II.

1. *Polyarthra platyptera* Ehrenberg. Few.

2. *Triarthra longiseta* Ehrenberg. Comparatively few in this vial. H. and G., II, 6.

3. *Ploesoma lenticulare* Herrick. Very many. It occurs in the lakes of Europe. In this country it has been reported only from Lake St. Clair, both in bottom and surface tows (Jennings). Zoöl. Anz., Bd. 10, 577.

4. *Brachionus militaris* Ehrenberg. Rare. I have found this an abundant species in ponds of western New York; it is a good sailor, preferring small seas, however. Authors have recorded the fact that the posterior spines are not in the same horizontal plane. This seems to be in relation to the habit of always turning on its long axis as it swims; they appear to bore their way through the water. H. and G., Sup. 82.

5. *Anuræa cochlearis* Gosse. Many, but far less numerous than in I.

6. *Notholca longispina* Kellicott. More abundant than in I.

III.

1. *Asplanchna priodonta* Gosse. Quite numerous. Jennings reports this fine species as abundant in Lake St. Clair, both at the surface and in deep water. H. and G., I, 123.

2. *Polyarthra platyptera* Ehrenberg. Several found.

3. *Triarthra longiseta* Ehrenberg. Numerous.

4. *Diaschisa valga* Gosse. Only one seen. It appears to agree well with the figure and description. H. and G., II, 77.

5. *Anuræa cochlearis* Gosse. Not common.

6. *Notholca longispeia* Kellicott.

Cladocera. A. Birge.

The following letter on the *Cladocera* of Turkey Lake has been received:

I enclose list of *Cladocera* in your bottles.

1. *Holopedium gibberum Zad.*, few; *Daphnia hyalina and retrocurva* Forbes. Much *algal* material, chiefly *Clathrocystis.*

2. *Holopedium gibberum D. retrocurva Sida. crystallina O. F. M., Diaphanosoma brachyurum* Liev.

3. *D. retrocurva*, extreme form of hemlet, like that of Lake Mendota, *Diaph. brachyurum.* Material looks as if it had been dried.

4. *D. retrocurva Diaph. brachyurum Ceriodaphnia lacustris* Birge. *Leptodora hyalina Lillj., Holopedium gibberum,* one specimen.

5. *Diaph. brachyurum, Sida crystallina, Cer. lacustris.*

6. *Holo. gibberum, Diaph. brachyurum, D. retrocurva, Algae* like No. 1.

7. *Diaph. brachyurum, D. retrocurva, Cer. lacustris, Leptodora hyalina.*

Great number of *Epischura lacustris,* far more than I ever saw before.

8. *D. retrocurva, Sida crystallina, Diaph., brachyurum.*

9. *Diaph. brachyurum, D. retrocurva,* not an extreme form, *Daphnia longiremis* Sars, *Sida crystallina,* very few.

Most of these species are predictable, that is, they would be found in almost any pelagic collection from this general region. I do not think that *H. gibberum* has been found so far south as this collection shows it. *Cer. lacustris* has not been found outside of Wisconsin before. The specimens are much more thin-shelled than those which I have seen before. It is remarkable that *D. retrocurva* is far more numerous than is *D. hyalina.* The reverse has been true in all lakes which I have studied, except Pine Lake, Wisconsin. In most of the bottles examined it was difficult to find *D. hyalina,* while the other species was quite plenty. It is to be noted that this species of Forbes is really a variety of *D. kahlbergiensis* Sch, but as the form is well marked and the full name intolerably long, I have quoted it by the varietal name only.

D. longiremis has been found before only in Lake Geneva, Wisconsin. In size, form and shape of head it exactly agrees with my figures and description in Trans. Wis. Acad.; Vol. IX, p. 299, pl. XI, figs. 4-10.

In all bottles there were many *Cyclops* and *Diaptomus,* and in one, as already noted, large numbers of *Epischura.*

I should gladly write more, but have been too busy for a longer report. Will send bottles to Marsh for Copepods and try to get up a full account later.

Very truly,

E. A. Birge.

Data of the lots of specimens numbered in the above letter:

I. Taken Aug. 28, 1895, between 1 and 2 P. M., from surface of water. Killed in picro-sulphuric acid. Preserved in 70 per cent. alcohol.

II. Taken June 27, 1895, at 8 A. M. Skimmed from surface of water, using No. 2 Bolting Cloth. Killed in picro-sulphuric acid. Preserved in 70 per cent. alcohol.

III. Taken Aug. 14, 1895, at 5 P. M. Depth of haul, 60 ft. Killed in picro-sulphuric acid. Preserved in 70 per cent. alcohol.

IV. Taken July 27, 1895. Skimmed from surface of water, using No. 2 Bolting Cloth. Killed and preserved in 10 per cent. formalin.

V. Taken June 27, 1895, at 8 A. M. Skimmed from the surface with a No. 2 Bolting Cloth net. Killed and preserved in 10 per cent. formalin.

VI. Taken July 29, 1895. Depth of haul, 25 ft. Killed and preserved in formalin.

VII. Taken July 12, at night. Surface skimming, using a No. 2 Bolting Cloth net. Killed and preserved in 10 per cent. formalin.

VIII. Taken Aug. 1, 1895, at 9 A. M. Depth of haul, 10 ft. Killed in Flemming's fluid. Preserved in 70 per cent. alcohol.

IX. Taken Aug. 7, 1895, at 4 P. M. Depth of haul, 110 ft. Killed in Flemming's fluid. Preserved in 70 per cent. alcohol.

I, II, III, IV, V, VI, VII, VIII are from Turkey Lake or Lake Wawasee; IX is from Tippecanoe Lake.

Decapoda.

The following crayfishes from Turkey Lake were identified by Mr. W. P. Hay, of Washington, D. C.:

Cambarus blandingii acutus Girard.

Cambarus propinquus Girard.

Cambarus virilis Hagen.

On a Small Collection of Mollusks from Northern Indiana. By R. Ellsworth Call, M. D., Ph. D.

The mollusks herewith reported on were collected by the members of the Indiana University Biological Station during the past summer. The region is sufficiently well characterized in the report of Dr. Eigenmann, the Director of the Station, and it is necessary here only to allude to its salient features.

The locality is on the divide separating the drainage areas of the Great Lakes and the Wabash River. In certain places the two drainages are practically identical and thus afford opportunity for the intermingling of the two faunas. The lakes and streams are all well within the limit of glaciation in former ages and their beds and shores are boulder-covered or lined. The bottoms of shallower portions of the lakes are gravelly or muddy, while the deeper portions are either muddy or sandy. Corresponding with these physical factors are certain features of molluscan distribution and modification, which it is the object of these notes to adduce and emphasize.

Unionidæ.

Anodonta decora Lea. Two specimens of this form were found, both of which were obtained in Syracuse Lake. The specimens were very much more fragile and far thinner than is usual for this species, even when secured from lakes and ponds. The epidermis is quite pale, the lines of growth crowded, and the nacreous deposit very white. Forms from sluggishly flowing streams in southern Indiana and elsewhere in the Ohio basin are very highly colored, both interiorly