

A PRELIMINARY REPORT ON THE VERTICAL DISTRIBUTION OF WATER MITES IN GREEN LAKE, WISCONSIN

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While geographical distribution, altitude distribution and distribution according to the character of the bodies of water in which they have been found, have been studied, the vertical distribution of water mites has received little attention. Distribution in the lakes of different elevations has been studied in the Swiss and Scandinavian mountain regions. In this country, little has been done beyond systematic work; data on distribution have been confined almost entirely to horizontal distribution. In this connection, it is interesting to note that Professor F. C. Baker, in his studies on the life in Oneida Lake, New York, records the hydrachnids at varying depths and for different bottoms in a shallow bay.

The author has been fortunate enough to receive from Professor Chauncey Juday, of the Wisconsin Natural History Survey, some collections made at different depths in Green Lake, in eastern Wisconsin. This lake is remarkable among lakes in the glaciated plains regions in its great depth, which reaches 230 feet.

Collections were made in August, 1921, and were in three lots: at depths from the surface to five meters; from five meters to ten meters; and from ten meters to twenty-nine meters. Thirteen genera were represented, most of them common ones. About three hundred and thirty-five individuals were present; the species have not yet been fully determined. As was to be expected, the genera were not found in the same ratios as in ordinary collections made by dragging a cone net through the vegetation of the surface waters, where *Arrhenurus*, *Piona*, *Limnesia*, *Unionicola* and the "red mites", like *Diplo-dontus*, usually predominate. However, *Limnesia* led in number of individuals and was found at all depths, as were also *Arrhenurus*, *Neumania* and *Piona*. *Lebertia* and *Torrenticola* were very abundant in the shallow places but were not found at the greater depths. *Mideop-*

sis occurred only below five meters. The list of the genera at different depths is given, together with the number of individuals.

A—From the surface to 5 meters.

Arrhenurus manubriator Mar., 10.
Arrhenurus scutulatus Mar., 5.
Arrhenurus fem. unidentified, 16.
Oxus, 1.
Frontipoda americana Mar., 2.
Lebertia, 72.
Torrenticola, 50.
Koenikea concava Wol., 17.
Neumania, 19.
Piona, 13.
Unionicola, 1.
Limnesia, about 50.
Sporadoporus, 11.

B—From 5 meters to 10 meters.

Arrhenurus manubriator Mar., 3.
Arrhenurus scutulatus Mar., 2.
Arrhenurus fem. unidentified, 9.
Koenikea concave Wol., 7.
Mideopsis, 5.
Neumania, 4.
Piona, 5.
Limnesia, 36.
Pionopsis, 1.

From 10 meters to 29 meters.

Arrhenurus americanus Mar., 1.
Mideopsis, 2.
Neumania, 2.
Piona, 1.
Limnesia, 1.