

New data on Trichoceridae (Diptera) from Romania

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Abstract

Thirteen species of Trichoceridae are new records to Romanian fauna. Out of 45 European species 16 are known to occur here at present. Between them *Trichocera (Saltrichocera) maculipennis* MEIGEN has only very old data from the beginning of 1900 and it was not confirmed by our recent investigations. The other two literature quoted species *T. (S.) regelationis* and *T. (T.) hiemalis* with the same old literature data were confirmed by our recent data.

Key words: new records, Trichoceridae, Romania

Introduction

The family Trichoceridae is one of the most primitive dipteran families, divided into 4 genera: *Trichocera* MEIGEN, 1803 *Diazosma* BERGROTH, 1913, *Paracladura* BRUNETTI, 1911 and *Nothotrichocera* ALEXANDER, 1926 (DAHL & ALEXANDER, 1976). Recently, as more attention has been paid to the European Trichoceridae, the number of known species increased from 24, listed by DAHL (1992) to 46 mentioned by KRZEMIŃSKA, 1992, 1999, 2000, 2001, 2002; MARTINOVSKÝ, 1987, STARÝ, 1996, 1997, 1998, 1999, 2000, STARÝ & GEIGER, 1995, STARÝ & KRZEMIŃSKA, 2000, STARÝ & MARTINOVSKÝ, 1993, 1996 and STARÝ & PODENAS, 1995. Up to the present the species recorded from Europe belong to two genera: *Diazosma* (with 2 European species) and *Trichocera* (with 44 European species) (DAHL, 1992, KRZEMIŃSKA, 2002).

The keys published by LINDNER (1930), CZIŹEK (1938), EDWARDS (1938), LAURENCE (1957) and DAHL (1966) are useful for identification of some wide distributed species, but these are largely outdated, and subsequently new published descriptions should be consulted prior to identification. Recently representatives of the most species-rich *T. saltator* group were keyed by STARÝ (1998) and important taxonomical problems were resolved for a number of other species groups too (KRZEMIŃSKA, 1996, 2000, 2001, STARÝ, 1996).

In general appearance, adult Trichoceridae are resemble with small and medium-sized Limoniidae, but they differ from all other Tipulomorpha by the presence of ocelli, by the vein A2 short and usually abruptly curved towards the wing margin, and by ovipositor bent downwards (DAHL & KRZEMIŃSKA, 1997). Adults are often reported as occurring in caves, cellars and other darkened places, including

rodent burrows. Adults may frequently be observed flying at wet places from autumn till spring. Many species of *Trichocera* produce swarms of predominantly male specimens. As to species diversity, in temperate Europe, occurrence is notably accumulated in the mountains and the peak of occurrence is restricted to late autumn (STARÝ & BARTÁK, 2000).

Material and methods

Our data came from different collecting sites, all of them situated in the Romanian Carpathians:

1. Vlădeasa Mountains, volcanic rocks, spruce fir forest at 1400 m.a.s.l.
2. Iara River Valley, Valea Ierii, spruce fir-beech mixed forest, 800 m a.s.l.
3. Turzii Gorge (Cheile Turzii), Trascau Mountains, calcareous habitats near the river side, 400 m a.s.l.
4. Stana de Vale, Bihor Mountains, spruce fir forest, 1300 m a.s.l.
5. Stanisoara, Cozia Mountains, 700 m a.s.l.
6. Siculeni, Ciuc Depression, damp meadows near the mountainous brook, 640 m a.s.l.

A map with the collecting sites is presented in fig. 1.

We used two complementary collecting methods in our field work. We swept the vegetation in suitable habitats. The major part of the specimens was collected by the senior author. A light trap was operated between 5.V. and 22.X.2000 in the Apuseni Mountains, Valea Ierii near the river side. The material is preserved in alcohol 70% for conservation and deposited in the Department of Zoology, Faculty of Biology and Geology, Cluj, Romania. The identification was made after male and female genitalia and wing venation.

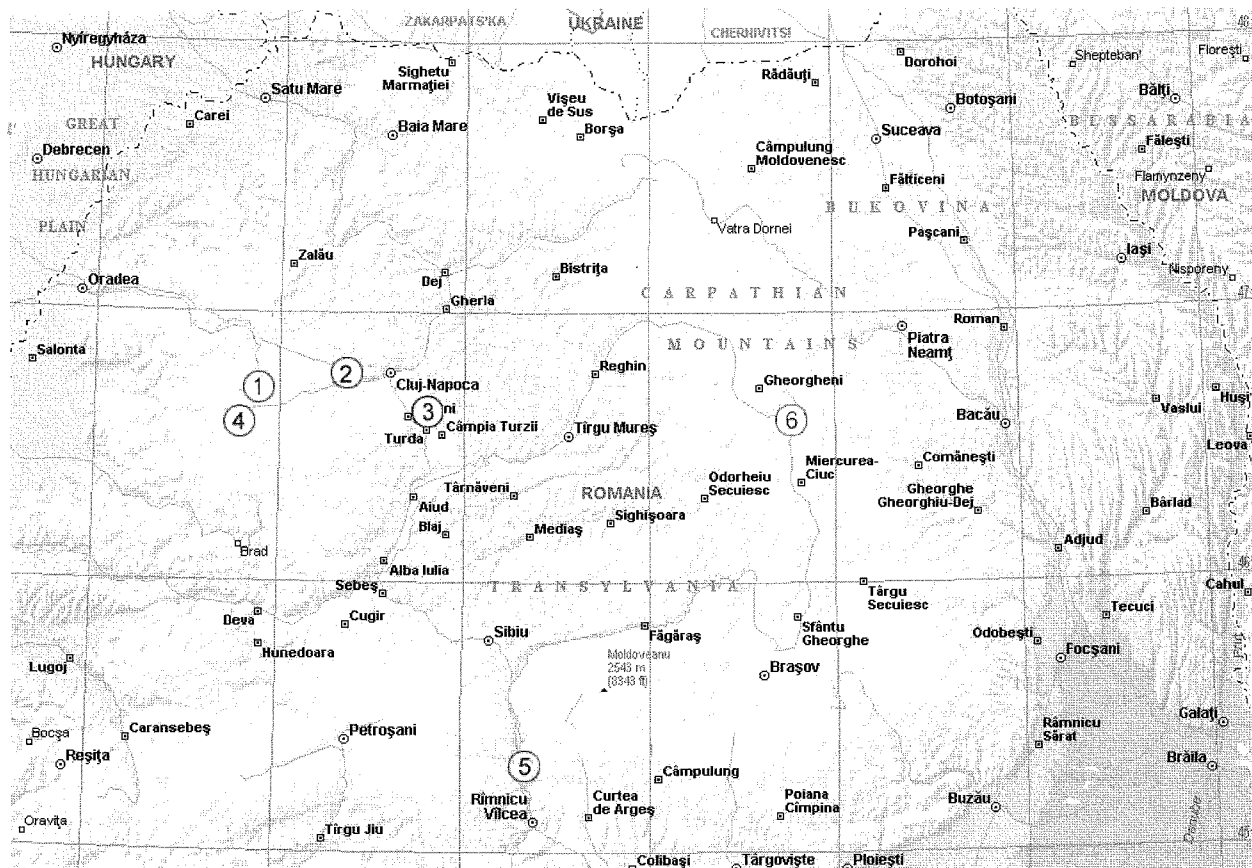


Fig. 1. Collecting sites of Trichoceridae from Romania (the numbers indicate localities, see the text).

Result and discussion

Formerly only three species were recorded from Romania; at that time representatives of Trichoceridae were studied within the Limoniidae (THALHAMMER, 1900). No recent data were published about Romanian Trichoceridae over more than a century. Out of 46 European species 16 are now found in Romania, and 13 of them are new records for the Romanian fauna. The nomenclature and systematic is applied according to KRZEMIŃSKA, 2002.

Trichocera (*Trichocera*) MEIGEN, 1803

Trichocera (*Trichocera*) *hiemalis* (DEGEER), 1776 – Apuseni Mountains, Valea Ierii, shrubs vegetation on the river bank, 800 m, 04.X. 2000 - 1 male, light trap; Trascau Mountains, Cheile Turzii (in the limestone gorge), near Hasdate brook, 400 m, 05.10.2001 - 1 male. STARÝ identified it also from the light trap material from Iara Valley, Apuseni Mountainins (pers. com.).

Trichocera (*Trichocera*) *major* Edwards, 1921 – Vladeasa Mountains, spruce fir forest at 1400 m, 20.X.2001 - 3 males, 1 female.

Trichocera (*Trichocera*) *sibirica* Edwards,

1920 – Vladeasa Mountains, spruce fir forest at 1400 m, 20.X.2001 - 3 males, 1 female.

Trichocera (*Saltrichocera*) KRZEMIŃSKA, 2002

Trichocera (*Saltrichocera*) *antennata* STARÝ, 1999 – Vladeasa Mountains, spruce fir forest at 1400 m, 20.X.2001 - 2 females.

Trichocera (*Saltrichocera*) *calva* STARÝ, 1999 – Stana de Vale, Bihor Mountains, spruce fir forest at 1300 m, 13.X.2001 - 3 male, 3 female.

Trichocera (*Saltrichocera*) *dahlae* MENDEL, 1971 – Vladeasa Mountains, spruce fir forest at 1400 m, 20.X.2001, 16 males, 4 females.

Trichocera (*Saltrichocera*) *implicata* DAHL, 1976 – Vladeasa Mountains, spruce fir forest at 1400 m, 20.X.2001, 1 male, 1 female.

Trichocera (*Saltrichocera*) *montium* STARÝ, 2001 – Vladeasa Mountains, spruce fir forest at 1400 m, 20.X.2001, 2 male, 1 female.

Trichocera (*Saltrichocera*) *parva* MEIGEN, 1804 – Stana de Vale, Bihor Mountains, spruce fir forest at 1300 m, 13.X.2001 - 2 male, 2 females and from the light trap from Iara Valley at 07.X.2000 (STARÝ. pers. com.).

Trichocera (*Saltrichocera*) *recondita* STARÝ, 2000 – Vladeasa Mountains, spruce fir forest, 1400

m, 20.X.2001 - 1 male. The identity of this specimen is uncertain, identification after female would be more explicit. The presence of this species in Romania was confirmed also by STARÝ, basing on the wing venation only (pers. com.). The material studied by Starý was collected by light trap in 07.X.2000 in the Iara Valley, Apuseni Mountains.

Trichocera (Saltrichocera) regelationis (L., 1758) – Stanisoara, Cozia Mountains, lamping in beech forest at 700 m, 06.VI.2000 - 2 males (leg. RAKOSY); Stana de Vale, Bihor Mountains, spruce fir forest at 1300 m, 13.X.2001 - 1 male, 1 female; Trascau Mountains, Cheile Turzii (in the limestone gorge), near Hasdate brook, 400 m, 05.10.2001 - 1 male; Vladeasa Mountains, spruce fir forest at 1400 m, 20.X.2001 - 2 females. STARÝ also identified it from the light trap from Iara Valley, Apuseni Mountains (pers. com.).

Trichocera (Saltrichocera) rufescens EDWARDS, 1921 – Stana de Vale, Bihor Mountains, spruce fir forest at 1300 m, 13.X.2001 - 4 females; Vladeasa Mountains, spruce fir forest at 1400 m, 20.X.2001 - 3 females. STARÝ also identified it from the light trap from Iara Valley, Apuseni Mountains (pers. com.).

Trichocera (Saltrichocera) saltator (HARRIS, 1776) – Siculeni, Ciuc Depression, Romanian Eastern Carpathians, shrubs vegetation near the mountainous brook, 640 m, 11.XI.2001 - 2 females.

Trichocera (Saltrichocera) sparsa STARÝ & MARTINOVSKÝ, 1996 – Siculeni, Ciuc Depression, Romanian Eastern Carpathians, shrubs vegetation near the mountainous brook, 640 m, 11.XI.2001 - 1 male, 3 females; Vladeasa Mountains, spruce fir forest at 1400 m, 20.X.2001 - 1 female.

In concordance with the literature data, *T. (S.) dahlae* appear to be one of the most common species in high altitudes, while *T. (S.) regelationis* has a general distribution in the mountainous regions in Romania.

Most remarkable is the presence of some recently described species (STARÝ, 1999, 2000): *T. (S.) antennata*, *T. (S.) calva*, *T. (S.) montium*, *T. (S.) recondita*, with few records all over Europe.

Due to the high diversity of habitats of the mountainous regions and the high number of Trichoceridae species identified in the surrounding countries the number of Trichoceridae species in Romania will increase in the future.

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