

***Somatochlora shennong* sp. nov. from Hubei, China (Odonata: Corduliidae)**

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Abstract

A new species, *Somatochlora shennong* sp. nov. (holotype ♂, Dajiuju National Wetland Park in Shennongjia National Nature Reserve, Hubei Province, China, 9 August 2012) is described, illustrated, and compared with the related species *S. dido* Needham and *S. taiwana* Inoue & Yokota.

Key words: Odonata, *Somatochlora*, China, new species

Introduction

Nine species of the genus *Somatochlora* have previously been known from mainland China and Taiwan (Table 1). They are widely distributed in China from the north to the south. In northern China, species including *S. alpestris* (Selys), *S. arctica* (Zetterstedt), *S. graeseri* Selys, *S. exuberata* Bartenev, and *S. metallica* (Vander Linden) inhabit marshes, ponds and slow-flowing streams in the lowlands. They are dominant species and rather common. However, in southern China, *Somatochlora* become very rare dragonflies and only appear in high mountains.

In our ongoing surveys in Hubei province, central China, two *Somatochlora* species were simultaneously found in the Dajiuju wetlands in Shennongjia National Nature Reserve. One species is the little-known species *S. shanxiensis*, and the other seems unique in the well-developed thoracic stripes as well as the structure of male cerci and hamules. It is described here as a new species. The females of *S. dido* and *S. taiwana* have not been described.

All types are deposited in the Collection of Aquatic Animals, Institute of Hydrobiology, Chinese Academy of Sciences, Wuhan City, Hubei Province, China.

TABLE 1. Records of the genus *Somatochlora* in mainland China and Taiwan.

Species	Sources
<i>Somatochlora alpestris</i> Selys, 1840	North China (Asahina 1942)
<i>Somatochlora arctica</i> Zetterstedt, 1840	North China (Asahina 1942)
<i>Somatochlora dido</i> Needham, 1930	Sichuan (Needham 1930); Guangxi (Wilson 2005)
<i>Somatochlora graeseri</i> Selys, 1887	North China (Asahina 1942)
<i>Somatochlora exuberata</i> Bartenev, 1910	North China (Asahina 1942)
<i>Somatochlora lingyinensis</i> Zhou & Wei, 1979	Zhejiang (Zhou & Wei 1979)
<i>Somatochlora metallica vera</i> Bartenev, 1914	North China (Asahina 1942)
<i>Somatochlora shanxiensis</i> Zhu & Zhang, 1999	Shanxi (Zhu & Zhang 1999)
<i>Somatochlora taiwana</i> Inoue & Yokota, 2001	Taiwan (Inoue & Yokota 2001)



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FIGURES 11–16. *Somatochlora dido* holotype male: (11) appendages in lateral view; (12) anal appendages in ventro-lateral view; (13) anal appendages in dorsal view; (14) anal appendages in ventral view; (15) hamule and genital lobe in lateral view; (16) genital ligula.

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References

- Asahina, S. (1942) Odonaten gesammelt von Dr. S. Kuwayama in Manchoukuo nebst einer Liste der bekannten Odonatenarten aus Mandschurei und den angrenzenden Gebieten. *Kontyû*, 16 (2), 67–82.

- Asahina, S. (1996) Records of the northern Vietnamese Odonata taken by the expedition members from the National Science Museum, Tokyo: 3. Aeschnidae [sic], Corduliidae and Libellulidae. *Bulletin of the National Science Museum, Tokyo*, 22 (2), 69–80. [A]
- Inoue, K., Sasamoto, A. & Futahashi, R. (2013) The true status of *Somatochlora taiwana* Inoue & Yokota: a genuine species or a synonym of *S. dido* Needham? (Anisoptera: Corduliidae). *Odonatologica*, 42 (4), 325–334.
- Inoue, K. & Yokota, H. (2001) *Somatochlora taiwana* spec. nov., a new dragonfly from Taiwan (Anisoptera: Corduliidae). *Odonatologica*, 30 (2), 217–221.
- Needham, J.G. (1930) *A manual of the dragonflies of China. A monographic study of the Chinese Odonata*. The Fan Memorial Institute of Biology, Peiping, 345 + 11 pp.
- Wilson, K.D.P. (2005) Odonata of Guangxi Zhuang Autonomous Region, China, part II: Anisoptera. *International Journal of Odonatology*, 8 (1), 107–168.
<http://dx.doi.org/10.1080/13887890.2005.9748247>
- Zhou, W.B. & Wei, J.L. (1979) Two new species of the order Odonata in Zhejiang. *Journal Hangzhou University*, 4, 110–113. [In Chinese, with English abstract]
- Zhu, H.Q. & Zhang, X.X. (1999) *Somatochlora shanxiensis* spec. nov., a new dragonfly from Shanxi, China (Anisoptera: Corduliidae). *Odonatologica*, 28 (3), 289–292.