New species and records of short-palped crane-flies (Diptera: Limoniidae) from Krasnodar Territory, Russia

Новые виды и находки комаров-лимониид (Diptera: Limoniidae) из Краснодарского края, Россия

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ABSTRACT. Two new species of short-palped crane-flies (Diptera, Limoniidae) are described from Russia (Krasnodar Territory, the Caucasus region), Austrolimnophila (Austrolimnophila) vikhrevi sp.n. and Scleroprocta staryi sp.n. Descriptions of males and illustrations of male genitalia are provided. Five species are recorded as new to the fauna of Russia, Ormosia (Ormosia) bicornis (de Meijere, 1920) (new for mainland Russia), Ormosia (Ormosia) longispina Savchenko, 1983, Eloeophila minor Stary, 2009, Prionolabis subcognata Savchenko, 1971, and Elliptera omissa Schiner, 1863.

KEY WORDS: Diptera, Limoniidae, Limnophilinae, Chioneinae, Austrolimnophila, Scleroprocta, Russia, Krasnodar Territory, Caucasus, taxonomy, description, new species, new records.

Novye vidy i nachadki komarov-limoniiid (Diptera: Limoniidae) iz Krasnodarskogo kraia, Rossiya

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Introduction

The rich and diverse fauna of short-palped crane-flies (Limoniidae, Pediicidae) of the Caucasus is relatively well-studied if compared with many other regions of Russia, and the most important contribution to its knowledge was done through the efforts of Evgeniy N. Savchenko (1909–1994). Still, new species have been discovered and new regional as well as country records have been added recently [Lantsov, 2009; Gavryushin, 2011]. During examination of the material collected by the author and his colleagues two species new to science belonging to the genera Austrolimnophila (s.str.) Alexander, 1920 (subfamily Limnophilinae) and Scleroprocta Edwards, 1938 (subfamily Chioneinae) were revealed.

The nominative subgenus of the genus Austrolimnophila Alexander, 1920 so far has been represented by six species in the Western Palaearctic [Oosterbroek, 2015]. Great similarity of these species led to some confusion, misidentifications, and poor understanding of their distribution. Savchenko in his impressive review of the fauna of the former Soviet Union pointed out that the common A. (A.) ochracea (Meigen, 1804) is apparently missing in Southern Europe and other areas, including Transcaucasia, being replaced there by a number of closely related species [Savchenko, 1989: 67]. The works by Jaroslav Starý proved this hypothesis, earlier he described two new Mediterranean species [Starý, 1977] and two more new species with the same distribution were added quite recently [Starý, 2014].

The Holarctic genus Scleroprocta Edwards, 1938 includes 8 species in the Western Palaearctic [Oosterbroek, 2015] and was initially erected as a subgenus of Ormosia Rondani, 1856 to incorporate species very different from their relatives by a number of distinct features, especially in non-inverted male terminalia, a remarkable sclerotised structure between the base of gonocoxites ventrally (ventral plate), and parameres fused together thus forming a separate structure, the parameral plate [Starý, 2008].

Material and methods

The morphological terms used here mainly follow McAlpine [1981], venation is described mostly after
Alexander and Byers [1981]. Male genitalia were boiled in 10% solution of potassium hydroxide (KOH) for 60 to 90s, neutralised by a 10% solution of acetic acid (CH₃COOH), rinsed in water and then stored in glycerol. Dissected male genitalia were examined with a Nikon SMZ645 binocular microscope and then photographed using an eTREK DCM900 camera on MBI-1 microscope; images were processed with CombineZP software. Type material is deposited in the Zoological Museum of the Moscow State University (ZMMU).

Species description

**Austrolimnophila (Austrolimnophila) vikhrevi** sp.n.

Figs 1–5.

Sc2

trochanters light yellow. Femora, tibiae and tarsi indistinctly darker, coxa and
ened. Legs rather long, dirty yellow with tips of raes brownish yellow, with yellowish grey pruinosity.

greyish yellow; mediotergite brownish yellow; pleu-
lobes brown, their posterolateral corners and median
wide brown median area divided in two stripes; scutal
extensive yellowish grey pruinosity, with indistinct
brown, at certain angles appearing grey because of
ites and pronotum brownish yellow; prescutum light
corresponding segments.

Thorax mostly brownish yellow; cervical scler-
ites and pronotum brownish yellow; prescutum light
brown, at certain angles appearing grey because of
extensive yellowish grey pruinosity, with indistinct
wide brown median area divided in two stripes; scutal
lobes brown, their posterolateral corners and median
area between the lobes greyish yellow; scutellum
greyish yellow; mediotergite brownish yellow; pleu-
rae brownish yellow, with yellowish grey pruinosity.
Halteres with stems yellow, knobs somewhat dark-
ened. Legs rather long, dirty yellow with tips of
femora, tibiae and tarsi indistinctly darker, coxa and
trochanters light yellow.

Wings with membrane weakly tinged with brown,
veins brown, stigma indistinct yet present. Venation: Sc, slightly beyond tip of Sc, rq on R2 at approx. 0.45
its length, origin of Rs not less than half its length
beyond the tip of A1, Rs twice longer than R1, its base
angled (sometimes with a short spur), crossvein m-
cu at the middle of discal cell which is small, its poste-
rior/lower margin (M1+2) half the length of M1 (in para-
types approx. 0.4 to 0.6 length of M1); the distal section
of M1, ca. 0.25 length of M1. The last character seems
to be variable, in the paratypes the distal section
of M1, being ca. 0.3 to 0.6 length of M1. Additionally,
one of the paratypes has extra cross-veins in distal
portions of cells m1 in both wings.

Abdomen brownish yellow, tergites and sternites
widely darkened laterally. Hypopygium (Figs 1–2) of
moderate size, dark brown with reddish brown gonos-
tyli. Tergite 9 posteriorly with moderately deep semi-
circular emargination with protruding postero-lateral
corners; triangular lobe on each side of emargination.
Gonocoxites cylindrical, slightly narrowed apically.
Both gonostyli setose. Outer gonostyli slender, paral-
lel-sided, gradually tapered distally into slightly curved,
blackened terminal spine. Inner gonostyli very slender,
moderately sinuous, obtuse at apex. Aedeagal complex
(Figs 3–5) with parameres darkly pigmented, its poste-
rior arms triangular, gently curved inwards, tips obtuse
and widely separated (approx. at the width of aedeagus
at its base). Aedeagus long but not extending beyond
distal ends of gonocoxites, rather broad, gently curved
in lateral aspect, gradually tapering to subacute tip.
Dorsal apodeme of vesica of moderate length, strongly
arched ventrally.

Female unknown.

ETYMOLOGY. This species is named after Nikita
E. Vikhrev (Moscow, Russia), my friend and one of
the world’s leading experts in Muscoidea.

DISCUSSION. By the key to Western Palaearctic
species provided by Starý [2014: 359–360] Austrolimnophila (Austrolimnophila) vikhrevi sp.n. runs out ei-
erther at Austrolimnophila (Austrolimnophila) brevicel-
lula Starý, 1977 or Austrolimnophila (Austrolimnophi-
la) cretica Starý, 2014, differing from both of these
two species in details of venation and structure of male
terminalia indicated above.

DISTRIBUTION. Russia (Krasnodar Territory).

Sclero procta staryi sp.n.

Figs 6–13.

MATERIAL EXAMINED. Holotype ♂, RUSSIA: Krasnodar
Territory, Lagomaki, 44.009°N, 39.994°E, 1700 m, 11.V.2012, N.
Vikhrev leg. (dry-mounted, glued to an insect pin; in good condi-
tion, both fore legs missing, antennae intact). Paratype: ♂, same
data (dry-mounted, glued to an insect pin; in good condition, legs
and antennae intact).

DIAGNOSIS. Medium-sized dark greyish brown
species with typical Sclero procta appearance. Body
length ca. 5–6 mm, wing length ca. 7–7.5 mm.

DESCRIPTION. Male. Head dark greyish brown,
rostrum and palpi brownish yellow. Antennae long, reaching about
half the length of abdomen, yellowish brown, antennal
flagellomeres elongate oval, approx. 4 times as long as
broad, with long yellowish suberect pubescence on all
flagellomeres; verticils roughly 0.8 length of correspond-
 segments.

Thorax almost uniformly dark greyish brown except
for dorsopleural membranes which are somewhat yel-
lowed. Halteres brownish yellow. Legs with coxa, tro-
chanters and femora yellow, the latter widely darkened
distally, especially fore femora, tibiae and tarsi brown.

Wings rather broad, wing membrane tinged with
greyish brown, veins brown, stigma almost indistinct.
Venation usual for the genus; Sc ending almost at the
level of M2, or at the point of furcation of R2+3 (paratype);
discal cell only slightly beyond m-cu, small, M1+4 ca.
0.6 length of M1.

Abdomen dark greyish brown, concolorous with
thorax. Hypopygium (Figs 6–8) of moderate size, brown
with darkened outer gonostyli and median portion of
tergite 9. Median portion of tergite 9 (Fig. 13) large,
rectangular, provided with stout spine-like sclerotised
projection on each side of its anterior margin which
extends far beyond its posterior margin; these spines
are curved inwards in lateral aspect, gradually tapering
into acute tips, and convergent (crossing each other in
the image is due to deformation while dissecting). Gono-
coxites and both gonostyli as in Figs 6–8, 13, of typical
structure. Parameral plate reduced to transverse band
above proximal part of aedeagus, subquadrate in shape,
with moderately deep triangular emargination on pos-
terior margin and obtuse postero-lateral corners. Aede-
agus (Figs 9–11) of moderate size, strongly bent in
the middle and bipartite distally in lateral aspect, the
upper part more slender, tapering into acute tip, the lower one bipartite in ventral aspect. Ventral plate (Figs 8, 12) extremely well developed, heavily sclerotized, its posterior margin strongly protruding and narrowly bilobed; these lobes abruptly dilate anteriorly to form wide divergent protrusions over ventomesal por-
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tions of gonocoxites. Due to unusual development of the ventral plate, gonocoxites appear completely fused together in caudal view (Fig. 12). Dorsal apodeme of vesica rather small, with darkly pigmented triangular base and narrow median projection.

Female unknown.

ETYMOLOGY. This species is named in honour of Jaroslav Starý (Opava, Czech Republic), a prominent expert in Palaearctic Tipuloidea who contributed a lot to the knowledge of this genus.

DISCUSSION. By the key to Western Palaearctic species provided by Stary [2014: 359–360] Austrolimnophila (Austrolimnophila) vikhrevi sp.n. runs out either at Austrolimnophila (Austrolimnophila) brevicellula Stary, 1977 or Austrolimnophila (Austrolimnophila) cretica Stary, 2014, differing from both of these two species in details of venation and structure of male terminalia indicated above.

DISTRIBUTION. Russia (Krasnodar Territory).

New records

Subfamily Chioneinae

1. Ormosia (Ormosia) bicorns (de Meijere, 1920)

MATERIAL EXAMINED. 1 ♂♂, RUSSIA: Krasnodar Territory, Sochi dist., Kh mastery env., 43.55°N, 39.89°E, 24.VI.2011, N. Vikhrev leg.

DISTRIBUTION. Widely distributed in Europe from Great Britain to Italy and Ukraine. New record for Russia.

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ERRATUM. In my previous article [Gavryushin D.I. 2014. New species of Gonomyia Meigen, 1818 (Diptera: Limoniidae) from Middle Asia // Russian Entomol. J. Vol.23. No.1. P.71–74], the incorrect longitude is given in description of material of Gonomyia kiritschenkoi, it should read 68.38°E.

References


