TWO NEW SPECIES OF CADDISFLIES (INSECTA: TRICHOPTERA) FROM THE RUSSIAN FAR EAST

T. I. Arefina

Institute of Biology and Soil Science, Far Eastern Branch of the Russian Academy of Sciences, Vladivostok-22, 690022, Russia

Two new species of caddisflies, *Lype zwicki* sp. n. (Psychomyiidae) from Khabarovskii krai and *Ceraclea drachevi* sp. n. (Leptoceridae) from Primorski krai, are described.

KEY WORDS: Trichoptera, taxonomy, new species, Russia.

INTRODUCTION

Two new species of caddisflies were collected from Khabarovskii krai and Primorski krai during an expedition of the Institute of Biology and Soil Science of the Russian Academy of Sciences supported by the Russian Fund of Fundamental Investigations (Grant N 96-04-50388) in 1997 and during a co-operative field survey in 1998 with Prof. P. Zwick (Limnologische Flussstation des Max-Planck-Instituts
Für Limnologie, Schlitz, Germany), respectively. Holotypes and paratypes of new species are preserved in alcohol and deposited in the collection of the Institute of Biology and Soil Science (Vladivostok).

**FAMILY PSYCHOMYIIDAE**

The genus *Lype* McLachlan, 1879 is represented in Russia by four species, two of them are known from the Russian Far East: *L. daurica* Ivanov et Levanidova, 1996 from Primorski krai and *L. excisa* Mey, 1991 from Sakhalin and Kuril Islands (Arefina et al., 1997). A new species of *Lype* is described below.

*Lype zwicki* Arefina, sp. n.

Figs 1-6


**DESCRIPTION.** Length of forewing: male – 3.9-4.2 mm; female – 4.6-4.8 mm. Head and thorax yellow-brown, abdomen light brown from above, wings pale.

**MALE GENITALIA (Figs 1-4).** Sternite IX with triangular anterior projection. Preanal appendages long, flat, broadened medially in dorsal view, gradually tapering to blunt apices; and extending beyond segment X about half of their length. Dorsal projection of tergite IX shorter than segment X, triangular in dorsal view, tapering to nearly rounded apex in dorsal view. Segment X broad, truncate. Distal segments of inferior appendages short and rather wide in lateral view, fused basally in ventral view, with meso-ventral corners protruding caudad; terminal segment of each inferior appendage long, straight, slightly curved dorso-apically, with apex rounded in lateral view, and acute, turned inwards in ventral view. Phallic apparatus massive, constricted medially; aedeagus with triangular subapical projection in lateral view, finger-like in dorsal view, apex of aedeagus without apical excision.

**FEMALE GENITALIA (Figs 5-6).** Anterior margin of segment VIII with rounded excision medially, posterior margin straight. Segments X and XI considerably extended and gradually tapered. Vulvar scale tiny.

**IMMATURE STAGES.** Unknown.

**DIAGNOSIS.** The male of *Lype zwicki* sp. n. resembles that of *L. excisa* in the shape of dorsal projection of tergite IX in lateral view. It resembles those of *L. phaeopa* (Stephens, 1836) and *L. auripilis* McLachlan, 1884 in the shape of distal segment of the inferior appendages. It differs from all of these species by the truncate apex of segment X and by the straight terminal segments of the inferior appendages. Females of *L. excisa* and *L. daurica* remain unknown.

**DISTRIBUTION.** Russia: Khabarovskii krai (Amur River Basin).

**ETYMOLOGY.** I take pleasure in naming this species after Prof. P. Zwick.

**FAMILY LEPTOCERIDAE**

The genus *Ceraclea* Stephens, 1829 consists of three subgenera. The new species belongs to the subgenus *Athripsodina* Kimmins, 1963. Within eight species groups of the subgenus *Athripsodina* the new species belongs to *C. (A.) annulicornis* group, which is represented in the Russian Far East by six species: *C. annulicornis* (Stephens, 1836) from Magadanskaya oblast and Khabarovskii krai; *C. bilobulata* Arefina et Morse, 2001 from Khabarovskii krai; *C. excisa* (Morton, 1904) from Magadanskaya oblast, Kamchatskaya oblast, Khabarovskii krai, Primorskiy krai, Amurskaya oblast and Sakhalin Island; *C. hastata* Botosaneanu, 1970 from Primorskiy krai; *C. shuotsuensis* (Tsuda, 1942) from Khabarovskii krai and Primorskiy krai; *C. sibirica* (Ulmer, 1906) from Khabarovskii krai, Primorskiy krai and Amurskaya oblast (Vshivkova et al., 1997; Arefina et al., 2001).
**Ceraclea (Athripsodina) drachevi** Arefina, sp. n.

Figs 7-13


DESCRIPTION. Length of forewing: male – 10.5-11.2 mm, female – 8.3-9.2 mm. Head and body with white and brown hairs mixed. Vertex of head and thorax brown, abdomen lighter. Wings brown with setae darker.

MALE GENITALIA (Figs 7-10). Preanal appendages broad, triangular, fused basally one third of their length, each with rounded apex in dorsal view. Tergite X extends beyond preanal appendages, upturned apically, apex acute from dorsal view, rounded from lateral view, laterally with short processes. Main body of each inferior appendage straight in lateral view, with subapicodorsal lobe bent caudal; basoventral lobe of each inferior appendage short, triangular; harpago slender, finger-like; mesal ridge of inferior appendage produced in small, triangular process located mesally; phallic guide slightly projected. Phallus broadly sclerotized, curved ventrad about half distance from base; right paramere spine large, left paramere spine seta-like.
Figs 7-10. Male genitalia of Ceraclea drachevi sp. n.: 7) lateral view; 8) dorsal view; 9) left inferior appendage, caudal view; 10) phallus, lateral view. (bv - basoventral lobe of inferior appendage, har - harpago, inf.app - inferior appendage, mes.rdg - mesal ridge of inferior appendage, ph.gd - phallic guide of inferior appendage, pr.app - preanal appendage, sap.do - subapical lobe of inferior appendage, X - tergite X).

FEMALE GENITALIA (Figs 11-13). Tergite IX rounded apically, with pair of small subdorsal processes. Preanal appendages broad but very short. Lamellae semi-circular in lateral view. Each gonopod plate with subtriangular caudal projection, plates approximate on midline. Spermathecal sclerite rather long, U-shaped, with lateral arms curved mesad; sclerotized bands supporting spermathecal sclerite not extends cephalad beyond tergite IX.

IMMATURE STAGES. Unknown.

DIAGNOSIS. Within the Ceraclea (A.) annulicornis group, C. drachevi belongs to the subgroup including C. annulicornis (Stephens), C. excisa (Morton), C. maccalmonti Moulton et Stewart, 1992, C. globosa Yang et Morse, 1988, C. ruthae (Flint,
Figs 11-13. Female genitalia of *Ceraclea drachevi* sp. n.: 11) lateral view; 12) dorsal view; 13) ventral view. (go.pl - gonopod plate, lam - lamellae, pr.app - preanal appendage, sc.b - sclerotized band, sp.sc - spermathecal sclerite, IX - tergite IX).

1965), *C. shuotsuensis* (Tsuda). All enumerated species have short and slender left paramere spine. The four species *C. annulicornis*, *C. ruthae*, *C. shuotsuensis*, *C. globosa* each have a very large base of the phallus; a character not present in *C. drachevi*, *C. excisa* or *C. maccalmonti*. The new species shares with *C. annulicornis* a short basoventral lobe of the inferior appendages; and with *C. excisa* similarly shaped preanal appendages. The new species and *C. excisa* differs from other East Palaearctic *C. annulicornis* group species by the smaller anterior end of the phallus. The male of *C. drachevi* can be distinguished from that of *C. excisa* by the shorter basoventral lobe and shorter phallic guide of each inferior appendage. The female of *C. drachevi* differs from all known females of the subgroup by the shorter preanal appendages and shorter sclerotized bands supporting the spermathecal sclerite.

**DISTRIBUTION.** Russia: South part of Primorski krai (Sea of Japan Basin).

**ETYMOLOGY.** This species is named in memory of my friend Dr. G. Drachev.
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