

**Case 3617*****Habroleptoides confusa* Sartori & Jacob, 1986 (Insecta, Ephemeroptera, LEPTOPHLEBIIDAE): proposed precedence over *Habroleptoides carpatica* Bogoescu & Crăsnaru, 1930**

Éva Vánca

*Babeş-Bolyai University, Department of Taxonomy and Ecology, Clinicilor 5–7, 400006 Cluj-Napoca, Romania (e-mail: vancsaeva@gmail.com)*

Michel Sartori

*Museum of Zoology, Palais de Rumine, CH-1014 Lausanne, Switzerland (e-mail: michel.sartori@vd.ch)*

**Abstract.** The purpose of this application, under Article 23.9.3 of the Code, is to conserve the specific name *Habroleptoides confusa* Sartori & Jacob, 1986 for a well-known European mayfly (family LEPTOPHLEBIIDAE). A recent study has shown that the name is threatened by the senior subjective synonym *Habroleptoides carpatica* Bogoescu & Crăsnaru, 1930, which has been seldom used since its first publication, while the junior synonym is very widely used. Therefore, precedence of the name *Habroleptoides confusa* Sartori & Jacob, 1986 is requested.

**Keywords.** Nomenclature; taxonomy; Ephemeroptera; LEPTOPHLEBIIDAE; *Habroleptoides confusa*, *Habroleptoides carpatica*; Romania; Europe; mayflies.

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1. *Habroleptoides carpatica* was described by Bogoescu & Crăsnaru (1930, pp. 190–194) from the type locality Valea Căşăriei brook, close to the Zoological Research Station of Sinaia, Bucegi Mountains, Southern Carpathians, Romania. The species was differentiated from the widespread European species *Habroleptoides modesta* (Hagen, 1864) by characters both at the imaginal stage (e.g. number of crossveins in the hind wings, shape of the male genitalia, shape of the subanal plate of the female), and at the larval stage (number of segments in the labial and maxillary palps).

2. In their revision of the genus *Habroleptoides* Schönemund, 1929, Sartori & Jacob (1986, pp. 683–691) redescribed *H. modesta* from its type area (Corsica Island). They showed that all continental records of this species were erroneous, and proposed the name *Habroleptoides confusa* Sartori & Jacob (1986, p. 687) (for *Habroleptoides modesta* sensu auct., nec *Potamanthus modestus* Hagen, 1864). The type locality for *H. confusa* is the Orbe River, Vallorbe, canton of Vaud, Switzerland. Sartori & Jacob (1986) mentioned that the differentiating characters of the *H. carpatica* adults as given in the original description (Bogoescu & Crăsnaru, 1930) and in subsequent additional information (Bogoescu, 1958, p. 86) seem to fall within the intraspecific variation of *H. confusa*. However, the type material of *H. carpatica* is lost, and since no topotypic material was known to exist, the taxonomy of *H. carpatica* could not be clarified.

3. Recently, *Habroleptoides* larvae were reared from the type locality of *H. carpatica* and their morphology was studied (Vánčsa et al., 2013). The study confirmed that the morphological characters analysed fall within the intraspecific variability of *H. confusa* and that the structure of the larval mouthparts of *H. carpatica* was based on a misinterpretation by Bogoescu & Crăsnaru, 1930. Thus, both species should be considered as subjective synonyms.

4. The species name *H. carpatica* has seldom been used since its publication, mainly by Bogoescu (1932, 1958). The species has also been reported from Serbia (Filipović, 1979) and Bosnia-Herzegovina (Tanasijević, 1970), without diagnosis. However, the conditions of Article 23.9.1.1 of the Code (Reversal of Precedence) are not met.

5. On the contrary, the same species is well known under the name *Habroleptoides confusa* (or as *H. modesta* auct. before 1986). Widespread in Europe (except the British Isles, Fennoscandia and Mediterranean Islands) the species has been mentioned in more than 250 studies, including ca. 150 since 1986 by more than 60 authors (e.g. Grimm, 1987; Vinçon & Thomas, 1987; Bauernfeind, 1990; Hefti & Tomka, 1991; Kluge, 1994; Gaino & Reborá, 1995; Kukula, 1995; Moog et al., 1997; Kriska et al., 1998; Thomas, 1998; Weichselbaumer & Bauernfeind, 1999; Haybach & Malzacher, 2003; Kovács & Bauernfeind, 2003; Brulin, 2007; Willkommen & Hornschemeyer, 2007; Buffagni et al., 2009; Lubini et al., 2012). Hence the conditions of Article 23.9.1.2 of the Code are met. The species name is also widely used in European legislation and projects such as AQEM ([www.aqem.de](http://www.aqem.de)), STAR ([www.eu-star.at](http://www.eu-star.at)), Euro-limpacs ([www.eurolimpacs.ucl.ac.uk](http://www.eurolimpacs.ucl.ac.uk)), WISER ([www.wiser.eu](http://www.wiser.eu)), REFRESH ([www.refresh.ucl.ac.uk](http://www.refresh.ucl.ac.uk)) or BioFresh ([www.freshwaterbiodiversity.eu](http://www.freshwaterbiodiversity.eu)).

6. Because the usage of the name *H. carpatica* would cause confusion and instability in nomenclature and ecology, we propose that the specific name *H. confusa* be given precedence over the name *H. carpatica*, whenever the two are considered as synonyms.

7. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to give the name *confusa* Sartori & Jacob, 1986, as published in the binomen *Habroleptoides confusa*, precedence over the name *carpatica* Bogoescu & Crăsnaru, 1930, as published in the binomen *Habroleptoides carpatica*, whenever the two are considered to be synonyms;
- (2) to place on the Official List of Specific Names in Zoology the following names:
  - (a) *confusa* Sartori & Jacob, 1986, as published in the binomen *Habroleptoides confusa*, with the endorsement that it is to be given precedence over the name *carpatica* Bogoescu & Crăsnaru, 1930, as published in the binomen *Habroleptoides carpatica*, whenever the two are considered to be synonyms;
  - (b) *carpatica* Bogoescu & Crăsnaru, 1930, as published in the binomen *Habroleptoides carpatica*, with the endorsement that it is not to be given priority over the name *confusa* Sartori & Jacob, 1986, as published in the binomen *Habroleptoides confusa*, whenever the two are considered to be synonyms.

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