

## Fam. 9. LIOGNATHIDÆ.

The Liognathidæ comprise the four genera *Gerres*, *Pentaprion*, *Liognathus*, and *Gazza*. The three last-named appear to be exclusively marine and are confined to the tropical Indo-Pacific. *Gerres* is found in all tropical seas, and most of the species appear to freely enter fresh water.

## 1. GERRES, Cuv., 1829.

*Gerres*, Günth. Cat. Fish. iv. p. 252 (1862).

*Eucinostomus*, *Ulema*, *Xystæma*, and *Gerres*, Jord. & Everm. Bull. U.S. Nat. Mus. xlvii. 1898, pp. 1367, 1371, 1372, and 1373.

Body compressed; scales large or moderate, cycloid or finely ctenoid. Lateral line complete. Mouth moderate, very protractile; maxillary exposed; jaws equal anteriorly; bands of small villiform teeth in jaws; palate toothless. Præorbital and præoperculum entire or finely serrated. A single dorsal with IX 10 rays, with a scaly sheath at the base; second or third dorsal spine the longest; anal with II-III 7-9 rays; caudal forked; pectoral asymmetrical, pointed; ventrals a little behind the base of pectorals, with I 5 rays; a scaly process at base of spine of each ventral fin.

*Hab.* Tropical seas, entering rivers.

The American species of *Gerres* number seventeen, and although only a small proportion of these have been recorded from rivers or lakes in Mexico and Central America, we may feel quite sure that most of them are to be met with there. It is rather a difficult matter to know how to deal with such a group in a work on fresh-water fishes, but I have thought it more useful to prepare a synopsis of all the American species, based on an examination of the available material, rather than to give descriptions of the few definitely known to occur in the fresh waters of Mexico and Central America.

*Synopsis of the Species.*

## I. Præoperculum entire.

## A. Anal III 7.

1. Second anal spine  $\frac{1}{3}$ - $\frac{1}{2}$  the length of head; second dorsal spine a little longer than third; depth of body  $2\frac{1}{3}$ - $2\frac{1}{2}$  in the length.

5 or  $5\frac{1}{2}$  scales between lateral line and middle of dorsal fin . . . . . 1. *cinereus*.

4 scales between lateral line and middle of dorsal fin . . . . . 2. *simillimus*.

2. Second anal spine from less than  $\frac{1}{4}$  to slightly more than  $\frac{1}{3}$  the length of head; second dorsal spine a little shorter than third.

a. Præmaxillary processes (measured from anterior edge of upper jaw to their posterior extremities) more than  $\frac{1}{2}$  the length of head.

Snout a little shorter than eye; maxillary extending to below anterior margin of eye; depth of body  $2\frac{1}{3}$ - $2\frac{2}{3}$  in the length; 7 gill-rakers on the lower part of anterior arch . . . . . 3. *gula*.