A new species of the genus Geranomyia Haliday, 1833 (Diptera: Limoniidae) from Transcaucasia

Новый вид рода Geranomyia Haliday, 1833 (Diptera: Limoniidae) из Закавказья

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Abstract. The description of a new species, Geranomyia eugeniana Lantsov, sp. n. from Transcaucasia (Georgia; Russia: Khosta) is given. The new species is compared with the very similar Western Palaearctic species Geranomyia caloptera from which it differs in the longer proboscis and the localization of spots on wings. Distribution of the genus Geranomyia in the Caucasus is confirmed.

Резюме. Приводится описание нового для науки вида Geranomyia eugeniana Lantsov, sp. n. из Закавказья (Грузия; Россия: Хоста). Новый вид отличается от близкого к нему Geranomyia caloptera длинной хоботка и расположением пигментных пятен на крыльях. Подтверждено распространение на Кавказе рода Geranomyia.

The genus Geranomyia Haliday, 1833 is a typical representative of the tropical biota where most (309 or 91.5%) of currently known 341 species of the genus are found. One hundred sixty six species (49%) of Geranomyia occur in the Neotropical Region, 40 species (12%) occur in Australia and Oceania, 69 species (20%) occur in the Oriental Region and 34 species (10%) occur in the Afrotropical Region. The genus Geranomyia is presented in Palaearctic by 13 species, which are confined mainly to the western territories and 10 species to the eastern [Oosterbroek, 2015]. There are no widespread Palaearctic species extending from West to East. The faunas of the genus Geranomyia in Eastern and Western Palaearctic are disconnected and probably have different origins.

So far 2 species are known in Russia: Geranomyia avocetta Alexander, 1913 from Kuril Islands, South Sakhalin (the species is listed also for Central Japan) [Alexander, 1913; Savchenko, Krivolotuskaya, 1976; Savchenko, 1989; Oosterbroek, 2015] and Geranomyia gigiuesis Alexander, 1921 from the south of Khabarovsk Region, southern Primorye, southern Kuril Islands (Kunashir, Shikotan) (the species is known also from Central Japan and North Korea) [Alexander, 1921, 1954; Savchenko, Krivolotuskaya, 1976; Savchenko, 1989; Oosterbroek, 2015].

The collection of the Zoological Museum of National Museum of Natural History at the National Academy of Sciences of Ukraine (NMNH NASU, Kiev, Ukraine) contains 3 males of Geranomyia from Georgia collected by E.N. Savchenko and V.M. Ermolenko and labeled by E.N. Savchenko as a new to science [Savchenko, 1989: 323]. This material remained unexplored until now. Recently the author collected a female of this species in Russia on the Black Sea coast of the Caucasus. After studying the available material, it was concluded that the Caucasian population deserves the status of a new species of Geranomyia. Description of this new species is presented below.

Geranomyia eugeniana Lantsov, sp. n.
(Figs 1–8)

Material. Holotype, ♂: Туапсе, ССР Армянск.[ский] хр. В. Север. Гордэдзи (115 км от Батуми) хвойный лес 17. VIII. [19]70 В. Ермоленко” (Georgian SSR, Arsaminsky Ridge, 115 km from Batumi, pine forest, 17.08.1970 V. Ermolenko). Paratypes: 1♂, “Аджарская АССР Кобулетский р-н, окр. п. Хина, замки камни у потока в лесу, 1. VI. [19]66, Е. Савченко” (Adzhara ASSR Kubeleti district, Hina vill. environs, moss-covered stones from the stream in the forest, 830 m, 1. VI. [19]66 E. Savchenko), dry preparation of genitalia glued to the rectangular plate of celluloid located below; 1♂, “Грузинская ССР, подъём от Адигени к пер. Гордэдзи (132 км от Батуми) смеш. лес у ручья, 15. VIII. [19]70 Е. Савченко” (Georgian SSR, ascent from Adigeni to Goderdzi pass (132 km from Batumi) mixed forest near stream, 15. VIII. [19]70 E. Savchenko), red-white label pinned below without text, “1 Geranomyia sp. n.” (hand written by E. Savchenko); micro tube with genitalia in glycerin on a separate pin with the same geographical label; 1♂, “Россия, Краснодарский край, Хоста, Кавказский государственный биосферный заповедник – «Тисо-самшитовый лес», Н 43°32′12″, Е 39°52′54″, 19.05.2013 leg В. Ланцов” (Russia, Krasnodar Region, Khota, Caucasian State Biosphere Reserve, “Tiso-samshitovaya roshcha” N 43°32′12″ E 39°52′54″, 19.05.2013 leg V. Lantsov), “Тисо-самшитовый лес, боковое влажное ущелье, примыкающее к туристической тропе «Большое холмо» 81 м над ур. мн.” (trench and boxwood grove, side wet canyon, adjacent to the tourist trail “Bolshoe koltso”, 81 m above sea level), the holotype and paratypes are stored in (NMNH NASU) (box No. 132).

Remarks. The holotype is partly damaged, one halter and all legs are absent, except coxae, trochanters and one femur of hind left leg. The male from Adzharia is damaged,
Fig. 1–9. Geranomyia eugeniana sp. n. and its habitat.
1 – male, paratype, lateral view (Georgia: Adzharia, Hina vill. env.); 2 – male, holotype, lateral view (Arsianskiy Ridge, western slopes of Goderdzi Pass);
3 – distal part of paraglossae, male, holotype, dorsal view (Georgia); 4–5 – scutum, dorsal view: 4 – male (Georgia), 5 – female (Russia: Khosta); 6–7 – male genitalia, paratype (Georgia): 6 – dorsal view, 7 – ventral view; 8 – female, paratype, lateral view (Russia: Hosta); 9 – subtropical yew-box forest, the habitat of Geranomyia eugeniana sp. n. (Russia: Khosta).

Рис. 1–9. Geranomyia eugeniana sp. n. и его местообитание.
1 – самец, паратип, вид сбоку (Грузия: Аджария, окр. пос. Хина); 2 – самец, голотип, вид сбоку (Арсианский хр., западный склон перевала Годердзи); 3 – вершина нижнегубного щупика самца, голотип, вид сверху (Грузия); 4–5 – среднеспинка, вид сверху: 4 – самец (Грузия), 5 – самка (Россия: Хоста); 6–7 – половой аппарат самца, паратип (Грузия): 6 – вид сверху, 7 – вид снизу; 8 – самка, паратип, вид сбоку (Россия: Хоста); 9 – субтропический тисо-самшитовый лес, местообитание Geranomyia eugeniana sp. n. (Россия: Хоста).
one leg and labial palpi or paraglossae (terminology according to Alexander [1919: 846–847]) are absent. The second male is damaged, missing head and legs except for coxae and trochanters and femur, tibia and 1st tarsal segment of hind right leg.

**Description.** Male (Figs 1, 2). Head grey, pruinose. Antennae 14-segmented, length of scape 0.25 mm, pedicel globular 0.075 mm in diameter. Segments of flagellum grey, pruinose, with bristles not exceeding length of respective segments. 1st flagellomere slightly longer. Proboscis black to brown, normal for the genus, covered dorsally by microscopic spines. Base of proboscis with short bristle-like hairs. Tips of labial palps (paraglossae) twisted in a spiral (Fig. 3). Eyes without significant characters.

Thorax brownish yellow, mesothorax with 3 thin longitudinal brown stripes, one median and two lateral (Fig. 4), which, however, visible only from a certain angle. Pleura yellowish brown. Stem of halter yellow-grey, knobby brown.

Wings (Figs 1, 2) moderately wide with 6 good visible pigment spots near front edge. From base of wing, spots are as follows: first approximately in middle of vein Sc; second at base of vein R; third at branching of Sc; fourth at tip of R (it covers divergence of vein R); fifth at tip of R; sometimes sixth spot may be at the branch of R as well as at the tip of vein R. Size and shape of spots vary. In addition, weak spots may be on the cord or on crossveins at the distal edge of the discal cell. Vein Sc long, tip of Sc, at 2/3 length of R, vein Sc at tip of Sc, vein R under obtuse angle to R, vein M-Cu at forking of vein M or little bit proximal to it. Cell M, absent.

Coxae, trochanters, femora and tibiae grey-yellow with brown small bristles. Middle and hind coxae are close together. Tips of femora slightly thickened and flattened (Fig. 1). Tibiae without spurs. Tarsi dichromatic, 1st, 2nd and proximal part of 3rd segments grayish-yellow, tip of 3rd segment, 4th and 5th segments brown. Inner surface of paired claws on 5th tarsal segment smooth, without spines. Abdomen brownish yellow. Sternites yellow, tergites brownish.

Male genitalia (Figs 6, 7) typical for genus. Gonostylus large (0.6 mm), width : length ratio is 1 : 2. Rostral projection with 2 large bristle-like hairs. Tips of labial palps (paraglossae) twisted in a spiral (Fig. 3). Paraglossae of both sexes of *Geranomyia* sp. n. are with 2 large spines, very close together, appearing as 1 spine (Fig. 6).

Body length of male 5.5 mm, head + thorax 1.9 mm, wing length 6.5–7.4 mm, proboscis length (including length of paraglossae) 2.6 mm.

Female (Figs 5, 8). Similar to male except for following: tips of paraglossae not in a spiral. Ovipositor with elongated and upcurved cerci, tips of hypovalves pointed. Since there was only one leg and labial palpi or paraglossae (terminology according to Alexander [1919: 846–847]) are absent. The second male is damaged, missing head and legs except for coxae and trochanters and femur, tibia and 1st tarsal segment of hind right leg.

**Diagnosis.** The new species is close to *Geranomyia caloptera* Mik, 1867, a western European species found in Central and Southern Europe, Northern Africa (Morocco), in the Asian part of Turkey and in Israel [Lackschewitz, 1928; Podenas et al., 2006; Stary, Freidberg, 2007; Oosterbroek, 2015]. *Geranomyia eugeniana* sp. n. differs from *G. caloptera* by having a longer proboscis, and in the male, the paraglossal tips are spiraled but straight in *G. caloptera*. They differ as well in the location and form of pigment spots on the wing and the length of the proboscis.

**Bionomics.** *Geranomyia eugeniana* sp. n. has been collected on the Black Sea coast of the Caucasus and in Georgia (at altitudes of up to 830 m above sea level). It is found in humid hydrophytic habitat. In Khusta it occurs in a wet canyon in the Tertiary relict Colchidian subtropical forest with Taxus baccata L. and Buxus colchica Pojark (Fig. 9). The habitat of the species in Georgia is near water communities. The species belongs to the group “faune hygropétrique” [Vaillant, 1952].

**Etymology.** The new species is named after the outstanding entomologist, researcher of Tipuloidea E.N. Savchenko.

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Table 1. The differences between *Geranomyia eugeniana* sp. n. and *Geranomyia caloptera*.
Таблица 1. Различия между *Geranomyia eugeniana* sp. n. и *Geranomyia caloptera*.

<table>
<thead>
<tr>
<th>Character (male and female)</th>
<th><em>Geranomyia eugeniana</em> sp. n.</th>
<th><em>Geranomyia caloptera</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of proboscis</td>
<td>Exceeds the aggregate length of head and thorax; 48% of the male body length, and one third of female body length / Превышает совокупную длину головы и грудь и составляет 48% длины тела самца и треть длины тела самки</td>
<td>Subequal to total length of the head and the thorax / Меньше совокупной длины головы и брюшка</td>
</tr>
<tr>
<td>Length and form of paraglossae</td>
<td>Male: very long, spiraled distally *; female: long but straight / У самцов довольно длинные и дистально свернуты в спираль *; у самок длинные и прямые</td>
<td>Males and females: shorter and straight / У самцов и самок сравнительно короткие, обычного строения</td>
</tr>
<tr>
<td>Pigmentation of wings</td>
<td>6 spots – 5 big and 1 small 6 пятен – 5 крупных и 1 мелкое</td>
<td>7 spots – 6 big and 1 small 7 пятен – 6 крупных и 1 мелкое</td>
</tr>
<tr>
<td>Proximal spot on wings / Расположение проксимального пято на крыле</td>
<td>About midlength on the vein Sc Около середины дим жилищ Sc</td>
<td>Near base of Sc У основания Sc</td>
</tr>
<tr>
<td>Coloration of tarsal segments</td>
<td>Bicolored – greyish yellow anteriorly and brown distally / Биколорные – серо-желтые проксимальные и коричневые дистальные</td>
<td>Monochrome – all yellow Одноцветные – все желтые</td>
</tr>
</tbody>
</table>

Note. * – this character hardly can be consider as taxonomic one as it can be connected with physiological state of the specimen.