U.S. FISH COMMISSION
BEAUFORT, N.C.

UNITED STATES COMMISSION OF FISH AND FISHERIES
SPENCER F. BAIRD, COMMISSIONER

THE FISHERIES

AND

FISHERY INDUSTRIES

OF THE

UNITED STATES

PREPARED THROUGH THE CO-OPERATION OF THE COMMISSIONER OF FISHERIES AND THE SUPERINTENDENT OF THE TENTH CENSUS

BY

GEORGE BROWN GOODE
ASSISTANT SECRETARY OF THE SMITHSONIAN INSTITUTION
AND A STAFF OF ASSOCIATES

SECTION II

A GEOGRAPHICAL REVIEW OF THE FISHERIES INDUSTRIES AND FISHING COMMUNITIES FOR THE YEAR 1880

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LETTER OF TRANSMITTAL.

WASHINGTON, D. C., *March* 1, 1883.

Prof. SPENCER F. BAIRD,

U. S. Commissioner of Fish and Fisheries:

SIR: I have the honor to submit herewith a geographical review of the fisheries of the United States, including the fishery districts of the Atlantic, the Gulf, and the Pacific coasts, and of the great lakes. This report has been prepared by the following-named census agents and assistants of the United States Fish Commission: Dr. Tarleton H. Bean, Mr. A. Howard Clark, Capt. Joseph W. Collins, Mr. R. Edward Earll, Mr. Richard H. Edmonds, Mr. Ernest Ingersoll, Prof. David S. Jordan, Mr. Ludwig Kumlien, Col. Marshall McDonald, Mr. Frederick Mather, Mr. Silas Stearns, Mr. Frederick W. True, and Mr. W. A. Wilcox. The manuscript of this volume was prepared for the press by Mr. R. E. Earll, and has been printed under the editorial supervision of Mr. A. Howard Clark.

This report constitutes Section II of the Special Report on the Food Fishes and Fishery Industries of the United States, prepared through the co-operation of the Commission of Fish and Fisheries and the Superintendent of the Tenth Census. Section I, the Natural History of Useful Aquatic Animals, has already been published.

The accompanying statistical statement gives a summary of the fisheries of the country in 1880. We find that the total number of persons actually employed in the fishery industries, either as fishermen or in preparing the products for market, was 131,426, of whom 101,684 were fishermen, and the remainder shoresmen. The fishing fleet consisted of 6,605 vessels (aggregating 208,297.82 tons) and 44,804 boats, and the total amount of capital invested was $37,955,349, distributed as follows: Vessels, $9,357,282; boats, $2,465,393; minor apparatus and outfits, $8,145,261; other capital, including shore property, $17,987,413.

The value of the fisheries of the sea, of the great rivers, and of the great lakes was $43,046,053, and that of those in minor inland waters was $1,500,000; in all, $44,546,053. These values were estimated upon the basis of the prices of the products received by the producers, and, if average wholesale prices had been considered, the value would have been much greater.

STATISTICS OF THE FISHERIES OF THE UNITED STATES IN 1880. (a)

	States and territories.	GRAND TOTAL.			PERSONS EMPLOYED.		APPARATUS AND CAPITAL.		
		Persons employed.	Capital invested.	Value of products.	Fishermen.	Shoresmen.	Vessels.		
							Number.	Tonnage.	Value.
		Number.			*Number.*	*Number.*			
	The United States	131,426	$37,955,349	$43,046,053	101,684	29,742	6,605	208,297.82	$9,357,282
	New England states	37,043	19,937,607	14,270,393	29,838	7,205	2,066	113,602.59	4,562,131
	Middle states, exclusive of great lake fisheries	14,981	4,426,078	8,676,579	12,584	2,397	1,210	23,566.93	1,382,000
	Southern Atlantic states	52,418	8,951,722	9,602,737	38,774	13,644	3,014	60,886.15	2,375,450
	Gulf states	5,131	545,584	1,227,544	4,382	749	197	3,009.86	308,051
	Pacific states and territories	16,803	2,748,383	7,484,750	11,613	5,190	56	5,463.42	546,450
	Great lakes	5,050	1,345,975	1,784,050	4,493	557	62	1,768.87	183,200
1	Alabama	635	38,200	119,275	545	90	24	317.20	14,585
2	Alaska	6,130	447,000	2,661,640	6,000	130	.....	.....	.....
3	California	3,094	1,139,675	1,860,714	2,089	1,005	49	5,246.80	535,350
4	Connecticut	3,131	1,421,020	1,456,866	2,585	546	291	9,215.95	514,050
5	Delaware	1,979	268,231	997,695	1,662	317	69	1,226.00	51,600
6	Florida	2,480	406,117	643,227	2,284	196	124	2,152.97	372,645
7	Georgia	899	78,770	119,993	809	90	1	12.00	450
8	Illinois	300	83,400	60,100	265	35	3	209.73	8,500
9	Indiana	52	29,360	22,740	45	7	1	21.90	2,500
10	Louisiana	1,597	93,621	392,610	1,300	297	49	539.69	20,821
11	Maine	11,071	3,375,994	3,614,178	8,110	2,961	606	17,632.65	633,542
12	Maryland	26,008	6,242,443	5,221,715	15,873	10,135	1,450	43,500.00	1,750,000
13	Massachusetts	20,117	14,334,450	8,141,750	17,165	2,952	1,054	83,232.17	3,171,189
14	Michigan	1,781	442,665	716,170	1,600	181	36	914.42	98,500
15	Minnesota	35	10,160	5,200	30	5	1	33.59	5,000
16	Mississippi	186	8,800	22,540	110	76	.....	.....	.....
17	New Hampshire	414	209,465	176,684	376	38	23	1,019.05	51,500
18	New Jersey	6,220	1,492,202	3,176,589	5,659	561	590	10,445.90	545,900
19	New York	7,266	2,629,585	4,380,565	5,650	1,616	541	11,582.51	777,600
20	North Carolina	5,274	506,561	845,695	4,729	545	95	1,457.90	39,000
21	Ohio	1,046	473,800	518,420	925	121	9	359.51	38,400
22	Oregon	6,835	1,131,350	2,781,024	2,795	4,040	.....	.....	.....
23	Pennsylvania	552	119,810	320,050	511	41	11	321.99	10,500
24	Rhode Island	2,310	596,678	880,915	1,602	708	92	2,502.77	191,850
25	South Carolina	1,005	66,275	212,482	964	41	22	337.32	15,000
26	Texas	601	42,400	128,300	491	110	.....	.....	.....
27	Virginia	18,864	1,914,119	3,124,444	16,051	2,813	1,446	15,578.93	571,000
28	Washington	744	30,358	181,372	729	15	7	216.62	11,100
29	Wisconsin	800	222,840	253,100	730	70	11	220.25	26,700

a The value of fishery products taken by unprofessional fishermen in the minor inland waters of the United States is roughly estimated at $1,500,000. It was impossible during the fishery investigation to obtain details of this industry.

STATISTICS OF THE FISHERIES OF THE UNITED STATES IN 1880.

APPARATUS AND CAPITAL—continued.				VALUE OF PRODUCTS BY FISHERIES.							
Boats.		Value of minor apparatus and outfits.	Other capital, including shore property.	General fisheries. (b)	Whale fishery.	Seal fishery.	Menhaden fishery.	Oyster fishery.	Sponge fishery.	Marine-salt industry.	
Number.	Value.										
44, 804	$2, 465, 393	$8, 145, 261	$17, 987, 413	$22, 405, 018	$2, 323, 943	$2, 289, 813	$2, 116, 787	$13, 403, 852	$200, 750	$305, 890	
14, 787	739, 970	5, 038, 171	9, 597, 335	10, 014, 645	2, 121, 385	111, 851	539, 722	1, 478, 900	.....	3, 890	
8, 293	546, 647	674, 951	1, 822, 480	2, 882, 294	.....	.....	1, 261, 385	4, 532, 900	.....	.....	
13, 331	640, 508	1, 145, 878	4, 789, 886	2, 217, 797	408	.....	315, 680	7, 068, 852	.....	.....	
1, 252	50, 173	52, 823	134, 537	713, 594	.....	.....	.....	313, 200	200, 750	.....	
5, 547	404, 695	467, 238	1, 530, 000	4, 792, 638	202, 150	2, 177, 962	.....	10, 000	.....	302, 000	
1, 594	83, 400	766, 200	313, 175	1, 784, 050	.....	.....	.....	.....	.....	.....	
119	10, 215	7, 000	6, 400	74, 325	.....	.....	.....	44, 950	.....	.....	1
3, 000	60, 000	7, 000	380, 000	564, 640	500	2, 096, 500	.....	.....	.....	.....	2
853	91, 485	205, 840	307, 000	1, 341, 314	201, 650	15, 750	.....	.....	.....	302, 000	3
1, 173	73, 585	375, 535	457, 850	383, 887	32, 048	111, 851	256, 205	672, 875	.....	.....	4
839	33, 227	70, 324	113, 080	309, 029	.....	.....	941	687, 725	.....	.....	5
1, 058	28, 508	39, 927	65, 037	426, 527	.....	.....	.....	15, 950	200, 750	.....	6
358	15, 425	18, 445	44, 430	84, 993	.....	.....	.....	35, 000	.....	.....	7
101	2, 000	11, 900	61, 000	60, 100	.....	.....	.....	.....	.....	.....	8
15	1, 650	20, 210	5, 000	32, 740	.....	.....	.....	.....	.....	.....	9
165	4, 800	18, 000	50, 000	192, 610	.....	.....	.....	200, 000	.....	.....	10
5, 920	245, 624	934, 593	1, 562, 235	3, 576, 678	.....	.....	.....	37, 500	.....	.....	11
2, 825	186, 448	297, 145	4, 108, 850	479, 388	.....	.....	11, 851	4, 730, 476	.....	.....	12
6, 749	351, 736	3, 528, 925	7, 282, 600	5, 581, 204	2, 089, 337	.....	61, 769	405, 550	.....	3, 890	13
454	10, 345	272, 920	60, 900	716, 170	.....	.....	.....	.....	.....	.....	14
10	900	3, 760	500	5, 200	.....	.....	.....	.....	.....	.....	15
58	4, 600	1, 600	2, 600	12, 540	.....	.....	.....	10, 000	.....	.....	16
211	7, 780	60, 385	89, 800	170, 634	.....	.....	.....	6, 050	.....	.....	17
4, 065	223, 963	232, 339	490, 000	949, 678	.....	.....	146, 286	2, 080, 625	.....	.....	18
8, 441	289, 885	390, 200	1, 171, 900	1, 689, 357	.....	.....	1, 114, 158	1, 577, 050	.....	.....	19
2, 714	123, 175	225, 436	118, 950	785, 287	408	.....	.....	60, 000	.....	.....	20
487	29, 830	253, 795	151, 775	518, 420	.....	.....	.....	.....	.....	.....	21
1, 360	246, 600	245, 750	639, 000	2, 776, 724	.....	4, 300	.....	.....	.....	.....	22
156	13, 272	40, 538	55, 500	132, 550	.....	.....	.....	187, 500	.....	.....	23
734	61, 245	138, 733	204, 850	302, 242	.....	.....	221, 748	356, 925	.....	.....	24
501	9, 790	25, 985	15, 500	192, 482	.....	.....	.....	20, 000	.....	.....	25
167	15, 000	4, 400	23, 000	81, 000	.....	.....	.....	47, 300	.....	.....	26
6, 618	292, 720	560, 763	489, 636	602, 239	.....	.....	303, 829	2, 218, 376	.....	.....	27
334	6, 610	8, 648	4, 000	109, 960	.....	61, 412	.....	10, 000	.....	.....	28
319	24, 975	145, 165	26, 000	253, 100	.....	.....	.....	.....	.....	.....	29

b Includes fisheries for all food species except oysters.

Since 1865 the fisheries have greatly increased in extent and value, chiefly due to improved methods of preservation of products and means of transportation.

The fisheries of the New England States are the most important. They engage 37,043 men, 2,066 vessels, and 14,787 boats, and yield products to the value of $14,270,393. In this district the principal fishing ports, in order of importance, are: Gloucester, Portland, Boston, Provincetown, and New Bedford, the latter being the center of the whale fishery. New England was settled in 1620 by colonists chiefly from the western counties of England, who selected that portion of the coast on account of its peculiar fitness for the prosecution of the fisheries, and by the middle of the seventeenth century there was a considerable fleet of ketches and snows engaged in the cod fishery on the off-shore banks, where—especially on the banks of Newfoundland—France, Spain, Portugal, and England already had a fleet of several hundred large vessels. Just before the war of the Revolution New England had 665 vessels and 4,405 men employed in its fisheries.

Next to New England in importance are the South Atlantic States, employing 52,418 men, 3,014 vessels (the majority of which are small and engaged in the shore and bay fisheries), and 13,331 boats, and returning products to the value of $9,602,737.

Next are the Middle States, employing in the coast fisheries 14,981 men, 1,210 vessels, and 8,293 boats, with products to the amount of $8,676,579.

Next are the Pacific States and Territories, with 16,803 men, 56 vessels, and 5,547 boats, with products to the amount of $7,484,750. The fisheries of the great lakes employ 5,050 men, 62 vessels, and 1,594 boats, with products to the amount of $1,784,050. The Gulf States employ 5,131 men, 197 vessels, and 1,252 boats, yielding products to the value of $1,227,544.

Forty-three distinct fisheries are recognized by American writers, each being carried on in a special locality and with methods peculiar to itself. Among the most important of these are the oyster fishery, the off-shore cod fishery, the whale fishery, the fur-seal fishery, the mackerel fishery, the menhaden fishery, the halibut fishery, the antarctic seal and sea-elephant fishery, the west-coast salmon fishery, the lobster fishery, the shad and alewife fisheries, the swordfish fishery, and the clam fishery.

The off-shore fisheries are carried on by citizens of the New England and Middle States, and are prosecuted on the great oceanic banks extending from Nantucket to Labrador, and upon the ledges and shoals between these and the coast.

The great purse-seine fisheries for mackerel and menhaden are carried on north of Cape Hatteras, at distances from the shore varying from 1 mile to 150 miles. The fishing-grounds in the Gulf of Saint Lawrence, formerly frequented by many hundreds of American vessels, have been almost entirely abandoned since the introduction of the purse-seine, and in 1882 only one vessel visited those waters, returning with about 200 barrels of mackerel. The oyster fishery is located for the most part between Cape Hatteras and Cape Cod, chiefly in the great inland bays. In all the great rivers of the Atlantic coast are fisheries for the anadromous shad and the two species of alewife. About the keys of Southern Florida is an extensive sponge fishery, and on the shoals of the Gulf of Mexico the red-snapper and grouper fisheries are yearly increasing in value. The fur-seal fishery is chiefly located upon the Pribylov islands of Alaska. A small fleet of vessels yearly penetrates to the ice-bound islands of the Antarctic for seal-skins and sea-elephant oil. The whaling fleets, with headquarters at New Bedford and San Francisco, frequent all oceans, the larger vessels cruising chiefly in the North Pacific, while the smaller ones pursue their prey throughout the Atlantic and South Pacific. The salmon fishery is seated upon the Columbia River and its tributaries, though other rivers in Oregon and California produce large quantities of salmon, which is extensively canned and exported. The most valuable product of the great-lake fisheries is the whitefish. The swordfish fishery of Southern New England, though employing but 40 vessels and perhaps 160 men, produces 1,500,000 pounds weight annually.

The export of American fishery products is comparatively small, owing to the fact that the demand for such products for home consumption is really greater than the supply, and is constantly on the increase. In 1880 the total value of exported fish products amounted to $5,744,580, of which, according to custom-house records, England received $2,601,017. Of the quantity sent to England, $1,596,007 was in canned preparations, and $363,790 in fresh oysters, the remainder

being chiefly products of the whale fishery. In former years there was an extensive export trade in dried cod with Spain and Portugal. Large quantities of canned salmon are sent to China, Japan, and Australia.

At present no subsidies are allowed to fishermen, except that the duties on imported salt used in the preparation of fish are remitted. This practice was begun in 1866, at which time the old bounty law was repealed.

The United States, with the intention of aiding its fishermen, has paid to Great Britain the sum of $5,500,000 for the privilege of fishing in the British provincial waters from 1873 to 1885.

Since 1871 the United States has appropriated over one million dollars to be used by the United States Fish Commission in behalf of the fishermen and fish consumers, and under the direction of the Commissioner, Prof. Spencer F. Baird, very important results have been accomplished. All the State Governments, with the exception of six, have established State fish commissions, and most of these have been liberally supported by grants of money.

The undeveloped fishery resources are very great. Many of the fishes and invertebrates which in Europe are highly valued by the poorer classes are never used here. Only about 150 of the 1,500 species of fishes known to inhabit the waters of the United States are ordinarily found in the markets.

Yours, very respectfully,

G. BROWN GOODE,

Special Agent Tenth Census, in charge of Fishery Investigation.

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