
STATISTICS OF THE FISHERIES OF THE GULF STATES.

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

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INTRODUCTORY NOTE.

The following report on the condition of the commercial fisheries of the Gulf States is based upon a canvass of the region made in 1898, the information relating to the year 1897. Condensed information on this subject has already been made public in Statistical Bulletin No. 8, Fisheries of the Gulf States, single-sheet statistical bulletins relating to the condition of the fisheries usually being prepared upon the completion of field work and distributed in advance of full reports appearing in the regular publications of the Commission.

The report has been prepared under the direction of Mr. C. H. Townsend, assistant in charge of the Division of Fisheries.

The agents of the division participating in the field investigations were: Messrs. Charles H. Stevenson, in Texas and Louisiana; Ansley Hall, in Mississippi and Alabama, and John N. Cobb, in western Florida. The agents were familiar with the fields allotted to them, having at some previous time canvassed the fisheries of the same States. In addition to the purely statistical matter, they have furnished explanatory notes, which have been inserted under the proper headings.

The preparation of the extensive series of tables has been chiefly in the hands of Mr. S. Le R. Pritchard.

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STATISTICS OF THE FISHERIES OF THE GULF STATES.

GENERAL NOTES AND STATISTICS.

The fisheries of the Gulf States, as considered in the present report, are the commercial fisheries of the coastal waters, no inquiries being made respecting fishing carried on irregularly above tidal waters.

The last canvass of the fisheries of this region was made in 1890.* While there has been an increase in the number of persons engaged, there has been a decrease in the amount of capital invested and in the value of the product. The fishery conditions in 1897 were, however, not quite normal, owing to unsettled conditions in Cuba, quarantine restrictions, and the storms of previous years, which destroyed much of the outfit of the fishermen. The region has very important fishery resources throughout its vast extent of coast line, but they are far from being well developed.

The fisheries of the Gulf States in 1897 gave employment to 13,967 persons, 11,180 being fishermen and 2,787 shoresmen. The largest number is credited to Florida, where 5,011 were engaged. Louisiana ranks next with 4,403, followed by Mississippi with 2,565, and Texas with 1,199. In Alabama the number of persons employed amounted to 789. There has been an increase of 2,215 in the number of persons engaged in the Gulf fisheries since 1890, at which time the total number was 11,752. About one-fourth of the fishing population is composed of unnaturalized persons.

The money invested in the industry was \$2,584,061; nearly one-half of this sum, \$1,149,262, is credited to western Florida; \$518,301 to Mississippi, \$513,813 to Louisiana, \$237,496 to Texas, and \$165,189 to Alabama. There has been a decrease of \$394,231 in the amount of capital invested in the fisheries in this region since 1890.

The total number of vessels employed was 425, valued with their outfits at \$717,076. 6,025 boats were used, valued at \$436,041.

* The following publications, emanating chiefly from the U. S. Fish Commission, should be consulted in this connection:

Fisheries of the Gulf of Mexico. Silas Stearns. The Fisheries and Fishery Industries of the United States, section 11. Geographical Review of the Fisheries for 1880.

Report on the Fisheries of the Gulf States. J. W. Collins and H. M. Smith. Bulletin U. S. Fish Commission, 1891.

Report on the Coast Fisheries of Texas. Charles H. Stevenson. Report U. S. Fish Commission, 1889 to 1891.

The Fish and Fisheries of the Coastal Waters of Florida. Transmitted to the United States Senate by the Commissioner of Fish and Fisheries, January 28, 1897. Senate Document 100, Fifty-fourth Congress, second session. See also pp. 263-342, Report of U. S. Fish Commissioner for 1896.

The apparatus of capture was valued at \$137,216, and the shore property and cash capital at \$1,289,328.

The yield of the fisheries in this region was 65,660,623 pounds, valued at \$2,271,726. The fisheries of western Florida were valued at \$944,793. Louisiana ranks next in the value of products, the amount being \$713,587. The values of the products of the other three States are as follows: Texas \$286,610; Mississippi \$192,298, and Alabama \$134,438. The value of products has decreased \$166,949 since 1890. The oyster fishery leads in importance and was valued at \$748,760. The sponge fishery ranks next, with a value of \$305,589. Mullet follow, valued at \$213,988, and red snappers at \$200,412. Other important products of the region are trout valued at \$114,978; shrimp valued at \$117,453, and channel bass valued at \$91,776.

The sponge fishery is confined to Florida. The oyster fishery is more important in Louisiana than elsewhere, the yield in that State being valued at \$432,668. Mississippi ranks next in the importance of this fishery, the yield being valued at \$110,964. The shrimp fishery is of more importance in Louisiana than in any other State, having a value of \$80,576. The most important items in the fisheries of Alabama are oysters with a value of \$60,207, and red snappers valued at \$11,725. In the fisheries of Texas the oyster leads, valued at \$94,663. The other Texas fisheries of importance are the trout fishery valued at \$45,525, sheephead at \$21,723, and red snapper at \$17,453.

The following three tables show, by States, the number of persons employed, the capital invested, and the yield in 1897, while the fourth table shows the extent of the fisheries in 1880, 1890, and 1897:

Table showing the number of persons engaged in the fisheries of the Gulf States in 1897.

States.	Fishermen.	Shoresmen.	Total.
Florida.....	4,667	344	5,011
Alabama.....	593	196	789
Mississippi.....	1,061	1,504	2,565
Louisiana.....	3,719	684	4,403
Texas.....	1,140	59	1,199
Total.....	11,180	2,787	13,967

Table showing the investment in the fisheries of the Gulf States in 1897.

Designation.	Florida.		Alabama.		Mississippi.	
	No.	Value.	No.	Value.	No.	Value.
Vessels.....	183	\$274,177	53	\$40,375	83	\$81,125
Tonnage.....	2,771.02		522.18		854.88	
Outfit.....		191,561		10,570		25,938
Boats.....	1,621	180,548	254	12,939	439	17,039
Apparatus of capture.....		54,350		9,205		19,255
Shore property.....		175,526		49,350		125,644
Cash capital.....		323,100		42,760		249,300
Total.....		1,149,262		165,189		518,801

Table showing the investment in the fisheries of the Gulf States in 1897—Continued.

Designation.	Louisiana.		Texas.		Total.	
	No.	Value.	No.	Value.	No.	Value.
Vessels.....	81	\$32,101	45	\$36,585	425	\$464,343
Tonnage.....	395.80		508.81		5,052.69	
Outfit.....		9,545		15,119		252,733
Boats.....	3,025	197,604	680	77,911	6,025	436,041
Apparatus of capture.....		31,660		22,746		137,216
Shore property.....		173,903		55,155		579,578
Cash capital.....		69,000		80,000		714,150
Total.....		513,813		237,496		2,584,001

Table showing the products of the fisheries of the Gulf States in 1897.

Species.	Florida.		Alabama.		Mississippi.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Amber-fish.....	18,000	\$320				
Angel-fish.....	59,186	1,699	6,000	\$115		
Barracuda.....	81,000	1,240				
Black bass.....			41,000	2,870	27,000	\$1,350
Blue-fish.....	264,971	6,057	204,500	4,094	33,300	1,105
Buffalo-fish.....					21,500	215
Cat-fish.....	5,000	100	188,000	2,872	81,200	720
Channel bass or red-fish.....	236,368	3,597	213,000	7,425	199,000	8,303
Crevalle.....	38,140	494	12,000	180		
Drum, salt-water.....	37,855	622	6,000	91	5,000	250
Flounders.....	32,561	549	47,000	1,602	28,200	1,002
Groupers.....	781,155	9,349	69,000	1,035		
Grunts.....	671,876	16,833				
Hog-fish.....	81,600	3,480				
Jurel.....	7,500	75				
King-fish.....	440,000	6,800				
Lady-fish.....	123,223	2,633				
Mullet, fresh.....	11,711,041	126,124	591,300	8,497	240,600	2,881
Mullet, salted.....	2,432,277	54,028	6,000	195		
Mullet roe, salted.....	143,999	13,310				
Perch.....			5,000	200	5,000	150
Pike and pickerel.....			4,000	61		
Pin-fish.....			4,000	61	38,880	1,314
Pompano, fresh.....	859,151	17,964	60,300	4,212	24,800	1,580
Pompano, salted.....	23,225	1,230				
Porgies.....	98,200	2,450				
Pork-fish.....	11,962	1,196				
Sailor's choice.....	89,381	3,198				
"Sardines".....	150,000	3,090				
Sheepshead.....	693,347	9,793	86,800	2,949	110,150	4,103
Snappers, red.....	5,314,487	171,234	835,090	11,725		
Snappers, other.....	110,631	3,298				
Spanish mackerel, fresh.....	456,322	21,757	85,500	3,960	64,760	5,076
Spanish mackerel, salted.....	23,579	1,193				
Spots and croakers.....	26,113	495	504,000	8,099	51,900	1,914
Sturgeon.....	9,254	331				
Sun-fishes.....	7,909	238	79,500	2,783	24,800	508
Trout, fresh*.....	703,830	15,148	296,100	9,711	452,800	15,570
Trout, salted.....	63,105	2,524				
Whiting.....	9,589	109	2,000	70		
Yellow-tail.....	73,440	6,594				
Other fish.....	537,138	24,317				
Sponges.....	332,856	305,589				
Oysters.....	1,258,098	50,258	1,785,438	60,207	4,407,992	110,964
Clams.....	7,084	171				
Shrimp.....			40,600	609	1,903,165	28,804
Craw-fish.....	157,500	3,150				
Crabs, hard.....	6,240	208	24,400	505	131,640	3,494
Crabs, soft.....					21,200	1,720
Turtles.....	634,616	22,736				
Terrapin.....	11,400	1,250	2,034	320	6,798	1,275
Conchs.....	500	30				
Alligator hides.....		12,450				
Otter skins.....		14,481				
Total.....	28,255,219	944,793	4,699,381	134,438	7,829,685	192,298

* The "trout" referred to in these tables is the squeteague or weak-fish of the northern Atlantic waters.

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Table showing the products of the fisheries of the Gulf States in 1897.

Species.	Louisiana.		Texas.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Amber-fish					18,600	\$620
Angel-fish					65,186	1,811
Barracnda					31,000	1,240
Black bass	320	\$26			68,320	4,246
Blue-fish	3,960	132	29,540	\$1,281	536,271	12,669
Buffalo-fish	311,093	4,768	12,200	470	344,703	5,453
Cat-fish	2,153,134	51,420	71,230	3,035	2,448,564	58,147
Channel bass or red-fish	485,200	20,520	1,144,376	51,922	2,257,944	91,776
Crovalle	18,000	690	18,000	743	86,140	2,107
Drum, fresh-water	7,250	74			7,250	74
Drum, salt-water	18,570	540	50,400	2,046	117,825	3,549
Flounders	9,625	654	218,025	9,810	335,411	13,026
Groupers			3,463	84	853,018	10,468
Grunts					671,876	10,833
Hog-fish	125	5	15,995	784	97,720	4,269
Jew-fish			33,281	1,083	33,281	1,083
Jurel					7,500	75
King-fish					440,000	6,600
Lady-fish					123,223	2,633
Mullet, fresh	165,819	5,871	60,350	2,167	12,769,110	145,530
Mullet, salted			500	25	2,438,777	55,148
Mullet roe, salted					143,999	13,310
Perch	11,050	500	32,150	1,506	53,200	2,356
Pike and pickerel			22,730	989	26,730	1,050
Pin-fish					42,880	1,375
Pompano, fresh	17,665	1,891	17,850	812	479,766	20,459
Pompano, salted					23,225	1,236
Porgies					98,200	2,450
Pork-fish					11,962	1,196
Sailor's choice					89,381	3,198
"Sardines"					150,000	3,090
Sheepshead	238,010	12,606	467,504	21,723	1,565,811	51,074
Shoemaker	9,600	346			9,600	846
Silver perch	3,015	128			3,015	128
Snappers, red			464,791	17,463	6,114,278	200,412
Snappers, other					110,631	3,296
Spanish mackerel, fresh	55,805	5,132	40,710	1,039	703,097	37,864
Spanish mackerel, salted					28,579	1,193
Spots and croakers	328,775	10,980	136,700	6,007	1,047,488	33,495
Striped bass	22,880	1,440	8,050	384	31,830	1,833
Sturgeon			22,400	984	31,654	1,315
Sun-fishes	119,780	3,789			231,998	7,318
Trout, fresh	566,648	26,500	1,011,620	45,525	3,030,998	112,454
Trout, salted					63,105	2,524
Whiting					11,589	179
Yellow-tail					73,440	6,594
Other fish	66,550	3,583	60,500	2,646	664,188	30,546
Sponges					332,856	805,569
Oysters	6,714,330	432,668	2,491,370	94,663	10,657,138	748,760
Clams					7,084	171
Shrimp	4,486,726	80,576	800,530	7,464	6,791,021	117,453
Craw-fish	84,850	8,113			242,450	6,263
Crabs, hard	1,458,853	12,801	188,120	3,669	1,759,233	20,787
Crabs, soft					21,206	1,720
Turtles	22,305	581	237,985	6,860	894,396	80,177
Terrapin	41,680	4,149	8,880	507	60,692	7,501
Conchs					500	80
Alligator hides		22,096				34,546
Otter skins						14,481
Total	17,401,788	713,587	7,174,550	286,610	65,660,623	2,271,726

Comparative table showing the extent of the fisheries of the Gulf States in 1880, 1890, and 1897.

PERSONS EMPLOYED.

States.	1880.	1890.	1897.	Increase or decrease in 1897 compared with 1890.	Percentage of increase or decrease in 1897 compared with 1890.
Florida.....	2, 112	4, 068	5, 011	+ 943	+ 2. 32
Alabama.....	635	618	789	+ 171	+27. 66
Mississippi.....	186	1, 721	2, 565	+ 844	+49. 04
Louisiana.....	1, 597	4, 068	4, 403	+ 335	+ 8. 23
Texas.....	601	1, 277	1, 199	- 78	- 6. 11
Total.....	5, 131	11, 752	13, 967	+2, 215	+18. 85

CAPITAL INVESTED.

States.	1880.	1890.	1897.	Increase or decrease in 1897 compared with 1890.	Percentage of increase or decrease in 1897 compared with 1890.
Florida.....	\$362, 563	\$1, 369, 204	\$1, 149, 262	-\$220, 032	-16. 07
Alabama.....	38, 200	135, 290	165, 189	+ 29, 899	+22. 10
Mississippi.....	8, 800	434, 710	518, 301	+ 83, 591	+19. 23
Louisiana.....	93, 621	719, 876	513, 813	- 206, 063	-28. 62
Texas.....	42, 400	319, 122	237, 496	- 81, 626	-25. 58
Total.....	545, 584	2, 978, 292	2, 584, 061	- 394, 231	-13. 24

PRODUCTS.

States.	Pounds.			Increase or decrease in 1897 compared with 1890.	Percentage of increase or decrease in 1897 compared with 1890.
	1880.	1890.	1897.		
Florida.....	8, 376, 395	27, 418, 562	28, 255, 210	+ 836, 657	+ 3. 42
Alabama.....	3, 541, 500	4, 776, 968	4, 699, 331	- 77, 587	- 1. 62
Mississippi.....	783, 500	8, 131, 401	7, 829, 685	- 301, 716	- 3. 71
Louisiana.....	6, 996, 000	20, 789, 203	17, 401, 788	-3, 387, 415	-18. 29
Texas.....	3, 858, 875	7, 959, 400	7, 174, 550	- 784, 850	- 9. 86
Total.....	23, 561, 210	69, 075, 534	65, 360, 623	-3, 714, 911	- 5. 38

States.	Value.			Increase or decrease in 1897 compared with 1890.	Percentage of increase or decrease in 1897 compared with 1890.
	1880.	1890.	1897.		
Florida.....	\$564, 619	\$1, 064, 139	\$944, 793	-\$119, 346	-11. 21
Alabama.....	119, 275	164, 871	134, 438	- 20, 433	-13. 19
Mississippi.....	22, 640	245, 099	192, 298	- 53, 401	-21. 73
Louisiana.....	392, 610	660, 134	713, 587	+ 53, 453	+ 8. 10
Texas.....	128, 300	313, 832	289, 610	- 27, 222	- 8. 67
Total.....	1, 227, 544	2, 438, 675	2, 271, 728	-166, 949	- 6. 85

FISHERIES OF WESTERN FLORIDA.

The fisheries of western Florida are, in general, more important than those of any other State on the Gulf, and especially take precedence in the yield of blue-fish, mullet, pompano, red snappers, Spanish mackerel, and turtles. This is the only State in the country in which the sponge fishery is prosecuted.

The length of the coast line of the west side of Florida, following indentations, is about 2,810 miles.

The principal indentations are Charlotte Harbor, Sarasota Bay, Tampa Bay, Clearwater Bay, Wiccassassee Bay, Apalachee Bay, St. George Sound, Apalachicola Bay, St. Andrew Bay, Choctawhatchee Bay, Santa Rosa Sound, Escambia Bay, and Perdido Bay. The more important rivers are the Caloosahatchee, Peace, Manatee, Withlacoochee, Suwannee, Ocklocknee, Apalachicola, Choctawhatchee, Escambia, and Perdido.

The fishery centers are Key West, St. James City, Punta Gorda, St. Petersburg, Tampa, Tarpon Springs, Homosassa, Cedar Key, St. Marks, Carrabelle, Apalachicola, St. Andrew Bay, and Pensacola.

In all respects except the amount of capital invested and the value of the catch there has been an increase over the figures of the last general canvass in 1890.

The three following tables give, in condensed form, statistics of the fisheries of the west coast of Florida. Information for all species was not collected for the year 1897, and in some instances the figures obtained for the year 1895 have been used.

There were 1,231 men engaged in the vessel fisheries and in transporting fishery products. There were 183 vessels, valued at \$465,738, including their outfits, used in transporting and in the fisheries. The fishing vessels had \$5,632 invested in apparatus.

In the shore fisheries there were engaged 3,436 men. The boats numbered 1,621 and were worth \$130,548. The apparatus of capture was valued at \$48,718. In the shore industries connected with the fishing business 344 persons were employed. The shore property and cash capital amounted to \$498,626. The total investment in the fisheries was \$1,149,262.

The total yield of the commercial fisheries was 28,255,219 pounds, valued at \$944,793. The three most valuable products were sponges, valued at \$305,589; mullet, worth \$194,362; and red snappers, worth \$171,234.

Persons employed.

How engaged.	No.
On vessels fishing.....	1,169
On vessels transporting.....	62
In shore or boat fisheries.....	3,436
Shoresmen	344
Total.....	5,011

Table of apparatus and capital.

Items.	No.	Value.	Items.	No.	Value.
Vessels fishing.....	154	\$241,201	Apparatus—shore fisheries:		
Tonnage.....	2,502.32		Seines.....	271	\$16,287
Outfit.....		179,259	Gill nets.....	858	22,998
Vessels transporting.....	20	32,970	Cast nets.....	28	190
Tonnage.....	268.70		Trap nets.....	26	75
Outfit.....		12,302	Turtle gill nets.....	61	1,586
Boats.....	1,021	130,548	Lines.....		184
Apparatus—vessel fisheries:			Tongs.....	207	1,575
Seines.....	3	675	Sponge apparatus.....		1,134
Turtle gill nets.....	54	1,692	Guns.....	297	4,455
Lines.....		1,007	Traps.....	202	122
Tongs.....	16	130	Minor apparatus.....		112
Sponge apparatus.....		2,122	Shore and accessory property.....		176,526
			Cash capital.....		323,100
			Total.....		1,149,262

Table showing by species the yield of the fisheries of the west coast of Florida in 1897.

Species.	Lbs.	Value.	Species.	Lbs.	Value.
Angel-fish.....	50,186	\$1,000	Snappers, red.....	5,314,487	\$171,234
Amber-fish.....	18,600	620	Snappers, other.....	110,631	3,200
Barracuda.....	31,000	1,240	Spanish mackerel, fresh.....	450,322	21,757
Blue-fish.....	264,971	6,057	Spanish mackerel, salted.....	23,579	1,193
Car-fish.....	5,000	100	Spots and croakers.....	26,113	495
Channel bass.....	236,368	3,597	Sturgeon.....	9,254	331
Crevalle.....	38,140	494	Sun-fishes.....	7,909	238
Drum.....	37,855	622	Trout, fresh.....	703,830	15,148
Flounders.....	32,561	549	Trout, salted.....	63,105	2,524
Groupers.....	781,155	9,349	Whiting.....	9,589	100
Grunts.....	671,876	16,833	Yellow-tail.....	73,440	6,504
Hog-fish.....	81,000	3,480	Other fish.....	537,138	24,317
Jurel.....	7,500	75	Oysters.....	1,258,008	50,258
King-fish.....	440,000	6,600	Clams.....	7,084	171
Lady-fish.....	123,223	2,633	Conchs.....	500	30
Mullet, fresh.....	11,639,615	125,172	Sponge.....	332,856	305,589
Mullet, salted.....	2,503,703	55,880	Crabs.....	6,240	208
Mullet roe, salted.....	143,999	13,310	Craw-fish.....	167,500	3,150
Pompano, fresh.....	359,151	17,964	Turtles.....	634,616	25,736
Pompano, salted.....	23,225	1,236	Terrapins.....	11,400	1,250
Porgies.....	98,200	2,450	Alligator hides.....	(3)	12,450
Pork-fish.....	11,962	1,106	Otter skins.....	(6)	14,481
Sailor's choice.....	89,381	3,198			
Sardines.....	150,000	3,000	Total.....	28,255,219	944,793
Sheepshead.....	663,347	9,793			

¹ 179,715 bushels.

² 3,800 in number.

³ 17,300 in number.

⁴ 2,936 in number.

THE FISHERIES BY COUNTIES.

Commercial fishing is carried on in 16 of the 19 coastal counties, but most extensively in Mouroe, Escambia, and Hillsboro counties.

Vessel fisheries.—The vessel fisheries of the west coast of Florida are more important than those of any other State in this region. They are prosecuted from 8 counties, but principally from Mouroe and Escambia counties. In the former the sponge and turtle fisheries are most prominent, while in the latter the red-snapper fishery occupies the leading position. The total vessel catch amounted to 7,221,987 pounds, valued at \$488,531. The more important of the products are sponges, valued at \$276,295; red snappers, \$161,999; oysters, \$17,144, and turtles, \$16,308. While the shore fisheries yielded a larger quantity of fishery products, the value of the vessel fisheries was greater.

Shore fisheries.—The total yield of the shore fisheries was 21,033,232 pounds, valued at \$456,262. While this is a much larger catch than that made in the vessel fisheries, the latter is somewhat more valuable, owing to the large number of sponges taken by vessels. The leading products in the shore fisheries are mullet, worth \$194,362; oysters, \$33,114; sponges, \$29,294; pompano, \$18,997; trout, \$17,672; grunts, \$16,833, and Spanish mackerel, \$15,836.

Monroe County ranks first in the value of products handled, followed by Hillsboro, Manatee, Lee, Franklin, and De Soto counties in the order named. In the quantity of catch handled Manatee County holds first place, followed by Hillsboro, De Soto, Monroe, and Franklin counties.

Detailed figures for each county are given in the following five tables:

Table showing the number of persons employed in the fisheries of the west coast of Florida.

Counties.	In vessel fisheries.	On vessels transporting.	Shore or boat fisheries.	Shoresmen.	Total.
Monroe	728	5	783	85	1,601
Lee			267	9	276
De Soto	15	12	228	24	279
Manatee			183	9	192
Hillsboro	127	41	340	30	538
Hernando			22	2	24
Citrus			55	6	61
Levy	3		235	9	247
Lafayette			25	2	27
Taylor			146	3	149
Wakulla			124	12	136
Franklin	61	4	580	116	761
Calhoun			20	1	21
Washington	9		192	10	211
Santa Rosa	6		10		16
Escambia	220		226	26	472
Total	1,169	62	3,436	344	5,011

Table showing by counties the apparatus and capital employed in the fisheries of the west coast of Florida.

Designation.	Monroe.		Lee.		De Soto.		Manatee.		Hillsboro.		Hernando	
	No.	Value.	No.	Val.	No.	Val.	No.	Val.	No.	Val.	No.	Val.
Vessels fishing	80	\$121,800			2	\$1,600			15	\$18,206		
Tonnage	1,165.45				13.79				181.93			
Outfit		79,594				1,539				13,604		
Vessels transporting	1	1,600			6	3,600			20	26,926		
Tonnage	19.14				47.52				189.29			
Outfit		225				2,922				8,995		
Boats	343	52,942	54	\$3,106	123	6,015	199	\$12,530	222	13,185	20	\$600
Apparatus—vessel fisheries:												
Seines					2	550						
Turtle nets	51	1,632										
Lines		18								130		
Sponge apparatus		1,702								318		
Apparatus—shore fisheries:												
Seines	10	154	43	2,170			78	2,350	45	1,842		
Gill nets	4	48	56	1,771	140	3,500	211	6,219	133	3,950	20	600
Cast nets	8	80							20	110		
Trap nets	25	75										
Turtle nets	28	896										
Lines		89								30		
Touge					9	59	6	48	48	312		
Sponge apparatus		1,026								9		
Guns			150	2,250	44	660			20	300		
Traps			150	90	15	9			20	12		
Minor apparatus		108										
Shore and accessory property		72,305		2,100		1,200		1,100		20,555		50
Cash capital		135,000		500		15,600				50,000		
Total		460,294		11,987		38,154		22,247		158,484		1,250

Table showing by counties the apparatus and capital employed in the fisheries of the west coast of Florida—Continued.

Designation.	Citrus.		Levy.		Lafayette.		Taylor.		Wakulla.		Franklin.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels fishing			1	\$700							10	\$6,020
Tonnage			8.15								72.32	
Outfit				1,980							2	6,182
Vessels transporting											2	850
Tonnage											12.75	
Outfit												160
Boats	46	\$1,090	109	8,029	14	\$420	57	\$1,710	81	\$2,035	213	10,216
Apparatus—vessel fisheries:												
Turtle nets			3	60							16	136
Tongs												102
Sponge apparatus												
Apparatus—shore fisheries:												
Seines								8	240	35	2,531	
Gill nets	23	690	62	1,340	14	350	57	1,425	51	765	64	1,465
Turtle nets			30	600							3	90
Lines				3								36
Tongs	18	144	26	156					4	32	65	553
Sponge apparatus												99
Guns									50	750	33	495
Traps											17	11
Minor apparatus				4								
Shore and accessory property		430		2,100		100		280		1,118		28,138
Cash capital				8,500						3,000		38,500
Total		2,354		23,472		870		3,415		8,840		104,584

Designation.	Calhoun.		Washington.		Santa Rosa.		Escambia.		Total.		
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	
Vessels fishing			2	\$1,000	1	\$1,200	34	\$80,775	154	\$241,201	
Tonnage			14.71		13.29		1,032.08		2,502.32		
Outfit				2,280		1,440		72,640		179,259	
Vessels transporting								29	32,976		
Tonnage								268.70		12,302	
Outfit										130,548	
Boats	12	\$300	73	2,410	2	200	53	4,900	1,621		
Apparatus—vessel fisheries:											
Seines			1	125						3	675
Turtle nets										64	1,692
Lines				33		22		804			1,007
Tongs										16	136
Sponge apparatus											2,122
Apparatus—shore fisheries:											
Seines	4	400	28	4,100	2	250	18	2,250	271	16,287	
Gill nets			3	75			20	800	858	22,998	
Cast nets									28	190	
Trap nets									25	75	
Turtle nets										61	1,586
Lines								28			184
Tongs			16	136			15	135		207	1,575
Sponge apparatus											1,134
Guns										297	4,455
Traps										202	122
Minor apparatus											112
Shore and accessory property		50		3,100		100		42,800		175,526	
Cash capital				2,000				70,000		323,100	
Total		810		10,159		3,212		284,130		1,140,262	

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Table showing by counties and species the yield of the fisheries of western Florida.

Species.	Monroe.		Lee.		De Soto.		Manatee.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Angel-fish	27,600	\$1,280	2,000	\$35				
Amber-fish	18,600	620						
Barracuda	31,000	1,240						
Blue-fish	11,000	917	13,500	270	33,582	\$672	45,000	\$900
Channel bass			21,000	315	4,800	72	75,620	1,134
Drum							8,094	122
Crevalle							15,000	225
Flounders							12,000	184
Groupers	155	16						
Grunts	114,500	2,683						
Hog-fish	642,000	16,250					9,333	187
King-fish	81,600	3,480						
Lady-fish	440,000	6,600						
Mullet, fresh	70,000	2,100						
Mullet, salted	49,614	1,443	211,100	3,167	2,362,080	23,621	3,664,566	36,645
Mullet roe, salted	750	15	745,444	12,528			31,000	517
Pompano, fresh	100	10	51,904	4,152			2,675	216
Pompano, salted			12,600	756	58,240	2,330	76,110	3,805
Porgies			7,425	446				
Pork-fish	98,200	2,450						
Sailor's choice	11,962	1,196						
"Sardines"	20,179	2,020	2,100	32	2,000	40	15,102	226
Sheepshead	150,000	3,090						
Snappers, red	300	14	73,142	1,097	100,000	1,500	81,213	1,219
Snappers, other	6,800	204						
Spanish mackerel, fresh	59,334	2,418	1,000	15			11,000	165
Spanish mackerel, salted	17,000	569	2,000	80	207,720	12,509	29,716	1,189
Trout, fresh			3,500	245				
Yellow-tail			24,333	487	5,453	119	117,425	2,347
Other fish	64,880	6,475						
Oysters	453,481	23,304						
Clams					67,128	2,797	1,280	79
Conchs	900	36						
Sponges	500	30						
Crabs	270,906	277,197						
Turtles	13,000	208						
Alligator hides	167,500	3,150						
Otter skins	546,752	17,770			8,400		525	
					10,000		1,750	
Total	3,351,853	370,783	1,171,048	42,025	2,841,003	45,935	4,195,134	49,160

Species.	Hillsboro.		Hernando.		Citrus.		Levy.		Lafayette.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Angel-fish	15,100	\$200								
Blue-fish	31,114	673					1,800	\$45		
Channel bass	61,307	970	1,600	\$23			3,640	55		
Crevalle	12,515	188								
Drum	13,000	200					9,855	197		
Flounders	18,444	277								
Groupers	127,000	1,270								
Grunts	17,333	347								
Mullet, fresh	1,778,631	17,058	128,000	1,300	74,110	\$741	625,000	6,250	143,000	\$1,430
Mullet, salted	45,122	529	3,000	31			18,200	223	24,000	360
Mullet roe, salted	1,840	184	120	12					2,000	200
Pompano, fresh	170,756	8,753								
Sailor's choice	24,000	860					20,000	520		
Sheepshead	138,985	2,128	6,213	93	22,200	334	130,896	1,366	3,100	62
Snappers, red	275,500	8,290					7,500	225		
Snappers, other	22,433	302	1,000	20	6,333	127	9,531	191		
Spanish mackerel, fresh	75,834	3,630					1,214	61		
Spanish mackerel, salted					8,946	447				
Spots and croakers							1,109	22		
Sturgeon							0,254	331		
Trout, fresh	110,220	2,311	33,666	673	12,000	270	140,000	3,563	14,000	420
Whiting							800	12		
Other fish	4,100	78					810	6		
Oysters	313,500	17,219			7,000	199	59,500	2,040		
Clams							6,184	135		
Sponges	56,000	23,300								
Turtles							85,000	4,800		
Terrapins							11,400	1,250		
Alligator hides		3,000								
Otter skins		2,000								
Total	3,312,744	93,327	173,499	2,152	130,580	2,118	1,146,993	21,202	186,100	2,472

Table showing by counties and species the yield of the fisheries of western Florida—Cont'd.

Species.	Taylor.		Wakulla.		Franklin.		Calhoun.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Catfish					5,000	\$100		
Channel bass	1,000	\$24	29,081	\$440	29,977	450		
Flounders			500	9				
Grunts			3,210	49				
Mullet, fresh	901,000	11,263	646,914	9,114	290,500	2,860	8,000	\$120
Mullet, salted	114,600	2,292	125,661	2,513	801,500	18,650	97,000	2,425
Mullet roe, salted	12,000	1,200	7,900	790	29,160	2,916	4,000	400
Pompano, fresh			630	32	6,100	183		
Pompano, salted							2,000	100
Sheepshead			9,157	138	46,670	850		
Spanish mackerel, fresh			3,278	163	13,600	385		
Spanish mackerel, salted							2,300	104
Spots and croakers			1,109	18	2,900	68		
Trout, fresh			17,995	448	194,800	3,322		
Trout, salted							12,000	480
Whiting					1,300	20		
Oysters			11,100	370	742,600	25,144		
Sponges					6,950	5,092		
Turtles					2,144	150		
Alligator hides				240		285		
Otter skins				18		713		
Total	1,029,200	14,779	857,135	14,348	2,178,101	62,194	125,300	3,629

Species.	Washington.		Santa Rosa.		Escambia.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Angel-fish					14,480	\$181	59,186	\$1,606
Amber-fish							18,600	620
Barracuda							31,000	1,240
Blue-fish	21,250	\$425	8,725	\$175	99,000	1,980	284,971	6,057
Cat-fish							5,000	100
Channel bass	1,810	28	2,100	32	3,333	48	236,368	3,597
Crevalle	2,266	29	1,100	17	14,165	138	38,140	494
Drum							37,855	622
Flounders	403	16	325	13	734	34	32,561	549
Groupers	17,805	178	8,500	85	613,350	5,133	781,155	9,349
Grunts							671,876	10,833
Hog-fish							81,600	8,480
Jurel					7,500	75	7,500	75
King-fish							440,000	6,000
Lady-fish	29,268	293	1,300	13	22,655	227	123,223	2,633
Mullet, fresh	115,000	1,672	53,000	707	583,100	7,775	11,639,915	125,172
Mullet, salted	426,000	13,845			71,428	952	2,503,703	55,880
Mullet roe, salted	32,300	3,230					143,999	13,310
Pompano, fresh	16,215	935	6,500	890	12,000	780	359,151	17,964
Pompano, salted	13,800	690					23,225	1,236
Porgies							98,200	2,450
Pork-fish							11,962	1,196
Sailor's choice							89,381	3,198
"Sardines"							150,000	8,000
Sheepshead	6,424	128	7,145	143	37,892	721	663,347	9,793
Snappers, red	102,019	3,370	61,555	2,154	4,861,113	156,991	5,314,487	171,234
Snappers, other							110,631	3,296
Spanish mackerel, fresh	37,525	1,118	28,333	850	40,102	1,203	456,322	21,757
Spanish mackerel, salted	8,833	397					23,679	1,193
Spots and croakers			1,300	20	19,095	367	28,113	495
Sturgeon							9,254	331
Sun-fishes	720	15			7,180	223	7,900	238
Trout, fresh	2,000	70	2,100	74	29,838	1,044	793,830	15,146
Trout, salted	51,105	2,044					63,105	2,524
Whiting					7,689	77	9,589	109
Yellow-tail					8,500	119	73,440	6,504
Other fish	21,083	218	914	12	57,350	701	537,138	24,317
Oysters	21,000	910			35,000	1,500	1,258,008	50,258
Clams							7,084	171
Couchs							500	80
Sponges							332,856	305,589
Crabs							6,240	208
Craw-fish							157,500	3,150
Turtles					720	16	634,616	22,736
Terrapins							11,400	1,250
Alligator hides								12,450
Otter skins								14,481
Total	926,835	29,609	182,707	4,685	6,446,888	180,285	28,256,210	944,793

FISHERIES BY APPARATUS.

Vessel fisheries.—In the vessel fisheries of western Florida purse and haul seines, lines, turtle nets, sponge apparatus, and tongs were the only forms of apparatus in use. Much the largest catch was made with lines—5,840,642 pounds, valued at \$171,229, being secured. Of the line catch 5,032,487 pounds, worth \$161,999, consisted of red snappers; the other species were groupers and king-fish.

The most valuable products were obtained by the sponge apparatus, 302,101 pounds of sponges, worth \$276,295, being secured. Oysters and turtles were taken with tongs and turtle nets, respectively; the value of the former was \$17,144, and of the latter \$16,308.

Purse seines were used in Biscayne Bay on the eastern coast for Spanish mackerel alone, and 70,000 pounds, valued at \$7,000, were obtained.

Haul seines, which were used incidentally by several red-snapper vessels, occupy an insignificant position, as their catch was only 26,392 pounds, valued at \$555.

The total yield from all forms of apparatus was 7,221,987 pounds, valued at \$488,531.

Shore fisheries.—Gill nets are the most important means of capture in the shore or boat fisheries. With this form of apparatus 11,847,155 pounds of fish, worth \$164,971, were secured. Mullet is by far the most important fish taken, while the other prominent species were the pompano, Spanish mackerel, trout, and sheepshead.

The seine catch is less than half that of the gill nets, but has a higher proportionate value. The total is 5,956,891 pounds, worth \$115,993. The principal species taken is the mullet, as is the case with gill nets; other prominent species are Spanish mackerel, trout, and pompano, although these occupy an insignificant position as compared with the mullet.

The line fishery comes next in importance, yielding 2,081,971 pounds, valued at \$72,443. The greater part of this fishery was carried on in Mouroe County. The leading species are grunts, red snappers, and yellow-tail.

Cast nets, turtle nets, trap nets, sponge apparatus, tongs, hooks, guns, etc., are credited with taking 1,147,215 pounds, valued at \$102,855. The prominent species taken by these forms of apparatus are mullet, oysters, sponges, alligators, and otters.

In 1897 an act was passed by the legislature prohibiting the use of "stop nets." For some years the fishermen have been in the habit of operating with this net, which is an ordinary seine or gill net, by stretching it across the mouths of small bights, creeks, and rivers along the coast and holding it in position by means of stakes driven in the bottom. This net, set at high water, when the fish had run in, would prevent them from running out again with the tide, and they could be easily caught by the fishermen at low water. This fishery was mainly for mullet. The method was very destructive, as young and old, large and small, were taken, or else left to die on the bare bottom, and the enactment of this law will doubtless greatly benefit the fisheries.

Table showing by counties and apparatus the yield of the vessel fisheries of the west coast of Florida.

Apparatus and species.	Monroe.		DeSoto.		Hillsboro.		Levy.		Franklin.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Purse seines:										
Spanish mackerel			70,000	\$7,000						
Lines:										
Groupers	8,500	\$249			81,000	\$810				
King-fish	197,000	2,955								
Red snappers	5,800	174			152,000	4,560				
Total	211,300	3,378			233,000	5,370				
Turtle nets:										
Turtles	489,852	15,658					13,000	\$650		
Sponge apparatus:										
Sponges	247,000	252,377			51,645	20,570			3,450	\$3,342
Tongs:										
Oysters									480,000	17,144
Grand total..	948,158	271,413	70,000	7,000	284,645	25,946	13,000	650	483,450	20,486

Apparatus and species.	Washington.		Santa Rosa.		Escambia.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Purse seines:								
Spanish mackerel							70,000	\$7,000
Haul seines:								
Blue-fish	4,350	\$87					4,350	87
Jurel					7,500	\$75	7,500	75
Lady-fish	3,212	32					3,212	32
Pompano	3,515	203					3,515	203
Spanish mackerel	4,075	114					4,075	114
Spots					2,340	30	2,340	30
Yellow-tail					1,400	14	1,400	14
Total	15,152	436			11,240	119	26,392	555
Lines:								
Groupers	17,805	178	8,500	\$85	495,350	4,953	611,155	6,275
King-fish							197,000	2,955
Red snappers	102,010	3,370	61,555	2,154	4,711,113	151,741	5,032,487	161,999
Total	119,824	3,548	70,055	2,239	5,206,463	156,694	5,840,642	171,229
Turtle nets:								
Turtles							502,852	16,308
Sponge apparatus:								
Sponges							302,101	276,295
Tongs:								
Oysters							480,000	17,144
Grand total..	134,976	3,984	70,055	2,239	5,217,703	156,813	7,221,987	488,531

Table showing by counties and apparatus the yield of the shore fisheries of the west coast of Florida.

Apparatus and species.	Monroe.		Lee.		De Soto.		Manatee.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Blue-fish	3,000	\$250					21,000	\$420
Channel bass							40,005	600
Crevalle							1,500	23
Drum							15,000	225
Groupers	13,000	204						
Grunts	38,000	950					3,333	67
Lady-fish	70,000	2,100						
Mullet, fresh	9,014	225	123,000	\$1,845			1,245,545	12,455
Mullet, salted			714,233	11,904			21,000	350
Mullet roe, salted			51,704	4,088			1,800	146
Pompano, fresh							4,888	244
Porgies	1,000	20						
Pork-fish	500	50						
" Sardines "	132,000	2,640						
Sheepshead	300	14					23,113	347
Snappers, gray, etc.	11,000	367						
Spanish mackerel, fresh	5,000	160					8,000	320

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Table showing by counties and apparatus the yield of the shore fisheries of the west coast of Florida—Continued.

Apparatus and species.	Monroe.		Lee.		De Soto.		Manatee.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Selnes—Continued.								
Trout, fresh							13,425	\$207
Yellow-tail	200	\$7						
Other fish	9,800	245						
Craw-fish	132,000	2,640						
Total	424,814	9,941	888,837	\$17,837			1,398,609	15,404
Gill nets:								
Angel-fish			2,000	35				
Blue-fish			13,500	270	33,582	\$672	24,000	480
Channel bass			21,000	315	4,800	72	35,615	534
Creville							6,594	99
Flounders							12,000	184
Grunts							6,000	120
Mullet, fresh	33,500	1,005	88,100	1,822	2,362,080	23,621	2,419,021	24,190
Mullet, salted			31,211	624			10,000	167
Mullet roe, salted			800	64			875	70
Pompano, fresh			12,600	756	58,240	2,330	71,222	3,501
Pompano, salted			7,425	446				
Sailor's choice			2,100	32	2,000	40	15,102	226
Sheepshead			73,142	1,007	100,000	1,500	58,100	872
Snappers, gray, etc.			1,000	15			11,000	165
Spanish mackerel, fresh			2,000	80	137,720	5,509	21,716	869
Spanish mackerel, salt			3,500	245				
Trout, fresh			24,333	487	5,453	119	104,000	2,080
Total	33,500	1,005	282,711	5,788	2,708,875	33,863	2,795,245	33,617
Cast nets:								
Mullet, fresh	7,100	213						
Mullet, salted	750	15						
Mullet roe, salted	100	10						
Sardines	18,000	450						
Total	25,050	688						
Turtle nets:								
Turtles	56,900	2,112						
Lines:								
Amber-fish	18,600	620						
Angel-fish	22,000	1,038						
Barracuda	31,000	1,240						
Blue-fish	8,000	667						
Flounders	155	16						
Groupers	81,000	1,890						
Grunts	573,000	14,525						
Hog-fish	74,750	3,185						
King-fish	243,000	3,645						
Porgies	61,800	2,295						
Pork-fish	9,462	940						
Sailor's choice	19,066	1,907						
Snappers, red	1,000	80						
Snappers, other	37,070	1,610						
Spanish mackerel	12,000	400						
Yellow-tail	59,133	5,913						
Other fish	427,721	22,186						
Total	1,708,757	62,113						
Miscellaneous:								
Angel-fish	5,600	242						
Groupers	12,000	280						
Grunts	81,000	775						
Hog-fish	6,850	295						
Porgies	5,400	135						
Pork-fish	2,000	200						
Sailor's choice	1,113	113						
Snappers, gray, etc.	11,264	489						
Yellow-tail	5,547	555						
Other fish	15,900	873						
Sponges	23,900	24,820						
Crabs	6,240	208						
Craw-fish	25,500	510						
Clams	900	36						
Conchs	500	30						
Oysters					67,128	2,797	1,280	79
Alligator hides				8,400		525		
Otter skins				16,000		1,750		
Total	163,774	29,511		18,400	67,128	5,072	1,280	79
Grand total	2,403,695	105,370	1,171,048	42,025	2,771,003	38,935	4,195,134	49,160

FISHERIES OF THE GULF STATES.

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Table showing by counties and apparatus the yield of the shore fisheries of the west coast of Florida—Continued.

Apparatus and species.	Hillsboro.		Hernando.		Citrus.		Levy.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Channel bass	15,203	\$228						
Crevaille	4,515	68						
Drum	13,000	200						
Flounders	6,000	90						
Mullet, fresh	92,266	830						
Mullet, salted	9,667	106						
Mullet roe, salted	1,000	100						
Sailor's choice	2,000	30						
Sheepshead	25,635	430						
Snappers, gray, etc.	5,100	102						
Trout, fresh	11,666	234						
Other fish	3,000	45						
Total	189,052	2,469						
Gill nets:								
Angel-fish	15,100	200						
Blue-fish	31,114	673					1,800	\$45
Channel bass	46,104	742	1,500	\$23			3,640	55
Crevaille	8,000	120						
Drum							9,855	197
Flounders	12,444	187						
Grunts	17,333	947						
Mullet, fresh	1,652,365	15,882	125,000	1,300	74,110	\$741	625,000	6,250
Mullet, salted	35,455	423	8,000	81			18,200	223
Mullet roe, salted	840	84	120	12				
Pompano, fresh	170,756	8,753						
Sailor's choice	22,000	330					26,000	520
Sheepshead	113,360	1,698	6,213	93	22,200	334	119,782	1,198
Snappers, gray, etc.	17,333	260	1,000	20	6,333	127	9,631	191
Spanish mackerel, fresh ..	75,834	8,630					1,214	01
Spanish mackerel, salted ..					8,946	447		
Spots and croakers							1,109	22
Sturgeon							9,254	331
Trout, fresh	98,554	2,077	33,666	673	12,000	270	140,000	3,563
Whiting							600	12
Other fish	1,100	33					810	6
Total	2,317,692	85,439	173,499	2,152	123,589	1,019	966,295	12,674
Cast nets:								
Mullet, fresh	34,000	840						
Turtle nets:								
Turtles							72,000	4,150
Lines:								
Groupers	46,000	460						
Sheepshead							11,114	168
Snappers, red	123,500	3,730					7,500	225
Total	169,500	4,190					18,614	393
Miscellaneous:								
Sponges	4,355	2,724						
Clams							6,184	135
Oysters	313,500	17,219			7,000	199	59,500	2,040
Tetrapins							11,400	1,250
Alligator hides		5,000						
Otter skins		2,000						
Total	317,855	24,943			7,000	199	77,084	3,425
Grand total	3,028,009	67,381	173,499	2,152	180,589	2,118	1,133,993	20,642

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Table showing by counties and apparatus the yield of the shore fisheries of the west coast of Florida—Continued.

Apparatus and species.	Lafayette.		Taylor.		Wakulla.		Franklin.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Channel bass					8,443	\$127	26,977	\$405
Flounders					500	9		
Mullet, fresh					51,500	773	143,500	1,436
Mullet, salted					49,245	985	616,500	15,330
Mullet roe, salted					1,800	180	20,660	2,066
Pompano, fresh							5,000	150
Sheepshead					1,902	29	21,845	402
Spanish mackerel, fresh							11,000	275
Spots and croakers					1,109	18	2,200	33
Trout, fresh					7,595	191	158,000	2,745
Whiting							1,300	20
Total					122,094	2,312	1,006,482	22,862
Gill nets:								
Channel bass			1,600	\$24	21,238	319	8,000	45
Grunts					3,210	49		
Mullet, fresh	143,000	\$1,430	901,000	11,263	595,414	8,341	153,000	1,430
Mullet, salted	24,000	360	114,600	2,292	76,416	1,528	185,000	4,320
Mullet roe, salted	2,000	200	12,000	1,200	6,100	610	8,500	850
Pompano, fresh					630	32	1,100	33
Sheepshead	3,100	62			7,255	109	13,225	231
Spanish mackerel, fresh					3,278	163	2,600	110
Spots and croakers							700	35
Trout, fresh	14,000	420			10,400	257	36,800	577
Total	186,100	2,472	1,029,200	14,779	723,941	11,408	403,925	7,631
Turtle nets:								
Turtles							2,144	150
Lines:								
Cat-fish							5,000	100
Sheepshead							12,100	217
Total							17,100	317
Miscellaneous:								
Sponges							2,500	1,750
Oysters					11,100	370	262,500	8,000
Alligator hides							240	285
Other skins							18	713
Total					11,100	628	265,000	10,748
Grand total	186,100	2,472	1,029,200	14,779	857,135	14,348	1,694,651	41,708

Apparatus and species.	Calhoun.		Washington.		Santa Rosa.		Escambia.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Angel-fish							14,488	\$181
Blue-fish			16,900	\$338	8,725	\$175	99,000	1,980
Channel bass			1,310	20	2,100	32	8,333	48
Crevaille			2,268	29	1,100	17	14,165	138
Flounders			408	16	825	13	734	34
Lady-fish			26,056	261	1,300	13	22,655	227
Mullet, fresh	8,000	\$120	115,000	1,672	53,000	707	583,100	7,775
Mullet, salted	97,000	2,425	414,000	13,455				
Mullet roe, salted	4,000	400	31,000	3,100				
Pompano, fresh			12,700	732	6,500	390	12,000	780
Pompano, salted	2,000	100	13,800	690				
Sheepshead			6,424	128	7,145	143	37,892	721
Spanish mackerel, fresh			32,700	981	28,333	850	30,000	900
Spanish mackerel, salted	2,300	104	8,833	397				
Spots and croakers					1,300	20	17,355	337
Sun-fishes			729	15			7,180	223
Trout, fresh			2,000	70	2,100	74	21,438	750
Trout, salted	12,000	480	48,000	1,920				
Whiting							7,689	77
Yellow-tail							7,160	105
Other fish			21,088	216	614	12	57,350	701
Turtles							720	16
Total	125,300	3,629	753,204	24,040	112,742	2,446	936,257	14,993

Table showing by counties and apparatus the yield of the shore fisheries of the west coast of Florida—Continued.

Apparatus and species.	Calhoun.		Washington.		Santa Rosa.		Escambia.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Gill nets:								
Channel bass			500	\$3				
Mullet, salted			12,000	390			71,426	\$952
Mullet roe, salted			1,300	130				
Spanish mackerel, fresh			750	23			10,102	303
Trout, fresh							8,400	294
Trout, salted			3,105	124				
Total			17,055	675			89,928	1,549
Lines:								
Groupers							18,000	180
Snappers, red							150,000	5,250
Total							168,000	5,430
Miscellaneous:								
Oysters			21,000	910			35,000	1,500
Grand total	125,300	\$3,629	791,859	25,625	112,742	\$2,446	1,229,185	23,472

SUMMARY.

Apparatus and species.	Lbs.	Value.	Apparatus and species.	Lbs.	Value.
Seines:			Cast nets:		
Angel-fish	14,486	\$181	Mullet, fresh	41,100	\$553
Blue-fish	148,625	3,163	Mullet, salted	750	15
Channel bass	97,371	1,460	Mullet roe, salted	100	10
Crevalle	23,546	275	"Sardines"	18,000	450
Drum	28,000	425	Total	59,950	1,028
Flounders	7,962	162	Turtle nets:		
Groupers	13,000	204	Turtles	131,044	6,412
Grunts	41,333	1,017	Lines:		
Lady-fish	120,011	2,601	Amber-fish	18,600	620
Mullet, fresh	2,423,925	27,844	Angel-fish	22,000	1,038
Mullet, salted	1,921,645	44,555	Barracuda	31,000	1,240
Mullet roe, salted	111,364	10,080	Blue-fish	8,000	667
Pompano, fresh	41,088	2,296	Cat-fish	5,000	16
Pompano, salted	15,800	790	Flounders	155	2,530
Porgies	1,000	20	Groupers	145,000	2,630
Pork-fish	500	50	Grunts	673,000	14,625
Sailor's choice	2,000	30	Hog-fish	74,750	3,185
"Sardines"	132,000	2,640	King-fish	243,000	3,845
Sheepshead	123,756	2,214	Porgies	91,800	2,235
Snappers, gray, etc	10,100	469	Pork-fish	9,462	1,940
Spanish mackerel, fresh	115,033	3,495	Sailor's choice	19,006	1,907
Spanish mackerel, salted	11,133	501	Sheepshead	23,214	585
Spots and croakers	21,964	408	Snappers, red	282,000	9,235
Sun-fishes	7,909	238	Snappers, other	37,070	1,010
Trout, fresh	216,224	4,331	Spanish mackerel	12,000	400
Trout, salted	60,000	2,400	Yellow-tail	59,133	5,913
Whiting	8,989	97	Other fish	427,721	22,186
Yellow-tail	7,360	112	Total	2,081,971	72,443
Other fish	92,047	1,219	Miscellaneous:		
Craw-fish	132,000	2,640	Angel-fish	5,600	242
Turtles	720	16	Groupers	12,000	280
Total	5,956,391	115,993	Grunts	31,000	775
Gill nets:			Hog-fish	6,850	295
Angel fish	17,100	235	Porgies	5,400	135
Blue-fish	103,996	2,140	Pork-fish	2,000	200
Channel bass	138,097	2,137	Sailor's choice	1,113	113
Crevalle	14,594	219	Snappers, gray, etc	11,264	439
Drum	9,855	197	Yellow-tail	5,547	555
Flounders	24,444	371	Other fish	15,960	873
Grunts	26,543	516	Sponges	30,755	29,294
Mullet, fresh	9,174,500	96,775	Crabs	6,240	208
Mullet, salted	681,308	11,310	Craw-fish	25,500	510
Mullet roe, salted	32,535	3,220	Clams	7,084	171
Pompano, fresh	314,548	15,465	Conchs	500	80
Pompano, salted	7,425	446	Oysters	778,008	33,114
Sailor's choice	67,202	1,148	Terrapin	11,400	1,250
Sheepshead	516,377	7,194	Alligator hides		12,450
Snappers, gray, etc	40,197	778	Otter skins		14,481
Spanish mackerel, fresh	255,214	10,748	Total	950,221	95,415
Spanish mackerel, salted	12,446	602	Grand total	21,033,232	456,262
Spots and croakers	1,809	57			
Sturgeon	9,254	331			
Trout, fresh	487,608	10,817			
Trout, salted	3,195	124			
Whiting	600	12			
Other fish	1,410	39			
Total	11,847,165	164,971			

NOTES ON CERTAIN FISHERIES.

The sturgeon fishery.—Sturgeon are quite numerous in nearly all rivers on the west coast of Florida north of Cedar Key during their regular season, but very little attention has been given to their capture. In 1896 a fishery was started on the Suwanee River and a few were secured, and it is likely that the fishery will be carried on more extensively hereafter. No caviar was put up during this first season.

The mullet fishery.—So far as the number of persons employed, quantity and value of apparatus used, and quantity of catch are concerned, this is the most important fishery in the State. Mullet have appeared along the shores in such abundance each year that the fishermen have thought the supply inexhaustible until within the last year or two. In 1897 a law was passed forbidding the catching of any fish from June 15 to August 15, and of mullet alone from November 15 to December 31, except with cast nets and hook and line. The existence of this law explains part of the decrease that has taken place, as it went into effect in 1897 and thus shortened the fishing season.

The main cause of the decrease lies further back than this, however. Prior to 1896 a large business in salted mullet was carried on with Cuba, but this trade was practically abandoned in 1896, owing to the high tariff imposed on imported fish as a consequence of the revolution in Cuba. Previous to this time the salt-fish trade with Cuba had been virtually controlled by Americans. Now that conditions in Cuba are more favorable, this trade will probably revive and prove a boon to the Florida fishermen.

There was formerly a great deal of waste in the handling of fresh mullet, owing to the softening of the fish during transportation from the camps to the shipping centers. As the camps are scattered many miles up and down the coast, and sailing vessels are generally used, when head winds are encountered the whole cargo might be lost, as the fish were merely stowed in the hold in bulk with a little cracked ice thrown on them. Nearly all of the transporters are now fitted with refrigerators, in which the fish are stored, and brought to market with very little loss, even though the vessels should be detained.

An important feature of the mullet fishery is the large number of transporters used in it. In 1897 there were employed 27 vessels, with an aggregate tonnage of 255.95, which were valued, with their outfits, at \$44,268. These were manned by 58 men.

The following table shows the catch of mullet for six different years:

	1879.	1880.	1889.	1890.	1895.	1897.
	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>
Mullet, fresh	1,058,083	.....	8,794,586	10,650,959	12,310,953	11,639,615
Mullet, salted	2,504,422	.....	2,728,785	2,968,254	5,714,134	2,503,703
Mullet, smoked .....	.....	.....	4,500	3,200	.....	.....
Mullet roe, salted	6,602	.....	244,080	298,540	299,001	143,999
Total	3,569,107	2,028,250	11,771,951	13,920,962	18,324,148	14,287,317

The red-snapper fishery.—Pensacola is the center of this fishery, but it is also prosecuted incidentally from Key West, Tampa, St. Petersburg, and Cedar Key. The catch landed at Pensacola is greater than at all other points in the United States combined. While there has been a decrease since 1895 in the number of vessels engaged, the total catch has increased, as well as the average catch per man and per vessel.

Table showing the number of vessels, tonnage, and men employed in the red-snapper fishery.

Year.	No. of vessels.	Tonnage.	No. of men.	Year.	No. of vessels.	Tonnage.	No. of men.
1875.....	11	328.22	60	1883.....	24	662.91	133
1876.....	13	376.95	71	1884.....	25	577.96	140
1877.....	11	323.47	57	1885.....	27	751.66	163
1878.....	10	297.10	54	1886.....	33	1,149.10	231
1879.....	11	282.12	60	1889.....	35	980.25	218
1880.....	14	302.11	71	1890.....	34	973.65	218
1881.....	21	458.03	108	1895.....	42	1,209.62	280
1882.....	26	732.59	150	1897.....	30	1,060.68	235

Catch of red snappers by vessels and by boats.

	1895.		1897.	
	Lbs.	Value.	Lbs.	Value.
Caught by vessels.....	4,587,715	\$144,855	4,874,687	\$157,265
Caught by boats.....	195,815	6,959	150,000	5,250
Total.....	4,783,530	151,814	5,024,687	162,515

Comparative summary of the Pensacola red-snapper catch.

Year.	Lbs.	Average catch.	
		Per vessel.	Per man.
1880.....	1,450,000	103,571	20,423
1884.....	2,380,800	95,232	17,006
1889.....	3,554,178	101,548	16,304
1890.....	4,144,842	121,907	19,013
1895.....	4,587,715	109,231	16,385
1897 (fiscal year).....	4,874,687	135,408	20,743

The principal snapper banks of the Gulf lie between Mobile Bay and Cedar Key. They are fished during the warmer months; the rest of the time the vessels go to the Campeche Banks off the Yucatan coast. There is no apparent diminution in the abundance of the fish on these banks. Groupers are also taken in this fishery, being found on the banks in company with the red snappers; but the fishermen do not seek them especially, as they bring a very low price.

Several New Orleans vessels land their catch at Pensacola when they are fishing in the eastern part of the Gulf, whence it is sent to their home port.

The sponge fishery.—This fishery, which is not operated elsewhere in the United States, is of great importance to Florida. Next to the manufacture of cigars, it is the leading industry of Key West. It is prosecuted from Key West, Tarpon Springs, and Apalachicola. The sponges are landed principally at Key West and Tarpon Springs, although a few were sold last season at St. Marks and Apalachicola. They are purchased at auction by buyers for firms in the Northern States, who prepare them for market at their warehouses in the three places named.

The following table shows the catch for five years by vessels hailing from the above-named ports:

Place.	1880.		1889.		1890.		1895.		1897.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Key West.....			307,595	\$307,954	358,467	\$427,375	280,372	\$344,015	270,006	\$277,197
Tarpon Springs.....							16,344	27,168	56,000	23,300
Cedar Key.....			952	965	4,160	5,000	2,048	3,707		
St. Marks.....			990	990	640	640				
Apalachicola.....			7,022	11,178	3,505	5,667	7,356	11,981	5,950	5,092
Total.....	207,000	\$200,750	316,559	381,087	366,772	438,682	306,120	386,871	332,856	305,589

The fishery has varied considerably during the past eight years, especially as regards the prices realized. While the catch of 1897 was larger than that for 1895, the value for the latter year is \$81,282 more, the sponges taken in 1897 being of a poorer quality than in 1895.

In 1895 the sponge fleet consisted of 119 vessels and 200 boats. In 1897 102 vessels and 184 boats were engaged. The decrease is attributable to the poor season of 1896 and to the hurricane of September 29 of that year, which sank a number of vessels and seriously damaged others.

According to the reports of fishermen and others interested in the business, the sponges are decreasing in number, while inferior grades are now being secured. Formerly most of the sponges were taken in 10 feet depth of water, while now some of the sponging operations are conducted in water as deep as 45 feet, which is about the limit at which the fishery can be successfully prosecuted under the methods which now prevail.

Artificial propagation has been urged for some time by the most far-sighted fishermen and dealers, but the lack of suitable laws permitting the ownership of land for this purpose has heretofore prevented. In 1897 such a law was passed, allowing "any person or persons owning lands bordering upon the waters of the State to propagate and grow sponges in the waters in front of such lands to a depth not exceeding 1 fathom at low tide, and they shall have the exclusive right to sponge or propagate and grow sponges within such limits." It is quite certain that good will result from the adoption of this law if the growers are properly protected.

The oyster fishery.—There are extensive natural oyster deposits on the west coast of Florida, the most important of which are in De Soto, Hillsboro, Levy, Franklin, Washington, and Escambia counties. Ever since 1890 the oyster industry has been on the decline. In that year 2,597,567 pounds, valued at \$93,692, were secured, while in 1897 only 1,258,008 pounds, valued at \$50,258, were taken. Excessive tonging is responsible for a part of the decrease, and much damage is attributed to the severe storms which visit this coast, and to severe frosts when the beds were exposed at low water. The beds suffer little, if any, from the principal enemies of the oyster in other regions—starfishes and borers.

The greatest decrease is in Franklin County, where the catch fell off 785,782 pounds.

In 1890 there were 2 oyster canneries in operation in this section, both in Franklin County; and they were still operating in 1897. Owing to the scarcity of oysters, it is customary for the larger of these canneries to shut down every other year, the output of both being controlled by one firm. Since this investigation was made a cannery has been started in Hillsboro County.

The decrease in the productiveness of the natural beds has led to the institution of oyster-culture, especially in Hillsboro Bay, Manatee River, at Cedar Key, and in Escambia and East bays, but oyster cultivation has not been generally taken up, and public sentiment is not yet sufficiently in favor of it to secure planted beds from poaching.

The turtle fishery.—Among the most valuable of the fishery products of Florida is the turtle, of which there are three species, the green, the loggerhead, and the hawksbill. In 1890 this fishery was prosecuted in 8 counties, while in 1897 it was carried on only in Monroe, Levy, Franklin, and Escambia counties. The total catch in 1897 was 634,616 pounds, valued at \$22,736, and of this 546,752 pounds, worth \$17,770, were taken in Monroe County. Monroe and Levy counties are the only ones that employ vessels in this fishery.

Turtles are gradually becoming scarce in Florida. Monroe County is the only one that shows an increase over the 1890 figures. In that year 297,157 pounds, valued at \$15,866, were taken in this county, while in 1897 the catch was 546,752 pounds, worth \$17,770. The greater part of this increase is due to the capture of turtles along the Yucatan coast by vessels trading in that region. These vessels carry turtle nets and use them whenever possible. They also buy turtles from Yucatan people, but these are not shown in the statistical tables.

In a number of counties where turtles were formerly quite common none are taken now. This is largely owing to the fact that turtle eggs have been eagerly sought for. The turtle should be protected during the breeding season, and the eggs should never be taken.

Very little use is made of turtles other than in the fresh state. A Key West firm began the preparation of green turtle soup in 1896 and has been very successful.

An idea of the extent of the turtle industry of Florida in past years can be gained from a glance at the following table:

Counties.	1880.	1889.	1890.	1895.	1897.
	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>
Monroe.....		291, 695	297, 157	410, 142	546, 752
Lee.....		3, 500	3, 000	4, 375	
De Soto.....			4, 000		
Manatee.....		60, 665	60, 665		
Hillsboro.....		11, 735	12, 004	5, 000	
Levy.....		70, 705	89, 958	107, 610	85, 000
Franklin.....				3, 850	2, 144
Washington.....		100			
Santa Rosa.....		740	7, 000		
Escambia.....		740	2, 250		720
Total.....	180, 000	439, 880	476, 034	530, 977	634, 616

FISHERIES OF ALABAMA.

Alabama has a much shorter coast line than any other State in the Gulf region. The more extensive and valuable section of the coast of the State consists of the shores of Mobile Bay and Mississippi Sound. Mobile Bay extends inland for a distance of about 40 miles, and is the only important indentation. The Mobile River, a large stream formed by the junction of the Alabama and Tombigbee rivers, flows into its headwaters. Mississippi Sound extends along the shore of Alabama west of Mobile Bay, the two bodies of water being connected by Grant Pass.

The two counties of the State which reach the coast and are interested in fisheries are Mobile County on the west and Baldwin County on the east of Mobile Bay. The city of Mobile, located on the west side of the bay in Mobile County, is the principal fishing and trade center. There are several small settlements in both counties which are to some extent fishing localities, the most important being Mon Louis Island, Dauphin Island, Coden, and Bayou Labatre, in Mobile County; Bromley, Daphne, Point Clear, Fish River, Magnolia Springs, Bonsecour, and Shell Banks, in Baldwin County.

The fishing interests of this State are divided into three principal branches, viz, the vessel fisheries, the shore or boat fisheries, and the trade in fishery products. The persons employed on the fishing vessels numbered 150, on boats in the shore fisheries 443, and in packing and fish houses of various kinds 196, a total of 789.

The number of vessels engaged in fishing was 53, having a value, including their outfits, of \$50,945; the number of boats employed in the shore fisheries was 254, valued at \$12,939; the apparatus used on vessels and boats, consisting of seines, trammel nets, lines, tongs, and spears, was valued at \$9,205; the value of the shore and accessory property employed in the fishery trade was \$49,350, and the amount of cash capital utilized \$42,750; a total investment, including the cash capital, of \$165,189.

The products of the fisheries consisted of 2,846,009 pounds of fish, valued at \$72,797; 73,200 hard crabs, or 24,400 pounds, valued at \$505;

40,600 pounds of shrimp, valued at \$609; 1,121 terrapin, or 2,934 pounds, valued at \$320; and 255,063 bushels, or about 102,025 barrels, of oysters, the meats of which weighed 1,785,438 pounds and were worth \$60,207; a total of 4,699,381 pounds, having a value of \$134,438.

The yield of the fisheries of this State in 1897 can not be regarded as fairly representing the annual average, from the fact that the enforcement of a quarantine in the months of September, October, and the early part of November, in consequence of the yellow-fever epidemic which prevailed during that period, seriously interfered with the prosecution of the industry and caused a considerable falling off in the products, especially those of the oyster fisheries.

The three tables which follow show by counties the number of persons employed, the number and value of vessels and boats, the quantity and value of apparatus of capture, the value of shore and accessory property, the amount of cash capital, and the quantity and value of the products of the fisheries of Alabama in 1897.

Table showing by counties the number of persons employed in the fisheries of Alabama in 1897.

How engaged.	Baldwin.	Mobile.	Total.
On vessels fishing.....	45	105	150
Boat or shore fishermen.....	170	273	443
Shoreshmen.....		196	196
Total.....	215	574	789

Table showing by counties the vessels, boats, and apparatus employed in the fisheries of Alabama in 1897.

Items.	Baldwin.		Mobile.		Total.	
	No.	Value.	No.	Value.	No.	Value.
Vessels fishing.....	19	\$14,350	34	\$26,025	53	\$40,375
Tonnage.....	105.74		356.44		522.18	
Outfit.....		2,099		8,471		10,570
Boats.....	85	5,800	160	7,139	254	12,939
Apparatus—vessel fisheries:						
Seines.....	4	200	3	325	3	325
Trammel nets.....			6	300	10	500
Lines.....		23		108		131
Tongs.....	45	270	65	390	110	660
Apparatus—shore fisheries:						
Seines.....	3	175	7	535	10	710
Trammel nets.....	70	3,500	46	2,280	116	5,780
Lines.....				80		80
Spears.....			25	7	25	7
Tongs.....	40	240	130	792	170	1,032
Shore and accessory property.....				49,350		49,350
Cash capital.....				42,750		42,750
Total.....		26,657		138,532		165,189

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Table showing by counties and species the yield of the fisheries of Alabama in 1897.

Species.	Baldwin.		Mobile.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Angel-fish.....	3,300	\$50	2,700	\$65	6,000	\$115
Black bass.....	25,200	1,764	15,800	1,106	41,000	2,870
Blue-fish.....	124,480	2,490	80,020	1,604	204,500	4,094
Cat-fish.....	109,200	1,638	78,800	1,234	188,000	2,872
Channel bass or red-fish.....	122,200	4,277	90,800	3,148	213,000	7,425
Crevalle.....	7,350	110	4,650	70	12,000	180
Croakers.....	246,800	3,703	170,200	2,453	417,000	6,156
Drum.....	3,900	59	2,100	32	6,000	91
Flounders.....	18,200	637	28,800	965	47,000	1,602
Groupers.....	9,000	135	60,000	900	69,000	1,035
Mullet, fresh.....	297,400	4,388	293,900	4,099	591,300	8,487
Mullet, salted.....	.....	.....	6,000	195	6,000	195
Perch.....	3,000	120	2,000	80	5,000	200
Pickrel.....	2,500	38	1,500	23	4,000	61
Pin-fish.....	2,500	38	1,500	23	4,000	61
Pompano.....	37,500	2,025	22,800	1,587	60,300	4,212
Red snapper.....	35,000	1,225	300,000	10,500	335,000	11,725
Sheepshead.....	40,000	1,715	37,800	1,234	86,800	2,949
Spanish mackerel.....	46,600	2,330	38,900	1,630	85,500	3,060
Spots.....	53,300	811	33,700	1,132	87,000	1,943
Sun-fishes.....	48,681	1,539	29,828	1,044	79,509	2,783
Trout.....	137,900	4,573	158,200	5,138	296,100	9,711
Whiting.....	2,000	70	.....	.....	2,000	70
Crabs, hard.....	.....	.....	24,400	505	a 24,400	505
Shrimp.....	.....	.....	40,600	609	40,600	609
Terrapin.....	.....	.....	2,934	320	b 2,934	320
Oysters.....	471,940	23,690	1,313,498	36,517	c 1,785,438	60,207
Total.....	1,857,951	58,225	2,841,430	76,213	4,699,381	134,438

a 73,200 in number.

b 1,121 in number.

c 255,063 bushels.

The vessel and shore fisheries.—The principal fisheries prosecuted in Alabama are the seine and trammel-net fisheries, the red-snapper fishery, and the oyster fishery. In addition to these, cat-fish and crabs are taken with trot lines, and flounders are caught in small quantities with spears.

The oyster fishery is of much greater importance than any other branch, and is engaged in by a large number of vessels and boats. The season begins about the 1st of September and continues until the latter part of April, although oysters are taken to a greater or less extent in nearly every month of the year. Tongs are the only apparatus of capture used. The oysters, as they are sold by the fishermen, are divided into three principal grades. These are the plants, cullens, and reefers. The plants and cullens are obtained chiefly from the planted grounds in Bon Secours Bay, a small indentation of Mobile Bay at the lower end of Baldwin County, and also from the planted grounds in Heron Bay and vicinity, which is in the lower part of Mobile County, on Mississippi Sound. The reefers are from the natural reefs in Mobile Bay and Mississippi Sound. The prices received for the different grades of oysters fluctuate more or less, but average from \$1.25 to \$1.50 a barrel for plants, \$1 a barrel for cullens, and about 60 cents a barrel for reefers. The greater part of the catch is sold to the dealers at Mobile.

It was formerly customary for a number of the vessels to engage in buying the oysters from the tongers and transporting them to Mobile. The profits of this enterprise, never very large, finally became so small

that it was practically abandoned, and the vessels and boats now carry their own catch to market. Aside from the grades of oysters above referred to, considerable quantities are obtained from the natural reefs for canning purposes. These are sold at Biloxi, Miss., and also to a cannery which has recently been built at Bayou Labatre, the price received being from 25 to 30 cents a barrel. Oysters are also taken in the spring, after the market season is over, for planting purposes, for which the tongers receive 10 cents a barrel delivered on the planting-grounds. They consist of oysters and shells together. The quantity of oysters taken by vessels was 894,915 pounds, or 51,138 barrels, valued at \$40,881; the quantity taken by boats was 890,253 pounds, or 50,887 barrels, valued at \$19,326; a total, exclusive of oysters for planting purposes, of 102,025 barrels, having a value of \$60,207, or nearly one-half the entire value of the fishery products of the State. The oysters taken by vessels included a much larger proportion of the better grades than those taken by boats; hence their value was proportionately greater.

Seines are used to a limited extent on vessels, but are chiefly operated by small boats. The greater number of these are fish seines, and vary in length from 60 to 100 fathoms each, having a depth in the center of 10 to 15 feet and narrowing at the ends to 5 or 6 feet. They are made of cotton twine and cost, according to their size and quality, from \$40 to \$100 each. The size of the mesh, stretched, is about 2 inches in the center and 3 inches in the remainder of the net. A few shrimp seines are also used. These are made of lighter twine and are usually a little longer than the fish seines, and cost from \$60 to \$125 each. The catch taken by vessels in seines consisted of 22,200 pounds of fish, valued at \$873, and 20,000 pounds of shrimp, valued at \$300; the catch by boats was 117,026 pounds of fish, valued at \$2,477, and 20,600 pounds of shrimp, valued at \$309; a total of 179,826 pounds of fish and shrimp, having a value of \$3,959.

The most important apparatus used in the capture of inshore species, locally termed "beach fish," are the trammel nets. These are used to a considerable extent on both vessels and boats. The nets are made of cotton twine, and are divided in two sections, each section being 40 fathoms long and costing about \$25 or \$50 for the entire net. The size of the mesh in the outside webs is from 10 to 12 inches, and in the inside web about 2½ inches stretched. The quantity of fish taken in trammel nets by vessels was 221,700 pounds, valued at \$4,405, and by boats 2,052,508 pounds, valued at \$51,538; a total of 2,274,208 pounds, having a value of \$55,943.

The red-snapper fishery, which has heretofore been carried on in an irregular manner in this State, was recently established at Mobile, and may grow to much larger proportions in the course of a few years. It is exclusively a vessel fishery, with hand lines as the apparatus of capture. There were five vessels engaged in it, four of which operated

during the entire year. The yield of this fishery was 335,000 pounds of red snappers, valued at \$11,725, and 69,000 pounds of groupers, valued at \$1,035; a total of 404,000 pounds of fish, having a value of \$12,760.

The fisheries with trot lines and spears are carried on with small boats and are not extensive. The quantity of cat-fish taken with trot lines was 12,000 pounds, valued at \$240, and of hard crabs, with trot lines rigged especially for that purpose, 24,400 pounds, valued at \$505. Flounders are the only species taken with spears, the quantity being 17,000 pounds, valued at \$550. There were also 2,509 pounds of ter-rapin, valued at \$274. These were picked up in the marshes without the use of apparatus.

The vessel fisheries slightly predominate in the quantity and value of oysters obtained, but are otherwise of much less importance than the shore fisheries. The products taken by vessels aggregated 1,563,815 pounds, valued at \$59,219, and by boats 3,136,566 pounds, valued at \$75,219. This includes oysters, which are represented by the weight of the meats on a basis of 17½ pounds to the barrel in the shell.

The following tables exhibit by counties, species, and apparatus the quantity and value of products taken in the vessel and shore fisheries of Alabama in 1897:

Table showing by counties, apparatus, and species the yield of the vessel fisheries of Alabama in 1897.

Apparatus and species.	Baldwin.		Mobile.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:						
Angel-fish			1,200	\$42	1,200	\$42
Blue-fish			1,500	60	1,500	60
Channel bass or red-fish			3,000	105	3,000	105
Croakers			600	9	600	9
Pompano			1,500	105	1,500	105
Sheepshead			3,000	105	3,000	105
Spanish mackerel			1,500	75	1,500	75
Trout			9,900	372	9,900	372
Shrimp			20,000	300	20,000	300
Total			42,200	1,173	42,200	1,173
Trammel nets:						
Channel bass or red-fish	2,000	\$70	13,400	469	15,400	539
Croakers	1,000	15	2,000	30	3,000	45
Flounders			400	16	400	16
Mullet	30,000	374	124,000	1,550	154,000	1,924
Pompano	1,000	70			1,000	70
Sheepshead	2,000	70	500	18	2,500	88
Spanish mackerel	1,500	75			1,500	75
Spots	2,200	44	3,200	94	5,400	108
Trout	2,000	80	36,500	1,460	38,500	1,540
Total	41,700	798	180,000	3,607	221,700	4,405
Lines:						
Grouper	9,000	135	60,000	900	69,000	1,035
Red snapper	35,000	1,225	300,000	10,500	335,000	11,725
Total	44,000	1,360	360,000	11,400	404,000	12,760
Tongs:						
Oysters	331,940	18,890	562,975	21,991	894,915	40,881
Grand total	417,640	21,048	1,145,175	38,171	1,562,815	59,219

Table showing by counties, apparatus, and species the yield of the shore fisheries of Alabama in 1897.

Apparatus and species.	Baldwin.		Mobile.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:						
Angel-fish	500	\$8			500	\$8
Blue-fish	5,130	103	3,500	\$44	8,630	147
Cat-fish	1,000	15	1,000	7	2,000	22
Channel bass or red-fish.....	4,950	173	2,000	40	6,950	213
Croakers	10,500	158	20,000	200	30,500	358
Drum	500	8			500	8
Flounders	1,200	42			1,200	42
Mullet			1,500	23	1,500	23
Pompano	1,500	105	300	12	1,800	117
Sheepshead	2,000	70	6,000	120	8,000	190
Spanish mackerel.....	2,500	125	10,500	210	13,000	335
Spots	2,100	32			2,100	32
Sun-fishes	2,221	78			2,221	78
Trout	5,700	188	30,000	600	35,700	788
Whiting	2,000	70			2,000	70
Shrimp			20,000	309	20,000	309
Terrapin			425	46	425	46
Total	41,801	1,175	95,825	1,611	137,626	2,786
Trammel nets:						
Angel-fish	2,800	42	1,500	23	4,300	65
Black bass	25,200	1,764	15,800	1,106	41,000	2,870
Blue-fish	119,350	2,387	76,020	1,500	194,370	3,887
Cat-fish	108,200	1,623	65,800	987	174,000	2,610
Channel bass or red-fish.....	115,250	4,034	72,400	2,534	187,650	6,568
Crevalle	7,350	110	4,650	70	12,000	180
Croakers	235,300	3,530	147,600	2,214	382,900	5,744
Drum	3,400	51	2,100	32	5,500	83
Flounders	17,000	595	11,400	398	28,400	994
Mullet, fresh	267,400	4,014	168,400	2,528	435,800	6,540
Mullet, salted			6,000	195	6,000	195
Perch	3,000	120	2,000	80	5,000	200
Pickrel	2,500	38	1,500	23	4,000	61
Pin-fish	2,500	38	1,500	23	4,000	61
Pompano	35,000	2,450	21,000	1,470	56,000	3,920
Sheepshead	45,000	1,575	28,800	991	73,800	2,566
Spanish mackerel.....	42,600	2,130	26,800	1,345	69,400	3,475
Spots	49,000	735	30,500	1,068	79,500	1,803
Sun-fishes	47,460	1,661	29,828	1,044	77,288	2,705
Trout	130,200	4,305	81,800	2,706	212,000	7,011
Total	1,258,510	31,202	793,098	20,336	2,052,608	51,538
Lines:						
Cat-fish			12,000	240	12,000	240
Crabs, hard			24,400	505	24,400	505
Total			36,400	745	36,400	745
Spears:						
Flounders			17,000	550	17,000	550
Tongs:						
Oysters	140,000	4,800	750,523	14,526	890,523	19,326
Taken without apparatus:						
Terrapin			2,509	274	2,509	274
Grand total	1,440,311	37,177	1,696,255	38,042	3,136,666	75,219

THE WHOLESALE FISHERY TRADE.

The city of Mobile is the principal market and point of distribution for the fishery products of the coastal waters of Alabama. The only other localities where the fishery trade is prosecuted are Coden and Bayou Labatre, located on the shores of Mississippi Sound, in the western part of the State, about 25 miles from Mobile. These places are less favorable as shipping-points on account of being about 9 miles from the railroad.

The most important branches of shore industry connected with the fisheries are the wholesale trades in fresh fish and oysters. Shrimp and crabs are also handled to a limited extent, and in 1897 an oyster cannery began to operate at Bayou Labatre.

The trade in fresh fish, which is the more extensive branch, was carried on chiefly by four firms at Mobile. The fish handled consist of a large variety of local species, or "beach fish," taken in the seines and trammel nets, and also of red snappers and groupers. These two species have usually been obtained at Pensacola, but during the past year about one-half the quantity utilized were landed by Mobile vessels. The fish are packed with ice in boxes and barrels and are shipped to numerous points in Alabama and adjacent States. The quantity handled was 3,151,900 pounds, valued at \$127,065.

The oyster trade is engaged in to a greater or less extent by eight firms, two of which are also fresh-fish dealers. The greater part of the oysters are opened and sold by count. They are divided into four grades, designated as plants, cullings, selects, and reefers. The first two grades are obtained from the planted grounds and the last two from the natural reefs. The oysters are packed with ice for shipment in buckets, half barrels, and barrels, and small quantities are also put up in hermetically sealed buckets holding from 1 to 4 quarts. The output of the cannery at Bayou Labatre above referred to consisted chiefly of canned oysters, shrimp and crabs being prepared in limited quantities. In order to avoid exposing the private interests of the firm, this being the only cannery in the State, the products have been included as opened oysters, whole shrimp, and live crabs, with the value received for them after being canned. The aggregate quantity, therefore, of oysters utilized for opening and canning purposes was 26,420,000 in number, or 104,061 gallons, the value of which as sold was \$106,164. There were also 1,850 barrels of oysters sold in the shell, valued at \$3,646, the total value of the various branches of the oyster trade being \$109,810. The quantity of shrimp handled raw and canned, represented in a raw condition, was 70,600 pounds, valued as sold at \$3,198, and the number of crabs was 135,600, valued at \$2,220.

There were 10 establishments in the State engaged in handling fishery products at wholesale, 8 of which were located at Mobile, 1 at Coden, and 1 at Bayou Labatre. In these 196 persons were employed

as shore hands. The value of the shore and accessory property used was \$49,350; the amount of cash capital was \$42,750; the wages paid amounted to \$28,556, and the aggregate value of the products handled was \$242,293.

The extent of the wholesale trade in fishery products in Alabama in 1897 is shown in the following table:

Table showing the extent of the wholesale trade in fishery products for Alabama in 1897.

Items.	Quantity.	Value.	Items.	Quantity.	Value.
Establishments	10	\$49,350	Drum.....pounds..	6,000	\$190
Cash capital.....		42,750	Flounders.....do..	30,000	1,750
Wages paid.....		28,556	Groupers.....do..	73,000	1,625
Employees.....	190		Jurel.....do..	3,000	80
<i>Products handled.</i>			Mullet.....do..	590,000	12,050
Oysters opened..number..	*26,420,000	106,164	Pickeral.....do..	4,000	110
Oysters sold in the shell, barrels.....	1,850	3,646	Pin-fish.....do..	4,000	120
Shrimp.....pounds..	70,000	3,188	Pompano.....do..	60,000	7,250
Crabs.....number..	135,000	2,220	Red snapper.....do..	710,000	30,500
Angel-fish.....pounds..	6,000	120	Sheepshead.....do..	80,800	4,140
Black bass.....do..	41,000	3,620	Silver perch.....do..	5,000	320
Blue-fish.....do..	201,000	8,040	Spanish mackerel.....do..	105,000	6,900
Cat-fish.....do..	175,000	3,675	Spots.....do..	87,000	2,430
Channel bass.....do..	211,000	10,550	Sun-fishes.....do..	79,500	4,335
Crovalle.....do..	12,000	270	Trout.....do..	269,600	15,040
Croakers.....do..	397,000	13,910	Whiting.....do..	2,000	40
			<i>Total value of products.</i>		242,293

* Equals 104,061 gallons.

FISHERIES OF MISSISSIPPI.

Description of the coast.—The coast line of Mississippi is broken by a number of small indentations, the most important of which are Point Aux Chenes Bay, Pascagoula Bay, Biloxi Bay, and Bay St. Louis. Each of these receives the waters of a number of small streams, the largest of which is the Pascagoula River, emptying into Pascagoula Bay; Biloxi River, emptying into Biloxi Bay, and the Wolf River, emptying into Bay St. Louis. At a distance of about 10 miles from the shore is a low broken chain of small sandy islands, none of which has more than an occasional inhabitant. Of these, Ship Island, lying directly off of Biloxi, is the most important and furnishes the only good harbor for large vessels on the coast. Mississippi Sound, extending the entire length of the coast and terminating on the east at the entrance of Mobile Bay, Alabama, lies between the islands and the mainland. Its waters are too shallow for navigation by large vessels, but it is of considerable importance as a fishing-ground.

Fishing localities.—There are three counties on the coast of this State, each of which is interested in the fisheries. These are Jackson, Harrison, and Hancock. The fisheries of Harrison County are much more extensive than in the other two counties combined. Fishing is prosecuted commercially or otherwise in all the localities along the shore, but the principal points are at Scranton and Ocean Springs, in Jackson County, Biloxi, in Harrison County, and Bay St. Louis, in Han-

cock County. These are all small towns, Biloxi, with a population not exceeding 5,000, being the largest and most important fishing and trade center.

General statistics.—The number of persons employed on the vessels fishing and transporting was 382; on boats in the various branches of shore fisheries, 679; in the canneries and packing houses, 1,504—a total of 2,565.

The number of vessels engaged in fishing and transporting fishery products was 83, having a value, including their outfits, of \$107,063; the number of boats of all classes used in the shore fisheries was 439, valued at \$17,039. The apparatus of capture used by vessels and boats, consisting of seines, trammel nets, gill nets, cast nets, dredges, tongs, spears, and lines, was valued at \$19,255. The value of shore and accessory property, which comprises chiefly the canneries and the packing houses, was \$125,644—a total investment, if the cash capital employed in the canning and packing industries, amounting to \$249,300, is included, of \$518,301.

The products of the fisheries consisted of 1,358,890 pounds of fish, valued at \$46,041; 1,903,165 pounds of shrimp, valued at \$28,804; 458,520 hard and soft crabs in number, valued at \$5,214; 3,372 terrapin, valued at \$1,275; and 629,713 bushels, or about 251,885 barrels of oysters, valued at \$110,964; the total value of products being \$192,298.

In the quantity and value of nearly all products, except shrimp, there was a large falling off from recent years. This may be explained by the fact that owing to the prevalence of yellow fever in this section in the fall of 1897 a rigid quarantine was maintained from September 6 to November 12; all means of transportation were suspended and the fisheries and canning and packing industries were practically discontinued. The shrimp fishery has materially increased, and it seems probable that under more favorable conditions all other branches of the fisheries would have been more extensive than ever before.

The three following tables show, by counties, the number of persons employed, the number and value of vessels, boats, and apparatus used, the amount of capital invested, and the quantity and value of the products of the fisheries of Mississippi in 1897:

Table showing by counties the number of persons employed in the fisheries of Mississippi in 1897.

Counties.	On ves- sels fish- ing.	On ves- sels trans- porting.	Boat or shore fish- men.	Shores- men.	Total.
Jackson	20	.....	271	143	434
Harrison	241	17	206	1,107	1,661
Hancock	104	.....	112	254	470
Total	365	17	679	1,504	2,565

Table showing by counties the vessels, boats, and apparatus employed in the fisheries of Mississippi in 1897.

Items.	Jackson.		Harrison.		Hancock.		Total.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels fishing.....	5	\$4,100	55	\$54,025	18	\$13,300	78	\$72,025
Tonnage.....	44.45		540.61		179.49		764.55	
Outfit.....		1,488		18,355		3,250		23,693
Vessels transporting.....			5	9,100			5	9,100
Tonnage.....			90.33				90.33	
Outfit.....				2,345				2,345
Boats.....	169	4,953	204	9,850	66	2,236	439	17,039
Apparatus—vessel fisheries:								
Seines.....	4	475	35	4,300	1	100	40	4,875
Trammel nets.....	3	180					3	180
Gill nets.....	1	130					1	130
Dredges.....			8	275			8	275
Tongs.....	19	93	251	1,316	78	468	348	1,877
Spears.....	4	4					4	4
Apparatus—shore fisheries:								
Seines.....	25	2,025	47	5,975			72	8,000
Trammel nets.....	18	1,320	9	270	2	90	29	1,680
Cast nets.....			15	60	60	240	75	300
Lines.....		113		27		46		188
Spears.....	10	10					10	10
Tongs.....	130	654	131	786	48	288	309	1,728
Minor apparatus.....			20	10			20	10
Shore and accessory property.....		9,850		95,870		20,124		125,044
Cash capital.....		7,400		166,900		75,000		249,300
Total.....		32,595		370,564		115,142		518,301

Table showing by counties and species the yield of the fisheries of Mississippi in 1897.

Species.	Jackson.		Harrison.		Hancock.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Black bass.....	15,000	\$750			12,000	\$600	27,000	\$1,350
Blue-fish.....	33,300	1,105					33,300	1,105
Buffalo-fish.....	21,500	215					21,500	215
Cat-fish.....	28,000	560			3,200	160	31,200	720
Channel bass or red-fish.....	153,800	6,043	33,200	\$1,660	12,000	600	199,000	8,303
Croakers.....	18,700	324	21,200	1,080	8,500	425	48,400	1,809
Drum, salt-water.....			3,000	150	2,000	100	5,000	250
Flounders.....	21,600	672	6,600	330			28,200	1,002
Mullet.....	187,100	1,891	46,500	850	7,000	140	240,600	2,881
Perch.....	5,000	150					5,000	150
Pin-fish.....	20,000	370	18,880	944			38,880	1,314
Pompano.....	23,000	1,400	1,800	180			24,800	1,580
Sheepshead.....	79,400	2,566	21,500	1,075	9,250	462	110,150	4,103
Spanish mackerel.....	45,800	3,180	3,960	396	15,000	1,500	64,760	5,076
Spots.....	3,500	105					3,500	105
Son-fishes.....	23,300	433	1,000	50	500	25	24,800	508
Trout.....	300,500	12,545	39,300	1,875	23,000	1,150	452,800	15,570
Shrimp.....	222,400	3,592	1,070,765	25,062	10,000	150	1,903,165	28,804
Crabs, hard.....	5,280	92	90,360	2,052	86,000	1,350	131,640	3,494
Crabs, soft.....	1,200	120	4,000	400	16,000	1,200	21,200	1,720
Terrapin.....			6,798	1,275			6,798	1,275
Oysters.....	567,441	19,847	3,045,141	77,480	795,410	13,637	4,407,992	110,964
Total.....	1,865,821	55,960	5,014,004	114,839	949,860	21,499	7,829,685	192,298

¹ 394,920 in number.

² 63,600 in number.

³ 3,372 in number.

⁴ 629,713 in bushels.

The vessel and shore fisheries.—The oyster fishery is of much greater importance than any other fishery in the State. Its development has taken place chiefly since 1880, and has been largely due to the establishment of the oyster canneries, which have greatly increased the demand for the products. This fishery now employs a large fleet of vessels and boats, and is a source of considerable revenue to fishermen and shore employees engaged in preparing the products for market. The season for taking oysters begins October 1 and closes April 30. Until quite recently oyster tongs were the only apparatus of capture used on vessels and boats in this fishery, but in 1897 three small steamboats and one schooner were fitted with dredges. The quantity of oysters taken by vessels with dredges was 51,871 barrels, valued at \$15,728, and with tongs, 105,079 barrels, valued at \$45,493—a total catch by vessels of 156,949 barrels, having a value of \$61,221. The catch by small boats, on which tongs were the only apparatus employed, aggregated 94,935 barrels, valued at \$49,743.

The oysters are nearly all obtained from the natural reefs in Mississippi Sound and in the vicinity of the islands along the coast. Oysters have been planted to some extent for many years at Biloxi, Ocean Springs, and Scranton, and there are still considerable areas of bottom utilized for planting purposes in these localities, but the results have never been fully satisfactory.

The shrimp fishery, which was comparatively small until within the last few years, now ranks next in importance to the oyster fishery. The entire catch of shrimp—except 10,000 pounds, valued at \$150, obtained with cast nets—was taken in seines by vessels and large sailboats, each having a crew of four men, that being the number required to fish a seine. The fishing season is from about March 15 to May 1, and again in the fall from August 1 to November 1. The length of the seines varies more or less, but is usually about 115 fathoms each, with a depth of 6 feet at the ends and 12 feet in the center. The size of the mesh is 2½ inches stretched. The seines are made of 9 to 12 thread cotton twine, and cost from \$100 to \$125 each. To facilitate the fishing operations, and for the purpose of securing larger quantities of shrimp, some of the packers employ a number of transporting vessels. These are supplied with ice and sent out on the fishing-grounds to buy the catch of the vessels and boats. The remainder of the shrimp is landed by the fishermen. Many of the fishing craft are owned by the packers, but the usual method in such cases is to have the vessel fished on shares, the owner paying the market price for the shrimp, which is about 1½ cents a pound when landed at the packing houses or sold to the transporting vessels.

The quantity of shrimp taken with seines was almost equally divided between the vessels and boats, the quantity secured by vessels being 951,105 pounds, valued at \$14,267, and by boats 942,060 pounds, valued at \$14,387.

There is also considerable fishing with seines for fish—chiefly with small boats, vessels being engaged in it to only a limited extent. The season is from March 15 to October 1. The fish seines are made of somewhat heavier twine than the shrimp seines and are more expensive. They are from 95 to 100 fathoms long, the size of mesh being from 2 to 2½ inches stretched, and cost about \$150 each. Four or five men are employed in each seine crew. The quantity of fish taken with this apparatus by vessels was 96,100 pounds, valued at \$2,980, and by boats 363,740 pounds, valued at \$12,918.

In addition to the shrimp and fish taken in seines there was an incidental catch with shrimp seines consisting of 3,473 pounds of terrapin, valued at \$650, by vessels, and 3,325 pounds, valued at \$625, by boats, the value of all products by seine fishing being \$45,817.

The trammel-net fishery is prosecuted during the fall, winter, and spring, and, so far as fish proper are concerned, is of greater importance than the seine fishery, but is of less value when all the products taken by seines are considered. The trammel nets are used in sections of 40 to 50 fathoms each in length, two sections comprising one net. The size of mesh in the inside web is about 2 inches, and in the webs on either side about 14 inches stretched. The cost of the nets when new is from \$25 to \$30 for each section. The quantity of fish taken by vessels in trammel nets was 186,700 pounds, valued at \$6,758, and by boats 376,100 pounds, valued at \$11,901.

Considerable quantities of fish are taken with pole and line, and with hand lines, by small boats during the fall. The most important species caught in this manner are the trout and Spanish mackerel. Hard and soft crabs are also caught with trot lines from September 1 to May 15. The trot lines are from 400 to 700 feet long, the bait being attached to snoods placed about 4 feet apart. They cost from \$1.25 to \$2 each. The line catch aggregated 429,390 pounds of crabs and fish, having a value of \$13,851.

Gill nets are used to a very limited extent in the vessel fisheries, the catch amounting to only 5,600 pounds, valued at \$455.

Spears were used by one vessel and a number of small boats in the capture of flounders.

Cast nets and dip nets are used in the boat fisheries, the former for taking mullet and shrimp, and the latter for taking soft crabs, the value of the catch of both forms of apparatus being \$2,240.

The fisheries prosecuted by vessels are much less extensive than those carried on with small boats, but are gradually assuming greater relative importance, and the forms of apparatus used are becoming more varied. The total value of the products taken by vessels was \$86,493, and by boats \$105,805.

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The following tables exhibit the products of the vessel and shore fisheries in 1897, by counties, apparatus, and species:

Table showing by counties, apparatus, and species the yield of the vessel fisheries of Mississippi in 1897.

Apparatus and species.	Jackson.		Harrison.		Hancock.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Blue-fish.....	12,000	\$360					12,000	\$360
Channel bass or red-fish.....	20,000	600			1,000	\$50	21,000	650
Croakers.....	1,800	27			6,000	300	7,800	327
Mullet.....	9,000	90			1,000	20	10,000	110
Sheepshead.....	12,000	360			2,000	100	14,000	460
Spanish mackerel.....	5,000	300					5,000	300
Sun-fishes.....	6,300	73					6,300	73
Trout.....	15,000	450			5,000	250	20,000	700
Shrimp.....	70,000	1,050	881,106	\$13,217			951,106	14,267
Terrapin.....			3,473	650			3,473	650
Total.....	151,100	3,310	884,678	13,867	15,000	720	1,050,678	17,897
Trammel nets:								
Blue-fish.....	10,000	380					10,000	380
Channel bass or red-fish.....	56,000	2,480					56,000	2,480
Croakers.....	6,200	128					6,200	128
Flounders.....	1,000	50					1,000	50
Mullet.....	28,000	300					28,000	300
Pompano.....	2,000	140					2,000	140
Sheepshead.....	23,000	790					23,000	790
Spanish mackerel.....	2,500	250					2,500	250
Spots.....	3,500	105					3,500	105
Sun-fishes.....	7,000	110					7,000	110
Trout.....	47,500	2,025					47,500	2,025
Total.....	186,700	6,758					186,700	6,758
Gill nets:								
Blue-fish.....	500	25					500	25
Sheepshead.....	100	5					100	5
Spanish mackerel.....	3,500	350					3,500	350
Trout.....	1,500	75					1,500	75
Total.....	5,600	455					5,600	455
Spears:								
Flounders.....	5,400	162					5,400	162
Tongs:								
Oysters.....	117,250	3,000	1,199,223	33,536	522,410	8,957	1,838,883	45,493
Dredges:								
Oysters.....			907,743	15,728			907,743	15,728
Grand total.....	466,050	13,685	2,991,544	63,131	537,410	9,677	3,995,004	86,493

Table showing by counties, apparatus, and species the yield of the shore fisheries of Mississippi in 1897.

Apparatus and species.	Jackson.		Harrison.		Hancock.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Blue-fish.....	6,000	\$180					6,000	\$180
Buffalo-fish.....	21,500	215					21,500	215
Cat-fish.....	3,500	70					3,500	70
Channel bass.....	41,800	1,463	25,200	\$1,260			67,000	2,723
Croakers.....	6,000	90	16,200	810			22,200	900
Flounders.....	6,000	180	3,600	180			9,600	360
Mullet.....	52,500	525					52,500	525
Pin-fish.....	11,000	200	11,880	594			22,880	794
Pompano.....	14,000	840	1,800	180			15,800	1,020
Sheepshead.....	14,500	435	18,000	900			32,500	1,335
Spanish mackerel.....	22,500	1,350	3,960	396			26,460	1,746
Sun-fishes.....	3,000	60					3,000	60
Trout.....	62,000	1,540	28,800	1,440			90,800	2,980
Shrimp.....	152,400	2,542	789,660	11,845			942,060	14,387
Terrapin.....			3,325	625			3,325	625
Total.....	406,700	9,690	902,425	18,230			1,309,125	27,920

Table showing by counties, apparatus, and species the yield of the shore fisheries of Mississippi in 1897—Continued.

Apparatus and species.	Jackson.		Harrison.		Hancock.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Trammel nets:								
Black bass.....	15,000	\$750			12,000	\$600	27,000	\$1,350
Blue-fish.....	4,800	180				10	4,800	180
Cat-fish.....	4,500	90			200	10	4,700	100
Channel bass.....	36,000	1,500	8,000	\$400	8,000	400	52,000	2,300
Croakers.....	4,700	79	5,000	250	1,500	75	11,200	404
Drum, salt-water.....			3,000	150	500	25	3,500	175
Flounders.....	4,200	130	3,000	150			7,200	280
Mullet.....	97,600	976	30,000	600			127,600	1,576
Perch.....	5,000	150					5,000	150
Pin-fish.....	9,000	170	7,000	350			16,000	520
Pompano.....	7,000	420					7,000	420
Sheepshead.....	29,800	978	3,500	175	5,000	250	38,300	1,401
Spanish mackerel.....	12,300	930					12,300	930
Sun-fishes.....	7,000	190	1,000	50	500	25	8,500	285
Trout.....	40,500	1,435	10,500	435			51,000	1,870
Total.....	277,400	7,956	71,000	2,560	27,700	1,385	376,100	11,901
Cast nets:								
Mullet.....			10,500	250	6,000	120	22,500	370
Shrimp.....					10,000	150	10,000	150
Total.....			10,500	250	16,000	270	32,500	520
Lines:								
Cat-fish.....	20,000	400			3,000	150	23,000	550
Channel bass.....					3,000	150	3,000	150
Croakers.....					1,000	50	1,000	50
Drum, salt-water.....					1,500	75	1,500	75
Sheepshead.....					2,250	112	2,250	112
Spanish mackerel.....					15,000	1,500	15,000	1,500
Trout.....	234,000	7,020			18,000	900	252,000	7,920
Crabs, hard.....	5,280	92	90,360	2,052	36,000	1,350	131,640	3,494
Total.....	259,280	7,512	90,360	2,052	79,750	4,287	429,390	13,851
Spears:								
Flounders.....	5,000	150					5,000	150
Tongs:								
Oysters.....	450,191	16,847	938,175	28,216	273,000	4,680	1,661,366	49,743
Minor apparatus:								
Crabs, soft.....	1,200	120	4,000	400	16,000	1,200	21,200	1,720
Grand total.....	1,399,771	42,275	2,022,460	51,708	412,450	11,822	3,834,081	105,805

THE WHOLESALE FISHERY TRADE.

The principal shore industries connected with the fisheries of Mississippi are the canning of oysters, shrimp, and crabs, and the trade in opened oysters, whole shrimp, live crabs, terrapin, and fresh fish.

The oyster-canning business was established at Biloxi in 1881. In that year one cannery was built and put in operation and others were added a few years later. Since that time the industry has grown to considerable proportions and has contributed materially to the prosperity of the communities in which it is carried on. In 1897 there were 4 canneries in operation—3 at Biloxi and 1 at Bay St. Louis. The aggregate value of these, including land, buildings, wharves, machinery, and fixtures, was \$88,000, the amount of cash capital utilized was \$203,000, and of wages paid \$55,552. The number of persons employed was 942. The total value of the output was \$346,751. Of this amount \$256,664 represents the value of the canned-oyster pack; the remain-

der, \$90,087, is the value of the opened oysters, canned shrimp, and other fish products handled at the canneries.

The packing of shrimp at the canneries and oyster houses has greatly increased during the past few years and is now an important feature of the fishery trade. The shrimp are packed in tin cans, chiefly of the 1 and 2 pound sizes, and also in packages holding 5, 10, and 20 pounds, or 1, 2, and 4 gallons. The quantity of shrimp utilized for packing was 9,304 barrels, costing, as landed from the vessels and boats, \$29,286, and having a value when packed of \$119,282. Besides this, 572 barrels were sold in a raw or whole condition, at a value of \$2,842, the aggregate value of the shrimp trade being \$122,124.

Hard crabs have also been prepared at the canneries in various years since about 1882, but the industry has never been extensive, chiefly on account of the limited demand for the goods. The meat of the crabs, after being removed from the shell, is packed in 1 and 2 pound cans, hermetically sealed, and processed in a manner similar to other canned products. The pack consisted of 10,560 1-pound and 2,160 2-pound cans, having a value of \$2,035.

The canning industry is of great importance to the fishery interests of this section, not only on account of the increased amount of capital invested, the labor employed, and wages distributed, but it has been largely instrumental in developing the oyster and shrimp fisheries by affording a convenient and ready market for their products. It is not probable that these fisheries would have ever reached their present stage of development under the conditions prevailing before the establishment of the canneries, when New Orleans was the principal market for the catch.

Next in importance to the canning industry is the trade in opened oysters. There were 16 packing houses, exclusive of the oyster canneries, engaged in this branch of business. Of these, 7 were located at Biloxi, 4 at Ocean Springs, and 5 at Scranton. The number of persons employed was 562, the value of shore property used was \$35,950, the amount of cash capital \$46,300, and of wages paid \$32,096. These firms, as already indicated, were also engaged in packing shrimp, and some of them in handling other fishery products.

The oysters are divided into three principal grades, designated as plants, selects, and reefers. After being opened they are counted and packed with ice in wooden buckets for shipment, the covers of the buckets being fastened on with wire nails. The capacity of the buckets ranges from 3 to about 8 gallons, or from 500 to 1,000 oysters, the size of the bucket required depending upon the number and grade of oysters to be packed. They cost from 15 to 28 cents, or an average of about 25 cents each. The oysters are sold by count instead of gallon in nearly all instances. This is an old custom among the oyster-packers of this region, and is said to be due to the fact that the trade which they supply demands solid measure, which renders it difficult, if the oysters

are sold by the gallon, to compete with the trade at Baltimore, Md. However this may be, the oysters are shipped without any water except what accumulates from the ice used to keep them cool. The price received by the 1,000 fluctuates considerably, but is approximately from \$6.25 to \$6.50 for plants, \$3.25 to \$3.50 for selects, and about \$2 for reefers. The number of gallons to 1,000 oysters is generally estimated to be about $7\frac{1}{2}$ for plants, $4\frac{1}{2}$ for selects, and 3 for reefers. The quantity of opened oysters sold in 1897, expressed in number, was 31,615,950, or about 154,711 gallons, having a value of \$119,941. The greater part of these was the product of the packing-houses, the quantity prepared at the oyster canneries being only 2,755,000, or about 13,947 gallons, valued at \$11,420. It should perhaps be noted that the trade in opened oysters, as shown by the above figures, is little more than half as large as it has been in previous years, but the decline is probably only temporary.

A small number of terrapin are handled by dealers at Biloxi. These are derived from the fisheries of Mississippi and Louisiana, a part of them being shipped from New Orleans. The value of the terrapin trade amounted to \$2,805. A few years since a terrapin pen was constructed at Biloxi which is used principally for keeping the animals and improving their condition. It is built on the shore at the water's edge, and is 500 feet square. A part of its area is covered with water having an extreme depth of about 6 feet.

The trade in fresh fish is carried on chiefly by four of the firms located at Scranton. It has not so far become very extensive, apparently on account of not being sufficiently well established to enable the dealers to buy all the fish that may be brought to them, and consequently it sometimes happens that when fish are needed the fishermen, who follow the business in a somewhat irregular manner, are not prepared to supply the demand. The quantity of fish handled aggregated 382,200 pounds, valued at \$19,324. In nearly all the localities along the coast considerable quantities are handled at retail. At Biloxi there are also from 700 to 1,000 barrels shipped annually by rail to New Orleans and other points by the fishermen. There are no fish salted in this section except a small quantity of mullet.

There is a very small trade in hard and soft crabs at Biloxi, Ocean Springs, and Scranton. The crabs are packed with ice in baskets, boxes, and tubs and shipped to Mobile and other points. The number of crabs shipped was 70,800, the value of which was \$733. In addition to this, a much larger quantity was shipped by individual fishermen.

The number of establishments in the State which handled fishery products at wholesale was 20; the value of shore property, \$123,950; the amount of cash capital used, \$249,300; of wages paid, \$87,648. The number of persons employed in canneries and packing houses, exclusive of fishermen, was 1,504. The aggregate value of the products prepared was \$525,186

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The extent of the trade in 1897 is shown in detail in the following table:

Table showing the extent of the canning and wholesale trade of fishery products for Mississippi in 1897.

Items.	Biloxi and Bay St. Louis.		Ocean Springs.		Scranton.		Total.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Establishments.....	* 11	\$114,500	4	\$2,300	5	\$7,150	20	\$123,950
Cash capital.....		241,900		2,000		5,400		249,300
Wages paid.....		74,421		2,955		10,272		87,648
Persons engaged.....	1,361		40		103		1,504	
Products received:								
Oysters.....barrels..	229,060	104,010	8,750	5,850	18,300	13,845	250,110	123,705
Shrimp.....do.....	9,304	29,286	60	180	512	1,798	9,876	31,264
Crabs.....number..	174,000	888	4,800	40	12,000	70	190,800	998
Terrapin.....do.....	5,113	1,977					5,113	1,977
Fish.....pounds..	16,500	250			382,200	13,380	398,700	13,630
Products as sold:								
Oysters—								
Opened, plants.....number..	4,950,000	30,960	690,000	4,440	1,240,050	8,710	26,880,050	44,110
Opened, select.....do.....	13,735,000	45,955	2,810,000	9,373	4,837,500	14,128	21,382,500	69,456
Opened, reefers.....do.....	320,000	640			3,033,400	5,735	3,353,400	6,375
Canned, 1-lb. cans.....do.....	3,368,684	151,047					3,368,684	151,047
Canned, 2-lb. cans.....do.....	1,333,990	105,617					1,333,990	105,617
Shells.....barrels..	96,000	960					96,000	960
Shrimp—								
Whole.....do.....			60	270	612	2,572	572	2,842
Headless.....gallons..	11,250	4,563					11,250	4,563
Pickled.....do.....	44,775	17,745					44,775	17,745
Peeled.....do.....	825	680					825	680
Canned, 1-lb. cans, dry.....No.	440,304	37,861					440,304	37,861
Canned, 1-lb. cans, dry.....No.	221,600	30,033					221,600	30,033
Canned, 2-lb. cans, dry.....No.	154,800	16,830					154,800	16,830
Canned, 1-pound cans, pickled.....No.	61,200	4,590					61,200	4,590
Canned, 1-lb. cans, salad, number.....	96,000	7,000					96,000	7,000
Crabs—								
Whole.....number..	54,000	563	4,800	50	12,000	120	70,800	733
Canned, 1-lb. cans.....do.....	10,560	1,540					10,560	1,540
Canned, 2-lb. cans.....do.....	2,160	495					2,160	495
Terrapin.....do.....	5,113	2,805					5,113	2,805
Fish—								
Black bass.....pounds..					5,000	375	5,000	375
Blue fish.....do.....					15,300	765	15,300	765
Buffalo fish.....do.....					10,000	300	10,000	300
Cat fish.....do.....					15,000	725	15,000	725
Channel bass.....do.....					84,000	4,300	84,000	4,300
Croakers.....do.....					7,200	250	7,200	250
Drum.....do.....					1,200	56	1,200	56
Flounders.....do.....					9,200	465	9,200	465
Mullet.....do.....					32,500	930	32,500	930
Perch.....do.....					5,000	250	5,000	250
Pin fish.....do.....					11,700	351	11,700	351
Pompano.....do.....					4,500	390	4,500	390
Sheepshead.....do.....					35,100	1,821	35,100	1,821
Spanish mackerel.....do.....					28,800	2,400	28,800	2,400
Sun-fishes.....do.....					9,700	481	9,700	481
Trout.....do.....					108,000	5,465	108,000	5,465
Mullet, salted, $\frac{1}{4}$ barrels.....No.	150	375					150	375
Mullet, salted, $\frac{1}{2}$ barrels.....No.	50	225					50	225
Value of products sold.....		460,464		14,133		50,589		525,186

* One establishment at Bay St. Louis.
 † In addition to this number 60 shore or boat fishermen were employed as shoresmen part of the season.
 ‡ Equals 51,500 gallons.
 § Equals 93,151 gallons.
 ¶ Equals 10,060 gallons.

FISHERIES OF LOUISIANA.

The extent of the fisheries of Louisiana in 1897, as shown by the statistics collected, does not properly represent the present condition of the fisheries of that State, owing to quarantine regulations restricting the prosecution of the fisheries during two months in the fall when shipments of all products are generally quite heavy. Notwithstanding this fact the yield in 1897 surpasses any previous year for which we have any record, the value being \$713,587, against \$681,284 in 1890 and \$392,610 in 1880. Had the trade not been restricted by quarantine the value of the product in 1897 would doubtless have approached \$900,000.

There are three principal fisheries of Louisiana, viz, the oyster fishery, valued in 1897 at \$432,668, which is centered about New Orleans, Houma, and Morgan City; the seine fishery for shrimp and for trout, red-fish or channel bass, sheepshead, etc., the yield of which in 1897 was sold by fishermen for \$173,454; and the trot-line fishery for cat-fish, yielding a product valued at \$46,682. The remaining \$60,783 worth of products consisted of alligator hides, \$22,096; crabs, \$12,891; terrapin, \$4,032; craw-fish, \$3,113, and a miscellaneous lot of fish caught by a variety of minor apparatus, such as fyke nets, lines, dip nets, etc.

The oyster industry of Louisiana is the most valuable on the United States coast south of Virginia, the yield in 1897 amounting to 959,190 bushels, worth \$432,668 at first hands. Were it not for the quarantine in the fall of 1897 the Louisiana oyster product during that year would doubtless have been 15 to 20 per cent greater.

The oyster reefs extend almost continuously along the southern coast, from the border of the State of Mississippi to the mouth of the Atchafalaya River, and are most abundant in Plaquemines, Terrebonne, Lafourche, St. Bernard, and Jefferson parishes. West of the Atchafalaya River there are a few oyster reefs in Cote Blanche Bay, Marsh Island Pass, and Cameron Pass, but they are only slightly developed and may be entirely omitted in a consideration of the present oyster industry of the State. In general the Louisiana oysters compare favorably with any on the Gulf coast.

There are three centers in the oyster trade of Louisiana, viz, New Orleans, Houma, and Morgan City. The New Orleans trade amounts to about 200,000 barrels annually, of which about 75,000 barrels are received at the Old Basin from Mississippi Sound and the Louisiana marshes east of the Mississippi River, 100,000 barrels at the French Market lugger landing from Bayou Cook, Barataria Bay, Jacks Camp, etc., and the remainder by steamer and rail from the waters of Plaquemines and Jefferson parishes. Nearly all are consumed locally, very few oysters being shipped to outside points.

The oyster reefs on the east side of the Mississippi River, known as the Louisiana Marsh reefs, are utilized by fishermen from Mississippi as well as Louisiana. These reefs are frequently injured by fresh water

from the rivers, and the oysters are not usually so valuable as those from the west side of the Mississippi River. In 1897 there were from Louisiana 34 sailboats, worth \$14,640, with 123 men, engaged in taking oysters from these reefs for the New Orleans market, and their catch, amounting to 55,860 barrels, was landed at Old Basin and sold for \$40,027. These men live mainly in New Orleans, and the oysters are carried from the reefs directly to the New Orleans market.

In Plaquemines Parish, on the east side of the Mississippi River, there is an extensive oyster-planting industry. The locality in which this is carried on is known generally as Salt Works, and includes Yankee Bayou, Scobels Bay, Bokeskie Bayou, Quarantine Bay, Whale Bay, etc. In that vicinity there are 65 camps with 186 oystermen, using 102 sailboats, worth \$22,780. They obtain oysters from Louisiana marshes and from the reefs west of the Mississippi River, and bed them on grounds preempted in accordance with the State law. After remaining 6 or 8 months or longer these oysters are taken up and sold in New Orleans. In 1897 the sales from the Salt Works amounted to 34,152 barrels, for which the oystermen received \$52,980. Most of these oysters are delivered at the French Market lugger landing in New Orleans.

The finest oysters in Louisiana are from the Bayou Cook section, under that name being included nearly all the waters of the western half of Plaquemines Parish, and especially Bayou Chute, Grand Bayou, Bay Adam, Bayou Fontenal, Bayou des Huitres, and the adjacent bayous. These oysters are the result of the most careful system of individual ostreiculture along the Gulf coast. The natural reefs in the Bayou Cook section were exhausted about thirty years ago, and the colony of Austrians settled there have since depended on gathering oysters in Lake Barre, Timbalier Bay, and other waters of southern Louisiana during the spring and planting them in Bayou Cook and the adjacent waters, where they remain until the following season, acquiring in the meantime the peculiar flavor which distinguishes the oysters from that locality. The oystermen of Bayou Cook are among the most enterprising and painstaking of the fishermen on the Gulf coast, and there is no class along that coast better equipped for their work or more successful in its prosecution. They live in small camps adjacent to their bedding-grounds, these camps being constructed of boards or palmettoes raised 10 or 15 feet above the marsh. In 1897 there were 302 persons engaged in the Bayou Cook oyster industry, living in 86 camps, and using 122 sailboats worth \$33,675, and 244 rowboats worth \$10 or \$12 each. The oysters marketed during that season amounted to 62,184 barrels, for which \$110,627 was received.

The waters of Jefferson Parish produced large quantities of oysters prior to 1893, but the severe storm in September of that year destroyed most of the reefs as well as the greater portion of the boats and apparatus for carrying on the fisheries. The oysters being situated in shoal water were washed in windrows and covered up by sand. These reefs are gradually recovering from the effect of that storm, but most of the

present oystermen of Jefferson Parish work on the reefs in Lafourche and Terrebonne parishes.

Between the Lafourche and the Atchafalaya rivers in the southern part of Lafourche and Terrebonne parishes are located the principal oyster reefs of Louisiana, and from them are drawn the supplies for Houma and Morgan City and much of those for New Orleans, as well as the oysters for bedding at Bayou Cook. These reefs are situated in Lake Barre, Timbalier Bay.

The market for these oysters prior to 1880 was New Orleans, together with a small consumption in the villages and settlements near the reefs; but in 1880 the wholesale trade was started at Morgan City and ten years later several shucking houses were established at Houma for shipping oysters to distant points. The trade has fluctuated considerably from year to year, but has gradually increased. Although the trade in 1897 was much less than usual, on account of the quarantine regulations, yet this section of Louisiana furnished 230,380 barrels of oysters, for which the fishermen received \$228,164. Of this quantity 84,468 barrels were marketed at Houma, 95,834 barrels at Morgan City, and 50,078 barrels were consumed in New Orleans and in the settlements adjacent to the reefs. In addition thereto there were about 100,000 barrels of oysters taken for bedding in Terrebonne, Lafourche, Jefferson, and Plaquemines parishes, which are not included in the tables. The number of persons engaged in tonging and transporting these oysters to market was 1,012, using 646 sailboats, worth \$85,716, and a large number of skiffs, worth from \$8 to \$20 each. A number of areas have been preempted in Terrebonne and Lafourche parishes, and some attention has been given during the last year or two to oyster-culture in this section, but the yield from private grounds was inconsiderable in 1897. It is customary for the oystermen to bed the oysters taken at the beginning of the season and before the market houses have opened, but these oysters are usually taken up when the market demand is good.

As used in this connection, a barrel signifies a flour barrel with capacity for $2\frac{1}{2}$ bushels of oysters, and not the local measurement. At no place on the Louisiana coast is a standard measure used in handling oysters. At the French Market in New Orleans a basket of uniform size is used, and in filling it the oysters are heaped up to a point as long as any will remain on and the contents of two of these baskets is considered a barrel, although it is equivalent to only about 85 per cent of a standard barrel. At the Old Basin until quite recently a shallow box was used, this being filled up to a point as in case of the baskets at the French Market and the contents of four of these boxes is considered a barrel, although it is equivalent to only 90 per cent of a barrel. At Morgan City and Houma measurements are made with baskets of uniform size, three of which are supposed to make a barrelful; but at the reefs these are usually heaped, whereas at the markets they are filled even with the rim, and the gain in number of barrels is considerable, amounting usually to 50 per cent of the reef measurement.

Compared with 1890 there has been a very large decrease in the seine fishery of Louisiana, the number of seines used decreasing from 168 worth \$14,600 in 1890 to 136 worth \$12,211 in 1897, the catch for the former year being 10,576,833 pounds valued at \$243,528 and for the latter year 6,554,749 pounds, for which the fishermen received \$173,454. The decrease is most noticeable in the yield of shrimp, buffalo-fish and cat-fish, the shrimp falling off from 6,662,050 pounds worth \$90,519 in 1890 to 4,402,626 pounds for which the fishermen received \$78,792; the buffalo-fish seine catch decreased from 1,030,250 to 147,200 pounds and the cat-fish yield from 653,925 to 144,900 pounds. The large decrease in the yield of the last two species was due mainly to an interdiction of seine fishing in the lakes; but the general decrease in the seine fishery is due largely to the results of the severe storm in September of 1893, which drowned many seine fishermen and destroyed much of the property of the survivors.

With the exception of the Manila fishermen employed by the Chinese shrimp-driers in the Barataria region, and of several seine crews at Morgan City, practically all the seine fishery of Louisiana is tributary to New Orleans, and there are three branches of the fishery tributary to that city, viz, Lake Pontchartrain, the St. Bernard or Shell Beach, and the Barataria Bay seine fishery. In 1897 the first comprised 16 sail boats with an equal number of seines and 94 men, who made their headquarters at Bayou Bridge, and who landed 829,759 pounds of fish, consisting principally of red-fish, trout, sheepshead, and croakers, valued at \$38,384, and also of 51 crews of 106 men using 51 seines worth \$1,401, which were operated from various points along the shore of Lake Pontchartrain, catching 368,360 pounds of fish worth \$16,490.

The St. Bernard seine fishery gave employment in 1897 to 85 men using 17 seines worth \$1,870, which yielded 325,060 pounds of fish worth \$14,334, made up principally of trout, sheepshead, redfish or channel bass, shrimp, and croakers. Each of the St. Bernard seining crews usually operates from a sail vessel, but the catch is generally sent to market by the Shell Beach Railroad or by wagons.

The Barataria seine fishery gave employment in 1897 to 412 men, using 79 boats worth \$23,840, and 40 seines, 6,270 fathoms in length, and valued at \$6,765. Their catch consisted of 4,286,626 pounds of shrimp, for which they received \$76,223, and 494,965 pounds of other species, consisting principally of trout, red-fish, channel bass, mullet, and croakers, the whole being worth \$21,107. Included with the foregoing are 15 crews of 196 Manilamen, Spaniards, etc., who work principally for the Chinese shrimp-driers near the head of Barataria Bay. Of the shrimp, 1,331,736 pounds were purchased by the Chinese driers, 1,142,360 by New Orleans shrimp-canners, and the remaining 1,781,530 pounds were sold at the French Market in New Orleans. Shrimp are caught throughout the year in Louisiana, but the principal season is during March and April, and through August and September.

The seine fishery prosecuted from Morgan City is of recent origin,

beginning in 1896, and was of small extent in 1897, only 4 seines being used, the principal species obtained being shrimp, red-fish or channel bass, trout, etc. The prospects for developing an important seine fishery tributary to Morgan City are extremely favorable.

Although the value of the alligator yield increased slightly from 1890 to 1897, being \$21,150 in the former year and \$22,096 in the latter, the condition of that industry is far from satisfactory. For many years there has been a steady decrease in abundance of alligators, and the average size of the hides secured has diminished. Localities in which they formerly abounded are now almost exhausted, and it is only by greatly increased efforts that the product has been kept up to its present extent. The number of hides reported in 1889 was 74,240, worth \$38,185 at first hands; in 1890, 38,588, worth \$21,150, and in 1897, 41,092, for which the hunters received \$22,096. The yield of alligators in those parts of the State not covered by the present canvass is estimated at 30,000, valued at \$15,000. These alligators are secured principally by shooting, but also in various other ways, such as gaffing with a long pole when hibernating in old stump holes and the like, hooking on lines attached to bent saplings so fastened as to fly up when the alligator becomes fixed to the hook, etc.

The cat-fish fishery in Louisiana, which is the most extensive in the United States, is centered at Morgan City and Melville. The business in 1897 was seriously restricted by quarantine regulations, which prevented shipments during two months of the fall; but the catch by lines amounted to 1,950,064 pounds, for which the fishermen received \$46,682. The greater part of these, 979,093 pounds, worth \$24,516, were received at Morgan City, where they were dressed and shipped throughout the West. The receipts of cat-fish at Melville aggregated 456,291 pounds gross weight, worth \$10,496; and 121,670 pounds of cat-fish, worth \$2,836, were received at Plaquemine. The two last-named ports also received 148,273 pounds of buffalo-fish and 18,120 pounds of cat-fish and drum, which were caught in fyke nets. These fisheries were carried on by 828 woodsmen living in the St. Mary, Assumption, Iberia, Iberville, St. Landry, St. Martin, Pointe Coupee, and Avoyelles parishes, and who engaged in fishing, alligator hunting, gathering moss, and the like. In taking cat-fish they use both trot lines and single lines, the latter being employed during high water, the lines being tied to tree trunks and bushes in the swamps, whereas the trot lines are strung out in the lakes and bayous.

The aggregate weight of crabs taken in Louisiana is considerable, amounting in 1897 to 4,376,500 in number, equivalent to about 1,458,833 pounds. These are caught by long lines in brackish waters adjacent to New Orleans, and especially in Jefferson, Orleans, and St. Bernard parishes. Owing to the expense attendant upon marketing the crabs the fishermen obtain very small returns, sometimes receiving only 5 cents for a basket containing 5 dozen crabs, and the total receipts from this source in 1897 were only \$12,891.

Some little attention is given to soft crabs in the vicinity of New Orleans, but this is confined principally to searching for them in the shoal water. On account of the high price at which they sell during the winter and early spring it seems probable that a profitable business could be built up in obtaining soft crabs after the manner practiced in Maryland and North Carolina.

The minor fisheries of Louisiana are of very little consequence and scarcely rank as industries. In the various localities a few hand lines, dip nets, crawfish pots, and the like are used at odd times and the surplus above home wants is sold in the vicinity. The total extent of these fisheries as well as of those mentioned before is presented in the following series of tables, showing the number of persons engaged, the boats, apparatus, etc., employed, and the quantity and value of the products of the fisheries of Louisiana in 1897.

Persons employed.

How engaged.	No.
On vessels fishing.....	80
On vessels transporting.....	63
In shore or boat fisheries.....	3,576
Shoemen.....	684
Total.....	4,403

Table of apparatus and capital.

Items.	No.	Value.	Items.	No.	Value.
Vessels fishing.....	31	\$15,006	Apparatus—shore fisheries:		
Tonnage.....	198.57		Seines.....	135	\$12,156
Outfit.....		3,945	Fyke nets.....	188	940
Vessels transporting.....	30	17,095	Minor apparatus.....		2,539
Tonnage.....	197.23		Lines.....		7,971
Outfit.....		5,000	Tongs.....	1,563	7,615
Boats fishing.....	3,008	191,114	Shore and accessory prop- erty.....		173,803
Boats transporting.....	17	6,490	Cash capital.....		60,000
Apparatus—vessel fisheries:			Total.....		513,813
Seines.....	76	55			
Tongs.....	1	384			

Table of products.

Species.	Lbs.	Value.	Species.	Lbs.	Value.
Black bass.....	320	\$26	Silver perch.....	3,015	\$128
Blue-fish.....	3,060	132	Spanish mackerel.....	55,805	5,132
Buffalo-fish.....	311,093	4,708	Striped bass.....	22,880	1,449
Cat-fish.....	2,153,134	51,420	Sun-fishes.....	119,780	3,789
Channel bass or red-fish.....	465,200	20,529	Trout.....	566,048	26,500
Crevalle.....	18,000	690	Other fish.....	66,550	3,583
Croakers.....	328,775	16,980	Oysters.....	16,714,330	432,098
Drum, fresh-water.....	7,250	74	Shrimp.....	4,480,726	80,576
Drum, salt-water.....	18,570	540	Crabs.....	21,458,833	12,801
Flounders.....	9,625	654	Craw-fish.....	84,950	3,113
Hog-fish.....	125	5	Terrapin.....	41,080	4,149
Mullet.....	165,819	5,871	Turtle.....	22,395	581
Perch.....	11,050	500	Alligator hides.....	(³)	22,096
Pompano.....	17,665	1,891			
Sheepshead.....	238,010	12,506	Total.....	17,401,798	713,587
Shoemaker.....	9,600	346			

¹ Represents 383,676 barrels or 959,190 bushels.

² Represents 4,376,506 in number.

³ Represents 41,092 in number.

The fishermen of Louisiana are largely of foreign birth, and in a majority of cases have little attachment to the places where they camp, moving from place to place according to the productiveness of the fisheries in the various localities. For this reason it is extremely difficult to report the extent of the fisheries of each parish or county separately, but for the purpose of securing uniformity in presenting the figures for all the Gulf States, the following five tables are arranged to show by parishes the number of persons employed, the quantity and value of boats, apparatus, etc., and the weight and value of the product. The last two tables are intended to represent the yield in the vessel fisheries and in the shore fisheries separately. It must not be understood, however, that there is any difference in the so-called "vessel fisheries" and the shore or boat fisheries of this State, for their characteristics are identical, and there is probably no sail craft employed in the fisheries of Louisiana large enough to be listed at the custom-house if measured according to the present regulations.

Table showing the number of persons employed in the fisheries of Louisiana in 1897.

Parishes or counties.	On ves- sels fishing.	On ves- sels trans- porting.	Shore or boat fish- ermen.	Shores- men.	Total.
Calcasieu			8		8
Cameron			7		7
Jefferson		4	422	24	450
Lafourche	2		362		364
Orleans	18		415	370	803
Plaquemines			494		494
St. Bernard			158		158
St. Charles			140		140
St. John the Baptist			32		32
St. Landry			342	15	357
St. Mary	87	47	676	161	821
St. Tammany			34		34
Tangipahoa			26		26
Terrebonne	23	12	555	114	704
Vermilion			5		5
Total	80	63	3,576	684	4,403

¹ Includes the parishes Pointe Coupée, Iberville, Avoyelles, and a portion of St. Martin.
² Includes the parishes of Assumption, Iberia, and portions of Iberville and St. Martin.

Table showing by counties the vessels, boats, and apparatus employed in the fisheries of Louisiana in 1897.

Items.	Calcasieu.		Cameron.		Jefferson.		Lafourche.		Orleans.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels fishing							1	\$400	4	\$1,935
Tonnage							5.73		28.78	
Outfit								100		1,060
Vessels transporting					2	\$700				
Tonnage					12.20					
Outfit						200				
Boats fishing	12	\$225	10	\$260	180	24,432	227	21,455	231	27,405
Boats transporting					3	825				
Apparatus—vessel fisheries:										
Selnes							2	12	18	90
Tongs										
Apparatus—shore fisheries:										
Selnes					34	5,200	11	1,770	46	2,210
Minor apparatus						485				742
Lines		45		40		640				120
Tongs			5	25	53	165	292	1,485	123	615
Shore and accessory property		75		20		24,160		5,500		95,100
Cash capital						5,500				80,000
Total		345		345		62,307		30,702		159,277

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Table showing by counties the vessels, boats, and apparatus employed in the fisheries of Louisiana in 1897—Continued.

Items.	Plaquemines.		St. Bernard.		St. John Bapt.		St. Charles.		St. Landry.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Boats fishing.....	674	\$61,810	151	\$2,415	108	\$1,684	30	\$540	355	\$1,240
Boats transporting.....									14	5,665
Apparatus—shore fisheries:			17	1,870	4	195	9	310		
Seines.....									188	940
Fyke nets.....						273		185		
Minor apparatus.....		83		500		120		30		1,536
Lines.....		120		240						
Tongs.....	488	2,340								
Shore and accessory property.....		13,150		260		300		150		5,813
Cash capital.....										4,300
Total.....		77,503		5,351		2,572		1,195		21,494

Items.	St. Mary.		St. Tammany.		Tangipahoa.		Terrebonne.		Vermilion.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels fishing.....	16	\$7,260					10	\$5,411		
Tonnage.....	98.56						65.50			
Outfit.....		1,685						1,100		
Vessels transporting.....	22	14,745					6	1,050		
Tonnage.....	148.21						36.82			
Outfit.....		4,800						600		
Boats fishing.....	539	11,368	23	\$805	20	\$455	444	34,895	4	\$125
Apparatus—vessel fisheries:										
Seines.....	1	55								
Tongs.....	33	165					23	117		
Apparatus—shore fisheries:										
Seines.....	2	136	3	110	2	80	7	275		
Minor apparatus.....		50		67		38		70		
Lines.....		4,970		48		22				40
Tongs.....	64	320					537	2,685		
Shore and accessory property.....		16,765		100		60		12,450		
Cash capital.....		19,500						9,700		
Total.....		81,819		1,130		655		68,953		165

SUMMARY.

Items.	No.	Value.	Items.	No.	Value.
Vessels fishing.....	31	\$15,006	Apparatus—shore fisheries:		
Tonnage.....	198.57		Seines.....	135	\$12,156
Outfit.....		3,945	Fyke nets.....	188	940
Vessels transporting.....	30	17,095	Minor apparatus.....		2,539
Tonnage.....	197.23		Lines.....		7,971
Outfit.....		5,600	Tongs.....	1,563	7,615
Boats fishing.....	3,008	191,114	Shore and accessory property.....		173,903
Boats transporting.....	17	6,490	Cash capital.....		69,000
Apparatus—vessel fisheries:			Total.....		518,813
Seines.....	1	55			
Tongs.....	76	384			

Table showing by counties and species the yield of the fisheries of Louisiana in 1897.

Species.	Calcasieu.		Cameron.		Jefferson.		Lafourche.		Orleans.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Black bass									320	\$28
Blue-fish									3,460	112
Buffalo-fish					7,400	\$148	28,900	\$578	27,090	514
Cat-fish	30,850	\$582	4,000	\$120	149,000	3,220	12,800	384	59,420	1,627
Channel bass or red-fish					54,125	2,585	22,030	1,080	266,705	11,745
Croakers					20,820	1,347	5,400	221	18,000	690
Drum, salt-water									154,915	7,743
Flounders									16,170	420
Mullet					92,560	3,063	38,085	1,567	5,325	399
Perch			2,800	84	2,050	78			12,274	400
Pompano					12,000	699	1,960	126	17,100	1,805
Sheepshead									127,735	6,390
Shoemaker									9,600	346
Silver perch					3,260	326	950	85	2,870	110
Spanish mackerel					720	49			47,710	4,326
Striped bass					7,170	293			4,840	277
Sun-fishes			28,750	512	157,795	7,549	56,590	2,862	175,215	7,432
Trout					17,200	951	7,200	294	45,630	1,341
Other fish			10,250	870	186,900	10,142	882,910	49,601	1,076,425	44,358
Oysters					3,328,466	54,837	928,160	21,386	24,100	584
Shrimp					975,067	6,179			320,000	4,120
Crabs					20,500	670			21,350	913
Craw-fish					1,375	58				
Terrapins					6,850	177			2,600	61
Turtles						4,257		5,243		
Alligators										
Total	30,850	582	54,800	1,566	5,053,458	90,628	1,985,585	83,437	2,461,854	90,494

Species.	Plaquemines.		St. Bernard.		St. Charles.		St. John Baptist.		St. Landry.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Buffalo-fish	11,000	\$220	6,000	\$104	23,750	\$480	37,000	\$740	148,273	\$1,583
Cat-fish	123,600	2,472	49,700	1,066	47,500	1,014	57,150	1,482	588,831	13,586
Channel bass or red-fish	4,000	20	44,360	2,290	1,000	75	300	21		
Croakers	7,100	504	36,000	1,152	19,450	1,145	28,670	2,165	7,250	74
Drum, fresh-water			2,400	120						
Drum, salt-water			4,000	240						
Flounders			11,500	480	5,200	198	3,650	138		
Mullet			5,600	338						
Perch			500	60						
Pompano			59,180	3,594	3,860	267	4,300	314		
Sheepshead	2,000	12	3,650	365	100	12				
Spanish mackerel			14,900	904	400	32	1,000	117		
Striped bass			13,700	437	4,780	273	6,250	417		
Sun-fishes	1,100	33	78,240	4,273	10,530	728	12,920	804		
Trout	3,000	15	12,800	660	3,800	208	4,600	296		
Other fish										
Oysters	1,635,880	163,607								
Shrimp	36,000	740	52,000	1,140			9,000	138		
Crabs			132,900	2,140			18,500	640		
Craw-fish			9,600	380	15,000	510	3,200	74		
Turtles			4,620	137						
Total	1,873,680	167,423	541,650	19,860	134,870	4,947	187,040	7,348	744,354	15,243

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Table showing by counties and species the yield of the fisheries of Louisiana in 1897—Cont'd.

Species.	St. Mary.		St. Tammany.		Tangipahoa.		Terrebonne.		Vermillion.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Blue-fish	500	\$20								
Buffalo-fish	4,620	118	2,960	\$59	4,100	\$84	10,000	\$140		
Cat-fish	979,093	24,516	18,280	602	9,910	301			22,400	\$448
Channel bass or red-fish	35,900	1,413	1,870	140			34,910	1,160		
Croakers	3,880	155	20,990	1,069	12,040	715	10,610	364		
Flounders			300	15						
Hog-fish	75	3					50	2		
Mullet	1,050	21	300	12			600	12		
Pompano	65	26								
Sheepshead	8,520	341	2,600	198	1,455	99	14,000	466		
Silver perch							145	18		
Spanish mackerel	75	3					60	5		
Striped bass			920	70						
Sun-fishes	1,800	36	2,760	174	1,790	99	1,250	25	4,800	144
Trout	23,860	948	5,020	355	4,785	326	38,693	1,208		
Other fish			4,250	240	3,200	170				
Oysters	389,585	22,712					2,473,380	141,378		
Shrimp	57,800	1,136					60,200	753		
Crabs			16,533	240	5,333	74				
Terrapins	14,757	2,123					25,548	1,968		
Turtles			3,200	84	1,800	44	125	4		
Alligators		5,816						6,780		
Total	1,521,580	59,387	79,983	3,867	44,413	1,912	2,670,471	154,283	27,200	592

SUMMARY.

Species.	Lbs.	Value.	Species.	Lbs.	Value.
Black bass	320	\$26	Silver perch	3,015	\$128
Blue-fish	3,960	132	Spanish mackerel	55,805	5,132
Buffalo-fish	311,093	4,768	Striped bass	22,880	1,449
Cat-fish	2,153,134	51,420	Sun-fishes	119,780	3,789
Channel bass or red-fish	465,200	20,529	Trout	566,648	26,500
Crevalle	18,000	690	Other fish	66,550	3,583
Croakers	328,775	10,980	Oysters	6,714,330	432,068
Drum, fresh-water	7,250	74	Shrimp	4,486,728	80,576
Drum, salt-water	18,570	540	Crabs	1,458,833	12,891
Flounders	9,625	654	Craw fish	84,950	3,113
Hog-fish	125	5	Terrapins	41,680	4,149
Mullet	165,819	5,871	Turtles	22,395	581
Perch	11,050	509	Alligator		22,096
Pompano	17,665	1,891			
Sheepshead	238,010	12,506	Total	17,401,788	713,587
Shoemaker	9,600	346			

Table showing by counties, apparatus, and species the yield of the vessel fisheries of Louisiana in 1897.

Apparatus and species.	Lafourche.		Orleans.		St. Mary.		Terrebonne.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seine:										
Channel bass or red-fish					6,150	\$246			6,150	\$246
Croakers					180	7			180	7
Mullet					150	3			150	3
Sheepshead					1,120	45			1,120	45
Trout					4,060	162			4,060	162
Shrimp					1,800	86			1,800	86
Total					13,460	499			13,460	499
Torgs:										
Oysters	11,060	\$627	98,875	\$4,331	119,910	6,852	93,030	\$5,316	322,875	17,126
Grand total	11,060	627	98,875	4,331	133,370	7,351	93,030	5,316	336,335	17,625

Table showing by counties, apparatus, and species the yield of the shore fisheries of Louisiana in 1897.

Apparatus and species.	Calcasieu.		Cameron.		Jefferson.		Lafourche.		Orleans.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:										
Black bass.....									320	\$28
Blue-fish.....									3,469	112
Buffalo fish.....					7,400	\$148	28,900	\$578	27,080	514
Cat-fish.....					9,000	240	12,800	384	40,120	1,003
Channel bass or red-fish.....					54,125	2,585	22,030	1,080	266,585	11,736
Crevalle.....									18,000	690
Croakers.....					26,020	1,224	5,400	221	127,415	6,593
Drum, salt-water.....									16,170	420
Flounders.....									5,825	399
Mullet.....					88,360	2,924	38,685	1,567	7,124	218
Pompano.....									17,100	1,805
Sheepshead.....					8,900	491	1,960	126	123,605	6,094
Shoemaker.....									9,600	846
Silver perch.....									2,870	110
Spanish mackerel.....					2,460	246	950	95	44,860	4,014
Striped bass.....					320	21			3,440	207
Sun-fishes.....					1,470	86			43,230	1,213
Trout.....					141,485	6,558	56,590	2,862	162,355	6,544
Other fish.....					11,200	612	7,200	294	9,500	520
Shrimp.....					3,328,466	54,837	928,160	21,386		
Total.....					3,679,206	69,972	1,102,675	28,593	928,169	42,564
Minor apparatus:										
Cat-fish.....					6,200	136			4,200	128
Mullet.....					4,200	139			4,150	137
Trout.....					2,200	132			2,000	145
Sun-fishes.....					1,700	87			600	36
Other fish.....					2,000	114			2,000	100
Shrimp.....									24,100	584
Crabs.....					10,667	167			320,000	4,120
Craw-fish.....					20,500	670			21,850	913
Terrapins.....					1,375	58				
Turtles.....					6,850	177			2,900	61
Alligator hides.....						4,257		5,243		
Total.....					55,692	5,937		5,243	381,000	6,224
Lines:										
Cat-fish.....	30,850	\$582	4,000	\$120	134,400	2,844			15,100	496
Channel bass or red-fish.....									120	9
Croakers.....					3,800	123			27,500	1,150
Mullet.....									1,000	45
Perch.....			2,800	84	2,650	78				
Sheepshead.....					3,100	208			4,130	296
Spanish mackerel.....					800	80			2,850	312
Striped bass.....					400	28			900	70
Sun-fishes.....			28,750	512	4,000	120			1,800	92
Trout.....					14,110	650			10,860	743
Other fish.....					4,000	225			2,000	135
Crabs.....					964,400	6,012				
Total.....	30,850	582	35,550	716	1,181,660	10,577			66,260	3,848
Tongs:										
Oysters.....			10,250	870	186,900	10,142	871,850	48,974	977,550	40,027
Grand total..	30,850	582	54,800	1,586	5,053,458	96,628	1,974,525	82,810	2,352,979	92,163

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Table showing the yield of the shore fisheries of Louisiana in 1897—Continued.

Apparatus and species.	Plaquemines.		St. Bernard.		St. Charles.		St. John Baptist.		St. Landry.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Val.	Lbs.	Value.	Lbs.	Val.
Seinees:										
Buffalo-fish			6,000	\$104	23,750	\$480	37,000	\$740		
Cat-fish			17,000	394	21,000	465	31,000	798		
Channel bass or red-fish			44,360	2,290	1,000	75	300	21		
Croakers			29,500	892	14,050	783	28,570	2,165		
Drum, salt-water			2,400	120						
Flounders			4,000	240						
Mullet			9,000	360	2,000	70	2,000	80		
Porch			5,600	338						
Pompano			500	60						
Sheepshead			53,000	3,220	1,200	84	1,500	90		
Spanish mackerel			2,000	200	100	12				
Striped bass			10,700	644	400	32	1,000	75		
Sun-fishes			12,400	372	2,400	144	4,250	297		
Trout			68,000	3,560	4,160	318	2,180	168		
Other fish			8,000	400	2,000	100	2,000	140		
Shrimp			52,000	1,140						
Total			325,060	14,334	72,060	2,563	109,800	4,574		
Fyke nets:										
Buffalo-fish									148,273	\$1,583
Cat-fish									10,870	254
Drum, fresh-water									7,250	74
Total									166,393	1,911
Minor apparatus:										
Buffalo-fish	11,000	\$220								
Cat-fish	2,000	40	8,100	162	2,500	54	7,400	210		
Channel bass or red-fish	4,000	20								
Croakers	2,000	100								
Mullet			2,500	100	2,000	80	1,650	58		
Striped bass			2,000	100						
Sun-fishes			1,000	50	1,000	50	2,000	120		
Trout					1,500	90	1,200	66		
Other fish			1,800	90	1,000	60	1,400	80		
Shrimp	36,000	740								
Crabs			132,000	2,140			9,000	138		
Craw-fish			9,600	389	15,000	510	18,500	640		
Turtles			4,620	137			3,200	74		
Total	55,000	1,120	162,520	3,150	23,000	844	44,350	1,366		
Lines:										
Cat-fish	121,600	2,432	24,000	510	24,000	495	18,750	474	577,961	13,332
Croakers	5,100	204	6,500	260	5,400	362				
Mullet					1,200	48				
Sheepshead	2,000	12	6,180	374	2,160	183	2,800	224		
Spanish mackerel			1,650	165						
Striped bass			2,200	160			600	42		
Sun-fishes	1,100	33	300	15	1,380	84				
Trout	3,000	15	10,240	713	4,870	320	9,540	570		
Other fish			3,000	170		48	1,200	70		
Total	132,800	2,696	54,070	2,307	39,810	1,540	32,890	1,386	577,961	13,332
Tongs:										
Oysters	1,685,880	163,607								
Grand total	1,873,680	167,423	541,650	19,860	134,870	4,947	187,040	7,346	744,354	15,248

Table showing the yield of the shore fisheries of Louisiana in 1897—Continued.

Apparatus and species.	St. Mary.		St. Tammany.		Tangipahoa.		Terrebonne.		Vermilion.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Val.
Seines:										
Blue-fish	500	\$20								
Buffalo-fish			2,960	\$59	4,100	\$84	10,000	\$140		
Cat-fish			8,120	258	5,290	158				
Channel bass or red-fish	29,750	1,167	1,870	149			34,910	1,160		
Croakers	3,700	148	12,350	984	9,865	585	10,610	364		
Flounders			300	15						
Hog-fish	75	3					50	2		
Mullet	900	18	300	12			600	12		
Pompano	65	26								
Sheepshead	7,400	296	800	62	615	47	14,900	466		
Silver perch							145	18		
Spanish mackerel	75	3					60	5		
Striped bass			920	70						
Sun-fishes	1,800	36	1,610	104	1,370	78	1,250	25		
Trout	19,800	786	960	57	509	25	38,693	1,208		
Other fish			2,000	110	1,600	90				
Shrimp	32,000	640					60,200	753		
Terrapins	143	21					1,068	96		
Turtles							125	4		
Total	96,208	3,164	32,190	1,871	23,310	1,067	172,611	4,253		
Minor apparatus:										
Cat-fish			1,100	32	800	22				
Trout			500	30	300	17				
Sun-fishes			600	37	420	21				
Other fish			750	45	600	30				
Shrimp	24,000	480								
Crabs			16,533	240	5,333	74				
Terrapins	14,614	2,102					24,480	1,872		
Turtles			3,290	84	1,800	44				
Alligator hides		5,816						6,780		
Total	38,614	8,378	22,683	468	9,253	208	24,480	8,652		
Lines:										
Buffalo-fish	4,620	118							22,400	\$448
Cat-fish	970,093	24,516	9,060	312	3,850	121				
Croakers			8,640	685	2,175	130				
Sheepshead			1,800	136	840	52				
Trout			3,500	268	3,985	284				
Sun-fishes			550	33					4,800	144
Other fish			1,500	94	1,000	50				
Total	983,713	24,634	25,110	1,528	11,850	637			27,200	592
Tongs:										
Oysters	269,075	15,800					2,380,350	136,062		
Grand total.	1,388,210	52,036	79,983	3,867	44,413	1,912	2,577,441	148,967	27,200	592

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Table showing the yield of the shore fisheries of Louisiana in 1897—Continued.

SUMMARY.

Apparatus and species.	Lbs.	Value.	Apparatus and species.	Lbs.	Value.
Seines:			Minor apparatus:		
Black bass	320	\$26	Buffalo-fish	11,000	\$220
Blue-fish	3,960	132	Cat-fish	32,300	784
Buffalo-fish	147,200	2,847	Channel bass or red-fish	4,000	20
Cat-fish	144,900	3,700	Croakers	2,000	100
Channel bass or red-fish	454,930	20,254	Mullet	14,500	514
Crevalle	18,000	690	Striped bass	2,000	100
Croakers	267,480	13,959	Sun-fishes	7,320	401
Drum, salt-water	18,570	540	Trout	7,700	480
Flounders	9,625	654	Other fish	9,650	519
Hog-fish	125	5	Shrimp	84,100	1,784
Mullet	148,969	5,261	Crabs	494,433	6,879
Perch	5,600	338	Craw-fish	84,950	3,113
Pompano	17,665	1,891	Terrapins	40,469	4,032
Sheepshead	213,880	10,976	Turtles	22,270	577
Shoemaker	9,600	346	Alligator hides		22,096
Silver perch	8,015	128			
Spanish mackerel	50,505	4,575	Total	816,592	41,619
Striped bass	16,780	1,049			
Sun-fishes	69,780	2,355	Lines:		
Trout	494,723	22,086	Buffalo-fish	4,620	118
Other fish	43,500	2,266	Cat-fish	1,965,064	40,082
Shrimp	4,400,826	78,756	Channel bass or red-fish	120	9
Terrapins	1,211	117	Croakers	59,115	2,914
Turtles	125	4	Mullet	2,200	93
Total	6,541,289	172,955	Perch	5,450	162
			Sheepshead	23,010	1,485
Fyke nets:			Spanish mackerel	5,300	557
Buffalo-fish	148,273	1,583	Striped bass	4,100	300
Cat-fish	10,870	254	Sun-fishes	42,680	1,033
Drum, fresh-water	7,250	74	Trout	60,165	3,772
Total	166,393	1,911	Other fish	18,500	798
			Crabs	964,400	6,012
Tongs:			Total	8,149,724	63,935
Oysters	6,391,455	415,542	Grand total	17,065,453	695,062

Only about one-third of the fishery products of Louisiana enter into the wholesale trade, the remaining two-thirds being sold direct from the boats to the retail merchants and consumers. The wholesale oyster trade is centered at Morgan City and Houma. The trade in oysters at New Orleans is more extensive than at Morgan City and Houma combined, but it is almost exclusively retail and very few are shipped from that city. The trade at Morgan City originated about 1880 and at Houma in 1889. The business at the latter point fell off on account of depleted beds, but was revived in 1896. Nearly all the oysters received are opened and shipped throughout the West. The extent of the business at each point during 1897 was reduced by the quarantine regulations during October and November.

The great bulk of the shrimp caught in Louisiana are sold to the Chinese driers in the Barataria section, to the canners in New Orleans, and to the retail trade in New Orleans, only a small proportion being consumed in the fishing settlements. In the Barataria section there are three Chinese camps devoted to drying shrimp, principally for export to the Orient. This industry was begun in 1873 and although badly affected by the storm of 1893, and by serious competition with a similar business in Mexico, yet it is still in fairly prosperous condition. In 1897 these camps received 1,331,736 pounds of fresh shrimps, costing \$10,304, which yielded 142,510 pounds of dried, worth \$21,185. They

also prepared 61,147 pounds of dried fish, using 142,510 pounds of miscellaneous fresh fish, but most of the fish-drying was done by them at temporary camps on Timbalier Island.

The wholesale cat-fish trade is conducted at Morgan City, Melville, and the village of Plaquemine. The trade originated at Morgan City in 1873 and reached its maximum in 1893. The origin of the trade at Melville followed shortly after the completion of the Texas and Pacific Railroad through that place, and that at Plaquemine dates only from 1897. During the year covered by this report the gross weight of cat-fish received at Morgan City was about 842,575 pounds; at Melville, 367,402 pounds, and at Plaquemine, 70,483 pounds, in addition to which there was a small quantity of other species received at each point.

The following table shows the extent of the wholesale business at each place in 1897:

Table showing the wholesale trade in fishery products for Louisiana in 1897.

Items.	Morgan City.	Houma.	Barataria section.	New Orleans and elsewhere.	Total.
Establishments	4	5	3	8	20
Value	\$11,085	\$9,450	\$20,600	\$71,805	\$112,840
Cash capital	\$10,500	\$9,700	\$5,500	\$34,300	\$60,000
Employees	161	114	24	199	498
Products received:					
Oysters	95,834	84,468			180,302
Value	\$84,039	\$84,468			\$168,507
Shrimp			1,331,736	1,142,360	2,474,096
Value			\$10,304	\$22,847	\$33,151
Cat-fish	842,575			63,212	1,481,887
Value	\$21,064			\$14,384	\$35,448
Buffalo-fish				129,153	129,158
Value				\$1,382	\$1,382
Other fish			142,510		142,510
Value			\$1,833		\$1,833
Products as sold:					
Number of oysters sold opened	28,897,490	33,787,250			62,684,740
Value	\$131,039	\$136,587			\$268,226
Number of cans of oysters prepared	401,160				401,160
Value	\$20,198				\$20,198
Pounds of shrimp dried			141,413		141,418
Value			\$21,185		\$21,185
Number of cans of shrimp prepared				421,264	421,264
Value				\$59,876	\$59,876
Pounds of cat-fish	577,106			437,885	1,014,991
Value	\$32,487			\$24,219	\$56,706
Pounds of buffalo-fish				88,464	88,464
Value				\$2,678	\$2,678
Pounds of other fish dried			61,147		61,147
Value			\$2,956		\$2,956

FISHERIES OF TEXAS.

The fisheries of Texas are confined almost exclusively to the coastal indentations and their estuaries. In the Gulf of Mexico very few fish are caught, the only important fishery prosecuted there being the taking of red snappers. The principal fisheries in the bays are seining and oystering, while associated with these and of less importance are the use of green turtle nets, cast nets, lines, spears, etc. The history and method of the fisheries and the fishery resources of Texas were described in considerable detail in the report of the U. S. Fish Commission for 1891, to which reference should be made.¹

The general condition of the fisheries in 1897 did not compare favorably with that of 1890, there being a decrease at nearly all points except Matagorda Bay and Sabine Lake. The persons employed numbered 1,277 in 1890 as against 1,199 in 1897. The value of vessels, boats, apparatus, shore property, etc., decreased from \$319,122 to \$237,496, the reduction being greatest in the case of shore property and cash capital. The value of the products in 1890 was \$313,832 against \$286,610 in 1897. In 1880 the persons employed numbered 601; the capital invested, \$42,400, and the value of the products, \$128,300. The greatest decrease in products in 1897 is noticed in the case of oysters, but nearly all the fisheries show some falling-off since 1890.

A noticeable exception to this is the yield of red snappers, of which only 4,800 pounds were obtained in 1890, whereas the product in 1897 approximated 464,791 pounds, valued at \$17,451. Prior to 1892 the red-snapper fishery was of little value in Texas, being confined to an occasional trip at odd intervals. Since then an important and profitable fishery has been developed at Galveston, the vessels making weekly trips to the banks south of that port.

The seine fishing is the most valuable and extensive fishery in Texas. The number of seines has increased from 136 in 1890 to 171 in 1897, but the yield shows a falling-off, the catch in 1890 being 3,786,100 pounds, whereas in 1897 it was 3,561,035 pounds; the value being \$157,502 in the former year and \$143,070 in the latter. The decrease in the yield of the seines is greatest in case of sheepshead, the total yield of that species in 1890 being 759,050 pounds, whereas in 1897 it was but 464,024 pounds. Trout, croakers, and several other species show considerable decrease. On the other hand, the yield of blue-fish, flounders, Spanish mackerel, and shrimp has increased.

The oyster industry shows a much greater decrease since 1890 than the seine fishery. The yield in 1890 aggregated 440,800 bushels, valued at \$127,990, whereas in 1897 it was but 355,910 bushels, worth \$94,663 at first hands. This is due to business depression in several of the coastal towns and to the failure of the principal attempts made at oyster

¹ The Coast Fisheries of Texas, by Charles H. Stevenson, Report U. S. Fish Commission for 1889-1891, pp. 373-420.

culture about 1890. The decrease is greatest in Galveston, Aransas, and Corpus Christi bays—the yield in Sabine Lake showing a considerable increase. While some experimental work at oyster culture is now in operation, practically the entire market receipts are from the public reefs. These oysters are shipped raw to the trade throughout the west and southwest and to Mexican points, none of them being steam-canned.

The green-turtle fishery has never been of great consequence on the Texas coast, yet its present extent is very much less than formerly, the decrease since 1890 being about 60 per cent. Most of the green turtle are taken by gill nets or fly nets, the percentage taken in seines being very small. Notwithstanding an increase of 10 per cent in number of nets used in 1897 over 1890, the gill-net yield in the two years decreased from 585,000 to 237,385 pounds. The scarcity of green turtle is generally attributed to the vigorous fishery prosecuted along the Mexican coast. Several green-turtle canneries were formerly operated in Texas, but they have been closed on account of the scarcity of turtles, and the product is now placed on the market fresh.

Cast nets, hand lines, spears, and crab traps constitute the minor apparatus employed, and their yield fluctuates from year to year according to the prosperity of other industries along the coast. If the other industries of the coast towns give steady employment to the laborers, the latter spend but little time in fishing with this class of apparatus.

The general extent of the fisheries of Texas in 1897 is presented in the following series of three tables, showing the number of persons engaged, the quantity and value of boats, apparatus, etc., employed, and the weight and value of the catch:

Table of persons employed.

How engaged.	No.
On vessels fishing.....	175
In shore or boat fisheries.....	965
On shore, in fish-houses, etc.....	59
Total	1,199

Table of apparatus and capital.

Items.	No.	Value.	Items.	No.	Value.
Vessels fishing.....	45	\$30,505	Apparatus—shore fisheries:		
Tonnage	508.81		Seines.....	147	\$15,517
Outfit		15,119	Turtle gill nets.....	204	1,254
Boats	686	77,911	Cast nets.....	158	542
Apparatus—vessel fisheries:			Minor nets.....	60	20
Seines.....	24	2,702	Lines.....		393
Turtle gill nets.....	22	115	Spears.....		52
Lines.....		148	Tongs and rakes.....	285	1,688
Tongs and rakes.....	43	255	Shore and accessory property.....		55,155
			Cash capital.....		30,000
			Total.....		237,400

Table of products.

Species.	Lbs.	Value.	Species.	Lbs.	Value.
Blue-fish	29,540	\$1,281	Pompano.....	17,850	\$812
Buffalo-fish	12,200	470	Red snapper	464,791	17,453
Cat-fish	71,230	3,035	Sheepshead	467,504	21,723
Channel bass or red-fish.....	1,144,378	51,922	Spanish mackerel	40,710	1,939
Crevalle.....	18,000	743	Striped bass	8,959	384
Croakers.....	136,700	6,007	Sturgeon.....	22,400	984
Drum.....	50,400	2,046	Trout.....	1,011,620	45,525
Flounders.....	218,025	9,819	Other fish.....	60,500	2,646
Groupers.....	3,405	84	Shrimp.....	360,530	7,464
Hog-fish.....	15,995	784	Crabs.....	138,120	3,689
Jew-fish.....	33,281	1,083	Turtles.....	237,385	6,860
Mullet, fresh.....	60,350	2,167	Terrapins.....	3,880	507
Mullet, salted.....	500	25	Oysters.....	2,401,370	94,663
Perch.....	32,150	1,506			
Pike.....	22,730	980	Total.....	7,174,550	286,610

¹ Represents 424,360 in number.² Represents 355,910 bushels.

The principal localities where the Texas fisheries are prosecuted are the bays formed between the mainland and the outlying chain of islands and peninsulas, viz, Galveston, Matagorda, Aransas, Corpus Christi, and Laguna Madre; also Sabine Lake, in the extreme eastern part of the State; this, however, is an expansion of the Sabine River rather than a bay. The only important fishery prosecuted outside of these indentations is the red-snapper fishery carried on in the Gulf of Mexico from the port of Galveston.

The most important of these localities from a fishery point of view is Galveston Bay, the value of its fisheries in 1897 approximating \$102,772, whereas in 1890 it amounted to \$160,869, the decrease being greatest in the yield of oysters, the value of which in 1890 was \$72,140 and in 1897 \$36,201. The value of the yield by seines in Galveston Bay decreased from \$79,909 in 1890 to \$60,261 in 1897.

Second in importance to Galveston Bay is Corpus Christi Bay, the value of its fishery yield in 1897 being \$52,370, against \$45,625 in 1890, the increase being in the yield by seines, due to an increase in the number employed. The value of the oyster product of Corpus Christi Bay in 1890 was \$18,350, whereas in 1897 it was \$14,977. A noticeable feature of the fisheries of this bay is the large increase in the yield of shrimp, from 10,000 pounds in 1890 to 224,400 pounds in 1897.

The value of the fisheries of Matagorda Bay are only slightly less than those of Corpus Christi, amounting to \$51,328 in 1897. This is a great improvement over 1890, when the value was but \$33,693. The increase has occurred principally in the seine fishery, the value of which in 1890 amounted to \$3,593 and in 1897 to \$25,358, the number of seines used increasing in the same time from 5 to 29. The oyster yield of Matagorda Bay was 109,350 bushels, worth \$29,200 in 1890, and 95,816 bushels, valued at \$23,768, in 1897. The fishery resources of Matagorda Bay are second to none on the Texas coast, their present minor rank being due to lack of sufficient transportation facilities, although they are now very much better than in 1890. Port Lavaca is the shipping-point for the products of this bay.

The fisheries of Aransas Bay show a considerable falling-off since 1890, when its rank was second among the Texas bays, the value amounting to \$62,822, against \$36,236 in 1897. The decrease is most apparent in the seine fishery, the 29 seines used in 1890 yielding 1,244,100 pounds of fish, worth \$43,562; whereas in 1897 the yield in the 28 seines was but 638,636 pounds, for which the fishermen received \$26,009. The oyster yield of Aransas Bay in 1890 was 26,550 bushels, worth \$6,600, and in 1897 it was increased to 28,700 bushels, valued at \$6,872.

The fisheries of Sabine Lake have developed considerably during recent years, increasing in value from \$4,038 in 1890 to \$12,530 in 1897, due principally to the utilization of the oyster reefs at the lower end of the lake, which yielded 32,164 bushels in 1897 and many more than that in 1898. The fisheries of the lower end of Laguna Madre and of several other points on the coast are of minor importance, due to lack of suitable transportation facilities.

The following tables show in detail the extent of the fisheries of each of the above-mentioned localities, the figures being presented by counties. The counties which border Galveston Bay are Galveston, Harris, and Chambers; the fisheries of Matagorda Bay are prosecuted from Matagorda and Calhoun counties, those of Aransas Bay from Aransas County, Corpus Christi Bay from Nueces County, Laguna Madre from Cameron County, and Sabine Lake from Jefferson County. The Brazoria County fisheries are prosecuted in Brazos River and in West Bay, and the red-snapper fishery of Galveston County in the Gulf of Mexico.

Table showing the number of persons employed in the fisheries of Texas in 1897.

Counties.	On ves- sels fish- ing.	Boat or shore fisher- men.	Shores- men.	Total.
Aransas.....	10	173	7	190
Brazoria.....		22		22
Calhoun.....	36	92	17	145
Cameron.....		27	2	29
Chambers.....		19		19
Galveston.....	61	387	10	467
Harris.....	16	33		49
Jefferson.....		48		48
Matagorda.....	17	22		39
Nueces.....	35	142	14	191
Total.....	175	965	50	1,109

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Table showing by counties the vessels, boats, and apparatus employed in the fisheries of Texas in 1897.

Items.	Aransas.		Brazoria.		Calhoun.		Cameron.		Chambers.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels fishing	3	\$1,900			10	\$5,650				
Tonnage	23.25				81.10					
Outfit		921				3,120				
Boats	98	12,855	22	\$2,504	65	8,834	20	\$1,370	18	\$2,058
Apparatus—vessel fisheries:										
Seines	2	220			9	1,000				
Turtle nets	17	85			5	30				
Tongs and rakes					12	72				
Apparatus—shore fisheries:										
Seines	26	3,028	4	340	18	1,020	7	540	3	348
Turtle nets	48	270			66	330	6	24		
Cast nets	24	82			24	82	10	30		
Lines		30						70		
Spears		10								
Tongs and rakes	22	132	12	72	16	80	6	30	9	54
Shore and accessory property		6,820		50		10,840		570		54
Cash capital		9,000				13,000				
Total		35,353		2,972		44,964		2,634		2,514

Items.	Galveston.		Harris.		Jefferson.		Matagorda.		Nueces.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels fishing	13	\$16,820	5	\$2,850			7	\$4,420	7	\$4,925
Tonnage	252.35		44.07				57.54		50.50	
Outfit		4,894		1,665				1,801		2,712
Boats	304	35,617	25	2,755	52	\$3,596	26	2,002	56	6,320
Apparatus—vessel fisheries:										
Seines	2	260	3	365			1	112	7	805
Lines		148								
Tongs and rakes	10	60	4	24			14	84	3	15
Apparatus—shore fisheries:										
Seines	62	6,470	10	956	4	510	1	100	12	1,305
Turtle nets									84	630
Cast nets	60	220							40	128
Minor nets	60	20								
Lines		173				105				15
Spears		27								15
Tongs and rakes	157	942	4	24	21	126	18	108	20	120
Shore and accessory property		23,986		102		467		100		12,100
Cash capital		2,000								6,000
Total		91,637		8,801		4,801		8,727		35,090

SUMMARY.

Items.	No.	Value.	Items.	No.	Value.
Vessels fishing	45	\$36,565	Apparatus—shore fisheries:		
Tonnage	598.81		Seines	147	\$15,517
Outfit		15,119	Turtle nets	204	1,254
Boats	686	77,911	Cast nets	158	542
Apparatus—vessel fisheries:			Minor nets	60	20
Seines	24	2,702	Lines		303
Turtle nets	22	115	Spears		62
Lines		148	Tongs and rakes	285	1,688
Tongs and rakes	43	255	Shore and accessory property		55,155
			Cash capital		30,000
			Total		237,496

Table showing by counties and species the yield of the fisheries of Texas in 1897.

Species.	Aransas.		Brazoria.		Calhoun.		Cameron.		Chambers.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Blue-fish.....	9,300	\$380	400	\$20	6,400	\$265	2,000	\$70	250	\$14
Cat-fish.....	11,000	495					21,000	1,050		
Channel bass.....	239,616	9,849	14,000	630	228,210	9,574	35,240	1,246	14,860	852
Crevalle.....	3,200	97			2,800	110	1,000	80		
Croakers.....	7,650	304	2,000	80	24,600	948	5,000	150	3,400	170
Drum.....	2,450	75							1,600	80
Flounders.....	55,500	2,236	1,000	45	29,850	1,221	4,600	161	800	48
Hog-fish.....	2,480	100			3,825	163				
Jew-fish.....	13,300	535								
Mullet, fresh.....	23,900	813	800	32	3,050	105	6,000	180		
Mullet, salted.....									500	25
Perch.....	3,500	140	700	30	9,050	369	1,200	86	800	44
Pike.....	1,000	40			1,130	45				
Pompano.....	6,900	308	200	12	5,470	255				
Sheepshead.....	80,500	3,309	7,600	308	79,574	3,332			6,000	342
Spanish mackerel.....	9,600	414			7,500	339	4,000	180	300	24
Striped bass.....	2,250	94			1,300	54	2,000	80		
Sturgeon.....							22,400	984		
Trout.....	200,350	8,192	10,000	490	152,350	6,387	33,800	1,195	9,170	529
Other fish.....	15,000	450	2,000	80						
Shrimp.....	3,710	111	4,000	120	10,200	308	45,200	1,373	1,000	40
Crabs.....	4,800	192					3,000	75		
Turtles.....	25,340	997			47,355	1,894	8,840	265		
Terrapins.....	830	227								
Oysters.....	200,900	6,872	50,820	2,399	268,002	9,311	73,500	2,100	41,020	1,758
Total.....	923,076	36,230	93,620	4,237	880,668	34,680	268,780	9,155	79,700	8,926

Species.	Galveston.		Harris.		Jefferson.		Matagorda.		Nueces.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Blue-fish.....	3,350	\$201	750	\$45			320	\$10	6,770	\$270
Buffalo-fish.....					12,200	\$470				
Cat-fish.....	6,000	240			33,230	1,250				
Channel bass.....	255,630	14,491	73,620	4,252	11,700	654	21,800	894	249,700	9,480
Crevalle.....	6,600	331	1,400	70					3,000	105
Croakers.....	61,800	2,575	15,750	819	1,200	60	2,200	88	23,100	813
Drum.....	22,550	941	5,900	300	1,000	45			16,900	605
Flounders.....	54,125	3,209	7,050	434	200	12	2,650	110	62,250	2,843
Groupers.....	3,463	84								
Hog-fish.....	4,950	207	1,500	90			240	10	3,000	118
Jew-fish.....	19,981	548								
Mullet, fresh.....	15,800	670	1,200	60					9,600	307
Perch.....	9,400	604	2,000	120	400	20	500	22	4,600	161
Pike.....	6,650	264	1,800	97	250	12			11,900	481
Pompano.....	600	48					330	15	4,350	174
Red snapper.....	464,791	17,453								
Sheepshead.....	123,750	7,550	37,300	2,153	4,980	254	8,800	360	109,000	4,115
Spanish mackerel.....	3,600	288	1,000	80	700	56	1,400	65	12,610	513
Striped bass.....	1,000	60	200	12			100	4	2,100	86
Trout.....	216,500	12,522	56,300	3,237	5,300	527	14,200	580	313,650	11,866
Other fish.....	14,000	840	4,500	206	5,000	270			20,000	740
Shrimp.....	65,000	2,590	5,900	214	500	15	620	19	224,400	2,674
Crabs.....	112,000	2,800			12,000	870			6,820	252
Turtles.....	34,800	1,170	4,700	180			210	8	116,140	2,346
Terrapins.....	1,200	120			1,850	160				
Oysters.....	721,420	31,371	71,540	3,072	225,148	8,355	402,710	14,457	436,810	14,977
Total.....	2,228,960	101,327	292,410	15,501	315,658	12,530	450,080	16,048	1,035,760	52,370

SUMMARY.

Species.	Lbs.	Value.	Species.	Lbs.	Value.
Blue-fish.....	29,540	\$1,281	Pompano.....	17,850	\$812
Buffalo-fish.....	12,200	470	Red snapper.....	464,791	17,453
Cat-fish.....	71,230	3,035	Sheepshead.....	467,504	21,723
Channel bass.....	1,144,376	51,922	Spanish mackerel.....	40,710	1,939
Crevalle.....	18,000	743	Striped bass.....	8,950	384
Croakers.....	136,700	6,007	Sturgeon.....	22,400	984
Drum.....	50,400	2,040	Trout.....	1,011,620	45,525
Flounders.....	218,025	9,819	Other fish.....	60,500	2,640
Groupers.....	3,463	84	Shrimp.....	360,530	7,464
Hog-fish.....	16,995	784	Crabs.....	138,120	6,689
Jew-fish.....	83,281	1,083	Turtles.....	237,365	6,860
Mullet, fresh.....	60,350	2,167	Terrapins.....	3,880	507
Mullet, salted.....	500	25	Oysters.....	2,491,370	94,663
Perch.....	32,150	1,508			
Pike.....	22,730	980	Total.....	7,174,550	286,610

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Table showing by counties, apparatus, and species the yield of the vessel fisheries of Texas in 1897.

Apparatus and species.	Aransas.		Calhoun.		Galveston.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:						
Blue-fish.....	1,100	\$46	2,400	\$105	350	\$21
Channel bass or red-fish.	37,509	1,571	96,800	4,068	23,000	1,284
Crevalle.....	200	7	800	30	600	31
Croakers.....	4,650	184	10,600	408	3,200	160
Drum.....	450	15			900	45
Flounders.....	4,500	196	11,950	505	1,800	104
Hog-fish.....	480	22	1,025	75	450	27
Jew-fish.....	300	13				
Mullet.....	2,800	106	550	21		
Perch.....			4,050	169	500	30
Pike.....			130	5	650	34
Pompano.....	900	38	2,470	113		
Sheepshead.....	9,500	399	32,074	1,347	11,000	620
Spanish mackerel.....	1,600	72	3,500	159	400	32
Striped bass.....	1,450	62	300	12		
Trout.....	27,350	1,140	66,600	2,798	19,600	1,100
Other fish.....						
Shrimp.....	150	5	3,200	100	1,000	30
Turtles.....	2,700	108	695	26	2,800	110
Terrapins.....	150	07				
Total.....	95,789	4,057	237,744	9,939	66,250	3,628
Lines:						
Groupers.....					3,463	84
Jew fish.....					18,181	440
Red snappers.....					464,791	17,453
Total.....					486,435	17,977
Turtle nets:						
Turtles.....	8,640	343	8,920	358		
Tongs and rakes:						
Oysters.....			169,162	6,054	129,080	5,229
Grand total.....	104,429	4,400	415,826	10,351	681,765	26,834

Apparatus and species.	Harris.		Matagorda.		Nucoes.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Blue-fish.....	350	\$21	320	\$16	2,570	\$102	7,090	\$311
Channel bass or red-fish.	37,500	2,100	10,800	454	92,700	3,457	298,309	12,932
Crevalle.....	400	20					2,000	88
Croakers.....	5,100	271	1,200	48	6,500	231	31,250	1,305
Drum.....	2,200	115			9,700	353	13,250	528
Flounders.....	2,250	146	1,450	62	5,550	197	27,500	1,210
Hog-fish.....	500	30	240	10			3,285	164
Jew-fish.....							300	13
Mullet.....					1,600	57	4,950	184
Perch.....	800	48	500	22	2,000	09	7,850	388
Pike.....	800	42			5,500	195	7,080	276
Pompano.....			330	15	2,550	102	6,250	268
Sheepshead.....	17,700	991	3,800	160	47,000	1,787	121,074	5,304
Spanish mackerel.....	700	56	400	20	5,310	221	11,910	560
Striped bass.....	200	12	100	4	900	34	2,950	124
Trout.....	27,800	1,557	6,200	260	117,350	4,367	264,900	11,228
Other fish.....	1,600	86					1,500	86
Shrimp.....	3,400	114	620	19			8,370	268
Turtles.....	4,700	180	210	8			11,105	432
Terrapins.....							150	67
Total.....	105,900	5,792	26,170	1,098	299,230	11,172	831,083	35,686
Lines:								
Groupers.....							3,463	84
Jew fish.....							18,181	440
Red snappers.....							464,791	17,453
Total.....							486,435	17,977
Turtle nets:								
Turtles.....							17,500	701
Tongs and rakes:								
Oysters.....	42,140	1,812	234,200	8,477	39,200	1,337	613,872	22,909
Grand total.....	148,040	7,604	200,460	9,575	338,430	12,509	1,948,950	77,278

Table showing by counties, apparatus, and species the yield of the shore fisheries of Texas in 1897.

Apparatus and species.	Aransas.		Brazoria.		Calhoun.		Cameron.		Chambers.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:										
Blue-fish.....	8,200	\$334	400	\$20	4,000	\$160	2,000	\$70	250	\$14
Channel bass.....	196,107	8,038	14,000	630	131,410	5,508	32,640	1,142	14,860	852
Croavalle.....	3,000	00			2,000	80	1,000	30		
Croakers.....	3,000	120	2,000	80	12,000	480	5,000	150	3,400	170
Drum.....	2,000	00							1,000	80
Flounders.....	19,000	760	1,000	45	14,500	580	4,600	101	800	48
Hog-fish.....	2,000	84			2,200	88				
Jew-fish.....	1,000	42								
Mullet, fresh.....	18,500	630	800	32	2,500	84	3,000	90		
Mullet, salted.....									500	25
Perch.....	2,000	80	700	30	5,000	200	1,200	36	800	44
Pike.....	1,000	40			1,000	40				
Pompano.....	6,000	270	200	12	3,000	142				
Sheepshead.....	71,000	2,910	7,600	308	47,500	1,985			0,000	342
Spanish mackerel.....	8,000	342			4,000	180	4,000	160	300	24
Striped bass.....	800	32			1,000	42	2,000	80		
Sturgeon.....							22,400	984		
Trout.....	169,500	6,906	10,000	400	82,750	3,409	30,500	1,068	9,170	529
Other fish.....	15,000	450	2,000	80						
Shrimp.....	2,000	58	4,000	120	4,800	120	41,700	1,251	1,000	40
Turtles.....	14,000	546			1,600	64	2,000	00		
Terrapins.....	080	160								
Total.....	542,847	21,952	42,700	1,847	310,260	13,228	152,040	5,282	38,680	2,168
Turtle nets:										
Turtles.....					36,140	1,446	0,840	205		
Cast nets:										
Croakers.....					2,000	60				
Mullet.....	2,600	77					3,000	90		
Perch.....	1,500	60								
Trout.....	3,500	140			3,000	120	1,800	72		
Shrimp.....	1,500	48			2,200	82	8,500	122		
Total.....	9,100	825			7,200	262	8,300	284		
Lines:										
Cat-fish.....	11,000	495					21,000	1,050		
Channel bass.....	6,000	240					2,000	104		
Jew fish.....	12,000	480								
Trout.....							1,500	55		
Crabs.....	4,800	192					3,000	75		
Total.....	33,800	1,407					28,100	1,284		
Spears:										
Flounders.....	32,000	1,280			3,400	136				
Tongs and rakes:										
Oysters.....	200,900	6,872	50,820	2,390	98,840	3,257	73,500	2,100	41,020	1,758
Grand total.....	818,647	31,836	93,520	4,237	464,840	18,320	268,780	9,155	79,700	8,926

Apparatus and species.	Galveston.		Harris.		Jefferson.		Matagorda.		Nueces.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:										
Blue-fish.....	3,000	\$180	400	\$24					4,200	\$168
Buffalo-fish.....					12,200	\$470				
Cat-fish.....					6,400	288				
Channel bass.....	228,630	12,067	30,120	2,152	9,600	528	11,000	\$440	157,000	6,023
Croavalle.....	6,000	300	1,000	50					3,000	105
Croakers.....	48,600	2,415	10,650	545	1,200	60	1,000	40	16,000	582
Drum.....	21,650	898	3,700	185	1,000	45			7,200	252
Flounders.....	24,825	1,490	4,800	288	200	12	1,200	48	8,700	322
Hog-fish.....	4,500	270	1,000	60					3,000	118
Jew-fish.....										
Mullet, fresh.....	5,800	270	1,200	60					2,000	70
Perch.....	6,500	300	1,200	72	400	20			2,000	92
Pike.....	6,000	330	1,000	55	250	12			6,400	236
Pompano.....	600	48							1,800	72
Sheepshead.....	119,750	6,750	19,600	1,102	4,500	225	5,000	200	62,000	2,328
Spanish mackerel.....	3,200	256	300	24	700	56	1,000	45	7,300	292

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Table showing by counties, apparatus, and species the yield of the shore fisheries of Texas in 1897—Continued.

Apparatus and species.	Galveston.		Harris.		Jefferson.		Matagorda.		Nueces.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines—Continued.										
Striped bass.....	1,000	\$60							1,200	\$40
Trout.....	191,100	11,074	28,500	\$1,680	3,800	\$437	8,000	\$320	100,300	7,499
Other fish.....	10,000	600	3,000	180	1,000	50			20,000	740
Shrimp.....	04,000	2,560	2,500	100	500	15			171,000	1,820
Turtles.....	32,000	1,060								
Terrapins.....	1,200	120			1,850	160				
Total.....	778,355	42,036	114,970	6,637	43,600	2,376	27,200	1,093	670,300	20,765
Turtle nets:										
Turtles.....									116,140	2,346
Cast nets:										
Mullet.....	10,000	400							6,000	180
Perch.....	2,400	144								
Trout.....	3,000	180								
Shrimp.....									53,400	854
Total.....	15,400	724							59,400	1,034
Minor nets:										
Crabs.....	112,000	2,800								
Lines:										
Catfish.....	6,000	240			26,830	964				
Channel bass.....	4,000	240			2,100	126				
Jew-fish.....	1,800	108								
Sheepshead.....	3,000	180			480	29				
Trout.....	2,800	168			1,500	90				
Other fish.....	4,000	240			4,000	220				
Crabs.....					12,000	370			6,320	252
Total.....	21,600	1,176			40,910	1,799			6,320	252
Spears:										
Flounders.....	27,500	1,615							48,000	1,824
Tongs and rakes:										
Oysters.....	692,340	26,142	29,400	1,260	225,148	8,355	108,420	5,980	307,110	13,640
Grand total.....	1,547,195	74,493	144,370	7,897	315,658	12,530	105,620	7,073	1,297,270	39,861

SUMMARY.

Apparatus and species.	Lbs.	Value.	Apparatus and species.	Lbs.	Value.
Seines:			Cast nets:		
Blue-fish.....	22,450	\$970	Croakers.....	2,000	\$60
Buffalo-fish.....	12,200	470	Mullet.....	21,600	747
Cat-fish.....	6,400	285	Perch.....	3,800	204
Channel bass or red-fish.....	831,367	38,280	Trout.....	11,300	512
Crevalle.....	16,000	655	Shrimp.....	60,600	1,106
Croakers.....	103,450	4,642	Total.....	99,400	2,629
Drum.....	37,150	1,518	Turtle nets:		
Flounders.....	79,625	3,754	Turtles.....	150,120	3,997
Hog-fish.....	12,700	620	Minor nets:		
Jew-fish.....	1,000	42	Crabs.....	112,000	2,800
Mullet, fresh.....	33,800	1,230	Lines:		
Mullet, salted.....	500	25	Cat-fish.....	64,830	2,740
Perch.....	20,400	964	Channel bass or red-fish.....	14,700	710
Pike.....	15,650	713	Jew-fish.....	13,800	588
Pompano.....	11,000	544	Sheepshead.....	3,480	209
Sheepshead.....	342,950	16,210	Trout.....	6,800	313
Spanish mackerel.....	28,800	1,379	Other fish.....	8,000	460
Striped bass.....	6,000	260	Crabs.....	26,120	889
Sturgeon.....	22,400	984	Total.....	136,730	5,918
Trout.....	729,620	33,472	Spears:		
Other fish.....	51,000	2,100	Flounders.....	110,900	4,855
Shrimp.....	291,560	6,090	Tongs and rakes:		
Turtles.....	49,600	1,730	Oysters.....	1,877,498	71,754
Terrapins.....	3,730	440	Grand total.....	5,225,600	209,837
Total.....	2,729,952	117,384			

The extent of the wholesale trade in fishery products on the Texas coast is set forth in the following summary. Most of the products of Matagorda, Aransas, and Corpus Christi bays are shipped respectively from Port Lavaca, Rockport, and Corpus Christi to the west and south-west, and the same is true of the red snappers caught off Galveston. But most of the products of other sections of the coast are consumed in the localities where obtained. A noticeable feature of the wholesale fish trade on this coast is the organization effected by the fishermen several years ago of union or cooperative fish markets, the profits of which are shared in by the fishermen. But at present these are not patronized by the fishermen as generally as three or four years ago. There is no drying, pickling, smoking, or canning of fishery products along the Texas coast.

Statement showing the extent of the wholesale trade in fishery products for Texas in 1897.

Items.	Corpus Christi.		Galveston.		Port Lavaca.		Rockport.		Total.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Establishments..	2	\$12,100	1	\$3,300	2	\$10,800	2	\$6,500	7	\$32,700
Cash capital.....		6,000		2,000		13,000		9,000		30,000
Tons of ice used.	200	1,600	120	480	180	1,120	200	1,400	700	4,600
Employees.....	14		4		17		7		42	
<i>Products handled.</i>										
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Blue-fish.....	6,400	\$386			7,100	\$465	9,000	\$560	22,500	\$1,411
Cat-fish.....							11,000	715	11,000	715
Channel bass or red-fish.....	229,324	13,182			232,180	16,074	228,642	13,816	690,146	43,072
Cresvalle.....	3,000	100			2,000	130	2,800	146	7,800	436
Croakers.....	21,854	1,270			21,050	1,287	7,520	457	51,024	3,014
Flounders.....	38,730	2,207			24,120	1,405	47,654	3,071	110,504	6,778
Hog-fish.....	3,000	180			4,340	312	2,400	165	9,740	657
Jew-fish.....							12,000	815	12,000	815
Porch.....	4,200	242			7,634	513	3,200	187	15,034	942
Pike.....	6,850	583					800	48	10,650	631
Pompano.....	4,250	283			5,000	400	4,720	584	15,970	1,267
Mullet.....	8,000	410			2,600	162	22,150	1,276	32,750	1,838
Red snapper.....			464,791	\$23,380					464,791	23,380
Sheepshead.....	103,450	6,454			84,500	5,792	74,500	4,815	262,450	17,061
Spanish mackerel.....	10,540	735			8,120	632	9,000	644	27,690	2,011
Striped bass.....	2,000	120					2,000	140	4,000	260
Trout.....	296,000	16,695			151,545	9,023	188,850	11,698	636,395	37,416
Other fish.....	32,000	1,920	19,143	628			12,400	693	63,543	3,241
Turtles.....	80,620	2,816			44,615	2,685	28,000	1,860	153,235	6,861
Terrapins.....							950	205	950	205
Shrimp.....	204,150	5,634			9,000	300	3,000	140	216,150	6,184
Oysters.....	410,480	22,870			602,084	30,152	217,000	9,765	1,229,564	62,787
Total.....	1,407,848	76,237	483,034	24,008	1,206,488	69,382	889,586	51,390	4,047,856	221,017

¹ 175,652 bushels.