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**A new species of the genus *Glossosoma* Curtis  
(Trichoptera: Glossosomatidae)  
from the Russian Far East**

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**Abstract.** A male and a female of a new species of the genus *Glossosoma*, belonging to the subgenus *Synaophora*, are described and compared with the closely related *G. (S.) altaicum* (MARTYNOV).

**Key words:** Trichoptera, Glossosomatidae, *Glossosoma*, *Synaophora*, Far East.

# Introduction

Until now, on the Russian Far East, the genus *Glossosoma* was represented by six species belonging to the subgenus *Synaophora*, *G. (S.) nylanderi* MCLACHLAN, 1879, *G. (S.) intermedium* (KLAPALEK, 1892), *G. (S.) altaicum* (MARTYNOV, 1914), *G. (S.) dulkeji* (MARTYNOV, 1934), *G. (S.) ussuricum* (MARTYNOV, 1934) and *G. (S.) angaricum* (LEVANOVA, 1967). However, while engaged in the study of Far Eastern caddisflies, from the collection obtained by T. Tiunova from the Tumnin River in the Khabarovsk Territory, I discovered a new species of the genus *Glossosoma* belonging to the subgenus *Synaophora* as well. The specimens of this new species were collected at several places of the middle part of the Tumnin River for a distance of approximately 80 km (49.7 miles) during two rafting expeditions in June and July of 1997.

Although the new species, *G. (S.) neffi*, is closely related to *G. (S.) altaicum* and both coexist at the Tumnin River, *G. (S.) neffi* remains local to the Tumnin River while *G. (S.) altaicum* is widely spread throughout the southern parts of Siberia and the Russian Far East, Korea, Mongolia and Japan. The two species differ in details of both male and female genitalia. Type material is preserved in alcohol and held in the collection of the Institute of Biology and Soil Sciences, Far Eastern Branch of the Russian Academy of Sciences, Vladivostok, Russia. The terminology used in describing the genitalic structures follows SCHMID (1980).

## *Glossosoma (Synaophora) neffi*, sp. n. (Figs. 1-11)

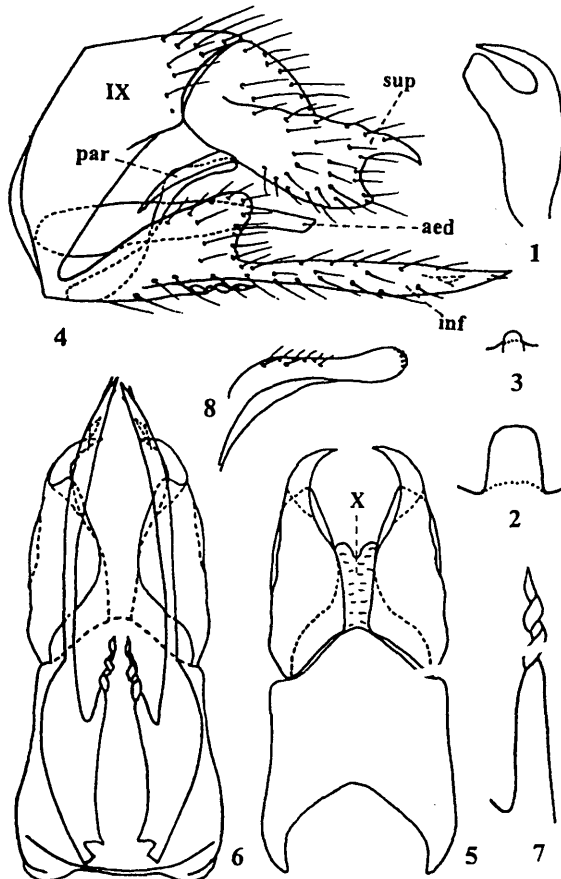
**Material:** Holotype male, Russia, Khabarovsk Territory, Vaninsky District, Tumnin River, approximately 500 m above confluence with Besymyannaya Stream, 29.VI.1997, T. Tiunova (TT). Paratypes: 10 males 5 females, data as holotype; 3 males 2 females, Tumnin River confluence with Vasily Spring, 16.VII.1997, TT; 2 males 16 females, Tumnin River between confluences with Vasily and Bokhago Springs, 16.VII.1997, TT; 2 males 2 females, Tumnin River, 1 km below confluence with Tun Stream, 18.VII.1997, TT; 5 males 2 females, Tumnin River near Gapanki Rocks, 29.VI.1997, TT.

**Description:** General colour light brown to brown; vertex of head and thorax brown with warts being paler; abdomen brown above, pale brown below; antennae brown tinge with light annulations; coxae brown, middle coxae with light area; basal half of femora light brown; tibiae and tarsal segments lighter; spurs fuscous brown, spines light brown; apical internal spur of hind legs modified (Fig. 1); fore wings brown tinge, hind wings lighter, pterostigma of wings slightly darker.

**Male:** The length of the fore wings 6.5-7.5mm; abdominal sternites IV-VII each with transversal line; sternite V with a pair of well developed lateral bulges; sternite VI with trapeziform mesal projection (Fig. 2); sternite VII with small knob-like mesal projection (Fig. 3).

**Genitalia:** Segment IX (IX) wide dorsally, very short ventrally, rounded projections on fore margins of lateral parts (Fig. 4); segment X (X) rather small, entirely membranous (Fig. 5); superior appendage (sup) large, concave dorsal surface with dorso-lateral

groove; dorsal and ventral projections on distal portion of superior appendage with dorsal projection being hook shaped, curved ventrad in the lateral view (Fig. 4) and mesad in the dorsal view (Fig. 5), ventral projection shorter than dorsal projection with triangular apex; inferior appendage (inf) with subbaso-ventral spiral appendix (Figs. 6, 7) directed caudad and expending beyond basal half of inferior appendage; basal half of each inferior appendage with rounded dorso-caudal projection in the lateral view; distal half of inferior appendage slender, curved slightly inward apically with subapical tooth on inner surface; aedeagus (aed) rather short, narrows to apex; parameres (par) with rounded apices bent dorso-caudad, covered with several setae on dorsal surface (Fig. 8).



Figs. 1-8. *Glossosoma (Synaophora) neffi* sp. n., male: apical internal spur of hind leg (1); mesal projection of sternite VI (2) and VII (3); genitalia, lateral (4), dorsal (5) and ventral (6) views; subbaso-ventral appendix of the right inferior appendage (7); left paramere, lateral view (8). Abbreviations: aed = aedeagus; inf = inferior appendage; par = parameres; sup = superior appendage; IX, X = abdominal segments IX and X.

**Female:** Length of the fore wings 6.5-8.0 mm; abdominal sternites IV, V and VI each with transversal line; sternite V with a pair of well developed lateral bulges; sternite VI with short, knob-like, mesal projection; abdominal tergite IV with a few setae along lateral borders; tergite V with numerous, rather strong setae along lateral and caudal borders; tergites VI and VII clothed with less number of setae in their latero-caudal corners if compare with the latter; setae of tergites IV, VI and VII slightly weaker than those of tergite V; segment VIII distinct, stronger sclerotized than other segments; segment VIII annular, nearly equal in length dorsally and ventrally (Figs. 9, 10); distal margin of the segment VIII straight; spermathecal sclerite, fig. 11.

**Immature stages unknown.**

**Etymology:** The new species is named for my friend Walter J. Neff.

Diagnosis: *Glossosoma neffi* sp. n. is a member of the subgenus *Synaophora* MARTYNOV, 1927 based on wing venation and genitalia. Although this new species is most closely related to *G. (S.)*

*altaicum* (Figs. 13-18), the male may be easily distinguished by the presence of the subbaso-ventral spiral appendix of the inferior appendage. The female of the new species is distinguished from other species of the subgenus by the form of the abdominal segment VIII and from the female of *G. (S.) altaicum*, which has same form of the abdominal segment VIII, by the shape of the spermathecal sclerite (Figs. 11,12).

Distribution: Known only from the type locality (Russian Far East).

Ecological notes: *G. (S.) neffi* sp. n. is a typical inhabitant of permanent mountain river with pebbled bottom and fringed by trees.

#### Acknowledgements

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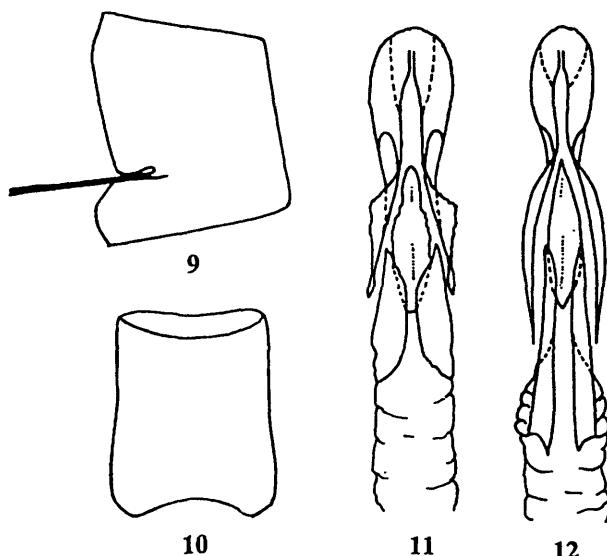
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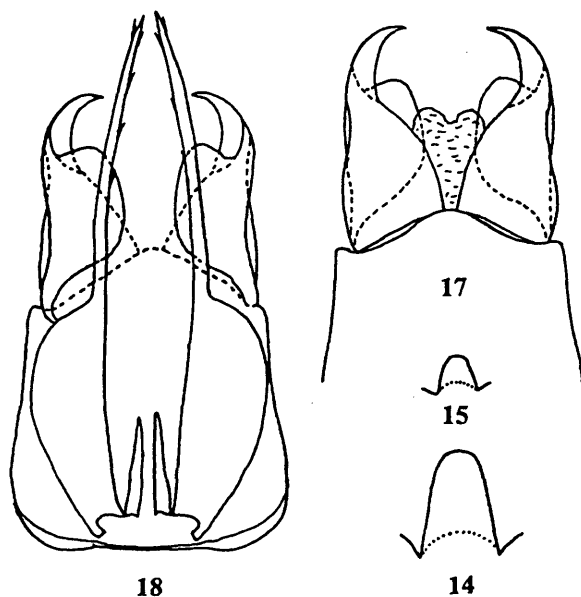
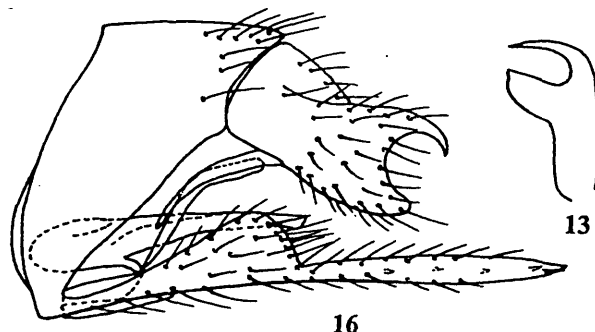
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Figs. 9-12. 9 and 10, *Glossosoma (Synaophora) neffi* sp. n., female abdominal segment VIII, lateral and dorsal views. 11 and 12, spermathecal sclerite, ventral view: (11) *G. (S.) neffi* sp. n.; (12) *G. (S.) altaicum*.



Figs. 13-18. *Glossosoma (Synaophora) altaicum* (MARTYNOV), male: apical internal spur of hind leg (13); mesal projections of sternite VI (14) and VII (15); genitalia, lateral (16), dorsal (17) and ventral (18) views.



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