

ON THE GENERIC CHARACTERISTICS OF PRIONOTUS STEARNSII.

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During an examination of various species of Triglids, undertaken to ascertain their most salient characters, I was struck by the differences from others manifest by the *Prionotus stearnsii*. A more detailed comparison convinced me that it represented an independent generic group which may be named *Colotrigla* on account of the curtailment of the pectoral fins and free rays. The following comparative diagnosis, relieved of all superfluties, has been prepared with the species of *Prionotus* and *Trigla* before me.

COLOTRIGLA.

Prionotus sp. GOODE, BEAN, JORDAN and EVERMANN.

Triglids with the scales uniform, head with almost smooth bones, jaws exerted and even or lower prominent, supramaxillaries exposed,

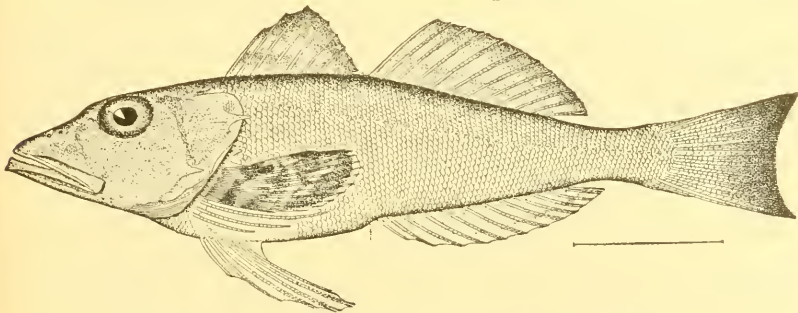


FIG. 1.—*COLOTRIGLA STEARNSII*. (AFTER JORDAN AND EVERMANN.)

teeth on jaws, vomer and palatines, spinous dorsal weak, pectorals very short, and free rays weak and not specially formed for use in progression or sensation.

The brevity of the pectoral fins or "wings," which so contrasts with the elongation in the true *Prionoti*, at once arrests attention, but would not perhaps be sufficient alone to demand recognition by

generic differentiation were it not accompanied by others entirely independent of teleological adaptation. The comparatively unarmed and smooth head and the prominent jaws are such irrelative deviations from the typical Trigline type. The most noteworthy character, however, is that manifest not only in the pectoral fins and rays, but in their mode of insertion: the basis of insertion is much reduced, so that the free rays are quite removed from the under thoracic surface as well as ventral fins. In striking contrast with this is the condition in the *Prionoti* as well as *Trigla*, which have the free rays thickened and differentiated from the others by the tendency to decurvature forward, the wide base of attachment, and the insertion of the lowermost ray in front of the ventral's base.

The comparatively unarmed head is one of the most observable features. The only distinctive spines are the opercular and preopercular; the postorbital ridge is spineless and truncated behind and the other spines obsolete or not represented even by vestiges. It is the obsolescence of the preorbital spines that gives the peculiar physiognomy of *Colotrigla*.

The only species is the *Colotrigla stearnsii* originally described by Jordan and Swain in 1884^a as *Prionotus stearnsii*. In contrast with the characteristics of *Colotrigla* are those of *Prionotus* as now limited.

PRIONOTUS.

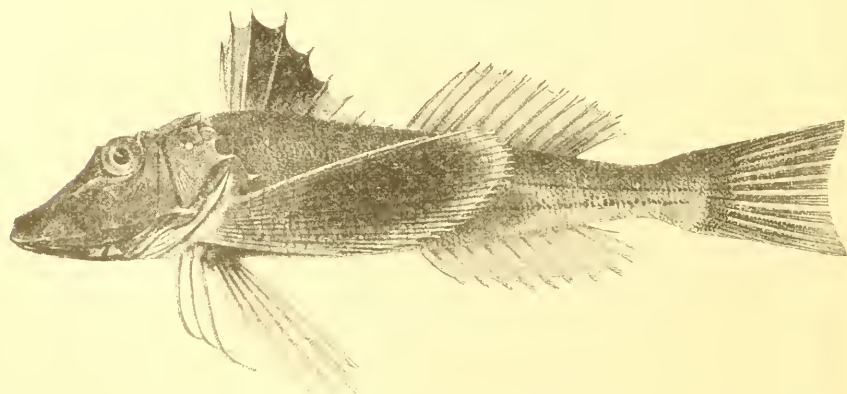


FIG. 2.—PRIONOTUS CAROLINUS. (AFTER STORER.)

Prionotus LACÉPÈDE, Hist. Nat. Poiss., III, 1802, p. 37 (*evolans*).

Ornichthys SWAINSON, Nat. Hist. Fishes, etc., II, 1839, p. 262 (*punctatus*).

Chriolac JORDAN and GILBERT, Proc. U. S. Nat. Mus., I, 1878, p. 374 (*evolans*).

Gurnardus JORDAN and EVERMANN, Syn. Fishes N. A., p. 2148 (*gymnostethus*).

Merulinus JORDAN and EVERMANN, Syn. Fishes N. A., p. 2149 (*carolinus*).

Trigla sp. LINNÆUS, 1758.

Triglids with the scales uniform, head with deeply sculptured bones, jaws mostly concealed under the projecting preorbitals and lower

^aProc. U. S. Nat. Mus., VII, 1884, p. 541.

shortest and closing within upper, supramaxillaries mostly retractile under preorbitals, teeth on jaws, vomer and palatines, spinous dorsal strong and highest at third or fourth spines, pectorals more or less elongated and extending half way or more to caudal, and free rays thickened and modified for progression as well as sensory functions.

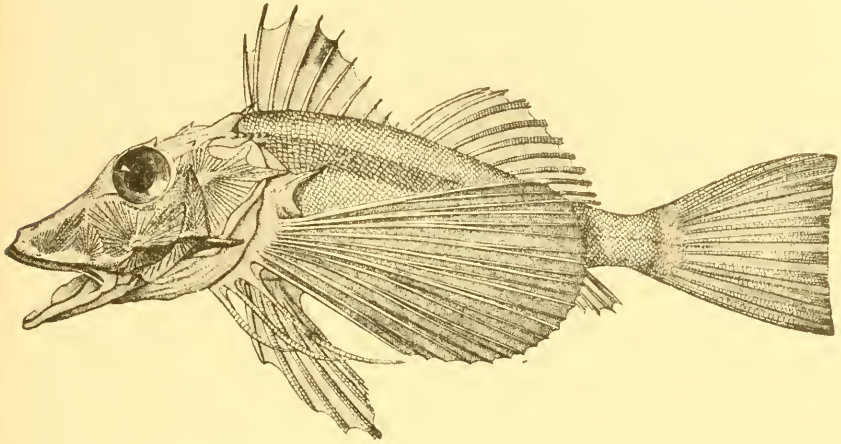


FIG. 3.—*PRIONOTUS STRIGATUS*. (AFTER CUVIER AND VALENCIENNES.)

The thick free pectoral rays are used in progression and their ordinary position is well illustrated in a figure published by Saville Kent in 1883, the best to be found in any work; it is an illustration of the

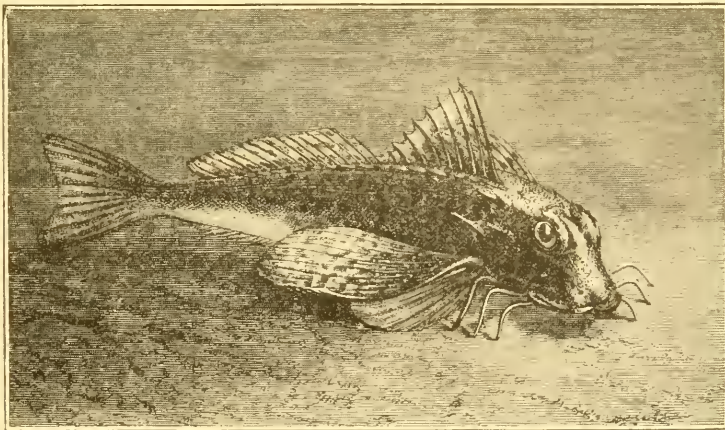


FIG. 4.—STREAKED GURNARD (*Trigla lineata*) IN CHARACTERISTIC TRIGLOID ATTITUDE. (AFTER T. SAVILLE KENT.)

“Streaked Gurnard” of England (*Trigla lineata*) and exactly reproduces the attitude of *Prionotus* as observed by myself, both in nature (along Long Island and Woods Hole) as well as in aquaria. The figures of Triglids here reproduced have been all conventionalized and give no idea of the carriage of the rays in life. That of *P. strigatus* is

here given, as no original illustration of it has been published in any American work.

The free rays of *Colotrigla*, inserted high up as they are and quite slender, could not be used in this manner.

There is another species of Triglid, referred to *Prionotus* by previous authors and much more nearly related to the typical species than the *P. stearnsii*, which exhibits a remarkable deviation from all the other species of that genus; it is the *P. alatus*. Each pectoral fin is divided into two parts, an upper of 7 or 8 rays diminishing downward, and a lower of 6 or 7, whose uppermost ray is very long and the lower rapidly graduated downward. This singular character is worthy of subgeneric recognition at least, and the subgenus may be named *Fissala*.