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FISHES OF THE BAHAMA ISLANDS
THE GEOGRAPHICAL SOCIETY
OF BALTIMORE

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BY
BARTON A. BEAN

SPECIAL PUBLICATION FROM
THE BAHAMA ISLANDS
BY PERMISSION OF
THE GEOGRAPHICAL SOCIETY OF BALTIMORE
1905
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THE

BAHAMA ISLANDS

EDITED BY
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BARTON A. BEAN,

Assistant Curator of the Division of Fishes, U. S. National Museum.

INTRODUCTION.

The Bahama Islands, lying as they do between latitudes 21° and 28° north, have a tropical fish fauna, similar to other parts of the West Indies; ninety per cent of the list of one hundred and eighty-three Bahama species here enumerated as collections in the U. S. National Museum and elsewhere, made largely by the Bahama Expedition in 1903, and by the Bureau of Fisheries steamer Albatross in 1886, are credited to the West Indian fauna. Forty per cent of this list have also been found in Bermuda, and seventy per cent along and close to the Florida coast. But eight and one-half per cent of this list have been recorded from the Pacific.

A comparison with the Bermuda fauna shows an exceedingly close relationship between it and the Bahama fauna. Almost all of the fishes known to the waters of Bermuda are found in the waters of the Bahamas. In fact, Bermuda is the northeast end of the West Indian region, which includes the Bahamas.

The fish fauna of the Bahamas is varied, but not so rich as other similar faunas; certain forms are rare, comparatively speaking, and the hauls made with the twenty-fathom seine, twelve feet deep, and of fine mesh, were usually surprisingly light, both as to number of species and individuals taken. It was only possible to draw the seines on smooth shores, plenty of which were found, but the waters at the time of our visit seemed more or less barren. The fishes on the coral heads were fairly abundant, such forms as Chlorichthys, Iridio, Balistes, etc., being quite common, as were the young tang. The Chetodonts were rare. Our observations led us to agree with Professor Mayer, who says: "The Bahama region is richer in corals, poorer in fishes and in invertebrates, and far poorer in pelagic life than that of the Tortugas."
It is quite impossible to give statistics as to the number and value of the fishes taken in the Bahamas. No record is kept of fishes sold in the markets. Low prices prevail and in the absence of the best grades of beef, mutton and the like, large quantities of fishes are annually consumed. At the time of our visit, June 16 to July 20, 1903, the supply of fish in the wells of the boats in Nassau harbor seemed to be ample and in excess of the demand. The following kinds are esteemed as food: snapper, mutton-fish, groupers, pompano, grunts, jacks, runners, porgies, angel-fish, pork-fish, hog-fish, tangs, turbot and shell-fish. Those considered of fair quality are: bonito, king-fish, shad (Gerres), goat-fish, mullet, goggle-eye, squirrel-fish, hound-fish, flying-fish, amber-fish or amber jack, etc.

Of the one hundred and eighty-three species here enumerated fully forty-two are of primary importance as food-fishes, while twenty-four may be regarded as of secondary importance. About ten other species are sometimes eaten, but little esteemed, and a few are often unfit for human consumption, being poisonous. The Barracuda, though eaten at times, will often cause great discomfort to those partaking of its flesh. In speaking of the morays Catesby says: \footnote{1} "The inhabitants of the Bahama Islands will eat only the green sort, rejecting those which are black as poisonous." He also refers to the unicornfish (Alutera scripta) as being poisonous, and of the rock-fish (Perca marina venenosa punctata) says: \footnote{2} "This fish has a worst character for its poisonous quality of any other among the Bahama Islands."

As will readily be seen by the illustrations (Plates LII-LXI) from drawings by Mr. A. H. Baldwin, the fishes of the Bahamas are not only useful for food, but also as an attraction to the many visitors to the Islands. Their beauty in life, as they swim to and fro among the sea fans and corals, is indescribable, and one never tires looking through the water bucket with glass bottom, or better still, through the floor of a glass-bottom boat. The "Sea Gardens" of Nassau harbor are famous for their beauty, but they are meager in attraction to some of the bottoms observed farther south. The rock-beauties, angel-fishes, turbot, tang, parrot-fishes, pork-fish, hog-fish, cock-eye pilot, and many others are plainly seen in the clear water and as they flash their beautiful colors fill the observer with wonder and admiration.\footnote{3}

\footnote{1} The Natural History of Carolina, Florida, and the Bahama Islands, etc., Vol. II. 1743.
\footnote{2} Loc. cit.
\footnote{3} Popular accounts of the fishes of the Bahamas are to be found in American Fishes, Goode, and in American Food and Game Fishes, Jordan and Evermann.
For collecting in the Bahamas seines are useful, but they should not be too long nor deep; seventy-five feet long and eight feet deep, with a fine-mesh pocket, would probably prove of more service in the shallow waters than longer nets. The Bahama traps are useful, but should be specially constructed of closer woven wire than that used for commercial purposes. Dip-nets from four to six feet square, held out by spreaders and baited with conch meat, were found most successful in capturing beautiful fishes around the coral heads. These fishes will nibble longer at the bait offered them on hooks without being captured than any we have heretofore seen. The oyster dredge fitted with netting did quite well, but the tangle bars for deep water were lost on the several occasions used. This was much to be regretted, as many good things were expected from this sort of fishing.

The meat of the conch is much used as bait. The groupers, grunts and the like are known as bottom fish and are taken by hook and line, while the shad and jacks swim near the surface and are taken in nets. The so-called "passing jack" or "black jack" is said to be one of the best fishes running into Nassau harbor and other places among the Islands. They are taken in large numbers in August and September by means of nets quickly drawn around the schools.

I would express my thanks to Mr. Joseph S. Lewis, of the Johns Hopkins Medical School, and to Mr. J. B. G. Custis, both of whom were assigned to me as assistants in collecting, and to Mr. Randall, who had charge of the launch. To Messrs. Augustus Willige and C. A. McKnew, assistants in the Division of Fishes, thanks are due for help rendered in identifying the collections.

ANOTATED LIST OF BAHAMA FISHES.

The Bahama Expedition of 1903 collected some highly interesting forms, *Stathmonotus, Chriodorus* and *Verma* having heretofore been recorded only from Florida, and the curious goby, *Garmannia*, indefinitely assigned to the West Indies. So far as the list here given is concerned, I need hardly say that it is very incomplete as a catalogue of the whole Bahama fish fauna, but I have thought it best to confine myself at this time to the specimens at hand and not give a list from recorded species and supposition as to what may be found in the region under discussion.

The ocean deepens rapidly at many places around the Islands and the deep-sea fauna must be rich. Such forms as *Gonostoma, Stomias* and *Echio-
stoma have been found in the Bahama Channel, also Pseudoscopelus in the Old Bahama Straits.

Family BRANCHIOSTOMATIDÆ (Lancelets).

ASYMMETRON LUCAYANUM Andrews.

This form has been found at Bimini and Nassau. Adult and young were obtained by Dr. Andrews, found swimming at the surface in the evening in June and July, 1892. It was found also in calcareous sand.

Family GINGLYMOSTOMIDÆ (Nurse Sharks).

GINGLYMOSTOMA CIRRATUM Gmelin (Nurse Shark).

Large shark abundant about the coral reefs of the West Indies and on the west coast of Mexico. A female of this species was taken by the Expedition at Green Cay on June 29, 1903. It was 7 feet 9 inches long and contained seventeen egg capsules. Numerous specimens were seen.

Family GALEIDÆ (Requiem Sharks).

HYPOPRION BREVIROSTRIS Poey (Short-nosed Shark).

This shark grows to a length of 7 feet; it ranges throughout the West Indies and was taken by the steamer Albatross at Watlings Island, March 5, 1886.

CARCHARHINUS OBSCURUS Le Sueur (Dusky Shark).

Middle Atlantic Ocean. Grows to a length of 9 or 10 feet. Numerous examples of what the writer took to be this shark were observed north of Abaco Island. They followed the wake of the vessel, often coming to the surface close by, affording a good target for the rifles aboard, but seemed to be little disturbed by the bullets shot at them.

Family SPHYRNIDÆ (Hammer-headed Sharks).

SPHYRNA TIBURO Linneus (Shovel-head Shark).

The maximum length of this shark is about 5 feet; it has an exceedingly wide range, occurring from the coast of Long Island, throughout the West Indies, and across the Pacific to China. The steamer Albatross secured specimens north of Abaco in 1886.

Family DASYATIDÆ (Sting Rays).

UROLOPHUS JAMAICENSIS Cuvier (Round Sting Ray).

This form occurs throughout the West Indies, and was obtained by the Expedition at Nassau, and at the eastern end of Hog Island.
Family ALBULIDÆ (Lady Fishes).

**ALBULA VULPES LINNAEUS** (Lady Fish).

Tropical seas on both coasts of North America, northward in the Atlantic to Cape Cod and in the Pacific to San Diego.

Collected by the Expedition at Spanish Wells, July 4, 1903.

Other common names for this fish are: "banana-fish," "bone-fish" and "macaibi."

Family ELOPIDÆ (Tarpons).

**ELOPS SAUERUS LINNAEUS** (Big-eyed Herring).

This rather indifferent food-fish reaches a length of 3 feet or more; it is found in all tropical seas and strays northward to Massachusetts and Lower California.

Collected by the Expedition at the east end of Hog Island, June 18, 1903. The young were abundant.

Family CLUPEIDÆ (Herrings).

**JENKINSSIA STOLIFERA** Jordan and Gilbert.

This interesting little fish, heretofore known from the Gulf of Mexico (Key West to Yucatan), was obtained by the Expedition at Spanish Wells, July 4, 1903.

**SARDINELLA SARDINA** (Poey) (Scaled Sardine).

West Indian fauna; abundant. Collected by the steamer *Albatross* at Nassau.

**SARDINELLA CLUPEOLA** (Cuvier and Valenciennes).


Family SYNOdontidÆ (Lizard-Fishes).

**SYNOdUS INTERMEDIUS** (Agassiz) (Lizard-fish).

A very large specimen was observed by me in Nassau Harbor, but we failed to secure it. It refused all bait offered and the attempts to grapple it with large hooks were unsuccessful. Several small specimens were taken.

The steamer *Albatross* collected *S. intermedius* at Watlings Island and Abaco.

**TRACHINOCEPHALUS MYOPS** Forster (Ground Spearing; Lagarto).

Abundantly distributed throughout the West Indies and occurring northward on Atlantic coast to the Carolinas. Collected by the Expedition at Clarence Harbor, July 15, and off an island near Nassau, July 20, 1903.
Family MURID'RESODID'E.

STILBISCUS EDWARDSI Jordan and Bollman.


Family OPHICHTHYID'E (Snake Eels).

SPHAGEBRANCHUS ANGUIFORMIS (Peters).


YERMA KENDALLI Gilbert.

A single species belonging to the family Ophichthidae (snake eels), heretofore known only on the coast of Florida, was obtained by the Expedition at Green Cay, June 30, 1903.

Family MURID'E (Morays).

LYCODONIS MORINGA Cuvier (Common Spotted Moray).

This distinctly marked eel reaches a length of 3 feet. It has been found in the West Indies and about Florida, ranging as far southward as Rio Janeiro and St. Helena. In the middle of July, 1903, a specimen was taken by the Expedition at Nassau.

LYCODONIS FUNEBSI Ranzani (Black Moray).

This eel is the largest of our American species, reaching a length of 6 feet or more and being noted for its extreme ferocity. It is common on both of our coasts, from Florida Keys to Rio Janeiro and Gulf of California to Panama. A specimen was obtained by the steamer Albatross at Nassau during March, 1886.

ECHIDNA CATENATA Bloch.

A form of the most highly specialized morays; small in size but generally common in the West Indies and from Bermuda to Surinam. Collected by the steamer Albatross at Abaco in March, 1886.
Family MYRID.E (Worm Eels).
**Myrophis punctatus** Läitken.

This species of eel, resembling an earthworm in appearance and size, is found in the West Indies and along the Gulf Coast southward to Surinam. Two specimens were collected by the Expedition off Governors Island, July 7, 1903. Taken by oyster dredge in 5 fathoms of water on a bottom of coral sand.

Family PECILIID.E (Killifishes).
**Cyprinodon variegatus** Lacepede (Sheepshead Minnow).

This little fish is widely distributed, being found in brackish waters from Cape Cod to the Rio Grande. Very abundant in the lake near Cockburn Town, Watlings Island, where specimens were found by the Expedition, July 11, 1903.

**Cyprinodon variegatus riverendi**, described by Poey from Cuban specimens, has also been recorded from the Florida Keys and obtained by the steamer *Albatross* at Green Cay, April 12, 1886.

**Gambusia affinis** Baird and Girard (Top Minnow).

This interesting little fish, known to the Cubans as "guajacones," and named *Gambusia* by Poey after the Cuban word *gambusino*, meaning nothing, reaches a length of but 2 inches. It is viviparous, the young coming forth in the summer when about one-third of an inch long.

The top minnow is found in marshes and lagoons of the southern and Gulf coasts from Delaware to Mexico, often ascending rivers into fresh water. Collected by the Expedition in lake near Cockburn Town, Watlings Island, July 11, 1903.

Family EXOCETID.E (Flying-fishes).
**Exocetus lineatus** Cuvier and Valenciennes (Striped Flying-fish).

Found in the warm seas of the Atlantic, but not abundantly. Specimens have been recorded as taken from Corea, the Madeiras, Canaries and Bermuda. The specimen secured by the Expedition flew aboard the ship at Cat Island during the night of July 8, 1903.

Family HEMIRHAMPHID.E (Half-beak Gars).
**Hemirhamphus brasiliensis** Linnaeus (Half-beak).

Grows to a length of 15 inches, is a good food-fish, and is found in more or less abundance from Key West, Florida, southward to Brazil. Obtained by the Expedition at Clarence Harbor, July 14, 1903. It seemed to be rare in the Bahamas at the time of our visit.
Chriodorus atherinoides Goode and Bean (Hard Head).

This interesting fish, heretofore recorded only from Key West, Florida, was obtained by the Expedition at Spanish Wells, July 4, 1903. A single example, 4 3/4 inches long.

Family ESOCIDÆ (Gars).

Tylosurus notatus Poey (Silver Gar).

This species, known also as "long jaws" and "needle-fish," is common at Key West and throughout the West Indies. It reaches a length of 20 inches. Obtained by the Expedition at Nassau and Spanish Wells during June and July, 1903, being especially abundant at the latter place.

Tylosurus caribbéus Le Sueur (Silver Gar).

This species inhabits the West Indies. One specimen was obtained by me at Nassau during June, 1903.

Tylosurus acus Lacépède (Hound Fish).

Plate LIII.

This fish grows to a length of 4 feet and has been recorded from the West Indies, the Bahamas and Bermuda. It occasionally strays northward to the coast of Massachusetts. Taken by the Expedition at Spanish Wells, July 4, and at Clarence Harbor, July 15, 1903.

Family SPHYRÆNIDÆ (Barracudas).

Sphyraena picuda Bloch and Schneider (Barracuda).

The great Barracuda, Picuda, or Becuna, grows to a length of 6 feet and may well be termed the wolf of the sea. It is eaten but not much esteemed. Very common in the tropics, ranging the high seas throughout the West Indies, from Brazil northward, including Bermuda, to the New England coast. Taken by the Expedition at Spanish Wells, Governors Harbor, Powells Point, Clarence Harbor and Nassau during June and July, 1903.

Family ATERINIDÆ (Silversides).

Atherina stipes Müller and Troschel (Friars).

This species includes the A. laticeps of Poey. It is abundant throughout the West Indies, the Gulf of Mexico and the Bahamas. Of small size and only food for other fishes. Taken by the Expedition near Nassau, Spanish Wells, the Current, and Clarence Harbor during June and July, 1903.
Atherina area Jordan and Gilbert (Slender Friar).

By no means rare, but occurring in less abundance than *A. stipes*. It is found in the Gulf of Mexico, at Key West and Cozumel; specimens also having been collected by the steamer *Albatross* at Watlings Island, Rum Cay, Cat Island and Abaco during March, 1886.

**Family MUGILIDÆ (Mullets).**

*Mugil curema* Cuvier and Valenciennes (White Mullet).

An important food-fish, running in large schools and ranging on both our coasts from Cape Cod to Brazil and Magdalena Bay to Chili. It grows to a foot in length. Taken by the Expedition at Powells Point, July 8, 1903.

"Blue-back mullet," "Liza" and "Liza Blanca" are names also applied to this fish.

*Mugil trichodon* Poey (Fan-tailed Mullet).

A deeper fish than the *M. curema* and having a less extensive range, occurring from Florida Keys to Brazil; abundant at Key West, but rare about Cuba. One specimen was collected by the Expedition at Spanish Wells, July 4, 1903.

**Family HOLOCENTRIDÆ (Squirrel-fishes).**

*Holocentrus ascensionis* Osbeck (Squirrel-fish).

This is one of the most brilliantly colored of our tropical fishes. It attains a length of about 2 feet and may be found around the rocks and reefs of the West Indies; ranging from Florida to St. Helena; the Expedition secured a specimen in Nassau harbor, June 23, 1903. It is not very important as a food-fish, but is frequently seen in the tropical markets. Observed in Nassau market.

*Holocentrus vexillarius* Poey.

Taken by the steamer *Albatross* at Abaco, April, 1886.

*Holocentrus coruscus* Poey (Squirrel-fish).

Recorded from Green Turtle Cay, where it was taken by C. L. Edwards in 1888.

*Holocentrus siccifer* Cope.

Described in 1866 from a specimen taken at New Providence.
Family SCOMBRIDÆ (Mackerels).

**Gymnosarda alleterata** (Rafinesque) (Bonito).

This fish, known in the Mediterranean as "Tunny," is common throughout the West Indies and ranges northward to Cape Cod. It is a good food-fish. An example was obtained by the Expedition on a trolling line, between Andros Island and Green Cay, on June 28, 1903.

**Scomberomorus cavalla** Cuvier and Valenciennes (King-fish or Cero).

This large fish is common in the West Indian region. It attains a length of 5 feet or more and is used as food. Observed in the Nassau market.

Family CARANGIDÆ (Pompanos).

**Caranx bartholomei** Cuvier and Valenciennes (Yellow Jack).

An indifferent food-fish, occurring in the West Indies and frequently straying northwards as far as the Carolinas. It was taken in April, 1886, by the steamer *Albatross* at Nassau.

**Caranx crysos** Mitchill (Jack).

Unlike *C. bartholomei* Cuv. and Valen., this fish has gained rather a prominent name among the food-fishes, more especially in the West Indies, where it occurs in abundance. Its range is also greater, covering the western Atlantic from Cape Cod to Brazil. Its qualities as a game fish have made it a favorite with many sportsmen. "Crévalle," "runner," "jurel" and "yellow mackerel" are other names applied to this fish. Several specimens were secured at Nassau by the steamer *Albatross* in April, 1886.

**Caranx latus** Agassiz (Horse-eye Jack).

This species of *Caranx* is found on the west coast of Mexico, in the West Indies, and oftentimes as far north as Virginia. It is generally regarded as poisonous and causing the disease known as Ciguatera if eaten. A specimen was taken by the Expedition near Cape Hatteras in June, 1903, several more being secured at Spanish Wells and Clarence Harbor in July, 1903.

**Caranx ruber** Bloch (Carbonero).

Found only in the West Indies heretofore; a single specimen was secured at Nassau in June, 1903, by the Expedition. It is much less abundant than the other *Caranx* mentioned above, and for this reason has no value as a food-fish.
Trachurus crumenophthalmus Bloch (Goggle-eye).

Also known as "big-eyed scad," "goggle-eye Jack" and "chicharro." It occurs throughout the West Indies northward to Cape Cod, and in the Pacific on the west coast of Mexico. In the Hawaiian Islands it is esteemed as a food-fish, being found in great abundance and called "akule" by the natives. An abundant fish in the Nassau market at the time of our visits in June and July, 1903. A fairly good fish and one of the lowest priced. The usual length of market specimens was 8 or 9 inches.

Trachinotus falcatus Linneaus (Round Pompano).

This well-known food-fish exceeds a foot in length and is found in the West Indies; it ranges from Cape Cod to Brazil, being common southward and occasionally found northward in the Gulf Stream as far as Woods Holl. Collected by the Expedition at Tarpum Bay and east end of Hog Island in July, 1903.

Trachinotus glaucus Bloch (Old Wife).

A handsome fish, unimportant as food, found among the West Indies and along the coast from Virginia southward to the Caribbean Sea. In size it rarely exceeds a foot. Several specimens were obtained by the Expedition at Nassau, June 20, 1903.

Trachinotus goodei Jordan and Evermann (Great Pompano).

Also commonly called the "permit;" a good food-fish, though not as highly valued as T. carolinus. It often grows to a length of 3 feet, specimens of this size weighing about thirty pounds, being the largest size attained by any of the pompanos. It occurs in the West Indies, northward to Florida. Collected by the Expedition at Hog Island, June 18, 1903.

Decapterus macarellus Cuvier and Valencienimes (Mackerel Scad).

Found in the warmer parts of the Atlantic, straying northward to Cape Cod. Of no value as food. Two specimens were taken by the Expedition near the edge of the Gulf Stream off Cape Hatteras, June 6, 1903.

Seriola rivoliana Cuvier and Valencienmes (Amber-fish).

As a food-fish this species is unimportant, comparing unfavorably in this respect with the majority of the species in this genus. It is of wide distribution, ranging from the Mediterranean to Brazil, throughout the West Indies and occasionally on the coasts of Florida and South Carolina. A specimen was obtained by the steamer Albatross, March 5, 1886.
Large examples of *S. rivoliana* were observed in Nassau Harbor. Two brought to the schooner's side by hand-line fishermen weighed about 50 lbs. each.

**Naucrates ductor** Linnaeus (Pilot-fish).

A fish of wide distribution, inhabiting the open seas, being found occasionally on the Atlantic coast from Cape Cod to the West Indies. Two specimens were taken by the Expedition, the one from the edge of Gulf Stream, the other at N. Lat. 31° 13', W. Long. 74° 41', in June, 1903.

**Alectis ciliaris** (Bloch) (Thread-fish).

Both coasts of tropical America; common around the Florida Keys. Obtained at Green Turtle Cay, 1888, by C. L. Edwards.

**Selene vomer** Linnaeus (Horsehead).

One of the handsomest and commonest of the Moon-fishes, deriving its name of Horsehead and also that of Lookdown from the peculiar shape of its head. Its flesh is excellent, being generally considered a great delicacy. Found on both coasts, from Cape Cod to Brazil, Lower California to Peru; more common about the sandy coasts of tropical America. A specimen was taken by the Expedition at Nassau, June 20, 1903.

**Family Nomeidae.**

**Psenes cyanophrys** Cuvier and Valenciennes.

A small fish occurring in the Atlantic, Pacific and Indian oceans, being widely distributed in the warm ocean currents. Secured by the Expedition at Green Cay, June 29, 1903.

**Nomeus gronovii** Gmelin (Portuguese Man-of-war Fish).

This fish derives its name from its habit of seeking protection beneath the jelly-fish known as the Portuguese man-of-war, moving freely about its poisoned tentacles. The single example obtained by the Expedition was taken with its host in the open ocean southeast of Cape Hatteras in June, 1903.

**Family Bramidae (Pomfrets).**

**Brama raii** Bloch (Pomfret).

Found in the open seas at considerable depths; rarely in the Atlantic, more frequently on the Pacific coast from California north to Puget Sound.
A young specimen was taken near Cape Hatteras, June 15, 1903, by the Expedition. This fish attains a length of 2 to 4 feet. On the Pacific coast it is highly valued as a food-fish.

**Family CHEILODIPTERIDÆ (The King of the Mullets).**

**APOGON PIGMENTARIUS (Poey).**

An interesting little fish heretofore recorded from Cuba. One specimen was obtained by the Expedition at Golding Key, Andros Island, June 26, 1903. Color in life red; in alcohol whitish, profusely covered with small black spots.

**APOGONICHTHYS STELLATUS Cope.**

Two specimens of this rare species were obtained by the Expedition at Golding Key, Andros Island, June 27, 1903. They were of a uniform black color when captured, but since being in alcohol have faded to a reddish-brown with more or less metallic luster, thickly dotted with small dark spots and numerous star-shaped blotches each with a silvery center.

Professor Cope described the species from a specimen (the only one known) said to have come from Nassau. Our specimens are 2 and 2½ inches long.

**Family SERRANIDÆ (The Sea Basses).**

**EPINEPHELUS MACULOSUS Cuvier and Valenciennes (Red Hind).**

Plate LVII.

This is one of the smallest of the Groupers. Like all the others it is highly esteemed as food and for its game qualities. It ranges from Carolina to Brazil, being rare on our coast but more frequent in the West Indies and the Bermudas. Several specimens were collected by the Expedition at Nassau during June and July, 1903. It attains a length of about 2 feet.

**EPINEPHELUS MYSTACINUS Poey (Cherna de lo Alto).**

Found in the deeper waters of the West Indies, southward to Brazil; reaching an approximate length of 2 feet. A good food-fish, but not found in such quantities as to make it of commercial value. Collected by the Expedition at Nassau, June 22, 1903.

**EPINEPHELUS STRIATUS Bloch (Nassau Grouper).**

This is one of the best marked and most important food-fish of its kind. Found throughout the Bahamas and in the West Indies, northward to Florida.
It often reaches a length of three feet and a weight of about fifty pounds, this being the largest size attained by any of the species of this genus. A fifteen-pound specimen was taken by the Expedition in Clarence Harbor, and the fish was fairly common in the wells of the fishing boats in Nassau harbor in June, 1903. It is also one of the commonest of the food-fishes of Bermuda. The younger forms are known as "Hamlet grouper.”

**Mycteroperca venenosa apua** (Bloch).

West Indies; Florida Keys to Brazil. C. L. Edwards collection, Green Turtle Cay, 1888.

**Petrometopon cruentatus** (Lacépède) (Coney or Red Hind).

This is a handsome fish, reaching a length of 1 foot and inhabiting the waters of the West Indian region generally. It is a fair food-fish. Specimens were obtained by the Expedition at Nassau and Rum Cay in June and July, 1903.

**Bodianus fulvus** (Linnaeus) (Yellow Fish).

This species grows to a length of 1 foot, is a fairly good food-fish, and occurs from Bermuda to Florida and throughout the West Indies. “Nigger-fish,” “butter-fish,” “guativere” and “guativere amarilla” are other names applied to the species. One example collected by the Expedition at Watlings Island, July 11, 1903.

**Bodianus fulvus ruber** (Bloch and Schneider) (Red Guativere).

A variety of the preceding, and like it variable in color. Of the same general range. Obtained by the Expedition in Nassau, July 20, 1903.

**Bodianus fulvus punctatus** (Linnaeus) (Negro Fish).

Plate LVIII.

An old and well-known but rather unimportant food-fish of the Bahamas, Bermuda and the West Indies generally. Dr. Goode in his list of fishes observed and collected in Bermuda during the months of February and March, 1872, says: “The names ‘butter-fish’ and ‘nigger-fish’ are in use also at Barbados, St. Thomas and the Bahamas, as applied to this and an allied species. The first refers to the color and soft, oily feeling of the yellow variety; the latter probably also to color.”

Specimens were obtained by the Expedition at Nassau and Clarence Harbor in June and July, 1903.

Family RHYPTICIDÆ (Soap Fishes).

*Rhypticus bistrispinosus* (Mitchill) (Soap Fish).

Plate I. II.

A curious fish, named on account of the soapy or oily feeling of the smooth skin. Found along the south Atlantic coast of the United States from Charleston to Pensacola, straying northward to coast of New England. Obtained by the Expedition at Nassau and Green Cay in June and July, 1903.

Family KYPHOSIDÆ (Sea Chubs).

*Kyphosus sectatrix* (Linnaeus) (Bermuda Chub).

The "rudder-fish," "chub," or "chopa blanca," as it is variously called, occurs in the open ocean from the West Indies northward to Cape Cod, and eastward to the Canary Islands. It is observed following vessels, probably for the food thrown overboard, and is often seen around the rudder, from which habit is derived one of its common names.

Obtained by the Expedition at N. Lat. 31° 13', W. Lon. 74°, on June 13, 1903.

Family HÆMULONIDÆ (Grunts).

*Bathystoma aurolineatum* (Cuvier and Valenciennes) (Jeniguano).

One of the smaller species of grunts, occurring throughout the West Indies. Obtained by steamer *Albatross* at Abaco Island, April, 1886.

*Bathystoma rimator* (Jordan and Swain) (Tom Tate or Red-mouthed Grunt).

This grunt occurs in the Atlantic from Cape Hatteras to Trinidad. It is one of the most abundant of the food-fishes about Charleston Harbor. Obtained by the Expedition at Clarence Harbor, July 14, 1903.

*Hæmulon album* Cuvier and Valenciennes (Margate Fish).

This is one of the most important and highly esteemed food-fishes of the West Indies, the Florida Keys, the Bahamas and Bermuda. It grows to a length of 2 feet, and is more or less abundant. Numerous specimens were observed and captured by the Expedition in the various places visited, and the fish was always a welcome addition to the mess.
\textbf{Haemulon carbonarium} Poey (Ronco Carbonero).

A smaller species than the \textit{H. album}, seldom exceeding 10 inches in length, but having some value as a food-fish, especially around Cuba, where it is found in abundance. It occurs in much smaller quantities in the rest of the West Indies, the Bermudas and Brazil. Several specimens were secured at Nassau by the steamer \textit{Albatross} in April, 1886.

\textbf{Haemulon flavolineatum} (Desmarest) (Open-mouthed Grunt).

This is an exceedingly well-marked species, reaching a foot in length and being regarded as a good food-fish. It is common throughout the West Indies; ranges from Florida Keys south to Brazil, being found in greatest quantities about Porto Rico. Specimens were obtained at Nassau market and Abaco by the steamer \textit{Albatross} in March, 1886. Other names by which this species is known are "French grunt" and "ronco condenado."

\textbf{Haemulon melanurum} (Linnaeus) (Black-tail Grunt).

This grunt is a good food-fish. It reaches a length of 1 foot and is common to the West Indies. Collected by me in the Nassau market, June, 1903.

\textbf{Haemulon plumieri} (Lacépède) (Common Grunt).

This is one of the most abundant and highly prized of the smaller varieties of food-fishes found throughout the West Indies, Florida Keys, Bahama Islands and other nearby localities. It grows to a length of 1 foot or more, but the average size of those found in the markets is much less. Obtained by the Expedition at Nassau in June, 1903.

\textbf{Haemulon sciurus} (Shaw) (Yellow Grunt).

A handsome grunt, also known as "squirrel grunt." It grows to a length of 18 inches, but found in the markets much smaller. Found throughout the West Indies, Florida Keys, Bahamas and Bermuda.

\textbf{Brachygenys chrysargyreus} (Günther) (Small-mouthed Grunt).

A little fish reaching but 6 inches in length. Common at Key West and Havana. The steamer \textit{Albatross} obtained it at Abaco in 1886.

\textbf{Anisotremus virginicus} (Linnaeus) (Pork-fish).

Plate LIV.

A very good food-fish, known also as "sisi," reaching a length of 1 foot and ranging from Florida to Brazil; found frequently in the West Indies.
Secured by the Expedition at Nassau, July 2, 1903. Named for the Virgin Islands, where the fish is common, and not for Virginia, where it is seldom if ever found.

**Family LUTJANIDÆ (Snappers).**

**Lutjanus analis** (Cuvier and Valenciennes) (Mutton Fish).

A large, handsome food-fish, often sold as red snapper, occurring on the fishing banks of the West Indian waters, Florida and the Bahamas. Obtained at Nassau by the steamer *Albatross*. Observed in the markets at the time of our visit.

Catesby says: "For the excellence of its taste it is in greater esteem than any other at the Bahama Islands."

**Lutjanus apodus** (Walbaum) (Schoolmaster).

Grows to a-weight of 8 pounds. An attractive fish, used for food. Common to Bahama, Florida and the West Indies generally.

**Lutjanus buccanella** (Cuvier and Valenciennes) (Black-finned Snapper).

Occurring in the West Indies; taken in deep water. Obtained by the steamer *Albatross* at Nassau in 1886.

**Lutjanus griseus** (Linnaeus) (Gray Snapper).

This is one of the commonest and best food-fishes of the West Indian fauna. It is known as "mangrove snapper," attains a length of three feet (18 lbs.), and is found in the Bahamas, Bermuda, Florida and the West Indies.

**Lutjanus mahogoni** (Cuvier and Valenciennes) (Mahogoni Snapper).

One of the smaller species of snapper, found in the West Indies, etc. Observed and collected by the Expedition in Nassau market during June and July, 1903.

**Lutjanus synagris** (Linnaeus) (Red-tailed Snapper).

One of the most abundant of the snappers, rarely exceeding a foot in length, chiefly inhabiting shallow waters. A food-fish of importance about Havana, occurring there in great numbers, but a little less abundantly found from Tampa to Brazil. Specimens were obtained by the exposition at Nassau, July 20, 1903.
Ocyurus chrysurus (Bloch) (Yellow-tailed Snapper).

A delicious and abundant food-fish ranging from southern Florida to Brazil, and throughout the West Indies. It grows to a length of 2 feet and possesses some merit as a game-fish. The steamer Albatross collected several specimens in April, 1886. Observed and collected by the Expedition in Nassau market during June and July, 1903.

Apsilus dentatus Guichenot (Arnillo).

This is a handsome fish reaching a foot in length and having some value as food. It is found in the West Indies, being rather common about Cuba. A specimen was taken by the Expedition at Powells Point, Eleuthera, July 8, 1903.

Family Sparidæ (Porgies).

Diplodus argenteus (Cuvier and Valenciennes) (Silvery Sargo).

Found in the West Indies and along the coast from Florida and the Bermudas southward to Argentina. One specimen was secured by the Expedition at Nassau, June 20, 1903.

Calamus calamus (Cuvier and Valenciennes) (Saucer-eye Porgy).

This fish reaches a length of 1 foot and besides being excellent eating, furnishes some sport in its capture, being considered a rather good game-fish by many. It is found throughout the West Indies and northward among the Florida Keys. The steamer Albatross collected several specimens at Nassau in April, 1886.

Calamus leucosteus Jordan and Gilbert (White-boned Porgy).

A good food-fish reaching a length of 1 foot and obtained heretofore only at the markets of Charleston, S. C. It was secured by the steamer Albatross at the Nassau market in April, 1886.

Calamus penna (Cuvier and Valenciennes) (Sheepshead Porgy).

Like the rest of the species this is valued as food. It is very common from southern Florida to Brazil and is known also in the West Indies. A specimen was obtained by the steamer Albatross at the Nassau market in April, 1886.
Calamus bajonado (Bloch and Schneider) (Jolt-head Porgy).

This is the largest of the porgies, reaching a size of 2 feet and a weight of ten pounds. It is also the most abundant species of this genus and the most important as a food-fish. Found in abundance throughout the West Indies and north to the Florida Keys. Taken by the Expedition at Nassau, June 22, 1903.

Family GERRIDE (Silver Jennies).

Gerres brasili anus (Cuvier and Valenciennes) (Patao).

Found from Cuba to Brazil, and ranking as a good food-fish wherever it is abundant. It reaches a foot in length and is generally common. Collected by the Expedition at Nassau, June 18, 1903.

Gerres cinereus (Walbaum) (Broad Shad).

This is one of the largest members of the family Gerridae, reaching a length of more than a foot, and has considerable value as a food-fish. It is common to both coasts of tropical America, north to Florida and to Lower California. Obtained by seines and other nets. Common in the market at Nassau. Obtained by the Expedition at Spanish Wells and Clarence Harbor during July, 1903.

Eucinostomus gula (Cuvier and Valenciennes) (Silver Jenny).

This is a common species from the coasts of Carolina to Brazil. It grows to a length of six inches and is chiefly valuable as bait. Obtained by the Expedition at Spanish Wells, Watlings Island and Clarence Harbor, during July, 1903.

Eucinostomus lefroyi Goode (Long-boned Shad).

A bait fish, reaching a length of 8 inches. Common from Bermuda westward to Florida, and southward throughout the West Indies. Taken by the Expedition at Spanish Wells, the Current, and Clarence Harbor during July, 1903.

Family PRIACANTHIDÆ (Catalufas).

Priacanthus cruentatus (Lacépède) (Big-eye).

This fish is known in Havana as the "catalufa," and is a common food-fish in that market. It is found throughout the West Indies, ranging across the Atlantic to St. Helena and the Canaries. Obtained by the steamer Albatross at Rum Cay.
Priacanthus arenatus Cuvier and Valenciennes (Catalufa).

Tropical Atlantic, straying northward in the Gulf Stream. Obtained by the steamer Albatross at Nassau.

Family MULLIDÆ (Surmulletse).

Upeneus maculatus (Bloch) (Goat Fish).

A very handsome, strikingly colored fish, abundant and valued as food. It occurs in the West Indies, and probably in Bermuda. Common in the Nassau market. Obtained by the Expedition at East End of Hog Island (Nassau harbor), along Eleuthera Island and at Clarence Harbor, where many young were seined during July, 1903.

Upeneus martinicus Cuvier and Valenciennes (Yellow Goat Fish).

This species grows to a length of one foot and is valued as food. It is found throughout the West Indies and north to Florida. The steamer Albatross collected it at Nassau in 1886.

Family CHETODONTIDÆ (Butterfly Fishes).

Holacanthus tricolor (Bloch) (Rock Beauty).

Plate LXI.

This striking fish inhabits the West Indies, and has been recorded from Bermuda. Numerous specimens were observed in the "Sea Gardens," near Nassau, during June, 1903, but none were taken.

Pomacanthus arcuatus (Linnaeus) (Black Angel Fish).

Length one and one-half to two feet. A handsome fish, but little valued as food. West Indies generally, occasionally straying northward to the middle Atlantic coast. Obtained by the Expedition at Nassau and Andros Island during June, 1903.

Chætodon ocellatus Bloch (Spanish Angel Fish).

West Indian fauna, straying northward. Observed among the coral heads in Nassau harbor. One of the beautiful fishes of the tropics. Obtained by the Expedition at Nassau during June, 1903.

Chætodon capistratus Linnaeus (French Angel Fish).

A beautiful tropical fish, of small size, abundant around the coral reefs of the West Indies. The Chætodonts are the butterflies of the warm seas. Obtained by the Expedition at Nassau, June 19, 1903.
Angelichthys ciliaris (Linnaeus) (Yellow Angel Fish).

One of the most beautiful of fishes, growing to a length of 18 inches. In his catalogue of Bermuda fishes Dr. Goode says: "The angel fish attains a weight of four pounds and as far surpasses all the other fishes of the region in its delicious flavor as in its lovely hues." It ranges through the West Indies. Common in the Nassau market and at other places in the Bahamas.

Family TEUTHIDIDÆ (Surgeon Fishes).

Teuthis bahianus (Bloch and Schneider) (Ocean Tang).

This is the most important of the surgeon fishes on account of its large size (reaching a length of 1 foot), and its value as a food-fish. It is found in the West Indies and along the Atlantic coast from Key West to Bahia. Collected by the Expedition at Nassau during June and July, 1903.

Teuthis caruleus (Bloch and Schneider) (Blue Surgeon or Tang).

One of the commonest of the tangs in the West Indies, reaching a length of eight or ten inches and being used as food. Found also in the Bermudas and ranging from Key West to Bahia. Specimens were obtained by the Expedition at Nassau, Clarence Harbor and the east end of Hog Island during June and July, 1903.

Teuthis hepatus Linnaeus (Common Tang).

This is the most abundant of the tangs, common in the West Indies and northward to Florida. Found occasionally as far north as Charleston and southward to Brazil. Several specimens collected by the Expedition at Clarence Harbor, July, 1903.

Family POMACENTRIDÆ (Demoiselles).

Eupomacentrus leucostictus (Müller and Troschel) (Black Pilot).

An extremely handsome fish, attaining an approximate length of four or five inches and found in large numbers throughout the West Indies north to the western coast of Florida. Collected in July, 1903, at Clarence Harbor, Powells Point and the east end of Hog Island by the Expedition.

Eupomacentrus fuscus (Cuvier and Valenciennes) (Maria Molle).

Found in the West Indies and among the coral reefs at Key West, ranging southward to the Brazilian coast, occurring in abundance almost throughout its entire range. Taken by the Expedition at Nassau, June 24, 1903.
Eupomacentrus adustus (Troschel).
Attaining a length of three or four inches and occurring commonly about Cuba. Collected by the steamer Albatross at Nassau, April, 1886.

Glyphisodon saxatilis (Linneus) (Cow-pilot or Pintano).
A widely-distributed fish, occurring on both coasts of tropical America, ranging from Florida to Uruguay and Guaymas to Peru. It reaches a length of six inches and is abundant about the rocks and coral reefs at every point. Specimens were obtained by the Expedition at Nassau and Green Cay, July, 1903.

Family LABRIDE (Wrasses).

Lachnolaimus maximus (Walbaum) (Hog Fish).
This is a common and attractive food-fish occurring throughout the West Indies and Bermudas, and ranging north to Key West. It attains a length of 3 feet and a weight of twenty pounds and is generally found in abundance about the coral reefs. A specimen was taken by the Expedition at Nassau during June and July, 1903, where it was common in the market.

Harpe rufa (Linnaeus) (Spanish Lady Fish).
A very attractive fish reaching a length of 2 feet. Found abundantly in the West Indies and ranging from Key West to Rio Janeiro. Obtained by the steamer Albatross in the market at Nassau.

Novaculichthys infirmus (Bean) (Flexible Razor Fish).
Known heretofore only from Cozumel, Yucatan, but obtained by the steamer Albatross at Nassau, April, 1886.

Xyrichthys psittacus (Linnaeus) (Razor Fish).
A brilliantly colored fish found in the West Indies and from Charleston and Pensacola southward to Bahia. It reaches a length of 15 inches and is rather common. Obtained by the steamer Albatross at the Nassau market in April, 1886.

Iridio bivittatus (Bloch) (Slippery Dick).
This is the smallest species of this genus, the average length being about 6 or 7 inches. It has an extensive range, occurring throughout the West Indies, and from North Carolina to Brazil, being exceedingly common everywhere among the rocks and reefs. A number of specimens were obtained by
the Expedition at Spanish Wells, Eleuthera Island, Clarence Harbor, and the
east end of Hog Island during June and July, 1903.

Iridio garnoti (Cuvier and Valenciennes).
Reaches a length of 8 or 9 inches and is found in the West Indies.
Obtained by the Expedition at Clarence Harbor, July 17, 1903.

Iridio maculipinna (Müller and Troschel).
Found in the West Indies and ranging northward as far as Beaufort, N. C.
Taken by the steamer Albatross at Nassau, April, 1886.

Iridio radiatus (Linnaeus) (Pudding-wife).
Attains a length of 18 inches and ranks as the largest of the Ameri-
can species of Iridio. It is found abundantly in the West Indies and the
Bermudas, ranging from Brazil to the Florida Keys. Several specimens were
secured in the market at Nassau by the steamer Albatross, April 23, 1886.

Chlorichthys bifasciatus (Bloch).
A rather common fish found scattered throughout the West Indies. A
number were collected by the Expedition at Clarence Harbor, July, 1903.

Chlorichthys nitidus (Günther).
A fish reaching a length of 3 inches and being found in the West Indies.
Taken by the Expedition from the Current, Eleuthera Island, and at Nassau
and Clarence Harbor, during June and July, 1903.

Family SCARIDÆ (Parrot Fishes).
Sparisoma aurofrenatum (Cuv. and Val.) (Gold-bridled Parrot Fish).
Plate LIX.
This is one of the most attractive of the parrot fishes, being well marked
and highly colored, but like the other species of this genus has no great value
as food. It reaches a length of 8 or 10 inches and is rather common
throughout the West Indies. Collected by the Expedition at Nassau, June
24, 1903.

Sparisoma viride (Bonnaterre) (Dark-green Parrot Fish).
Found in the West Indies and is generally common. It is one of the
largest of the species, attaining a length of 2 feet, and is considered a food-
fish at Porto Rico. A specimen was secured by the steamer Albatross in the
market at Nassau, March, 1886.
Sparisoma distinctum (Poey) (Streaked Parrot Fish).

This species ranges throughout the West Indies, and was obtained by the Expedition in the Bahamas during June and July, 1903.

Sparisoma flavescens (Bloch and Schneider) (Mud Parrot).

One of the smaller of the parrot fishes, rarely exceeding a foot in length; plain in color; common from Key West to Rio Janeiro. Obtained by the Expedition in the Nassau market, June, 1903.

Sparisoma hoplomystax (Cope).

Occurs in the West Indies and from Key West to Bahia. It is very common throughout its whole range, being seined in large quantities by the Expedition at Clarence Harbor. A number of specimens were also obtained at Spanish Wells and the east end of Hog Island during July, 1903.

Sparisoma lorito Jordan and Swain (Loro).

Found in the West Indies and used as food by the Porto Ricans. It was collected by the Expedition at Nassau in June, 1903.

Scarus caeruleus (Bloch) (Blue Parrot Fish).

Widely and abundantly distributed throughout the West Indies northward as far as Chesapeake Bay. It reaches a length of 2 or 3 feet and a weight of twenty pounds, its large size making it the most important of the parrot fishes, although it is not highly valued as food. A specimen was taken opposite Mangrove Cay by the Expedition, June 27, 1903. Common.

Scarus croicensis (Bloch) (Bullon).

One of the smaller of the species, its length rarely exceeding 6 or 7 inches. It is very common throughout the West Indies and ranges north to Key West. Large numbers were obtained at Spanish Wells, Powells Point and Clarence Harbor by the Expedition during July, 1903.

Scarus tenuopterus Desmarest (Ribbon-finned Parrot Fish).

Occurs in the West Indies and is rather numerous. It reaches a length of about 10 inches. Collected by the Expedition in the Bahamas during June and July, 1903.
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CRYPTOTOMUS RETRACTUS (Poey).

Found in the West Indies and north to Pensacola. Several specimens obtained by the Expedition from the Current, Eleuthera, and at Clarence Harbor during July, 1903.

Family ZEIDÆ (John Dories).

ZENION HOLOLEPIS (Goode and Bean).

Taken by the steamer Albatross off coast of Yucatan and on Little Bahama Bank. Described and figured by Goode and Bean in Oceanic Ichthyology, 1896.

Family SCORPÆNIDÆ (Rock Fishes).

SCORPÆNA PLUMIERI Bloch (Rascacio).

A handsome but valueless species, more or less common to the south Atlantic coast of the United States, the West Indies, and recorded from Bermuda. The steamer Albatross obtained it at Nassau. At Key West this fish is called “poison toad.”

SCORPÆNA BRASILIENSIS Cuvier and Valenciennes (Scorpion Fish).

Found from Charleston to Rio Janeiro. One specimen taken by the Expedition at the Current, July 5, 1903.

SCORPÆNA GRANDICORNIS Cuvier and Valenciennes (Lion Fish).

A strikingly handsome fish occurring around the Florida Keys and southward throughout the West Indies to Brazil. The steamer Albatross obtained it at Abaco, April, 1886.

The fishes of this genus are known at Key West as “poison toads” on account of the painful wounds they inflict with their spines.

Family CEPHALACANTHIDÆ (Flying Gurnards).

CEPHALACANTHUS VOLITANS (Linnaeus) (Flying Gurnard).

Plate LX.

A beautifully colored species, of odd form, known in some of the West Indian islands as bat-fish. Found on both coasts of the Atlantic Ocean, ranging north to Newfoundland and south to Rio Janeiro. Recorded from Woods Holl, Massachusetts, Bermuda, Key West and various West Indian islands. Obtained by the Expedition at Nassau during June, 1903. The color sketch by Mr. Baldwin gives one a good idea of the appearance of the fish in life and especially of its handsome pectoral fins. To show this fin to advantage the
artist took the liberty to draw it down in an unnatural position; the eye as shown in the picture is rather too small.

Family MALACANTHID.I.E (Blanquillos).

MALACANTHUS plumieri (Bloch) (Sand Fish).

This species grows to a length of 15 inches or more; it is rather common in the West Indies and used as food. Obtained by the Expedition at Green Cay and Clarence Harbor during July, 1903.

Family DACTYLOSCOPID.I.E (Little Star-gazers).

DACTYLOSCOPUS tridigitatus Gill (Fingered Star-gazer).

This interesting little fish is found in the West Indies and north to Key West and the Bahamas. Two specimens were obtained by the Expedition at the Current, July 5, 1903.

Family GOBIID.I.E (Gobies).

GOBIUS glaucofr.enu.m (Gill) (Bridled Goby).

Heretofore recorded from the Florida Keys. Twenty-five specimens were obtained by the Expedition in the oyster dredge off Governors Harbor, Eleuthera Island, July 7, 1903, in five fathoms of water.

GOBIUS soporator Cuvier and Valenciennes (Sleeper or Caiman Goby).

This species is generally abundant in tropical seas of both Atlantic and Pacific oceans. Found in the shallow waters of shores and ditches, hiding under stones. Specimens were obtained by the Expedition at Salt Key, near Nassau, and at Powells Point, Eleuthera, during June and July, 1903.

GARMANNIA hemigymna (Eigenmann and Eigenmann) (Half-naked Goby).

This highly interesting goby, heretofore indefinitely ascribed to the West Indies, was taken by the Expedition in an oyster dredge on the north side of Green Cay, in about five fathoms of water, June 30, 1903, five examples, measuring from five-eighths to seven-eighths of an inch in length, being captured.

Family GOBIESOCID.I.E (Clinging Gobies).

GOBIESOX cephalus Lacépêde (Cling Fish).

Obtained by the Expedition at Green Cay, in the oyster dredge, in five fathoms of water.
Gobiesox heres Jordan and Bollman.


Family ECHENIID.E (Remoras).

Echeneis naucrateoides Zuiew (Sucking Fish).

This interesting fish ranges from the coast of Massachusetts to the West Indies, being common southward. It is also found in the waters of Bermuda, usually attached to sharks. Obtained by the Expedition at Gregory Town, Eleuthera, July, 1903, where they were first noticed by the side of the vessel eating offal. Numerous examples, captured by hook and line.

Family BLENNIID.E (Blennies).

Labrisomus xuchipixxis (Quoy and Gaimard) (Molly Miller).

Common in rock pools of the West Indies. The steamer Albatross obtained this species at Abaco, New Providence and Watlings Island during March and April, 1886. Recorded from Bermuda.

Malacoctenus moorei Evermann and Marsh (Combed Blenny).

This species was described in 1899 from a specimen obtained in Porto Rico. It has since been collected in the Tortugas Archipelago by Dr. J. C. Thompson, U. S. N., at Key West by Bean and King, and obtained by the Bahama Expedition at Powells Point and Clarence Harbor during July, 1903.

Malacoctenus varius (Poey) (Variegated Blenny).

An interesting little fish recorded by Poey from Cuba, and obtained by the steamer Albatross at Nassau, March, 1886.

Malacoctenus lugubris (Poey) (Dismal Blenny).

Described from Cuban specimens; obtained by the steamer Albatross at Nassau, March, 1886.

Malacoctenus ocellatus (Steindachner) (Ocellated Blenny).


Malacoctenus biguttatus (Cope).

Auchenopterus affinis (Steindachner) (Nape-finned Blenny).
Heretofore recorded from St. Thomas and Key West; obtained by the Expedition at Governors Harbor, Eleuthera.

Stathmonotus hemphilli (Hemphill's Blenny).
Heretofore known only from two specimens taken at Key West; one example of this interesting form was obtained by the Expedition on the shore of Hog Island, near Nassau, June 18, 1903.

Family Ophidiidae (Cusk Eels).

Ophidium sp. (Cusk Eel).
The steamer Albatross obtained a specimen at Abaco.

Family Fierasferidae (Pearl Fishes).

Fierasfer affinis (Günther) (Pearl Fish).
This interesting species takes its common name from the habit of resorting to the shells of the pearl oyster. It has been recorded from Key Biscayne, Florida, the Tortugas, Cape Florida, New Providence, and on the west coast at Panama and Lower California. The Albatross collected it at Nassau, 1886, and the U. S. National Museum has recently received specimens collected by Dr. Hubert L. Clark at Jamaica.

Family Pleuronectidae (Flounders).

Platophrys maculifer (Poey) (Spotted Flounder).
This little flounder was found by the Expedition in considerable numbers on the beach of east end of Hog Island, the Current, Eleuthera, and in Clarence Harbor, July, 1903. Taken in the seine. Poey described it from Cuba.

Platophrys lunatus (Linneaus) (Peacock Flounder).
A specimen 14 inches long of this beautiful flounder was taken by C. L. Edwards at Green Turtle Cay in 1888.

Platophrys ocellatus (Agassiz) (Ocellated Flounder).
Sandy shores of the Atlantic coast from New England to Brazil.

Platophrys sp. (Spotted Flounder).
A handsome specimen, 5\(\frac{1}{2}\) inches long, of a flounder referable to this genus was taken by the Expedition at Tarpum Bay, July 7, 1903.
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Citharichthys spiopterus Günther (Whiff).
A small fish abundant along the shores of the western Atlantic from South Carolina to Brazil. Obtained by the Expedition along Eleuthera, the Current, July 5, 1903.

Syacium micrurum Ranzani (Small Flounder).
This species belongs to the West Indian fauna. It was obtained by the Expedition in Clarence Harbor, July 15, 1903.

Family SOLEIDÆ (Soles).
Achirus inscriptus Gosse.
Taken by C. L. Edwards at Green Turtle Cay in 1888.

Family AULOSTOMIDÆ (Trumpet-fishes).
Aulostomus maculatus Valenciennes (Trumpet Fish).
This interesting fish ranges from Bermuda and Florida southward. Several specimens were obtained by the Expedition at Clarence Harbor, July 14 and 17, 1903. Called "stalk-fish" in the Bahamas. The life colors of this fish are very pretty, forming as they do lines of cream, chocolate and black horizontal stripes. There are also numerous pearl-colored spots on the body.

Family SYNGNATHIDÆ (Pipe-fishes).
Siphostoma albirostre (Heckel) (Pipe Fish).
This species has been recorded from the coral reefs of the West Indies, ranging from Florida to Bahia. Obtained by the steamer Albatross at Abaco, Watlings Island and New Providence.

Siphostoma pelagicum (Osbeck) (Pipe-fish).
Tropical parts of the Atlantic. Obtained by the Expedition at Clarence Harbor, July 14, 1903.

Siphostoma rousseau (Kaup) (Pipe Fish).
West Indies, known from St. Lucia and Martinique. Obtained by the Expedition between Nassau and Elbow Key, July, 1903, in seaweed taken by dip-net.

Corythroichthys cayorum Evermann and Kendall (Pipe-fish).
Described from Key West; taken by the Expedition at Powells Point and Clarence Harbor, July, 1903.
Family HIPPOCAMPID.E (Sea Horses).

Hippocampus punctulatus Guichenot (Sea Horse).

Tropical parts of the Atlantic, common in the West Indies. One specimen collected by the Expedition at Governors Harbor, July 7, 1903.

Family BALISTID.E (Trigger-fishes).

Balistes vetula Linnaeus (Old-wife).

This important species is common in the tropical parts of the Atlantic, throughout the West Indies and north to Florida, Bahama and Bermuda. It is a showy fish in life and the young, which are quite numerous around the coral heads of the Bahamas, add much to the beauty of the fish life seen there.

Collected and observed by the Expedition in considerable numbers at various points visited during June and July, 1903. Common in the Nassau market.

Balistes carolinensis Gmelin (Turbot).

Found in the tropical parts of the Atlantic, ranging northward in the Gulf Stream to the New England coast. Common in the Mediterranean. The flesh is eaten and the skin is used for polishing purposes. "Trigger-fish" and "leather-jacket" are other common names for this species. Several young specimens were taken by the Expedition in the Gulf weed north of Abaco during July, 1903.

Canthidermis maculatus (Bloch) (Rough-skinned Turbot).

So far as the records go this is a rare species. It inhabits the open ocean of the West Indies and has received the name of "ocean turbot." One specimen was obtained by the Expedition in floating gulf weed about sixty miles north of Abaco during July, 1903. Young, 1½ inches long.

Family MONACANTHID.E (File-fishes).

Monacanthus spilonotus Cope (File-fish).

The habitat of this species is recorded as Gulf of Mexico. We obtained it on the edge of the Gulf Stream, June 6, 1903, not far from Cape Hatteras, and July 15 at Clarence Harbor, and east end of Hog Island, July 20, 1903. Common in the latter places.

Cantherines pullus (Ranzani) (Lija Colorada).

West Indies and Brazil, north to southern Florida. Obtained by the steamer Albatross at Nassau, April 23, 1886.
Alutera scripta (Osbeck) (Unicorn Fish).

This curious fish, also known as "file-fish," was observed by Catesby in the Bahamas, and by Goode in Bermuda, where it was so uncommon (1872) that it did not have a common name. It grows to a length of 2 or 3 feet. Observed by us at Nassau during June and July, 1903.

Family OSTRACIONTIDAE (Trunk-fishes).

Lactophrys bicaudalis Linnaeus (Shell-fish).

This curious, showy fish is common to the West Indies. It was present in the Nassau market and is more or less esteemed as food. Like other members of the genus, it is sold to curiosity hunters.

Lactophrys tricornis Linnaeus (Horn-fish).

This species is rather common from the coast of North Carolina to Brazil. It is the "cow-fish" of Bermuda, "cuckold" of Jamaica," and "toro" of the Cubans. The fish reaches a length of 18 inches and is much esteemed as food. Obtained by the Expedition in Nassau market, June 20, 1903. The steamer Albatross collected it at Nassau and Abaco in 1886.

Lactophrys trigonus Linnaeus (Trunk-fish).

West Indies north to Key West, and straying to the coast of Massachusetts. Four specimens were collected by the Expedition at Clarence Harbor, July 14, 1903. The steamer Albatross obtained a specimen at Rum Cay, July, 1903.

Family TETRODONTIDAE (Puffers).

Spheroides spengleri (Bloch) (Swell-toad).

This fish, known also as "puffer" and "tambor," is found from Florida and Texas throughout the West Indies to Rio Janeiro and eastward to the Canaries and Madeiras. Recorded by Mr. Goode from Bermuda. Obtained by the Expedition at the Current, Powells Point, Clarence Harbor and at east end of Hog Island, July, 1903.

Family DIODONTIDAE (Porcupine Fishes).

Diodon hystrix Linnaeus (Porcupine Fish).

This species is widely distributed, being found in tropical seas, everywhere more or less common. Its chief value is as a curiosity, and it is sold by dealers of marine curios. Many dried and inflated skins were seen in the shops at Nassau, ranging in length from 1 to 2 feet. In Bermuda, Mr. Goode says,
it is highly prized by curiosity hunters, but never eaten. He records the name "sea hedgehog," and if I remember correctly, the name "edgehog" is used in the Bahamas.

**Diodon holacanthus** Linnaeus (Smaller Porcupine Fish).

Found in warm seas generally. Very similar to *D. hystrix*, and it seems to us probably the young of that species. Numerous specimens were obtained by the Expedition at Clarence Harbor and at the east end of Hog Island, July, 1903.

**Chilomycterus spinosus** (Linnaeus) (Burr-fish).

Under this we would place *C. schaepfi* of Walbaum and *C. geometricus* (Bloch and Schneider). Habitat Atlantic coast of America from Cape Cod to Brazil; Gulf of Mexico to Bermuda. Taken by the steamer *Albatross* at Nassau, April 10, 1886.

Family **ANTENNARIIDÆ** (Anglers).

**Antennarius principis** (Cuvier and Valenciennes) (Black Angler).

West Indian fauna. Named for Prince Maurice of Nassau, its discoverer. A very small example of this interesting little fish was picked out of some grass on the beach at Golding Key, Andros Island, June 27, 1903, by Mr. C. A. Shore, of the botanical party. Its general color is black; spinous dorsals and tips of pectorals whitish; a white blotch on back before rays of dorsal, and upper edge of caudal peduncle whitish.

**Antennarius nuttingi** Garman.

Great Bahama Banks. Expedition State University of Iowa, 1893.

**Pterophryne histrio** (Linnaeus) (Mouse Fish).

Plate LV.

This curiously shaped fish, known also as "sargassum-fish," and "harlequin-fish," was found by the Expedition in floating seaweed (sargassum) in and near the Gulf Stream from off Cape Hatteras south to Andros Island. Quite a number were taken in dip-nets as the vessel slowly sailed along; they ranged in length from one-half to three inches. Probably fifty examples were captured by different members of the party, who saved them as curiosities. Twenty were preserved by the writer for the National Museum.
The colored sketch by Mr. Baldwin is a very good representation of the fish in life. The pectorals are not quite correctly drawn, the rays should be more slender and at least ten in number. One of the larger examples has eleven rays in the pectoral.

Family OGCOCEPHALIDÆ (Bat-Fishes).

OGOCEPHALUS RADIATUS (Mitchill).

Great Bahama Banks. Expedition of State University of Iowa, 1893.
Anisotremus viridifrons (Linnaeus)
Pork Fish
About 2/3 natural size
Euphillus mormyrus (Cuvier & Valenciennes).

Natural size.