

SCIENTIFIC NOTE

NEW SYNONYMS OF *SERRATELLA JINGHONGENSIS*
(EPHEMEROPTERA: EPHEMERELLIDAE) FROM CHINA¹C. F. Zhou,² Luke M. Jacobus,³ and W. P. McCafferty³

Xu et al. (1984) described *Serratella jinghongensis* (Xu, You, and Hsu) (Ephemeroptera: Ephemerallidae) based on adults from Yunnan Province, China. They placed their new species in the genus *Ephemerella* Walsh, *sensu lato*, and subgenus *Serratella* Edmunds. The species has since been listed in the genus *Serratella*, following the precedent of Tshernova (1972) and Allen (1980). *Serratella* is part of the subfamily Ephemerallinae of the Ephemerallidae (McCafferty and Wang 2000).

Based on our examination of *S. jinghongensis* type material, we discovered that the apparent distinctiveness of the hindwing of *S. jinghongensis* (cf. e.g., Xu et al. 1984: Fig. 3) is an artifact of incorrect illustration. Rather than having greatly reduced venation and a prominent costal process, as indicated in the original illustration, the actual hindwing (Fig. 1) instead is the same as that of *S. albostriata* Tong and Dudgeon and *S. hainanensis* She, Gui, and You. Additional examination of the types of each of these three species described from southeastern China (Xu et al., 1984; She et al., 1995; Tong and Dudgeon 2000) revealed no differences in structure or color. Furthermore, larvae associated with those of *S. jinghongensis* adults from Yunnan Province are indistinguishable from those of *S. albostriata* (Tong and Dudgeon 2000: Figs. 1, 3–12). In light of all the evidence presented above, we consider *S. albostriata* and *S. hainanensis* junior subjective synonyms of *S. jinghongensis* and provide the following synonymy. In the synonymy given below, T₂ refers to a provisional designation.

Serratella jinghongensis (Xu, You, and Hsu, 1984: 413)

Ephemerella T₂ Dudgeon, 1982: 225.

Serratella T₂ Dudgeon, 1990: 225.

Ephemerella jianghongensis Xu, You, and Hsu; You and Gui, 1995, misspelling
Uracanthella sp. Dudgeon, 1999: 270.

S. hainanensis She, Gui, and You 1995: 77, new synonym

S. albostriata Tong and Dudgeon, 2000: 198, new synonym

Material Examined. Types: *S. jinghongensis* holotype, MA (male adult), and paratypes, 2MA, 1MS (subimago), and 5FA (female adults), China, Yunnan Province, Jinghong City, VIII-1979, H Gui, J-Z Xu [deposited in the Nanjing Normal University Mayfly Research Collection, Nanjing, P. R. China (NNU)]. *S. hainanensis* holotype, MA, and paratype, 1MA, China, Hainan Province, Diaolu Mt., 27°29'V-1986, J Zhang, S-S She [NNU]. *S. albostriata* paratypes, 2L (larvae), China, Hong Kong, Pak Ngau Shek, 8-I-1999, X Tong; paratype, 1MA, Hong Kong, Tai Mo Shan, Tai Tso Stream, 10-IX-1987, D Dudgeon [Purdue University Entomological Research Collection, West Lafayette, Indiana, USA]. Other materials

¹ Received on March 4, 2005. Accepted on October 5, 2005.

² Jiangsu Key Laboratory for Bioresource Technology, College of Life Sciences, Nanjing Normal University, Nanjing 210097, P. R. China. E-mail: zhouchangfa@njnu.edu.cn

³ Department of Entomology, Purdue University, West Lafayette, Indiana 47907 U.S.A. E-mails: konchu@purdue.edu, mccaffer@purdue.edu.

[NNU]: China, Guizhou Province, 10MA, 10FA, 5MS, Guiding Co., Changming village, 9-IX-2000, C-R LI, C-F Zhou (ZCF); 5MA, 20FA, Wangmu Co., Sanglang village, 16-IX-2000, C-R LI, ZCF. Yunnan Province, 6MA, 2FA, Jinghong City, V-1981; 20MA, 10FA, Jinghong City, Xishanbenan, X-1979, H Gui, J-Z Xu; 5MA, 2FA, 3MS, 60L, Jinghong Co., Puwen village, 2-IV-2001, ZCF; 10MA, 10MS, 70L, Menla Co., Menxin village, 20-III-2001, ZCF; 12MA, 12L, Menla Co., Menlun village, 24-III-2001, ZCF; 15MA, 10FA, 8L, Menla Co., Menban village, 28-III-2001, ZCF; 5MA, 10MS, 10FA, 20L, Jingdu Co., Fengshan village, 8-IV-2001, ZCF; 6L, Jingdong Co., Longjie village, 12-IV-2001, ZCF; 4L, Jingdong Co., Jingdong town, Juehe creek, 16-IV-2001, ZCF.

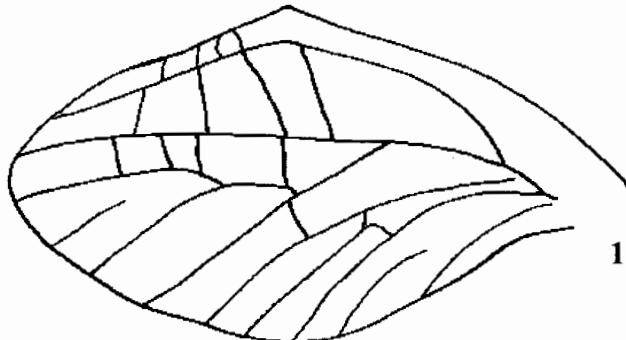


Fig. 1. *Serratella jinghongensis* hindwing, male adult.

ACKNOWLEDGMENTS

In part, this material is based upon work supported under National Natural Science Foundation of China Grant numbers 30570200 and 30300037 to CFZ, Nanjing Normal University Fund number 2005104 XGQ2B70 to CFZ, and a U. S. National Science Foundation Graduate Fellowship to LMJ.

LITERATURE CITED

- Allen, R. K.** 1980. Geographic distribution and reclassification of the subfamily Ephemerallinae (Ephemeroptera: Ephemerallidae). pp. 71-81. In, Flannagan, J. F. and E. Marshall (Editors). Advances in Ephemeroptera Biology. Plenum Press, New York, NY, U.S.A. 552 pp.
- Dudgeon, D.** 1982. Aspects of the microdistribution of insect macrobenthos in forest streams in Hong Kong. Archiv für Hydrobiologie Supplement 64: 221-239.
- Dudgeon, D.** 1990. Determinants of the distribution and abundance of larval Ephemeroptera (Insecta) in Hong Kong running waters. pp. 221-232. In, Campbell, I. C. (Editor). Mayflies and Stoneflies: Life Histories and Biology. Kluwer Academic Publishers. Dordrecht, The Netherlands. 392 pp.
- Dudgeon, D.** 1999. Tropical Asian Streams: Zoobenthos, Ecology and Conservation. Hong Kong University Press. Hong Kong. 912 pp.
- McCafferty, W. P. and T.-Q. Wang.** 2000. Phylogenetic systematics of the major lineages of Pannota mayflies (Ephemeroptera: Pannota). Transactions of the American Entomological Society 126: 9-101.
- She, S.-S., H. Gui, and D.-S. You.** 1995. A research on the mayflies from Hainan Province, China (Insecta: Ephemeroptera). Journal Nanjing Normal University (Natural Science) 18: 72-82.
- Tong, X. and D. Dudgeon.** 2000. Ephemerallidae (Insecta: Ephemeroptera) from Hong Kong, China, with descriptions of two new species. Aquatic Insects 22: 197-207.
- Tshernova, O. A.** 1972. Some new Asiatic species of mayflies (Ephemeroptera, Heptageniidae, Ephemerallidae). Entomologicheskoe Obozrenie 51: 604-614.
- Xu, J.-Z., D.-S. You, and Y.-C. Hsu.** 1984. A new species of *Ephemerella* (Ephemeroptera: Ephemerallidae). Acta Zootaxonomica Sinica 9: 413-415.
- You, D.-S. and H. Gui.** 1995. Economic insect fauna of China, Fascicle 48. Ephemeroptera. Science Press. Beijing, China. 152 pp.