

FISHES COLLECTED BY WILLIAM P. SEAL IN CHESAPEAKE BAY,
AT CAPE CHARLES CITY, VIRGINIA, SEPTEMBER 16 TO OCTOBER
3, 1890.

BY

BARTON A. BEAN,

Assistant Curator of the Department of Fishes.

On the 15th of September, 1890, Mr. William P. Seal, of the U. S. Fish Commission, left Washington and proceeded to Cape Charles City, Virginia, on Chesapeake Bay, about 5 miles north of Cape Charles, for the purpose of collecting living fishes for the national aquaria at Washington, District of Columbia. He was accompanied by Messrs. L. G. Harron and D. W. Kenly, also of the Fish Commission, and by the writer in behalf of the U. S. National Museum. Mr. Seal carried with him the necessary outfit for collecting purposes. It consisted of nets and seines, tubs, buckets, transportation boxes and cans for live fishes, live boxes, and an outfit of tents, etc., for the accommodation of his party, which camped upon the beach immediately in front of the town of Cape Charles. The party, with the exception of the writer, remained there until October 4, when they returned to Washington. As a result of this trip a very creditable exhibit of living fishes was obtained and quite a little added to our knowledge of the marine life in the Chesapeake.

We found the water quite shallow in front of the town and the first few hauls of a 30-fathom seine brought up quite a number of species. King's Creek, which is about $1\frac{1}{2}$ miles north of the town, is one of the richest collecting grounds in the neighborhood. It is a good feeding place for fishes. The pound nets furnish much of interest to the collector. Sterling Bros., of Cape Charles City, are always very obliging and of much assistance to those seeking specimens and information concerning the fisheries. Cape Charles City is the shipping point for all the fishes taken in pound nets for a distance of 10 miles. It is the terminus of the New York, Philadelphia and Norfolk Railroad, and is connected with Norfolk by steamers twice daily.

Besides the species listed by me, Mr. Seal observed the following: *Chilomycterus*, *Astroscopus*, *Stromateus triacanthus*, *Sphyræna*, and *Sphyrna zygena*. When it is not specifically stated the common names given do not refer to Cape Charles. The water of this portion of the bay is very salt, there being no tributary streams of fresh water of any consequence on the eastern shore of Virginia.

I am indebted to the U. S. Fish Commission for the early use of the material collected by Mr. Seal, and to Dr. T. H. Bean and Dr. T. Gill for various suggestions in the preparation of this paper.

1. *Petrodon turgidus* Mitch. Swell-fish or Puffer.

U. S. N. M. 43153. Individuals from 3 to 10 inches long were common in the bay at Cape Charles City. They were seined and taken in pound nets. At St. Jerome's, Maryland, in September, 1889, Mr. Seal saw a few of this species in boats, but none were seined by his party. This is called sucking toad at Cape Charles, Virginia.

2. *Alutera schœpffi* Walb. File-fish.

U. S. N. M. 43146. Many specimens were taken but they could not be kept alive for the aquaria. It is called fool fish at Cape Charles because, as the fishermen say, it is too foolish to get out of the way of anything. Those observed ranged in length from 6 to 12 inches, occurring in the pounds and seine.

3. *Monacanthus hispidus* L. Short File-fish.

U. S. N. M. 43177, 43204. A large number of examples were seined in the bay at Cape Charles City, where it is called fool fish. The individuals observed measured from $2\frac{1}{2}$ to 7 inches in length.

4. *Siphostoma fuscum* Storer. Pipe Fish.

U. S. N. M. 43242. Sixteen specimens. This species is common in the bay.

5. *Siphostoma louisianæ* Gthr.

U. S. N. M. 43206. This species is rare in the bay, so far as we have observed, and Mr. Seal obtained but two examples. These measured 11 and 12 inches respectively. Mr. Seal secured this fish, also, at St. Jerome's, Maryland, in September, 1889.

6. *Achirus lineatus* L. Sole; Hog Choker.

Abundant throughout the bay and in the Lower Potomac River.

7. *Aphoristia plagiosa* L.

U. S. N. M. 43207, 43226. Five specimens, 2 to 3 inches long, were seined at Cape Charles City.

8. *Citharichthys microstomus* Gill.

U. S. N. M. 43227. Six specimens, measuring from 1 to 3 inches, were collected by the seine.

D. 80-83; A. 63-64; scales 45-47.

9. *Paralichthys dentatus* L. Flounder.

U. S. N. M. 43162. Numerous young of this species were seined and larger ones taken in the pound nets at the time of Mr. Seal's visit. The one here catalogued is but $4\frac{1}{2}$ inches long. In May, 1889, Mr. Seal obtained the young of the common flounder at Point Lookout, Maryland, securing specimens from 1 to $1\frac{1}{2}$ inches long, and in September, 1889, he collected examples from 5 to 10 inches in length at St. Jerome's, Maryland.

The flounder is called chicken halibut by the bay fishermen and also by marketmen in Norfolk, Virginia, and Washington, District of Columbia.

10. *Bothus maculatus* Mitch. Sand Flounder.

U. S. N. M. 43131, 43179. Two specimens measuring $6\frac{1}{2}$ and 9 inches in length. This species was obtained in small numbers by Mr. Seal, and several specimens were brought alive to Washington, where they do well in the marine aquaria.

No. 43131 has D. 62; A. 52; V. 6.

The pectoral of the eyed side is much longer than that of the blind side, and contains one spine and nine rays, while that of the blind side has but eight rays. The length of the eye is one-fourth that of the head, and the mandible is slightly less than half length of head. Eyed side and fins profusely spotted with brown, and the scales are edged with black.

11. *Ophidium marginatum* De Kay.

U. S. N. M. 43168. One specimen, $4\frac{3}{4}$ inches long.

Mr. Seal seined several examples of this species at Cape Charles City, a few of which were brought alive to Washington.

12. *Hypsoblennius punctatus* Wood. Blenny.

U. S. N. M. 43160, 43215. Eight specimens from 2 to 5 inches long. Abundant on oyster beds.

By the bay fishermen the blennies are confounded with the toadfish, *Batrachus tau*.

D. XII, 14-15; A. 18; P. 14.

13. *Chasmodes bosquianus* Lac. Oyster Blenny.

U. S. N. M. 43218. Two specimens, $2\frac{1}{4}$ inches long. Common on the oyster beds. Mr. Seal found this species in considerable numbers on the oyster beds of the Lower Potomac in May, 1889. I found a lernean parasite attached to the dorsal membrane of one of the specimens.

This little fish is often found in oyster shells, where it apparently seeks refuge from enemies. In January, 1889, Mr. Evan Lyons, of Georgetown, District of Columbia, bought some oysters in Washington, and upon opening one, which he had kept two or three days, instead

of an oyster he found an oyster blenny. The fish was alive when found, and had eaten the oyster, which, in all probability, had inclosed the blenny a week or so before. Mr. Seal found an empty quahaug shell inhabited by a *Chasmodes*, the eggs of which were attached to the sides of the shell.

14. *Batrachus tan* L. Toadfish.

Called bullfish at Cape Charles City, where it is very common. Individuals from an inch to 1 foot in length were taken.

The toadfish is found in large numbers in the Lower Potomac and at St. Jerome's, Maryland. Mr. Seal says the fishermen eat them and pronounce the flesh excellent, although they are never shipped to market.

15. *Gobiosoma bosci* Lac. Goby.

U. S. N. M. 43220 Four specimens, from 1 to 2 inches long.

In May, 1889, Mr. Seal found this species quite abundant on the oyster beds of the Lower Potomac, and in September, 1889, he secured several specimens at St. Jerome's, Maryland.

16. *Prionotus strigatus* Mitch. Sea Robin.

U. S. N. M. 43201. One specimen, 5½ inches long. Several specimens were obtained and brought alive to Washington.

17. *Hiatula onitis* L. Tautog; Black Fish.

U. S. N. M. 43133, 43172. Two specimens, from 2½ to 5½ inches long.

In the bay at Cape Charles City the young of this species were seined in large numbers. In May, 1889, Mr. Seal secured two specimens 15 inches long, which had been taken with hook and line off Point Lookout.

18. *Gerres argentens* Cuv. & Val. Silver Jenny.

U. S. N. M. 43173, 43216, 43221. We seined large numbers of this species in the bay at Cape Charles City. They ranged in length from 1 to 3 inches. None were seen in the pounds by me. The name Silver Jenny was given me by a gentleman at Cape Charles, who said it is applied to this fish and that the species grows much larger than any specimens we had, and also that it is a good food fish. I think the young *Gerres* must be mistaken for the young of *Bairdiella*, which is known as silver perch.

19. *Chætodipterus faber* Brons. Moon Fish; Angel Fish; Porgée.

U. S. N. M. 42477, 43140, 43141. This species is frequently taken in the pound nets. At the time of our visit but few were observed. I saw several examples that were about 7 inches long. The National Museum has a good series of the young of this species, measuring from 1 to 5 inches in length. In June, 1881, Colonel M. McDonald obtained

a specimen $3\frac{1}{4}$ inches long in the Potomac River, at Gunston, Virginia. This point is about 80 miles from the river's mouth. Prof. John A. Ryder obtained young specimens ranging from 1 to $2\frac{1}{2}$ inches long, in the Chesapeake region in St. Jerome's Creek, Maryland, and other specimens from 1 to 2 inches in length are from Beaufort and Charleston, South Carolina, and others from Florida. This fish is to be found quite regularly in the Washington, District of Columbia, market. Its flesh is excellent food. Specimen No. 42477, taken at Cape Charles City, Virginia, is $5\frac{1}{2}$ inches long, and has D. VIII-I, 20; A. III, 18. The third spine of the dorsal is longer than the head. The length of the eye is one-fifth that of the head. Mr. Seal saw a boy taking this species by hook and line, in the grass, in water 4 or 5 feet deep, at Cape Charles City.

20. *Trichiurus lepturus* L. Silvery Hair-tail.

U. S. N. M. 43188. Ten specimens, measuring from 20 to 23 inches in length. Secured from the pound nets.

The flesh of this fish is excellent eating, being white and well flavored. It is rather common in the Chesapeake, and has been taken at the mouth of the Potomac River.

21. *Scomberomorus maculatus* Mitch. Spanish Mackerel.

Very few of this species were being taken while we were at Cape Charles. The retail price there was 30 cents per pound. Those we observed in the pound nets ranged in length from about 12 to 24 inches.

22. *Trachynotus carolinus* L. Pompano.

U. S. N. M. 43183. Six specimens, measuring 4, 6, $6\frac{1}{2}$, 7, and 9 inches, respectively. A few very young examples, 2 inches long, were seized September 18, 1890, in the bay at Cape Charles City, and it is probable that the species is more or less common there.

23. *Caranx chrysus* Mitch. Crevalle.

U. S. N. M. 43164, 43193. Six specimens, measuring from $5\frac{1}{2}$ to $7\frac{1}{2}$ inches in length.

24. *Trachurops crumenophthalmus* Bloch.

U. S. N. M. 43174, 43199. Fifteen specimens, $6\frac{1}{2}$ and 7 inches long.

25. *Chloroscombrus chrysurus* L.

U. S. N. M. 43192. One specimen.

26. *Selene vomer* L. Look Down.

U. S. N. M. 43148, 43165, 43191. Fourteen specimens, 5 to 10 inches long, taken in Sterling Brothers' pound nets, in the bay at Cape Charles City.

27. *Stromateus paru* L. Harvest Fish.

U. S. N. M. 43147, 43156, 43190. Twelve specimens, from 4 to 7 inches long. This species is known in Chesapeake Bay as butterfish, and it is sold in the markets under this name. It is one of our sweetest flavored fishes.

Mr. Seal observed but one specimen of *S. triacanthus* at Cape Charles. I saw a number in Washington, District of Columbia, market about November 1, said to come from Chesapeake Bay.

28. *Larimus fasciatus* Holbrook.

U. S. N. M. 43217. One specimen, 1 inch long. D. X-I, 24; A. II, 6.

Mr. Seal's discovery of this species in the Chesapeake extends its recorded range northward. The Museum has two specimens, No. 33162, from Charleston, South Carolina, which were collected by C. H. Gilbert. These measure $5\frac{1}{2}$ and $7\frac{1}{2}$ inches. Uhler and Lugger, in their list of the fishes of Maryland, published in 1876, refer to the young of *Pogonias chromis* under the name *Larimus fasciatus*. *Pogonias fasciatus* was intended.

29. *Cynoscion regalis* Bl. & Schn. Weakfish.

This species is known as trout, or gray trout, in the Chesapeake, and it is a very important fish to the fishermen. They are taken in the pound nets, and those caught at the time of our visit ranged from 1 to 3 pounds in weight. Mr. Seal obtained this species from the pounds at Point Lookout in May, 1889; and at St. Jerome's in September, 1889, observed specimens ranging in length from 6 to 15 inches. It occurs in the Potomac as far up as Lower Cedar Point. The water at this point is quite fresh, being probably never above 1.05.

30. *Cynoscion maculatus* Mitch. Spotted Sea-trout.

U. S. N. M., 43159. Two specimens, 8 and 9 inches in length.

This species was rather rare at Cape Charles City at the time of Mr. Seal's visit. On September 20, 1890, I saw a fair supply of this fish in the Norfolk, Virginia, market. These market specimens ranged in weight from 1 to 5 pounds. According to the dealers, they are seldom seen over 5, although they sometimes have specimens weighing 10 pounds.

Mr. Seal notes that the young sea trout, 3 to 6 inches long, were abundant at St. Jerome's in September, 1889.

31. *Bairdiella chrysura* Lac. Yellow-tail.

U. S. N. M., 43175, 43194, 43214. Sixteen specimens, ranging from 7 to $8\frac{1}{2}$ inches in length.

Mr. Seal obtained specimens measuring 1 and $1\frac{1}{2}$ inches in length at Point Lookout, May 17, 1889, and others, from 2 to 5 inches long, at St. Jerome's in September, 1889. This is called silver perch in many localities.

32. *Menticirrus alburnus* L. Whiting.

U. S. N. M., 43155, 43180. Four specimens, from 9 to 12 inches long.

The kingfish, *M. nebulosus*, was not secured at Cape Charles, but Mr. Seal reports it as abundant at St. Jerome's in September, 1889, ranging from 1 to 6 inches in length. He took it at Point Lookout in May, 1889, also.

33. *Liostomus xanthurus* Lac. Spot.

U. S. N. M., 43138, 43139. Two specimens.

Large numbers of young spot from 3 to 4 inches in length were seined in the bay at Cape Charles City. They were present in abundance, numerous schools being seen. Mr. Seal collected the young, 1½ inches long, in the Lower Potomac in May, 1889, and found the species, from 3 to 6 inches long, abundant at St. Jerome's, Maryland, in September. As a pan fish, the spot is the most highly prized of all fishes sold in the Norfolk market. It is very hardy as an aquarium fish, and Mr. Seal experiences no trouble in transporting and keeping them alive in Washington.

34. *Micropogon undulatus* L. Croaker.

U. S. N. M., 43132, 43158.

This fish, like the spot, was taken in the shallow waters of the bay at Cape Charles City, in rather large numbers. It ranged in size from 3 to 8 inches, those from 3 to 5 being very common. Larger specimens were taken in the pound nets.

Young specimens, from 1 to 1½ inches long, were collected by Mr. Seal in the Lower Potomac in May, 1889, and larger ones, 3 to 6 inches long, were taken at St. Jerome's in September, 1889.

35. *Sciænopis ocellatus* L. Red Drum.

U. S. N. M., 43130. One specimen, 16 inches long; weight, about 2½ pounds. This species was seined in a quiet cove of the bay, near Cape Charles City, at night. Quite a number, about 16 inches long, were obtained and brought to Washington, where they do well in the marine aquaria. Mr. Seal observed them as large as 30 inches or more from the pounds.

I was very much surprised at the great abundance of red drum in the Norfolk and Portsmouth, Virginia, markets on September 20, 1890. Cart loads of this species were to be seen, especially in Portsmouth. The fish ranged in weight from 1 to 3 pounds, and were packed into the carts as thickly as they could be placed standing on their heads or tails. No ice was used on them.

In November, 1890, Mr. Joseph Ragan, of the Washington market, called my attention to a red drum, which had, besides the two black spots on the caudal fin, three similar marks on either side of the body,

those of the right side being very close together, while the ones of the left side were farther apart; the body spots being the same, white edged, as the one at the root of the tail, which is seldom, if ever, absent.

36. *Archosargus probatocephalus* Walb. Sheepshead.

U. S. N. M., 43187. One specimen, 4 inches long. Mr. Seal obtained a few young examples of this species. A few days before our arrival at Cape Charles City a hook and line fisherman had taken six fine sheepshead along the piles forming the breakwater at that place. In May, 1889, Mr. Seal failed to secure this species in the Lower Potomac. At St. Jerome's, Maryland, in September, 1889, he purchased a specimen measuring 20 inches, which had been captured on a ledge near Point Lookout. The fishermen at this point receive 17 cents per pound for sheepshead.

This valuable species seems destined to extinction in our northern waters. The outrageous practice of dynamiting fish on the New Jersey coast has driven it away from places where a few years ago it was moderately abundant.

37. *Diplodus holbrookii* Bean. Holbrook's Scup.

U. S. N. M., 42486, 43152, 43198. Seven specimens. A small number of this beautiful scup were seined, and Mr. Seal succeeded in bringing several living individuals to Washington. A distinctive mark of this species is the black blotch around the caudal peduncle.

D. XII, 14; A. III, 14. Scales in lateral line 55. Length of specimens, 4 and 5 inches.

38. *Stenotomus chrysops* L. Scup.

U. S. N. M., 42490, 43184. Five specimens, from 5 to 8 inches long.

Very few of the common scup were seined by us at Cape Charles City, and in the Norfolk market the species was equally rare, September 20, 1890. A dealer gave me the name "maiden" for a scup about 8 inches long.

39. *Lagodon rhomboides* L. Fair-maid.

U. S. N. M., 42489, 43157, 43189. Numerous specimens, from 5 to 6½ inches long. This species was seined in the bay at Cape Charles City in large numbers. It is very beautiful in life and a hardy fish for the aquaria. At Cape Charles City it is called fair-maid, a very appropriate name, owing to its pleasing colors.

40. *Orthopristis chrysopterus* L. Pig-fish.

U. S. N. M., 43135. Fourteen specimens, ranging in length from 3 to 6 inches. A specimen 11 inches long was obtained by Mr. Kenly in Norfolk. Its vulgar name is derived from its annoying habit of stealing bait off hooks.

41. *Lutjanus caxis* Bl. & Schn. Gray Snapper.

U. S. N. M., 43209. Three young specimens, $1\frac{1}{2}$ and 2 inches long. D. X, 14; A. III, 8.

Color: Upper parts dark bluish; sides olive; throat, pectorals, ventrals, and caudal pale; dorsal and anal spotted; membrane of spinous dorsal edged with black. A blue stripe as wide as the pupil extends from the snout through the eye to end of head. The dark spots on scales form longitudinal stripes on body.

42. *Centropristis striatus* L. Sea Bass.

U. S. N. M., 43143, 43171, 43211. Ten specimens, from $1\frac{1}{2}$ to 7 inches long.

This fish is called Black Will at Cape Charles City, while at St. Jerome's, Maryland, Mr. Kenly tells me they call it Black Nell. Those observed by us were small, requiring three or four fish to the pound. Very young specimens, from 2 to 4 inches long, were common in the seine. A few individuals weighing about 1 pound each were taken at the end of the breakwater.

According to Mr. Seal the sea bass is taken in the Potomac River as far up as the Wicomico River. It occurs also in Breton's Bay, near Leonardtown, Maryland, and at Point Lookout he collected a number ranging in length from 6 to 7 inches.

43. *Pomatomus saltatrix* L. Bluefish.

U. S. N. M., 43134, 43167. Two specimens, 8 inches long.

This is the "tailor" of Chesapeake Bay. The young, from 3 to 8 inches long, were very abundant around the wharves at Cape Charles City. Few large bluefish were being taken in the pound nets at the time of our visit. Earlier in the season the fishing was much better. From the 19th to the 21st of September, 1889, Mr. Seal found the young, measuring from 5 to 8 inches in length, quite abundant along the wharves at St. Jerome's, Maryland, and in the Potomac River as far up as Lower Cedar Point.

44. *Elacate canada* L. Crab-eater.

U. S. N. M., 43145, 43161. Fourteen specimens, ranging from 11 to 14 inches in length.

This species is called "bonito" in the Chesapeake. It is taken in the pound nets. Mr. Seal saw this fish from the pounds measuring at least 3 feet in length. In 1889 I saw a specimen in the Washington, District of Columbia, market, which measured more than 4 feet in length, and probably weighed as much as 35 pounds. Specimens ranging from 2 to 3 feet are common in this market during the summer months.

45. *Menidia notata* Mitch. Silverside.

U. S. N. M., 43213. This species was abundant at Cape Charles City. Mr. Seal found it in abundance in the Lower Potomac, May 16, 1889, and at St. Jerome's, Maryland, September 19–21, ranging in length from 1½ to 5 inches. Its chief value is as food for larger fishes.

46. *Mugil curema* Cuv. & Val. Gray Mullet.

U. S. N. M., 42480. Two specimens.

47. *Mugil albula* L. Striped Mullet.

U. S. N. M., 43137. One specimen, 9 inches long.

Called jumping mullet or fat back. Mr. Seal found the young mullets, 3 to 10 inches in length, exceedingly abundant. About September 25, he took about five thousand in one seine haul in the bay at Cape Charles City. The mullets are hardy and attractive for aquaria. The species was abundant in the Norfolk market, September 20, 1890, and the writer saw some in the Washington, District of Columbia, market about November 1. The species was reported as abundant on the North Carolina coast in 1890, where the bluefish devoured them by the thousands.

48. *Hemirhamphus pleei* Cuv. & Val. Half-beak.

U. S. N. M., 43185. Fourteen specimens, from 12 to 16 inches long.

This species was very abundant in the bay at Cape Charles City, and was seined in large numbers in shallow water. They are not hardy, and none of them reached Washington alive.

49. *Hemirhamphus roberti* Cuv. & Val.

U. S. N. M., 43178, 43195. Four specimens, 6½ inches long.

This species was not near so common as the *H. pleei*. Half-beaks were observed by Mr. Seal at Point Lookout, Maryland, May 17, 1889.

50. *Tylosurus marinus* Bl. & Schn. Silver Gar.

U. S. N. M., 43186. Nine specimens, from 12 to 14 inches long.

Common at Cape Charles City. Mr. Seal observed the species at Point Lookout in May, and at St. Jerome's in September 1889. I have observed the species in the Potomac River at Washington.

51. *Fundulus majalis* Walb. Mummichog.

Moderately common.

52. *Fundulus heteroclitus grandis* Bd. & Grd.

U. S. N. M., 42495. One specimen. Common, especially in the shallow water back of the docks.

In May, 1889, Mr. Seal obtained this species, besides *F. diaphanus*, *majalis*, *Cyprinodon variegatus*, *Lucania parva*, and *Gambusia patruelis* in the Lower Potomac, from Lower Cedar Point to Point Lookout.

53. *Synodus foetens* L. Lizard Fish.

U. S. N. M., 42479, 43144. Seventeen specimens, from 6 to 10 inches long.

Mr. Seal found this fish to be common at St. Jerome's in September, 1889. The fishermen called it scorpion, pronounced "scarpin," and its bite is feared by the colored people. Other common names elsewhere in use are, cigar fish, spear fish, sand diver, etc.

54. *Elops saurus* L. Big-eyed Herring.

U. S. N. M., 43149, 43150. Two specimens, 12 and 13½ inches long. Mr. Seal tells me that this species is called lady fish at Cape Charles City.

55. *Opisthonema oglinum* Le S. Thread Herring.

U. S. N. M., 43205. Three specimens, 5 inches long.

56. *Brevoortia tyrannus* Latrobe. Menhaden.

U. S. N. M., 43136. This species is known as old wife in the Chesapeake at Cape Charles City. On the way to the pound nets we saw many schools, some of which were very large. The nets were full of them. Being of no use to the fishermen as food fish, the menhaden were thrown back into the bay. Mr. Sterling, of Sterling Brothers, told us that there were more menhaden in the bay than had been seen for years. Notwithstanding the great abundance of this fish there was a scarcity of bluefish, Spanish mackerel, weakfish, and crab-eaters ("bonito"). In May, 1889, Mr. Seal obtained the menhaden in the Lower Potomac, and in September at St. Jerome's, Maryland. At the latter place they ranged in length from 2 to 8 inches.

57. *Stolephorus browni* Gmelin. Anchovy.

U. S. N. M., 43224. Thirty-seven specimens, 3 to 4 inches long. Anal 20. Abundant in coves, where they are fed upon voraciously by the weakfish.

As a delicacy the anchovy is probably the best fish of our waters.

58. *Stolephorus mitchilli* Cav. & Val. Anchovy.

U. S. N. M., 43223. Fifty specimens, 1 to 2½ inches long. Anal 27. Mr. Seal took the anchovy in the Wicomico River, Lower Potomac, May 16, 1889, and at St. Jerome's in September, 1889, where he records it as not abundant. It was found from one-half to 3 inches in length.

59. *Conger conger* L. Conger Eel.

A few examples were taken in the Atlantic, near Cobb's Island, and brought alive to Washington. The species was not observed in the Chesapeake.

60. *Anguilla rostrata* De Kay. Eel.

U. S. N. M., 43196. One specimen, 4 inches long.

Mr. Seal found the common eel to be everywhere abundant in the Lower Potomac, in May, 1889, ranging in length from 1 to 3 feet, and at St. Jerome's, Maryland, in September, 1889, specimens from 3 inches to 2 feet in length were abundant.

61. *Scoliodon terræ-novæ* Rich. Sharp-nosed Shark.

U. S. N. M., 42491. One specimen. Length, 20½ inches.

Sharks, rays, and skates are common in the Chesapeake at Cape Charles City. The capture of *Raia*, *Pteroplatea*, *Rhinoptera*, and blue sharks is of ordinary occurrence in the pound nets. They are used as bait for crabs.

62. *Raia lævis* Mitch. Barndoor Skate.

U. S. N. M., 42500. One specimen. Length of disk, 10 inches; width, 13 inches; length of tail, 10 inches. Secured in the pound nets of Sterling Brothers.

63. *Pteroplatea maclura* Le S. Butterfly Ray.

U. S. N. M., 42502. One specimen. Disk, 9 inches long; tail, 3 inches; width of disk, 16 inches. Secured in the pound nets of Sterling Brothers.

64. *Rhinoptera quadriloba* Le S. Cow-nosed Ray.

U. S. N. M., 42499. One specimen. Length to caudal spine, 12 inches; length of tail, measured from spine, 21 inches; width of disk, 19 inches. Two serrated caudal spines; the first but half an inch in length, the second 1¼ inches. Width of mouth, 2 inches.