

First record of *Neophemera maxima* (Joly, 1870) in Austria (Insecta: Ephemeroptera: Neoephemeridae)

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In April 2017, 2 nymphs of *Neophemera maxima* were recorded in Austria for the first time. They were found in the river Lafnitz, a tributary of the river Raab where the species is well known at less than 40 km downstream in Hungary.

1 Introduction

The mayfly fauna in Austria encompasses about 114 species (Weichselbaumer *et al.* 2015). The Lafnitz River and its tributaries are known to shelter many rare species located in Austria exclusively (or almost) in Burgenland. For example *Ametropus fragilis* Albarda, 1878, *Labiobaetis calcaratus* Keffermüller, 1972, *Isonychia ignota* (Walker, 1853), *Ecdyonurus siveci* (Jacob & Braasch, 1984), *Ecdyonurus subalpinus* Klapálek, 1907 (Weichselbaumer *et al.* 2015). *Neophemera maxima*, the only species of the family Neoephemeridae in Europe, was described from the River Garonne in France. A Western Palearctic species, it is known from Lithuania, Poland, Hungary, France and Bulgaria. In Macedonia and Ukraine it is probably extinct, since the species was not found during the past 50 years (Bauernfeind & Soldán 2012). Despite a fairly wide range, the species is very sparse and rare; the populations generally being only relicts.

2 Methods

With the intention to collect mayflies and more particularly *Rhithrogena* nymphs, 2 samples were made on 19.04.2017 in the River Lafnitz in Dobensdorf (N 47.0193° E 16.1382°, 240 m ASL) and 3.5km downstream in Königsdorf (N 46.9979° E 16.1657°, 233 m ASL). Samples were made by kick sampling in the different habitats.

3 Results

This discovery is the first mentioned for Austria. In both Dobensdorf and Königsdorf, a single nymph of *N. maxima* was found. As Ephemerellidae were very numerous and as they look roughly like *N. maxima*, the species was identified only in the laboratory. The sampled habitats were very various (roots, sand, pebbles, mud) and it is not possible to know exactly in what kind of habitat the nymphs were captured. In the Raab River, 40 km downstream, numerous *N. maxima* were sampled, a few in mud, but the most in piles of branches blocked against bridge pillars.

In Dobersdorf and Königsdorf, we found *N. maxima* in association with *Baetis buceratus* Eaton, 1870, *Baetis rhodani* (Pictet, 1843), *Baetis vardarensis* Ikononov, 1962, *Baetis vernus* (Curtis, 1834), *Ecdyonurus torrentis* Kimmins, 1942, *Epeorus assimilis* Eaton, 1881, *Ephemera danica* Müller, 1764, *Ephemerella mucronata* Bengtsson, 1909, *Ephemerella*

notata Eaton, 1887, *Heptagenia flava* Rostock, 1877, *Heptagenia longicauda* (Stephens, 1836), *Heptagenia sulphurea* (Müller, 1776), *Paraleptophlebia submarginata* (Stephens, 1835), *Rhithrogena semicolorata* (Curtis, 1834), *Siphonurus* sp.

References

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