tilated in the dissection by the time the abnormality was noticed that it was out of the question to get a photograph of all the appendages in position. I, therefore, preserved the appendages and give herewith a drawing of the posterior view of both.

The first and second pairs of appendages were modified in the usual way and in no way differed from the corresponding appendages in the normal males of the same species. The additionally modified third pair



Fig. 1.



Fig. 2.

resemble in plan almost exactly the second pair. The exopod and the segmented flabellum of the endopod are much less reduced and much more extensively provided with feathered setæ than the second pair. They are of about the same size and in position converge and fit against the second pair of appendages much in the same manner that these do against the first. Whether they were in any way functional I am, of course, unable to say.

# c. Description of a New Species of Darter from Tippecanoe Lake.

#### W. J. Moenkhaus.

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 last year published a note in the Proceedings of the Indiana Academy\* under the title "An Aberrant Etheostoma" in

<sup>5</sup> For 1902, pp. 115-116.

which I briefly described the specimen and compared it with Percina caprodes and Hadropterus aspro. Last summer the sandbars on the south side of the east end of the lake were again extensively seined and among some 500 or 600 Percina caprodes two small specimens—probably that summer's brood—were taken which, beyond a doubt, are similar to the specimen which had been taken six years previously in a part of the lake three or four 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 three similar specimens, making in all six 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, icthyologist, of the U. S. Fish Commission.

#### HADROPTERUS EVERMANNI Moenkhaus.

(New Species.)

Head 4; depth 6.16; D. XVI, 14; A. II, 11; scales 8-79-9.

The form of the body is much like that of *H. aspro*, rather elongate, fusiform, somewhat compressed posteriorly, but less pointed anteriorly. Mouth moderately large, maxillary reaching to the pupil; the 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.

All 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 three or four such scales, the remaining specimens are without scales; the breast naked; opercle with closely set ctenoid scales slightly smaller than those on the 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 one and one-third in head; origin of spinous dorsal one-third the distance between the snout and base of caudal; origin of the soft dorsal and the anal equidistant from the snout, one and one-half in body length; the spinous dor-

<sup>8-</sup>Academy of Science.

sal somewhat longer than the soft dorsal and the latter than the anal; these three fins are about the same height, the order of their height in an ascending series being spinous dorsal, soft dorsal, anal; their height equals two in head.

The color patterns suggest an intermediate type between *Percina* caprodes and *Hadropterus aspro*. Sides with about nineteen large, distinct black blotches which, especially along the middle region, alternate with smaller ones, these often being the ventral ends of more or less well developed transverse bars. The dorsal side with a series of large quadrate blotches alternating and anastomosing with variously developed transverse bars. The color pattern is of the transverse type rather than the longitudinal characteristics of *H. aspro* and *macrocephalum*. In the older specimen this dorsal pattern becomes more diffuse and less regular. Dorsal two-thirds of opercle and the upper part of cheek, black. A distinct black band extends downward and another, more diffuse, forward from the eye. Both dorsals and the caudal fin, barred, pectorals indistinctly so; ventrals and anal, plain. A black spot at the base of the caudal.

TABLE OF MEASUREMENTS AND COUNTS OF ALL THE SPECIMENS.

Number of specimen—					5	6	Av.
Length of body77.	.00 4	19.00	50.00	55.00	49.00	51.00	
Head in length 4	.05	3.82	3.84	3.93	-3.92	3.92	3.91
Depth in length 6	.16	7.00	-6.25	6.11	6.30		6.36
Eye in head 3	.80	3.65	3.42	3.79	-3.90	4.30	3.81
Snout in head 3.	.95	4.00	3.82	-4.66	4.17	4.33	4.14
Maxillary in head 3	.58	3.65	-3.71	-4.66	4.17	4.23	4.00
Interorbital in head 4	.63	5.13	-5.20	-4.66	4.17	5.20	4.83
Pectorals in head 1	.36	1.28	1.30	1.21	1.56	1.30	1.33
Ventrals in head 1	.31	1.42	-1.32	1.40	-1.39	1.44	1.38
Spinous D. from snout. 3	.20	2.88	-2.92	3.23	-3.06	3.18	3.08
Soft dorsal from snout. 1	.60	1.58	-1.66	-1.57	1.58	1.59	1.59
Anal from snout 1	.64	1.58	1.61	-1.62	1.58	1.59	1.60
Dorsal fin-XVI.14 XIV,	14	XV.1	4 XI	V,13	XIV,	15 XI	V,13
Anal fin-II,11 II,10 II,1	10 1	11,11	11,11	11.1	1		
Scales-7-79-9 9-84-12 9-8	84-11	8-8	2-11	9-82-13	2 8-8	4-11 8	32

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 etenoid instead of cycloid, on the cheeks and opercles.

Type No. 9785. Museum Indiana University.

Cotype No. 9786. Museum Indiana University.

Cotypes have also been deposited in the U. S. National Museum, U. S. Fish Commission, Museum of Stanford University and British Museum of Natural History.

## d. Myxomycetes of Lake Winona.

### FRED MUTCHLER.

With the advice and consent of Dr. C. A. King, I decided to take the time not required in teaching during the Station Session of 1902 in making a systematic study of the Myxomycetes of the lake neighborhood and this report shows the result of the work.

The season was one especially favorable for such a study, inasmuch as the frequent warm rains were very conducive to a luxuriant growth of all kinds of fungi.

This list is by no means complete, though I feel sure that it contains the majority of the forms indigenous to the region. Had it been possible to continue the study for another month I feel sure that the list would have been very materially increased, for myxomycetes were as plentiful at the close as they were at the opening of the station work.

Quite a number of specimens were collected on special excursions to Turkey Lake, Tippecanoe River, and North Manchester. I have included in this list species found on those trips that I did not find at Winona. The locality of such species is indicated in every case. All others were collected in the immediate neighborhood of the lake.

Didymium nigripes I found growing October 20, on Sphagnum that I brought to Clark University from the lake. On November 21 I noticed the same species growing on rabbits' dung that I had also brought from there.

My first attempt was to follow the classification and nomenclature as given in Lister's Mycetozoa. I soon found, however, that there are species here not given in that work, and I therefore used McBride's Myxomycetes of North America in connection with it.