



## New records for Limoniidae and Pediciidae (Diptera) from the Caucasus, Russia

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### Abstract

*Ormosia* (*Ormosia*) *hederae* (Curtis, 1835) (Limoniidae) and *Dicranota* (*Paradicranota*) *minuta* Lackschewitz, 1940 (Pediciidae) are new for Russia. The first species is new for the North Caucasus, the second one and *Dicranomyia* (*Idiopyga*) *halterella* Edwards, 1921 (Limoniidae) are new to the Caucasus. The material was collected in the Rtsyvashki valley (the Central Caucasus). Data on species ecology were presented.

**Key words:** Limoniidae, Pediciidae, new for Russia and the Caucasus

### Introduction

During 3 to 9 September 2008 the author took part in a trip to the Central Caucasus (the Rtsyvashki River valley) as a member of an expedition team of the Laboratory of Invertebrate Diversity (Institute of Ecology of Mountain Territories RAS).

The basin of the River Rtsyvashki is on the northern border of the buffer zone of Kabardino-Balkarian High-mountain Nature Reserve. This area of the Bolshoy Kavkaz (the Great Caucasus) is called the Suganskie Alpy and is within the limits of the Bokovoy Hrebet (Lateral Ridge) (the peak of Mt. Sugan 4489 m a.s.l. (m above sea-level)) (Panov 1979). The session was carried out mainly in a parvifoliolate forests zone from 1220 to 1650 (1800) m above sea-level (a background species—*Betula verrucosa*; on the banks of streams and in the river bottomland—*Alnus incana*) (Bondarenko 2007).

Preliminary tipuloid data from the regional fauna was already published (Lantsov 2009). Fifteen species of tipuloid dipterans from the valley of the Rtsyvashki River were recorded: 10 species of Limoniidae (three species of *Chioneinae*, seven of *Limoniinae*) and five species of Tipulidae. For the first time for the Central Caucasus, five additional species of them are specified—*Dicranomyia* (*Dicranomyia*) *didyma* (Meigen, 1804); *Dicranomyia* (*Dicranomyia*) *longipennis* (Schummel, 1829); *Dicranomyia* (*Dicranomyia*) *melanantha* Savchenko, 1984; *Rhipidia* (*Rhipidia*) *maculata* Meigen, 1818; *Tipula* (*Savtshenkia*) *benesignata* Mannheims, 1954; *Tipula* (*Savtshenkia*) *subsignata* Lackschewitz, 1933.

Further examination of the specimens produced new information that is presented here. Before our work, mentioned above (Lantsov 2009), the tipuloid fauna of this region of the Central Caucasus was unknown.

## Material and methods

The area surveyed was the North Caucasus, Kabardino-Balkar Republic, the basin of River Cherek-Balkarsky, the valley of Rtsyvashki River, 3 km SW from the village Verhnyaya Balkhariya, N 43° 04–05', E 43° 26'. In order not to repeat the same text, these data were omitted from specimens cited below. All specimens were collected by the author.

Traditional methods were used—sweeping using an entomological net and using a light trap. The specimens were processed on the same day. All dried and alcoholic materials are kept in the author's collection (Russia, Pyatigorsk).

Information about the geographical distribution of species and their representation in regional faunas came from various catalogues and databases (Savchenko 1989; Savchenko, Oosterbroek, Starý 1992; Oosterbroek 2009).

### Family Limoniidae, Subfamily Chioneinae

#### *Ormosia (Ormosia) hederiae* (Curtis, 1835)

**Material:** The right river bank, flood-plain at a stream, 1658 m above sea-level, 4.IX.2008 (dried specimen) (1 ♂).

**Distribution:** A European-Central Asian species that is found in the majority of the western European countries, as well as in Tajikistan (the Pamirs) and Turkey. Previously it was known only from Transcaucasia (Georgia, Azerbaijan). New for Russia and the North Caucasus.

The Genus *Ormosia* is represented by 96 species in the Palearctic. In Russia—33 species and one subspecies. In the Caucasus at least 11 species, six of which are known from the North-West Caucasus. Eight species are known from the Transcaucasus. Only *Ormosia (Ormosia) fascipennis* (Zetterstedt, [1838]) and *O. (O.) hederiae* are found in the Central Caucasus (North Osetiya and Kabardino-Balkariya, respectively).

**Ecology.** Larvae in wet soils of deciduous and mixed forests. Supposedly two generations a year.

### Family Limoniidae, Subfamily Limoniinae

#### *Dicranomyia (Idiopyga) halterella* Edwards, 1921

**Material.** Dry specimens. Sweeping on a grass stand at a brook on a rocky fluvial terrace above the flood-plain on the right bank of the river, 1790 m, 5.IX. 2008. (2 ♂♂). Specimens preserved in alcohol (70%). Meadow near bottomland forest, light trap, 1571 m, 5.IX. 2008. (8 ♂♂); brook in lateral gorge, 1850 m, 5.IX. 2008. (1 ♀); right bank of the river, Sweeping on a grass stand at a brook, 1790 m, 5.IX. 2008. (1 ♂, 1 ♀).

**Distribution:** This is a little-known mountain holarctic species. In Russia it was only known from the north-western European part, the Far East (Kamchatka, Sakhalin), Altai and Tuva. It is also found in Kirghizia and Mongolia. New for the Caucasus.

The Genus *Dicranomyia* is one of the largest in the family, with 164 species and seven subspecies in the Palearctic and 71 species in Russia. In the Caucasus, not fewer than 20 species. Five species are present in this area under examination (25%). As for the subgenus *Idiopyga*, there are 22 species in the Palearctic and two are known from the Central Caucasus—*D. halterella* and *Dicranomyia (Idiopyga) ctenopyga* (Alexander, 1943).

**Ecology.** The autumn species ranging mainly in semi-aquatic assemblages (at channels). Data on a high-altitude component of its natural habitat is practically absent. In the Caucasus it is found up to 1850 m.

**Family Pediciidae, Subfamily Pediciinae**

*Dicranota (Paradicranota) minuta* Lackschewitz, 1940

**Material.** 70° alcohol: grassland in a bottom-land forest, light-trap, 1571 m, 4.IX 2008 (1 ♂).

**Distribution.** European (Mediterranean to West Asian mountains), alpine species. It is found in Czech Republic, Germany, North Italy (in the Alps, in the upper reaches of the Adige River and in the Trentino-Alto-Adige region), Poland, Romania, Slovakia, Switzerland, Southwest Ukraine (Carpathians). New for Russia and the Caucasus.

The Genus *Dicranota*, one of the largest in the family, has 101 species in the Palearctic, 34 of which are in Russia. In the Caucasus there are not fewer than nine species, eight of which are in the subgenus *Paradicranota* and one is in the subgenus *Ludicia*—*Dicranota (Ludicia) iranensis* (Alexander, 1975). Among these eight, six species are known from the Transcaucasus and three from the northwest Caucasus. *Dicranota minuta* is the single species of the genus known from the Central Caucasus for the present.

**Ecology.** In mountain regions of Germany it is recorded at altitudes up to 1800 m (Schacht 1999); on northern slopes of the Carpathians it ranges from 1300 to 1350 m (Savchenko 1986). It flies from July till October (Savchenko 1986).

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