
DESCRIPTION
OF A
NEW SPECIES OF DARTER FROM TIPPECANOE LAKE.

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During the summer of 1896, while collecting large quantities of *Percina caprodes* in Tippecanoe Lake, a single large specimen of darter was taken which could not be identified with any described species. I thought then and since, until recently, that it might be a hybrid between *Percina caprodes* and *Hadropterus aspro*, because of evident intermediate characters. After holding the specimen for six years with the hope that other specimens might be taken, I published a note in the Proceedings of the Indiana Academy for 1902 (pp. 115-116), under the title "An aberrant *Etheostoma*," in which I briefly described the specimen and compared it with *Percina caprodes* and *Hadropterus aspro*. Last summer the sandbar on the south side of the east end of the lake was again extensively seined, and among some 500 or 600 *Percina caprodes* 2 small specimens—probably that summer's brood—were taken which, beyond a doubt, are similar to the specimen taken six years previously in a part of the lake 3 or 4 miles distant. Among a peck of darters from a part of Tippecanoe Lake that the labels do not indicate, collected in 1898 by some students of the Indiana University Biological Station, I found 3 similar specimens, making 6 specimens of this type from different parts of the lake. There can no longer be any doubt that we have to do with a distinct species, and, so far as I can determine, the species is undescribed.

This new species is among the most beautiful and largest of the darters. It gives me the greatest pleasure to name the species for Dr. Barton Warren Evermann, ichthyologist of the U. S. Fish Commission.

Hadropterus evermanni Moenkhaus, new species.

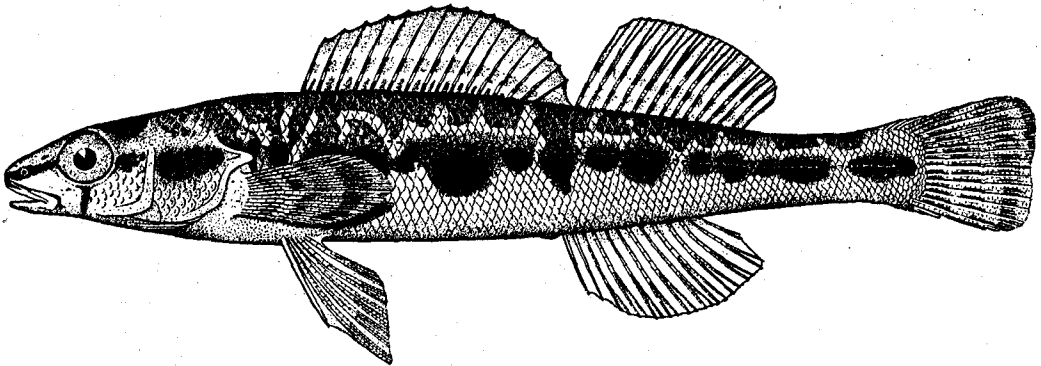
Head 4 in length; depth 6.16; eye 3.8 in head; snout 3.95; D. xvi, 14; A. ii, 11; scales 8-79-9.

Form of body much like that of *H. aspro*, rather elongate, fusiform, somewhat compressed posteriorly, but less pointed anteriorly; mouth moderately large, maxillary reaching pupil; cleft of mouth almost horizontal, lower jaw included; eye large, about equaling snout; interorbital rather broad, flat; gill-membranes free from isthmus and separate; opercular spine and flap well developed; preopercle entire. Scales ctenoid; nape with fewer, smaller, embedded scales; median ventral line in one specimen provided with a row of closely set, slightly enlarged scales; a second specimen has 3 or 4 such scales, remaining specimens without scales; breast naked; opercle with closely set ctenoid scales slightly smaller than those on body; cheeks with fewer, still smaller, embedded ctenoid scales; lateral line complete, slightly arched over pectorals. Pectoral and ventral fins about equal in length, measuring 1.4 in head; origin of spinous dorsal one-third distance between snout and base of caudal; origins of soft dorsal and anal equally distant from snout, the distance from snout 1.56 in body length; spinous dorsal somewhat longer than soft dorsal, the latter longer than anal; these 3 fins about the same height, the order of their height in an ascending series being spinous dorsal, soft dorsal, anal; their heights being, respectively, about 2.5, 2.2, and 2.1 in head.

The color pattern suggests an intermediate type between *Percina caprodes* and *Hadropterus aspro*; side with about 19 large, distinct black blotches, which, especially along the middle region, are alternately larger and smaller, these often being the ventral ends of more or less well-developed transverse bars; dorsal side with a series of large quadrate blotches alternating and anastomosing with variously developed transverse bars; color pattern of the transverse type rather than the longitudinal characteristic of *H. aspro* and *H. macrocephalum*. In the older individual this dorsal pattern becomes more diffuse and less regular; dorsal two-thirds of opercle and upper part of cheek black; a distinct black band extending downward and another, more diffuse, forward from the eye; both dorsals and caudal fin barred; pectoral indistinctly barred; ventrals and anal plain; a black spot at base of caudal.

Table of measurements and counts of all the specimens.

No. of specimen.	Length of body.	Head in length.	Depth in length.	Eye in head.	Snout in head.	Maxillary in head.	Interorbital in head.	Pectoral in head.	Ventrals in head.	Spinous dorsal from snout.	Soft dorsal from snout.	Anal from snout.	Dorsal fin.	Anal fin.	Scales.
	<i>mm.</i>														
1	77.00	4.05	6.16	3.80	3.95	3.58	4.63	1.36	1.31	3.20	1.60	1.64	XVI, 14	II, 11	8-79-9
2	49.00	3.82	7.00	3.65	4.00	3.65	5.13	1.28	1.42	2.88	1.58	1.58	XIV, 14	II, 10	9-94-12
3	50.00	3.84	6.25	3.42	3.82	3.71	5.20	1.30	1.32	2.92	1.66	1.61	XV, 14	II, 10	9-84-11
4	55.00	3.93	6.11	3.79	4.66	4.66	4.66	1.21	1.40	3.23	1.57	1.62	XIV, 13	II, 11	8-82-11
5	49.00	3.92	6.30	3.90	4.17	4.17	4.17	1.56	1.39	3.06	1.58	1.58	XIV, 15	II, 11	9-82-12
6	51.00	3.92	.....	4.30	4.33	4.23	5.20	1.30	1.44	3.18	1.58	1.59	XIV, 13	II, 11	8-84-11
Average .....	.....	3.91	6.36	3.81	4.14	4.00	4.83	1.33	1.38	3.08	1.59	1.60	.....	.....	82



Hadropterus cvermanni Moenkhaus, new species.

The species is most closely related to *Hadropterus aspro* and *Hadropterus macrocephalum*. From the former it differs most strikingly in the color pattern, especially that of the dorsal side, which is transverse in type rather than longitudinal, and in the greater number of scales, which in this species are ctenoid instead of cycloid, on the cheeks and opercles.

Type, No. 9785, Museum Indiana University; cotype, No. 9786, Museum Indiana University; cotype, No. 50834, U. S. National Museum; cotype, No. 2742, U. S. Fish Commission; cotypes have also been deposited in the British Museum of Natural History and in the Museum of Leland Stanford Junior University.

The drawing was made from the largest specimen, which is taken as the type. This has an unusual number of dorsal spines, 16, as will be seen from the table of counts.