Reevaluation of the Genera Compsoneuria Eaton and Trichogenia Braasch & Soldán (Ephemeroptera: Heptageniidae)

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Abstract

Compsoneuria Eaton (Ephemeroptera: Heptageniidae) has been placed in both the Heptageniinae Needham tribes Compsoneuriini Wang & McCafferty and Ecdyonurini Ulmer by different mayfly workers. In order to clarify the phylogenetic position of the genus, we examined adult material of its type species (C. spectabilis Eaton), larvae originally described as C. spectabilis, and material of potentially related species. We determined that the larva originally described as C. spectabilis was incorrectly associated with adults and is actually a species of Trichogenia Braasch & Soldán. Herein we name this species Trichogenia ulmeri N.SP. Braasch & Webb. The adults of C. spectabilis possess Ecdyonurinae characters and therefore Compsoneuria and Compsoneuriini are transferred to Ecdyonurinae. In order to maintain the stability of genera within Heptageniinae, we establish Trichogeniini Webb & McCafferty N.TRB. Compsoneuriella Ulmer and Notonurus Crass are confirmed to be synonyms of Compsoneuria. Heptagenia lieftincki Ulmer is shown to be a member of Compsoneuria [=Compsoneuria lieftincki (Ulmer) N.COMB.]. Compsoneuria is also shown to be distinct from Thalerosphyrus Eaton and several species previously placed in Thalerosphyrus are moved to Compsoneuria, for example T. josettae [= Compsoneuria josettae (Sartori & Elouard) N.COMB.]. The southeast Asian genus Trichogenia is reviewed; Trichogenia hableyi Webb & McCafferty N.SP. is described from larvae from Celebes and Borneo, Indonesia; and Heptagenia nasuta Ulmer is provisionally transferred to Trichogenia [=Trichogenia nasuta (Ulmer) N.COMB.]

Keywords: Ephemeroptera; Heptageniidae; Ecdyonurinae; Heptageniinae; Trichogenia; Compsoneuria; Compsoneuriella; Thalerosphyrus; systematics; new species