

Case 3322

Baetis pentaphlebodes Ujhelyi, 1966 (Insecta, Ephemeroptera): proposed precedence over *Baetis nexus* Navás, 1918

Michel Sartori

*Museum of Zoology, Palais de Rumine, Place de la Riponne 6,
CH-1014 Lausanne, Switzerland
(e-mail: michel.sartori@serac.vd.ch)*

Tomáš Soldán

*Institute of Entomology, Academy of Sciences, Branišovská 31,
CZ-37005 České Budějovice, Czech Republic
(e-mail: soldan@entu.cas.cz)*

Abstract. The purpose of this application, under Article 23.9.3 of the Code, is to conserve the specific name *Baetis pentaphlebodes* Ujhelyi, 1966 for a well-known European mayfly (family BAETIDAE). The name is threatened by the senior subjective synonym *Baetis nexus* Navás, 1918, which has been seldom used since its first publication. Therefore, precedence of the name *Baetis pentaphlebodes* Ujhelyi, 1966 is proposed.

Keywords. Nomenclature; taxonomy; Ephemeroptera; BAETIDAE; *Baetis pentaphlebodes*; *Baetis nexus*; Hungary; Spain; mayflies.

1. The mayfly species *Baetis nexus* was described in 1918 (Navás, 1918, pp. 38–39) from the type locality San Joan de l'Erm, Catalonia, Spain, and since then, prior to Alba-Tercedor's (2002) revision, the name had been mentioned only five times, by Müller-Liebenau (1969), Puthz (1978) (in both cases as nomina dubia), Alba-Tercedor (1981, 1984) and Alba-Tercedor & Peters (1985).

2. However, the same species is well known under the name *Baetis pentaphlebodes* Ujhelyi, 1966. Since its original description from Hungary (Ujhelyi, 1966, pp. 206–210), type locality Veresegyház, it has been mentioned in faunistic lists (Keffermüller, 1972; Soldán, 1978; Kazancı, 1984; Thomas et al., 1986; Adam, 1991; Bauernfeind & Weichselbaumer, 1991; Russev, 1993), Ephemeroptera check-lists (Puthz, 1978), autoecological studies (Camousseight & Fontaine, 1990), identification keys (Bauernfeind, 1994; Bauernfeind & Humpesch, 2001), morphological papers (egg description by Kopelke & Müller-Liebenau, 1981) and in the red lists of threatened species (Sowa, 1992).

3. Alba-Tercedor (2002, p. 78) proposed the synonymy of *Baetis pentaphlebodes* Ujhelyi, 1966 and *Baetis nexus* Navás, 1918 and suggested that the latter name should be used as valid. This opinion was supported by Alba-Tercedor & Jáimez-Cuéllar (2003) and Jacob (2003), but not by Haybach & Malzacher (2003) or Kovács & Bauernfeind (2003).

4. Since *B. nexus* has been used as a valid name by Alba-Tercedor (2002), Alba-Tercedor & Jáimez-Cuéllar (2003) and Jacob (2003), the requirements of Article 23.9.1.1 (Reversal of Precedence) of the Code are not met. However, the name *B. pentaphlebodes* has been used as a valid name in at least 35 original scientific papers, monographs and reviews since 1969 by at least 20 authors. Hence the provisions of Article 23.9.1.2 of the Code are met (see Müller-Liebenau, 1969; Keffermüller, 1972; Soldán, 1978; Landa & Soldán, 1985; Thomas et al., 1986; Grimm, 1988; Bauernfeind, 1990; Camousseight & Fontaine, 1990; Sowa, 1990; Weichselbaumer & Sowa, 1990; Adam, 1991; Bauernfeind & Weichselbaumer, 1991; Jaźdżewska & Gorczynczki, 1991; Sowa, 1992; Russev, 1993; Bauernfeind, 1994; Glazaczow, 1994; Marten, 1994; Jaźdżewska, 1995; Moog, 1995; Moog et al., 1995; Marten et al., 1996; Peissner et al., 1996; Thomas & Masselot, 1996; Marten, 1997; Moog et al., 1997; Schmidt-Kloiber, 1997; Marten et al., 1999; Bauernfeind & Humpesch, 2001; Horsák, 2001; Jaźdżewska, 2001; Haybach & Malzacher, 2002).

5. Because the usage of the name *B. nexus* would cause confusion and instability in nomenclature and ecology, we propose that the specific name *B. pentaphlebodes* be given precedence over the name *B. nexus*, whenever the two are considered to be synonyms.

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

- (1) to use its plenary power to give the name *pentaphlebodes* Ujhelyi, 1966, as published in the binomen *Baetis pentaphlebodes*, precedence over the name *nexus* Navás, 1918, as published in the binomen *Baetis nexus*, whenever the two are considered to be synonyms;
- (2) to place on the Official List of Specific Names in Zoology the following names:
 - (a) *pentaphlebodes* Ujhelyi, 1966, as published in the binomen *Baetis pentaphlebodes*, with the endorsement that it is to be given precedence over the name *nexus* Navás, 1918, as published in the binomen *Baetis nexus*, whenever the two are considered to be synonyms;
 - (b) *nexus* Navás, 1918, as published in the binomen *Baetis nexus*, with the endorsement that it is not to be given priority over the name *pentaphlebodes* Ujhelyi, 1966, as published in the binomen *Baetis pentaphlebodes*, whenever the two are considered to be synonyms.

Acknowledgements

We are grateful to Arne Haybach (Koblenz) for advice.

References

- Adam, G.** 1991. *Baetis liebenauae* Keffermüller und *Baetis pentaphlebodes* Ujhelyi in Nordostbayern (Insecta, Ephemeroptera). *Lauterbornia*, **8**: 77–80.
- Alba-Tercedor, J.** 1981. Recopilacion de citas de Efemerópteros en la Península ibérica e Islas Baleares. *Trabajos y Monografías del Departamento de Zoología, Universidad de Granada (Nueva Serie)*, **4**: 41–81.
- Alba-Tercedor, J.** 1984. A revision of the European species of the genus *Baetis* Leach, 1815 described by Reverend Longinos Navás (Baetidae) in Landa, V., Soldán, T. & Tonner, M. (Eds.), *Proceeding of the fourth international conference on Ephemeroptera*, pp. 53–59. CSAV, Bechyně.

- Alba-Tercedor, J.** 2002. A new synonymy in *Baetis*: *Baetis nexus* Navás, 1918 is the valid name of *Baetis pentaphlebodes* Ujhelyi, 1966 (Ephemeroptera: Baetidae). *Aquatic Insects*, **24**: 77–79.
- Alba-Tercedor, J. & Jámez-Cuéllar, P.** 2003. Checklist and historical evolution of the knowledge of Ephemeroptera in the Iberian Peninsula, Balearic and Canary Islands. Pp. 91–97 in Gaino, E. (Ed.), *Research Update on Ephemeroptera and Plecoptera*. University of Perugia, Perugia, Italy.
- Alba-Tercedor, J. & Peters, W.L.** 1985. Types and additional specimens of Ephemeroptera studied by Longinos Navás in the Museo de Zoología del Ayuntamiento, Barcelona, Spain. *Aquatic Insects*, **7**: 217–227.
- Bauernfeind, E.** 1990. The present state of mayfly-faunistics in Austria. *Verhandlungen der Botanischen-Zoologischen Gesellschaft, Wien*, **127**: 61–82.
- Bauernfeind, E.** 1994. *Bestimmungsschlüssel für die österreichischen Eintagsfliegen (Insecta: Ephemeroptera)*. Bundesanstalt für Wassergüte, Wien.
- Bauernfeind, E. & Humpesch, U.H.** 2001. *Die Eintagsfliegen Zentraleuropas (Insecta: Ephemeroptera): Bestimmung und Ökologie*. Naturhistorisches Museum, Wien.
- Bauernfeind, E. & Weichselbaumer, P.** 1991. Mayflies records from Austria (Insecta: Ephemeroptera). *Verhandlungen der Botanischen-Zoologischen Gesellschaft, Wien*, **128**: 47–66.
- Camousséight, A. & Fontaine, J.** 1990. The biological cycle of *Baetis pentaphlebodes*, Ujhelyi 1966, in an old meander of the Rhone River, France (Ephemeroptera: Baetidae). Pp. 27–34 in Campbell, I.C. (Ed.), *Mayflies and Stoneflies: Life story and Biology*. Kluwer Academic Publishers, Dordrecht.
- Glazaczow, A.** 1994. Mayflies (Ephemeroptera) from the rivers Gwda and Drawa (in the Pomeranian Lake District of North West Poland) and from some waters of their river basins. *Polskie Pismo Entomologiczne*, **63**: 213–257.
- Grimm, R.** 1988. Zur Eintagsfliegenfauna der Donauzuflüsse Rot und Rauglen (Baden-Württemberg). *Nachrichtenblatt der Bayerischen Entomologen*, **37**: 73–83.
- Haybach, A. & Malzacher, P.** 2002. Verzeichnis der Eintagsfliegen Deutschlands (Insecta: Ephemeroptera). *Entomologische Zeitschrift*, **112**: 34–45.
- Haybach, A. & Malzacher, P.** 2003. Verzeichnis der Eintagsfliegen (Ephemeroptera) Deutschlands. *Entomofauna Germanica*, **6**: 33–46.
- Horsák, M.** 2001. Contribution to the knowledge of macroinvertebrate fauna of the Dyje River downstream of the Nové Mlýny Reservoirs (Czech Republic). *Scripta Facultatis scientiarum naturalium Universitatis Masarykiana brunensis, Biologia, Supplementum*, **27**: 41–62.
- Jacob, U.** 2003. *Baetis* Leach 1815, sensu stricto oder sensu lato. Ein Beitrag zum Gattungskonzept auf der Grundlage von Artengruppen mit Bestimmungsschlüsseln. *Lauterbornia*, **47**: 59–129.
- Jaźdżewska, T.** 1995. Comparison of the ephemeropteran fauna from the Swietokrzyskie Mountains and Roztocze Upland, Poland. Pp. 111–120 in Corkum, L.D. & Ciborowski, J.J.H. (Eds.), *Current directions in research on Ephemeroptera*. Canadian Scholars' Press Inc., Toronto.
- Jaźdżewska, T.** 2001. Distribution in Poland of species of the *Baetis* group (Ephemeroptera, Baetidae). Pp. 259–270 in Dominguez, E. (Ed.), *Trends in Research in Ephemeroptera and Plecoptera*. Kluwer Academic/Plenum Publishers, New York.
- Jaźdżewska, T. & Gorczyński, A.** 1991. Les éphéméroptères des rivières qui franchissent la zone marginale du Roztocze Central. Pp. 263–270 in Alba-Tercedor, J. & Sanchez-Ortega, A. (Eds.), *Overviews and strategies of the Ephemeroptera and Plecoptera*. Sandhill Crane Press, Inc., Gainesville.
- Kazancı, N.** 1984. New Ephemeroptera (Insecta) from Turkey. *Aquatic Insects*, **6**: 253–258.
- Kefermüller, M.** 1972. Banadia nad fauna Jetek (Ephemeroptera) Wielkopolski V. *Polskie Pismo Entomologiczne*, **43**: 527–533.
- Kopelke, J.-P. & Müller-Liebenau, I.** 1981. Estrukturen bei Ephemeroptera und deren Bedeutung für die Aufstellung von Artengruppen am Beispiel der europäischen Arten der

- Gattung *Baetis* Leach, 1815. Teil II : *rhodani-*, *vernus-* und *fuscatus* – Gruppe (Insecta: Baetidae). *Spixiana*, **4**: 39–54.
- Kovács, T. & Bauernfeind, E.** 2003. Checklist of the Hungarian mayfly fauna (Ephemeroptera). *Folia Entomologica Hungarica*, **64**: 69–84.
- Landa, V. & Soldán, T.** 1985. Distributional patterns, chorology and origin of the Czechoslovak fauna of mayflies (Ephemeroptera). *Acta Entomologica Bohemoslovaca*, **82**: 241–268.
- Marten, M.** 1994. Derzeitiger Kenntnisstand und historische Entwicklung der Makrozoobenthos der Donau unter besonderer Berücksichtigung der Montanregion. Pp. 157–189 in *Limnologische Berichte Donau* (1994), vol. 2. EAWAG, Dübendorf.
- Marten, M.** 1997. Ephemeroptera and Plecoptera of the River Danube in Baden-Württemberg (Germany). Pp. 167–174 in Landolt, P. & Sartori, M. (Eds.), *Ephemeroptera & Plecoptera Biology-Ecology-Systematics*. Mauron-Tinguely & Lachat SA, Fribourg.
- Marten, M., Hackbarth, W. & Otto, C.-J.** 1999. Neue Ephemeroptera- und Plecoptera-Nachweise aus Baden-Württemberg und Stand der derzeitigen Erfassung im Rahmen der biologischen Umweltbeobachtung an Fließgewässer. *Lauterbornia*, **37**: 63–86.
- Marten, M., Malzacher, P., Reusch, H., Otto, C.-J., Brinkmann, R., Roos, P., Hackbarth, W. & Gorka, M.** 1996. Ephemeroptera und Plecoptera in Baden-Württemberg – Stand der faunistischen Erforschung. *Lauterbornia*, **27**: 69–79.
- Moog, O.** 1995. *Fauna aquatica austriaca – Katalog zur autoökologischen Einstufung aquatischer Organismen*. Österreichs Bundesministerium für Land- und Forstwirtschaft, Wien.
- Moog, O., Bauernfeind, E. & Weichselbaumer, P.** 1997. The use of Ephemeroptera as saprobic indicators in Austria. Pp. 254–260 in Landolt, P. & Sartori, M. (Eds.), *Ephemeroptera & Plecoptera Biology-Ecology-Systematics*. Mauron-Tinguely & Lachat SA, Fribourg.
- Moog, O., Humpesch, U. & Konar, M.** 1995. The distribution of benthic invertebrates along the Austrian stretch of the river Danube and its relevance as an indicator of zoogeographical and water quality patterns – part 1. *Archiv für Hydrobiologie*, **101**: 121–213.
- Müller-Liebenau, I.** 1969. Revision der europäischen Arten der Gattung *Baetis* Leach, 1815 (Insecta, Ephemeroptera). *Gewässer und Abwässer*, **48/49**: 1–214.
- Navás, L.** 1918. Excursiones entomologicas por el Norte de la provincia de Lérida (6–24 de Julio de 1917). *Butlleti de la Institucio catalana d'Historia Natural*, (1918): 36–49.
- Peissner, T., Kappus, B. & Malzacher, P.** 1996. Bewertung der Eintagsfliegenfauna der Baden-Württembergischen Donau und ausgewählter Nebengewässer. *Lauterbornia*, **27**: 81–91.
- Putz, V.** 1978. Ephemeroptera. Pp. 256–263 in Illies J. (Ed.), *Limnofauna Europaea*, vol. 1. 2nd Edition, Gustav Fischer Verlag, Stuttgart.
- Russev, B.K.** 1993. Review of literature and established mayfly species (Ephemeroptera, Insecta) from Bulgaria. *Lauterbornia*, **14**: 71–77.
- Schmidt-Kloiber, A.** 1997. Ephemeroptera of an artificial Danube backwater irrigation system in Austria. Pp. 152–156 in Landolt, P. & Sartori, M. *Ephemeroptera & Plecoptera Biology-Ecology-Systematics*. Mauron-Tinguely & Lachat SA, Fribourg.
- Soldán, T.** 1978. Mayflies (Ephemeroptera) new to the fauna of Czechoslovakia found in 1972–1977. *Acta Entomologica Bohemoslovaca*, **75**: 319–329.
- Sowa, R.** 1990. Ephemeroptera – Jetki. Pp. 33–38 in Razowski, J. (Ed.), *A checklist of the animals of Poland*. PWN, Warsawa, Wroclaw-Krakow.
- Sowa, R.** 1992. Jetki Ephemeroptera. Pp. 97–101 in Glowacinski, Z. (Ed.), *A checklist of rare and endangered animals in Poland*. Nature Protection research Centre, PAS, Krakow.
- Thomas, A. & Masselot, G.** 1996. Les Ephémères de France: inventaire des espèces signalées et des espèces potentielles (Ephemeroptera). *Bulletin de la Société entomologique de France*, **101**: 467–488.
- Thomas, A.G.B., Prevot, R. & Vinçon, G.** 1986. Deux Ephéméroptères nouveaux pour la faune de France: *Baetis pentaphlebodes* Ujhelyi, 1966 (Baetidae) et *Caenis beskidensis* Sowa, 1973 (Caenidae). *Bulletin de la Société d'Histoire Naturelle de Toulouse*, **122**: 179.
- Ujhelyi, S.** 1966. The mayflies of Hungary, with the description of a new species, *Baetis pentaphlebodes* sp. n. (Ephemeroptera). *Acta zoologica Academiae Scientiarum Hungariae*, **12**: 203–210.

Weichselbaumer, P. & Sowa, R. 1990. Beitrag zur Kenntnis der Eintagsfliegenfauna Österreichs (Insecta: Ephemeroptera). *Berichte der naturwissenschaftlich-medizinischen Vereins in Innsbruck*, **77**: 113–122.

Acknowledgement of receipt of this application was published in BZN **61**: 134.

Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).