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STATISTICS  
OF THE  
FISHERIES OF THE MIDDLE ATLANTIC STATES.

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PREPARED IN THE DIVISION OF STATISTICS AND METHODS OF THE  
FISHERIES, UNITED STATES FISH COMMISSION.

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## INTRODUCTION.

The present report on the fisheries of the Middle Atlantic States is for the calendar year 1901. The statistics of the oyster fishery, however, in all sections except Long Island, New York; Delaware; Worcester County, Md., and Accomac and Northampton counties, Va., are for the oyster season of 1900-1901.

The investigation on which this report is based embraced the commercial fisheries of all the coastal waters, including coast-rivers, of the various States of this region. It was begun in January and completed in October, 1902. The inquiries in the field were made by the statistical agents of the Commission as follows: Mr. C. H. Stevenson canvassed Long Island, New York; Delaware; Accomac and Northampton counties, Va., and Worcester County, Md. Mr. John N. Cobb canvassed New York, exclusive of Long Island; the Atlantic coast of New Jersey, and, in December after the regular investigation closed, obtained statistics of the smoked-fish trade of Philadelphia and additional data on the shore fisheries of Philadelphia County, Pa., and Burlington and Mercer counties, N. J. Mr. W. A. Roberts canvassed the Eastern Shore of Maryland, except Worcester and Cecil counties, and also the Patuxent River, and the Chesapeake side of St. Mary, Calvert, and part of Anne Arundel counties on the western shore of that State. Mr. John B. Wilson assisted in the work at Crisfield, Md., and canvassed New Jersey on the Delaware River and Bay from Camden to Cape May. Mr. Thomas B. Gould obtained statistics of Pennsylvania on the Delaware and Susquehanna rivers, and of New Jersey on the Delaware River above Camden. Messrs. W. A. Wilcox and T. M. Cogswell canvassed Virginia, except Accomac and Northampton counties, and also that part of Maryland bordering the Potomac River. The remaining territory in Maryland was worked by Mr. G. H. H. Moore and Mr. E. S. King, the former canvassing Cecil and Harford counties and the wholesale trade and vessel fisheries of Baltimore City, and the latter collecting statistics on the shore fisheries of Baltimore County and Baltimore City and on the vessel and shore fisheries of a part of Anne Arundel County. Messrs. Stevenson, Cobb, Roberts, Wilcox, Cogswell, and Moore obtained explanatory notes on the fisheries which are embodied in the text, and also assisted in the work of preparing

the text and compiling the statistics in the office. The general preparation and arrangement of the report was under the direction of Mr. Ansley Hall. The results of the inquiry, which in this report are presented in detail, have already been published in condensed form in Statistical Bulletin No. 131.

The fisheries of the Middle Atlantic States in 1901<sup>a</sup> gave employment to 93,661 persons, of whom 70,923 were fishermen and 22,738 were shoresmen in the wholesale fishery trade, oyster canneries, and other shore industries related to the fisheries. Maryland employed in its fisheries 36,260 persons, Virginia 29,325, New Jersey 12,030, New York 11,564, Pennsylvania 2,484, and Delaware 1,998. The last general investigation of the fisheries of this group of States was for the year 1897. In connection with that canvass statistics for New York and New Jersey were also obtained for 1898. Since 1897 there has been a decrease in the number of persons employed of 3,074. There was a decrease of 6,552 persons in Maryland, 464 in New Jersey, and 394 in Delaware, but this was partly offset by an increase in each of the other States.

The total capital invested in 1901 was \$25,080,371. The investment in New York was \$9,444,271; in Maryland, \$6,506,066; in Virginia, \$3,633,104; in New Jersey, \$2,729,571; in Pennsylvania, \$2,110,162, and in Delaware, \$657,197. Compared with 1897 the investment has increased \$4,973,900, or 24.73 per cent. About half of this increase is in New York and the remainder is distributed in various amounts in all the other States, the largest percentage in any State being 61.15 per cent in Delaware.

The number of fishing and transporting vessels employed was 3,721, valued at \$3,657,103. Their net tonnage was 54,761 tons, and the value of their outfits was \$1,088,706. There has been a decrease in the vessels of 153 in number, and of 3,554 tons in tonnage, but an increase of \$339,080 in the value. The number of boats in the shore fisheries was 36,237, valued at \$2,023,880. The apparatus of capture was valued at \$1,713,454, the shore and accessory property at \$9,561,356, and the cash capital amounted to \$7,035,872.

The products of the fisheries aggregated 819,046,576 pounds, valued at \$17,485,500. New York derived from its fisheries 228,092,285 pounds, valued at \$3,894,270; New Jersey, 117,930,964 pounds, valued at \$4,755,522; Pennsylvania, 6,029,538 pounds, valued at \$251,491; Delaware, 5,835,186 pounds, valued at \$203,372; Maryland, 82,975,245 pounds, valued at \$3,767,461; and Virginia, 378,183,358 pounds, valued at \$4,613,384. The most important species in the fisheries of these States is the oyster, the yield of which was 19,749,677 bushels, valued at \$10,287,556, representing nearly 59 per cent of the total

<sup>a</sup> In the present report, it should be noted, the statistics for New York and Pennsylvania do not include the fisheries of the Great Lakes and other interior waters within the boundaries of these States.

value of products for the entire region. The yield of shad, which is next in importance, was 31,897,687 pounds, valued at \$1,253,622. The catch of clams, hard and soft, was 1,118,777 bushels, valued at \$1,074,834. Some of the other prominent species were alewives, 33,198,605 pounds, \$243,340; blue-fish, 16,317,795 pounds, \$758,122; menhaden, 493,936,462 pounds, \$987,228; squeteague, 23,496,383 pounds, \$558,653; crabs, hard and soft, 70,951,965 in number, \$495,385. The catch of alewives, blue-fish, croakers, king-fish, yellow perch, pike and pickerel, scup, shad, striped bass, and oysters, as compared with 1897, has decreased in quantity, but increased in value. In the meantime there has been an increase in both the quantity and value of a large number of other species.

The products since 1897 have increased 224,874,366 pounds, or 37.84 per cent in quantity, and \$3,161,037 or 22.06 per cent in value. There has been an increase in quantity in all the States except Delaware and Maryland, and in value in all except Delaware and Pennsylvania. The decrease in Delaware, which was 32.52 per cent in quantity and 19.34 per cent in value, is explained principally by a falling off in the catch of sturgeon, squeteague, and alewives. In Maryland the decrease in the yield of alewives, shad, and oysters has been largely instrumental in overbalancing the increase in other species. In New York the products have increased 108.19 per cent in quantity and 14.82 per cent in value. This is attributable mainly to the fact that since the consolidation of a number of the principal menhaden plants on the Atlantic coast in 1898, a considerable part of the menhaden catch formerly included in the products of other States has been credited to New York, where the home office of the company representing the combined interests is located. Therefore if the comparison is made with 1898 instead of with 1897 the increase is reduced to 8.35 per cent in quantity and 9.85 per cent in value. The next greatest increase is in New Jersey and Virginia, where it relates to a number of species. In Virginia, however, the products have been affected in quantity chiefly by the increased catch of menhaden, which has risen from 178,656,362 pounds, valued at \$255,241, to 273,493,799 pounds, valued at \$433,109. The oyster yield in this State has also increased from 7,023,848 bushels, valued at \$2,041,683, to 7,885,447 bushels, valued at \$2,923,456.

In connection with the fisheries of the Middle Atlantic States, one of the most important occurrences during the past few years is the adoption of gasoline and naphtha engines as an auxiliary means of propelling sailing vessels and boats. In New York and New Jersey these engines are used on a large number of boats in the oyster, clam, shad, and pound-net fisheries, and on many of the vessels engaged in transporting fishery products to market.

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The following tables present the number of persons employed, the amount of capital invested, and the quantity and value of the products of the fisheries of the Middle Atlantic States in 1901, and also a comparison of the extent of the fisheries in 1897 and 1901:

Table showing the number of persons engaged in the fisheries of the Middle Atlantic States in 1901.

States.	Fishermen.	Shoresmen.	Total.
New York	8,676	2,888	11,564
New Jersey	11,170	860	12,030
Pennsylvania	1,748	736	2,484
Delaware	1,565	433	1,998
Maryland	23,707	12,553	36,260
Virginia	24,657	5,268	29,925
Total	70,923	22,738	93,661

Table showing the investment in the fisheries of the Middle Atlantic States in 1901.

Items.	New York.		New Jersey.		Pennsylvania.	
	No.	Value.	No.	Value	No.	Value.
Vessels	633	\$1,241,215	611	\$643,475	27	\$69,150
Tonnage	11,641		6,714		519	
Outfit		854,176		166,813		23,840
Boats	4,656	317,447	6,473	502,066	526	30,583
Seine	335	53,075	483	38,785	120	12,615
Gill nets	3,918	67,347	5,060	145,306	228	13,193
Pound nets, traps, and weirs	248	67,645	158	155,679		
Fyke nets	7,212	34,860	3,057	16,955	1,384	2,239
Stop nets			14	1,660	16	905
Dip nets	101	155			232	570
Lines		6,694		4,473		659
Eel pots	7,626	7,301	5,665	4,052	117	122
Lobster pots	4,986	8,350	850	2,358		
Dredges, tongs, nippers, rakes, and hoes.		39,169		101,593		2,650
Crab scrapes			323	1,155		1,686
Other apparatus		121		3,643		1,168,243
Shore and accessory property		4,221,226		785,428		793,707
Cash capital		3,025,500		155,550		
Total investment		9,444,271		2,729,571		2,110,162

Items.	Delaware.		Maryland.		Virginia.		Total.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels	27	\$20,200	1,337	\$887,155	1,086	\$805,908	3,721	\$3,667,103
Tonnage	237		20,067		15,683		54,761	
Outfit		2,247		250,207		291,423		1,088,706
Boats	910	29,601	11,498	553,526	12,174	589,757	36,237	2,023,880
Seine	192	9,091	318	30,033	311	78,530	1,769	322,129
Gill nets	691	22,343	3,653	34,660	10,437	50,035	23,987	332,884
Pound nets, traps, and weirs.	7	760	1,017	99,265	1,599	313,996	3,029	637,346
Fyke nets	548	899	4,064	11,372	729	7,444	16,994	73,769
Stop nets							30	2,565
Bow nets	12	32	106	529			118	561
Dip nets							353	725
Trammel nets			18	1,570			18	1,570
Slat traps					6	120	6	120
Lines		56		4,722		3,579		20,183
Eel pots	1,260	406	4,389	2,248	569	579	19,526	14,708
Lobster pots	60	60					5,896	10,768
Dredges, tongs, nippers, rakes, and hoes		2,430		157,398		72,592		375,822
Crab scrapes			2,831	10,247	933	2,256	4,087	13,638
Other apparatus		86		870		261		6,667
Shore and accessory property.		352,086		2,164,749		869,624		9,561,356
Cash capital		216,600		2,297,515		547,000		7,035,872
Total investment		667,197		6,506,063		3,633,104		25,080,371

Table showing the quantity and value of products taken in the fisheries of the Middle Atlantic States in 1901.

Species.	New York.		New Jersey.		Pennsylvania.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Albacore.....			15,148	\$259		
Alwolves, fresh.....	1,363,614	\$19,106	3,347,491	19,425	801,925	\$2,448
Alwolves, salted.....			374,000	2,365	334,000	6,560
Black bass.....			3,000	159		762
Blue-fish.....	9,350,502	473,366	6,110,818	254,682	1,946	67
Bonito.....	194,727	7,307	1,459,418	34,841		
Butter-fish.....	590,682	25,809	3,003,301	84,119		
Cat-fish.....	174,144	8,822	256,859	14,220	183,199	10,163
Cero.....	1,570	123	22,789	714		
Cod.....	1,172,291	51,921	9,300,771	67,603		
Crevaille.....			63	1		
Croakers.....			226,360	5,663	6,231	141
Drum.....			58,380	868		
Eels, fresh.....	722,859	50,038	1,862,988	70,636	140,504	6,151
Flounders.....	1,274,308	49,949	1,668,221	52,993	22,411	709
German carp.....	281,494	17,142	227,419	14,290	161,895	9,795
Haddock.....	160,708	6,516	228,963	8,101		
Hake.....	36,580	860	26,841	749		
Herring, salted.....	180,000	2,025				
Horse-mackerel.....			224	5		
King-fish.....	29,826	3,418	21,086	3,083		
Ling.....	26,140	516	317,868	4,375		
Mackerel.....	507,338	19,454	10,005	1,577		
Menhaden.....	180,409,767	454,505	32,910,666	88,041		
Mullet, fresh.....			36,300	1,842		
Mullet, salted.....			57,814	5,123		
Mummichog.....	140,000	800				
Perch, white.....	51,987	3,390	1,270,097	81,699	3,465	206
Perch, yellow.....	25,893	2,014	16,569	1,038	1,225	62
Pike and pickerel.....	2,060	135	2,560	210		
Pollock.....	42,581	1,240				
Salmon, Atlantic.....	163	78	233	73	1,397	202
Scup.....	804,589	25,379	607,099	16,367	22,593	565
Sea bass.....	231,517	15,216	1,495,247	70,003	687,412	32,791
Sea robins.....	385,000	483				
Shad, fresh.....	3,482,472	110,682	14,031,002	475,202	2,982,865	124,328
Shark.....			500	10		
Sheepshead.....	100	12	7,285	905		
Skates.....	139,200	140	2,375	48		
Spanish mackerel.....	4,104	933	38,928	5,729		
Spots.....	4,800	206	299,092	3,471		
Squeteague.....	2,346,688	73,939	11,973,394	315,770	3,600	115
Striped bass.....	71,840	9,102	354,467	49,734	13,092	1,153
Sturgeon.....	112,626	6,108	128,919	8,393	530	43
Caviar.....	4,291	2,215	19,108	10,959		
Suckers.....	218,874	11,023	110,415	6,459	29,855	1,313
Sun-fish.....	12,875	1,099			3,970	317
Swell-fish.....	134,870	101				
Tautog.....	49,662	1,798	91,105	3,186		
Tomcod.....	38,300	1,152	265,041	4,519		
Wall-eyed pike.....					14,675	2,321
Whitebait.....	24,510	1,784				
Whiting.....	33,975	480	405,804	7,874		
Clams, hard.....	1,478,368	257,686	4,246,070	552,953		
Clams, soft.....	779,450	58,843	902,770	54,918		
Clams, surf.....				500		
Crabs, hard.....	791,725	4,993	719,995	23,558		
Crabs, soft.....	40,440	2,104	417,910	51,861		
Frogs.....					800	240
King crabs.....			409,800	1,711		
Lobsters.....	183,539	21,742	65,943	8,340		
Mussels.....	262,400	1,860	374,600	920		
Oysters, market.....	12,380,921	1,703,985	14,646,345	1,696,767	282,352	35,517
Oysters, seed.....	3,808,525	268,555	10,617,572	550,918	302,638	14,232
Shells.....	2,286,000	1,330	144,000	32		
Scallops.....	1,109,724	107,337	114,000	3,200		
Shrimp.....			4,095	1,988		
Squid.....	180,846	5,114	17,748	826		
Terrapin.....	340	340	8,232	3,135		
Turtle.....			20,180	1,053	10,500	870
Total.....	228,092,285	3,894,270	117,930,964	4,755,522	6,029,538	251,491

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Table showing the quantity and value of products taken in the fisheries of the Middle Atlantic States in 1901—Continued.

Species.	Delaware.		Maryland.		Virginia.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Albacore							15, 143	\$259
Alewives, fresh	597, 374	\$4, 816	13, 454, 757	\$87, 021	13, 633, 444	\$110, 524	33, 198, 605	243, 340
Alewives, salted			292, 400	4, 287	280, 000	4, 900	1, 280, 400	19, 014
Black bass			22, 383	2, 124	199, 439	16, 735	233, 378	19, 780
Blue-fish	400	20	100, 145	4, 378	755, 085	25, 609	16, 317, 795	768, 122
Bonito			250	10	14, 160	537	1, 668, 555	42, 695
Butter-fish			458, 700	11, 505	1, 071, 860	28, 551	5, 129, 543	149, 984
Cat-fish	130, 280	5, 075	488, 777	15, 547	820, 825	23, 560	2, 063, 584	77, 396
Cero			500	10			24, 859	847
Cod	1, 250	50	600	12	100	4	3, 475, 012	119, 590
Creville			400	2	468, 791	13, 533	469, 244	13, 536
Croakers	28, 730	665	303, 405	4, 239	3, 937, 168	53, 493	4, 501, 894	64, 201
Drum	3, 200	56	53, 450	570	2, 228, 172	2, 707	343, 152	4, 201
Eels, fresh	230, 650	9, 127	334, 811	12, 809	105, 815	4, 430	2, 897, 627	152, 686
Eels, salted			2, 200	60			2, 200	60
Eels, smoked			1, 100	128			1, 100	128
Flounders	5, 500	226	51, 205	1, 625	209, 394	6, 253	3, 231, 039	111, 755
Gizzard carp	198, 040	9, 752	163, 180	5, 319	127, 930	2, 940	1, 159, 958	59, 238
Gizzard shad			6, 010	133	5, 250	100	11, 260	233
Haddock							387, 666	14, 617
Hake							63, 421	1, 609
Harvest-fish			12, 800	110			12, 800	110
Herring, salted							180, 000	2, 025
Hickory shad			8, 315	209	448, 600	11, 427	456, 915	11, 636
Hog-fish					44, 892	3, 586	44, 892	3, 586
Horse-mackerel							224	5
King-fish			7, 215	955	91, 122	3, 436	149, 199	10, 892
Ling							344, 008	4, 891
Mackerel			1, 800	180			519, 643	21, 211
Menhaden			7, 122, 230	11, 573	273, 493, 799	433, 109	493, 936, 462	987, 224
Moon-fish					70, 400	2, 161	70, 400	2, 161
Mullet, fresh	5, 350	180	35, 295	900	190, 700	5, 420	267, 645	8, 342
Mullet, salted							57, 814	5, 123
Mummichog							140, 000	800
Perch, white	242, 360	11, 357	452, 815	25, 005	731, 925	32, 582	2, 752, 649	154, 239
Perch, yellow			292, 720	9, 617	158, 939	4, 472	495, 346	17, 203
Pike and pickerel	16, 310	654	67, 530	5, 390	32, 103	2, 848	120, 553	9, 287
Pollock							42, 581	1, 240
Pompano			140	14	96, 186	7, 549	96, 326	7, 563
Roach			200	1			200	1
Salmon, Atlantic							1, 793	353
Scup			32, 650	1, 019			1, 466, 931	43, 350
Sea bass	500	25	50, 800	2, 540	2, 200	93	2, 467, 676	126, 668
Sea robins							385, 000	433
Shad, fresh	1, 367, 952	56, 605	3, 094, 181	120, 177	6, 972, 212	306, 203	31, 890, 687	1, 253, 197
Shad, salted			17, 000	425			17, 000	425
Shark					8, 430		500	10
Sheepshead			1, 350	52		348	17, 165	1, 167
Skates							141, 575	188
Spanish mackerel			2, 922	348	520, 142	44, 017	566, 096	51, 027
Spots			22, 470	387	806, 827	24, 306	1, 133, 189	28, 370
Squeteague	722, 455	13, 915	1, 018, 775	26, 921	7, 431, 496	127, 993	23, 496, 383	558, 653
Striped bass	47, 595	5, 114	824, 413	68, 568	527, 507	45, 177	1, 838, 919	178, 848
Sturgeon	75, 892	3, 678	107, 620	3, 503	183, 023	12, 161	648, 610	33, 886
Sturgeon, caviar	10, 397	6, 766	5, 818	3, 486	18, 318	10, 204	57, 842	33, 630
Suckers	2, 500	101	14, 750	281	48, 165	927	424, 059	19, 104
Swell-fish	200	2	3, 970	72	4, 000	95	25, 015	1, 585
Tarpon					75	1	134, 870	101
Tautog	3, 600	180					75	1
Tomcod							144, 367	5, 114
Wall-eyed pike							303, 341	5, 671
Whitebait							14, 675	2, 321
Whiting					600	12	24, 510	1, 784
Clams, hard	8, 200	1, 203	107, 600	14, 384	1, 764, 680	134, 777	7, 604, 918	961, 003
Clams, soft							1, 082, 220	113, 761
Clams, surf							13, 336	500
Crabs, hard			9, 824, 793	85, 884	6, 113, 277	52, 863	17, 449, 790	167, 298
Crabs, soft	150, 509	5, 587	4, 303, 582	202, 563	1, 298, 424	65, 972	6, 200, 865	328, 087
Frogs			130	50	15, 377	1, 283	16, 307	1, 573
King crabs	720, 400	2, 380					1, 180, 200	4, 091
LOBSTERS	2, 760	294					252, 242	30, 376
Mussels							637, 000	2, 780
Oysters, market	678, 300	40, 290	39, 798, 927	3, 031, 518	42, 473, 683	2, 621, 915	110, 260, 528	9, 129, 992
Oysters, seed	534, 030	22, 318			12, 724, 446	301, 541	27, 987, 211	1, 157, 564
Shells							2, 430, 000	1, 362
Prawn					2, 850	142	2, 850	142
Scallops							1, 223, 724	110, 537
Shrimp			728	708			4, 823	2, 696
Squid							198, 594	5, 940
Terrapin	512	491	1, 593	1, 139	5, 130	1, 444	15, 807	6, 549
Turtle	50, 050	2, 445	4, 835	203	56, 897	1, 444	142, 412	6, 015
Total	5, 835, 186	203, 372	82, 975, 245	3, 767, 461	378, 183, 858	4, 613, 384	819, 046, 576	17, 485, 500

Supplementary table showing certain of the above products in number and bushels.

Products.	New York.		New Jersey.		Pennsylvania.	
	No.	Value.	No.	Value.	No.	Value.
Clams, hard..... bushels..	184, 736	\$257, 686	530, 759	\$552, 953		
Clams, soft..... do.....	77, 945	58, 848	90, 277	54, 918		
Clams, surf..... do.....			1, 667	500		
Crabs, hard..... number..	2, 375, 175	4, 993	2, 159, 985	23, 558		
Crabs, soft..... do.....	121, 320	2, 104	1, 253, 730	51, 861		
King crabs..... do.....			294, 900	1, 711		
Mussels..... bushels..	10, 240	1, 860	11, 860	920		
Oysters, market..... do.....	1, 768, 703	1, 703, 985	2, 092, 335	1, 696, 767	40, 336	\$35, 517
Oysters, seed..... do.....	544, 075	268, 555	1, 516, 796	550, 918	43, 234	14, 232
Shells..... do.....	38, 100	1, 330	2, 400	32		
Scallops..... do.....	184, 954	107, 337	7, 333	3, 200		

Products.	Delaware.		Maryland.		Virginia.		Total.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Clams, hard..... bushels..	1, 025	\$1, 203	13, 450	\$14, 384	220, 585	\$134, 777	950, 555	\$961, 073
Clams, soft..... do.....							168, 222	113, 761
Clams, surf..... do.....							1, 667	500
Crabs, hard..... number..			29, 474, 379	85, 894	18, 339, 331	52, 863	52, 349, 370	167, 298
Crabs, soft..... do.....	451, 527	5, 587	12, 910, 746	202, 563	3, 865, 272	65, 972	18, 602, 595	328, 087
King crabs..... do.....	360, 200	2, 330					565, 100	4, 091
Mussels..... bushels..							22, 100	2, 780
Oysters, market..... do.....	96, 900	40, 290	5, 685, 561	3, 031, 518	6, 067, 669	2, 621, 915	15, 751, 504	9, 129, 992
Oysters, seed..... do.....	76, 290	22, 318			1, 817, 778	301, 541	3, 998, 173	1, 157, 564
Shells..... do.....							40, 500	1, 362
Scallops..... do.....							192, 287	110, 537

Comparative table showing the extent of the fisheries of the Middle Atlantic States in 1897 and 1901.

States.	Persons engaged.				Capital invested.			
	1897.	1901.	Increase or decrease in 1901 compared with 1897.	Percentage of increase or decrease in 1901 compared with 1897.	1897.	1901.	Increase or decrease in 1901 compared with 1897.	Percentage of increase or decrease in 1901 compared with 1897.
New York.....	8, 962	11, 564	+2, 702	+30. 49	\$7, 012, 725	\$9, 444, 271	+\$2, 431, 546	+34. 67
New Jersey.....	12, 494	12, 030	- 464	- 3. 71	2, 371, 253	2, 729, 571	+ 358, 318	+15. 11
Pennsylvania.....	1, 898	2, 484	+ 586	+30. 87	1, 601, 528	2, 110, 102	+ 508, 574	+31. 76
Delaware.....	2, 392	1, 998	- 394	-16. 47	407, 819	657, 197	+ 249, 378	+61. 15
Maryland.....	42, 812	36, 260	- 6, 552	-15. 30	5, 321, 610	6, 506, 060	+ 684, 456	+11. 76
Virginia.....	28, 277	29, 325	+1, 048	+ 3. 71	2, 891, 536	3, 633, 104	+ 741, 568	+25. 64
Total.....	96, 735	93, 661	-3, 074	- 3. 18	20, 106, 471	25, 080, 371	+ 4, 973, 900	+24. 73

  

States.	Products.							
	Pounds.		Percentage of increase or decrease in 1901 compared with 1897.	Value.	Percentage of increase or decrease in 1901 compared with 1897.			
	1897.	1901.		1897.	1901.			
New York.....	109, 555, 566	228, 092, 285	+118, 536, 719	+108. 19	\$3, 301, 595	\$3, 894, 270	+ \$502, 675	+14. 82
New Jersey.....	103, 782, 517	117, 930, 964	+ 14, 148, 447	+ 13. 63	3, 614, 434	4, 765, 522	+1, 141, 088	+31. 57
Pennsylvania.....	5, 604, 263	6, 029, 538	+ 425, 275	+ 7. 59	269, 507	251, 491	- 18, 016	- 6. 68
Delaware.....	8, 047, 897	5, 835, 186	- 2, 212, 711	- 32. 52	252, 123	203, 372	- 48, 751	-19. 34
Maryland.....	88, 588, 018	82, 975, 245	- 5, 612, 773	- 6. 34	3, 617, 308	3, 767, 461	+ 150, 153	+ 4. 15
Virginia.....	277, 993, 949	378, 183, 358	+100, 189, 409	+ 36. 04	3, 179, 493	4, 613, 384	+1, 433, 890	+45. 09
Total.....	694, 172, 210	819, 046, 576	+124, 874, 366	+ 37. 84	14, 324, 463	17, 485, 500	+3, 161, 037	+22. 06



The study of the fisheries of this region will be greatly facilitated by consulting the earlier publications relating to them, as follows:

- The Fishery Industries of the United States, Section II. Geographical Review of the Fisheries for 1880. Parts VI to XI, inclusive.
- The Fishery Industries of the United States, Section V. History and Methods of the Fisheries.
- A statistical report on the Fisheries of the Middle Atlantic States, by Hugh M. Smith, M. D. Bull. U. S. Fish Com. 1894, pp. 339-467.
- The Oyster Industry of Maryland, by Charles H. Stevenson. Bull. U. S. Fish Com. 1892, pp. 203-297.
- The Sturgeon and Sturgeon Industries of the Eastern Coast of the United States, by John A. Ryder. Bull. U. S. Fish Com. 1888, pp. 231-328.
- The Sturgeon Fishery of Delaware River and Bay, by John N. Cobb. Rept. U. S. Fish Com. 1899, pp. 369-380.
- Notes on the Oyster Industry of New Jersey, by Ansley Hall. Rept. U. S. Fish Com. 1892, pp. 463-528.
- The Shad Fisheries of the Atlantic Coast of the United States, by Charles H. Stevenson. Rept. U. S. Fish Com. 1898, pp. 101-269.
- Notes on the extent and condition of the Alewife Fisheries of the United States in 1896, by Hugh M. Smith. Rept. U. S. Fish Com. 1898, pp. 31-43.
- Statistics of the Fisheries of the Middle Atlantic States. Rept. U. S. Fish Com. 1900, pp. 195-310.

#### FISHERIES OF NEW YORK.

Considering the value of the fishery product, New York now ranks second among the Middle Atlantic States, being surpassed only by New Jersey. The returns for 1901 show about 10 per cent increase over those for 1898, the total value amounting to \$3,545,189 in 1898, and \$3,894,270 in 1901.

The oyster industry yields about 50 per cent of the value of the fisheries of New York, the product in 1901 amounting to 1,768,703 bushels of market oysters and 544,075 bushels of seed oysters to be replanted, the whole worth \$1,972,540. This industry is now almost wholly dependent on the growing of oysters on private areas, which a few years ago were entirely barren and unproductive. In the same year, the natural oyster reefs, to which the public resorted, yielded only 5,480 bushels of market oysters and 33,890 bushels of seed oysters, with a valuation of \$20,104, or little more than 1 per cent of the total oyster product of the State.

One of the most interesting of the recent developments in the oyster industry of New York is the extensive planting of seed oysters at the eastern end of Long Island, especially in the vicinity of Greenport and Southold. This began ten years ago, and at present about 350,000 bushels are planted annually, the seed being obtained from Long Island Sound. The oysters in those waters grow very rapidly, but, not fattening readily, they are usually taken up within a year and again planted in Great South Bay and elsewhere.

An offset to the development of oyster-planting in Peconic Bay is the decrease in this industry in Shinnecock Bay, on the south side of Long Island. In 1898 the private areas in that bay yielded 43,000 bushels of oysters, worth about \$1 per bushel; but, owing to the failure on the part of the town authorities to secure the planters in their

holdings of ground, the planting has almost ceased. In 1901 less than 2,000 bushels were taken from private areas and no seed was planted.

A new departure in the fishery industries of New York, and one which gives promise of extensive development, is the cultivation of hard clams or quahogs. During the last three or four years many thousands of bushels of small clams have been bedded on private areas on the south side of Long Island. Comparatively few of these were marketed previous to 1901; in that year 9,260 bushels were sold for \$25,565. The increasing scarcity of clams on the public areas and the high market price which now prevails indicate that the cultivation of this mollusk will be greatly extended. The popularity of small clams is constantly increasing in the markets, and in time their cultivation on the south side of Long Island may even rival oyster-culture.

During the year covered by these returns, the scallop fishery at the eastern end of Long Island was in a prosperous condition, yielding 169,294 bushels, which sold for \$100,607. In 1898 the yield was 103,063 bushels, worth \$49,960; and in 1891, 69,565 bushels, worth \$48,340. This mollusk is taken entirely by means of light dredges, which are usually operated from sailboats, but to a very small extent from rowboats.

The blue-fish now ranks first in value among the food-fishes of New York State, the yield in 1901 being 9,350,502 pounds, worth \$473,366. These were taken principally by line fishermen sailing from New York City, 617 men and 48 vessels engaging in this fishery in 1901, and to a less extent in gill nets, seines, and pound nets operated along the Long Island coast. Compared with 1898, it appears that there has been a decrease in the quantity of blue-fish taken and an increase in value, the yield in 1898 being 11,214,433 pounds, worth \$387,167. The catch in 1891 was reported at 5,506,575 pounds, worth \$237,010; and in 1880 at 3,000,000 pounds, worth \$67,500. These figures furnish an illustration of the increase in value of food-fish during the last twenty-three years. Thus it appears that in 1880 the value of blue-fish was 2.25 cents per pound; in 1891, 4.30 cents; in 1898, 3.45 cents; and in 1901, 5.07 cents per pound. The demand for blue-fish in the food markets is constantly increasing. To secure early supplies, a part of the fleet now leaves port in March, going southward as far as Cape Fear, and the season extends until late in November.

The yield of menhaden in New York is second only to that in Virginia, 300,682,545 being secured in 1901. Of these, 233,667 were landed at oil and fertilizer factories in Maine, 25,703,000 in Rhode Island, 154,102,335 in Delaware, and 33,118,338 in Texas, as they were caught in those respective localities. Thirty-two steamers, valued at \$489,350, including their seines and outfit, and 3 sail vessels engaged in this fishery, employing 745 men. In addition to these 191 men were employed in rendering the fish into oil and fertilizer at the factories in the State, these factories representing an investment of \$558,500.

Exclusive of the oyster and clam industries and the taking of bluefish and menhaden, the use of pound nets is the most important fishery in New York. The pound nets are set principally at the eastern end of Long Island, and to a much less extent at the western end of Great South Bay and off Gravesend. This fishery was more valuable in 1901 than ever before, the 248 nets yielding 8,769,082 pounds of fish, worth \$164,557. In 1898 the yield was valued at \$108,939, and in 1891 at \$125,719. The large increase in 1901 was due principally to the higher prices prevailing in the markets. The principal species taken in pound nets are squeteague, butter-fish, flounders, and scup.

The shad yield in New York in 1901 shows a gratifying increase over 1898; indeed, it was greater than for any previous year for which returns are available since 1888. The number captured in 1901 was 888,240, valued at \$110,682. In 1898 the catch was 488,611; in 1897, 506,273; in 1896, 542,814; and in 1891, 762,946. Most of the shad are taken in Hudson River, and especially in Dutchess, Ulster, Westchester, and Columbia counties.

The sturgeon fishery shows a remarkable falling off, the value of the product decreasing from \$46,573 in 1898 to \$8,323 in 1901. This fish is now very scarce, not only in Hudson River, but also along the south side of Long Island, where it was secured in abundance six years ago. A large percentage of the sturgeon taken in Hudson River are small—under 20 pounds in weight—and are known locally as “peelicans.” In 1892 the State interdicted the capture of these small fish, and this is expected to have a beneficial effect on the abundance of mature sturgeon.

The catch of sturgeon on the south side of Long Island furnishes an instance of the development and decline of coastal fisheries. The fish are taken by means of floating gill nets with 12 or 14-inch mesh, operated during May and June, and also to a limited extent in September. The nets are set 1 or 2 miles from the shore from Blue Point to Montauk Point, and especially off Amagansett, Wainscott, and Westhampton. This fishery began in 1892. In 1896 there were 103 men employed, using 37 boats and 223 gill nets, and the catch of sturgeon amounted to 314,430 pounds, gross weight, worth \$15,125. In 1898, when the fishery probably reached its greatest development, 187 men used 70 boats and 454 nets, and the gross weight of sturgeon secured was 509,365 pounds, worth \$43,864. Notwithstanding a large increase in the quantity of twine used by each boat, the average catch of fish in succeeding years showed a great decrease, and in 1901 the 57 men, using 25 boats and 257 nets, secured only 65,130 pounds, gross weight, of sturgeon, worth \$4,801. This fishery is so unprofitable at present that it promises to become extinct in a few years.

The returns for most of the minor species of fish show a considerable increase during the last five years, a result doubtless of the high cost of

meats. Especially is this true of eels, which are generally distributed throughout the waters of New York. The yield in 1898 was 396,945 pounds, worth \$27,517, and in 1901 it was 722,859 pounds, worth \$50,033. In the same time the yield of flounders increased from 876,683 pounds, worth \$28,455, to 1,274,308 pounds, worth \$49,949.

The high market value of lobsters during recent years has resulted in great activity in their capture in the coastal waters of New York, as well as on other portions of the Atlantic coast; but the catch has declined from 381,020 pounds in 1897 and 332,378 pounds in 1898 to 183,539 pounds in 1901. The average catch per pot in 1897 was 81 pounds; in 1898, 59 pounds, and in 1901, 37 pounds. This decrease occurred although the number of months in which the lobster fishery is prosecuted has increased somewhat.

Probably the most noteworthy change in the methods of the fisheries of New York is the extensive adoption of auxiliary power in the vessels and boats, which makes the work to a large extent independent of weather conditions. Especially is this the case in oyster-culture and in the pound-net fisheries. Gasoline and naphtha engines are the popular forms adopted. These were introduced about ten years ago. In 1901 35 boats, worth \$30,720, and 55 vessels, worth \$176,900, were thus equipped.

The following tables show the number of persons employed, the amount of capital invested, and the quantity and value of the products of the fisheries of New York in 1901:

*Number of persons employed.*

How engaged.	No.
On vessels fishing .....	3, 131
On vessels transporting .....	455
In shore or boat fisheries.....	6, 090
Shoresmen .....	2, 888
Total .....	11, 664

*Table of apparatus and capital.*

Items.	No.	Value.	Items.	No.	Value.
Vessels fishing.....	437	\$1, 005, 666	Apparatus—shore fisheries:		
Tonnage.....	8, 458		Seines.....	259	\$16, 700
Outfit.....		328, 865	Gill nets.....	3, 453	62, 724
Vessels transporting.....	196	235, 550	Pound nets.....	248	67, 645
Tonnage.....	3, 183		Fyke nets.....	6, 607	32, 745
Outfit.....		25, 311	Dip nets.....	101	155
Boats.....	4, 656	317, 447	Lines.....		2, 104
Apparatus—vessel fisheries:			Eel pots.....	7, 021	6, 766
Seines.....	76	36, 375	Lobster pots.....	2, 196	3, 270
Gill nets.....	465	4, 623	Spears.....	198	121
Fyke net.....	605	2, 115	Dredges.....	1, 563	5, 530
Lines.....		4, 590	Tongs.....	1, 986	10, 954
Eel pots.....	505	535	Rakes.....	1, 198	7, 813
Lobster pots.....	2, 790	5, 080	Hoes.....	585	480
Dredges.....	1, 195	12, 731	Shore property.....		4, 221, 226
Tongs.....	364	1, 633	Cash capital.....		3, 025, 500
Rakes.....	83	518	Total.....		9, 444, 271

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Table of products.

Species.	Lbs.	Value.	Species.	Lbs.	Value.
Alewives	1,363,614	\$19,106	Spanish mackerel	4,104	\$933
Blue-fish	9,350,502	473,366	Spots	4,800	206
Bonito	194,727	7,307	Squeteague	2,346,683	73,939
Bullheads	135,585	6,788	Striped bass	71,840	9,102
Butter-fish	690,682	25,809	Sturgeon	112,626	6,108
Carp, American	89,072	4,894	Caviar	4,291	2,215
Carp, German	281,494	17,142	Suckers	129,802	6,129
Cat-fish	38,659	2,034	Sun-fish	12,875	1,099
Cero	1,570	123	Swell-fish	134,870	101
Cod	1,172,291	51,921	Tautog	49,662	1,798
Eels	722,859	50,033	Tomcod or frost-fish	38,300	1,152
Flounders	1,274,308	49,949	Whitebait	24,510	1,784
Haddock	160,703	6,516	Whiting	33,975	480
Hake	36,680	860	Crabs, hard	791,725	4,993
Herring, salted	180,000	2,025	Crabs, soft	40,440	2,104
King-fish	29,826	3,418	Lobsters	183,639	21,742
Ling	26,140	516	Squid	180,846	5,114
Mackerel	607,838	19,454	Clams, hard, public reefs	b 1,404,288	232,121
Menhaden	180,409,767	454,565	Clams, hard, private areas	c 74,080	25,665
Mummichog	140,000	800	Clams, soft	d 779,450	58,843
Perch, white	51,887	3,390	Oysters, market, public reefs	e 38,360	3,554
Perch, yellow	25,893	2,014	Oysters, market, private areas	f 12,342,561	1,700,431
Pike	2,050	185	Oysters, seed, public reefs	g 237,230	16,550
Poelock	42,581	1,240	Oysters, seed, private areas	h 3,571,295	252,005
Salmon	163	78	Mussels	i 262,400	1,860
Scup	804,589	25,379	Scallops	j 1,109,724	107,337
Sea bass	231,517	15,216	Terrapin	840	340
Sea robins	385,000	433	Shells	k 2,286,000	1,330
Shad	3,432,472	110,682			
Sheepshead	100	12			
Skates	139,200	140			
			Total	228,092,285	3,894,270

a 121,320 in number.  
 b 175,536 bushels.  
 c 9,260 bushels.

d 77,945 bushels.  
 e 6,480 bushels.  
 f 1,763,223 bushels.

g 33,890 bushels.  
 h 510,185 bushels.  
 i 10,240 bushels.

j 184,954 bushels.  
 k 38,100 bushels.

STATISTICS OF THE FISHERIES BY COUNTIES.

In comparing the returns by counties for 1901 with those for 1898 and previous years, a large decrease in the fisheries of Queens County is apparent. This is due to the formation of a new county, Nassau, within the former limits of Queens County, and Queens and Nassau counties combined now represent the Queens County of previous years. Also there appears an extension of the fisheries of New York County and a corresponding decrease in Westchester County, owing to a change in the boundary lines.

The extent of the fisheries in each county of New York in 1901 is shown in detail in the following tables:

Table showing the number of persons employed in the fisheries of New York in 1901.

Counties.	On vessels fishing.	On vessels trans- porting.	In shore or boat fisheries.	Boatmen.	Total.
Albany			132		132
Columbia			266	4	270
Dutchess			299		299
Greene			126		126
Kings	37	61	418	29	535
Nassau	169	73	739	13	994
New York	635	20	38	2,077	2,770
Orange			114		114
Putnam			20		20
Queens	15	54	236	6	311
Rensselaer			132		132
Richmond	194	120	451	16	781
Rockland			117		117
Suffolk	2,072	137	1,396	742	4,347
Ulster			352	1	353
Westchester	9		254		263
Total	3,131	455	5,090	2,888	11,564

Table showing, by counties, the vessels, boats, and apparatus employed in the fisheries of New York in 1901.

Items.	Albany.		Columbia.		Dutchess.		Greene.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Boats	64	\$1,657	110	\$3,942	157	\$6,750	68	\$2,256
Apparatus—shore fisheries:								
Seines	19	1,345	24	1,660	13	905	7	685
Gill nets	1	20	70	2,245	536	12,320	77	2,475
Fyke nets	332	1,735	343	1,595	589	2,563	153	765
Dip nets	4	18					10	50
Shore property		410		1,220		1,620		532
Total		5,185		10,662		24,158		6,763

Items.	Kings.		Nassau.		New York.		Orange.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels fishing	11	\$7,500	52	\$45,370	51	\$226,950		
Tonnage	84		449		2,534			
Outfit		2,635		12,008		133,900		
Vessels transporting	26	24,300	27	43,750	9	7,050		
Tonnage	312		529		93			
Outfit		2,125		2,710		1,190		
Boats	511	35,210	877	66,893	52	5,290	53	\$2,540
Apparatus—vessel fisheries:								
Seines			2	115	7	2,350		
Gill nets			11	1,250	90	810		
Lines		260		636		3,343		
Eel pots	176	175						
Lobster pots					700	1,400		
Dredges			98	1,478				
Tongs	2	8	4	20	2	16		
Rakes			18	154	4	32		
Apparatus—shore fisheries:								
Seines			28	2,460	1	70	12	1,175
Gill nets	8	1,160	4	280	3	50	324	5,200
Pound nets	2	980						
Fyke nets	46	512					110	550
Dip nets	15	12	38	13				
Lines		605		40				
Eel pots	650	628	876	806				
Lobster pots	474	438						
Spears	17	70		35				
Dredges	38	324	245	1,908				
Tongs	404	2,265	491	2,490				
Rakes	123	561	269	1,371	43	344		
Hoes	143	132	135	94	83	736		
Shore property		39,575		71,625		3,541,245		568
Cash capital		5,000				2,813,500		
Total		124,416		255,196		6,738,276		10,033

Items.	Putnam.		Queens.		Rensselaer.		Richmond.		Rockland.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels fishing			3	\$9,250			40	\$94,150		
Tonnage			43				549			
Outfit				735				32,127		
Vessels transporting			22	31,500			60	48,850		
Tonnage			335				619			
Outfit				2,125				11,847		
Boats	10	\$520	273	14,643	57	\$1,210	436	46,085	69	\$3,188
Apparatus—vessel fisheries:										
Lines								162		
Lobster pots							1,250	2,500		
Dredges			12	235			128	6,205		
Tongs							40	323		
Rakes							18	144		
Apparatus—shore fisheries:										
Seines	2	110			19	1,570			11	785
Gill nets	35	1,050			3	60	80	1,200	564	4,940
Pound nets							2	2,100		
Fyke nets	5	25	1	25	160	800	34	1,580	69	545
Dip nets					2	20				
Eel pots			532	661			50	25	100	125
Lobster pots							400	800		
Spears			16	15						
Dredges			54	364			6	150		
Tongs			210	1,115			318	2,569		
Rakes			66	359			373	3,159		
Hoes			57	39						
Shore property		45		16,240		275		18,240		577
Total		1,760		77,346		3,935		272,216		10,160

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Table showing, by counties, the vessels, boats, and apparatus employed in the fisheries of New York in 1901—Continued.

Items.	Suffolk.		Ulster.		Westchester.		Total.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels fishing .....	277	\$614,045	.....	.....	3	\$8,400	437	\$1,005,665
Tonnage .....	4,769	.....	.....	.....	30	.....	8,458	.....
Outfit .....	.....	146,775	.....	.....	.....	685	.....	828,865
Vessels transporting .....	62	80,100	.....	.....	.....	.....	196	235,550
Tonnage .....	1,295	.....	.....	.....	.....	.....	3,183	.....
Outfit .....	.....	5,314	.....	.....	.....	.....	.....	25,311
Boats .....	1,584	113,494	182	\$8,735	153	5,034	4,656	317,447
Apparatus—vessel fisheries:	.....	.....	.....	.....	.....	.....	.....	.....
Seines .....	67	33,910	.....	.....	.....	.....	76	36,875
Gill nets .....	364	2,563	.....	.....	.....	.....	465	4,623
Fyke nets .....	605	2,115	.....	.....	.....	.....	605	2,115
Lines .....	.....	189	.....	.....	.....	.....	.....	4,590
Eel pots .....	330	500	.....	.....	.....	.....	505	5,595
Lobster pots .....	840	1,180	.....	.....	.....	.....	2,790	5,080
Dredges .....	953	4,693	.....	.....	4	120	1,195	12,731
Tongs .....	316	1,266	.....	.....	.....	.....	364	1,633
Rakes .....	39	138	.....	.....	.....	.....	83	518
Apparatus—shore fisheries:	.....	.....	.....	.....	.....	.....	.....	.....
Seines .....	92	3,920	19	1,330	12	685	259	16,700
Gill nets .....	391	12,936	427	9,275	920	9,513	3,453	62,724
Pound nets .....	244	64,565	.....	.....	.....	.....	248	67,645
Fyke nets .....	4,262	19,788	368	1,587	135	675	6,607	32,745
Dip nets .....	15	8	17	84	.....	.....	101	155
Lines .....	.....	1,459	.....	.....	.....	.....	.....	2,104
Eel pots .....	4,708	4,449	.....	.....	105	72	7,021	6,766
Lobster pots .....	1,205	1,738	.....	.....	117	299	2,196	3,270
Spears .....	93	56	.....	.....	.....	.....	198	121
Dredges .....	1,220	3,094	.....	.....	.....	.....	1,563	5,580
Tongs .....	520	2,170	.....	.....	.....	.....	1,986	10,954
Tongs .....	233	705	.....	.....	49	422	1,196	7,318
Rakes .....	238	203	.....	.....	12	12	585	480
Hoes .....	.....	.....	.....	.....	.....	.....	.....	.....
Shore property .....	.....	524,945	.....	821	.....	3,248	.....	4,221,226
Cash capital .....	.....	207,000	.....	.....	.....	.....	.....	3,025,500
Total .....	.....	1,853,178	.....	21,782	.....	29,215	.....	9,444,271

Table showing, by counties, the yield of the fisheries of New York in 1901.

Species.	Albany.		Columbia.		Dutchess.		Greene.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives .....	183,302	\$2,765	397,497	\$5,960	53,931	\$548	139,267	\$2,116
Bullheads .....	19,518	977	20,021	1,093	31,729	1,688	6,150	308
Carp, American .....	.....	.....	5,583	115	20,000	1,036	1,300	26
Carp, German .....	2,045	101	2,095	53	10,868	562	381	10
Cat-fish .....	.....	.....	69	3	2,646	134	.....	.....
Fels .....	594	54	89	8	341	25	15	1
Perch, white .....	488	49	944	87	3,202	192	310	27
Perch, yellow .....	1,458	146	1,967	175	5,474	422	979	88
Shad .....	350	15	381,917	12,709	923,512	27,904	147,160	5,236
Striped bass .....	.....	.....	150	6	3,742	470	.....	.....
Sturgeon .....	2,101	74	723	19	15,181	908	5,388	294
Caviar .....	.....	.....	.....	.....	924	463	1,200	600
Suckers .....	8,494	326	6,784	242	25,300	1,265	2,345	86
Sun-fish .....	1,015	102	1,752	148	4,491	369	312	31
Total .....	219,365	4,579	819,591	20,528	1,081,940	35,886	304,816	8,823

Table showing, by counties, the yield of the fisheries of New York in 1901—Continued.

Species.	Kings.		Nassau.		New York.		Orange.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives.....	12, 870	\$360					500	\$15
Blue-fish.....	90, 400	5, 290	166, 800	\$12, 124	8, 754, 420	\$437, 825		
Bonito.....	3, 125	125	260	13				
Bullheads.....					100	5	8, 350	418
Butter-fish.....	69, 650	1, 480						
Carp, American.....					440	22	24, 800	1, 488
Carp, German.....					2, 800	224	21, 600	1, 296
Cat-fish.....					15	1	2, 650	133
Cod.....	96, 400	4, 595	298, 120	12, 006	263, 700	13, 185		
Eels.....	103, 780	9, 211	102, 690	7, 462			60	4
Flounders.....	8, 700	410	123, 175	5, 518				
Haddock.....	17, 575	830	48, 000	1, 902	3, 333	100		
Hake.....	29, 700	718	1, 900	46				
Herring, salted.....					180, 000	2, 025		
King-fish.....			470	106				
Ling.....	22, 900	458						
Mackerel.....					193, 500	7, 800		
Menhaden.....	4, 200	50						
Perch, white.....					200	16	2, 958	177
Perch, yellow.....							4, 648	325
Scup.....	8, 900	450	9, 500	373	212, 005	7, 428		
Sea bass.....	7, 050	564			90, 152	5, 409		
Shad.....	45, 975	2, 715			3, 600	250	207, 600	6, 228
Sheepshead.....			100	12				
Spanish mackerel.....	60	12	185	37				
Spots.....	4, 800	206						
Squeteague.....	38, 600	1, 580	216, 280	8, 817	27, 250	1, 090		
Striped bass.....			6, 886	1, 028	500	50	6, 211	780
Sturgeon.....							3, 253	132
Caviar.....							32	16
Suckers.....					841	29	30, 672	1, 534
Tautog.....	13, 300	788						
Tomcod or frost-fish.....	300	12						
Crabs, hard.....			12, 000	210				
Crabs, soft.....			33, 200	1, 140				
Lobsters.....	10, 960	1, 126			21, 000	2, 520		
Clams, hard, public reefs.....	158, 880	24, 542	359, 324	61, 591	23, 600	3, 677		
Clams, hard, private areas.....	60, 960	22, 400	13, 120	3, 155				
Clams, soft.....	323, 050	24, 634	115, 300	7, 915				
Oysters, market, private areas.....	2, 194, 220	295, 737	2, 012, 080	320, 506	79, 800	11, 400		
Oysters, seed, public reefs.....			63, 630	4, 460	14, 000	1, 000		
Oysters, seed, private areas.....			842, 170	57, 444				
Mussels.....			62, 400	1, 740				
Scallops.....			33, 960	3, 730				
Total.....	3, 331, 355	398, 343	4, 522, 050	511, 345	9, 871, 256	494, 056	313, 334	12, 546

Species.	Putnam.		Queens.		Rensselaer.		Richmond.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives.....					222, 615	\$3, 350	3, 600	\$10
Bullheads.....	790	\$40			5, 142	257		
Carp, American.....	3, 700	222						
Carp, German.....	2, 600	156			1, 746	88		
Cat-fish.....	75	4						
Cod.....							73, 451	8, 673
Eels.....			62, 210	\$4, 534	204	19	2, 600	208
Haddock.....							500	15
Perch, white.....	80	5			119	12		
Perch, yellow.....	290	21			627	53		
Sea bass.....							6, 200	312
Shad.....	50, 800	1, 524			88	4	118, 700	6, 360
Striped bass.....	250	36						
Sturgeon.....					1, 632	33	1, 500	165
Suckers.....	3, 500	175			2, 731	96		
Sun-fish.....					951	95		
Lobsters.....							62, 067	7, 448
Clams, hard, public reefs.....			70, 480	11, 722			175, 200	18, 485
Clams, soft.....			33, 200	2, 824				
Oysters, market, public reefs.....			700	100				
Oysters, market, private areas.....			1, 351, 840	180, 385			2, 042, 887	273, 617
Oysters, seed, public reefs.....							56, 700	3, 430
Oysters, seed, private areas.....							42, 000	3, 000
Scallops.....							60, 000	3, 000
Total.....	62, 085	2, 183	1, 508, 430	199, 565	235, 755	4, 007	2, 644, 405	319, 723



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Table showing, by counties, the yield of the fisheries of New York in 1901—Continued.

Species.	Rockland.		Suffolk.		Ulster.		Westchester.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives.....	225	\$7	267,105	\$2,315	101,536	\$1,635	1,166	\$35
Blue-fish.....			338,882	18,127				
Bonito.....			191,342	7,169				
Bullheads.....	6,282	315			31,066	1,556	6,428	321
Butter-fish.....			521,032	21,329				
Carp, American.....	8,893	534			4,513	260	19,843	1,191
Carp, German.....	20,160	1,210	176,440	11,615	22,759	747	18,000	1,080
Cat-fish.....	991	50	30,700	1,638	245	12	1,169	59
Cero.....			1,570	123				
Cod.....			440,620	18,462				
Eels.....	4,873	245	404,628	25,295	200	16	10,575	551
Flounders.....			1,182,433	46,421				
Haddock.....			91,295	3,669				
Hake.....			4,980	96				
King-fish.....			29,356	3,312				
Ling.....			3,240	58				
Mackerel.....			314,338	11,654				
Menhaden.....			180,405,667	454,455				
Mummichog.....			140,000	800				
Perch, white.....	1,945	118	31,910	2,111	2,899	184	7,132	428
Perch, yellow.....	3,083	217			4,327	343	2,940	208
Pike.....			2,050	185				
Pollock.....			42,581	1,240				
Salmon.....			163	78				
Scup.....			574,184	17,128				
Sea bass.....			129,115	8,931				
Sea robins.....			385,000	433				
Shad.....	232,240	7,160	9,771	580	844,359	26,005	466,400	13,992
Skates.....			139,200	140				
Spanish mackerel.....			3,859	884				
Squeteague.....			2,064,553	62,452				
Striped bass.....	5,285	670	39,454	4,990	1,754	220	7,608	852
Sturgeon.....	1,629	49	63,106	3,722	6,392	345	11,721	387
Caviar.....			2,024	1,079	85	43	26	14
Suckers.....	19,943	998			9,696	403	19,496	975
Sun-fish.....					4,354	354		
Swell-fish.....			134,870	101				
Tautog.....			36,362	1,010				
Tomcod or frost-fish.....			38,000	1,140				
Whitebait.....			24,510	1,784				
Whiting.....			33,975	480				
Crabs, hard.....			779,725	4,783				
Crabs, soft.....			7,240	984				
Lobsters.....			72,712	6,952			16,800	3,696
Squid.....			180,846	5,114				
Clams, hard, public reefs.....			469,104	90,104			147,200	22,000
Clams, soft.....			260,900	19,220			42,000	4,200
Oysters, market, public reefs.....			37,660	3,454				
Oysters, market, private reefs.....			4,647,734	616,973			14,000	1,813
Oysters, seed, public reefs.....			102,900	7,660				
Oysters, seed, private reefs.....			2,617,125	185,061			70,000	6,500
Mussels.....			200,000	120				
Scallops.....			1,015,764	100,607				
Terrapin.....			340	340				
Shells.....			2,286,000	1,330				
Total.....	305,549	11,573	200,976,265	1,780,688	1,034,185	32,123	862,504	68,302

The shad fishery.

Counties.	No.	Value.	Counties	No.	Value.
Albany.....	100	\$15	Rensselaer.....	25	\$4
Columbia.....	101,455	12,709	Richmond.....	31,800	6,360
Dutchess.....	232,528	27,904	Rockland.....	58,160	7,160
Greene.....	39,440	5,236	Suffolk.....	2,792	580
Kings.....	13,136	2,715	Ulster.....	216,704	26,005
New York.....	900	250	Westchester.....	116,600	13,992
Orange.....	51,900	6,228			
Putnam.....	12,700	1,524	Total.....	888,240	110,682

a 3,432,472 pounds.

THE PRODUCTS, BY APPARATUS.

The products of the vessel fisheries aggregated 199,925,663 pounds, valued at \$2,240,582, and those of the shore fisheries 28,166,622 pounds, valued at \$1,653,688. The yield of seines was 177,736,396 pounds, \$538,351; gill nets, 6,235,399 pounds, \$151,533; pound nets, 8,769,082 pounds, \$164,557; fyke nets, 939,182 pounds, \$41,884; lines, 10,963,390 pounds, \$525,139; dip nets, 48,691 pounds, \$2,299; lobster pots, 183,539 pounds, \$21,742; eel pots, 486,158 pounds, \$33,435; spears, 180,960 pounds, \$12,192; and of dredges, tongs, rakes, etc., 22,549,488 pounds, \$2,403,138.

The following tables present, by apparatus of capture, the products of the fisheries of New York in 1901:

Table showing, by counties, the yield of the seine fisheries of New York in 1901.

Species.	Albany.		Columbia.		Dutchess.		Greene.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Shore fisheries:								
Alewives.....	182,666	\$2,740	394,997	\$5,925	32,998	\$520	136,667	\$2,050
Bullheads.....	416	21	2,055	103	994	51	150	8
Carp, American.....			4,425	89	20,000	1,036		
Carp, German.....	1,260	61	2,095	53	10,868	562	300	6
Cat-fish.....					595	31		
Eels.....	50	5						
Perch, white.....	100	10	220	22				
Perch, yellow.....	80	8	417	42	1,896	136	101	10
Shad.....	350	15	167,317	5,973	46,200	1,584	65,450	2,291
Striped bass.....			150	6	2,134	267		
Sturgeon.....	897	30	315	6				
Suckers.....	4,860	194	3,360	126	15,700	785	1,206	48
Sun-fish.....	100	10	309	31			200	20
Total.....	190,779	3,094	575,660	12,376	131,385	4,972	204,074	4,433

Species.	Nassau.		New York.		Orange.		Putnam.		Rensselaer.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.
Vessel fisheries:										
Blue-fish.....	1,600	\$134	18,000	\$900						
Herring, salted.....			180,000	2,025						
Mackerel.....			6,000	300						
Flounders.....	3,250	135								
King-fish.....	130	26								
Scup.....	1,260	50	194,205	6,805						
Sea bass.....	10,200	408	47,384	2,843						
Squeteague.....	106	16	24,000	960						
Striped bass.....										
Total.....	16,626	769	469,589	13,833						
Shore fisheries:										
Alewives.....					500	\$15			221,667	\$3,325
Blue-fish.....	25,290	1,724								
Bullheads.....			100	5	4,350	218	415	\$21		
Carp, American.....			440	22	24,800	1,488	3,700	222		
Carp, German.....			2,800	224	21,600	1,296	2,600	156	1,611	81
Cat-fish.....			15	1	2,050	103	55	3		
Eels.....	8,600	640								
Flounders.....	74,775	2,777								
King-fish.....	340	80								
Perch, white.....									70	7
Perch, yellow.....			200	16	4,268	299	250	18	40	4
Scup.....	8,250	323								
Shad.....									88	4
Sheepshead.....	100	12								
Spanish mackerel.....	105	21								
Squeteague.....	168,030	7,015								
Striped bass.....	6,780	1,012	500	50	3,413	429	250	36		
Sturgeon.....									838	17
Suckers.....			841	29	25,472	1,274	2,800	140	1,205	34
Sun-fish.....									141	14
Total.....	292,570	13,604	4,896	347	86,453	5,122	10,070	596	225,655	3,486
Total vessel and shore.....	309,196	14,373	474,485	14,180	86,453	5,122	10,070	596	225,655	3,486

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Table showing, by counties, the yield of the seine fisheries of New York in 1901—Cont'd.

Species.	Rockland.		Suffolk.		Ulster.		Westchester.		Total.	
	Lbs.	Val.	Lbs.	Value.	Lbs.	Value.	Lbs.	Val.	Lbs.	Value.
Vessel fisheries:									19,690	\$1,034
Blue-fish									180,000	2,025
Herring, salted									6,000	300
Mackerel									3,250	135
Flounders			174,535,267	\$441,039					174,535,267	441,039
Menhaden									130	26
King-fish									3,250	260
Perch, white			3,250	260					195,465	6,855
Scup									47,381	2,843
Sea bass									34,200	1,368
Squeteague									3,906	481
Striped bass			3,800	465						
Total			174,542,317	441,704					175,028,532	456,366
Shore fisheries:										
Alewives	225	\$7	112,000	420	96,770	\$1,513	1,166	\$35	1,179,656	16,550
Blue-fish			5,400	290					30,690	2,014
Bullheads	1,478	75			1,875	95	1,220	61	13,053	658
Carp, American	8,893	534			4,213	253	19,843	1,191	86,314	4,835
Carp, German	20,160	1,210	171,360	11,311	22,542	742	18,000	1,080	275,196	16,782
Cat-fish	396	19	2,660	135	45	2	409	21	6,225	315
Cod			120	5					120	5
Eels									8,050	645
Flounders			12,340	585					87,115	3,362
King-fish			200	25					540	105
Menhaden			76,800	160					76,800	160
Mummichog			140,000	800					140,000	800
Perch, white			25,960	1,687	150	12			26,500	1,738
Perch, yellow	2,723	191			1,091	80	2,502	177	13,568	881
Scup									8,250	323
Shad					157,199	5,390			436,604	15,257
Sheepshead									100	12
Spanish mack'l.									105	21
Squeteague			3,750	152					172,689	7,167
Striped bass	4,161	530	10,005	1,445	150	19	2,192	275	29,735	4,069
Sturgeon									2,045	53
Suckers	13,946	698			6,616	275	12,992	650	88,998	4,253
Sun-fish			24,510	1,784	260	21			1,010	96
Whitebait									24,510	1,784
Total	51,982	3,264	585,105	18,799	290,911	8,402	58,324	3,490	2,707,864	81,985
Total vessel and shore	51,982	3,264	175,127,422	460,563	290,911	8,402	58,324	3,490	177,736,396	538,351

NOTE.—Of the menhaden taken by Suffolk County vessels, 140,200 pounds were landed at oil and fertilizer factories in Maine, 15,421,800 in Rhode Island, 50,426,200 in New York, 92,461,400 in Delaware, and 19,871,000 in Texas, as they were caught in those respective localities.

Table showing, by counties, the yield of the pound-net fisheries of New York in 1901.

Species.	Kings.		Richmond.		Suffolk.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Shore fisheries:								
Alewives	12,870	\$360	3,600	\$10	155,105	\$1,895	171,675	\$2,265
Blue-fish	400	20			90,290	3,382	90,690	3,402
Bonito					184,232	6,870	184,232	6,870
Butter-fish	69,650	1,480			521,032	24,329	590,682	25,809
Cero					1,570	123	1,570	123
Cod					10,230	392	10,230	392
Eels					43,740	2,972	43,740	2,972
Flounders	2,500	100			516,163	18,743	518,663	18,843
King-fish					29,156	3,287	29,156	3,287
Ling					3,240	58	3,240	58
Mackerel					306,868	11,040	306,868	11,040
Menhaden	4,200	50			3,531,900	7,311	3,536,100	7,361
Pollock					42,581	1,240	42,581	1,240
Salmon					163	78	163	78
Scup					515,894	14,394	515,894	14,394
Sea bass					65,211	4,538	65,211	4,538
Sea robins					385,000	433	385,000	433
Shad	4,500	240	38,150	2,180	9,771	580	52,421	3,000
Skates					137,970	104	137,970	104
Spanish mackerel					3,734	861	3,734	861
Spots	4,800	206					4,800	206
Squeteague	13,800	520			1,671,241	47,600	1,685,041	48,120
Squid					180,846	5,114	180,846	5,114
Striped bass			1,500	165	24,769	2,957	24,769	2,957
Sturgeon							1,500	165
Swell-fish					134,870	101	134,870	101
Tautog					13,561	324	13,561	324
Whiting					33,975	480	33,975	480
Total	112,720	2,976	43,250	2,355	8,613,112	159,226	8,769,082	164,557

Table showing, by counties, the yield of the gill-net fisheries of New York in 1901.

Species.	Albany.		Columbia.		Dutchess.		Greene.		Kings.			
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.		
Shore fisheries:												
Alewives.....	202	\$6	2,500	\$35	933	\$28	1,000	\$30				
Perch, white.....					2,263	136						
Shad.....			214,600	6,736	877,312	26,320	81,710	2,945	17,100	\$1,195		
Striped bass.....					1,608	203						
Sturgeon.....			125	8	15,181	908	5,280	292				
Caviar.....					924	463	1,200	600				
Total.....	202	6	217,225	6,779	898,221	28,058	89,190	3,867	17,100	1,195		
Species.	New York.		Orange.		Putnam.		Nassau.		Rensselaer.		Richmond.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Vessel fisheries:												
Blue-fish.....							129,870	\$9,552				
Bonito.....							260	13				
Mackerel.....	187,500	\$7,500										
Spanish mackerel.....							80	16				
Squeteague.....							29,450	1,072				
Total.....	187,500	7,500					159,660	10,653				
Shore fisheries:												
Alewives.....							9,950	714	700	\$19		
Blue-fish.....			2,515	\$152								
Perch, white.....			207,600	6,228	50,800	\$1,524					59,200	\$2,960
Shad.....	3,600	250										
Squeteague.....							7,700	322				
Striped bass.....			2,798	351								
Sturgeon.....			3,253	132								
Caviar.....			32	16								
Total.....	3,600	250	216,228	6,879	50,800	1,524	17,650	1,036	700	19,59,200	2,960	
Total vessel and shore.....	191,100	7,750	216,228	6,879	50,800	1,524	177,310	11,689	700	19,59,200	2,960	
Species.	Rockland.		Suffolk.		Ulster.		Westchester.		Total.			
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.		
Vessel fisheries:												
Blue-fish.....			69,417	\$4,349					199,287	\$13,901		
Bonito.....			210	9					470	22		
Flounders.....			15,196	622					15,196	622		
Mackerel.....									187,500	7,500		
Menhaden.....			1,664,400	3,897					1,664,400	3,897		
Scup.....			1,160	54					1,160	54		
Spanish mackerel.....									80	16		
Squeteague.....			174,622	5,912					204,072	6,984		
Tantog.....			86	4					86	4		
Total.....			1,925,091	14,847					2,272,251	33,000		
Shore fisheries:												
Alewives.....					900	\$27			6,235	145		
Blue-fish.....			67,030	4,069					76,980	4,783		
Bonito.....			2,700	145					2,700	145		
Carp, German.....			4,200	252					4,200	252		
Cat-fish.....			9,000	540					9,000	540		
Flounders.....			10,600	798					10,600	798		
Mackerel.....			7,470	614					7,470	614		
Menhaden.....			597,200	2,048					597,200	2,048		
Perch, white.....	1,475	\$89			2,200	132	6,700	\$402	15,183	911		
Pike.....			2,050	185					2,050	185		
Scup.....			3,500	149					3,500	149		
Sea bass.....			800	72					800	72		
Shad.....	232,240	7,180			687,160	20,615	466,400	13,992	2,897,722	89,925		
Spanish mackerel.....			75	15					75	15		
Squeteague.....			197,985	8,066					205,685	8,388		
Striped bass.....	1,124	140	220	33	1,604	201	5,416	577	12,770	1,505		
Sturgeon.....	1,629	49	63,106	3,722	6,392	345	11,721	387	106,687	5,843		
Caviar.....			2,024	1,079	85	43	26	14	4,291	2,215		
Total.....	236,468	7,438	967,960	21,787	698,341	21,363	490,263	15,372	3,963,148	118,533		
Total vessel and shore.....	236,468	7,438	2,893,051	36,634	698,341	21,363	490,263	15,372	6,235,399	161,533		

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Table showing, by counties, the yield of the fyke-net fisheries of New York in 1901.

Species.	Albany.		Columbia.		Dutchess.		Greene.		Kings.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Shore fisheries:										
Bullheads.....	18,892	\$945	17,966	\$900	30,735	\$1,537	6,009	\$300		
Carp, American.....			1,158	26			1,300	26		
Carp, German.....	510	26					81	4		
Cat-fish.....			69	3	2,050	103				
Eels.....	544	49	89	8	341	25	15	1	2,100	\$378
Perch, white.....	38	4	724	65	939	56	200	16		
Perch, yellow.....	1,203	120	1,550	133	3,578	286	688	49		
Shad.....									24,375	1,280
Sturgeon.....	804	16	283	5			108	2		
Suckers.....	3,254	117	3,424	116	9,600	480	1,139	38		
Sun-fish.....	915	92	1,443	117	4,491	369	112	11		
Tomcod.....									300	12
Total.....	26,160	1,369	26,706	1,373	51,734	2,856	9,552	447	26,775	1,670

Species.	Orange.		Putnam.		Queens.		Rensselaer.		Richmond.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Shore fisheries:										
Bullheads.....	4,000	\$200	375	\$19			5,036	\$252		
Carp, German.....							85	4		
Cat-fish.....	600	30	20	1						
Eels.....	60	4			1,200	\$120	204	19		
Perch, white.....	413	25	80	5			49	5		
Perch, yellow.....	380	26	40	3			415	42		
Shad.....									21,350	\$1,220
Sturgeon.....							499	10		
Suckers.....	5,200	260	700	35			1,341	55		
Sun-fish.....							810	81		
Total.....	10,653	545	1,215	63	1,200	120	8,439	468	21,350	1,220

Species.	Rockland.		Suffolk.		Ulster.		Westchester.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Vessel fisheries:										
Flounders.....			124,900	\$5,017					124,900	\$5,017
Shore fisheries:										
Bullheads.....	4,804	\$240			29,191	\$1,461	5,208	\$260	122,216	6,114
Carp, American.....					300	7			2,758	69
Carp, German.....			880	52	217	5			1,779	91
Cat-fish.....	595	31	19,040	963	200	10	760	38	23,231	1,179
Eels.....	73	5	1,000	80	200	16	675	48	6,501	768
Flounders.....			478,035	19,641					478,035	19,641
Perch, white.....	470	29	2,700	164	549	40	432	26	6,594	435
Perch, yellow.....	360	26			3,236	263	438	31	11,788	979
Shad.....									45,725	2,500
Squeteague.....			100	4					100	4
Striped bass.....			320	49					320	49
Sturgeon.....									1,694	33
Suckers.....	5,997	300			3,080	128	6,504	325	40,239	1,854
Sun-fish.....					4,094	333			11,865	1,003
Tautog.....			22,700	681					22,700	681
Tomcod.....			38,000	1,140					38,000	1,152
Terrapin.....			340	340					340	340
Total.....	12,299	631	563,115	23,114	41,067	2,263	14,017	728	814,282	36,867
Total vessel and shore.....	12,299	631	688,015	28,131	41,067	2,263	14,017	728	939,182	41,884

Table showing the quantity and value of lobsters taken in pots in New York in 1901.

County.	Vessel fisheries.		Shore fisheries.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Kings.....			10,960	\$1,126	10,960	\$1,126
New York.....	21,000	\$2,520			21,000	2,520
Richmond.....	47,867	5,744	14,200	1,704	62,067	7,448
Suffolk.....	28,580	2,388	44,132	4,564	72,712	6,952
Westchester.....			16,800	3,696	16,800	3,696
Total.....	97,447	10,652	86,092	11,090	183,539	21,742

Table showing, by counties, the yield of the dip-net fisheries of New York in 1901.

Species.	Albany.		Greene.		Nassau.		Rensselaer.		Suffolk.		Ulster.		Total.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.
Shore fisheries:														
Alewives.....	434	\$9	1,600	\$36			248	\$6			3,866	\$95	6,148	\$146
Bullheads.....	210	11					106	5					316	16
Carp, German.....	275	14					50	3					325	17
Perch, white.....	350	35	110	11			72	7					460	46
Perch, yellow.....	175	18	290	29									537	54
Sturgeon.....	400	8					300	6					700	14
Stuckers.....	380	15					185	7					565	22
Crabs, soft.....					33,200	\$1,140			6,440	\$814			39,640	1,984
Total.....	2,224	110	2,000	76	33,200	1,140	961	34	6,440	844	3,866	95	48,691	2,299

Table showing, by counties, the yield of the line fisheries of New York in 1901.

Species.	Nassau.		New York.		Richmond.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Vessel fisheries:						
Blue-fish.....			8,736,420	\$436,925		
Cod.....	276,920	\$11,158	263,700	13,185	73,451	\$3,673
Haddock.....	44,750	1,772	3,833	100	500	15
Hake.....	1,900	46				
Scup.....			17,800	623		
Sea bass.....			42,768	2,566	5,200	312
Squeteague.....			3,250	130		
Total.....	323,570	12,976	9,067,271	453,529	79,151	4,000
Shore fisheries:						
Cod.....	21,200	848				
Haddock.....	3,250	130				
Total.....	24,450	978				
Total vessel and shore.....	348,020	13,954	9,067,271	453,529	79,151	4,000

Species.	Kings.		Suffolk.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Vessel fisheries:						
Blue-fish.....	39,000	\$2,310	80,495	\$1,467	8,855,915	\$443,702
Bonito.....	625	25	1,820	75	2,445	100
Cod.....	37,900	1,830	74,260	8,022	726,231	38,468
Flounders.....			6,499	242	6,499	242
Haddock.....	4,975	230	20,820	843	74,378	2,960
Hake.....	7,800	170			9,700	216
Ling.....	4,100	82			4,100	82
Scup.....	2,900	150	28,365	1,504	49,065	2,277
Sea bass.....	1,750	140	36,766	2,412	86,464	5,430
Skates.....			1,230	36	1,230	36
Spanish mackerel.....	30	2			10	2
Squeteague.....	2,800	120	7,045	331	13,095	581
Striped bass.....			280	33	280	33
Tautog.....	1,300	78	15	1	1,315	79
Total.....	103,160	5,137	257,595	13,566	9,830,747	489,208
Shore fisheries:						
Blue-fish.....	51,000	2,960	26,250	1,570	77,250	4,530
Bonito.....	2,500	100	2,380	70	4,880	170
Cod.....	58,606	2,765	356,010	14,443	435,710	18,056
Fls.....	2,000	200	1,200	72	3,200	272
Flounders.....	6,200	310	18,100	743	24,300	1,053
Haddock.....	12,600	600	70,475	2,826	86,325	3,556
Hake.....	21,900	548	4,980	96	26,880	644
Ling.....	18,800	376			18,800	376
Scup.....	6,000	300	25,265	1,027	31,265	1,327
Sea bass.....	5,300	424	26,338	1,889	31,638	2,313
Spanish mackerel.....	50	10	50	8	100	18
Squeteague.....	22,000	940	9,810	387	31,810	1,327
Striped bass.....			60	8	60	8
Tautog.....	12,000	710			12,000	710
Crabs, hard.....			347,625	1,451	347,625	1,451
Crabs, soft.....			800	120	800	120
Total.....	218,850	10,243	889,343	24,710	1,132,643	35,931
Total vessel and shore.....	322,010	15,380	1,146,938	38,276	10,963,390	525,139

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Table showing, by counties, the catch by dredges, tongs, rakes, etc., in New York in 1901.

Species.	Kings.		Nassau.		New York.		Queens.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Vessel fisheries:								
Clams, hard—			37,440	\$6,160				
Public areas			15,900	530				
Mussels								
Oysters, market—			551,600	83,350	9,800	\$1,400	172,200	\$22,140
Private areas	7,700	\$980						
Oysters, seed—			32,130	2,275				
Public reefs			478,450	32,885				
Private areas								
Total.....	7,700	980	1,115,520	125,200	9,800	1,400	172,200	22,140
Shore fisheries:								
Crabs, hard			12,000	210				
Clams, hard—								
Public reefs	158,890	24,542	322,384	55,431	23,600	3,677	70,480	11,722
Private areas	60,960	22,400	13,129	3,165				
Clams, soft	328,050	24,684	115,300	7,915			33,200	2,824
Mussels			46,500	1,210				
Oysters, market—							700	100
Public reefs			1,460,480	237,166	70,000	10,000	1,179,640	158,245
Private areas	2,186,620	294,757						
Oysters, seed—								
Public reefs			31,500	2,185	14,000	1,000		
Private areas			363,720	24,559				
Scallops			33,960	3,730				
Total.....	2,734,410	366,383	2,398,964	335,561	107,600	14,677	1,284,020	172,891
Total vessel and shore.....	2,742,110	367,363	3,514,484	460,761	117,400	16,077	1,456,220	195,031

  

Species.	Richmond.		Suffolk.		Westchester.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Vessel fisheries:								
Crabs, hard			203,600	\$1,612			203,600	\$1,612
Clams, hard—								
Public areas	42,400	\$4,505	96,160	23,617	16,000	\$1,500	192,000	35,782
Mussels			200,000	120			215,900	650
Oysters, market—								
Private areas	2,000,187	267,112	4,093,054	544,029	14,000	1,813	6,848,541	920,824
Oysters, seed—								
Public reefs	56,700	3,430	52,850	4,100			141,680	9,805
Private areas	42,000	3,000	2,549,715	179,787	70,000	6,500	3,140,165	222,172
Scallops	60,000	3,000	486,900	48,370			546,900	51,370
Shells			1,236,000	719			1,236,000	719
Total.....	2,201,287	281,047	8,918,279	802,354	100,000	9,813	12,524,786	1,242,934
Shore fisheries:								
Crabs, hard			228,500	1,720			240,500	1,930
Clams, hard—								
Public reefs	132,800	13,980	372,944	66,487	131,200	20,500	1,212,288	196,339
Private areas							74,080	25,565
Clams, soft			260,900	19,220	42,000	4,200	779,450	58,843
Mussels							46,500	1,210
Oysters, market—								
Public reefs			37,660	3,454			38,360	3,554
Private areas	42,700	6,505	554,680	72,944			5,494,020	773,607
Oysters, seed—								
Public reefs			50,050	3,560			95,560	6,745
Private areas			67,410	5,274			431,130	29,833
Scallops			528,864	62,237			562,824	65,967
Shells			1,050,000	611			1,050,000	611
Total.....	175,500	20,485	3,151,008	225,507	173,200	24,700	10,024,702	1,160,204
Total vessel and shore.....	2,376,787	301,532	12,069,287	1,027,861	273,200	34,513	22,549,488	2,403,138

Table showing, by counties, the yield of eels in pots in New York in 1901.

Counties.	Vessel fisheries.		Shore fisheries.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Kings.....	28,500	\$2,280	59,700	\$5,243	88,200	\$7,523
Nassau.....			67,190	4,802	67,190	4,802
Queens.....			38,960	3,300	38,960	3,300
Richmond.....			2,600	208	2,600	208
Rockland.....			4,800	240	4,800	240
Suffolk.....	18,500	1,125	256,008	15,734	274,508	16,859
Westchester.....			9,900	503	9,900	503
Total.....	47,000	3,405	439,158	30,030	466,158	33,435

Table showing, by counties, the yield of fish by spears in New York in 1901.

Species.	Kings.		Nassau.		Queens.		Suffolk.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Shore fisheries:										
Eels.....	11,480	\$1,110	67,500	\$4,420	12,050	\$1,114	\$4,180	\$5,312	175,210	\$11,956
Flounders.....			5,150	206			600	30	5,750	236
Total.....	11,480	1,110	72,650	4,626	12,050	1,114	84,780	5,342	180,960	12,192

Table showing the extent of the menhaden industry of New York in 1901.

Items.	No.	Value.	Items.	No.	Value.
Factories.....	3	\$405,500	Steam vessels fishing.....	a 32	\$357,500
Cash capital.....	191	153,000	Tonnage.....	2,646	
Persons in factories.....	745		Outfit.....		99,350
Persons on vessels.....	84,043,667	125,582	Seines.....	63	32,500
Menhaden received.....	4,357	97,716	Sail vessels fishing.....	3	3,700
Tons of dry scrap prepared.....	2,019	22,504	Tonnage.....	64	
Tons of acidulated scrap prepared.....	656,286	156,638	Outfit.....		2,245
Gallons of oil made.....			Seines.....	3	900

aThese vessels also supplied menhaden to factories in Delaware, Rhode Island, and Texas.

Table showing the extent of the wholesale trade in fishery products of New York City in 1901.

Items.	Fresh-fish trade.	Salt-fish trade.	Oyster and clam trade.	Sponge trade.	Miscellaneous.	Total.
Number of firms.....	55	25	27	12	6	125
Number of persons.....	648	440	478	232	32	1,830
Value of shore property.....	\$1,081,425	\$796,160	\$154,150	\$883,760	\$125,550	\$3,041,025
Amount of cash capital.....	\$813,000	\$691,500	\$438,000	\$555,000	\$86,000	\$2,583,500
Amount paid for wages.....	\$344,110	\$204,712	\$176,445	\$125,848	\$17,258	\$868,373



## FISHERIES OF NEW JERSEY.

New Jersey is very favorably situated for carrying on extensive commercial fisheries, and, as all parts of the State have easy rail communication with New York, Brooklyn, Philadelphia, Jersey City, Newark, Camden, Trenton, and the immense population of the States of New York, New Jersey, and Pennsylvania outside of the above-named cities, the fishermen have a constant and ready market for their catch.

As New Jersey fronts on New York and Delaware bays, the Hudson and Delaware rivers, and the ocean, both salt and fresh water species are taken, and fishing is carried on throughout the year in at least some part of the State. In the spring many of the fishermen along the coast and in the interior resort to the Delaware and Hudson rivers and participate in the shad fishery, after the close of which some of the river fishermen engage in salt-water fishing along the coast.

An important feature of the fisheries is the increasing number of sailing vessels and boats fitted with gasoline and naphtha engines as an auxiliary means of propelling them. This applies not only to the vessels used by clam buyers and clam and fish transporters, but many boats under 5 tons burden used in the clam, shad, oyster, and pound-net fisheries are so fitted, giving much greater facility in carrying on fishing operations in variable weather.

The increasing use of steamers in dredging oysters from the planted beds in Monmouth County is a noticeable feature of the industry. Formerly this work was done by sailing vessels owned by the planters, but lately they have been using these vessels merely in the preliminary thinning out of the beds or carrying oysters to market, while steamers are hired to dredge the main body of market oysters. By operating in this manner but few steamers and men are needed to do the work which formerly required a much larger number of sailing vessels and men to perform.

A point in connection with the pound-net fisheries which is not shown clearly in the tables is that for every net set in the water the owner has a duplicate on shore. As the net after being fished for several days must be brought ashore to be cleaned and repaired, the fishermen have the duplicate net to put in its place, thus avoiding any loss of time in fishing. The value of these duplicate nets has been included in the general value of the pound nets, but not the number.

During the past ten years the "stop net" has been much used, principally in catching German carp. This is a long, fine-meshed net, which is stretched across the mouth of a small creek or bight at high tide, preventing the escape of the fish when the tide turns. As the tide recedes the ground is left bare, and the fishermen walk along the inner side of the net and pick up such fish as they want. Unfortunately this net does considerable damage, as the mesh is so fine that

but few fish can go through, and many too small to be of any value to the fishermen are left upon the mud to die.

Bag nets, which are used only in Burlington and Atlantic counties, principally on the Mullica River, are large, bag-shaped nets and are operated under the ice. Holes are cut in the ice, through which the net is lowered by means of ropes attached to it at each side of its entrance, and the tide sweeping in fills it out and keeps it extended its entire length. When the tide turns the net is lifted out of the water, emptied, and fished the reverse way if the fisherman desires.

*German carp.*—The catch of this species in 1889 was 2,725 pounds, valued at \$218, while in 1897 785,409 pounds, worth \$39,370, were taken. Since 1897 the catch has been steadily declining, amounting in 1898 to 245,983 pounds, valued at \$13,884, and in 1901 to 227,419 pounds, worth \$14,290. As a result of the good prices realized this fishery will probably be prosecuted with greater activity in the future.

*Shad.*—The shad season of 1901 was good in nearly all parts of the State, and all but six of the counties show an increase over the figures for 1898. The decreases in these counties are insignificant, while the increases in the other counties are important. In 1898 the catch numbered 2,749,723, valued at \$293,173, while in 1901 the number was 3,243,142, which sold for \$475,202, an increase for 1901 over 1898 of 493,419 shad and \$182,029. The greater part are taken on the Delaware River and Bay, and the remainder comes chiefly from the Hudson River and New York Bay. A few are caught along the coast, principally in pound nets.

The following shows the number taken in each county of the State:

Table showing the number of shad taken in each county of New Jersey in 1901.

Counties.	No.	Value.	Counties.	No.	Value.
Atlantic .....	1,170	\$293	Mercer .....	52,140	\$15,117
Bergen .....	144,315	21,647	Middlesex .....	2,217	418
Burlington .....	331,390	58,545	Monmouth .....	68,096	11,768
Camden .....	350,690	46,144	Ocean .....	4,422	929
Cape May .....	1,766	444	Salem .....	1,347,440	180,894
Cumberland .....	275,750	38,415	Sussex .....	1,202	342
Gloucester .....	468,097	66,863	Warren .....	6,035	1,710
Hudson .....	184,500	27,675			
Hunterdon .....	13,912	3,998	Total .....	3,243,142	475,202

*Sturgeon.*—The sturgeon fishery of New Jersey is prosecuted chiefly in the Delaware River and Bay, a small percentage of the catch being taken in the ocean. This fishery was at one time very extensive, but is rapidly declining; the fishermen are growing fewer in number each year, and as the season of 1902 was less favorable than that of 1901 it is probable that few persons will engage in the fishery in 1903. A gill-net fishery for sturgeon in the ocean off Holly Beach has been in operation for several seasons with fair success.

Efforts have been made in recent years to propagate sturgeon in the Delaware, but on account of the difficulty in securing a sufficient quantity of ripe spawn very little has been accomplished.

The following table shows the quantity and value of sturgeon, including caviar, taken in New Jersey in various years since 1890:

Year.	Lbs.	Value.
1890 .....	3, 635, 350	\$90, 085
1891 .....	3, 520, 370	86, 419
1892 .....	3, 187, 342	64, 982
1897 .....	1, 013, 604	94, 056
1898 .....	868, 326	100, 966
1901 .....	188, 027	19, 362

*Oysters.*—Since the last general canvass of this State a number of changes have occurred in the oyster industry. For many years the planters had been striving earnestly for State control of the industry, and in 1899 success crowned their efforts so far as the Delaware Bay was concerned. Under the provisions of an act passed in that year, “all oyster grounds, lands, and beds included within lands of the State of New Jersey under the tidal waters of the Delaware Bay and Maurice River Cove” are placed under the exclusive control of a State oyster commission, composed of three members, to be appointed by the governor, all of whom should be directly interested or engaged in the oyster business in this region. The commission is authorized to appoint an oyster superintendent, who has immediate supervision of the industry and attends to the enforcement of the law.

The law further authorizes the commission to lease to “applicants therefor any of the lands of the State under the tidal waters of the Delaware Bay and Maurice River Cove south of the line running direct from the mouth of Straight Creek to Cross Ledge light-house, and commonly known as the ‘southwest line,’” to be used for the taking, planting, and cultivating of oysters. The granting of leases to nonresidents is forbidden, except in cases where such persons already held ground at the time the law went into effect. Leases are granted for terms not exceeding thirty years, at an annual rental of not less than 25 cents per acre or fraction thereof. Persons having ground or grounds staked up at the time the law went into effect are entitled to have lease or leases for such granted to them in preference to others upon making written application to the commission within a certain time after the act took effect. Leases are to be renewed to the original lessee at the end of each term should he care to continue the business. Penalties are provided for persons robbing such beds. All the natural oyster beds of the bay are exempt from lease.

All vessels and boats engaged in the industry are required to pay a license fee of not exceeding \$2 per ton on the tonnage measurement, and these licenses are to remain in force for one year from the time of issuance. All vessels and boats must be wholly owned by citizens and actual residents of the State.

The law further provides that no oysters shall be taken north of the said “southwest line” except from April 1 to June 15 of each year,

while it is forbidden to take oysters south of the "line" except from September 1 to June 15, both inclusive, of each year. Except on the natural beds south of the "line," no oysters can be taken on ground not leased of the State. The seed beds are located north of the "line," while the market oysters are to be found south of it. One of the best features of the law is the provision requiring that all oysters taken on the natural beds shall be immediately culled, and all shells and other material except oysters at once thrown back upon the beds.

In 1902 this law, with slight variations, was extended to the Keyport region in Monmouth County.

On March 26, 1902, a special act relating solely to Ocean County went into effect. This act is similar in many respects to the Delaware Bay law. One notable exception is in the setting apart of a portion of the grounds to be known and held as public clam-grounds. Leases are to be granted for terms not exceeding ten years, at an annual rental of not less than 50 cents nor more than \$3 per acre or fraction thereof, for the first 10 acres leased, and not less than \$1 per acre for each additional acre or fraction thereof. Persons having ground staked out at the time the law went into effect have first claim on such grounds. Leases are restricted to actual residents of the State. Persons who engage in the business pay a yearly license fee of \$2.50. Oystering on natural beds is restricted to the period between October 1 and April 30, while all oysters are to be immediately culled and the shells and refuse thrown back upon the bed from which taken. In 1902 a similar law went into effect in Atlantic County.

The greater part of the grounds suitable for oyster cultivation are now under the direct supervision of commissions authorized by the legislature, and beneficial results should soon be apparent through the protection given to the planters in their efforts at cultivating oysters. The authoritative surveying and mapping of the leased grounds in the various sections of the State is progressing rapidly and efficiently.

During the year ending October 31, 1901, the New Jersey State Oyster Commission distributed upon the natural beds of the State, exclusive of Delaware Bay, 62,335 bushels of shells. This is done to replenish the natural beds, which are the principal sources of supply of seed oysters for the planted beds. There is no published record of the quantity distributed in the bay.

One of the most serious problems confronting the oyster planter is the securing of enough seed oysters each year to keep the planted beds up to their full capacity. As the natural beds of the State do not furnish oysters enough for this purpose it is necessary for the planters to buy seed from other States. For many years nearly all the seed oysters planted, in addition to those taken from the natural beds, have come from Virginia. It is estimated that the oysters purchased from that State have averaged in late years about \$450,000 in value. On February 16, 1901, a Virginia law forbidding the export

of oysters less than 3 inches in length went into effect and prevented the planters from securing their usual seed supply from that source. This very much hampered the planters, and many of them, in 1901, planted only a fraction of the usual quantity of seed. The result of this scarcity of seed does not appear in the present statistics, as the small oysters require several years to attain their full growth. Most of the seed planted now comes from the Raritan River, Staten Island Sound, Newark Bay, and Connecticut. During the season of 1901 seed oysters were unusually plentiful on the natural beds off Keansburg, Monmouth County. During the past two years drum-fish have done considerable damage to the planted beds. In 1902 dynamite was used to destroy them in Tuckerton Bay.

*Clams.*—During 1901 hard clams were fairly abundant in the waters of this State, but in the summer of 1902 they became very scarce and the price rose unusually high. Owing to the heavy cost of running the large clam vessels of Monmouth County many of the clammers tied up their vessels and went clamming in small boats, which could be run much more cheaply. Except in Monmouth County the soft-clam business is insignificant; here it is centered largely around Highlands, where a number of wholesale dealers buy from the clammers and ship either in the shell or opened. At Ocean City, in Cape May County, surf clams are gathered along the sea beach, for bait in the line fisheries. None is used for food.

*Mussels.*—During 1901 mussels were very scarce, there having been no set in most of the counties during the last four or five years. In Monmouth County in 1902 several medium-sized beds were worked. In Burlington and Atlantic counties mussels are used for fertilizer; in Cape May and Monmouth counties they are used principally for food.

*Terrapin.*—On March 25, 1898, a law was passed by the legislature forbidding the taking of terrapin for three years from the date of the passage of the act, and providing that fishing could be carried on thereafter from November 1 to April 1. The industry was resumed in 1901, and the catch amounted to 8,232 pounds, valued at \$3,135. During 1897, the last year before the law went into effect, 13,528 pounds, valued at \$6,096, were secured. But few persons resumed the business in 1901, which probably accounts for the small quantity taken after three years' complete protection. The fishermen classify the terrapin secured as follows: "Cow," those 6 or more inches long on the under shell; "one-half count," those under 6 inches and not less than 4 inches in length on the under shell; "bulls," all under 4 inches long. Under the present law terrapin under 4 inches in length must be returned to the water. The animal is usually secured by means of a short stick with a hook fastened to the end. With this the fisherman pokes around under the overhanging banks and in likely holes, and hooks the animal out far enough to get hold of it with his hands.

## GENERAL STATISTICS.

As compared with 1898 the present canvass shows increases, except in a few instances. In the number of persons employed there was a decrease of 240, but the total investment increased \$392,148. In 1898 the total quantity of fishery products secured in the State was 90,297,118 pounds, valued at \$3,563,766, while in 1901 it was 117,930,964 pounds, worth \$4,755,522, a gain of 27,633,846 pounds and \$1,191,756. The species showing notable increases are the following: Alewives, blue-fish, bonito, butter-fish, eels, menhaden, white perch, shad, squeteague, spots, market and seed oysters. The increase in the catch of butter-fish is especially noteworthy, having risen from 262,627 pounds, valued at \$8,080, in 1898, to 3,008,301 pounds, valued at \$84,119, in 1901, a gain of 2,745,674 pounds and \$76,039. The principal decreases occurred in croakers, sea bass, sturgeon, king crabs, lobsters, and mussels.

During the last few years cold-storage plants have been erected at various places on the seacoast, in which the surplus catch of the pound nets is frozen when the price is low, to be ultimately shipped when the price advances, or during the winter months when fishing can not be carried on.

The three tables below show, in a condensed form, the number of persons engaged, the number and value of vessels, boats, and of the various kinds of apparatus employed, the value of shore and accessory property, the amount of cash capital, and the quantity and value of the products of the fisheries of New Jersey in 1901:

*Number of persons employed.*

How engaged.	No.
On vessels fishing .....	2,142
On vessels transporting .....	200
In shore or boat fisheries .....	8,828
Shoemen .....	860
Total .....	12,030

*Table of apparatus and capital.*

Items.	No.	Value.	Items.	No.	Value.
Vessels fishing .....	533	\$518,025	Apparatus—shore fisheries:		
Tonnage .....	5,371		Seines .....	469	\$33,000
Outfit .....		143,067	Gill nets .....	5,058	145,146
Vessels transporting .....	78	125,450	Pound nets and weirs .....	158	155,679
Tonnage .....	1,343		Bag nets .....	89	3,110
Outfit .....		23,746	Fyke nets .....	3,057	16,955
Boats .....	6,473	502,666	Stop nets .....	14	1,600
Apparatus—vessel fisheries:			Lines, hand and trawl .....		3,421
Seines .....	14	5,785	Eel pots .....	5,275	3,823
Gill nets .....	2	160	Lobster pots .....	850	2,358
Lines, hand and trawl .....		1,052	Oyster tongs, rakes, dredges .....	5,096	35,660
Eel pots .....	390	223	Clam tongs, rakes, and hoes .....	3,372	22,337
Crab dredges .....	323	1,135	Minor apparatus .....		533
Oyster dredges and tongs .....	1,654	37,188	Shore and accessory property .....		785,428
Clam tongs and rakes .....	577	6,408	Cash capital .....		155,550
			Total .....		2,729,571

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Table of products.

Species.	Lbs.	Value.	Species.	Lbs.	Value.
Albacore	15, 143	\$259	Shark	500	\$10
Alewives, fresh	3, 347, 491	19, 425	Sheepshead	7, 285	905
Alewives, salted	374, 000	2, 865	Skates	2, 375	48
Black bass	3, 000	169	Spanish mackerel	38, 928	5, 729
Blue-fish	6, 110, 318	254, 682	Spots	299, 092	3, 471
Bonito	1, 459, 418	34, 841	Squeteague	11, 973, 394	315, 770
Butter-fish	3, 008, 301	84, 119	Striped bass	354, 467	49, 734
Cat-fish	256, 859	14, 229	Sturgeon	168, 919	8, 393
Cero	22, 789	714	Caviar	19, 108	10, 959
Cod	2, 300, 771	67, 603	Suckers	110, 415	5, 459
Crevalle	63	1	Tautog	91, 105	3, 136
Croakers	226, 360	5, 663	Tomcod	265, 041	4, 519
Drum	68, 330	868	Whiting	405, 804	7, 874
Eels	1, 362, 988	70, 636	Clams, hard	<sup>a</sup> 1, 246, 070	552, 953
Flounders	1, 666, 221	62, 993	Clams, soft	<sup>b</sup> 902, 770	54, 918
German carp	227, 419	14, 290	Clams, surf	<sup>c</sup> 13, 336	600
Haddock	226, 963	8, 101	Crabs, hard	<sup>d</sup> 719, 995	23, 558
Hake	26, 841	749	Crabs, soft	<sup>e</sup> 417, 910	51, 861
Horse mackerel	224	5	King crabs	<sup>f</sup> 409, 800	1, 711
King-fish	21, 036	3, 083	Lobsters	65, 943	8, 340
Ling	317, 868	4, 375	Mussels	<sup>g</sup> 374, 600	920
Mackerel	10, 005	1, 677	Oysters, market	<sup>h</sup> 14, 646, 345	1, 696, 767
Menhaden	32, 910, 666	88, 041	Oysters, seed	<sup>i</sup> 10, 617, 572	550, 918
Mullet, fresh	36, 300	1, 842	Oyster shells	<sup>j</sup> 144, 000	32
Mullet, salted	57, 814	5, 123	Scallops	<sup>k</sup> 114, 000	3, 200
Perch, white	1, 270, 097	81, 699	Shrimp	4, 095	1, 988
Perch, yellow	16, 569	1, 038	Squid	17, 748	826
Pike and pickerel	2, 560	210	Terrapin	8, 232	3, 135
Salmon	233	73	Turtles	20, 130	1, 053
Scup	607, 099	16, 367			
Sea bass	1, 495, 247	76, 003			
Shad	14, 031, 002	475, 202	Total	117, 930, 964	4, 755, 522

<sup>a</sup> 530,759 bushels.  
<sup>b</sup> 90,277 bushels.  
<sup>c</sup> 1,667 bushels.  
<sup>d</sup> 2,159,985 in number.

<sup>e</sup> 1,253,730 in number.  
<sup>f</sup> 204,900 in number.  
<sup>g</sup> 11,860 bushels.  
<sup>h</sup> 2,092,335 bushels.

<sup>i</sup> 1,516,796 bushels.  
<sup>j</sup> 2,400 bushels.  
<sup>k</sup> 7,333 bushels.

STATISTICS OF THE FISHERIES BY COUNTIES.

Fishing is carried on in 17 counties of the State. Essex County has no fishing, but there is considerable wholesale trade in fishery products at Newark. Of these counties Bergen, Hudson, Union, Middlesex, and part of Monmouth are on the Hudson River, Staten Island Sound, and New York Bay; Ocean, Atlantic, and portions of Monmouth, Burlington, and Cape May are on the ocean side, while Sussex, Warren, Hunterdon, Mercer, Camden, Gloucester, Salem, Cumberland, and parts of Burlington and Cape May are on the Delaware River and Bay.

Monmouth County leads in the quantity of products, while the large oyster industry of Cumberland places that county ahead so far as total value of catch is concerned. Ocean County also surpasses Cumberland County in quantity, but is far behind both Cumberland and Monmouth in the value of the catch. A feature of the fisheries of Salem County is the immense preponderance of the shad fishery.

The three following tables show the extent of the fisheries by counties.

Table showing the number of persons employed in the fisheries of New Jersey in 1901.

Counties.	On vessels fishing.	On vessels transporting.	In shore or boat fisheries.	Shoreshmen.	Total.
Atlantic	211	25	646	7	889
Bergen			85	10	95
Burlington		7	466	30	503
Camden	87	3	309	11	410
Cape May	115	18	923	16	1,072
Cumberland	1,356	16	777	289	2,438
Essex				85	85
Gloucester			334	8	342
Hudson	4	2	182	29	217
Hunterdon			99	1	100
Mercer			236		236
Middlesex	10	19	217	24	270
Monmouth	295	65	1,740	203	2,303
Ocean	64	32	1,443	96	1,635
Salem		13	1,062	44	1,119
Sussex			26		26
Union			210	7	217
Warren			73		73
Total	2,142	200	8,828	860	12,030

Table showing, by counties, the vessels, boats, and apparatus employed in the fisheries of New Jersey in 1901.

Items.	Atlantic.		Bergen.		Burlington.		Camden.		Cape May.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels fishing	57	\$59,150					13	\$21,000	29	\$29,975
Tonnage	486						196		313	
Outfit		15,129						4,203		5,948
Vessels transporting	12	9,300			3	\$3,350	1	900	7	12,650
Tonnage	125				66		13		138	
Outfit		1,372				340		244		1,165
Boats	659	60,056	65	\$6,450	304	30,100	143	14,195	785	41,311
Apparatus—vessel fisheries:										
Seines	4	785							1	400
Lines, hand and trawl		855								197
Eel pots									60	25
Oyster dredges and tongs	111	1,195					52	1,300	72	1,728
Clam tongs and rakes	102	714							16	112
Apparatus—shore fisheries:										
Seines	53	2,441			32	4,435	14	2,960	80	2,160
Gill nets	81	625	1,230	6,415	161	5,612	103	4,693	123	3,924
Pound nets and weirs	3	4,000							75	17,135
Bag nets	30	750			59	2,360				
Fyke nets	27	340	3	60	672	1,197	45	54	33	540
Stop nets					11	1,030	2	530		
Lines, hand and trawl		327								684
Eel pots			490	602	7	7			60	50
Oyster tongs, rakes, and dredges	722	4,782			245	927	8	124	548	3,562
Clam tongs, rakes, and hoes	704	4,886			104	448			592	3,821
Minor apparatus		67								98
Shore and accessory property		23,060		2,200		10,693		2,020		29,429
Cash capital										5,000
Total		189,834		15,727		60,499		52,223		159,914

  

Items.	Mercer.		Salem.		Sussex.		Union.		Warren.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels transporting			1	\$35,000						
Tonnage			244							
Outfit				3,950						
Boats	109	\$3,800	524	55,500	8	\$100	106	\$10,600	19	\$355
Apparatus—shore fisheries:										
Seines	25	1,729	20	1,667	5	110			15	693
Gill nets	72	2,155	452	62,885						
Fyke nets	384	729								
Stop nets	1	100								
Lines, hand and trawl				3						
Oyster tongs, rakes, and dredges			2	12			210	1,260		
Minor apparatus				114						
Shore and accessory property		2,939		38,709		470		1,600		781
Cash capital								1,000		
Total		11,452		107,900		680		14,460		1,809



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Table showing, by counties, the vessels, boats, and apparatus employed in the fisheries of New Jersey in 1901—Continued.

Items.	Cumberland.		Essex.		Gloucester.		Hudson.		Hunterdon.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels fishing	300	\$300,775					2	\$1,050		
Tonnage	3,040						18	515		
Outfit		58,325						700		
Vessels transporting	4	3,500					1			
Tonnage	70						14			
Outfit		1,195						310		
Boats	581	47,198			171	\$19,480	117	9,645	48	\$1,070
Apparatus—vessel fisheries:							6	21		
Crab dredges										
Oyster dredges and tongs	1,186	29,700					8	82		
Clam tongs and rakes										
Apparatus—shore fisheries:					5	850			23	2,285
Seines	18	785								
Gill nets	176	18,427			141	12,923	592	3,191		
Fyke nets	291	291			407	585	330	4,450		
Lines, hand and trawl		4								
Pots, eel							310	310		
Pots, lobster							125	183		
Oyster tongs, rakes, and dredges	620	6,079					107	856		
Clam tongs, rakes, and hoes							4	32		
Minor apparatus		46						2		
Shore and accessory property		169,702		\$83,000		1,747		23,260		6,935
Cash capital		12,000		42,200				30,000		
Total		648,027		125,200		35,585		74,637		10,290

Items.	Middlesex.		Monmouth.		Ocean.		Total.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels fishing	5	\$3,750	117	\$77,725	10	\$24,600	533	\$518,025
Tonnage	31		1,095		192		5,371	
Outfit		1,610		49,802		7,445		143,067
Vessels transporting	6	8,500	29	38,650	14	12,900	78	125,450
Tonnage	84		416		173		1,343	
Outfit		2,115		11,475		1,580		23,746
Boats	153	14,035	1,395	91,569	1,286	96,622	6,473	502,666
Apparatus—vessel fisheries:								
Seines			6	2,700	3	1,900	a 14	5,785
Gill nets			2	160			b 2	160
Lines, hand and trawl								1,052
Pots, eel			60	60	280	138	390	223
Crab dredges			317	1,114			323	1,135
Oyster dredges and tongs	6	51	210	3,103	17	111	1,654	37,188
Clam tongs and rakes	20	250	408	5,100	23	150	577	6,408
Apparatus—shore fisheries:								
Seines	5	2,550	67	3,976	107	6,359	c 469	33,000
Gill nets	15	90	868	9,900	1,039	14,306	d 5,058	145,146
Pound nets and weirs	1	300	67	120,344	12	13,900		155,679
Bag nets							89	3,110
Fyke nets	18	530	205	3,984	642	4,195	3,057	16,955
Stop nets							e 14	1,660
Lines, hand and trawl				1,933		470		3,421
Pots, eel	115	95	1,343	1,258	2,950	1,507	5,275	3,829
Pots, lobster			695	2,085	80	90	850	2,358
Oyster tongs, rakes, and dredges	262	1,834	470	3,167	1,902	13,057	5,096	35,660
Clam tongs, rakes, and hoes	10	90	744	5,293	1,218	7,767	3,372	22,337
Minor apparatus				179		27		533
Shore and accessory property		14,150		315,033		59,640		785,428
Cash capital		5,000		44,350		16,000		155,550
Total		55,550		793,020		282,764		2,729,571

a 11,340 yards in length.

b 320 yards in length.

c 68,303 yards in length.

d 888,253 yards in length.

e 9,625 yards in length.

Table showing, by counties, the yield of the fisheries of New Jersey in 1901.

Species.	Atlantic.		Bergen.		Burlington.		Camden.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives, fresh	54,500	\$514			143,370	\$735	50,500	\$255
Alewives, salted					368,000	2,760		
Blue-fish	30,911	2,063						
Butter-fish	15,000	300						
Cat-fish	6,100	305			56,985	2,836	15,730	1,316
Cod	831,140	24,998						
Croakers	73,825	1,629						
Eels	120,800	6,580	37,500	\$1,898	8,125	410	3,690	185
Flounders	38,032	1,727						
German carp					61,613	3,219	67,910	4,516
Haddock	6,846	211						
Hake	5,710	178						
King-fish	6,875	885						
Menhaden	4,500,000	6,000						
Mullet, fresh	3,000	170						
Mullet, salted	5,000	500						
Perch, white	202,019	9,299	1,200	48	112,078	5,483		
Perch, yellow					1,483	78		
Pike and pickerel					365	32		
Salmon					99	27	70	28
Scup	12,600	518						
Sea bass	209,400	10,470						
Shad	4,680	293	577,200	21,647	1,199,590	58,545	1,402,760	46,144
Sheepshead	3,360	659						
Spots	3,400	68						
Squeteague	713,766	23,496			55,400	2,062		
Striped bass	61,075	9,872	43,385	4,339	52,245	9,771	1,000	100
Sturgeon					472	39		
Suckers					25,890	1,507	3,685	295
Tautog	1,500	59						
Tomeod			1,800	54				
Whiting	5,000	200						
Clams, hard	720,360	71,666			124,792	16,380		
Crabs, hard	5,767	303						
Crabs, soft	2,400	480						
Mussels	54,000	540			320,000	320		
Oysters, market	1,197,959	137,098			146,020	16,681	578,200	73,115
Oysters, seed	352,499	15,859			22,750	885	365,820	18,186
Shrimp		47						
Terrapin	400	200						
Total	9,253,209	327,087	661,145	27,986	2,699,227	121,770	2,479,365	144,140

Species.	Cumberland.		Gloucester.		Hudson.		Hunterdon.		Mercer.	
	Lbs.	Value.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Value.
Alewives, fresh	10,100	\$101	20,500	\$103					8,900	\$89
Cat-fish	29,300	2,159	15,837	883	700	\$35	615	\$72	49,700	2,478
Eels	8,340	657	11,857	952	17,100	1,205	100	6	9,700	392
German carp	350	21	6,520	521	820	49	3,335	163	43,357	2,602
Perch, white	10,200	635			592	24			500	25
Perch, yellow									1,000	51
Pike and pickerel							20	2	75	8
Salmon							55	17	9	1
Shad	1,280,450	38,415	2,232,118	66,863	738,000	27,675	68,560	3,998	201,860	15,117
Squeteague	36,650	2,305								
Striped bass	42,955	3,854	570	51	1,683	168	1,135	123	1,830	149
Sturgeon	98,614	4,497							400	27
Caviar	13,836	7,611								
Suckers	1,000	50	1,365	74			9,325	465	39,210	1,981
Tox cod					1,200	36				
Clams, hard					10,400	1,625				
Clams, soft					3,500	263				
Crabs, hard					8,000	430				
Crabs, soft					1,000	333				
King crabs	51,000	128								
Lobsters					22,000	2,220				
Oysters, market	7,420,686	971,727								
Oysters, seed	7,392,749	389,367			422,100	21,105				
Turtles	1,800	162								
Total	16,398,030	1,421,689	2,288,767	69,447	1,227,095	55,168	63,145	4,846	356,541	22,920

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Table showing, by counties, the yield of the fisheries of New Jersey in 1901—Continued.

Species.	Cape May.		Middlesex.		Monmouth.		Ocean.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Albacore.....	1,600	\$37			11,065	\$197	2,478	\$25
Alewives, fresh.....	110,100	894	34,400	\$65	680,763	8,861	2,234,359	7,808
Alewives, salted.....							6,000	105
Black buss.....							3,000	159
Blue-fish.....	358,852	21,091	18,600	555	5,352,068	214,494	349,987	16,479
Bonito.....	13,480	502			1,293,802	29,641	152,136	4,698
Butter-fish.....	719,945	20,695	700	21	1,845,097	50,276	427,559	12,827
Cat-fish.....			450	23	4,170	178	65,450	3,273
Cero.....	4,590	168			17,619	529	580	17
Cod.....	370,834	11,111			663,979	19,025	434,818	12,469
Crevalle.....					53	1		
Croakers.....	95,575	2,849			38,845	652	18,115	533
Drum.....	11,830	682			46,500	186		
Eels.....	119,450	6,939	14,600	841	412,951	21,314	698,700	29,851
Flounders.....	110,851	4,803	13,560	675	847,178	22,830	658,600	23,058
German carp.....					80	2		
Haddock.....	13,930	419			77,771	2,334	128,416	5,187
Hake.....	6,840	215			11,580	274	2,711	82
Horse mackerel.....					224	5		
King-fish.....	11,060	1,567			3,046	495	1,055	136
Ling.....	22,033	661			258,393	3,152	37,442	562
Mackerel.....	2,879	507			5,003	752	2,123	318
Menhaden.....	755,000	12,430	260,880	489	17,099,342	54,308	10,295,444	14,814
Mullet, fresh.....	19,600	990			13,500	682		
Mullet, salted.....	52,814	4,623						
Perch, white.....	26,288	1,306	3,614	145	11,793	683	901,688	64,043
Perch, yellow.....	13,653	885						
Pike and pickerel.....							2,100	168
Scup.....	251,300	8,238			301,795	6,783	41,404	828
Sea bass.....	579,690	29,799			443,977	19,863	262,180	15,871
Shad.....	7,064	444	10,068	418	235,344	11,768	17,688	929
Shark.....					500	10		
Sheepshead.....	3,925	346						
Skates.....					2,375	48		
Spanish mackerel.....	2,510	381			32,096	4,700	4,322	648
Spots.....	5,750	292			244,199	2,654	45,743	457
Squeteague.....	1,117,455	33,080	36,100	855	8,874,124	222,564	1,135,149	31,173
Striped bass.....	48,645	5,643	3,120	434	22,669	2,845	65,700	11,447
Sturgeon.....	40,595	2,615			6,683	437		
Caviar.....	2,060	1,411			1,172	509		
Suckers.....					11,350	361	12,315	369
Tautog.....	780	23			88,425	3,046	400	8
Tomcod.....					214,839	3,720	47,202	709
Whiting.....	350	7			400,454	7,667		
Clams, hard.....	700,384	67,225	43,798	7,093	2,020,952	317,949	619,384	71,015
Clams, soft.....					788,130	48,659	111,140	5,996
Clams, surf.....	13,336	500						
Crabs, hard.....	13,600	404	1,200	46	665,006	21,199	26,422	1,176
Crabs, soft.....	6,400	1,200			360,478	43,070	47,632	6,778
King crabs.....	358,800	1,583						
Lobsters.....					40,043	5,574	3,900	546
Mussels.....	600	60						
Oysters, market.....	386,050	51,701	340,900	48,700	1,340,801	177,960	3,235,729	219,785
Oysters, seed.....	497,287	23,736	465,000	26,000	189,406	10,852	282,261	13,098
Oyster shells.....					144,000	32		
Scallops.....			42,000	350	72,000	2,850		
Shrimp.....					210	140	3,600	1,801
Squid.....	16,600	792			948	28	200	6
Terrapin.....	7,832	2,935						
Turtles.....	150	2			8,605	154	8,300	646
<b>Total.....</b>	<b>6,902,567</b>	<b>325,171</b>	<b>1,278,890</b>	<b>86,610</b>	<b>45,205,403</b>	<b>1,346,313</b>	<b>22,293,431</b>	<b>579,848</b>

Species.	Salem.		Sussex.		Union.		Warren.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Cat-fish.....	11,822	\$671						
Eels.....							75	\$6
German carp.....	52,469	3,148					965	49
Perch, white.....	125	8						
Perch, yellow.....	483	24						
Shad.....	6,029,280	180,894	5,645	\$342			20,635	1,710
Squeteague.....	4,750	285						
Striped bass.....	8,430	934					25	4
Sturgeon.....	22,155	748						
Caviar.....	2,040	1,428						
Suckers.....	4,575	235					1,700	122
Oysters, seed.....	7,700	390			630,000	\$31,600		
Turtles.....	1,275	89						
<b>Total.....</b>	<b>6,145,104</b>	<b>188,794</b>	<b>5,645</b>	<b>342</b>	<b>630,000</b>	<b>31,600</b>	<b>23,400</b>	<b>1,891</b>

THE PRODUCTS BY APPARATUS.

In the vessel fisheries seines lead in the quantity of products secured—over nine-tenths of the catch consisting of menhaden—but dredges, tongs, rakes, etc., rank first in the value of the catch. In the shore fisheries dredges, tongs, rakes, etc., occupy first place, both as regards quantity and value of catch, while the pound net and weir fisheries are second in quantity secured, but are outstripped by gill nets in the value of the yield. A feature of the shore fisheries is the great increase—6,811,064 pounds and \$204,409—shown in the pound-net catch of Monmouth County over 1898. Ocean and Cape May counties also show relatively large increases.

Cod show a great falling off in the pound-net fisheries. In 1897 1,191,000 pounds, valued at \$14,795, and in 1898, 280,000 pounds, valued at \$5,590, were secured, while in 1901 the catch amounted to only 30,686 pounds, worth \$903. According to the reports of the pound-net owners the catch of 1897 was very large, as cod are generally taken in but small quantities in this form of apparatus. Butter-fish, bonito, and squeteague taken in pound nets show large increases over 1897 and 1898, while king crabs have fallen off considerably.

Table showing, by counties, the yield of the seine fisheries of New Jersey in 1901.

Species.	Atlantlc.		Burlington.		Camden.		Cape May.		Cumberland.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
<b>Vessel fisheries:</b>										
Bonito .....							2,000	\$80		
Blue-fish .....							4,000	160		
Croakers .....							2,000	40		
Menhaden .....	4,500,000	\$6,000								
Scup .....							80,000	2,400		
Perch, white .....	15,100	604								
Sea bass .....							8,000	960		
Squeteague .....	7,600	304					4,000	80		
Striped bass .....	3,900	312								
<b>Total .....</b>	<b>4,526,600</b>	<b>7,220</b>					<b>100,000</b>	<b>3,720</b>		
<b>Shore fisheries:</b>										
Alewives, fresh .....	42,700	417	143,370	\$735	50,500	\$255	89,100	818	10,100	\$101
Alewives, salted .....			368,000	2,760						
Blue-fish .....							6,630	403		
Butter-fish .....							1,445	66		
Cat-fish .....			19,949	979	13,730	1,176			12,450	942
Drum .....							1,000	60		
Eels .....	59,500	3,515					32,550	1,618		
Flounders .....	4,400	206					34,516	1,612		
German carp .....			30,900	1,652	47,410	3,676			350	21
Hake .....							440	18		
King-fish .....	1,525	229					2,405	445		
Mullet, fresh .....	2,000	120					19,800	990		
Mullet, salted .....							62,814	4,623		
Perch, white .....	53,100	2,124	12,578	508			10,913	457	8,700	530
Perch, yellow .....			1,433	78			13,653	885		
Pike .....			365	32						
Salmon .....			75	23	70	28				
Shad .....	4,680	293	181,910	10,241	470,108	18,167	1,101	71	14,200	426
Spots .....							5,300	265		
Striped bass .....	17,700	2,019	9,145	1,151	1,000	100	34,894	4,182	24,840	2,211
Sturgeon .....			412	36						
Suckers .....			17,800	907	2,485	199			1,000	50
Squeteague .....	87,300	2,722	31,400	1,102			181,800	7,872	24,340	1,513
Shrimp .....	285	47								
<b>Total .....</b>	<b>273,190</b>	<b>11,692</b>	<b>817,427</b>	<b>20,204</b>	<b>585,308</b>	<b>23,601</b>	<b>488,364</b>	<b>24,405</b>	<b>95,980</b>	<b>5,794</b>
<b>Grand total .....</b>	<b>4,799,790</b>	<b>18,912</b>	<b>817,427</b>	<b>20,204</b>	<b>585,308</b>	<b>23,601</b>	<b>688,364</b>	<b>28,125</b>	<b>95,980</b>	<b>5,794</b>

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Table showing, by counties, the yield of the seine fisheries of New Jersey in 1901—Cont'd.

Species.	Gloucester.		Hunterdon.		Mercer.		Middlesex.		Sussex.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Shore fisheries:										
Alewives, fresh	20,500	\$103			8,900	\$89	34,400	\$65		
Blue-fish							16,400	492		
Cat-fish	3,247	195	615	\$72	16,200	763				
Eels			100	6						
Flounders							2,250	90		
German carp	6,520	521	3,335	163	42,467	2,548				
Menhaden							212,880	399		
Perch, white					500	25	700	28		
Perch, yellow					1,000	51				
Pike			20	2	75	8				
Salmon			55	17						
Shad	220,950	6,529	68,560	3,998	20,100	1,525	2,988	90	5,645	\$342
Striped bass	570	51	1,135	123	1,830	119	400	56		
Sturgeon					400	27				
Suckers	1,365	74	9,325	465	39,210	1,981				
Squeteague							20,200	303		
Total	253,152	7,473	83,145	4,946	129,682	7,156	290,218	1,523	5,645	342

Species.	Monmouth.		Ocean.		Salem.		Warren.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Val.	Lbs.	Value.
Vessel fisheries:										
Bonito									2,000	\$80
Blue-fish									4,000	160
Cronkers									2,000	40
Menhaden	13,063,959	\$30,120	10,283,000	\$14,690					27,846,959	50,810
Scup									80,000	2,400
Perch, white									15,100	604
Sea bass									8,000	960
Squeteague	2,000	60							13,600	444
Striped bass									3,900	312
Total	13,065,959	30,180	10,283,000	14,690					27,975,559	55,810
Shore fisheries:										
Alewives, fresh	66,100	1,072	2,094,166	7,116					2,559,836	10,771
Alewives, salted			6,000	105					374,000	2,865
Black bass			3,000	169					3,000	159
Blue-fish	6,500	353	1,800	90					31,330	1,338
Butter-fish									1,445	66
Cat-fish	1,070	51	65,450	3,273	8,912	\$517			140,623	7,958
Drum									1,000	50
Eels	85,860	4,293					75	\$6	178,085	9,468
Flounders	5,054	165	3,200	128					49,420	2,201
German carp	80	2			36,200	2,172	965	49	168,227	10,804
Hake									440	17
King-fish	40	2							3,970	676
Menhaden	138,000	389	6,500	65					357,380	853
Mullet, fresh	13,300	666							35,100	1,776
Mullet, salted									52,814	4,623
Perch, white	4,100	282	646,765	40,977	125	8			737,481	44,939
Perch, yellow					483	24			16,569	1,038
Pike									460	42
Salmon									200	68
Scup	110	2							110	2
Shad	13,120	657	4,528	271	98,630	2,973	20,635	1,710	1,127,158	47,293
Spots									6,300	265
Striped bass	10,460	1,755	59,275	10,349	8,430	934	25	4	169,704	23,084
Sturgeon									812	68
Suckers	10,750	343	4,615	135	4,675	235	1,700	122	92,815	4,511
Squeteague	43,100	1,453	61,700	2,301					449,840	17,266
Crabs, hard	88,064	2,936	22,850	1,003					110,914	3,939
Crabs, soft	186,900	20,153	39,532	5,421					226,432	25,574
Shrimp			3,210	1,606					3,495	1,653
Snappers			300	6					300	6
Turtles	320	3							320	3
Total	672,928	34,677	3,022,791	73,005	157,355	6,863	23,400	1,891	6,898,580	223,372
Grand total	13,738,887	64,757	13,305,791	87,695	157,355	6,863	23,400	1,891	34,874,139	279,182

Table showing, by counties, the yield of the gill-net fisheries of New Jersey in 1901.

Species.	Atlantic.		Bergen.		Burlington.		Camden.		Cape May.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Val.
Shore fisheries:										
Alewives.....	6,700	\$71							1,200	\$9
Blue-fish.....									600	36
Butter-fish.....									2,100	84
Croakers.....									500	15
Flounders.....	100	6							180	9
King-fish.....	75	15							326	40
Menhaden.....									418,000	5,220
Mullet, fresh.....	1,000	50								
Mullet, salted.....	5,000	500								
Perch, white.....	36,400	2,674							10,525	537
Salmon.....						24	\$4			
Scup.....									900	36
Shad.....			577,260	\$21,647	1,017,680	48,304	932,652	\$27,977		
Spanish mackerel.....									150	23
Striped bass.....	200	24	42,985	4,299					803	69
Sturgeon.....						60	3		26,476	1,709
Caviar.....									1,080	756
Suckers.....						8,000	600			
Squeteague.....	100	8				24,000	960		3,510	109
Total.....	49,575	3,347	620,245	25,946	1,049,764	49,871	932,652	27,977	460,882	8,652

Species.	Cumberland.		Gloucester.		Hudson.		Mercer.		Middlesex.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Val.
Shore fisheries:										
Perch, white.....	1,500	\$105								
Salmon.....								9	\$1	
Shad.....	1,266,250	37,989	2,011,168	\$60,334	478,800	\$17,955	181,760	13,592	1,200	\$36
Striped bass.....	18,115	1,643			500	50				
Sturgeon.....	98,614	4,497								
Caviar.....	13,836	7,611								
Squeteague.....	7,010	474								
Total.....	1,405,325	52,319	2,011,168	60,334	479,300	18,005	181,769	13,593	1,200	36

Species.	Monmouth.		Ocean.		Salem.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Vessel fisheries:								
Blue-fish.....	4,800	\$215					4,800	\$215
Shore fisheries:								
Alewives.....	5,000	100	119,000	\$480			131,900	660
Blue-fish.....	202,400	8,096	300,465	14,472			503,465	22,604
Bonito.....	3,308	100	21,375	775			24,683	875
Butter-fish.....							2,100	84
Croakers.....	1,800	23					2,300	38
Flounders.....							280	14
King-fish.....				200	10		601	65
Menhaden.....	9,700	84					427,700	5,304
Mullet, fresh.....							1,000	50
Mullet, salted.....							5,000	500
Perch, white.....			231,810	21,535			280,235	24,851
Pickrel.....			2,100	168			2,100	168
Salmon.....							33	5
Scup.....							900	36
Shad.....	130,776	6,539			5,930,650	\$177,921	12,528,196	412,294
Spanish mackerel.....	3,254	488					3,401	511
Striped bass.....			5,925	1,063			68,531	7,148
Sturgeon.....	1,789	113			22,155	748	149,093	7,070
Caviar.....	36	20			2,040	1,428	16,992	9,815
Suckers.....			7,800	234			15,800	834
Squeteague.....	73,250	1,784	166,175	5,990			274,075	9,325
Whiting.....	50,000	1,000					50,000	1,000
Total.....	481,313	18,347	854,850	44,727	5,954,845	180,097	11,488,388	503,251
Grand total ...	485,613	18,562	854,850	44,727	5,954,845	180,097	14,492,688	503,466

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Table showing, by counties, the yield of the pound-net and weir fisheries of New Jersey in 1901.

Species.	Atlantic.		Cape May.		Middlesex.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
<b>Shore fisheries:</b>						
Albacore			1,600	\$37		
Alewives			19,800	67		
Blue-fish	600	\$30	5,822	331	2,100	\$63
Bonito			11,480	422		
Butter-fish	15,000	300	716,400	20,545	700	21
Cero			4,580	168		
Croakers			14,508	540		
Drum			2,690	79		
Eels	300	15	9,500	565		
Flounders	13,340	400	44,300	1,784	4,000	160
King-fish	1,334	200	5,090	555		
Ling			2,100	63		
Mackerel			2,879	507		
Menhaden			337,000	7,210	48,000	90
Perch, white			4,400	285		
Scup			81,400	3,122		
Sea bass			290	35		
Shad			5,960	373	120	4
Spanish mackerel			2,360	358		
Spots			450	27		
Striped bass	334	50	9,195	980		
Sturgeon			14,120	936		
Caviar			980	655		
Squeteague	90,000	2,700	824,500	21,040	3,400	68
Whiting	5,000	200	350	7		
Crabs, hard	2,000	20	12,000	324		
King crabs			358,800	1,583		
Squid			16,600	792		
Turtles			150	2		
<b>Total</b>	<b>127,908</b>	<b>3,915</b>	<b>2,513,314</b>	<b>63,392</b>	<b>58,320</b>	<b>406</b>

Species.	Monmouth.		Ocean.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
<b>Shore fisheries:</b>						
Albacore	11,065	\$197	2,478	\$25	15,143	\$259
Alewives	598,769	7,641	21,192	212	639,761	7,820
Blue-fish	93,638	4,014	12,112	435	114,272	4,873
Bonito	1,277,894	29,289	130,161	3,905	1,419,635	33,616
Butter-fish	1,845,097	50,276	427,559	12,827	3,004,756	83,969
Cero	17,619	629	580	17	22,789	714
Cod	21,201	627	9,485	276	30,686	903
Crevalle	63	1			63	1
Croakers	37,046	629	18,111	533	73,668	1,792
Drum	46,500	186			49,196	265
Eels	82	4			9,882	584
Flounders	513,432	13,648	68,036	2,011	643,108	18,033
Haddock	2,105	64			2,105	64
Hake	1,680	34			1,680	34
King-fish	2,760	454	655	96	9,839	1,305
Ling	249,913	3,067	37,442	562	289,455	3,692
Mackerel	5,003	752	2,123	318	10,005	1,577
Horse mackerel	224	5			224	5
Menhaden	3,850,743	23,474	5,944	59	4,241,687	30,833
Perch, white					4,400	285
Scup	263,650	5,718	40,804	816	385,854	9,656
Sea-bass	57,311	2,243	80	5	57,681	2,283
Shad	89,832	4,491	13,160	658	109,072	5,626
Shark	500	10			500	10
Skates	2,375	48			2,375	48
Spanish mackerel	28,756	4,206	4,322	648	35,438	5,212
Spots	232,569	2,332	46,743	457	278,762	2,816
Striped bass	2,304	145	500	35	12,333	1,210
Sturgeon	4,894	324			19,014	1,260
Caviar	1,136	489			2,116	1,144
Squeteague	8,698,374	217,759	892,174	22,304	10,608,448	263,871
Tautog	2,059	77	400	8	2,459	85
Tomcod	181,539	2,722	47,202	709	228,741	3,431
Whiting	347,304	6,604			352,654	6,811
Crabs, hard	21,220	590	900	6	36,120	940
King crabs					358,800	1,583
Squid	948	28	200	6	17,748	826
Turtles	8,285	151			8,435	153
<b>Total</b>	<b>18,517,879</b>	<b>382,728</b>	<b>1,781,367</b>	<b>46,958</b>	<b>22,998,788</b>	<b>497,399</b>

Table showing, by counties, the yield of the stop-net fisheries of New Jersey in 1901.

Species.	Burlington.		Camden.		Mercer.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Shore fisheries:								
Cat-fish	1,300	\$65	2,000	\$140			3,300	\$205
Eels			1,050	53			1,050	53
German carp	30,713	1,567	10,500	840	890	\$54	42,103	2,461
Suckers			1,200	96			1,200	96
Total	32,013	1,632	14,750	1,129	890	54	47,653	2,815

Table showing, by counties, the yield of the fyke-net fisheries of New Jersey in 1901.

Species.	Atlantic.		Bergen.		Burlington.		Camden.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Shore fisheries:								
Cat-fish					28,736	\$1,442		
Eels					6,976	352	2,640	\$132
Perch, white	9,319	\$373	1,200	\$48				
Striped bass	2,941	267	400	40				
Tomcod			1,800	54				
Total	12,260	640	3,400	142	35,711	1,791	2,640	132

Species.	Cape May.		Cumberland.		Gloucester.		Hudson.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Shore fisheries:								
Cat-fish			16,850	\$1,217	12,590	\$688	700	\$35
Eels	6,800	\$590	8,340	657	11,857	952		
Flounders	800	48					820	49
German carp							592	24
Perch, white	450	27					259,200	9,720
Shad								
Squeteague	3,600	160						
Striped bass	3,600	396					1,183	118
Tomcod							1,200	36
Total	14,650	1,211	25,190	1,874	24,447	1,640	263,695	9,982

Species.	Mercer.		Middlesex.		Monmouth.		Ocean.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Shore fisheries:										
Alewives					10,894	\$148			10,894	\$148
Blue-fish					630	32			630	32
Cat-fish	34,500	\$1,725	450	\$23	3,100	127			96,926	5,257
Eels	9,700	392			39,575	2,200			85,887	5,335
Flounders			7,310	325	50,300	1,597	257,600	\$9,263	316,010	11,233
German carp									820	49
King-fish					246	39			246	39
Menhaden					36,940	241			36,940	241
Mullet					200	16			200	16
Perch, white			2,914	117	7,693	401	23,113	1,531	45,281	2,621
Scup					160	5			160	5
Shad			5,760	288	1,616	81			266,576	10,089
Spanish mackerel					86	6			86	6
Spots					11,630	322			11,630	322
Squeteague			12,500	484	57,400	1,508			72,900	2,142
Striped bass			2,720	378	9,905	946			20,749	2,144
Suckers					600	18			600	18
Tautog					1,900	57			1,900	57
Tomcod					100	2			3,100	92
Whiting					250	5			250	5
Crabs, hard			1,200	46	12,000	864			13,200	910
Total	44,200	2,117	32,854	1,661	245,225	8,674	280,713	10,794	984,985	40,661



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Table showing, by counties, the yield of the line fisheries of New Jersey in 1901.

Species.	Cumberland.		Ocean.		Salem.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Shore fisheries:						
Blue-fish			35,610	\$1,482		
Bonito			600	18		
Cod			425,333	12,193		
Flounders			329,764	11,626		
Haddock			128,416	5,137		
Hake			2,711	82		
King-fish			200	30		
Scup			600	12		
Sea-bass			262,100	15,866		
Spots	5,300	\$318	15,100	578	4,750	\$285
Total	5,300	318	1,200,434	47,024	4,750	285

Species.	Atlantic.		Cape May.		Monmouth.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Vessel fisheries:								
Blue-fish	15,851	\$831	22,500	\$1,141			38,351	\$1,972
Cod	784,530	23,554	221,434	6,649			1,005,964	30,203
Croakers	4,230	169	3,600	87			7,730	256
Flounders	4,727	258	6,840	232			11,567	550
Haddock	6,446	197	6,700	201			13,146	398
Hake	5,010	154	1,900	57			6,910	211
Ling			10,000	300			10,000	300
Scup	7,600	318	13,800	414			21,400	732
Sea bass	183,500	9,175	70,600	3,570			254,100	12,745
Sheepshead	360	19					360	19
Squeteague	14,200	852	8,000	450			22,200	1,302
Total	1,026,454	35,527	365,274	13,161			1,391,728	48,688
Shore fisheries:								
Alewives	5,100	26					5,100	26
Blue-fish	14,460	1,202	319,300	19,020	5,044,600	\$201,784	5,413,970	223,488
Bonito					12,600	252	13,200	270
Cod	46,610	1,444	149,400	4,462	642,778	18,398	1,264,121	36,497
Croakers	69,595	1,460	71,067	2,167			140,662	3,627
Drum			8,140	553			8,140	553
Eels			600	36			600	36
Flounders	15,465	858	24,215	1,058	278,392	7,420	647,836	20,962
Haddock	400	14	7,230	218	75,666	2,270	211,712	7,039
Hake	700	24	4,500	140	9,900	240	17,811	485
King-fish	2,941	441	3,239	527			6,380	998
Ling			9,933	298	8,480		18,413	383
Scup	5,000	200	75,200	2,266	37,875	1,058	118,675	3,536
Sea bass	25,900	1,295	500,800	25,234	386,666	17,620	1,176,466	60,015
Sheepshead	3,000	540					6,025	886
Spots	3,400	68					3,400	68
Squeteague	514,566	16,910	92,615	3,329			632,331	21,420
Striped bass			150	16			150	16
Tautog	1,500	79	780	23	84,466	2,912	86,746	2,994
Whiting					2,900	58	2,900	58
Terrapin	400	200					400	200
Total	709,037	24,741	1,271,094	59,693	6,684,323	252,097	9,774,938	384,158
Grand total	1,735,491	60,268	1,636,368	72,854	6,584,323	252,097	11,166,666	432,846

Table showing, by counties, the yield of the bag-net fisheries of New Jersey in 1901.

Species.	Atlantic.		Burlington.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Shore fisheries:						
Cat-fish	6,100	\$305	7,000	\$350	13,100	\$655
Striped bass	36,000	7,200	43,100	8,620	79,100	15,820
White perch	88,100	3,524	99,500	4,975	187,600	8,499
Total	130,200	11,029	149,600	13,945	279,800	24,974

Table showing, by counties, the catch by dredges, tongs, rakes, etc., in New Jersey in 1901.

Species.	Atlantic.		Burlington.		Camden.		Cape May.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
<b>Vessel fisheries:</b>								
Clams, hard.....	86,024	\$8,913					8,480	\$893
Mussels.....	17,000	170						
Oysters, market.....	146,286	17,685			578,200	\$73,115	177,611	23,281
Oysters, seed.....	83,349	4,505			332,220	16,631	186,578	10,056
<b>Total.....</b>	<b>332,659</b>	<b>31,273</b>			<b>910,420</b>	<b>89,746</b>	<b>372,669</b>	<b>34,230</b>
<b>Shore fisheries:</b>								
Clams, hard.....	640,336	62,753	124,792	\$16,380			691,904	66,332
Clams, surf.....							13,336	500
Mussels.....	37,000	370	320,000	320			600	60
Oysters, market.....	1,051,673	119,413	146,020	16,691			208,439	28,420
Oysters, seed.....	269,160	11,354	22,760	885	33,600	1,555	310,709	13,680
<b>Total.....</b>	<b>1,998,159</b>	<b>193,890</b>	<b>613,562</b>	<b>84,266</b>	<b>33,600</b>	<b>1,555</b>	<b>1,224,988</b>	<b>108,992</b>
<b>Grand total.....</b>	<b>2,330,818</b>	<b>225,163</b>	<b>613,562</b>	<b>34,266</b>	<b>944,020</b>	<b>91,301</b>	<b>1,697,657</b>	<b>143,222</b>

  

Species.	Cumberland.		Hudson.		Middlesex.		Monmouth.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
<b>Vessel fisheries:</b>								
Clams, hard.....			10,400	\$1,625	24,598	\$4,213	756,624	\$117,980
Crabs, hard.....			6,000	180			426,770	12,805
Oysters, market.....	7,320,943	\$938,709					361,700	38,780
Oysters, seed.....	5,282,630	295,431					179,956	10,812
Scallops.....					42,000	350	42,000	350
<b>Total.....</b>	<b>12,603,633</b>	<b>1,255,134</b>	<b>16,400</b>	<b>1,805</b>	<b>66,598</b>	<b>4,563</b>	<b>1,707,050</b>	<b>180,227</b>
<b>Shore fisheries:</b>								
Clams, hard.....					19,200	2,880	1,264,328	199,969
Clams, soft.....			3,500	263			788,130	48,659
Oysters, market.....	99,743	13,924			340,900	48,700	1,039,101	139,180
Oysters, seed.....	2,110,059	92,936	422,100	21,105	455,000	26,000	9,450	540
Oyster shells.....							144,000	32
Scallops.....							80,000	2,500
<b>Total.....</b>	<b>2,209,802</b>	<b>105,960</b>	<b>425,600</b>	<b>21,368</b>	<b>815,100</b>	<b>77,580</b>	<b>3,275,009</b>	<b>390,880</b>
<b>Grand total.....</b>	<b>14,813,435</b>	<b>1,361,094</b>	<b>442,000</b>	<b>23,173</b>	<b>881,698</b>	<b>82,143</b>	<b>4,982,059</b>	<b>571,107</b>

  

Species.	Ocean.		Salem.		Union.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
<b>Vessel fisheries:</b>								
Clams, hard.....	9,792	\$1,267					895,918	\$134,891
Crabs, hard.....							432,770	12,985
Mussels.....							17,000	170
Oysters, market.....	5,600	601					8,530,340	1,112,165
Oysters, seed.....	11,690	557					6,076,483	338,192
Scallops.....							84,000	700
<b>Total.....</b>	<b>27,082</b>	<b>2,425</b>					<b>16,036,511</b>	<b>1,599,403</b>
<b>Shore fisheries:</b>								
Clams, hard.....	609,592	69,748					3,350,152	418,062
Clams, soft.....	111,140	6,996					902,770	54,918
Clams, surf.....							13,336	500
Mussels.....							357,600	750
Oysters, market.....	3,230,129	219,184					6,116,005	584,602
Oysters, seed.....	270,571	12,541	7,700	\$330	630,000	\$31,500	4,541,089	212,426
Oyster shells.....							144,000	32
Scallops.....							30,000	2,500
<b>Total.....</b>	<b>4,221,432</b>	<b>307,469</b>	<b>7,700</b>	<b>330</b>	<b>630,000</b>	<b>31,500</b>	<b>15,454,952</b>	<b>1,273,790</b>
<b>Grand total.....</b>	<b>4,248,514</b>	<b>309,894</b>	<b>7,700</b>	<b>330</b>	<b>630,000</b>	<b>31,500</b>	<b>31,491,463</b>	<b>2,873,193</b>

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Table showing the catch of eels and lobsters, by pots, in New Jersey in 1901.

Counties.	Vessel fisheries.		Shore fisheries.				Total.	
	Eels.		Eels.		Lobsters.			
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Bergen.....			37,500	\$1,898			37,500	\$1,898
Burlington.....			1,150	58			1,150	58
Cape May.....	7,100	\$355	3,700	185			10,800	540
Hudson.....			17,100	1,205	22,000	\$2,220	39,100	3,425
Middlesex.....			14,600	841			14,600	841
Monmouth.....	3,600	180	156,884	8,230	40,043	5,574	200,527	13,984
Ocean.....	45,300	2,265	545,300	27,181	3,900	546	591,500	29,992
Total.....	56,000	2,800	776,234	39,598	65,943	8,310	898,177	50,738

Table showing the catch by minor apparatus in New Jersey in 1901.

Species.	Atlantic.		Cape May.		Cumberland.		Hudson.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Shore fisheries:								
Eels.....	61,000	\$3,050	59,200	\$2,960				
Crabs, hard.....	3,767	283	1,600	80			2,000	\$250
Crabs, soft.....	2,400	180	6,400	1,200			1,000	333
King crabs.....					51,000	\$128		
Terrapin.....			7,832	2,935				
Turtle.....					1,800	162		
Total.....	67,167	3,813	75,032	7,175	52,800	290	3,000	583

  

Species.	Monmouth.		Ocean.		Salem.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Shore fisheries:								
Cut-fish.....					2,910	\$154	2,910	\$154
Eels.....	126,950	\$6,347	8,100	\$405			255,250	12,762
German carp.....					16,269	976	16,269	976
Tomcod.....	33,200	996					33,200	996
Crabs, hard.....	116,962	4,004	2,672	167			126,991	4,784
Crabs, soft.....	173,578	22,917	8,100	1,357			191,478	26,287
King crabs.....							51,000	128
Shrimp.....	210	140	390	195			600	335
Terrapin.....							7,832	2,935
Turtle.....			8,000	640	1,275	89	11,075	891
Total.....	450,890	34,404	27,262	2,764	20,454	1,219	696,605	50,248

THE MENHADEN INDUSTRY.

While the greater portion of the catch of menhaden is sold to the factories to be turned into oil and fertilizer, large quantities are also utilized by the line fishermen as bait. In 1901 one steamer, two gasoline vessels, and one sailing vessel spent much time during the fishing season in running menhaden from the fishing vessels to Seabright, Monmouth County, for the numerous colony of line fishermen located at that place. These are prepared as "chum" by the fishermen and used for attracting the blue-fish to the vicinity of their boats. At many places the line fishermen have gill nets which they use in catching their own menhaden bait.

In 1901 there were six factories for the preparation of oil and fertilizer in operation, viz: One at Keansburg, two at Belford, and one at Port Monmouth, in Monmouth County; one at Tuckerton,

Ocean County, and one at Leesburg, Cumberland County. Part of the plant of the latter factory is at Bakersville, Atlantic County, but as most of the work is done at Leesburg it is all credited there.

Table showing the extent of the menhaden industry in New Jersey in 1901.

Items.	No.	Value.	Items.	No.	Value.
Factories.....	6	\$124,000	Steam vessels fishing.....	4	\$30,000
Cash capital.....		40,000	Tonnage.....	69	
Wages paid factory employees.....		22,825	Outfit.....		7,685
Persons in factories.....	147		Purse seines.....	4	2,500
Persons on vessels.....	139		Sail vessels fishing.....	6	6,800
Menhaden pressed.....	27,090,000	27,090	Tonnage.....	54	
Menhaden caught by vessels.....	38,108,615	51,810	Outfit.....		12,575
Tons of dry scrap prepared.....	1,131	52,046	Purse seines.....	6	2,700
Gallons of oil made.....	109,789	25,440	Sail vessels transporting.....	8	6,100
			Tonnage.....	107	
			Outfit.....		2,805

### FISHERIES OF PENNSYLVANIA.

As Pennsylvania has no frontage on the ocean, its fishery interests are quite limited. With the exception of the small fleet of vessels engaged in line fishing in the ocean during the summer and in working planted oyster beds in Delaware Bay, the fisheries of the State within the scope of this report are confined to the Delaware and Susquehanna rivers. Several of the largest seine fisheries on the New Jersey side of the Delaware River are operated by Pennsylvania, however, while Pennsylvania capital controls a considerable part of the oyster industry of New Jersey and Delaware.

The three tables which follow show in detail the extent of the coast fisheries of Pennsylvania in 1901:

Table of persons employed.

How engaged.	No.
On vessels fishing.....	209
On vessels transporting.....	7
On boats in shore fisheries.....	1,532
Shoresmen.....	736
Total.....	2,484

Table of apparatus and capital.

Items.	No.	Value.	Items.	No.	Value.
Vessels fishing.....	25	\$54,650	Apparatus—shore fisheries:		
Tonnage.....	452		Seines.....	120	\$12,615
Outfit.....		21,740	Gill nets.....	228	13,103
Vessels transporting.....	2	4,500	Stop nets.....	16	905
Tonnage.....	67		Fyke nets.....	1,384	2,239
Outfit.....		2,100	Dip nets.....	252	570
Boats.....	526	30,583	Lines.....	117	269
Shore and accessory property.....		1,168,243	Eel pots.....	117	122
Cash capital.....		793,707	Fish baskets.....	122	1,686
Apparatus—vessel fisheries:			Total.....		2,110,162
Dredges.....	80	2,650			
Lines.....		390			

Table of products.

Species.	Lbs.	Value.	Species.	Lbs.	Value.
Alowives, fresh	801,925	\$2,448	Shad	2,982,868	\$124,328
Alowives, salted	334,000	6,960	Souetague	3,600	115
Black bass	7,556	762	Striped bass	13,092	1,158
Blue-fish	1,345	67	Sturgeon	530	43
Cat-fish	193,199	10,163	Suckers	29,355	3,313
Croakers	6,231	141	Sun-fish	3,970	317
Eels	140,504	6,151	Wall-eyed pike	14,675	2,321
Flounders	22,411	709	Frogs	800	240
German carp	161,895	9,795	Oysters, market	<sup>a</sup> 282,352	35,517
Perch, white	3,465	206	Oysters, seed	<sup>b</sup> 302,638	14,232
Perch, yellow	1,225	62	Turtles	10,500	870
Salmon	1,397	202	Total	6,029,538	251,491
Scup	22,593	685			
Sea bass	687,412	32,791			

<sup>a</sup> 40,336 bushels.

<sup>b</sup> 43,234 bushels.

THE FISHERIES BY COUNTIES.

Eight counties in the eastern part of Pennsylvania engage in the fisheries—Bucks, Delaware, Monroe, Northampton, Philadelphia, and Pike counties on the Delaware River, and Lancaster and York counties on the Susquehanna River. Nearly half of the total number of persons employed, over two-thirds of the total investment, and almost one-half of the catch are credited to Philadelphia County. This is largely owing to the wholesale trade of the city of Philadelphia and the vessel fishery for oysters from that city. The relative importance of the fisheries of each county in 1901 is exhibited in the three following tables:

Table showing the number of persons employed in the fisheries of Pennsylvania in 1901.

Counties.	On vessels fishing.	On vessels transporting.	In shore or boat fisheries.	Shoresmen.	Total.
Bucks			335	25	360
Delaware			160	26	186
Lancaster			437		437
Monroe			16		16
Northampton			59		59
Philadelphia	209	7	257	685	1,168
Pike			39		39
York			229		229
Total	209	7	1,532	736	2,484

Table showing, by counties, the vessels, boats, apparatus, and shore property employed in the fisheries of Pennsylvania in 1901.

Items.	Bucks.		Delaware.		Lancaster.		Monroe.		Northampton.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Boats	135	\$5,291	72	\$9,752	114	\$2,385	5	\$65	14	\$210
Apparatus—shore fisheries:										
Sieves	40	6,030	6	430	36	3,060	4	131	11	480
Gill nets	42	2,650	66	5,038	14	425				
Stop nets			6	430						
F-ke nets	45	45	100	98	215	296				
Dip nets			2	6	157	344				
Lines		10		15		124				4
Eel pots	55	42	62	80	80	1,128				
Fish baskets										
Shore and accessory property		59,945		10,069		2,380		413		297
Cash capital				12,099						
Total		74,013		38,917		10,142		609		991

Table showing, by counties, the vessels, boats, apparatus, and shore property employed in the fisheries of Pennsylvania in 1901—Continued.

Items.	Philadelphia.		Pike.		York.		Total.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels fishing .....	25	\$54,650					25	\$54,650
Tonnage .....	462						462	
Outfit .....		21,740						21,740
Vessels transporting .....	2	4,500					2	4,500
Tonnage .....	67						67	
Outfit .....		2,100						2,100
Boats .....	139	11,880	7	\$110	40	\$890	626	30,583
Apparatus—vessel fisheries:								
Dredges .....	80	2,650					80	2,650
Lines .....		390						390
Apparatus—shore fisheries:								
Seines .....	10	1,365	6	169	7	950	a 120	12,615
Gill nets .....	104	4,030			2	150	b 228	13,193
Stop nets .....	10	475					c 16	905
Fyke nets .....	924	1,675			100	125	1,384	2,239
Dip nets .....	13	60			80	160	252	570
Lines .....		40				76		269
Eel pots .....							117	122
Fish baskets .....					42	558	122	1,686
Shore and accessory property .....		1,093,621		1,000		518		1,168,243
Cash capital .....		781,608						793,707
<b>Total .....</b>		<b>1,980,784</b>		<b>1,279</b>		<b>3,427</b>		<b>2,110,162</b>

a 20,179 yards.

b 88,440 yards.

c 5,110 yards.

Table showing, by counties and species, the yield of the fisheries of Pennsylvania in 1901.

Species.	Bucks.		Delaware.		Lancaster.		Philadelphia.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives, fresh .....	669,800	\$1,696	102,500	\$107			29,625	\$345
Alewives, salted .....	334,000	6,960						
Black bass .....	166	21			6,000	\$600		
Blue-fish .....							1,845	67
Cat-fish .....	7,195	360	7,750	427	60,950	3,502	93,054	4,654
Croakers .....							6,231	141
Eels .....	3,560	323	13,000	620	53,875	2,290	23,999	1,201
Flounders .....							22,411	709
German carp .....	23,885	1,551	67,025	4,205	11,150	556	64,380	3,211
Perch, white .....			3,100	188			365	18
Perch, yellow .....			1,150	59			75	3
Salmon .....	1,380	185					17	17
Scup .....								
Sea bass .....							22,593	585
Shad .....	1,033,089	43,241	933,800	29,264	319,376	18,683	687,412	32,791
Squeteague .....							567,545	25,504
Striped bass .....	6,040	418	3,040	253	1,725	173	3,600	115
Sturgeon .....			530	43			1,792	169
Suckers .....	12,050	569	2,625	92	3,200	156	6,955	295
Sun-fish .....	70	5			2,100	168		
Wall-eyed pike .....					8,850	1,442		
Frogs .....					100	30		
Oysters, market .....							282,352	35,517
Oysters, seed .....							302,638	14,232
Turtles .....	1,500	150	9,000	720				
<b>Total .....</b>	<b>2,091,725</b>	<b>55,479</b>	<b>1,143,520</b>	<b>36,178</b>	<b>467,326</b>	<b>27,450</b>	<b>2,106,359</b>	<b>119,563</b>

Species.	Monroe.		Northampton.		Pike.		York.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Black bass .....							1,400	\$141
Cat-fish .....			350	\$25			23,900	1,195
Eels .....			70	7			46,000	1,810
German carp .....			1,135	60			4,350	212
Shad .....	3,995	\$357	17,800	1,275	17,300	\$1,275	89,963	4,879
Striped bass .....							1,495	150
Suckers .....			1,900	122			2,625	79
Sun-fish .....							1,800	144
Wall-eyed pike .....							5,825	879
Frogs .....							700	210
<b>Total .....</b>	<b>3,995</b>	<b>357</b>	<b>21,255</b>	<b>1,489</b>	<b>17,300</b>	<b>1,275</b>	<b>178,058</b>	<b>9,699</b>

## THE CATCH OF SHAD.

The following supplementary table shows the number of shad caught, and the value, in each county of Pennsylvania on the Delaware and Susquehanna rivers in 1901:

Counties.	No.	Value.
Bucks.....	230,187	\$43,241
Delaware.....	217,000	29,264
Lancaster.....	79,679	18,533
Monroe.....	1,330	357
Northampton.....	5,100	1,275
Philadelphia.....	145,831	25,504
Pike.....	4,700	1,275
York.....	20,204	4,879
Total.....	703,031	124,328

## THE FISHERIES BY APPARATUS.

Vessel fishing is carried on in Philadelphia County only, lines and oyster dredges being the apparatus of capture. The line fishery is prosecuted in the summer months, after the oyster season has closed, by a few of the oyster vessels. Pennsylvania has no waters suitable for the cultivation of oysters and is compelled to carry on the industry in other States, principally in Delaware, where Pennsylvanians have bought or leased large tracts of suitable ground.

Some of the oldest seine fisheries in the United States are to be found on the Delaware River. A few of the fishing shores at present in use were cleared and operated by the Indians long before the white man settled in the country. The seine fisheries are operated primarily for shad and alewives, though various other species are obtained in smaller quantities. Gill nets are also used extensively, and in 1901 the catch, consisting principally of shad, was greater in value than that taken in seines.

The following tables show the quantity and value of products in the vessel and shore fisheries by each form of apparatus:

*Table showing the yield of the vessel fisheries of Pennsylvania in 1901.*

Species and apparatus.	Philadelphia County.	
	Lbs.	Value.
<b>Lines:</b>		
Blue-fish.....	1,345	\$67
Croakers.....	6,231	141
Flounders.....	22,411	709
Scup.....	22,593	685
Sea bass.....	687,412	32,791
Squeteague.....	3,600	115
Total.....	743,592	34,408
<b>Dredges:</b>		
Oysters, market.....	282,352	35,517
Oysters, seed.....	302,638	14,232
Total.....	584,990	49,749
Grand total.....	1,328,582	84,157

Table showing, by counties, the yield of the seine fisheries of Pennsylvania in 1901.

Species.	Bucks.		Delaware.		Lancaster.		Monroe.		Northampton.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives, fresh	669,800	\$1,696	80,000	\$270						
Alewives, salted	334,000	6,960								
Cat-fish	4,075	204	1,600	64					100	\$5
Eels			2,600	104					50	4
German carp	14,385	806	40,250	2,605	650	\$31			1,135	60
Perch, white			3,000	180						
Perch, yellow			1,000	50						
Salmon	1,380	185								
Shad	595,389	25,766	1,600	48	245,200	13,906	3,995	\$357	17,800	1,275
Striped bass	5,040	418	200	16						
Suckers	12,050	669							1,900	122
<b>Total</b>	<b>1,636,119</b>	<b>36,604</b>	<b>130,250</b>	<b>3,337</b>	<b>245,850</b>	<b>13,937</b>	<b>3,995</b>	<b>357</b>	<b>20,985</b>	<b>1,466</b>

  

Species.	Philadelphia.		Pike.		York.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives, fresh	7,500	\$100					757,300	\$2,066
Alewives, salted							334,000	6,960
Cat-fish	11,370	569					17,145	842
Eels	434	22					3,084	130
German carp	24,550	1,473			4,350	\$212	85,320	5,187
Perch, white	265	13					3,265	193
Perch, yellow	50	2					1,050	52
Salmon							1,390	185
Shad	19,697	838	17,300	\$1,275	71,763	3,894	972,744	47,359
Striped bass	1,792	159					7,032	593
Suckers	5,480	231					19,430	922
<b>Total</b>	<b>71,138</b>	<b>3,407</b>	<b>17,300</b>	<b>1,275</b>	<b>76,113</b>	<b>4,106</b>	<b>2,201,760</b>	<b>64,489</b>

Table showing, by counties, the yield of the gill-net fisheries of Pennsylvania in 1901.

Species.	Bucks.		Delaware.		Lancaster.		Philadelphia.		York.		Total.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.
Alewives			22,500	\$137			18,600	\$198			41,100	\$335
German carp	9,500	\$745	2,800	244							12,300	989
Salmon							17	17			17	17
Shad	437,700	17,475	932,200	29,216	55,896	\$3,494	547,248	24,636	10,200	\$510	1,983,244	75,331
Striped bass			2,840	237							2,840	237
Sturgeon			530	43							530	43
<b>Total</b>	<b>447,200</b>	<b>18,220</b>	<b>960,870</b>	<b>29,877</b>	<b>55,896</b>	<b>3,494</b>	<b>565,865</b>	<b>24,851</b>	<b>10,200</b>	<b>510</b>	<b>2,040,031</b>	<b>76,952</b>

Table showing, by counties, the yield of the stop-net fisheries of Pennsylvania in 1901.

Species.	Delaware.		Philadelphia.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives			3,525	\$47	3,525	\$47
Cat-fish			1,050	\$118	6,290	265
Eels					100	5
German carp			21,400	1,219	23,400	1,404
Perch, white					100	5
Perch, yellow					25	1
Shad					600	30
Suckers					975	39
<b>Total</b>			<b>22,450</b>	<b>1,337</b>	<b>34,015</b>	<b>1,796</b>



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Table showing, by counties, the yield of the fyke-net fisheries of Pennsylvania in 1901.

Species.	Bucks.		Delaware.		Lancaster.		Philadelphia		York.		Total.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.
Black bass .....					1,500	\$150					1,500	\$150
Cat-fish .....	1,700	\$85	4,050	\$187	46,250	2,725	67,144	\$3,357	20,000	\$1,000	139,144	7,354
Eels .....	400	36	1,900	76			13,865	694			16,165	806
Striped bass .....					825	83					825	83
Suckers .....					3,000	150	200	10			3,200	160
Sun-fish .....					1,800	144					1,800	144
Wall-eyed pike .....					6,600	1,032					6,600	1,032
<b>Total .....</b>	<b>2,100</b>	<b>121</b>	<b>5,950</b>	<b>263</b>	<b>59,975</b>	<b>4,284</b>	<b>81,209</b>	<b>4,061</b>	<b>20,000</b>	<b>1,000</b>	<b>169,234</b>	<b>9,729</b>

Table showing, by counties, the yield of the dip-net fisheries of Pennsylvania in 1901.

Species.	Delaware.		Lancaster.		Philadelphia.		York.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Cat-fish .....			200	\$12	2,800	\$140			3,000	\$152
Eels .....			2,000	80					2,000	80
German carp .....	2,575	\$137	10,500	525	6,400	334			19,475	996
Shad .....			18,280	1,133			8,000	\$475	26,280	1,608
Suckers .....	2,625	92							2,625	92
<b>Total .....</b>	<b>5,200</b>	<b>229</b>	<b>30,980</b>	<b>1,750</b>	<b>9,200</b>	<b>474</b>	<b>8,000</b>	<b>475</b>	<b>53,380</b>	<b>2,928</b>

Table showing, by counties, the yield of the line fisheries of Pennsylvania in 1901.

Species.	Bucks.		Delaware.		Lancaster.		Northampton.		Philadelphia.		York.		Total.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.
Black bass .....	156	\$21			2,500	\$250					1,400	\$141	4,056	\$412
Cat-fish .....	1,420	71	500	\$30	600	25	250	\$20	6,460	\$323	2,900	145	12,020	614
Eels .....	1,160	102	2,000	80	3,500	185	20	3	9,600	480	2,400	96	18,680	946
Perch, white .....			100	8									100	8
Perch, yellow .....			150	9									150	9
Striped bass .....					900	90					1,495	150	2,395	240
Suckers .....					200	6			300	15	2,625	79	3,125	100
Sun-fish .....	70	5			300	24					1,800	144	2,170	173
Wall-eyed pike .....					2,000	360					5,825	879	7,825	1,239
Frogs .....					100	30					700	210	800	240
Turtles .....	1,500	160	9,000	720									10,500	870
<b>Total .....</b>	<b>4,306</b>	<b>349</b>	<b>11,750</b>	<b>847</b>	<b>10,000</b>	<b>970</b>	<b>270</b>	<b>23</b>	<b>16,350</b>	<b>818</b>	<b>19,145</b>	<b>1,844</b>	<b>61,821</b>	<b>4,851</b>

Table showing the yield of the fish-basket and pot fisheries of Pennsylvania in 1901.

Species.	Fish baskets.						Pots.					
	Lancaster.		York.		Total.		Bucks.		Delaware.		Total.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.
Black bass .....	2,000	\$200			2,000	\$200						
Cat-fish .....	14,000	740	1,000	\$50	15,000	790			650	\$28	550	\$28
Eels .....	48,375	2,025	43,600	1,714	91,975	3,739	2,000	\$185	6,500	260	8,500	445
Wall-eyed pike .....		250				250						
<b>Total .....</b>	<b>64,625</b>	<b>3,015</b>	<b>44,600</b>	<b>1,764</b>	<b>109,225</b>	<b>4,779</b>	<b>2,000</b>	<b>185</b>	<b>7,050</b>	<b>288</b>	<b>9,050</b>	<b>473</b>

## THE WHOLESALE FISHERY TRADE OF PHILADELPHIA AND CHESTER.

There is a large wholesale trade in fresh, salted, and smoked fish, oysters, sponges, and other fishery products in Philadelphia, while a much smaller business is carried on in Chester. The following table shows the persons employed, wages paid, and capital invested in both cities:

*Persons and capital in the wholesale fishery trade of Philadelphia and Chester in 1901.*

Items	Philadelphia.		Chester.		Total.	
	No.	Value.	No.	Value.	No.	Value.
Establishments .....	95	\$526,306	6	\$7,584	101	\$533,890
Cash capital .....		673,308		12,099		685,407
Wages paid .....		262,842		4,569		267,411
Persons engaged .....	535		26		561	

## THE SMOKING OF FISH IN PHILADELPHIA.

The smoking of fish is quite an important industry in Philadelphia, and a few of the establishments located there compare very favorably with the best in the country.

The following table shows the extent of this industry:

Items.	No.	Value.
Establishments .....	18	\$148,530
Cash capital .....		56,400
Wages paid .....		49,176
Persons engaged .....	150	

  

Products sold.	Lbs.	Value.
Eels .....	17,950	\$2,693
Haddock .....	114,300	13,716
Herring .....	2,132,043	129,853
Lake herring (cisco) .....	302,050	36,246
Mackerel .....	500	45
Salmon .....	200,200	40,040
Shad .....	77,500	9,360
Sturgeon .....	68,750	24,063
Total products .....	2,913,093	256,016

## FISHERIES OF DELAWARE.

Compared with 1897 the fisheries of Delaware in 1901 show a decrease in the number of persons employed and in the value of the product, the number of persons decreasing from 2,392 in 1897 to 1,998 in 1901, and the value of the product from \$252,123 to \$203,372 in the same period. The returns for 1897 differed little from those of 1892 and the three years immediately preceding.

More than half of the decrease occurred in the sturgeon fishery, the output of which in 1897 was valued at \$34,750, and in 1901 at \$10,444. This decrease occurred notwithstanding the fact that caviar and dressed sturgeon were much higher in price in the latter year, the caviar increasing from 37 to 65 cents per pound, and the dressed sturgeon from less than 5½ cents in 1897 to 8¼ cents per pound in 1901. In 1901 this fishery gave employment to 122 men, using 57 boats, worth \$5,690, and 37,680 yards of drift gill nets, worth \$5,190; the catch was 553 sturgeon, weighing 86,199 pounds, which yielded 10,307 pounds of caviar, worth \$6,766, and 44,499 pounds of dressed sturgeon, worth \$3,678. The sturgeon product of the State is now less than 7 per cent in quantity and 35 per cent in value of what it was ten years ago, notwithstanding an increase in the number of boats employed. At Delaware City, one of the principal centers of this fishery, there were 422 kegs of caviar produced in 1895, 244 in 1896, 106 in 1897, 54 in 1898, 35 in 1899, 20 in 1900, and only 6 in 1901.

The yield of shad also shows a large decrease in number, but from the point of view of the fisherman this is more than offset by an increase in the value, the fish averaging \$11.09 per hundred in 1897 and \$15.61 in 1901. More than 90 per cent of the shad in this State are taken by means of drift nets, which are operated principally in Delaware River, especially at Newcastle, Delaware City, and Port Penn, and to a small extent in the headwaters of Nanticoke River. In 1891 this fishery employed 397 men, using 201 boats worth \$8,826, and 236 nets worth \$16,833, and the catch of shad numbered 394,952. In 1901 the fishermen numbered 443, using 244 boats worth \$13,726, and 285 nets worth \$13,842, and the catch amounted to 329,750 in number. This represented an average for each man of 995 shad in 1891 and only 744 in 1901.

The oyster business, the most important fishery industry of the State, has changed little during the last ten years. As in other Middle Atlantic States, there is a steady decrease in the resources of the public reefs of Delaware, with a corresponding increase in private oyster culture. At the present time most of the market oysters obtained from the public reefs are scarcely more than large enough

for planting purposes; but owing to local conditions and regulations they are sold in the markets of the adjacent towns.

The returns presented in the subjoined tables show only imperfectly the extent of the oyster resources of this State. Most of the oysters credited to Pennsylvania and a small percentage of those credited to New Jersey were taken from within the limits of the State of Delaware; but they have been credited to Pennsylvania and New Jersey, respectively, owing to the fact that they were taken by vessels owned in those States. During the year covered by the returns 15 non-resident vessels engaged in dredging oysters on the natural reefs, and 34 in cultivating oysters on the private areas in this State, whereas only 21 resident vessels engaged in this industry. The oyster fishery is centered at Bowers Beach and Little Creek in Kent County, but many oysters are tonged near the mouths of creeks in that county and also in Sussex County. At Seaford, Sussex County, about 125 persons are employed in the wholesale oyster trade, receiving supplies from Chesapeake Bay in Maryland.

The yield of alewives, perch, squeteague, and striped bass shows a decrease of about 50 per cent compared with 1897, while that of German carp, cat-fish, and eels shows an increase. These species are taken mostly by seines, gill nets, and fyke nets, and many eels are taken in pots. The fisheries are not centered in particular localities, but are well distributed throughout the State, except the squeteague, which is taken mostly below the mouth of Delaware River. The increase in the yield of German carp is especially noteworthy. Ten years ago very few were caught, but in 1897 111,300 pounds were reported, and in 1901 the catch amounted to 198,040 pounds.

While the lobster fishery of Delaware is of little economic importance, it is interesting on account of its representing the southernmost limit of that fishery on the Atlantic coast. It is prosecuted at Lewes, in Sussex County, and the lobsters are taken in pots set in the vicinity of Delaware breakwater. In common with that on other parts of the coast, the yield of lobsters in Delaware shows a gradual decrease. In 1891 the catch was 8,200 pounds, in 1897 it was 5,095 pounds, and in 1901 it was further reduced to 2,760 pounds.

The factory at Lewes, Del., receives large quantities of menhaden for conversion into oil and fertilizer. These fish, however, are credited as part of the product of the fisheries of New York, owing to the fact that the vessels taking them are owned in that State. In 1901 46,260 tons of menhaden were converted into \$325,982 worth of oil and fertilizer. With the exception of Virginia this was a greater quantity of menhaden than was utilized in any other State, and represented one-sixth of the total product of menhaden in the United States.

The extent of the fisheries of Delaware in 1901 is shown in the following tables.

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Table showing, by counties, the vessels, boats, apparatus, and shore property employed in the fisheries of Delaware in 1901.

Items.	Kent.		Newcastle.		Sussex.		Total.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels fishing.....	20	\$15,550			1	\$350	21	\$15,900
Tonnage.....	147				5		152	
Outfit.....		1,691				51		1,742
Vessels transporting.....	2	2,200	1	\$750	3	1,350	6	4,300
Tonnage.....	20		21		44		85	
Outfit.....		105		80		320		505
Boats.....	318	9,813	201	14,632	391	6,556	910	29,901
Apparatus—vessel fisheries:								
Dredges.....	55	1,360			2	60	57	1,420
Apparatus—shore fisheries:								
Pound nets.....	3	600	4	160			7	760
Seines (total length 28,795 yards)...	44	3,226	24	1,407	124	4,458	192	9,091
Drift nets—								
Shad (total length, 138,055 yards)...	62	1,862	115	10,822	108	1,158	285	13,842
Sturgeon (total length, 37,680 yards)	23	2,200	23	1,360	29	1,630	75	5,190
Miscellaneous (total length, 17,880 yards)	11	1,365	4	240	1	15	16	1,620
Stake gill nets (total length, 15,890 yards).....	79	611			236	1,080	315	1,691
Fyke nets.....	108	132	275	392	165	375	648	899
Eel pots.....	40	14	90	60	1,130	332	1,260	406
Eel spears.....					26	12	26	12
Lobster pots.....					60	60	60	60
Line.....		5		30		21		36
Bow nets.....	5	24			4		9	24
Dredges.....	4	75					4	75
Tongs.....	118	703			38	180	156	883
Rakes.....	2	4			24	48	26	52
Other apparatus.....		45				29		74
Shore and accessory property.....		12,100		21,500		318,486		352,086
Cash capital.....		1,600		4,400		211,000		216,600
Total.....		65,285		55,333		546,579		657,197

Table showing, by counties and species, the yield of the fisheries of Delaware in 1901.

Species.	Kent.		Newcastle.		Sussex.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives.....	8,200	\$143	289,070	\$1,173	300,104	\$3,500	597,374	\$4,816
Blue-fish.....					400	20	400	20
Carp, German.....	43,700	2,485	154,340	7,267			198,040	9,752
Cat-fish.....	27,200	1,365	88,000	3,126	15,080	584	130,280	5,075
Cod.....					1,250	50	1,250	50
Croakers.....	12,800	175			15,930	490	28,730	665
Drum.....	3,200	56					3,200	56
Eels.....	7,850	401	95,500	3,570	127,300	5,156	230,650	9,127
Flounders.....					5,500	226	5,500	226
Mullet.....					5,350	180	5,350	180
Perch.....	64,430	4,247	7,600	276	170,330	6,884	242,360	11,367
Pike.....	2,460	130			13,850	524	16,310	654
Sea bass.....					500	25	500	25
Shad.....	145,920	6,299	1,012,332	40,100	209,700	10,206	1,367,952	56,605
Squeteague.....	871,995	5,787	500	10	349,940	8,118	722,435	13,915
Striped bass.....	17,295	2,086	3,450	347	26,850	2,681	47,595	5,114
Sturgeon.....	24,484	1,185	42,608	2,027	8,800	466	75,892	3,678
Cavlar.....	4,797	3,183	3,350	2,121	2,160	1,462	10,307	6,766
Suckers.....	2,500	101					2,500	101
Sun-fish.....					200	2	200	2
Tautog.....					3,600	180	3,600	180
Crabs, soft.....					150,509	5,587	150,509	5,587
King crabs.....	720,400	2,380					720,400	2,380
Lobsters.....					2,760	294	2,760	294
Oysters—								
Market, public reefs.....	344,939	18,989			232,785	9,710	577,724	28,699
Market, private areas.....	94,976	10,966			5,600	625	100,576	11,591
Seed, public reefs.....	529,480	22,108			4,550	210	534,030	22,318
Clams.....	640	90			7,560	1,113	8,200	1,203
Turtles.....	7,150	378	32,400	1,500	10,500	567	50,050	2,445
Terrapin.....	30	15	30	22	452	454	512	491
Total.....	2,434,446	82,569	1,729,180	61,539	1,671,560	59,264	5,835,186	203,372

a 451,527 in number.  
b 82,532 bushels.

c 14,368 bushels.  
d 76,290 bushels.

e 1,025 bushels.

Table showing, by counties, the number of persons employed in the fisheries of Delaware in 1901.

Items.	Kent.	Newcastle.	Sussex.	Total.
On vessels fishing.....	72	.....	2	74
On vessels transporting.....	3	2	8	13
On boats in shore fisheries.....	458	352	668	1,478
Shoresmen.....	16	40	377	433
Total.....	649	394	1,055	1,998

Table showing, by counties, the yield of the vessel fisheries of Delaware in 1901.

Apparatus and species.	Kent.		Sussex.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Dredges:						
Oysters, market, from private areas....	86,275	\$9,980	5,600	\$625	91,875	\$10,605
Oysters, seed, from public reefs.....	240,450	11,323	4,550	210	245,000	11,533
Total.....	326,725	21,303	10,150	835	336,875	22,138

Table showing, by counties and apparatus of capture, the yield of the shore fisheries of Delaware in 1901.

Apparatus and species.	Kent.		Newcastle.		Sussex.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
<b>Gill nets:</b>								
Alewives.....			44,670	\$396	16,820	\$181	61,490	\$577
Cat-fish.....	14,400	\$720			1,200	53	15,600	773
Croakers.....	700	28			500	9	1,200	37
Drum.....	1,200	20					1,200	20
Flounders.....					4,150	168	4,150	166
Perch, white.....	41,780	3,012			39,950	1,678	81,730	4,690
Pike.....	2,300	122			4,000	160	6,800	282
Shad.....	127,080	5,356	1,010,012	40,003	99,471	4,982	1,236,563	50,341
Squeteague.....	800	15			28,500	340	29,800	356
Striped bass.....	8,720	1,196			7,350	713	16,070	1,909
Sturgeon.....	24,484	1,185	42,608	2,027	8,800	466	75,892	3,678
Caviar.....	4,797	3,183	3,350	2,121	2,100	1,462	10,307	6,766
Suckers.....	2,500	101					2,500	101
<b>Total.....</b>	<b>228,761</b>	<b>14,939</b>	<b>1,100,640</b>	<b>44,547</b>	<b>212,901</b>	<b>10,210</b>	<b>1,542,302</b>	<b>69,696</b>
<b>Pound nets:</b>								
Carp, German.....	30,000	1,800	1,000	50			31,000	1,850
Cat-fish.....			2,400	120			2,400	120
Perch, white.....			200	12			200	12
Squeteague.....			500	10			500	10
Striped bass.....			1,100	110			1,100	110
Terrapin.....			30	22			30	22
<b>Total.....</b>	<b>30,000</b>	<b>1,800</b>	<b>5,230</b>	<b>324</b>			<b>35,230</b>	<b>2,124</b>
<b>Seines:</b>								
Alewives.....	8,200	143	244,400	777	269,284	3,159	521,884	4,079
Carp, German.....	11,200	560	126,840	5,892			138,040	6,452
Cat-fish.....	500	20	49,800	1,660	73,880	531	64,180	2,211
Croakers.....	12,100	147			12,230	339	24,330	486
Drum.....	2,000	36					2,000	36
Eels.....			500	20	6,800	272	6,800	292
Flounders.....					1,350	60	1,350	60
Mullet.....					5,350	180	5,350	180
Perch, white.....	21,650	1,185	6,600	240	112,860	4,442	141,110	5,867
Pike.....					8,350	289	8,350	289
Shad.....	15,960	799	2,320	97	109,029	5,164	127,309	6,060
Squeteague.....	320,895	4,511			296,740	6,910	617,635	11,451
Striped bass.....	8,575	890	2,350	237	19,500	1,968	30,425	3,095
Sun-fish.....					200	2	200	2
Terrapin.....	30	15			210	108	240	123
Turtles.....			1,000	50			1,000	50
<b>Total.....</b>	<b>401,110</b>	<b>8,336</b>	<b>433,810</b>	<b>8,973</b>	<b>855,283</b>	<b>23,424</b>	<b>1,690,203</b>	<b>40,733</b>

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Table showing, by counties and apparatus of capture, the yield of the shore fisheries of Delaware in 1901—Continued.

Apparatus and species.	Kent.		Newcastle.		Sussex.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
<b>Fyke nets:</b>								
Alewives.....			26,600	\$1,325	14,000	\$160	14,000	\$160
Carp, German.....			35,800	1,346			46,700	1,901
Cat-fish.....	10,900	\$555	66,500	2,630	600	24	71,100	2,824
Eels.....	4,000	170	800	24	17,520	714	18,720	758
Perch.....	400	20					160	8
Pike.....	160	8			9,550	520	10,700	898
Turtles.....	7,150	378						
<b>Total.....</b>	<b>22,610</b>	<b>1,131</b>	<b>129,600</b>	<b>5,325</b>	<b>41,670</b>	<b>1,418</b>	<b>193,880</b>	<b>7,874</b>
<b>Lines:</b>								
Blue-fish.....					400	20	400	20
Cod.....					1,250	50	1,250	50
Croakers.....					3,200	142	3,200	142
Pike.....					1,500	75	1,500	75
Sea bass.....					500	25	500	25
Squeteague.....	50,300	1,230			24,700	868	75,000	2,098
Tautog.....					3,600	180	3,600	180
Turtles.....			31,400	1,450	960	47	32,360	1,497
<b>Total.....</b>	<b>50,300</b>	<b>1,230</b>	<b>31,400</b>	<b>1,450</b>	<b>36,100</b>	<b>1,407</b>	<b>117,800</b>	<b>4,087</b>
<b>Pots:</b>								
Eels.....	3,850	231	28,500	920	97,900	3,930	130,250	5,081
Lobsters.....					2,760	294	2,760	294
<b>Total.....</b>	<b>3,850</b>	<b>231</b>	<b>28,500</b>	<b>920</b>	<b>100,660</b>	<b>4,224</b>	<b>133,010</b>	<b>5,375</b>
<b>Spears:</b>								
Eels.....					22,600	930	22,600	930
<b>Minor nets:</b>								
Carp, German.....	2,500	125					2,500	125
Cat-fish.....	1,400	70					1,400	70
Perch.....	600	30					600	30
Shad.....	2,880	144			1,200	60	4,080	204
Crabs, soft.....					150,509	5,587	150,509	5,587
<b>Total.....</b>	<b>7,380</b>	<b>369</b>			<b>151,709</b>	<b>5,647</b>	<b>159,089</b>	<b>6,016</b>
<b>Dredges, tongs, etc.:</b>								
Oysters, market, from public areas.....	344,939	18,989			232,785	9,710	577,724	28,699
Oysters, market, from private areas.....	8,701	986					8,701	986
Oysters, seed, from public areas.....	289,030	10,785					289,030	10,785
Clams.....	640	90			7,560	1,113	8,200	1,203
<b>Total.....</b>	<b>643,310</b>	<b>30,850</b>			<b>240,345</b>	<b>10,823</b>	<b>883,655</b>	<b>41,673</b>
<b>Other apparatus:</b>								
King crabs.....	720,400	2,380					720,400	2,380
Terrapin.....					242	346	242	346
<b>Total.....</b>	<b>720,400</b>	<b>2,380</b>			<b>242</b>	<b>346</b>	<b>720,642</b>	<b>2,726</b>
<b>Grand total.....</b>	<b>2,107,721</b>	<b>61,266</b>	<b>1,729,180</b>	<b>61,689</b>	<b>1,661,410</b>	<b>58,429</b>	<b>5,498,311</b>	<b>181,234</b>

*The menhaden industry.*

Items.	No.	Value.
Factories.....	1	\$300,000
Cash capital.....		200,000
Persons in factories.....	250	
Menhaden utilized.....	154,200,670	231,301
Tons of dried scrap.....	3,314	69,598
Tons of acidulated scrap.....	11,392	120,273
Gallons of oil made.....	582,584	136,111

## FISHERIES OF MARYLAND.

In 1901 the fishery products of Maryland show a small increase in value over 1897, at which time the State ranked first among the Middle Atlantic States in the value of its fisheries. Notwithstanding this increase, the State is now surpassed in the value of fishery products by New Jersey, Virginia, and New York. The value of Maryland's fishery resources depends largely upon the oyster, the yield being worth more than four times as much as that of all other products combined. The greater part of the capital in this fishery is invested at Baltimore in oyster canneries, shucking houses, and dredging and transporting vessels.

Though the oyster season of 1900-1901, compared with 1897-98, shows a decided decrease in the number of bushels taken, there has been an increase in the value of the catch. The best catches by dredging vessels were from grounds in the upper part of Chesapeake Bay, and being near Baltimore were sold direct to dealers there instead of to transporting vessels.

The diminished supply of oysters on natural beds in some localities has induced many oystermen to engage in planting on private beds. The benefits of oyster-planting are already apparent, and the future promises greater success, provided more ample protective laws are enacted. It is difficult, however, to pass laws that would suit both oystermen and crabbers in Dorchester and Somerset counties, as the crabbers object to crabbing grounds being taken for oyster-planting purposes. Maryland oyster planters have also suffered considerably through a law passed by the State of Virginia prohibiting the shipment of seed oysters from that State, thus cutting off a prolific source of supply. Before this law went into effect Maryland planters could obtain their seed oysters from Virginia at an average cost of 15 cents a bushel, while now the prices range from 20 to 40 cents. The principal sources of supply of seed oysters are the Potomac, Little Choptank, Choptank, and Honga rivers, and Eastern Bay. The most important planting grounds are in Fishing Bay, Pocomoke Sound, Chincoteague Bay, and the Nanticoke and Wicomico rivers. The planters in these waters are assured of a considerable degree of safety, as the crabbing industry is practically of no importance there.

The following extract from an editorial in the *Baltimore Sun* of April 20, 1903, may be of interest as showing the attitude of those who advocate more extensive oyster planting:

*Oyster planting.*—A dispatch to *The Sun* from Prince Frederick says that many tongers in Calvert County have taken up lots for planting oysters. This is gratifying intelligence and indicates that the oystermen are beginning to awaken to the situation. There has been much complaint lately of seed oysters being taken from the State. It is to be hoped that a great number of lots will be staked off before the



supply of seed oysters is exhausted. Then the oyster planters will have to go to the legislature for the enactment of a law which will protect them from marauders who come by night and carry off their property, as well as those who despoil them by legal process. The present law under which these lots are staked off and planted affords no manner of protection to the industrious planter. Planting on natural beds is prohibited, and the common practice is for persons interested to wait until the oysters in a private lot are marketable, and then they go into court and prove that at some time long past the lot staked off was a natural bed. This is easy to do, as in past years nearly the whole bottom of the coves and creeks where oysters will grow had oysters on them. After this proof is submitted the court orders the lot to be vacated, and then outsiders carry off the oysters which have been planted. This has gone on so regularly and persistently that it is surprising to hear that men will take the risks. If all or a large majority of those interested in the oyster industry in a locality become planters, then all will be equally interested in protecting the beds. Then the oystermen will, perhaps, cease their opposition to the enactment of a law which will protect planters in their rights. \* \* \*

While Maryland is neglecting her opportunities and frittering away a vast mine of wealth, other States, by enlightened legislation, are growing rich from oyster bottoms greatly inferior to ours. Not only is a great food supply disappearing, but people are losing a profitable employment and oyster canneries are moving from the State to other States where a supply of oysters can be procured.

As a rule, oysters are marketed as soon as caught, but at Solomons, Calvert County, and vicinity the oystermen bed their catch and let it remain down for a better market. This insures an increased price, the oysters having a chance to fatten. This is especially advantageous during the early part of the season, when the oysters are rather poor and the demand for them light.

With the exception of Baltimore the most important oyster centers in the State are Cambridge and Crisfield, the number of men and boats engaged in the fishery from these towns being very much greater than from Baltimore. Deal Island, Oxford, Tilghman Island, and St. Michael also have large investments in this fishery.

*Clams.*—Clams are of commercial importance in only two counties, Somerset and Worcester. In the former they are taken in Pocomoke Sound by fishermen from Crisfield and vicinity. In 1901, however, a few men from Fairmount fished for clams to a limited extent in Tangier Sound. In Worcester County the entire catch is taken from Chincoteague and Sinepuxent bays.

*Crabs.*—The crab fishery is next in commercial importance to the oyster, though the investment in boats, apparatus, and shore property is small compared with that in the oyster fishery, and practically no revenue is derived from it by the State, as no license of any kind is required, except in Dorchester County, where a fee of \$2.50 is charged for the privilege of scraping. No restrictions as to seasons or size of crabs are imposed. There has been a noticeable increase in this fishery since 1897, and the outlook for the industry appears bright, though the catch in most localities in 1902 was small. The demand for both live crabs and crab meat is constantly growing, and the number of factories engaged in the preparation of crab meat is

increasing. It is not unlikely that in the near future there will be a demand for crabs during the winter as well as in the summer.

Practically the entire catch of soft crabs is taken in scrapes and scoop nets, though a few are caught in small seines of from 40 to 50 yards in length, which are handled by two men. The seines are used interchangeably with scoop nets, the latter being used on low tides and the former on high tides or when the water is too thick to see the crabs.

With the exception of a few hard crabs taken in scrapes with soft crabs and in dredges during the oyster season, the catch is taken on trot lines. These lines vary in length from 200 to 1,000 yards, and are baited principally with beef tripe and cels. As the transportation companies object to handling tripe, it is being superseded by eels.

Though the crab industry is of greatest importance on the eastern shore of the State, quite a number are caught on the western shore, and in 1902 increased catches were taken in Anne Arundel County and in the vicinity of Solomons Island, Calvert County. The preceding cold winter seemingly did not affect the supply in these counties, and with the decreased catch on the eastern shore and advanced prices many residents of the western shore were encouraged to engage in the fishery.

*Shad.*—This is the most important species of fish taken in the waters of the State and, together with alewives, is the incentive for a great many men to engage in fishing. This is especially applicable to the gill-net fishermen, who set their nets as soon as the run of shad begins in the spring and fish until the close of the season, when the nets are laid aside and other occupations are followed until the next spring. Although the investment is small, the shad fishery sometimes proves quite remunerative to a large number of men. With the exception of Betterton and vicinity, where the catch of shad in gill nets was exceptionally heavy, this species shows a falling off of nearly 50 per cent in 1901 compared with 1897. It is probable, however, that the decline is only temporary, and is attributed by many fishermen to the late and cold spring, the low temperature of the water in the rivers tending to prevent the shad entering for the purpose of spawning. While the catch was small, the fishermen were compensated to a large degree by advanced prices. Shad are taken principally in gill nets, pound nets, seines, and bow nets, five-sixths of the total yield of the State being from the gill-net and pound-net fisheries.

*Alewives.*—Alewives are next in importance to shad and are taken during the same season. Practically the entire catch is secured in pound nets and seines, though in some localities many are also caught in gill nets. Like the shad, and for similar reasons, they show a decrease in 1901 as compared with 1897.

*Menhaden.*—The increase in this species over 1897 is due to the fact that during that year the factory at Crisfield purchased its supply

from Virginia vessels, while in 1901 it employed its own steamer and bought only a small proportion from vessels outside of the State.

*Striped bass and white perch.*—Striped bass is one of the best selling species taken in the State. Very little change has taken place in its abundance, though it was a more special object of capture in 1901 than in 1897, an increased number of purse-seiners fishing for this species and incidentally for white perch. There has been a noticeable decline in the catch of white perch since 1897.

*German carp.*—While this species is not of great importance compared with many others, there has been a large increase in the catch, especially in Harford, Kent, Calvert, Cecil, Charles, and Prince George counties. One small pound net set in the Patuxent River, off Calvert County, caught 10,000 pounds of carp during the fall of 1901, which were sold at an average price of 4 cents a pound.

*Gar pike.*—This species is not of great importance in any one locality, but in the aggregate quite a number are caught in pound nets and shad gill nets. They are sold principally to colored people for a few cents a piece and it is not uncommon at some places to see several colored people awaiting the return of fishermen to buy their gar pike.

*Terrapin.*—This fishery has decreased in value within the past ten years from \$22,333 in 1891 to \$1,139 in 1901, and it is now followed in but few localities as a business, most of the catch being taken incidentally by men engaged in other pursuits. If this decline continues it will be only a few years when the terrapin will be practically extinct in the State.

*Other species.*—Other important species are squeteague, cat-fish, butter-fish, sturgeon, and eels, all except squeteague and butter-fish showing a decrease since 1897. The increase in these two species is chiefly due to the extension of the pound-net fisheries in the Atlantic Ocean off Worcester County.

*Apparatus.*—Taking the value of the catch as a basis, the most important kinds of apparatus of capture are tongs and nippers, dredges, pound nets (including trap nets and weirs), seines, crab scrapes, lines, gill nets, scoop nets, and fyke nets, in the order named. The catch by these kinds of apparatus ranged from \$1,873,905 worth taken by tongs and nippers to \$24,211 worth in fyke nets. Minor forms of apparatus were used, but their catches were small.

With the exception of \$14,384 worth of clams and \$99 worth of terrapin, the catch by tongs and nippers consisted of oysters. Two kinds of tongs are used, the ordinary shaft tongs and the patent tongs, the former being in much more general use. The employment of patent tongs is confined almost exclusively to Kent, Calvert, and St. Mary counties, their use being general in the two latter counties near the mouth of the Patuxent River, where they are especially advantageous owing to the depth of water being too great in most places for shaft tongs. The shafts of the latter vary in length in different parts

of the State from 16 to 35 feet, an average being about 18 feet. The use of winding gear for operating patent tongs makes necessary the employment of larger boats than for shaft tonging, these larger boats being generally used later in the season for dredging.

Pound nets are fished principally in the spring for shad and alewives, but very often they are set in rivers in the fall for striped bass.

Two kinds of seines are used, haul and purse seines. The former are used principally for alewives, striped bass, shad, white perch, and other fishes, while menhaden, striped bass, and white perch are the most important species taken by the latter. Haul seines are usually fished in the spring, but often in the fall also. Purse seining for striped bass and white perch is carried on during the summer. Haul seines are in most cases fished in the rivers, an average crew consisting of from four to six men, except on the Potomac and Susquehanna rivers, where longer seines are used. The longest seine used on the Maryland side of the Potomac River in 1901 was 1,600 yards, 22 men being necessary to handle it and look after the catch. The longest seine used in the State was on the Susquehanna River in Cecil County. Its length was 2,200 yards, and there were 65 men in the crew. Purse seines are fished in the open waters of Chesapeake Bay for menhaden, striped bass, and white perch. Almost the entire menhaden catch of the State was taken by the steamer already mentioned as being owned at Crisfield. Purse seining for striped bass and white perch is confined exclusively to fishermen from Kent County, Rock Hall being the center of the fishery. Vessels of about 5 net tons and over are used. The crew usually consists of seven men, and a trip varies in length from one to two weeks, according to the abundance of fish. This fishery, while not new, has been prosecuted more vigorously during recent years than formerly and has proved quite profitable, notwithstanding the large outlay and heavy running expenses. The crew, as a rule, work on shares.

Two kinds of lines are used, the trot line for hard crabs and catfish, and the hand line for sea bass, squeteague, and various other species. The same kind of line is used for crabs as for catfish, except that no hooks are needed for the former. Crabs constitute over 90 per cent of the entire line catch.

The preponderance of shad over other species taken in gill nets is so great that this apparatus may be said to be used primarily for that species. In Kent County, however, large catches of striped bass and white perch are made in sunken gill nets set during the winter and early spring before the run of shad has begun. As soon as that species appears the anchors (usually bags of sand) are removed from the nets and the latter allowed to drift. The drift gill net is the most important style of gill net used, though quite a number of shad are also taken in stake gill nets. Drift gill nets vary in length from 50 yards set in the rivers to 2,200 yards set in Chesapeake Bay. The longest

are used in the bay off Betterton, Kent County. An average of those used at this place is about 1,400 yards. Nets of this length consist of sections of from 200 to 300 yards each, fastened together while fishing. As the nets are set about 3 feet under water it is very seldom necessary to make any provision for the passage of vessels, as most of the latter can go over the nets without injuring them. Occasionally, however, in the case of larger vessels or steamers, it is necessary to separate the net to allow them to pass. Another advantage in setting the nets under water is to prevent them catching logs or driftwood. In fishing one man can handle a net from 50 to 100 yards long, while it takes two men for a net varying in length up to 1,000 yards, or two of the shorter ones. Three men are commonly engaged in handling the longest nets used in the bay. In some localities drift gill nets are fished exclusively in the daytime, while in others they are fished during the day in the early part of the season when the water is muddy, and, later, when the water becomes clear, they are fished at night, the men usually going out about midnight and remaining until noon the next day. The nets are then spread out and dried before using them again.

A comparatively new and profitable style of net, called "buck net," is used in a few localities. These are from 225 to 400 yards in length, from 25 to 40 feet deep, and are fished in the open waters of Chesapeake Bay, the catch consisting principally of blue-fish and occasionally a few Spanish mackerel. The net is hauled around a school of fish, the latter gilling in it. A crew of about five men is required in handling a net of this kind.

Owing to the almost complete disappearance of sturgeon in the rivers of the State, very few sturgeon gill nets are used; but in Worcester County an increase in the catch of this species is shown, due to an extension of the fishery by fishermen from New Jersey.

*Men.*—The total number of persons engaged in the fisheries of Maryland in 1901 was 36,260. Of this number, 16,880 are credited to the shore fishery; 12,553 were engaged in oyster shucking and packing houses, crab houses, and other occupations incidental to the fisheries; 5,715 were engaged on fishing vessels, and 1,112 on transporting vessels. One hundred and ten men were engaged both in the shore and vessel fisheries. There has been a decrease of 6,552 since 1897 in the total number of persons engaged in the State, this being due principally to the decline in the oyster fishery.

*Investment.*—The total investment in the fisheries was \$6,506,066. Of this, \$2,297,515 represents the cash capital employed; \$2,164,749, the amount invested in shore and accessory property; \$1,137,362, the value of 955 fishing and 382 transporting vessels with their outfits; \$553,526, the value of 11,498 boats under 5 tons. The remainder represents the value of the apparatus used.

In the following tables is shown, first, the number of persons engaged in the fisheries; second, the vessels, boats, and apparatus used and the value of the shore and accessory property and cash capital employed; third, the quantity and value of fishery products taken in the State during 1901, the statistics on oysters, however, being for the season of 1900-1901.

*Persons employed.*

How engaged.	No.
On vessels fishing.....	5,715
On vessels transporting.....	1,112
In shore or boat fisheries.....	16,880
Shoresmen.....	12,533
<b>Total.....</b>	<b>36,260</b>

*Table of apparatus and capital.*

Items.	No.	Value.	Items.	No.	Value.
Vessels fishing.....	955	\$312,955	<b>Apparatus—shore fisheries:</b>		
Tonnage.....	10,811		Selnes.....	b 312	\$28,648
Outfit.....		193,089	Gill nets.....	c 3,653	34,660
Vessels transporting.....	382	374,200	Pound nets.....	997	98,765
Tonnage.....	9,256		Trap nets and weirs.....	20	600
Outfit.....		57,118	Fyke nets.....	4,064	11,372
Boats.....	11,498	553,526	Trammel nets.....	d 18	1,570
Shore and accessory prop- erty.....		2,164,749	Bow nets.....	106	529
Cash capital.....		2,297,518	Minor nets.....	2,144	837
<b>Apparatus—vessel fisheries:</b>			<b>Lines.....</b>		<b>4,722</b>
Oyster dredges.....	3,570	51,730	Eel pots.....	3,149	1,678
Crab scrapes.....	178	607	Spears.....	25	33
Tongs.....	54	512	Oyster dredges.....	2,183	20,576
Selnes.....	a 6	1,385	Crab scrapes.....	2,663	9,640
Eel pots.....	1,240	570	Tongs and rippers.....	13,959	84,580
			<b>Total.....</b>		<b>6,506,066</b>

a Total length, 1,445 yds.  
b Total length, 60,640 yards.

c Total length, 348,061 yards.  
d Total length, 7,620 yards.

*Table of products.*

Species.	Lbs.	Value.	Species.	Lbs.	Value.
Alewives, fresh.....	13,454,757	\$87,021	Scup.....	32,650	\$1,019
Alewives, salted.....	292,400	4,287	Sea bass.....	50,800	2,540
Black bass.....	23,383	2,124	Shad, fresh.....	3,094,181	120,177
Blue-fish.....	100,145	4,378	Shad, salted.....	17,000	425
Bonito.....	250	10	Sheepshead.....	1,350	62
Butter-fish.....	458,700	11,505	Spanish mackerel.....	2,922	348
Carp.....	163,180	5,319	Spot.....	22,470	387
Cat-fish.....	488,777	15,547	Squeteague.....	1,018,775	26,921
Cero.....	500	10	Striped bass.....	824,418	68,568
Croakers.....	303,405	4,239	Sturgeon.....	107,620	3,503
Drum.....	53,450	576	Caviar.....	5,818	3,486
Eels, fresh.....	334,811	12,309	Suckers.....	14,760	281
Eels, salted.....	2,200	60	Sun-fish.....	3,970	72
Flounders.....	51,205	1,625	Other fish.....	2,300	143
Gizzard shad.....	6,010	133	Crabs, hard.....	a 9,824,793	85,884
Harvest-fish.....	12,800	110	Crabs, soft.....	b 4,303,582	202,663
Hickory shad.....	8,215	209	Shrimp.....	728	706
King-fish.....	1,800	955	Oysters, natural rock.....	c 36,298,717	2,732,274
Mackerel.....	7,215	180	Oysters, private beds.....	d 3,500,210	299,244
Menhaden.....	7,122,230	11,573	Clams.....	e 107,600	14,384
Mullet.....	85,295	900	Turtles.....	4,895	203
Perch, white.....	452,815	25,005	Terrapin.....	1,593	1,139
Perch, yellow.....	292,720	9,617	Frogs.....	130	60
Pike.....	67,580	5,390			
Pompano.....	140	14	<b>Total.....</b>	<b>82,975,245</b>	<b>3,767,461</b>

a 29,474,379 in number.

d 500,030 bushels.

b 12,910,746 in number.

e 13,450 bushels.

c 5,185,531 bushels.

Several fishery products shown in the preceding table in pounds, for convenience of comparison, are presented in the following table in number and bushels, as usually marketed:

Products.	Quantity.	Value.
Crabs, hard.....	number.. 29, 474, 379	\$85, 884
Crabs, soft.....	do..... 12, 919, 746	202, 563
Oysters, natural rock.....	bushels.. 5, 185, 531	2, 732, 274
Oysters, private beds.....	do..... 500, 030	299, 244
Clams.....	do..... 13, 450	14, 384

THE FISHERIES BY COUNTIES.

While the fisheries are prosecuted on both the eastern and western shores of the State, by far the larger catches are made in the former section, this being particularly true in the case of oysters and crabs. Somerset and Dorchester counties possess the most valuable fishery resources in the State, this preeminence being due to oysters and crabs. Dorchester leads slightly in the catch of oysters, but Somerset's valuable crab fishery more than offsets this advantage, three-fourths of the State's soft-crab catch being taken in this county. Practically all of these are handled at Crisfield and Deal Island and shipped from these points to the large cities throughout the United States and Canada. Talbot County leads in the catch of hard crabs, the principal part of the catch being used in factories, where the meat is extracted and shipped in tin buckets. Most of these factories are located at Oxford, St. Michaels, and vicinity, and Tilghmans Island. Large quantities of hard crabs are also taken at Cambridge, Dorchester County, and Mount Vernon, Somerset County, practically all of these being shipped alive. The fisheries proper are prosecuted to the greatest extent in Worcester County. This is the only county bordering on the Atlantic Ocean, and most of the fishing is now done by means of pound nets, which, since 1897, have increased from 1 to 7 in number. Talbot ranks next to Worcester County in its pound net fishery, the principal catches being made in the Choptank River and in Chesapeake Bay off Tilghman Island. Squeteague is the most important species taken in Worcester, and shad and alewives in Talbot County.

Increased values are shown in 1901 compared with 1897 in the fisheries of Anne Arundel, Calvert, Charles, Kent, Queen Anne, Somerset, and Wicomico counties, while decreases are shown for the other fishery counties, especially in Caroline County, where a decline from \$22,012 in 1897 to \$5,787 in 1901 has taken place. This is due almost entirely to the decrease in shad. With the exception of Charles County, the counties showing increased values owe it to the better prices received for oysters. A decided improvement is shown in the crab fishery in every county except Kent and Queen Anne. This compensated to a degree for the poor showing made in some of the other fisheries, particularly the shad and alewife. Harford and Worcester counties are the only counties showing an increase in shad. The former county represents a natural

increase, while in Worcester County it was due to more extensive fishing. On the basis of persons employed, the most important counties are Baltimore (including Baltimore city), Somerset, and Dorchester, where 9,642, 6,340, and 5,229 persons, respectively, were engaged. Baltimore's lead over the other counties is due entirely to its wholesale oyster trade. The extensive haul-seine fisheries formerly prosecuted in Cecil County are being superseded by pound nets, the advantages of the latter being reduction of first cost and economy of operation. Baltimore and Kent counties have the most important fyke-net fisheries.

The three following tables show the extent of the fisheries in each county of Maryland in 1901:

Table showing the number of persons employed in the fisheries of Maryland in 1901.

Counties.	On vessels fishing.	On vessels transporting.	In shore or boat fisheries.	Shoresmen.	Total.
Anne Arundel.....	61	127	1,962	375	2,525
Baltimore.....	1,257	243	1,770	7,972	9,642
Calvert.....	209	82	1,195	10	1,496
Caroline.....	.....	157	.....	.....	157
Cecil.....	.....	2	341	4	347
Charles.....	6	12	653	45	716
Dorchester.....	1,791	146	2,243	1,049	5,229
Harford.....	.....	6	468	154	628
Kent.....	35	69	1,171	.....	1,275
Prince George.....	.....	.....	80	.....	80
Queen Anne.....	2	36	1,279	.....	1,317
St. Mary.....	36	69	1,115	.....	1,220
Somerset.....	1,912	155	2,772	1,601	6,340
Talbot.....	366	70	1,559	1,049	3,044
Wicomico.....	40	58	975	379	1,452
Worcester.....	.....	37	740	15	792
Total.....	5,715	1,112	16,880	12,553	36,260

Table showing, by counties, the vessels, boats, apparatus, and shore property employed in the fisheries of Maryland in 1901.

Items.	Anne Arundel.		Baltimore.		Calvert.		Caroline.		Cecil.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels fishing.....	13	\$5,750	146	\$82,450	43	\$22,300	.....	.....	.....	.....
Tonnage.....	119	.....	3,550	.....	356	.....	.....	.....	.....	.....
Outfit.....	.....	1,525	.....	58,005	.....	6,935	.....	.....	.....	.....
Vessels transporting.....	57	\$5,800	68	\$5,350	24	\$28,050	.....	.....	1	\$500
Tonnage.....	902	.....	2,683	.....	712	.....	.....	.....	12	.....
Outfit.....	.....	5,571	.....	15,470	.....	4,015	.....	.....	.....	45
Boats.....	1,040	\$1,856	92	\$2,058	640	\$30,316	81	\$475	139	\$5,900
Apparatus—vessel fisheries:	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Oyster dredges.....	30	557	584	7,085	149	2,075	.....	.....	.....	.....
Tongs.....	9	54	.....	.....	28	344	.....	.....	.....	.....
Apparatus—shore fisheries:	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seines.....	58	1,225	32	3,144	11	640	8	790	6	3,325
Gill nets.....	43	423	18	215	82	197	191	1,187	297	4,291
Pound nets.....	56	5,580	4	230	62	5,910	9	350	160	9,935
Fyke nets.....	.....	.....	1,702	4,093	.....	.....	34	152	1,134	1,460
Trammel nets.....	1	50	1	30	.....	.....	.....	.....	4	255
Minor nets.....	157	83	6	20	100	20	1	2	.....	.....
Lines.....	.....	470	.....	1	.....	131	.....	22	.....	.....
Eel pots.....	.....	.....	147	71	152	164	.....	.....	130	93
Oyster dredges.....	16	255	.....	.....	94	1,470	.....	.....	.....	.....
Tongs and rippers.....	1,687	12,364	.....	.....	663	4,597	.....	.....	.....	.....
Shore and accessory property.....	.....	27,831	.....	1,814,655	.....	968	.....	2,555	.....	7,200
Cash capital.....	.....	19,800	.....	1,968,350	.....	300	.....	.....	.....	500
Total.....	179,197	.....	4,051,227	.....	108,432	.....	5,533	.....	.....	33,504

NOTE.—In tables for Maryland showing statistics by counties the returns for Baltimore County and Baltimore city are combined.



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Table showing, by counties, the vessels, boats, apparatus, and shore property employed in the fisheries of Maryland in 1901—Continued.

Items.	Charles.		Dorchester.		Harford.		Kent.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels fishing	1	\$400	331	\$153,515			5	\$2,650
Tonnage	9		2,603				88	
Outfit		275		50,757				1,560
Vessels transporting	4	1,950	44	55,450	3	\$3,400	32	18,050
Tonnage	91		1,150		28		640	
Outfit		630		7,044		120		8,345
Boats	313	11,649	1,750	93,758	158	14,497	765	39,982
Apparatus—vessel fisheries:								
Oyster dredges	2	80	1,291	19,458				
Crab scrapes				117				
Tongs				86				
Seines				13				
Eel pots			1,075	605			5	685
Apparatus—shore fisheries:								
Seines	14	4,590	8	435	14	5,910	32	1,683
Gill nets	68	5,110	902	2,126	298	4,360	518	7,056
Pound nets	107	11,750	204	12,230			74	5,735
Trap nets and weirs							19	475
Fyke nets	2	50	26	112	691	847	237	2,032
Trammel nets					12	1,235		
Minor nets			298	104			23	4
Lines		45		819				314
Eel pots	18	18	519	248	482	246	555	376
Oyster dredges	4	100	924	7,964				
Crab scrapes				220				
Tongs and nippers	332	1,224	2,193	13,896			1,044	8,435
Shore and accessory property		6,465		63,882		38,850		3,000
Cash capital		600		93,440		2,500		
Total		44,936		576,969		71,965		95,382

Items.	Prince George.		Queen Anne.		St. Mary.		Somerset.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels fishing			1	\$100	6	\$2,600	336	\$203,215
Tonnage			6		45		3,411	
Outfit				85		1,195		60,713
Vessels transporting			16	10,900	23	14,100	50	56,425
Tonnage			191		390		1,313	
Outfit				2,290		3,045		7,506
Boats	33	\$940	777	34,080	644	34,990	2,817	128,375
Apparatus—vessel fisheries:								
Oyster dredges			4	20	14	265	1,208	18,180
Crab scrapes							61	221
Tongs					1	14		
Seines							1	700
Apparatus—shore fisheries:								
Seines	12	1,855	29	764	1	200		
Gill nets	22	128	47	325	7	295	30	230
Pound nets	5	450	26	1,415	47	6,140	39	4,040
Trap nets and weirs	1	25						
Fyke nets			24	475			45	540
Row nets							24	120
Minor nets			36	14	50	13	1,443	562
Lines				199		147		315
Eel pots			92	78	40	40	155	85
Spears							19	30
Oyster dredges					75	393	932	9,096
Crab scrapes							2,431	8,876
Tongs and nippers			2,255	12,245	975	5,028	1,506	9,275
Shore and accessory property		449		1,985		555		117,203
Cash capital								161,250
Total		3,847		64,975		69,020		776,957

Table showing, by counties, the vessels, boats, apparatus, and shore property employed in the fisheries of Maryland in 1901—Continued.

Items.	Talbot.		Wicomico.		Worcester.		Total.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels fishing	66	\$36,700	7	\$3,275			955	\$612,956
Tonnage	573		51				10,811	
Outfit		11,099		940				193,089
Vessels transporting	27	20,125	18	20,550	15	\$13,550	382	\$74,200
Tonnage	480		395		269		9,266	
Outfit		4,260		2,720		1,057		67,118
Boats	1,186	60,727	617	21,657	446	12,266	11,498	553,526
Apparatus—vessel fisheries:								
Oyster dredges	260	3,660	28	350			3,570	51,730
Crab scrapes								607
Tongs	3	15						54
Seines								a 6
Eel pots	165	65					1,240	570
Apparatus—shore fisheries:								
Seines	17	197	3	300	67	3,590	a 312	28,648
Gill nets	60	1,141	488	4,038	682	3,538	b 3,653	34,680
Found nets	175	19,445	32	4,200	7	11,355		98,765
Trap nets and weirs								800
Fyke nets								20
Trammel nets	12	95	167	1,516			4,064	11,372
Row nets							c 18	1,570
Minor nets			4	18	78	391		105
Lines		1,929		301		29		4,722
Eel pots			69	34	790	225	3,149	1,678
Spears					6	3		25
Oyster dredges	120	1,188	18	160			2,183	20,576
Crab scrapes	2	9					2,653	9,640
Tongs and rippers	2,302	11,478	761	4,850	241	1,188	13,959	84,680
Shore and accessory property		54,411		9,460		15,277		2,164,749
Cash capital		40,775		20,000				2,297,515
Total		267,284		94,369		62,469		6,506,066

a Total length of seines, 62,085 yards

b Total length of gill nets, 348,061 yards.

c Total length of trammel nets, 7,520 yards.

Table showing, by counties, the yield of the fisheries of Maryland in 1901.

Species.	Anne Arundel.		Baltimore.		Calvert.		Caroline.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives, fresh	1,010,522	\$6,146	133,600	\$565	457,000	\$4,779	34,700	\$688
Black bass			543	62				
Blue-fish	750	37			2,300	119		
Butter-fish					200	10		
Carp	24,185	890	4,700	184	21,870	686	2,810	96
Cat-fish	11,266	280	68,820	1,917	24,850	858	17,070	416
Croakers	2,100	69			18,950	414		
Drum					1,300	13		
Eels, fresh	29,370	1,060	13,041	388	20,405	712		
Flounders	450	22			9,515	335		
Gizzard shad	110	6						
Harvest-fish					300	10		
Hickory shad	1,275	38			2,890	74		
Mullet	900	26					3,050	46
Perch, white	17,820	995	16,235	905	33,300	2,016	17,020	718
Perch, yellow	6,650	321	120,005	4,341	1,380	61	5,350	176
Pike	750	66	26,800	2,695	510	49	300	23
Shad, fresh	141,652	6,047	10,036	387	74,200	3,605	84,250	3,499
Sheepshead					150	12		
Spanish mackerel					100	12		
Spots					1,000	28		
Squeteague	2,615	90			5,850	224		
Striped bass	36,902	3,021	53,555	4,808	47,300	3,977	3,015	183
Suckers			1,830	55				
Sun-fish	1,100	22						
Other fish			1,000	120				
Crabs, hard	1,162,565	8,794	480	12	181,333	884		
Crabs, soft	171,267	14,435	16,288	1,258	60,266	2,251		
Shrimp			728					
Oysters, natural rock	4,398,702	350,758	2,297,050	229,516	1,705,691	147,400		
Oysters, private beds					55,720	5,300		
Turtles	125	6	60	2				
Terrapin	138							
Frogs			130	50				
Total	7,021,214	893,298	2,764,901	247,962	2,726,379	173,829	167,565	5,787

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Table showing, by counties, the yield of the fisheries of Maryland in 1901—Continued.

Species.	Cecil.		Charles.		Dorchester.		Harford.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives, fresh	3,030,000	\$13,445	1,865,600	\$9,728	434,900	\$1,309	3,837,500	\$25,500
Alewives, salted			239,000	3,525	4,000	85		
Black bass	1,900	144	19,840	1,820			100	8
Blue-fish			6,800	328	33,200	1,328		
Butter-fish					100	3		
Carp	22,700	882	14,385	313	820	26	33,300	1,209
Cat-fish	20,650	902	64,561	1,879	32,795	1,150	27,200	1,176
Croakers					49,850	717		
Drum					1,900	28		
Eels, fresh	9,400	492	4,585	129	80,820	3,367	26,400	1,056
Flounders			3,650	110	2,270	100		
Gizzard shad					4,400	94		
Menhaden					6,800	12		
Mullet	750	34			2,050	51	3,100	93
Perch, white	37,300	1,836	79,645	4,455	23,870	1,185	22,750	1,474
Perch, yellow	3,700	174	17,745	610	7,470	229		
Pike	12,200	769	6,350	350	7,595	547	1,050	34
Shad, fresh	513,300	15,661	416,040	12,384	209,405	10,338	510,400	16,470
Shad, salted			17,000	425				
Spots					14,860	163		
Squeteague			6,600	291	4,060	146		
Striped bass	8,200	750	141,082	11,309	29,325	2,123	45,750	6,090
Sturgeon			3,760	302	1,690	108		
Caviar			485	295	1,170	65		
Suckers			8,025	148	1,170	22		
Sun-fish					600	8		
Other fish					300	9		
Crabs, hard			210,000	2,100	1,664,333	18,337		
Crabs, soft					518,999	23,525		
Oysters, natural rock			443,275	27,340	7,770,490	566,024		
Oysters, private beds			25,900	2,400	674,350	49,082		
Terrapin					435	510		
Total	3,660,100	35,089	3,593,328	80,241	11,482,987	683,691	4,507,550	53,110

  

Species.	Kent.		Prince George.		Queen Anne.		St. Mary.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives, fresh	542,240	\$3,122	358,500	\$2,034	160,250	\$1,549	377,800	\$2,490
Alewives, salted	44,400	552	5,000	125				
Black bass			1,000	100				
Blue-fish					2,200	88	11,475	550
Butter-fish							12,000	363
Carp	13,025	242	14,050	489	7,720	225	2,250	45
Cat-fish	83,980	2,229	39,200	1,108	27,050	736	1,000	26
Croakers					9,000	210	17,750	534
Drum							500	5
Eels, fresh	66,725	1,625	1,175	32	26,030	883	3,100	191
Eels, salted	1,700	50						
Flounders					2,800	117	2,080	52
Harvest-fish							500	15
Hickory shad							4,150	97
Mullet	4,775	113	1,300	38	1,500	24		
Perch, white	66,315	3,487	14,800	846	11,825	640	7,375	420
Perch, yellow	95,095	2,575	12,475	303	17,530	655		
Pike	4,510	350	1,480	137	450	33		
Shad, fresh	314,210	13,028	62,750	2,145	19,850	1,008	73,925	3,309
Sheepshead							200	15
Spanish mackerel							1,582	199
Spots	100	3					700	25
Squeteague	200	7			940	45	31,170	1,242
Striped bass	286,290	20,704	10,150	741	51,125	3,671	34,777	3,507
Sturgeon							1,500	115
Caviar							80	60
Suckers			3,525	52				
Sun-fish	900	13			200	4		
Crabs, hard	391,333	2,533			691,166	4,908	197,500	1,975
Crabs, soft	17,607	1,305			39,366	2,470	5,025	419
Oysters, natural rock	2,878,050	168,930			2,470,699	145,142	1,990,650	140,010
Oysters, private beds	10,500	1,458						
Total	4,821,955	222,328	525,405	8,149	3,539,701	162,308	2,767,089	155,664

Table showing, by counties, the yield of the fisheries of Maryland in 1901—Continued.

Species.	Somerset.		Talbot.		Wicomico.		Worcester.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives, fresh	84,700	\$962	709,400	\$7,598	148,250	\$1,883	269,795	\$2,223
Blue-fish	13,860	561	18,700	829			10,869	538
Bonito							250	10
Butter-fish	3,200	49					443,200	11,080
Carp			1,000	24	365	9		
Cut-fish	16,175	423	11,695	321	41,665	2,097	1,000	30
Coro							500	10
Croakers	124,435	730	32,800	713	5,650	107	42,870	746
Drum	23,200	416	200	1	100	2	26,260	105
Eels, fresh	17,700	879	3,000	100	4,700	221	28,360	1,174
Eels, salted					600	10		
Flounders	2,085	43	5,645	229	910	43	21,800	574
Gizzard shad			100	4	1,400	30		
Harvest-fish	12,000	85						
King-fish	65	5					7,150	950
Mackerel							1,800	180
Menhaden	6,055,600	10,071					1,059,830	1,490
Mullet	2,500	30	200	3	340	8	14,830	434
Perch, white	5,640	204	9,050	475	12,190	785	77,680	4,669
Perch, yellow			3,150	99	2,170	74		
Pike	76	5			400	34	5,060	298
Pompano	140	14						
Scup							32,650	1,019
Sea bass							60,800	2,540
Shad, fresh	42,650	2,202	360,200	18,267	187,485	8,722	74,828	3,105
Sheepshead							1,000	25
Spanish mackerel	540	54	300	33			400	50
Spots	810	23	500	10			4,500	135
Squeteague	45,950	1,352	4,330	133	9,760	384	907,300	23,007
Striped bass	5,737	438	32,120	2,299	14,810	1,208	24,280	3,789
Sturgeon	1,100	59			865	34	99,205	2,885
Caviar					63	24	5,070	3,042
Suckers					200	4		
Sun-fish					670	5	500	20
Other fish	400	2					600	12
Crabs, hard	768,900	12,496	3,771,517	28,753	784,000	5,040	1,666	50
Crabs, soft	3,368,232	153,937	106,532	2,963				
Oysters, natural rock	6,648,129	548,686	3,618,047	272,876	1,868,055	134,120	19,880	1,473
Oysters, private beds	611,800	56,740	2,100	150	1,162,700	78,245	1,057,140	105,809
Clams	72,600	10,884					35,000	3,500
800		15			4,350	180		
Turtles	800	15						
Terrapin	150	100					870	360
Total	17,828,673	801,465	8,990,486	335,880	4,250,988	233,269	4,326,924	176,391

The number and value of shad taken in each county of Maryland in 1901 is shown in the following table:

Counties.	No.	Value.	Counties.	No.	Value.
Anne Arundel.....	40,426	\$6,047	Prince George.....	15,687	\$2,145
Baltimore.....	2,867	387	Queen Anne.....	5,671	1,008
Calvert.....	24,733	3,605	St. Mary.....	21,121	3,309
Caroline.....	24,071	3,499	Somerset.....	14,217	2,202
Cecil.....	128,325	15,661	Talbot.....	120,067	18,267
Charles.....	108,010	12,809	Wicomico.....	62,495	8,722
Dorchester.....	69,802	10,338	Worcester.....	21,379	3,105
Harford.....	127,600	16,470			
Kent.....	89,774	13,028	Total.....	876,245	120,602

43,111,181 pounds.

The following table shows the shad catch of Maryland in 1901, by waters, in the order of their importance, their rank being based upon the pounds of shad taken:

Waters.	No.	Lbs.	Value.	Waters.	No.	Lbs.	Value.
Chesapeake Bay.....	314,860	1,242,600	\$44,888	Pocomoke and Tan-			
Potomac River.....	146,000	490,065	14,800	gier sounds.....	3,700	12,200	\$715
Choptank River.....	135,412	417,070	19,827	Sassafras River.....	2,500	8,700	238
Susquehanna River.....	67,000	252,400	8,874	Patuxent River.....	1,900	6,400	160
Patuxent River.....	43,000	148,950	6,941	Blackwater River.....	2,125	6,370	200
Nanticoke River.....	34,348	122,440	6,977	Honga River.....	1,655	4,660	266
Wicomico River.....	27,500	94,652	4,269	Gunpowder River.....	850	2,836	177
Seyvern River.....	28,575	93,633	4,004	North East River.....	600	2,000	60
Pocomoke River.....	8,200	28,000	1,050	Atlantic Ocean.....	550	1,925	110
West River.....	6,885	20,655	1,091	Chincoteague and			
Little Choptank River.....	6,000	18,000	905	Sinepuxent bays..	520	1,820	83
Fishing Bay.....	4,475	15,660	739	South River.....	470	1,600	60
Chester River.....	4,000	14,700	478	Middle River.....	235	800	50
Elk River.....				Total.....	876,245	3,111,181	120,602

Of the rivers shown in the preceding table, the Potomac, Susquehanna, Nanticoke, and Pocomoke have shad fisheries in two States, including Maryland. The value of Virginia's shad catch in the Potomac is over seven times that of Maryland. The catch from the Susquehanna River in Pennsylvania is nearly three times as valuable as in Maryland. Delaware's catch from the Nanticoke slightly exceeds that of Maryland. The proportion of Virginia's catch in the Pocomoke was comparatively small. The total yield of shad for each of the above rivers is shown, by States, in the following table:

Waters and States.	No.	Lbs.	Value.	Waters and States.	No.	Lbs.	Value.
Potomac River:				Nanticoke River:			
Maryland.....	146,000	490,065	\$14,800	Maryland.....	34,985	122,440	\$5,977
Virginia.....	648,462	2,446,604	104,566	Delaware.....	37,097	129,840	6,315
Total.....	794,462	2,936,669	119,366	Total.....	72,082	252,280	12,292
Susquehanna River:				Pocomoke River:			
Maryland.....	67,000	252,400	8,874	Maryland.....	28,575	93,633	4,004
Pennsylvania.....	98,883	409,339	23,412	Virginia.....	2,137	7,480	414
Total.....	165,883	661,739	32,286	Total.....	30,712	101,113	4,418

The following tables show, by counties, the quantity and value of products taken by each form of apparatus in the shore and vessel fisheries of the State in 1901:

Table showing, by counties, the seine catch of Maryland in 1901.

Species.	Anne Arundel.		Baltimore.		Calvert.		Caroline.		Cecil.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Shore fisheries:										
Alewives, fresh	46,000	\$352	83,600	\$415	18,000	\$142	14,600	\$283	600,000	\$3,000
Black bass			93	7					900	78
Blue-fish	550	27								
Carp	21,750	818	2,200	69	1,800	67	1,500	58	21,000	790
Cat-fish	10,116	223	12,630	364	17,000	605	2,100	62		
Croakers	1,800	54								
Eels	22,240	797	3,891	116	3,355	138				
Flounders					25	1				
Mullet	900	26					800	3		
Perch, white	5,000	277	10,610	611	13,550	\$53	3,400	119		
Perch, yellow	2,175	98	13,255	455	1,030	51	125	5	2,000	100
Pike	550	46	5,560	545	310	33			2,500	125
Shad, fresh	1,100	43	3,636	227	3,100	120	28,300	1,107	80,000	2,400
Squeteague	2,140	67								
Striped bass	13,975	1,173	50,555	4,575	7,660	648			6,500	500
Suckers			330	10						
Sun-fish	850	17								
Crabs, soft	46,480	3,704	16,000	1,200						
Turtles	125	6	60	2						
Terrapin	36	48								
Total	175,787	7,776	202,410	8,596	65,830	2,658	50,325	1,627	711,900	6,993

Species.	Charles.		Dorchester.		Harford.		Prince George.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Shore fisheries:								
Alewives, fresh	1,040,800	\$4,803	13,400	\$135	3,837,500	\$25,500	281,300	\$1,600
Alewives, salted	239,000	3,525						
Black bass	17,590	1,631			100	8	1,000	100
Blue-fish	1,600	75						
Carp	6,560	129	100	3	28,000	900	13,000	455
Cat-fish	19,818	587	3,500	102	200	8	36,100	1,032
Croakers			150	3				
Eels	800	27	40	1			850	24
Mullet			150	3	1,000	30	1,300	38
Perch, white	20,440	1,124	7,950	431	450	36	11,300	625
Perch, yellow	7,920	267	1,300	45			12,350	236
Pike	2,200	142	270	27	50	4	1,450	135
Shad, fresh	48,400	1,452	3,420	141	130,000	5,550	46,100	1,520
Shad, salted	17,000	425						
Spots			200	3				
Squeteague	800	32	250	5				
Striped bass	24,200	1,963	2,080	247	6,100	730	6,180	446
Suckers	5,505	98					8,525	52
Total	1,452,603	16,280	34,210	1,146	3,998,400	32,766	414,455	6,323

Species.	Queen Anne.		St. Mary.		Talbot.		Wicomico.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Shore fisheries:								
Alewives, fresh	4,600	\$69					2,700	\$46
Blue-fish			2,000	\$100	400	\$20		
Carp	4,070	98			400	4		
Cat-fish	7,850	210	600	16			2,400	125
Eels	250	10						
Mullet	300	8						
Perch, white	4,750	235	5,350	321	600	30	1,175	58
Perch, yellow	2,950	100						
Pike							25	2
Shad, fresh	1,200	56					2,300	102
Spots					500	10		
Squeteague			3,750	150	600	24		
Striped bass	26,825	1,930	7,142	571	500	34	1,750	139
Sun-fish	100	2						
Crabs, soft	22,166	1,425			8,166	510		
Total	75,061	4,144	18,742	1,157	11,166	632	10,350	472

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Table showing, by counties, the seine catch of Maryland in 1901—Continued.

Species.	Kent.		Somerset.		Worcester.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
<b>Vessel fisheries:</b>								
Cat-fish	250	\$5					250	\$5
Menhaden			6,000,000	\$10,000			6,000,000	10,000
Perch, white	9,800	550					9,800	550
Striped bass	111,000	7,650					111,000	7,650
<b>Total</b>	<b>121,050</b>	<b>8,205</b>	<b>6,000,000</b>	<b>10,000</b>			<b>6,121,050</b>	<b>18,205</b>
<b>Shore fisheries:</b>								
Alewives, fresh	1,400	19			209,600	\$1,762	6,153,500	38,126
Alewives, salted							239,000	3,625
Black bass							19,683	1,824
Blue-fish							4,460	222
Carp	3,200	49					98,580	3,440
Cat-fish	14,750	402			1,000	30	127,964	3,755
Croakers					1,900	45	3,850	102
Eels	2,725	81					34,161	1,194
Flounders					350	14	375	15
Menhaden					1,059,830	1,490	1,059,830	1,490
Mullet					1,000	40	4,950	148
Perch, white	6,060	300			54,600	3,304	145,255	8,325
Perch, yellow	4,025	120					47,700	1,537
Pike					4,860	288	17,765	1,347
Shad, fresh	85	5			7,434	329	355,075	13,052
Shad, salted							17,000	425
Spots							17,700	13
Squetague					17,550	622	25,090	900
Striped bass	34,275	2,543			16,400	2,572	204,042	18,071
Suckers							9,360	160
Sun-fish							950	19
Crabs, soft	6,707	430					99,519	7,269
Turtles							185	8
Terrapin					870	360	906	408
<b>Total</b>	<b>73,227</b>	<b>3,949</b>			<b>1,375,454</b>	<b>10,856</b>	<b>8,669,920</b>	<b>105,375</b>
<b>Total, vessel and shore</b>	<b>194,277</b>	<b>12,154</b>	<b>6,000,000</b>	<b>10,000</b>	<b>1,375,454</b>	<b>10,856</b>	<b>14,790,970</b>	<b>123,580</b>

Table showing, by counties, the gill-net catch in the shore fisheries of Maryland in 1901.

Species.	Anne Arundel.		Baltimore.		Calvert.		Caroline.		Cecil.		Charles.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.
Alewives, fresh	14,630	\$439			3,200	\$71	9,200	\$187			70,000	\$560
Carp	400	10			300	10						
Perch, white			150	\$9	3,000	207						
Pike			1,300	130								
Shad	12,500	500			11,400	518	53,900	2,315	395,000	\$12,075	291,440	8,585
Striped bass	705	69	1,490	119	1,540	108	395	21			2,750	194
Sturgeon											3,610	289
Caviar											3,465	280
<b>Total</b>	<b>28,235</b>	<b>1,018</b>	<b>2,940</b>	<b>258</b>	<b>19,440</b>	<b>914</b>	<b>63,495</b>	<b>2,523</b>	<b>395,000</b>	<b>12,075</b>	<b>368,255</b>	<b>9,908</b>

Species.	Dorchester.		Harford.		Kent.		Prince George.		Queen Anne.		St. Mary.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.
Alewives, fresh	30,800	\$320			52,000	\$578	1,200	\$14	27,200	\$320		
Alewives, salted	4,000	85					5,000	125				
Blue-fish	33,200	1,328									5,000	\$250
Carp					1,465	31	800	22				
Cat-fish					9,380	216			1,400	41		
Eels	100	3										
Mullet					150	2						
Perch, white					21,670	1,165	800	40				
Perch, yellow					670	17						
Pike					1,700	119						
Shad	42,405	2,071	380,400	\$10,920	284,525	11,726	12,300	482	4,200	188	1,167	140
Spanish mackerel												
Spots	60	2										
Squetague	150	5									2,000	100
Striped bass	810	69	9,700	1,164	83,100	5,983	250	18	4,500	176		
<b>Total</b>	<b>111,525</b>	<b>3,873</b>	<b>390,100</b>	<b>12,084</b>	<b>454,660</b>	<b>19,843</b>	<b>20,350</b>	<b>701</b>	<b>37,300</b>	<b>724</b>	<b>8,167</b>	<b>490</b>

Table showing, by counties, the gill-net catch in the shore fisheries of Maryland in 1901—  
Continued.

Species.	Somerset.		Talbot.		Wicomico.		Worcester.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives, fresh			2,000	\$50	36,400	\$619	32,160	\$242	278,790	\$3,400
Alewives, salted									9,000	210
Blue-fish	12,500	\$500	17,700	779					68,400	2,857
Carp									2,965	73
Cat-fish									10,780	257
Eels									100	8
Flounders							200	8	200	8
King-fish							1,750	140	1,750	140
Mullet							23,830	394	13,980	396
Perch, white			150	10	840	62	23,020	1,365	49,630	2,858
Perch, yellow									670	17
Pike							200	10	3,200	259
Shad	10,400	485	9,200	392	140,220	6,365	7,438	221	1,665,328	56,833
Spanish mackerel			300	33					1,467	173
Spots									60	2
Squeteague			2,000	59			1,350	47	5,500	211
Striped bass			600	50			7,880	1,217	113,720	9,183
Sturgeon					365	34	96,570	3,188	100,545	3,511
Caviar					53	24	4,680	2,574	5,188	2,878
Total	22,900	985	31,950	1,373	177,878	7,094	189,078	9,406	2,321,273	83,269

Table showing, by counties, the fyke-net catch in the shore fisheries of Maryland in 1901.

Species.	Baltimore.		Caroline.		Ceekl.		Charles.		Dorches- ter.		Harford.	
	Lbs.	Value.	Lbs.	Val.	Lbs.	Value.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.
Black bass	450	\$45			800	\$50						
Carp	2,000	100			1,700	92						
Cat-fish	53,190	1,483	590	\$20	14,900	655	425	\$8			26,800	\$1,152
Eels	5,250	154	1,420	38	1,400	92	4,600	92			3,000	120
Mullet			2,450	39	600	30						
Perch, white	4,700	245	5,400	313	29,800	1,529	3,500	175			22,300	1,438
Perch, yellow	97,700	3,614	2,580	162	1,600	70	750	15				
Pike	19,150	1,940	300	23	6,800	424						
Striped bass	750	60	220	17	700	55	1,550	124				
Suckers	1,500	45										
Terrapin									293	\$350		
Total	184,690	7,686	12,960	552	58,300	2,997	10,825	414	293	350	52,100	2,710

Species.	Kent.		Queen Anne.		Somerset.		Talbot.		Wicomico.		Total.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Value.
Alewives	27,640	\$206	5,900	\$74	4,300	\$57			12,850	\$203	50,690	\$540
Black bass											1,250	85
Carp	4,660	101	1,050	40			100	\$4	325	7	10,850	372
Cat-fish	24,300	618	11,300	344	9,200	228	395	11	12,365	568	158,470	5,189
Croakers					2,150	42			1,050	18	3,200	60
Drum									100	2	100	2
Eels	18,550	429	1,430	60					1,250	69	30,880	924
Flounders							175	9	600	30	775	39
Gizzard shad									200	5	200	5
Mullet	1,125	19	800	6	2,500	30	200	3	340	8	8,015	135
Perch, white	11,385	521	4,160	153	3,400	156	1,400	75	7,625	511	93,660	5,116
Perch, yellow	80,100	2,057	10,900	396			950	34	1,970	67	196,450	6,355
Pike	1,650	136	300	23	75	5			375	32	28,550	2,583
Shad	650	26	350	14	1,350	69			3,365	165	5,615	264
Squeteague					50	2			360	9	410	11
Striped bass	5,750	442	2,250	164	4,300	303	670	41	10,335	861	26,525	2,067
Suckers									100	2	1,600	47
Sun-fish			100	2					670	5	770	7
Terrapin					75	50					368	400
Total	175,710	4,555	38,430	1,275	27,400	932	3,890	177	53,880	2,562	618,478	24,211



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Table showing, by counties, the trammel-net catch in the shore fisheries of Maryland in 1901.

Species.	Anne Arund. l.		Baltimore.		Cecil.		Harford.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Black bass					200	\$16			200	\$16
Blue-fish	200	\$10							200	10
Carp	160	5					10,300	\$309	10,460	314
Cat-fish	100	5			500	37	200	16	800	58
Eels	90	3							90	3
Gizzard shad	110	5							110	5
Mullet					150	4	2,100	63	2,250	67
Perch, white	550	33	75	\$5	200	15			825	53
Perch, yellow	200	10			100	4			300	14
Pike					2,900	220	1,000	30	3,900	250
Striped bass	120	10	50	4	400	40	29,950	4,196	30,520	4,250
Sun-fish	250	5							250	5
Total	1,780	86	125	9	4,450	336	43,550	4,614	49,905	5,015

Table showing, by counties, the pound-net, trap-net, and weir catch in the shore fisheries of Maryland in 1901.

Species.	Anne Arundel.		Baltimore.		Calvert.		Caroline.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives, fresh	949,892	\$5,355	50,000	\$150	435,800	\$4,566	10,900	\$218
Blue-fish					2,300	119		
Butter-fish					200	10		
Carp	1,875	57	600	15	19,770	609	420	6
Cat-fish	1,050	52	3,000	70	7,850	253	3,950	38
Croakers	300	15			18,950	414		
Drum					1,300	13		
Eels	7,040	200	300	10	3,450	115		
Flounders	450	22			9,490	334		
Harvest-fish					300	10		
Hickory shad	1,275	38			2,890	74		
Mullet							300	4
Perch, white	12,270	686	700	35	16,750	956	8,150	276
Perch, yellow	4,275	213	9,050	272	350	10	2,645	68
Pike	200	20	800	80	200	16		
Shad	128,052	5,504	6,400	160	59,700	2,967	2,050	77
Sheepshead					150	12		
Spanish mackerel					100	12		
Spots					1,000	28		
Squeteague	475	23			5,850	224		
Striped bass	22,102	1,769	710	50	28,100	3,221	2,400	95
Terrapin	30	22						
Total	1,129,286	14,036	71,460	842	624,500	13,963	30,815	782

Species.	Cecil.		Charles.		Dorchester.		Kent.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives, fresh	2,430,000	\$10,445	754,800	\$4,365	390,700	\$3,854	461,200	\$2,319
Alewives, salted							44,400	552
Black bass			2,250	189				
Blue-fish			5,300	253				
Butter-fish					100	3		
Carp			7,400	176	720	23	3,700	61
Cat-fish	5,250	210	40,143	1,200	25,895	798	24,600	670
Croakers					49,700	714		
Drum					1,900	28		
Eels			2,485	76	1,540	64	18,150	443
Flounders			3,650	110	2,270	100		
Gizzard shad					4,400	94		
Menhaden					6,800	12		
Mullet					1,900	48	8,500	92
Perch, white	7,300	292	55,705	3,156	15,920	754	17,300	948
Perch, yellow			9,005	328	5,670	184	10,100	376
Pike			4,150	208	7,325	520	1,160	95
Shad	38,300	1,186	75,200	2,347	163,580	8,126	29,050	1,271
Spots					14,800	158	100	3
Squeteague			5,800	259	3,660	136	200	7
Striped bass	1,600	155	112,582	9,028	25,535	1,817	52,065	4,077
Sturgeon			150	13	1,690	108		
Caviar			30	15	1,130	65		
Suckers			2,620	60	1,170	22		
Sun-fish					600	8	900	13
Other fish					200	1		
Total	2,482,450	12,288	1,081,170	21,773	726,005	17,637	666,425	10,927

Table showing, by counties, the pound-net, trap-net, and weir catch in the shore fisheries of Maryland in 1901—Continued.

Species.	Prince George.		Queen Anne.		St. Mary.		Somerset.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives, fresh	76,000	\$420	122,550	\$1,086	377,800	\$2,496	80,400	\$805
Blue-fish			2,200	38	4,475	200	700	35
Butter-fish					12,000	363	3,200	49
Carp	250	12	2,100	57	2,250	45		
Cat-fish	3,100	76	5,250	104	500	11	6,975	195
Croakers			9,000	210	17,750	534	120,985	675
Drum					500	5	19,500	346
Eels	325	8	10,500	393	200	6	300	9
Flounders			2,800	117	2,080	52	1,925	39
Harvest-fish					500	15	12,000	85
Hickory shad					4,150	97		
Menhaden							55,600	71
Mullet			400	10				
Perch, white	2,700	180	2,925	151	2,025	99	1,740	41
Perch, yellow	125	7	3,700	155				
Pike	30	2	150	10				
Pompano							140	14
Shad	4,350	143	14,100	750	73,925	3,309	20,900	1,083
Sheepshead					200	15		
Spanish mackerel					415	59	540	64
Spots					700	25	210	10
Squeteague			940	45	25,420	992	21,950	655
Striped bass	3,720	277	15,650	1,222	27,635	2,936	1,437	135
Sturgeon					1,500	115	1,100	59
Caviar					80	60		
Other fish							400	2
Total	90,600	1,125	192,165	4,398	554,105	11,428	350,002	4,462

Species.	Talbot.		Wicomico.		Worcester.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives, fresh	707,400	\$7,648	96,300	\$1,015	27,600	\$213	6,971,342	\$44,949
Alewives, salted							44,400	652
Black bass							2,250	189
Blue-fish	600	30			1,960	98	17,535	823
Bonito					250	10	250	10
Butter-fish					443,200	11,080	458,700	11,505
Carp	500	16					39,485	1,077
Cat-fish	11,200	310	4,875	155			143,638	4,142
Cero					500	10	500	10
Cod					600	12	600	12
Croakers	32,800	713	4,600	89	33,770	518	287,855	3,882
Drum	200	1			26,250	105	49,650	498
Eels			250	12			44,540	1,396
Flounders	5,470	220	310	13	19,600	490	48,045	1,497
Gizzard shad	100	4	1,200	25			5,700	123
Harvest-fish							12,800	110
Hickory shad							8,315	209
King-fish					5,400	810	5,400	810
Mackerel					1,800	180	1,900	180
Menhaden							62,400	83
Mullet							6,100	154
Perch, white	6,900	360	2,250	130			152,635	8,064
Perch, yellow	2,200	65	200	7			47,320	1,685
Pike							14,015	951
Pompano							140	14
Scup					28,650	850	28,650	850
Shad	351,000	17,375	41,600	2,100	1,995	113	1,010,202	47,011
Sheepshead					1,000	25	1,350	52
Spanish mackerel					4,000	60	1,465	175
Spots					4,500	135	21,110	359
Squeteague	1,730	50	9,400	375	852,520	21,358	927,945	24,124
Striped bass	30,350	2,174	2,585	194			336,371	27,150
Sturgeon					2,940	119	7,380	414
Caviar					85	46	325	186
Suckers			100	2			3,790	74
Sun-fish					500	20	2,000	41
Other fish							600	3
Terrapin							30	22
Total	1,150,450	29,366	163,670	4,117	1,453,520	36,251	10,766,623	183,395

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Table showing, by counties, the bow-net catch in the shore fisheries of Maryland in 1901.

Species.	Somerset.		Wicomico.		Worcester.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives.....					435	\$6	435	\$6
Carp.....			40	\$2			40	2
Cat-fish.....			375	20			375	24
Perch, white.....			300	24			300	24
Shad.....	10,000	\$575			57,961	2,442	67,961	3,017
Striped bass.....			140	14			140	14
Total.....	10,000	575	855	60	58,396	2,448	69,251	3,083

Table showing the catch by minor apparatus in the shore fisheries of Maryland in 1901.

Species.	Anne Arundel.		Baltimore.		Calvert.		Caroline.		Dorchester.		Kent.	
	Lbs.	Value.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.
Carp.....							300	\$11				
Perch, white.....							70	5				
Crabs, soft.....	124,520	\$10,704			60,000	\$2,250			149,700	\$6,835	2,900	\$175
Shrimp.....			728	\$708					142	160		
Terrapin.....												
Frogs.....			130	50								
Total.....	124,520	10,704	858	758	60,000	2,250	370	16	149,842	6,995	2,900	175

Species.	Queen Anne.		St. Mary.		Somerset.		Talbot.		Total.		
	Lbs.	Val.	Lbs.	Val.	Lbs.	Value.	Lbs.	Val.	Lbs.	Value.	
Carp.....	500	\$30								800	\$41
Cat-fish.....	350	12								350	12
Perch, white.....										70	5
Perch, yellow.....	80	4								80	4
Crabs, soft.....	10,400	685	5,025	\$419	1,052,070	\$49,378	5,433	\$340	1,410,048	728	70,786
Shrimp.....											708
Oysters, natural rock.....					7,000	600			7,000	500	
Terrapin.....					75	50			217	210	
Frogs.....									130	50	
Total.....	11,330	731	5,025	419	1,059,145	49,928	5,433	340	1,419,423	72,316	

Table showing, by counties, the line catch in the shore fisheries of Maryland in 1901.

Species.	Anne Arundel.		Baltimore.		Calvert.		Caroline.		Charles.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Cat-fish.....							9,600	\$287		
Crabs, hard.....	1,162,565	\$8,794	480	\$12	181,333	\$884			210,000	\$2,100
Crabs, soft.....	267	27	288	58	266	1				
Total.....	1,162,832	8,821	768	70	181,599	885	9,600	287	210,000	2,100

  

Species.	Dorchester.		Kent.		Queen Anne.		St. Mary.		Talbot.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Cat-fish.....	3,400	\$250	10,700	\$318		900	\$25			
Perch, white.....			100	3						
Perch, yellow.....			200	5						
Striped bass.....			100	3	2,000	180				
Crabs, hard.....	1,664,333	18,337	391,333	2,535	691,166	4,908	197,500	\$1,975	3,771,517	\$28,753
Crabs, soft.....	136,466	5,940	8,000	700	700	6,800	360		92,333	2,078
Total.....	1,804,199	24,527	410,433	3,564	700,866	5,473	197,500	1,975	3,863,850	30,831

Table showing the line catch in the shore fisheries of Maryland in 1901—Continued.

Species.	Somerset.		Wicomico.		Worcester.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Blue-fish .....	660	\$26			8,900	\$440	9,560	\$466
Cat-fish .....			21,550	\$1,229			46,150	2,109
Croakers .....	1,300	13			7,200	182	8,500	195
Drum .....	3,700	70					9,700	70
Flounders .....	160	4			1,650	62	1,810	66
King-fish .....	65	5					65	5
Perch, white .....	500	7					600	10
Perch, yellow .....							200	5
Scup .....					4,000	160	4,000	160
Sea bass .....					50,800	2,540	50,800	2,540
Spots .....	600	13					600	13
Squeteague .....	23,950	695			35,880	980	59,830	1,675
Striped bass .....			784,000	6,040	1,666	60	2,100	183
Crabs, hard .....	714,900	11,761					9,770,793	85,149
Crabs, soft .....	24,000	1,300					268,420	10,464
Turtles .....	300	15	4,350	180			4,650	195
Total .....	770,135	13,909	809,900	6,449	170,096	4,414	10,231,778	103,305

Table showing, by counties, the catch of eels by pots and spears in Maryland in 1901.

Counties.	Eels, fresh.		Eels, salted.		Eels, smoked.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
<b>Vessel fisheries:</b>								
Dorchester .....	57,440	\$2,621					57,440	\$2,621
Talbot .....	3,000	100					3,000	100
Total .....	60,440	2,721					60,440	2,721
<b>Shore fisheries:</b>								
Baltimore .....	3,600	108			1,000	\$120	4,600	228
Calvert .....	13,600	459					13,600	459
Cecil .....	8,000	400					8,000	400
Charles .....	1,300	26					1,300	26
Dorchester .....	21,700	678			100	8	21,800	686
Harford .....	23,400	936					23,400	936
Kent .....	27,300	672	1,700	\$50			29,000	722
Queen Anne .....	13,850	420					13,850	420
St. Mary .....	17,400	185					17,400	185
Somerset .....	3,200	140	500	10			3,700	150
Wicomico .....	28,360	1,174					28,360	1,174
Worcester .....								
Total .....	164,610	6,068	2,200	60	1,100	128	167,910	6,256
Total vessel and shore .....	225,050	8,789	2,200	60	1,100	128	228,350	8,977

Table showing, by counties, the catch by dredges and scrapes in Maryland in 1901.

Species.	Anne Arundel.		Baltimore.		Calvert.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
<b>Vessel fisheries:</b>						
Oysters, natural rock .....	100,807	\$9,535	2,297,050	\$229,515	270,650	\$23,200
<b>Shore fisheries:</b>						
Oysters, natural rock .....	18,200	1,925			127,400	12,510
Total, vessel and shore .....	119,007	11,460	2,297,050	229,515	397,950	35,710

  

Species.	Charles.		Dorchester.		Queen Anne.		St. Mary.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
<b>Vessel fisheries:</b>								
Oysters, natural rock .....	11,200	\$640	3,355,240	\$259,514	5,250	\$300	43,400	\$3,130
Crabs, soft .....			86,333	4,030				
Total .....	11,200	640	3,441,573	263,544	5,250	300	43,400	3,130
<b>Shore fisheries:</b>								
Oysters, natural rock .....	35,000	2,000	1,271,025	93,105			162,250	11,425
Oysters, private buds .....			3,500	250				
Crabs, soft .....			146,500	6,720				
Total .....	35,000	2,000	1,421,025	100,075			162,250	11,425
Total, vessel and shore .....	46,200	2,640	4,862,598	363,619	5,250	300	195,650	14,555

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Table showing the catch by dredges and scrapes in Maryland in 1901—Continued.

Species.	Somerset.		Talbot.		Wicomico.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Vessel fisheries:								
Oysters, natural rock..	3,652,677	\$324,738	957,222	\$74,798	65,975	\$5,400	10,759,371	\$930,770
Oysters, private beds..	7,000	500					7,000	500
Crabs, soft .....	68,033	2,959					154,366	6,989
Total.....	3,727,710	328,197	957,222	74,798	65,975	5,400	10,920,737	938,259
Shore fisheries:								
Oysters, natural rock..	1,384,992	104,183	186,375	13,478	20,300	1,450	3,195,542	240,076
Oysters, private beds..							3,500	250
Crabs, hard .....	54,000	735					54,000	735
Crabs, soft .....	2,224,129	100,300	600	35			2,371,229	107,055
Total.....	3,663,121	205,218	186,975	13,513	20,300	1,450	5,624,271	348,116
Total, vessel and shore.....	7,390,831	533,415	1,144,197	88,311	86,275	6,850	16,545,008	1,286,375

Table showing, by counties, the catch by tongs and rippers in Maryland in 1901.

Species.	Anne Arundel.		Calvert.		Charles.		Dorchester.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Vessel fisheries:								
Oysters, natural rock..	2,800	\$275	75,355	\$6,285			9,800	\$650
Shore fisheries:								
Oysters, natural rock..	4,276,895	339,023	1,232,385	105,405	397,075	\$24,700	3,134,425	212,755
Oysters, private beds..			55,720	5,300	25,900	2,400	570,850	48,832
Terrapin .....	72	99						
Total.....	4,276,967	339,122	1,288,105	110,705	422,975	27,100	3,705,275	261,587
Total, vessel and shore.....	4,279,767	339,397	1,363,460	116,990	422,975	27,100	3,715,075	262,237

Species.	Kent.		Queen Anne.		St. Mary.		Somerset.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Vessel fisheries:								
Oysters, natural rock..					1,400	\$80		
Shore fisheries:								
Oysters, natural rock..	2,878,050	\$168,930	2,465,449	\$144,842	1,783,600	125,375	1,503,460	\$119,265
Oysters, private beds..	10,500	1,458					604,800	56,240
Clams .....							72,600	10,884
Total.....	2,888,550	170,388	2,465,449	144,842	1,783,600	125,375	2,180,860	186,389
Total, vessel and shore.....	2,888,550	170,388	2,465,449	144,842	1,785,000	125,455	2,180,860	186,389

Species.	Talbot.		Wicomico.		Worcester.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Vessel fisheries:								
Oysters, natural rock..	1,750	\$150					91,105	\$7,440
Shore fisheries:								
Oysters, natural rock..	2,772,700	184,450	1,781,780	\$127,270	19,880	\$1,473	22,245,699	1,553,488
Oysters, private beds..	2,100	760	1,162,700	78,245	1,057,140	105,869	3,489,710	298,494
Clams .....					35,000	3,500	107,600	14,384
Terrapin .....							72	99
Total.....	2,774,800	184,600	2,944,480	205,515	1,112,020	110,842	25,843,081	1,866,465
Total, vessel and shore.....	2,776,550	184,750	2,944,480	205,515	1,112,020	110,842	25,934,186	1,873,905

The following table shows the extent and value of the oyster fishery of Maryland during the season of 1900-1901:

Table showing, by counties, the extent of the oyster fishery of Maryland for the season of 1900-1901.

Items.	Anne Arundel.		Baltimore.		Calvert.		Charles.		Dorchester.	
	No.	Value.	No.	Value.	No.	Value.	No.	Val.	No.	Value.
Persons employed:										
On vessels fishing.....	61		1,257		209		6		1,789	
On vessels transporting.....	127		243		82		12		148	
In shore or boat fisheries.....	1,932				1,095		349		2,120	
Shoresmen.....	290		7,936		5		16		990	
Total.....	2,410		9,436		1,391		383		5,058	
Vessels fishing.....	13	\$5,750	146	\$82,450	43	\$22,300	1	\$400	330	\$153,115
Tonnage.....	119		3,550		356		9		2,590	
Outfit.....		1,625		58,005		6,935		275		50,667
Vessels transporting.....	57	\$5,800	68	\$5,350	24	\$28,050	4	\$1,950	46	\$5,850
Tonnage.....	902		2,683		712		91		1,163	
Outfit.....		5,571		15,470		4,015		630		7,134
Boats.....	791	\$7,735			463	\$28,145	178	\$5,760	1,206	\$87,245
Apparatus—vessel fisheries:										
Dredges.....	30	557	584	7,085	149	2,075	2	80	1,291	19,458
Tongs.....	9	54			28	344			13	85
Apparatus—shore fisheries:										
Dredges.....	16	255			94	1,470	4	100	924	7,964
Tongs, etc.....	1,585	12,362			663	4,597	332	1,224	2,193	13,896
Shore and accessory property.....		25,500		1,725,440				1,150		60,413
Cash capital.....		19,500		1,901,350				600		91,350
Total investment.....		164,609		3,886,150		97,931		12,169		547,177
Products.	Bush.	Value.	Bush.	Value.	Bush.	Value.	Bush.	Val.	Bush.	Value.
Vessel fisheries:										
Dredge catch (natural rock).....	14,401	\$9,535	328,150	\$229,515	38,650	\$23,200	1,600	\$640	479,320	\$259,514
Tong catch (natural rock).....	400	275			10,765	6,286			1,400	650
Total, vessel catch.....	14,801	9,810	328,150	229,515	49,415	29,485	1,600	640	480,720	260,164
Shore fisheries:										
Dredge catch (natural rock).....	2,600	1,925			18,200	12,510	5,000	2,000	182,075	93,355
Tong catch (natural rock).....	610,985	339,023			176,055	105,405	56,725	24,700	447,775	212,755
Tong catch (private beds).....					7,960	5,300	3,700	2,400	81,550	48,832
Total, shore catch.....	613,585	340,948			202,215	123,215	65,425	29,100	711,400	354,942
Total, vessel and shore catch.....	628,386	350,758	328,150	229,515	251,630	152,700	67,025	29,740	1,192,120	615,106

<sup>a</sup> Includes 500 bushels, valued at \$250, taken from private beds.

NOTE.—A few oysters were taken in the shore fisheries by nippers, and in one locality some were taken by scoop nets, but the apparatus and catch are combined under tongs.

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Table showing, by counties, the extent of the oyster fishery of Maryland for the season of 1900-1901—Continued.

Items.	Kent.		Queen Anne.		St. Mary.		Somerset.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Persons employed:								
On vessels fishing.....			2		36		1,885	
On vessels transporting.....	69		36		69		156	
In shore or boat fisheries.....	999		1,217		1,059		2,064	
Shoresmen.....							1,252	
Total.....	1,068		1,255		1,164		5,356	
Vessels fishing.....			1	\$100	6	\$2,600	335	\$188,215
Tonnage.....			6		45		3,347	
Outfit.....				85		1,195		57,608
Vessels transporting.....	32	\$18,050	16	10,900	23	14,100	50	56,425
Tonnage.....	640		191		390		1,313	
Outfit.....		3,345		2,290		3,045		7,506
Boats.....	500	32,910	609	32,335	550	33,325	1,054	97,925
Apparatus—vessel fisheries:								
Dredges.....			4	20	14	265	1,208	18,180
Tongs.....					1	14		
Apparatus—shore fisheries:								
Dredges.....					75	393	932	9,096
Tongs, etc.....	1,044	8,435	2,255	11,245	975	5,028	1,473	8,988
Shore and accessory property.....		1,950						63,618
Cash capital.....								102,800
Total investment.....		64,690		56,975		59,965		610,361
Products.	Bush.	Value.	Bush.	Value.	Bush.	Value.	Bush.	Value.
Vessel fisheries:								
Dredge catch (natural rock).....			750	\$300	6,200	\$3,130	522,811	\$325,238
Tong catch (natural rock).....					200	80		
Total vessel catch.....			750	300	6,400	3,210	522,811	325,238
Shore fisheries:								
Dredge catch (natural rock).....					21,750	11,425	197,856	104,183
Tong catch (natural rock).....	411,150	\$168,930	352,207	144,842	254,800	125,375	215,780	119,765
Tong catch (private beds).....	1,500	1,458					86,400	56,240
Total shore catch.....	412,650	170,388	352,207	144,842	276,550	136,800	500,036	280,188
Total vessel and shore catch.....	412,650	170,388	352,957	145,142	282,950	140,010	1,022,847	605,426

<sup>a</sup> Includes 1,000 bushels, valued at \$500, taken from private beds.

Table showing, by counties, the extent of the oyster fishery of Maryland for the season of 1900-1901—Continued.

Items.	Talbot.		Wicomico.		Worcester.		Total.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Persons employed:								
On vessels fishing.....	364		40				5,649	
On vessels transporting.....	70		65		37		1,103	
In shore or boat fisheries.....	1,461		761		236		13,293	
Shoremen.....	765		223		15		11,498	
Total.....	2,660		1,079		288		31,543	
Vessels fishing.....	65	\$36,400	7	\$3,275			947	\$494,605
Tonnage.....	564		51				10,637	
Outfit.....		10,962		940				188,197
Vessels transporting.....	27	20,125	18	20,550	15	\$13,550	379	370,700
Tonnage.....	480		395		269		9,229	
Outfit.....		4,260		2,720		822		56,808
Boats.....	792	51,530	184	19,650	226		6,548	454,872
Apparatus—vessel fisheries:								
Dredges.....	260	3,660	28	350			3,570	51,730
Tongs.....	3	15					54	512
Apparatus—shore fisheries:								
Dredges.....	120	1,138	18	160			2,183	20,576
Tongs, etc.....	2,302	11,478	761	4,850	231	1,158	13,914	83,261
Shore and accessory property.....		40,035		3,900		12,700		1,985,706
Cash capital.....		36,000		10,000				2,161,600
Total investment.....		215,603		66,395		36,542		5,818,567
Products.	Bush.	Value.	Bush.	Value.	Bush.	Value.	Bush.	Value.
Vessel fisheries:								
Dredge catch (natural rock).....	136,746	\$74,798	9,425	\$5,400			1,538,053	\$931,270
Tong catch (natural rock).....	250	150					13,015	7,440
Total vessel catch.....	136,996	74,948	9,425	5,400			1,551,068	938,710
Shore fisheries:								
Dredge catch (natural rock).....	26,625	13,478	2,900	1,450			457,006	240,326
Tong catch (natural rock).....	396,100	184,460	254,540	127,270	2,840	\$1,473	3,178,957	1,553,988
Tong catch (private beds).....	300	150	166,100	78,245	151,020	105,869	498,580	298,494
Total shore catch.....	423,025	198,078	423,540	206,965	153,860	107,342	4,134,493	2,092,808
Total vessel and shore catch.....	560,021	273,026	432,965	212,365	153,860	107,342	5,685,561	3,031,518

The following is a summary of the crab fishery of Maryland in 1901:

Table showing, by counties, the extent of the crab fishery of Maryland in 1901.

Items.	Anne Arundel.		Baltimore.		Calvert.		Charles.		Dorchester.	
	No.	Value.	No.	Val.	No.	Val.	No.	Val.	No.	Value.
Persons engaged:										
Soft crabbers.....	157		32		100				435	
Hard crabbers.....	96		2		36		18		242	
Shoremen.....	123		16		3				65	
On vessels transporting crabs.....									1	
Total a.....	376		50		139		18		743	
Vessels soft crabbing.....									35	\$12,625
Tonnage.....									224	
Outfit.....										800
Vessels transporting crabs.....									1	100
Tonnage.....									8	
Outfit.....										10
Boats, soft crabbing.....	134	\$1,559	16	\$160	70	\$560			296	10,485
Boats, hard crabbing.....	96	2,089	1	14	36	330	18	\$144	214	3,705
Total a.....	230	3,648	17	174	106	890	18	144	510	13,590

a Exclusive of duplication.



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Table showing, by counties, the extent of the crab fishery of Maryland in 1901—Continued.

Items.	Anne Arundel.		Baltimore.		Calvert.		Charles.		Dorchester.	
	No.	Value.	No.	Val.	No.	Val.	No.	Val.	No.	Value.
Apparatus used in soft crabbing:										
Scrapes									337	\$1,141
Scoop nets	157	\$83			100	\$20			298	104
Seines	35	105	16	\$432						
Apparatus used in hard crabbing:										
Trot lines	40	470	2	1	36	131	18	\$45	227	810
Shore and accessory property		4,905		1,042		428				445
Cash capital		1,400				300				3,090
Total investment		10,611		1,649		1,769		189		19,180
Soft-crab catch by—										
Scrapes									698,500	10,750
Scoop nets	373,660	10,704			180,000	2,250			449,100	6,835
Seines	139,440	3,704	48,000	1,200						
Trot lines <sup>a</sup>	800	27	864	53	798	1			409,398	5,940
Total	513,800	14,435	48,864	1,258	180,798	2,251			1,556,998	23,525
Hard-crab catch by trot lines	3,487,695	8,794	1,440	12	543,999	884	630,000	2,100	4,992,999	18,337
Total catch soft and hard crabs	4,001,495	23,229	50,304	1,270	724,797	3,135	630,000	2,100	6,549,997	41,862

Items.	Kent.		Queen Anne.		St. Mary.		Somerset.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Persons engaged:								
Soft crabbers	26				20		2,164	
Hard crabbers	115		39		60		89	
Shoresmen							250	
On vessels transporting crabs							20	
Total <sup>b</sup>	135		129		80		2,462	
Vessels, soft crabbing							20	\$7,375
Tonnage							113	
Outfit								500
Vessels transporting crabs							12	3,500
Tonnage							80	
Outfit								300
Boats soft crabbing	13	\$135	25	\$198	15	\$140	2,340	92,555
Boats hard crabbing	105	1,045	93	558	60	590	90	1,045
Total <sup>b</sup>	112	1,120	115	735	75	730	2,430	93,600
Apparatus used in soft crabbing:								
Scrapes							2,492	9,097
Scoop nets	23	4	35	10	50	13	1,443	562
Seines	12	38	17	89				
Apparatus used in hard crabbing:								
Trot lines	105	303	93	197	60	147	90	294
Shore and accessory property		115		80		30		27,414
Cash capital								81,150
Total investment		1,580		1,111		920		212,117
Soft-crab catch by—								
Scrapes							6,876,486	103,259
Scoop nets	8,700	175	81,200	685	15,075	419	3,156,210	49,378
Seines	20,120	430	66,498	1,425				
Trot lines	24,000	700	20,400	360			72,000	1,300
Total	52,820	1,805	118,098	2,470	15,075	419	10,104,696	153,937
Hard-crab catch by trot lines	1,174,000	2,535	2,073,498	4,908	592,500	1,976	2,306,700	12,496
Total catch soft and hard crabs	1,226,820	3,840	2,191,696	7,378	607,575	2,394	12,411,396	166,433

<sup>a</sup> These lines are used primarily for hard crabs, the soft or shedding crabs being taken with the hard crabs as "doubles."

<sup>b</sup> Exclusive of duplication.

Table showing, by counties, the extent of the crab fishery of Maryland in 1901—Continued.

Items.	Talbot.		Wicomico.		Worcester.		Total.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Persons engaged:								
Soft crabbers.....	34						3,007	
Hard crabbers.....	403		72		2		1,228	
Shoemen.....	615		158				1,230	
On vessels transporting crabs.....			2				23	
Total <sup>a</sup> .....	1,022		232		2		5,388	
Vessels soft crabbing.....							55	\$20,000
Tonnage.....							337	
Outfit.....								1,300
Vessels transporting crabs.....			1	\$400			14	4,000
Tonnage.....			5				93	
Outfit.....				10				320
Boats soft crabbing.....	17	\$760					2,926	106,552
Boats hard crabbing.....	393	10,684	72	502	2	\$20	1,180	20,126
Total <sup>a</sup> .....	395	10,694	72	502	2	20	4,082	125,847
Apparatus used in soft crabbing:								
Scrapes.....	2	9					2,531	10,247
Scoop nets.....	30	16					2,136	811
Seines.....	15	37					95	701
Apparatus used in hard crabbing:								
Trot lines.....	393	1,929	72	143	2	4	1,138	4,474
Shore and accessory property.....		29,250		4,320				68,029
Cash capital.....		15,925		10,000				111,865
Total investment.....		57,859		14,965		24		321,974
Soft-crab catch by—								
Scrapes.....	1,800	35					7,576,786	114,044
Scoop nets.....	16,299	340					4,230,144	70,786
Seines.....	24,488	510					298,556	7,269
Trot lines <sup>b</sup> .....	277,000	2,078					805,260	10,464
Total.....	319,597	2,963					12,910,746	202,563
Hard-crab catch by trot lines	11,314,550	28,753	2,352,000	5,040	4,998	50	20,474,379	85,884
Total catch, soft and hard crabs.....	11,634,147	31,716	2,352,000	5,040	4,998	50	42,385,125	288,447

<sup>a</sup> Exclusive of duplication.

<sup>b</sup> These lines are used primarily for hard crabs, the soft or shedding crabs being taken with the hard crabs as "doublers."

<sup>c</sup> Includes 95,006 hard crabs, valued at \$235, taken in crab scrapes, and 67,000 hard crabs, valued at \$500, taken while dredging for oysters.

THE WHOLESALE FISHERY TRADE.

In the quantity of oysters handled Baltimore ranks first not only in the State, but in the entire country. This is largely due to its accessibility from the oyster grounds and its transportation facilities. So important is the shucking and packing trade of Baltimore that during the oyster season the leading railroads send out daily trains, several cars in length, loaded entirely with shucked oysters, which are widely distributed throughout the Western States. Many dealers, however, are finding it cheaper to have their oysters shucked in small towns contiguous to the oyster-grounds and shipped to Baltimore by steamer. This is also the case with firms engaged in the crab-meat industry. While Baltimore handles the larger portion of the State's oyster catch, owing to direct connection of towns on the eastern shore

of the State with New York and Philadelphia, these two cities receive large shipments of fish, the demand being greater and the prices higher in many cases than in Baltimore.

The burning of oyster shells for lime is an industry of some importance in Baltimore, the product being used largely as a fertilizer. The use of crushed and ground shells as a food for fowls is also growing. Owing to the lessening quantity and higher prices of oysters the canning industry of this city is decreasing in value, several large firms having moved to other States. Next to Baltimore the largest quantities of oysters are handled at Cambridge, Crisfield, and Oxford, many shucking houses being located at these places. Crisfield still continues to be the most important crab-shipping point in the United States and, together with Deal Island, handles practically the entire soft-crab catch of the State. On account of the small capital necessary, the number of crab firms at Crisfield is increasing yearly and is no doubt responsible for the low prices received by the fishermen, as these firms, in their endeavors to get contracts with commission houses in the larger cities, are compelled to underbid competitors in fixing prices for the following season.

Hard crabs are handled principally at Oxford, St. Michaels and vicinity, Tilghman Island, and Cambridge. With the exception of the latter, these places handle the crab meat almost entirely.

The following table shows by localities the number and value of establishments, cash capital employed, and number of persons engaged in the wholesale fishery trade of Maryland in 1901:

*Table showing the wholesale fishery trade of Maryland in 1901.*

Localities.	Establishments.		Cash capital.	Number of persons engaged.
	No.	Value.		
Annapolis.....	6	\$26,735	\$19,800	375
Baltimore.....	104	1,795,940	1,968,350	7,972
St. Michaels, Claiborne, and Royal Oak.....	8	12,605	10,800	241
Tilghman Island.....	6	8,685	9,100	218
Oxford and Bellevue.....	16	31,048	20,875	591
Crisfield, Lawsonia, and Ewell.....	43	80,793	114,600	814
Deal Island and Chance.....	13	6,940	4,550	126
Fairmount and Oriole.....	9	11,800	14,700	243
Marion and Hopewell.....	6	9,780	13,400	205
Tulls Corner and Shelltown.....	2	3,825	3,500	104
Cambridge and Secretary.....	30	60,527	91,340	1,003
Holland Island and Elliott.....	2	905	1,000	20
Wingate and Vienna.....	2	865	1,000	20
Havre de Grace and Perryville.....	3	4,900	3,000	28
Bivalve and Tyaskin.....	4	3,970	14,500	287
Whitehaven and Nanticoke.....	2	2,250	5,500	94
Solomons and Benedict.....	2	878	900	17
Total.....	258	2,061,946	2,296,915	12,358

## FISHERIES OF VIRGINIA.

The fisheries of Virginia, as compared with those of the other Middle Atlantic States, ranked first in the quantity of products in 1901.

The last two canvasses (1897 and 1901) of the fisheries of this State by the United States Fish Commission present some interesting comparisons. The total capital invested in shore property, vessels, fishing apparatus, and cash capital in 1897 amounted to \$2,891,536, and in 1901 to \$3,633,104, an increase of \$741,568. The number of fishermen and shore employees in 1897 was 28,277, and in 1901, 29,325, an increase of 1,048. Of the employees in 1901, 5,565 were on vessels, 18,492 on small boats in shore fisheries, and 5,268 in wholesale fish markets, menhaden factories, and oyster canneries.

The products in 1901 as compared with 1897 show an increase of 861,599 bushels in the quantity and of \$881,773 in the value of the oyster catch. In the other fishery products there has been an increase of 94,158,216 pounds and of \$552,113. The total yield and value of the oyster fishery in 1897 was 7,023,848 bushels, of \$2,041,683 value; in 1901, 7,885,447 bushels, of \$2,923,456 value. The fishery products, exclusive of oysters, in 1897 amounted to 228,827,013 pounds, of \$1,137,815 value; in 1901, to 322,985,229 pounds, of \$1,689,928 value.

The greater part of the fish are caught by pound nets, gill nets, and haul seines, in each of which, since 1897, there has been a material increase in number. Pound nets have increased from 1,250 to 1,590, gill nets from 9,307 to 10,437, and haul seines from 107 to 257.

Alewives, one of the most abundant food species, have increased in both the quantity and value of the catch, which was 13,689,510 pounds in 1897, valued at \$70,841, and 13,913,444 pounds in 1901, valued at \$115,424. There was an increase of 905,690 pounds in the squeteague taken and of \$38,026 in the value.

The shad catch is an important feature of the fisheries of Virginia, the most of it being taken in pound nets, of which many are owned and worked by planters who farm near the fishing-grounds. The farmer fishermen take up their pound nets at the close of the shad season. The shad catch of 1901 shows a large decrease from that of 1897, which is accounted for by the unusually cold and backward spring. The season at its best is short, and in 1901 the fish were late in arriving, after which much time was lost from the weather being unfavorable for fishing. The shad catch in 1897 amounted to 11,529,474 pounds, valued at \$304,448, and in 1901 to 6,972,212 pounds, valued at \$366,203, a decrease of 4,557,262 pounds in quantity and an increase of \$38,245 in value, the better price received by the fishermen in 1901 more than compensating for the reduced catch. The shad in 1901 were extra large and of fine quality, and found a ready market at the seaside resorts, as well as in the northern markets, the demand being steady and prices satisfactory.

Crabs continue plentiful, with an increasing demand for those shipped alive, for cooked meat picked from the shell and shipped in bulk, and for that hermetically sealed in tin cans, the latter being distributed as far as the Pacific coast. The crab catch in 1897 amounted to 6,399,514 pounds, valued at \$68,245, and in 1901 to 7,401,701 pounds, of \$118,835 value, an increase of 1,002,187 pounds and of \$50,590.

Oysters comprise more than three-fifths of the value of the fisheries of Virginia. The oyster season from September 1900 to May 1901 was the most successful for many years. The yield of the oyster fishery of Virginia in 1891 was 6,074,025 bushels, of \$2,524,348 value; in 1897, 7,023,848 bushels, of \$2,041,683 value; and in 1901, 7,885,447 bushels, of \$2,923,357 value. The product of market oysters in 1901 was 2,991,144 bushels from natural rock or native beds and 3,076,525 bushels from private beds, and of seed oysters 1,817,778 bushels were taken from their native beds and replanted on private beds.

Yearly the area of native oyster grounds decreases, as a result of overworking the beds and the abandonment of those that have become unproductive. As soon as a bed is depleted of oysters it is available for rent by any citizen at \$1 per acre per year. This has proved of much benefit to the State, both on account of the revenue derived and in the reestablishment of beds upon a commercial basis. Grounds once noted for an abundance of fine oysters were, from overworking, cleaned of oysters and abandoned, after which they were leased from the State by private parties who prepared and reseeded the grounds, watched and cared for them until they equaled or exceeded their former abundance. Others leased land up the rivers on bottoms that had never been known to have an oyster on them; seed oysters were planted on these grounds, and new areas of good oyster beds resulted.

In some cases leased lands have been used only for a short bedding of market oysters that had been taken from their native beds. This gave the owner protection during the few months the oysters remained on the private beds and fattened. In case of an overstocked market with much reduced prices, many cargoes are returned and planted on private beds. These oysters having been counted as from natural beds were not again counted from private beds, which accounts in some cases for the entire absence or very small quantity of oysters from private beds in counties that are known to have leased oyster lands.

#### ENDLESS-CHAIN SCRAPER USED IN OYSTER-SHUCKING ESTABLISHMENTS.

Oysters are brought in vessels from the oyster beds to the plants of the wholesale dealers and there unloaded into storerooms adjoining the shucking rooms on the wharf. From the latter they are carried to the shucking benches. Shucking benches extend the entire length of the long, low building, some 100 to 200 feet long, there often being several of the tables with an aisle between. Each of these long tables has partitions dividing it into stalls just large enough for the oyster

opener to work to advantage. The opener picks up an oyster from the pile before him, placing its edge on an upright pin, and with a small hammer breaks off the tip end, then inserting his oyster knife with a quick motion, flips off the top shell which drops down a spout by his side; another quick motion with the knife and the oyster is thrown from the shell into a measure, the shell following the first one down the spout. From the chute the shells fall into an oval-shaped trough that extends under the entire length of the long table. An endless chain passes over the trough to which, every 2 or 3 feet, is attached an iron scraper that scrapes the shells as they fall from the hands of the opener. Arriving at the end of the table, the shells fall into another trough running at right angles, which is also provided with an endless chain with scrapers that passes on outside of the building and up an incline of 50 feet in height, out on an extended arm some 50 feet, around which it returns and continues its endless course. The extended arm at the top is provided with openings through which a continuous stream of shells falls so long as the 150 openers are at work. When one pile of shells reaches up to the 50-foot level the first opening is closed, the shells falling through the next opening, starting another pile from the ground. The endless chain is 1,000 feet long and is driven by a 45-horsepower steam engine. This appliance was first used in the oyster industry during the season of 1899 and 1900, removing 125,000 bushels of shells.

In the season of 1900-1901, 190,000 bushels of shells represented the bulk of the season's work of opened oysters by one firm. At the close of the season these shells were all removed and scattered over the private oyster beds of the firm, for the spat or young oysters to catch on soon after hatching out.

For many years the removal of the large amount of shells was quite a tax on the business. Shells were gladly given away to anyone who would remove them. Then as they came more in demand for road building, the filling of low lands, for making lime, and other purposes, a small price of 1 cent or less a bushel was paid. As the leasing of land for oyster culture increased, the shells came largely in demand for planting on oyster beds and were so used for several years, the price advancing to 2 cents a bushel. During the years of depression their use was discontinued. With the return of more prosperous years and a large increase of private beds, an active demand for shells to plant called for nearly all the supply, at prices ranging from 3 to 4 cents a bushel, adding many thousands of dollars to the receipts of the dealers.

#### FISHING WATERS AND SEASONS.

The State of Virginia is bountifully supplied with waters that produce many species of food fish. Beginning on the south near the State line of North Carolina, pound nets and haul seines are used all

along the beach to Cape Henry and in the Chesapeake Bay and Potomac River, as well as on the eastern shore of Virginia in Accomac and Northampton counties. Pound nets are set in the early spring as soon as the weather will permit, but most of them are taken up when the run of shad is passed. A few are again fished for a short time in the fall, and others are fished all the season from March to November, the length of seasons depending on weather conditions. Much time and property are often lost from unfavorable weather. Haul seines are used during the same time mentioned for pound nets. These are worked by hand, horses, and in a few cases by steam.

The several navigable streams, including the Nansemond, James, York, Rappahannock, and Potomac rivers, with their numerous branches, creeks, and bays, are nearly all fished, more or less, for shad, and but very little except during the shad season. For a long time the rivers have no doubt been overfished, being lined with stake gill nets, haul seines, and a few other appliances of capture. So few of the local species remain that it does not pay the fishermen to follow the business after the run of shad is over. Citizens living along the upper tide waters now report very few, if any, shad seen in these waters, which formerly were so plentifully supplied with them. The same conditions obtain as to alewives and all other migratory fish.

It has been noted that the fishery products of Virginia for 1901 show quite an increase over those of 1897. This may be partly accounted for by an increased quantity of fishing apparatus in the waters of Chesapeake Bay and the near shore waters of the Atlantic Ocean. The number of pound nets increases every year, and they are placed farther from shore in deeper water.

While the river fisheries have to a large extent become exhausted, or at least unprofitable, their place has been filled by the planting of oysters on private beds. A large portion of the beds of the rivers before mentioned are now leased from the State and planted with oysters as far up as the waters are at all suitable. Much of this oyster ground was never known to have had an oyster on it, while other sections were abandoned oyster beds. Nearly all of these private oyster beds have proved financially successful, except when excessive rains have freshened the water and covered the oyster beds with silt, killing thousands of bushels of oysters. The two eastern counties of Virginia—Northampton and Accomac—have almost continuous shore lines of fishing-grounds in the waters of Chesapeake Bay and the Atlantic Ocean. The representative catches of this district embrace menhaden, blue-fish, alewives, crabs, and oysters, with smaller quantities of several other species.

The three tables which follow show the number of persons employed, the number and value of vessels, boats, and apparatus of capture, the value of shore and accessory property, the amount of cash capital, and the quantity and value of products in the fisheries of Virginia in 1901.

Persons employed.

How engaged.	No.
In vessel fisheries.....	4,480
On vessels transporting.....	1,185
In shore or boat fisheries.....	18,492
Shoemen.....	5,268
<b>Total.....</b>	<b>29,325</b>

Table of apparatus and capital.

Items.	No.	Value.	Items.	No.	Value.
Vessels fishing.....	702	\$529,588	Apparatus—shore fisheries:		
Tonnage.....	8,245		Scines.....	257	\$41,135
Outfit.....		241,106	Pound nets.....	1,590	313,616
Vessels transporting.....	384	276,320	Gill nets.....	10,437	50,035
Tonnage.....	7,338		Fyke nets.....	729	7,444
Outfit.....		50,317	Lines.....		3,579
Boats.....	12,174	589,757	Eel pots and spears.....	579	585
Shore and accessory property.....		869,624	Weirs and slat traps.....	15	500
Cash capital.....		547,000	Oyster dredges.....	525	7,341
Apparatus—vessel fisheries:			Oyster tongs.....	9,478	42,488
Scines.....	54	37,395	Crab scrapes.....	933	2,256
Oyster dredges.....	435	9,315	Clam tongs, rakes, etc.....	1,976	5,574
Oyster tongs.....	1,687	7,318	Minor apparatus.....		255
Clam tongs, rakes, etc.....	359	566	<b>Total.....</b>		<b>3,633,104</b>

Table of products.

Species.	Lbs.	Value.	Species.	Lbs.	Value.
Alewives, fresh.....	13,633,444	\$110,524	Shad.....	6,972,212	\$366,203
Alewives, salted.....	280,000	4,900	Sheepshead.....	8,430	348
Black bass.....	199,439	16,735	Spanish mackerel.....	520,142	44,017
Blue-fish.....	755,085	25,609	Spots.....	806,827	24,306
Bonito.....	14,160	537	Squeteague.....	7,431,496	127,993
Butter-fish.....	1,071,860	28,551	Striped bass.....	527,507	45,177
Carp.....	127,930	2,940	Sturgeon.....	183,023	12,161
Cat-fish.....	820,325	23,560	Caviar.....	18,318	10,204
Crevalle.....	468,791	13,533	Suckers.....	48,165	927
Cod.....	100	4	Sun-fish.....	4,000	95
Croakers.....	3,937,168	53,493	Tarpon.....	75	1
Drum.....	228,172	2,707	Whiting.....	600	12
Eels.....	105,815	4,430	Crabs, hard.....	a6,113,277	52,863
Flounders.....	209,394	6,253	Crabs, soft.....	b1,288,424	65,972
Gizzard shad.....	5,250	100	Prawn.....	2,850	142
Hickory shad.....	448,600	11,427	Terrapin.....	5,130	1,444
Hog-fish.....	44,892	3,586	Turtles.....	56,897	1,444
King-fish.....	91,122	3,436	Frogs.....	15,377	1,283
Menhaden.....	273,493,799	433,109	Clams, hard.....	c1,764,680	134,777
Moon-fish.....	70,400	2,161	Market oysters, natural rock.....	d20,938,008	1,145,169
Mullet.....	190,700	5,420	Market oysters, private beds.....	e21,535,675	1,476,746
Perch, white.....	781,925	32,582	Seed oysters, natural rock.....	f12,724,446	301,541
Perch, yellow.....	158,939	4,472			
Pike.....	32,103	2,848			
Pompano.....	96,186	7,549			
Sea bass.....	2,200	93	* Total.....	378,183,358	4,618,384

a 18,339,831 in number.  
b 3,865,272 in number.

c 220,585 bushels.  
d 2,991,144 bushels.

e 3,076,525 bushels.  
f 1,817,778 bushels.

The hard and soft crabs, clams, and oysters above shown in pounds are given by number and bushels in the following table:

Products.	No.	Value.
Crabs, hard.....	18,339,831	\$52,863
Crabs, soft.....	3,865,272	65,972
Clams..... bushels.....	220,585	134,777
Market oysters, natural rocks..... do.....	2,991,144	1,145,169
Market oysters, private beds..... do.....	3,076,525	1,476,746
Seed oysters, natural rocks..... do.....	1,817,778	301,541



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STATISTICS BY COUNTIES.

In 1897 the fisheries of Virginia were carried on in 34 counties, but since that time they have ceased to be of commercial importance in Dinwiddie and Hanover counties. The following tables give detailed statistics of the fisheries of each county for the year 1901:

Table showing the number of persons employed in the fisheries of Virginia in 1901.

Counties.	In vessel fisheries.	On vessels transporting.	In shore or boat fisheries.	Shoreshmen.	Total.
Accomac	1,234	129	2,615	447	4,425
Alexandria		45	120		165
Caroline			16		16
Charles City			248		248
Chesterfield			86		86
Elizabeth City	79	63	501	516	1,159
Essex	6	10	297	30	343
Fairfax			165	10	175
Glorcester	346	73	967	84	1,470
Henrico			146		146
Isle of Wight	141	7	299		447
James City		4	80		84
King and Queen		3	264		267
King George	8		252	2	262
King William	110	62	256	234	662
Lancaster	405	89	1,773	837	3,104
Mathews	30	111	1,639		1,780
Middlesex	53	121	1,639	52	1,865
Nansemond	228	21	403	124	776
New Kent			271		271
Norfolk	628	106	718	1,959	3,411
Northampton	236	88	829	370	1,523
Northumberland	618	49	1,226	350	2,143
Princess Anne			585	52	637
Prince George			128		128
Prince William		2	135	6	142
Richmond	4	24	476	25	529
Stafford		3	151	10	164
Surry			43		43
Warwick	100	27	346		478
Westmoreland	151	12	394	81	588
York	153	86	1,424	130	1,793
Total	4,430	1,135	18,492	5,268	29,825

Table showing, by counties, the vessels, boats, apparatus, and shore property employed in the fisheries of Virginia in 1901.

Items.	Accomac.		Alexan- dria.		Caroline.		Charles City.		Chester- field.		Elizabeth City.	
	No.	Value.	No.	Value.	No.	Val.	No.	Value.	No.	Val.	No.	Value.
Vessels fishing	163	\$110,021									13	\$18,500
Tonnage	1,677										171	
Outfit		38,280										6,345
Vessels transporting	42	40,350	16	\$7,100							15	9,200
Tonnage	799		173								374	
Outfit		4,146		2,350								3,375
Boats	2,927	187,585	70	2,135	13	\$130	146	\$1,851	37	\$795	272	14,410
Apparatus—vessel fisheries:												
Seines	10	5,645										
Oyster dredges	262	4,485									22	795
Oyster tongs	294	1,494									42	168
Clam tongs, rakes, etc	294	504										
Apparatus—shore fisheries:												
Seines	33	1,115	4	800	1	20	5	1,825	6	300	2	800
Found nets	128	20,140			9	900					103	80,150
Gill nets	21	251	47	3,255	5	100	143	3,701	48	1,365	1	30
Fyke nets	3	35	72	720								
Lines	16	118						10				800
Eel pots and spears		10										
Oyster dredges	330	5,219										
Oyster tongs	1,647	8,469									213	962
Crab scrapes	933	2,255										
Clam tongs, rakes, etc	1,273	4,129										
Minor apparatus		30										
Shore and accessory property		74,815		565		50		1,825		525		71,165
Cash capital		63,300										61,000
Total		572,397		16,925		1,200		9,212		2,985		217,200

Vessels, boats, apparatus, etc., of the fisheries of Virginia in 1901—Continued.

Items.	Essex.		Fairfax.		Gloucester.		Henrico.		Isle of Wight.		James City.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Val.
Vessels fishing					74	\$27,875			35	\$11,175		
Tonnage					768				346			
Outfit						16,925				9,085		
Vessels transporting	4	\$1,625			27	18,500			3	900	1	\$600
Tonnage	66				615				45		81	
Outfit		475				3,455				825		200
Boats	196	4,275	61	\$3,633	688	25,516	73	\$1,619	190	3,860	47	1,004
Apparatus—vessel fisheries:												
Oyster dredges					2	100						
Oyster tongs					228	912			94	376		
Apparatus—shore fisheries:												
Seines	1	200	4	8,450					2	100	1	20
Pound nets	37	3,575	40	4,900	172	34,400					2	200
Gill nets	875	1,601	17	1,020	540	810	97	2,300	2,480	5,532	724	1,936
Fyke nets	8	80	55	1,075	116	1,100	100	200	24	276	40	400
Lines		14				180					39	84
Eel pots and spears	73	110							50	50	100	100
Weirs and slat traps							6	120				
Oyster tongs	199	696			784	2,836			140	560	20	80
Shore and accessory property		2,790		3,860		4,500		375		2,150		380
Total		15,441		22,938		137,169		4,614		34,408		4,954

Items.	Nansemond.		New Kent.		Norfolk.		Northampton.		Northumberland.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels fishing	50	\$24,300			112	\$38,775	43	\$41,817	57	\$126,550
Tonnage	486				1,115		465		1,215	
Outfit		13,360				39,830		17,023		38,432
Vessels transporting	10	6,250			38	30,200	37	27,170	15	10,700
Tonnage	100				678		462		362	
Outfit		1,065				5,360		3,471		1,930
Boats	189	4,435	164	\$2,484	339	14,750	685	29,004	791	36,765
Apparatus—vessel fisheries:										
Seines							6	5,650	20	13,700
Oyster dredges									91	1,586
Oyster tongs	152	608			431	1,780	105	458		
Clam tongs, rakes, etc.							65	52		
Apparatus—shore fisheries:										
Seines	1	200	5	1,170	6	6,300	4	565	1	175
Pound nets	5	200			23	15,725	16	11,600	299	67,961
Gill nets	16	112	525	3,384	569	1,895				
Fyke nets	6	120	16	160			1	10		
Lines		10		15		291		298		89
Eel pots and spears									100	75
Weirs and slat traps	2	30								
Oyster dredges									86	832
Oyster tongs	206	824	28	112	326	1,304	352	1,534	664	2,077
Clam tongs, rakes, etc.					15	60	219	172		
Minor apparatus		60				16		16		46
Shore and accessory property		10,550		965		300,060		91,314		85,800
Cash capital		9,000				194,000		38,900		53,800
Total		71,124		8,290		650,296		269,059		440,506

Items.	Princess Anne.		Prince George.		Prince William.		Richmond.		Stafford.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels fishing							1	\$300		
Tonnage							14			
Outfit								150		
Vessels transporting					1	\$300	8	5,700	1	\$300
Tonnage					8		165		6	
Outfit						100		975		150
Boats	345	\$4,515	63	\$1,020	45	2,219	277	6,590	63	2,480
Apparatus—vessel fisheries:										
Oyster tongs							4	16		
Apparatus—shore fisheries:										
Seines	126	5,070	1	75	10	4,225			10	3,875
Pound nets	13	16,200			11	1,225	94	9,050	78	4,660
Gill nets	210	6,840	73	2,381	9	600	2,060	3,193	6	500
Fyke nets					25	500			67	680
Lines		230		5		3				
Eel pots and spears	240	240								
Oyster tongs	125	375					289	1,164		
Minor apparatus				15						10
Shore and accessory property		9,060		500		1,660		4,065		2,960
Total		42,520		3,996		10,832		31,203		15,395

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Vessels, boats, apparatus, etc., of the fisheries of Virginia in 1901—Continued.

Items.	King George.		King and Queen.		King William.		Lancaster.		Mathews.		Middlesex.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels fishing .....	2	\$350			13	\$6,000	28	\$86,300	5	\$1,950	10	\$2,900
Tonnage .....	12				179		772		50		91	
Outfit .....		320				7,300		29,951		1,166		2,595
Vessels transporting .....			1	\$1,500	22	19,250	29	17,850	35	18,775	84	85,700
Tonnage .....			30		442		516		799		974	
Outfit .....				150		3,050		3,425		4,650		5,600
Boats .....	117	6,138	99	4,600	139	1,640	1,026	64,720	916	51,735	1,058	53,035
Apparatus—vessel fisheries:												
Seines .....							16	11,400			2	1,000
Oyster dredges .....	4	170										
Oyster tongs .....					92	368	36	272	10	88	22	120
Apparatus—shore fisheries:												
Seines .....	4	1,750	1	200	2	350	6	1,650	10	50	6	1,950
Pound nets .....	102	11,175					138	26,375	189	32,750	44	7,390
Gill nets .....	23	620	64	1,280	378	3,794						
Fyke nets .....	30	318			106	1,060						
Lines .....		1						182		160		140
Weirs and slat traps .....					7	350						
Oyster dredges .....	11	440									2	24
Oyster tongs .....	60	210	115	700	12	48	889	3,916	802	4,843	1,114	5,846
Clam tongs, rakes, etc. ....									40	120		
Minor apparatus .....								34		6		18
Shore and accessory property .....		1,555		1,100		16,670		155,530		2,625		12,690
Cash capital .....						46,000		73,000				5,000
Total .....		23,047		9,530		106,013		474,605		118,907		134,008

Items.	Surry.		Warwick.		Westmoreland.		York.		Total.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels fishing .....			20	\$5,800	27	\$11,650	49	\$15,325	702	\$529,588
Tonnage .....			258		210		416		8,245	
Outfit .....				5,090		5,435		9,846		241,106
Vessels transporting .....			9	3,150	4	2,500	32	18,700	384	276,320
Tonnage .....			117		58		518		7,338	
Outfit .....				1,260		500		4,305		60,317
Boats .....	23	\$345	173	4,315	189	11,809	813	40,345	12,174	589,757
Apparatus—vessel fisheries:										
Seines .....									54	37,395
Oyster dredges .....					54	2,180			435	9,315
Oyster tongs .....			70	280			107	428	1,687	7,318
Clam tongs, rakes, etc. ....									359	556
Apparatus—shore fisheries:										
Seines .....					5	600			257	41,135
Pound nets .....					57	6,250	30	8,800	1,590	313,616
Gill nets .....	731	2,185	750	1,125	22	135	3	90	10,437	50,035
Fyke nets .....			8	80	17	170	35	420	729	7,444
Lines .....				20		62		755		3,579
Eel pots and spears .....									579	585
Weirs and slat traps .....									15	500
Oyster dredges .....					97	826			526	7,341
Oyster tongs .....			235	940	138	636	1,120	4,356	9,478	42,488
Crab scrapes .....								5	933	2,256
Clam tongs, rakes, etc. ....							429	1,093	1,976	5,574
Minor apparatus .....									5	255
Shore and accessory property .....		300		1,350		1,505		6,375		869,624
Cash capital .....						3,000				547,000
Total .....		2,830		23,410		47,248		110,842		3,633,104

Table showing, by counties, the products of the fisheries of Virginia in 1901.

Species.	Accomac.		Alexandria.		Caroline.		Charles City.		Chesterfield.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives, fresh	477,270	\$3,200	38,000	\$202	56,500	\$565	149,362	\$1,724	138,000	\$2,070
Black bass	1,050	105	9,914	804			5,500	890	18,000	1,440
Blue-fish	79,940	3,921								
Bonito	3,640	207								
Butter-fish	17,005	351								
Carp, German			1,500	30			4,250	125	30,000	900
Cat-fish	750	30	27,200	689	1,000	20	17,100	641	6,000	240
Cod	100	4								
Croakers	128,465	2,543								
Drum	93,670	744								
Eels	3,600	147	1,000	30						
Flounders	30,735	899								
Hickory shad							4,500	150		
King-fish	27,760	962								
Menhaden	41,828,700	77,461								
Mullet	60,400	1,704								
Perch, white	4,190	141	7,900	395	2,250	122	10,342	712	1,800	108
Perch, yellow			20,500	435			10,467	300	1,760	35
Pike			2,050	183						
Pompano	51,985	4,077								
Sea bass	2,200	93								
Shad	104,539	5,103	289,080	7,401	7,425	297	299,256	17,528	72,100	4,120
Sheepshead	1,200	73								
Spanish mackerel	68,625	5,968								
Spots	17,405	762								
Squeteague	605,065	13,711								
Striped bass	5,145	340	10,916	1,045	900	72	20,795	1,248		
Sturgeon	8,115	774					6,840	832		
Caviar							556	318		
Suckers			3,500	52			3,800	66		
Crabs, hard	80,000	530								
Crabs, soft	1,093,784	46,848								
Terrapin	1,230	794								
Turtles							1,025	51		
Frogs							700	125		
Clams, hard	1,073,520	99,439								
Market oysters, from natural rock	2,930,383	175,662								
Market oysters, from private beds	3,320,205	266,008								
Seed oysters, from natural rock	2,579,290	71,896								
<b>Total</b>	<b>54,599,906</b>	<b>784,498</b>	<b>411,560</b>	<b>11,266</b>	<b>68,075</b>	<b>1,076</b>	<b>533,993</b>	<b>24,210</b>	<b>267,660</b>	<b>8,913</b>

Species.	Isle of Wight.		James City.		King George.		King and Queen.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives, fresh			19,055	\$190	1,144,000	\$5,959	7,500	\$75
Blue-fish					900	36		
Carp, German	800	\$12			1,100	17		
Cat-fish	9,975	333	43,800	1,425	120,850	3,115	3,000	75
Croakers	41,050	698	600	12				
Eels	2,500	125	5,400	270	700	21		
Flounders	2,800	64			11,850	331		
Gizzard shad	5,250	100						
Perch, white	4,475	261	7,625	686	73,766	4,353	1,500	90
Perch, yellow					4,000	130		
Pike					1,300	65		
Shad	121,812	6,463	70,596	4,346	162,849	5,259	93,000	4,650
Spots	8,550	177						
Squeteague	36,800	1,183	15,000	450	1,000	40		
Striped bass	4,500	355	15,150	1,818	126,059	12,399	500	50
Sturgeon	6,900	516	10,750	860				
Caviar	880	513	600	336				
Turtles			1,092	54	1,200	65		
Frogs			917	163				
Market oysters, from natural rock	794,199	39,808			147,700	8,620	21,000	1,500
Market oysters, from private beds	525,000	30,000	133,000	9,500			448,000	35,200
Seed oysters, from natural rock	1,219,946	26,138						
<b>Total</b>	<b>2,780,437</b>	<b>106,736</b>	<b>323,585</b>	<b>20,110</b>	<b>1,796,774</b>	<b>40,410</b>	<b>574,500</b>	<b>41,640</b>

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Table showing, by counties, the products of the fisheries of Virginia in 1901—Continued.

Species.	Elizabeth City.		Essex.		Fairfax.		Gloucester.		Henrico.	
	Lbs.	Value.	Lbs.	Val.	Lbs.	Value.	Lbs.	Value.	Lbs.	Val.
Alewives, fresh	258,934	\$3,435	219,360	\$2,231	1,590,671	\$10,086	344,000	\$5,160	285,000	\$6,225
Black bass					21,225	2,040				
Blue-fish	382,376	11,471								
Bonito	400	12								
Butter-fish	145,100	4,353	17,300	413			172,000	5,160		
Carp, German	1,200	36			13,375	276	25,000	250		
Cat-fish			37,650	954	49,135	1,407	56,000	1,680	35,000	1,450
Crevalle	100,561	3,009					103,200	3,098		
Croakers	888,563	13,680					412,800	4,128		
Drum	16,350	155					34,400	344		
Eels			24,100	1,160	1,680	50	6,000	210		
Flounders	65,664	1,967					10,000	300		
Hickory shad	78,300	1,839					68,800	1,376		
Hog-fish	30,300	2,130								
King-fish	3,500	140								
Menhaden	1,464,825	2,930					344,000	688		
Moon-fish	66,400	2,057								
Mullet	22,800	466								
Perch, white	39,600	1,916	6,310	253	26,970	1,370	60,000	3,600	23,000	1,380
Perch, yellow			125	5	23,460	657				
Pike					4,787	397				
Pompano	13,870	991					10,000	700		
Shad	272,607	18,703	87,385	3,513	151,049	5,023	527,250	35,150	72,450	4,140
Spanish mackerel	53,352	4,497					172,000	13,760		
Spots	102,082	2,041								
Squeteague	1,818,031	28,133	18,825	385			206,400	3,096		
Striped bass	1,534	92	9,290	537	31,248	3,261	26,200	2,994		
Sturgeon	29,558	2,142					7,500	450		
Caviar	3,653	2,207					910	546		
Suckers			165	5	8,350	137				
Whiting	600	12								
Crabs, hard	1,044,590	5,937					177,000	1,770		
Turtles	12,525	236					5,000	100		
Frogs			12,400	750						
Clams, hard	42,664	3,520					50,984	4,093		
Market oysters, from natural rock	250,110	14,292	122,220	7,384			818,300	44,304		
Market oysters, from private beds	2,660,000	149,040	634,837	45,345			759,500	47,200		
Seed oysters, from natural rock	963,830	27,538	7,000	200			1,163,400	26,730		
Total	10,833,418	308,977	1,196,967	63,135	1,921,940	24,703	5,560,644	206,887	415,450	13,195

Species.	King William.		Lancaster.		Mathews.		Middlesex.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives, fresh	145,850	\$1,459	230,000	\$1,725	811,500	\$4,403	299,600	\$2,796
Blue-fish			6,500	465	9,380	369		
Butter-fish			109,500	2,310	37,400	752	77,950	1,252
Carp, German	5,015	100						
Cat-fish	181,200	4,580	5,600	168				
Crevalle	2,720	81						
Croakers	3,350	67	75,600	756	68,500	805	25,800	508
Drum			7,560	76				
Eels	3,800	76	3,500	140				
Flounders	3,310	102	3,140	94				
Hickory shad					83,750	2,680		
Menhaden			84,902,190	131,175	135,000	140	5,194,500	3,826
Mullet					2,500	50		
Perch, white	5,860	352						
Perch, yellow			3,000	60				
Shad	269,064	14,381	470,225	26,765	818,455	46,776	150,925	7,978
Spanish mackerel			33,800	2,704	875	139	3,150	252
Spots			2,500	125				
Squeteague	31,800	954	246,500	4,520	143,250	3,135	96,250	2,647
Striped bass	7,500	751	3,400	198	7,200	576	30,000	1,800
Sturgeon	625	44	6,475	389	23,800	714	1,800	126
Caviar	75	45	1,200	720	900	360	130	78
Suckers	9,250	139						
Crabs, hard	133,650	1,337	292,280	4,041	218,751	3,280	100,831	1,537
Crabs, soft			96,000	9,950	4,000	800	6,800	610
Terrapin					150	100		
Turtles					10,000	200		
Clams, hard					196,000	1,400		
Market oysters, from natural rock			1,787,800	102,160	2,044,350	114,120	2,168,600	123,970
Market oysters, from private beds	385,000	32,000	1,551,200	109,300	585,550	47,690	1,379,000	98,500
Seed oysters, from natural rock	546,000	11,700	55,300	1,975			2,800	100
Total	1,734,069	68,168	89,893,270	399,806	6,201,311	227,889	7,537,536	245,880

Table showing, by counties, the products of the fisheries of Virginia in 1901—Continued.

Species.	Nansemond.		New Kent.		Norfolk.		Northampton.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives, fresh	2,000	\$80	354,633	\$3,244	84,280	\$1,032	27,000	\$42
Black bass			200	10				
Blue-fish					84,850	1,750	81,870	1,383
Bonito							6,810	169
Butter-fish					198,850	5,930	21,200	510
Carp, German	400	16	640	13	600	18		
Cat-fish	1,400	57	12,600	345	10			
Crevalle			320	10	122,650	3,680	18,650	405
Croakers	16,500	260	400	8	482,500	6,625	114,175	2,282
Drum					24,500	245	40,460	1,015
Eels			320	7			2,240	12
Flounders			160	5	25,950	973	5,950	165
Hog-fish					11,200	1,120	860	82
King-fish					7,950	276	5,410	498
Menhaden					440,000	840	25,880,800	43,136
Moon-fish							2,000	44
Mullet					80,000	2,300		
Perch, white	1,700	102	1,120	83	17,800	506		
Perch, yellow			790	47				
Pompano							7,315	741
Shad	36,750	2,475	292,969	16,782	131,290	8,491	12,510	720
Sheepshead							840	32
Spanish mackerel					5,300	586	72,425	7,304
Spots					218,200	7,044	42,955	1,344
Squeteague	5,800	105	4,800	192	1,047,410	18,548	997,380	12,415
Striped bass	2,300	184	1,000	100			15,260	1,098
Sturgeon					14,205	1,022	2,580	129
Caviar					755	484	70	35
Suckers	6,000	180	800	12				
Tarpon					75	1		
Crabs, hard			1,200	12	1,090,625	10,375	1,509,000	9,159
Crabs, soft					2,400	420		
Turtles			2,900	145	400	8		
Frogs			1,150	205				
Clams, hard					32,000	3,000	202,160	11,371
Market oysters, from natural rock	1,352,456	68,698			3,483,620	174,806	715,540	32,317
Market oysters, from private beds	546,000	29,699	154,000	12,100	1,692,005	109,197	3,981,978	245,817
Seed oysters, from natural rock	1,181,600	25,920			672,700	17,920	1,464,470	29,464
Total	3,152,906	127,725	830,002	33,320	9,887,115	377,197	85,177,898	401,679

Species.	Stafford.		Surry.		Warwick.		Westmoreland.		York.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives, fresh	940,408	\$6,375					584,756	\$2,934		
Alewives, salted	280,000	4,900								
Black bass	76,150	7,547								
Blue-fish	800	32					1,990	78	54,800	\$1,644
Butter-fish									27,000	810
Carp	21,700	540					6,000	90		
Cat-fish	75,625	2,866			3,000	\$100	62,240	1,929		
Crevalle									20,800	624
Croakers					21,945	665			789,200	11,834
Drum									900	15
Eels							700	23		
Flounders							5,645	184	3,000	90
Menhaden									240,000	480
Mullet									15,000	600
Perch, white	33,710	1,686					90,970	4,805		
Perch, yellow	48,350	1,712			550	50	14,100	423		
Pike	19,225	1,821					600	30		
Shad	23,280	651	66,815	\$3,580	34,650	2,310	57,546	1,762	58,040	3,536
Spots					1,875	75	700	21	8,800	176
Squeteague	1,000	40			8,580	260	3,500	140	278,600	4,342
Striped bass	27,050	2,246			400	50	108,000	8,633	8,000	180
Sturgeon			10,800	756					8,700	609
Caviar			800	400					1,500	900
Suckers	8,750	175								
Sun-fish							4,000	95		
Crabs, hard							134,200	1,779	662,580	5,478
Crabs, soft									2,500	200
Terrapin									1,750	450
Turtles	800	50					675	40	1,000	20
Clams, hard									167,352	11,954
Market oysters, from natural rock					226,240	14,034	802,830	47,923	1,850,450	93,140
Market oysters, from private beds					350,000	18,850			1,274,000	75,050
Seed oysters, natural rock					1,049,860	22,497			1,783,250	38,213
Total	1,556,848	30,141	78,415	4,736	1,697,100	58,891	1,878,512	70,889	7,197,222	249,846

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Table showing, by counties, the products of the fisheries of Virginia in 1901—Continued.

Species.	Northumberland.		Princess Anne.		Prince George.		Prince William.		Richmond.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives, fresh	4,315,000	\$36,700	11,915	\$185	16,800	\$198	766,800	\$5,126	315,250	\$3,168
Black bass			44,000	2,200	3,000	240	20,400	1,959		
Blue-fish	56,300	2,152	75,880	2,318						
Bonito			4,810	159						
Butter-fish	55,300	903	193,255	5,807						
Carp, German					5,000	150	11,350	368		
Cat-fish					1,000	40	32,300	968	37,900	948
Crevalle			99,890	2,626						
Croakers	34,200	186	933,520	8,936						
Drum			10,342	113						
Eels	7,000	350	22,000	880			2,800	84	20,475	846
Flounders	27,300	819	14,490	270						
Hickory shad	213,250	5,382								
Hog-fish			2,532	254						
King-fish			46,512	1,560						
Menhaden	115,055,031	172,383	8,750	50						
Moon-fish			2,000	60						
Mullet			10,000	300						
Perch, white			292,137	8,750	300	18	17,300	798	750	45
Perch, yellow			19,250	198	312	6	12,610	462	225	7
Pike							4,141	352		
Pompano			13,016	1,040						
Shad	1,712,000	83,075	84,550	6,600	156,750	8,802	50,800	1,395	219,895	8,428
Sheepshead	8,850	69	6,040	183						
Spanish mackerel	8,735	785	101,880	8,022						
Spot	6,500	325	407,260	12,216						
Squeteague	408,580	7,041	1,471,925	24,936					85,000	1,700
Striped bass	35,000	2,500	6,450	447			20,800	1,721	7,850	482
Sturgeon	28,230	1,571	11,465	899	4,680	328				
Caviar	6,089	2,542	850	510	350	210				
Suckers							7,800	156	250	5
Crabs, hard	316,830	4,812	352,000	2,816						
Crabs, soft	82,940	7,744								
Prawn			2,850	142						
Terrapin					2,000	100				
Turtles	9,200	184	6,080	61	1,000	50	4,000	180		
Frogs					210	40				
Market oysters, from natural rock	1,281,140	73,358							141,120	9,072
Market oysters, from private beds	85,400	6,100	157,500	45,000					913,500	65,250
Seed oysters, from natural rock			14,000	500					21,000	750
Total	123,743,878	408,932	4,427,149	138,093	191,402	10,182	951,101	13,569	1,763,215	90,685

Number and value of shad taken in the fisheries of Virginia in 1901.

County.	No.	Value.	County.	No.	Value.
Accomac	29,868	\$5,103	Middlesex	42,950	\$7,978
Alexandria	72,270	7,401	Nansemond	10,500	2,475
Caroline	2,475	297	New Kent	97,223	10,782
Charles City	87,702	17,528	Norfolk	40,280	8,491
Chesterfield	20,600	4,120	Northampton	3,574	730
Elizabeth City	89,539	18,703	Northumberland	462,500	83,075
Essex	26,210	3,513	Princess Anne	24,621	6,600
Fairfax	38,707	5,023	Prince George	45,000	8,802
Gloucester	175,750	35,150	Prince William	12,700	1,995
Henrico	20,700	4,140	Richmond	62,827	8,428
Isle of Wight	35,400	6,468	Stafford	5,820	651
James City	21,731	4,345	Surry	19,090	3,580
King and Queen	26,571	4,650	Warwick	9,900	2,310
King George	42,009	5,259	Westmoreland	14,456	1,762
King William	59,688	14,381	York	15,154	3,536
Lancaster	134,350	26,765			
Mathews	233,845	46,776	Total	2,014,010	366,203

46,972,212 pounds.

THE PRODUCTS BY APPARATUS.

The products of the vessel fisheries of this State amounted to 277,812,456 pounds, valued at \$1,080,475, and those of the shore fisheries to 100,370,902 pounds, valued at \$3,532,909. The yield of the vessel fisheries consisted of menhaden with purse seines, 262,877,262

pounds, \$417,765; oysters with dredges and tongs, 14,749,490 pounds, or 2,107,070 bushels, \$644,169; and hard clams with tongs, etc., 185,704 pounds, or 23,213 bushels, \$18,541. In the shore fisheries a greater variety of apparatus was employed and the products comprised upward of thirty different species. Seines secured 9,987,821 pounds, \$122,774; gill nets, 3,204,111 pounds, \$133,171; pound nets, 34,620,083 pounds, \$673,789; slat traps and weirs, 84,780 pounds, \$2,559; fyke nets, 668,837 pounds, \$28,453; lines, 8,415,124 pounds, \$105,894; eel pots and spears, 47,700 pounds, \$2,132; minor apparatus, 320,103 pounds, \$25,976; dredges and tongs, 40,488,639 pounds, or 5,778,377 bushels of oysters, \$2,279,287; clam tongs, hoes, and rakes, 1,578,976 pounds, or 197,372 bushels of clams, \$116,236; and crab scrapes, 994,728 pounds, or 2,996,184 soft crabs in number, \$42,638.

The following tables show, by counties and species, the quantity and value of products taken with each form of apparatus in the vessel and shore fisheries of Virginia in 1901:

Table showing, by counties, the yield of the seine fisheries in Virginia in 1901.

Species.	Accomac.		Alexandria.		Caroline.		Charles City.		Chesterfield.		Elizabeth City.	
	Lbs.	Value.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.
Vessel fisheries:												
Menhaden	40,077,900	\$75,038										
Shore fisheries:												
Alewives, fresh	800	12			25,000	\$250	139,500	\$1,625	36,000	\$540		
Black bass			9,214	\$734			5,000	350	18,000	1,440		
Carp							2,250	45	30,000	900		
Cat-fish			16,875	483			17,100	641	6,000	240		
Croakers	8,150	220										
Drum	1,200	18										
Flounders	10,250	267										
Hickory shad							4,500	150				
King-fish	4,150	149										
Mullet	36,800	1,034									1,800	\$46
Perch, white	1,100	43	3,400	170			10,342	712	1,800	108		
Perch, yellow			13,150	288			10,467	300	1,760	35		
Pike			1,050	83								
Sea bass	500	20										
Shad	613	32					26,606	1,495	18,900	1,080		
Spots	6,905	290									3,000	60
Squeteague	119,480	3,347									1,000	60
Striped bass	300	18	10,916	1,045			20,795	1,248				
Suckers							3,300	66				
Total	180,148	5,450	54,605	2,803	25,000	250	239,860	6,632	112,460	4,343	5,800	166
Grand total	40,268,048	80,488	54,605	2,803	25,000	250	239,860	6,632	112,460	4,343	5,800	166

Species.	Essex.		Fairfax.		Isle of Wight.		James City.		King George.		King and Queen.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.
Shore fisheries:												
Alewives, fresh	10,000	\$100	1,204,671	\$7,529			10,000	\$100	28,000	\$140		
Black bass			10,800	1,060								
Blue-fish									900	36		
Carp			5,425	109	800	\$12						
Cat-fish	2,500	50	18,955	506	2,400	84			62,750	1,056	3,000	\$75
Croakers					2,500	37						
Flounders					1,875	37						
Gizzard shad					5,250	100						
Perch, white	2,000	80	5,510	300	1,000	60			20,100	1,005	1,500	90
Perch, yellow			10,400	216					2,000	70		
Pike			850	68								
Shad	15,000	500	47,274	1,891					2,875	87	1,500	75
Squeteague					3,650	109			1,000	40		
Striped bass	3,000	150	16,568	1,939					58,600	6,470	500	50
Total	32,500	880	1,320,453	13,618	17,475	429	10,000	100	166,225	8,904	6,500	290



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Table showing, by counties, the yield of the seine fisheries in Virginia in 1901—Continued.

Species.	King William.		Lancaster.		Mathews.		Middlesex.		Nansemond.	
	Lbs.	Val.	Lbs.	Value.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.
<b>Vessel fisheries:</b>										
Menhaden			81,402,194	\$127,520			2,000,000	\$2,000		
<b>Shore fisheries:</b>										
Alewives, fresh	111,000	\$1,110								
Carp	775	15								
Cat-fish	18,000	450								
Croakers									5,000	\$50
Menhaden			3,066,666	3,220			1,194,500	1,826		
Mullet					2,500	\$50			300	18
Perch, white	2,900	174								
Perch, yellow			3,000	60						
Shad	7,650	410							10,500	650
Squeteague			22,500	790					1,200	18
Striped bass	625	63	600	30					500	40
Suckers	2,200	33							6,000	180
<b>Total</b>	<b>143,150</b>	<b>2,255</b>	<b>3,092,766</b>	<b>4,100</b>	<b>2,500</b>	<b>50</b>	<b>1,194,500</b>	<b>1,826</b>	<b>23,500</b>	<b>956</b>
<b>Grand total</b>	<b>143,150</b>	<b>2,255</b>	<b>84,494,960</b>	<b>131,620</b>	<b>2,500</b>	<b>50</b>	<b>3,194,500</b>	<b>3,826</b>	<b>23,500</b>	<b>956</b>

Species.	New Kent.		Norfolk.		Northampton.		Northumberland.		Princess Anne.	
	Lbs.	Val.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Val.
<b>Vessel fisheries:</b>										
Menhaden					25,858,800	\$43,098	113,538,368	\$170,109		
<b>Shore fisheries:</b>										
Alewives, fresh	328,502	\$2,986	760	\$9					44,000	\$2,200
Black bass	200	10							1,000	40
Blue-fish			8,000	240	120	6	24,000	720		
Cat-fish	3,000	105								
Croakers			160,000	3,100					182,500	1,250
Flounders			8,400	181	350	11			2,500	50
Hog-fish			10,000	1,000						
King-fish			1,000	30	1,310	123				
Mullet			10,000	200					8,000	240
Perch, white	800	64	15,900	468					290,250	8,707
Perch, yellow	790	47							19,250	193
Shad	9,354	604								
Spanish mackerel							460	60		
Spots			104,700	3,269	6,115	187			149,000	4,470
Squeteague			77,260	2,125	46,080	1,389			86,000	3,680
Striped bass	200	20			15,260	1,098				
<b>Total</b>	<b>342,846</b>	<b>3,833</b>	<b>391,040</b>	<b>10,602</b>	<b>69,235</b>	<b>2,814</b>	<b>24,400</b>	<b>780</b>	<b>782,500</b>	<b>20,830</b>
<b>Grand total</b>	<b>342,846</b>	<b>3,833</b>	<b>391,040</b>	<b>10,602</b>	<b>25,928,035</b>	<b>46,912</b>	<b>113,562,768</b>	<b>170,889</b>	<b>782,500</b>	<b>20,830</b>

Species.	Prince George.		Prince William.		Stafford.		Westmoreland.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
<b>Vessel fisheries:</b>										
Menhaden									262,877,262	\$417,765
<b>Shore fisheries:</b>										
Alewives, fresh	6,000	\$90	500,000	\$3,125	680,000	\$3,925			2,980,253	21,638
Alewives, salted					280,000	4,900			280,000	4,900
Black bass	3,000	240	11,990	1,140	28,000	2,792			130,204	9,966
Blue-fish					800	32	1,850	\$72	36,670	1,146
Carp	5,000	150	8,750	290	2,000	60	5,500	82	60,500	1,663
Cat-fish	1,000	40	25,300	758	26,525	767	21,500	645	214,905	5,900
Croakers									358,150	4,657
Drum									1,200	18
Flounders									18,375	526
Gizzard shad									5,250	100
Hickory shad									4,500	150
Hog-fish									10,000	1,000
King-fish									6,460	302
Menhaden									4,261,166	5,046
Mullet									59,100	1,670
Perch, white	300	18	10,650	465	19,950	998	37,500	1,875	425,302	15,345
Perch, yellow	312	6	7,860	272	10,600	358	14,100	423	93,689	2,268
Pike			2,466	185	2,675	224			7,041	560
Sea bass									500	20
Shad	3,150	180	27,200	680	12,480	327			183,002	8,011
Spanish mackerel									400	60
Spots							700	21	270,420	8,297
Squeteague					1,000	40	2,600	104	361,770	11,702
Striped bass			16,400	1,331	21,850	1,726	28,000	2,240	194,114	17,468
Suckers			3,000	60	6,350	127			20,850	466
Sun-fish							4,000	95	4,000	95
<b>Total</b>	<b>18,762</b>	<b>724</b>	<b>613,616</b>	<b>8,306</b>	<b>992,230</b>	<b>16,276</b>	<b>115,750</b>	<b>5,657</b>	<b>9,987,821</b>	<b>122,774</b>
<b>Grand total</b>	<b>18,762</b>	<b>724</b>	<b>613,616</b>	<b>8,306</b>	<b>992,230</b>	<b>16,276</b>	<b>115,750</b>	<b>5,657</b>	<b>272,865,083</b>	<b>640,589</b>

Table showing, by counties, the yield of the gill-net fisheries of Virginia in 1901

Species.	Accomac.		Alexandria.		Caroline.		Charles City.		Chesterfield.		Elizabeth City.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.
Alewives.....			38,000	\$202			9,862	\$99	102,000	\$1,530		
Black bass.....							500	40				
Blue-fish.....	1,200	\$72					2,000	80				
Carp.....												
King-fish.....	300	11										
Mullet.....	23,600	670									20,000	\$400
Shad.....			289,080	7,401	4,500	\$180	272,650	16,033	53,200	3,040		
Spots.....	600	30										
Squeteague.....	4,000	120									400	24
Sturgeon.....							6,840	832				
Caviar.....							556	318				
Total.....	29,700	903	327,080	7,603	4,500	180	292,408	17,402	155,200	4,570	20,400	424

  

Species.	Essex.		Fairfax.		Gloucester.		Henrico.		Isle of Wight.		James City.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.
Alewives.....	3,000	\$30					265,000	\$5,725			9,055	\$90
Shad.....	48,835	2,014	91,200	\$2,736	11,250	\$750	72,450	4,140	121,812	\$6,463	66,096	4,046
Sturgeon.....									6,900	516	10,750	860
Caviar.....									890	513	600	336
Total.....	51,835	2,044	91,200	2,736	11,250	750	337,450	9,865	129,692	7,492	86,501	5,332

  

Species.	King George.		King and Queen.		King William.		Nansemond.		New Kent.		Norfolk.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.
Alewives.....			7,500	\$75	18,500	\$185			24,931	\$249		
Croakers.....											50,000	\$650
Flounders.....											3,000	150
Mullet.....											68,000	2,040
Shad.....	33,763	\$1,284	91,500	4,575	258,234	13,759	9,275	\$662	283,135	16,146	55,800	3,955
Spots.....											24,000	1,500
Squeteague.....											43,500	815
Sturgeon.....					625	44						
Caviar.....					75	45						
Total.....	33,763	1,284	99,000	4,650	277,434	14,033	9,275	662	308,066	16,395	244,300	9,120

  

Species.	Princess Anne.		Prince George.		Prince William.		Richmond.		Stafford.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives.....			10,800	\$108	116,000	\$870			64,000	\$480
Shad.....	24,500	\$1,950	153,600	8,622	23,600	715	141,512	\$6,065	10,800	324
Sturgeon.....			4,680	328						
Caviar.....			350	210						
Total.....	24,500	1,950	169,430	9,268	139,600	1,585	141,512	6,065	74,800	804

  

Species.	Surry.		Warwick.		Westmoreland.		York.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives.....									668,648	\$9,643
Black bass.....									600	40
Blue-fish.....							7,200	\$216	8,400	285
Carp.....									2,000	80
Croakers.....							3,000	45	53,000	695
Flounders.....									3,000	150
King-fish.....									300	11
Mullet.....							15,000	600	126,600	3,710
Shad.....	66,815	\$3,580	33,750	\$2,250	2,550	\$99			2,219,907	110,799
Spots.....							1,800	36	26,400	1,565
Squeteague.....							3,600	72	51,600	1,031
Sturgeon.....	10,800	756							40,595	3,336
Caviar.....	800	400							3,261	1,822
Total.....	78,415	4,736	33,760	2,250	2,550	99	30,600	969	3,204,111	133,171

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Table showing, by counties, the yield of the pound-net fisheries of Virginia in 1901.

Species.	Accomac.		Caroline.		Elizabeth City.		Essex.		Gloucester.	
	Lbs.	Value.	Lbs.	Val.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives.....	476,270	\$3,185	31,500	\$315	258,934	\$3,435	206,360	\$2,101	344,000	\$5,160
Black bass.....	1,050	105								
Blue-fish.....	77,290	3,804			42,895	1,287				
Bonito.....	3,640	207			4,400	12				
Butter-fish.....	17,005	351			145,100	4,353	17,300	413	172,000	5,160
Carp.....					1,200	36				
Cat-fish.....	750	30	1,000	20			32,760	844		
Crevalle.....					100,561	3,009			103,200	3,098
Croakers.....	88,665	1,669			677,563	10,499			412,800	4,128
Drum.....	58,320	459			6,550	67			34,400	344
Eels.....							16,900	800		
Flounders.....	17,955	554			25,564	767			10,000	300
Hickory shad.....					78,300	1,839			68,800	1,376
Hog-fish.....					300	30				
King-fish.....					3,500	140				
Menhaden.....	1,750,800	2,423			1,464,825	2,930			344,000	688
Moon-fish.....					66,400	2,057				
Mullet.....					1,000	20				
Perch, white.....	690	28	2,250	122	3,600	116	4,310	173		
Perch, yellow.....							125	5		
Pompano.....	51,985	4,077			13,870	991			10,000	700
Shad.....	104,026	5,071	2,925	117	272,507	18,703	23,550	999	516,000	34,400
Sheepshead.....	600	47								
Spanish mackerel.....	68,625	5,968			53,352	4,497			172,000	13,760
Spots.....	6,100	247			19,082	381				
Squeteague.....	250,535	6,531			1,448,631	22,629	18,825	385	206,400	3,096
Striped bass.....	4,545	298	900	72	1,534	92	4,940	306	3,000	210
Sturgeon.....	8,115	774			29,558	2,142			7,500	450
Caviar.....					3,653	2,207			910	546
Suckers.....							165	5		
Whiting.....					600	12				
Turtles.....					12,525	236			5,000	100
Total.....	2,986,966	35,828	38,575	646	4,732,004	82,387	325,225	6,031	2,410,010	73,616

Species.	Fairfax.		James City.		King George.		Lancaster.		Mathews.		Middlesex.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.
Alewives.....	386,000	\$2,557			1,116,000	\$5,819	230,000	\$1,725	811,500	\$4,403	299,600	\$2,796
Black bass.....	3,800	380										
Blue-fish.....							6,500	455	9,380	369		
Butter-fish.....							109,500	2,310	37,400	752	77,950	1,252
Carp.....	4,150	83										
Cat-fish.....	14,800	440	3,000	\$105	63,600	1,924						
Croakers.....							5,600	168				
Drum.....							75,600	756	68,500	805	25,800	508
Eels.....							7,560	76				
Flounders.....					11,350	331	3,140	94				
Hickory shad.....									83,750	2,680		
Menhaden.....							433,330	435	135,000	140		
Perch, white.....	14,350	717			48,466	3,064						
Perch, yellow.....	5,400	192			2,000	60						
Pike.....	2,300	184										
Shad.....	12,575	396			126,211	3,888	470,225	26,765	818,455	46,776	160,325	7,978
Spanish mackerel.....												
Spots.....							33,800	2,704	875	139	3,150	252
Squeteague.....			12,500	375			2,500	125				
Striped bass.....	8,880	830	7,350	882	67,259	5,913	224,000	3,730	143,250	3,135	96,250	2,647
Sturgeon.....							2,800	168	7,200	576	30,000	1,800
Caviar.....							6,475	389	23,800	714	1,800	126
Suckers.....	3,000	45					1,200	720	900	360	130	78
Turtles.....									10,000	200		
Total.....	455,255	5,824	22,850	1,362	1,434,886	20,999	1,615,730	40,760	2,150,010	61,049	685,005	17,437

Table showing, by counties, the yield of the pound-net fisheries of Virginia—Continued.

Species.	Nansemond.		Prince William.		Richmond.		Stafford.		Westmoreland.		York.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.
Alewives.....	1,000	\$10	150,800	\$1,131	315,250	\$3,153	296,408	\$1,970	584,756	\$2,934		
Black bass.....			2,160	194			40,750	4,025			7,600	\$228
Blue-fish.....									140		27,000	810
Butter-fish.....												
Carp.....			1,100	33			16,250	411				
Cat-fish.....	200	7	2,000	60	37,900	948	38,400	1,278	39,090	1,234		
Crevalle.....											20,800	624
Croakers.....	2,000	20									538,000	8,125
Drum.....											900	15
Eels.....					20,475	845			200	8		
Flounders.....									5,645	184	400	12
Menhaden.....											240,000	480
Perch, white.....	1,100	66	4,550	228	750	45	13,760	688	50,970	2,805		
Perch, yellow.....			1,000	40	225	7	27,850	1,114				
Pike.....			500	50			14,850	1,461				
Shad.....	5,950	400			78,383	2,363			54,996	1,663	52,800	3,520
Squeteague.....	1,000	15			85,000	1,700			900	36	122,000	1,850
Striped bass.....	1,800	144	1,900	190	7,850	482	5,200	520	80,060	6,393		
Sturgeon.....											8,700	609
Caviar.....											1,500	900
Suckers.....					250	5						
Turtles.....											1,000	20
Total.....	13,050	662	164,010	1,926	546,083	9,548	453,468	11,467	816,757	15,263	1,020,700	17,193

Species.	Norfolk.		Northampton.		Northumberland.		Princess Anne.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives.....	83,500	\$1,023	27,000	\$42	4,315,000	\$36,700	11,915	\$185	9,945,793	\$78,644
Black bass.....									47,700	4,704
Blue-fish.....	46,850	1,510	21,600	972	28,800	1,292	74,880	2,278	315,935	12,201
Bonito.....			5,310	159			4,810	159	14,160	537
Butter-fish.....	198,850	5,930	21,200	510	50,300	803	193,256	5,807	1,066,860	28,451
Carp.....	600	18							23,300	708
Cat-fish.....									239,090	7,581
Crevalle.....	122,650	3,680	18,650	406			99,890	2,626	465,751	13,442
Croakers.....	172,500	2,375	42,175	442	31,200	156	725,020	7,426	2,859,823	30,969
Drum.....	24,500	245	10,450	115			10,342	113	163,022	1,434
Eels.....									41,075	1,733
Flounders.....	19,550	662	5,600	154	27,300	819	11,990	220	138,494	4,027
Hickory shad.....					213,250	5,882			444,100	11,277
Hog-fish.....	1,200	120	860	82			1,032	104	3,392	336
King-fish.....	6,950	246	3,100	290			46,512	1,560	60,062	2,236
Menhaden.....	440,000	840	22,000	38	1,516,665	2,274	8,750	50	6,355,371	10,298
Moon-fish.....			2,000	44			2,000	60	70,400	2,161
Mullet.....	2,000	60					2,000	60	5,000	140
Perch, white.....	1,900	38					1,887	43	148,583	8,133
Perch, yellow.....									36,600	1,418
Pike.....									17,650	1,695
Pompano.....			7,315	741			13,016	1,040	96,186	7,549
Shad.....	75,490	4,526	12,510	720	1,712,000	83,075	60,050	4,650	4,548,978	246,010
Sheepshead.....			840	32	850	60	6,040	183	7,830	322
Spanish mackerel.....	5,300	586	72,425	7,304	8,335	725	101,880	8,022	519,742	43,957
Spots.....	84,500	2,275	16,840	407	6,500	325	248,260	7,446	383,782	11,206
Squeteague.....	883,650	14,963	863,700	8,396	405,980	6,897	1,365,925	21,076	6,128,846	97,301
Striped bass.....					35,000	2,500	3,950	297	274,168	21,673
Sturgeon.....	14,205	1,022	2,580	129	28,230	1,571	11,465	899	142,428	8,825
Caviar.....	755	484	70	35	5,089	2,542	850	510	15,057	8,382
Suckers.....									3,415	55
Tarpon.....	75	1							75	1
Whiting.....									600	12
Prawn.....							2,850	142	2,850	142
Turtles.....	400	8			9,200	184	6,080	61	44,205	809
Total.....	2,185,425	40,612	1,155,725	21,017	8,393,700	145,305	3,014,649	64,957	34,620,083	673,789

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Table showing, by counties, the yield of the fyke-net fisheries of Virginia in 1901.

Species.	Accomac.		Alexandria.		Essex.		Fairfax.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives.....	200	\$3						
Black bass.....			700	\$70			6,625	\$600
Carp.....			1,500	30			3,800	83
Cat-fish.....			10,325	206	1,600	\$40	15,380	461
Eels.....			1,000	30			1,680	50
Flounders.....	1,000	22						
Perch, white.....	100	4	4,500	225			7,110	353
Perch, yellow.....			7,350	147			7,650	249
Pike.....			1,000	100			1,637	145
Sea bass.....	400	22						
Squeteague.....	150	6						
Striped bass.....	300	24			1,350	81	5,800	492
Suckers.....			3,500	52			5,350	92
<b>Total.....</b>	<b>2,150</b>	<b>81</b>	<b>29,875</b>	<b>860</b>	<b>2,950</b>	<b>121</b>	<b>55,032</b>	<b>2,525</b>

Species.	Gloucester.		Henrico.		Isle of Wight.		James City.		Nansemond.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Carp.....	25,000	\$250			5,075	\$161	30,000	\$1,050	1,000	\$40
Cat-fish.....	56,000	1,680	30,000	\$1,200	5,050	69			6,500	130
Croakers.....										
Eels.....	6,000	210								
Flounders.....					925	17				
Perch, white.....	60,000	3,600	15,000	900	3,475	211	7,625	686		
Shad.....							4,500	300	3,850	250
Squeteague.....					2,500	75	2,500	75	2,600	52
Striped bass.....	23,200	2,784			4,500	355	7,500	900		
<b>Total.....</b>	<b>170,200</b>	<b>8,524</b>	<b>45,000</b>	<b>2,100</b>	<b>21,625</b>	<b>888</b>	<b>52,125</b>	<b>3,011</b>	<b>13,950</b>	<b>472</b>

Species.	Northampton.		Prince William.		Stafford.		Warwick.		Westmoreland.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Black bass.....			6,250	\$625	7,400	\$730				
Carp.....			1,500	45	3,450	69			500	\$8
Cat-fish.....			5,000	150	10,700	321	3,000	\$100	1,650	50
Eels.....	240	\$12	2,800	84					500	15
Perch, white.....			2,100	105			550	50	2,500	125
Perch, yellow.....			3,750	150	9,900	240				
Pike.....			1,175	117	1,700	136			600	30
Shad.....							900	60		
Striped bass.....			2,500	200			400	50		
Suckers.....			4,800	96	2,400	48				
Turtles.....									675	40
<b>Total.....</b>	<b>240</b>	<b>12</b>	<b>29,875</b>	<b>1,572</b>	<b>35,550</b>	<b>1,544</b>	<b>4,850</b>	<b>260</b>	<b>6,425</b>	<b>268</b>

Species.	New Kent.		King George.		King William.		York.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives.....	1,200	\$12			7,950	\$80			9,350	\$95
Black bass.....									20,975	2,025
Carp.....	640	13	1,100	\$17	4,240	85			41,730	600
Cat-fish.....	9,600	240	4,500	135	68,600	1,590			247,430	7,424
Crevalle.....	320	10			2,160	65			2,480	75
Croakers.....	400	8			2,650	53	8,200	\$164	22,800	424
Eels.....	320	7	700	21	2,120	43			15,360	472
Flounders.....	160	5			1,710	52	2,600	78	6,395	174
Perch, white.....	320	19	5,200	284	2,120	127			110,600	6,689
Perch, yellow.....									28,650	786
Pike.....			1,300	65					7,412	593
Sea bass.....									400	22
Shad.....	480	32			3,180	212	240	16	13,150	870
Spots.....							1,000	20	1,000	20
Squeteague.....	4,800	192			31,800	954	7,000	140	51,350	1,494
Striped bass.....	800	80	200	16	5,300	530	3,000	180	54,850	5,692
Suckers.....	800	12			5,300	80			22,150	380
Crabs, hard.....	1,200	12			8,650	87			9,850	99
Turtles.....			480	29					1,155	69
Terrapin.....							1,750	450	1,750	450
<b>Total.....</b>	<b>21,040</b>	<b>642</b>	<b>13,480</b>	<b>567</b>	<b>140,780</b>	<b>3,958</b>	<b>23,790</b>	<b>1,048</b>	<b>668,837</b>	<b>28,453</b>

Table showing, by counties, the catch of the weir and stat trap fisheries of Virginia in 1901.

Species.	Henrico.		King William.		Nansemond.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alewives.....	20,000	\$500	8,400	\$84			28,400	\$584
Carp.....					400	\$16	400	16
Cat-fish.....	5,000	250	33,600	840	200	10	38,800	1,100
Crevaille.....			560	16			560	16
Croakers.....			700	14			700	14
Eels.....			1,680	33			1,680	33
Flounders.....			1,600	50			1,600	50
Perch, white.....	8,000	480	840	61	300	18	9,140	649
Shad.....					175	13	175	13
Striped bass.....			1,575	158			1,575	158
Suckers.....			1,760	26			1,760	26
<b>Total.....</b>	<b>33,000</b>	<b>1,230</b>	<b>50,705</b>	<b>1,272</b>	<b>1,075</b>	<b>57</b>	<b>84,780</b>	<b>2,559</b>

Table showing, by counties, the yield of the line fisheries of Virginia in 1901.

Species.	Accomac.		Charles City.		Elizabeth City.		Essex.		Gloucester.		Isle of Wight.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.
Blue-fish.....	1,450	\$45			339,480	\$10,184						
Cat-fish.....							800	\$20			2,600	\$88
Cod.....	100	4										
Croakers.....	31,650	654			211,000	3,181					31,500	592
Drum.....	34,150	267			9,800	88						
Flounders.....	1,530	56			40,000	1,200						
Hog-fish.....					30,000	2,100						
King-fish.....	23,300	802										
Perch, white.....	2,300	66			36,000	1,800						
Sea bass.....	1,300	51										
Sheepshead.....	600	26										
Spots.....	3,800	195			80,000	1,600					3,550	177
Squeteague.....	130,900	3,707			868,000	5,520					30,650	999
Crabs, hard.....	80,000	690			1,044,330	5,937			177,000	\$1,770		
Turtles.....			1,025	\$51								
Frogs.....			700	125								
<b>Total.....</b>	<b>311,080</b>	<b>6,403</b>	<b>1,725</b>	<b>176</b>	<b>2,158,610</b>	<b>31,610</b>	<b>800</b>	<b>20</b>	<b>177,000</b>	<b>1,770</b>	<b>70,200</b>	<b>1,856</b>

Species.	James City.		King George.		King William.		Lancaster.		Mathews.		Middlesex.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.
Cat-fish.....	10,800	\$270			66,000	\$1,700						
Croakers.....	600	12										
Striped bass.....	300	36										
Crabs, hard.....					125,000	1,250	292,280	\$4,041	218,751	\$3,280	100,831	\$1,537
Turtles.....	1,092	54	720	\$36								
<b>Total.....</b>	<b>12,792</b>	<b>372</b>	<b>720</b>	<b>36</b>	<b>191,000</b>	<b>2,950</b>	<b>292,280</b>	<b>4,041</b>	<b>218,751</b>	<b>3,280</b>	<b>100,831</b>	<b>1,537</b>

Species.	Nansemond.		New Kent.		Norfolk.		Northampton.		Northumberland.		Princess Anne.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.
Blue-fish.....							9,650	\$405	3,500	\$140		
Butter-fish.....									5,000	100		
Croakers.....	3,000	\$60			50,000	\$500	72,000	1,840	3,000	30	26,000	\$260
Drum.....							30,000	900				
Hog-fish.....											1,500	160
King-fish.....							1,000	85				
Spots.....							20,000	750			10,000	300
Squeteague.....	1,000	20			43,000	645	87,600	2,630	2,000	104	20,000	300
Striped bass.....											2,500	160
Crabs, hard.....					1,090,625	10,375	1,509,000	9,159	816,830	4,812	352,000	2,816
Turtles.....			2,900	\$145								
Frogs.....			450	80								
<b>Total.....</b>	<b>4,000</b>	<b>80</b>	<b>3,350</b>	<b>225</b>	<b>1,183,625</b>	<b>11,520</b>	<b>1,729,260</b>	<b>15,769</b>	<b>330,930</b>	<b>5,186</b>	<b>412,000</b>	<b>3,976</b>

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Table showing, by counties, the yield of the line fisheries of Virginia in 1901—Continued.

Species.	Prince George.		Prince William.		Warwick.		Westmoreland.		York.		Total.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Blue-fish									40,000	\$1,200	394,080	\$11,974
Butter-fish											5,000	100
Cat-fish											80,100	2,078
Cod											100	4
Croakers					21,945	\$665			190,000	3,000	642,695	10,794
Drum											73,950	1,256
Flounders											41,530	1,256
Hog-fish											31,500	2,250
King-fish											24,300	887
Perch, white											38,300	1,866
Sea bass											1,300	51
Sheepshead											600	26
Spots					1,875	75			6,000	120	125,225	3,217
Squeteague					8,580	260			146,000	2,280	838,330	16,465
Striped bass											2,800	186
Crabs, hard							134,200	\$1,779	662,580	5,478	6,103,427	52,764
Turtles	1,000	\$50	4,000	\$180							10,737	516
Frogs											1,150	205
Total	1,000	50	4,000	180	32,400	1,000	134,200	1,779	1,044,580	12,078	8,415,124	105,894

Table showing, by counties, the yield by eel pots, spears, and other minor apparatus in the fisheries of Virginia in 1901.

Apparatus and counties.	Alewives.		Terrapin.		Turtles.		Frogs.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Minor apparatus:								
Accomac			1,230	\$794				
Essex							12,400	\$750
James City							917	163
Mathews			150	100				
Nansemond	1,000	\$20					700	125
New Kent							210	40
Prince George			2,000	100				
Stafford					800	\$50		
Total	1,000	20	3,380	994	800	50	14,227	1,078

  

Apparatus and counties.	Eels.		Shad.		Crabs, soft.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Eel pots and spears:								
Accomac	3,600	\$147					3,600	\$147
Essex	7,200	360					7,200	360
Isle of Wight	2,500	125					2,500	125
James City	5,400	270					5,400	270
Northumberland	7,000	350					7,000	350
Princess Anne	22,000	880					22,000	880
Total	47,700	2,132					47,700	2,132
Minor apparatus:								
Accomac					99,056	\$4,210	100,286	5,004
Essex							12,400	750
James City							917	163
Lancaster					96,000	9,950	96,000	9,950
Mathews					4,000	300	4,150	400
Middlesex					6,800	510	6,800	510
Nansemond			7,000	\$500			8,000	520
New Kent							700	125
Norfolk					2,400	420	2,400	420
Northumberland					82,940	7,744	82,940	7,744
Prince George							2,210	140
Stafford							800	50
York					2,500	200	2,500	200
Total			7,000	500	293,696	23,334	320,103	25,976
Grand total	47,700	2,132	7,000	500	293,696	23,334	367,803	28,108

Table showing the catch by oyster dredges and tongs in the fisheries of Virginia in 1901.

Counties.	Oyster tongs.					
	Market oysters from natural rock.		Market oysters from private beds.		Seed oysters from natural rock.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
<b>Vessel fisheries:</b>						
Accomac.....	129,878	\$6,934	857,437	\$69,395	773,626	\$21,756
Elizabeth City.....					213,500	6,100
Essex.....					7,000	200
Gloucester.....	234,150	11,659			648,909	14,205
Isle of Wight.....	416,199	20,908			533,946	11,438
King William.....					546,000	11,700
Lancaster.....	113,050	6,460				
Mathews.....	59,500	3,200				
Middlesex.....	63,200	3,090			2,800	100
Nansemond.....	245,000	13,325			1,181,600	25,920
Norfolk.....	2,486,700	124,910			672,700	17,920
Northampton.....	164,577	7,433	915,859	56,538	386,826	6,776
Richmond.....					21,000	760
Warwick.....	50,400	2,730			346,509	7,425
York.....	459,200	23,340			470,750	10,083
<b>Total.....</b>	<b>4,410,854</b>	<b>223,989</b>	<b>1,773,296</b>	<b>125,933</b>	<b>5,755,148</b>	<b>134,378</b>
<b>Shore fisheries:</b>						
Accomac.....	1,507,443	90,317	2,462,768	196,613	1,805,664	50,140
Elizabeth City.....	250,110	14,292	980,000	56,800	750,330	21,438
Essex.....	122,220	7,384	634,837	45,345		
Gloucester.....	573,650	32,120	759,600	47,200	514,500	12,525
Isle of Wight.....	378,000	18,900	525,000	30,000	686,000	14,700
James City.....			133,000	9,500		
King George.....	98,000	5,600				
King and Queen.....	21,000	1,500	448,000	35,200		
King William.....			385,000	32,000		
Lancaster.....	1,674,750	95,700	1,551,200	109,300	55,300	1,975
Mathews.....	1,984,850	110,920	585,550	47,590		
Middlesex.....	2,115,400	120,880	1,323,000	94,500		
Nansemond.....	1,107,456	55,373	1,516,000	29,699		
New Kent.....			164,000	12,100		
Norfolk.....	997,920	49,806	1,692,005	109,197		
Northampton.....	550,963	24,884	3,066,119	189,279	1,127,644	22,688
Northumberland.....	754,320	43,104	85,400	6,100		
Princess Anne.....			167,500	45,000	14,000	500
Richmond.....	141,120	9,072	913,500	65,250		
Warwick.....	175,840	11,304	350,000	18,850	703,360	15,072
Westmoreland.....	311,850	18,510				
York.....	1,391,250	69,800	1,274,000	75,030	1,312,500	28,125
<b>Total.....</b>	<b>14,156,142</b>	<b>779,556</b>	<b>18,026,379</b>	<b>1,254,573</b>	<b>6,969,298</b>	<b>167,163</b>
<b>Grand total.....</b>	<b>18,566,996</b>	<b>1,003,545</b>	<b>19,799,675</b>	<b>1,380,506</b>	<b>12,724,446</b>	<b>301,541</b>

Counties.	Oyster dredges.				Total.	
	Market oysters from natural rock.		Market oysters from private beds.		Lbs.	Value.
	Lbs.	Value.	Lbs.	Value.		
<b>Vessel fisheries:</b>						
Accomac.....	647,542	\$38,497			2,408,483	\$136,582
Elizabeth City.....			1,680,000	\$92,240	1,893,500	98,340
Essex.....					7,000	200
Gloucester.....	10,500	525			893,550	26,398
Isle of Wight.....					950,145	32,346
King George.....	16,800	1,080			16,800	1,080
King William.....					546,000	11,700
Lancaster.....					113,050	6,460
Mathews.....					59,500	3,200
Middlesex.....					56,000	3,190
Nansemond.....					1,426,600	39,245
Norfolk.....					3,168,400	142,830
Northampton.....					1,417,262	70,747
Northumberland.....	220,220	12,734			220,220	12,734
Richmond.....					21,000	750
Warwick.....					396,900	10,155
Westmoreland.....	235,130	14,793			235,130	14,793
York.....					929,950	33,428
<b>Total.....</b>	<b>1,130,192</b>	<b>67,629</b>	<b>1,680,000</b>	<b>92,240</b>	<b>14,749,490</b>	<b>644,169</b>

a Includes 12,000 bushels (84,000 pounds) of seed oysters valued at \$1,799 taken from private beds.



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Table showing the catch by oyster dredges and tongs in the fisheries of Virginia in 1901—Continued.

Counties.	Oyster dredges.				Total.	
	Market oysters from natural rock.		Market oysters from private beds.		Lbs.	Value.
	Lbs.	Value.	Lbs.	Value.		
Shore fisheries:						
Accomac.....	645,470	\$39,915			6,421,345	\$376,985
Elizabeth City.....					1,980,440	92,530
Essex.....					757,057	52,729
Gloucester.....					1,847,650	91,845
Isle of Wight.....					1,689,000	63,600
James City.....					133,000	9,500
King George.....	32,900	1,940			130,900	7,540
King and Queen.....					469,000	36,700
King William.....					385,000	32,000
Lancaster.....					3,281,250	206,975
Mathews.....					2,670,400	158,510
Middlesex.....			56,000	\$4,000	3,494,400	219,380
Nansemond.....					1,653,456	85,072
New Kent.....					154,000	12,100
Norfolk.....					2,689,925	159,093
Northampton.....					4,744,726	236,851
Northumberland.....	306,600	17,520			1,146,320	66,724
Princess Anne.....					171,500	45,500
Richmond.....					1,054,620	74,322
Warwick.....					1,229,200	45,226
Westmoreland.....	255,850	14,620			567,700	33,130
York.....					3,977,750	172,976
Total.....	1,240,820	73,995	56,000	4,000	40,448,639	2,279,287
Grand total.....	2,371,012	141,624	1,736,000	96,240	55,198,129	2,923,456

The following supplementary table presents in bushels, instead of pounds, the quantity and value of oysters taken from public and private areas in each county of Virginia in 1901:

Counties.	Market oysters from natural rock.		Market oysters from private beds.		Seed oysters from natural rock.		Total.	
	Bush.	Value.	Bush.	Value.	Bush.	Value.	Bush.	Value.
	Accomac.....	418,619	\$175,663	474,315	\$266,008	368,470	\$71,896	1,261,404
Elizabeth City.....	35,730	14,292	380,000	149,040	137,690	27,538	553,420	190,870
Essex.....	17,460	7,384	90,691	45,345	1,000	200	109,151	52,929
Gloucester.....	116,900	44,304	108,500	47,200	166,200	26,730	391,600	118,234
Isle of Wight.....	113,467	39,808	75,000	30,000	174,278	26,138	362,735	95,946
James City.....			19,000	9,500			19,000	9,500
King George.....	21,100	8,620					21,100	8,620
King and Queen.....	3,000	1,500	64,000	35,200			67,000	36,700
King William.....			55,000	32,000	78,000	11,700	133,000	43,700
Lancaster.....	255,400	102,160	221,600	109,300	7,900	1,975	484,900	213,435
Mathews.....	292,050	114,120	83,650	47,690			375,700	161,710
Middlesex.....	309,800	123,970	197,000	98,500	400	100	507,200	222,570
Nansemond.....	193,208	68,698	78,000	29,699	168,800	25,920	440,008	124,317
New Kent.....			22,000	12,100			22,000	12,100
Norfolk.....	497,660	174,806	241,715	109,197	96,100	17,920	835,475	301,923
Northampton.....	102,220	32,317	568,854	245,817	209,210	29,464	880,284	307,598
Northumberland.....	183,020	73,358	12,200	6,100			195,220	79,458
Princess Anne.....			22,500	45,000	2,000	500	24,500	45,500
Richmond.....	20,160	9,072	130,500	65,250	3,000	750	163,660	75,072
Warwick.....	32,320	14,034	60,000	18,860	149,980	22,497	232,300	65,381
Westmoreland.....	114,690	47,923					114,690	47,923
York.....	264,250	93,140	182,000	75,050	254,750	38,213	701,100	206,403
Total.....	2,991,144	1,145,169	3,076,525	1,476,746	1,817,778	301,541	7,885,447	2,923,456

Table showing, by counties, the catch by clam tongs, hoes and rakes, and crab scrapes in the fisheries of Virginia in 1901.

Fisheries and counties.	Clam tongs, hoes and rakes.		Crab scrapes.	
	Clams, hard.		Crabs, soft.	
	Lbs.	Value.	Lbs.	Value.
Vessel fisheries:				
Accomac.....	139,208	\$15,926		
Northampton.....	46,496	2,615		
Total.....	185,704	18,541		
Shore fisheries:				
Accomac.....	934,312	83,513	994,728	\$42,638
Elizabeth City.....	42,664	3,520		
Gloucester.....	50,984	4,093		
Mathews.....	196,000	1,400		
Norfolk.....	32,000	3,000		
Northampton.....	155,664	8,756		
York.....	167,352	11,954		
Total.....	1,678,976	116,236	994,728	42,638
Grand total.....	1,764,680	134,777	994,728	42,638

<sup>a</sup> Includes 20 bushels (200 lbs.) soft clams, valued at \$20

#### MENHADEN FISHERY.

The menhaden fisheries, with one less factory than in 1897, show a gain of \$455,693 in the value of products in 1901, the value being \$362,032 in 1897 and \$817,725 in 1901. This large gain may in part be accounted for by the higher prices received for the products and in part by the increased catch of 115,504,331 menhaden, the catch of 1897 numbering 263,203,000 fish and that of 1901 378,727,331 fish. During the past few years factories have been extensively enlarged and improved and new and improved machinery has been introduced. The increase in steamers was 7, in purse seines 15, and in vessel and shore employees 407. Menhaden were found fairly plentiful, and the season on the whole was a satisfactory one.

The manufactured products of the menhaden fisheries amounted to 21,130 tons of dry scrap, 10,591 tons of acidulated scrap, and 723,215 gallons of oil. This business gives employment on vessels and in factories to 1,577 persons, the factory employees receiving \$92,308 in wages during 1901.

Table showing the extent of the menhaden industry of Virginia in 1901.

Items.	No.	Value.	Items.	No.	Value.
Factories.....	15	\$271,025	Steam vessels fishing.....	21	\$256,000
Cash capital.....		121,450	Tonnage.....	1,753	
Wages paid factory employees.....		92,308	Outfit.....		64,580
Persons in factories.....	661		Sail vessels fishing.....	17	17,600
Persons on vessels.....	916		Tonnage.....	435	
Menhaden utilized.....	378,727,331	392,715	Outfit.....		12,565
Tons of dry scrap.....	21,130	617,872	Sail vessel transporting.....	18	19,850
Tons of acidulated and crude scrap.....	10,591	135,388	Tonnage.....	524	
Gallons of oil made.....	723,215	164,465	Outfit.....		2,170
			Seines (total length, 42,636 feet).....	52	36,895

## WHOLESALE FISHERY TRADE.

The wholesale trade in fishery products of the State was represented by 80 firms in 1901 and 56 in 1897, a gain of 24. Of the 80 firms, 67 were engaged in the oyster business, most of them, more or less extensively, from the planting of seed oysters to the gathering, opening, and distribution of the marketable crop to all sections of the country. This branch of business shows many changes and improvements and has increased considerably in importance.

The wholesale trade in food-fish is carried on by a comparatively small number of firms. The fresh fish are handled chiefly during the early spring runs of migratory fish, the season being much earlier than for the same species in northern waters. This early spring catch has a wide range of distribution. The only cured fish marketed are salted alewives.

The total number of employees in the wholesale firms was 4,132, the larger portion of whom were engaged in the opening of oysters. The wholesale firms paid in 1901 \$701,807 in wages, most of which went to oystermen for their eight months' work.

Reference has been made to an endless-chain scraper for removing oyster shells from the shucking rooms. This device is employed by Messrs. J. S. Darling & Son, of Hampton, one of the largest firms in Virginia, and has resulted in saving much time, labor, and expense. The old and expensive method of removing shells by shovels and wheelbarrows is still practiced by all of the other firms.

*Table showing the persons and capital in the wholesale fishery trade of Virginia in 1901.*

Localities.	Establishments.		Cash capital.	Number of persons engaged.	Wages paid.
	No.	Value.			
Lewisetta, Wheaton, Kinsale, and Munday's Point...	7	\$21,000	\$31,800	551	\$86,650
West Point .....	5	15,500	46,000	234	45,600
Hampton .....	6	65,000	61,000	510	66,575
Suffolk .....	3	9,000	9,000	124	9,900
Portsmouth and Berkley .....	4	62,440	38,000	513	105,425
Norfolk .....	20	229,500	156,000	1,404	318,100
Irvington and Weems Wharf .....	3	3,100	8,000	123	20,000
Cape Charles, Brighton, Cobbs Landing, and Brownsville .....	7	10,200	11,100	130	9,980
Willis Wharf, Bridgetown, and Franktown .....	5	5,350	7,800	184	7,320
Chesconessex, Dreka, Mappsville, Saxis, and Lemont .....	9	8,000	20,600	148	9,447
Watchpage, Messongo, and Wisharts Point .....	4	3,600	8,000	85	6,210
Chincoteague and Franklin City .....	5	10,250	20,500	116	14,850
Tangier Island .....	2	1,000	2,750	10	1,750
Total .....	80	443,940	420,550	4,132	701,807