followed by the sponge, crustacean, and reptilian fisheries, the last named, although the least remunerative, being of greater extent than the combined reptilian fisheries of all other sections.

The fisheries of this region gave employment in 1888 to 9,543 persons, of whom 1,639 were vessel fishermen, 6,364 shore fishermen, and 1,540 factory hands, preparators, etc. The capital invested amounted in the aggregate to \$1,884,710, of which \$504,648 represented vessels and their outfits, \$371,332 boats, \$107,250 apparatus of capture, and \$901,480 shore property and cash capital. The yield of the fisheries was valued at \$1,819,745.

### FLORIDA.

The statements given in these tables cover the commercial fisheries of the State, with the exception of a limited amount of fishing in some of the small lakes and minor rivers and the business of hunting alligators. The statistics practically cover the same ground as the census of 1880, and therefore afford a very satisfactory basis for comparison.

Speaking in general terms, there has been a marked increase during the past eight years in the three grand items of persons employed, capital, and value of catch. The increase in capital is found chiefly in boats, nets, seines, oyster apparatus, and shore property, and this, together with the increase in personnel, is due to the development of certain fisheries and the establishment of these industries at points where they were not prosecuted in the census year.

There is little change in the vessel fishery, for the reason that there is a natural limit to the sponge trade, and the high tariff on fish in Cuban markets has held in check the development of the smack fishery.

The shad catch shows a marvelous increase—from 251,700 pounds in 1880 to 1,444,000 pounds in 1888. There has also been a marked improvement in the mullet fishery, amounting to 200 per cent. in the catch.

There has been a large increase in the red-snapper fishery, but a decline in the grouper catch; the combined output of the two species, however, is about 1,000,000 pounds more than in 1880.

The oyster industry is no less noticeable for improvement. Canning establishments have recently been located on the east coast, and a large business has been built up. In 1888 the product was 239,195 bushels against 78,600 bushels in 1880.

That portion of the figures in the accompanying tables which is to be credited to the west coast, for the year 1888, may be briefly summarized as follows:

Persons employed:	
Vessel fishermen .....	1,045
Shore fishermen .....	1,831
Shoresmen and factory hands .....	190
Total .....	3,066
Apparatus and capital:	
Vessels (2,486.37 tons) .....	141
Boats .....	1,159
Seines .....	93
Gill nets .....	621
Pound nets .....	3
Total investment, including shore property and cash capital .....	\$613,736
Value of products:	
General food-fish .....	\$310,280
Mollusks .....	44,448
Reptiles .....	10,978
Sponge .....	253,600
Total .....	628,306

126. Table of persons employed, 1888.

How engaged.	No.
On fishing vessels .....	1,029
On transporting vessels .....	20
On boats .....	2,576
On shore, in factories, etc. ....	286
Total .....	3,517

127. Table of apparatus and capital, 1888.

Designation.	No.	Value.
Vessels fishing (tonnage 2,388.11).....	135	\$218,575
Outfit.....		120,054
Vessels transporting (tonnage 98.20).....	9	12,100
Outfit.....		2,520
Boats.....	1,641	136,148
Apparatus of capture—vessel fisheries:		
Haul seines.....	19	2,100
Gill nets.....	23	575
Hand lines.....	237	384
Tongs.....	16	96
Sponge outfits.....		1,026
Apparatus of capture—shore fisheries:		
Haul seines.....	119	8,490
Gill nets.....	1,010	40,738
Pound nets.....	3	1,800
Cast nets.....	241	1,217
Hand lines.....	1,055	192
Tongs and rakes.....	408	2,296
Sponge outfits.....		1,050
Shore property.....		143,145
Cash capital.....		80,000
<b>Total.....</b>		<b>723,406</b>

128. Table of products, 1888.

Species.	Vessel fisheries.		Shore fisheries.		Total.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Angel-fish.....			2,000	\$60	2,000	\$60
Black bass or trout.....			70,000	2,950	70,000	2,950
Bluefish.....			245,787	5,212	245,787	5,212
Bream.....			3,500	87	3,500	87
Catfish.....			27,800	480	27,800	480
Channel bass.....			405,557	11,154	405,557	11,154
Crevaille.....			19,810	108	19,810	108
Drum.....			55,126	1,118	55,126	1,116
Flounders.....			7,333	144	7,333	144
Grouper.....	378,961	\$11,087	5,000	100	383,961	11,187
Grunt.....			6,000	120	6,000	120
Jurel.....			24,075	497	24,075	497
Kingfish.....			235,661	6,040	235,661	6,040
Mullet.....	108,000	2,200	4,030,703	74,400	4,138,703	76,600
Mullet, salted.....	1,004,060	36,096	1,053,200	21,356	2,057,200	58,352
Mullet roe, salted.....	45,500	2,276	99,300	4,836	138,800	7,112
Perch.....			15,000	750	15,000	750
Pompano.....			59,094	5,336	59,094	5,336
Red snapper.....	3,024,497	85,400	199,060	5,931	3,223,557	91,331
Sailor's choice.....			2,000	60	2,000	60
Sea bass or blackfish.....			3,000	75	3,000	75
Shad.....			1,448,000	89,630	1,448,000	89,630
Sheepshead.....			557,431	13,817	557,431	13,817
Skipjack or lady fish ( <i>Albula</i> ).....			8,652	86	8,652	86
Spanish mackerel.....			140,029	7,166	140,029	7,166
Spots and croakers.....			28,435	819	28,435	819
Squeteague.....			511,297	15,064	511,297	15,064
Sturgeon.....			50,294	2,967	50,294	2,967
Whiting.....			22,800	840	22,800	840
Miscellaneous fish.....			2,011,875	47,295	2,011,875	47,295
Miscellaneous fish, salted.....			10,020	550,000	10,020	550,000
Refuse fish.....			225,000	1,125	225,000	1,125
Sponge.....	185,346	185,340	68,344	68,344	253,690	253,690
Shrimp.....			152,000	5,800	152,000	5,800
Crabs.....			2,606	94	2,606	94
Terrapin.....			10,100	1,220	10,100	1,220
Turtle.....	84,390	6,430	140,181	9,204	224,571	15,634
Quahogs.....			2,475	154	2,475	154
Oysters.....	151,690	4,202	1,522,675	53,199	1,674,365	57,398
<b>Total.....</b>	<b>5,582,384</b>	<b>333,937</b>	<b>14,014,700</b>	<b>408,345</b>	<b>19,597,084</b>	<b>802,282</b>

NOTE.—The manufactured product consisted of 2,000 pounds of caviar, valued at \$250.

# 364 REPORT OF COMMISSIONER OF FISH AND FISHERIES.

129. Summary by customs districts of the vessel fisheries of Florida in 1888.

Customs district.	No. of vessels fishing.	Net tonnage.	Value of vessels.	Value of outfit, gear, provisions, fuel, etc.	Number and nationality of fishermen.					Value of catch.
					Americans.	British.	Italians.	All others.	Total.	
Fernandina .....	1	32.89	\$1,200	\$600	5				5	\$800
Key West .....	82	1,303.57	137,125	77,860	248	457			705	208,736
St. Mark's .....	3	45.58	3,050	1,268	15	5			20	2,690
Apalachicola .....	11	91.10	6,950	4,400	62				62	17,104
Pensacola .....	37	914.88	69,350	40,987	207		15	15	237	104,607
<b>Total .....</b>	<b>134</b>	<b>2,388.11</b>	<b>218,575</b>	<b>125,115</b>	<b>537</b>	<b>462</b>	<b>15</b>	<b>15</b>	<b>1,029</b>	<b>333,937</b>

  

Customs district.	No. of vessels transporting.	Net tonnage.	Value of vessels.	Value of outfit, provisions, etc.	Number and nationality of crew.					Value of products transported.
					Americans.	British.	Italians.	All others.	Total.	
Fernandina .....	2	20.82	\$2,000	\$500	4				4	\$8,570
Key West .....	4	50.03	7,700	1,700	15				15	30,658
St. Marks .....	3	27.41	2,400	320	7				7	16,991
Apalachicola .....										
Pensacola .....										
<b>Total .....</b>	<b>9</b>	<b>98.26</b>	<b>12,100</b>	<b>2,520</b>	<b>26</b>				<b>26</b>	<b>56,219</b>

130. Table showing the extent of the sponge fishery of Florida in 1888

Fishing port.	Vessel fishery.						
	Vessels.				Product.		
	No.	Net tonnage.	Value.	Value of apparatus and outfit.	No. of fishermen.	Pounds of sponge.	Value to fishermen.
Key West .....	74	1,132.43	\$116,725	\$68,700	659	175,946	\$175,940
Cedar Keys .....	1	18.50	1,000	258	7	600	600
St. Mark's .....							
Apalachicola .....	*7	52.49	4,900	3,560	41	8,800	8,800
<b>Total .....</b>	<b>82</b>	<b>1,203.42</b>	<b>122,625</b>	<b>172,518</b>	<b>707</b>	<b>185,346</b>	<b>185,346</b>

  

Fishing port.	Shore fishery.					Total.				
	Boats.			Product.		Capital invested.	No. of fishermen.	Pounds of sponge.	Value to fishermen.	
	No.	Value.	Value of apparatus and outfit.	No. of fishermen.	Pounds of sponge.					Value to fishermen.
Key West .....	300	\$28,650	\$30,000	300	62,092	\$62,092	\$344,075	959	238,038	\$238,038
Cedar Keys .....	3	532	150	5	1,732	1,752	1,940	12	2,352	2,352
St. Mark's .....	3	632	150	5	500	500	782	5	500	500
Apalachicola .....	24	2,750	1,408	40	4,000	4,000	12,624	81	12,800	12,800
<b>Total .....</b>	<b>330</b>	<b>32,570</b>	<b>31,708</b>	<b>350</b>	<b>68,344</b>	<b>68,344</b>	<b>259,421</b>	<b>1,057</b>	<b>253,690</b>	<b>253,690</b>

\* Including four vessels that also engaged in other fisheries during a portion of the year.  
 † This amount includes the value of 311 rowboats, valued at \$4,912, used by the crews of the vessels.  
 ‡ Including 170 rowboats, valued at \$2,720.

ALABAMA.

The data obtained for this State cover the coast fisheries only.

Compared with the census year the fishery industries of Alabama show a decline in personnel and catch, though there has been considerable increase in the capital invested. The change in the last-mentioned particular is due entirely to the greater amount of shore property shown in the returns for 1888.

One of the most noticeable changes has occurred in the red-snapper fishery, the catch having declined from 360,000 pounds in 1880 to 85,964 pounds in 1888. This is because Pensacola is more favorably situated than Mobile for prosecuting this industry, and has absorbed the greater part of it.

Contrary to the rule in the Gulf States, there has been a decline in the oyster fishery, the catch having fallen off from 104,500 bushels in 1880 to 76,125 in 1888.

The mullet fishery has increased about 100 per cent. in quantity and value of catch.

The fisheries of Alabama are the least important of any of the coast States, but with the present activity in developing oyster grounds its fishery interests may advance materially in the near future.

131. Table of persons employed, 1888.

How engaged.	Number.
On vessels .....	63
On boats .....	105
In factories and other shore houses .....	60
Total .....	318

132. Table of apparatus and capital, 1888.

Designation.	Number.	Value.
Vessels (265.44 tons) .....	26	\$22,400
Outfit .....		5,350
Boats .....	131	0,810
Apparatus of capture:		
Seine, nets, etc .....	46	4,420
Tongs, rakes, and minor apparatus .....		740
Shore property, accessories, land, etc .....		14,184
Cash capital .....		8,000
Total capital .....		61,004

133. Table of products, 1888.

Species.	Pounds.	Value.
Red snapper .....	85,964	\$2,886
Sea trout .....	227,500	7,800
Mullet .....	262,500	6,700
Mixed fish .....	385,000	15,000
Shrimps .....	43,750	5,000
Oysters .....	532,875	32,174
Crabs .....	90,000	0,000
Total .....	1,633,589	75,500

MISSISSIPPI.

Only the coast fisheries are included in the tables for this State.

The fishing industries of Mississippi are remarkable for having increased more in all directions since the census year than those of any other State. In personnel there has been an increase of 642 per cent.; in capital, 3,646 per cent.; in catch, 900 per cent., and in value of catch, 928 per cent. This advance is due to the establishment of a large vessel fishery, which did not exist in 1880, and to a phenomenal development of the oyster industry, the product of which in the census year was only 25,000 bushels, worth \$10,000, while in 1888 it was 767,205 bushels, valued (at first hand) at \$157,463. This industry is developing with unusual rapidity, the catch in 1888 exceeding that of the previous year by 186,105 bushels. Canneries are being established and there is much activity in developing and working grounds.

The general food-fish fisheries have also developed rapidly in recent years, but there are no figures available for making satisfactory comparisons.

134. Table of persons employed.

How engaged.	1887.	1888.
On vessels .....	114	143
On boats .....	*379	437
On shore, in canneries, etc. ....	660	800
Total.....	1,153	1,380

\* 13 in 1887 and 14 in 1888 were semi-professionals.

135. Table of apparatus and capital.

How engaged.	1887.		1888.	
	No.	Value.	No.	Value.
Vessels fishing* .....	34	\$20,420	42	\$24,600
Outfit .....		7,470		9,805
Boats .....	240	14,691	250	14,526
Apparatus of capture—vessel fisheries:				
Seine .....	20	1,750	20	1,750
Tongs .....	130	780	164	909
Sponge outfit .....		5		5
Apparatus of capture—shore fisheries:				
Seine .....	24	2,300	24	2,250
Gill nets .....	13	430	14	505
Cast nets .....	8	48	8	48
Lines .....		2		3
Tongs .....	274	1,734	322	1,900
Shore property .....		78,474		93,104
Cash capital .....		150,650		180,550
Total.....		284,760		329,632

\* Tonnage in 1887, 295.93; in 1888, 374.42.



136. Table of products.

Species.	1887.		1888.	
	Pounds.	Value.	Pounds.	Value.
Blackfish	18,800	\$940	19,100	\$1,026
Black bass	4,000	200	4,500	225
Bluefish	72,700	3,593	78,100	3,583
Bream ( <i>Lepomis</i> )	42,600	1,073	44,900	1,310
Buffalo fish	70,200	702	71,300	713
Catfish	68,100	1,248	70,250	1,320
Drum	1,800	90	2,000	100
Flounders	44,600	1,804	47,575	1,928
Mullet	233,206	2,550	233,050	2,567
Perch or sunfish	62,800	2,547	65,100	2,644
Pickeral	8,500	340	10,300	412
Pompano	10,750	1,203	11,650	1,335
Redfish	140,525	6,396	164,800	7,651
Sheepshead	123,750	5,719	127,800	5,792
Spadefish	16,600	588	19,750	775
Spanish mackerel	30,100	2,066	33,700	2,430
Spots and croakers	75,000	1,982	78,850	2,083
Trout ( <i>Cynoscion</i> )	258,200	12,438	279,000	13,336
Shrimp*	1,144,800	23,616	1,092,800	22,566
Crabs, hard	38,400	1,030	16,500	468
Crabs, soft	15,000	500	40,200	1,160
Oysters*	4,067,700	118,974	5,370,435	157,463
Sponge*	50	75	550	825
<b>Total</b>	<b>6,548,175</b>	<b>189,716</b>	<b>7,883,010</b>	<b>231,712</b>

\*Of these species the following quantities and values represent the results of vessel fisheries, all the remaining products being the output of fisheries prosecuted from the shore: Shrimp, 785,000 pounds worth \$15,762 in 1887, and 767,000 pounds worth \$15,300 in 1888; oysters, 1,221,675 pounds worth \$34,605 in 1887, and 1,586,760 pounds worth \$47,603 in 1888; sponge, 50 pounds worth \$75 in 1887, and 550 pounds worth \$825 in 1888.

137. Table showing by apparatus and species the yield of the shore fisheries of Mississippi in 1887 and 1888, exclusive of the shellfish and crustacean fisheries.

Species.	Seines.				Gill nets.			
	1887.		1888		1887.		1888.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Blackfish	18,800	\$946	19,100	\$1,026	4,000	\$200	4,500	\$225
Black bass								
Bluefish	72,700	3,593	78,100	3,583	5,000	100	5,500	110
Bream ( <i>Lepomis</i> )	37,600	973	39,400	1,200	70,200	702	71,300	713
Buffalo fish					21,700	414	21,850	437
Catfish	46,400	634	48,400	883	1,800	90	2,000	100
Drum					2,000	100	2,500	125
Flounders	42,600	1,704	45,075	1,803	20,000	400	25,000	500
Mullet	213,200	2,156	208,050	2,067	22,000	916	23,400	976
Perch or sunfish	49,800	1,631	41,700	1,668	8,500	340	10,300	412
Pickeral								
Pompano	10,750	1,203	11,550	1,335				
Redfish	133,025	6,021	156,300	7,226	7,500	375	8,500	425
Sheepshead	121,250	5,504	124,800	5,642	2,500	125	3,000	150
Spadefish	16,600	588	19,750	775				
Spanish mackerel	30,100	2,066	33,700	2,430				
Spots and croakers	71,400	1,802	74,850	1,883	3,600	180	4,000	200
Trout ( <i>Cynoscion</i> )	205,000	9,778	226,650	10,673	53,200	2,600	53,250	2,663
<b>Total</b>	<b>1,060,225</b>	<b>38,880</b>	<b>1,127,425</b>	<b>42,194</b>	<b>222,000</b>	<b>6,602</b>	<b>236,100</b>	<b>7,036</b>

SUMMARY.

Apparatus.	1887.		1888.	
	Pounds.	Value.	Pounds.	Value.
Seines	1,060,225	\$38,880	1,127,425	\$42,194
Gill nets	222,000	6,602	236,100	7,036
<b>Total</b>	<b>1,282,225</b>	<b>45,481</b>	<b>1,362,525</b>	<b>49,230</b>

## LOUISIANA.

The tables for this State include, in addition to the coast fisheries, the fishing prosecuted on the Mississippi River below New Orleans, and on Lakes Pontchartrain and Borgue.

Next to Mississippi, the fisheries of Louisiana have had a greater percentage of increase than those of any other Gulf State. The development in the number of vessels and boats employed is especially remarkable; of the former, there were 49 in 1880, and 116 in 1888; while the boats have increased from 165 to 2,347. Among the special fisheries, the shrimp shows an enormous advance, the catch being about 13 times greater than in 1880. The catch of other crustaceans was also very much larger than shown by the census. The oyster industry has also improved materially, the product being more than double what it was in 1880. In the aggregate the output has increased from 6,996,000 pounds to 19,121,056 pounds.

138. Table of persons engaged.

How engaged.	1887.	1888.
On vessels fishing .....	310	290
On vessels transporting.....	27	29
On boats .....	2,384	2,527
On boats transporting .....	627	541
On shore, in canneries, etc.....	359	371
<b>Total .....</b>	<b>3,607</b>	<b>3,768</b>

139. Table of apparatus and capital.

Designation	1887.		1888.	
	No.	Value.	No.	Value.
Vessels fishing*.....	113	\$53,020	108	\$49,045
Outfit .....		18,871		17,739
Vessels transporting †.....	11	8,900	8	6,850
Outfit.....		4,465		4,335
Boats .....	2,216	140,765	2,347	140,444
Apparatus of capture—vessel fisheries:				
Seines .....	18	1,435	10	1,490
Tongs .....	265	1,833	245	1,606
Lines .....		53		27
Apparatus of capture—shore fisheries:				
Seines .....	127	11,875	134	12,275
Cast nets .....	530	1,668	551	1,714
Dip nets .....	4,108	3,610	4,255	3,782
Small traps .....	4,210	1,853	4,280	1,870
Tongs .....	808	5,252	867	5,636
Lines .....		0,733		7,527
Miscellaneous .....		6,105		6,250
Shore property .....		214,429		234,047
Cash capital .....		152,140		184,200
<b>Total .....</b>		<b>633,007</b>		<b>664,927</b>

\* Tonnage in 1887, 821.66; in 1888, 779.09.

† Tonnage in 1887, 71.26; in 1888, 52.50.

140. Table of products.

Species.	Vessel fisheries.				Shore fisheries.			
	1887.		1888.		1887.		1888.	
	Pounds	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Black bass.....					64,850	\$3,430	69,200	\$3,716
Bream and sunfish.....					210,200	13,320	209,500	13,340
Bluefish.....	12,550	\$812	14,720	\$015				
Buffalo fish.....	9,431	203	9,320	196	985,000	19,050	992,500	19,241
Catfish.....	18,895	378	18,850	375	2,184,000	41,795	2,316,272	43,984
Flounders.....	6,975	647	7,970	737	11,500	1,150	12,000	1,200
Mullet.....					252,760	8,690	252,714	8,710
Perch, white and black.....					13,000	1,120	13,300	1,330
Pompano.....	5,275	602	6,190	848	24,534	2,980	24,800	3,015
Redfish.....	58,628	2,458	57,535	2,435	230,400	7,452	230,900	7,545
Red snapper.....	130,860	4,615	150,300	5,250				
Rock bass.....					56,333	3,380	50,334	3,020
Sheepshead.....	27,670	1,991	27,065	1,974	333,900	20,402	339,400	21,334
Spanish mackerel.....	19,012	1,860	21,640	2,153	100,100	10,010	104,000	10,400
Spots and croakers.....	26,980	2,303	26,695	2,273	27,000	2,700	28,500	2,850
Striped bass.....					11,335	680	33,334	2,000
Trout ( <i>Oynoscion</i> ).....	41,170	2,200	42,472	2,302	482,605	22,766	479,746	22,776
Yellow-tail.....	14,960	914	14,815	890	70,850	3,420	73,400	3,574
Miscellaneous.....	65,120	2,680	64,000	2,572	206,300	9,855	215,800	9,260
Shrimp.....	98,680	1,968	107,075	2,147	6,711,000	94,440	6,835,625	81,305
Crayfish.....					138,000	6,900	140,000	7,000
Crabs, hard.....	27,460	1,278	27,000	1,250	810,000	11,950	824,100	12,180
Crabs, soft.....	10,388	682	10,200	605	123,000	5,880	133,200	6,500
Oysters.....	1,637,489	59,538	1,738,744	62,545	8,110,100	155,625	3,301,200	108,275
Turtle.....					87,250	2,250	98,700	2,513
Alligator hides.....					(*)	45,025	(*)	58,225
Total.....	2,211,531	85,234	2,344,531	89,527	16,243,958	494,270	16,776,625	523,293

Species.	Total.			
	1887.		1888.	
	Pounds.	Value.	Pounds.	Value.
Black bass.....	64,850	\$3,430	69,200	\$3,716
Bream and sunfish.....	210,200	13,320	209,500	13,340
Bluefish.....	12,550	812	14,720	915
Buffalo fish.....	994,431	19,253	1,001,820	19,437
Catfish.....	2,202,895	42,173	2,335,122	44,359
Flounders.....	18,475	1,797	19,075	1,937
Mullet.....	252,760	8,690	252,714	8,710
Perch, white and black.....	13,000	1,120	13,300	1,330
Pompano.....	20,800	3,072	30,990	3,803
Redfish.....	280,020	9,910	288,435	9,980
Red snapper.....	130,860	4,615	150,300	5,250
Rock bass.....	56,333	3,380	50,334	3,020
Sheepshead.....	361,510	22,393	366,405	23,308
Spanish mackerel.....	119,112	11,876	125,640	12,553
Spots and croakers.....	53,980	5,003	55,195	5,123
Striped bass.....	11,335	680	33,334	2,000
Trout ( <i>Oynoscion</i> ).....	523,776	24,975	522,218	25,078
Yellow-tail.....	85,810	4,334	88,215	4,464
Miscellaneous.....	271,420	12,535	277,800	11,832
Shrimp.....	6,800,680	96,408	6,942,700	93,452
Crayfish.....	138,000	6,900	140,000	7,000
Crabs, hard.....	837,450	13,228	851,100	13,430
Crabs, soft.....	133,388	6,562	143,400	7,165
Oysters.....	4,747,689	215,163	5,039,944	230,820
Turtle.....	87,250	2,250	98,700	2,513
Alligator hides.....		45,025		58,225
Total.....	18,455,480	579,604	19,121,056	612,820

\* Number in 1887, 87,068; in 1888, 116,618.

# 370 REPORT OF COMMISSIONER OF FISH AND FISHERIES.

141. *Table showing by apparatus and species the yield of the shore fisheries of Louisiana in 1887 and 1888, exclusive of the shellfish, crustacean, and reptilian fisheries.*

Species.	Seines.				Lines.			
	1887.		1888.		1887.		1888.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Black bass .....	64,850	\$3,430	69,200	\$3,716				
Bream and sunfish .....	151,262	8,605	149,625	8,510	25,625	\$2,050	26,250	\$2,100
Buffalo fish .....	978,400	18,920	985,200	19,097				
Cattfish .....	567,165	9,305	588,933	9,626	1,553,127	31,168	1,662,322	33,026
Flounders .....	11,500	1,150	12,000	1,200				
Mullet .....	192,700	6,500	191,586	6,570	20,000	700	20,700	725
Perch, white and black .....	13,000	1,120	13,300	1,330				
Pompano .....	24,534	2,980	24,800	3,015				
Redfish .....	230,400	7,452	230,900	7,545				
Rock bass .....	42,167	2,530	41,167	2,470	14,166	850	9,167	550
Sheepshead .....	273,368	14,369	275,293	14,923	60,532	6,033	64,107	6,411
Spanish mackerel .....	83,350	8,335	87,800	8,780	16,750	1,675	16,200	1,620
Spots and croakers .....	27,000	2,700	28,500	2,850				
Striped bass .....	8,557	513	27,223	1,633	2,778	167	6,111	367
Trout ( <i>Cynoscion</i> ) .....	376,974	15,370	372,484	15,280	92,304	6,694	93,688	6,783
Yellow-tail .....	70,850	3,420	73,400	3,574				
Miscellaneous fish .....	147,150	7,981	149,300	7,364	14,575	747	14,750	749
<b>Total .....</b>	<b>3,263,227</b>	<b>114,770</b>	<b>3,320,711</b>	<b>117,489</b>	<b>1,719,857</b>	<b>50,084</b>	<b>1,913,290</b>	<b>52,331</b>

  

Species.	Mining apparatus, including cast nets, dip nets, etc.				Total.			
	1887.		1888.		1887.		1888.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Black bass .....					64,850	\$3,430	69,200	\$3,716
Bream and sunfish .....	33,313	\$2,665	33,625	\$2,730	210,200	13,320	209,500	13,340
Buffalo fish .....	6,600	130	7,300	144	985,000	19,050	992,500	19,241
Cattfish .....	63,708	1,322	65,017	1,332	2,184,000	41,795	2,316,272	43,984
Flounders .....					11,500	1,150	12,000	1,200
Mullet .....	40,000	1,400	40,428	1,415	252,700	8,690	252,714	8,710
Perch, white and black .....					13,000	1,120	13,300	1,330
Pompano .....					24,534	2,980	24,800	3,015
Redfish .....					230,400	7,452	230,900	7,545
Rock bass .....					56,333	3,380	56,334	3,420
Sheepshead .....					333,900	20,402	339,400	21,334
Spanish mackerel .....					100,100	10,010	104,000	10,400
Spots and croakers .....					27,000	2,700	28,500	2,850
Striped bass .....					11,335	680	33,334	2,000
Trout ( <i>Cynoscion</i> ) .....	13,328	702	13,579	707	482,606	22,766	479,746	22,776
Yellow-tail .....					70,850	3,420	73,400	3,574
Miscellaneous fish .....	44,575	1,127	49,750	1,147	206,300	9,855	213,800	9,260
<b>Total .....</b>	<b>201,521</b>	<b>7,346</b>	<b>209,699</b>	<b>7,475</b>	<b>5,204,608</b>	<b>172,200</b>	<b>5,443,700</b>	<b>177,295</b>

TEXAS.

The tables for this State include only what may properly be classed as coast fisheries. Texas has had a remarkable development in its fishery interests during the past 8 years, and in percentage of increase ranks high among the coast States. In personnel there has been an increase since 1880 of 103 per cent.; in capital of 406 per cent.; in catch of 74 per cent., and in value of catch 33 per cent.

Among the important changes the vessel fishery deserves mention. There was no fishery of this character reported in 1880; in 1888 19 vessels were employed in fishing. There appears to have been more or less improvement in most branches of fishing. Perhaps the most important change is in the oyster industry, in which the catch has increased from 95,625 bushels in 1880 to 355,561 bushels in 1888. The large extent of ground on the Texas coast available for cultivation of oysters renders it possible that there will be still greater activity in the oyster trade of this State in the near future.

The turtle fishery, as compared with the figures for 1880, shows a large increase, though it is claimed by the fishermen that there has been a decrease in the abundance of turtles in recent years.

The recent withdrawal of the coast connections with the steamship lines has affected the fisheries considerably, and in many cases has led to changes in locality, much to the detriment of certain sections, with a corresponding improvement elsewhere.

142. Table of persons employed.

How engaged.	1887.	1888.
In vessel fisheries .....	60	60
In shore fisheries .....	832	833
On shore, in canneries, etc .....	126	110
Total .....	1,027	1,021

143. Table of apparatus and capital.

Designation.	1887.		1888.	
	No.	Value.	No.	Value.
Vessels fishing* .....	10	\$12,310	19	\$12,085
Outfit .....		3,140		3,090
Boats .....	738	89,704	752	92,739
Apparatus of capture—vessel fisheries:				
Seine .....	9	1,310	0	1,310
Turtle nets .....	33	330	30	300
Lines .....		12		12
Tongs .....	27	162	21	126
Apparatus of capture—shore fisheries:				
Seine .....	114	13,675	116	13,945
Turtle nets .....	104	1,650	130	1,400
Cast nets .....	175	615	182	633
Crab traps .....	127	38	130	39
Lines .....		400		450
Tongs .....	334	2,165	344	2,217
Miscellaneous, including spears .....		770		775
Shore property .....		58,130		62,210
Cash capital .....		22,000		23,150
Total .....		206,591		214,511

\* Tonnage in 1887, 188.08; in 1888, 188.08.

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144. Table of products.

Species.	Vessel fisheries.				Shore fisheries.			
	1887.		1888.		1887.		1888.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Bluefish					7,000	\$350	6,500	\$340
Buffalo fish					9,200	509	12,000	680
Catfish					47,250	2,511	46,500	2,490
Croaker	41,800	\$1,467	44,300	\$1,551	65,568	2,805	65,600	2,954
Flounders	9,700	383	10,570	421	100,500	4,745	100,800	4,782
Grouper	4,500	135	6,800	204				
Hogfish or capitaine					18,000	810	17,500	788
Jackfish	10,400	416	11,860	472	52,170	1,988	48,000	1,842
Jewfish					4,600	230	4,200	210
Mullet					31,250	1,612	31,650	1,646
Perch					27,000	1,328	28,100	1,370
Pike					21,500	1,065	21,100	1,055
Pompano					2,500	750	2,300	690
Redfish	168,400	5,418	171,580	5,903	838,704	32,761	772,497	31,932
Red snapper	25,000	1,055	30,000	1,125	50,000	3,000	35,000	1,850
Sheepshead	83,540	3,035	85,410	3,202	611,184	25,761	561,307	22,993
Shoemaker ( <i>Elagatis</i> )					9,000	405	8,500	383
Spanish mackerel					11,000	660	10,800	648
Striped bass					5,800	290	5,500	275
Trout ( <i>Oynoscion</i> )	94,560	3,307	97,350	3,483	840,124	35,131	774,267	33,228
Miscellaneous fish	11,600	319	8,930	288	273,560	9,199	233,120	8,231
Oysters	109,743	6,100	127,575	4,488	1,623,650	82,175	2,261,350	105,145
Crabs					111,333	4,275	115,333	4,400
Shrimp					254,633	7,950	259,333	7,950
Terrapin					57,780	5,800	47,520	6,480
Turtle	85,000	1,260	75,000	1,125	495,000	7,240	465,000	6,675
<b>Total</b>	<b>702,243</b>	<b>22,900</b>	<b>669,375</b>	<b>22,242</b>	<b>5,580,246</b>	<b>233,350</b>	<b>5,939,786</b>	<b>249,015</b>

Species.	Total vessel and shore fisheries.			
	1887.		1888.	
	Pounds.	Value.	Pounds.	Value.
Bluefish	7,000	\$350	6,500	\$340
Buffalo fish	9,200	509	12,000	680
Catfish	47,250	2,511	46,500	2,490
Croaker	107,368	4,272	109,000	4,505
Flounders	116,200	5,133	117,370	5,203
Grouper	4,500	135	6,800	204
Hogfish or capitaine	18,000	810	17,500	788
Jackfish	62,570	2,404	59,800	2,314
Jewfish	4,600	230	4,200	210
Mullet	31,250	1,612	31,650	1,646
Perch	27,000	1,328	28,100	1,370
Pike	21,500	1,065	21,100	1,055
Pompano	2,500	750	2,300	690
Redfish	1,005,104	38,179	944,077	37,835
Red snapper	75,000	4,055	65,000	2,975
Sheepshead	694,724	28,708	646,717	28,195
Shoemaker ( <i>Elagatis</i> )	9,000	405	8,500	383
Spanish mackerel	11,000	660	10,800	648
Striped bass	5,800	290	5,500	275
Trout ( <i>Oynoscion</i> )	940,684	38,438	871,617	36,709
Miscellaneous fish	235,100	9,518	242,050	8,409
Oysters	1,793,393	88,275	2,268,925	109,633
Crabs	111,333	4,275	115,333	4,400
Shrimp	254,633	7,960	259,333	7,950
Terrapin	57,780	5,800	47,520	6,480
Turtle	680,000	8,500	540,000	7,800
<b>Total</b>	<b>6,282,489</b>	<b>256,250</b>	<b>6,609,161</b>	<b>271,257</b>

145. Table showing by apparatus and species the yield of the shore fisheries of Texas in 1887 and 1888, exclusive of the shellfish, crustacean, and reptilian fisheries.

Species.	Cast nets.				Seines.			
	1887.		1888.		1887.		1888.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Bluefish					7,000	\$350	6,500	\$340
Buffalo fish					9,200	509	12,000	600
Catfish					5,750	311	8,000	420
Croaker					65,568	2,805	65,609	2,854
Flounders					51,500	2,045	48,800	1,982
Hogfish or capitaine					18,000	810	17,500	788
Jackfish					52,170	1,988	48,000	1,842
Jewfish					4,600	230	4,200	210
Mullet	18,750	\$1,050	19,750	\$1,110	12,500	562	11,900	536
Perch	7,500	450	9,000	510	19,500	878	19,100	800
Pike					21,500	1,005	21,100	1,055
Pompano					2,500	750	2,300	690
Redfish					838,704	32,761	772,497	31,932
Sheepshead					601,184	25,161	550,307	22,333
Shoemaker ( <i>Elagatis</i> )					9,000	405	8,500	383
Spanish mackerel					11,000	630	10,800	648
Striped bass					5,800	290	5,500	275
Trout ( <i>Cynoscion</i> )	5,000	200	5,000	200	828,124	34,151	756,767	32,276
Miscellaneous fish					261,500	8,699	221,120	7,731
<b>Total</b>	<b>81,250</b>	<b>1,700</b>	<b>33,750</b>	<b>1,820</b>	<b>2,825,100</b>	<b>114,430</b>	<b>2,590,500</b>	<b>107,915</b>

Species.	Lines.				Spears.			
	1887.		1888.		1887.		1888.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Catfish	41,500	\$2,200	38,500	\$2,070				
Flounders					55,000	\$2,700	58,000	\$2,800
Red snapper	50,000	3,000	35,000	1,850				
Sheepshead	10,000	600	11,000	660				
Trout ( <i>Cynoscion</i> )	13,000	780	12,500	750				
Miscellaneous fish	12,000	500	12,000	500				
<b>Total</b>	<b>128,500</b>	<b>7,080</b>	<b>100,000</b>	<b>5,830</b>	<b>55,000</b>	<b>2,700</b>	<b>58,000</b>	<b>2,800</b>

SUMMARY.

Species.	1887.		1888.		Species.	1887.		1888.	
	Lbs.	Value.	Lbs.	Value.		Lbs.	Value.	Lbs.	Value.
Bluefish	7,000	\$350	6,500	\$340	Redfish	838,704	\$32,761	772,497	\$31,932
Buffalo fish	9,200	509	12,000	600	Red snapper	50,000	3,000	35,000	1,850
Catfish	47,250	2,611	40,500	2,400	Sheepshead	611,184	25,161	561,307	22,993
Croaker	65,568	2,805	65,609	2,854	Shoemaker	9,000	405	8,500	383
Flounders	100,500	4,745	106,000	4,782	Spanish mackerel	11,000	660	10,800	648
Hogfish or capitaine	18,000	810	17,500	788	Striped bass	5,800	290	5,500	275
Jackfish	52,170	1,988	48,000	1,842	Trout	846,124	35,131	774,267	33,226
Jewfish	4,600	230	4,200	210	Miscellaneous fish	273,500	9,199	233,120	8,231
Mullet	31,250	1,612	31,650	1,646	<b>Total</b>	<b>3,037,850</b>	<b>125,910</b>	<b>2,791,250</b>	<b>118,385</b>
Perch	27,000	1,328	28,100	1,370					
Pike	21,500	1,065	21,100	1,055					
Pompano	2,500	750	2,300	690					

## VII.—FISHERIES OF THE PACIFIC STATES.

The shore line covered by the accompanying statistical statements has an approximate length of 4,425 miles, of which California has 1,910 miles, Oregon 1,170 miles, and Washington 1,345 miles. These figures include all the rivers of the coast as far as the limits of commercial fishing.

The vessel fisheries characteristic of this region are those for whales, fur seals, and cod, all of which are of great importance. The whale fishery carried on from this coast is now the most important in the country. The shore fisheries, especially on the California coast and in Puget Sound, are extensive. The river fishery for salmon is the most important in the world, and is the most remunerative fishery of the region, while the canning industry dependent thereon is of great magnitude.

The fisheries of this section have been made the subject of a special report, to which the reader is referred for details.\*

There were employed in the fisheries of the Pacific States in 1888 1,879 vessel fishermen, 8,804 shore fishermen, and 3,167 shosmen and factory hands, making a total of 13,850 persons.

The capital invested, which ranked next to the Middle States in point of value, amounted to \$6,498,239, of which \$1,682,545 represented vessels and their outfits, \$591,985 boats, \$1,194,795 apparatus of capture, and \$3,082,914 shore property and circulating capital.

The catch, which in value ranked as third among the five coast sections, was worth at first hands \$6,379,363. Next to the general food-fish fisheries the most important branches were the fur-seal, whale, and sea-otter industries, and the molluscan fisheries. The crustacean catch was also large.

## CALIFORNIA.

The tables for this State cover all the commercial fisheries, including those prosecuted in Alaska, so far as they are controlled by California capital; exception to this, however, is made in the case of the Alaskan salmon fishery.

In general the fisheries of California show a satisfactory improvement since 1880, though there has been a decline in some branches. The figures for 1888 indicate an increase in personnel of 72 per cent., in capital of 136 per cent., and in value of products of 38 per cent. In 1888 the fur-seal and sea-otter fisheries of Alaska were included, these being maintained by California capital. In the foregoing comparisons with 1880 these fisheries have been added to the figures given for California for the census year.

\* Report on the Fisheries of the Pacific Coast of the United States, by J. W. Collins.



There has been a material advance in the vessel fisheries of the State, the fleet having increased from 49 to 94 vessels, while the average tonnage is now 128.82 against 107.08 in 1880. The whale fishery has grown to large proportions, and this State is slightly in advance of any other in this industry, so far as value of products is concerned, though the margin of difference over Massachusetts is so small that the relative positions of the two States may be changed at any time. In 1880 there were only 5 whaling vessels in California, but in 1888 the fleet numbered 27 sail. In value of products, this branch of the fisheries has increased more than 300 per cent. since 1880.

Among other conspicuous changes the following may be mentioned: The shrimp fishery has increased 125 per cent.; the oyster industry, which was not reported in 1880, now amounts to over a half million dollars in value of products; the clam fishery has also undergone a great advance, while the abalone fishery has seriously declined.

146. Table of persons employed, 1888.

How engaged.	No.
On fishing vessels .....	1,396
On transporting vessels .....	147
On boats .....	3,188
On shore, in canneries, factories, etc .....	607
<b>Total .....</b>	<b>5,338</b>

147. Table of apparatus and capital, 1888.

Designation.	Number.	Value.
Vessels fishing (tonnage 9,544.49) .....	69	\$741,650
Outfit .....		372,175
Vessels transporting (tonnage 2,564.32) .....	25	304,850
Outfit .....		75,300
Boats .....	1,354	245,010
Apparatus of capture:		
Gill nets .....	2,367	256,465
Trammel nets .....	329	14,735
Seines, bag nets, etc .....	1,629	57,625
Traps, pots, and fykes .....	1,460	4,420
Hand lines and trawl lines .....		21,430
Shore property .....		323,050
Cash capital .....		267,500
<b>Total .....</b>		<b>2,684,210</b>

148. Table of products, 1888.

Species.	Vessel fisheries.		Shore fisheries.		Total.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Miscellaneous fish.....	5,200	\$338	17,845,432	\$941,968	17,850,632	\$942,306
Miscellaneous fish, salted.....	3,890,393	101,962	1,552,299	47,130	5,442,692	149,092
Oysters.....			910,000	509,175	910,000	509,175
Clams.....			2,396,415	78,284	2,390,415	78,284
Abalone shells and meats.....	940,000	20,760	2,665,920	57,826	3,605,920	78,570
Octopus and squid.....			244,000	13,620	244,000	13,620
Crayfish.....			231,060	7,995	231,060	7,995
Crabs.....			230,000	37,200	230,000	37,200
Shrimp and prawn.....			4,902,360	141,688	4,902,360	141,688
Terrapin and frogs.....			60,000	15,060	60,000	15,060
Hair-seal, sea-lion, and walrus skins.....	(*)	4,205	(†)	1,050	.....	5,255
Fur-seal pelts.....	(.)	27,580	(§)	1,549,150	.....	1,576,730
Sea-otter pelts.....	(  )	38,500	(¶)	179,159	.....	217,659
Whalebone and ivory.....	197,060	585,895	.....	.....	197,060	585,895
Whale and seal oil.....	2,137,192	102,384	54,375	2,450	2,191,567	104,834
	7,169,845	881,614	31,091,861	3,581,755	38,261,706	4,463,369

\* 121 in number.  
† 666 in number.

‡ 4,455 in number.  
§ 100,000 in number.

¶ 385 in number.  
‖ 2,286 in number.

OREGON.

All the commercial fisheries of this State are included in the tables, and for the first time the statistics embrace the salmon canning and market fishing on the small coast rivers, where these industries have generally been recently established and have grown to considerable importance.

The specially prominent feature of the fisheries of Oregon is the salmon industry; outside of this the fishery interests have not yet assumed proportions of any magnitude.

In recent years there has been some decline in the salmon fishery, so far as the catch and pack are concerned, although, owing to the increase in price paid the fishermen, there has been an enhancement of first value.

The salmon catch of the State, as reported for 1880, was 39,500,000 pounds, valued at \$855,302. It is believed, however, that the entire catch of the Columbia River, for the year last mentioned, has been credited to Oregon, and this should be taken into consideration in noting comparisons. In 1888 the yield of salmon amounted to 23,948,142 pounds, valued at \$935,211. So far as other products are concerned there is no basis for comparison in detail; it may be said, however, that there has been a large increase in the general fisheries. The oyster industry has been established since 1880, and the sturgeon fishery likewise. The latter has assumed considerable importance, ranking next to the salmon in productiveness, the yield in 1888 being 970,624 pounds.

149. Table of persons employed, 1888.

How engaged.	No.
On transporting vessels.....	63
On boats.....	3,045
On shore, in canneries, factories, etc.....	1,584
Total.....	4,682

150. Table of apparatus and capital, 1888.

Designation.	Number.	Value.
Vessels transporting (tonnage, 422.30).....	13	\$74, 050
Outfit.....		11, 400
Boats.....	1, 545	201, 095
Apparatus of capture:		
Gill nets.....	2, 545	322, 620
Seines.....	25	7, 280
Pound nets and weirs.....	56	41, 550
Salmon wheels.....	24	63, 013
Minor apparatus.....		2, 900
Shore property.....		619, 294
Cash capital.....		952, 850
<b>Total.....</b>		<b>2, 296, 632</b>

151. Table of products, 1888.

Species.	Pounds.	Value.
Eels, salted.....	15, 000	\$750
Salmon.....	23, 415, 242	963, 016
Salmon, salted.....	532, 900	21, 595
Shad.....	10, 000	500
Smelt.....	180, 000	5, 400
Sturgeon.....	784, 424	11, 796
Sturgeon, salted.....	180, 200	3, 724
Miscellaneous fish.....	45, 500	3, 402
Oysters.....	275, 000	6, 250
Clams.....	74, 880	7, 325
Crayfish.....	14, 825	716
Oil.....	60, 000	1, 800
Fertilizer.....	201, 600	1, 800
Caviare.....	96, 760	4, 840
<b>Total.....</b>	<b>25, 891, 831</b>	<b>1, 033, 674</b>

**WASHINGTON.**

The tables embrace all fisheries of commercial importance, including the small coast rivers and bays.

As no mention was made of the salmon fishery prosecuted from the Washington side of the Columbia River in 1880, the basis for comparison with that period is not entirely satisfactory. All that can be done is to present such figures as are available.

In general there has been a decided increase since the last census year in the fishery interests of this State, notably in the oyster fishery, the yield of which has advanced from 15,000 to 60,993 bushels; in the salmon fishery, in which the catch in 1880 was reported to be 350,000 pounds and in 1888 was 16,319,736 pounds; in the vessel fishery for food species (including halibut and salt salmon) which has been established in recent years, and the product of which in 1888 amounted to 686,000 pounds. The fur-seal fishery has declined considerably in value, though to a less extent in number of skins.

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152. *Table of persons employed, 1888.*

How engaged.	No.
On fishing vessels .....	267
On transporting vessels .....	16
On boats .....	2,571
On shore, in canneries, factories, etc .....	979
<b>Total</b> .....	<b>3,830</b>

153. *Table of apparatus and capital, 1888.*

Designation.	Number.	Value.
Vessels fishing (tonnage, 682.16) .....	13	\$52,500
Outfit .....		28,700
Vessels transporting (tonnage, 70.57) .....	4	19,100
Outfit .....		2,820
Boats .....	1,202	145,880
Apparatus of capture:		
Gill nets .....	1,130	187,345
Seines .....	59	44,200
Pound nets and weirs .....	159	122,400
Salmon wheels .....	15	45,287
Minor apparatus .....		2,945
Shore property .....		333,220
Cash capital .....		533,000
<b>Total</b> .....		<b>1,517,397</b>

154. *Table of products, 1888.*

Species.	Vessel fisheries.		Shore fisheries.		Total.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Cod .....			239,400	\$10,820	239,400	\$10,820
Halibut .....	310,000	\$9,300	610,000	12,500	920,000	21,800
Halibut, salted .....	300,000	10,100			300,000	10,100
Salmon .....			16,185,836	681,808	16,185,836	681,808
Salmon, salted .....	76,000	2,660	57,900	2,145	133,900	4,805
Miscellaneous fish .....			1,135,200	33,775	1,135,200	33,775
Fur-seal pelts .....	(*)	29,458				29,458
Sea-otter pelts .....	(†)	3,450				3,450
Crabs .....			1,875	570	1,875	570
Shrimp .....			5,000	500	5,000	500
Clams .....			300,000	3,200	300,000	3,200
Oysters .....			4,066,200	86,574	4,066,200	86,574
Oil .....			75,000	4,000	75,000	4,000
<b>Total</b> .....	<b>686,000</b>	<b>54,968</b>	<b>22,676,411</b>	<b>885,892</b>	<b>23,362,411</b>	<b>890,860</b>

\* 5,351 in number.

† 30 in number.