

mandibular palp is thrown off, and the use of the second pair of antennae as swimming instrument is discarded. Apparently both sexes occur there in equal numbers, the males attaining the largest size. As the summer passes their numbers decrease, and their size seems to depend upon the length of time the ponds they occur in carry any water.

I have examined a great number of specimens of this species from Greenland and arctic Eurasia, found in the museums in London and Scandinavia.

Genus ARTEMIOPSIS Sars.

Artemiopsis stefanssoni.

Artemiopsis Stefanssoni JOHANSEN, (Preliminary diagnosis in *Canadian Field-Naturalist*, vol. xxxv, No. 2, p. 29, issued June 22, 1921).

This species was secured in one of the three large tundra ponds situated at about 100 feet elevation on one of the gravel ridges near the coast of Bernard harbour, south of our winter house. I collected a number of mature males and females here, on October 6, 1915, by cutting a hole in the ice of the pond.

IMMATURE STAGES

On July 3, 1916, I secured, in the same pond, fourteen larvae presumably of the same species, measuring from two to three mm. in length. They were in the rictanaplus and post-mentanaplus stage, the youngest of them having large second pair of antennae, and the abdomen (tail) not fully developed, though both the paired eyes, and 10 to 11 pairs of foliaceous legs were present. In the largest specimens the second pair of antennae were comparatively shorter, and all the nine joints of the tail (abdomen) to be seen. As even the mature specimens of the genus can hardly be distinguished from the genus *Branchinecta*, except in the sexual characters, it follows, that the larvae are practically of the same appearance as *B. paludosa* of corresponding age, so I do not find it necessary to figure them. From *B. paludosa* of the same size they are distinguished by having more of the adult characters (foliaceous legs developed, second pair of antennae shorter, etc.). The tail (abdomen) even when it has all its nine segments, is shorter and more solid-clumsy than tapering, with the cercopods (each of which ends in a long spine) less differentiated, as described under the adults.

They were found in numbers among the stones covered by detritus-mud and vegetation in the shallow bights of the pond, showing up by their pink or pale rose colour. They were rather sluggish in behaviour and fairly easy to catch by stirring up the water, which later that day (3.30 p.m.) had a temperature of 55° F. (Air 50° F., clear and warm).

Branchinecta paludosa was not observed in these three ponds (though both *Lepidurus arcticus* and other Entomostraca were common there (see p. 8), during our stay at Bernard harbour. At this time of the year *B. paludosa* at this locality had already reached such a size (1-1½ cm.) that the two sexes could be easily separated, thus five times the length of the *Artemiopsis* larvae. When it is further remembered (see above and below), that the full grown *Artemiopsis* were secured the preceding fall in this same pond, there can be little doubt but that these larvae belong to the genus *Artemiopsis*, and not to *Branchinecta*.

DESCRIPTION OF ADULTS

I give some illustrations (text figures 5-6) of the adults of this new and interesting species, which shows certain differences from the only other species hitherto known, *A. bungei* Sars, from eastern Siberia, sufficiently characteristic to support a new specific name. The males (text-figure 5) measured from 7 to 10 mm., and in spite of their small size they were fully mature, and continually copulating with the females. They had the eleven pairs of foliaceous legs, and