

Article XVIII.—NOTES ON CUBAN FISHES.

BY JOHN TREADWELL NICHOLS.

**I. A SMALL FRESH-WATER COLLECTION MADE BY MR. BARNUM BROWN
IN 1911.**

Mr. Barnum Brown writes: "While collecting fossils in the Province of Santa Clara, Cuba, in 1911, my work took me to Baños de Ciego, Montero, 30 miles north of Cienfuegos. Here occur three hot springs having a temperature respectively of $93\frac{1}{2}$, $96\frac{1}{2}$ and $99\frac{1}{2}$ degrees Fahrenheit. These springs are grouped close together, not more than 20 yards apart and about 200 yards from the Analla River into which they drain. The springs of $93\frac{1}{2}$ and $96\frac{1}{2}$ degrees temperature are walled in and the latter is surrounded by a hotel. The one of $99\frac{1}{2}$ degrees temperature is of largest volume and has direct communication with the river. In this spring as well as in the drainage water of the other springs and the cold water of the river, I found a great many fishes, mostly viviparous.

"The following species have been identified from the spring:

Symbranchus marmoratus Bloch.

Gambusia puncticulata Poey.

Glaridichthys falcatus Eigenmann.

Girardinus matallicus Poey.

Pæcilia vittata Guichenot.

Heros tetraacanthus (Cuv. & Val.).

Of these the eel-like *Symbranchus marmoratus* was found only in the hot spring. The other species so far as I was able to observe, were common to both the cold water of the river and that of the hot springs, and it seemed evident that they, in part at least, followed up from the cold river water through the drainage of the hot springs, becoming acclimated by degrees, until they were finally able to live in the hottest water, 37° Centigrade, approximately that of blood temperature.

"I was curious to know if it were possible for these fishes to live equally well in the hot spring water of $99\frac{1}{2}$ degrees temperature and the river water of 60° temperature without first going through a process of acclimatization, so conducted a number of experiments. It was quite evident that fishes could gradually come from the cold water into that of the hottest temperature, so I took a number from the hot spring, carefully catching them in a

net so as to avoid injury and placed some in river water and others in water from the other springs. Those placed in water of $93\frac{1}{2}$ degrees temperature seemed to live in it as well as in that of $99\frac{1}{2}$ degrees, but of those placed in river water, out of eleven fishes, nine died within ten minutes. The other two lived.

"This experiment was repeated several times with similar results; more than two thirds failing to resist the sudden change of temperature.

"I am unable to tell whether those used in the experiments were *Gambusia punctulata*, *Glaridichthys falcatus*, *Girardinus metallicus*, or *Pæcilia vittata* but probably they were mostly the latter genus and species, as this form was most abundant in the Chapapote spring.

"While living in the hotel during a heavy storm the Analla River overflowed, sending a branch across this Chapapote spring. The following day we pumped out the water finding a great many viviparous fishes, probably all of the four determined small species and a number of *viajecos*, *Heros tetraanthus*. Evidently they had all become acclimated to the hot water during the time of this overflow."

Besides the species he mentions, Mr. Brown's collection contains two species which were not found in the warm spring he is discussing, *Gambusia punctata*, Poey, of which he obtained two from the Rio Analla and several from a tributary of the Zaza, and *Glaridichthys torralbasi* Eigenmann, of which he secured one specimen from the latter locality.

II. MARKET AND OTHER FISHES, INCLUDING TWO NEW SPECIES, OBSERVED IN 1912.

The following annotated list, including notes on two hitherto undescribed species, is of the fishes observed in Cuba during a short stay about March 1, 1912. It is based largely on those seen in the markets but, with due allowance for this fact, should give some idea of the rich Cuban marine fauna at that season and be of service to students of Cuban fishes. It should also have economic interest.

From February 21 to March 2, and again from March 7 to 9, the writer was in or near Havana, examining the markets and doing a very little independent collecting; March 3 at Matanzas, March 5 at Aguada in Sta. Clara Province, and March 6 and 7 at Cienfuegos.

DASYATIDÆ.

1. *Dasyatis* sp.

One seen gliding over the bottom at Marianao. One or two small ones cut up for sale in the Havana market, March 8 and 9.

LEPISOSTEIDÆ.

2. **Lepisosteus tristœchus** (*Bloch & Schneider*).

Several specimens of the Cuban garpike were taken for me from the Anabana River at Aguada by Dr. Carlos M. Campos, March 5, the largest about three feet long. Some of them were full of developed eggs. The species is considered identical with the alligator gar from the Mississippi and these Cuban specimens resembled it in their robust bodies, sculptured scales and arrangement of teeth, differing markedly in these respects from *L. platostomus*. They were browner, *i. e.*, less greenish, and smaller than alligator gars from Mississippi in the museum collections, and unspotted, whereas these Mississippi fish have spots on the posterior fins.

ANGUILLIDÆ.

3. **Anguilla chrysypa** (*Rafinesque*).

Not uncommon in the Havana market.

MURÆNIDÆ.

4. **Lycodontis funebris** (*Ranzani*).

One small specimen in the Havana market. The dealer from whom I bought it had probably laid it out for me, as he said it was poisonous, and knew I wanted it for a museum specimen.

ELOPIDÆ.

5. **Tarpon atlanticus** (*Cuv. & Val.*).

This fish, which I believe is seldom eaten by the sportsmen who capture it in Florida, was seen once or twice in the Havana market.

6. **Elops saurus** *Linn.*

Common in the markets.

ALBULIDÆ.

7. **Albula vulpes** (*Linn.*).

Not uncommon in the Havana market.

CLUPEIDÆ.

8. **Clupanodon pseudohispanicus** (*Poey*).

Abundant in the Havana market.

9. ***Sardinella sardina*** (Poey).

Abundant in the Havana market.

10. ***Sardinella macrophthalmus*** (Ranzani).

Tolerably common in the Havana market. A fisherman was seen catching them with small hook and fine line, Havana Harbor, February 25.

11. ***Opisthonema oglinum*** (Le Sueur).

Common in the Havana market.

ENGRAULIDIDÆ.

12. ***Stolephorus browni*** (Gmelin).

Abundant, Havana market, etc.

13. ***Stolephorus productus*** (Poey).

Common, Havana market, etc.

PÆCILIDÆ.

14. ***Rivulus marmoratus*** Poey.

Common in brackish water at Marianao.

15. ***Cyprinodon variegatus riverendi*** (Poey).

Common at Marianao.

16. ***Gambusia puncticulata*** Poey.

Common in a mangrove grown lagoon at Marianao.

17. ***Pœcilia vittata*** Guichenot.

Abundant in brackish water at Marianao. A little ditch which ran from the mangrove swamp to the shore was alive with these robust active fishes. It is interesting to find them in waters of different salinity as did Mr. Brown in waters of different temperature.

ESOCIDÆ.

18. ***Tylosurus raphidoma*** (Ranzani).

Fishes of this genus were common in the markets; a small specimen purchased proved of this species.

HEMIRAMPHIDÆ.

19. ***Hemiramphus brasiliensis*** (Linn.).

Tolerably common in the Havana market.

SYNGNATHIDÆ.

20. *Siphostoma torrei* n. sp.

The type and only specimen obtained, No. 3359, American Museum of Natural History, was taken in brackish water close to the wall along the San Juan River in the city of Matanzas, March 3. It is a ♀ 150 mm. long to base of caudal. Head 5 times in this measure. Depth 3.8 in head. Snout 1.6, eye 8.2 Postorbital part of head 3.4. Snout slender. Tail equal to trunk without head. Ridges on head low, those on body distinct, moderate. $19 + 23$ rings. Dorsal on $2\frac{1}{2} + 6$, low, with about 42 rays. Color in spirits mottled brownish, whiter on the back, with a narrow silvery streak on the flanks, running almost the entire length of the trunk.

The ring formula separates this species from other members of the genus with the exception of *Siphostoma poeyi* Jordan & Evermann, from which it differs in the higher dorsal count and minor characters. In naming it

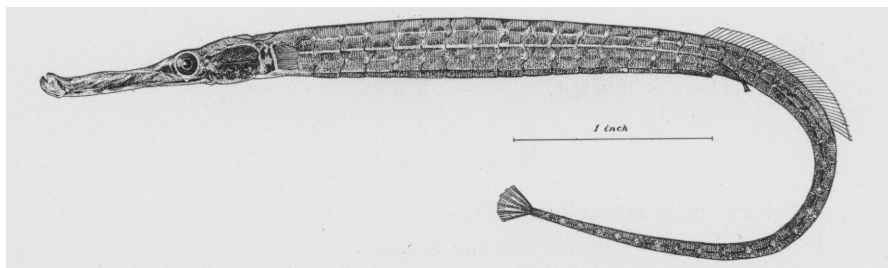


Fig. 1. *Siphostoma torrei* n. sp.

for Dr. Carlos De La Torre, formerly of Matanzas, the type locality, now of the University of Havana, the writer ventures to hope that this paper may be of some slight service to Dr. De La Torre in the thorough study of Cuban fishes he is undertaking.

ATHERINIDÆ.

21. *Atherina stipes* Müller & Troschel [*Atherina laticeps* Poey].

Used salted for bait at Marianao, where I was told they were eaten fresh.

MUGILIDÆ.

22. *Mugil gaimardianus* Desmarest.

This genus was common in the markets, and young were taken at Marianao. Those identified belonged to this species, which was probably not the only one present.

SPHYRÆNIDÆ.

23. **Sphyræna picuda** Bloch & Schneider.

Small specimens were seen in the markets several times; a larger one caught by fishermen at Marianao, a large one in the Cienfuegos market. It is considered one of the four most poisonous Cuban fishes, and its sale is prohibited in Havana and Matanzas. The others are *Caranx latus*, the large *Seriola*, and *Lycodontis funebris*. It is said that by no means all the fish of these species are poisonous and the smaller ones are safer. The symptoms are sometimes alimentary disorders, sometimes skin troubles. The cause is not known.

24. **Sphyræna guachancho** Cuv. & Val.

A much prized food fish very abundant in the markets.

POLYNEMIDÆ.

25. **Polydactylus virginicus** (Linn.).

A few. Havana market.

HOLOCENTRIDÆ.

26. **Holocentrus ascensionis** (Osbeck).

Tolerably common in the Havana market.

27. **Holocentrus coruscus** Poey.

One small one taken in a pool at Marianao.

MULLIDÆ.

28. **Upeneus maculatus** (Bloch).

Several small ones seen in the Havana market.

SCOMBRIDÆ.

29. **Scomberomorus regalis** (Bloch).

Common in the Havana market. Mostly small ones. Not in very good repute. One of the leading fishermen said it is sometimes poisonous.

30. **Scomberomorus cavalla** (Cuv. & Val.).

Abundant in the Havana market; and much prized.

31. **Acanthocybium solandri** (Cuv. & Val.).

Seen once in the Havana market on February 22; two or three large individuals.

TRICHIURIDÆ.

32. **Trichiurus lepturus** *Linn.*

One in the Havana market, March 9, called "sabe."

CARANGIDÆ.

33. **Elagatis bipinnulatus** (*Quoy & Gaimard*).

One in the Havana market March 8.

34. **Trachurops crumenophthalmus** (*Bloch*).

Abundant in the Havana market, both large and small ones, the latter mixed with Clupeids and Gerrids, the Clupeids forming the bulk of, and *Clupanodon pseudohispanicus* being the most abundant species in these mixtures.

35. **Caranx ruber** (*Bloch*).

Under the Cuban name of "cibi," this fish and *Caranx bartholomæi* are considered unsafe for food and their sale in the Havana market prohibited. Yet the writer has two specimens selected to show extremes of variation from a lot averaging about 8 inches in length which were for sale there March 9. The larger of these is 210 mm. long with a depth of 3.5 in length to notch of caudal fin; the other 200 mm. with depth of 3.4. They are thus almost the same size as a *Caranx bartholomæi* 220 mm. long from Cienfuegos, and on carefully contrasting them with this specimen they show the distinguishing characters of the two species. The *ruber* are slightly more slender, with more graceful lines, their lower jaws project slightly instead of being slightly included, their gillrakers are closer set, more slender and numerous, 32 instead of 20 on the lower limb of the arch. The peduncular scutes form a lower keel posteriorly and appear broader anteriorly. There is a distinct black band diagonally from the top of the peduncle backward and downward along the upper margin of the lower caudal lobe. The writer has not seen this mark in *bartholomæi*, but a small specimen of *ruber* 90 mm. long (depth to notch of caudal 2.7) from the Russell J. Coles, Cape Lookout (North Carolina) collections, has it well marked. This small fish has the recumbent dorsal spine somewhat better developed than the larger ones, which yet have evidence of it.

36. **Caranx bartholomæi** *Cuv. & Val.*

A specimen 220 mm. long from the Cienfuegos market has the depth of body in length to notch of caudal fin 3.1. A specimen 55 mm. long from the Havana market February 26 has this same measurement 2.3. Four specimens from the Russell J. Coles collections from North Carolina, 100

to 140 mm. long, have it about 2.5. All the specimens have a recumbent spine at the front of the spinous dorsal, which is small and concealed, except in the 55 mm. one.

37. ***Caranx hippos*** (Linn.).

Small specimens abundant in Havana and Cienfuegos markets.

38. ***Caranx crysos*** (Mitchill).

Three specimens were found in the Havana market March 8 and 9.

Table of Variation.

| | | | |
|--------------------------|---------------|--------------------------------|--|
| Length of fish | about 120 mm. | about 240 mm. | about 280 mm. |
| Depth to notch of caudal | 2.9 | 3.3 | 3.5 |
| Body | compressed | less compressed | still less compressed |
| Pectoral length | equal to head | $\frac{1}{8}$ longer than head | more than $\frac{1}{5}$ longer than head |
| Scutes | 51 | 46 | 45 |

The lesser depth and greater thickness of the body are unquestionably age characters.

39. ***Caranx latus*** Agassiz.

Three small specimens from the Havana market 140 to 170 mm. long, have the depth 2.6 to 2.7 in length to notch of caudal fin. A large one about 950 mm. long seen in the Cienfuegos market had the depth 3.5 in this measure. *Caranx fosteri* Cuv. and Val. seems after all to be the adult of *Caranx latus*. From the Hawaiian "ulua" this species differs in the more rounded forehead outline, fewer vertical fin rays, fewer and larger scutes, and more abruptly arched lateral line. The "ulua" is probably *Caranx peronii* Cuv. & Val. It is not *Caranx parapistes* Richardson, the type figure of which is readily identifiable as *Caranx fosteri* Cuv. & Val. = *Caranx latus* Agassiz.

40. ***Vomer setipinnis*** (Mitchill).

One specimen found in the Havana market.

41. ***Vomer gabonensis*** Guichenot.

A single specimen found in the Havana market with a specimen of *V. setipinnis*. Five specimens found in the Cienfuegos market.

42. ***Selene vomer*** (Linn.).

A few specimens seen in the Havana and Cienfuegos markets.

43. ***Chloroscombrus chrysurus*** (Linn.).

Common in the Havana market.

44. ***Trachinotus falcatus*** (Linn.).

One large one of perhaps six lbs. cut into strips, was seen at the Havana market, and also two or three young.

CORYPHÆNIDÆ.

45. **Coryphæna hippurus** Linn.

Two specimens, each of about twenty pounds weight, seen in the Havana market under the name of "dorad."

CENTROPOMIDÆ.

46. **Centropomus pedimacula** Poey.

This genus was common in the markets and small ones were seen swimming along the water front of the San Juan River at Matanzas. Those identified belonged to this species.

SERRANIDÆ.

47. **Petrometopon cruentatus** (Lac.).

Common in the Havana market.

48. **Bodianus fulvus ruber** (Bl. & Schn.)

Abundant in the Havana market where *B. f. punctatus* was not uncommon.

49. **Epenephelus adscensionis** (Osbeck).

Abundant in the Havana market.

50. **Epenephelus striatus** (Bloch).

Abundant in the Havana market.

51. **Mycteroperca venenosa** (Linn.).

Seen in the markets.

52. **Diplectrum radiale** (Quoy & Gaimard).

One, Havana market.

53. **Diplectrum formosum** (Linn.).

One, Havana market.

54. **Prionodes phœbe** (Poey).

One taken by fishermen at Marianao.

LUTIANIDÆ.

55. **Neomænis griseus** (Linn.).

Abundant in the Havana market.

56. **Neomænis apodus** (*Walbaum*).

Several seen in the Havana market.

57. **Neomænis bucanella** (*Cuv. & Val.*).

Not uncommon in the Havana market.

58. **Neomænis aya** (*Bloch*).

Common in the Havana market.

59. **Neomænis analis** (*Cuv. & Val.*).

Abundant in the markets.

60. **Neomænis synagris** (*Linn.*).

Abundant in the Havana market.

61. **Ocyurus chrysurus** (*Bloch*).

Abundant in the Havana market.

62. **Aprion macrophthalmus** (*Müller & Troschel*).

Not uncommon in the Havana market.

63. **Etelis oculatus** (*Cuv. & Val.*).

Not uncommon in the Havana market.

HÆMULIDÆ.

64. **Hæmulon album** *Cuv. & Val.*

A few seen in the Havana market.

65. **Hæmulon parra** (*Desmarest*).

A few in the Havana and many in the Cienfuegos market.

66. **Hæmulon sciurus** (*Shaw*).

Seen in the Havana market, and one caught on hook and line at Marianao. This fish uttered a short grating sound suggesting a squirrel gnawing a nut.

67. **Hæmulon plumieri** (*Lac.*).

Tolerably common in the Havana market.

68. **Bathystoma rimator** (*Jordan & Swain*).

A specimen 5 inches long from the Havana market February 26, has the depth $2\frac{3}{4}$ to base of caudal. Though this species appears not to have been previously recorded from Cuba, it seems highly improbable that so small a fish would be brought across from Florida.

69. **Bathystoma striatum** (*Linn.*).

Two or three specimens caught by fishermen at Marianao had no noticeable red or yellow color in the mouth when fresh.

70. **Anisotremus virginicus** (*Linn.*).

Seen once in the Havana market.

71. **Orthopristis poeyi** *Scudder*.

A few seen in the Havana market.

SPARIDÆ.

72. *Calamus proridens* Jordan & Gilbert.

73. *Calamus bajonado* (Bl. & Schn.).

The genus *Calamus* was commonly represented in the markets. Specimens of these two species were obtained and identified.

74. *Archosargus unimaculatus* (Bloch).

Tolerably common in the Havana market.

GERRIDÆ.

75. *Eucinostomus harengulus* Goode & Bean.

A specimen 150 mm. long from the Havana market agrees admirably with descriptions of this species.

76. *Eucinostomus gula* (Cuv. & Val.).

Several specimens obtained from among the small Gerrids common in the Havana market proved to be this species.

77. *Xystæma havana* n. sp.

The type No. 3358, American Museum of Natural History, was caught at Mari-
anao Beach, Havana, February 28, on sandy bottom, from a small pier, with hook
and line, at night. It is 127 mm. long to base of caudal. Depth 2.7 in this measure.
Head 3.1. Eye 2.9 in head. Maxillary 3.4. The eye is very large, the head broad
and blunt, the mouth small, so that the maxillary barely reaches the eye. The diame-
ter of the eye is slightly greater than the length of snout which equals the distance
between the eyes. The second anal spine, stouter than the third, which it equals
in length, is contained 2.7 times in the head. Dorsal IX, 10, anal III, 7. Premaxil-
lary groove, naked, linear. The scales running forward along its sides to just beyond
front of eye, but not crossing it. Broad scaly sheathes at bases of dorsal and anal.
Scales 4-42-9. Enlarged interhæmal spine long, narrow and solid like that of
Xystæma cinereum, but somewhat differently shaped, a deep lateral furrow running
the length of it. Preopercle entire. Color when fresh silvery, no cross bars, rows
of scales on center of sides with faint longitudinal streaks. Spinous dorsal tipped
with blackish.

This fish has a larger eye, smaller mouth and less trenchant outlines
than either *Xystæma cinereum* or *Eucinostomus harengulus*. It is narrower
than the former, lacks its cross bars, and has the naked area on the head
narrower with less flaring sides. It has the top of the head much broader
and less pointed than the latter. It resembles *Eucinostomus dowi* (Gill)
described from the Pacific, and would probably be easily mistaken for that
species, but Mr. Barton A. Bean of the U. S. National Museum has kindly

examined one of the cotypes of *E. dowi* and found the enlarged interhæmal as it should be in *Eucinostomus*. The large eye and plain color would be

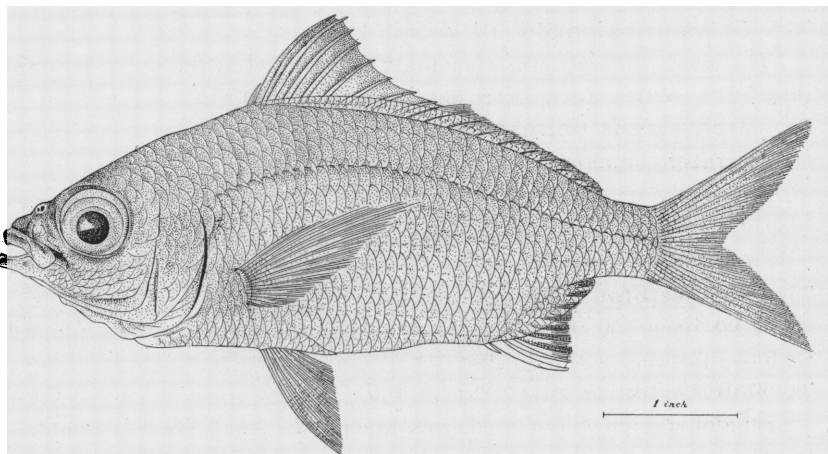


Fig. 2. *Xystæma havana* n. sp.

appropriate for a nocturnal species. The name is for the steamship 'Havana' on which we made two comfortable trips between New York and that port.

In going over the Museum's material for comparison the writer finds three specimens of this new species collected at Miami, Florida, by the Fabbri Tekla Expedition in 1910. They are 120, 82, and 60 mm. long, and agree well with the type. The largest of them has a somewhat longer maxillary, 3.3 in the head.

78. ***Xystæma cinereum*** (Walbaum).

Common in the Havana market.

79. ***Gerres olisthostomus*** Goode & Bean.

Tolerably common in the Havana market.

80. ***Gerres brasiliensis*** Cuv. & Val.

A number seen in the Cienfuegos market.

SCIENIDÆ.

81. ***Bairdiella ronchus*** (Cuv. & Val.).

Not uncommon in the Havana market.

82. ***Micropogon furnieri*** (Desmarest).

Common in the Havana market.

CICHLIDÆ.

83. **Heros tetracanthus** (Cuv. & Val.).

A few from the Anabana River at Aguada.

POMACENTRIDÆ.

84. **Chromis multilineatus** (Guichenot).

Apparently caught commonly by the fishermen at Marianao. The color of a specimen was livid purplish, whiter on chest and fuscous on nape, with indistinct streaks along the rows of scales. Dorsal blackish with a narrow orange tip and the last one or two rays lighter, a lemon yellow blotch on the back about the base of the last ray. Caudal white with blackish upper and lower borders and the tips of the lobes orange, a narrow yellow streak from the orange tips outside the blackish borders. Pectoral, ventral and anal fins more or less orange. A jet black blotch at the axil of the pectoral.

85. **Eupomacentrus fuscus** (Cuv. & Val.).

Abundant in somewhat brackish water along the water front at Matanzas. No specimens were secured, but color variations of the living fish were observed at close range. Their caudal fins were varyingly dusky or yellowish, but none of the fish had the yellow color running forward on the under parts as it frequently does in *leucostictus*. Some small ones were observed which were bright blue on the head and front part of the back and had one or more dark lengthwise stripes on the head,—somewhat different from any coloring of *leucostictus*. A few large ones swimming about actively had the back and fore part of the sides pale ashen, but the same individuals became uniform dusky when they ceased their activity. The motions of this species seem less gliding and wrasse-like than those of *Eupomacentrus leucostictus*.

86. **Eupomacentrus leucostictus** (Müller & Troschel).

Common in rock pools at Marianao.

87. **Abudefduf saxatilis** (Linn.).

Small ones common in rock pools at Marianao and Havana.

LABRIDÆ.

88. **Lachnolaimus maximus** (Walbaum).

Tolerably common in the Havana market.

89. **Harpe rufa** (Linn.).

One in the Havana market.

90. **Iridio cyanocephalus** (*Bloch*).

Identified once in the Havana market.

91. **Iridio maculipinna** (*Müller & Troschel*).

Two or three very young wrasses in pools at Marianao were probably this species.

92. **Iridio bivittatus** (*Bloch*).

One in a small pool at Marianao.

SCARIDÆ.

93. **Sparisoma chrysopterum** (*Bloch & Schneider*).

Identified once in the Havana market.

94. **Scarus cæruleus** (*Bloch*).

Identified once in the Havana market.

EPHIPPIDÆ.

95. **Chætodipterus faber** (*Brouss*).

Not uncommon in the Havana market.

TEUTHIDIDÆ.

96. **Teuthis** sp.

Seen once or twice.

BALISTIDÆ.

97. **Balistes vetula** *Linn.*

A dead specimen at Cojimar, Feb. 25. One in Havana Market March 8 or 9.

SCORPÆNIDÆ.

98. **Scorpæna plumieri** *Bloch*.

One seen in the Cienfuegos market.

GOBIIDÆ.

99. **Guavina guavina** (*Cuv. & Val.*).

One specimen from the Havana market Feb. 26.

100. **Lophogobius cyprinoides** (*Pallas*).

Two specimens from the Havana market Feb. 26.

101. **Gobius soporator** *Cuv. & Val.*

Generally abundant along the shore.

102. **Gobius boleosoma** *Jordan & Gilbert.*

Several in brackish water at Marianao.

103. **Gobius oceanicus** *Pallas.*

Commonly sold *en masse* in the Havana market.

BATRACHOIDIDÆ.

104. **Opsanus tau** (*Linn.*).

Common in the Havana market, alive.

Gobiesocidæ.

105. **Arbacia rupestris** (*Poey*).

These little fishes, less than $1\frac{1}{2}$ inches long, were common, pressed against the rocky bottoms and sides of spray-whipped pools, just beyond reach of the surf at the edge of a jutting rocky shore at Marianao. Taken out of water they seemed little inconvenienced and made some progress by wriggling and clinging. The colors of a living specimen were as follows: Pale. Six more or less bilaterally divided dark saddle-like blotches along the back, the upper parts marked with a fine network or orange and dusky mottling which leaves conspicuous shining white spaces on the sides.

BROTULIDÆ.

106. **Ogilbia cayorum** *Evermann & Kendall.*

One specimen two inches long from the Havana market in February. The species was described from Florida but it seems very improbable that our small specimen was brought from there.

PLEURONECTIDÆ.

107. **Platophrys maculifer** (*Poey*).

One specimen from the Havana market Feb. 26.

108. **Syacium micrurum** *Ranzani.*

One small ♀ specimen from the Havana market Feb. 26.

109. **Citharichthys spilopterus** *Günther.*

Common in the Havana market.

SOLEIDÆ.

110. **Achirus lineatus** (*Linn.*).

One in the Havana market March 9.

ANTENNARIIDÆ.

111. **Antennarius** sp.

One minute specimen at Marianao.