



## A new subspecies of the subgenus *Ecdyonurus* Eaton, 1868 (Ephemeroptera: Heptageniidae) from the East of Ukraine

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### Abstract

*Ecdyonurus dispar gratificus* **ssp. nov.** is reported from several small streams and rivers within the Donetsk Ridge (East of Ukraine). The new subspecies is described and illustrated on larvae and reared adults of both sexes. SEM photographs of the egg structures are presented. Critical diagnostic characters distinguishing the new subspecies from other representatives of the subgenus *Ecdyonurus* Eaton, 1868 and especially from the nominal subspecies are discussed. The data on the biology and distribution are presented.

**Key words:** new subspecies, description, distinguishing characters, ecology, Ukraine, Crimean Peninsula, Caucasus

### Introduction

The representatives of the genus *Ecdyonurus* Eaton, 1868 can be divided into two natural groups, characterized by marked distinctive features in larvae and adults, i.e. the subgenus *Ecdyonurus* s. str. and the subgenus *Helvetoraeticus* Bauernfeind & Soldán, 2012 (established for the former *E. helveticus* species-group). In this contribution, followed by Bauernfeind and Soldán (2012), we consider the so called “*Ecdyonurus venosus* species-group” (subgenus *Ecdyonurus*) in the wide sense, including the *E. forcipula* species-group s. Jacob & Braasch 1986, *E. cortensis* species-group s. Belfiore 1987 and *E. ruffii* species-group s. Braasch & Soldán 1985.

Distribution of representatives of the subgenus *Ecdyonurus* is restricted with the Western Palaearctic, where 40 species and subspecies are described (for details see Bauernfeind & Soldán 2012). The genus reaches Estonia northwardly, therein Khaberman (1953) recorded of *E. venosus* (Fabricius, 1775) larvae from continental part of the country. Kazlauskas (1959), Kazlauskas and Sanvaityte (1962) and Remm (1970) identified all collected specimens from Latvia and Lithuania as “*Ecdyonurus fluminum*”, which belongs in fact to *E. dispar* (Curtis, 1834) (presence namely of this species is confirmed later by Ruginis 2006 and Kovács *et al.* 2008).

According to the current data, distribution of the genus is limited by Caucasus Mts. on the East, where two species are described. *Ecdyonurus ornatipennis* Tshernova, 1938 was described from the Eastern Caucasus Mts. (Nakhichevan' Republic) (Tshernova 1938) while *E. autumnalis* Braasch, 1980 was described from the Western Caucasus (Braasch 1980). These species also were recorded from Turkey and Iran (Braasch 1981; Kazancı & Braasch 1988; Kazancı 2001). Except for *E. helveticus* Eaton, 1883 (this record probably belongs to another taxon of *Helvetoraeticus*; see for details Kluge *et al.* 2013), all species from Turkey belong to the subgenus *Ecdyonurus*. Some data about distribution of *E. aurantiacus* (Burmeister, 1839) and *E. submontanus* Landa, 1969 in the Eastern Anatolia (as the new records for Turkey) were published recently by Kazancı (2009). On the other hand, systematic position of *Ecdyonurus bimaculatus* Tanatmış & Haybach, 2010 described from the North-Western Anatolia Region is defined by authors near to *Thamnodontus* Kluge, 2004 (Tanatmış & Haybach 2010).

The following extralimital species are known: *E. asiaeminoris* Demoulin, 1973, described from Israel