

## First record of the genus *Atrichops* Verrall, 1909 in Hungary (Diptera: Athericidae)

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**Abstract.** This paper reports on the first known larva of *Atrichops crassipes* (Meigen, 1820) from Hungary. The single specimen was caught with flushing of stones during a year-long monthly sampling in the Morgó Stream, Börzsöny Mts. Characterisation of the sampling site, list of the accompanying fauna and a figure on the habitus of the specimen are given.

Among the small family Athericidae, there are only two species included in the Checklist of the Diptera of Hungary (Papp, 2001). The monotypic genus *Atrichops* Verrall, 1909 was mentioned as expected but not yet reported (Májer, 2001).

*Atrichops crassipes* (Meigen, 1820) is known from the United Kingdom, Belgium, The Netherlands, Spain, France, Germany, Italy, Czech Republic, Poland, Slovakia and Romania (Thomas, 2004), and having a merolimnic, biennial life cycle (Gerke & Böttger, 2001).

During a year-long monthly benthic sampling in the Morgó Stream, North Hungary, a single larva of *Atrichops* was caught with flushing of stones. This specimen represents the first Hungarian record of the genus.

### MATERIAL AND METHODS

Benthic samples were taken monthly at five localities along the Morgó Stream (called Apátkuti Stream on its upper section), between 06. 03. 2008 and 03. 02. 2009. Two samples were taken at each locality: one with flushing of stones, and one with kick-and-sweep method. The material has been preserved in 70% ethanol. The *Atrichops* specimen is deposited in the Diptera Collection,

Department of Zoology, Hungarian Natural History Museum, Budapest (HNHM).

The accompanying benthic taxa were identified to specific level by various specialists: Mollusca: Dávid Murányi; Crustacea: Gammaridae: Júlia Papp (Eötvös Loránd University); Ephemeroptera: Nóra Hordós (ELU), Dávid Murányi; Odonata: Dávid Murányi; Plecoptera: Dávid Murányi; Coleoptera: Zoltán Kálmán, Zoltán Csabai (University of Pécs); Neuroptera: Dávid Murányi; Diptera: Simuliidae: Csaba Deák (Trans-Tisza Region Inspectorate for Environment, Nature and Water). Additional taxa were identified only at generic or family level (e.g. Oligochaeta: Tubificidae; Diptera: Ceratopogonidae), or the identifications are still in progress (e.g. Trichoptera, Diptera: Chironomidae).

### RESULTS AND DISCUSSION

*Material examined.* *Atrichops crassipes* (Meigen, 1820): Hungary, Pest county, Börzsöny Mts, Kismaros, Morgó Stream above the bridge of the forest railway terminal, N 47°49.751' E 19°00.777', 200 m a.s.l., flushing of stones, 28. 10. 2008, one larva, leg. K. Schöll, and N. Tarjányi.

The specimen is a third instar larva, on the basis of the size of head capsule (Gerke & Böttger

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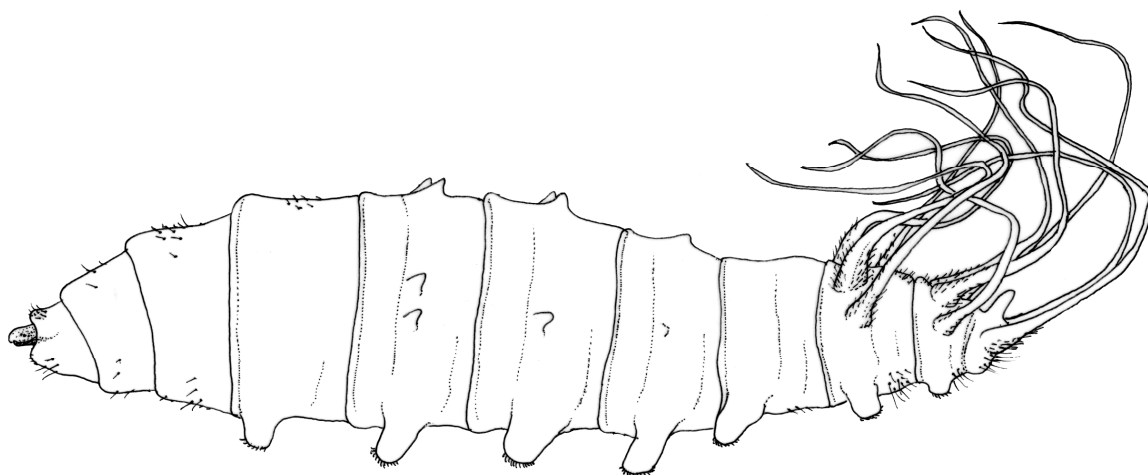


Figure 1. Habitus of the larva of *Atrichops crassipes* (Meigen, 1820) from Morgó Stream, Hungary (scale 1 mm)

2001). Its habitus (Fig. 1) possesses all the distinctive morphological characteristics of the species discussed by Thomas (1974), Rozkošný (1980) and Rozkošný and Nagatomi (1997).

The sampling site, where the larva was caught, is the lowest among the five sites along the Morgó Stream, 1 km above the mouth to the Danube River. The width of the stream is about 3 m, the water is 0.2–0.5 m deep and runs fast; the substrate consists of sand with sparse, 5–15 cm large stones, macrophyton is lacking, and the bank is moderately steep. The stream flows among alders, and thus the water is rather shaded. The sampling site agrees with locality 7 of Csuták (1973).

The accompanying benthic macroinvertebrata fauna consists of the following taxa: Mollusca: *Ancylus fluviatilis* Müller, 1774, *Pisidium* sp.; Crustacea: Amphipoda: *Gammarus balcanicus* Schäffera, 1922, *Gammarus fossarum* Koch, 1853, *Gammarus roeseli* Gervais, 1835; Ephemeroptera: *Baetis rhodani* (Pictet, 1843), *Baetis* sp., *Caenis luctuosa* (Burmeister, 1839), *C. robusta* Eaton, 1884, *Ecdyonorus* spp., *Ephemerella danica* (Müller, 1764), *Ephemerella ignita* (Poda, 1761), *Habroleptoides* sp., *Habrophlebia* sp., *Rhitrogena* spp.; Odonata: *Calopteryx virgo* (Linnaeus, 1758), *Onychogomphus forcipatus* (Linnaeus, 1758); Pleco-

ptera: *Capnia bifrons* (Newman, 1839), *Isoperla* sp., *Leuctra* sp., *Nemoura* sp.; Coleoptera: Elmidae: *Elmis maugetii* (Latreille, 1802), *Limnius volckmari* (Panzer, 1793); Trichoptera (indet.); Diptera: Limoniidae (indet.); Diptera: Ceratopogonidae: *Atrichopogon* sp.; Diptera: Chironomidae (indet.); Diptera: Simuliidae: *Prosimulium tomosvaryi* (Enderlein, 1921), *Prosimulium* sp., *Simulium (Simulium) argyreatum* (Meigen, 1838), *Simulium (Simulium) argyreatum/variegatum*, *Simulium (Simulium) ornatum* (Meigen, 1818); Diptera: Athericidae: *Ibisia marginata* (Fabricius, 1781).

The species should be regarded very rare in the Morgó Stream, as only a single larva turned up among the thousands of benthic invertebrates collected. Moreover, it was not found during previous benthic samplings (Csuták, 1973; Lien, 1984), nor extensive recent collecting efforts of Diptera imago in the watershed of the Morgó Stream (Papp, 2004, 2006, 2007). It is worth to mention that other Athericidae larvae (probably all of them are *Ibisia marginata* [Fabricius, 1781], but some young larvae cannot be identified with sure) were present and quite abundant at all but one sampling sites.

**Acknowledgements** We are grateful to Dr. László Papp (HNHM) for confirming the identification, and the colleagues who allowed us to publish the list of the accompanying taxa identified by them. This work was supported by the Hunarian Danube Research Station of the Hungarian Academy of Sciences.

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