8.—REPORT ON THE FISHERIES OF THE SOUTH ATLANTIC STATES.

INTRODUCTORY NOTE.

The accompanying report on the fisheries and fishery industries of the South Atlantic States is one of a series of special papers, some already published and others in course of preparation, relating to the economic fisheries of each geographical division of the coast States and emanating from the Division of Fisheries of the U. S. Fish Commission.

The article is based on a thorough investigation of the commercial fisheries of the region carried on by the field agents of the office during the years 1890 and 1891. The fisheries of not only the coastal waters of the section are included in the paper, but also those of the rivers emptying into the Atlantic Ocean, most of which were canvassed in their entirety. The scope of the report and the form of presentation make it the most detailed and complete statistical account thus far prepared on the fisheries of the South Atlantic States, and will, it is hoped, render it especially interesting and valuable for reference to those having a practical connection with the fishing industry as well as of general utility to those dealing with economic questions in the several States.

While there are certain branches of the fisheries in which the South Atlantic States take precedence, the industry, as a whole, is less important than in any other coast section. The report shows that in 1890 the number of persons here engaged in the fisheries was 16,001, the amount of capital invested was $1,688,286, and the first value of the products was $1,573,704. The shad is by far the most important single object of capture, after which come oysters, alewives, and mullet. The value of these four items is $1,036,285, a sum twice as large as that accruing from the sale of all the other products combined.

It is known that the fisheries of this region are capable of a much greater development than they have yet attained. The resources of the offshore banks, the littoral waters, and the lower courses of the rivers invite attention. It is probable that the most marked advance in the industry will occur as a result of the utilization of the facilities offered for the cultivation of oysters. In all these States the oyster has already received more or less attention from legislatures, local economists, capitalists, and the general government; and it seems only a question of a few years, under proper encouragement and methods, when the vast resources in the line of oyster production will be demonstrated.

The report has been prepared by Dr. Hugh M. Smith, acting assistant in charge of the Division of Fisheries. In the elaboration of the material he has had the assist-

ance of Mr. W. de C. Ravenel and Mr. S. G. Worth, superintendent of Central Station, Washington, D. C., and late superintendent of fisheries of North Carolina, both of whom have an extended personal knowledge of the fisheries of this region.

The agents participating in the field investigations were Messrs. W. H. Abbott, Ansley Hall, and E. E. Race in North Carolina, and Charles H. Stevenson in North Carolina and South Carolina. The canvass of Georgia and Florida and of parts of North Carolina and South Carolina was made by Mr. W. de C. Ravenel, who was detailed from the Division of Fish-Culture.

MARSHALL MCDONALD,
U. S. Commissioner of Fish and Fisheries.

REPORT ON THE FISHERIES OF THE SOUTH ATLANTIC STATES.

BY HUGH M. SMITH, M. D.

I.—GENERAL REMARKS AND STATISTICS.

INTRODUCTION.

Note on the geography of the region.—The South Atlantic States as here considered are North Carolina, South Carolina, Georgia, and eastern Florida. The area of these States is 201,972 square miles and the population in 1890 was 4,989,302. The population of the counties having commercial fisheries and having a frontage on the coast, bays, or rivers, was 1,366,323. The principal cities and towns of the region on the coastal waters and rivers are Elizabeth City, Edenton, Plymouth, Washington, Newbern, Beaufort, and Wilmington, in North Carolina; Georgetown, Charleston, and Beaufort, in South Carolina; Savannah, Brunswick, Darien, and St. Marys, in Georgia, and Fernandina, Jacksonville, and St. Augustine, in Florida. These are also the most important fishing centers. The coast line following the general trend of the shore is about 950 miles in length, but the large number of islands, sounds, bays, and estuaries give a shore line four or five times longer.

Scope of the report.—The investigation on which this report is based was personally conducted by a part of the divisional force during 1890 and 1891. The statistical and other information relates to the years 1889 and 1890, and affords an excellent basis for comparison with the fisheries as they existed in 1880, when the U. S. Fish Commission instituted a careful inquiry in this region in behalf of the Tenth Census, the reports of which contain detailed chapters on the history, methods, and statistics of the coast and river fisheries of each State.* The present report is primarily intended to be a statistical account of the present condition of the fisheries of this region. The methods employed in the fisheries have undergone too few changes during the past decade to require a special discussion at this time. It will be sufficient to notice under each State the most marked differences as compared with 1880.

The plan of the statistical presentation contemplates a detailed exhibition of the fisheries of each State by counties and river basins. In some cases, where the fishery interests of two adjoining counties are closely commingled, the statistics have also been combined; and in the upper courses of some of the rivers where the fisheries are on a small scale a combination of the figures for several counties has been made.

* The principal papers on the fisheries of this region are the following:

The Coast Fisheries of the South Atlantic States, by R. Edward Earll. <The Fisheries and Fishery Industries of the United States, section II, Geographical Review of the Fisheries for 1880.

The River Fisheries of the South Atlantic States, by Marshall McDonald. <The Fisheries and Fishery Industries of the United States, section V, History and Methods of the Fisheries.

The statistics presented may be regarded as covering all commercial fishing, both professional and semi-professional, prosecuted in the South Atlantic States. In addition to an examination of the general coast fisheries, which were canvassed in their entirety, the investigations were usually carried as far up the rivers as commercial fisheries existed. In nearly all the important rivers flowing into the Atlantic Ocean fisheries of greater or less extent are prosecuted; these are naturally most extensive in the lower courses of the rivers, but even in the headwaters of some of the longest streams, hundreds of miles from their mouths, semi-professional and desultory fishing is carried on. The time and force available for the work precluded a complete personal canvass of every river basin, but in each case the inquiry was carried to the farthest limit that circumstances seemed to require, with the result that the fishing in most of the streams was thoroughly covered, while in a few instances in which the fishing in the upper courses of the river was too scattered, remote, or unimportant to warrant a visit from the agents, careful estimates were obtained.

Illustrations are given of all the important marine, fresh-water, and anadromous food-fishes of this region. The number of species figured is eighty-one. There is much confusion among fishermen and others regarding the identity and relations of many of the fishes as indicated by the common names in use, some of which are exceedingly inappropriate and misleading, and it is largely with a view to aid in the proper identification of the fish that the plates are presented. Under each figure the most appropriate common name or names and the scientific name are given, together with the local designations in the different States so far as they are known. In cases in which a name is assigned to no particular State, it has a more or less general distribution in the South Atlantic region. It is, of course, probable that many vernacular names are not recorded.

FISHERY RESOURCES OF THE SECTION.

The South Atlantic States occupy an intermediate position zoölogically as well as geographically as regards the Middle Atlantic and Gulf States, and in their coastal waters and rivers have fish, crustaceans, reptiles, and mollusks that are common to one or both of the adjoining regions. The resources of these States are great, but are less developed than those of any other section on the Atlantic seaboard.

There is a large variety and abundance of fishes inhabiting the pelagic, littoral, and fluvial waters of this region. Among the marine forms are certain subtropical fishes which occur in greater or less numbers, some of which reach the northern limit of their normal range or of greatest abundance south of Cape Hatteras; among these are the pompanos, mullets, and the grunts, snappers, and other sparoid fishes. Such generally distributed species as the bluefish, Spanish mackerel, menhaden, and squeteague are well represented. Some fish that are most plentiful off the New England and Middle Atlantic States are also found as far south as Florida in sufficient quantities to be objects of fisheries, such as the northern scup, sea bass, tautog, and butter-fish. The fishes that are resident in the brackish and fresh waters of the lowlands represent, in many respects, a fauna that is more or less characteristic of such regions; the predominance of the sunfishes (*Centrarchidæ*) both in species and individuals; the existence in abundance of such ganoid fishes as the dogfish (*Amia*) and gar pikes (*Lepisosteus*); and the occurrence in large numbers and varieties of catfishes (*Siluridæ*) and suckers (*Catostomidæ*), are prominent features of the fish life. The

white perch (*Morone americana*) reaches the southern limit of its abundance in North Carolina, and in Albemarle Sound is an important food-fish. The migratory fishes, as shad, alewives, and striped bass, of which enormous bodies annually visit the region, are taken in large quantities in the lowlands. In the upper courses of most of the rivers, the most important commercial fishes are the suckers and sunfishes, besides the anadromous species mentioned, which often extend their migrations far up the streams.

The reptilian resources of this region comprise a number of valuable animals inhabiting the salt, brackish, and fresh waters. Three marine turtles occur; the most important of these is the green turtle (*Chelonia mydas*), which is valued for its eggs and the oil they yield, as well as for its flesh, which is highly esteemed. The other turtles are the loggerhead turtle (*Thalassochelys caretta*), which has little food value and is chiefly important for its eggs and the oil which is extracted from the flesh and eggs, and the hawkbill or tortoise-shell turtle (*Eretmochelys imbricata*), the shell of which constitutes its greatest value, the flesh and eggs being similar to those of the loggerhead. The snapping turtle (*Chelydra serpentina*) is found throughout the fresh waters of this region, but is not taken in large numbers for market, although it is a favorite article of food for home consumption. Foremost among the animals of this class is the diamond-back terrapin (*Malaclemmys palustris*), which is the most important reptilian product of these States, and is here taken in larger quantities than elsewhere in the United States, with the exception of the Chesapeake Bay region. Other terrapins of some commercial importance are the yellow-bellied terrapin (*Pseudemys scabra*) and the Florida cooter (*Pseudemys concinna*). One of the pond tortoises, locally called the "chicken tortoise" (*Chrysemys reticulata*), also has some economic value. The alligator (*Alligator mississippiensis*) is found in all the South Atlantic States, but is scarce in the more northern parts of the region and is the object of an established industry only in Florida.

During the colder months, large numbers of porpoises congregate south of Cape Hatteras, where they are captured by means of large seines; this fishery is more important in North Carolina than in any other State, and nowhere else is the seine used for taking porpoises. Other cetaceans occur off this coast at times, but they are not now captured by the fishermen of this region.

The only mollusk which has up to this time attained commercial prominence is the oyster (*Ostrea virginica*). This occurs in every State; is, next to the shad, the most important single fishery product of the region, and is doubtless destined, in the near future, to occupy a much more prominent position among the food resources of these States, as a result of the increased attention it is receiving from the general government, State legislatures, economists, and cultivators. The round or hard clam or quahog (*Venus mercenaria*) is found in some abundance in parts of this region and is taken in small quantities in North Carolina, Georgia, and Florida. The only other mollusk which has become an object of fishery is the scallop (*Pecten irradians*), of which limited quantities are secured in North Carolina.

Among crustaceans the shrimp are the most important representatives occurring on the South Atlantic coast. Two species (*Penæus setiferus* and *P. brasiliensis*) are taken in large numbers throughout the region, the small individuals often being denominated shrimp, while the larger examples are called prawn. The shrimps here reach a larger size than on the coast of the New England and Middle States and

are much more abundant than in those sections. The yield is at present much less than the resources would warrant, and is largely limited by the demand. Crabs are abundant in the salt and brackish water of the region, but no very important fishery is prosecuted for them. The common blue crab (*Callinectes hastatus*), which is called "channel crab" at some places in North Carolina and "sea crab" in the other States, abounds along the coast and is the principal species taken for food and bait. The stone crab (*Menippe mercenaria*), the only other species of crab having economic value, is larger, less abundant, and more highly esteemed as food than the blue crab; it is found from North Carolina to Florida.

IMPORTANCE AND CHARACTER OF THE FISHERIES.

Considered in the aggregate, the fisheries of this region are less extensive and important than those of any other section of the United States. The amount of capital invested, the quantity of products taken, and the value of the yield are all less than in the next important fishing region—the Gulf States. In the number of persons engaged in the industry, however, the South Atlantic States take precedence over the Gulf and Pacific States. The explanation of the apparent disproportion between the investment and yield on one hand and the personnel on the other lies in the fact that there is an unusually large semi-professional element in the river fisheries, where the apparatus is of an inexpensive nature and the catch is small.

The most important fisheries of this region are those for shad, oysters, alewives, mullets, black bass, bluefish, striped bass, squeteague, sea bass, and shrimp, the value of each of which is from $25,000 to $482,400, the aggregate value of these ten items being $1,266,903, or about four-fifths of the total yield of the fisheries of the region. The specially prominent species are shad, oyster, alewives, and mullets; of these, it is only in the alewife fishery that this section surpasses all others, but among minor branches the black-bass, porpoise, and sucker fisheries also rank first on the Atlantic seaboard. Of the individual coastal States, North Carolina leads in the value of the alewife, black-bass, and porpoise fisheries, which are among those in which the region as a whole takes precedence.

One of the most prominent features of the fisheries of the South Atlantic States is the comparative unimportance of the vessel fishery. Fewer vessels are employed than in any other coast section, and their use is almost restricted to the oyster fishery; although in North Carolina there is a small fleet engaged in the menhaden fishery, and in this State and in South Carolina and Georgia vessels are sparingly used in the turtle, terrapin, and hand-line fisheries. The abundance of fish in the river and the shore waters has, up to this time, precluded the necessity of resorting to the offshore fishing-grounds where the use of vessels is required.

Numerous forms of apparatus are employed in the South Atlantic fisheries, some of which are used in large quantities and some only sparingly. The principal kinds are set or stake gill nets and drift gill nets, haul seines, sweep seines, purse seines, pound nets, weirs, fyke nets, cast nets, skim nets, dip nets, and lines, employed in the capture of fish; seines in the taking of porpoises, shrimps, terrapins, turtles, and crabs; cast nets for shrimps; lines for crabs, and tongs for oysters, clams, and scallops. Fish wheels and wooden traps were also at one time somewhat extensively employed in the head waters of some of the rivers, but these are now of little commercial importance.

In the ocean and general salt-water fisheries lines are the principal means of capture; the largest quantities of sea bass, whiting, sheepshead, squeteague, channel bass, drum, etc., are thus taken. In the waters of the sounds, bays, and lower courses of the rivers, gill nets and seines are the predominant types in the capture of shad, alewives, black bass, mullet, bluefish, channel bass, and sturgeon; in North Carolina pound nets are also important in taking alewives, shad, and striped bass. In the upper parts of the rivers skim nets, dip nets, and small gill nets are the characteristic apparatus, and the principal fish caught are shad, alewives, and suckers.

A consideration of the forms of apparatus employed in the food-fish fisheries of the South Atlantic States shows that the use of seines and gill nets is so much more extensive than that of any other form, except in North Carolina, that all other apparatus is unimportant by comparison, and that some types which in other regions constitute a very prominent means of capture are entirely absent or only sparingly used in the greater part of the South Atlantic region. The pound net, for instance, is found practically only in one State, and the fyke net is employed only in very small numbers and in isolated localities. The possibility of introducing new forms which will develop the fishing resources, increase the income of the fishermen, and at the same time mitigate their labors, seems worthy of serious attention. Both the pound and fyke nets are adapted to the capture of almost every species of marine, fresh-water, and anadromous fish occurring in the region, and the topography of the shores is extremely favorable to their employment. Their inexpensiveness, as compared with seines, recommends them, and the possibility of employing them in connection with seine, gill-net, and other fisheries without special increase in the working force is an important consideration.

A conspicuous instance of the advantage which may come to a locality through the use of improved means of capture is seen in the Albemarle region of North Carolina, where, within a comparatively few years, the pound net by its introduction and extensive operation in the shad, alewife, striped bass, and other fisheries is displacing the more expensive and less effectual apparatus, and the wonderful resources of the waters of the section are more fully demonstrated and utilized than ever before.

The introduction of modern improved apparatus should not be undertaken without a due consideration of the limitations in its use and without the enaction by legislatures of provisions for the proper protection of the fish sought to be caught. Such forms as the pound net and fyke net can, in most localities, be regarded as legitimate means of capture whose proper use will result in no appreciable diminution in the abundance of the fish caught; but when no restrictions are placed on the number that may be set in a given river, bay, or estuary, the season for their operation, the size of the mesh in leader and bowl, and their position with reference to the interference with the movements of anadromous or other migrating fish on their way to the spawning-grounds, they are capable of doing vast injury, which years of artificial stocking may not effectually overcome. In some of the States to the north a serious decline in the catch of shad and other fish in certain rivers may be directly traced to the reckless setting of pound nets at the mouths of rivers in such numbers or such position that practically the entire body of migrating fish is caught before the process of reproduction supervenes.

STATISTICAL PRESENTATION.

Condensed statistics covering various phases of the fisheries of the South Atlantic States are contained in the following tables. The specification is by States. A series of three tables is first presented, showing the number of persons engaged in the industry, the number and value of the vessels, boats, nets, etc., employed, and the quantity and value of the principal products taken. From Table 1 it will be seen that 16,001 persons found employment in the fisheries of this region in 1890, of whom 12,650 were fishermen and 3,351 were shoresmen. The investment in fishing property, as shown in Table 2, was $1,688,286, of which $159,164 represented vessels, $259,803 boats, $418,609 apparatus, and $850,710 shore, accessory, and cash property. The amount of the catch as given in Table 3 was 67,201,630 pounds, for which the fishermen received $1,573,704. Of this sum $482,403 accrued from the sale of shad, $254,141 from oysters, $166,106 from alewives, $133,635 from mullet, and $537,419 from all other products.

1.—Table showing the number of persons employed in the fisheries of the South Atlantic States in 1890.

States.	Fishermen.	Shoresmen.	Total.
North Carolina	7,478	2,796	10,274
South Carolina	2,577	124	2,701
Georgia	1,421	201	1,622
Florida	1,174	230	1,404
Total	12,650	3,351	16,001

2.—Table showing the number and value of vessels, boats, and apparatus, and the value of the shore property and cash capital employed in the fisheries of the South Atlantic States in 1890.

Items.	North Carolina.		South Carolina.		Georgia.		Florida.		Total.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels	128	$101,029	15	$29,325	23	$26,800	3	$2,010	169	$159,164
Tonnage	1,615.59	.....	240.04	.....	267.74	.....	39.25	.....	2,162.62	.....
Boats	3,862	188,375	1,227	31,804	788	9,766	716	29,858	6,593	259,803
Seines	1,273	99,649	74	4,008	51	2,052	359	7,480	1,757	113,189
Gill nets	90,980	154,582	1,380	13,958	398	7,957	468	27,730	93,226	204,227
Pound nets	950	80,394	.....	.....	5	1,250	5	570	960	82,214
Fyke nets	36	384	.....	.....	11	285	.....	.....	47	669
Pots	1,165	1,755	.....	.....	.....	.....	.....	.....	1,165	1,755
Skim and other minor nets	728	2,798	734	2,464	383	1,017	.....	.....	1,845	6,279
Cast nets	.....	.....	.....	.....	148	740	203	1,028	351	1,768
Lines	.....	57	.....	562	.....	306	.....	630	.....	1,555
Tongs	1,479	4,457	169	1,116	157	898	59	280	1,864	6,751
Minor apparatus	.....	202	.....	.....	.....	.....	.....	.....	.....	202
Shore and accessory property	.....	306,506	.....	27,525	.....	51,560	.....	49,919	.....	435,510
Cash capital	.....	303,800	.....	17,000	.....	71,800	.....	22,600	.....	415,200
Total	.....	1,243,988	.....	127,762	.....	174,431	.....	142,105	.....	1,688,286

3.—Table showing the quantity and value of products taken in the fisheries of the South Atlantic States in 1890.

Species.	North Carolina.		South Carolina.		Georgia.		Florida.		Total.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives	16,481,063	$164,636	28,600	$740	24,000	$580	10,120	$150	16,543,783	$166,106
Black bass	407,530	20,492	2,100	107	.....	.....	181,646	9,832	591,276	30,431
Bluefish	1,345,194	33,603	100,480	3,060	.....	.....	7,310	255	1,452,984	36,918
Bream and perch	609,474	22,769	104,635	5,204	18,400	888	588,190	20,235	1,320,699	49,096
Catfish	53,685	1,246	129,051	4,523	192,232	8,175	96,240	1,265	471,208	15,209
Channel bass and drum	165,815	1,919	273,028	5,326	53,870	2,515	199,290	5,737	692,003	15,497
Menhaden	12,410,400	16,171	.....	.....	.....	.....	.....	.....	12,410,400	16,171
Mullet	3,585,981	97,408	387,875	9,405	52,740	2,381	1,547,027	24,441	5,573,623	133,635
Sea bass	33,075	1,158	826,164	26,283	10,000	600	10,445	355	879,684	28,396
Shad	5,768,413	306,015	563,259	41,187	399,660	30,918	2,654,022	104,283	9,385,354	482,403
Sheepshead	146,345	5,981	39,100	1,256	5,000	300	274,113	8,358	464,558	15,895
Spots and croakers	719,725	18,729	41,670	1,450	13,800	790	24,133	802	799,328	21,771
Squeteague	1,885,677	48,856	103,106	3,604	144,000	7,911	235,284	7,895	2,368,067	68,266
Striped bass	568,341	32,138	11,560	1,084	9,000	720	.....	.....	588,901	33,942
Sturgeon	175,210	4,467	203,962	3,850	80,560	1,497	28,055	560	487,787	10,374
Whiting	35,300	1,231	523,520	20,930	18,374	1,060	14,020	545	591,214	23,766
Miscellaneous fish	1,277,065	45,661	612,495	20,701	141,920	7,720	764,336	11,169	2,795,816	85,251
Oysters	5,650,820	175,567	442,050	23,204	1,570,485	40,520	681,450	14,850	*8,344,805	254,141
Quahogs	226,152	12,090	.....	.....	4,000	300	5,600	350	†235,752	12,740
Scallops	18,000	800	.....	.....	.....	.....	.....	.....	‡18,000	800
Crabs	47,400	1,185	93,260	1,740	47,866	1,060	4,100	185	192,626	4,170
Shrimps	144,200	5,435	371,840	18,592	162,160	6,081	65,825	2,557	744,025	32,665
Terrapins	26,552	4,690	74,948	8,376	43,050	9,107	10,350	1,425	154,900	23,598
Turtles	17,725	1,024	.....	.....	.....	.....	60,100	4,441	77,825	5,465
Porpoises	.....	4,398	.....	.....	.....	.....	.....	.....	(§)	4,398
Total	51,799,142	1,027,669	4,932,703	200,622	2,991,117	123,123	7,461,656	219,690	67,184,618	1,571,104

* 1,192,115 bushels. † 29,469 bushels. ‡ 4,000 bushels. § 1,747 in number.

NOTE.—The following quantities of caviare, prepared from sturgeon roe, were made by the fishermen in 1890: South Carolina, 12,137 pounds, worth $1,980; Georgia, 3,000 pounds, worth $440; Florida, 1,875 pounds, worth $180. These items are to be added to the above in order to show the total results of the fisheries.

Another series of three tables illustrates special features of the fisheries as regards the products.

The importance of the various forms of apparatus employed in the capture of fish and other products is exhibited in the following table. Seines are credited with the largest and most valuable catch, 33,164,442 pounds, worth $517,308, being taken in this way. Gill nets rank next, with 11,575,164 pounds, valued at $450,891. Tongs occupy the third position, taking 8,598,557 pounds (of the edible parts of oysters, clams, etc.), for which $267,681 was received. Lines took 3,903,729 pounds, worth $132,697. With pound nets a much larger yield was made than with lines, viz, 8,410,972 pounds, but the value of the same was only $126,256. The order of importance of the remaining forms of apparatus is skim and cast nets, pots, and fyke nets.

4.—Table showing the quantities and values of products taken in each kind of apparatus employed in the fisheries of the South Atlantic States in 1890.

Apparatus.	North Carolina.		South Carolina.		Georgia.		Florida.		Total.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Seines	30,314,862	$423,736	614,078	$23,075	65,830	$10,120	2,169,672	$60,377	*33,164,442	$517,308
Gill nets	6,354,178	252,249	793,730	42,474	611,662	37,503	3,815,594	118,665	11,575,164	450,891
Pound nets	8,282,562	123,606	.....	.....	41,695	1,285	86,715	1,365	8,410,972	126,256
Fyke nets	24,885	716	.....	.....	20,190	898	.....	.....	45,075	1,614
Skim nets and cast nets	304,148	12,746	514,956	28,273	277,467	13,747	187,487	6,321	†1,284,058	61,087
Pots	153,415	9,222	.....	.....	.....	.....	.....	.....	153,415	9,222
Lines	444,275	14,583	2,541,303	81,225	401,138	18,947	517,013	17,942	‡3,903,729	132,697
Tongs	5,894,972	188,457	442,050	23,204	1,574,485	40,820	687,050	15,200	8,598,557	267,681
Minor apparatus	25,845	2,354	38,723	4,351	1,650	243	.....	.....	66,218	6,948
Total	51,799,142	1,027,669	4,944,840	202,602	2,994,117	123,563	7,463,531	219,870	67,201,630	1,573,704

* Includes shrimps, terrapins, and turtles. † Includes shrimps. ‡ Includes crabs.

It is interesting to observe the different average values of the products taken in the various kinds of apparatus. From the preceding table the following average prices per pound may be deduced:

Average values of products taken in different forms of apparatus.

Means of capture.	Price per pound.
	Cents.
Seines	1.56
Gill nets	3.89
Pound nets	1.50
Fyke nets	3.58
Skim nets and cast nets	4.75
Pots	6.01
Lines	3.39
Tongs	3.11
Minor apparatus	10.49
Total	2.34

In Table 5 the values of the fisheries for the different classes of products are given for each State. The general food-fish fisheries, valued at $1,219,556, greatly outrank the combined yield of all the other fisheries and surpass by nearly $1,000,000 the value of the next prominent branch—the molluscan fisheries. The taking of shrimps and crabs ranks third in importance, followed by the reptilian, menhaden, and mammalian fisheries, the two last named existing in only one State.

5.—Table showing the values of the different fisheries of the South Atlantic States in 1890.

Fisheries.	North Carolina.	South Carolina.	Georgia.	Florida.	Total.
General food-fish	$806,309	$150,690	$66,495	$196,062	$1,219,556
Menhaden	16,171				16,171
Mammalian	4,398				4,398
Reptilian	5,714	8,376	9,107	5,866	29,063
Crustacean	6,620	20,332	7,141	2,742	36,835
Molluscan	188,457	23,204	40,820	15,200	267,681
Total	1,027,669	202,602	123,563	219,870	1,573,704

About five-ninths of the money accruing from the fisheries of this region represent fresh-water products. The fresh-water fisheries of North Carolina and Florida are considerably more important than those prosecuted in salt water. The relative extent of the river and other fresh-water fisheries of the South Atlantic States is probably greater than in any other coast section and constitutes one of the principal features of the industry. From the following table it will be seen that in 1890 the salt-water products had a value of $740,539 and the fresh-water were worth $833,165.

6.—Value of the products of the salt-water and fresh-water fisheries of the South Atlantic States in 1890.

States.	Salt-water fisheries.	Fresh-water fisheries.	Total.
North Carolina	$453,944	$573,725	$1,027,669
South Carolina	137,530	65,072	202,602
Georgia	80,242	43,321	123,563
Florida	68,823	151,047	219,870
Total	740,539	833,165	1,573,704

COMPARISONS BETWEEN 1880 AND 1890.

Data are available for an interesting and important comparison between the present extent of the fisheries of the South Atlantic States and their condition in 1880. The exhibition of the changes which have occurred during this decade, as given in the following tables, constitutes one of the most valuable uses which the statistics subserve.

From Table 7 it will be observed that there has been a marked increase in the number of persons engaged in the industry, the advance being participated in by every State. The number of fishermen increased 5,800, the number of shoresmen was augmented by 2,655, and the total increase in the fishing population was 8,455, or more than 100 per cent. The order of rank of the States as regards their numerical increase was North Carolina, South Carolina, Florida, and Georgia. The ratio of increase was greatest in Florida, after which came South Carolina, North Carolina, and Georgia.

A comparative statement of the vessels, boats, and apparatus used in 1880 and 1890 is given in Table 8. An increase in the invested capital, amounting to $993,126, is seen to have taken place in all the States. The increase is in the number and value of vessels, boats, and almost every form of apparatus, but is especially marked in the items of boats, pound nets, gill nets, and shore property and cash capital. The largest advance is in North Carolina, where the fishery investment was $737,427 more in 1890 than in 1880; the percentage of increase, however, was greatest in Florida.

The value of the fisheries in 1890 exceeded by $317,126 that of 1880. The increase was largest in North Carolina, where it aggregated $181,974, and was smallest in Georgia, where it amounted to only $3,570; while in South Carolina there was a decrease of $9,880. The advance was relatively greatest in Florida, being $141,462, or over 180 per cent. Among fish, every important species, except sturgeon, has an increased value, considering the entire region, although in North Carolina the shad shows a decrease, owing to a reduction in the average price, the quantity taken being much larger than in 1880. The increase in the value of the fish caught was $185,479, of which $102,325 represented shad. The sturgeon fishery declined $45,725. Next to fish, the largest advance has been in mollusks, especially oysters. The increase in oysters in the ten years intervening between the two investigations was $134,141, although the net increase in mollusks was only $126,826, owing to a decline in the clam fishery. The value of the reptiles taken in the fisheries of this region appears to have increased $14,413, although the result of the terrapin fishery in North Carolina in 1890 was $6,160 less than in 1880. A decrease in the catch of crustaceans aggregating $13,990 is to be observed, depending on a falling off in the shrimp fishery of South Carolina. The entire value of the porpoise fishery in 1890 is a gain over 1880, in which year no porpoises were taken. The details of the changes in the fisheries of the several States during the decade are brought out in Table 9.

7.—Comparative statement of the number of persons engaged in the fisheries of the South Atlantic States in 1880 and 1890.

States.	Fishermen.			Shoresmen.			Total.			
	1880.	1890.	Increase.	1880.	1890.	Increase.	1880.	1890.	Increase.	
									Number.	Per cent.
North Carolina	4,729	7,478	2,749	545	2,796	2,251	5,274	10,274	5,000	94.80
South Carolina	964	2,577	1,613	41	124	83	1,005	2,701	1,696	168.76
Georgia	809	1,421	612	90	201	111	899	1,622	723	80.42
Florida	348	1,174	826	20	230	210	368	1,404	1,036	281.52
Total	6,850	12,650	5,800	696	3,351	2,655	7,546	16,001	8,455	112.05

8.—Comparative statement of the vessels, boats, apparatus, and property employed in the fisheries of the South Atlantic States in 1880 and 1890.

States.	Vessels.				Boats.				Seines.			
	Number.		Value.		Number.		Value.		Number.		Value.	
	1880.	1890.	1880.	1890.	1880.	1890.	1880.	1890.	1880.	1890.	1880.	1890.
North Carolina	95	128	$39,000	$83,550	2,714	3,862	$123,175	$188,375	835	1,273	$95,982	$99,649
South Carolina	22	15	15,000	24,800	501	1,227	9,790	31,804	44	74	2,725	4,008
Georgia	1	23	450	21,025	358	788	15,425	9,766	17	51	800	2,052
Florida	.....	3	.....	1,750	315	716	12,950	29,858	16	359	1,060	7,480
Total	118	169	54,450	131,125	3,888	6,593	161,340	259,803	912	1,757	100,567	113,189

States.	Pound nets.				Gill nets.				Value of other apparatus and outfit.		Shore and cash property.	
	Number.		Value.		Number.		Value.					
	1880.	1890.	1880.	1890.	1880.	1890.	1880.	1890.	1880.	1890.	1880.	1890.
North Carolina	117	950	$30,300	$80,394	18,796	90,980	$43,290	$154,582	$55,364	$27,132	$118,950	$610,306
South Carolina	.....	.....	.....	.....	66	1,380	3,415	13,958	19,845	8,667	15,500	44,525
Georgia	.....	5	.....	1,250	251	398	9,120	7,957	8,525	9,021	44,450	123,360
Florida	.....	5	.....	570	172	468	11,915	27,730	5,129	2,198	12,500	72,519
Total	117	960	30,300	82,214	19,285	93,226	67,740	204,227	88,863	47,018	191,400	850,710

States.	Total investment.			
	1880.	1890.	Increase.	
			Amount.	Per cent.
North Carolina	$506,561	$1,243,988	$737,427	145.57
South Carolina	66,275	127,762	61,487	92.78
Georgia	78,770	174,431	95,661	121.44
Florida	43,554	142,105	98,551	226.27
Total	695,160	1,688,286	993,126	142.86

9.—Comparative statement of the values of the principal products of the fisheries of the South Atlantic States in 1880 and 1890.

Products.	North Carolina.			South Carolina.		
	1880.	1890.	Increase or decrease.	1880.	1890.	Increase or decrease.
Fish:						
Alewives	$142,784	$164,636	+$21,852	$9,000	$740	—$8,260
Bluefish	12,000	33,603	+ 21,603	4,000	3,060	— 940
Mullet	80,500	97,408	+ 16,908	7,210	9,405	+ 2,195
Shad	329,569	306,015	— 23,554	12,432	41,187	+28,755
Squeteague	25,550	48,856	+ 23,306	10,300	3,604	— 6,696
Sturgeon	18,094	4,467	— 13,627	15,675	5,830	— 9,845
Others	145,823	167,495	+ 21,672	90,365	86,864	— 3,501
Total	754,320	822,480	+ 68,160	148,982	150,690	+ 1,708
Reptiles:						
Terrapins	10,850	4,690	— 6,160	1,950	8,376	+ 6,426
Turtles*	.....	1,024	+ 1,024	.....	.....	.....
Total	10,850	5,714	— 5,136	1,950	8,376	+ 6,426
Crustaceans:						
Shrimps	4,500	5,435	+ 935	37,500	18,592	—18,908
Crabs	450	1,185	+ 735	750	1,740	+ 990
Total	4,950	6,620	+ 1,670	38,250	20,332	—17,918
Mollusks:						
Oysters	60,000	175,567	+115,567	20,000	23,204	+ 3,204
Clams	15,575	12,090	— 3,485	3,300	.....	— 3,300
Scallops	.....	800	+ 800	.....	.....	.....
Total	75,575	188,457	+112,882	23,300	23,204	— 96
Mammals:						
Porpoises	.....	4,398	+ 4,398	.....	.....	.....
Grand total	845,695	1,027,669	+181,974	212,482	202,602	— 9,880

Products.	Georgia.			Florida.			Total		
	1880.	1890.	Increase or decrease.	1880.	1890.	Increase or decrease.	1880.	1890.	Increase or decrease.
Fish:									
Alewives	$3,750	$580	—$3,170	$200	$150	— $50	$155,734	$166,106	+$10,372
Bluefish	100	.....	— 100	500	255	— 245	16,600	36,918	+ 20,318
Mullet	4,100	2,381	— 1,719	20,787	24,441	+ 3,654	112,597	133,635	+ 21,038
Shad	17,941	30,918	+12,977	20,136	104,283	+ 84,147	380,078	482,403	+102,325
Squeteague	2,280	7,911	+ 5,631	2,225	7,895	+ 5,670	40,355	68,266	+ 27,911
Sturgeon	24,780	1,937	—22,843	150	740	+ 590	58,699	12,974	— 45,725
Others	24,617	22,768	— 1,849	25,380	58,298	+ 32,918	286,185	335,425	+ 49,240
Total	77,568	66,495	—11,073	69,378	196,062	+126,684	1,050,248	1,235,727	+185,479
Reptiles:									
Terrapins	1,650	9,107	+ 7,457	200	1,425	+ 1,225	14,650	23,598	+ 8,948
Turtles*	.....	.....	.....	.....	4,441	+ 4,441	.....	5,465	+ 5,465
Total	1,650	9,107	+ 7,457	200	5,866	+ 5,666	14,650	29,063	+ 14,413
Crustaceans:									
Shrimps	4,000	6,081	+ 2,081	3,500	2,557	— 943	$49,500	$32,665	—$16,835
Crabs	125	1,060	+ 935	.....	185	+ 185	1,325	4,170	+ 2,845
Total	4,125	7,141	+ 3,016	3,500	2,742	— 758	50,825	36,835	— 13,990
Mollusks:									
Oysters	35,000	40,520	+ 5,520	5,000	14,850	+ 9,850	120,000	254,141	+134,141
Clams	1,650	300	— 1,350	330	350	+ 20	20,855	12,740	— 8,115
Scallops	.....	.....	.....	.....	.....	.....	.....	800	+ 800
Total	36,650	40,820	+ 4,170	5,330	15,200	+ 9,870	140,855	267,681	+126,826
Mammals:									
Porpoises	.....	.....	.....	.....	.....	.....	.....	4,398	+ 4,398
Grand total	119,993	123,563	+ 3,570	78,408	219,870	+141,462	1,256,578	1,573,704	+317,126

* Not reported in 1880, although probably taken. The comparison of the reptile catch is therefore unsatisfactory.

II.—FISHERIES OF NORTH CAROLINA.

GEOGRAPHICAL FEATURES OF THE COAST.

The coast of North Carolina, following the outer shores, is only about 300 miles long, but if the sounds, estuaries, and other indentations are considered, the length is nearly 1,500 miles, along the entire extent of which the prosecution of commercial fishing is made possible by the configuration of the shores and the adjoining bottom; the absence of high or rocky shores and the preponderance of low, sandy stretches and shallow water areas permitting the employment of pound nets, seines, and gill nets under the most favorable circumstances.

The characteristic physical features of the coastal regions of North Carolina are (1) the low, narrow, sandy islands and peninsulas which skirt nearly the whole ocean front of the State, between which and the mainland are (2) numerous sounds, some of large size, which are the principal fishing-grounds, while (3) the mainland is very irregular in outline and is intersected by a number of large and small streams, the most important of which are the Pasquotank, Chowan, Roanoke, Alligator, Pamlico, Neuse, and Cape Fear rivers.

The principal cities and towns on the coast, bays, and rivers are Elizabeth City, Hertford, Edenton, Plymouth, Columbia, Manteo, Washington, Newbern, Kinston, Beaufort, Morehead City, and Wilmington, which are also the chief fishing centers of the State.

FISHING-GROUNDS.

The principal fishing-grounds of the State are the sounds and the lower courses of the streams emptying into them. Fishing in the upper courses of the rivers is usually of a non-commercial nature and is unimportant. There is also at certain points along the coast a limited fishery in the ocean for typically salt-water fish. The principal sounds of North Carolina are Currituck, Albemarle, Croatan, Roanoke, Pamlico, Core and Bogue, each of which deserves special notice.

Currituck Sound.—This is the most northern sound in the State. It runs parallel with the coast and extends from the Virginia State line to the eastern end of Albemarle Sound, with which it merges. It is 40 miles in length and from 3 to 4 miles in width. For a body of water of such size the depth is extremely shallow, in no place being more than 9 feet. Except during periods of dry weather the water is fresh, although at one time it communicated freely with the ocean by means of Caffey Inlet, which was closed in the year 1800. Prior to this time the sound contained marine fish, but at present only fresh-water and anadromous fishes are found in it. Black bass (locally called chub) and white perch are very abundant, and at the proper season striped bass and herring enter the sound in considerable numbers. The catch of black bass is probably greater than in any other part of the State, if not the largest in the country. The region is annually visited by enormous numbers of wild fowl, and is one of the most noted hunting resorts on the Atlantic coast. The only settlement of note on the sound is Currituck, situated near its head.

Albemarle Sound and tributaries.—This sound has the distinction of being the largest coastal body of fresh water in the world. Its extreme length from east to west is 60 miles, and its maximum width is 15 miles, the average being 6 or 8 miles; it therefore contains about 450 square miles. The water is normally quite fresh, but during periods of excessively dry weather it becomes salt or brackish, especially at its eastern end, where it drains into Roanoke and Croatan sounds. Of all the North Carolina sounds this is the most important from a fishery standpoint; and it is probable that there are few bodies of water of similar size in the world having more extensive fisheries. The importance is due to the fact that (1) the region is annually visited by enormous bodies of shad, alewives, striped bass, and other desirable economic species, and (2) the natural conditions permit the employment of seines, pound nets, gill nets, and other devices in almost limitless numbers. It is especially remarkable for its level bottom and uniform depth of water, and the absence of strong currents and tides, except those of infrequent occurrence resulting from gales. Eight rivers enter the sound, four on the north, two on the west, and two on the south, in nearly all of which more or less extensive fisheries are carried on. The Chowan and Roanoke rivers, which flow into the western end of the sound, are among the longest and most important in the State, and have large fisheries in the portion adjacent to their mouths. The North, Pasquotank, Little, and Perquimans rivers on the north and the Scuppernong and Alligator rivers on the south are short, wide streams, the most important, as regards fisheries, being the Pasquotank and Alligator.

Roanoke and Croatan sounds.—These lie to the south of the eastern end of Albemarle Sound and extend parallel with the coast; they are separated by Roanoke Island. Roanoke Sound lies to the east of the island, and is 8 miles long and 1½ to 2 miles wide. It is very shallow throughout its length, except in a narrow channel which skirts the shore of the island. Croatan Sound has the same length as Roanoke Sound, but is 2 to 4 miles wide and is much deeper. Most of the drainage from Albemarle Sound passes through it. The combined area of these bodies of water is about 75 miles. Important gill-net and other fisheries are prosecuted in these sounds. The southern extremities contain small deposits of native oysters, and the area probably suitable for oyster culture and planting is about 9,000 acres.

Pamlico Sound and tributaries.—With the exception of Long Island Sound, this is the largest sound on the Atlantic coast of the United States. It is about 75 miles long and from 10 to 30 miles wide, the area being about 1,860 square miles. On the north it communicates with Albemarle Sound through Roanoke and Croatan sounds, and much of the water of Albemarle Sound finds entrance into the ocean through it; on the south it joins Core Sound. The general depth is 15 to 20 feet. The sound is separated from the sea by long, narrow strips of sandy land, called the "Banks," through which the water of the sound finds exit at New, Hatteras, and Ocracoke inlets. The land known as the "Banks" consists chiefly of low, desolate, barren sand hills, with occasional patches of scrubby vegetation. The inhabitants now depend for their livelihood almost entirely on fishing, oystering, and clamming, although in earlier times the region was the home of a class who made their living from the wrecks which were numerous on this coast. Two important rivers, the Pamlico and the Neuse, enter the sound from the west, their mouths being broad estuaries in which considerable fishing is done.

Pamlico Sound contains a great wealth of both fresh-water and salt-water fish. The large bodies of anadromous fish, which occur in the sounds to the north, all pass through Pamlico Sound. The salinity of the water permits the entrance of menhaden, squeteague, spots, mullet, sheepshead, whiting, hogfish, bluefish, etc., in large numbers. Extensive areas are covered with a natural growth of oysters, which have recently attained marked prominence and are now, next to shad, the most valuable fishery product of the State. The possibilities of the waters of the sound and its tributaries for oyster-culture are believed to be very great. Lieut. Francis Winslow found, as the result of careful surveys, that the area of the natural oyster beds was 7,400 acres, and the area of the bottom that is probably suitable for planting is 620,206 acres, while the possible ground available for the purpose is 718,868 acres.

Core and Bogue sounds.—Communicating with Pamlico Sound on the north, and extending first in a southwesterly and then in a westerly direction, is a long and narrow body of water about 50 miles in length and from 1 to 6 miles in width, known as Core and Bogue sounds. Their area is about 165 square miles. These communicate with the ocean through Beaufort, Bear, and Bogue inlets. The water is very shoal, varying from 1 to 10 feet, and not averaging more than 4 or 5. The people living on the shore of these sounds are very generally dependent on the water for a livelihood, and the fisheries carried on are very extensive. The principal species taken are mullet, squeteague, bluefish, spot, hogfish, Spanish mackerel, and whiting. The catch of the two first-named fish in Core Sound is larger than in any other body of water on the Atlantic coast.

About 2,800 acres of bottom in these sounds are covered with native oysters, and, according to Lieut. Winslow, 68,300 acres are probably suitable for oyster-planting.

Other sounds and rivers.—South of Bogue Sound the coast is fringed with five small, shallow sounds, known as Stump, Topsail, Middle, Masonboro, and Myrtle sounds. These have but little bearing on the fisheries at present and are chiefly important because of the possibilities they have for oyster production and cultivation. White Oak and New rivers, the only streams of importance between Beaufort Entrance and the Cape Fear River, also have natural oyster beds. New River is said to contain some of the finest oyster-ground in the world, although the absence of shipping facilities has, until recently, retarded the development of this important resource.

Ocean fishing-grounds.—Fishing in the ocean is prosecuted with gill nets and seines at many places along the coast, but is especially important on the shore between Cape Hatteras and Currituck Sound, where the winter fishery for bluefish has become famous. The other species taken in greatest numbers are trout, spot, mullet, drum, whiting, Spanish mackerel, and sheepshead. In the vicinity of Wilmington, considerable line-fishing is done at times on the blackfish banks located several miles offshore, sea bass, grunts, and pigfish being the species taken. The shore between Cape Hatteras and Bogue Inlet has a number of seine fisheries for porpoises, which congregate in this region in large numbers during the colder months.

IMPORTANCE OF THE FISHERIES.

The fishing industry of North Carolina ranks as one of the most important business enterprises of the State, and in the coastal regions is no doubt of greater value than any other single branch of trade. There are few States having so large a population so entirely dependent on the fisheries for a livelihood, and there are few sections

in which the general facilities for prosecuting the industry are more favorable. The fisheries, therefore, possess a great economic interest to the State and indirectly to the country at large; and a proper knowledge of the extent, condition, and needs of the industry becomes of considerable importance to the citizens of the commonwealth.

In 1880 North Carolina occupied the tenth rank among the coast States, this position being determined by the value of the products. In 1888, owing chiefly to a large decrease in the mullet fishery, the State had fallen to the thirteenth position, being surpassed by Massachusetts, California, New Jersey, Maryland, New York, Virginia, Maine, Connecticut, Oregon, Washington, Rhode Island, and Florida. At the present time, owing to an almost phenomenal development of the oyster industry, the State occupies a place considerably in advance of that held in 1888, and probably ranks after Connecticut in the list before given. There is little reason to doubt that the increased attention recently devoted to oyster production and cultivation will soon give North Carolina higher rank and greater prestige as a fishing State.

GENERAL STATISTICS.

The statistical data herewith presented cover the entire commercial fishery interests of the State, including the river basins. From the three general tables which follow a clear conception may be gained of the condition and extent of the fisheries as they existed in 1889 and 1890.

The prominent features of the first table, showing the number of persons employed in the industry, are (1) the small proportion of vessel fishermen and the large number of shore and boat fishermen, the disparity being greater than in almost any other coast State; and (2) the substantial increase in the number of fishery employés in 1890 as compared with the previous year, the advance being especially marked in the shoresmen, the reasons for which will be brought out elsewhere. The total fishing population, numbering 10,274 in 1890, is much larger than that of any State, except Maryland, Massachusetts, Maine, Virginia, and New Jersey.

The capital invested in the fishing industry was $968,600 in 1889 and $1,243,988 in 1890. This increase was chiefly due to the greater amount of shore property and cash capital employed. In 1890 the value of vessels and their outfits was $101,029; of boats, pile-drivers, and steam flats, $188,375; of apparatus of capture, $344,278; of shore property and working capital, $610,306. The minor factors in the investment are brought out in the second table of the series.

In the third table the quantities and values of each of the important objects of capture are shown for 1889 and 1890. It is seen that in 1889 45,545,643 pounds of fishery products were taken, which yielded the fishermen $950,427, and in the following year 51,799,142 pounds were taken, with a value of $1,027,669. The most important single product of the North Carolina fisheries is the shad, the value of which in 1890 was $306,015; this sum was considerably in excess of the selling price of the next important species, the oyster, which was $175,567. The alewives had a value of $164,636, after which the principal species were mullet, worth $97,408; squeteague, worth $48,856; bluefish, worth $33,603; and striped bass, worth $32,138. The other products are relatively unimportant.

10.—Table of persons employed.

How engaged.	1889.	1890.
In vessel fisheries	233	251
On transporting vessels	110	175
In shore fisheries	6,837	7,052
On shore, in fish-houses, factories, etc	1,475	2,796
Total	8,655	10,274

11.—Table of apparatus and capital.

Designation.	1889.		1890.	
	No.	Value.	No.	Value.
Vessels fishing	47	$27,215	54	$30,550
Tonnage	473.79	.....	530.72	.....
Outfit	.....	11,127	.....	12,129
Vessels transporting	51	23,950	74	53,000
Tonnage	536.16	.....	1,084.87	.....
Outfit	.....	3,575	.....	5,350
Boats	3,747	162,544	3,816	162,005
Steam flats	20	24,000	20	24,000
Pontoons or pile-drivers	24	1,325	26	1,470
Apparatus of capture—vessel fisheries:				
Seines	12	3,775	16	3,975
Lines	.....	2	.....	2
Tongs	94	246	110	284
Apparatus of capture—shore fisheries:				
Seines	1,227	101,282	1,257	95,674
Pound nets	897	75,495	950	80,394
Gill nets	80,455	140,355	90,980	154,582
Fyke nets	33	355	36	384
Skim nets	731	2,788	728	2,798
Lines	.....	43	.....	55
Pots	290	450	1,165	1,755
Tongs, rakes, and forks	1,164	3,538	1,369	4,173
Miscellaneous apparatus	.....	207	.....	202
Shore property and accessories	.....	237,128	.....	306,506
Cash capital	.....	149,200	.....	303,800
Total	.....	968,600	.....	1,243,988

12.—Table of products.

Species.	1889.		1890.		Species.	1889.		1890.	
	Pounds.	Value.	Pounds.	Value.		Pounds.	Value.	Pounds.	Value.
Alewives, fresh	4,528,212	$43,602	5,219,979	$48,865	Spanish mackerel, fresh	64,145	$4,866	82,950	$5,978
Alewives, salted	9,858,588	101,781	11,261,084	115,771	Spanish mackerel, salted	9,150	299	8,550	276
Black bass, fresh	419,170	21,092	406,330	20,420	Spots, fresh	197,760	4,591	227,160	5,289
Black bass, salted	1,000	60	1,200	72	Spots, salted	161,870	4,209	181,100	5,573
Bluefish, fresh	712,611	16,983	1,151,380	29,398	Squeteague, fresh	1,443,465	35,456	1,640,160	39,958
Bluefish, salted	182,500	3,894	193,814	4,205	Squeteague, salted	263,827	8,673	245,517	8,898
Catfish, fresh	55,220	1,248	53,685	1,246	Strawberry bass, fresh	29,725	1,153	28,075	1,106
Channel bass, fresh	141,400	1,427	136,950	1,404	Striped bass, fresh	526,249	30,458	562,841	31,973
Channel bass, salt	130,868	1,279	28,865	515	Striped bass, salted	5,100	153	5,500	165
Croakers, fresh	201,590	4,776	227,345	5,461	Sturgeon, fresh	227,797	5,754	175,210	4,467
Croakers, salted	84,185	2,396	84,120	2,406	Suckers, fresh	58,146	1,745	60,550	1,779
Eels, fresh	55,250	3,476	160,615	9,726	Whiting, fresh	30,800	1,062	35,300	1,231
Flounders, fresh	48,200	872	48,630	894	Other fish, fresh	436,818	11,935	474,452	12,851
Hogfish, fresh	206,899	6,296	251,370	7,830	Other fish, salted	77,680	2,101	87,963	2,362
Hogfish, salted	5,340	145	5,150	141	Refuse fish	17,220	160	18,500	173
Menhaden, fresh	8,753,250	11,518	12,410,400	16,171	Porpoises	(*)	6,097	(*)	4,398
Mullet, fresh	654,463	12,927	974,815	19,178	Shrimps	135,240	5,100	144,200	5,435
Mullet, salted	2,398,017	72,018	2,610,216	78,065	Crabs	50,000	1,250	47,400	1,185
Mullet roe, salted	825	140	950	165	Terrapins	26,750	4,703	26,552	4,690
Perch, fresh	558,417	21,366	583,204	22,098	Turtles	18,350	1,076	17,725	1,024
Perch, salted	24,550	632	26,270	671	Quahogs	†155,472	8,265	†226,152	12,090
Pike, fresh	36,761	1,558	40,510	1,765	Scallops	‡15,750	700	‡18,000	800
Pompano, fresh	8,200	656	9,750	780	Oysters	§7,011,340	194,272	§5,650,820	175,567
Sea bass, fresh	28,900	939	33,075	1,158					
Shad, fresh	5,263,986	276,037	5,675,063	301,942	Total	45,545,643	950,427	51,799,142	1,027,669
Shad, salted	92,400	4,161	93,350	4,073					
Sheepshead, fresh	77,172	3,104	90,665	4,000					
Sheepshead, salted	55,015	1,966	55,680	1,981					

* Number in 1889, 2,283; in 1890, 1,747.
† Weight of edible part; represents 19,434 bushels in 1889 and 28,269 bushels in 1890.
‡ Weight of edible part; represents 3,500 bushels in 1889 and 4,000 bushels in 1890.
§ Weight of edible part; represents 1,001,620 bushels in 1889 and 807,260 bushels in 1890.

THE FISHERIES CONSIDERED BY COUNTIES.

There are seventeen counties in North Carolina having frontage on the ocean or on the sounds tributary thereto, all of which maintain more or less important fisheries. These in their geographical order, beginning at the north, are Currituck, Camden, Pasquotank, Perquimans, Chowan, Bertie, Washington, Tyrrell, Dare, Hyde, Pamlico, Craven, Carteret, Onslow, Pender, New Hanover, and Brunswick. There are also nine additional counties situated at some distances from the coast and abutting on rivers in which commercial fishing is prosecuted. These are Gates and Hertford counties, on the Chowan River; Martin County, on the Roanoke River; Beaufort, Pitt, and Edgecombe counties, on Tar River and its termination, the Pamlico; Lenoir County, on the Neuse River; and Duplin and Sampson counties, on the Cape Fear River.

In the following tables the fisheries in each of these counties are shown in detail. The four tables relate, respectively, to the persons employed, the apparatus, boats, etc., used; the quantity and value of products taken in the shore or boat fisheries, and the results of the vessel fisheries.

In the first table special attention should be directed (1) to the large number of fishery employés in Dare, Carteret, Pamlico, and Craven counties; and (2) to the marked increase in 1890 over 1889 in the number of shoresmen in Pasquotank and Beaufort counties, owing to the establishment of oyster canning and packing houses.

The precedence which Dare County exercises in the number of persons employed is naturally maintained in the matter of capital invested, as shown in the second table. The principal items of this county are boats and gill nets, while in Carteret County, which ranks second in the amount of capital devoted to the industry, the value of the vessels exceeds any other single element of expense; and in Pasquotank County, which ranks third, the chief investment is in shore property and working capital. Chowan County leads in the value of the seines and pound nets, the number of the latter being greater than in all the other counties combined.

The value of the products of the shore fisheries of Dare County in 1890 was over $90,000 more than that of the next important county, viz, Carteret, and over $150,000 more than that of Chowan County, which ranks third. Shad and oysters are the two principal products of Dare County, the former being more valuable than all the other species combined, and both being taken in larger quantities than in any other county. The objects of capture which give prominence to the fisheries of Carteret County are oysters, mullet, and squeteague. In the yield of oysters the county ranks next to Dare County, and in that of the two last named it takes first place. Chowan County is notable for its catch of alewives, in which it is the leading county of the State, while the yield of shad is also large, ranking next to Dare County. Many other interesting details of the fisheries in the different counties are disclosed by the third table.

A prominent feature of the fishing industry in North Carolina is the relatively and actually unimportant nature of the vessel fisheries, a condition which contrasts very strongly with most of the other important fishing States. The vessel fisheries exist only in Craven and Carteret counties, and may be said to be restricted to the taking of oysters and menhaden, although in Carteret County a few bluefish, mullet, Spanish mackerel, and squeteague are sometimes caught. The configuration of the shores and the abundance of fish in the inshore waters have, up to the present time, precluded the necessity for engaging in the offshore vessel fisheries, except for menhaden. When the emergency arises or the occasion requires, the pelagic waters contiguous to the North Carolina coast will no doubt yield satisfactory results.

13.—Table showing by counties the number of persons employed in the fisheries of North Carolina in 1889 and 1890.

Counties.	On vessels fishing.		On vessels transporting.		In shore fisheries.		On shore, in factories, etc.		Total.	
	1889.	1890.	1889.	1890.	1889.	1890.	1889.	1890.	1889.	1890.
Currituck					490	558	20	21	510	579
Camden					36	38			36	38
Pasquotank			21	26	121	124	86	796	228	946
Perquimans					110	102	10	8	120	110
Chowan			18	17	506	488	307	309	831	814
Gates					8	10			8	10
Hertford					34	35			34	35
Bertie					348	234	89	71	437	305
Martin					126	126	16	16	142	142
Washington					136	133	66	67	202	200
Tyrrell					131	128	38	28	169	156
Dare			15	15	1,348	1,440	70	72	1,433	1,527
Hyde					143	156	7		150	156
Beaufort					98	135	13	607	111	742
Pitt					46	46			46	46
Edgecombe					103	113			103	113
Pamlico and Craven	51	51		16	863	917	560	614	1,474	1,598
Lenoir					27	27			27	27
Carteret	182	200	56	96	933	975	128	122	1,299	1,393
Onslow					504	524	55	55	559	579
New Hanover				5	274	286	10	10	284	301
Pender					111	113			111	113
Duplin					68	68			68	68
Sampson					125	126			125	126
Brunswick					148	150			148	150
Total	233	251	110	175	6,837	7,052	1,475	2,796	8,655	10,274

14.—Table showing by counties the apparatus and capital employed in the fisheries of North Carolina in 1889 and 1890.

Designation.	Currituck.				Camden.			
	1889.		1890.		1889.		1890.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Boats	306	$11,860	271	$13,790	36	$4,870	37	$4,910
Apparatus of capture:								
Seines	191	5,520	216	5,595				
Pound nets	9	585	10	645				
Gill nets	7,700	13,550	9,250	15,838	2,038	3,008	2,060	3,040
Pots	145	230	420	640				
Shore property and accessories		1,320		1,515		710		725
Cash capital		2,500		2,500				
Total		35,565		40,523		8,588		8,675

Designation.	Pasquotank.				Perquimans.			
	1889.		1890.		1889.		1890.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels transporting	9	$2,575	10	$5,475				
Tonnage	99.76		166.99					
Outfit		767		960				
Boats	33	2,493	33	2,493	33	$1,761	29	$1,538
Pontoons or pile-drivers					1	50	1	50
Apparatus of capture:								
Seines	5	620	5	620	2	2,000	2	2,000
Pound nets	10	1,700	10	1,725	86	6,850	65	5,200
Gill nets	2,625	3,844	2,650	3,957	1,170	1,641	1,210	1,772
Skim nets	25	63	25	63				
Shore properties and accessories		9,950		41,400		1,728		1,540
Cash capital		20,100		121,100		1,050		850
Total		42,112		177,793		15,080		12,950

14.—*Table showing by counties the apparatus and capital employed in North Carolina fisheries*—Continued.

Designation.	Chowan.				Gates.				Hertford.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels transporting	8	$3,500	8	$3,400	.....	.....	.....	.....	.....	.....	.....	.....
Tonnage	64.51	.....	60.06	.....	.....	.....	.....	.....	.....	.....	.....	.....
Outfit	.....	718	.....	595	.....	.....	.....	.....	.....	.....	.....	.....
Boats	131	5,743	123	5,520	6	$330	7	$405	14	$657	15	$678
Steam flats	8	8,800	8	8,800	.....	.....	.....	.....	.....	.....	.....	.....
Pontoons or pile-drivers	13	750	14	825	.....	.....	.....	.....	.....	.....	.....	.....
Apparatus of capture:												
Seines	9	19,800	8	18,800	.....	.....	.....	.....	5	750	5	775
Pound nets	466	36,305	485	37,768	16	1,800	22	2,100	8	840	9	950
Gill nets	19	275	24	325	85	110	75	95	100	135	110	143
Shore property and accessories	.....	43,377	.....	42,875	.....	320	.....	440	.....	410	.....	426
Cash capital	.....	10,900	.....	10,700	.....	.....	.....	.....	.....	.....	.....	.....
Total	.....	130,168	.....	129,608	.....	2,560	.....	3,040	.....	2,792	.....	2,972

Designation.	Bertie.				Martin.				Washington.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Boats	32	$1,565	25	$1,125	45	$745	45	$735	37	$2,400	36	$2,420
Steam flats	8	8,600	8	8,600	.....	.....	.....	.....	.....	.....	.....	.....
Pontoons or pile-drivers	.....	.....	.....	.....	.....	.....	.....	.....	6	255	6	250
Apparatus of capture:												
Seines	10	19,600	7	12,600	4	2,600	4	2,600	4	3,000	4	3,000
Pound nets	27	1,600	28	1,659	.....	.....	.....	.....	107	8,705	109	8,855
Gill nets	.....	.....	.....	.....	.....	.....	.....	.....	471	771	486	793
Skim nets	.....	.....	.....	.....	30	90	30	90	181	952	193	1,006
Shore property and accessories	.....	19,850	.....	16,345	.....	4,000	.....	4,000	.....	7,550	.....	7,560
Cash capital	.....	8,000	.....	5,000	.....	1,950	.....	1,950	.....	2,000	.....	2,000
Total	.....	59,215	.....	45,329	.....	9,385	.....	9,375	.....	25,633	.....	25,884

Designation.	Tyrrell.				Dare.				Hyde.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels transporting	.....	.....	.....	.....	7	$2,150	7	$2,125	.....	.....	.....	.....
Tonnage	.....	.....	.....	.....	55.37	.....	55.39	.....	.....	.....	.....	.....
Outfit	.....	.....	.....	.....	.....	515	.....	395	.....	.....	.....	.....
Boats	57	$3,440	59	$3,650	1,147	75,780	1,184	72,071	98	$4,130	107	$4,485
Steam flats	.....	.....	.....	.....	4	6,600	4	6,600	.....	.....	.....	.....
Pontoons or pile-drivers	1	120	1	120	3	150	4	225	.....	.....	.....	.....
Apparatus of capture:												
Seines	1	500	1	500	238	13,045	246	13,983	91	2,026	87	1,900
Pound nets	102	8,560	115	9,535	38	4,450	54	6,182	4	600	8	1,200
Gill nets	2,850	4,387	3,230	5,106	48,975	75,298	56,396	85,947	2,214	3,047	2,570	3,955
Fyke nets	.....	.....	.....	.....	15	265	17	289	.....	.....	.....	.....
Pots	.....	.....	.....	.....	120	180	650	975	.....	.....	30	45
Tongs, rakes, and forks	.....	.....	.....	.....	374	1,790	424	2,140	65	390	70	420
Minor apparatus	.....	160	.....	160	.....	.....	.....	.....	.....	.....	.....	.....
Shore property and accessories	.....	1,980	.....	2,200	.....	33,050	.....	34,985	.....	2,780	.....	380
Cash capital	.....	500	.....	500	.....	12,500	.....	9,500	.....	2,000	.....	.....
Total	.....	19,647	.....	21,771	.....	225,773	.....	235,417	.....	14,973	.....	12,385

Designation.	Beaufort.				Pitt.				Edgecombe.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Boats	49	$4,290	65	$5,920	35	$390	34	$399	87	$610	93	$690
Apparatus of capture:												
Seines	16	4,800	21	6,300	2	200	2	200	3	300	4	400
Pound nets	17	2,800	27	3,800	3	300	4	400	4	400	4	375
Gill nets	1,950	2,750	2,900	4,060	.....	.....	.....	.....	.....	.....	.....	.....
Skim nets	.....	.....	.....	.....	30	150	28	140	80	400	85	420
Pots	25	40	65	95	.....	.....	.....	.....	.....	.....	.....	.....
Shore property and accessories	.....	9,430	.....	50,905	.....	110	.....	130	.....	139	.....	160
Cash capital	.....	10,800	.....	67,300	.....	.....	.....	.....	.....	.....	.....	.....
Total	.....	34,910	.....	138,380	.....	1,150	.....	1,269	.....	1,849	.....	2,045

14.—Table showing by counties the apparatus and capital employed in North Carolina fisheries—Continued.

Designation.	Pamlico and Craven.				Lenoir.				Carteret.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels fishing	13	$3,175	13	$3,175	.....	.....	.....	.....	34	$24,040	41	$27,375
Tonnage	103.47	.....	103.47	.....	.....	.....	.....	.....	370.32	.....	427.25	.....
Outfit	.....	2,450	.....	2,450	.....	.....	.....	.....	.....	8,677	.....	9,679
Vessels transporting	.....	.....	5	9,750	.....	.....	.....	.....	27	15,725	42	30,050
Tonnage	.....	.....	185.47	.....	.....	.....	.....	.....	316.52	.....	575.78	.....
Outfit	.....	.....	.....	595	.....	.....	.....	.....	.....	1,575	.....	2,585
Boats	407	9,571	434	9,982	9	$54	9	$54	704	24,177	701	23,977
Apparatus of capture—vessel fisheries:												
Seines	.....	.....	.....	.....	.....	.....	.....	.....	12	3,775	16	3,975
Lines	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	2
Tongs	38	100	38	100	.....	.....	.....	.....	56	146	72	184
Apparatus of capture—shore fisheries:												
Seines	64	6,650	69	6,900	9	450	9	450	427	11,660	416	11,120
Gill nets	4,300	7,800	4,066	6,457	.....	.....	.....	.....	5,148	11,779	5,148	11,779
Skim nets	320	960	300	900	.....	.....	.....	.....	.....	.....	.....	.....
Tongs, rakes, and forks	.....	.....	.....	.....	.....	.....	.....	.....	585	1,036	680	1,173
Shore property and accessories	.....	33,920	.....	35,620	.....	72	.....	72	.....	50,805	.....	49,605
Cash capital	.....	28,000	.....	34,500	.....	.....	.....	.....	.....	43,700	.....	42,700
Total	.....	92,626	.....	110,429	.....	576	.....	576	.....	197,097	.....	214,204

Designation.	Onslow.				New Hanover.				Pender.			
	1889		1890.		1889.		1890.		1889.		1890.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels transporting	.....	.....	.....	.....	.....	.....	2	$2,200	.....	.....	.....	.....
Tonnage	.....	.....	.....	.....	.....	.....	41.18	.....	.....	.....	.....	.....
Outfit	.....	.....	.....	.....	.....	.....	.....	220	.....	.....	.....	.....
Boats	285	$5,355	307	$5,602	65	$1,166	70	1,286	18	$290	18	$290
Apparatus of capture:												
Seines	37	2,760	38	2,775	31	1,350	34	1,490	18	810	18	810
Gill nets	629	7,574	642	7,060	130	3,514	114	3,250	17	555	15	620
Skim nets	.....	.....	.....	.....	20	60	22	66	.....	.....	.....	.....
Lines	.....	3	.....	4	.....	36	.....	47	.....	.....	.....	.....
Tongs, rakes, and forks	140	312	195	430	.....	10	.....	10	.....	.....	.....	.....
Miscellaneous apparatus	.....	.....	.....	.....	.....	47	.....	42	.....	.....	.....	.....
Shore property and accessories	.....	6,070	.....	6,030	.....	8,940	.....	8,940	.....	90	.....	90
Cash capital	.....	2,700	.....	2,700	.....	2,500	.....	2,500	.....	.....	.....	.....
Total	.....	24,774	.....	24,601	.....	17,623	.....	20,051	.....	1,745	.....	1,810

Designation.	Duplin.				Sampson.				Brunswick.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Boats	17	$85	17	$85	81	$404	81	$404	15	$378	16	$396
Apparatus of capture:												
Seines	17	561	17	561	28	615	28	615	15	1,665	16	1,680
Gill nets	.....	.....	.....	.....	25	25	25	25	9	292	9	360
Fyke nets	.....	.....	.....	.....	18	90	19	95	.....	.....	.....	.....
Skim nets	.....	.....	.....	.....	45	113	45	113	.....	.....	.....	.....
Lines	.....	.....	.....	.....	.....	4	.....	4	.....	.....	.....	.....
Shore property and accessories	.....	45	.....	48	.....	32	.....	35	.....	450	.....	480
Total	.....	691	.....	694	.....	1,283	.....	1,201	.....	2,785	.....	2,916

15.—Table showing by counties and species the yield of the shore fisheries of North Carolina in 1889 and 1890.

Species.	Currituck.				Camden.			
	1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives, fresh	6,304	$63	4,832	$48				
Alewives, salted	21,500	242	23,900	245				
Black bass, fresh	347,170	17,252	335,000	16,632				
Bluefish, fresh			132,000	4,100				
Channel bass, salted	8,000	200	8,200	205				
Eels, fresh	42,400	2,544	83,500	5,010				
Flounders, fresh	2,300	92	2,470	98				
Mullet, fresh	5,600	208	6,600	245				
Mullet, salted	24,800	916	27,220	994	3,000	$120	3,150	$126
Perch, fresh	120,525	3,622	125,935	3,785				
Perch, salted	3,050	82	2,820	75				
Pike, fresh	20,161	953	24,660	1,168				
Shad, fresh	190,400	10,880	247,671	14,153	93,100	3,256	137,813	5,120
Sheepshead, salted	900	36	980	39				
Spots, fresh	2,500	100	2,380	95				
Strawberry bass, fresh	26,625	998	24,525	928				
Striped bass, fresh	3,800	320	4,240	350	2,300	276	4,200	462
Sturgeon, fresh	7,800	225	8,000	240				
Miscellaneous fish, salted	3,500	70	3,450	68				
Refuse fish	17,220	160	15,500	173				
Turtles	5,100	306	5,050	303				
Total	859,655	39,269	1,091,933	48,954	98,400	3,652	145,163	5,708

Species.	Pasquotank.				Perquimans.			
	1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives, fresh	57,220	$725	60,223	$751	694,400	$6,831	640,560	$6,269
Alewives, salted	79,540	1,157	85,356	1,249	61,400	682	59,940	660
Black bass, fresh	11,300	578	13,440	680				
Catfish, fresh	19,420	583	21,685	651				
Eels, fresh	7,050	494	7,200	504				
Perch, fresh	35,775	2,022	32,270	1,786	30,700	1,528	29,050	1,447
Pike, fresh	7,100	355	7,350	377				
Shad, fresh	120,677	4,533	132,406	5,248	106,365	4,694	97,125	4,295
Striped bass, fresh	3,490	458	3,174	357	4,749	409	4,000	316
Miscellaneous fish, fresh	675	33	820	41	3,400	126	3,230	112
Turtles	2,250	135	2,175	128				
Total	344,497	11,073	366,099	11,772	901,014	14,270	833,905	13,099

Species.	Chowan.				Gates.				Hertford.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives, fresh	1,824,644	$16,375	2,258,594	$19,132	94,000	$1,175	84,200	$1,053	140,614	$1,731	152,650	$1,853
Alewives, salted	3,841,350	42,831	4,629,284	50,816					170,348	2,157	161,234	2,016
Perch, fresh	45,514	1,566	40,520	1,461	15,200	456	15,770	473	12,616	439	10,350	377
Shad, fresh	400,141	22,384	426,726	23,722	15,050	860	16,660	950	22,240	1,328	28,525	1,630
Shad, salted	16,800	735	13,725	526								
Striped bass, fresh	39,450	2,832	39,450	2,912	13,500	1,080	14,200	1,136	11,296	877	8,140	624
Sturgeon, fresh	28,975	801	26,110	731								
Other fish, fresh	55,292	1,776	59,865	1,892	1,800	54	1,800	54	3,550	96	3,440	98
Total	6,252,166	89,300	7,494,274	101,192	139,550	3,625	132,630	3,666	361,164	6,628	364,339	6,598

15.—Table showing by counties and species the yield of the shore fisheries of North Carolina—Continued.

Species.	Bertie.				Martin.				Washington.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives, fresh	917,200	$8,736	941,000	$9,000	32,000	$312	36,800	$359	76,800	$768	82,000	$830
Alewives, salted	1,684,000	17,115	1,990,560	19,764	388,000	3,977	463,200	4,748	642,000	6,691	726,840	7,516
Mullet, salted									1,500	60	1,700	72
Perch, fresh	17,320	814	17,050	864					33,680	2,010	29,400	1,764
Shad, fresh	546,875	21,850	360,676	17,560	77,700	5,050	85,435	5,582	258,377	12,564	248,867	12,512
Shad, salted	16,800	960	13,125	750	6,300	216	7,000	247				
Striped bass, fresh	24,700	1,487	21,700	1,401	4,500	270	4,320	259	42,410	2,594	41,250	2,476
Sturgeon, fresh	6,152	62	5,715	60	11,450	115	10,060	100	73,720	2,539	68,200	2,336
Other fish, fresh	23,625	739	21,180	667	9,700	375	10,100	390	38,630	1,357	40,280	1,431
Total	3,236,672	51,763	3,371,006	50,066	529,650	10,315	616,915	11,685	1,167,117	28,583	1,238,537	28,937

Species.	Tyrrell.				Dare.				Hyde.			
	1889.		1890.		1889.		1890.		1889		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives, fresh	52,000	$520	64,000	$624	91,200	$935	109,200	$1,119	31,010	$383	42,250	$540
Alewives, salted	1,169,920	11,648	1,210,800	12,188	1,432,400	10,744	1,488,400	11,327	63,630	769	100,590	1,248
Black bass, fresh					38,000	1,900	36,450	1,822				
Black bass, salted					1,000	60	1,200	72				
Bluefish, fresh					290,871	7,913	350,400	9,235	11,280	254	14,200	324
Bluefish, salted					74,600	1,514	70,200	1,458	72,760	1,677	79,300	1,847
Channel bass, fresh					87,900	887	88,050	890	22,500	240	21,800	235
Croakers, fresh					4,375	112	8,900	215	5,780	131	6,230	146
Croakers, salted					8,440	175	7,300	151	21,175	424	21,680	438
Eels, fresh					4,500	360	65,000	3,900			1,715	120
Mullet, fresh					136,825	2,891	149,580	3,135	13,510	203	12,800	192
Mullet, salted	8,500	340	8,800	352	305,800	9,023	286,375	8,514	69,180	1,297	63,800	1,199
Perch, fresh	54,075	1,886	51,780	1,805	32,200	884	36,350	1,059	44,500	1,405	66,465	1,995
Perch, salted					21,500	550	23,450	596				
Shad, fresh	99,680	4,272	114,975	5,188	2,030,760	110,073	2,358,121	131,723	69,475	3,573	97,230	4,970
Shad, salted					52,500	2,250	59,500	2,550				
Sheepshead, fresh					23,215	773	29,275	961	6,080	182	7,400	219
Sheepshead, salted					44,240	1,697	44,400	1,703	9,875	233	10,300	239
Spanish mackerel, fresh					3,245	162	5,950	298	2,500	113	3,000	140
Spanish mackerel, salted					2,650	84	2,950	90	4,500	135	4,000	122
Spots, fresh					10,160	229	14,650	312	4,250	94	5,300	114
Spots, salted					48,580	1,278	47,750	1,333	18,450	378	17,400	366
Squeteague, fresh					96,760	1,844	118,680	2,272	8,400	201	9,000	215
Squeteague, salted					79,460	1,417	79,930	1,525	46,700	1,031	41,340	914
Strawberry bass, fresh	1,000	50	1,120	56	2,100	105	2,430	122				
Striped bass, fresh	110,005	5,169	115,810	5,619	169,450	8,081	210,460	9,830	19,100	955	23,600	1,180
Striped bass, salted					5,100	153	5,500	165				
Other fish, fresh	2,600	78	3,200	96	31,620	847	36,470	925	10,300	246	12,455	295
Other fish, salted					15,980	314	14,400	293	28,200	564	30,880	628
Porpoises						5,200		1,737				993
Terrapins					3,600	425	3,450	405				
Turtles	7,500	460	6,800	408	2,500	175	3,700	185				
Quahogs					40,800	1,840	40,600	1,931	7,200	315	7,000	306
Oysters					3,167,500	71,350	2,057,125	58,775	504,350	8,480	537,950	12,600
Total	1,505,280	24,423	1,577,285	26,336	8,360,831	246,245	7,856,196	260,628	1,094,705	23,283	1,237,685	31,585

Species.	Beaufort.				Pitt.				Edgecombe.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives, fresh	46,280	$595	55,100	$707	7,480	$94	8,400	$102	9,400	$117	11,080	$139
Alewives, salted	304,000	3,768	320,980	3,994								
Eels, fresh	1,300	78	3,200	192								
Perch, fresh	71,125	2,845	83,500	3,340	1,050	42	1,200	48	4,843	180	6,114	228
Shad, fresh	208,663	11,895	227,675	13,010	30,780	1,683	37,576	2,047	84,162	4,327	72,430	3,715
Striped bass, fresh	19,999	1,200	13,617	817								
Other fish, fresh	13,666	425	10,560	318	500	20	1,100	42	2,180	55	2,920	73
Total	665,033	20,806	714,632	22,378	39,810	1,839	48,276	2,239	100,585	4,679	92,544	4,155

15.—Table showing by counties and species the yield of the shore fisheries of North Carolina—Continued.

Species.	Pamlico and Craven.				Lenoir.				Carteret.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives, fresh	443,660	$4,202	665,490	$6,303	4,000	$40	3,600	$36				
Black bass, fresh	22,700	1,362	21,440	1,286								
Bluefish, fresh									343,000	$6,860	579,200	$13,572
Bluefish, salted									34,000	680	43,000	860
Catfish, fresh	27,200	408	25,000	375								
Channel bass, fresh									10,200	80		
Channel bass, salted									104,200	800		
Croakers, fresh									96,365	1,927	109,915	2,198
Croakers, salted									49,500	1,665	49,050	1,656
Flounders, fresh	17,500	175	16,000	160								
Hogfish, fresh									37,450	999	41,400	1,092
Menhaden, fresh									195,000	245	201,000	251
Mullet, fresh									373,412	7,468	669,500	13,390
Mullet, salted									1,112,000	33,220	1,324,100	39,565
Perch, fresh	16,000	480	15,000	450								
Pike, fresh	9,500	250	8,500	220								
Pompano, fresh									5,000	400	6,000	480
Shad, fresh	507,500	29,000	594,348	29,318	24,500	1,400	29,988	1,574	26,500	1,060	23,000	920
Sheepshead, fresh									5,500	385	6,000	420
Spanish mackerel, fresh									55,700	4,456	70,500	5,355
Spanish mackerel, salted									2,000	80	1,600	64
Spots, fresh									107,650	2,153	124,250	2,485
Spots, salted									90,500	2,485	109,950	3,774
Squeteague, fresh	22,000	1,000	20,000	900					934,500	18,670	1,092,500	21,850
Squeteague, salted	14,250	427	14,500	435					7,500	150	6,000	120
Striped bass, fresh	57,500	4,450	54,680	4,234								
Sturgeon, fresh	26,000	260	25,500	255	1,200	12	1,000	10				
Other fish, fresh	56,000	810	58,872	840					21,600	812	37,000	940
Porpoises										897		1,668
Terrapins									18,000	3,328	18,432	3,360
Quahogs									72,272	4,477	108,152	6,720
Scallops									15,750	700	18,000	800
Oysters									2,465,890	76,912	1,986,250	57,575
Total	1,219,810	42,824	1,519,330	44,776	29,700	1,452	34,588	1,620	6,183,489	170,909	6,624,799	179,115

Species.	Duplin.				Sampson.				Brunswick.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Catfish, fresh					8,600	$257	7,000	$220				
Mullet, salted									127,500	$3,576	170,800	$4,614
Mullet roe, salted									825	140	950	165
Perch, fresh	1,800	$73	1,500	$61	15,294	866	15,450	926				
Shad, fresh	14,124	883	12,840	830	23,500	2,166	21,400	1,915	24,129	1,377	26,964	1,350
Suckers, fresh	22,800	513	25,180	566	20,046	888	20,550	879				
Other fish, fresh					1,900	45	2,300	52				
Terrapins									1,250	460	1,170	450
Oysters									12,600	900	12,005	900
Total	38,724	1,469	39,520	1,457	69,340	4,222	66,700	3,992	166,304	6,453	211,889	7,479

15.—Table showing by counties and species the yield of the shore fisheries of North Carolina—Continued.

Species.	Onslow.				New Hanover.				Pender.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Bluefish, fresh	6,800	$136	9,880	$187	45,360	$1,361	44,200	$1,326	15,300	$459	13,500	$454
Bluefish, salted	1,140	23	1,314	40								
Channel bass, fresh	2,000	20	2,800	28	18,800	200	24,300	251				
Channel bass, salted	18,668	279	20,665	310								
Croakers, fresh	18,400	400	22,100	473	62,170	1,771	67,450	1,996	14,500	435	12,750	433
Croakers, salted	5,070	132	6,090	161								
Flounders, fresh	2,000	40	1,930	37	15,900	355	20,730	449	10,500	210	7,500	150
Hogfish, fresh	30,500	675	35,000	758	121,099	4,086	154,970	5,380	17,850	536	20,000	600
Hogfish, salted	5,340	145	5,150	141								
Mullet, fresh	87,215	1,617	80,600	1,470	30,901	435	34,235	496	7,000	105	6,500	100
Mullet, salted	680,384	21,179	651,133	19,870	50,703	1,775	57,470	2,211	14,650	512	15,668	548
Perch, fresh									6,200	248	5,500	229
Pompano, fresh					3,200	256	3,750	300				
Sea bass, fresh					28,900	939	33,075	1,158				
Shad, fresh	25,179	1,431	22,172	1,110	152,869	8,742	149,800	7,500	111,240	6,756	104,640	6,000
Sheepshead, fresh					42,377	1,764	47,990	2,400				
Spanish mackerel, fresh					2,700	135	3,000	150				
Spots, fresh	9,500	190	12,000	240	63,700	1,825	68,580	2,043				
Spots, salted	4,340	68	6,000	100								
Squeteague, fresh	213,525	8,499	212,600	8,721	138,780	4,382	159,880	5,060	21,500	700	19,500	780
Squeteague, salted	115,917	5,648	103,747	5,904								
Sturgeon, fresh					72,500	1,740	30,625	735				
Suckers, fresh									15,300	344	14,820	334
Whiting, fresh					30,800	1,062	35,300	1,231				
Other fish, fresh	93,000	2,480	98,700	2,937	52,630	1,278	58,410	1,413	14,150	283	11,750	235
Other fish, salted	30,000	1,153	39,233	1,373								
Shrimps					135,240	5,100	144,200	5,435				
Crabs					50,000	1,250	47,400	1,185				
Terrapins	1,500	250	1,500	275	2,400	240	2,000	200				
Quahogs	20,000	1,000	24,000	1,200	15,200	633	46,400	1,933				
Oysters	206,500	12,450	339,500	17,600	35,000	2,750	37,009	2,830	7,000	550	7,497	565
Total	1,576,978	57,815	1,696,114	62,935	1,171,229	42,079	1,270,774	45,682	255,190	11,138	239,625	10,428

SUMMARY.

Species.	1889.		1890.		Species.	1889.		1890.	
	Pounds.	Value.	Pounds.	Value.		Pounds.	Value.	Pounds.	Value.
Alewives, fresh	4,528,212	$43,602	5,219,979	$48,865	Spanish mackerel, fresh	64,145	$4,866	82,450	$5,943
Alewives, salted	9,858,588	101,781	11,261,084	115,771	Spanish mackerel, salted	9,150	299	8,550	276
Black bass, fresh	419,170	21,092	406,330	20,420	Spots, fresh	197,760	4,591	227,160	5,289
Black bass, salted	1,000	60	1,200	72	Spots, salted	161,870	4,209	181,100	5,573
Bluefish, fresh	712,611	16,983	1,143,380	29,198	Squeteague, fresh	1,435,465	35,296	1,632,160	39,798
Bluefish, salted	182,500	3,894	193,814	4,205	Squeteague, salted	263,827	8,673	245,517	8,898
Catfish, fresh	55,220	1,248	53,685	1,246	Strawberry bass, fresh	29,725	1,153	28,075	1,106
Channel bass, fresh	141,400	1,427	136,950	1,404	Striped bass, fresh	526,249	30,458	562,841	31,973
Channel bass, salted	130,868	1,279	28,865	515	Striped bass, salted	5,100	153	5,500	165
Croakers, fresh	201,590	4,776	227,345	5,461	Sturgeon, fresh	227,797	5,754	175,210	4,467
Croakers, salted	84,185	2,396	84,120	2,406	Suckers, fresh	58,145	1,745	60,550	1,779
Eels, fresh	55,250	3,476	160,615	9,726	Whiting, fresh	30,800	1,062	35,300	1,231
Flounders, fresh	48,200	872	48,630	894	Miscellaneous fish, fresh	436,818	11,935	474,452	12,851
Hogfish, fresh	206,899	6,296	251,370	7,830	Miscellaneous fish, salted	77,680	2,101	87,963	2,362
Hogfish, salted	5,340	145	5,150	141	Refuse fish	17,220	160	18,500	173
Menhaden, fresh	195,000	245	201,000	251	Porpoises		6,097		4,398
Mullet, fresh	654,463	12,927	959,815	19,028	Shrimps	135,240	5,100	144,200	5,435
Mullet, salted	2,398,017	72,018	2,610,216	78,065	Crabs	50,000	1,250	47,400	1,185
Mullet roe, salted	825	140	950	165	Terrapins	26,750	4,703	26,552	4,690
Perch, fresh	558,417	21,366	583,204	22,098	Turtles	18,350	1,076	17,725	1,024
Perch, salted	24,550	632	26,270	671	Quahogs	155,472	8,265	226,152	12,090
Pike, fresh	36,761	1,558	40,510	1,765	Scallops	15,750	700	18,000	800
Pompano, fresh	8,200	656	9,750	780	Oysters	6,398,840	173,392	4,977,336	150,845
Sea bass, fresh	28,900	939	33,075	1,158	Total	36,366,893	918,114	38,884,758	986,482
Shad, fresh	5,263,986	276,027	5,675,063	301,942					
Shad, salted	92,400	4,161	93,350	4,073					
Sheepshead, fresh	77,172	3,104	90,665	4,000					
Sheepshead, salted	55,015	1,966	55,680	1,981					

16.—Table showing by counties and species the yield of the vessel fisheries of North Carolina in 1889 and 1890.

Species.	Craven.				Carteret.				Total.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Bluefish	.....	.....	.....	.....	.....	.....	8,000	$200	.....	.....	8,000	$200
Menhaden	.....	.....	.....	.....	8,558,250	$11,273	12,209,400	15,920	8,558,250	$11,273	12,209,400	15,920
Mullet	.....	.....	.....	.....	.....	.....	15,000	150	.....	.....	15,000	150
Spanish mackerel	.....	.....	.....	.....	.....	.....	500	35	.....	.....	500	35
Squeteague	.....	.....	.....	.....	8,000	160	8,000	160	8,000	160	8,000	160
Oysters	210,000	$7,500	199,500	$7,125	402,500	13,380	473,984	17,597	612,500	20,880	673,484	24,722
Total	210,000	7,500	199,500	7,125	8,968,750	24,813	12,714,884	34,062	9,178,750	32,313	12,914,384	41,187

The shad is taken in every county and, as is already shown, is the most valuable fishery product of the State. The following table, giving the number of shad caught in each county during the two years covered by this report, may prove instructive. The great importance of the shad fisheries of Dare County is clearly brought out, the catch there being three-sevenths of that of the entire State. The yield in Pamlico and Craven, Chowan, and Bertie counties is also large, amounting to more than 100,000 fish in each.

17.—Table showing the number of shad taken in each county in North Carolina in 1889 and 1890.

Counties.	1889.	1890.	Counties.	1889.	1890.
Currituck	54,400	70,763	Pitt	8,794	10,736
Camden	26,600	39,375	Edgecombe	24,046	20,694
Pasquotank	34,479	37,830	Pamlico and Craven	145,000	148,000
Perquimans	30,390	27,750	Lenoir	7,000	7,497
Chowan	119,126	125,841	Carteret	7,571	5,750
Gates	4,300	4,760	Onslow	7,194	5,543
Hertford	6,354	8,150	New Hanover	43,677	37,700
Bertie	161,050	106,800	Pender	31,783	26,160
Martin	24,000	26,410	Duplin	4,035	3,210
Washington	73,822	71,105	Sampson	6,714	5,350
Tyrrell	28,480	32,850	Brunswick	6,894	6,741
Dare	595,217	690,749			
Hyde	19,850	27,780	Total	1,530,394	1,612,594
Beaufort	59,618	65,050			

THE FISHERIES CONSIDERED WITH REFERENCE TO THE APPARATUS USED.

A knowledge of the relative and actual effectiveness of the different forms of apparatus employed in the fisheries is of great practical advantage to the fishermen, and the following comprehensive table has been prepared with special reference to this fact. It shows, for each county, the quantity and value of each product taken with each kind of fishing device employed in the fisheries, and should be examined in connection with several preceding tables, in which the number and value of each form of apparatus are given.

It is seen that the seine is the form of apparatus that takes the largest quantities of fish and yields the greatest money returns. In 1889, 15,952,688 pounds of fish, valued at $349,269, were caught in this way, and in 1890, 17,984,830 pounds, worth $401,036. The fish secured in largest quantities are alewives, of which 8,177,340 pounds, valued at $82,031, were sold in 1889, and 9,152,799 pounds, worth $92,374, in 1890. The shad, however, is a more valuable fish than the alewives in the seine fisheries, and in 1890 was worth $98,457, although the value in 1889 was somewhat less

than that of the alewives. The other prominent fish taken in seines are bluefish, mullet, squeteague, black bass, and spots, more of which are caught in seines than in any other form of apparatus.

The seine fisheries of the Albemarle section are more important than those of any other part of the State, and it is probable that the number of large shad seines there operated is greater than elsewhere in the United States. The counties bordering on the sound and its tributaries which maintain the most valuable seine fisheries are Chowan and Bertie. In that portion of Dare County bordering on Croatan Sound there are also important seine fisheries. In Pamlico Sound, Beaufort and Craven counties have valuable fisheries of this kind. Carteret County leads all others in the value of its seine fisheries, the sales of fish in 1890 amounting to $86,195; Dare, the next important county, followed with $52,111, after which came Bertie, Chowan, Craven, Currituck, Onslow, and Beaufort counties.

Next to the seine the pound net is the most productive means of capture, although the value of the catch is less than that of the gill nets. In 1889, 7,066,611 pounds of fish, valued at $111,877, were taken, and in 1890, 8,282,562 pounds, worth $123,606. By far the most important fish captured are the alewives, of which 6,073,160 pounds were secured in 1889, and 7,189,424 pounds in 1890. The next fish in point of value are shad, striped bass, and perch.

Few changes in the fisheries of the State during the past decade have been more remarkable than the large increase in the number of pound nets. In 1880 only 117 such nets were set in the State, while in 1890 there were 950. The pound nets are most numerous in the Albemarle region, but are also employed in the other sounds and the rivers emptying into them. This form of net was introduced into Albemarle Sound in 1870, since which time it has exerted a marked influence on the development of the fisheries by supplanting to a greater or less extent the older types of apparatus because of its greater cheapness and efficiency.

Gill nets take somewhat smaller quantities of fish than pound nets, but the catch has a greater value, owing chiefly to the large numbers of shad secured, which have a relatively high valuation. Considerably more than half the shad credited to the State are taken in gill nets, the catch in 1890 being 3,348,577 pounds, valued at $175,388. The yield of mullet and squeteague is also an important item in the gill-net fishery, the value of the former in 1890 being $27,054 and of the latter $16,186. No other species require special mention. Gill nets are most numerous in Dare County, in which the gill-net catch is far more valuable than in all the remaining counties combined, this prominence being due to the enormous quantities of shad taken. Carteret and Onslow counties rank next in importance, the principal part of the catch being marine species.

Of the remaining forms of apparatus used in the capture of fish, lines are the most prominent, although when compared with seines, pound nets, and gill nets they are insignificant. Line fishing on a commercial basis is followed only in Onslow, New Hanover, and Sampson counties, and the quantities of fish taken are small. The aggregate catch in 1890 was 380,375 pounds, having a value of $13,003, the principal species being hogfish and squeteague.

Skim nets are used in greatest numbers on the Roanoke and Tar rivers in the capture of shad and alewives. In 1890 247,148 pounds of fish, worth $10,581, were taken by this means. Eel pots are sparingly employed in four counties—Currituck,

Dare, Hyde, and Beaufort—and their use appears to be increasing, especially in Dare County. Pots took 153,415 pounds of eels in 1890, for which the fishermen received $9,222.

Fyke nets are the only remaining apparatus used commercially in taking fish, and these are only sparingly employed in Dare and Sampson counties, where they catch small quantities of catfish, mullet, perch, suckers, sheepshead, striped bass, and squeteague. The total yield in 1890 was 24,885 pounds, valued at $716.

In the vessel fisheries, the yield of which has been given in a previous table, the variety of products taken and of apparatus used is too limited to require elaboration in a special table. The oysters were obtained with tongs, the menhaden with purse seines, the mullet and Spanish mackerel with haul seines, and the bluefish and squeteague with lines.

18.—Table showing by counties, apparatus, and species the yield of the shore fisheries of North Carolina in 1889 and 1890.

Apparatus and species.	Currituck.				Camden.			
	1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Seines:								
Alewives, fresh	6,304	$63	4,832	$48	.....	.....	.....	.....
Black bass, fresh	336,520	16,826	323,200	16,160	.....	.....	.....	.....
Bluefish, fresh	.....	.....	132,000	4,100	.....	.....	.....	.....
Flounders, fresh	2,300	92	2,470	98	.....	.....	.....	.....
Mullet, fresh	4,000	160	4,700	188	.....	.....	.....	.....
Mullet, salted	1,600	64	1,720	69	.....	.....	.....	.....
Perch, fresh	120,150	3,605	125,475	3,764	.....	.....	.....	.....
Perch, salted	1,050	42	920	37	.....	.....	.....	.....
Pike, fresh	19,261	913	23,560	1,119	.....	.....	.....	.....
Spots, fresh	2,500	100	2,380	95	.....	.....	.....	.....
Strawberry bass, fresh	26,175	978	24,000	904	.....	.....	.....	.....
Refuse fish	17,220	160	18,500	173	.....	.....	.....	.....
Total	537,080	23,003	663,757	26,755	.....	.....	.....	.....
Pound nets:								
Alewives, salted	21,500	242	23,900	245	.....	.....	.....	.....
Black bass, fresh	10,650	426	11,800	472	.....	.....	.....	.....
Perch, fresh	375	17	460	21	.....	.....	.....	.....
Pike, fresh	900	40	1,100	49	.....	.....	.....	.....
Strawberry bass, fresh	450	20	525	24	.....	.....	.....	.....
Total	33,875	745	37,785	811	.....	.....	.....	.....
Gill nets:								
Channel bass, salted	8,000	200	8,200	205	.....	.....	.....	.....
Mullet, fresh	1,600	48	1,900	57	.....	.....	.....	.....
Mullet, salted	23,200	852	25,500	925	3,000	$120	3,150	$126
Perch, salted	2,000	40	1,900	38	.....	.....	.....	.....
Shad, fresh	190,400	10,880	247,671	14,153	93,100	3,256	137,813	5,120
Sheepshead, salted	900	36	980	39	.....	.....	.....	.....
Striped bass, fresh	3,800	320	4,240	350	2,300	276	4,200	462
Sturgeon, fresh	7,800	225	8,000	240	.....	.....	.....	.....
Miscellaneous fish, salted	3,500	70	3,450	68	.....	.....	.....	.....
Total	241,200	12,671	301,841	16,075	98,400	3,652	145,163	5,708
Pots:								
Eels	42,400	2,544	83,500	5,010	.....	.....	.....	.....
Miscellaneous:								
Turtles	5,100	306	5,050	303	.....	.....	.....	.....
Grand total	859,655	39,269	1,091,933	48,954	98,400	3,652	145,163	5,708

18.—Table showing by counties, apparatus, etc., the yield of the shore fisheries of North Carolina—Continued.

Apparatus and species.	Pasquotank.				Perquimans.			
	1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Seines:								
Alewives, fresh	14,560	$192	20,143	$250	370,800	$3,695	364,560	$3,661
Alewives, salted	17,440	262	26,856	397	41,200	505	40,640	491
Black bass, fresh	11,300	578	13,440	680	.....	.....	.....	.....
Catfish, fresh	12,000	360	14,000	420	.....	.....	.....	.....
Perch, fresh	28,375	1,430	26,700	1,341	700	28	550	22
Pike, fresh	7,100	355	7,350	377	.....	.....	.....	.....
Shad, fresh	2,800	150	3,063	168	45,500	1,950	42,210	1,809
Striped bass, fresh	900	110	1,100	121	1,000	80	800	62
Other fish, fresh	.....	.....	.....	.....	2,400	96	2,510	90
Total	94,475	3,437	112,652	3,754	461,600	6,354	451,270	6,135
Pound nets:								
Alewives, fresh	42,660	533	40,080	501	323,600	3,136	276,000	2,608
Alewives, salted	22,000	285	16,800	217	.....	.....	.....	.....
Catfish, fresh	7,420	223	7,685	231	.....	.....	.....	.....
Eels, fresh	7,050	494	7,200	504	.....	.....	.....	.....
Perch, fresh	7,400	592	5,570	445	30,000	1,500	28,500	1,425
Shad, fresh	5,331	300	5,198	292	25,900	1,375	18,620	1,034
Striped bass, fresh	1,790	268	834	116	2,700	270	1,835	180
Other fish, fresh	675	33	820	41	1,000	30	720	22
Total	94,326	2,728	84,187	2,347	383,200	6,311	325,675	5,269
Gill nets:								
Alewives, salted	13,600	212	14,300	225	20,200	177	19,300	169
Shad, fresh	112,546	4,083	124,145	4,788	34,965	1,369	36,295	1,452
Striped bass, fresh	800	80	1,240	120	1,049	59	1,365	74
Total	126,946	4,375	139,685	5,133	56,214	1,605	56,960	1,695
Skim nets:								
Alewives, salted	26,500	398	27,400	410	.....	.....	.....	.....
Miscellaneous:								
Turtles	2,250	135	2,175	128	.....	.....	.....	.....
Grand total	344,497	11,073	366,099	11,772	901,014	14,270	833,905	13,099

Apparatus and species.	Chowan.				Gates.				Hertford.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Seines:												
Alewives, fresh	315,556	$3,549	354,666	$3,901	.....	.....	.....	.....	113,632	$1,394	120,926	$1,506
Alewives, salted	1,577,780	17,934	1,773,332	20,836	.....	.....	.....	.....	170,848	2,157	161,234	2,016
Perch, fresh	8,700	261	7,820	235	.....	.....	.....	.....	6,500	195	3,300	100
Shad, fresh	220,129	11,949	231,665	12,576	.....	.....	.....	.....	8,400	480	11,900	680
Shad, salted	10,500	525	6,900	276	.....	.....	.....	.....	.....	.....	.....	.....
Striped bass, fresh	13,950	792	12,200	732	.....	.....	.....	.....	5,100	408	2,500	200
Sturgeon, fresh	11,450	76	9,310	67	.....	.....	.....	.....	.....	.....	.....	.....
Other fish, fresh	26,400	792	28,150	845	.....	.....	.....	.....	1,450	34	1,200	30
Total	2,184,465	35,878	2,424,043	39,468	.....	.....	.....	.....	305,930	4,668	301,060	4,532
Pound nets:												
Alewives, fresh	1,509,088	12,826	1,903,928	15,231	94,000	$1,175	84,200	$1,053	26,982	337	31,724	347
Alewives, salted	2,263,570	24,897	2,855,952	29,980	.....	.....	.....	.....	.....	.....	.....	.....
Perch, fresh	36,814	1,305	32,700	1,226	12,500	375	9,270	278	3,016	151	3,250	162
Shad, fresh	173,082	10,079	187,635	10,722	9,100	520	8,050	460	8,940	568	11,025	630
Shad, salted	6,300	210	6,825	250	.....	.....	.....	.....	.....	.....	.....	.....
Striped bass, fresh	25,500	2,040	27,250	2,180	11,300	904	9,400	752	2,696	189	2,840	200
Other fish, fresh	28,892	984	31,715	1,047	1,200	36	1,600	48	1,400	42	1,620	50
Total	4,043,246	52,341	5,046,005	60,636	128,100	3,010	112,520	2,591	43,034	1,287	50,459	1,389
Gill nets:												
Perch, fresh	.....	.....	.....	.....	2,700	81	6,500	195	3,100	93	3,800	115
Shad, fresh	6,930	356	7,426	424	5,950	340	8,610	490	4,900	280	5,600	320
Striped bass, fresh	.....	.....	.....	.....	2,200	176	4,800	384	3,500	280	2,800	224
Sturgeon, fresh	17,525	725	16,800	664	.....	.....	.....	.....	.....	.....	.....	.....
Other fish, fresh	.....	.....	.....	.....	600	18	200	6	700	20	620	18
Total	24,455	1,081	24,226	1,088	11,450	615	20,110	1,075	12,200	673	12,820	677
Grand total	6,252,166	89,300	7,494,274	101,192	139,550	3,625	132,630	3,666	361,164	6,628	364,339	6,598

18.—Table showing by counties, apparatus, etc., the yield of the shore fisheries of North Carolina—Continued.

Apparatus and species.	Bertie.				Martin.				Washington.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Seines:												
Alewives, fresh	796,000	$7,524	816,000	$7,752	32,000	$312	36,800	$359	30,000	$263	32,000	$280
Alewives, salted	1,660,000	16,845	1,961,760	19,414	388,000	3,977	463,200	4,748	210,000	1,942	232,000	2,146
Perch, fresh	7,520	226	5,300	159	.....	.....	.....	.....	.....	.....	.....	.....
Shad, fresh	543,375	21,650	355,863	17,285	60,200	4,300	67,200	4,800	133,000	5,700	126,700	5,430
Shad, salted	16,800	960	13,125	750	6,300	216	7,000	247	.....	.....	.....	.....
Striped bass, fresh	18,400	920	13,800	690	4,500	270	4,320	259	10,000	600	11,150	669
Sturgeon, fresh	6,152	62	5,715	60	11,450	115	10,060	100	12,500	125	12,100	122
Other fish, fresh	16,825	505	14,780	443	8,700	348	8,500	350	23,450	750	24,080	783
Total	3,065,072	48,692	3,186,343	46,553	511,150	9,538	597,080	10,863	418,950	9,380	438,030	9,430
Pound nets:												
Alewives, fresh	121,200	1,212	125,000	1,248	.....	.....	.....	.....	46,800	505	50,000	550
Alewives, salted	24,000	270	28,800	350	.....	.....	.....	.....	380,000	4,249	440,000	4,840
Perch, fresh	9,800	588	11,750	705	.....	.....	.....	.....	33,680	2,010	29,400	1,764
Shad, fresh	3,500	200	4,813	275	.....	.....	.....	.....	83,202	4,754	76,317	4,470
Striped bass, fresh	6,300	567	7,900	711	.....	.....	.....	.....	30,910	1,904	28,375	1,703
Sturgeon, fresh	.....	.....	.....	.....	.....	.....	.....	.....	1,720	34	1,500	30
Other fish, fresh	6,800	234	6,400	224	.....	.....	.....	.....	15,180	607	16,200	648
Total	171,600	3,071	184,663	3,513	.....	.....	.....	.....	591,492	14,063	641,792	14,005
Gill nets:												
Alewives, salted	.....	.....	.....	.....	.....	.....	.....	.....	8,000	60	7,440	56
Mullet, salted	.....	.....	.....	.....	.....	.....	.....	.....	1,500	60	1,700	72
Shad, fresh	.....	.....	.....	.....	.....	.....	.....	.....	25,200	1,140	27,650	1,312
Striped bass, fresh	.....	.....	.....	.....	.....	.....	.....	.....	1,500	90	1,725	104
Sturgeon, fresh	.....	.....	.....	.....	.....	.....	.....	.....	59,500	2,380	54,600	2,184
Total	.....	.....	.....	.....	.....	.....	.....	.....	95,700	3,730	93,115	3,728
Skim nets:												
Alewives, salted	.....	.....	.....	.....	.....	.....	.....	.....	44,000	440	47,400	474
Shad, fresh	.....	.....	.....	.....	17,500	750	18,235	782	16,975	970	18,200	1,300
Other fish, fresh	.....	.....	.....	.....	1,000	27	1,600	40	.....	.....	.....	.....
Total	.....	.....	.....	.....	18,500	777	19,835	822	60,975	1,410	65,600	1,774
Grand total	3,236,672	51,763	3,371,006	50,066	529,650	10,315	616,915	11,685	1,167,117	28,583	1,238,537	28,937

Apparatus and species.	Tyrrell.				Dare.				Hyde.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Gill nets:												
Alewives, salted	22,000	$165	21,000	$157	2,000	$25	2,000	$25	.....	.....	.....	.....
Bluefish, fresh	.....	.....	.....	.....	19,000	437	30,000	755	5,180	$117	6,200	$144
Bluefish, salted	.....	.....	.....	.....	72,800	1,469	69,000	1,428	37,900	805	41,300	897
Channel bass, fresh	.....	.....	.....	.....	87,900	887	88,050	890	15,000	180	15,800	185
Croakers, fresh	.....	.....	.....	.....	3,275	82	5,100	128	3,000	68	3,230	78
Croakers, salted	.....	.....	.....	.....	7,820	156	6,800	136	12,800	256	10,780	220
Mullet, fresh	.....	.....	.....	.....	24,100	584	31,250	748	6,200	93	5,850	88
Mullet, salted	8,500	340	8,800	352	204,850	5,589	183,730	5,035	42,780	802	38,800	730
Perch, salted	.....	.....	.....	.....	15,000	350	16,100	372	.....	.....	.....	.....
Shad, fresh	73,450	3,147	83,300	3,808	1,861,853	100,096	2,108,631	115,159	52,150	2,682	61,250	3,150
Shad, salted	.....	.....	.....	.....	52,500	2,250	59,500	2,550	.....	.....	.....	.....
Sheepshead, fresh	.....	.....	.....	.....	7,590	276	9,000	315	4,100	113	5,200	142
Sheepshead, salt	.....	.....	.....	.....	6,890	241	8,000	280	6,350	127	6,900	137
Spanish mackerel, fresh	.....	.....	.....	.....	1,145	57	1,500	75	1,500	63	1,700	75
Spanish mackerel, salted	.....	.....	.....	.....	2,650	84	2,950	90	2,000	60	2,000	62
Spots, fresh	.....	.....	.....	.....	5,360	133	5,150	124	2,100	46	2,680	55
Spots, salted	.....	.....	.....	.....	25,300	505	22,250	443	10,500	210	9,400	206
Squeteague, fresh	.....	.....	.....	.....	7,860	237	15,300	460	3,600	81	3,750	84
Squeteague, salt	.....	.....	.....	.....	38,200	730	35,450	778	28,500	621	24,540	536
Striped bass, fresh	29,150	1,935	33,400	2,048	12,230	1,128	12,830	1,155	400	20	500	25
Striped bass, salt	.....	.....	.....	.....	5,100	153	5,500	165	.....	.....	.....	.....
Other fish, fresh	.....	.....	.....	.....	1,870	37	2,000	40	5,130	110	6,130	135
Other fish, salted	.....	.....	.....	.....	15,460	304	14,100	287	14,700	294	15,000	310
Total	133,080	5,587	146,500	6,365	2,480,753	115,810	2,734,391	131,438	253,890	6,748	261,010	7,259

18.—Table showing by counties, apparatus, etc., the yield of the shore fisheries of North Carolina—Continued.

Apparatus and species.	Tyrrell.				Dare.				Hyde.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Seines:												
Alewives, fresh									13,830	$168	16,750	$210
Alewives, salted	200,040	$2,004	202,200	$2,031	1,400,000	$10,400	1,450,000	$10,920	41,490	492	50,250	628
Black bass, fresh					38,000	1,900	36,450	1,822				
Black bass, salted					1,000	60	1,200	72				
Bluefish, fresh					264,271	7,158	296,600	7,955	6 100	137	8,000	180
Bluefish, salted					1,800	45	1,200	30	34,860	872	38,000	950
Channel bass, fresh									7,500	60	6,000	50
Croakers, fresh					1,100	30	1,500	45	2,780	63	3,000	68
Croakers, salted					620	19	500	15	8,375	168	10,900	218
Mullet, fresh					105,500	2,233	105,300	2,237	7,310	110	6,950	104
Mullet, salted					100,950	3,434	102,645	3,479	26,400	495	25,000	469
Perch, fresh	1,400	42	1,500	45	18,700	426	17,750	408	37,500	1,125	52,330	1,570
Perch, salted					6,500	200	7,350	224				
Shad, fresh	5,250	225	7,700	352	142,986	8,497	212,190	14,550	13,650	702	29,050	1,464
Sheepshead, fresh					14,600	454	16,950	530	1,980	69	2,200	77
Sheepshead, salt					37,350	1,456	36,400	1,423	3,525	106	3,400	102
Spanish mackerel, fresh					2,100	105	2,450	123	1,000	50	1,300	65
Spanish mackerel, salted									2,500	75	2,000	60
Spots, fresh					4,800	96	5,500	138	2,150	48	2,620	59
Spots, salted					23,280	773	25,500	890	7,950	168	8,000	160
Squeteague, fresh					52,200	870	46,520	795	4,800	120	5,250	131
Squeteague, salt					41,260	687	44,480	747	18,200	410	16,800	378
Strawberry bass, fresh					2,100	105	2,430	122				
Striped bass, fresh					77,800	2,522	96,700	3,135	18,700	935	23,100	1,155
Other fish, fresh	1,600	48	1,840	55	24,300	707	24,820	708	4,020	96	4,165	95
Other fish, salted					520	10	300	6	13,500	270	15,880	318
Porpoises						5,200		1,737				993
Total	208,290	2,319	213,240	2,483	2,361,737	47,387	2,534,735	52,111	278,120	6,739	330,945	9,504
Pound nets:												
Alewives, fresh	52,000	520	64,000	624	91,200	935	109,200	1,119	17,180	215	25,500	330
Alewives, salted	947,880	9,479	987,600	10,000	30,400	319	36,400	382	22,140	277	50,340	620
Bluefish, fresh					7,600	318	23,800	525				
Croakers, fresh							2,300	42				
Mullet, fresh					975	39	6,730	114				
Perch, fresh	52,675	1,844	50,280	1,760	13,500	458	18,600	651	7,000	280	14,135	425
Shad, fresh	21,000	900	23,975	1,028	25,921	1,480	37,100	2,014	3,675	189	6,930	356
Sheepshead, fresh					775	33	3,050	105				
Spanish mackerel, fresh							2,000	100				
Spots, fresh							4,000	50				
Squeteague, fresh					33,450	672	53,160	943				
Strawberry bass, fresh	1,000	50	1,120	56								
Striped bass, fresh	80,855	3,234	82,410	3,571	78,170	4,356	99,620	5,461				
Other fish, fresh	1,000	30	1,360	41	4,200	63	8,350	136	1,150	40	2,160	65
Total	1,156,410	16,057	1,210,745	17,080	286,191	8,673	404,310	11,642	51,145	1,001	99,065	1,796
Fyke nets:												
Mullet, fresh					6,250	35	6,300	36				
Sheepshead, fresh					250	10	275	11				
Squeteague, fresh					3,250	65	3,700	74				
Striped bass, fresh					1,250	75	1,310	79				
Other fish, fresh					1,250	40	1,300	41				
Total					12,250	225	12,885	241				
Pots:												
Eels					4,500	360	65,000	3,900			1,715	120
Miscellaneous:												
Terrapins					3,600	425	3,450	405				
Turtles	7,500	460	6,800	408	3,500	175	3,700	185				
Quahogs					40,800	1,840	40,600	1,931	7,200	315	7,000	306
Oysters					3,167,500	71,350	2,057,125	58,775	504,350	8,480	537,950	12,600
Total	7,500	460	6,800	408	3,215,400	73,790	2,104,875	61,296	511,550	8,795	544,950	12,906
Grand total	1,505,280	24,423	1,577,285	26,336	8,360,831	246,245	7,856,196	260,628	1,094,705	23,283	1,237,085	31,585

18.—Table showing by counties, apparatus, etc., the yield of the shore fisheries of North Carolina—Continued.

Apparatus and species.	Pamlico and Craven.				Lenoir.				Carteret.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Seines:												
Alewives, fresh	443,660	$4,202	665,490	$6,303	4,000	$40	3,600	$36	.....	.....	.....	.....
Black bass, fresh	9,500	570	8,000	480	.....	.....	.....	.....	.....	.....	.....	.....
Bluefish, fresh	.....	.....	.....	.....	.....	.....	.....	.....	339,500	$6,790	576,500	$13,518
Catfish, fresh	27,200	408	25,000	375	.....	.....	.....	.....	.....	.....	.....	.....
Channel bass, fresh	.....	.....	.....	.....	.....	.....	.....	.....	10,200	80	.....	.....
Channel bass, salted	.....	.....	.....	.....	.....	.....	.....	.....	104,200	800	.....	.....
Croakers, fresh	.....	.....	.....	.....	.....	.....	.....	.....	63,165	1,263	73,165	1,463
Flounders, fresh	17,500	175	16,000	160	.....	.....	.....	.....	.....	.....	.....	.....
Hogfish, fresh	.....	.....	.....	.....	.....	.....	.....	.....	31,450	819	34,550	886
Mullet, fresh	.....	.....	.....	.....	.....	.....	.....	.....	20,000	400	25,000	500
Mullet, salted	.....	.....	.....	.....	.....	.....	.....	.....	1,044,000	31,320	1,247,000	37,410
Perch, fresh	9,500	285	9,000	270	.....	.....	.....	.....	.....	.....	.....	.....
Pike, fresh	5,500	170	5,000	150	.....	.....	.....	.....	.....	.....	.....	.....
Pompano, fresh	.....	.....	.....	.....	.....	.....	.....	.....	5,000	400	6,000	480
Shad, fresh	133,000	7,600	448,988	21,386	24,500	1,400	29,988	1,574	.....	.....	.....	.....
Sheepshead, fresh	.....	.....	.....	.....	.....	.....	.....	.....	5,500	385	6,000	420
Spanish mackerel, fresh	.....	.....	.....	.....	.....	.....	.....	.....	48,800	3,904	61,000	4,880
Spots, fresh	.....	.....	.....	.....	.....	.....	.....	.....	63,350	1,267	75,500	1,510
Spots, salted	.....	.....	.....	.....	.....	.....	.....	.....	30,000	450	50,000	1,750
Squeteague, fresh	22,000	1,000	20,000	900	.....	.....	.....	.....	884,500	17,670	1,038,500	20,770
Squeteague, salt	14,250	427	14,500	435	.....	.....	.....	.....	.....	.....	.....	.....
Striped bass, fresh	52,500	4,200	50,000	4,000	.....	.....	.....	.....	.....	.....	.....	.....
Sturgeon, fresh	26,000	260	25,500	255	1,200	12	1,000	10	.....	.....	.....	.....
Other fish, fresh	33,000	580	33,872	590	.....	.....	.....	.....	21,600	812	37,000	940
Porpoises	.....	.....	.....	.....	.....	.....	.....	.....	.....	897	.....	1,668
Total	793,610	19,877	1,321,350	35,304	29,700	1,452	34,588	1,620	2,671,265	67,257	3,230,215	86,195
Gill nets:												
Black bass, fresh	13200	792	13,440	806	.....	.....	.....	.....	.....	.....	.....	.....
Bluefish, fresh	.....	.....	.....	.....	.....	.....	.....	.....	3,500	70	2,700	54
Bluefish, salted	.....	.....	.....	.....	.....	.....	.....	.....	34,000	680	43,000	860
Croakers, fresh	.....	.....	.....	.....	.....	.....	.....	.....	33,200	664	36,750	735
Croakers, salted	.....	.....	.....	.....	.....	.....	.....	.....	49,500	1,665	49,050	1,656
Hogfish, fresh	.....	.....	.....	.....	.....	.....	.....	.....	6,000	180	6,850	206
Menhaden, fresh	.....	.....	.....	.....	.....	.....	.....	.....	105,000	245	201,000	251
Mullet, fresh	.....	.....	.....	.....	.....	.....	.....	.....	353,412	7,068	644,500	12,890
Mullet, salted	.....	.....	.....	.....	.....	.....	.....	.....	68,000	1,900	77,100	2,155
Perch, fresh	6,500	195	6,000	180	.....	.....	.....	.....	.....	.....	.....	.....
Pike, fresh	4,000	80	3,500	70	.....	.....	.....	.....	.....	.....	.....	.....
Shad, fresh	329,000	18,800	105,360	5,632	.....	.....	.....	.....	26,500	1,060	23,000	920
Spanish mackerel, fresh	.....	.....	.....	.....	.....	.....	.....	.....	6,900	552	9,500	475
Spanish mackerel, salted	.....	.....	.....	.....	.....	.....	.....	.....	2,000	80	1,600	64
Spots, fresh	.....	.....	.....	.....	.....	.....	.....	.....	44,300	886	48,750	975
Spots, salted	.....	.....	.....	.....	.....	.....	.....	.....	60,500	2,035	59,950	2,024
Squeteague, fresh	.....	.....	.....	.....	.....	.....	.....	.....	50,000	1,000	54,000	1,080
Squeteague, salt	.....	.....	.....	.....	.....	.....	.....	.....	7,500	150	6,000	120
Striped bass, fresh	5,000	250	4,680	234	.....	.....	.....	.....	.....	.....	.....	.....
Other fish, fresh	23,000	230	25,000	250	.....	.....	.....	.....	.....	.....	.....	.....
Total	380,700	20,347	157,980	7,172	.....	.....	.....	.....	940,312	18,235	1,263,750	24,465
Skim nets:												
Shad, fresh	45,500	2,600	40,000	2,300	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous:												
Terrapins	.....	.....	.....	.....	.....	.....	.....	.....	18,000	3,328	18,432	3,360
Quahogs	.....	.....	.....	.....	.....	.....	.....	.....	72,272	4,477	108,152	6,720
Scallops	.....	.....	.....	.....	.....	.....	.....	.....	15,750	700	18,000	800
Oysters	.....	.....	.....	.....	.....	.....	.....	.....	2,465,890	76,912	1,986,250	57,575
Total	.....	.....	.....	.....	.....	.....	.....	.....	2,571,912	85,417	2,130,834	68,455
Grand total	1,219,810	42,824	1,519,330	44,776	29,700	1,452	34,588	1,620	6,813,489	170,909	6,624,799	179,115

18.—Table showing by counties, apparatus, etc., the yield of the shore fisheries of North Carolina—Continued.

Apparatus and species.	Onslow.				New Hanover.				Pender.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Seines:												
Bluefish, fresh	6,800	$136	9,880	$187	15,650	$470	16,100	$483	15,300	$459	13,500	$454
Bluefish, salted	1,140	23	1,314	40								
Channel bass, fresh					18,800	200	24,300	251				
Croakers, fresh	6,400	160	8,100	193	41,800	1,254	45,040	1,419	14,500	435	12,750	433
Croakers, salted	1,070	32	1,420	45								
Flounders, fresh	2,000	40	1,930	37	10,500	210	13,910	278	10,500	210	7,500	150
Hogfish, fresh	13,000	325	15,600	370	52,842	1,585	59,070	1,772	17,850	536	20,000	600
Hogfish, salted	2,340	70	2,080	65								
Mullet, fresh	22,465	337	23,400	351	25,351	370	28,735	431	7,000	105	6,500	100
Mullet, salted	593,034	18,118	574,200	17,178	50,703	1,775	57,470	2,211	14,650	512	15,668	548
Perch, fresh									6,200	248	5,500	229
Pompano, fresh					3,200	256	3,750	300				
Shad, fresh									65,670	4,155	59,700	3,750
Sheepshead, fresh					38,027	1,546	42,120	2,106				
Spanish mackerel, fresh					2,700	135	3,000	150				
Spots, fresh					42,500	1,275	46,100	1,452				
Squeteague, fresh	20,150	500	22,480	542	57,450	1,724	69,430	2,083	21,500	700	19,500	780
Squeteague, salt	3,000	120	3,747	139								
Suckers, fresh									15,300	344	14,820	334
Other fish, fresh					25,750	515	29,680	594	14,150	283	11,750	235
Total	671,399	19,861	664,151	19,147	385,273	11,315	438,705	13,530	202,620	7,987	187,188	7,613
Gill nets:												
Channel bass, fresh	2,000	20	2,800	28								
Channel bass, salted	18,668	279	20,665	310								
Croakers, fresh	12,000	240	14,000	280	9,370	187	9,450	189				
Croakers, salted	4,000	100	4,670	116								
Hogfish, fresh	17,500	350	19,400	388	11,450	229	11,400	228				
Hogfish, salted	3,000	75	3,070	76								
Mullet, fresh	64,750	1,280	57,200	1,119	5,550	65	5,500	65				
Mullet, salted	87,350	3,061	76,933	2,692								
Shad, fresh	25,179	1,431	22,172	1,110	152,869	8,742	149,800	7,500	45,570	2,601	44,940	2,250
Spots, fresh	9,500	190	12,000	240	8,200	160	8,280	165				
Spots, salted	4,340	68	6,000	100								
Squeteague, fresh	169,375	7,359	150,020	7,111	12,550	251	12,600	252				
Squeteague, salt	112,917	5,528	100,000	5,765								
Sturgeon, fresh					72,500	1,740	30,625	735				
Other fish, fresh	90,000	2,400	93,400	2,802	2,880	43	2,930	45				
Other fish, salted	30,000	1,153	39,233	1,373								
Total	650,579	23,534	621,563	23,510	275,369	11,417	230,585	9,179	45,570	2,601	44,940	2,750
Lines:												
Bluefish, fresh					29,710	891	28,100	843				
Croakers, fresh					11,000	330	12,960	388				
Flounders, fresh					5,400	145	6,820	171				
Hogfish, fresh					56,807	2,272	84,500	3,380				
Sea bass, fresh					28,900	939	33,075	1,158				
Sheepshead, fresh					4,350	218	5,870	294				
Spots, fresh					13,000	390	14,200	426				
Squeteague, fresh	24,000	640	40,100	1,068	68,780	2,407	77,850	2,725				
Whiting, fresh					30,800	1,062	35,300	1,231				
Other fish, fresh	3,000	80	5,300	135	24,000	720	25,800	774				
Total	27,000	720	45,400	1,203	272,747	9,374	324,475	11,390				
Miscellaneous:												
Shrimps					135,240	5,100	144,200	5,435				
Crabs					50,000	1,250	47,400	1,185				
Terrapins	1,500	250	1,500	275	2,400	240	2,000	200				
Quahogs	20,000	1,000	24,000	1,200	15,200	633	46,400	1,933				
Oysters	206,500	12,450	339,500	17,600	35,000	2,750	37,009	2,830	7,000	550	7,497	565
Total	228,000	13,700	365,000	19,075	237,840	9,973	277,009	11,583	7,000	550	7,497	565
Grand total	1,576,978	57,815	1,696,114	62,935	1,171,229	42,079	1,270,774	45,682	255,190	11,138	239,625	10,428

18.—Table showing by counties, apparatus, etc., the yield of the shore fisheries of North Carolina—Continued.

Apparatus and species.	Beaufort.				Pitt.				Edgecombe.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Seines:												
Alewives, fresh	36,080	$460	44,060	$562	6,720	$84	7,000	$84	7,400	$92	8,480	$106
Alewives, salted	280,000	3,475	296,020	3,689	.....	.....	.....	.....	.....	.....	.....	.....
Perch, fresh	50,625	2,025	64,250	2,570	250	10	900	36	2,743	96	3,314	116
Shad, fresh	135,600	7,720	151,200	8,640	8,400	465	5,618	305	14,914	767	9,429	485
Striped bass, fresh	17,916	1,075	12,917	775	.....	.....	.....	.....	.....	.....	.....	.....
Other fish, fresh	8,335	265	6,000	180	500	20	1,100	42	1,280	32	1,920	48
Total	528,556	15,020	574,447	16,416	15,870	579	14,618	467	26,337	987	23,143	755
Pound nets:												
Alewives, fresh	10,200	135	11,040	145	760	10	1,400	18	2,000	25	2,600	33
Alewives, salted	24,000	293	24,960	305	.....	.....	.....	.....	.....	.....	.....	.....
Perch, fresh	20,500	820	19,250	770	800	32	300	12	2,100	84	2,800	112
Shad, fresh	10,413	595	8,225	470	2,118	118	3,223	182	7,035	360	6,423	330
Other fish, fresh	3,166	95	4,185	125	.....	.....	.....	.....	900	23	1,000	25
Total	68,279	1,938	67,610	1,815	3,678	160	4,923	212	12,035	492	12,823	500
Gill nets:												
Shad, fresh	62,650	3,580	68,250	3,000	.....	.....	.....	.....	.....	.....	.....	.....
Striped bass, fresh	2,083	125	700	42	.....	.....	.....	.....	.....	.....	.....	.....
Other fish, fresh	2,165	65	425	13	.....	.....	.....	.....	.....	.....	.....	.....
Total	66,898	3,770	69,375	3,955	.....	.....	.....	.....	.....	.....	.....	.....
Skim nets:												
Shad, fresh	.....	.....	.....	.....	20,262	1,100	28,735	1,560	62,213	3,200	56,578	2,900
Pots:												
Eels	1,300	78	3,200	192	.....	.....	.....	.....	.....	.....	.....	.....
Grand total	665,033	20,806	714,632	22,378	39,810	1,839	48,276	2,239	100,585	4,679	92,544	4,155

Apparatus and species.	Duplin.				Sampson.				Brunswick.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Seines:												
Mullet, salted	.....	.....	.....	.....	.....	.....	.....	.....	127,500	$3,576	170,800	$4,614
Mullet roe, salted	.....	.....	.....	.....	.....	.....	.....	.....	825	140	950	165
Perch, fresh	1,800	$73	1,500	$61	5,460	$383	4,450	$381	.....	.....	.....	.....
Shad, fresh	14,124	883	12,840	830	13,700	1,286	12,400	1,100	.....	.....	.....	.....
Suckers, fresh	22,800	513	25,180	566	14,980	685	15,150	684	.....	.....	.....	.....
Total	38,724	1,469	39,520	1,457	34,140	2,354	32,000	2,165	128,325	3,716	171,750	4,779
Gill nets:												
Perch, fresh	.....	.....	.....	.....	1,000	50	1,000	50	.....	.....	.....	.....
Shad, fresh	.....	.....	.....	.....	.....	.....	.....	.....	24,129	1,377	26,964	1,350
Suckers, fresh	.....	.....	.....	.....	1,200	48	1,400	55	.....	.....	.....	.....
Other fish, fresh	.....	.....	.....	.....	900	25	800	22	.....	.....	.....	.....
Total	.....	.....	.....	.....	3,100	123	3,200	127	24,129	1,377	26,964	1,350
Fyke nets:												
Catfish, fresh	.....	.....	.....	.....	3,800	112	3,000	90	.....	.....	.....	.....
Perch, fresh	.....	.....	.....	.....	3,834	183	5,000	245	.....	.....	.....	.....
Suckers, fresh	.....	.....	.....	.....	3,866	155	4,000	140	.....	.....	.....	.....
Total	.....	.....	.....	.....	11,500	450	12,000	475	.....	.....	.....	.....
Skim nets:												
Shad, fresh	.....	.....	.....	.....	9,800	880	9,000	815	.....	.....	.....	.....
Lines:												
Catfish, fresh	.....	.....	.....	.....	4,800	145	4,000	130	.....	.....	.....	.....
Perch, fresh	.....	.....	.....	.....	5,000	250	5,000	250	.....	.....	.....	.....
Other fish, fresh	.....	.....	.....	.....	1,000	20	1,500	30	.....	.....	.....	.....
Total	.....	.....	.....	.....	10,800	415	10,500	410	.....	.....	.....	.....
Miscellaneous:												
Terrapins	.....	.....	.....	.....	.....	.....	.....	.....	1,250	460	1,170	450
Oysters	.....	.....	.....	.....	.....	.....	.....	.....	12,600	900	12,005	900
Total	.....	.....	.....	.....	.....	.....	.....	.....	13,850	1,360	13,175	1,350
Grand total	38,724	1,469	39,520	1,457	69,340	4,222	66,700	3,992	166,304	6,453	211,889	7,479

18.—Table showing by counties, apparatus, etc., the yield of the shore fisheries of North Carolina—Continued.

SUMMARY.

Apparatus and species.	1889.		1890.	
	Pounds.	Value.	Pounds.	Value.
Seines:				
Alewives, fresh	2,190,542	$22,038	2,495,307	$25,058
Alewives, salted	5,986,798	59,993	6,657,492	67,316
Black bass, fresh	395,320	19,874	381,090	19,142
Black bass, salted	1,000	60	1,200	72
Bluefish, fresh	647,621	15,150	1,052,580	26,877
Bluefish, salted	37,800	940	40,514	1,020
Catfish, fresh	39,200	768	39,000	795
Channel bass, fresh	36,500	340	30,300	301
Channel bass, salted	104,200	800	.....	.....
Croakers, fresh	129,745	3,205	143,555	3,621
Croakers, salted	10,065	219	12,820	278
Flounders, fresh	42,800	727	41,810	723
Hogfish, fresh	115,142	3,265	129,220	3,628
Hogfish, salted	2,340	70	2,080	65
Mullet, fresh	191,626	3,715	200,585	3,911
Mullet, salted	1,958,837	59,294	2,194,503	65,978
Mullet roe, salted	825	140	950	165
Perch, fresh	306,123	10,458	329,639	11,307
Perch, salted	7,550	242	8,270	261
Pike, fresh	31,861	1,438	35,910	1,646
Pompano, fresh	8,200	656	9,750	780
Shad, fresh	1,585,198	79,879	1,817,704	97,184
Shad, salted	33,600	1,701	27,025	1,273
Sheepshead, fresh	60,107	2,454	67,270	3,133
Sheepshead, salted	40,875	1,562	39,800	1,525
Spanish mackerel, fresh	54,600	4,194	67,750	5,218
Spanish mackerel, salted	2,500	75	2,000	60
Spots, fresh	115,300	2,786	132,100	3,254
Spots, salted	61,230	1,391	83,500	2,800
Squeteague, fresh	1,062,600	22,584	1,221,680	26,001
Squeteague, salted	76,710	1,644	79,527	1,699
Strawberry bass, fresh	28,275	1,083	26,430	1,026
Striped bass, fresh	220,766	11,912	228,587	11,798
Sturgeon, fresh	68,752	650	63,685	614
Suckers, fresh	53,080	1,542	55,150	1,584
Other fish, fresh	213,760	5,883	231,367	6,028
Other fish, salted	14,020	280	16,180	324
Refuse fish	17,220	160	18,500	173
Porpoises	.....	6,097	.....	4,398
Total	15,952,688	349,269	17,984,830	401,036
Pound nets:				
Alewives, fresh	2,337,670	21,564	2,724,672	23,807
Alewives, salted	3,735,490	40,311	4,464,752	46,939
Black bass, fresh	10,650	426	11,800	472
Bluefish, fresh	7,600	318	23,800	525
Catfish, fresh	7,420	223	7,685	231
Croakers, fresh	.....	.....	2,300	42
Eels, fresh	7,050	494	7,200	504
Mullet, fresh	975	39	6,730	114
Perch, fresh	230,160	10,056	226,265	9,756
Pike, fresh	900	40	1,100	49
Shad, fresh	379,217	21,438	397,534	22,263
Shad, salted	6,300	210	6,825	250
Sheepshead, fresh	775	33	3,050	105
Spanish mackerel, fresh	.....	.....	2,000	100
Spots, fresh	.....	.....	4,000	50
Squeteague, fresh	33,450	672	53,160	948
Strawberry bass, fresh	1,450	70	1,645	80
Striped bass, fresh	240,221	13,732	260,464	14,874
Sturgeon, fresh	1,720	34	1,500	30
Other fish, fresh	65,563	2,217	76,080	2,472
Total	7,066,611	111,877	8,282,562	123,606
Gill nets:				
Alewives, salted	65,800	639	64,040	632
Black bass, fresh	13,200	792	13,440	806
Bluefish, fresh	27,680	624	38,900	953
Bluefish, salted	144,700	2,954	153,300	3,185
Channel bass, fresh	104,900	1,087	106,650	1,103
Channel bass, salted	26,668	479	28,865	515

Apparatus and species.	1889.		1890.	
	Pounds.	Value.	Pounds.	Value.
Gill nets—Cont'd.				
Croakers, fresh	60,845	$1,241	68,530	$1,410
Croakers, salted	74,120	2,177	71,300	2,128
Hogfish, fresh	34,950	759	37,650	822
Hogfish, salted	3,000	75	3,070	76
Menhaden, fresh	195,000	245	201,000	251
Mullet, fresh	455,612	9,138	746,200	14,967
Mullet, salted	439,180	12,724	415,713	12,087
Perch, fresh	13,300	419	17,300	540
Perch, salted	17,000	390	18,000	410
Pike, fresh	4,000	80	3,500	70
Shad, fresh	3,127,321	165,220	3,289,077	172,838
Shad, salted	52,500	2,250	59,500	2,550
Sheepshead, fresh	11,690	389	14,200	457
Sheepshead, salted	14,140	404	15,880	456
Spanish mackerel, fresh	9,545	672	12,700	625
Spanish mackerel, salted	6,650	224	6,550	216
Spots, fresh	69,460	1,415	76,860	1,559
Spots, salted	100,640	2,818	97,600	2,773
Squeteague, fresh	243,385	8,928	235,670	8,987
Squeteague, salted	187,117	7,029	165,990	7,199
Striped bass, fresh	64,012	4,739	72,480	5,222
Striped bass, salted	5,100	153	5,500	165
Sturgeon, fresh	157,325	5,070	110,025	3,823
Suckers, fresh	1,200	48	1,400	55
Other fish, fresh	127,245	2,948	131,505	3,331
Other fish, salted	63,660	1,821	71,783	2,038
Total	5,920,945	237,951	6,354,178	252,249
Fyke nets:				
Catfish, fresh	3,800	112	3,000	90
Mullet, fresh	6,250	35	6,300	36
Perch, fresh	3,834	183	5,000	245
Sheepshead, fresh	250	10	275	11
Squeteague, fresh	3,250	65	3,700	74
Striped bass, fresh	1,250	75	1,310	79
Suckers, fresh	3,866	155	4,000	140
Other fish, fresh	1,250	40	1,300	41
Total	23,750	675	24,885	716
Skim nets:				
Alewives, salted	70,500	838	74,800	884
Shad, fresh	172,250	9,500	170,748	9,657
Other fish, fresh	1,000	27	1,600	40
Total	243,750	10,365	247,148	10,581
Lines:				
Bluefish, fresh	29,710	891	28,100	843
Catfish, fresh	4,800	145	4,000	130
Croakers, fresh	11,000	330	12,960	388
Flounders, fresh	5,400	145	6,820	171
Hogfish, fresh	56,807	2,272	84,500	3,380
Perch, fresh	5,000	250	5,000	250
Sea bass, fresh	28,900	939	33,075	1,158
Sheepshead, fresh	4,350	218	5,870	294
Spots, fresh	13,000	390	14,200	426
Squeteague, fresh	92,780	3,047	117,950	3,793
Whiting, fresh	30,800	1,062	35,300	1,231
Other fish, fresh	28,000	820	32,600	939
Total	310,547	10,509	380,375	13,003
Pots:				
Eels	48,200	2,982	153,415	9,222
Miscellaneous:				
Shrimps	135,240	5,100	144,200	5,435
Crabs	50,000	1,250	47,400	1,185
Terrapins	26,750	4,703	26,552	4,690
Turtles	18,350	1,076	17,725	1,024
Quahogs	155,472	8,265	226,152	12,090
Scallops	15,750	700	18,000	800
Oysters	6,398,840	173,392	4,977,336	150,845
Total	6,800,402	194,496	5,457,365	176,069
Grand total	36,366,893	918,114	38,884,758	980,482

THE SHORE FISHING INDUSTRIES.

The shore enterprises of North Carolina dependent on the fisheries are of great interest and importance, and their development is, in many cases, a true index of the condition of the fisheries with which they are connected. The branches to which attention may be directed are the porpoise industry, the menhaden industry, the wholesale fish trade, the oyster-canning industry, and the wholesale oyster trade. The prominent features of each of these is shown in the following tables, which are presented in a condensed form in order to avoid that disclosure of private interests which would, in many instances, ensue if the counties were specified.

The porpoise industry.—The porpoise industry and the fishery which it supports are of less extent than formerly, owing to the diminished inducements offered to the fishermen by the low prices received for the raw products. In 1889 and 1890 only two firms were engaged in handling the porpoises, in preparing their hides, and in trying out their oil. The number of porpoises killed was 2,283 in 1889, and 1,747 in 1890, for which the fishermen received $6,097 and $4,398, respectively. The resulting manufactured products were valued at $13,757 in 1889, and $10,350 in 1890.

The menhaden industry.—North Carolina is the most southern State in which the menhaden fishery and industry are carried on. The fishery is the only one, except that for oysters, in which vessels are employed, and it is the only offshore vessel fishery in the State, although a considerable part of the fish handled are caught in the sounds adjacent to the ocean and not in the ocean itself. The business is centered at or in the vicinity of Beaufort, where seven factories were in operation in 1889 and six in 1890. The capital invested in the latter year in buildings, vessels, apparatus, etc., was $97,560; the number of persons employed was 187; the value of the fish handled was $16,171; and the value of the manufactured products was $38,727.

The wholesale fish trade.—The business of buying fish from the fishermen and shipping the catch to market engaged the attention of 23 wholesale firms in 1889 and 1890. These handled in 1889 4,501,387 pounds of fresh and salt fish, and 67,200 pounds of mollusks and reptiles, for which $141,931 was paid to the fishermen; and in 1890 5,571,790 pounds of fresh and salt fish and 63,650 pounds of reptiles, etc., the cost price of which was $166,074. The selling price of the products was $219,903 and $257,120, respectively, so that the gross profits of the trade were $77,972 in 1889 and $91,046 in 1890.

The oyster industry.—The canning of oysters in North Carolina is a business which has sprung up within the past few years and become of considerable importance in two counties—Pasquotank and Beaufort. In 1889 only two firms engaged in the industry, but in 1890 the number had increased to five. The 1,362 persons employed in the latter year received $83,450 in wages. The quantity of oysters bought was 375,500 bushels in 1889 and 861,262 bushels in 1890, for which $121,425 and $290,232, respectively, were paid. The oysters were put up in 2,101,320 one-pound and two-pound cans worth $207,358 in 1889, and 4,886,112 cans worth $477,189 in 1890.

The oyster-packing trade in 1890 was engaged in by twelve firms located in Pasquotank and Washington counties. Nearly half a million bushels of oysters were utilized for opening, for which the fishermen received $170,989; the shell oysters yielded 326,630 gallons, the market value of which was $340,361.

19.—Table showing the extent of the porpoise industry of North Carolina in 1889 and 1890.

Designation.	1889.	1890.
Number of firms	2	2
Number of fishermen and shoresmen	81	79
Value of property	$3,300	$3,300
Cash capital	$4,000	$4,000
Porpoises handled.....number..	2,283	1,747
Value paid	$6,097	$4,398
Value as sold	$12,758	$9,726
Oil manufactured.....gallons..	3,897	2,746
Value	$999	$624
Enhancement in value	$7,660	$5,952

20.—Table showing the extent of the menhaden industry of North Carolina in 1889 and 1890.

Designation.	1889.	1890.	Designation.	1889.	1890.
Number of factories in operation..	7	6	Number of vessels employed as "carryaways"	8	9
Value of factories	$39,800	$38,800	Net tonnage	113.73	128.03
Cash capital	$23,500	$22,500	Value	$6,900	$8,350
Number of shoresmen employed..	80	74	Value of outfit	$515	620
Number of fishermen employed ..	118	113	Number of menhaden handled....	14,588,750	20,684,000
Number of steam vessels employed	1	1	Value to fishermen	$11,518	$16,171
Net tonnage	44.15	44.15	Number of gallons of oil prepared	36,304	50,369
Value	$8,500	$8,500	Value as sold	$7,155	$11,153
Value of outfit	$1,800	2,550	Number of tons of scrap prepared.	923	1,375
Number of sailing vessels employed	10	10	Value as sold	$18,760	$27,574
Net tonnage	140.92	149.89			
Value	$6,790	$9,250			
Value of outfit	$6,250	$6,990			

21.—Table showing the extent of the wholesale fish trade of North Carolina in 1889 and 1890.

Designation.	1889.	1890.
Number of firms	23	23
Number of persons employed	107	109
Value of property	$38,300	$38,775
Cash capital	$40,680	$42,000
Wages paid	$13,881	$15,245
Fresh fish handled.....pounds..	3,837,487	4,478,990
Value paid	$113,957	$127,953
Salted fish handled.....pounds..	663,900	1,092,800
Value paid	$18,902	$30,072
Mollusks and reptiles handled.....pounds..	67,200	63,650
Value paid	$9,072	$8,049
Value of products as sold	$219,903	$257,120
Enhancement in value	$77,972	$91,046

22.—Table showing the extent of the oyster industry of North Carolina.

Designation.	Oyster-canning industry.		Oyster-packing trade, 1890.
	1889.	1890.	
Number of firms	2	5	12
Number of persons employed	681	1,362	623
Value of property	$29,150	$66,600	$34,850
Cash capital	$45,000	$108,000	$94,500
Wages paid	$31,874	$83,450	$64,096
Oysters handled.....bushels..	375,500	861,262	492,250
Value paid	$121,425	$290,232	$170,989
Prepared products:			
One-pound cans.....number..	1,599,408	3,855,984	.....
Two-pound cans.....do...	501,912	1,030,128	.....
Value received	$207,358	$477,189	.....
Shucked oysters.....gallons..	.....	.....	326,630
Value received	.....	.....	$340,361
Enhancement in value	$85,933	$186,957	$169,372

III.—FISHERIES OF SOUTH CAROLINA.

The coastal region of South Carolina consists for the most part of a belt of swampy land from 5 to 30 miles in width, which is intersected by numerous creeks, rivers, and channels, forming innumerable large and small islands. The generally even outline of the shore is broken by Winyah Bay, Bull Bay, Charleston Harbor, St. Helena Sound, Port Royal Sound, and some other minor indentations. The principal rivers emptying directly into the ocean or into the bodies of water mentioned are the Pedee, Santee, Combahee, and Savannah, all of which have commercial fisheries. Charleston, Beaufort, and Georgetown are the principal cities on the coast and are the centers of the most important fisheries.

THE FISHING-GROUNDS.

The waters in and adjacent to the swampy belt abound in fish, crustaceans, terrapins, and oysters, and are favorite spawning-grounds for many species. The boat and shore fisheries are chiefly prosecuted in this region. The following account of the offshore grounds resorted to by the smack and boat fishermen of Charleston and other places on the coast of the State will bear repetition in this report:

Cape Romain Bank is a small rocky patch, about half a mile square, situated 8 miles SSE. from Cape Romain light and 4 miles S. by W. from the outer shoal buoy. It has a depth of 8 fathoms, the bottom consisting of lime rock and gravel with willow corals (gorgonians) growing upon it. Fish are caught on this ground from June to October, the following varieties being taken, namely: Sea bass, porgies, grunts, bluefish, sharks, a few sailor's choice, and in October spotted bass, which often weigh from 30 to 40 pounds each.

Inner East Bank bears SE. from Charleston light-ship; distance, 8 miles. It extends 1 mile east and west and one-half mile north and south, and has a depth of 7½ fathoms. It is frequented by smacks and small boats, the smacks going there from June to December and the small boats only from June to September. The fishing is done with hooks and lines, and the following kinds of fish are caught: Blackfish, porgies, jacks (abundant), and flounders.

Outer East Bank bears SE. by E. from Charleston light-ship; distance, 11 miles. It extends 1 mile east and one-half mile north and south, and has 8½ to 10 fathoms of water upon it, the bottom consisting of coral rock and yellow sand. The same smacks and boats fish on this bank that visit the Inner East Bank, the season being the same and also the species of fish taken.

Eastern Hole bears SE. by E. 15¾ miles from Charleston light. It is about a mile in diameter, with a depth of 12 fathoms, and a bottom of lime rock, sand, and willow corals. It is fished on, by smacks only, from October to April. Sea bass are the fish chiefly caught in the daytime, but at night tomcod, butter-fish, tautog, and a few flounders are also taken.

Outer Southeast Ground bears SE. 27½ miles from Charleston light, and extends 5 miles east and west and 2 miles north and south. The bottom is mostly coral rock, with many purple willow corals (gorgonians). The south side of the ground is covered with large red shells, the east side with bright white sand and white sand mixed with black specks, the west side with shells and sand. The smacks fish here from November to April and May, the catch consisting of sea bass, bastard snappers, red snappers, and jacks.

Inner Southeast Bank bears SE. 10 miles from Charleston light, and extends 2¼ miles east and west and 1½ miles north and south. It has about 10 fathoms of water and a coral bottom. This is a summer fishing-ground, and small boats and smacks visit it from May until August. Porgies, blackfish, redmouth grunts, black grunts, tautog, sailor's choice, and cobias are taken. Porgies school here abundantly in August, and about 300 is considered a fair day's catch. These weigh from three-fourths of a pound to 1 pound each, and are tied in bunches of five each for sale. The average daily catch of blackfish is 250, of grunts 300; but only a few tautog, black grunts, and sailor's choice are taken. Cobias come in May and remain until July; they drive all other fish away from these grounds. The average daily catch of this species to a man is three.

Coffin Land Ground or Inner Ground bears SSE. 8 miles from Charleston light, and is 3 miles long east and west by 2½ miles wide north and south. The bottom is of coral rock, and the depth 7 to 9 fathoms. Smacks and boats fish on this ground with hooks and lines (the only method pursued on these grounds) principally from April to December. Jacks are caught from April to August, porgies from July to October, and blackfish and sea bass from the first of October to the first of December. The average daily catch to a man, of all kinds, is about 400 fish.

Old Farms Ground bears SSE. 18 miles from Charleston light, is 5 miles long east and west by 3 miles wide north and south, and has a depth of 12 to 17 fathoms, with a bottom of coral and broken shells. This is a winter fishing-ground, and only smacks resort to it. Sea bass, red snappers, and bastard snappers are the principal fish taken from October to April; but, besides these, a few tautog, black grunts, and redmouth grunts are caught. The bait used on this and other grounds in the vicinity is blackfish, shark, and squid. The blackfish is the best. The daily catch of fish to a man is about three hundred.

Outer Old Farms Ground bears SSE. 25 miles from Charleston light, and is 3 miles long east and west by 1½ miles wide north and south. The bottom is of coral rock with "willows," and the depth 17 fathoms. This is also a winter ground for the same kinds of fish that are caught on the Old Farms, and fishing is carried on from October to April.

Inner South Ground bears S. ½ E. from Charleston light; distance, 15 miles. Its length is 1½ miles east and west and its width one-half mile north and south. It has 12 fathoms of water, and an uneven bottom of coral rock and yellow "willows." This is a winter ground, resorted to by smacks only from December until April. Blackfish, bastard snappers, red snappers, black grunts, porgies, and occasionally sharks, nursefish, and squirrel-fish are taken. Bastard snappers are the most plentiful, while the other kinds are generally scarce.

Outer South Ground bears S. ½ E. 27½ miles from Charleston light, and extends 2 miles east and west and three-fourths of a mile north and south. The depth of water is 14½ fathoms, and the bottom consists of coral rock, yellow "willows," and sponges. It is a winter ground, fished on from December to April. The same kinds of fish occur upon it as upon the Inner South Ground.

Edisto Bank bears SE. by S. 11 miles from Edisto Harbor. It is 1 mile long east and west by one-fourth of a mile wide, and has a depth of 8 to 10 fathoms. The bottom consists of rocks and shells, and on the north side of red sand. Smacks fish here from April to October. The fish taken are sea bass, porgies, redmouth grunts, a few jacks, and occasionally a cobia. Sharks (puppy sharks) are so plentiful in June as to stop fishing.

Blank Ground bears SE. ½ S. 8 or 9 miles from Outer South Ground, and extends 4 or 5 miles east and west and 2 miles north and south. It has 14 fathoms of water, and the bottom consists mostly of "willows," with some other corals. Fishing is best in January.

Tybee Ground bears E. ½ N. 12 to 14 miles from Martin's Industry light-ship. It is 1½ miles long southeast and northwest, and one-half mile wide. The bottom consists of shells and corals, the depth being 9 to 9½ fathoms. This ground is resorted to by the smacks, from August to January, for blackfish and trout, which are taken to the Charleston market, 50 miles distant.*

GENERAL IMPORTANCE AND NATURE OF THE FISHERIES.

Taking the value of the products of the fisheries as a basis, South Carolina ranks third among the States of this region, being surpassed by North Carolina and eastern Florida. The State occupied the same relative rank in 1880. In the number of persons engaged, South Carolina is in advance of Florida, owing to the relatively large semi-professional fishing population in the river fisheries. Compared with 1880, the results of the present canvass show an increase in persons and property and a decrease in the quantity and value of the catch. An analysis of the returns indicates that the decline has been chiefly in the shrimp, sturgeon, and alewife fisheries, while an advance is to be noted in the yield of terrapin and shad. The most important fishery of this State is that for shad, after which, in order of their value, are the fisheries for sea bass or blackfish, oysters, whiting, and shrimp.

* The Fisheries and Fishery Industries of the United States. <Section III, The Fishing Grounds of North America. Pp. 53–55.

The principal opportunities for the development of the fisheries of the State probably lie in the oyster-grounds and the facilities offered for their cultivation. A recent examination of the coastal waters of this State by the U. S. Fish Commission with reference to their availability for oyster-culture demonstrated the fact that the natural oyster beds are being depleted and that recourse must be had to artificial methods if the supply is to be maintained. The natural grounds surveyed occupied less than 800 acres, but there are probably 15,000 or 20,000 acres of bottom now destitute of oysters that are suitable for planting purposes. Those persons who are interested in the subject should consult the report* in which the results of the survey are given.

GENERAL NOTES AND STATISTICS.

Three tables follow, in which the condensed statistics of the fisheries of this State are shown for the years 1889 and 1890.

From Table 23 it is seen that in the latter year the fisheries gave employment to 2,701 persons, of whom 74 were employed in the vessel fisheries, 2,503 in the shore or boat fisheries, and 124 in the shore branches of the industry.

The aggregate capital invested in the business, as indicated in Table 24, was $127,762, of which $29,325 represented vessels and their outfits, $31,804 boats, $22,108 apparatus, and $44,525 shore property and working capital.

Table 25 gives the quantity and value of each product of the fisheries. The total yield in 1890 was 4,944,840 pounds, valued at $202,602, of which more than half was represented by four species, viz, shad, sea bass, oysters, and whiting. Besides these, shrimp, terrapin, and mullet are of importance.

23.—Table of persons employed.

How engaged.	1889.	1890.
In vessel fishery	73	67
On transporting vessels		7
In shore fisheries	2,527	2,503
On shore, in fish-houses, etc	42	124
Total	2,642	2,701

24.—Table of apparatus and capital.

Designation.	1889.		1890.	
	No.	Value.	No.	Value.
Vessels fishing	14	$13,300	13	$14,800
Tonnage	222.39		217.38	
Outfit		4,450		3,925
Vessels transporting			2	10,000
Tonnage			22.66	
Outfit				600
Boats	1,234	31,147	1,227	31,804
Apparatus of capture—vessel fisheries:				
Lines		152		143
Apparatus of capture—shore fisheries:				
Seines	71	3,875	74	4,008
Gill nets	1,551	17,030	1,380	13,958
Miscellaneous nets	753	2,038	734	2,464
Lines		452		419
Tongs	146	1,036	169	1,116
Shore property		20,125		27,525
Cash capital		13,000		17,000
Total		107,205		127,762

*An investigation of the coast waters of South Carolina with reference to oyster-culture. Bulletin U. S. Fish Commission, 1890, pp. 303-330, 7 maps.

25.—Table of products.

Species.	1889.		1890.	
	Pounds.	Value.	Pounds.	Value.
Alewives, fresh	37,160	$939	28,600	$740
Black bass, fresh	1,995	100	2,100	107
Bluefish, fresh	110,060	3,300	100,480	3,060
Bream and perch, fresh	103,233	5,139	104,635	5,204
Catfish, fresh	132,163	4,618	129,051	4,523
Channel bass, fresh	90,870	3,077	88,410	2,986
Drum, fresh	170,305	2,095	184,618	2,340
Hickory shad, fresh	42,918	1,467	34,237	1,226
Mullet, fresh	104,400	1,810	58,000	1,650
Mullet, salted	240,000	8,400	329,875	7,755
Sea bass, fresh	886,274	28,362	826,164	26,283
Shad, fresh	577,457	42,696	563,259	41,187
Sheepshead, fresh	38,640	1,265	39,100	1,256
Snappers, fresh	.....	.....	18,500	553
Spots and croakers, fresh	46,050	1,596	41,670	1,450
Squeteague, fresh	116,113	4,129	103,106	3,604
Striped bass, fresh	10,785	1,010	11,560	1,084
Sturgeon, fresh	271,980	3,071	203,962	3,850
Suckers, fresh	48,593	2,257	49,872	2,277
Whiting, fresh	491,382	19,768	523,520	20,930
Miscellaneous fish, fresh	502,702	16,430	509,886	16,645
Shrimps	380,400	19,020	371,840	18,592
Crabs	80,230	1,362	93,260	1,740
Terrapins	71,325	7,071	74,948	8,376
Oysters	*305,340	19,890	†442,050	23,204
Caviare	12,750	1,509	12,137	1,980
Total	4,879,125	200,381	4,944,840	202,602

* 43,620 bushels. † 63,150 bushels.

CONSIDERATION OF THE FISHERIES BY COUNTIES.

There are six counties of this State that abut immediately on the coast, all of which support commercial fisheries. There are nine others on the Savannah, Edisto, and Pedee rivers that have fisheries entitled to consideration as being of an economic nature. The extent of the fisheries in each county is shown in the three following tables, which relate to persons engaged, capital invested, and products. The figures for Charleston and Berkeley counties are combined, owing to their close connections, which made it difficult to satisfactorily separate the statistics.

26.—Table showing by counties the number of persons employed in the fisheries of South Carolina in 1889 and 1890.

Counties.	On fishing vessels.		On transporting vessels.		In shore fisheries.		On shore, in fish-houses, etc.		Total.	
	1889.	1890.	1889.	1890.	1889.	1890.	1889.	1890.	1889.	1890.
Chesterfield	.....	.....	.....	.....	47	50	.....	.....	47	50
Marlboro	.....	.....	.....	.....	43	45	.....	.....	43	45
Marion	.....	.....	.....	.....	225	221	.....	.....	225	221
Darlington	.....	.....	.....	.....	30	32	.....	.....	30	32
Florence	.....	.....	.....	.....	111	106	.....	.....	111	106
Williamsburg	.....	.....	.....	.....	83	84	.....	.....	83	84
Georgetown and Horry	.....	.....	.....	.....	719	671	10	12	729	683
Orangeburg	.....	.....	.....	.....	133	126	.....	.....	133	126
Berkeley and Charleston	73	67	.....	7	687	731	28	106	788	911
Colleton	.....	.....	.....	.....	110	111	.....	.....	110	111
Aiken	.....	.....	.....	.....	23	21	.....	.....	23	21
Barnwell	.....	.....	.....	.....	75	70	.....	.....	75	70
Hampton	.....	.....	.....	.....	30	25	.....	.....	30	25
Beaufort	.....	.....	.....	.....	211	210	4	6	215	216
Total	73	67	.....	7	2,527	2,503	42	124	2,642	2,701

27.—Table showing by counties the apparatus and capital employed in the fisheries of South Carolina in 1889 and 1890.

Designation.	Chesterfield.				Marlboro.				Marion.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Boats	18	$106	20	$114	18	$103	19	$105	165	$825	163	$815
Apparatus of capture:												
Seines	3	162	3	162	2	108	2	108	.....	.....	.....	.....
Gill nets	.....	.....	.....	.....	.....	.....	.....	.....	150	450	155	464
Miscellaneous nets	34	159	36	163	15	75	7	35	115	296	110	293
Lines	.....	5	.....	5	.....	4	.....	5	.....	25	.....	26
Total	.....	432	.....	444	.....	290	.....	253	.....	1,596	.....	1,598

Designation.	Darlington.				Florence.				Williamsburg.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Boats	13	$72	14	$78	81	$387	78	$381	50	$225	49	$220
Apparatus of capture:												
Seines	4	215	4	215	.....	.....	.....	.....	.....	.....	.....	.....
Gill nets	1	6	1	6	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous nets	6	20	7	22	72	188	68	182	48	134	47	131
Lines	.....	5	.....	5	.....	11	.....	11	.....	6	.....	6
Total	.....	318	.....	326	.....	586	.....	574	.....	365	.....	357

Designation.	Georgetown and Horry.				Orangeburg.				Berkeley and Charleston.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels fishing	.....	.....	.....	.....	.....	.....	.....	.....	14	$13,300	13	$14,800
Tonnage	.....	.....	.....	.....	.....	.....	.....	.....	222.39	.....	217.38	.....
Outfit	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,450	.....	3,925
Vessels transporting	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	10,000
Tonnage	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	22.66	.....
Outfit	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	600
Boats	326	$8,148	283	$7,711	36	$109	34	$101	287	18,529	331	19,660
Apparatus of capture—vessel fisheries:												
Lines	.....	.....	.....	.....	.....	.....	.....	.....	.....	152	.....	143
Apparatus of capture—shore fisheries:												
Seines	12	1,400	12	1,335	3	120	3	120	28	1,090	29	1,120
Gill nets	433	13,745	368	10,031	465	233	448	224	46	1,440	60	1,982
Miscellaneous nets	109	468	119	376	98	245	94	236	51	306	50	300
Lines	.....	15	.....	16	....	2	....	2	.....	280	.....	240
Tongs	10	50	10	48	....	200	....	200	60	400	78	457
Shore property	.....	3,000	.....	3,000	....	.....	....	.....	.....	15,600	.....	22,600
Cash capital	.....	3,000	.....	3,000	....	.....	....	.....	.....	10,000	.....	14,000
Total	.....	29,826	.....	25,517	....	909	....	883	.....	65,547	.....	89,827

Designation.	Colleton.				Aiken.				Barnwell.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Boats	57	$686	61	$823	11	$75	10	$69	26	$104	23	$92
Apparatus of capture:												
Seines	12	480	13	540	.....	.....	.....	.....	.....	.....	.....	.....
Gill nets	217	539	217	608	15	130	11	123	208	124	101	70
Miscellaneous nets	21	43	16	38	12	22	10	21	65	171	63	164
Lines	.....	9	.....	8	.....	29	.....	27	.....	23	.....	25
Tongs	6	36	6	36	.....	.....	.....	.....	.....	.....	.....	.....
Shore property	.....	1,125	.....	1,175	.....	.....	.....	.....	.....	.....	.....	.....
Total	.....	2,918	.....	3,228	.....	256	.....	240	.....	422	.....	351

27.—Table showing by counties the apparatus and capital employed in South Carolina fisheries—Continued.

Designation.	Hampton.				Beaufort.				Total.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels fishing	.....	.....	.....	.....	.....	.....	.....	.....	14	$13,300	13	$14,800
Tonnage	.....	.....	.....	.....	.....	.....	.....	.....	222.39	.....	217.38	.....
Outfit	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,450	.....	3,925
Vessels transporting	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	10,000
Tonnage	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	22.66	.....
Outfit	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	600
Boats	14	$138	15	$145	132	$1,640	127	$1,490	1,234	31,147	1,227	31,804
Apparatus of capture—vessel fisheries:												
Lines	.....	.....	.....	.....	.....	.....	.....	.....	.....	152	.....	143
Apparatus of capture—shore fisheries:												
Seines	.....	.....	.....	.....	7	300	8	408	71	3,875	74	4,008
Gill nets	14	333	15	340	2	30	4	110	1,551	17,030	1,380	13,958
Miscellaneous nets	7	11	9	13	100	500	98	490	753	2,638	734	2,464
Lines	.....	15	.....	18	....	23	....	25	.....	452	.....	419
Tongs	.....	.....	.....	.....	70	350	75	375	146	1,036	169	1,116
Shore property	.....	200	.....	250	....	200	....	500	.....	20,125	.....	27,525
Cash capital	.....	.....	.....	.....	.....	.....	.....	.....	.....	13,000	.....	17,000
Total	.....	697	.....	766	....	3,043	....	3,398	.....	107,205	.....	127,762

28.—Table showing by counties and species the yield of the fisheries of South Carolina in 1889 and 1890.

Species.	Chesterfield.				Marlborough.				Marion.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives, fresh	.....	.....	.....	.....	.....	.....	.....	.....	16,200	$405	12,300	$310
Bream and perch, fresh	8,830	$428	8,580	$415	12,000	$585	12,240	$594	20,915	976	20,800	959
Catfish, fresh	8,668	259	8,412	252	11,849	356	11,075	332	14,680	464	15,600	495
Hickory shad, fresh	682	33	733	36	455	22	489	24	.....	.....	.....	.....
Shad, fresh	9,194	1,078	11,753	1,165	3,410	350	2,600	265	15,860	1,219	16,021	1,386
Sturgeon, fresh	1,067	32	910	27	711	21	607	18	.....	.....	.....	.....
Suckers, fresh	11,869	485	12,097	494	662	33	698	35	3,500	150	3,945	158
Miscellaneous fish, fresh	6,176	247	5,870	233	9,557	383	8,783	351	11,585	463	12,750	486
Total	46,486	2,562	48,355	2,622	38,644	1,750	36,492	1,619	82,740	3,677	81,416	3,794

Species.	Darlington.				Florence.				Williamsburg.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives	.....	.....	.....	.....	9,720	$243	7,380	$186	3,240	$81	2,460	$62
Bream and perch, fresh	7,785	$378	7,650	$371	9,560	464	9,780	475	2,870	140	3,060	148
Catfish, fresh	8,378	251	8,240	248	8,600	258	8,200	246	2,718	82	2,600	78
Hickory shad, fresh	911	44	978	50	.....	.....	.....	.....	.....	.....	.....	.....
Shad, fresh	5,744	515	5,336	526	14,446	1,110	12,178	934	11,982	890	11,657	877
Sturgeon, fresh	1,422	42	1,245	37	.....	.....	.....	.....	.....	.....	.....	.....
Suckers, fresh	1,325	66	1,395	70	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous fish, fresh	5,369	217	5,037	202	5,630	225	5,800	232	1,925	77	1,840	74
Total	30,934	1,513	29,881	1,504	47,956	2,300	43,338	2,073	22,735	1,270	21,617	1,239

Species.	Colleton.				Aiken.				Barnwell.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Bream and perch, fresh	9,280	$622	10,010	$662	.....	.....	.....	.....	3,600	$180	3,440	$172
Catfish, fresh	2,500	50	2,890	60	13,273	$742	13,580	$743	10,027	600	8,960	560
Hickory shad, fresh	2,516	118	2,761	138	.....	.....	.....	.....	.....	.....	.....	.....
Shad, fresh	25,183	1,982	30,638	2,618	2,639	414	2,366	376	4,563	485	4,004	430
Striped bass, fresh	3,085	300	2,880	280	.....	.....	.....	.....	.....	.....	.....	.....
Sturgeon, fresh	27,300	535	45,500	1,365	9,520	136	8,400	120	.....	.....	.....	.....
Suckers, fresh	1,375	83	1,260	76	.....	.....	.....	.....	7,330	370	7,226	360
Miscellaneous fish, fresh	6,500	484	11,740	694	2,120	135	2,040	135	.....	.....	.....	.....
Oysters	7,840	840	8,750	938	.....	.....	.....	.....	.....	.....	.....	.....
Caviare	2,375	285	1,562	250	.....	.....	.....	.....	.....	.....	.....	.....
Total	87,954	5,299	117,991	7,081	27,552	1,427	26,386	1,374	25,520	1,635	23,630	1,522

28.—Table showing by counties and species the yield of the fisheries of South Carolina in 1889 and 1890—Cont'd.

Species.	Georgetown and Horry.				Orangeburg.				Berkeley and Charleston.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives, fresh	8,000	$210	6,460	$182	.....	.....	.....	.....	.....	.....	.....	.....
Black bass, fresh	1,995	100	2,100	107	.....	.....	.....	.....	.....	.....	.....	.....
Bluefish, fresh	.....	.....	.....	.....	.....	.....	.....	.....	110,060	$3,300	100,480	$3,060
Bream and perch, fresh	14,737	651	14,610	656	8,250	$444	7,900	$441	.....	.....	.....	.....
Catfish, fresh	13,070	436	11,700	396	.....	.....	.....	.....	12,850	380	15,064	450
Channel bass, fresh	8,420	420	6,060	360	.....	.....	.....	.....	76,350	2,287	77,540	2,326
Drum, fresh	.....	.....	.....	.....	.....	.....	.....	.....	15,305	450	19,618	590
Hickory shad, fresh	33,182	995	24,108	720	512	24	568	28	4,660	231	4,600	230
Mullet, fresh	8,400	210	18,000	450	.....	.....	.....	.....	96,000	1,600	40,000	1,200
Mullet, salted	240,000	8,400	329,875	7,755	.....	.....	.....	.....	.....	.....	.....	.....
Sea bass, fresh	.....	.....	.....	.....	.....	.....	.....	.....	878,974	28,131	819,964	26,088
Shad, fresh	338,433	24,825	325,819	23,044	10,091	928	9,193	848	113,525	7,185	111,150	6,840
Sheepshead, fresh	.....	.....	.....	.....	.....	.....	.....	.....	33,640	1,005	35,580	1,067
Snappers, fresh	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	18,500	553
Spots and croakers, fresh	.....	.....	.....	.....	.....	.....	.....	.....	38,620	1,184	34,280	1,040
Squeteague, fresh	10,715	640	8,306	480	.....	.....	.....	.....	87,678	2,629	80,710	2,418
Striped bass, fresh	3,000	240	2,800	224	700	70	620	60	4,000	400	5,260	520
Sturgeon, fresh	198,800	1,420	112,000	1,280	.....	.....	.....	.....	4,860	150	4,500	145
Suckers, fresh	7,440	310	8,423	340	15,092	760	14,828	744	.....	.....	.....	.....
Whiting, fresh	.....	.....	.....	.....	.....	.....	.....	.....	450,862	18,060	493,750	19,750
Miscellaneous fish, fresh	23,685	948	22,510	887	1,355	108	1,705	137	414,440	12,408	419,516	12,540
Shrimps	.....	.....	.....	.....	.....	.....	.....	.....	360,400	18,020	359,840	17,992
Crabs	1,020	42	1,200	45	.....	.....	.....	.....	83,350	1,250	90,060	1,620
Terrapins	3,000	250	3,600	350	.....	.....	.....	.....	51,075	5,221	51,525	5,725
Oysters	17,500	1,000	18,200	1,300	.....	.....	.....	.....	161,000	13,800	241,500	14,766
Caviare	9,375	1,104	8,750	1,505	.....	.....	.....	.....	.....	.....	.....	.....
Total	940,022	42,201	923,621	40,081	36,000	2,334	34,814	2,258	2,997,649	117,691	3,023,437	118,920

Species.	Hampton.				Beaufort.				Total for the State.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives, fresh	.....	.....	.....	.....	.....	.....	.....	.....	37,160	$939	28,600	$740
Black bass, fresh	.....	.....	.....	.....	.....	.....	.....	.....	1,995	100	2,100	107
Bluefish, fresh	.....	.....	.....	.....	.....	.....	.....	.....	110,060	3,300	100,480	3,060
Bream and perch, fresh	5,406	$271	6,565	$311	.....	.....	.....	.....	103,233	5,139	104,635	5,204
Catfish, fresh	25,550	740	22,730	663	.....	.....	.....	.....	132,163	4,618	129,051	4,523
Channel bass, fresh	.....	.....	.....	.....	6,100	$370	4,810	$300	90,870	3,077	88,410	2,986
Drum, fresh	.....	.....	.....	.....	155,000	1,645	165,000	1,750	170,305	2,095	184,618	2,340
Hickory shad, fresh	.....	.....	.....	.....	.....	.....	.....	.....	42,918	1,467	34,237	1,226
Mullet, fresh	.....	.....	.....	.....	.....	.....	.....	.....	104,400	1,810	58,000	1,650
Mullet, salted	.....	.....	.....	.....	.....	.....	.....	.....	240,000	8,400	329,875	7,755
Sea bass, fresh	.....	.....	.....	.....	7,300	231	6,200	195	886,274	28,362	826,164	26,283
Shad, fresh	18,187	1,475	16,484	1,646	4,200	240	4,060	232	577,457	42,696	563,259	41,187
Sheepshead, fresh	.....	.....	.....	.....	5,000	260	3,520	180	38,640	1,265	39,100	1,256
Snappers, fresh	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	18,500	553
Spots and croakers, fresh	.....	.....	.....	.....	7,430	412	7,390	410	46,050	1,596	41,670	1,450
Squeteague, fresh	.....	.....	.....	.....	17,720	860	14,090	706	116,113	4,129	103,196	3,604
Striped bass, fresh	.....	.....	.....	.....	.....	.....	.....	.....	10,785	1,010	11,560	1,084
Sturgeon, fresh	28,300	735	28,000	788	.....	.....	2,800	70	271,980	3,071	203,962	3,850
Suckers, fresh	.....	.....	.....	.....	.....	.....	.....	.....	48,593	2,257	49,872	2,277
Whiting, fresh	.....	.....	.....	.....	40,520	1,708	29,770	1,180	491,382	19,768	523,520	20,930
Miscellaneous fish, fresh	760	45	1,330	80	13,600	690	10,965	594	502,702	16,430	509,886	16,645
Shrimps	.....	.....	.....	.....	20,000	1,000	12,000	600	380,400	19,020	371,840	18,592
Crabs	.....	.....	.....	.....	1,860	70	2,000	75	86,230	1,362	93,260	1,740
Terrapins	.....	.....	.....	.....	18,000	1,600	20,723	2,301	71,325	7,071	74,948	8,376
Oysters	.....	.....	.....	.....	119,000	4,250	173,600	6,200	305,340	19,890	442,050	23,204
Caviare	1,000	120	1,200	200	.....	.....	625	25	12,750	1,509	12,137	1,980
Total	79,203	3,386	76,309	3,688	415,730	13,336	457,553	14,827	4,879,125	200,381	4,944,840	202,602

PRODUCTS WITH REFERENCE TO THE APPARATUS USED.

The quantity and value of the products of the fisheries taken by means of lines are much greater than those taken by any other form of apparatus, amounting in 1890 to 2,448,043 pounds, worth $79,485. The most prominent fish captured are sea bass and whiting. Next to lines in importance are gill nets, the yield of which was 781,593 pounds, valued at $40,494, of which $30,051 represented shad. The catch in seines was 537,853 pounds and sold for $17,050, more than half of which represented mullet. Such miscellaneous types of nets as skim nets, cast nets, dip nets, etc., took 183,116 pounds, valued at $11,681, consisting chiefly of shad. The details of this phase of the industry are given by counties in Table 29, which relates to the shore fisheries.

Although the vessel fisheries of South Carolina rank second in value among those of the States of this region, they are relatively and actually unimportant when compared with the shore or boat fisheries. Vessels are employed only in Charleston County and engage only in line fishing on the banks off Charleston. Sea bass and snappers are the species taken. In 1889 the catch amounted to 528,911 pounds, worth $17,631, and in 1890 to 538,278 pounds, valued at $17,641.

29.—Table showing by counties, apparatus, and species the yield of the shore fisheries of South Carolina in 1889 and 1890.

Apparatus and species.	Chesterfield.				Marlboro.				Marion.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Seines:												
Catfish, fresh	1,378	$41	1,012	$30	919	$28	675	$20	.....	.....	.....	.....
Hickory shad, fresh	682	33	733	36	455	22	489	24	.....	.....	.....	.....
Shad, fresh	3,393	384	3,108	280	.....	.....	.....	.....	.....	.....	.....	.....
Sturgeon, fresh	1,067	32	910	27	711	21	607	18	.....	.....	.....	.....
Suckers, fresh	994	50	1,047	52	662	33	698	35	.....	.....	.....	.....
Other fish, fresh	446	20	260	10	297	13	173	7	.....	.....	.....	.....
Total	7,960	560	7,070	435	3,044	117	2,642	104	.....	.....	.....	.....
Gill nets:												
Bream and perch, fresh	.....	.....	.....	.....	.....	.....	.....	.....	3,050	$120	3,300	$130
Suckers, fresh	.....	.....	.....	.....	.....	.....	.....	.....	3,500	150	3,945	158
Other fish, fresh	.....	.....	.....	.....	.....	.....	.....	.....	1,950	78	2,750	86
Total	.....	.....	.....	.....	.....	.....	.....	.....	8,500	348	9,995	374
Miscellaneous nets:												
Alewives, fresh	.....	.....	.....	.....	.....	.....	.....	.....	16,200	405	12,300	310
Shad, fresh	5,801	694	8,645	885	3,410	350	2,600	265	15,860	1,219	16,021	1,386
Suckers, fresh	10,875	435	11,050	442	.....	.....	.....	.....	.....	.....	.....	.....
Other fish, fresh	420	15	370	13	2,125	85	1,250	50	.....	.....	.....	.....
Total	17,096	1,144	20,065	1,340	5,535	435	3,850	315	32,060	1,624	28,321	1,696
Lines:												
Bream and perch, fresh	8,830	428	8,580	415	12,000	585	12,240	594	17,865	856	17,500	829
Catfish, fresh	7,290	218	7,400	222	10,930	328	10,400	312	14,080	464	15,600	495
Other fish, fresh	5,310	212	5,240	210	7,135	285	7,360	294	9,635	385	10,000	400
Total	21,430	858	21,220	847	30,065	1,198	30,000	1,200	42,180	1,705	43,100	1,724
Grand total	46,486	2,562	48,355	2,622	38,644	1,750	36,492	1,619	82,740	3,677	81,416	3,794

29.—Table showing by counties, apparatus, etc., the yield of the shore fisheries of South Carolina—Continued.

Apparatus and species.	Darlington.				Florence.				Williamsburg.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Seines:												
Catfish, fresh	1,838	$55	1,340	$41	.....	.....	.....	.....	.....	.....	.....	.....
Hickory shad, fresh	911	44	978	50	.....	.....	.....	.....	.....	.....	.....	.....
Shad, fresh	4,525	405	4,143	374	.....	.....	.....	.....	.....	.....	.....	.....
Sturgeon, fresh	1,422	42	1,245	37	.....	.....	.....	.....	.....	.....	.....	.....
Suckers, fresh	1,325	66	1,395	70	.....	.....	.....	.....	.....	.....	.....	.....
Other fish, fresh	594	26	347	13	.....	.....	.....	.....	.....	.....	.....	.....
Total	10,615	638	9,448	585	.....	.....	.....	.....	.....	.....	.....	.....
Gill nets:												
Shad, fresh	244	23	260	80	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous nets:												
Alewives, fresh	.....	.....	.....	.....	9,720	$243	7,380	$186	3,240	$81	2,460	$62
Catfish, fresh	300	9	400	12	.....	.....	.....	.....	.....	.....	.....	.....
Shad, fresh	975	87	933	72	14,446	1,110	12,178	934	11,982	890	11,657	877
Other fish, fresh	60	3	90	5	.....	.....	.....	.....	.....	.....	.....	.....
Total	1,335	99	1,423	89	24,166	1,353	19,558	1,120	15,222	971	14,117	939
Lines:												
Bream and perch, fresh	7,785	378	7,650	371	9,560	464	9,780	475	2,870	140	3,060	148
Catfish, fresh	6,240	187	6,500	195	8,600	258	8,200	246	2,718	82	2,600	78
Other fish, fresh	4,715	188	4,600	184	5,630	225	5,800	232	1,925	77	1,840	74
Total	18,740	753	18,750	750	23,790	947	23,780	953	7,513	299	7,500	300
Grand total	30,934	1,513	29,881	1,504	47,956	2,300	43,338	2,073	22,735	1,270	21,617	1,239

Apparatus and species.	Colleton.				Aiken.				Barnwell.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Seines:												
Bream and perch, fresh	2,480	$198	2,600	$208	.....	.....	.....	.....	.....	.....	.....	.....
Hickory shad, fresh	2,048	98	2,256	113	.....	.....	.....	.....	.....	.....	.....	.....
Shad, fresh	10,720	992	11,711	1,081	.....	.....	.....	.....	.....	.....	.....	.....
Striped bass, fresh	2,595	250	2,480	240	.....	.....	.....	.....	.....	.....	.....	.....
Suckers, fresh	1,375	83	1,260	76	.....	.....	.....	.....	.....	.....	.....	.....
Other fish, fresh	1,700	100	1,940	110	.....	.....	.....	.....	.....	.....	.....	.....
Total	20,918	1,721	22,247	1,828	.....	.....	.....	.....	.....	.....	.....	.....
Gill nets:												
Bream and perch, fresh	.....	.....	.....	.....	.....	.....	.....	.....	3,600	$180	3,440	$172
Hickory shad, fresh	468	20	505	25	.....	.....	.....	.....	.....	.....	.....	.....
Shad, fresh	8,938	550	12,427	1,022	2,639	$414	2,366	$376	1,040	160	975	150
Sturgeon, fresh	27,300	535	45,500	1,365	9,520	136	8,400	120	.....	.....	.....	.....
Suckers, fresh	.....	.....	.....	.....	.....	.....	.....	.....	7,330	370	7,226	360
Other fish, fresh	4,800	384	9,800	584	900	60	600	45	.....	.....	.....	.....
Total	41,506	1,489	68,232	2,996	13,059	610	11,366	541	11,970	710	11,641	682
Miscellaneous nets:												
Catfish, fresh	2,500	50	2,890	60	2,843	162	2,480	140	2,187	130	2,304	144
Shad, fresh	5,525	440	6,500	515	.....	.....	.....	.....	3,523	325	3,029	280
Striped bass, fresh	490	50	400	40	.....	.....	.....	.....	.....	.....	.....	.....
Other fish, fresh	.....	.....	.....	.....	1,220	75	1,440	90	.....	.....	.....	.....
Total	8,515	540	9,790	615	4,063	237	3,920	230	5,710	455	5,333	424
Lines:												
Bream and perch, fresh	6,800	424	7,410	454	.....	.....	.....	.....	.....	.....	.....	.....
Catfish, fresh	.....	.....	.....	.....	10,430	580	11,100	603	7,840	470	6,656	416
Total	6,800	424	7,410	454	10,430	580	11,100	603	7,480	470	6,656	416
Miscellaneous:												
Oysters	7,840	840	8,750	938	.....	.....	.....	.....	.....	.....	.....	.....
Caviare	2,375	285	1,562	250	.....	.....	.....	.....	.....	.....	.....	.....
Total	10,215	1,125	10,312	1,188	.....	.....	.....	.....	.....	.....	.....	.....
Grand total	87,954	5,299	117,991	7,081	27,552	1,427	26,386	1,374	25,520	1,635	23,630	1,522

29.—Table showing by counties, apparatus, etc., the yield of the shore fisheries of South Carolina—Continued.

Apparatus and species.	Georgetown and Horry.				Orangeburg.				Berkeley and Charleston.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Seines:												
Bream and perch, fresh					500	$40	420	$33				
Channel bass									26,220	$787	30,000	$900
Hick'ry shad, fresh					512	24	568	28	800	38	600	30
Mullet, fresh									96,000	1,600	40,000	1,200
Mullet, salted	240,000	$8,400	329,875	$7,755								
Shad, fresh					2,850	259	2,927	270	4,000	300	3,900	240
Sheepshead, fresh									3,460	105	2,860	85
Spots, fresh									9,010	296	8,950	280
Squeteague, fresh	2,420	145	2,106	120					32,630	979	30,110	900
Striped bass, fresh					700	70	620	60	2,200	220	3,200	320
Sturgeon, fresh									4,860	150	4,500	145
Suckers, fresh					427	25	375	22				
Other fish, fresh	1,870	75	2,040	80	380	30	505	41	13,100	383	13,690	390
Total	244,290	8,620	344,021	7,955	5,369	448	5,415	454	192,280	4,858	137,810	4,490
Gill nets:												
Black bass, fresh	1,995	100	2,100	107								
Bream and perch, fresh	7,247	331	6,320	285	7,200	360	6,880	360				
Channel bass, fresh	8,420	420	6,060	360								
Hick'ry shad, fresh	33,182	995	24,108	720					3,860	193	4,000	200
Mullet, fresh	8,400	210	18,000	450								
Shad, fresh	292,500	21,600	281,836	19,945					109,525	6,885	107,250	6,600
Squeteague, fresh	8,295	495	6,200	360								
Striped bass, fresh									1,800	180	2,060	200
Sturgeon, fresh	198,800	1,420	112,000	1,280								
Suckers, fresh	7,440	310	8,423	340	14,665	735	14,453	722				
Other fish, fresh	15,775	631	14,470	567	975	78	1,200	96	9,800	295	10,000	300
Total	582,054	26,512	479,517	24,414	22,840	1,173	22,533	1,178	124,985	7,553	123,310	7,300
Miscellaneous nets:												
Alewives, fresh	8,000	210	6,460	182								
Catfish, fresh	4,540	136	3,000	90								
Shad, fresh	45,933	3,225	43,983	3,099	7,241	669	6,266	578				
Striped bass, fresh	3,000	240	2,800	224								
Other fish, fresh	1,815	73	1,500	60								
Total	63,288	3,884	57,743	3,655	7,241	669	6,266	578				
Lines:												
Bluefish, fresh									110,060	3,300	100,480	3,060
Bream and perch, fresh	7,490	320	8,290	371	550	44	600	48				
Catfish, fresh	8,530	300	8,700	306					12,850	380	15,064	450
Channel bass, fresh									50,130	1,500	47,540	1,426
Drum, fresh									15,305	450	19,618	590
Sea bass, fresh									350,063	10,500	300,186	9,000
Sheepshead, fresh									30,180	900	32,720	982
Spots and croakers, fresh									29,610	888	25,330	760
Squeteague, fresh									55,048	1,650	50,600	1,518
Whiting, fresh									450,862	18,060	493,750	19,750
Other fish, fresh	4,225	169	4,500	180					391,540	11,730	395,826	11,850
Total	20,245	789	21,490	857	550	44	600	48	1,495,648	49,358	1,481,114	49,386
Miscellaneous:												
Shrimps									360,400	18,020	359,840	17,992
Crabs	1,020	42	1,200	45					83,350	1,250	90,060	1,620
Terrapins	2,250	250	2,700	350					51,075	5,221	51,525	5,725
Oysters	17,500	1,000	18,200	1,300					161,000	13,800	241,500	14,766
Caviare	9,375	1,104	8,750	1,505								
Total	30,145	2,396	30,850	3,200					655,825	38,291	742,925	40,103
Grand total	940,022	42,201	923,621	40,081	36,000	2,334	34,814	2,258	2,468,738	100,060	2,485,159	101,279

29.—Table showing by counties, apparatus, etc., the yield of the shore fisheries of South Carolina—Continued.

Apparatus and species.	Hampton.				Beaufort.				Total.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Seines:												
Bream and perch, fresh									2,980	$238	3,020	$241
Catfish, fresh									4,135	124	3,027	91
Channel bass, fresh					4,000	$240	3,000	$187	30,220	1,027	33,000	1,087
Hick'y shad, fresh									5,408	259	5,624	281
Mullet, fresh									96,000	1,600	40,000	1,200
Mullet, salted									240,000	8,400	329,875	7,755
Shad, fresh									25,488	2,340	25,789	2,245
Sheepshead, fresh					3,000	180	2,000	125	6,460	285	4,860	210
Spots, fresh					2,150	130	2,000	125	11,160	426	10,950	405
Squeteague, fresh					4,000	240	3,000	187	39,050	1,364	35,216	1,207
Striped bass, fresh									5,495	540	6,300	620
Sturgeon, fresh									8,060	245	7,262	227
Suckers, fresh									4,783	257	4,775	255
Whiting, fresh					*3,000*	*180*	*2,000*	*125*	*3,000*	*180*	*2,000*	*125*
Other fish, fresh					7,850	470	7,200	450	26,237	1,117	26,155	1,101
Total					24,000	1,440	19,200	1,199	508,476	18,402	537,853	17,050
Gill nets:												
Black bass, fresh									1,995	100	2,100	107
Bream and perch, fresh	1,406	$91	2,065	$113					22,503	1,082	22,005	1,060
Channel bass, fresh									8,420	420	6,060	360
Hick'y shad, fresh									37,510	1,208	28,613	945
Mullet, fresh									8,400	210	18,000	450
Shad, fresh	18,187	1,475	16,484	1,646	4,200	240	4,060	232	437,273	31,347	425,658	30,051
Squeteague, fresh									8,295	495	6,200	360
Striped bass, fresh									1,800	180	2,060	200
Sturgeon, fresh	28,300	735	28,000	788			2,800	70	263,920	2,826	196,700	3,623
Suckers, fresh									32,935	1,565	34,047	1,580
Other fish, fresh	760	45	1,330	80					34,960	1,571	40,150	1,758
Total	48,653	2,346	47,879	2,627	4,200	240	6,860	302	858,011	41,004	781,593	40,494
Miscellaneous nets:												
Alewives, fresh									37,160	939	28,600	740
Catfish, fresh	2,600	50	2,730	55					14,970	537	13,804	501
Channel bass, fresh					2,100	130	1,810	113	2,100	130	1,810	113
Shad, fresh									114,696	9,009	111,812	8,891
Spots and croakers, fresh					2,480	152	2,830	177	2,480	152	2,830	177
Squeteague, fresh					3,620	220	3,340	209	3,620	220	3,340	209
Striped bass, fresh									3,490	290	3,200	264
Suckers, fresh									10,875	435	11,050	442
Whiting, fresh					1,100	68	1,020	65	1,100	68	1,020	65
Other fish, fresh					1,370	80	1,000	61	7,010	331	5,650	279
Total	2,600	50	2,730	55	10,670	650	10,000	625	197,501	12,111	183,116	11,681
Lines:												
Bluefish, fresh									110,060	3,300	100,480	3,060
Bream and perch, fresh	4,000	180	4,500	198					77,750	3,819	79,610	3,903
Catfish, fresh	22,950	690	20,000	608					113,058	3,957	112,220	3,931
Channel bass, fresh									50,130	1,500	47,540	1,426
Drum, fresh					155,000	1,645	165,000	1,750	170,305	2,095	184,618	2,340
Sea bass, fresh					7,300	231	6,200	195	357,363	10,731	306,386	9,195
Sheepshead, fresh					2,000	80	1,520	64	32,180	980	34,240	1,046
Spots and croakers, fresh					2,800	130	2,560	108	32,410	1,018	27,890	868
Squeteague, fresh					10,100	400	7,750	310	65,148	2,050	58,350	1,828
Whiting, fresh					36,420	1,460	26,750	990	487,282	19,520	520,500	20,740
Other fish, fresh					4,380	140	2,765	83	434,495	13,411	437,931	13,507
Total	26,950	870	24,500	806	218,000	4,086	212,545	3,500	1,930,181	62,381	1,909,765	61,844
Miscellaneous:												
Shrimps					20,000	1,000	12,000	600	380,400	19,020	371,840	18,592
Crabs					1,860	70	2,000	75	86,230	1,362	93,260	1,740
Terrapins					18,000	1,600	20,723	2,301	71,325	7,071	74,948	8,376
Oysters					119,000	4,250	173,600	6,200	305,340	19,890	442,050	23,204
Caviare	1,000	120	1,200	200			625	25	12,750	1,509	12,137	1,980
Total	1,000	120	1,200	200	158,860	6,920	208,948	9,201	856,045	48,852	994,235	53,892
Grand total	79,203	3,386	76,309	3,688	415,730	13,336	457,553	14,827	4,350,214	182,750	4,406,562	184,961

OYSTER PLANTING AND CANNING.

During the years covered by this report, more attention was given to the question of oyster-culture than ever before in the history of the State, and two large companies were organized with a view to develop the oyster industry. In 1890 about 18,000 bushels of seed oysters were planted, but at the time of the inquiry sufficient time had not elapsed to determine what the results would be. Owing to causes not definitely determined, but probably on account of sand swept in by easterly storms, most of the plants of one company were lost. All the oysters planted in this State are placed in shallow water and are exposed at low tide. The opinion is prevalent that oysters deposited in deep water will not live or thrive because of a luxuriant growth of sea weed which collects sand and mud and ultimately smothers the oysters. Mr. Ravenel believes, however, that oysters will live and improve if they are planted in localities in which sand will not ordinarily accumulate, where the current is swift, and where the nature of the bottom is suitable; he states that experiments in deep-water planting have usually been made at the foot of some bank where mud and sand collect.

Besides the two companies mentioned, about 18 men annually plant from 400 to 2,500 bushels of oysters during the spring and summer months and take them up in the fall and winter for the Charleston market. They are planted in creeks near their homes, at a cost of about 30 cents a bushel, including labor, and bring from 50 cents to $1 per bushel when sold, 75 cents being the average price.

In 1890 two firms, located in Charleston and Berkeley counties, respectively, engaged in canning oysters. The establishment of these works resulted in a large increase in the number of fishermen in these counties, with a corresponding increase in boats and in the quantity of oysters taken, though the low price commanded by the oysters intended for canning prevented any great augmentation in the value of the fishery. One of the factories cans fruits and vegetables as well as oysters, and the other did not begin operations until late in the calendar year 1890, so the results of this branch of the industry, as shown in the following table, were relatively small. Only 20,000 bushels of oysters were utilized and only 106,400 cans were prepared.

30.—Table showing the extent of the oyster-canning industry in South Carolina.

Items.	1890.	Items.	1890.
Number of firms	2	Oysters utilized.....bushels..	20,000
Number of persons employed	80	Value paid	$3,000
Value of property	$7,000	Cans prepared .....number..	106,400
Cash capital	$4,000	Value	$7,481
Wages paid	$2,800	Enhancement in value	$4,481

IV.—FISHERIES OF GEORGIA.

The coast line of Georgia is shorter than that of any other State in this section, its extreme length following the general trend being only about 100 miles; but it is so broken by numerous sounds, river mouths, and islands that its actual length is probably not less than 500 or 600 miles. The coastal region is physically similar to South Carolina, consisting of a belt of low sandy or marshy islands and peninsulas intervening between the ocean and the mainland. Beginning on the north the principal islands are, in their order, Wassaw, Ossabaw, St. Catherine, Sapelo, St. Simon, Jekyl, and Cumberland; the largest sounds are Wassaw, St. Catherine, Sapelo, Doboy, Altamaha, St. Simon, and Cumberland. The chief rivers are the Savannah, forming the boundary between Georgia and South Carolina, the Ogeechee, Altamaha, Satilla, and St. Marys, the latter intervening between Georgia and Florida.

Savannah, the most important city on the coast of Georgia, is situated on the Savannah River, about 20 miles from the ocean, and is the headquarters of the fisheries and fish trade of the State. Other fishing centers in the coast region are Brunswick, near the head of St. Simon Sound, and Darien.

FISHING-GROUNDS.

The faunal features of the coast and rivers of Georgia are like those of South Carolina. The sounds and river mouths are favorite resorts for numerous salt-water fishes and abound in crabs, shrimps, and terrapin. Sturgeon, striped bass, shad, and alewives periodically ascend the rivers, in which are also found a large variety of catfishes, suckers, sunfishes, and other edible species. The ocean fishing-grounds consist of small isolated coral banks, to which snappers, blackfish, etc., are attracted in large schools by the abundance of food. The principal offshore grounds resorted to by the fishermen of Georgia are as follows: (1) Tybee Ground, described in the chapter on the fisheries of South Carolina; (2) Tybee Deep-water Ground, situated 40 miles southeast from the Tybee light-house, which is about 3 miles long and 2 miles wide, has a depth of 15 to 18 fathoms, has a bottom of corals, "willows," sand, and shells, and is frequented chiefly from January to March for blackfish and snappers; (3) Sapelo Ground, located about 10 miles east of Sapelo Island, is 4 miles long and 1 mile wide, is 9 to 10 fathoms deep, has a bottom consisting of corals and shells, and is visited by Charleston and Savannah fishermen from June to January, blackfish and snappers being caught.

IMPORTANCE AND DEVELOPMENT OF THE FISHERIES.

While the fisheries of Georgia are of less extent than those of any other State in this region, their relatively small importance depends upon the fact that they are undeveloped rather than upon any scarcity of fishery products or upon any difficulties in the way of prosecuting the industry. In the numerous bays and sounds and in the shore waters desirable food-fishes are found in great variety and abundance, but are taken only in small quantities. In the rivers, on the other hand, fishing has been more extensively prosecuted, and it would appear that in the case of the alewives and sturgeon there has been overfishing.

Comparing the extent of the fisheries of Georgia in 1890 with that in 1880, it is to be observed that an advance has occurred in the number of persons employed, the amount of capital invested, and the value of the products of the salt-water fisheries, while in the river fisheries there has been such a serious decline in the value of the sturgeon and alewives that the aggregate output for the State is eleven thousand dollars less than in 1880. The increase in the yield of oysters, shad, terrapin, and squeteague is a noticeable feature of the fisheries in recent years.

The oyster, the most valuable product of the fisheries of Georgia, is the one to which the greatest attention has of late years been directed and on which the State will probably most rely for the improvement of the fisheries in the coastal waters. Up to within a few years, the depletion of the best oyster-grounds in the State had been going on unchecked, and it seemed only a question of time when the beds in the most accessible situations would be almost exhausted. In 1889, however, the legislature enacted an enlightened law, taking effect January 1, 1890, for the regulation and protection of oyster-culture, which placed the industry on a firm footing and is no doubt destined to greatly promote the oyster interests. Under the provisions of the act authorizing the leasing of grounds to private persons for long periods of time and requiring the cultivation of same, the following transactions took place in Chatham, Glynn, and Camden counties in 1890:

Counties.	Area taken for planting purposes.	Oysters planted.	Value.	Shells planted.	Value.
	Acres.	*Bushels.*		*Bushels.*	
Chatham	450	30,000	$3,000	28,000	$1,400
Glynn	5,418	60,000	4,500	10,000	300
Camden	1,378	27,000	2,700	.....	.....
Total	7,246	117,000	10,200	38,000	1,700

The legislature also authorized the appointment by the governor of an oyster commission, and secured, through the governor, the assistance of the U. S. Coast and Geodetic Survey in making an examination of the waters of the State with reference to their adaptation to oyster-culture. The hydrographic surveys of the littoral waters were conducted by Mr. James C. Drake, ensign U. S. Navy, in the fall and winter of 1889–90, whose investigations had a scope similar to those carried on by the U. S. Fish Commission in South Carolina, of which mention has already been made. The valuable report* of Mr. Drake notes the general depletion of the beds by excessive fishing, the area of the depleted grounds being 1,700 acres. 30,000 acres of bottom, now destitute of oysters, are considered suitable and available for oyster-culture. The report makes the following important reference to oyster-canning and its effects:

> As a means of rapidly depleting the natural beds no more effective method could be instituted than the establishment of factories for the canning of oysters. These in the end will be of great benefit to the State, because the sooner the natural beds are depleted the sooner will the citizens engage in private cultivation, and enact laws that will give inducement to capital.

* On the sounds and estuaries of Georgia, with reference to oyster-culture. Bulletin No. 19, U. S. Coast and Geodetic Survey, Washington, 1891.

Next to the oyster, the most important product of the fisheries is the shad, the yield of which in point of value is nearly equal to that of all the other fishes of the State. After the shad, the species in the order of their importance are terrapin, squeteague, catfish, and shrimp. In the output of terrapin Georgia is surpassed only by Maryland and Virginia.

CONDENSED STATISTICS OF THE FISHERIES.

From the three tables which follow a general idea may be obtained of the extent and condition of the fisheries in 1889 and 1890.

Table 31 shows that in the latter year 64 persons found employment in the vessel fisheries, 1,357 in the shore or boat fisheries, and 201 in the shore industries, the total number, 1,622, being an increase of 125 over the previous year.

The vessels, boats, apparatus, etc., used in the fisheries and the amount of capital invested are given in Table 32. The 23 vessels employed in 1890 measured 267.74 tons and were valued at $26,800, the apparatus carried on them, consisting of seines and tongs, being worth $1,617 additional. The boats in use numbered 788, and had a value of $9,766. In the shore fisheries the gill net is the most numerous and valuable form of apparatus, after which come the seine, pound net, and cast net, the aggregate value being $12,888. Shore property and working capital constitute the largest investment, amounting to $123,360. The total value of fishing property in 1890 was $174,431, an increase of $53,456 over 1889, the advance being mostly due to additions to the fleet of oyster and fishing vessels and to the working capital.

The quantities and values of the principal products taken in 1889 and 1890 are shown in Table 33. In the former year, 2,643,533 pounds of fish, oysters, shrimp, etc., were landed, valued at $105,727; in 1890 the catch was 2,994,117 pounds, worth $123,563. The value of oysters is greater than any other species, amounting to $40,520 in 1890, after which are shad worth $30,918, terrapin worth $9,107, squeteague worth $7,911, catfish worth $8,175, and shrimp worth $6,081. The increase in the value of the yield in 1890 as compared with the previous years depended largely on an important augmentation of the oyster output.

31.—Table of persons employed.

How engaged.	Number.	
	1889.	1890.
In vessel fisheries	29	50
On transporting vessels	3	14
In shore fisheries	1,294	1,357
On shore, in fish-houses, etc	171	201
Total	1,497	1,622

32.—Table of apparatus and capital.

Designation.	1889.		1890.	
	No.	Value.	No.	Value.
Vessels fishing	13	$6,675	20	$10,025
Tonnage	118.50	.....	212.33	.....
Outfit	.....	3,960	.....	3,375
Vessels transporting	2	4,000	3	11,000
Tonnage	27.37	.....	55.41	.....
Outfit	.....	850	.....	2,400
Boats	725	7,384	788	9,766
Apparatus of capture—vessel fisheries:				
Seines	9	423	28	1,305
Tongs	13	104	40	312
Apparatus of capture—shore fisheries:				
Seines	18	587	23	747
Gill nets	373	7,458	398	7,957
Cast nets	152	760	148	740
Fyke nets	9	240	11	285
Pound nets	5	1,250	5	1,250
Skim nets	297	867	307	893
Small traps	76	123	76	124
Lines	.....	294	.....	306
Tongs	112	560	117	586
Shore property	.....	49,240	.....	51,560
Cash capital	.....	36,200	.....	71,800
Total	.....	120,975	.....	174,431

33.—Table of products.

Species.	1889.		1890.	
	Pounds.	Value.	Pounds.	Value.
Alewives	36,000	$720	24,000	$580
Bream and perch	20,385	974	18,400	888
Catfish	192,251	8,122	192,232	8,175
Channel bass	32,095	1,762	38,870	2,215
Drum	16,580	331	15,000	300
Hickory shad	18,400	921	23,100	1,150
Mullet	57,425	2,589	52,740	2,381
Sea bass	8,200	492	10,000	600
Shad	356,352	27,000	399,660	30,918
Sheepshead	5,165	310	5,000	300
Spots and croakers	14,185	807	13,800	790
Squeteague	130,337	7,183	144,600	7,911
Striped bass	13,260	1,100	9,000	720
Sturgeon	206,360	3,838	80,560	1,497
Suckers	5,692	299	5,923	311
Whiting	11,799	660	18,374	1,060
Miscellaneous	156,274	7,640	112,897	6,259
Oysters	*1,142,400	26,684	‡1,570,485	40,520
Quahogs	†3,200	250	§4,000	300
Shrimps	150,600	5,975	162,160	6,081
Crabs	43,267	935	47,866	1,060
Terrapins	38,040	6,270	43,050	9,107
Caviare	5,875	865	3,000	440
Total	2,643,533	105,727	2,994,117	123,563

* 163,200 bushels. † 224,357 bushels. ‡ 400 bushels. § 500 bushels.

THE FISHERIES CONSIDERED BY COUNTIES.

Of the twenty counties the fisheries of which are covered by this report, only six are directly on the seaboard, the remainder being on the Savannah, Altamaha, and other rivers. The coastal counties are Chatham, Bryan, Liberty, McIntosh, Glynn, and Camden.

The fisheries of Chatham County are much more important than those of all the other counties combined It has the most numerous fishing population, the greatest

amount of invested capital, and the largest and most valuable yield. The only vessel fishing in the State is carried on from this county, and in the catch of nearly all of the principal products—shad, oysters, shrimp, terrapin, etc.—it takes the lead. Glynn County ranks next to Chatham in the general importance of the industry, surpassing the latter in the extent of the mullet and squeteague fisheries. The other coast counties in the order of their rank are Bryan, Camden, McIntosh, and Liberty.

The three tables which follow give a detailed view of the fisheries by counties. The minor (mostly semi-professional) fishing on the rivers does not seem to require separation into counties.

84.—Table showing by counties the number of persons employed in the fisheries of Georgia in 1889 and 1890.

Counties.	On vessels fishing.		On vessels transporting.		In shore fisheries.		On shore, in fish-houses, etc.		Total.	
	1889.	1890.	1889.	1890.	1889.	1890.	1889.	1890.	1889.	1890.
Richmond, Burke, and Screven	.....	.....	.....	.....	72	67	.....	.....	72	67
Chatham	29	50	3	14	314	302	96	114	442	480
Bryan	.....	.....	.....	.....	70	71	.....	.....	70	71
McIntosh	.....	.....	.....	.....	45	43	.....	.....	45	43
Laurens, Montgomery, Tattnall, Liberty, Pulaski, Dodge, Wilcox, Telfair, Coffee, Appling, and Wayne	.....	.....	.....	.....	650	677	.....	.....	650	677
Glynn	.....	.....	.....	.....	120	156	75	87	195	243
Camden	.....	.....	.....	.....	23	41	.....	.....	23	41
Total	29	50	3	14	1,294	1,357	171	201	1,497	1,622

85.—Table showing by counties the apparatus and capital employed in the fisheries of Georgia in 1889 and 1890.

Designation.	Richmond, Burke, and Screven.				Chatham.			
	1889.		1890.		1889.		1890.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels fishing	.....	.....	.....	.....	13	$6,675	20	$10,025
Tonnage	.....	.....	.....	.....	118.50	.....	212.33	.....
Outfit	.....	.....	.....	.....	.....	3,960	.....	3,375
Vessels transporting	.....	.....	.....	.....	1	1,000	1	3,500
Tonnage	.....	.....	.....	.....	15.69	.....	14.37	.....
Outfit	.....	.....	.....	.....	.....	100	.....	800
Boats	35	$218	32	$202	200	3,348	197	3,318
Apparatus of capture—vessel fisheries:								
Seines	.....	.....	.....	.....	9	423	28	1,305
Tongs	.....	.....	.....	.....	13	104	40	312
Apparatus of capture—shore fisheries:								
Seines	.....	.....	.....	.....	10	360	14	520
Gill nets	39	310	38	308	75	3,629	84	3,870
Cast nets	10	50	8	40	105	525	100	500
Fyke nets	.....	.....	.....	.....	7	230	8	270
Skim nets	6	18	5	15	.....	.....	.....	.....
Small traps	26	39	27	41	.....	.....	.....	.....
Lines	.....	91	.....	93	.....	105	.....	111
Tongs	.....	.....	.....	.....	96	480	100	500
Shore property	.....	50	.....	50	.....	39,400	.....	40,620
Cash capital	.....	.....	.....	.....	.....	33,200	.....	41,700
Total	.....	776	.....	749	.....	93,539	.....	110,726

35.—Table showing by counties the apparatus and capital employed in the fisheries of Georgia—Continued.

Designation.	Bryan.				McIntosh.			
	1889.		1890.		1889.		1890.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Boats	42	$642	41	$562	30	$435	27	$287
Apparatus of capture:								
Seines	1	12	1	12	3	75	3	75
Gill nets	42	1,479	45	1,665	14	430	14	300
Cast nets	.....	.....	.....	.....	8	40	8	40
Fyke nets	2	10	3	15	.....	.....	.....	.....
Pound nets	5	1,250	5	1,250	.....	.....	.....	.....
Lines	.....	8	.....	5	.....	3	.....	2
Tongs	.....	.....	.....	.....	6	30	3	15
Shore property	.....	2,100	.....	2,280	.....	250	.....	250
Total	.....	5,501	.....	5,789	.....	1,263	.....	969

Designation.	Laurens, Montgomery, Tattnall, Liberty, Pulaski, Dodge, Wilcox, Telfair, Coffee, Appling, and Wayne.				Glynn.			
	1889.		1890.		1889.		1890.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels transporting	.....	.....	.....	.....	1	$3,000	2	$7,500
Tonnage	.....	.....	.....	.....	11.68	.....	41.04	.....
Outfit	.....	.....	.....	.....	.....	750	.....	1,600
Boats	337	$1,023	352	$1,057	67	1,387	107	3,684
Apparatus of capture:								
Seines	.....	.....	.....	.....	4	140	5	140
Gill nets	160	320	164	339	36	1,095	45	1,240
Cast nets	.....	.....	.....	.....	22	110	26	128
Skim nets	291	849	302	878	.....	.....	.....	.....
Small traps	50	84	49	83	.....	.....	.....	.....
Lines	.....	77	.....	85	.....	8	.....	8
Tongs	.....	.....	.....	.....	8	40	11	56
Shore property	.....	.....	.....	.....	.....	7,200	.....	8,110
Cash capital	.....	.....	.....	.....	.....	3,000	.....	23,000
Total	.....	2,353	.....	2,442	.....	16,730	.....	45,466

Designation.	Camden.				Total.			
	1889.		1890.		1889.		1890.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels fishing	.....	.....	.....	.....	13	$6,675	20	$10,025
Tonnage	.....	.....	.....	.....	118.50	.....	212.33	.....
Outfit	.....	.....	.....	.....	.....	3,960	.....	3,375
Vessels transporting	.....	.....	.....	.....	2	4,000	3	11,000
Tonnage	.....	.....	.....	.....	27.37	.....	55.41	.....
Outfit	.....	.....	.....	.....	.....	850	.....	2,400
Boats	14	$331	32	$656	725	7,384	788	9,766
Apparatus of capture—vessel fisheries:								
Seines	.....	.....	.....	.....	9	423	28	1,305
Tongs	.....	.....	.....	.....	13	104	40	312
Apparatus of capture—shore fisheries:								
Seines	.....	.....	.....	.....	18	587	23	747
Gill nets	7	195	8	235	373	7,458	398	7,957
Cast nets	7	35	6	32	152	760	148	740
Fyke nets	.....	.....	.....	.....	9	240	11	285
Pound nets	.....	.....	.....	.....	5	1,250	5	1,250
Skim nets	.....	.....	.....	.....	297	867	307	893
Small traps	.....	.....	.....	.....	76	123	76	124
Lines	.....	2	.....	2	.....	294	.....	306
Tongs	2	10	3	15	112	560	117	586
Shore property	.....	240	.....	250	.....	49,240	.....	51,560
Cash capital	.....	.....	.....	7,100	.....	36,200	.....	71,800
Total	.....	813	.....	8,290	.....	120,975	.....	174,431

36.—Table showing by counties and species the yield of the fisheries of Georgia in 1889 and 1890.

Species.	Richmond, Burke, and Screven.				Chatham.			
	1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives					8,000	$300	8,000	$340
Bream and perch	2,480	$124	2,120	$120	4,344	198	3,336	148
Catfish	46,665	2,332	45,751	2,776	72,624	2,180	72,052	2,177
Channel bass					13,675	784	20,850	1,250
Drum					12,000	240	10,000	200
Hickory shad					12,000	600	13,060	648
Mullet					19,225	961	15,360	768
Sea bass					8,200	492	10,000	600
Shad	6,500	971	6,022	902	123,470	9,590	138,775	11,650
Sheepshead					5,165	310	5,000	300
Spots and croakers					9,835	590	10,000	600
Squeteague					51,917	3,115	51,000	3,060
Striped bass					8,200	700	5,000	400
Sturgeon	16,800	240	25,200	360	119,000	2,200	34,580	704
Suckers	1,675	100	1,430	86				
Whiting					7,800	460	14,184	850
Miscellaneous	6,247	382	5,920	368	99,123	5,267	61,041	3,591
Oysters					674,800	18,020	863,100	29,035
Quahogs					3,200	250	4,000	300
Shrimps					120,000	4,500	136,160	5,106
Crabs					41,667	855	46,666	1,000
Terrapins					31,140	5,190	34,020	7,690
Caviare					4,625	700	2,750	400
Total	80,367	4,049	86,443	4,612	1,441,010	58,102	1,558,934	70,817

Species.	Bryan.				McIntosh.			
	1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives	28,000	$420	16,000	$240				
Bream and perch	6,516	300	5,004	222				
Catfish	25,554	730	25,663	784				
Channel bass					3,460	$230	3,000	$215
Hickory shad	4,800	240	8,040	402	850	43	1,100	55
Mullet					4,000	260	4,180	285
Shad	97,305	7,485	114,725	8,825	15,080	696	20,475	945
Squeteague					9,920	640	10,500	726
Striped bass	5,060	400	4,000	320				
Sturgeon	33,600	600	15,120	270	25,200	540	2,860	143
Miscellaneous	5,034	210	5,563	219	3,870	232	4,113	267
Oysters					14,000	400	8,400	240
Terrapins					4,500	750	1,980	385
Caviare	375	60	250	40				
Total	206,244	10,445	194,365	11,322	80,880	3,791	56,608	3,261

Species.	Laurens, Montgomery, Tattnall, Liberty, Pulaski, Dodge, Wilcox, Telfair, Coffee, Appling, and Wayne.				Glynn.			
	1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Bream and perch	7,045	$352	7,940	$398				
Catfish	47,408	2,380	48,766	2,438				
Channel bass					12,000	$600	11,920	$595
Drum					3,664	73	4,000	80
Hickory shad					750	38	900	45
Mullet					26,900	1,076	25,980	1,039
Shad	99,177	7,574	99,863	7,681	14,820	684	19,800	915
Spots and croakers					3,480	174	3,000	150
Squeteague					54,840	2,742	65,700	3,285
Sturgeon	3,640	26	2,800	20	8,120	232		
Suckers	4,017	199	4,493	225				
Whiting					3,040	152	3,180	159
Miscellaneous	940	46	1,360	69	24,170	1,209	27,920	1,396
Oysters					362,880	6,132	559,188	8,996
Shrimps					25,000	1,195	21,200	795
Crabs					1,280	64	960	48
Terrapins					1,920	265	5,640	826
Caviare					875	105		
Total	162,227	10,577	165,222	10,831	543,739	14,741	749,388	18,329

36.—Table showing by counties and species the yield of the fisheries of Georgia in 1889 and 1890—Continued.

Species.	Camden.				Total for the State.			
	1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives					36,000	$720	24,000	$580
Bream and perch					20,385	974	18,400	888
Catfish					192,251	8,122	192,232	8,175
Channel bass	2,960	$148	3,100	$155	32,095	1,762	38,870	2,215
Drum	916	18	1,000	20	16,580	331	15,000	300
Hickory shad					18,400	921	23,100	1,150
Mullet	7,300	292	7,220	289	57,425	2,589	52,740	2,381
Sea bass					8,200	492	10,000	600
Shad					356,352	27,000	399,660	30,918
Sheepshead					5,165	310	5,000	300
Spots and croakers	870	43	800	40	14,185	807	13,800	790
Squeteague	13,660	686	16,800	840	130,337	7,183	144,000	7,911
Striped bass					13,260	1,100	9,000	720
Sturgeon					206,360	3,838	80,560	1,497
Suckers					5,692	299	5,923	311
Whiting	950	48	1,010	51	11,790	660	18,374	1,060
Miscellaneous	5,890	294	6,980	349	136,274	7,640	112,897	6,259
Oysters	90,720	1,532	139,797	2,249	1,142,400	26,684	1,570,485	40,520
Quahogs					3,200	250	4,000	300
Shrimps	5,000	280	4,800	180	150,000	5,975	162,160	6,081
Crabs	320	16	240	12	43,267	935	47,866	1,060
Terrapins	480	65	1,410	206	38,040	6,270	43,050	9,107
Caviare					5,875	865	3,000	440
Total	129,066	3,422	183,157	4,391	2,643,533	105,727	2,994,117	123,563

PRODUCTS WITH REFERENCE TO APPARATUS USED.

In the limited vessel fishing now carried on in Georgia, seines and tongs are the only forms of apparatus used, and terrapin and oysters are the only products taken. The results of this fishery in the two years covered by this report are shown in the following table, which relates to Chatham County, to which the use of vessels is confined:

37.—Table showing by apparatus the yield of the vessel fisheries of Georgia in 1889 and 1890.

Apparatus and species.	1889.		1890.	
	Pounds.	Value.	Pounds.	Value.
Tongs:				
Oysters	*205,800	$5,220	†250,600	$7,160
Seines:				
Terrapin	‡22,140	3,690	§28,152	6,316
Total	227,940	8,910	278,752	13,476

*29,400 bushels. †35,800 bushels. ‡7,380 in number. §9,384 in number.

The kinds of apparatus employed in the shore fisheries are much more numerous, and the following table, giving the quantities and value of products taken in each form, presents some interesting facts for the different counties. The most important means of capture are gill nets. In 1890 these took 608,662 pounds of fish, valued at $37,063. The next prominent apparatus are lines, which yielded 353,272 pounds of fish, worth $17,887. The other forms of apparatus used in the capture of fish proper—seines, pound nets, cast nets, fyke nets, etc.—are relatively unimportant.

38.—Table showing by counties, apparatus, and species the yield of the shore fisheries of Georgia in 1889 and 1890.

Apparatus and species.	Richmond, Burke, and Screven.				Chatham.			
	1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Seines:								
Channel bass					3,675	$184	5,850	$350
Mullet					3,225	161	5,360	268
Whiting					2,000	120	4,184	250
Miscellaneous fish					3,600	160	4,066	203
Total					12,500	625	19,460	1,071
Gill nets:								
Hickory shad					12,000	600	13,060	648
Mullet					10,000	800	10,000	500
Shad	4,680	$747	4,397	$702	123,470	9,590	138,775	11,650
Squeteague					11,917	715	16,000	960
Sturgeon	16,800	240	25,200	360	119,000	2,200	34,580	704
Miscellaneous fish	4,220	262	4,000	250	6,500	325	4,363	240
Total	25,700	1,249	33,597	1,312	288,887	14,230	216,778	14,702
Cast nets:								
Bream and perch	2,480	124	2,120	120				
Catfish	1,325	90	1,290	87				
Suckers	1,675	100	1,430	86				
Miscellaneous fish	857	50	920	55				
Total	6,337	364	5,760	348				
Fyke nets:								
Alewives					8,000	300	8,000	340
Catfish					7,000	210	5,000	163
Striped bass					6,000	480	3,000	240
Total					21,000	990	16,000	743
Skim nets:								
Shad	1,820	224	1,625	200				
Miscellaneous fish	280	15	200	13				
Total	2,100	239	1,825	213				
Small traps:								
Catfish	6,770	407	6,818	404				
Lines:								
Bream and perch					4,344	198	3,336	148
Catfish	38,570	2,335	37,643	2,285	65,624	1,970	67,052	2,014
Channel bass					10,000	600	15,000	900
Drum					12,000	240	10,000	200
Sea bass					8,200	492	10,000	600
Sheepshead					5,165	310	5,000	300
Spots and croakers					9,835	590	10,000	600
Squeteague					40,000	2,400	35,000	2,100
Striped bass					2,200	220	2,000	160
Whiting					5,800	340	10,000	600
Miscellaneous fish	890	55	800	50	80,023	4,782	52,612	3,148
Total	39,460	2,390	38,443	2,335	243,191	12,142	220,000	10,770
Miscellaneous:								
Oysters					469,000	13,400	612,500	21,875
Quahogs					3,200	250	4,000	300
Shrimps					120,000	4,500	136,160	5,108
Crabs					41,667	855	46,666	1,000
Terrapins					9,000	1,500	5,868	1,374
Caviare					4,625	700	2,750	400
Total					647,492	21,205	807,944	30,055
Grand total	80,367	4,649	86,443	4,612	1,213,070	49,192	1,280,182	57,341

38.—Table showing by counties, apparatus, and species the yield of the shore fisheries of Georgia in 1889 and 1890—Continued.

Apparatus and species.	Bryan.				McIntosh.			
	1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Seines:								
Miscellaneous fish	2,500	$100	2,970	$110	.....	.....	.....	.....
Gill nets:								
Hickory shad	4,800	240	8,040	402	850	$43	1,100	$55
Shad	97,305	7,485	113,100	8,700	15,080	696	20,475	945
Sturgeon	33,600	600	15,120	270	25,200	540	2,860	143
Total	135,705	8,325	136,260	9,372	41,130	1,279	24,435	1,143
Cast nets:								
Mullet	.....	.....	.....	.....	4,000	260	4,180	285
Squeteague	.....	.....	.....	.....	1,120	68	1,230	81
Miscellaneous fish	.....	.....	.....	.....	1,870	112	1,960	127
Total	.....	.....	.....	.....	6,990	440	7,370	493
Fyke nets:								
Catfish	1,715	60	2,515	88	.....	.....	.....	.....
Miscellaneous fish	1,000	40	1,675	67	.....	.....	.....	.....
Total	2,715	100	4,190	155	.....	.....	.....	.....
Pound nets:								
Alewives	28,000	420	16,000	240	.....	.....	.....	.....
Catfish	19,890	560	20,070	600	.....	.....	.....	.....
Shad	.....	.....	1,625	125	.....	.....	.....	.....
Striped bass	5,060	400	4,000	320	.....	.....	.....	.....
Total	52,950	1,380	41,695	1,285	.....	.....	.....	.....
Lines:								
Bream and perch	6,516	300	5,004	222	.....	.....	.....	.....
Catfish	3,949	110	3,078	96	.....	.....	.....	.....
Channel bass	.....	.....	.....	.....	3,460	230	3,000	215
Squeteague	.....	.....	.....	.....	8,800	572	9,270	645
Miscellaneous fish	1,534	70	918	42	2,000	120	2,153	140
Total	11,999	480	9,000	360	14,260	922	14,423	1,000
Miscellaneous:								
Oysters	.....	.....	.....	.....	14,000	400	8,400	240
Terrapins	.....	.....	.....	.....	4,500	750	1,980	385
Caviare	375	60	250	40	.....	.....	.....	.....
Total	375	60	250	40	18,500	1,150	10,380	625
Grand total	206,244	10,445	194,365	11,322	80,880	3,791	56,608	3,261

38.—Table showing by counties, apparatus, and species the yield of the shore fisheries of Georgia in 1889 and 1890—Continued.

Apparatus and species.	Laurens, Montgomery, Tattnall, Liberty, Pulaski, Dodge, Wilcox, Telfair, Coffee, Appling, and Wayne.				Glynn.			
	1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Gill nets:								
Bream and perch	4,205	$210	4,840	$243				
Channel bass					8,160	$408	7,920	$395
Hickory shad					750	38	900	45
Mullet					19,700	788	21,500	860
Shad	42,055	3,180	41,779	3,213	14,820	684	19,800	915
Squeteague					42,000	2,100	50,500	2,525
Sturgeon	3,640	26	2,800	20	8,120	232		
Suckers	4,017	199	4,493	225				
Miscellaneous fish	940	46	1,360	69	14,370	719	16,400	820
Total	54,857	3,661	55,272	3,770	107,920	4,969	117,020	5,560
Cast nets:								
Mullet					7,200	288	4,480	179
Squeteague					8,640	432	11,200	560
Miscellaneous fish					3,520	176	4,000	200
Total					19,360	896	19,680	939
Skim nets:								
Shad	57,122	4,394	58,084	4,468				
Small traps:								
Catfish	13,943	707	12,850	641				
Lines:								
Bream and perch	2,840	142	3,100	155				
Catfish	33,465	1,673	35,916	1,797				
Channel bass					3,840	192	4,000	200
Drum					3,664	73	4,000	80
Spots and croakers					3,480	174	3,000	150
Squeteague					4,200	210	4,000	200
Whiting					3,040	152	3,180	159
Miscellaneous fish					6,280	314	7,520	376
Total	36,305	1,815	39,016	1,952	24,504	1,115	25,700	1,165
Miscellaneous:								
Oysters					362,880	6,132	559,188	8,996
Shrimps					25,000	1,195	21,200	795
Crabs					1,280	64	960	48
Terrapins					1,920	265	5,640	826
Caviare					875	105		
Total					391,955	7,761	586,988	10,665
Grand total	162,227	10,577	165,222	10,831	543,739	14,741	749,388	18,329

38.—Table showing by counties, apparatus, and species the yield of the shore fisheries of Georgia—Continued.

Apparatus and species.	Camden.				Total for the State.			
	1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Seines:								
Channel bass					3,675	$184	5,850	$350
Mullet					3,225	161	5,360	268
Whiting					2,000	120	4,184	250
Miscellaneous fish					6,100	260	7,036	313
Total					15,000	725	22,430	1,181
Gill nets:								
Bream and perch					4,205	210	4,840	243
Channel bass	2,000	$100	2,100	$105	10,160	508	10,020	500
Hickory shad					18,400	921	23,100	1,150
Mullet	5,500	220	6,100	244	41,200	1,808	37,600	1,604
Shad					297,410	22,382	338,326	26,125
Squeteague	10,500	525	13,000	650	64,417	3,340	79,500	4,135
Sturgeon					206,360	3,838	80,560	1,497
Suckers					4,017	199	4,493	225
Miscellaneous fish	3,560	178	4,100	205	29,590	1,530	30,223	1,584
Total	21,560	1,023	25,300	1,204	675,759	34,736	608,662	37,063
Cast nets:								
Bream and perch					2,480	124	2,120	120
Catfish					1,325	90	1,290	87
Mullet	1,800	72	1,120	45	13,000	620	9,780	509
Squeteague	2,100	108	2,800	140	11,860	608	15,230	781
Suckers					1,675	100	1,430	86
Miscellaneous fish	880	44	1,000	50	7,127	382	7,880	432
Total	4,780	224	4,920	235	37,467	1,924	37,730	2,015
Fyke nets:								
Alewives					8,000	300	8,000	340
Catfish					8,715	270	7,515	251
Striped bass					6,000	480	3,000	240
Miscellaneous fish					1,000	40	1,675	67
Total					23,715	1,090	20,190	898
Pound nets:								
Alewives					28,000	420	16,000	240
Catfish					19,890	560	20,070	600
Shad							1,625	125
Striped bass					5,060	400	4,000	320
Total					52,950	1,380	41,695	1,285
Skim nets:								
Shad					58,942	4,618	59,709	4,668
Miscellaneous fish					280	15	200	13
Total					59,222	4,633	59,909	4,681
Small traps:								
Catfish					20,713	1,114	19,668	1,045
Lines:								
Bream and perch					13,700	640	11,440	525
Catfish					141,608	6,088	143,689	6,192
Channel bass	960	48	1,000	50	18,260	1,070	23,000	1,365
Drum	916	18	1,000	20	16,580	331	15,000	300
Sea bass					8,200	492	10,000	600
Sheepshead					5,165	310	5,000	300
Spots and croakers	870	43	800	40	14,185	807	13,800	790
Squeteague	1,060	53	1,000	50	54,060	3,235	49,270	2,995
Striped bass					2,200	220	2,000	160
Whiting	950	48	1,010	51	9,790	540	14,190	810
Miscellaneous fish	1,450	72	1,880	94	92,177	5,413	65,883	3,850
Total	6,206	282	6,690	305	375,925	19,146	353,272	17,887
Miscellaneous:								
Oysters	90,720	1,532	139,797	2,249	936,600	21,464	1,319,885	33,360
Quahogs					3,200	250	4,000	300
Shrimps	5,000	280	4,800	180	150,000	5,975	162,160	6,081
Crabs	320	16	240	12	43,267	935	47,866	1,060
Terrapins	480	65	1,410	206	15,900	2,580	14,898	2,791
Caviare					5,875	865	3,000	440
Total	96,520	1,893	146,247	2,647	1,154,842	32,069	1,551,809	44,032
Grand total	129,066	3,422	183,157	4,391	2,415,593	96,817	2,715,365	110,087

SHORE INDUSTRIES.

The most important of the shore fishing-industries of this State is the wholesale trade in fresh fish, turtles, terrapins, oysters, shrimps, crabs, etc., which is centered at Savannah and Thunderbolt. Six firms, employing 114 persons in various capacities and having over $70,000 invested, are engaged in buying products from the fishermen of this and other States and in shipping them to southern, western, and northern markets. 2,400 tons of ice, valued at $12,000, were consumed in 1890 in the preservation of the products during and prior to transportation. This business is very extensive; in 1890 the quantity of fish, etc., purchased and sold was 9,465,501 pounds, for which the dealers paid $392,719, while the gross sales were probably not less than $1,000,000. The principal details of this trade are brought out in the following table. The mullet, sheepshead, squeteague, channel bass, miscellaneous fish, green turtle, and 290,595 of the shad came from Florida. The snappers were caught by New England smacks fishing off the Florida coast and landing their fares in Savannah. The oysters, crabs, shrimps, terrapins, and 32,000 of the shad were taken by local fishermen. Oysters are shipped in the shell and also shucked, most of the employés recorded being engaged in opening oysters in Savannah and Thunderbolt.

39.—Table showing the extent of the wholesale fish trade of Chatham County, Georgia, in 1890.

Items.	Number.	Value.
Number of firms	6	.....
Persons employed:		
White	13	.....
Colored	101	.....
Value of property	.....	$39,100
Cash capital	.....	34,200
Tons of ice used	2,400	12,000
Products handled:		
Channel bass.....pounds..	209,000	$11,495
Mullet.....do....	4,183,400	104,585
Shad.....do....	*1,048,434	80,649
Sheepshead.....do....	390,000	20,450
Snappers.....do....	1,500,000	45,000
Squeteague.....do....	445,000	24,475
Miscellaneous fish.....do....	315,000	17,325
Green turtle.....do....	80,000	8,000
Terrapins.....do....	†38,160	10,360
Shrimps.....do....	‡148,000	6,475
Crabs.....do....	§31,900	798
Oysters.....do....	‖1,076,607	63,107
Total number of pounds and value paid	9,465,501	392,719

*322,595 in number. †12,720 in number. ‡3,700 bushels. §95,700 in number.
‖153,801 bushels; most of the oysters were sold in an opened condition.

The retail fish trade is an important part of the industrial life of Savannah. There are eleven regular fish-stalls in the city market, which are the property of the city and are annually rented for $202 to $305 each. Nine of the stalls are kept open throughout the year, but two are not used regularly except on Saturday night, when the sale of catfish forms the bulk of the business. In 1890 22 men were engaged in this trade, $3,225 was paid for rent, the capital invested was about $12,000, and the cash required to properly run the industry was $10,000.

The following estimate of the extent of the retail fish trade was obtained by the agent of the office. The source of the retail fish supply is the same as that of the wholesale trade.

40.—Table showing the extent of the retail fish trade of Savannah, Ga., in 1890.

Species.	Pounds.	Cost price.	Selling price.
Catfish	70,000	$2,100	$4,550
Channel bass	100,000	5,000	8,000
Mullet	362,000	9,995	28,960
Sea bass	70,000	4,200	5,600
Shad	150,000	12,000	18,750
Sheepshead	60,000	3,000	4,800
Snapper	150,000	9,000	15,000
Squeteague	150,000	6,000	12,000
Whiting	30,000	1,500	2,400
Miscellaneous salt-water fish	100,000	6,000	8,000
Miscellaneous fresh-water fish	80,000	4,800	6,400
Oysters	*20,000	1,200	1,600
Clams	†1,600	120	200
Total	1,343,600	64,875	116,260

*2,000 gallons. †200 bushels.

The canning of oysters is a branch of the fishing industry that is carried on in one county of this State. In 1889, 268,000 cans were prepared, the market value of which was $18,750, and in 1890, 479,720 cans were put up, which sold for $37,561. The quantity of oysters handled was 50,000 bushels the first year and 89,500 bushels the next season; the price paid was 10 cents a bushel.

41.—Table showing the extent of the oyster-canning industry of Georgia in 1889 and 1890.

Items.	1889.	1890.
Number of canneries	1	1
Number of persons employed	70	87
Value of property	$6,000	$7,000
Cash capital	$3,000	$3,000
Oysters utilized ..... bushels..	50,000	89,500
Value paid	$5,000	$8,950
Cans prepared ..... number..	268.000	479,720
Value	$18,750	$37,561

V.—FISHERIES OF EASTERN FLORIDA.

DESCRIPTION OF THE COAST AND RIVERS.

The coast of eastern Florida, following the general trend, is about 450 miles in length, but the numerous rivers, bays, and lagoons give to the State a much more extensive shore line. At the extreme northern part of the State the St. Marys River forms the boundary between Georgia and Florida, and empties into Cumberland Sound. Below this is Nassau Sound, into the head of which the Nassau River flows. The next important interruption in the shore line is the St. Johns River, from which to the southern extremity of the coast there is an almost continuous line of long, narrow lagoons or rivers which communicate with the ocean at irregular intervals; these are the North River, Matanzas River or Lagoon, Halifax River, Mosquito Lagoon or Hillsboro River, Indian River, Lake Worth, and Biscayne Bay.

The principal fishing centers are Fernandina, the largest coast town of eastern Florida, situated on Amelia Island and separated from the mainland by the river of the same name; Mayport, Fulton, New Berlin, Arlington, Jacksonville, and Palatka, on the St. John River; Enterprise, Sanford, and Monroe, on Lake Monroe; St. Augustine, on Matanzas Lagoon; Ormond, Daytona, and New Smyrna, on Mosquito Lagoon and Halifax River; and Titusville, on the Indian River.

The following description has been given of the physical condition and natural fishery resources of eastern Florida:

The eastern portion of the State is a remarkably level section, rising but a few feet above the sea. The land is composed wholly of sand and broken shells, covered here and there by a thin layer of vegetable mold. The higher ridges of the region are covered with a scattered growth of pine, while the intervening depressions, which are submerged to a depth of from a few inches to several feet, support a rank growth of various swamp grasses, or are covered with dense thickets of cypress, palmetto, magnolia, and ash. Even in the higher pine lands one finds a great number of land-locked ponds and lakes varying from a few rods to several miles in extent. Along the ocean shore the current has thrown up low sandy bars for nearly the entire length of the State; and behind these are shallow lagoons or arms of the sea, with here and there an opening to the ocean. These lagoons, called by the inhabitants rivers, are often broad sheets of salt or brackish water, extending continuously for many miles along the coast, and with but few interruptions along the entire eastern shore of the State. They usually connect with the ocean by means of shallow inlets separated from each other by a considerable distance; and, although very shallow, are often navigable by boats and shoal-draft vessels for their entire length. In the still water of these lagoons many of the salt-water species find an agreeable change from the rougher water outside, some come in to spawn, while others are led to enter inlets in pursuit of food. During the winter months immense quantities of fish may be found in these places, but in summer the water becomes so warm that most of them are driven out into the sea. The saltness of the water varies greatly, being wholly dependent upon the amount of rainfall in the locality. During seasons of continued drought the lagoons are fed from the ocean, when they become very salt. During rainy seasons, however, they are often quite fresh, except at and near the inlets. The freshening of the water has a decided influence on its fauna. The oysters of an entire bay are at times wholly destroyed, while the fish are driven to the inlets, where the water is always more or less salt. An excellent opportunity is thus given for extensive fisheries, as immense quantities of fish can readily be taken with suitable apparatus.

Just beyond these salt or brackish lagoons of the shore, at a distance varying from 10 to 30 miles, lies the St. Johns River. It is fed by thousands of square miles of shoal grassy swamps, in which the river takes its rise. It is a sluggish stream, extending through nearly three degrees of latitude, and by means of its numerous and intricate windings the water is carried about 400 miles before it reaches the sea. It is navigable by small inland steamers for fully 350 miles. In its central portion the river often expands into small lakes several miles in extent, and as suddenly contracts into a mere creek only a few rods wide. In its lower third it is merely a succession of shallow lakes from 2 to 15 miles in breadth. It is said that the river has but 4 feet of fall during its entire course. For this reason

the current is usually quite sluggish, and the ocean tide extends to Lake George, situated 158 miles from the sea, while the water is usually brackish for a considerable distance beyond Jacksonville. Lake George is the prettiest and clearest sheet of water on the entire river. It is 12 miles wide by 16 to 20 long, and abounds in fish of various species, being seemingly the summer home of large numbers of mullet. There are several salt springs in various parts of the lake, and the fishermen claim that many of the mullet spawn there instead of taking the long trip to the sea. Probably no point on the St. Johns River affords better facilities for an extensive mullet fishery than Lake George. Fish of large size are reported to be remarkably abundant during the entire year, and it is said that they can be taken in any quantity desired. The distance from a suitable market might interfere with any extensive shipping of fresh mullet, but it seems probable that any party familiar with the proper methods of salting and curing fish could establish a very profitable business in the salting and shipping of mullet to other States, especially North and South Carolina. Lake Monroe, a sheet of water 5 miles wide by 10 long, is another expansion of the St. Johns River 240 miles above its mouth. Lake Harney, about 265 miles above the mouth of the St. Johns, is the highest point on the river where the fisheries have been prosecuted. The lake, which is only 5 or 6 miles in diameter, is so shoal that a common seine will scrape the bottom in almost every part.*

Mosquito Lagoon and Indian River are the principal bodies of water on the coast having connection with the fisheries. Mosquito Lagoon is, next to Indian River, the largest of the shallow waters on the east coast. It is 60 miles long and about its middle is connected with the ocean by means of a narrow opening known as Mosquito Inlet. The northern extension of the lagoon is called Halifax River. This area contains fish in large variety and great abundance, the supply of mullet being noticeably plentiful. The green turtle is also common. Indian River lies immediately south of Mosquito Lagoon and extends parallel with the coast for more than 150 miles. The region is rich in aquatic life, turtles, mullet, sheepshead, and squeteague being especially numerous.

IMPORTANCE AND NATURE OF THE FISHERIES.

The fisheries of eastern Florida rank next to those of North Carolina in importance. The special branches in which the State takes precedence over others in this section are unimportant, the rank of the State depending on a generally flourishing condition of the river and coast fisheries. The most prominent fisheries of eastern Florida are the shad and mullet; the value of these is considerably more than that of all other products combined, and the shad alone represents nearly half the total output of the fisheries.

The principal means of capture employed are gill nets and seines, with which the largest quantities of the most valuable products are obtained. Cast nets, lines, and minor forms are also in use, and recently pound nets have been introduced in limited numbers. The absence of vessels employed in the capture of fishery products is a unique feature of this coast.

Since 1880 there has been a steady increase in the fisheries of eastern Florida, until, at the present time, the value of the product is nearly three times greater than ten years ago. The advance has been marked in both the salt-water and the fresh-water fisheries, but is especially noticeable in the shad, mullet, oyster, and squeteague fisheries; the value of the shad catch is five times greater than in 1880; the yield of mullet is more than twice as large, although the value is relatively less; the quantity and value of oysters taken is about three times as great, and the value of the squeteague over three times as much. The advance is due to an increase in the number of fishermen and to an increased interest in the industry.

* Eastern Florida and its Fisheries, by R. Edward Earll. <The Fisheries and Fishery Industries of the United States, section II. Geographical Review of the Fisheries.

GENERAL STATISTICS OF EASTERN FLORIDA.

In the three following tables the extent of the fishery interests of the eastern part of Florida are shown in condensed form. The figures include the fisheries of the coastal waters, lagoons, and rivers as far south as Lake Worth, and the basin of the St. Johns River to Lake Monroe. The inquiry was not addressed to the alligator industry, as the time available would not permit a canvass of the interior waters where most of the alligator hunting is done. In other respects the fisheries of eastern Florida are completely exhibited.

From Table 42 it will be seen that 1,244 persons in 1889 and 1,404 in 1890 were engaged in the fishing industry, of which 1,059 and 1,168, respectively, were employed in the shore or boat fisheries. The two vessel fishermen in 1889 and the six in 1890 found employment in transporting fishery products caught by shore fishermen. The shoresmen are mostly connected with oyster-canning establishments and wholesale fish-houses.

The investment in the fisheries of eastern Florida, as shown in Table 43, was $128,434 in 1889 and $142,105 in 1890. The principal items in 1890 were $29,858 for boats, $27,730 for gill nets, $6,110 for seines, $49,919 for shore and accessory property, and $22,600 for cash capital.

The yield of the fisheries amounted to 5,982,375 pounds in 1889 and 7,463,531 pounds in 1890, for which the fishermen received $199,043 and $219,870, respectively. The increase in 1890 over the previous year was made up chiefly of mullet, shad, and oysters. Shad, the most important product, was valued at $104,283 in 1890, after which came mullet, worth $24,441; oysters, $14,850; black bass, $9,832; sheepshead, $8,358; and squeteague, $7,895. The species of fresh-water sunfishes other than black bass had a value of $20,235.

42.—Table of persons employed.

How engaged.	1889.	1890.
On vessels	2	6
In shore fisheries	1,059	1,168
On shore	183	230
Total	1,244	1,404

43.—Table of apparatus and capital.

Designation.	1889.		1890.	
	No.	Value.	No.	Value.
Vessels transporting	1	$1,000	3	$1,750
Tonnage	10.29	.....	39.25	.....
Outfit	.....	20	.....	260
Boats	668	28,304	716	29,858
Apparatus of capture:				
Pound nets and trap nets	.....	.....	5	570
Seines	36	4,685	105	6,110
Gill nets	357	25,475	468	27,730
Turtle nets	234	1,475	254	1,370
Cast nets	216	1,083	203	1,028
Lines	.....	323	.....	630
Tongs	52	234	59	280
Shore property	.....	47,695	.....	49,919
Cash capital	.....	18,140	.....	22,600
Total	.....	128,434	.....	142,105

44.—Table of products.

Species.	1889.		1890.	
	Pounds.	Value.	Pounds.	Value.
Alewives, fresh	.....	.....	10,120	$150
Black bass, fresh	155,433	$8,690	181,646	9,832
Bluefish, fresh	5,240	185	7,310	255
Bream and sunfish, fresh	497,305	17,274	588,190	20,235
Catfish, fresh	30,160	603	96,240	1,265
Channel bass, fresh	172,057	6,005	171,340	5,447
Drum, fresh	41,000	390	27,950	290
Menhaden, fresh	8,000	20	.....	.....
Mullet, fresh	1,207,316	19,270	1,503,427	22,810
Mullet, salted	6,000	230	42,600	1,481
Mullet roe, salted	.....	.....	1,000	150
Pike, fresh	38,670	1,520	37,168	1,485
Pompano, fresh	12,434	718	30,135	1,544
Sea bass, fresh	10,800	444	10,445	355
Shad, fresh	2,051,033	98,439	2,654,022	104,283
Sheepshead, fresh	264,491	8,308	274,113	8,358
Spots and croakers, fresh	26,010	907	24,133	802
Squeteague, fresh	243,381	8,851	235,284	7,895
Sturgeon, fresh	40,620	820	28,055	560
Whiting, fresh	10,800	420	14,020	545
Miscellaneous fish, fresh	145,531	4,655	177,033	5,590
Refuse fish	443,000	2,435	520,000	2,550
Shrimps	78,000	2,805	65,825	2,557
Crabs	3,000	115	4,100	185
Oysters	*436,492	11,123	†681,450	14,850
Quahogs	‡4,800	300	§5,600	350
Terrapins	3,000	750	10,350	1,425
Turtles	45,802	3,541	60,100	4,441
Caviare	2,000	225	1,875	180
Total	5,982,375	199,043	7,463,531	219,870

* 62,356 bushels. † 97,350 bushels. ‡ 600 bushels. § 700 bushels.

THE FISHERIES CONSIDERED BY COUNTIES.

The statistics presented for this State cover 10 counties, viz: Alachua, Brevard, Clay, Dade, Duval, Nassau, Orange, Putnam, St. Johns, and Volusia. In the three tables which follow, the extent of the fisheries in each of these is shown. Duval County, which embraces the mouth and lower reaches of the St. Johns River, ranks first in importance in the three items of persons engaged, capital invested, and quantity and value of products. The other especially prominent counties are Orange and Brevard, the former an interior county, including the headwaters of the St. Johns River, the latter on the coast and embracing most of the Indian River region.

45.—Table showing by counties the number of persons employed in the fisheries of eastern Florida in 1889 and 1890.

Counties.	On vessels transporting.		In shore fisheries.		On shore.		Total.	
	1889.	*1890.*	*1889.*	*1890.*	*1889.*	*1890.*	*1889.*	*1890.*
Nassau	.....	4	199	166	119	130	318	300
Duval	.....	.....	278	359	12	35	290	394
Clay and Putnam	.....	.....	132	108	12	11	144	119
Alachua	.....	.....	88	92	4	4	92	96
Orange	.....	.....	111	155	10	16	121	171
St. Johns	.....	.....	94	80	15	15	109	95
Volusia	.....	.....	56	84	4	5	60	89
Brevard	2	2	76	97	7	14	85	113
Dade	.....	.....	25	27	.....	.....	25	27
Total	2	6	1,059	1,168	183	230	1,244	1,404

46.—Table showing by counties the apparatus and capital employed in the fisheries of eastern Florida in 1889 and 1890.

Designation.	Nassau.				Duval.				Clay and Putnam.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels transporting	.....	.....	2	$750	.....	.....	.....	.....	.....	.....	.....	.....
Tonnage	.....	.....	28.96	.....	.....	.....	.....	.....	.....	.....	.....	.....
Outfit	.....	.....	.....	240	.....	.....	.....	.....	.....	.....	.....	.....
Boats	152	$5,845	139	5,151	183	$9,603	211	$9,355	55	$1,425	56	$2,890
Apparatus of capture:												
Pound nets and trap nets	.....	.....	.....	.....	.....	.....	1	400	.....	.....	1	110
Seines	9	195	9	180	14	620	13	580	1	150	2	400
Gill nets	26	590	23	580	217	19,990	245	20,895	43	2,680	21	1,160
Turtle nets	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cast nets	21	100	19	100	94	473	100	500	18	90	13	65
Lines	.....	15	.....	10	.....	35	.....	345	.....	14	.....	15
Tongs	15	75	14	70	8	40	12	60	.....	.....	.....	.....
Shore property	.....	10,500	.....	10,500	.....	15,450	.....	17,300	.....	4,000	.....	4,000
Cash capital	.....	3,500	.....	5,000	.....	7,840	.....	10,000	.....	1,000	.....	1,000
Total	.....	20,820	.....	22,581	.....	54,051	.....	59,435	.....	9,359	.....	9,640

Designation.	Alachua.				Orange.				St. Johns.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Boats	54	$432	58	$484	54	$3,998	73	$5,024	56	$1,875	52	$1,410
Apparatus of capture:												
Seines	32	1,280	34	1,530	14	1,745	23	2,620	4	170	7	150
Gill nets	.....	.....	.....	.....	31	915	50	1,725	6	120	14	190
Cast nets	.....	.....	.....	.....	7	35	5	25	40	200	30	150
Lines	.....	130	.....	120	.....	94	.....	100	.....	18	.....	20
Tongs	.....	.....	.....	.....	.....	.....	.....	.....	13	42	5	20
Shore property	.....	1,000	.....	1,000	.....	6,000	.....	6,268	.....	5,750	.....	2,150
Cash capital	.....	500	.....	500	.....	2,000	.....	2,000	.....	1,000	.....	800
Total	.....	3,342	.....	3,634	.....	14,787	.....	17,762	.....	9,175	.....	4,890

Designation.	Volusia.				Brevard.				Dade.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels transporting	.....	.....	.....	.....	1	$1,000	1	$1,000	.....	.....	.....	.....
Tonnage	.....	.....	.....	.....	10.29	.....	10.29	.....	.....	.....	.....	.....
Outfit	.....	.....	.....	.....	.....	20	.....	20	.....	.....	.....	.....
Boats	43	$1,330	59	$1,994	61	3,441	57	3,170	10	$355	11	$380
Apparatus of capture:												
Pound nets and trap nets	.....	.....	3	60	.....	.....	.....	.....	.....	.....	.....	.....
Seines	7	385	11	450	.....	.....	2	100	5	140	4	100
Gill nets	7	210	35	980	27	970	80	2,200	.....	.....	.....	.....
Turtle nets	20	175	50	250	180	1,080	168	840	34	220	36	280
Cast nets	23	120	20	110	3	15	4	18	10	50	12	60
Lines	.....	17	.....	20	.....	.....	.....	.....	.....	.....	.....	.....
Tongs	8	37	14	60	8	40	14	70	.....	.....	.....	.....
Shore property	.....	820	.....	1,740	.....	4,150	.....	6,931	.....	25	.....	30
Cash capital	.....	300	.....	500	.....	2,000	.....	2,800	.....	.....	.....	.....
Total	.....	3,394	.....	6,164	.....	12,716	.....	17,149	.....	790	.....	850

47.—Table showing by counties and species the yield of the fisheries of eastern Florida in 1889 and 1890.

Species.	Nassau.				Duval.				Clay and Putnam.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives, fresh											10,120	$150
Black bass, fresh					13,390	$535	14,040	$560	27,000	$1,350	23,000	1,150
Bluefish, fresh					3,000	120	4,130	160				
Bream and sunfish, fresh					41,210	1,262	42,425	1,322	68,600	2,840	51,880	2,440
Catfish, fresh					15,160	303	75,000	750	15,000	300	21,240	515
Channel bass, fresh	12,275	$650	11,172	$556	42,260	1,407	68,354	2,040				
Drum, fresh	15,000	150	12,000	125	6,000	40	10,950	115				
Menhaden, fresh					8,000	20						
Mullet, fresh	2,010	60	1,310	52	270,323	4,039	563,516	8,453	113,070	2,395	77,100	1,315
Sea bass, fresh					6,200	249	4,875	145				
Shad, fresh	60,000	3,000	37,800	1,890	1,200,783	60,209	1,348,512	63,632	107,250	6,930	249,000	8,200
Sheepshead, fresh	4,820	220	3,600	175	21,120	666	38,100	1,194				
Spots and croakers, fresh	5,865	275	5,113	250	7,685	242	6,020	180				
Squeteague, fresh	29,490	1,477	27,290	1,345	95,748	3,015	83,985	2,520				
Sturgeon, fresh	37,500	750	26,055	515	3,120	70	2,000	45				
Whiting, fresh			5,000	250	5,800	200	6,020	180				
Other fish, fresh	6,500	275	7,386	335	43,860	1,295	61,760	1,845	10,186	400	9,445	358
Refuse fish									403,000	2,235	460,000	2,250
Shrimps	48,000	1,800	40,000	1,500	10,000	375	16,600	662	4,000	180	3,200	160
Crabs	600	15	1,300	80	800	20	1,200	30	400	10	400	10
Oysters	287,231	4,208	556,500	8,175	37,800	1,440	21,000	900				
Terrapins	3,000	750	9,000	1,200			1,350	225				
Caviare	2,000	225	1,875	180								
Total	514,291	13,855	745,401	16,628	1,832,259	75,507	2,369,837	84,958	748,506	16,640	905,385	16,548

Species.	Alachua.				Orange.				St. Johns.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Black bass, fresh	60,443	$4,200	62,160	$4,344	54,600	$2,605	72,406	$3,478				
Bream and sunfish, fresh	212,419	8,550	228,256	9,123	175,076	4,622	242,516	6,750				
Channel bass, fresh									36,915	$1,533	22,109	$840
Drum, fresh									20,000	200	5,000	50
Mullet, fresh					25,600	384	44,000	440	34,655	977	23,618	690
Pike, fresh	34,630	1,360	34,050	1,360	4,040	160	3,118	125				
Sea bass, fresh									4,600	195	5,570	210
Shad, fresh					683,000	28,300	1,018,710	30,561				
Sheepshead, fresh									11,105	388	9,000	332
Spots and croakers, fresh					8,460	210	10,000	250	4,000	180	3,000	122
Squeteague, fresh									55,775	2,458	39,294	1,555
Whiting, fresh									5,000	220	3,000	115
Other fish, fresh					8,500	200	10,000	250	30,505	1,185	24,510	945
Refuse fish, fresh					40,000	200	60,000	300				
Shrimps									4,000	150	2,025	85
Crabs									1,200	70	1,200	65
Oysters									43,001	1,845	42,000	1,800
Quahogs									4,000	250	4,800	300
Turtles									800	80	2,000	200
Total	307,492	14,110	324,466	14,827	999,276	36,681	1,460,750	42,154	255,556	9,731	187,066	7,309

Species.	Volusia.				Brevard.				Dade.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Black bass, fresh							10,040	$300				
Bluefish, fresh					2,240	$65	3,180	95				
Bream and sunfish, fresh							23,113	600				
Channel bass, fresh	20,320	$610	28,320	$765	55,945	1,675	36,997	1,108	4,342	$130	4,388	$138
Mullet, fresh	190,640	2,863	185,523	2,497	555,845	8,330	588,470	9,073	15,173	222	19,890	290
Mullet, salted			22,600	781	6,000	230	20,000	700				
Mullet roe, salted							1,000	150				
Pompano, fresh					10,134	557	28,085	1,404	2,300	161	2,050	140
Sheepshead, fresh	27,050	810	36,800	1,060	191,006	5,925	183,113	5,492	9,300	299	3,500	105
Squeteague, fresh	33,858	1,040	29,540	815	18,210	555	49,145	1,480	10,300	306	6,090	180
Other fish, fresh	16,130	435	19,430	516	26,735	775	39,002	1,156	3,115	90	5,500	185
Shrimps	12,000	300	4,000	150								
Oysters	24,360	1,740	33,950	2,425	44,100	1,890	28,000	1,550				
Quahogs	800	50	800	50								
Turtles	10,170	814	7,000	525	20,832	1,667	36,900	2,722	14,000	980	14,200	994
Total	335,328	8,662	367,963	9,584	931,137	21,669	1,047,045	25,830	58,530	2,188	55,618	2,032

THE YIELD BY DIFFERENT FORMS OF APPARATUS.

The importance of the principal forms of apparatus employed in the fisheries is shown in Table 48, the counties and species being specified.

Gill nets are seen to be the most productive means of capture; in 1890 no less than 3,813,719 pounds of fish, valued at $118,485, were caught in this way, shad, mullet, sheepshead, and squeteague being the principal species taken. Seines rank next to gill nets in the amount and value of yield, the catch being 2,087,222 pounds, worth $54,061, in 1890. Shad, sunfish, and black bass are the principal seine products. By means of hand and set lines there were taken 512,913 pounds of fish, which gave a return of $17,757, black bass, sunfish, channel bass, sheepshead, and squeteague constituting the larger part of the yield. Cast nets take sunfish, mullet, and squeteague in greater numbers than other species, although the catch by this apparatus is small, being only 133,662 pounds, valued at $4,214. The pound-net and trap-net fishery, which had no existence as a commercial enterprise in the first year covered by this report, is credited with small quantities of numerous species in 1890; the total catch was only 86,715 pounds, the selling price of which was $1,365. Of the miscellaneous products, besides fish proper, recorded in the table, oysters and quahogs, secured with tongs and the hand, are the most important; turtles and terrapin are taken with nets and seines; shrimp are caught with seines and cast nets; and crabs are mostly obtained on trot lines.

48.—Table showing by counties, apparatus, and species the yield of the fisheries of eastern Florida in 1889 and 1890.

Apparatus and species.	Nassau.				Duval.				Clay and Putnam.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Seines:												
Black bass, fresh	.....	.....	.....	.....	9,210	$368	8,000	$320	.....	.....	.....	.....
Bream and sunfish, fresh	.....	.....	.....	.....	17,050	512	15,760	472	3,380	$170	5,000	$250
Channel bass, fresh	.....	.....	.....	.....	9,260	287	5,000	150	.....	.....	.....	.....
Mullet, fresh	.....	.....	.....	.....	31,723	480	25,000	375	.....	.....	.....	.....
Spots and croakers, fresh	.....	.....	.....	.....	6,385	192	5,020	150	.....	.....	.....	.....
Squeteague, fresh	.....	.....	.....	.....	23,310	700	10,000	300	.....	.....	.....	.....
Other fish, fresh	.....	.....	.....	.....	14,170	425	15,000	450	.....	.....	.....	.....
Refuse fish	.....	.....	.....	.....	.....	.....	.....	.....	387,000	2,150	400,000	2,000
Total	.....	.....	.....	.....	111,108	2,964	83,780	2,217	390,380	2,320	405,000	2,250
Gill nets:												
Channel bass, fresh	.....	.....	.....	.....	23,000	720	35,000	1,050	.....	.....	.....	.....
Mullet, fresh	.....	.....	.....	.....	227,000	3,405	526,176	7,893	97,000	2,145	74,000	1,265
Shad, fresh	60,000	$3,000	37,800	$1,890	1,200,783	60,209	1,348,512	63,632	107,250	6,930	244,500	8,050
Sheepshead, fresh	.....	.....	.....	.....	18,195	550	15,800	474	.....	.....	.....	.....
Squeteague, fresh	4,530	215	6,240	300	69,318	2,220	65,000	1,950	.....	.....	.....	.....
Sturgeon, fresh	37,500	750	26,055	515	3,120	70	2,000	45	.....	.....	.....	.....
Other fish, fresh	2,930	130	3,478	150	24,090	720	23,590	708	.....	.....	.....	.....
Refuse fish	.....	.....	.....	.....	.....	.....	.....	.....	16,000	85	20,000	100
Total	104,960	4,095	73,573	2,855	1,565,506	67,894	2,016,078	75,752	220,250	9,160	338,500	9,415

48.—Table showing by counties, apparatus, and species, the yield of the fisheries of eastern Florida in 1889 and 1890—Continued.

Apparatus and species.	Nassau.				Duval.				Clay and Putnam.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Pound nets and trap nets:												
Alewives, fresh											10,120	$150
Bream and sunfish, fresh											1,040	40
Channel bass, fresh							3,120	$90				
Drum, fresh							3,950	80				
Shad, fresh											4,500	150
Sheepshead, fresh							4,080	120				
Squeteague, fresh							3,985	120				
Whiting, fresh							1,020	30				
Other fish, fresh							12,900	387				
Refuse fish											40,000	150
Total							29,055	827			55,660	490
Cast nets:												
Black bass, fresh									3,000	$150	3,000	150
Bream and sunfish, fresh					11,060	$365	10,600	371	21,220	880	10,840	500
Catfish, fresh											3,000	150
Channel bass, fresh	1,340	$50	1,132	$56								
Menhaden, fresh					8,000	20						
Mullet, fresh	2,010	60	1,310	52	11,600	154	12,340	185	16,070	250	3,100	50
Sheepshead, fresh	940	40	600	25								
Squeteague, fresh	1,280	62	1,050	45								
Other fish, fresh	1,430	55	908	35					5,186	200	4,020	148
Total	7,000	267	5,000	213	30,660	539	22,940	556	45,476	1,480	23,960	998
Lines:												
Black bass, fresh					4,180	167	6,040	240	24,000	1,200	20,000	1,000
Bluefish, fresh					3,000	120	4,130	160				
Bream and sunfish, fresh					13,100	385	16,065	479	44,000	1,790	35,000	1,650
Catfish, fresh					15,160	303	75,000	750	15,000	300	18,240	365
Channel bass, fresh	16,935	600	10,040	500	10,000	400	25,234	750				
Drum, fresh	15,000	150	12,000	125	6,000	40	7,000	35				
Sea bass, fresh					6,200	249	4,875	145				
Sheepshead, fresh	3,880	180	3,000	150	2,925	116	18,220	600				
Spots and croakers, fresh	5,865	275	5,113	250	1,300	50	1,000	30				
Squeteague, fresh	23,080	1,200	20,000	1,000	3,120	95	5,000	150				
Whiting, fresh			5,000	250	5,800	200	5,000	150				
Other fish, fresh	2,140	90	3,000	150	5,600	150	10,270	300	5,000	200	5,425	210
Total	61,500	2,495	58,153	2,425	76,385	2,275	177,834	3,789	88,000	3,490	78,665	3,225
Miscellaneous:												
Shrimps	48,000	1,800	40,000	1,500	10,000	375	16,600	662	4,000	180	3,200	160
Crabs	600	15	1,300	80	800	20	1,200	30	400	10	400	10
Oysters	287,231	4,208	556,500	8,175	37,800	1,440	21,000	900				
Terrapins	3,000	750	9,000	1,200			1,350	225				
Caviare	2,000	225	1,875	180								
Total	340,831	6,998	608,675	11,135	48,600	1,835	40,150	1,817	4,400	190	3,600	170
Grand total	514,291	13,855	745,401	16,628	1,832,259	75,507	2,369,837	84,958	748,506	16,640	905,385	16,548

48.—Table showing by counties, apparatus, and species the yield of the fisheries of eastern Florida in 1889 and 1890—Continued.

Apparatus and species.	Alachua.				Orange.				St. Johns.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Seines:												
Black bass, fresh	40,263	$2,800	44,070	$3,084	28,500	$1,300	34,116	$1,564	.....	.....	.....	.....
Bream and sunfish, fresh	172,187	6,900	185,110	7,403	151,276	3,542	205,116	5,505	.....	.....	.....	.....
Channel bass, fresh	.....	.....	.....	.....	.....	.....	.....	.....	6,800	$272	5,109	$200
Mullet, fresh	.....	.....	.....	.....	.....	.....	.....	.....	7,500	187	3,618	90
Pike, fresh	24,130	960	23,000	920	4,040	160	3,118	125	.....	.....	.....	.....
Shad, fresh	.....	.....	.....	.....	558,000	22,675	868,710	26,061	.....	.....	.....	.....
Spots and croakers, fresh	.....	.....	.....	.....	8,460	210	10,000	250	.....	.....	.....	.....
Squeteague, fresh	.....	.....	.....	.....	.....	.....	.....	.....	7,800	312	5,234	200
Other fish, fresh	.....	.....	.....	.....	8,500	200	10,000	250	6,100	224	7,080	240
Refuse fish	.....	.....	.....	.....	40,000	200	60,000	300	.....	.....	.....	.....
Total	236,580	10,660	252,180	11,407	798,776	28,287	1,191,060	34,055	28,200	995	21,041	730
Gill nets:												
Channel bass, fresh	.....	.....	.....	.....	.....	.....	.....	.....	8,345	304	6,000	220
Mullet, fresh	.....	.....	.....	.....	22,000	330	44,000	440	7,355	220	3,000	90
Shad, fresh	.....	.....	.....	.....	125,000	5,625	150,000	4,500	.....	.....	.....	.....
Sheepshead, fresh	.....	.....	.....	.....	.....	.....	.....	.....	4,920	161	3,000	110
Squeteague, fresh	.....	.....	.....	.....	.....	.....	.....	.....	29,500	1,328	19,000	760
Other fish, fresh	.....	.....	.....	.....	.....	.....	.....	.....	8,180	320	7,000	275
Total	.....	.....	.....	.....	147,000	5,955	194,000	4,940	58,300	2,333	38,000	1,455
Cast nets:												
Black bass, fresh	.....	.....	.....	.....	600	30	500	25	.....	.....	.....	.....
Bream and sunfish, fresh	.....	.....	.....	.....	6,000	238	12,000	300	.....	.....	.....	.....
Channel bass, fresh	.....	.....	.....	.....	.....	.....	.....	.....	17,500	787	6,000	220
Mullet, fresh	.....	.....	.....	.....	3,600	54	.....	.....	19,800	570	17,000	510
Sheepshead, fresh	.....	.....	.....	.....	.....	.....	.....	.....	3,450	142	3,000	112
Squeteague, fresh	.....	.....	.....	.....	.....	.....	.....	.....	16,000	720	12,000	480
Other fish, fresh	.....	.....	.....	.....	.....	.....	.....	.....	10,300	406	2,000	80
Total	.....	.....	.....	.....	10,200	322	12,500	325	67,050	2,625	40,000	1,402
Lines:												
Black bass, fresh	20,180	1,400	18,090	1,260	25,500	1,275	37,790	1,889	.....	.....	.....	.....
Bream and sunfish, fresh	40,232	1,650	43,146	1,720	17,800	842	25,400	945	.....	.....	.....	.....
Channel bass, fresh	.....	.....	.....	.....	.....	.....	.....	.....	4,270	170	5,000	200
Drum, fresh	.....	.....	.....	.....	.....	.....	.....	.....	20,000	200	5,000	50
Pike, fresh	10,500	400	11,050	440	.....	.....	.....	.....	.....	.....	.....	.....
Sea bass, fresh	.....	.....	.....	.....	.....	.....	.....	.....	4,600	195	5,570	210
Sheepshead, fresh	.....	.....	.....	.....	.....	.....	.....	.....	2,735	85	3,000	110
Spots and croakers, fresh	.....	.....	.....	.....	.....	.....	.....	.....	4,000	180	3,000	122
Squeteague, fresh	.....	.....	.....	.....	.....	.....	.....	.....	2,475	98	3,000	115
Whiting, fresh	.....	.....	.....	.....	.....	.....	.....	.....	5,000	220	3,000	115
Other fish, fresh	.....	.....	.....	.....	.....	.....	.....	.....	5,925	235	8,430	350
Total	70,912	3,450	72,286	3,420	43,300	2,117	63,190	2,834	49,005	1,383	36,000	1,272
Miscellaneous:												
Shrimps	.....	.....	.....	.....	.....	.....	.....	.....	4,000	150	2,025	85
Crabs	.....	.....	.....	.....	.....	.....	.....	.....	1,200	70	1,200	65
Oysters	.....	.....	.....	.....	.....	.....	.....	.....	43,001	1,845	42,000	1,800
Quahogs	.....	.....	.....	.....	.....	.....	.....	.....	4,000	250	4,800	300
Turtles	.....	.....	.....	.....	.....	.....	.....	.....	800	80	2,000	200
Total	.....	.....	.....	.....	.....	.....	.....	.....	53,001	2,395	52,025	2,450
Grand total	307,492	14,110	324,466	14,827	999,276	36,681	1,460,750	42,154	255,556	9,731	187,066	7,309

48.—Table showing by counties, apparatus, and species the yield of the fisheries of eastern Florida in 1889 and 1890—Continued.

Apparatus and species.	Volusia.				Brevard.				Dade.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Seines:												
Black bass, fresh							10,040	$300				
Bream and sunfish, fresh							23,113	600				
Channel bass, fresh	10,320	$310	13,040	$352					3,342	$100	3,028	$90
Mullet, fresh	10,120	155	16,373	243					11,973	180	15,890	240
Pompano, fresh									2,300	161	2,050	140
Sheepshead, fresh	15,050	450	18,380	505					7,500	245	1,500	45
Squeteague, fresh	10,162	305	13,075	351					7,100	210	3,030	90
Other fish, fresh	3,780	100	4,120	110			5,022	151	3,115	90	5,500	185
Total	49,432	1,320	64,988	1,561			38,175	1,051	35,330	986	30,998	790
Gill nets:												
Bluefish, fresh					2,240	$65	3,180	95				
Channel bass, fresh	5,000	150	10,980	283	54,110	1,620	35,070	1,050				
Mullet, fresh	168,020	2,520	164,150	2,187	554,385	8,310	587,440	9,058				
Mullet, salted			22,600	781	6,000	230	20,000	700				
Mullet roe, salted							1,000	150				
Pompano, fresh					10,134	557	28,085	1,404				
Sheepshead, fresh	2,000	60	3,210	100	190,246	5,900	182,033	5,460				
Squeteague, fresh	18,380	575	12,190	329	17,000	510	48,000	1,440				
Other fish, fresh	4,620	115	4,190	101	23,815	690	31,440	930				
Total	198,020	3,420	217,320	3,781	857,930	17,882	936,248	20,287				
Pound nets and trap nets:												
Miscellaneous fish, fresh			2,000	48								
Cast nets:												
Channel bass, fresh					1,835	55	1,927	58	1,000	30	1,360	48
Mullet, fresh	12,500	188	5,000	67	1,460	20	1,030	15	3,200	42	4,000	50
Sheepshead, fresh					850	25	1,080	32	1,800	54	2,000	60
Squeteague, fresh					1,210	45	1,145	40	3,200	96	3,060	90
Other fish, fresh	5,000	150	6,120	185	2,920	85	2,540	75				
Total	17,500	338	11,120	252	8,275	230	7,722	220	9,200	222	10,420	248
Lines:												
Channel bass, fresh	5,000	150	4,300	130								
Sheepshead, fresh	10,000	300	15,210	455								
Squeteague, fresh	5,316	160	4,275	135								
Other fish, fresh	2,730	70	3,000	72								
Total	23,046	680	26,785	792								
Miscellaneous:												
Shrimps	12,000	300	4,000	150								
Oysters	24,360	1,740	33,950	2,425	44,100	1,890	28,000	1,550				
Quahogs	800	50	800	50								
Turtles	10,170	814	7,000	525	20,832	1,667	36,900	2,722	14,000	980	14,200	994
Total	47,330	2,904	45,750	3,150	64,932	3,557	64,900	4,272	14,000	980	14,200	994
Grand total	335,328	8,662	367,963	9,584	931,137	21,669	1,047,045	25,830	58,530	2,188	55,618	2,032

48.—Table showing the yield of the fisheries of eastern Florida in 1889 and 1890—Continued.

SUMMARY.

Apparatus and species.	1889.		1890.	
	Pounds.	Value.	Pounds.	Value.
Seines:				
Black bass, fresh	77,073	$4,468	96,226	$5,268
Bream and sunfish, fresh	343,893	11,124	434,099	14,230
Channel bass, fresh	29,722	969	26,177	792
Mullet, fresh	61,316	1,002	60,881	948
Pike, fresh	28,170	1,120	26,118	1,045
Pompano, fresh	2,300	161	2,050	140
Shad, fresh	558,000	22,675	868,710	26,061
Sheepshead, fresh	22,550	695	19,880	550
Spots and croakers, fresh	14,845	402	15,020	400
Squeteague, fresh	48,372	1,527	31,339	941
Other fish, fresh	35,665	1,039	46,722	1,386
Refuse fish	427,000	2,350	460,000	2,300
Total	1,649,806	47,532	2,087,222	54,061
Gill nets:				
Bluefish, fresh	2,240	65	3,180	95
Channel bass, fresh	90,455	2,794	87,050	2,603
Mullet, fresh	1,075,760	16,930	1,398,766	20,933
Mullet, salted	6,000	230	42,600	1,481
Mullet roe, salted	.....	.....	1,000	150
Pompano, fresh	10,134	557	28,085	1,404
Shad, fresh	1,493,033	75,764	1,780,812	78,072
Sheepshead, fresh	215,361	6,671	204,043	6,144
Squeteague, fresh	138,728	4,848	150,430	4,779
Sturgeon, fresh	40,620	820	28,055	560
Other fish, fresh	63,635	1,975	69,698	2,164
Refuse fish	16,000	85	20,000	100
Total	3,151,966	110,739	3,813,719	118,485
Cast nets:				
Black bass, fresh	3,600	180	3,500	175
Bream and sunfish, fresh	38,280	1,483	33,440	1,171
Catfish, fresh	.....	.....	3,000	150
Channel bass, fresh	21,675	922	10,419	382
Menhaden, fresh	8,000	20	.....	.....
Mullet, fresh	70,240	1,338	43,780	929
Sheepshead, fresh	7,040	261	6,680	229
Squeteague, fresh	21,690	923	17,255	655
Other fish, fresh	24,836	896	15,588	523
Total	195,361	6,023	133,662	4,214

Apparatus and species.	1889.		1890.	
	Pounds.	Value.	Pounds.	Value.
Pound and trap nets:				
Alewives, fresh	.....	.....	10,120	$150
Bream and sunfish, fresh	.....	.....	1,040	40
Channel bass, fresh	.....	.....	3,120	90
Drum, fresh	.....	.....	3,950	80
Shad, fresh	.....	.....	4,500	150
Sheepshead, fresh	.....	.....	4,080	120
Squeteague, fresh	.....	.....	3,985	120
Whiting, fresh	.....	.....	1,020	30
Other fish, fresh	.....	.....	14,900	435
Refuse fish	.....	.....	40,000	150
Total	.....	.....	86,715	1,365
Lines:				
Black bass, fresh	73,860	$4,042	81,920	4,389
Bluefish, fresh	3,000	120	4,130	160
Bream and sunfish, fresh	115,132	4,667	119,611	4,794
Catfish fresh	30,160	603	93,240	1,115
Channel bass, fresh	30,205	1,320	44,574	1,580
Drum, fresh	41,000	390	24,000	210
Pike, fresh	10,500	400	11,050	440
Sea bass, fresh	10,800	444	10,445	355
Sheepshead, fresh	19,540	681	39,430	1,315
Spots and croakers, fresh	11,165	505	9,113	402
Squeteague, fresh	34,591	1,553	32,275	1,400
Whiting, fresh	10,800	420	13,000	515
Other fish, fresh	21,395	745	30,125	1,082
Total	412,148	15,890	512,913	17,757
Miscellaneous:				
Shrimps	78,000	2,805	65,825	2,557
Crabs	3,000	115	4,100	185
Oysters	436,492	11,123	681,450	14,850
Quahogs	4,800	300	5,600	350
Terrapins	3,000	750	10,350	1,425
Turtles	45,802	3,541	60,100	4,441
Caviare	2,000	225	1,875	180
Total	573,094	18,859	829,300	23,988
Grand total	5,982,375	199,043	7,463,531	219,870

NOTES ON THE ALLIGATOR INDUSTRY.

As elsewhere explained in this article, in the inquiry on which this report is based it was not feasible to make a thorough canvass of the alligator industry, and the information at hand is only useful as showing the present condition of the business in the localities visited in connection with the regular investigation of the fisheries, and as affording a basis for an opinion of its general status throughout the State.

Florida is the only State in the South Atlantic region in which the hunting of alligators is carried on as a regular business. The industry is quite extensive, but is much less important than formerly, and in parts of the State where it was at one time a prominent business it is diminishing yearly. During the past decade the alligators have been systematically and relentlessly hunted in nearly every part of Florida; it is within bounds to say that since 1880 not less than 2,500,000 have been killed in the State, and it is not surprising that the supply has been greatly reduced in view of the non-migratory habits, the remarkably slow growth of the animal, and the sacrifice of large numbers before they have reached the reproductive age. According to the statements of hunters and others, alligators grow very slowly; during the first year of their existence they attain a length of about 1 foot; alligators 2 feet long are over 10 or 15 years old; while animals 12 feet long are 75 years old or more.

The observation of the Fish Commission agent in the St. Johns River leads him to think that the alligators are very nearly exterminated in that part of the river below Palatka, and above that point the number is becoming less year by year. Some hunters who have devoted many years to the business have given it up, and few, if any, are killing as many as they were four or five years ago. It seems only a question of time when this valuable fishery resource, which could by proper care be preserved to the State for an indefinite period, will become exhausted, to the great disadvantage of a large element of the population inhabiting the interior parts of the State.

In the Indian River region, Cocoa, Melbourne, and Fort Pierce are headquarters for alligator hunting and trade in the hides. At Cocoa about 10 men engage in hunting at times when other work does not receive attention, and in 1889 and 1890 took about 2,500 animals. In 1888 the same hunters secured 5,000 skins. A few years ago one of these hunters killed 800 alligators in a season, and another obtained 42 in one night. Twenty-five men were regularly employed in this business at one time. In 1889 and 1890, 12 hunters in the vicinity of Melbourne secured about 2,000 alligators. At Fort Pierce large numbers of alligators were handled in former years; in 1889, 12 men brought in about 4,000 skins, and in 1890, 2,000 skins and 100 otter pelts.

Near Lake Worth but little attention is given to hunting, owing to the scarcity of alligators. Only 3 men follow it regularly, in the summer months, getting from 100 to 150 animals each. In 1890 they shipped 450 hides to Jacksonville, which was about the usual yield in recent years. In 1889, 6,700 alligator hides were shipped from Miami to New York via Key West, and in 1890, 5,033 hides went from the same place.

Kissimmee, situated on Lake Tohopekaliga, in the interior of the State, is an important center of the alligator trade in the eastern half of Florida. In 1889 three firms were located there for the purpose of buying skins taken in the region between Lake Kissimmee and Lake Okeechobee, and in that year they handled 33,600 hides; in 1890 only two of these firms did business, and purchased about 15,000 skins. This decline of over 50 per cent was principally due to the scarcity of alligators, but was also influenced by the low prices received by the hunters and, to a certain extent, by the diversion of the trade from Kissimmee to Fort Myers, on the western side of the State. In 1889 about 20,000 of the skins went directly to New York and the others to Jacksonville; the following year 10,000 were sent to New York and the remainder to Jacksonville. The skins mentioned represent the work of about 20 professional and 80 semi-professional hunters. The aggregate number of animals killed and the average number to a man are very much less than the results a few years ago, when a skillful hunter could easily secure 600 alligators in two or three weeks. The marketable skins are from 3 to 12 feet in length, and are worth on an average about 60 cents apiece to the hunters, a sum which is taken out in provisions, ammunition, etc. The dealers receive 65 cents each in money from the tanners in New York.

The income of the alligator hunters in this region is considerably augmented by the capture of otters (*Lutra canadensis*), of which about 1,000 skins were sold in 1890 at an average price of $3.50 each; large numbers of other skins are also brought in, including those of the deer, bear, wildcat, opossum, and raccoon. A few years ago a large trade was also carried on in the skins and plumes of aquatic and wading birds, but the practical extermination of the birds over large areas has necessitated a discontinuance of the business.

During the past three or four years a large part of the alligator trade of Florida has been centered in Jacksonville, where, in the years covered by this inquiry, there were

two firms which purchased hides and teeth from hunters and other dealers, mostly in the southern part of the State. In 1889 these firms handled about 60,000 skins and in 1890 about 20,000. In the opinion of these dealers, the noticeable decline in the business has been due to the fact that the hunters have been obtaining more remunerative employment in working the phosphate beds, and that much of the trade that formerly went through Jacksonville now goes directly to New York.

Live and stuffed alligators enter largely into the trade in Florida curiosities In Jacksonville there are 12 dealers in alligators and 18 other dealers in shells, fish-scale jewelry, alligator teeth, etc. In 1890 about 8,400 alligators were disposed of to tourists in Jacksonville. The taking of small alligators to be sold as curiosities is now a prominent feature of the business; large numbers are annually secured and disposed of at prices, varying with the season, supply, and size, ranging from $20 to $35 per hundred, although as low as $10 has at times been received. The price for stuffed alligators is about 25 cents more than for live ones. Alligators from 6 to 12 feet long bring from $12 to $14 each. It is estimated that about 450 pounds of alligator teeth were sold in 1890. Of the best teeth about 70 make a pound, but from 150 to 200 of the smaller ones are required. The teeth of alligators have some commercial value to the hunter, but in many places of late not much attention has been given to them on account of the difficulty of extracting them and the low price received ($1 to $2 per pound). They are removed by burying the head and rotting out the teeth. The stuffing of alligators and the polishing of alligator teeth give employment to about 40 persons in addition to the regular dealers.

SHORE INDUSTRIES.

At nearly all the principal fishing centers there are firms engaged in buying fishery products from the fishermen and shipping them to northern and other markets. In the lower St. Johns and the interior lake region there are also wholesale dealers in alligator hides, teeth, etc. The only shore fishery industry which requires separate notice, however, is the canning of oysters.

Two factories established for this purpose are located at Fernandina, which utilize most of the oysters taken in the vicinity of that place; these are raccoon oysters and are found mostly between high and low water. At one time most of the stock came from Nassau Sound and Bell River, but the supply has been nearly exhausted and the adjoining county in Georgia is now furnishing a large part of the product. The prices paid range from 7 to 10 cents a bushel. The oysters are put up in 5 and 10 ounce cans, packed in cases holding 4 and 3 dozen cans, respectively. The extent of this industry is shown in the following table:

49.—Table showing the extent of the oyster-canning industry of Florida in 1889 and 1890.

Items.	1889.	1890.
Number of canneries	2	2
Persons employed:		
White	18	12
Colored	101	118
Value of property	$10,000	$10,000
Cash capital	$3,500	$5,000
Oysters utilized.....bushels..	40,333	78,000
Value paid	$4,033	$7,875
Cans prepared.....number..	242,000	471,900
Value	$15,950	$35,564

VI.—FISHERIES OF THE RIVER BASINS.

GENERAL REMARKS.

In a preceding part of this report, reference has been made to the importance of the fresh-water fisheries of the South Atlantic States, and figures have been presented (Table 6) showing that the value of the products taken in fresh water is much greater than the results of the salt-water fisheries. In this chapter it is intended to discuss in greater detail this branch of the fisheries and to exhibit its importance by a series of special tables.

The occurrence of marine fishes in brackish and fresh water and of fresh-water species in brackish and salt water has necessitated a somewhat arbitrary separation of the fisheries. As a rule, all fishing for anadromous and typically fresh-water fish has been included in the accompanying tables, but the taking of salt-water products in fresh water has in most cases been disregarded; an exception being made, for instance, in St. Johns River, in the headwaters of which the capture of mullet can only be regarded as a fresh-water fishery.

In the accompanying tables the extent of the fisheries in most of the river basins of the South Atlantic States is given, the omissions consisting of a few minor streams whose commercial fisheries are unimportant or carried on by fishermen from other rivers. In the case of the rivers emptying into Albemarle Sound and Winyah Bay, it has not been deemed necessary to show separately the fisheries of the individual streams. In the former region the fishing in the sound at and around the mouths of the principal rivers can not with satisfactory accuracy be separated from that in the rivers, and the fisheries of some of the streams entering Winyah Bay are too unimportant to require individual specification.

STATISTICS OF THE RIVER FISHERIES.

The four tables which follow illustrate the extent of the fisheries of the river basins as they existed in 1889 and 1890. The tables relate to the persons employed, the boats and apparatus used, and the quantity and value of the products taken in each basin. The products are shown in two tables, one being a condensed statement of the yield of each species, the other giving the catch in the various forms of apparatus.

The fresh-water fisheries of this region gave employment to 8,343 persons in 1889, and 8,497 persons in 1890. The capital invested was $700,608 in the former year, and $720,333 in the latter. The quantity of products taken was 27,773,312 pounds in 1889, and 31,353,272 pounds in 1890, the value of the same being $766,300 and $833,165, respectively.

Most of those engaged in the industry in the fresh waters are actual fishermen. Only 705 persons in 1889 and 709 in 1890 were shoresmen and carriers, leaving 7,638 persons in 1889 and 7,788 persons in 1890 who were employed in the taking of fishery products, and all of these were shore and boat fishermen, there being no fresh-water vessel fisheries in these States.

The fishing property of the fresh waters consisted in 1890 of 24 vessels, engaged in transporting products, worth $12,555; 3,759 boats, worth $170,060; 953 pound nets, worth $81,529; 585 seines, worth $79,543; 87,557 gill nets, worth $172,832; 1,623 miscellaneous nets, worth $5,925; 1,165 pots, worth $1,755; lines worth $897; and shore and cash property valued at $195,237.

In 1890 the quantity of fresh-water fish taken was 31,353,272 pounds, for which the fishermen received $833,165. The fish of which the largest catch was made were alewives, but the yield of shad was the most valuable. The principal fishes had the following values: Shad, $482,403; alewives, $166,106; striped bass, $33,942; black bass, $30,431; sturgeon, $12,974; and catfish, $12,745.

The apparatus with which the largest catch is made is the seine, which is credited with 14,305,273 pounds, valued at $296,961. Pound nets took 8,295,677 pounds, worth $123,880. The gill-net catch was somewhat less than the pound-net, being 7,376,184 pounds, but the value was nearly three times greater. In the yield of shad and mullet the gill nets take first rank, in that of alewives and black bass the seines have precedence, and in that of striped bass the pound nets lead.

50.—Table of persons employed.

River basins.	1889.	1890.
Albemarle Sound an tributaries	*3,561	†3,550
Pamlico River	275	330
Neuse River	937	991
Cape Fear River and tributaries	445	420
Winyah Bay and tributaries	1,096	1,047
Edisto River and tributaries	314	316
Combahee, Ashepoo, and Coosawhatchie Rivers	70	65
Savannah River	170	162
Ogeechee River	116	117
Altamaha River and tributaries	698	727
St. Marys River	52	40
St. Johns River and tributaries	‡609	§732
Total	8,343	8,497

*Includes 616 shoresmen and 51 transporters. †Includes 588 shoresmen and 55 transporters.
‡Includes 38 shoresmen. §Includes 66 shoresmen.

51.—Table of vessels, boats, apparatus, etc., employed.

Items.	Albemarle Sound and tributaries.				Pamlico River.				Neuse River.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Vessels transporting	23	$7,775	24	$10,650	.....	.....	.....	.....	.....	.....	.....	.....
Tonnage	210.94	.....	278.17	.....	.....	.....	.....	.....	.....	.....	.....	.....
Outfit	.....	1,832	.....	1,905	.....	.....	.....	.....	.....	.....	.....	.....
Boats	1,102	115,129	1,158	115,054	184	$5,920	209	$7,794	463	$11,995	490	$12,336
Pound nets	869	71,395	904	74,394	28	3,100	43	5,775	.....	.....	.....	.....
Seines	334	64,665	331	57,145	23	5,500	30	7,500	73	7,100	78	7,350
Gill nets	64,428	95,328	78,875	109,319	4,000	5,220	5,300	7,420	6,500	11,100	6,266	9,757
Miscellaneous nets	251	1,370	265	1,448	110	550	113	560	320	960	300	900
Pots	265	410	1,070	1,615	25	40	95	140	.....	.....	.....	.....
Shore property	.....	112,455	.....	110,801	.....	5,484	.....	5,675	.....	800	.....	820
Cash capital	.....	36,500	.....	30,100	.....	.....	.....	.....	.....	.....	.....	.....
Total	.....	506,859	.....	512,431	.....	25,814	.....	34,804	.....	31,955	.....	31,163

Items.	Cape Fear River and tributaries.				Winyah Bay and tributaries.				Edisto River and tributaries.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Boats	190	$2,495	195	$2,615	659	$9,229	614	$8,797	109	$2,316	122	$2,572
Seines	55	1,506	55	1,506	9	485	9	485	16	700	17	760
Gill nets	127	3,586	109	3,455	568	13,721	506	9,911	928	2,086	804	2,535
Miscellaneous nets	63	203	64	208	252	963	255	831	151	403	145	388
Lines	.....	4	.....	4	.....	71	.....	74	.....	11	.....	10
Shore property	.....	397	.....	403	.....	.....	.....	.....	.....	1,125	.....	1,200
Total	.....	8,191	.....	8,191	.....	24,469	.....	20,098	.....	6,641	.....	7,525

51.—Table of vessels, boats, apparatus, etc., employed—Continued.

Items.	Combahee, Ashepoo, and Coosawhatchie rivers.				Savannah River.				Ogeechee River.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Boats	31	$335	38	$420	105	$1,528	98	$1,367	67	$990	66	$910
Pound nets	.....	.....	.....	.....	.....	.....	.....	.....	5	1,250	5	1,250
Seines	.....	.....	.....	.....	.....	.....	.....	.....	1	12	1	12
Gill nets	22	610	26	730	102	2,994	93	2,786	70	2,465	77	2,775
Miscellaneous nets	24	52	25	55	77	384	72	409	2	10	3	15
Lines	.....	9	.....	8	.....	158	.....	160	.....	8	.....	6
Shore property	.....	400	.....	500	.....	50	.....	50	.....	3,500	.....	3,620
Total	.....	1,406	.....	1,713	.....	5,114	.....	4,772	.....	8,235	.....	8,588

Items.	Altamaha River and tributaries.				St. Marys River.				St. Johns River and tributaries.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Boats	361	$1,353	377	$1,212	26	$315	20	$240	320	$14,318	372	$16,743
Pound nets	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	110
Seines	.....	.....	.....	.....	.....	.....	.....	.....	50	3,310	64	4,785
Gill nets	184	960	191	939	26	590	20	460	265	21,845	290	22,685
Miscellaneous nets	341	933	351	961	.....	.....	.....	.....	37	185	30	150
Lines	.....	77	.....	85	.....	.....	.....	.....	.....	248	.....	550
Shore property	.....	.....	.....	.....	.....	.....	.....	.....	.....	26,450	.....	28,568
Cash capital	.....	.....	.....	.....	.....	.....	.....	.....	.....	11,340	.....	13,500
Total	.....	3,323	.....	3,197	.....	905	.....	700	.....	77,696	.....	87,091

SUMMARY.

Items.	1889.		1890.	
	No.	Value.	No.	Value.
Vessels transporting	23	$7,775	24	$10,650
Tonnage	210.94	.....	278.17	.....
Outfit	.....	1,832	.....	1,905
Boats	3,707	165,923	3,759	170,060
Pound nets	902	75,745	953	81,529
Seines	561	83,278	585	79,543
Gill nets	77,220	160,505	87,557	172,832
Miscellaneous nets	1,628	6,013	1,623	5,925
Pots	290	450	1,165	1,755
Lines	.....	586	.....	897
Shore property	.....	150,661	.....	151,637
Cash capital	.....	47,840	.....	43,600
Total	.....	700,608	.....	720,333

52.—Table of products and values.

Species.	Albemarle Sound and tributaries.				Pamlico River.				Neuse River.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives	13,477,340	$135,415	15,273,573	$151,567	461,800	$5,726	538,400	$6,730	447,060	$4,242	669,090	$6,339
Black bass	397,470	19,790	386,090	19,206	.....	.....	.....	.....	22,700	1,362	21,440	1,286
Bream and perch	422,155	15,859	414,745	15,492	121,518	4,472	157,279	5,611	16,000	480	15,000	450
Catfish	19,420	583	21,685	651	.....	.....	.....	.....	27,200	408	25,000	375
Eels	53,950	3,398	155,700	9,414	1,300	78	4,915	312	.....	.....	.....	.....
Pike	27,261	1,308	32,010	1,545	.....	.....	.....	.....	9,500	250	8,500	220
Shad	4,053,765	205,905	4,348,350	231,756	393,080	21,478	434,911	23,742	558,500	31,460	647,336	31,812
Strawberry bass	29,725	1,153	28,075	1,106	.....	.....	.....	.....	.....	.....	.....	.....
Striped bass	434,750	24,006	476,444	25,907	39,099	2,155	37,217	1,997	57,500	4,450	54,680	4,234
Sturgeon	128,097	3,742	118,085	3,467	.....	.....	.....	.....	27,200	272	26,500	265
Other fish	167,272	5,361	186,515	5,948	19,776	610	19,235	573	56,000	810	58,872	840
Refuse fish	17,220	160	18,500	173	.....	.....	.....	.....	.....	.....	.....	.....
Total	19,228,425	416,680	21,459,772	466,232	1,036,573	34,519	1,191,957	38,965	1,222,260	43,734	1,526,418	45,821

52.—Table of products and values—Continued.

Species.	Cape Fear River and tributaries.				Winyah Bay and tributaries.				Edisto River and tributaries.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives	.....	.....	.....	.....	37,160	$939	28,600	$740	.....	.....	.....	.....
Black bass	.....	.....	.....	.....	1,995	100	2,100	107	.....	.....	.....	.....
Bream and perch	23,294	$1,187	22,450	$1,216	76,697	3,622	76,720	3,618	17,130	$986	16,350	$975
Catfish	8,000	257	7,000	220	67,963	2,106	65,827	2,047	.....	.....	.....	.....
Hickory shad	.....	.....	.....	.....	35,230	1,094	26,308	830	7,220	353	7,424	371
Shad	351,041	21,355	337,816	18,705	399,069	29,987	385,364	28,197	129,434	8,705	127,933	8,609
Striped bass	.....	.....	.....	.....	3,000	240	2,800	224	7,295	720	8,360	820
Sturgeon	72,500	1,740	30,625	735	211,375	2,619	123,512	2,867	18,860	400	32,500	1,022
Suckers	58,146	1,745	60,550	1,779	24,796	1,044	26,558	1,097	23,797	1,213	23,314	1,180
Other fish	1,900	45	2,300	52	50,282	2,014	50,580	1,998	12,855	503	13,645	547
Total	515,481	26,329	460,741	22,707	907,567	43,765	788,369	41,725	216,591	12,880	229,526	13,524

Species.	Combahee, Ashepoo, and Coosawhatchie rivers.				Savannah River.				Ogeechee River.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives	.....	.....	.....	.....	8,000	$300	8,000	$340	28,000	$420	16,000	$240
Bream and perch	8,300	$461	9,765	$516	7,930	392	7,256	363	6,516	300	5,004	222
Catfish	5,100	100	5,620	115	99,915	5,074	93,291	4,850	25,554	730	25,663	784
Hickory shad	468	20	505	25	8,800	440	8,500	380	8,000	400	12,600	670
Shad	36,026	2,505	38,496	2,980	80,108	7,230	80,863	8,153	160,095	12,315	190,125	14,625
Striped bass	490	50	400	40	8,200	700	5,000	400	5,060	400	4,000	320
Sturgeon	29,975	975	41,187	1,521	142,545	3,326	71,350	1,704	56,375	1,060	25,450	490
Suckers	.....	.....	.....	.....	1,675	100	1,430	86	.....	.....	.....	.....
Other fish	4,800	384	9,800	584	9,127	562	9,290	583	5,034	210	5,563	219
Total	85,159	4,495	105,773	5,781	366,300	18,124	284,980	16,859	294,634	15,835	284,405	17,570

Species.	Altamaha River and tributaries.*				St. Marys River.				St. Johns River and tributaries.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Alewives	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10,120	$150
Black bass	.....	.....	.....	.....	.....	.....	.....	.....	155,433	$8,690	181,646	9,832
Bream and perch	7,045	$352	7,940	$398	.....	.....	.....	.....	497,305	17,274	588,190	20,235
Catfish	47,408	2,380	48,766	2,438	.....	.....	.....	.....	30,160	603	96,240	1,265
Hickory shad	1,600	81	2,000	100	.....	.....	.....	.....	.....	.....	.....	.....
Mullet	.....	.....	.....	.....	.....	.....	.....	.....	408,993	6,818	684,616	10,208
Pike	.....	.....	.....	.....	.....	.....	.....	.....	38,670	1,520	37,168	1,485
Shad	129,077	8,954	140,138	9,541	60,000	$3,000	37,800	$1,890	1,991,033	95,439	2,616,222	102,393
Sturgeon	37,835	903	5,660	163	39,500	975	27,930	695	3,120	70	2,000	45
Suckers	4,017	199	4,493	225	.....	.....	.....	.....	.....	.....	.....	.....
Other fish	940	46	1,360	69	.....	.....	.....	.....	5,186	200	9,042	299
Refuse fish	.....	.....	.....	.....	.....	.....	.....	.....	443,000	2,435	520,000	2,550
Total	227,922	12,915	210,357	12,934	99,500	3,975	65,730	2,585	3,572,900	133,049	4,745,244	148,462

* Includes the Satilla River.

SUMMARY.

Species.	1889.		1890.	
	Pounds.	Value.	Pounds.	Values.
Alewives	14,459,960	$147,042	16,543,783	$166,106
Black bass	577,598	29,942	591,276	30,431
Bream and perch	1,203,890	45,385	1,320,699	49,096
Catfish	331,320	12,241	389,092	12,745
Eels	55,250	3,476	160,615	9,726
Hickory shad	61,318	2,388	57,337	2,376
Mullet	408,993	6,818	684,616	10,208
Pike	75,431	3,078	77,678	3,250
Shad	8,341,228	448,333	9,385,354	482,403
Strawberry bass	29,725	1,153	28,075	1,106
Striped bass	555,394	32,721	588,901	33,942
Sturgeon	767,382	16,082	504,799	12,974
Suckers	112,431	4,301	116,345	4,367
Other fish	333,172	10,745	366,202	11,712
Refuse fish	460,220	2,595	538,500	2,723
Total	27,773,312	766,300	31,353,272	833,165

53.—Table of products specified by apparatus.

Apparatus and species.	Albemarle Sound and tributaries.				Pamlico River.				Neuse River.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Pound nets:												
Alewives	5,996,880	$60,920	7,073,584	$69,295	76,280	$955	115,840	$1,451	.....	.....	.....	.....
Black bass	10,650	426	11,800	472	.....	.....	.....	.....	.....	.....	.....	.....
Bream and perch	199,760	8,840	189,780	8,437	30,400	1,216	36,485	1,319	.....	.....	.....	.....
Catfish	7,420	223	7,685	231	.....	.....	.....	.....	.....	.....	.....	.....
Eels	7,050	494	7,200	504	.....	.....	.....	.....	.....	.....	.....	.....
Pike	900	40	1,100	49	.....	.....	.....	.....	.....	.....	.....	.....
Shad	362,276	20,386	379,558	21,175	23,241	1,262	24,801	1,338	.....	.....	.....	.....
Strawberry bass	1,450	70	1,645	80	.....	.....	.....	.....	.....	.....	.....	.....
Striped bass	240,221	13,732	260,464	14,874	.....	.....	.....	.....	.....	.....	.....	.....
Sturgeon	1,720	34	1,500	30	.....	.....	.....	.....	.....	.....	.....	.....
Other fish	60,347	2,059	79,585	2,635	5,216	158	7,295	215	.....	.....	.....	.....
Total	6,888,674	107,224	8,013,901	117,782	135,137	3,591	184,421	4,323	.....	.....	.....	.....
Seines:												
Alewives	7,344,160	73,018	8,061,149	80,756	385,520	4,771	422,560	5,279	447,660	$4,242	669,090	$6,339
Black bass	386,820	19,364	374,290	18,734	.....	.....	.....	.....	9,500	570	8,000	480
Bream and perch	199,595	6,455	196,665	6,335	91,118	3,256	120,794	4,292	9,500	285	9,000	270
Catfish	12,000	360	14,000	420	.....	.....	.....	.....	27,200	408	25,000	375
Pike	26,361	1,268	30,910	1,496	.....	.....	.....	.....	5,500	170	5,000	150
Shad	1,195,240	56,602	1,085,516	58,923	172,564	9,654	195,297	10,894	157,500	9,000	478,976	22,960
Strawberry bass	28,275	1,083	26,430	1,026	.....	.....	.....	.....	.....	.....	.....	.....
Striped bass	131,650	5,702	142,570	5,868	36,616	2,010	36,017	1,930	52,500	4,200	50,000	4,000
Sturgeon	41,552	378	37,185	349	.....	.....	.....	.....	27,200	272	26,500	265
Other fish	99,125	3,122	99,060	3,136	11,565	362	10,185	305	33,000	580	33,872	590
Refuse fish	17,220	160	18,500	173	.....	.....	.....	.....	.....	.....	.....	.....
Total	9,481,998	166,512	10,086,275	177,226	697,383	20,053	784,853	22,700	769,560	19,727	1,305,438	35,429
Gill nets:												
Alewives	65,800	639	64,040	632	.....	.....	.....	.....	.....	.....	.....	.....
Black bass	.....	.....	.....	.....	.....	.....	.....	.....	13,200	792	13,440	806
Bream and perch	22,800	564	28,300	720	.....	.....	.....	.....	6,500	195	6,000	180
Pike	.....	.....	.....	.....	.....	.....	.....	.....	4,000	80	3,500	70
Shad	2,461,774	127,197	2,846,841	149,576	114,800	6,262	129,500	7,050	355,500	19,860	128,360	6,552
Striped bass	61,629	4,497	72,100	5,086	2,483	145	1,200	67	5,000	250	4,680	234
Sturgeon	84,825	3,330	79,400	3,088	.....	.....	.....	.....	.....	.....	.....	.....
Other fish	6,800	153	6,270	137	2,995	90	1,755	53	23,000	230	25,000	250
Total	2,703,628	136,380	3,096,951	159,239	120,278	6,497	132,455	7,170	407,200	21,407	180,980	8,092
Miscellaneous nets:												
Alewives	70,500	838	74,800	884	.....	.....	.....	.....	.....	.....	.....	.....
Shad	34,475	1,720	36,435	2,082	82,475	4,300	85,313	4,460	45,500	2,600	40,000	2,300
Striped bass	1,250	75	1,310	79	.....	.....	.....	.....	.....	.....	.....	.....
Other fish	1,000	27	1,600	40	.....	.....	.....	.....	.....	.....	.....	.....
Total	107,225	2,660	114,145	3,085	82,475	4,300	85,313	4,460	45,500	2,600	40,000	2,300
Pots:												
Eels	46,900	2,904	148,500	8,910	1,300	78	4,915	312	.....	.....	.....	.....
Grand total	19,228,425	416,680	21,459,772	466,232	1,036,573	34,519	1,191,957	38,965	1,222,260	43,734	1,526,418	45,821

53.—Table of products specified by apparatus—Continued.

Apparatus and species.	Cape Fear River and tributaries.				Winyah Bay and tributaries.				Edisto River and tributaries.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Seines:												
Bream and perch	13,460	$704	11,450	$671					2,980	$238	3,020	$241
Catfish					4,135	$124	3,027	$91				
Hickory shad					2,048	99	2,200	110	3,360	160	3,424	171
Shad	93,494	6,324	84,940	5,680	7,918	789	7,251	654	17,570	1,551	18,538	1,591
Striped bass									5,495	540	6,300	620
Sturgeon					3,200	95	2,762	82	4,860	150	4,500	145
Suckers	53,080	1,542	55,150	1,584	2,981	149	3,140	157	1,802	108	1,635	98
Other fish					1,337	59	780	30	2,080	130	2,445	151
Total	160,034	8,570	151,540	7,935	21,619	1,315	19,160	1,124	38,147	2,877	39,862	3,017
Gill nets:												
Black bass					1,995	100	2,100	107				
Bream and perch	1,000	50	1,000	50	10,297	451	9,620	415	10,800	540	10,320	532
Hickory shad					33,182	995	24,108	720	3,860	193	4,000	200
Shad	247,747	14,151	243,876	12,210	292,744	21,623	282,096	20,025	101,100	6,160	100,100	6,160
Striped bass									1,800	180	2,060	200
Sturgeon	72,500	1,740	30,625	735	208,175	2,524	120,750	2,785	14,000	250	28,000	877
Suckers	1,200	48	1,400	55	10,940	460	12,368	498	21,995	1,105	21,679	1,082
Other fish	900	25	800	22	5,950	238	7,250	266	10,775	373	11,200	396
Total	323,347	16,014	277,701	13,072	563,283	26,391	458,292	24,816	164,330	8,801	177,359	9,447
Miscellaneous nets:												
Alewives					37,160	939	28,600	740				
Bream and perch	3,834	183	5,000	245								
Catfish	3,800	112	3,000	90	4,840	145	3,400	102				
Shad	9,800	880	9,000	815	98,407	7,575	96,017	7,518	10,764	994	9,295	858
Striped bass					3,000	240	2,800	224				
Suckers	3,866	155	4,000	140	10,875	435	11,050	442				
Other fish					4,420	176	3,210	128				
Total	21,300	1,330	21,000	1,290	158,702	9,510	145,077	9,154	10,764	994	9,295	858
Lines:												
Bream and perch	5,000	250	5,000	250	66,400	3,171	67,100	3,203	3,350	208	3,010	202
Catfish	4,800	145	4,000	130	58,988	1,837	59,400	1,854				
Other fish	1,000	20	1,500	30	38,575	1,541	39,340	1,574				
Total	10,800	415	10,500	410	163,963	6,549	165,840	6,631	3,350	208	3,010	202
Grand total	515,481	26,329	460,741	22,707	907,567	43,765	788,369	41,725	216,591	12,880	229,526	13,524

Apparatus and species.	Combahee, Ashepoo, and Coosawhatchie rivers.				Savannah River.				Ogeechee River.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Pound nets:												
Alewives									28,000	$420	16,000	$240
Catfish									19,890	560	20,070	600
Shad											1,625	125
Striped bass									5,060	400	4,000	320
Total									52,950	1,380	41,695	1,285
Seines:												
Miscellaneous fish									2,500	100	2,970	110
Gill nets:												
Bream and perch	300	$21	265	$18	1,106	$70	1,800	$95				
Hickory shad	468	20	505	25	8,800	440	8,500	380	8,000	400	12,600	670
Shad	30,501	2,065	31,996	2,465	78,288	7,006	79,238	7,953	160,095	12,315	188,500	14,500
Sturgeon	29,975	975	41,187	1,521	142,545	3,326	71,350	1,704	56,375	1,060	25,450	490
Other fish	4,800	384	9,800	584	5,880	367	5,930	375				
Total	66,044	3,465	83,753	4,613	236,619	11,209	166,818	10,507	224,470	13,775	226,550	15,660

53.—Table of products specified by apparatus—Continued.

Apparatus and species.	Combahee, Ashepoo, and Coosawhatchie rivers.				Savannah River.				Ogeechee River.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Miscellaneous nets:												
Alewives					*8,000*	*$300*	*8,000*	*$340*				
Bream and perch					2,480	124	2,120	120				
Catfish	5,100	$100	5,620	$115	20,125	999	17,892	938	1,715	$60	2,515	$88
Shad	5,525	440	6,500	515	1,820	224	1,625	200				
Striped bass	*490*	*50*	*400*	*40*	6,000	480	3,000	240				
Suckers					1,675	100	1,430	86				
Other fish					2,357	140	2,560	158	1,000	40	1,675	67
Total	11,115	590	12,520	670	42,457	2,367	36,627	2,082	2,715	100	4,190	155
Lines:												
Bream and perch	8.000	440	9,500	498	4,344	198	3,336	148	6,516	300	5,004	222
Catfish					79,790	4,075	75,399	3,912	3,949	110	3,078	96
Striped bass					2,200	220	2,000	160				
Other fish					890	55	800	50	1,534	70	918	42
Total	8,000	440	9,500	498	87,224	4,548	81,535	4,270	11,999	480	9,000	360
Grand total	85,159	4,495	105,773	5,781	366,300	18,124	284,980	16,859	294,634	15,835	284,405	17,570

Apparatus and species.	Altamaha River and tributaries.				St. Marys River.				St. Johns River and tributaries.			
	1889.		1890.		1889.		1890.		1889.		1890.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Pound nets:												
Alewives											10,120	$150
Bream and perch											1,040	40
Shad											4,500	150
Refuse fish											40,000	150
Total											55,660	490
Seines:												
Black bass									77,973	$4,468	96,226	5,268
Bream and perch									*343,893*	*11,124*	*434,099*	*14,230*
Mullet									31,723	480	25,000	375
Pike									28,170	1,120	26,118	1,045
Shad									558,000	22,675	868,710	26,061
Other fish											5,022	151
Refuse fish									427,000	2,350	460,000	2,300
Total									1,466,759	42,217	1,915,175	49,430
Gill nets:												
Bream and perch	4,205	$210	4,840	$243								
Hickory shad	1,600	81	2,000	100								
Mullet									346,000	5,880	644,176	9,598
Shad	71,955	4,560	82,054	5,073	60,000	$3,000	37,800	$1,890	1,433,033	72,764	1,743,012	76,182
Sturgeon	37,335	903	5,060	163	39,500	975	27,930	695	3,120	70	2,000	*45*
Suckers	4,017	199	4,493	225								
Other fish	940	46	1,360	69								
Refuse fish									16,000	85	20,000	100
Total	120,552	5,999	100,407	5,873	99,500	3,975	65,730	2,585	1,798,153	78,799	2,409,188	85,925
Miscellaneous nets:												
Black bass									3,600	180	3,500	175
Bream and perch									38,280	1,483	33,440	1,171
Catfish	13,943	707	12,850	641							3,000	150
Mullet									31,270	458	15,440	235
Shad	57,122	4,394	58,084	4,468								
Other fish									5,186	200	4,020	148
Total	71,065	5,101	70,934	5,109					78,336	2,321	59,400	1,879
Lines:												
Black bass									73,860	4,042	81,920	4,389
Bream and perch	2,840	142	3,100	155					115,132	4,667	119,611	4,794
Catfish	33,465	1,673	35,916	1,797					30,160	603	93,240	1,115
Pike									10,500	400	11,050	440
Total	36,305	1,815	39,016	1,952					229,652	9,712	305,821	10,738
Grand total	227,922	12,915	210,357	12,934	99,500	3,975	65,730	2,585	3,572,900	133,049	4,745,244	148,462

53.—Table of products specified by apparatus—Continued.

SUMMARY.

Apparatus and species.	1889.		1890.	
	Pounds.	Value.	Pounds.	Value.
Pound nets:				
Alewives	6,101,160	$62,295	7,215,544	$71,136
Black bass	10,650	426	11,800	472
Bream and perch	230,160	10,056	227,305	9,796
Catfish	27,310	783	27,755	831
Eels	7,050	494	7,200	504
Pike	900	40	1,100	49
Shad	385,517	21,648	410,484	22,788
Strawberry bass	1,450	70	1,645	80
Striped bass	245,281	14,132	264,464	15,194
Sturgeon	1,720	34	1,500	30
Other fish	65,563	2,217	86,880	2,850
Refuse fish	.....	.....	40,000	150
Total	7,076,761	112,195	8,295,677	123,880
Seines:				
Alewives	8,177,340	82,031	9,152,799	92,374
Black bass	474,293	24,402	478,516	24,482
Bream and perch	660,546	22,062	775,028	26,039
Catfish	43,335	892	42,027	886
Hickory shad	5,408	259	5,624	281
Mullet	31,723	480	25,000	375
Pike	60,031	2,558	62,028	2,691
Shad	2,202,286	106,595	2,739,228	126,763
Strawberry bass	28,275	1,083	26,430	1,026
Striped bass	226,261	12,452	234,887	12,418
Sturgeon	76,812	895	70,947	841
Suckers	57,863	1,799	59,925	1,839
Other fish	149,607	4,353	154,334	4,473
Refuse fish	444,220	2,510	478,500	2,473
Total	12,638,000	262,371	14,305,273	296,961
Gill nets:				
Alewives	65,800	639	64,040	632
Black bass	15,195	892	15,540	913
Bream and perch	57,008	2,101	62,145	2,253
Hickory shad	55,910	2,129	51,713	2,095

Apparatus and species.	1889.		1890.	
	Pounds.	Value.	Pounds.	Value.
Gill nets—cont'd.				
Mullet	346,000	$5,880	644,176	$9,598
Pike	4,000	80	3,500	70
Shad	5,407,537	296,963	5,893,373	309,636
Striped bass	70,912	5,072	80,040	5,587
Sturgeon	688,850	15,153	432,352	12,103
Suckers	38,152	1,812	39,940	1,860
Other fish	62,040	1,906	69,365	2,152
Refuse fish	16,000	85	20,000	100
Total	6,827,404	332,712	7,376,184	346,999
Miscellaneous nets:				
Alewives	115,660	2,077	111,400	1,964
Black bass	3,600	180	3,500	175
Bream and perch	44,594	1,790	40,560	1,536
Catfish	49,523	2,123	48,277	2,124
Mullet	31,270	458	15,440	235
Shad	345,888	23,127	342,269	23,218
Striped bass	10,740	845	7,510	583
Suckers	16,416	690	16,480	668
Other fish	13,963	583	13,065	541
Total	631,654	31,873	598,501	31,042
Lines:				
Black bass	73,860	4,042	81,920	4,389
Bream and perch	211,582	9,376	215,661	9,472
Catfish	211,152	8,443	271,033	8,904
Pike	10,500	400	11,050	440
Striped bass	2,200	220	2,000	160
Other fish	41,999	1,686	42,558	1,696
Total	551,293	24,167	624,222	25,061
Pots:				
Eels	48,200	2,982	153,415	9,222
Grand total	27,773,312	766,300	31,353,272	833,165

NOTES ON SPECIAL FISHERIES.

The shad fishery.—As has been shown, the shad is the most prominent fish occurring in the fresh waters of this region, and its capture constitutes the most important fishery therein prosecuted. It is found throughout the section, but is most numerous and is caught in largest quantities near the two extremes of the region in Albemarle Sound and in St. Johns River. Compared with 1880, the shad fisheries have undergone a very noteworthy advance. From 3,932,563 pounds, the yield in 1880, the product has increased to 9,385,354 pounds in 1890. With the increase in the catch the average price has declined from over 9½ cents to 5 cents per pound, and the value of the fisheries is consequently proportionally less than the augmentation in the yield. The preceding tables show that after Albemarle Sound and its tributaries, and the St. Johns River, the principal shad basins are those of the Pamlico, Neuse, Cape Fear, and Ogeechee rivers, and of Winyah Bay.

The shad fishery of Albermarle Sound and its tributary rivers is more extensive than that of any other hydrographic area, with the exception of Chesapeake Bay and tributaries, and, possibly, the Delaware Bay region. Since 1880 it is probable that not less than 35,000,000 pounds of shad, with a value to the fishermen of over $2,000,000, have here been caught. Notwithstanding the enormous annual drain on the supply, the catch has not only not diminished, but has gradually increased, until, in 1890, the

output was nearly twice as large as in 1880, although it should be remembered that more apparatus is now being used than formerly. In 1880 the quantity of shad taken was 2,255,823 pounds, valued at $172,969. The result of the fishery in 1889 was 4,053,765 pounds, worth $205,905, and in 1890, 4,348,350 pounds, valued at $231,756.

In the early days of this fishery much the largest part of the catch was taken with seines, but at the present time more than half the fish are caught with gill nets. The quantity of fish obtained in pound nets is not commensurate with the large number of these nets operated in the region, to which reference has elsewhere been made. This is owing to the circumstance that many of the nets are not set for shad, but are employed chiefly for alewives.

The shad fishery of St. Johns River is somewhat more than half as extensive as that in the Albemarle region. The increase in the catch of shad in this river since 1880 has been phenomenal, and the St. Johns now ranks among the three first shad streams in the United States. In 1880, 182 shad fishermen took 83,900 shad; in 1890, 442 fishermen secured 872,074 fish. The number of nets fished has been annually increasing, as has the number of shad taken by the individual fishermen. The supply is much less variable than in earlier years, and there has been no poor season since 1887. The most important form of apparatus is the gill net, by means of which about two-thirds of the catch is made. The seine is the only other device generally employed, although in 1890 a pound net took a small number of fish. The seine is the principal apparatus used in that part of the river between Lake George and Lake Harney, to which section it is restricted; prior to 1887 it was not employed in this fishery.

The following condensed table shows the extent of the shad fishery of this river in 1889 and 1890:

Shad fishery of the St. Johns River.

Fishery.	No. of men.		No. of nets.		No. of shad caught.		Value of shad.	
	1889.	1890.	1889.	1890.	1889.	1890.	1889.	1890.
Gill-net	331	382	166	191	493,161	581,704	$72,764	$76,182
Seine	58	58	10	10	223,000	289,570	22,675	26,061
Pound-net	.....	2	.....	1	.....	1,500	.....	150
Total	389	442	176	202	716,161	872,074	95,439	102,393

Considerable new capital went into the shad fishery of this river in 1891, as a result of which a substantial increase in the yield was anticipated.

The shad fishery of Savannah River has declined materially in the past decade. This, in the opinion of some of the fishermen, has been partly due to muddy water and freshets, which have been present almost constantly during the shad season in recent years, freshets often stopping the fishing for days or weeks at a time; others ascribe it to obstructions, which are said to prevent the shad from reaching the spawning-grounds. In 1880 the shad catch was less than one-third as large as it was eight years before, and since 1880 the yield has been reduced one-half. At the present time practically the entire catch is made with gill nets, only a few fish being taken with cast nets. The shad taken in this river command a very high price, the males bringing 50 cents each, and the females 75 cents to $1.

The sturgeon fishery.—The most noticeable decline in the river fisheries of the South Atlantic States during the past decade has been in the sturgeon fishery. In 1880 the aggregate catch in this region was 2,209,150 pounds, gross weight, valued at $58,699, including the caviare prepared by the fishermen. The yield in 1889 was 767,382 pounds, valued at $16,082, and in 1890 the output was still further reduced to 504,799 pounds, worth $12,974, notwithstanding the large increase in the fishing population. The principal waters in which the sturgeon is now taken are Albemarle Sound, Winyah Bay, and the Savannah River. The largest catch is made in the Albemarle region, where, as shown in the tables, 128,097 pounds, gross weight, were obtained in 1889, and 118,085 pounds in 1890, the value being $3,742 and $3,467, respectively. In 1880 over 900,000 pounds were credited to this section, for which the fishermen received more than $18,000. The most valuable sturgeon fishery in 1880 was that prosecuted in the Savannah River; the yield was 720,000 pounds, with a value, including the caviare, of $24,780. The supply of sturgeon in the Savannah River, like that of shad, has greatly declined and is steadily growing less, as shown by the figures, even the difference between two successive years being marked.

The decrease of 80 per cent in the yield of sturgeon during the past ten years argues very unfavorably for the continuance of the fishery, and there is reason to believe that the record at the end of the next decade will disclose a practical absence of this valuable resource from the fisheries of the South Atlantic States.

The alewife fishery.—Although all the coast rivers of this region are included within the range of the alewives (*Clupea pseudoharengus* and *C. æstivalis*), the fish are not abundant south of North Carolina, in which State more than 99 per cent of the catch in the South Atlantic States is taken. In addition to the Albemarle Basin, which supports a more extensive alewife fishery than any other body of water in the country, considerable quantities of these fish are obtained in the Pamlico and Neuse rivers.

In 1880 the total catch of alewives was 16,055,000 pounds, valued at $155,734. The tables indicate that the variation since that time, as disclosed by the figures for 1889 and 1890, has been slight, the yield in 1889 being somewhat less and that in 1890 a little greater than in 1880. The quantity and value of the alewife fishery of South Carolina, Georgia, and Florida have decreased; in North Carolina the value of the catch in 1889 and 1890 was greater than in 1880, and the quantity of fish taken in 1890 was considerably larger.

LIST OF FISHES FIGURED.

Plate No.

XLIII. *Acipenser sturio oxyrhynchus.* Sturgeon.
Lepisosteus platystomus. Short-nosed gar.
Amia calva. Dogfish; mudfish.
Tachysurus felis. Sea catfish.

XLIV. *Ailurichthys marinus.* Sea catfish.
Ictalurus punctatus. Channel catfish; spotted catfish.
Ameiurus platycephalus. Mud cat.

XLV. *Ameiurus albidus.* White catfish.
Ameiurus nigricans. Great catfish; Florida catfish.
Catostomus teres. Common sucker.

XLVI. *Erimyzon sucetta.* Chub sucker.
Minytrema melanops. Striped sucker.
Moxostoma rupiscartes. Sucker.

XLVII. *Moxostoma papillosum.* Sucker.
Cyprinus carpio. Asiatic carp; scale carp.
Cyprinus carpio coriaceus. Leather carp.

XLVIII. *Clupea mediocris.* Hickory shad.
Clupea pseudoharengus. Alewife; branch herring.
Clupea æstivalis. Alewife; glut herring.

XLIX. *Clupea sapidissima.* Shad.
Brevoortia tyrannus. Menhaden.
Dorosoma cepedianum. Gizzard shad; mud shad.

L. *Lucius americanus.* Banded pickerel.
Lucius reticulatus. Eastern pickerel.
Elacate canada. Cobia.

LI. *Mugil cephalus.* Common mullet; striped mullet.
Mugil curema. White mullet.
Scomberomorus maculatus. Spanish mackerel.

LII. *Caranx hippos.* Cavally.
Caranx chrysos. Jurel.
Seriola dumerili lalandi. Amber-fish.

LIII. *Vomer setipinnis.* Blunt-nosed shiner; moonfish.
Selene vomer. Silver moonfish.

LIV. *Pomatomus saltatrix.* Bluefish.
Trachynotus carolinus. Common pompano.
Trachynotus ovatus. Round pompano.

LV. *Trachynotus glaucus.* Banner pompano.
Stromateus triacanthus. Butterfish.

LVI. *Centrarchus macropterus.* Sunfish.
Pomoxis sparoides. Strawberry bass; calico bass.

LVII. *Ambloplites rupestris.* Rock bass.
Chænobryttus gulosus. Warmouth.

Plate No.

LVIII. *Acantharchus pomotis.* Mud bass; mud sunfish.
Lepomis pallidus. Blue sunfish.

LIX. *Lepomis megalotis.* Large-eared sunfish.
Lepomis auritus. Long-eared sunfish.

LX. *Lepomis punctatus.* Chinquapin perch.
Lepomis gibbosus. Common sunfish.

LXI. *Micropterus salmoides.* Large-mouthed black bass.
Perca flavescens. Yellow perch.
Epinephelus nigritus. Black grouper.

LXII. *Roccus lineatus.* Striped bass; rockfish.
Morone americana. White perch.
Centropristis philadelphicus. Rock blackfish.

LXIII. *Centropristis striatus.* Sea bass; blackfish.
Diplectrum formosum. Squirrel-fish.
Tautoga onitis. Tautog.

LXIV. *Lutjanus aya.* Red snapper.
Orthopristis chrysopterus. Hogfish.

LXV. *Hæmulon plumieri.* Common grunt; black grunt.
Hæmulon rimator. Red-mouthed grunt.

LXVI. *Archosargus probatocephalus.* Sheepshead.
Diplodus holbrooki. Pinfish; bream.

LXVII. *Stenotomus chrysops.* Northern scup; porgy.
Stenotomus aculeatus. Southern scup; porgy.

LXVIII. *Lagodon rhomboides.* Sailor's choice; bream; pinfish.
Sparus pagrus. Bastard snapper.

LXIX. *Rhomboplites aurorubens.* Mangrove snapper.
Lobotes surinamensis. Triple-tail.
Sciæna ocellata. Red drum; redfish.

LXX. *Pogonias cromis.* Drum (adult).
Pogonias cromis. Drum (young).

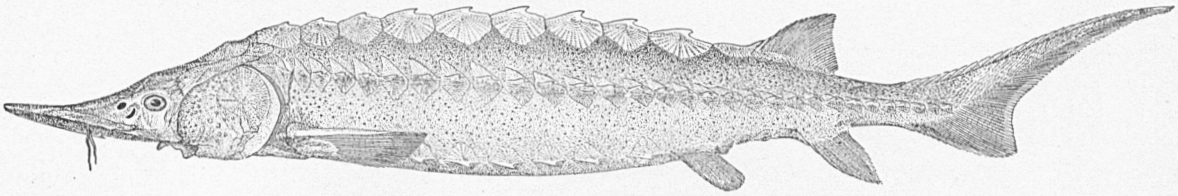
LXXI. *Cynoscion regalis.* Squeteague; weakfish.
Cynoscion nebulosus. Spotted squeteague; spotted weakfish.
Micropogon undulatus. Croaker.

LXXII. *Menticirrhus saxatilis.* Kingfish.
Menticirrhus americanus. Whiting; Carolina whiting.
Bairdiella chrysura. Yellow-tail.

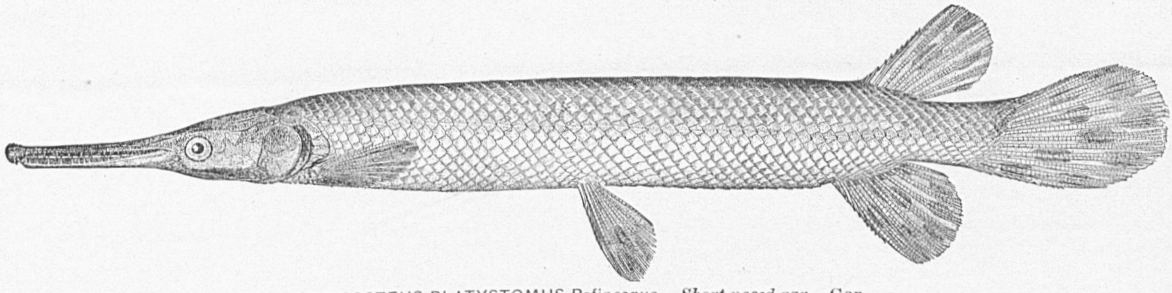
LXXIII. *Leiostomus xanthurus.* Spot.
Paralichthys lethostigma. Southern flounder.

LXXIV. *Phycis earlli.* Earll's hake.
Chætodipterus faber. Angel-fish; moonfish.

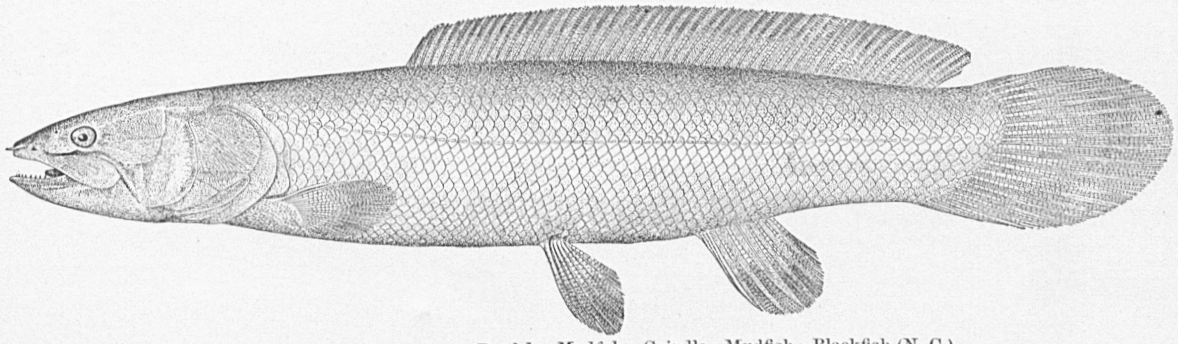
Reference to the general purpose and plan of the illustrations has already been made on page 272 of this report. Under the figure of each fish the scientific name of the species and the name of the original describer are given. These are followed by a name or names, in italic type, representing the most acceptable or generally employed common designation of the fish. The names in roman letters are the vernaculars in this region; their distribution, when not general in the South Atlantic States, is indicated. The absence of a name in roman letters, as in the case of the sturgeon, shad, sheepshead, and croaker, indicates that the local names are the same as the common names. The omission of the name in italics, which occurs in a few cases, means that no general common names are known and that only local names exist.



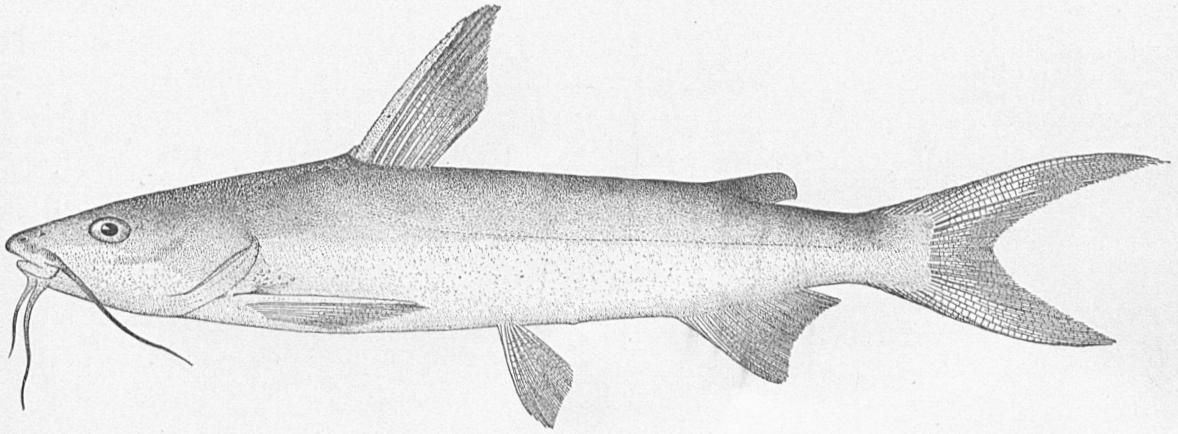
ACIPENSER STURIO OXYRHYNCHUS (Mitchill). *Sturgeon.*



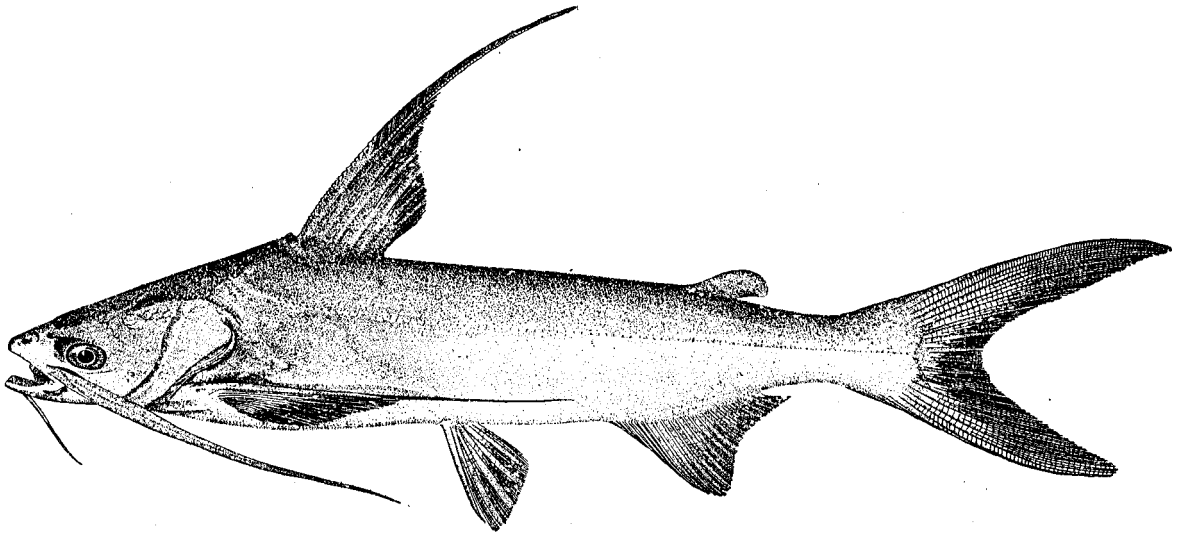
LEPISOSTEUS PLATYSTOMUS Rafinesque. *Short-nosed gar.* Gar.



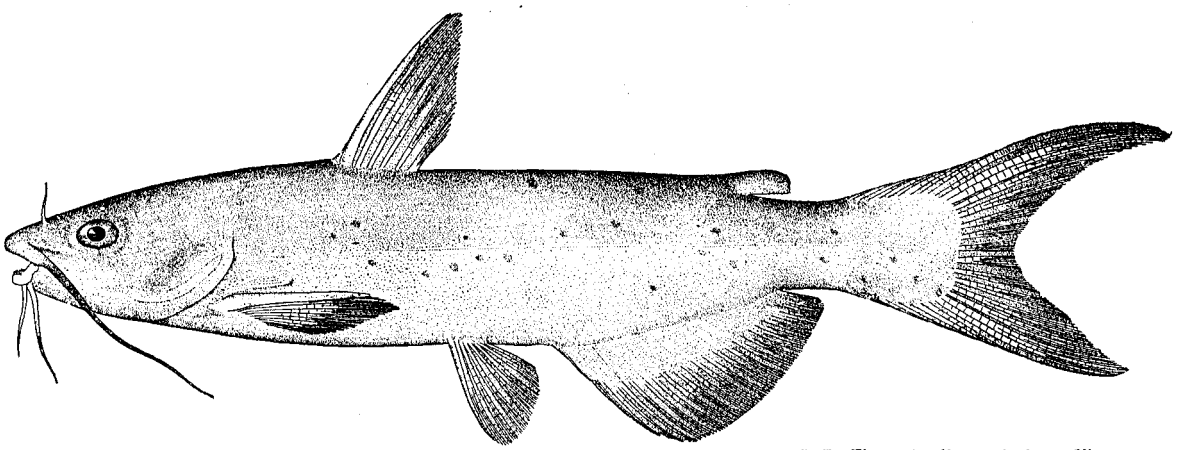
AMIA CALVA Linnæus. *Dogfish; Mudfish.* Grindle; Mudfish; Blackfish (N. C.).



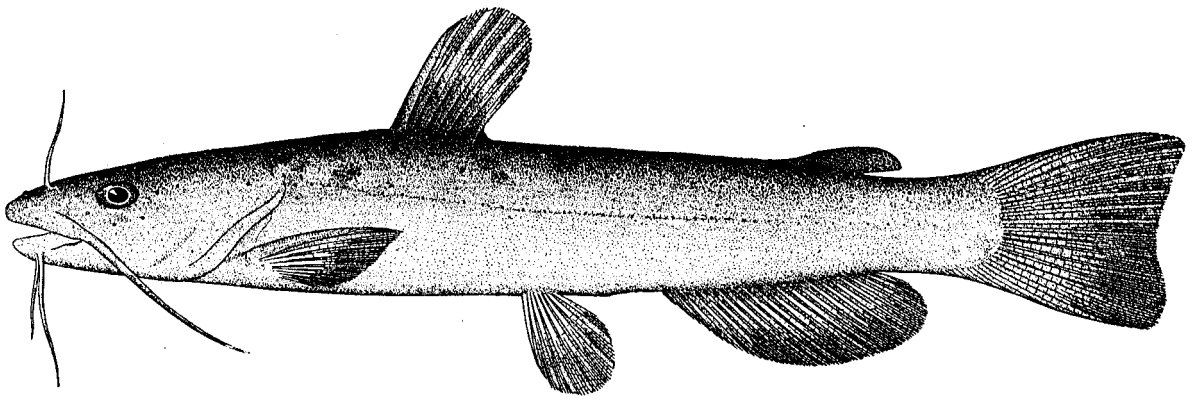
TACHYSURUS FELIS (Linnæus). *Sea catfish.* Small-mouthed cat (S. C.).



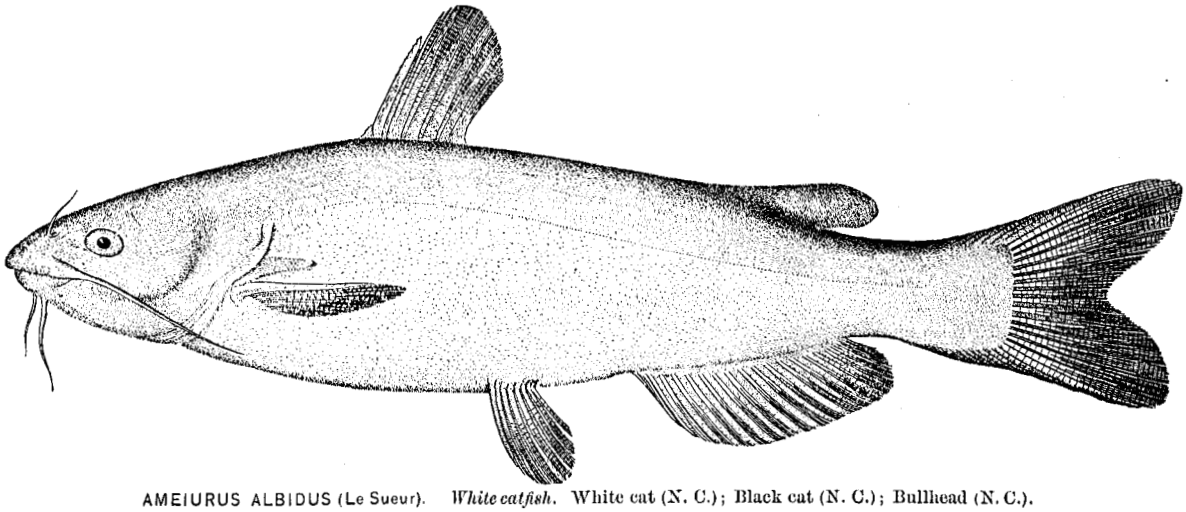
AILURICHTHYS MARINUS (Mitchill). *Sea catfish.* Silver cat (N. C.); Large-mouthed cat (S. C.); Gaff-topsail (Ga.); Sea cat (Fla.).



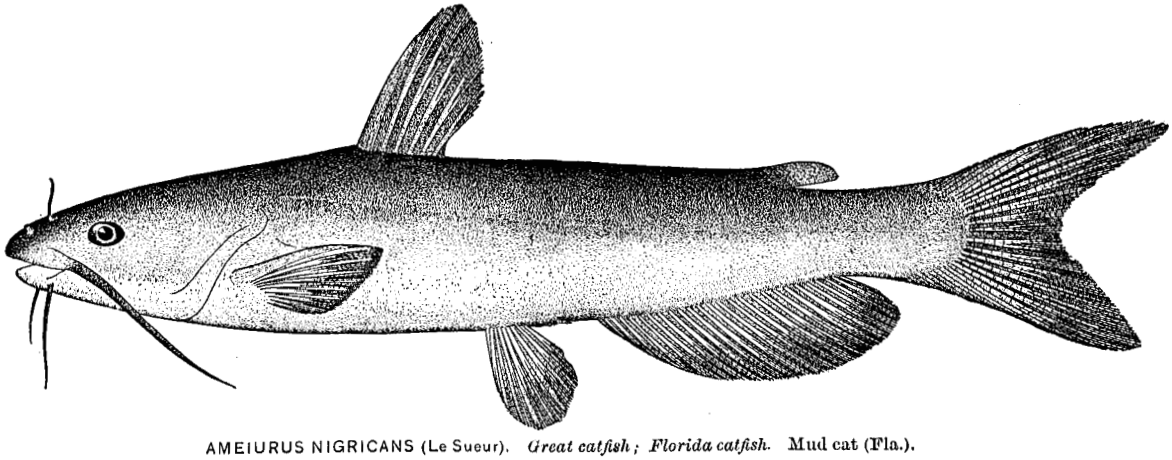
ICTALURUS PUNCTATUS (Rafinesque). *Channel catfish; Spotted catfish.* Channel cat (S. C., Fla.); Small-mouthed cat (Fla.).



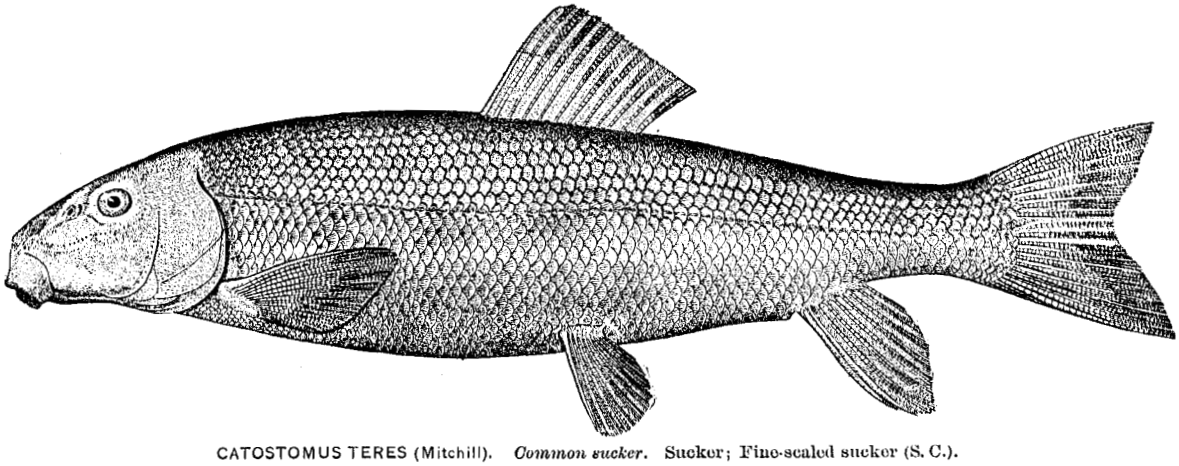
AMEIURUS PLATYCEPHALUS (Girard). Mud cat (S. C.).



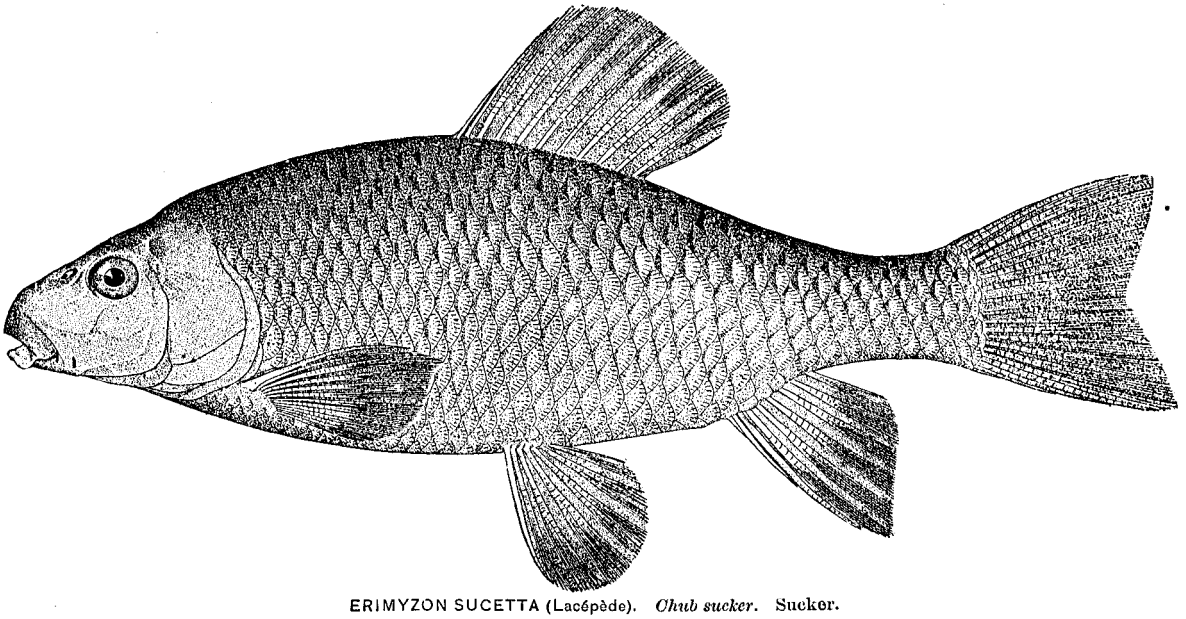
AMEIURUS ALBIDUS (Le Sueur). *White catfish.* White cat (N. C.); Black cat (N. C.); Bullhead (N. C.).



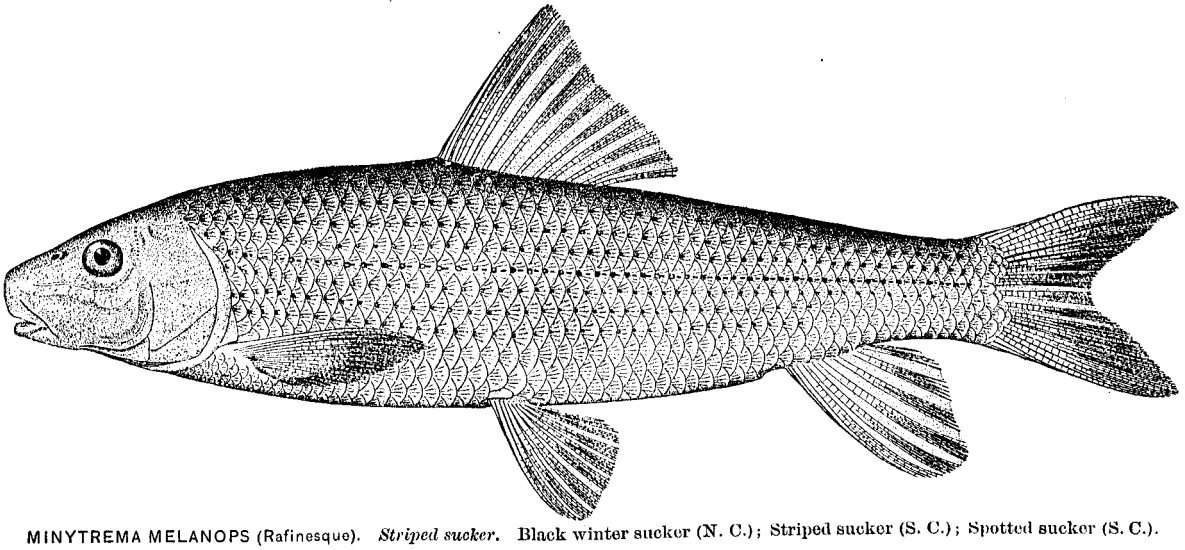
AMEIURUS NIGRICANS (Le Sueur). *Great catfish; Florida catfish.* Mud cat (Fla.).



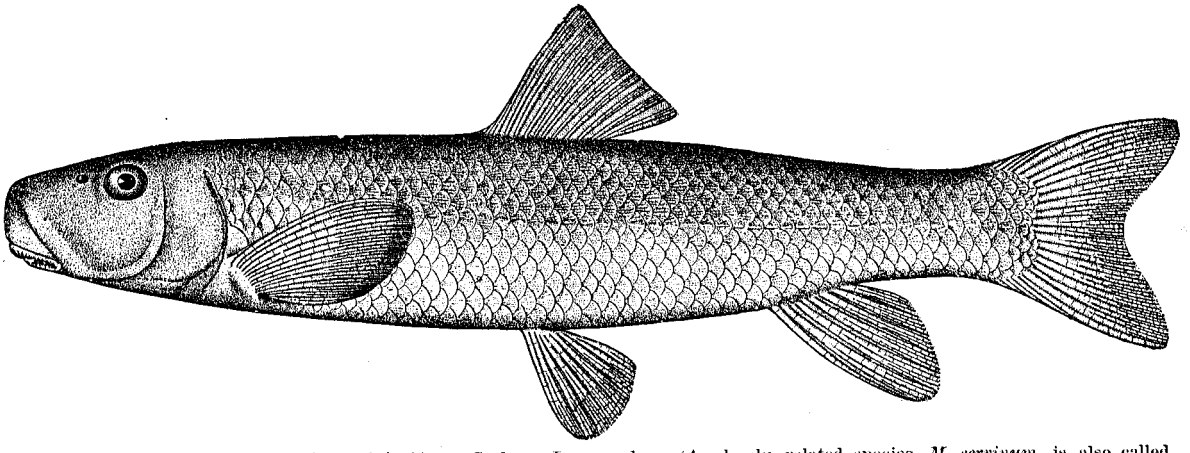
CATOSTOMUS TERES (Mitchill). *Common sucker.* Sucker; Fine-scaled sucker (S. C.).



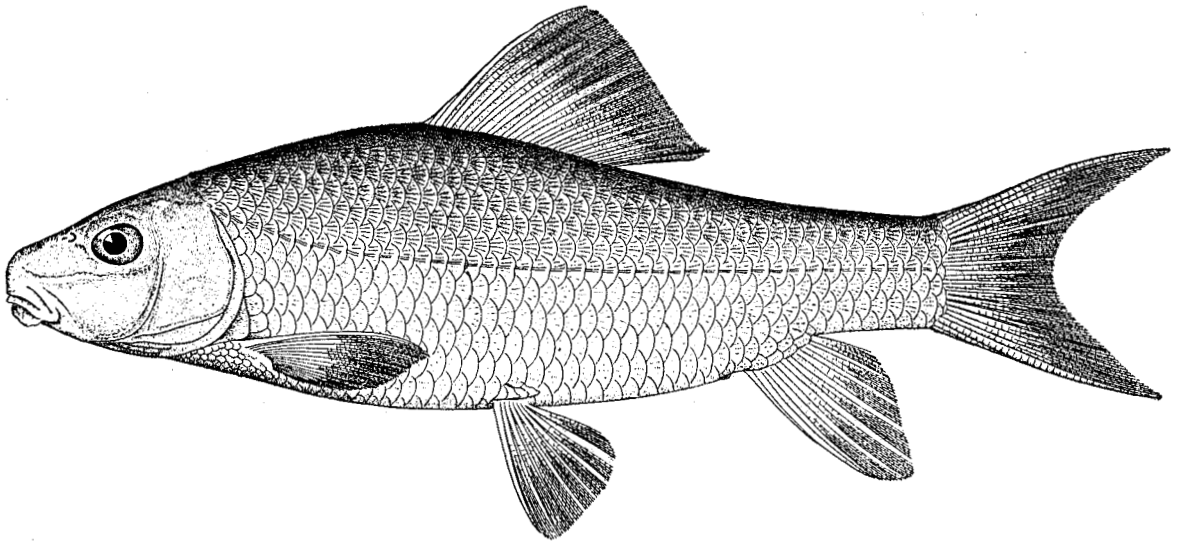
ERIMYZON SUCETTA (Lacépède). *Chub sucker.* Sucker.



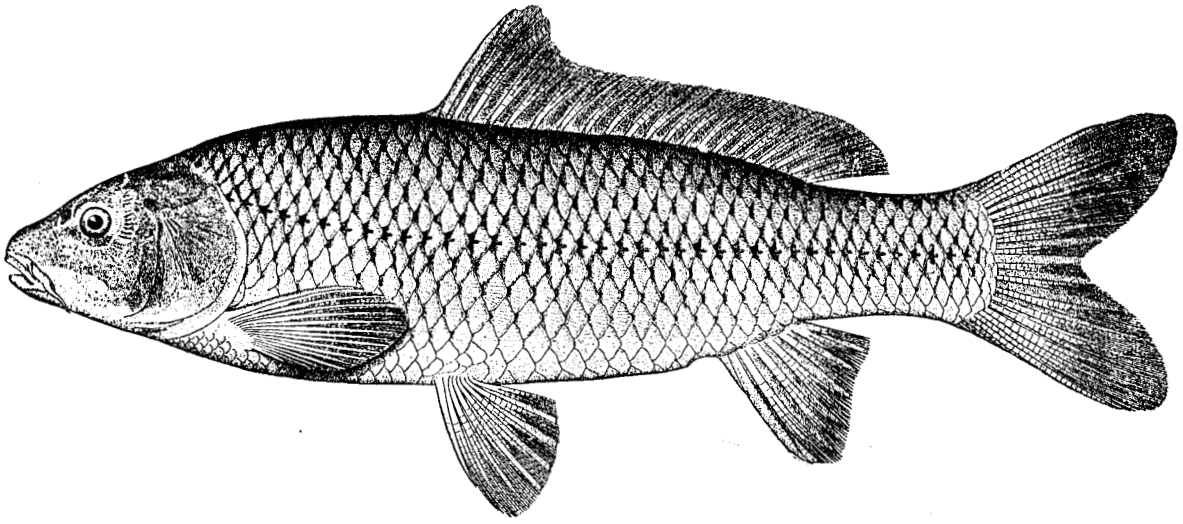
MINYTREMA MELANOPS (Rafinesque). *Striped sucker.* Black winter sucker (N. C.); Striped sucker (S. C.); Spotted sucker (S. C.).



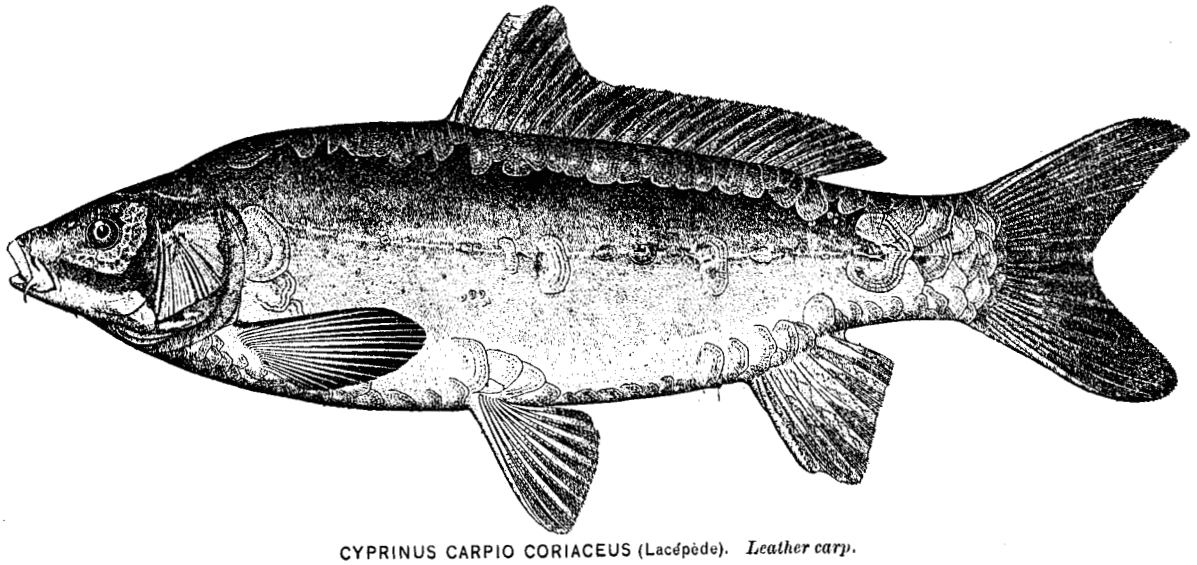
MOXOSTOMA RUPISCARTES Jordan and Jenkins. *Sucker.* Jump-rocks. (A closely related species, *M. cervinum*, is also called "jump-rocks" and "jumping mullet.")



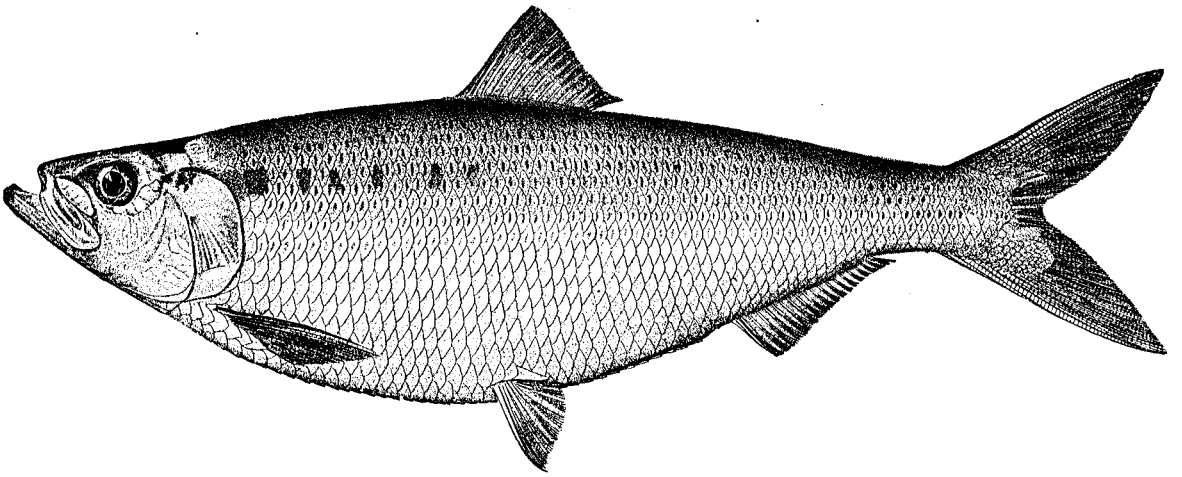
MOXOSTOMA PAPILLOSUM (Cope). *Sucker.* White mullet (Ga.); White sucker (Ga.); Shiner (Ga.). (A number of similar suckers occur throughout the South Atlantic region and are known to the fishermen as "mullet," redhorse," etc.)



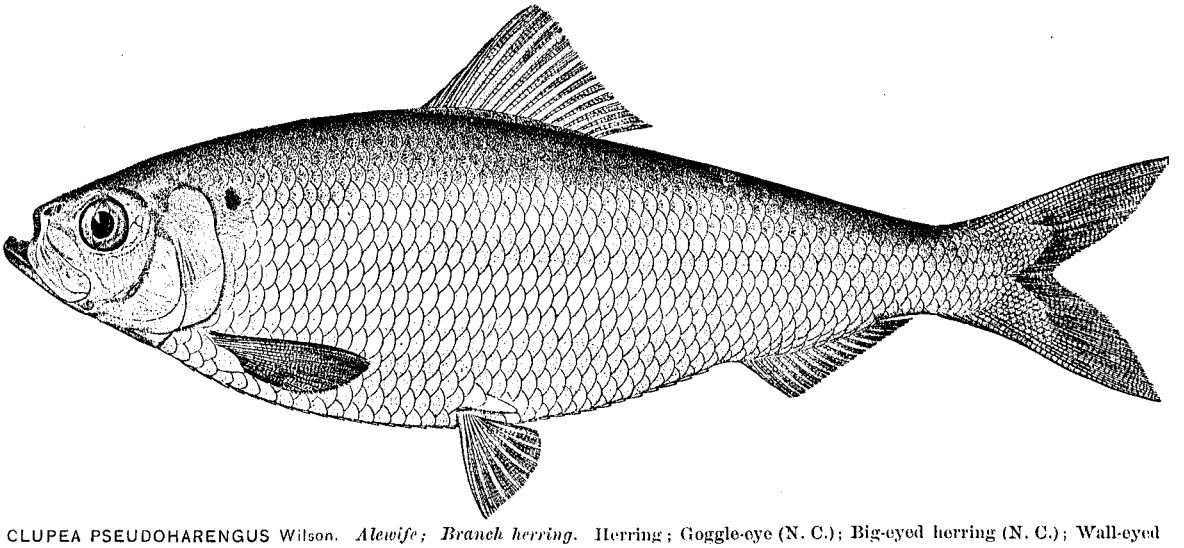
CYPRINUS CARPIO Linnæus. *Asiatic carp; Scale carp.*



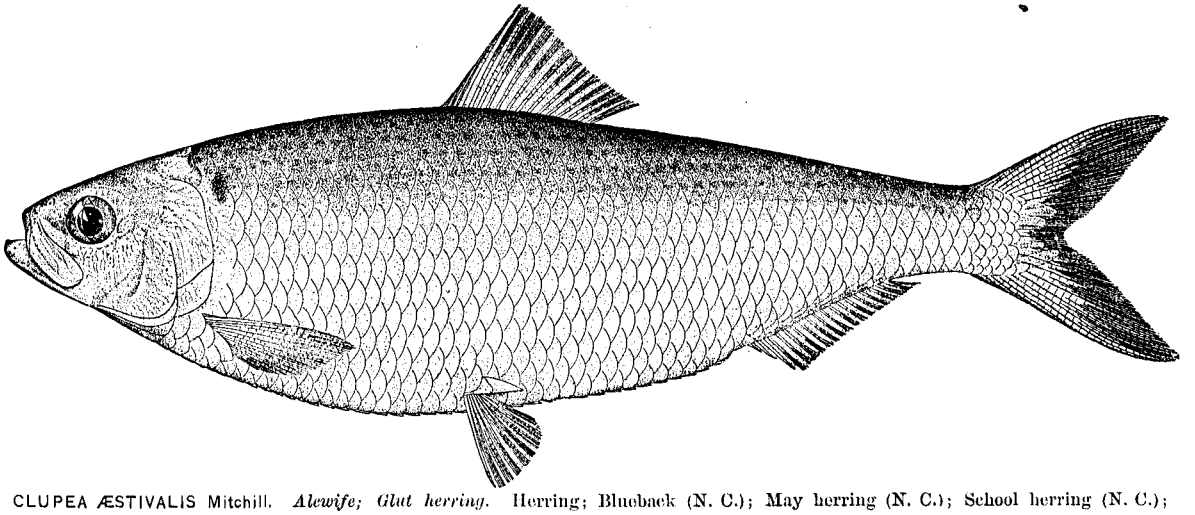
CYPRINUS CARPIO CORIACEUS (Lacépède). *Leather carp.*



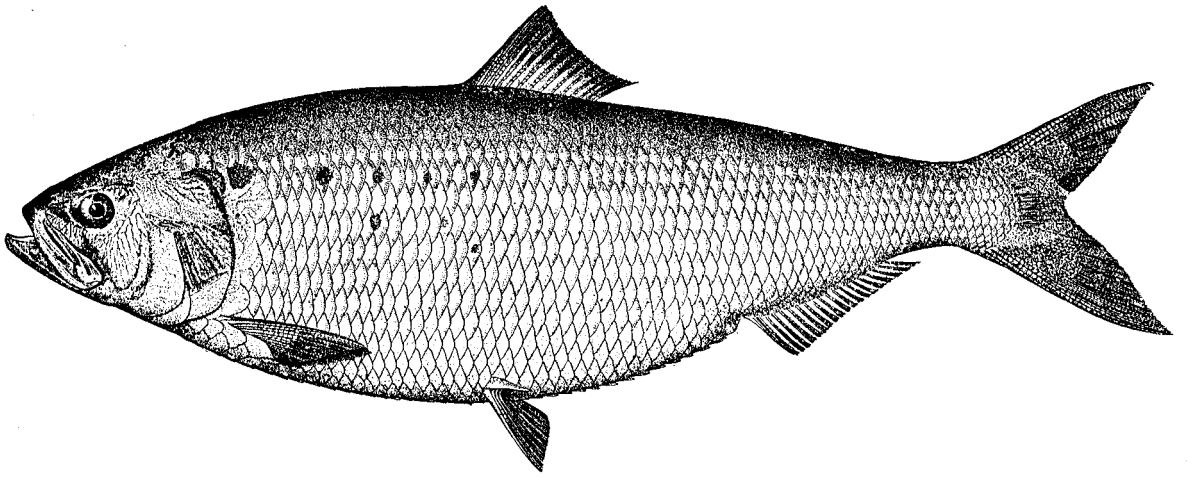
CLUPEA MEDIOCRIS Mitchill. *Hickory shad.* Hickory shad; Hick; Jack (N. C.).



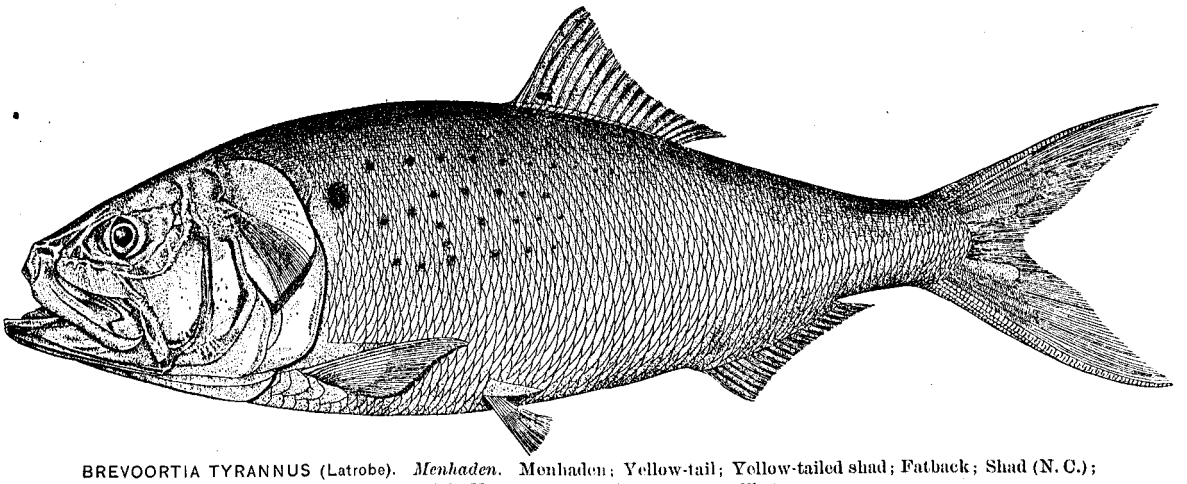
CLUPEA PSEUDOHARENGUS Wilson. *Alewife; Branch herring.* Herring; Goggle-eye (N. C.); Big-eyed herring (N. C.); Wall-eyed herring (N. C.).



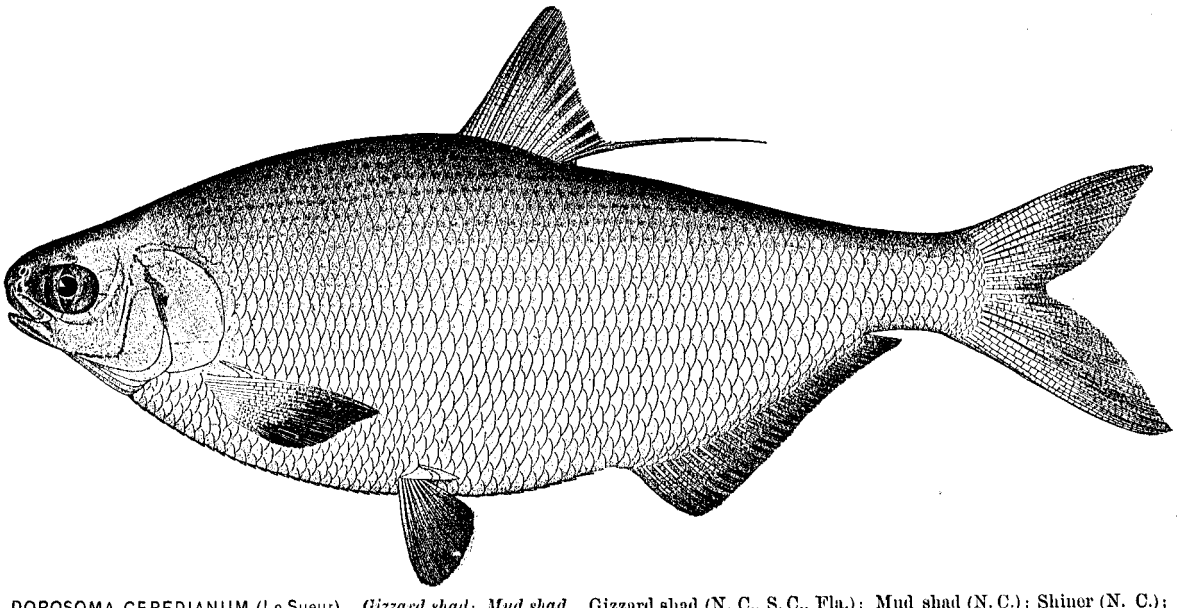
CLUPEA ÆSTIVALIS Mitchill. *Alewife; Glut herring.* Herring; Blueback (N. C.); May herring (N. C.); School herring (N. C.); English herring (S. C.).



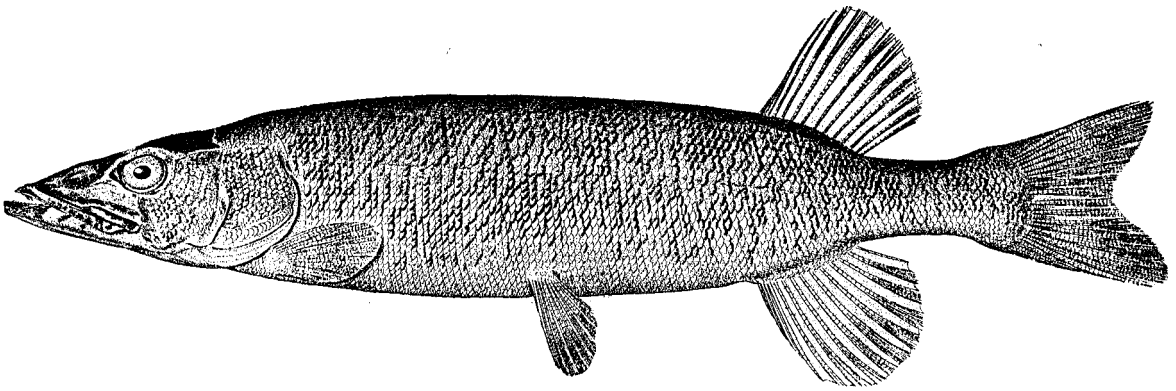
CLUPEA SAPIDISSIMA Wilson. *Shad.*



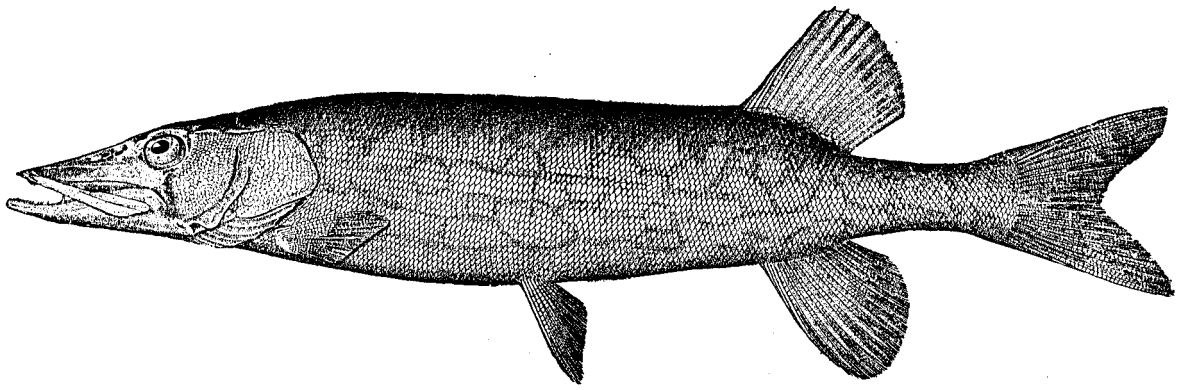
BREVOORTIA TYRANNUS (Latrobe). *Menhaden.* Menhaden; Yellow-tail; Yellow-tailed shad; Fatback; Shad (N. C.); Bugfish (N. C.); Shiner (Fla.); Herring (Fla.).



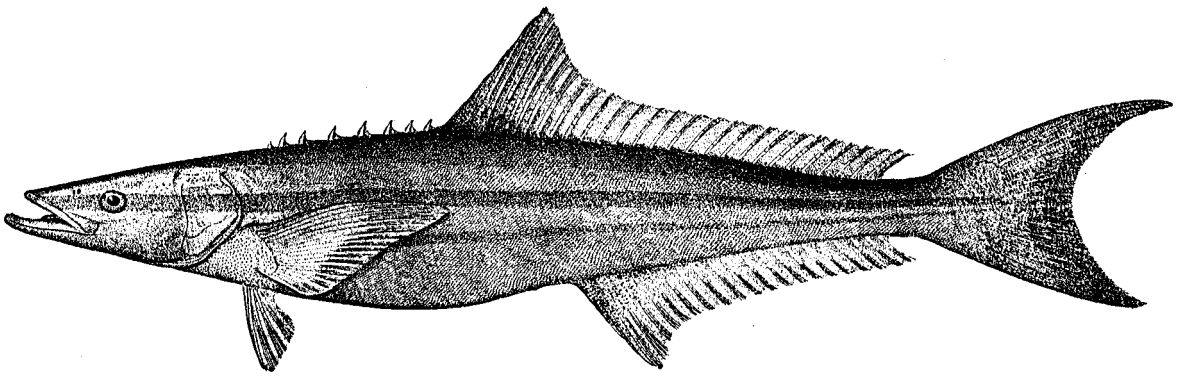
DOROSOMA CEPEDIANUM (Le Sueur). *Gizzard shad; Mud shad.* Gizzard shad (N. C., S. C., Fla.); Mud shad (N. C.); Shiner (N. C.); Nanny shad (N. C.); Hairy-back (N. C.); Thread herring (N. C.); Stink shad (Fla.); White-eyed shad (Fla.).



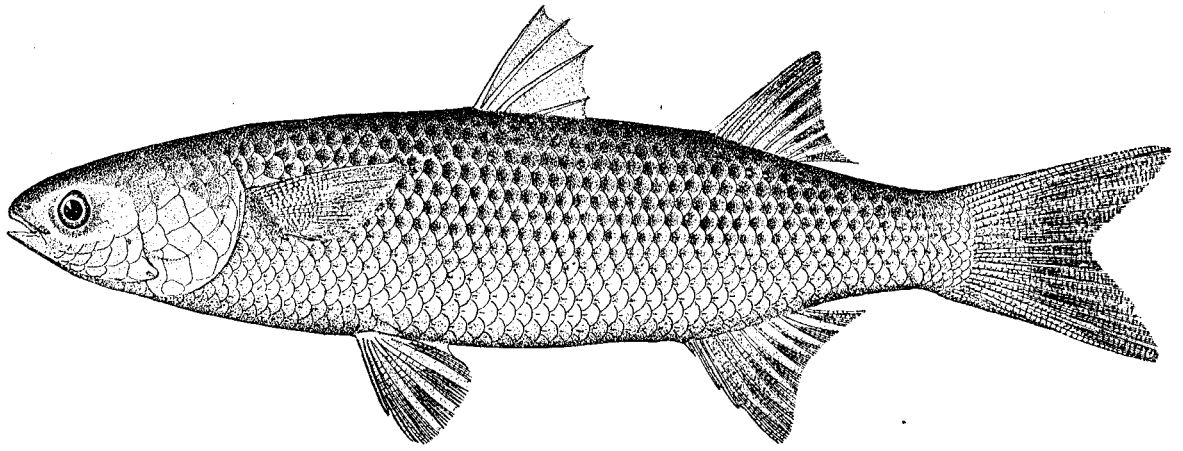
LUCIUS AMERICANUS (Gmelin). *Banded pickerel.* Pike (N. C.); Red-finned pike (N. C.); Jack (Ga.).



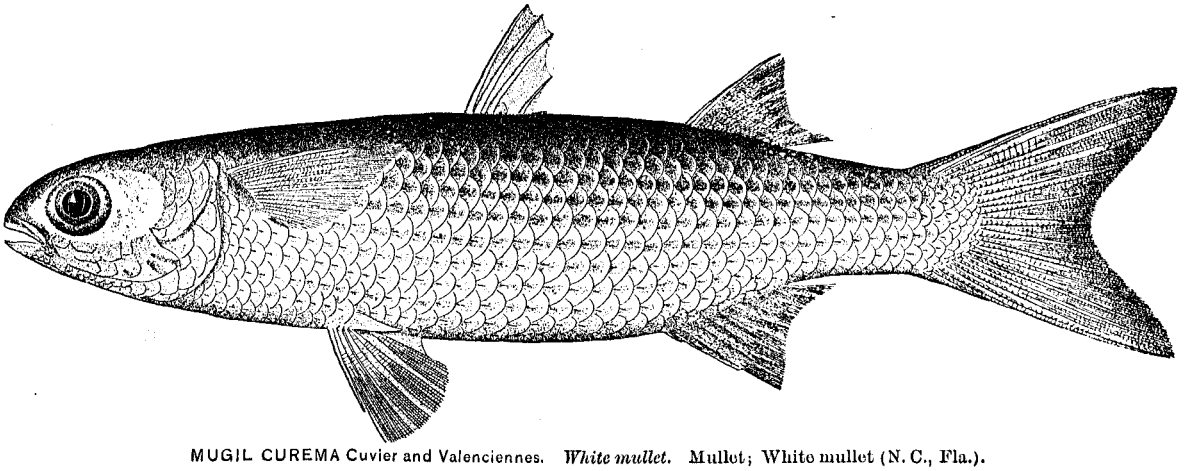
LUCIUS RETICULATUS (Le Sueur). *Eastern pickerel.* Pike (N. C.); Red-finned pike (N. C.); Duck-billed pike (N. C.); Jack (N. C., S. C.); Pickerel (S. C.).



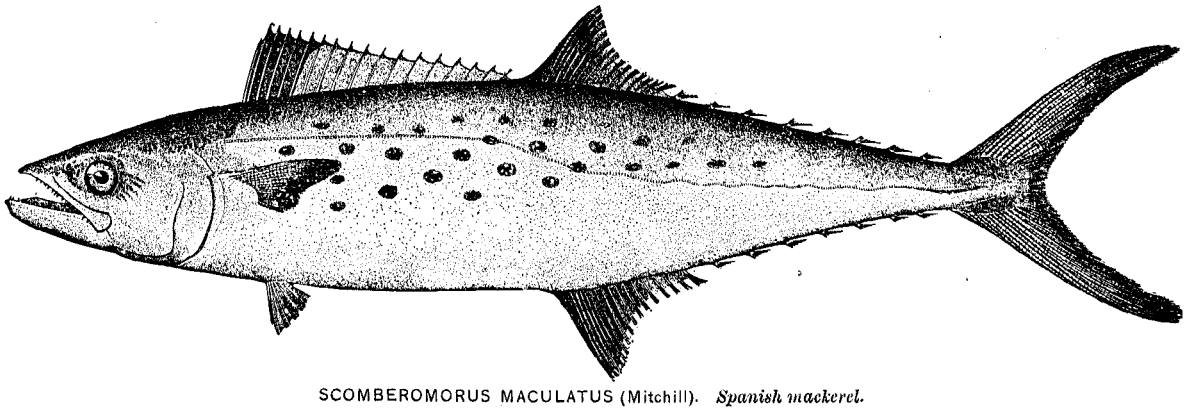
ELACATE CANADA (Linnæus). *Cobia.* Cobia; Sergeant fish (Fla.).



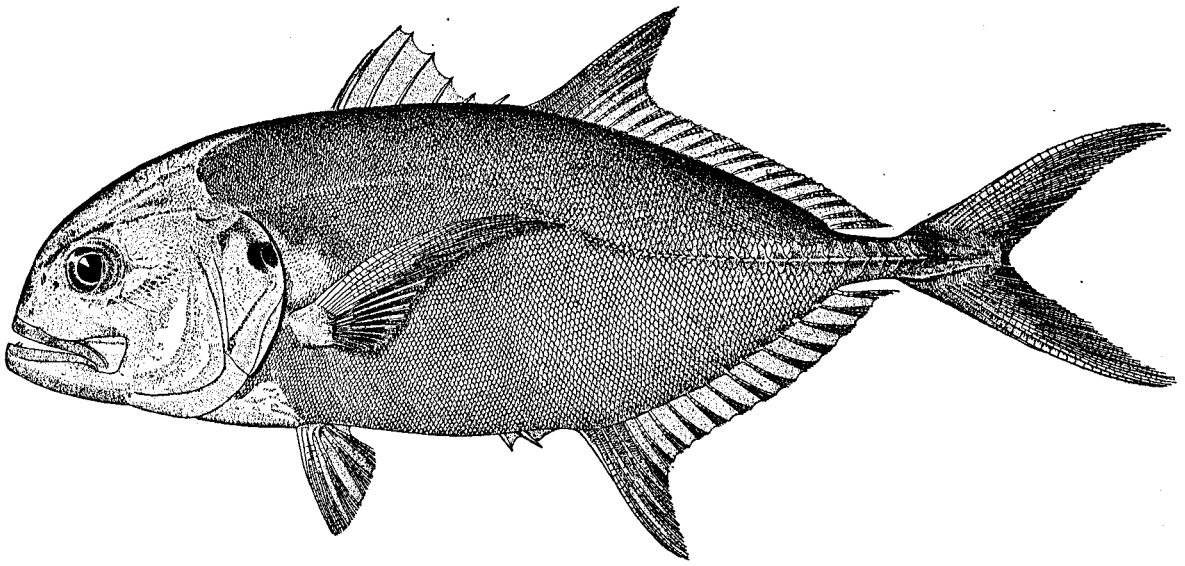
MUGIL CEPHALUS Linnæus. *Common mullet*; *Striped mullet*. Mullet; Jumping mullet (N. C.); Sand mullet (N. C.); Striped mullet (N. C., Fla.); Silver mullet (Fla.); Big-eyed mullet (Fla.).



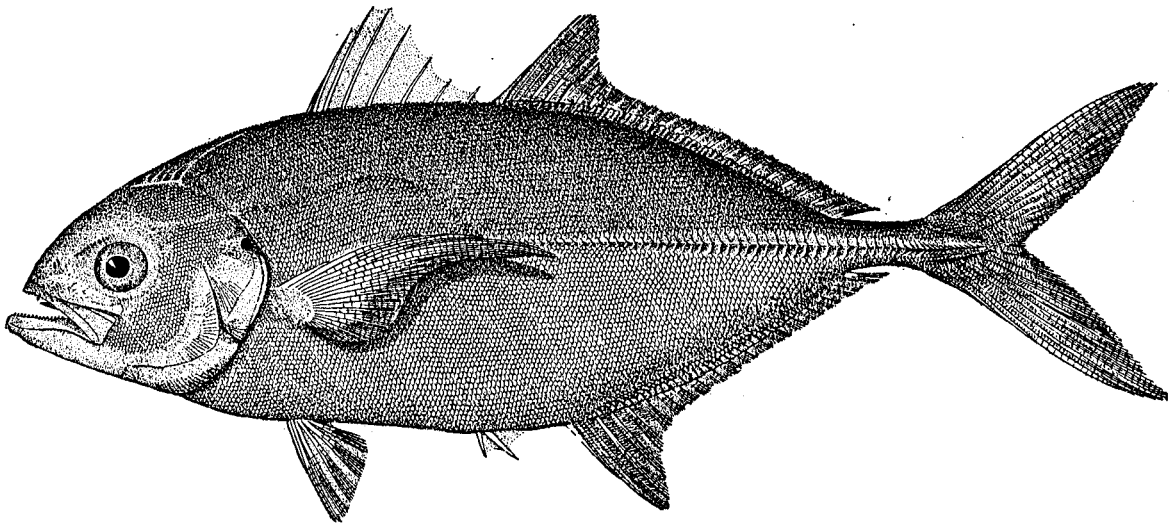
MUGIL CUREMA Cuvier and Valenciennes. *White mullet*. Mullet; White mullet (N. C., Fla.).



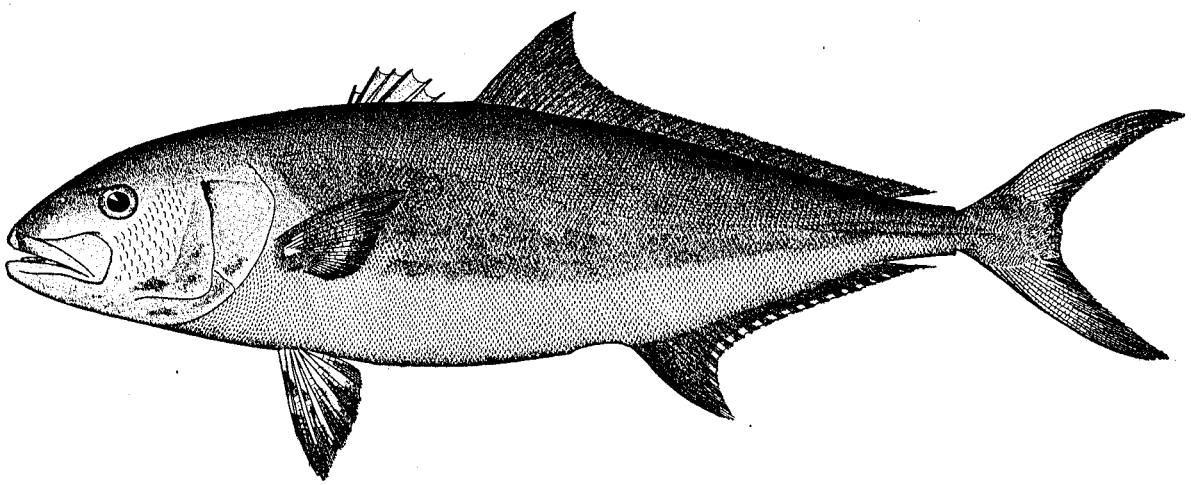
SCOMBEROMORUS MACULATUS (Mitchill). *Spanish mackerel*.



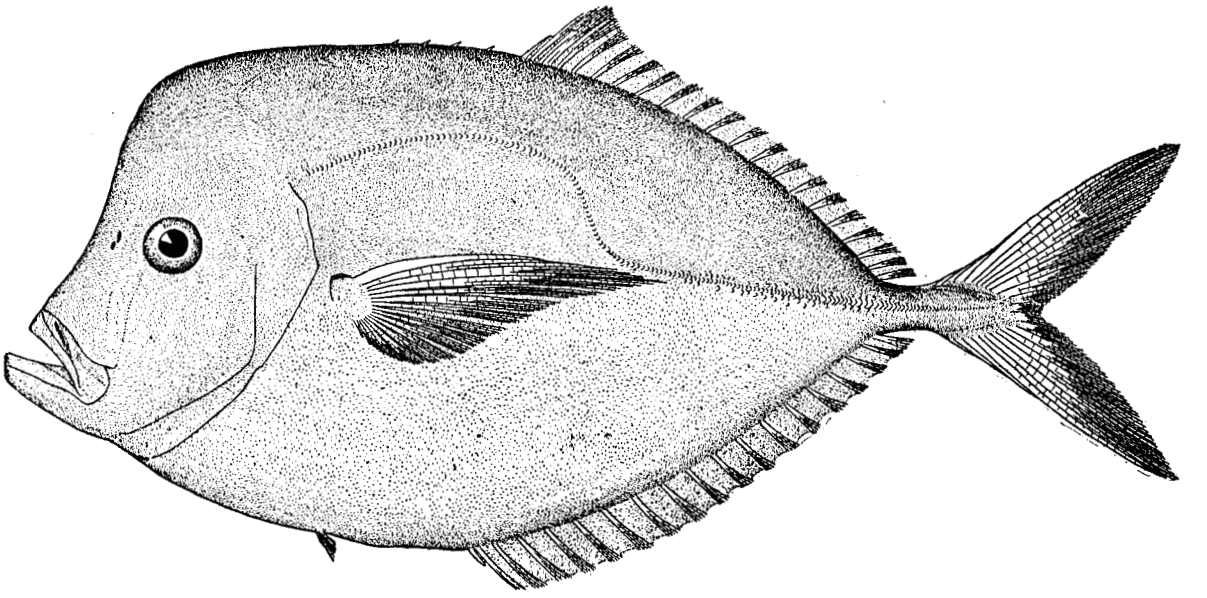
CARANX HIPPOS (Linnæus). *Cavally.* Cavally; Crevallé; Jack; Horse crevallé (S. C.); Jack crevallé (S. C.).



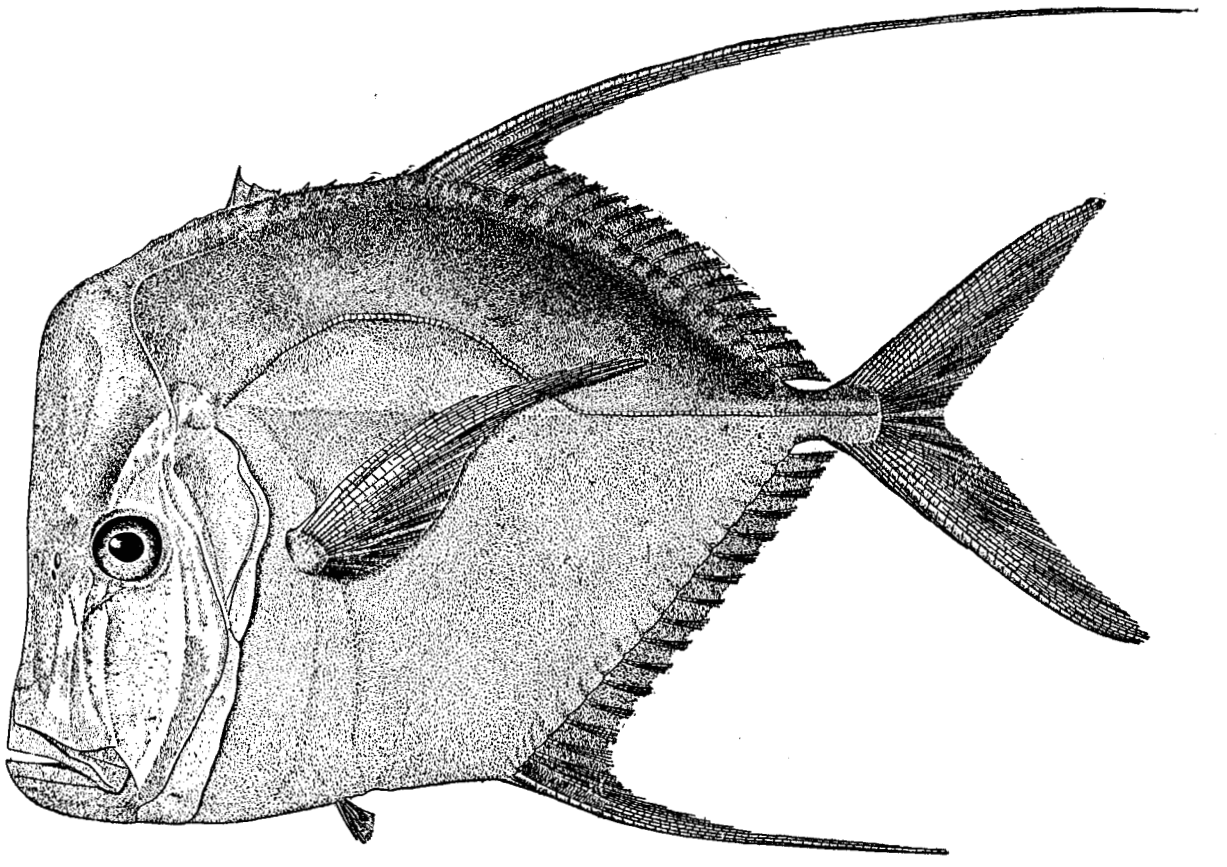
CARANX CHRYSOS (Mitchill). *Jurel.* Horse mackerel (N. C.); Sunfish (N. C.); Horse crevallé (S. C.); Jack crevallé (S. C.).



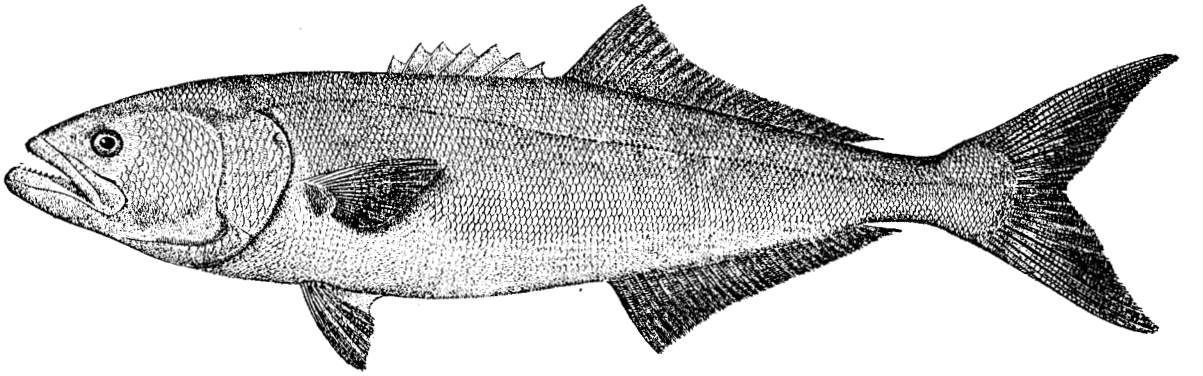
SERIOLA DUMERILI LALANDI (Cuvier and Valenciennes). *Amber-fish.* Jack.



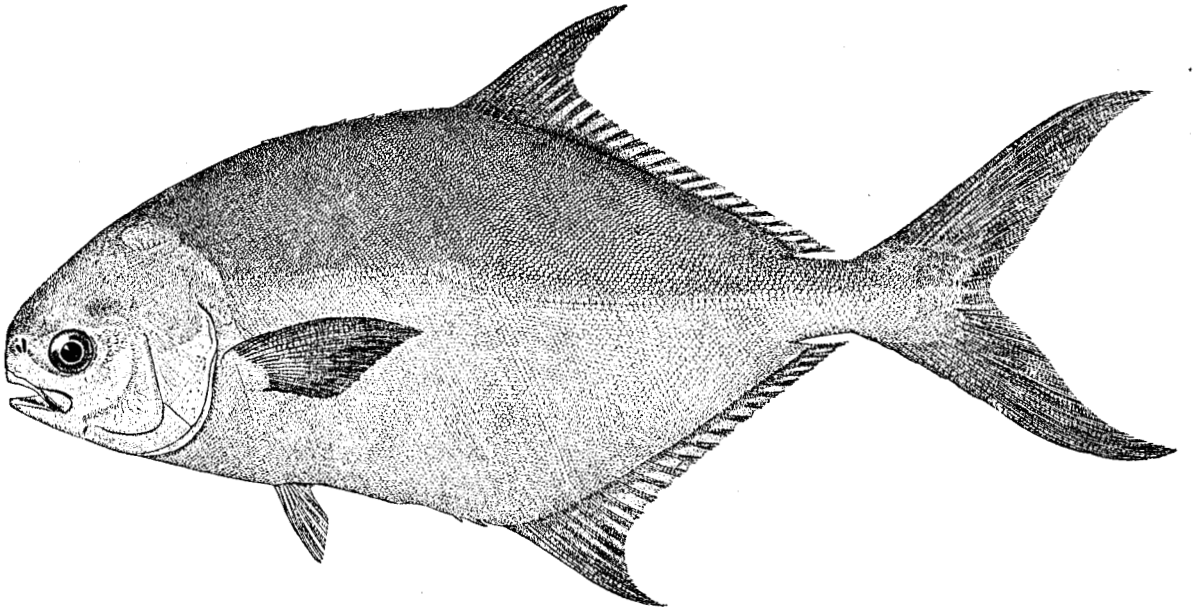
VOMER SETIPINNIS (Mitchill). *Blunt-nosed shiner; Moonfish.* Moonfish (N. C., Fla.); Sunfish (N. C.).



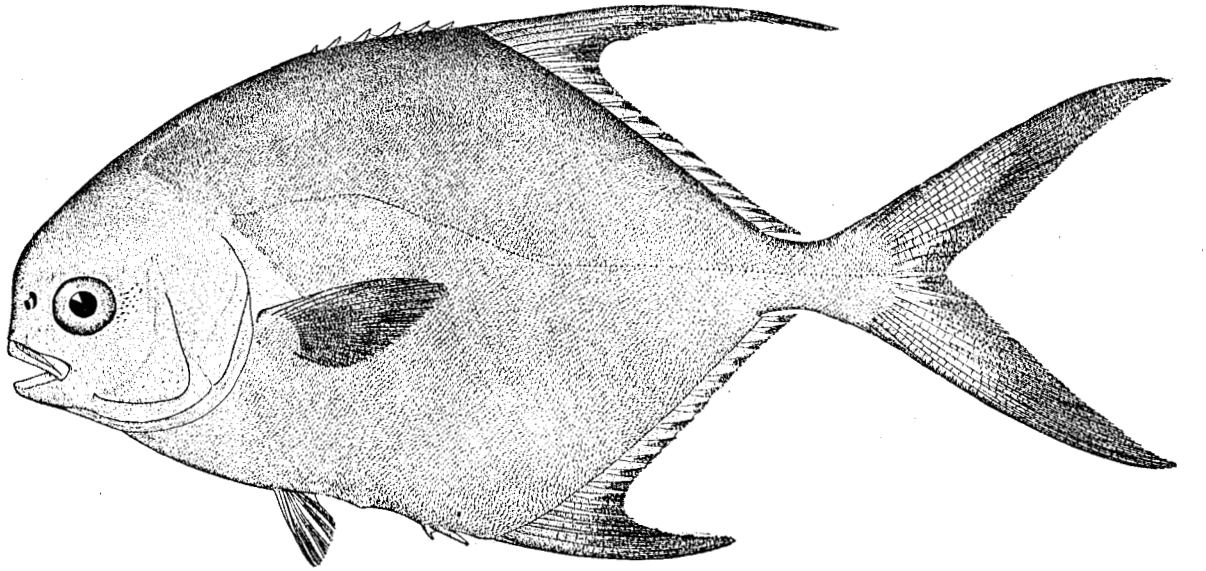
SELENE VOMER (Linnæus). *Silver moonfish.* Moonfish (N. C.); Hogfish (S. C.). (Not usually distinguished by the fishermen from *Vomer setipinnis.*)



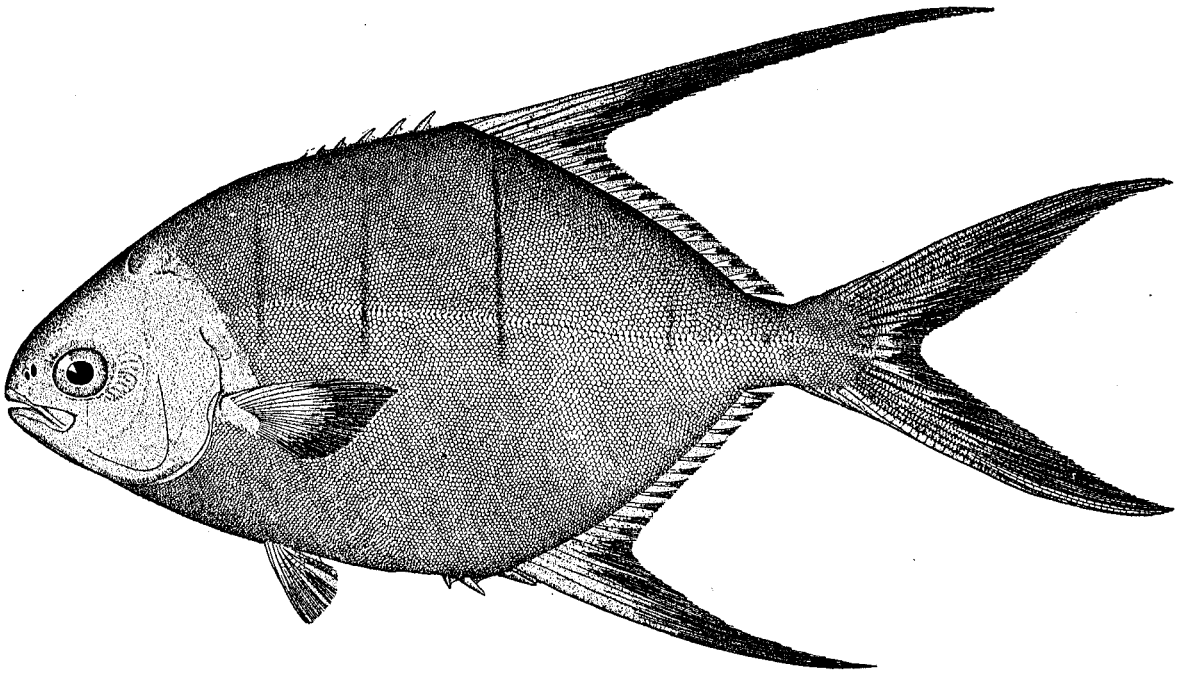
POMATOMUS SALTATRIX (Linnæus). *Bluefish.* Bluefish; Greenfish (N. C.); Skipjack (N. C., S. C., Fla.); Salt-water jack (Fla.).



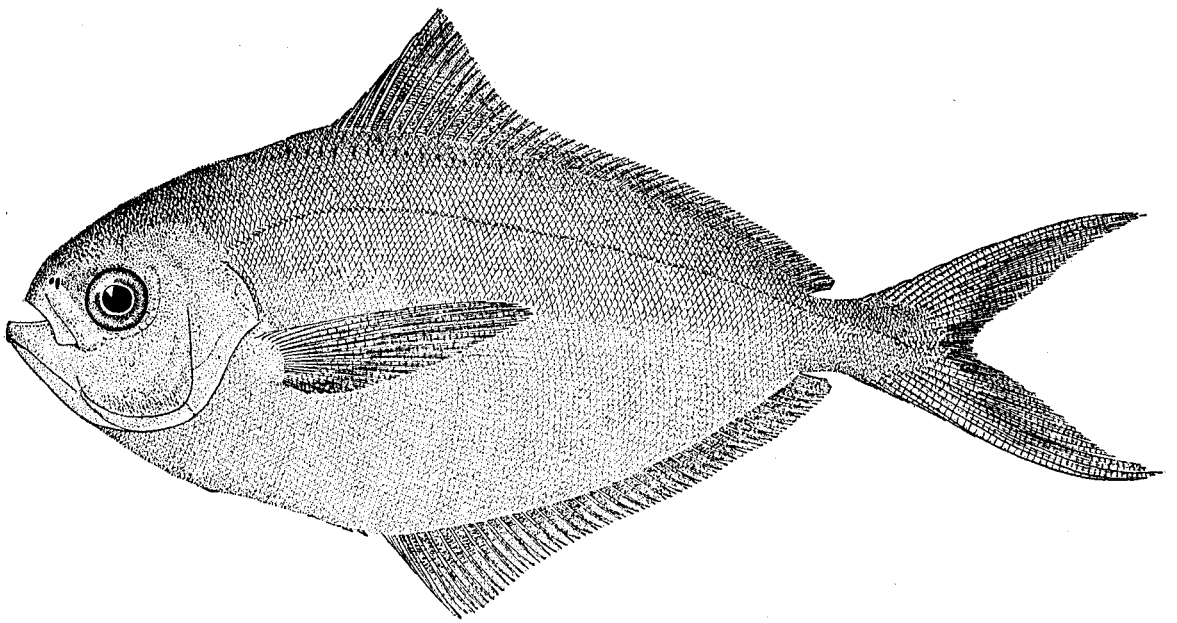
TRACHYNOTUS CAROLINUS (Linnæus). *Common pompano.* Pompano; Sunfish (N. C.); Crevallé (S. C.); Jack (Fla.).



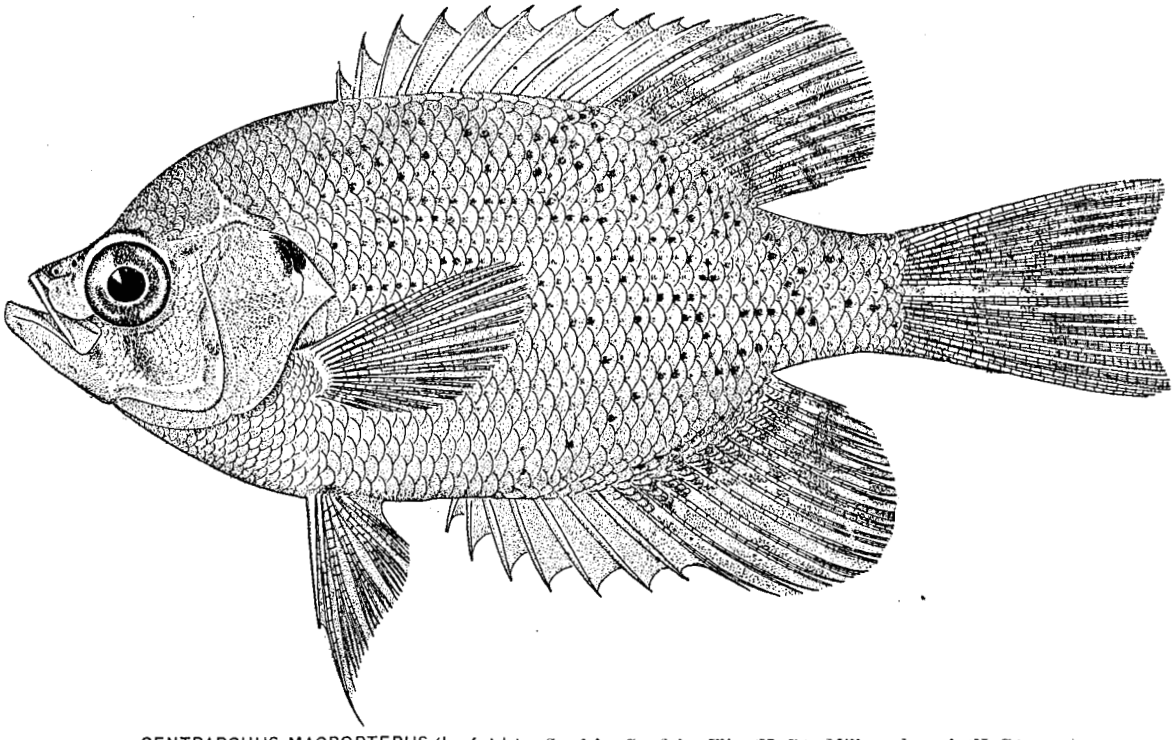
TRACHYNOTUS OVATUS (Linnæus). *Round pompano.* Shore pompano; Allovericore (N. C.); Crevallé (S. C.).



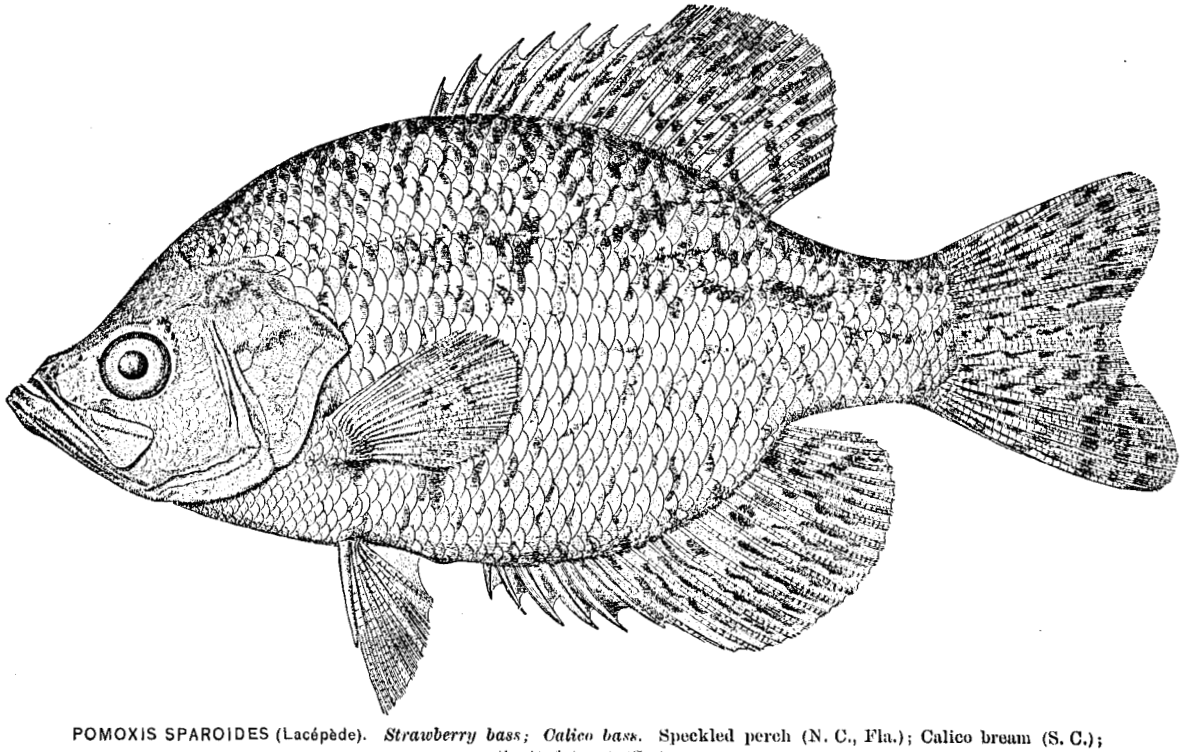
TRACHYNOTUS GLAUCUS Cuvier and Valenciennes. *Banner pompano.*



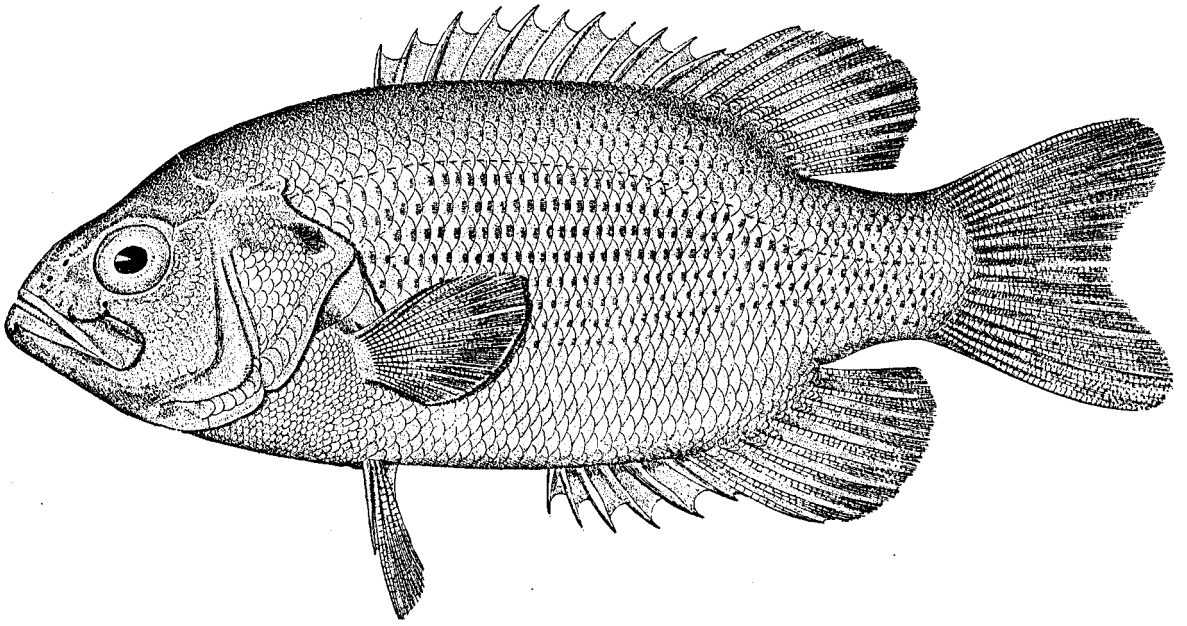
STROMATEUS TRIACANTHUS Peck. *Butter-fish.*



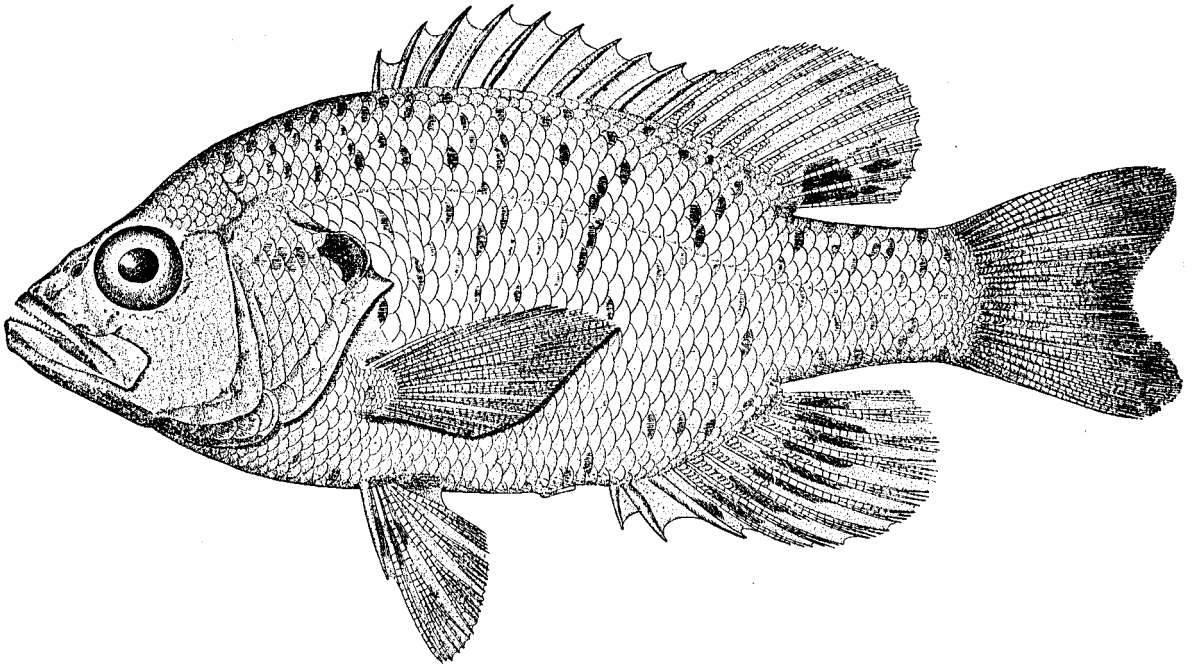
CENTRARCHUS MACROPTERUS (Lacépède). *Sunfish.* Sunfish; Flier (N. C.); Mill-pond perch (N. C.).



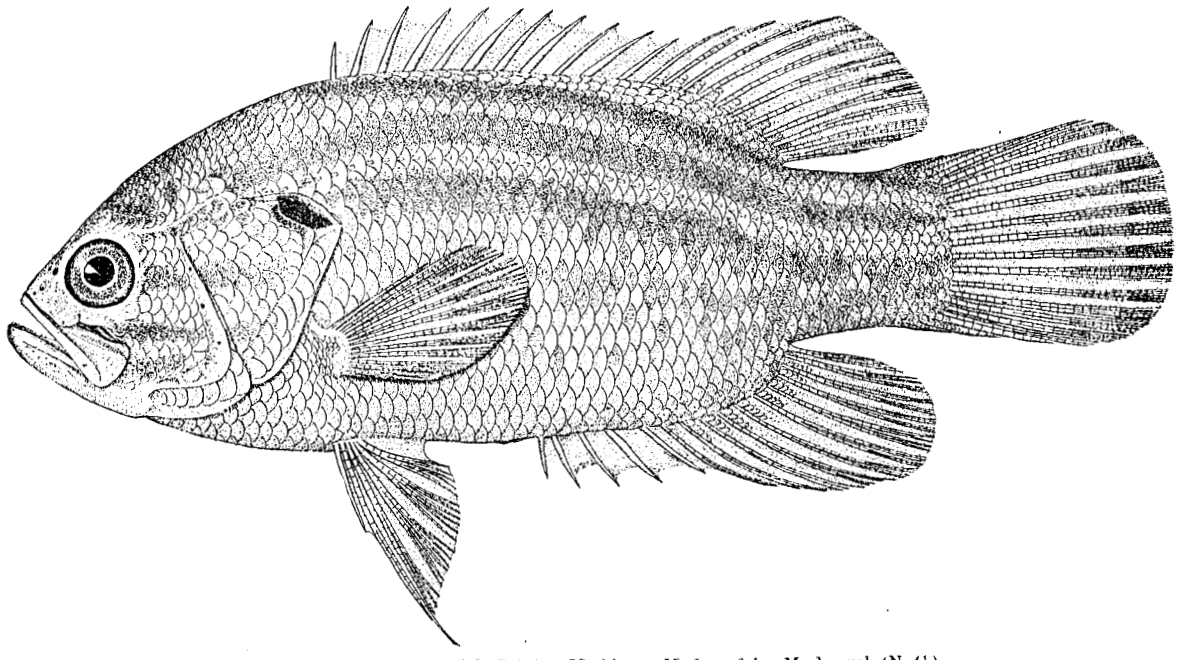
POMOXIS SPAROIDES (Lacépède). *Strawberry bass; Calico bass.* Speckled perch (N. C., Fla.); Calico bream (S. C.); Spotted trout (Ga.).



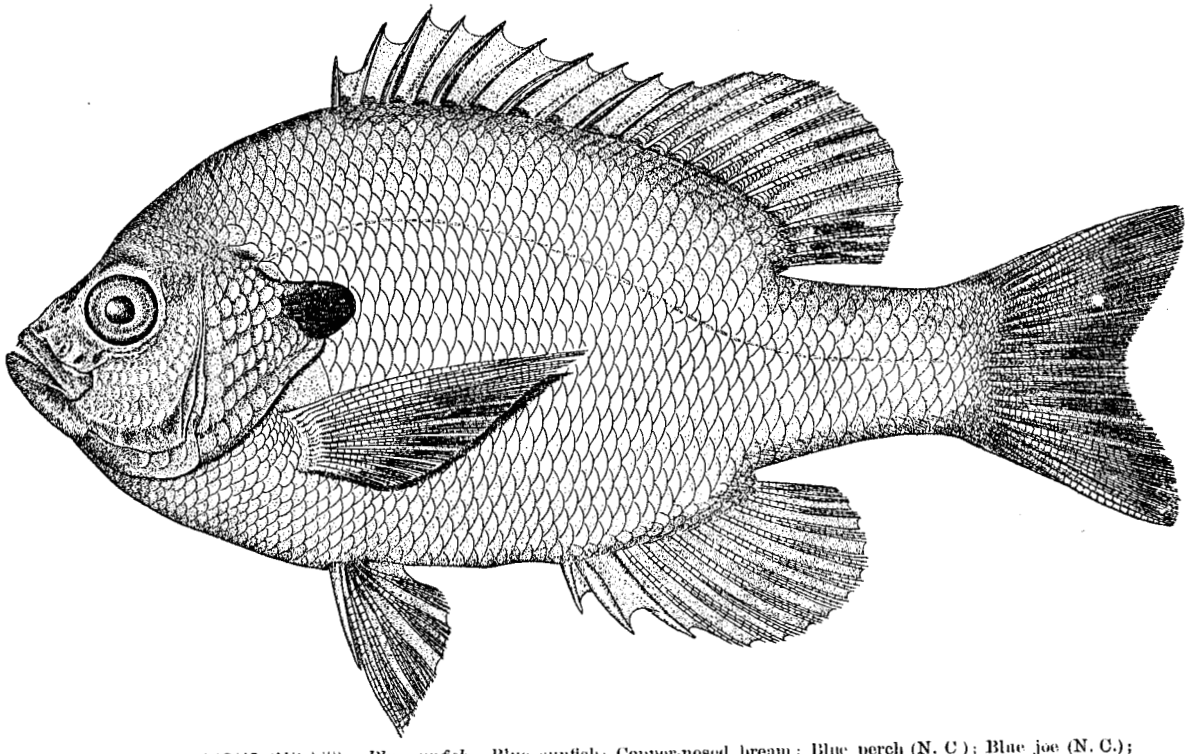
AMBLOPLITES RUPESTRIS (Rafinesque). *Rock bass.* Red-eye; Bream; Red-eyed bream.



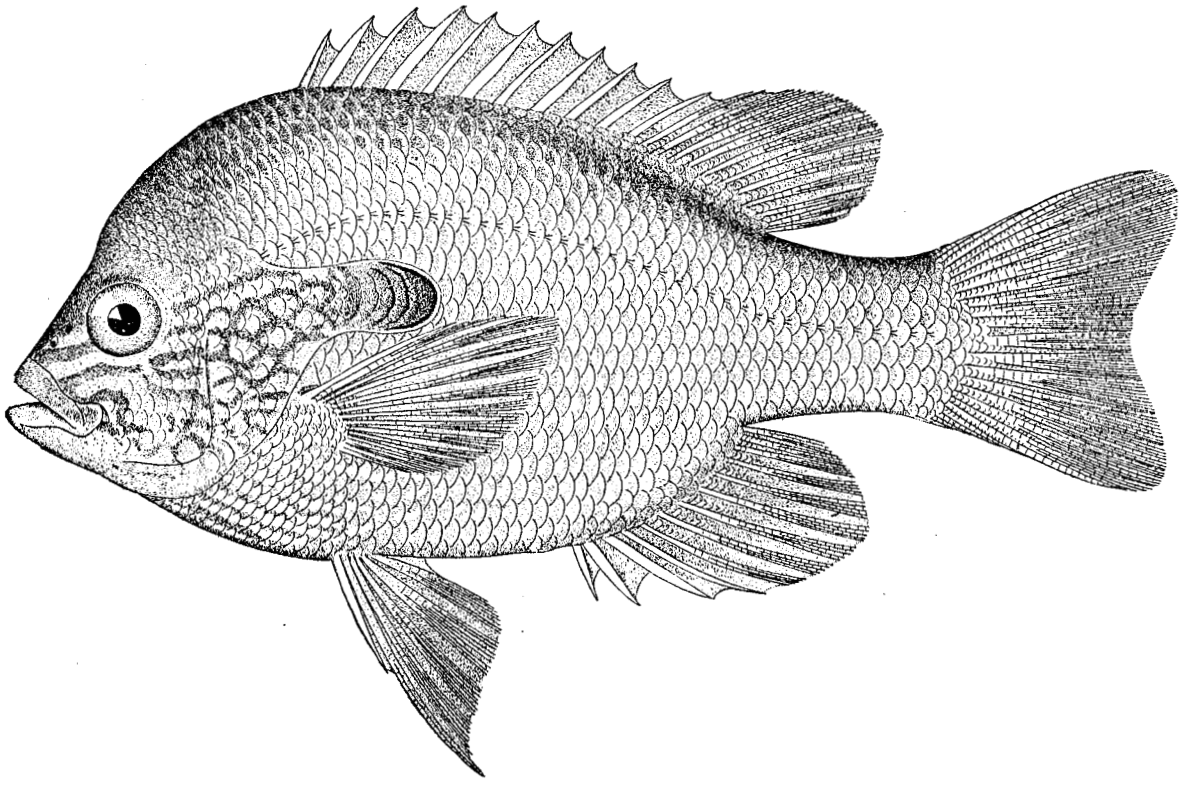
CHÆNOBRYTTUS GULOSUS (Cuvier and Valenciennes). *Warmouth.* Warmouth; Red-eye; Sunfish; Perch; Bream; Chub (N. C.); Goggle-eye (N. C.); Mud chub (N. C.); Warmouth perch (S. C., Ga., Fla.); More-mouth bream (S. C.); Sun trout (Ga.); Yaw-mouth perch (Ga.); Warm-mouth perch (Ga.).



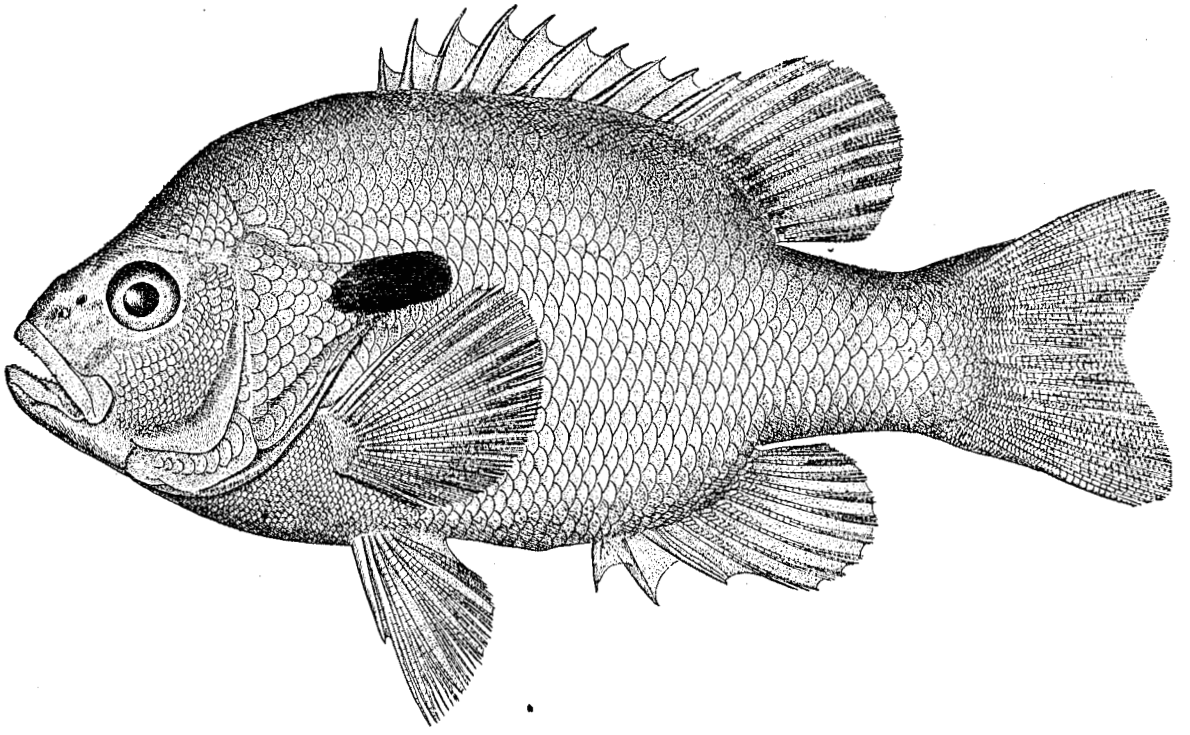
ACANTHARCHUS POMOTIS (Baird). *Mud bass; Mud sunfish.* Mud perch (N. C.).



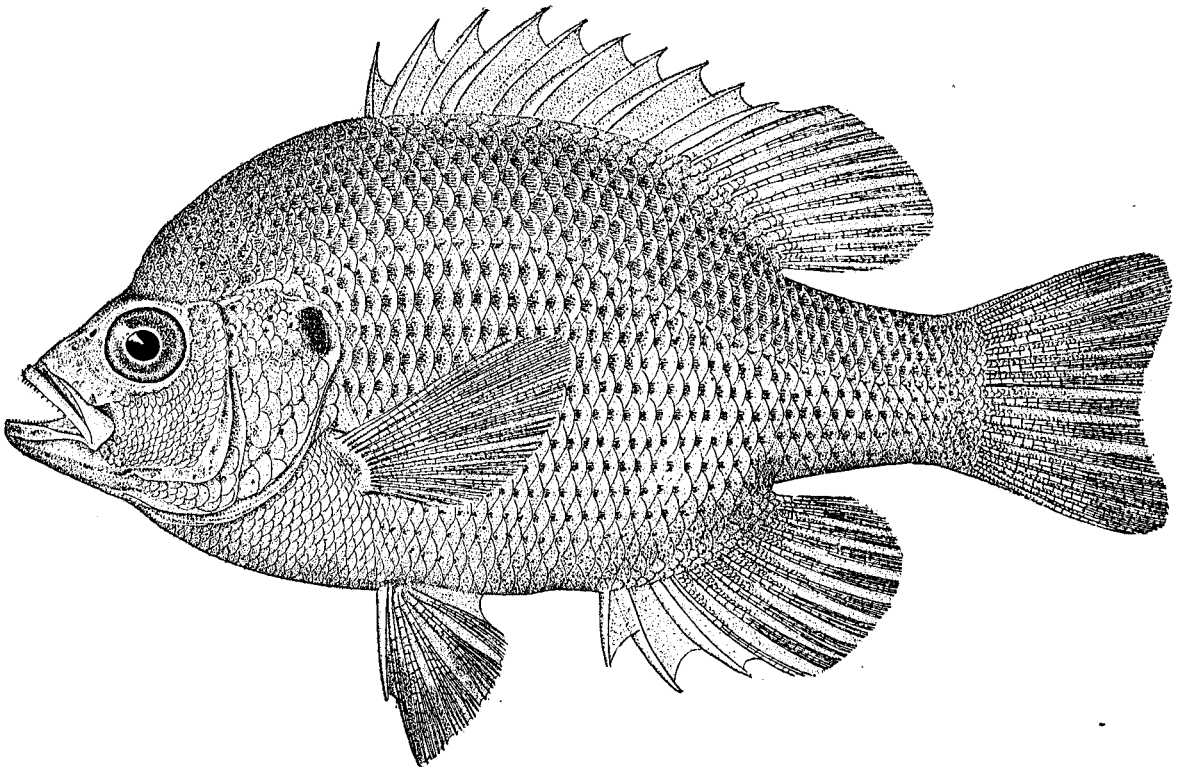
LEPOMIS PALLIDUS (Mitchill). *Blue sunfish.* Blue sunfish; Copper-nosed bream; Blue perch (N. C.); Blue joe (N. C.); Blue bream (S. C.); Copperhead bream (Fla.).



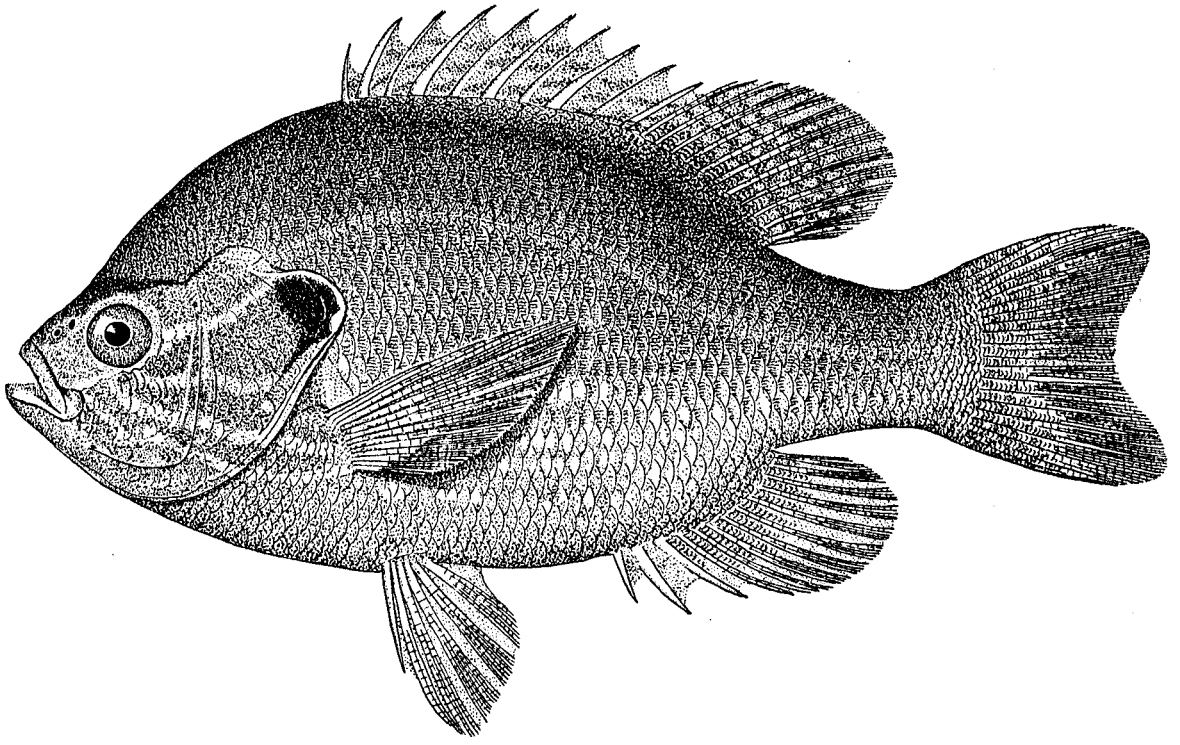
LEPOMIS MEGALOTIS (Rafinesque). *Large-eared sunfish.* Red-bellied perch (Ga.).



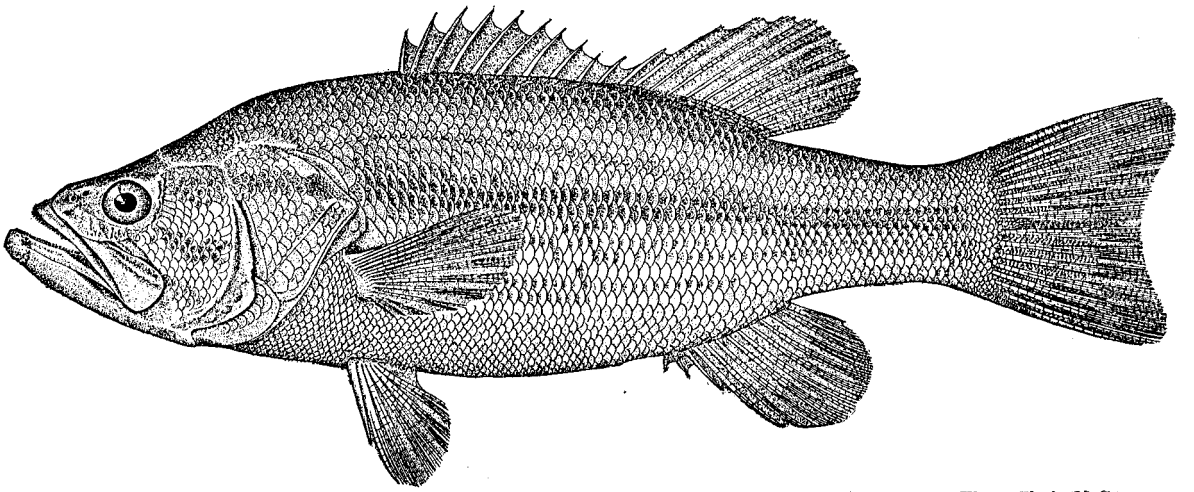
LEPOMIS AURITUS (Linnæus). *Long-eared sunfish.* Sunfish; Bream; Red-bellied perch; Red-bellied bream (N. C.); Robin (N. C.); Robin perch (N. C.); Red-belly (N. C.); Yellow-belly (N. C.); Leather-ear (N. C.); Perch (S. C.).



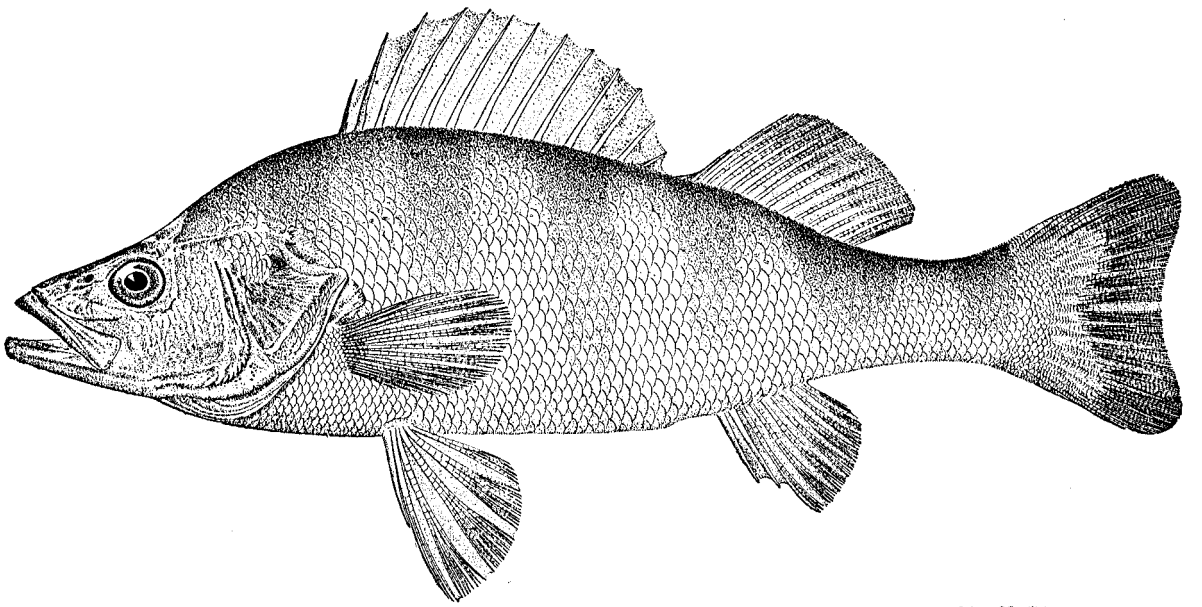
LEPOMIS PUNCTATUS (Cuvier and Valenciennes). Chinquapin perch (Fla.).



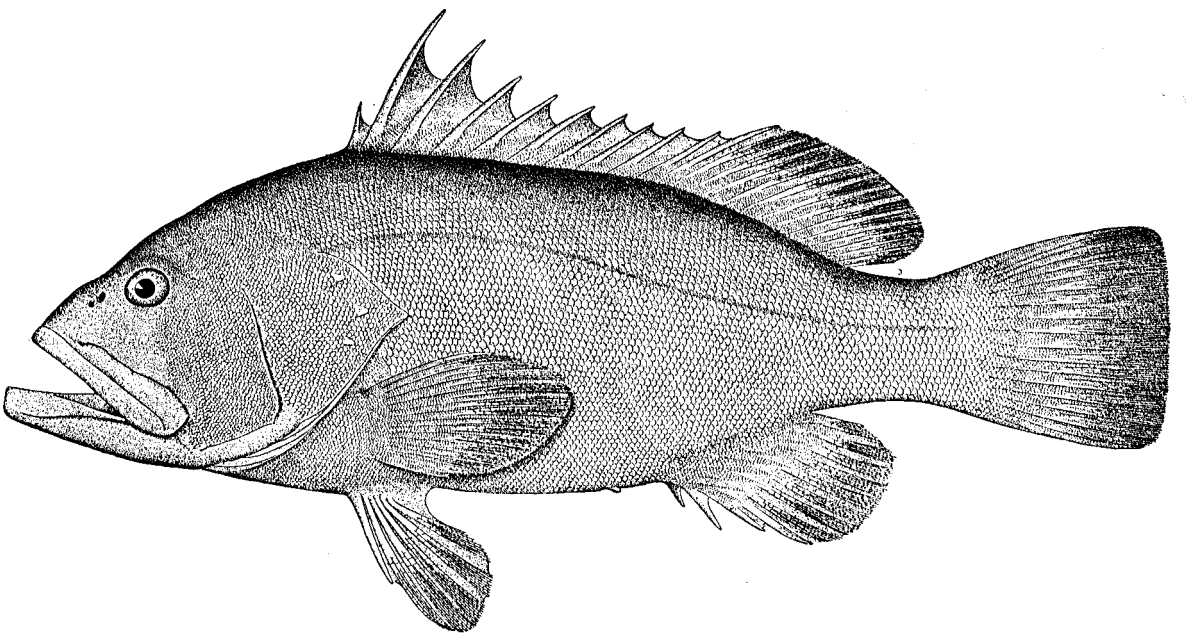
LEPOMIS GIBBOSUS (Linnæus). *Common sunfish.* Bream; Perch; Robin (N. C.); Robin perch (N. C.); Red-belly (N. C.); Yellow-belly (N. C.); Sand perch (N. C.).



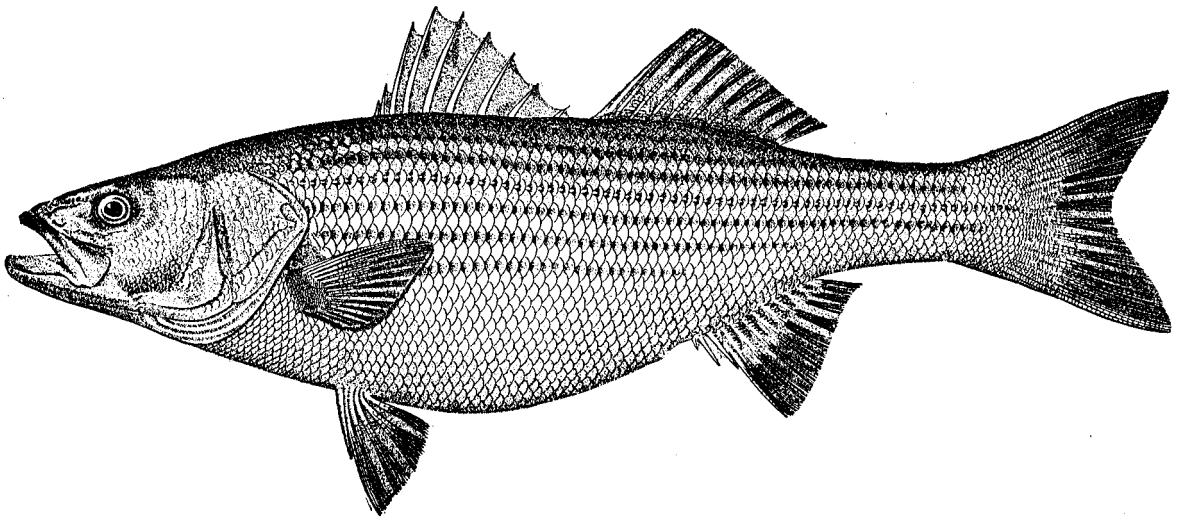
MICROPTERUS SALMOIDES (Lacépède). *Large-mouthed black bass.* Trout; Fresh-water trout (S. C., Ga., Fla.); Chub (N. C.); Welchman (N. C.).



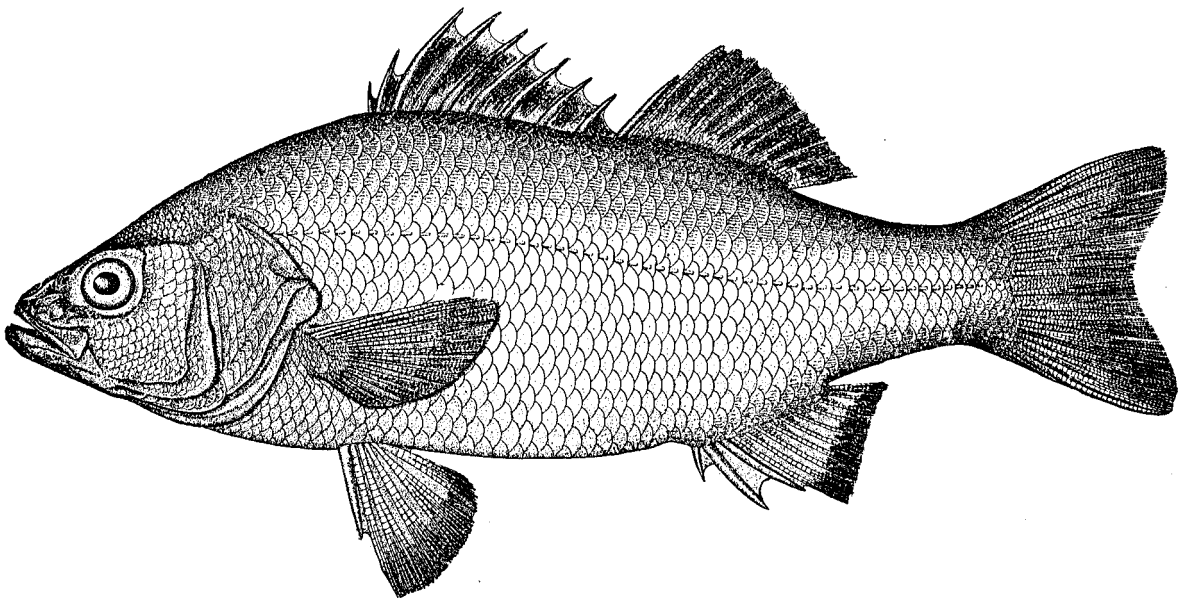
PERCA FLAVESCENS (Mitchill). *Yellow perch.* Englishman (N. C.); Raccoon perch (N. C.); Redfin (N. C.).



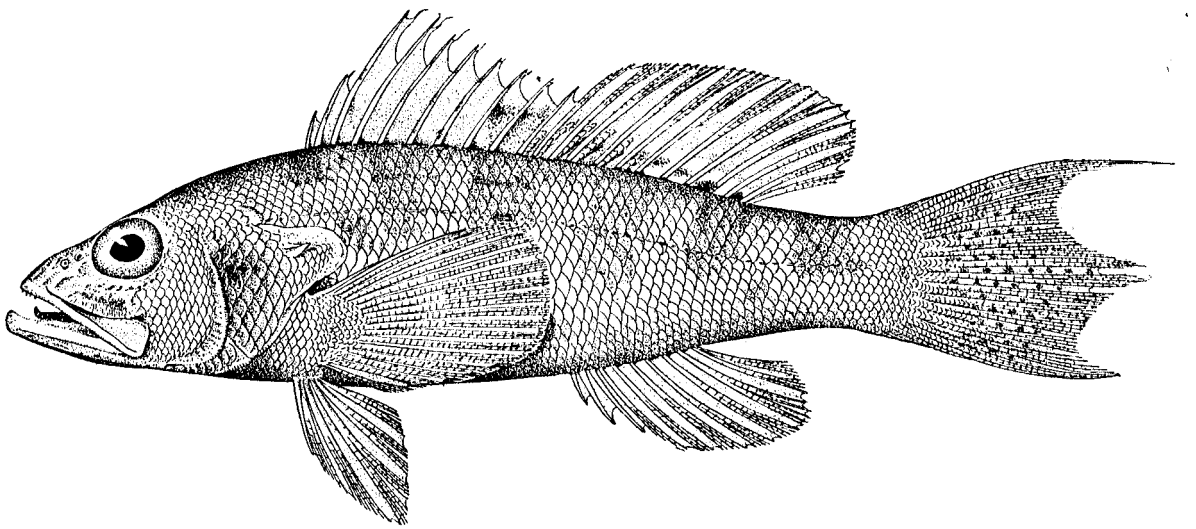
EPINEPHELUS NIGRITUS (Holbrook). *Black grouper.* Jewfish.



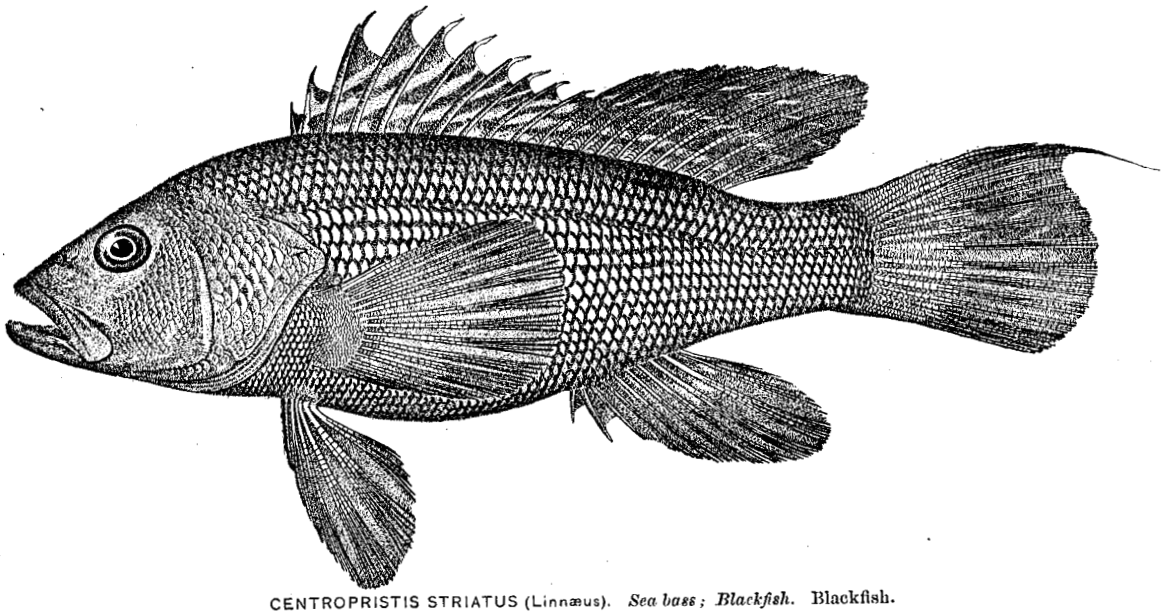
ROCCUS LINEATUS (Bloch). *Striped bass; Rockfish.* Rock; Rockfish.



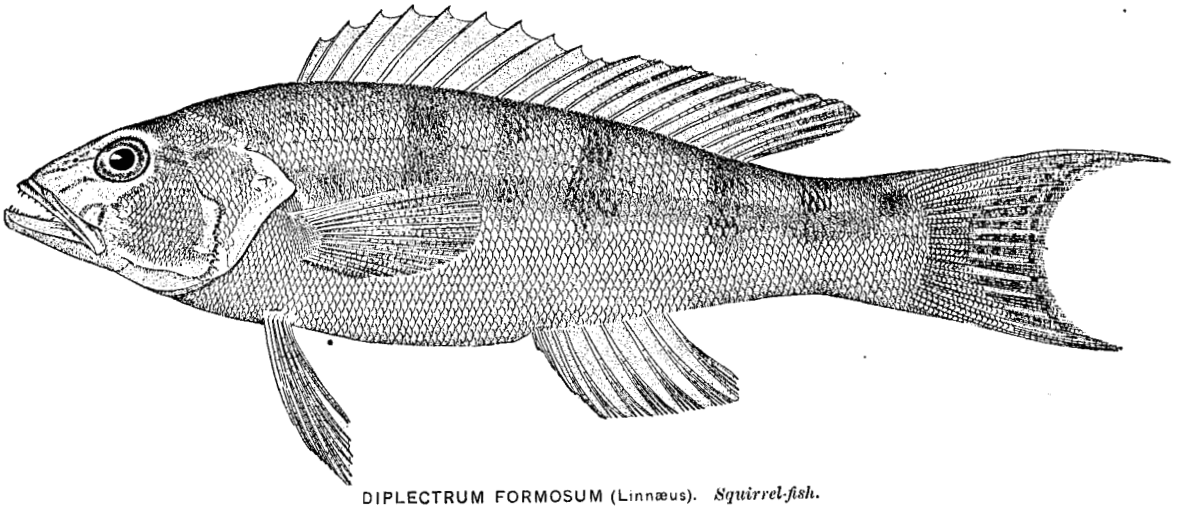
MORONE AMERICANA (Gmelin). *White perch.* Perch (N. C.); White perch (N. C.); Silver perch (N. C.).



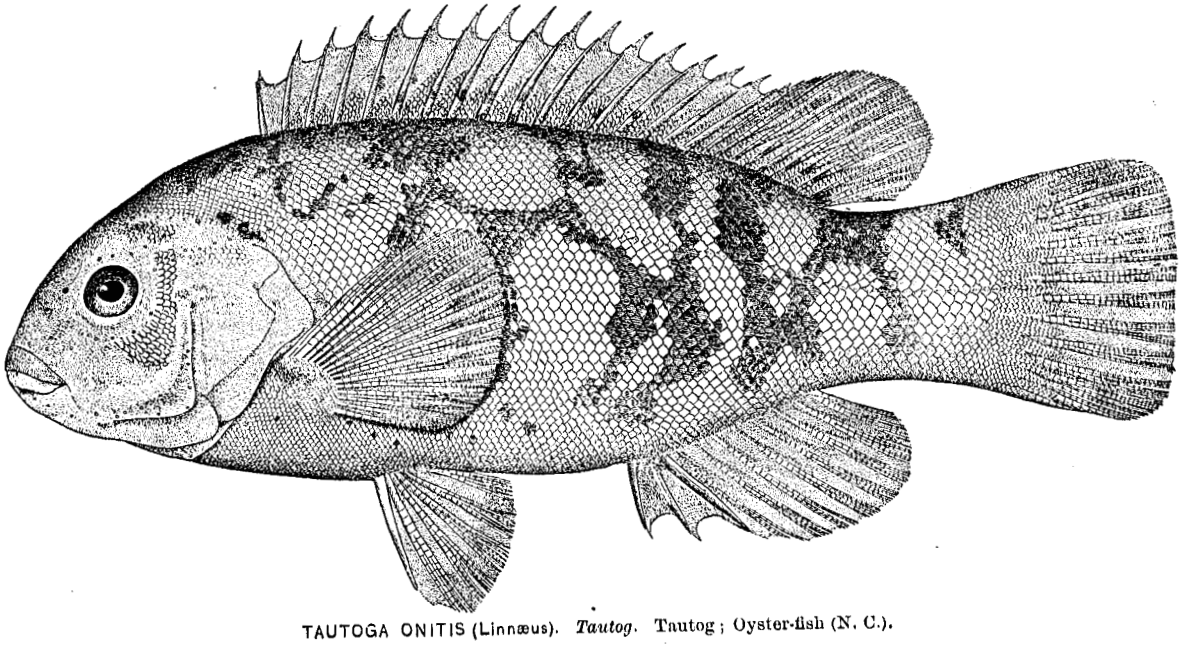
CENTROPRISTIS PHILADELPHICUS (Linnæus). Rock blackfish (S. C.); Rockfish (S. C.).



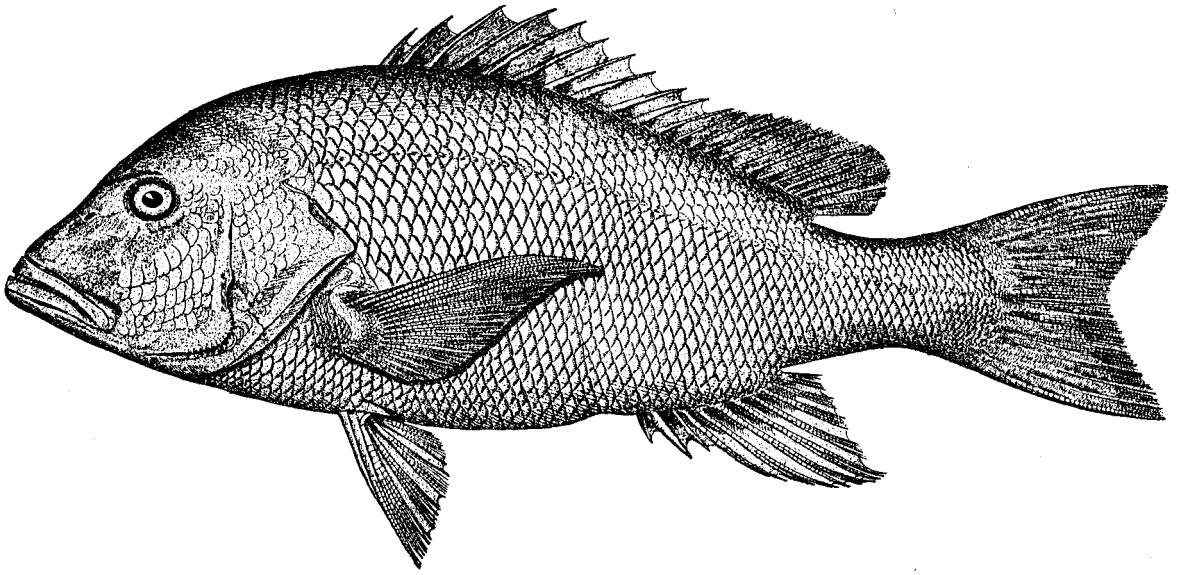
CENTROPRISTIS STRIATUS (Linnæus). *Sea bass; Blackfish.* Blackfish.



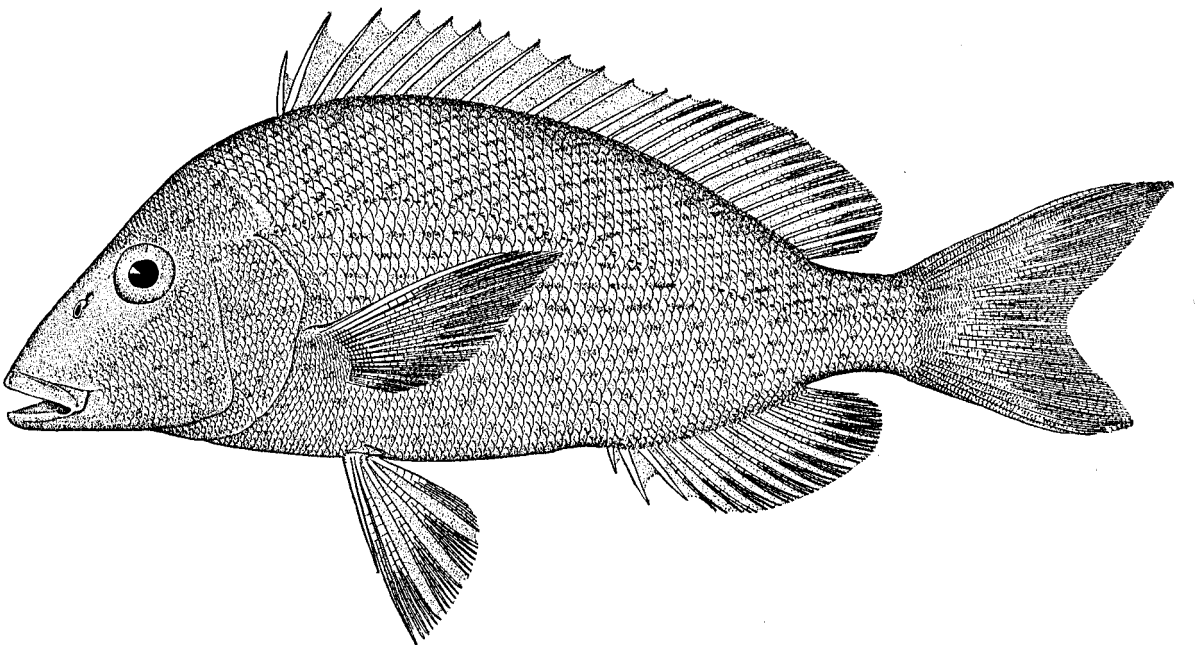
DIPLECTRUM FORMOSUM (Linnæus). *Squirrel-fish.*



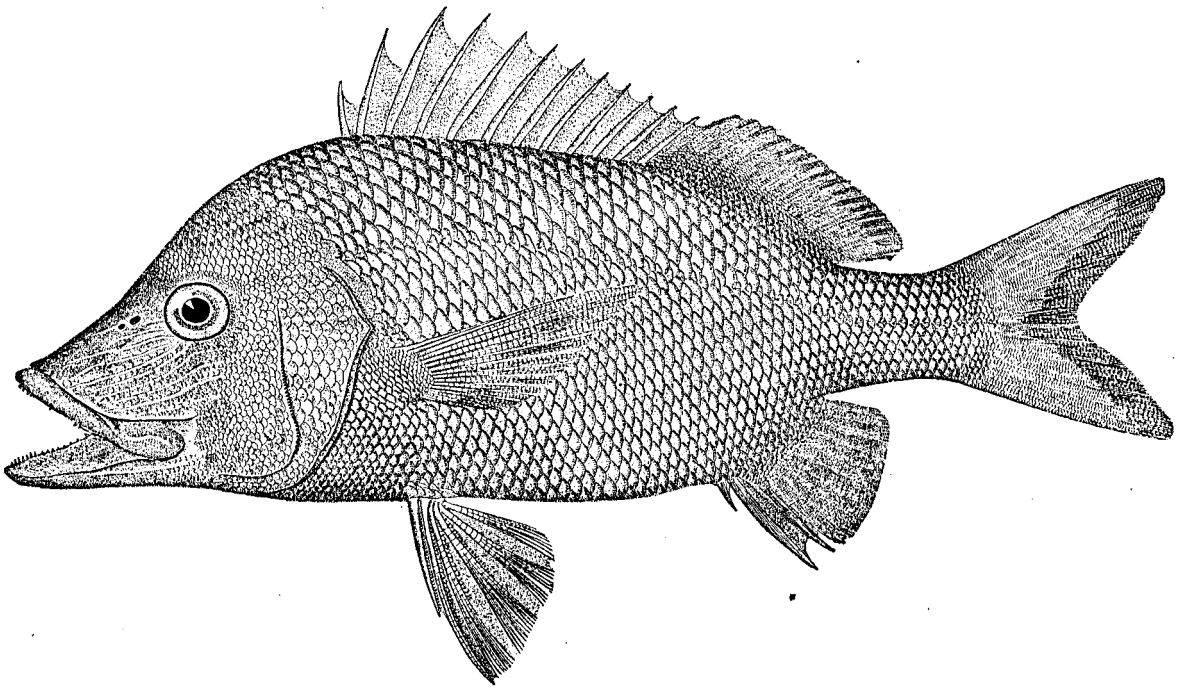
TAUTOGA ONITIS (Linnæus). *Tautog.* Tautog; Oyster-fish (N. C.).



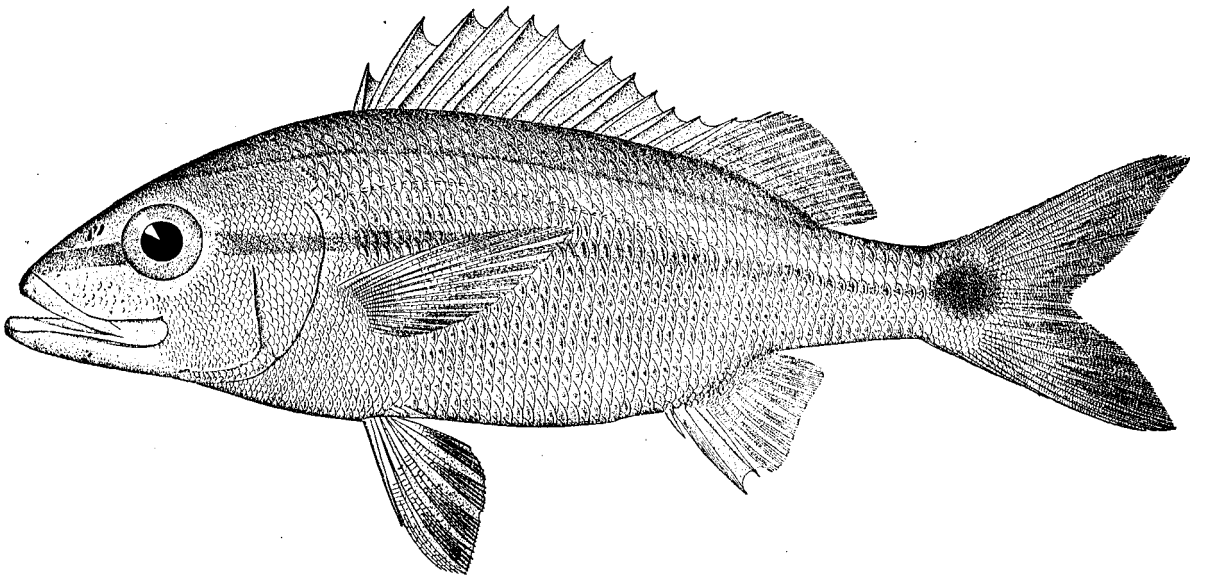
LUTJANUS AYA (Bloch). *Red snapper.*



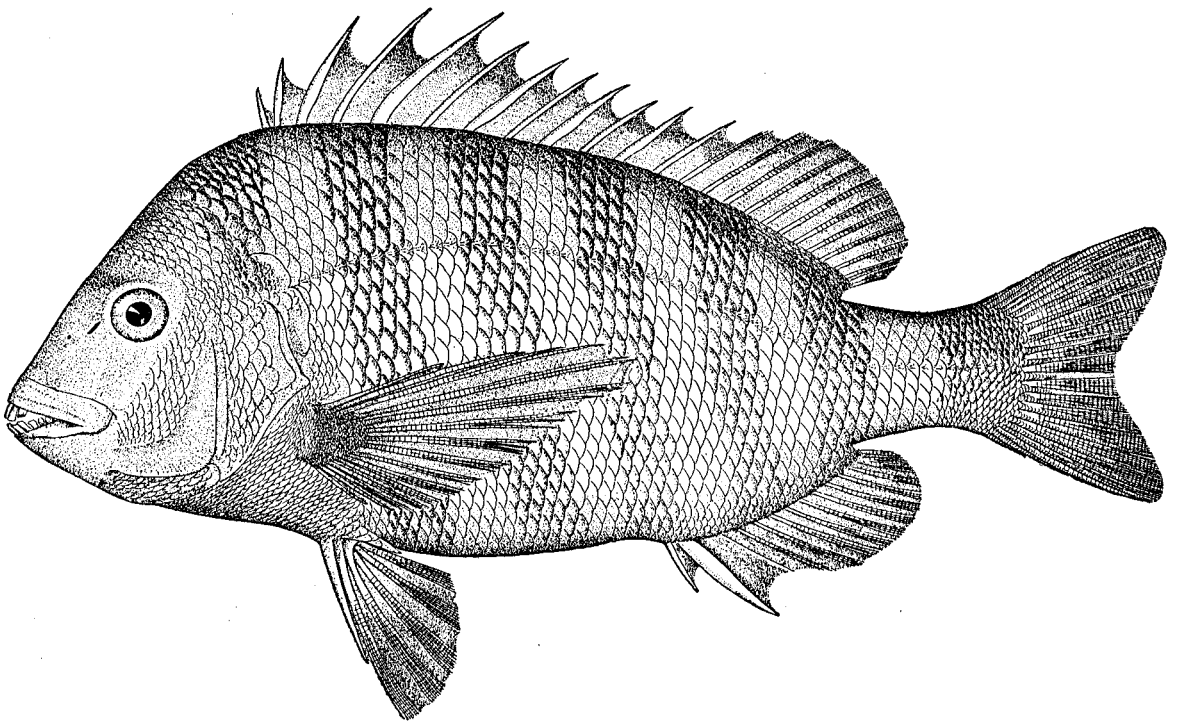
ORTHOPRISTIS CHRYSOPTERUS (Mitchill). *Hogfish.* Grunt; Pigfish (N. C.); Hogfish (N. C.); Sailor's choice (S. C., Fla.).



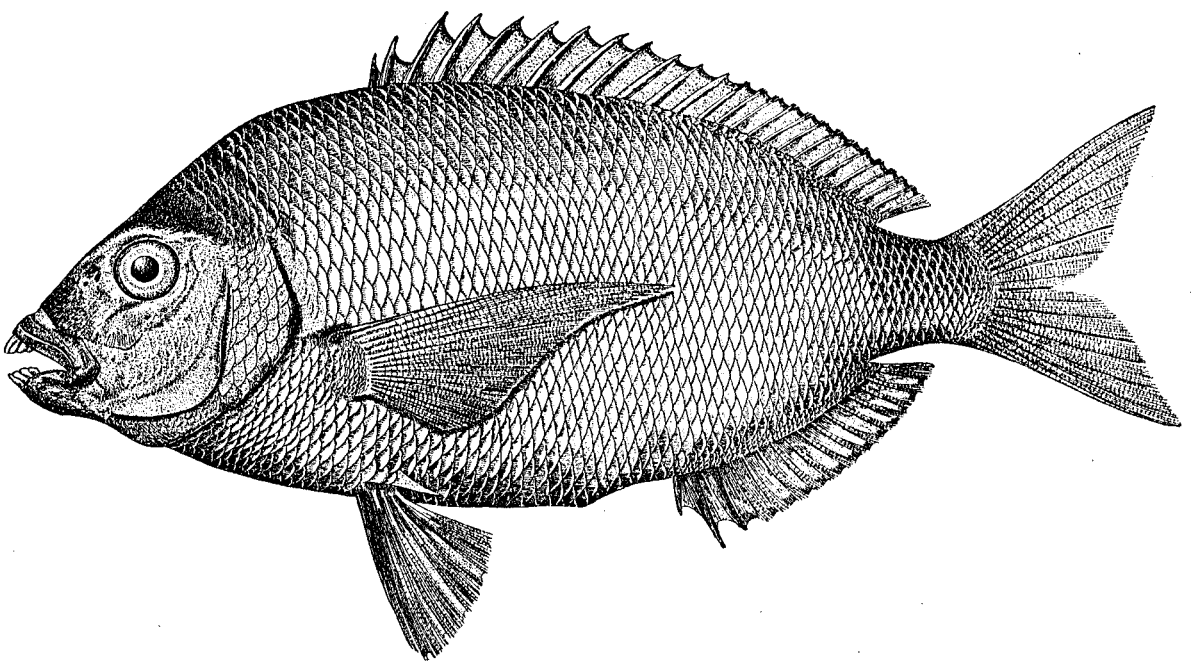
HÆMULON PLUMIERI (Lacépède). *Common grunt; Black grunt.* Grunt; Black grunt (S. C.).



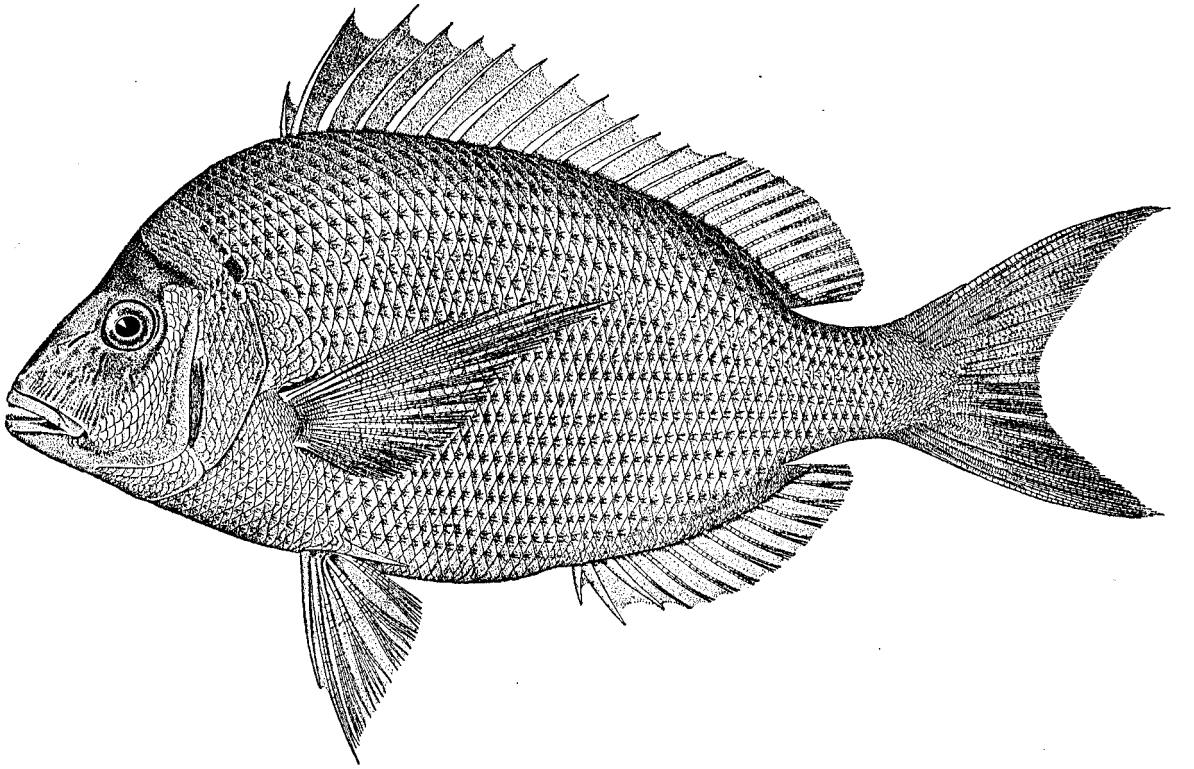
HÆMULON RIMATOR Jordan and Swain. *Red-mouthed grunt.* Grunt; Flannel-mouthed grunt (Fla.).



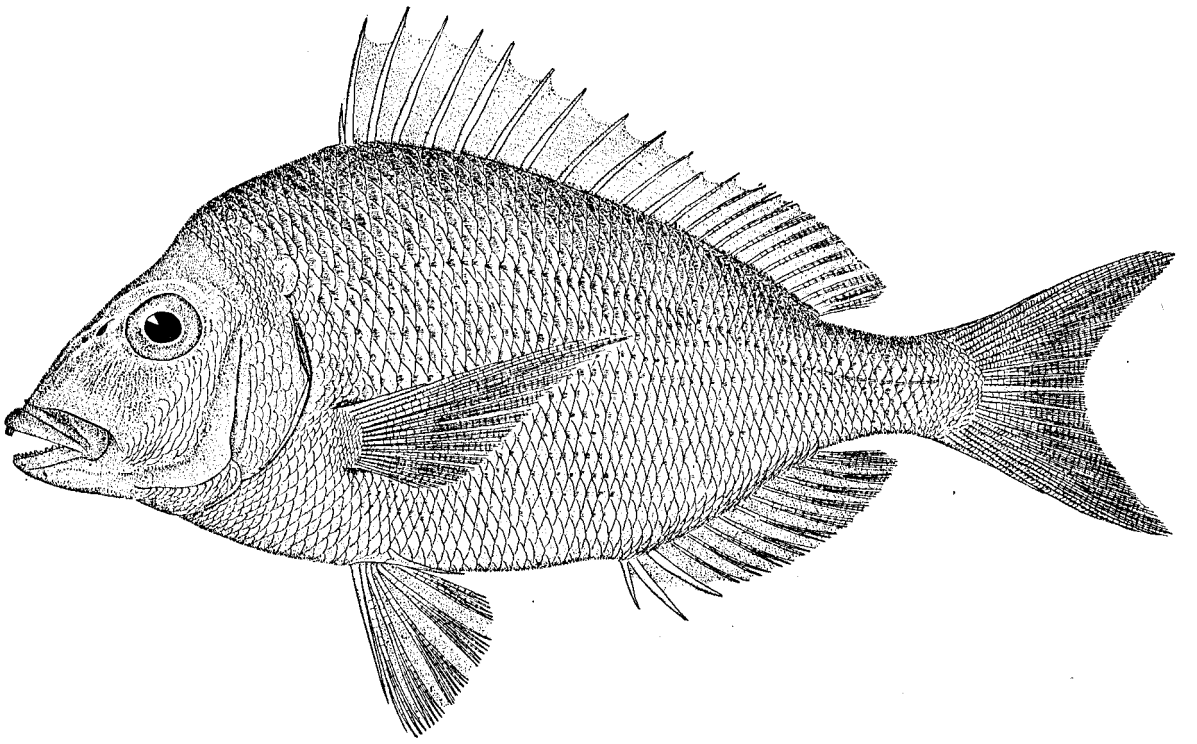
ARCHOSARGUS PROBATOCEPHALUS (Walbaum). *Sheepshead.*



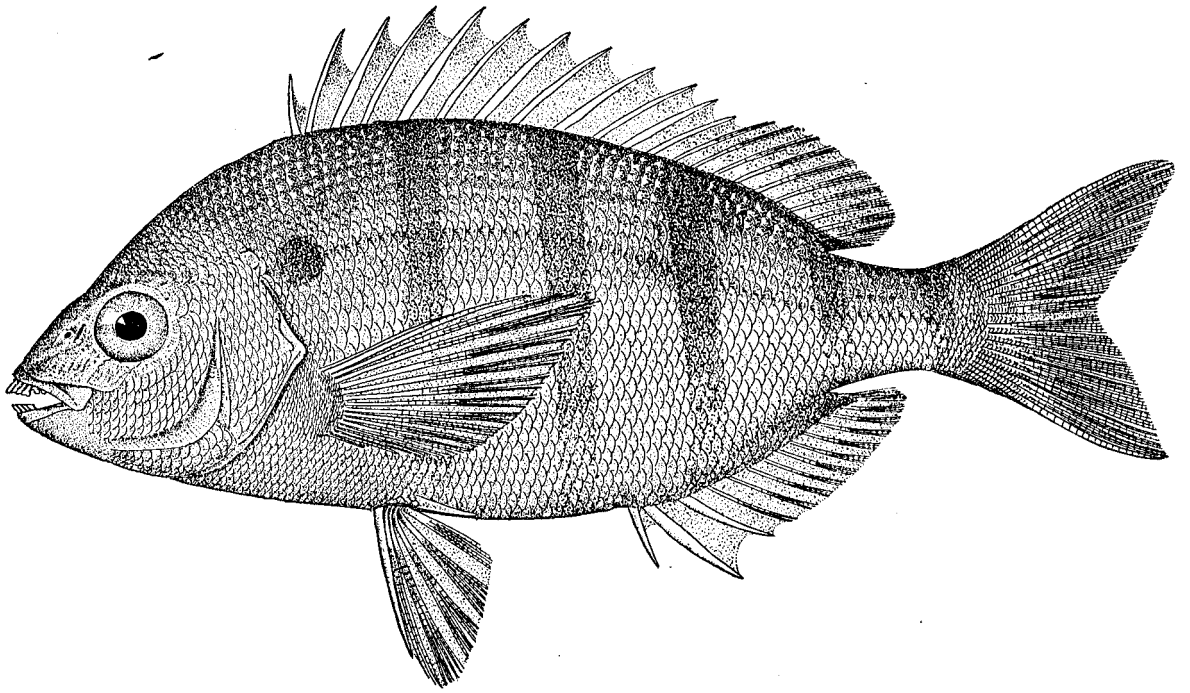
DIPLODUS HOLBROOKI (Bean). *Pinfish; Bream.* Pinfish; Sailor's choice; Spot-tailed pinfish (N. C.); Ring-tailed bream (S. C.); Salt-water bream (S. C.).



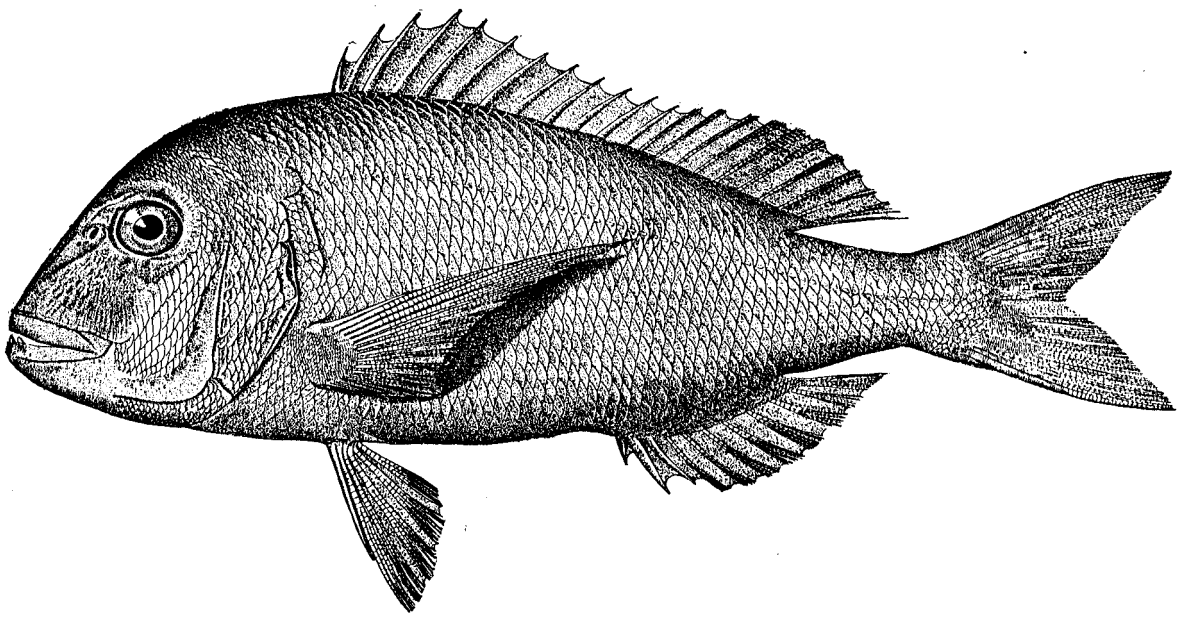
STENOTOMUS CHRYSOPS (Linnæus). *Northern scup; Porgy.* Porgy.



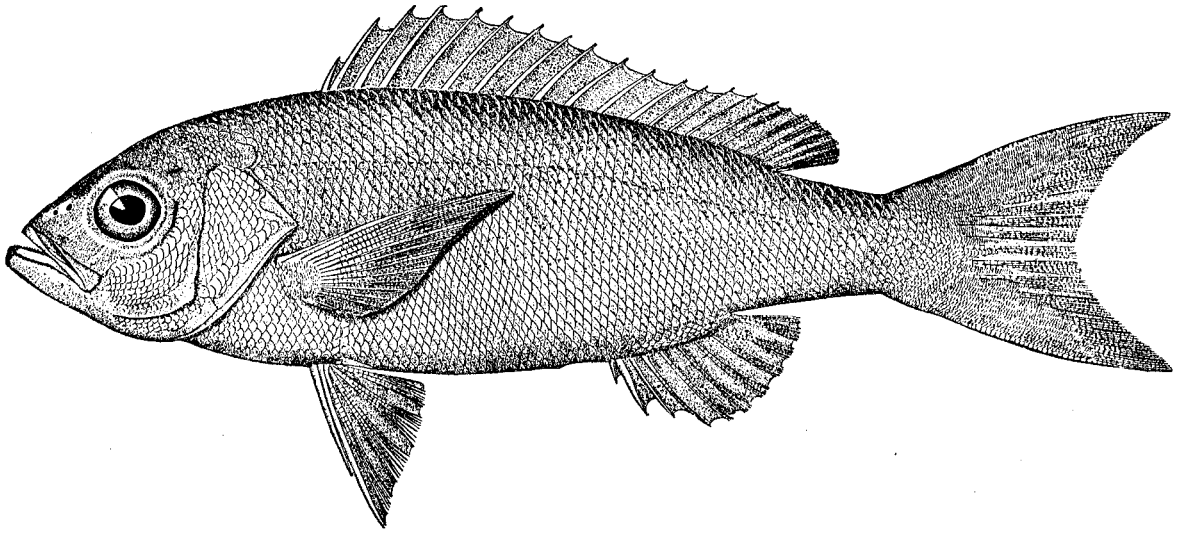
STENOTOMUS ACULEATUS (Cuvier and Valenciennes). *Southern scup; Porgy.* Porgy.



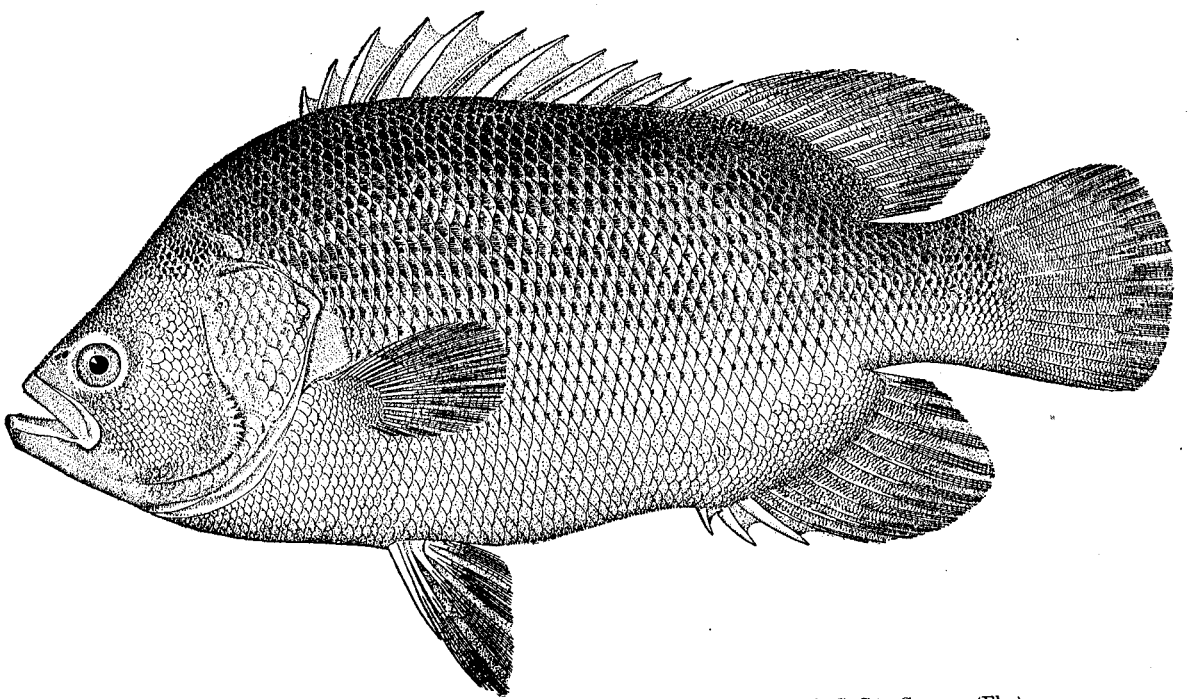
LAGODON RHOMBOIDES (Linnæus). *Sailor's choice; Bream; Pinfish.* Robin (N. C.); Pinfish (N. C.); Salt-water bream (S. C.); Squirrel-fish (Ga.); Sailor's choice (Ga., Fla.); Scup (Fla.); Yellow-tail (Fla.); Porgy (Fla.).



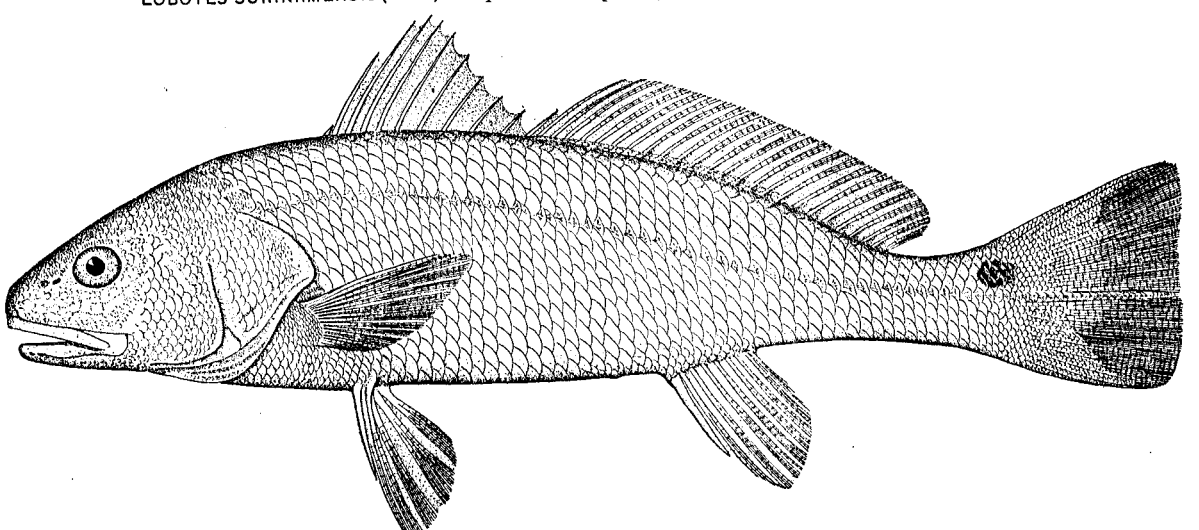
SPARUS PAGRUS Linnæus. Bastard snapper (S. C.).



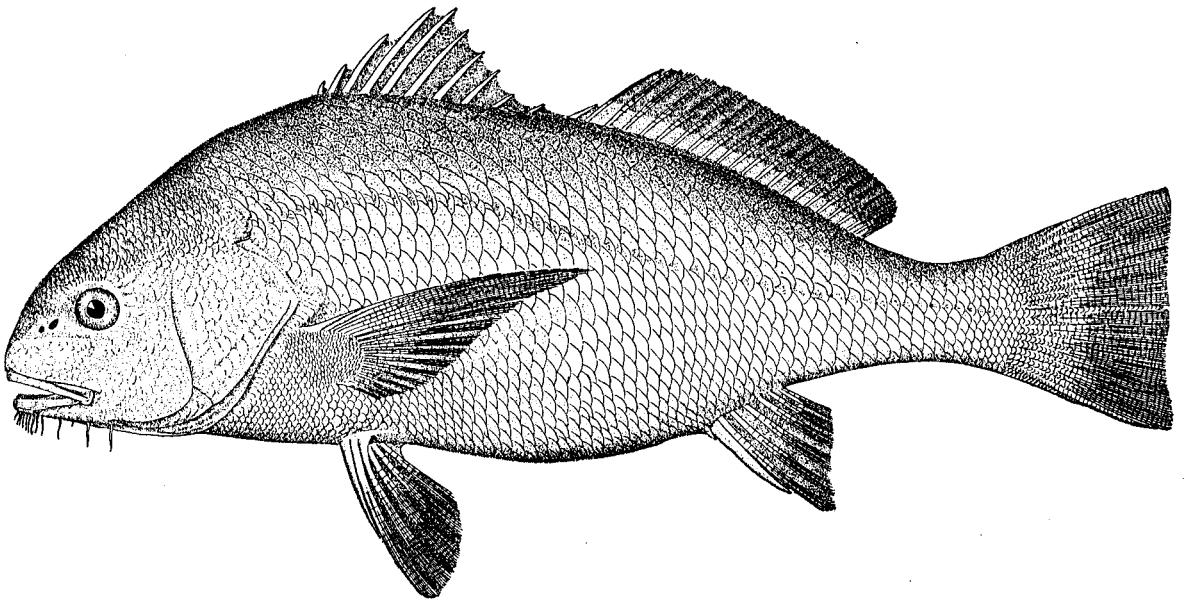
RHOMBOPLITES AURORUBENS (Cuvier and Valenciennes). *Mangrove snapper.*



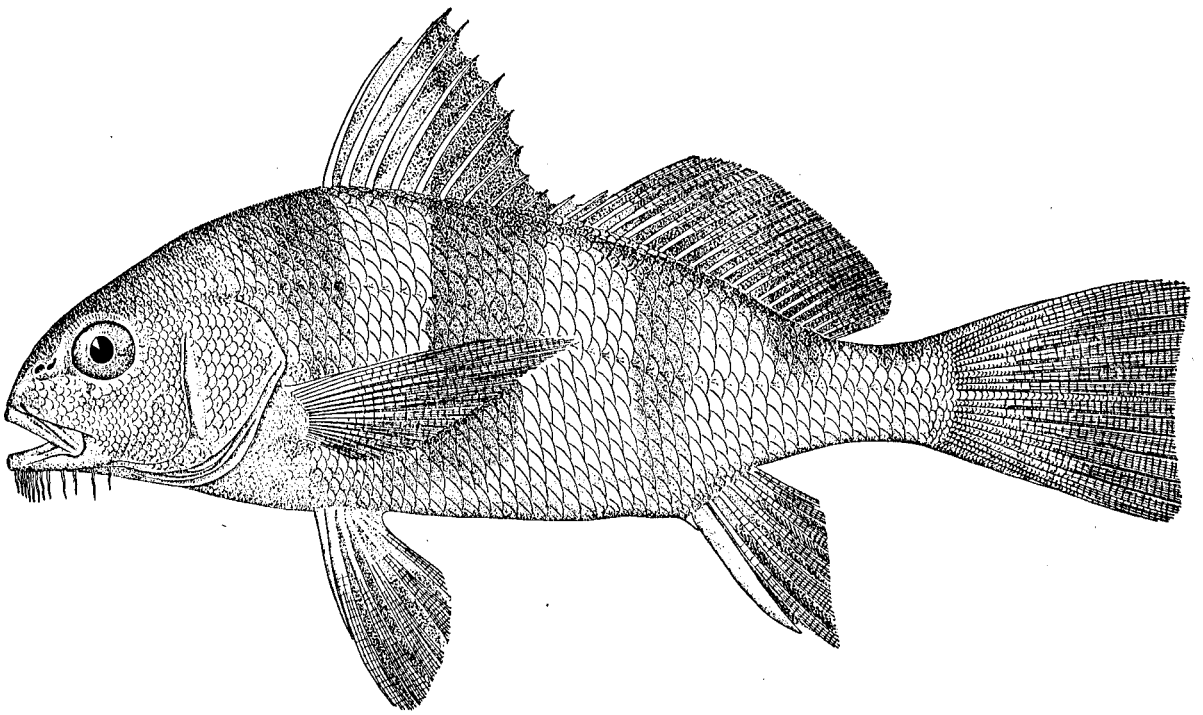
LOBOTES SURINAMENSIS (Bloch). *Triple-tail.* Sea perch (S. C.); Black perch (S. C.); Grouper (Fla.).



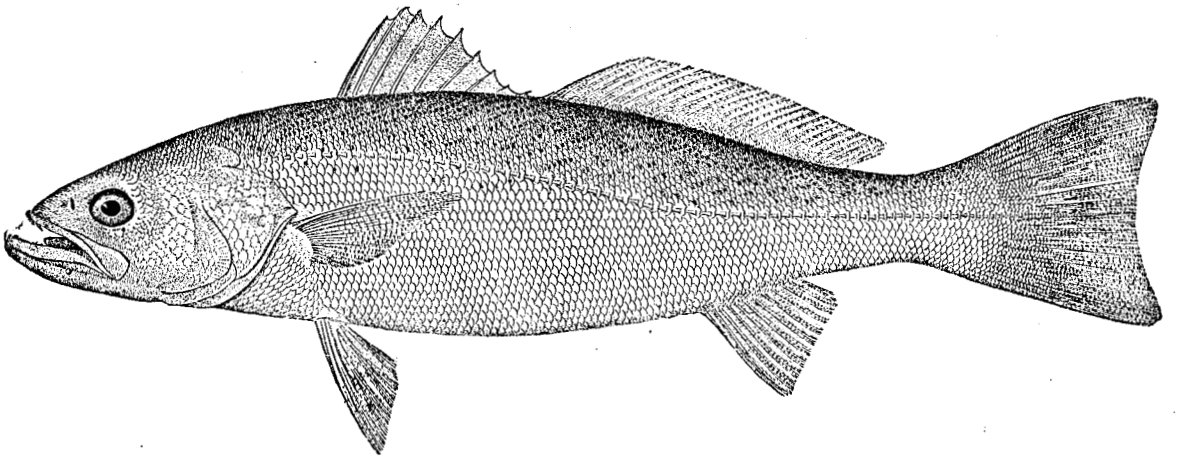
SCIÆNA OCELLATA (Linnæus). *Red drum; Redfish.* Drum; Channel bass; Red drum; Bass; Sea bass; School bass; Reef bass; Spotted bass; Red bass; Puppy drum (young, N. C.); Branded drum (S. C.); Redhorse (Fla.).



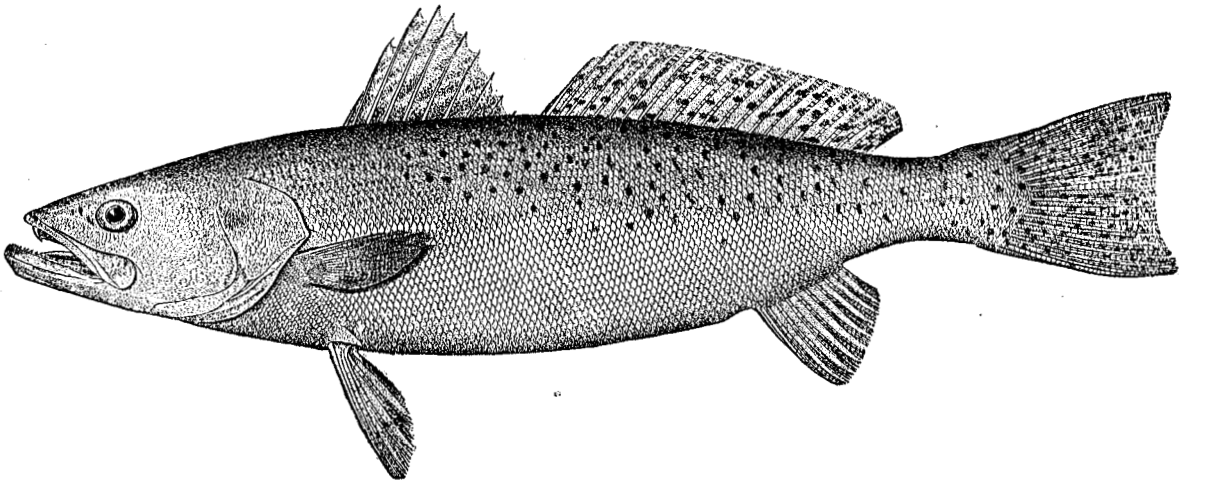
POGONIAS CROMIS (Linnæus). *Drum* (adult). Drum; Black drum; Sea drum (N. C.).



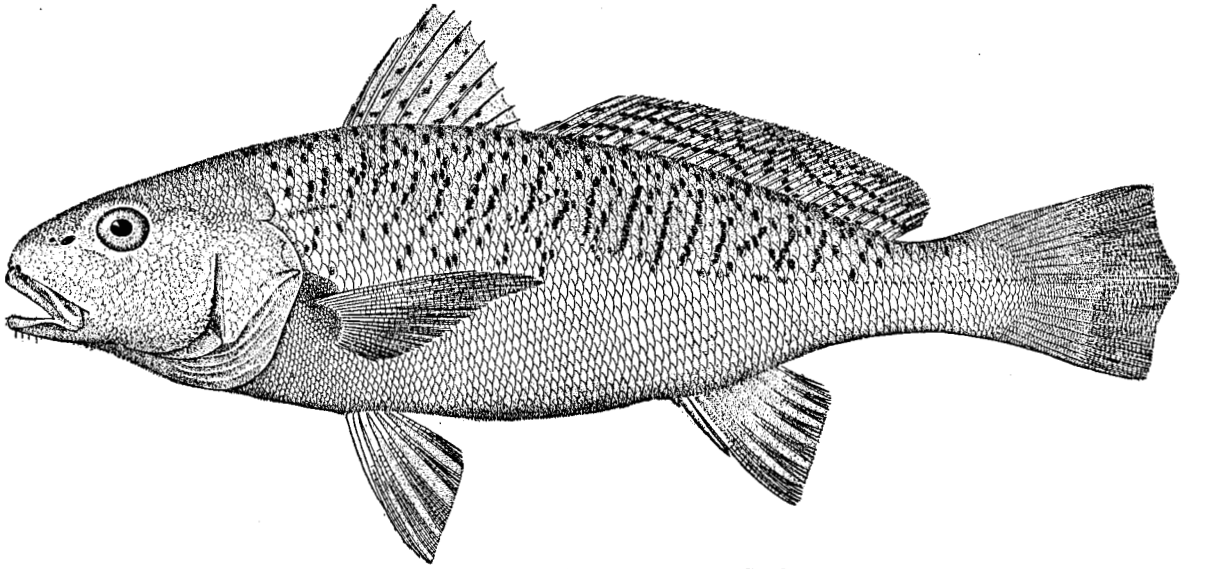
POGONIAS CROMIS (Linnæus). *Drum* (young). Drum; Striped drum; Sea drum (N. C.).



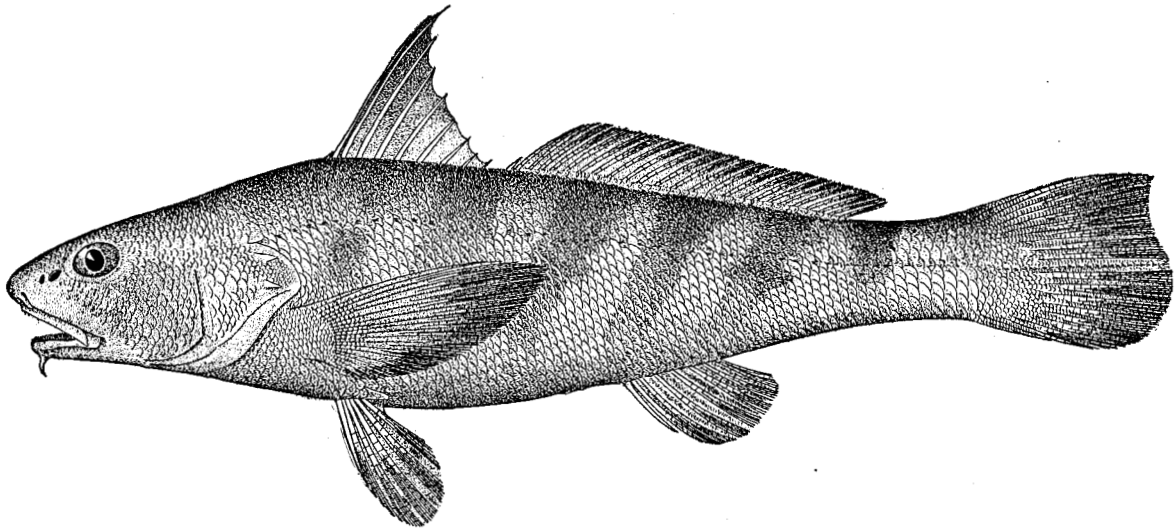
CYNOSCION REGALIS (Bloch and Schneider). *Squeteague; Weakfish.* Trout; Sea trout; Salt-water trout; Gray trout; Sun trout; Shad trout; Deep-water trout (S. C.); Yellow-finned trout (S. C.); Black trout (S. C.).



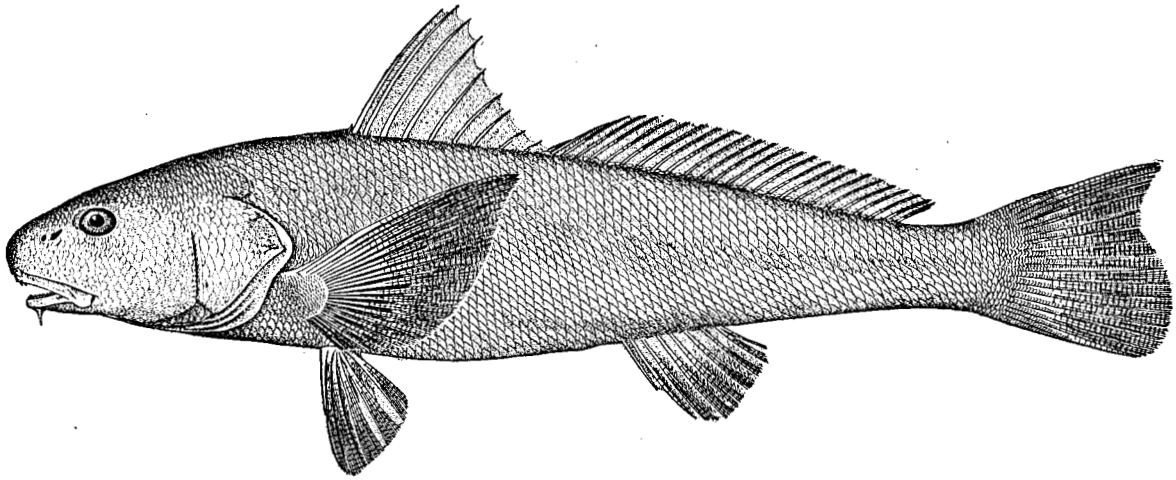
CYNOSCION NEBULOSUS (Cuvier and Valenciennes). *Spotted squeteague; Spotted weakfish.* Trout; Sea trout; Salmon trout; Speckled trout (N. C.); Spotted trout (S. C.).



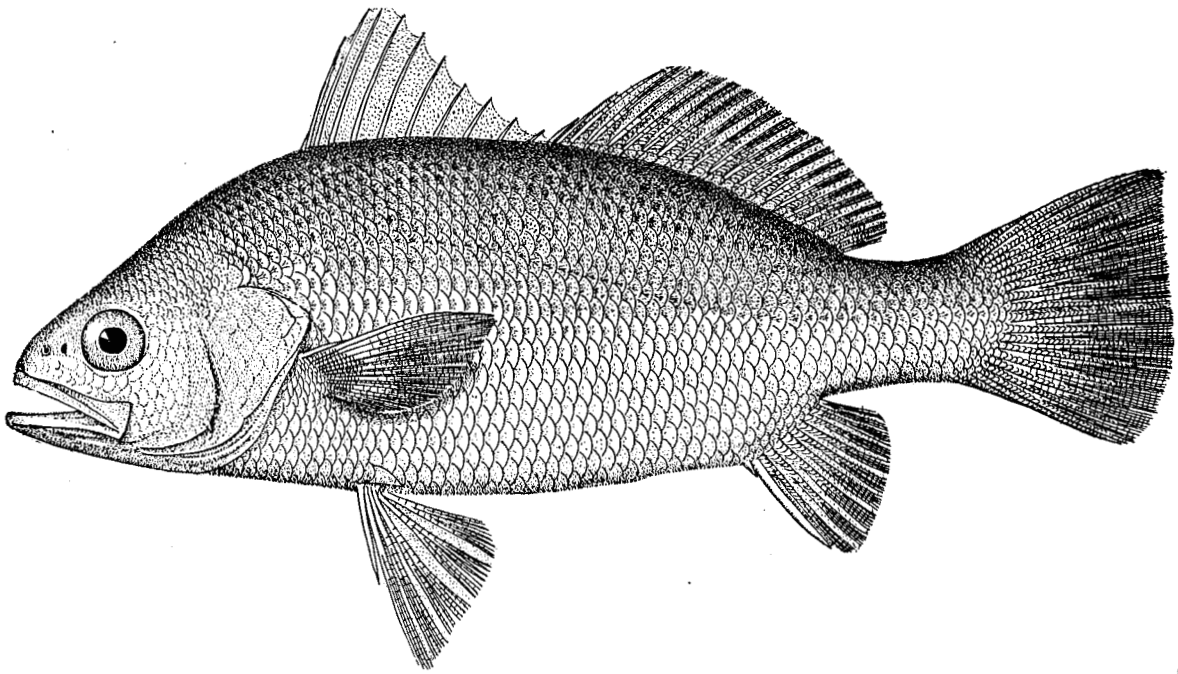
MICROPOGON UNDULATUS (Linnæus). *Croaker.*



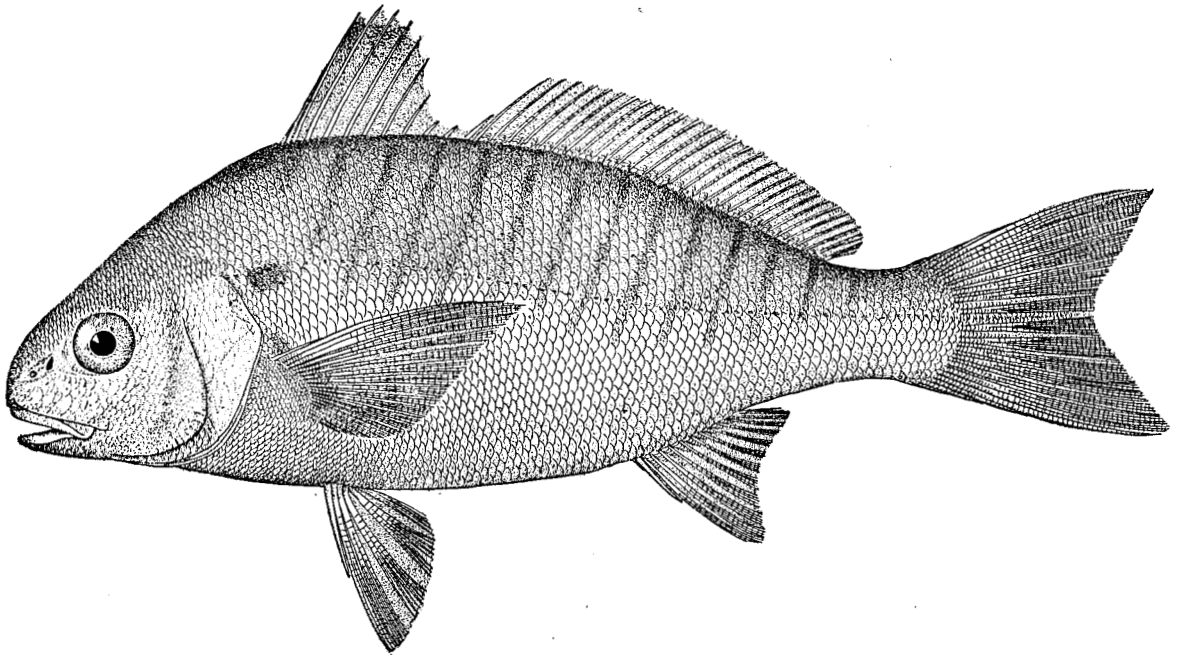
MENTICIRRHUS SAXATILIS (Bloch). *Kingfish.* Whiting; Sea-mink (N. C.).



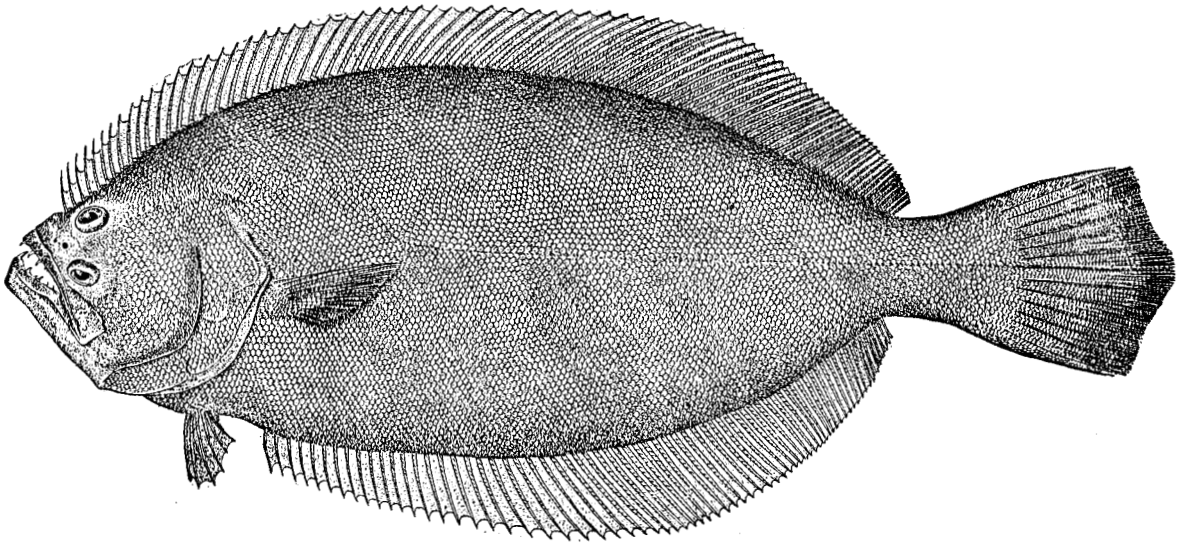
MENTICIRRHUS AMERICANUS (Linnæus). *Whiting; Carolina whiting.* Whiting; Sea mullet (N. C.); Deep-water whiting (S. C.); Kingfish (Fla.); Bull-head whiting (Fla.); Barb (Fla.).



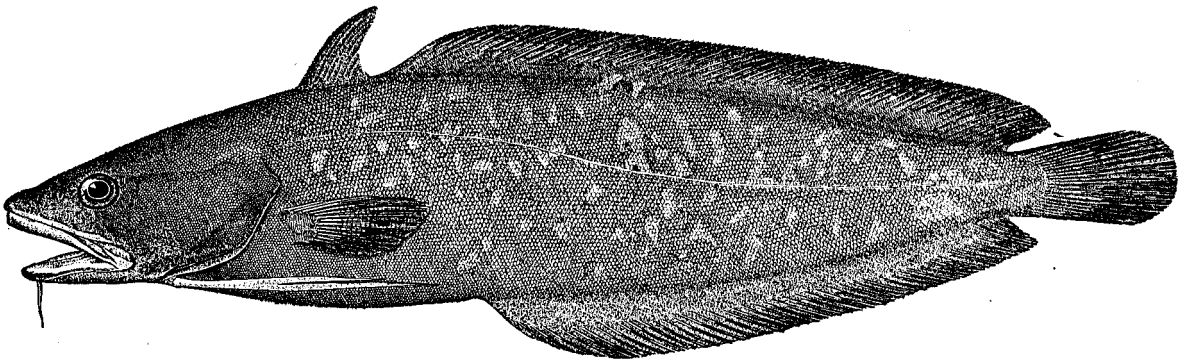
BAIRDIELLA CHRYSURA (Lacépède). *Yellow-tail.* Yellow-tail; Perch (N. C.).



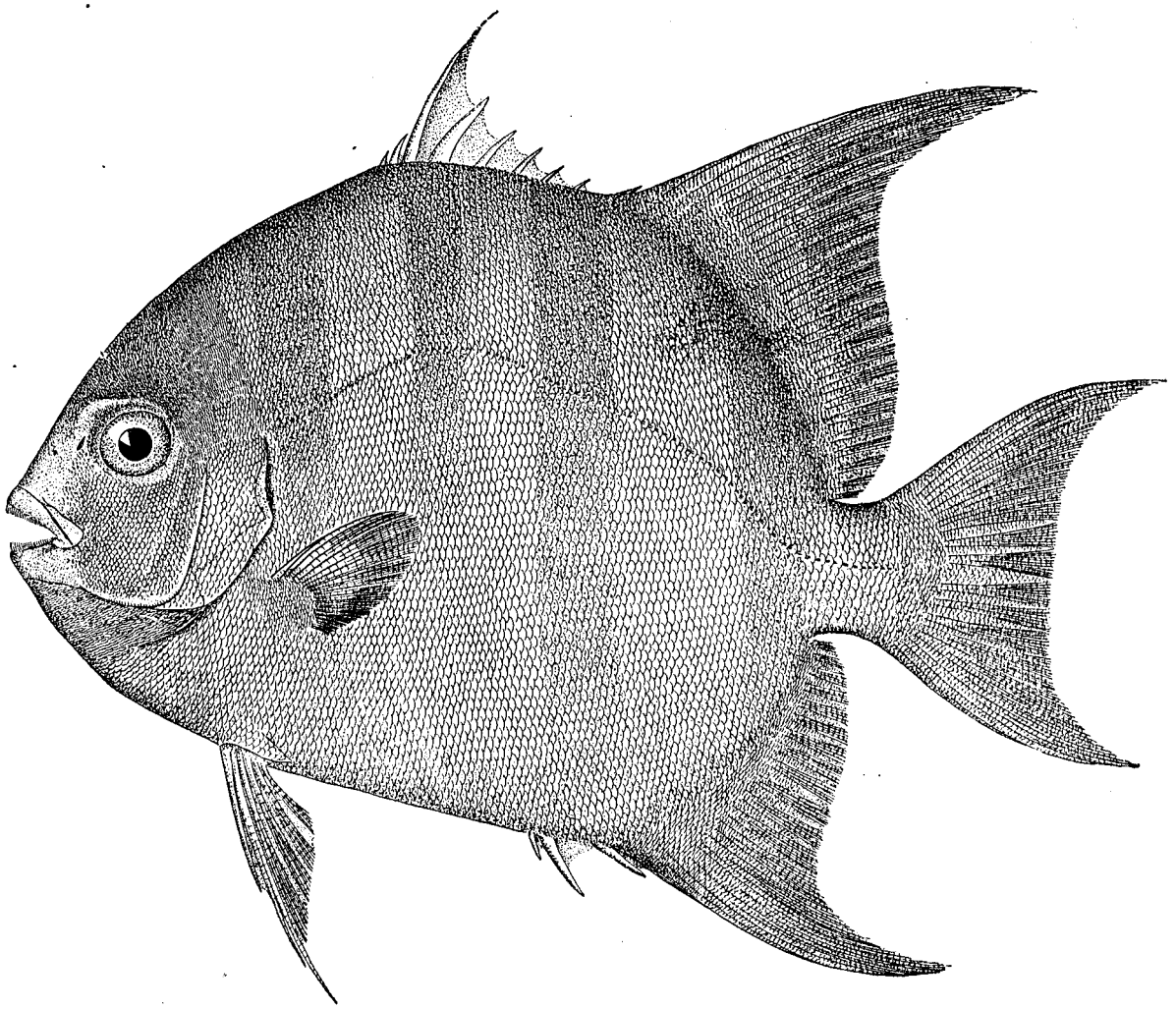
LEIOSTOMUS XANTHURUS Lacépède. *Spot.* Spot; Jimmy (N. C.); Chub (S. C.); Mussooka (Fla.); Oldwife (Fla.).



PARALICHTHYS LETHOSTIGMA Jordan and Gilbert. *Southern flounder.* Flounder.



PHYCIS EARLLI Bean. *Earll's hake.* Hake (S. C.); Tomcod (S. C.).



CHÆTODIPTERUS FABER (Broussonet). *Angel-fish; Moonfish.* Pogy or Porgy (N. C.); Angel-fish (S. C., Ga., Fla.).