

Both dorsals and caudal with dark cross-streaks. Pectoral faintly cross-barred; two or three small dusky spots on its base.

This species is probably the one named by Girard, *Gobius würdemanni*. Girard's description is, however, so short and so carelessly written as to be of little value for purposes of identification. This description however applies to this species better than to any of its relatives found on the Gulf coast. I have therefore preferred to regard this as the true *würdemanni*, rather than to apply to it a new name.

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LIST OF FISHES COLLECTED IN LAKE JESSUP, AND INDIAN RIVER, FLORIDA, BY MR. R. E. EARLL, WITH DESCRIPTIONS OF TWO NEW SPECIES.

By DAVID S. JORDAN.

In the year 1880 a collection of small fishes was made in Lake Jessup, Florida, a tributary of Saint John's River, and in the Indian River, near Titusville, Fla. Several interesting forms were obtained, among them two which appear to be new to science. The following is a list of the species. L. J. indicates Lake Jessup; I. R., Indian River:

1. *Jordanella floridæ*, Goode & Bean. 25345. I. R.
2. *Cyprinodon variegatus*, Lac. 25313. I. R.
3. *Fundulus similis*, Baird & Girard. 25317. I. R.
4. *Fundulus seminolis*, Girard. 25323. L. J.

D. 17. A. 14. Scales, 54-18.

Coloration rather pale; each scale with a small darker spot, these forming longitudinal stripes, the spots not coalescent. Dorsal with whitish and dusky spots arranged in cross series; caudal with cross series of dark spots. Lower fins plain. A small dusky spot above base of pectoral. Head rather long, narrow, and pointed. Interorbital width equal to length of snout,  $2\frac{3}{4}$  in head. Eye, 4 in head. Teeth in a broad band, the outer little enlarged.

This is a large, sleek-looking species, very distinct from all the others in the genus.

5. *Fundulus heteroclitus*, (L.). 25310. I. R.
6. *Zygonectes henshalli*, Jordan. 25330. I. R.
7. *Zygonectes chrysotus*, Günther. 35299. I. R.
8. *Gambusia patruelis*, (B. & G.). 25327; 25333; 25344. I. R.

A multitude of specimens of various sizes. Some have the black blotch below the eye very distinct; in others it is obscure, or altogether obsolete. Some of the largest and deepest colored females correspond exactly to the type of *Zygonectes inurus*. Others match almost perfectly

the description of *Gambusia arlingtonia*. The largest are about  $2\frac{1}{2}$  inches in length.

9. *Mollienesia latipinna*, Le Sueur. 25312; 25337. I. R.

10. *Heterandria ommata*, species nova. 25331 (2). I. R.

Two female specimens in poor condition, each about an inch in length.

Head,  $3\frac{1}{2}$  in length; depth, 4. D. 6; A. 10. Scales, about 28. Mouth very small, the teeth imperceptible. Eye large. Anal larger than dorsal (not modified in either specimen), inserted immediately below the last rays of the latter.

Color olivaceous; fins a little dusky. A large jet black ocellus at upper part of base of caudal and a smaller one above front of anal. A faint dusky shade along sides and one along median line of back.

This species differs strikingly in coloration from its congener, *Heterandria* (= *Girardinus*) *formosa*, which is also found in the waters of Florida.

11. *Querimana gyrans*, Jordan & Gilbert. 25315. I. R.

Numerous specimens, somewhat larger than the original types.

12. *Menidia menidia*, (L.). 25322. L. J.

13. *Menidia peninsulæ*, (Goode & Bean). 25318. L. J.

14. *Elassoma evergladei*, species nova. 25326 (8). L. J.; 25334. I. R.

Head,  $3\frac{1}{10}$ ; depth,  $3\frac{1}{2}$ . D. IV, 9 or 10; A. III, 5. Scales; 28-13 or 14. Length of largest  $1\frac{1}{3}$  inches.

Body more elongate and less compressed than in *Elassoma zonatum*; the head thick, moderately pointed anteriorly, flattish, and moderately wide above.

Mouth oblique, very small, its outline curved, upper jaw very protractile; lower jaw projecting. Snout very short, not longer than pupil; preorbital very narrow. Eye, 3 in head. Maxillary of moderate width, barely reaching the vertical from front of eye, its length 4 in head. Teeth in narrow bands, those of the outer series enlarged, close-set, slender, and curved. Apparently a few teeth on the vomer. Cheeks and opercles scaly, the former with 3 or 4 rows of scales. Preopercle entire; opercle unarmed, emarginate behind. Gill-membranes broadly connected across the isthmus. Breast with small scales. Scales of body very large, cycloid. No trace of lateral line. Gill-rakers very small, tubercular. Pseudobranchiæ very small, apparently covered by skin, as in the *Centrarchidæ*.

Vent normal in position. Dorsal fin low, the first spine short, the others graduated; ventral fins very slender and narrow, their filamentous tips nearly reaching front of anal; their rays i, 5; inner ray short, so that the number appears on a hasty examination to be i, 4. Pectoral,  $1\frac{4}{5}$  in length of head; caudal slightly emarginate,  $1\frac{1}{2}$  in head.

Color, in spirits, dusky olive, without cross-bands or scapular spot; centers of scales paler, thus forming faint longitudinal streaks; many scales of back and sides, each with a dark brown spot; these irregularly scattered. Body and head soiled with dark points. Dorsal, anal and caudal conspicuously marked with cross-bars formed of dark dots; ventrals and anal largely dusky, similarly but more faintly barred.

The discovery of a second species of this remarkable genus is very interesting.

15. *Pæcilichthys barratti*, (Holbrook). 25343. I. R.

16. *Lepidogobius gulosus*, (Girard). 25335. I. R.

Largest specimen  $3\frac{1}{2}$  inches long. These are larger than the specimens described by us (Proc. U. S. Nat. Mus., 1882, 294), from Pensacola. They are duller in color than the latter. The largest ones have the maxillary extending far beyond the eye, its length  $1\frac{3}{5}$  in head, and the dorsal spines filamentous, reaching middle of soft dorsal. The smaller ones have the dorsal spines low and the mouth much smaller.

17. *Gobiosoma bosci*, Lac. 25314. I. R.

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## CONCERNING SOME OF THE FORMS ASSUMED BY THE PATELLA IN BIRDS.

By DR. R. W. SHUFELDT, U. S. A.

Vicq-d'Azyr saw in the patella a detached olecranon—the homotype of the extensive process, so named—which is found at the proximal extremity of the ulna in the human subject, as it is in many other vertebrates. But what would this time-honored anatomist have to say for himself were he now standing at my side, and his opinion asked as to the nature of the bones of the limb which I have in my hand? It is the complete skeleton of the right lower extremity of *Centrocerus*, taken from a bird of this species less than half grown. Several years ago I figured these very bones, and they may be seen in my *Osteology of the Tetraonidæ*, plate ix, figure 67. In this limb neither the patella nor the calcaneal sesamoid has yet ossified, owing to the fact that the bird from which it was taken had not sufficiently advanced in age for this condition to have come about. In the memoir in question a large epiphysis was described as occupying the site of the future enemial crest of the tibia, which part of the bone never becomes a very prominent feature in this bird even after it has become full grown. There seems to be no particular necessity for this accretion to ossify thus separately from the end of the tibia, yet it is found to be quite formidable in size, and as the fowl grows cartilaginous ridges that eventually become the pro- and ecto-enemial processes of the tibia are seen upon its anterior face. In