

DESCRIPTIONS OF *Physiculus fulvus* and *Lotella maxillaris*, NEW SPECIES OF FISHES COLLECTED IN 1881 BY THE UNITED STATES FISH COMMISSION.

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The gadoid fishes described below have been withheld from publication for some time with the expectation that larger examples of the same species would be secured by one of the steamers of the Fish Commission. No additional material, however, has been obtained, and further delay seems undesirable.

*Physiculus fulvus*, n. s.

*Physiculus dalwigkii* has been credited to the fauna of the western Atlantic by Jordan and Gilbert (Syn. Fishes North America, 1883, p. 801). The description was borrowed from Günther's Catalogue, and the species was recorded on the strength of a doubtful identification with *Physiculus dalwigkii*, of a species of *Lotella*(?), which seems to be still undescribed. There is in the collection a species of *Physiculus* related to *dalwigkii* and represented by three young examples which were obtained at Station 941 in 76 fathoms. The catalogue number of these specimens is 28766. They were taken August 4, 1881, in north latitude 40° 01' and west longitude 69° 56', by the United States Fish Commission steamer Fish Hawk. The largest of these examples is 3½ inches in length. It is one of the three individuals referred to in my list of fishes published by Professor Verrill in American Journal Science and Arts, vol. xxii, 1881, p. 296, under the name *Physiculus*, sp. It is number 15 of that list.

*Description.*—The head is broad and depressed, with a short snout; the length of the head is contained in the total length to the caudal base nearly 4 times. The height of the body is about equal to the length of the head without the snout, and is contained 4⅔ times in the total length without caudal. The eye is about two-sevenths as long as the head. The length of the upper jaw is about equal to the space between the ventrals and the anal origin, and is contained 2¼ times in that of the head. The maxilla does not quite reach the vertical through the hind margin of the eye. The barbel is one-sixth as long as the head. The teeth are in narrow bands in the jaws; there is no outer series of enlarged teeth, but a few in the middle of the bands in both jaws are slightly larger than the others; all of the teeth, however, are inconspicuous; the vomer and palate are smooth. The vent is situated about under the third ray of the first dorsal. The distance of the first dorsal from the tip of the snout equals 3 times the length of its base; its longest ray equals twice the length of the snout, and slightly exceeds the length of the longest of the second dorsal; the length of the

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second dorsal base equals 3 times the length of the pectoral, which is contained nearly  $5\frac{1}{2}$  times in the total without caudal. The origin of the anal is about in a vertical let fall from the base of the fifth ray of the first dorsal. The distance of the ventral from the tip of the snout is contained  $4\frac{1}{2}$  times in the total length to caudal base. The longest ventral ray is contained about  $5\frac{3}{4}$  times in the standard body-length. When the ventral is extended backward its tip will reach the base of the fourth anal ray. The length of the middle caudal ray is one-third of the length of the head. The lateral line is very indistinct, but it is situated rather high, and follows pretty closely the contour of the back. The gill-rakers are moderately short and not numerous.

The general color is a light yellowish-brown with the under surface of the head, the abdomen, the margins of the dorsal and anal fins, the lips, and the axil of the pectoral very dark brown. There is, also, a dark brown blotch on the suboperculum. The inside of the mouth and of the gill-membranes are white.

*Radial formula.*—D. 10, 49; A. 54; V. 7. Scales 6-61 to 62-16.

***Lotella maxillaris*, n. s.**

The little fish which I at one time supposed to be similar to *Physiculus dalwigkii* is not that species, and it appears to belong to a different genus. I refer it, with some doubt, to the genus *Lotella*. The ventrals have a flat base and several rays. The vomerine teeth seem to be absent, and there is an outer series of stronger teeth in the jaws. The first dorsal also contains but five rays. The lower jaw, however, projects very slightly beyond the upper. I am induced to describe it here simply to call attention to its presence in our waters, and hope that better material may be soon obtained upon which to base a more nearly complete account.

*Description.*—A single individual was taken by the United States Fish Commission steamer "Fish Hawk," August 23, 1881, at Station 952, in north latitude  $39^{\circ} 55'$  and west longitude  $70^{\circ} 28'$ , in 396 fathoms. The specimen is only  $2\frac{2}{5}$  inches in length. The catalogue number of the type is 29832. It is No. 14 of my list of fishes published by Professor Verrill (Amer. Jour. Sci. and Arts, vol. xxii, 1881, p. 296). The head is moderately compressed; the snout is short. The length of the head is contained about  $4\frac{1}{3}$  times in the total length without caudal; the height of the body 5 times. The eye is one-third as long as the head. The maxilla reaches to the vertical through the anterior margin of the pupil; its length equals that of the postorbital part of the head. The teeth are in narrow bands in the jaws, the outer series being enlarged. The vomer and palate seem to be without teeth. The vent is situated about under the eighth ray of the second dorsal. The distance of the first dorsal from the tip of the snout is contained 4

times in the total length, including caudal. The ventrals extend to about the vertical from the origin of the second dorsal, and do not reach nearly to the vent. The longest ray of the first dorsal is a little more than one-half as long as the head. None of the rays of the second dorsal or of the anal are as long as the first ray of the first dorsal. The longest ray of the second dorsal does not much exceed one-half the height of the body. The longest ray of the anal is about one-half the length of the ventral. The origin of the anal is about under the tenth ray of the second dorsal. The ventrals are situated about under the beginning of the posterior third of the head; their length equals one-fourth of the length of the second dorsal base. The origin of the pectoral is somewhat in advance of that of the first dorsal. The fin is imperfect, but its length probably slightly exceeds that of the ventral. The caudal is rounded.

D. 5, 55; A. 44; V. 10.

Owing to the condition of the specimen it is very difficult to count the small scales, but there are about 7 or 8 rows between the origin of the first dorsal and the lateral line and about 14 or 15 rows between the origin of the anal and the lateral line. The number in the lateral line is at least 115 to the origin of the caudal.

The color of the type at present is a very light brown. The margins of the dorsal and anal, in their posterior portions, are blackish.

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## ON THE OCCURRENCE OF THE STRIPED BASS IN THE LOWER MISSISSIPPI VALLEY.

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On the 7th of April, 1883, Mr. Thomas S. Doron, of Montgomery, Ala., sent to the Museum a large striped bass which was caught in the Alabama River near Montgomery. The fish is a gravid female, measuring nearly 3 feet in total length. The depth was so considerable that the identity of the species with the striped bass of the east coast was at first questioned and an effort was made to secure smaller individuals from the same region for the purpose of comparison with east-coast specimens. Until recently, however, no young examples were obtained. The Museum has a specimen of the common striped bass, number 21312, from Pensacola, Fla., whence it was sent by Mr. Silas Stearns; this example which is 16 inches long, has been compared with one of equal size from Wood's Holl, Mass., and shows no differences from the common form. While the occurrence of the striped bass in the Gulf of Mexico has been established for several years we have not until now been certain that it exists, also, in the Mississippi Basin. The specimen recently obtained from Mr. J. Dock Harrell, of Osyka, Miss., enables us to decide