



A new species of *Sinacroneuria* (Plecoptera: Perlidae) from China with a provisional key to species

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Abstract

Sinacroneuria dabiेशana **sp. nov.** is proposed from Henan and Hubei provinces, China and the new species is compared with related congeners. The discovery of this species represents the northernmost distribution of the genus in China. A provisional key to the males of known species of *Sinacroneuria* is also presented.

Key words: Plecoptera, Perlidae, *Sinacroneuria*, new species, China

Introduction

Yang and Yang (1995) established the genus *Sinacroneuria* in the subfamily Acroneuriinae Klapálek, 1914 to accommodate the species *Sinacroneuria orientalis* Yang and Yang. Du *et al.* (1999) transferred *Kamimuria flavata* Navás, 1933 to *Sinacroneuria*. Du *et al.* (2001) combined several species described by Wu (1935, 1938) and Yang and Yang (1998) with the genus, but these authors did not provide aedeagal details for *S. quadriplagiata* (Wu, 1938). Du (2002) also considered *Acroneuria hainana* Wu, 1938 as a *Sinacroneuria* species, however, specimens we have examined as *A. hainana* do not have the Y-shaped aedeagal structure characteristic of the genus (unpublished data) and this species is not included in *Sinacroneuria* (DeWalt *et al.* 2014). Recently, Stark & Sivec (2008) described *S. bicornuata* from Sichuan.

In this paper, we describe a new species of *Sinacroneuria* from Henan and Hubei provinces of central China. The discovery of the new species represents the northernmost distribution of the genus in China. A provisional key to the males of known species of *Sinacroneuria* is also presented.

Methods and material

Types of the new species are deposited in the Insect Collection of Henan Institute of Science and Technology (HIST), Xinxiang, the Collection of Smaller Insect Orders, Department of Zoology, Hungarian Natural History Museum (HNHM), Budapest, and the Entomological Museum of China Agricultural University (CAUC), Beijing, respectively, as indicated in the text. Types were preserved in 75% ethanol. Aedeagi were everted using the cold maceration technique of Zwick (1983).

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(Figs. 1–2)

Adult habitus. General body color yellow brown. Triocellate, anterior ocellus smaller; distance between ocelli about two times the diameter of the ocellus. Head pale brown with dark brown area covering ocellar triangle,

Sinacroneuria quadriplagiata: Du *et al.*, 2001. In Wu & Pan (eds). Insects of Tianmushan National Nature Reserve: 74.

***Sinacroneuria wui* (Yang & Yang, 1998)**

Acroneuria wui Yang & Yang, 1998. In Wu, H. (ed). Insects of Longwangshan: 42. Type locality: China: Zhejiang Province (Longwangshan).

Sinacroneuria wui: Du *et al.*, 2001. In Wu & Pan (eds). Insects of Tianmushan National Nature Reserve: 75.

***Sinacroneuria yiui* (Wu, 1935)**

Mesoperla yiui Wu, 1935. Bull. Peking Soc. Nat. Hist. 9(3): 230. Type locality: China: Jiangxi Province (Lushan); Illies, 1966. Das Tierreich, 82: 311.

Acroneuria yiui: Wu, 1938. *Plecopterorum Sin.*: 135; Yang & Yang, 1998. In Wu, H. (ed). Insects of Longwangshan: 42.

Sinacroneuria yiui: Du *et al.*, 2001. In Wu & Pan (eds). Insects of Tianmushan National Nature Reserve: 75.

Key to the males known species of *Sinacroneuria*

1. Head mostly dark brown, without dark pigment in ocellar triangle, aedeagus not described *S. quadriplagiata*
- Head with dark pigment in ocellar triangle 2
2. Sensilla basiconica patch of tergum 9 fused medially 3
- Sensilla basiconica patch of tergum 9 narrowly divided medially *S. orientalis*
3. Head with two ocelli (fig. 1 in Stark and Sivec 2008) *S. biocellata*
- Head with three ocelli 4
4. Aedeagus with median sclerite in ventral aspect 5
- Aedeagus without median sclerite in ventral aspect (Figs. 3a & 3b) *S. bicornuata*
5. Sensilla basiconica patch of tergum 10 separated, aedeagal Y-arms apically outcurved or parallel 6
- Sensilla basiconica patch of tergum 10 mostly fused, aedeagal Y-arms apically incurved (Figs. 1b, 2c–2e) *S. dabieshana*
6. Aedeagal Y-arms nearly parallel (fig. 4 in Yang and Yang 1998). *S. yiui*
- Aedeagal Y-arms apically outcurved (figs. 8 & 16 in Yang and Yang 1998) 7
7. Legs with dorsum of femora black; lateral sclerite of aedeagal Y-shaped sclerite lightly sclerotized and shorter than Y-arms (fig. 8 in Yang and Yang 1998). *S. longwangshana*
- Legs with distal part of femora black; lateral sclerite of aedeagal Y-shaped sclerite strongly sclerotized and longer than Y-arms (fig. 16 in Yang and Yang 1998). *S. wui*

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