

back darker; lateral line usually more or less blackish; spinous dorsal and membrane between second and third anal spines blackish.

Hab. Pacific Coasts of Tropical America, entering rivers:

Panama ^{1 2 3 5}; Rio Vauqueria, Ecuador ⁶.

Here described from four specimens from Panama, 210–260 mm. in total length.

Centropomus brevis is founded on a young example of *C. armatus*; and *C. atri-dorsalis* was described from a small specimen of this species from the Rio Vauqueria, N.W. Ecuador, with the exceptional number of seven branched rays in the anal fin.

10. *Centropomus altus*, sp. n. (Tab. VIII. fig 1.).

Centropomus armatus (non Gill), Vaill. & Boc. Miss. Sci. Mex., Poiss. p. 34, t. 1 ter, fig. 3 (1874)¹.

Centropomus ensiferus (part.), Bouleng. Cat. Fish. i. p. 369 (1895)².

Depth of body 3 in the length, length of head $2\frac{1}{2}$. Snout $1\frac{1}{2}$ as long as eye, the diameter of which is 6 in the length of head and equal to the interorbital width. Maxillary extending to below middle of eye, its greatest width $\frac{2}{3}$ the diameter of eye. Præorbital acutely serrated posteriorly. Posterior edge of præopercle acutely serrated; two strong spines at the angle; lower edge with only 4 or 5 distinct serræ. Subopercular flap extending a little beyond the vertical from origin of dorsal. 14 gill-rakers, including 3 rudiments, on the lower part of anterior arch. 50–52 scales in a longitudinal series, 7 or 8 between middle of second dorsal and lateral line. Dorsal VIII, I 9–10; spines moderately strong, the third or fourth the longest, a little more than $\frac{2}{5}$ the length of head. Anal III 6; third spine $\frac{4}{5}$ the length of the second, which is $\frac{1}{4}$ the length of the fish. Pectoral $\frac{3}{5}$ the length of head. Ventrals extending a little beyond the vent, which is situated at $\frac{3}{5}$ the distance from base of ventral spine to origin of anal. Caudal peduncle $1\frac{1}{2}$ as long as deep. Silvery, back brownish; lateral line not blackish; vertical fins more or less dusky.

Hab. Atlantic Coast of Panama, Colon (*Boucard*²).

The description is based on a single specimen, 170 mm. in total length. Two others, of 85 and 95 mm., agree with it in all essential characters, but have, of course, a shorter snout, larger eye, more elevated spinous dorsal and longer anal spines. The number of scales and fin-rays in these is included in the description.

C. altus is the Atlantic representative of *C. unionensis*, from which it differs especially in the deeper body, the more strongly armed præoperculum, and the longer second anal spine, projecting further beyond the third.

11. *Centropomus unionensis*.

Centropomus unionensis, Bocourt, Ann. Sc. Nat. (5) ix. 1868, p. 90¹; Vaill. & Boc. Miss. Sc. Mex.,

Poiss. p. 37, t. 1. fig. 3 (1874)²; Steind. Sitzb. Ak. Wien, lxxiv. i. 1876, p. 49³; Bouleng.

Cat. Fish. i. p. 370 (1895)⁴; Jord. & Everm. Bull. U.S. Nat. Mus. xlvii. 1896, p. 1122⁵;

Gilb. & Starks, Mem. Calif. Ac. Sci. iv. 1904, p. 90, t. 13. fig. 27⁶.

Depth of body $3\frac{1}{2}$ in the length, length of head $2\frac{3}{5}$. Snout $1\frac{3}{4}$ as long as eye, the diameter of which is 7 in the length of head; interorbital width 6 in the length of head. Maxillary extending to below the middle of eye, its greatest width $\frac{2}{3}$ the diameter of eye. Præorbital feebly serrated posteriorly. Posterior edge of præopercle feebly serrated; two moderately strong spines at the angle; lower edge with a few serræ. Opercular flap extending slightly beyond the vertical from the origin of dorsal. 14 gill-rakers, including 3 rudiments, on the lower part of the anterior arch. 52 scales in a longitudinal series, $7\frac{1}{2}$ between middle