

New Records of Nematoceran Flies (Diptera) from Latvia

JUKKA SALMELA *, NOORA-ANNUKKA VARTIJA

* Corresponding author: Department of Biological and Environmental Sciences, University of Jyväskylä, P.O. Box 35 (YAC4), FIN-40014 Finland; e-mail: jueesalm@cc.jyu.fi

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Abstract: A total of 25 species of nematoceran flies (Diptera: Tipulidae 5 species, Limoniidae 12, Pediciidae 4, Cylindrotomidae 1, Ptychopteridae 1, Psychodidae 1 and Pleciidae 1) were collected during a trip in Latvia in the end of May 2006. The following species were collected from Latvia for the first time: *Tipula submarmorata* SCHUMMEL, *Tipula grisescens* ZETTERSTEDT, *Idioptera pulchella* (MEIGEN), *Ormosia loxia* STARÝ, *Dicranota bimaculata* (SCHUMMEL), *Triogma trisulcata* (SCHUMMEL), *Clytocerus ocellaris* (MEIGEN) and *Penthetria funebris* MEIGEN. Distribution and ecology of the species are briefly discussed.

Key words: Nematocera, fauna, Latvia.

Introduction

Diptera or two-winged flies is one of the most species rich insect orders in the World. In the Palaearctic region circa 40300 species are known and new species are continuously discovered. The occurrence of dipteran species in many European countries is still incompletely known, although some families may be better investigated than others. In Latvia, which is part of the hemiboreal region, crane flies (Tipulidae sensu lato) and some nematoceran families with similar ecological demands (that is, wetland inhabiting species predominate) have not been under systematic research. For example, only a few papers have dealt with Latvian crane flies, these being mainly taxonomic in their scope (Lackschewitz 1925, 1927, Spuris 1995)

Materials and Methods

In the end of May 2006 the authors made a short collecting trip to Latvia. Due to the early season the number of collected species was quite low. Still, some flies new for Latvian fauna were found. Results of our collecting are presented here, including information on the distribution and ecology of the species.

Collecting localities and habitats:

24.05. 2006 - Limbaži Distr., Randu pļavas protected nature area. Most of our collecting

took place in a moist forest characterized by *Alnus glutinosa* (L.) GAERTN. and *Thelypteris palustris* SCHOTT.

24.05.2006 - Limbaži Distr., Melēku līcis camping area, a brook characterized by relatively swift flow, sandy and stony bottom and mosses like *Fontinalis antipyretica* HEDW., *Amblystegium fluviatile* (HEDW.) SCHIMP. and *Conocephalum conicum* (L.) DUMORT. Riparian forest was dominated by *Tilia*, *Populus* and *Betula* and herb-rich bottom layer.

25.05.2006 - Limbaži Distr., Sveikuļi, lakeshore with meso-mesoeutrophic mire vegetation (*Scorpidium scorpioides* (HEDW.) LIMPR., *Calliergonella cuspidata* (HEDW.) LOESKE, *Calliergon cordifolium* (HEDW.) KINDB. and *C. giganteum* (SCHIMP.) KINDB.). This locality is in the vicinity of the Sveikuļi camping area.

27.05.2006 – Riga Distr., Ķemeri National Park [this is a very large area, you should specify an exact site], a small brook surrounded by deciduous trees.

Other localities are shortly presented in the context of the collected species.

All material was collected with a sweep net by the authors unless otherwise indicated. Flies were immediately stored in 70% ethanol and later identified to species using a stereomicroscope. All material was determined by the first author. Species marked with * are new for Latvian fauna. If not otherwise stated,

distribution data is obtained from <http://ip30.eti.uva.nl/ccw/index.php> for crane flies and <http://www.faunaeur.org> for other families.

Review on species

Tipulidae

Nephrotoma pratensis (LINNAEUS, 1758)

25.05.2006, 4 ind., Sveikuļi, camping area, L. Mikonranta & J. Torniainen leg. A widespread species in Europe. The species is an inhabitant of fields, wastelands and sandy soils (Oosterbroek 1979).

* *Tipula (Pterelachisus) submarmorata* SCHUMMEL, 1833

25.05.2006, 1 ind., Sveikuļi. A widespread species in Europe. In Finland *T. submarmorata* occurs in moist forests and around brooks and lake shores (Salmela 2006).

Tipula (Pterelachisus) varipennis MEIGEN, 1818

24.05.2006, 1 ind., Randu pļavas, Baltic coastal meadow, A. Eloranta leg; 27.05. 2006 1 ind., Ķemeri National Park. A widespread species in Europe, very common in deciduous forests and moist habitats in Finland (Salmela 2006).

Tipula (Pterelachisus) pseudovariipennis CZIZEK, 1912

25.05.2006, 1 ind., Sveikuļi, camping area, L. Mikonranta & J. Torniainen leg. A widespread species in Europe. A rare and poorly known species in Finland, collected only from two localities (Salmela 2006). Red-listed in Great Britain, probably a species of moist, broadleaved forests (Falk 1992)

* *Tipula (Savtshenkia) grisescens* ZETTERSTEDT, 1851

25.05.2006, 1 ind., Sveikuļi, camping area, L. Mikonranta & J. Torniainen leg. A relatively widespread species in Europe, a subalpine species in Switzerland (Dufour 1992). The species occurs throughout Finland in springs and cold headwater streams (Salmela 2006).

Limoniidae

Cheilotrichia (Empeda) cinerascens (MEIGEN, 1804)

24.05.2006, 4 ind., Melēku Līcis. *Cheilotrichia cinerascens* is widespread in Europe and common in moist environments in Finland (Salmela 2006). According to Karpa et al.

(1990) the species is known from Latvia.

Epiphragma (Epiphragma) ocellare (LINNAEUS, 1760)

24.05.2006, 1 ind., Melēku Līcis. This saproxylic crane fly species (Brindle 1967) has a widespread distribution in Europe.

* *Idioptera pulchella* (MEIGEN, 1830)

24.05.2006, 1 ind., Randu pļavas. Widespread in Europe and common and widespread in Finland (Salmela 2006). The larvae of the species were associated with *Sphagnum* mosses in Lithuania (Podeniene 2004).

Phylidorea (Phylidorea) bicolor (MEIGEN, 1804)

24.05.2006, 1 ind., Randu pļavas; 24.05.2006 1 ind., Melēku Līcis. The species is distributed over northern and central Europe and occurs in swampy forests and vegetation rich lake shores in Finland (Salmela 2006).

Erioptera (Erioptera) sordida ZETTERSTEDT, 1838

25.05.2006, 1 ind., Sveikuļi. Widespread in Europe, widespread and common in moist habitats in Finland (Salmela 2006).

Hoplolabis (Parilisia) vicina (TONNOIR, 1920)

24.05.2006, 1 ind., Melēku Līcis. A widespread species in Europe, larvae are associated with flowing water (Godfrey 1999).

Limnophila (Limnophila) schranki OOSTERBROEK, 1992

24.05.2006, 7 ind., Melēku Līcis; 27.05. 2006 1 ind., Ķemeri National Park. Very widespread in Europe. In Finland the species is quite common in brooks and rapids (Salmela 2006).

Molophilus (Molophilus) ater (MEIGEN, 1804)

26.05.2006, numerous ind., Engures Lake Nature Park, lake shore forest with rich vegetation. Widespread in Europe. Very common in moist environments in Finland (Salmela 2006).

Ormosia (Ormosia) depilata EDWARDS, 1938

27.05.2006, 1 ind., Ķemeri National Park. Widespread in Europe and common species in wetlands and forests in southern Finland (Salmela 2006).

Ormosia (Ormosia) lineata (MEIGEN, 1804)

24.05.2006, 3 ind., Melēku Līcis. Widespread in Europe. A common wetland species in Finland (Salmela 2006).

* *Ormosia (Ormosia) loxia* STARÝ, 1983

24.05.2006 3 ind., Melēku Līcis. The species is

known from Czech Republic, Finland, Germany, Slovakia, Switzerland and Lithuania. In Finland *O. loxia* is a rare and southern species collected from two localities, perhaps associated with forest brooks (Salmela 2006).

Metalimnobia (Metalimnobia) quadrimaculata (LINNAEUS, 1760)

25.05.2006, 1 ind., Sveikuļi, camping area, L. Mikonranta & J. Tornainen leg. Widespread in Europe, occurs also in the Nearctic region, larvae infest fruiting bodies of fungi (Yakovlev 1994).

Pediciidae

* *Dicranota (Dicranota) bimaculata* (SCHUMMEL, 1829)

27.05.2006, 1 ind., Ķemeri National Park. Relatively widespread in Europe, common around springs and brooks in Finland (Salmela 2006).

Tricyphona (Tricyphona) immaculata (MEIGEN, 1804)

27.05.2006, 1 ind., Ķemeri National Park. The species is widespread in Europe and very common in wetland habitats in Finland (Salmela 2006).

Tricyphona (Tricyphona) unicolor (SCHUMMEL, 1829)

25.05.2006, 1 ind., Sveikuļi. Widespread species in Europe. In Finland associated with swampy shores of brooks and meso-eutrophic mires (Salmela 2006).

Ula (Ula) sylvatica (MEIGEN, 1818)

24.05.2006, 1 ind., Melēku Līcis. Widespread species in Europe, larvae are associated with fruiting bodies of fungi (Yakovlev 1994). The species is probably reported from Latvia by Gimmerthal (1842).

Cylindrotomidae

* *Triogma trisulcata* (SCHUMMEL, 1829)

27.05.2006, numerous ind., Ķemeri National Park, an eutrophic fen near the lake Kaņieris shore, characterized by *Scorpidium* spp, *Plagiomnium elatum* (BRUCH & SCHIMP.) T.J.Kop. and *Cladium mariscus* (L.) POHL. The species is known from central and northern Europe. The species is local in Finland, most records are from eutrophic lake shores, eutrophic fens and Baltic coastal meadows (Salmela 2006). Larvae of the species are

dependent on semiaquatic mosses (Brindle 1967).

Ptychopteridae

* *Ptychoptera contaminata* (LINNAEUS, 1758)

27.05.2006, 1 ind., Ķemeri National Park, L. Mikonranta leg. A Holarctic species, in Europe mainly in the central and northern parts. Larvae of *Ptychoptera* live in mud bottom, shallow ponds (Andersson 1997).

Psychodidae

* *Clytocerus ocellaris* (MEIGEN, 1818)

24.05.2006, 1 ind., Melēku Līcis. European species, apparently the distribution is still poorly known. Eurytopic, very common species in wetlands in Finland (Salmela 2006).

Pleciidae

* *Penthetria funebris* MEIGEN, 1804

24.05.2006, numerous ind., Randu pļavas; 25.05.2006 numerous ind., Gauja National Park. This flightless, velvety black species was very abundant in both localities. Both sexes were observed walking in the bottom layer and within coarse detritus of moist, broadleaved forests. Two species of the genus are known from Europe but the other species is found only once from Germany and probably imported from the Nearctic region (Fitzgerald & Werner 2004). In Sweden the species is red-listed (NT) and presumed to be threatened due to decline of spruce mires (Gärdenfors 2005). Some authors classify *Penthetria funebris* classified to family Bibionidae (Skartveit 1997, Fitzgerald & Werner 2004).

Discussion

During a short trip to Latvia in the end of May 2006 several interesting species and new species for the regional fauna were found. Apparently, the knowledge of nematoceran families covered in the present paper is far from complete. For example, in the neighbouring country Lithuania 307 crane-fly species (Tipulidae, Limoniidae, Pediciidae and Cylindrotomidae) are known while only 173 in Latvia, including the species reported here. A systematic sampling of flies from wetlands and forests should yield dozens of species new for

Latvia.

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