

Aphids of the Kong Oscars Fjord area, North East Greenland.

By

John S. Edwards

Western Reserve University, Department of Biology
Cleveland, Ohio 44106.

Almost all the species of aphids recorded from Greenland have been collected on the south and west coasts. The opportunity was therefore taken to examine the aphid fauna of the Kong Oscars Fjord area during the summer of 1961 as part of the activities of the Leicester University East Greenland expedition. I must express my gratitude to Dr. G. Halliday, Leicester University, leader of the expedition for the opportunity to participate.

One of the zoological objects of the expedition was to examine the composition of the air-borne fauna and its activity patterns by means of "yellow traps" (Moericke, 1951 *Eine Farbfalle für Kontrolle des Fluges von Blattläusen*. Nachr. Bl. Dtsch. Pfl.-Sch. Dienst 3, 23-5). These traps consist of a tin can approximately 40 cm in diameter, and 15 cm deep, painted black outside, and yellow within. They are filled to a depth of 2-3 cm with water, and insects attracted to the yellow are trapped at the water surface. Such traps have been used for quantitative studies of aphid migration (e.g. Edwards, J. S., 1964 *On the Use of Gut Characters to Determine the Origin of Migrating Aphids*. *Annals. Appl. Biol.* 55, 485-494). Though bulky, the yellow traps are light, and well suited to expedition use. Up to 25 yellow traps were in use more or less continuously during the period of the expedition from mid July to late August. Diptera and Hymenoptera were taken at the traps but no alate aphids were taken at any time. It was expected that autumn migrants should have appeared in traps in late August, when they were found on vegetation, and their total absence is taken to indicate that, at least during the autumn of 1961, the migrant population was insignificant. In the experience of the writer, the intermittent, light winds that occurred during the trapping period would not have prevented migratory activity. A careful watch was kept for alate aphids trapped on snow fields, but none were found.

Aphids were collected from vegetation at various localities adjacent to the coastline along Kong Oscars Fjord, and in the vicinity of Schaffhauserdalen.

I am most grateful to Mr. D. Hille Ris Lambers, who has examined previous aphid material from Greenland (D. Hille Ris Lambers Meddelelser om Grønland 139 Nr. 1, 1950. 159 Nr. 5, 1960) for checking my tentative identifications and for commenting on the material, and to Messrs T. Brown and P. Gibbs for able field assistance.

Three of the sixteen species known from Greenland were found in the area, namely *Nectarosiphon polaris* H.R.L., *Betulaphis pelei* H.R.L., *Pterocomma groenlandica* H.R.L., and an aphid not previously reported from Greenland, *Neokakimia saxifragae* Donc. and Stroyan were collected.

1. *Nectarosiphon polaris* H.R.L. was present on clumps of *Cerastium alpinum* throughout its altitudinal range, though its density varied greatly. They were densest on weak and senescing plants. All apterous stages were able to negotiate the sticky glandular hairs of the plant, but alates were occasionally trapped. The colour of this species varied from a light yellow green to a jade green.

2. *Betulaphis pelei* H.R.L. Apterous virginoparae were found generally distributed on *Betula nana*, but never in aggregations. The hitherto unknown male and oviparous forms of this species were collected.

3. *Pterocomma groenlandica* H.R.L. Apterous virginoparae present on *Salix arctica* at all localities examined but patchy in distribution, suggesting a very sparse colonisation perhaps related to the distribution of persistent snow patches in Spring. No alatae were found until late August.

4. *Neokakimia saxifragae* Donc. and Stroyan. A single apterous male taken from *Saxifraga oppositifolia* near Skeldahl on 1. IX. 61, was identified by Mr. Hille Ris Lambers as *N. saxifragae* and is a new aphid to the Greenland fauna.

The following plant species were systematically examined for aphids, with negative results: *Papaver radicum*, *Arctus alpina*, *Carex* spp., *Oxyria digyna*, *Chamaenerium latifolium*, and *Erigeron humilis*.
