

ROTIFERA. D. S. KELLICOTT.

I received in September three vials of plankton, from Mr. Chancey Juday with the request to report upon the *Rotifera* found therein. The vials were marked and described as follows: "I. Contains plankton caught at the surface of the water of Wawasee Lake, Indiana, by using a plankton net; taken August 28, 1895; killed in picro-sulphuric acid; washed in 35 per cent. and 50 per cent. alcohol and preserved in 85 per cent. alcohol." "II. Depth of haul, 60 feet (Wawasee); depth of water, 65 feet; taken July 20, 1895; killed in Flemming's Fluid; washed in 35 per cent. and 50 per cent. alcohol, and preserved in 85 per cent. alcohol." "III. From Tippecanoe Lake; depth of haul, 110 feet; depth of water, 117 feet; taken August 7, 1895; killed in Flemming's Fluid; washed in 35 per cent. and 50 per cent. alcohol, and preserved in 85 per cent. alcohol."

I find that the *Rotifera* were much better preserved in II and III than in the first. The illoricate species in I were scarcely recognizable; in fact three species found in this vial I have not been able to place more nearly than the probable genus. Those in II and III have all been satisfactorily identified. While the whole number recognized in these collections is not large some interesting facts are brought to light. Three species not hitherto reported from this country are among the number, and others rarely. It is certain that the *rotiferal* fauna of these lakes is rich and will yield many unique forms as a reward to any student who may be able to work in the region, to take and study them in the fresh state, and in all their varied relations and situations of residence.

I shall enumerate, with remarks, the species found in each haul separately, although it will cause some repetition, and in the order of Hudson and Gosse's *Rotifera*, without citing the bibliography farther than a description where the partial bibliography, however, will usually be found.

I.

1. *Floscularia mutabilis* Bolton. Not infrequent. It is quite unexpected that a floscule should occur among pelagic species, and yet there are four known species of these *Rhizota* that cut loose and become sailors. Mr. H. S. Jennings has found three of them in St. Clair and lakes of Michigan. Of this one he says: "Very common in towings from Lake St. Clair, either at the surface or near the bottom. Hudson and Gosse, I, 56.

2. *Æcistes brachiatus* Hudson. A large number were found, but it was impossible to identify them surely. The tube conforms to the figures and descriptions of that of *Brachiatus*; it is cylindrical, smooth, compact, perfectly hyaline,

often containing a slight amount of adhering matter, often containing several eggs, which, however, are not so elongate as the figures represent those of *Brachiatus*; the long narrow foot and the long non-retractile antennæ agree well with the type. I am pretty confident that it is *Brachiatus*, yet I am surprised to find so many of them, or any of them, in a surface tow, as it is evidently normally anchored; perhaps they were attached to floating algae which apparently are not uncommon in the lake. H. and G., I, 83.

3. *Philodina megalotrocha* Ehrenberg. Numerous. I have often taken it at a distance from land, particularly in shallow lakes or among floating algae. H. & G., I, 101.

More than one species of *Rotifer* which could not by any means be identified were present.

4. *Sacculus viridis* Gosse. Rare. H. and G., I, 124.

5. *Polyarthra platyptera* Ehrenberg. Many seen. The serrations on the edges of the broad plates are coarse and more distant than in the type. H. and G., II, 3.

6. *Dinoharis pocillum* Ehrenberg. One individual. It is a bottom feeding species and rarely occurs in a surface tow. H. and G., II, 71.

7. *Dinoharis collinsii* Gosse. One. Bottom feeding species. It has not been observed in this country before. No species exceeds it in beauty. I could not make out the pair of spines on the foot and the edge of the lorica appears to be set with a row of small spines, rather than being serrate as described and figured. H. and G., II, 72.

8. *Anuraea cochlearis* Gosse. Exceedingly abundant. Our form differs slightly from Gosse's figure since the mesal ridge of the lorica does not extend straight from end to end, but has a decided angle at each pair of facets, the anterior median one is not divided. H. and G., II, 124.

9. *Notholea longispina* Kellicott. Not rare. This rotiferon was first known in the water supplies of cities along the Great Lakes. Soon after it was described in 1879, it was found in Olton Reservoir, Eng., and then by Imhof in the Swiss Lakes. More recently it has been found in lakes of America. Mr. Levic reports finding the eye spot double, or so far separated as to be regarded as two eyes. I have seen several in these collections with the same peculiarity.

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. *Anurva cochlearis* Gosse. Many, but far less numerous than in I.
6. *Notholea 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 valya* Gosse. Only one seen. It appears to agree well with the figure and description. H. and G., II, 77.
5. *Anurva cochlearis* Gosse. Not common.
6. *Notholea longispina* 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.