A description of the nymph of Baëtis macani Kimmins.

By

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Material: 7 cast skins and two whole nymphs of *Baëtis macani Kimm.* from Mount Saana in the Kilpisjärvi area in the northwest corner of Finland; three whole nymphs from Lake Heinola in Central Finland (prov. Tavastia australis); and one whole nymph from Erken Lake in Sweden (Upland).

Markings: Figure 1 shows the pattern on the abdominal terga of a specimen that showed contrast between light and dark areas rather better than most. On three of the others the light areas were not so light; on one the light areas were not so light and the dark areas not so dark; one was rather uniformly dark; and the three specimens from Lake Heinola were rather uniformly light. When the pattern can be made out, it is quite distinctive.

Gills: These (fig. 2) are more elongate than in any other species of *Baëtis* known to me.

Legs: The outer and inner margins of femora, tibiae and tarsi (the leg lying as in fig. 3) bear rather small pointed spines. Similar spines occur on the surface and all are of nearly the same size. In all other species of *Baëtis* known to me (Macan 1950, 1957) there is, along the top of the femora, a row of spines distinctly longer than those anywhere else, and the spines along the inner margin of the tarsi are longer than those along the outer, if there be any in this position at all. The legs are somewhat more slender than those of other species.

Other features: The tails are unusually long, though these rarely supply a good diagnostic character because the tip breaks off so easily. One specimen 8.5 mm long had outer tails 7 mm long. The specimens ranged in length from 7—9 mm. The mouthparts were rather like those of *Baëtis vernus*.

The shape of the gills, the armature of the legs, and the pattern, when it is evident, make this one of the most distinct species in the genus *Baëtis*. The spines of the legs recall those of *Cloëon*.

Ecology and distribution. On 16 August, 1956, the last day of the excursion that followed the thirteenth congress of the International Association of Limnology, I was on Mount Saana above Kilpisjärvi, near the tip of the north western arm of Finland. In a small lake with large boulders on the bottom, I saw nymphs of *Baëtis* and soon became aware that many of these were coming to the surface for ecdysis. I spent about an hour catching them and watching

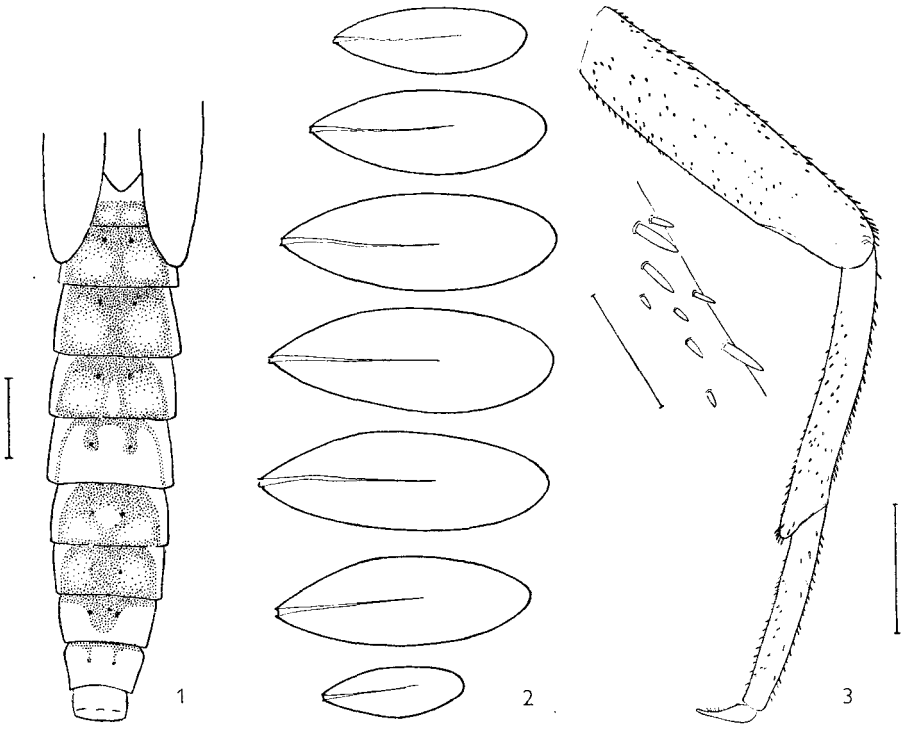

Fig. 1—3. *Baëtis macani* Kimm., nymph. Fig. 1. Abdomen from above. Scale line is 1 mm. long. Fig. 2. Set of gills. The largest gill is 1.1 mm. long. Fig. 3. Right front leg. Scale line is 0.5 mm. long. Below: spines from near the upper margin of the femur. Scale line is 0.1 mm. long.

till adults emerged, at the end of which time all the tubes I had with me were full. Later Dr. H.B.N. HYNES gave me some nymphs that he had collected further south in Finland, and Dr. G. PLESKOT gave me a specimen from Erken Lake. My thanks are due to these two colleagues. As usual, when confronted with an adult difficult to identify, I sought assistance from Mr. D. E. KIMMINS and on this occasion I have to thank him for the kind dedication also.

THIENEMANN brought back from a lake near Abisko in Swedish Lapland some specimens which ULMER (1943) identified as *Baëtis vernus*, but from the shape of the gill (Abb. 26) I feel little doubt that it was *B. macani* not *B. vernus*. The species is probably, therefore, widespread in lakes in Scandinavia. TIENSUU (1939) described *Baëtis saliens* from lakes, but Mr. KIMMINS writes that this is a different species.

Incidentally the adults in my tubes spent the day after emergence and capture in a rucksac on top of a bus on a hot sunny day. That night and the whole of the next day were spent on a train, then two days on a ship were followed by a train journey and a night at home. The specimens were alive

when I opened the tubes in the laboratory next morning. I did not note on which day they became imagines. This seems a remarkable feat of survival for any species and particularly one collected on a mountain in the Arctic circle. I did not measure the temperature of the water but observed that the nymphs were so sluggish that I could easily catch them with a pipette.

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