

**SOMATOCHLORA SHANXIENSIS SPEC. NOV.,  
A NEW DRAGONFLY FROM SHANXI, CHINA  
(ANISOPTERA: CORDULIIDAE)**

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The new sp. (holotype ♂ and allotype ♀: Mang-he river bank, Yangcheng Co., Shanxi, China, 27/28-VIII-1991; deposited at Shanxi University, Taiyuan, Shanxi, China) is described and illustrated. It is compared with *S. graeseri* and *S. uchidai*.

INTRODUCTION

Seven species of the genus *Somatochlora* have previously been recorded from China, including *S. alpestris* (Sel.), *S. arctica* (Zett.), *S. exuberata* Bart., *S. graeseri* Sel. and *S. metallica vera* Bart. (cf. DAVIES & TOBIN, 1985) that were listed from Manchuria (ASAHINA, 1942). The other two are *S. dido* NEEDHAM, 1930 and *S. lingyinensis* ZHOU & WEI, 1979. It is common knowledge that Manchuria is the formal name of northeastern China. The first 3 species and *uchidai* Först. were noted by HAMADA & INOUE (1985). In view of the above, the new species has been compared with *graeseri* and *uchidai* in this paper.

**SOMATOCHLORA SHANXIENSIS SP. NOV.**

Figures 1-8

**Material.** — **Holotype** ♂ and **allotype** ♀: China, Shanxi, Yancheng Co., Mang-he river bank, 27/28-VIII-1991; deposited at Shanxi University, Taiyuan, Shanxi, China.

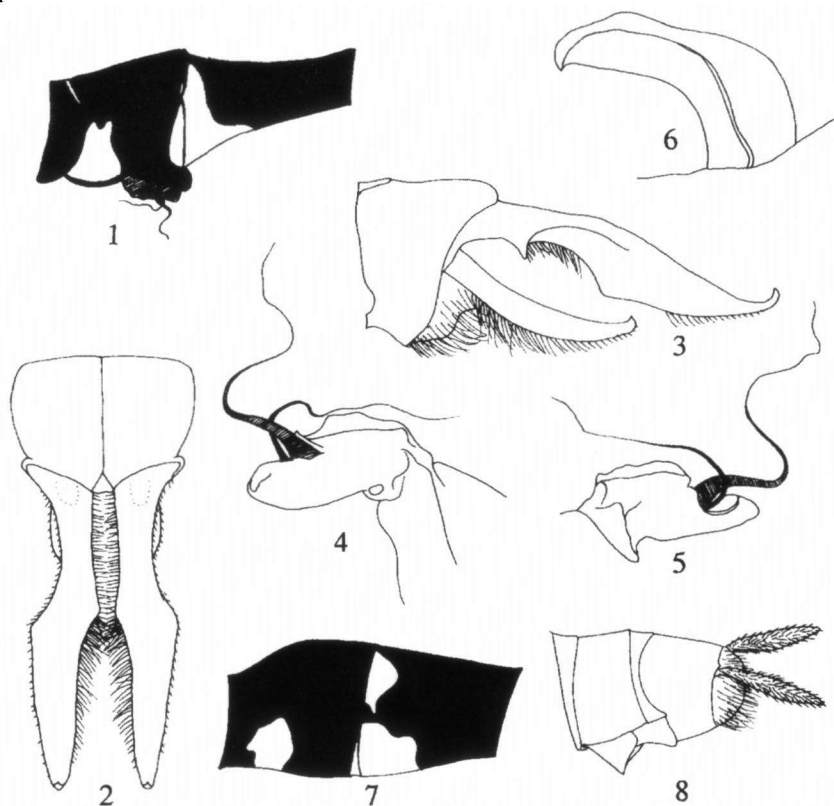
**MALE.** — **Head.** — Labium shining yellow, labrum black, anteclypeus olivaceous, postclypeus black and fringed with golden hairs on its lower lateral ends, frons shining metallic green marked with a lateral yellow spot and clothed with brown

hairs, top of vertex violet green and the black occiput with a grayish hair fringe.

**T h o r a x.** — Prothorax. — Black, middle lobe with yellowish lateral markings. Pterothorax. — Shining violet green, carinae black, four oval areas dorsal to antealar ridge yellow. Legs black, dorsal surface of antecoxa yellow. Wings hyaline, antenodal index 9:9/5:5.

**A b d o m e n.** — Black, slightly shining metallic green on basal segments. 1<sup>st</sup> to 3<sup>rd</sup> marked with yellow colour as Figure 1: an apico-dorsal stripe on 1<sup>st</sup>, a round spot below the auricle on 2<sup>nd</sup>, on the junction of 2<sup>nd</sup>-3<sup>rd</sup> with a fine superior stripe and a large inferior stripe each side, and a large baso-lateral spot on 3<sup>rd</sup>.

**Anal appendages.** — Black, shaped as in Figures 2 and 3: superior appendages slender, about equal in length to segments 9 and 10, basal half parallel, divaricate thereafter and shaped as a straight fork, and armed with a robust subbasal ventral spine.



Figs 1-8. *Somatochlora shanxiensis* sp. n., Shanxi: Figs 1-6, ♂: (1) abdominal segments 1-3, lateral view; — (2) anal appendages, dorsal view; — (3) same, lateral view; — (4) penis, distal segment lateral view from left; — (5) same, view from right; — (6) hamule, lateral view. — Figs 7-8, ♀: (7) abdominal segments 1-3, lateral view; — (8) abdominal segments 9 and 10, lateral view.

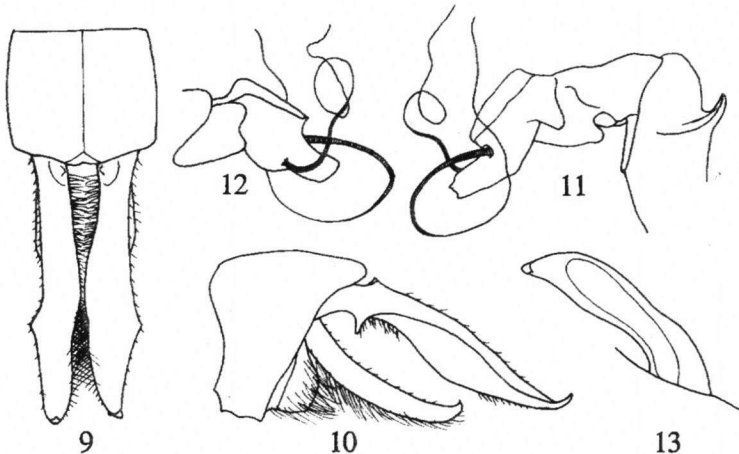
Genitalia. — Black, the penis has its specific characteristics on the flagella of distal segment, in which, the left one is about four times thicker than the right one, and located in the same dorsum hollow as in Figures 4 and 5; and the hamule broader as in Figure 6.

FEMALE (Allotype). — Closely similar to male, differing as follows: on 2<sup>nd</sup> the baso-lateral spot divided into two parts, junction of 2<sup>nd</sup> and 3<sup>rd</sup> the superior stripe dispersed as in Figure 7. Vulvar scale short as in Figure 8. The shining metallic parts are blue.

M e a s u r e m e n t s (in mm). — Male total length 53, abdomen 38, hindwing 37; — female total length 51, abdomen 36, hindwing 38.

AFFINITIES. — In colour the new species is similar to *g. graeseri* and *uchidai*, however, structurally it differentiates from these as follows:

- 1 Male..... 2
- Female ..... 4
- 2 Superior anal app. forked about half the way (Fig. 2); a pair of flagella come out of the same hollow (Figs 4, 5) ..... 3
- Superior anal app. forked about 2/3 to base (Fig. 9); the left flagellum on dorsum and the right one ventro-laterad (Figs 11, 12) ..... *g. graeseri*
- 3 Superior anal app. basal half narrow and enlarged gradually; without a basal spine (Fig. 3) ..... *shanxiensis*
- Superior anal app. basal 1/3 narrowly and abruptly enlarged; and with a basal spine (HAMADA & INOUE, 1985) ..... *uchidai*
- 4 Vulvar scale extends merely 1/3 length of segment 9; segments 9 and 10 slender (HAMADA & INOUE, 1985) ..... *uchidai*
- Vulvar scale extends more than half the length of segment 9 (Fig. 8) ..... 5
- 5 Abdominal segment 3 marked with two lateral spots (Fig. 7) ..... *shanxiensis*
- Abdominal segment 3 marked with a large lateral spot (HAMADA & INOUE, 1985) ..... *g. graeseri*



Figs 9-13. *Somatochlora g. graeseri* Selys, Heilongjiang, ♂: (9) anal appendages, dorsal view; — (10) same, lateral view; — (11) penis, distal segment, view from left; — (12) same, view from right; — (13) hamule, lateral view.

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