

New records of Cecidomyiidae, Dixidae and Mycetophilidae (Diptera) from the Czech and Slovak Republics

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Abstract: New records of Cecidomyiidae, Dixidae and Mycetophilidae (Diptera) are presented from various localities in the Czech Republic and Slovakia. Three species of Cecidomyiidae, four species of Dixidae and two species of Mycetophilidae are new to the Czech Republic. One species of Cecidomyiidae, two species of Dixidae and two species of Mycetophilidae are new to Slovakia. Problems with the interpretation of the species *Dixella nigra* (Staeger, 1840) and *Dixella bankowskiae* (Vaillant, 1969) are also commented on.

Key words: Insecta, Diptera, gall midges, meniscus midges, fungus gnats, faunistics, Czech Republic, Slovakia, Europe

Introduction

Since the last electronic version of the checklist of Diptera of the Czech and Slovak Republics (Jedlička et al. 2009), many new findings of species from various families have accumulated. Concerning the species rich families Cecidomyiidae and Mycetophilidae, several new records to the Czech or Slovak fauna have already been published (e.g. Mantič *et al.* 2015, Sikora *et al.* 2017) and additional species are continually being discovered.

In this contribution, further new records from these families are presented and the opportunity is taken to include also several interesting records of the little known family Dixidae. In total, we add 9 new records for the fauna of the Czech Republic and 5 for Slovakia.

Material and methods

The material was collected in various Czech and Slovak localities with Malaise traps, sweep netting or by individual collecting, identified by the authors and is deposited in JSL-UOC or TSPC, unless stated otherwise. In the species list, the collecting method is indicated only for Malaise traps (as MT), otherwise the material was collected individually by sweeping or collecting of galls.

Abbreviations: * = first record for the Czech Republic (CZ) or Slovakia (SK); NM = Nature Monument, NP = National Park, NNR = National Nature Reserve, NR = Nature Reserve, PLA = Protected Landscape Area, m = male, f = female, MT = Malaise trap, JSL-UOC = Jan Ševčík Lab, University of Ostrava, Czech Republic (reference collection), MHNN = Musée d'Histoire Naturelle de Neuchâtel, Neuchâtel, Switzerland, TSPC = Tomáš Sikora, University of Ostrava, Czech Republic (personal collection).

Survey of species

CECIDOMYIIDAE

Micromyinae

**Skuhraviana triangulifera* Mamaev, 1963

Holarctic in distribution (Gagné & Jaschhof 2017), recently recorded from CZ by Sikora *et al.* (2017). New to SK.

Material examined: SK: Muránska planina NP, Kučalach, fir-beech forest, 4.ix.2014, 1m, J. Ševčík leg., T. Sikora & M. Jaschhof det. (TSPC).

Winnertziinae

***Ekmanomyia svecica* Jaschhof, 2013**

A species recently described from Sweden (Jaschhof & Jaschhof 2013) and recorded as new to CZ by Sikora et al. (2017).

This specimen represents the first record from Bohemia (CZ).

Material examined: CZ: Českolipsko, Provodín, sand pit nr. cemetery, 10.vi.–16.vii.2015, 1 m, MT, L. Blažej leg., T. Sikora & M. Jaschhof det. (TSPC).

Porricondyliinae

****Camptomyia multinoda* (Felt, 1908)**

Holarctic in distribution (Gagné & Jaschhof 2017), recently recorded from SK by Sikora et al. (2017). New to CZ.

Material examined: CZ: Staré Město, NM Profil Morávky, deciduous forest, 21.vi.2016, 1 m, aspirator, T. Sikora leg., T. Sikora & M. Jaschhof det. (TSPC); same locality, 25.vi.2016, 1 m, T. Sikora leg., T. Sikora & M. Jaschhof det. (TSPC).

***Camptomyia spinifera* Mamaev, 1961**

Widely distributed in Palaearctic region (Gagné & Jaschhof 2017). New to Moravia and Silesia (CZ).

Material examined: CZ: Staré Město, NM Profil Morávky, deciduous forest, 25.vi.2016, 1 m, T. Sikora leg., T. Sikora & M. Jaschhof det. (TSPC).

****Cassidoides fulviventris* Mamaev, 1961**

Widespread Palaearctic species (Gagné & Jaschhof 2017), recently recorded from SK by Sikora et al. (2017). New to CZ.

Material examined: CZ: Českolipsko, Žizníkov, sand-pit, 17.vi.–15.vii.2016, 1 m, MT, L. Blažej leg., T. Sikora & M. Jaschhof det. (TSPC).

Cecidomyiinae

****Didactylomyia longimana* (Felt, 1908)**

Cosmopolitan species (Gagné & Jaschhof 2017). Recently recorded from SK by Mantič et al. (2015). New to CZ.

Material examined: CZ: Staré Město, NM Profil Morávky, deciduous forest, 25.vi.2016, 2 m, T. Sikora leg. & det. (TSPC); the same locality, 15.vi.2017, 3 m, T. Sikora leg. & det. (TSPC).

***Lasioptera artemisiae* Dombrovskaya, 1940 (Fig. 1)**

Palaearctic in distribution (Gagné & Jaschhof 2017), recorded from Bohemia (CZ) by Skuhrová (2004). New to Moravia & Silesia (CZ).

Material examined: CZ: Rybníček nr. Vyškov na Moravě, 6.ix.2017, galls on *Artemisia vulgaris* L., P. Kočárek leg., T. Sikora & J. Ševčík det. (JSL-UOC).

DIXIDAE

****Dixa obsoleta* Peus, 1934**

A very rare species hitherto recorded only from several Central European countries. New to CZ.

Material examined: CZ: Šumava Mts., Boubínský prales, 8.vi.1976, 1 m, R. Rozkošný leg., J. Martinovský det., M. Čada & J. Ševčík rev. (MHNN).



Fig 1: Larvae of *Lasioptera artemisiae* Dombrovskaya, 1940 in the gall on *Artemisia vulgaris* L.
Photo by J. Ševčík.

Fig 2: Male of *Monoclona orientalis* Zaitzev, 1983 from Muránska planina NP. Photo by J. Ševčík.

****Dixella amphibia* (De Geer, 1776)**

A widespread but local European species. New to SK.

Material examined: SK: Bořany, Latorica shores, 3.vi.1988, 1 m, J. Martinovský leg. & det., M. Čada & J. Ševčík rev. (MHNN).

***Dixella bankowskiae* (Vaillant, 1969)**

This species was described by Vaillant (1969) from Poland (Pieniny Mts., close to the border with Slovakia) and has not been recorded under this name up to the present. Martinovský (1995) recorded this species under the most probably misidentified name *Dixella nigra* (Staeger, 1840) and we found numerous specimens of the same species identified by him as *nigra* in his collection (see Material examined below). As the type series of *D. nigra* has not been found in the Staeger collection in Copenhagen (T. Pape, pers. comm., 2017), we cannot establish the identity of this species with certainty. Our interpretation is, therefore, based on the study of the specimens from Norway (provided by Ø. Håland) which more correspond to the figures by Martini (1929). The true *nigra* (*sensu* Salmela et al. 2007) has not yet been found in the Czech or Slovak Republics and should be deleted from the local checklist.

Moreover, Ševčík (2007) recorded the same species from the Czech Republic under the misidentified name *Dixella hyperborea* (Bergroth, 1889). True *Dixella hyperborea* is currently known within the Czech Republic and Slovakia only from the Vysoké Tatry Mts. This record was based on three specimens collected by Dr. J. Martinovský (Nové Štrbské pleso, 1.viii.1973, 2 m, 1 f) which are currently deposited in MHNN (also published by Rozkošný 1984).

Material examined

CZ: Moravskoslezské Beskydy Mts., Sulov, 23.ix.2016, 1 m, M. Čada leg. & det. (JSL-UOC); Šumava Mts., Horská Kvilda, 15.viii.–11.x.2016, 1 m, Malaise trap, M. Tkoč leg., J. Ševčík det. (JSL-UOC); the same locality, 4.viii.1974, 1 m, K. Spitzer leg., M. Čada det. (MHNN); Moravskoslezské Beskydy Mts., Černá Ostravice, 28.viii.1973, 6 f, R. Rozkošný leg.; Hrubá Voda u Olomouce, 28.vi.1969, 1 m, 1 f, 1.vii.1973, 1 m, 1 f, all J. Martinovský leg.; Prostřední Bečva, 12.x.1999, 3 m, J. Martinovský leg.; Josefová u Branné, 23.viii.1973, 3 m, 1 f, 27.viii.1973, 2 m, all J. Martinovský leg.; Smilov, 12.v.1970, 1 m, J. Martinovský leg.; Hraběšice, 14.v.1974, 1 m, 6.viii.1974, 1 m, all J. Martinovský leg.; Horní Lipová – Šerák, 14.viii.1975, 1 m, J. Martinovský leg.; Dětrichov nad Bystřicí, 2.ix.1971, 6 m, J. Martinovský leg.; Oskava, 20.v.1970, 1 m, J. Martinovský leg., all J. Martinovský det. as *D. nigra*, M. Čada & J. Ševčík rev. (all MHNN).

SK: Vysoké Tatry, Starý Smokovec, 1.x.2016, 1 m, M. Čada leg. & det.; Poľana Mts., Havranie skaly, 15.vi.2016, 1 m, J. Ševčík leg. & det. (all JSL-UOC); Nová Sedlica, NPR Stuzica, 16.vi.1991, 1 f, J. Starý leg.; Nová Sedlica, 1.x.1997, 1 m, J. Martinovský leg.; Poľana Mts., vodopád spády, 12.vi.1999, 2 m, J. Martinovský leg., all J. Martinovský det. as *D. nigra*, M. Čada & J. Ševčík rev. (all MHNN).

****Dixella filicornis* (Edwards, 1926)**

A species occurring from northern to southern Europe. New to CZ.

Material examined: CZ: Kunice, 1997 (without other data), 1 f, M. Barták leg.; Bořetice, 1 m, M. Barták leg., Uhlířské Janovice, near pond, 15.ix.1991, 1 m, 19.ix.1991, 1 m, all M. Barták leg., J. Martinovský det., M. Čada & J. Ševčík rev. (all MHNN).

****Dixella martinii* (Peus, 1934)**

This species is known from several neighbouring countries, so its occurrence in the Czech Republic or Slovakia has been expected. New to CZ.

Material examined: CZ: Staré Město pod Králickým Sněžníkem, 10.x.–11.x.1973, 6 m, 1 f, J. Martinovský leg.; Rejvíz, Malé mechové jezírko, 20.viii.1975, 1 m, 22.ix.1999, 1 m, all J. Martinovský leg.; Radějov, Přehrada Lučina, 30.vi.1998, 1 m, J. Starý leg., all J. Martinovský det., M. Čada & J. Ševčík rev. (all MHNN).

****Dixella naevia* (Peus, 1934)**

A nordic species which is considered as crenobiont in Finland (Salmela 2004). New to CZ.

Material examined: CZ: Hrubý Jeseník, Skřítek-rašeliniště, 5.x.1995, 4 m, J. Martinovský leg.; Rejvíz, Malé mechové jezírko, 22.ix.1999, 1 m, J. Martinovský leg., all J. Martinovský det., M. Čada & J. Ševčík rev. (all MHNN).

****Dixella obscura* (Loew, 1849)**

This species is known from Europe, Russia and Israel. According to Disney (1999), the larvae of this species occur in waters rich in calcium, such as the edges of slowly flowing rivers and swamps, especially with the presence of *Carex rostrata*. New to SK.

Material examined: SK: Vyšný Sliach, 16.ix.1985, 2 m, J. Martinovský leg., J. Martinovský det., M. Čada & J. Ševčík rev. (MHNN).

MYCETOPHILIDAE

****Dynatosoma nigripes* Ševčík & Papp, 2001**

This species was described from several localities in Hungary (Ševčík & Papp 2001) and subsequently recorded from Slovakia (Ševčík 2012). New to CZ.

Material examined: CZ: Šilheřovice, Černý les II. NR, 13.iv.2016, 1 f, 9.vii.2017, 1 m, J. Ševčík leg. & det. (JSL-UOC).

****Exechiopsis (Xenexechia) seducta* (Plassmann, 1976)**

This species was described from Sweden and except northern Europe subsequently recorded from Hungary (Ševčík & Papp 2001), European Russia (Zaitzev 2003), and England (Gibbs 2009, Chandler & Perry 2011, Chandler 2014, 2015). Ševčík & Papp (2001) transferred this species from the genus *Exechia* Winnertz to *Exechiopsis* Tuomikoski, a placement supported also by recent molecular data (Burdíková *et al.*, in prep.). New to CZ.

Material examined: CZ: Šilheřovice, Černý les II. NR, 4.ix.2015, 1 m, T. Sikora leg., J. Ševčík det. (JSL-UOC).

****Monoclona orientalis* Zaitzev, 1983 (Fig. 2)**

This species was described from the Russian Far East and recorded as new to Europe by Martinovský & Ševčík (1997). Later it was recorded also from Hungary (Zempléni NP, see Ševčík & Papp 2001). This is the first record from Slovakia and confirmation of its recent occurrence in the Czech Republic.

Material examined: CZ: Šilheřovice, Černý les II. NR, 9.vi.2017, 1 m, J. Ševčík leg. & det. (JSL-UOC). SK: Muránska planina NP, Šarkanica NNR, 9.viii.–5.ix.2017, 1 m, Malaise trap, M. Tkoč *et al.* leg., J. Ševčík det. (JSL-UOC).

****Synplasta rufilatera* (Edwards, 1941)**

A rare Palaearctic species with several scattered records from Europe. New to SK.

The specimen from Slovakia corresponds relatively well with the original figures by Edwards (1941). Zaitzev (2003), however, actually figured under the name *S. rufilatera* a different species, *S. praeformida* (Dziedzicki, 1910). The latter species differs in several details on the male terminalia, especially by the rounded, club shaped and more prominent apical part of the medioventral process of gonocoxites.

Material examined: SK: Cerová vrchovina Protected Landscape Area, Stará bašta, Pohanský hrad NNR, 6.iv.2017, 1 m, J. Ševčík leg. & det. (JSL-UOC).

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Nové nálezy Cecidomyiidae, Dixidae a Mycetophilidae (Diptera) z České a Slovenské republiky.

Nové nálezy dvoukřídlých z čeledí Cecidomyiidae, Dixidae a Mycetophilidae (Diptera) jsou prezentovány z různých lokalit České a Slovenské republiky. Tři druhy čeledi Cecidomyiidae, 4 druhy Dixidae a 2 druhy Mycetophilidae jsou poprvé publikovány z České republiky. Jeden druh čeledi Cecidomyiidae, dva druhy Dixidae a dva druhy Mycetophilidae jsou nové pro Slovensko. Komentovány jsou také problémy s interpretací druhů *Dixella nigra* (Staeger, 1840) a *Dixella bankowskiae* (Vaillant, 1969).

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