

EMPETRICHTHYS gen. nov. (Plate V.)

(Cyprinodontidæ).

Intestines short,  $1\frac{1}{2}$  times length of body. Teeth conic, fixed, in each jaw arranged in a band consisting of two or three rows, the outer series somewhat enlarged. Ventrals absent. Branchiostegals five. Both upper and lower pharyngeals greatly enlarged and bearing molar teeth, tubercular in shape. The lower pharyngeals are firmly attached to the ceratobranchials of the fourth arch, while the massive epibranchials of the same arch serve to connect them firmly at the sides with the pharyngobranchials above. The fourth branchial arch bears normal gills. Its median portion is produced anteriorly, forming a triangular extension of the lower pharyngeals in the middle line. On the oral surface this is indistinguishable from the pharyngeals proper, and like them bears molar teeth.

Scales normal, large, regularly imbricated, nowhere tubercular or ridged.

This genus seems most nearly allied to *Orestias*, of which numerous species have been described from lakes in the high Andes of South America.

***Empetrichthys merriami*, sp. nov.** (Plate v.)

*Type locality*.—Ash Meadows, Amargosa Desert, on boundary between California and Nevada.

In form and general appearance much resembling the mud minnow (*Umbra limi*), though somewhat deeper and more compressed.

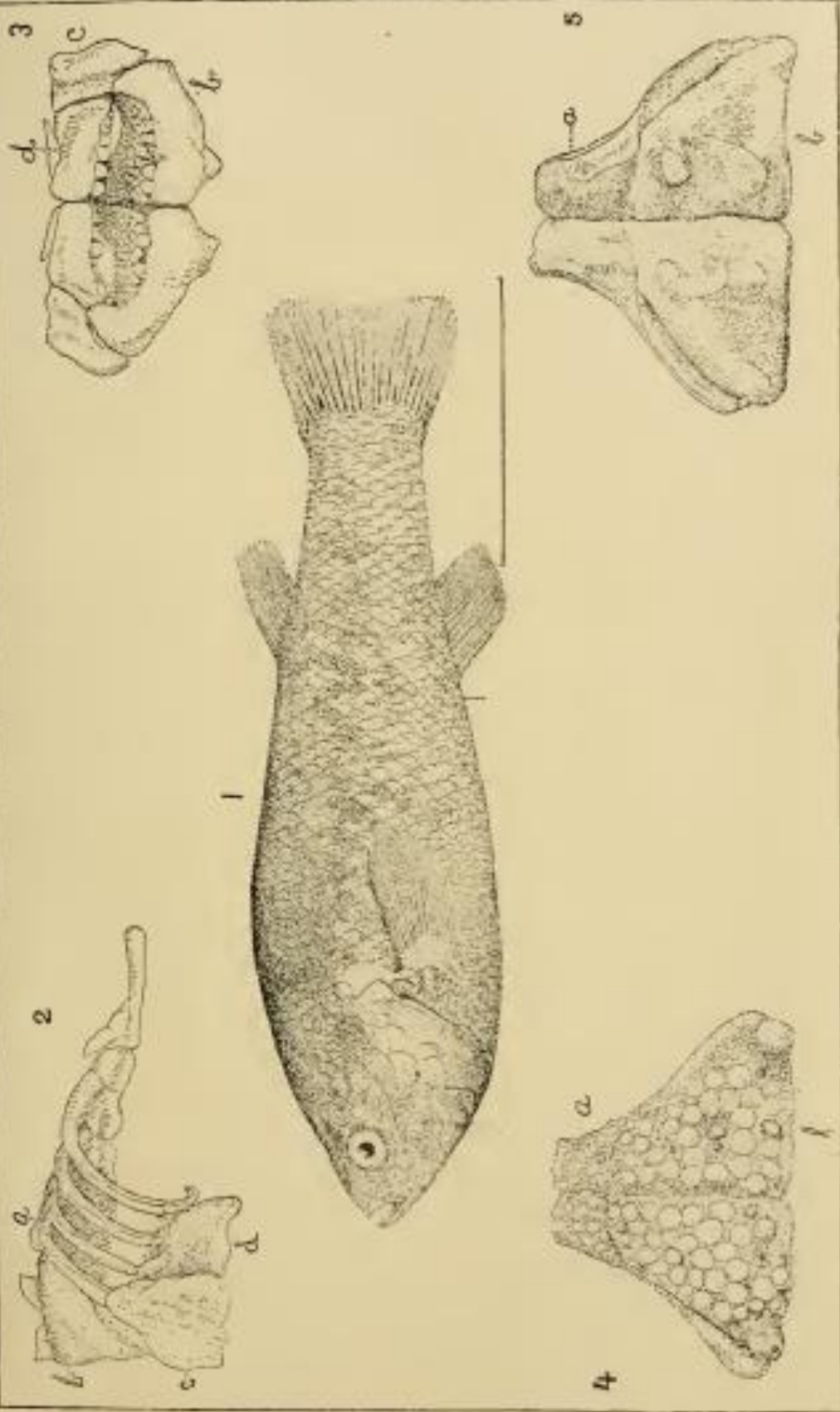
Head compressed, its upper surface slightly convex. Mouth very oblique, with a distinct lateral cleft, the maxillary free at tip only, reaching slightly behind front of eye. Length of gape (measured from tip of snout to end of maxillary),  $3\frac{1}{2}$  in head; interorbital width,  $2\frac{1}{2}$ ; length of snout (from front of orbit to middle of upper jaw),  $3\frac{3}{4}$ . Eye small, its greatest oblique diameter 5 to  $5\frac{1}{2}$  in head.

Distance from front of dorsal to middle of base of tail equals one-half its distance from tip of snout. The dorsal begins slightly in advance of anal, and ends above its posterior third. Its greatest height equals length of snout and eye.

Caudal truncate when spread. Pectorals broadly rounded, reaching half way to vent. D., 11 or 12 (13 in one specimen); A., 14 (from 13 to 15). Lat. l., 30 or 31, counted to base of caudal rays; 33 or 34 in all.

In spirits the color is dark brown above, sides and below lighter, often irregularly blotched with brown and white. The belly often appears checkered, having centers of scales brown and margins white, or the reverse. Fins all dusky, the basal portions of dorsal and caudal with elongated brown spots on the interradial membranes.

Several specimens were secured at Ash Meadows and in Pahrump Valley, Nevada.



*Engerichthys annectens* (Wm. et sp. nov.) Type.