

## Lists of the insect types in the Zoological Museum, University of Helsinki. 10. Ephemeroptera.

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The types of 8 taxa in the species group within Ephemeroptera are listed. References to original descriptions are given and, when the taxon is presently known under a different name, to an explanatory work. Additional information is given concerning J. A. Aro, and the loss of some of his types.

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This paper lists 7 species and 1 subspecies of Ephemeroptera, the types of which are deposited in the Helsinki Museum. Unless otherwise indicated, the specimens are dry, pinned adults.

Some of the species were described by Johan Emil Aro (1874-1928), a school teacher in Viipuri/Viborg (today Vyborg in the USSR), who described his species in Finnish; in his earlier work (Aro 1910) he did not mention anything about the material he had used. It has been possible to find from later works (Aro 1928, Tiensuu 1939) information concerning possible type specimens, but it was decided to restrict this category to specimens that Aro himself has collected. In the Helsinki Museum there are older materials, which Aro at least had seen inasmuch as he listed his species from such provinces from which he had not himself collected; none of them has any label in Aro's handwriting.

Aro was killed in a traffic accident on 5.2.1928 (before his later work was finished), and no information could be found concerning the fate of his material. It seems either to have been disposed of immediately, or if preserved in the school where he had worked, or in the Viipuri Natural History Museum, then it was undoubtedly destroyed during the Second World War. For two species thus no type material seems to exist. However, it seems useful to give some information concerning these two species, too, especially since Aro's papers are not easily available.

### Baetidae

*saliens* Tiensuu 1939:112; *Baetis*. Syntype from USSR (Karelian ASSR): Sortavala, Tiensuu, 2.9.34. Listed as synonym of *Baetis subalpinus* Bengtsson, 1917 (Müller-Liebenau 1969).

### Heptageniidae

*convergens* Aro 1910:31; *Echdyurus*. 3 syntypes (in alcohol) from Finland: Pori, joen varrelta [by the river], 24.V.03, Aro; same except 1.VI.03; Liperi, pappilan ranta [vicarage shore], 16.VI.05. Listed as synonym of *Heptagenia fuscogrisea* (Retzius, 1783) (Tiensuu 1939).

*mirabilis* Aro 1910:30; *Cinygma*. 27 syntypes (all in alcohol) from Finland: Vihti, läätäkköjä Kirjavan rannassa [ponds on the shore of Kirjava], 21/5 1903, J. E. Aro (6 larvae in one tube, 2 in another); Kokemäki, joelta [by the river], 29.VII.04, Aro (1 larva); Sysmä, maantieltä Nuoramoisjärven kohdalla [on the road at Lake Nuoramoisjärvi], 14.VI.06, Aro (1 male); Kuopio, Tuovilanlahti, 6.VII.01, J. E. Aro (1 male, 1 larva); Kuopio, Tuovilanlahti, 2.VII.01, J. E. Aro (2 larvae); Tuovilanlahti, joesta puitten alta [from the river under trees], 8/VII 01, Aro (9 larvae); Tuovilanlahti, 14/VII 01 (4 larvae). Listed as synonym of *Arthroplea congener* Bengtsson, 1908 (Tiensuu 1939).

### Ephemerellidae

*brunnescens* Tiensuu 1935:16; *Melanameletus*. Holotype from USSR (Karelian ASSR): Sortavala, Tiensuu, 18.VI.1931. Listed as synonym of *Ephemerella karelica* (Tiensuu, 1935) (Puthz 1978).

*karelica* Tiensuu 1935:21; *Eurylophella*. 10 syntypes (nymphs, in alcohol) from USSR (Karelian ASSR): Kurkijoki, kirkonkylän läpi virtaavasta savisesta ojasta [from a clayey ditch running through the church village], 30/7 1934. Leg. L. Tiensuu. Listed as *Ephemerella karelica* (Tiensuu, 1935) (Puthz 1978).

### Polymitarciidae

*ladogensis* Tiensuu 1935:8; *Polymitarcys*. 61 syntypes from USSR (Karelian ASSR): Salmi, Tiensuu, 1776, Type 6539 (1 ex., dry); Salmi, Tiensuu, Lunkulansaari, 11.8.1934 (1 ex., dry); Salmi, Tiensuu, Lunkulansaari, 12.8.1934 (1 ex., dry); Salmi, Tiensuu, Lunkulansaari, 13.8.1934 (1 ex., dry); Salmi, Tiensuu, 14.8.1934 (2 ex., dry); Salmi, Tiensuu (15 ex., dry); Salmi, Karkku, 16.8.1934, leg. L. Tiensuu, Type 6538 (15 ex. in alcohol in one tube); Salmi, Lunkulansaari, 2.8.1934, leg. L. Tiensuu, Type 6540 (4 larvae and 2 adults in alcohol in one tube); Salmi, Tiensuu (3 larvae, 7 subimagines and 5 adults in alcohol in one tube); Kl: Salmi, leg. L. Tiensuu, prep. no 1 (1 ex., in alcohol and some parts on slide); Kl: Salmi, leg. L. Tiensuu, prep. no 2 (same as the former). Tiensuu wrote: "Types 6538–6540 in Mus.Zool.Helsinki" but gave no additional information on the type specimens, and therefore I consider his entire original material syntypic. Listed as synonym of *Ephoron nigridorsum* (Tshernova, 1934) (Illies 1967).

### Caenidae

*dimidiata* var. *fennica* Aro 1928:29; *Caenis*. — see *fennica*.

*fennica* Aro 1928:29; *Caenis dimidiata* var. 6 syntypes from USSR (Leningrad obl.): Jääski, J. E. Aro; Antrea, Kuorekoski, J. E. Aro (3 ex., numbered 377, 557 and 952); Muola, Hotakka, J. E. Aro, 24.VII.1921; Muola, Äyräpää, J. E. Aro, 29.VII.1921. (Jääski is nowadays known as Lesogorskij, Antrea as Kamennogorsk and Muolaa as Kirillovskoe.) Listed as simple synonym of *Caenis horaria* (Linnaeus, 1758) (Saaristo 1966).

*undosa* Tiensuu 1939:122; *Caenis*. 6 syntypes from USSR (Karelian ASSR): Salmi, Tiensuu, Lunkulans., 13.8.34 (1 ex.) and Salmi, Tiensuu (5 ex.). Listed as synonym of *Caenis nocturna* Bengtsson, 1917 (Saaristo 1966), which again nowadays is considered a synonym of *Caenis lactea* (Burmeister, 1839) (Puthz 1978).

### Types not found

#### Siphonuridae

*fennica* Aro 1910:31; *Palmenia*. Described from a few specimens collected in Finland near Oulu on 20.5.1906 and 25.5.1906. Types apparently lost. Listed as synonym of *Parameletus chelififer* Bengtsson, 1908 (Tiensuu 1939).

#### Heptageniidae

*flavomaculatus* Aro 1928:54; *Ecdyurus*. Described from three specimens collected in Finland at Sysmä: Suopelto in 6.8.1902. Types apparently lost. Listed as synonym of *Ecdyonurus joernensis* Bengtsson, 1909 (Illies 1967), which is nowadays known as *Nixe joernensis* (Bengtsson) (Flowers 1986).

### References

- Aro, J. E. 1910: Piirteitä päiväkkorennoisten (Ephemeridae) elämäntavoista ja kehityksestä. — Viipurin suomalaisen reälilyseon vuosikertomus, p. 1–32.  
— 1928: Suomen päiväkkorennoiset (Ephemerida). — Otavan hyönteiskirjasto 3 / Vanamon kirjoja 27:1–68.  
Flowers, R. W. 1986: Holarctic distribution of three taxa of Heptageniidae (Ephemeroptera). — Entomol. News 97:193–197.  
Illies, J. 1967: Ephemeroptera. — In Illies (ed.), Limnofauna Europaea. Stuttgart, pp. 212–219.  
Müller-Liebenau, I. 1969: Revision der europäischen Arten der Gattung Baetis Leach, 1815 (Insecta, Ephemeroptera). — Gewässer und Abwässer 48/49:1–214.  
Puthz, V. 1978: Ephemeroptera. — In Illies (ed.), Limnofauna Europaea. 2. edition. Stuttgart, pp. 256–263.  
Saaristo, M. 1966: Revision of the Finnish species of the genus *Caenis* Steph. (Ephemeroptera). — Ann. Entomol. Fennici 32:68–87.  
Tiensuu, L. 1935: On the Ephemeroptera-fauna of Laatokan Karjala (Karelia Ladogensis). — Ann. Entomol. Fennici 1:3–23.  
— 1939: A Survey of the Distribution of Mayflies (Ephemerida) in Finland. — Ann. Entomol. Fennici 5:97–124.

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