

The Cladocera of the Canadian Arctic Expedition, 1913-18.

By CHANCEY JUDAY.

Wisconsin Geological and Natural History Survey.

The plankton collections secured by Mr. F. Johansen during the Canadian Arctic Expedition are of particular interest from the standpoint of the geographical distribution of the Cladocera because they were obtained from a region in which collections had not been made previously. These animals had been collected in Greenland and in Labrador on the east and in Alaska on the west, but the intervening region of Arctic North America was represented only by a single small collection; some freshwater plankton was collected at Fullerton, Northwest Territory, on the west side of Hudson bay, during the Neptune Expedition of 1903-4 and this material contained a single cladoceran, namely, *Daphnia pulex* (de Geer).

The present collections contain representatives of seven species of fresh water and two species of marine Cladocera. All of these species are well known and they have a wide range geographically; with one exception they are widely distributed not only in high Arctic latitudes but also in the north temperate zone. *Eurycerus glacialis*, as far as known, is confined to the Arctic regions.

The United States National Museum kindly loaned its collection of American Arctic Cladocera, and the two species of *Daphnia* represented therein have been included in this report.

FRESH WATER CLADOCERA.

Daphnia pulex (de Geer).

This species is cosmopolitan and circumpolar in its distribution. There are several varieties, at least two of which are represented in these collections. According to Lilljeborg, the species shows seasonal variations in its form, and the same appears to be true of this Canadian material.

The typical form of this species is most abundant in the collections. Specimens of the animal or of its ephippia were noted as follows:—

1. August 6, 1913. Teller (Port Clarence), Alaska. Ponds on higher tundra between big lake and sea. Few, various sizes.

2. June 4, 1914. Collinson point, Alaska. Waterhole on tundra. Ephippia.

3. June 25-26, 1914. Konganevik (Camden bay), Alaska. Margin of big lake among vegetation. Ephippia.

4. July 11, 1914. Collinson point, Alaska. In waterhole at beach, no vegetation. Temperature of water at 6 p.m., 58° F. Young, just hatched.

5. July 26, 1914. Martin point, Alaska. Big brackish lagoon about one-half foot deep, no vegetation. Temperature of water at 10 a.m., 51° F. Many, all sizes from newly hatched to full grown with parthenogenetic eggs.

6. August 14, 1914. Herschel island, Yukon Territory. Pond on north-east end of island. Abundant, some with ephippia or winter eggs.

7. June 25, 1915. Bernard harbour, Northwest Territories. Lakes and ponds on tundra, inland. Much vegetation. Many ephippia.

8. July 8, 1915. Locality, etc. as preceding. Young and ephippia.

9. July 15, 1915. Bernard harbour, Northwest Territories. Brackish pond near creek outlet. Large numbers of young, but none quite full grown. Enormous numbers of ephippia attached to filaments of algae.

10. July 19, 1915. Bernard harbour, Northwest Territory. Brackish pond near creek outlet. Many.