

Article III.—ON A NEW SWELL-FISH FROM FLORIDA.

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The collections of the American Museum of Natural History contain an undescribed species of *Spheroides*, which was thought to be *S. maculatus* when it was collected at Cape Sable, Florida, in 1910, but is, in reality, quite different.

***Spheroides harperi* sp. nov.**

The type, No. 2535, American Museum of Natural History, taken at Cape Sable, Florida, by the Fabbri Tekla Expedition, February, 1910, is 175 mm. long to the base of the caudal; depth 4.0 in this measure; head 2.8; eye 4.0 in head; snout 1.9; interorbital slightly concave, the bone at its narrowest about one half the greatest diameter of the eye. A rather slender fish with narrow, pointed head and large eye. Dorsal rather high, its free margin truncate, its longest ray 2.6 in the head. Anal much lower, rounded, its longest ray 3.3. Pectoral broad, its length 2.0. Caudal square or slightly rounded, 1.8. Dorsal 8. Anal 7. Nasal tubes large, their length 3.0 in eye. No spines anywhere, the back and sides covered with minute, obsolete, imbricate scales, the lower parts peculiarly and minutely grooved and wrinkled. A well marked fold along the under side of the head. The color of the alcoholic specimen is not well preserved, but shows small, pale, roundish specks everywhere on back and sides, and a row of dark blotches along the division between dark upper and whitish under parts. These suggest the marks of *maculatus* more than those of *spengleri*. There is a more pronounced elongate one in the axil, along the lower base of the pectoral.

Besides the type, we have three much smaller specimens collected at the same place and date, No. 2589, two 35 and one 53 mm. long. These have an area of varying size on the anterior part of the back, thickly beset with minute prickles, many small, roundish black spots more pronounced than the small white ones, which are also present on the upper parts, a row of diffuse dark blotches along the sides more suggestive of *maculatus* than of *spengleri*, a most pronounced one at the posterior base of the pectoral. One of the two smaller specimens is the most prickly, and differs from the others in having the under parts also thickly beset with prickles; the other of 35 mm. length is the smoothest of the three.

The species is named for Mr. Francis Harper, a fellow-member of the Linnæan Society of New York, who first called the writer's attention to the differences between the type and *S. maculatus*.

It is closest to *S. spengleri* and *S. nephelus*. The former differs notably from it in color, the latter in spination. Though both are from Florida, the

ranges of *nephelus* and *harperi* may be separated by *S. testudineus*, a species widely distributed southward, and abundant at Miami. A review of the most striking characters of 6 species of *Spheroides* from Atlantic North America, now on the writer's table, will not be out of place here.

Spheroides maculatus (Bloch & Schneider), represented by specimens from Woods Hole, Mass., Long Island, N. Y., and Cape Lookout, N. C., has the interorbital of medium width, the narrowest breadth of the bone a little shorter than the eye; is thickly beset with small prickles above and below; and has a row of mostly vertically elongate dark blotches on the side. These are fainter on the head, and there is usually a very pronounced one touching or hugging the axil of the pectoral. The largest specimen examined is 195 mm. long to base of caudal.

Spheroides spengleri (Bloch), represented by specimens from Katama Bay, Mass., Cape Lookout, N. C. and Key West, Fla., has a narrower, more pointed head, the interorbital bone about one-half the eye. It has rather large, embedded prickles below and is usually smooth above. A regular row of strong, roundish dark blotches along the side, well marked on the head, forms a diagnostic color character. The caudal has a whitish center and blackish base and end. The upper parts sometimes bear membranous flaps, and two small specimens from Porto Rico are prickly above. The largest specimen examined is 100 mm. long to base of caudal.

Spheroides nephelus (Goode & Bean). Through the courtesy of the United States National Museum and of Mr. Barton A. Bean, of that institution, I am enabled to compare one of the cotypes of this species, No. 31428, from Indian River, Florida. It has peculiar, strong, rather wide-set, stellate based prickles above, and well developed, rather close-set prickles below. The lateral row of blotches is indistinct, and suggests *maculatus* and *harperi*, being quite unlike *spengleri*. The interorbital bone is about one-half the eye. The specimen is 150 mm. long. Mr. Bean has kindly examined the other specimens mentioned in the type description of *nephelus*, and writes that the narrowest interorbital measurement is contained two to two and one-half times in the longest diameter of the eye.

Spheroides testudineus (Linnæus), represented by specimens from Miami, Fla., Livingston, Guatemala, and Brazil, has the back dark, the color broken up by a coarse, regular network of white lines, with concentric tendencies. Sides with small, scattered, round dark spots and no preëminent series of dark blotches bounding the white under parts. Interorbital broad, the least breadth of the bone equal to, or greater than, the eye. In small specimens of 40 to 50 mm., the interorbital is much narrower, the spots on the sides are fewer and comparatively larger, the lower ones more regularly placed. At any age it is the species most strikingly distinct of those men-

tioned in this paper. The largest specimen examined is 185 mm. long to base of caudal.

The most striking characters of *Spheroides harperi* are the pointed head, narrow interorbital, and absence of prickles in the grown specimen.

Spheroides marmoratus (Ranzani). Of this species we have a single specimen 140 mm. long, from the Gulf of Mexico, collected by Capt. Frank Seeley of the Ward Line. It has a raised orbital region, very narrow, decidedly concave interorbital, the breadth of the bone less than one-half the long diameter of the eye; long, slightly concave snout; very small nasal tubes, their height less than one-fifth the diameter of the eye, an irregular network of fine pale lines separating darker spots on the sides, the diameter of mesh about equal to the pupil. Lateral blotches smaller and less distinct, but not dissimilar to those of *maculatus*. A patch of strong prickles on the back behind the eyes, crowded anteriorly, becoming more scattered posteriorly, about reaching dorsal. Under parts smooth, the spines (if present) obsolete and deeply imbedded. A sharp fold or keel along the lower angles of the body from opposite nasal tubes to opposite dorsal.

