

common species in Southern Ohio and Indiana. *Pomotis macrochira* Kirtland is based, in part at least, on *Lepomis pallidus* (Mitch.). *Ichthelis macrochira* Jordan (Man. Vert.) is a *Xenotis*, to which I have since given the name of *X. aureolus*.

* 7th species, Blue Sunfish, *ICTHELIS CYANELLA*, *Ichthele bleuatre*.

APOMOTIS CYANELLUS Raf.

Bryttus punctatus Cuv. & Val.

Calliurus longulus Girard.

Calliurus formosus Girard.

Calliurus longulus Bliss (*in lit.*—specimens identified).

Chænobryttus mineopas Cope.

Ichthelis melanops Raf. (*Chænobryttus melanops* Cope, not of Gill.)

Rafinesque's description, although erroneous in one or two particulars, refers to a species of *Apomotis*, and the name *cyanella* has priority over all others. As in nearly every case the "diameter" is made too small; evidently Rafinesque trusted his eyes in such cases instead of a tape-line.

† 8th species, Black-Eye Sunfish, *ICTHELIS MELANOPS*, *Ichthele œuil-noir*.

APOMOTIS CYANELLUS Raf.

Description somewhat erroneous, but characteristic.

* Body elliptical, elongate, diameter one-fifth, olivaceous gilt, crowded with irregular blue dots; brownish above; head elongate, lower jaw longer, cheeks with blue flexuose lines; spot oblong, blackish, nearly marginal; tail rounded, notched; anal fin very broad with 12 rays, whereof three are short spiny; pectoral fins very short.

A small species hardly three inches, called Blue-fish or Sun-fish. I found it on the Ohio at the falls. Appearing entirely blue at a distance. Head brown above; iris gilt; opercle curved; tail olive-blue with 24 rays. Dorsal fin brownish with 20 rays, whereof 10 are spiny, hardly any middle depression. Pectorals small trapezoidal, 12 rays. Thoracic one and five.

† Body oblong, diameter one-fourth, olivaceous, covered with blue dots, neck brown above, head large, mouth rather large, upper jaw longer; opercle with blue curved and longitudinal lines beneath; spot rounded, black at its base; fins olivaceous, tail bilobed; anal fin with three and nine rays; pectoral fins large oboval.

Length from 2 to 6 inches; common in the tributary streams of the Ohio, the Kentucky, Licking, Miami, &c., and even in small creeks. Vulgar names, Blue-fish, Black-eyes, Sun-fish, Blue-bass, &c. It has black eyes (pupils) like all the other species, but the iris is black also, with a silvery hue or ring. Dorsal fin with 10 and 10 rays, the spiny ones very short. Caudal 20. Pectoral 16. Thoracic 1 and 5 as usual, but the spiny ray is very short, as are also those of the anal fin.