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Electragapetus martynovi sp.n. (Trichoptera: Glossosomatidae) from Primorye (South of the Russian Far East)

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Electragapetus martynovi sp.n. is the second species of the genus in the continental part of the Russian Far East and the sixth species of the world. The new species is related to the Japanese species *E.tsudai* Ross and *E. uchidai* Kobayashi by the genital structure and differs from all species of the genus by details of hind wing venation and some peculiarities of the head and thorax morphology.

Keywords: *Electragapetus,* Trichoptera, new species, Russian Far East.

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INTRODUCTION

The genus *Electragapetus* Ulmer is a small archaic genus including two subgenera: *Electragapetus* s. str. with a single fossil species *E. scitulus* Ulmer from Baltic amber (Ross, 1951, 1956) and *Eoagapetus* Martynov, with 5 recent species: *E. praeteritus* Martynov from the southern part of the Russian Far East (Khabarovskyi Krai, Primorye) and four species from Japan (Honshu): *E. tsudai* Ross, *E. mayaensis* Kobayashi, *E. uchidai* Kobayashi and *E. kuriensis* Kobayashi.

Recent study of the caddisfly collection of the Institute of Biology and Pedology, Vladivostok (IBP) provided an additional species of the genus *Electragapetus* from the continental part of the Russian Far East: *Electragapetus martynovi* sp.n. Unfortunately, this species is known only by the holotype male.

METHODS AND TERMINOLOGY

Head, thorax and genitalia were macerated in KOH, cleared and transferred to glycerol for drawing. The wing venation was drawn from glycerol. The general terminology of caddisflies follows that of Ross (1956).

Electragapetus martynovi sp.n.

Type material: Holotype. - 1 male, Zimoveinyi Creek, Bolshaya Ussurka River Basin, Primorye, Russian Far East, 28 VI 1968, at light, N.A.Azarova. Holotype deposited in Laboratory of Freshwater Hydrobiology, Institute of Biology and Pedology, Vladivostok, Russia.

Etymology. This species is named after the famous Russian entomologist Dr. A.V.Martynov.

Description of male imago. Anterior wing 3.8 mm long, hind wing 2.9 mm long, length of body 4.5 mm. Coloration: head and thorax greyish-brown; antennae and legs yellowish; spurs dark; fore wings pale greyish-yellow, hind wings paler.

Head short, ocelli large, frons with cluster of long setae. Arrangement and form of the setal warts (s.w.) similar to *Agapetus,* but details differ: frontal s.w. large and rhomboidal, antennal s.w. round, ocellar s.w. oval and enlarged horizontally, retrocular s.w. small and oblong. Medial pronotal s.w. oval, converging anteriorly, scutal s.w. oval, enlarged and converging towards the base (Fig. 1).

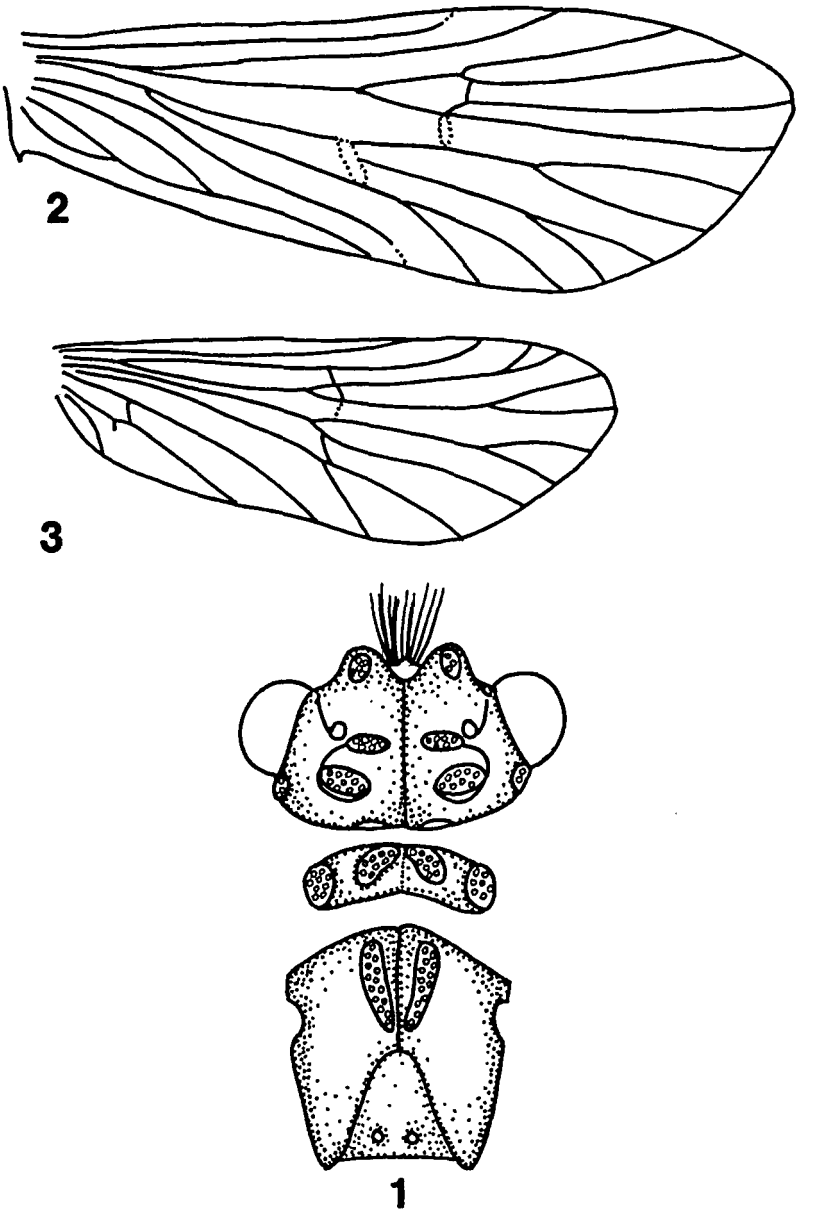
Wing venation (Fig. 2, 3) generally typical of the genus, but hind wing with peculiarities: cross-vein r connected with cross-vein s in a straight line, like in genus *Catagapetus;* R_{4+5} is branched well beyond the discoidal cell (more than 2.5 times the length of discoidal cell), while R_{4+5} of other species of *Electragapetus* is branched closer to the discoidal cell (more than once the length of discoidal cell).

Abdomen. Ventral processes present on segment VI and VII; the sixth ventral process broad at the base and acute at apex; the seventh ventral process very short, spine-shaped (Fig.4).

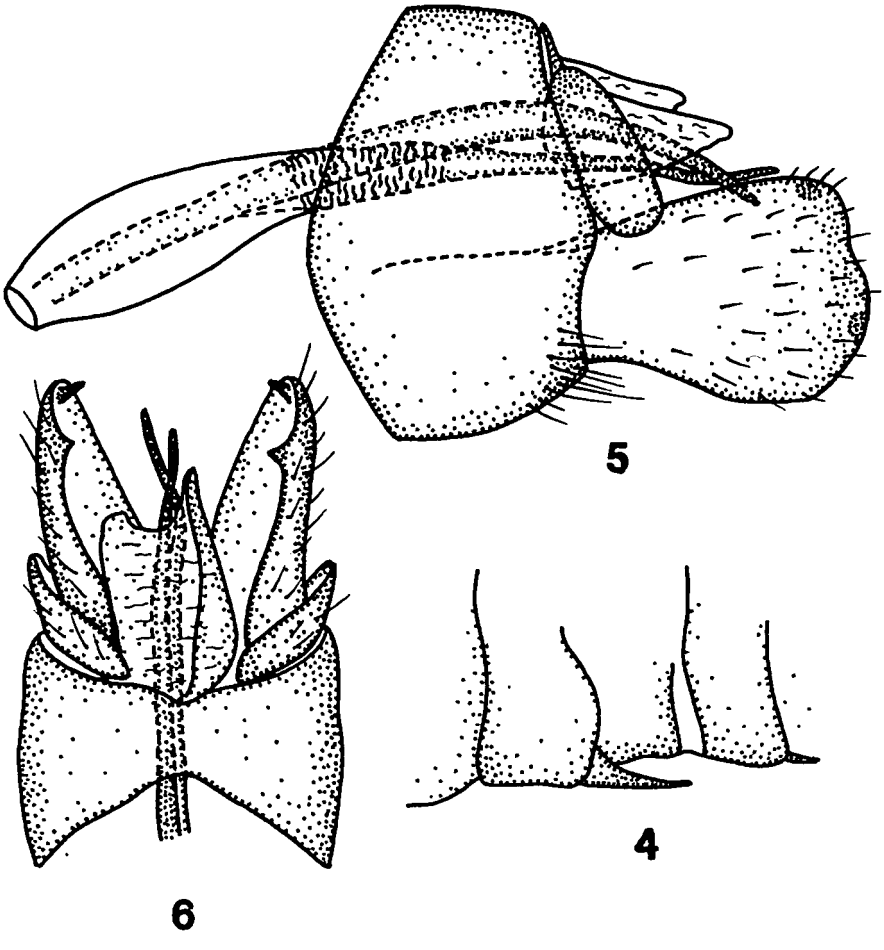
Genitalia (Fig.5,6). Cerci short but extremely broad at base. Segment X asymmetrical: right lobe membranous and rounded at apex; left lobe partially sclerotized, longer and more elongate than right one, acute at apex. Aedeagus with a pair of long rods, one well sclerotized, curved downward at apex, the other weakly sclerotized and somewhat curved upward. Claspers big, longer than their width, slightly narrowed at the base, a shallow concavity on distal margin; two small teeth on inner distal surface of claspers.

Female unknown.

E. martynovi sp. n. is related to the Japanese *E. mayaensis, E. tsudai* and *E. uchidai* which form a group with common genital characters: tergite X asymmetrical, left lobe more sclerotized than right one. *E. martynovi* sp. n. is closest to *E. mayaensis:* both have a more or less rounded apex of claspers and approximately equal rods of aedeagus. *E. martynovi* differs as follows: claspers of the new species grow wider posteriorly, while claspers of *E. mayaensis* are widest in their middle part; tergite X of uniform width from base to apex, while tergite X of *E. mayaensis* is strongly narrowed towards the apex. The other related species are distinguished from the new species by the following features: *E. uchidai* has a deep concavity on the apical part of claspers, and the left rod of aedeagus is twice shorter than the right; *E. tsudai* has a strongly curved left rod which is twice longer than the right one.



Figs. 1-3. *Electragapetus martynovi* sp. n., male: 1, head and thorax; 2, forewing; 3, hindwing.



Figs. 4-6. *Electragapetus martynovi* sp.n., male: 4, the sixth and the seventh ventral abdominal processes; 5, genitalia, lateral view; 6, dorsal view.

E. martynovi sp.n. differs from all other species of *Electragapetus* by the following characters: frons bearing a cluster of setae which are denser and longer than in the other species; cross-vein r directly connected to cross-vein s, as in *Catagapetus,* another archaic genus of Agapetinae.

Habitat: The single specimen of *Electragapetus martynovi* sp.n. was collected in a light trap near Zimoveinyi Creek [45°25'N/135°07'E], a tributary of the Bolshaya Ussurka River (Ussuri River System) at 400 m.a.s.l. The bottom of this forest stream is stony, the water is cool and weakly mineralized, and the average summer temperature does not exceed 12 C.

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REFERENCES

KOBAYASHI, M. (1982): A Classification for Japanese Species of Glossosomatidae (Trichoptera, Insecta). – Bull. Kanagawa Pref. Mus. 13:1-29.

— (1987): Caddisflies or Trichoptera from Shimane Prefecture in Japan (Insecta). – Bull. Kanagawa Pref. Mus. 17:13-35.

MARTYNOV, A.V. (1934): The Caddisflies. I. Trichoptera - Annulipalpia.- Key of the USSR Fauna, Leningrad, 13: 343 pp.

ROSS, H. (1951): Phylogeny and biogeography of the caddisflies of the genera *Agapetus* and *Electragapetus* (Trichoptera: Rhyacophilidae). – J. Wash. Acad. Sci. 41: 347-356.

— (1956): Evolution and classification of the mountain caddisflies. – Univ. Illinois Press, Urbana: 213 pp.