Glossostyles perspicua gen. et sp. nov. and other fungivorous Cecidomyiidae (Diptera) new to the Czech and Slovak Republics

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Introduction

Gall midges, Cecidomyiidae, are a large family of small-sized, mostly short-lived dipterans that belong to the infraorder Bibionomorpha (Wiegmann et al. 2011; Ševčík et al. 2014) and, most probably, to the superfamily Sciaroidea (Ševčík et al. 2016). The family is best known for its herbivorous species (subfamily Cecidomyiinae), which account for about ⅘ of the described biodiversity, while the five basal subfamilies (Catotrichinae, Lestremiinae, Micromyinae, Winnertziinae, Porricondylinae) contain solely fungivores, as far as the biology is known (Gagné & Jaschhof 2014). Taxonomic research on the fungivorous subfamilies has intensified in recent years, leading to a reclassification of the entire family and improving the tools for the identification of species, especially in Europe (Jaschhof 1998; Jaschhof & Jaschhof 2009, 2013). In the Czech and Slovak Republics (former Czechoslovakia) the study of gall midges is firmly established through the dedicated work of Marcela Skuhrová and Václav Skuhravý (see Bílý 2015), but was previously focused largely on Cecidomyiinae (e.g., Skuhrová 1991, 1994). This circumstance is not unusual and corresponds to the common practice of splitting responsibilities between workers on herbivorous gall midges, on the one hand, and fungivorous gall midges, on the other hand.

A research group established at the University of Ostrava to study mainly Bibionomorpha systematics, biodiversity and biology has recently expanded its research interest onto Cecidomyiidae, including the fungivorous subfamilies (Mantič et al. 2015). Another outcome from the faunistic-taxonomic surveys conducted by that group, which includes two of the present authors, is presented here, this time dedicated wholly to fungivorous gall midges. Considering that former efforts to inventory Czech and Slovak Diptera largely neglected these inconspicuous midges, it does not come as a surprise that the present study unveiled a number of new species records for either or both of the two countries. Other taxa were identified to be even new to science, including Glossostyles perspicua gen. et sp. nov., a new member of the tribe Porricondylini described in this paper.

Material and methods

Specimens for this study, mostly male adults, were collected in 1999–2015 by sweepnet (SW) and Malaise traps (MT) in a number of different localities in the Czech Republic (CZ) and Slovakia (SK). The range of habitats covered by these collecting efforts included natural woodland, peat-bogs, meadows, steppes and heathlands, with many of the collecting sites located in areas benefitting from some kind of conservation status, a fact accounting for the generally high habitat quality (Figs 1–2). Most of the specimens studied here were collected in the frame of several large-scale inventory projects organized by the Czech dipterists Miroslav Barták, Štěpán Kubík, Jindřich Roháček, and Jan Ševčík. For descriptions of the localities and collecting methods used in those projects, see Barták & Kubík (2005), Kubík (2001), Roháček & Ševčík (2009) and Ševčík & Kurina (2011).

No attempt has been made at this stage to verify identifications by studying the respective voucher specimens of the Czech and Slovak species referred to in the literature. A series of both males and females of the newly described species were collected during an insect inventory in Tyresta National Park, Sweden, and received on loan from the Naturhistoriska Riksmuseet in Stockholm (NHRS). Specimens studied here were mounted on microscope slides according to the method described by Jaschhof & Jaschhof (2009), with Hoyer’s medium used instead of Canada balsam in a part of the material. Types of the new species are deposited in the National Museum in Prague (NMPC), other specimens in the
Fig. 1. Sampling localities. A. Rejvíz peat-bog (Czech Republic) with a Malaise trap used in 2004. A well preserved postglacial peat-bog with *Pinus rotundata* growth. B. Rejvíz peat-bog with the Malaise trap used in 2005. Photos by J. Ševčík.
Fig. 2. Sampling localities. A. Velká Kotlina Glacial Cirque (Czech Republic) with a Malaise trap used in 2006. Frequent avalanches are the main cause of the unique subalpine biodiversity of this locality (e.g., more than 350 species of vascular plants have been recorded from there) B. Hrončeký grúň Reserve in Poľana Mts (Slovak Republic) with a Malaise trap used in 2005. This is a virgin forest mainly composed of fir and beech intermixed with ash, spruce and sycamore maple and with an enormous and unique diversity of flies (see Roháček & Ševčík 2009). Photos by J. Ševčík
personal collection of Tomáš Sikora (TSPC), which will ultimately be deposited in NMPC, in the
NHRS, and in the Senckenberg Deutsches Entomologisches Institut (SDEI), Müncheberg, Germany.
Morphological terms used here are in accordance with those applied to fungivorous Cecidomyiidae by
Jaschhof & Jaschhof (2009, 2013), and, with respect to wing veins, Jaschhof (2016). The arrangement
of subfamilies follows the classification outlined by Gagné & Jaschhof (2014); genera and species are
listed alphabetically.

Other abbreviations used in the present paper are as follows:

<table>
<thead>
<tr>
<th>Abbreviation</th>
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<tr>
<td>BR</td>
<td>Biosphere Reserve</td>
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<td>NM</td>
<td>Nature Monument</td>
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<td>NR</td>
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<td>NP</td>
<td>National Park</td>
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<td>tg</td>
<td>tergite</td>
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Results

Class Insecta Linnaeus, 1758
Order Diptera Linnaeus, 1804
Infraorder Bibionomorpha Hennig, 1954
Family Cecidomyiidae Newman, 1834

Genus *Glossostyles* Jaschhof & Sikora gen. nov.

Type species

*Glossostyles perspicua* gen. et sp. nov., described below.

Diagnosis

Adult morphology shows *Glossostyles* gen. nov. to be a typical member of the tribe Porricondylini,
where it belongs to the large group of genera with 14 male flagellomeres and without basitarsal spines
(group Aa in Jaschhof & Jaschhof 2013). The unadorned but massive construction of the male genitalia
(Fig. 3D) makes *Glossostyles* gen. nov. distinctive, with the particulars as follows. The gonocoxae are
fully merged ventromedially and lack processes at the posterior edge; the gonostyli are disproportionally
large and have no apical structure other than a sparse row of inconspicuous spines; the parameres are
fused to form a tegmen, which encloses the ejaculatory apodeme dorsally as a weakly sclerotized semi-
cylinder whose shape is elongate-trapezoid in ventral view. Similarly, large gonostyli and gonocoxae
are found in other genera of Porricondylini, such as *Pseudepidosis* Mamaev, 1966 and *Claspettomyia*
Grover, 1964, but there they are modified, the gonostyli with apical teeth and/or subapical swellings, and
the gonocoxae with a ventral emargination and various processes. Unlike in *Glossostyles* gen. nov., the
parameres in *Pseudepidosis* and *Claspettomyia* are strongly sclerotized, and are either separated from
each other or complexly built. *Claspettomyia* is peculiar among these three genera for having 13 instead
of 14 male flagellomeres.

Etymology

The name *Glossostyles* is composed of the Greek words ‘glossa’, for tongue, and ‘stylos’, for stylus,
with reference to the distinctive tongue-shape of the gonostyli. Gender is feminine.
Notes on relationship

Obvious similarities in the structure of the gonostyli and gonocoxae suggest that *Glossostyles* gen. nov. is most closely related to *Claspettomyia*. In both genera the gonostyli are enormously large, constricted beyond the basal apophyses, which are well developed, and clearly broadened further distally, while the massive gonocoxae are much broader than long.

*Glossostyles perspicua* Jaschhof & Sikora gen. et sp. nov. [urn:lsid:zoobank.org:act:5C7275CB-7B7F-4FAD-808F-3E346206447A](urn:lsid:zoobank.org:act:5C7275CB-7B7F-4FAD-808F-3E346206447A) Fig. 3A–F

Diagnosis

This species differs from the other Porricondylini in the characters referred to in the generic diagnosis of *Glossostyles* gen. nov. In particular, the tongue-shaped gonostyli, which are unusually large and directed ventromedially, make *G. perspicua* gen. et sp. nov. unmistakable.

Etymology

The species epithet 'perspicua' is a Latin adjective, meaning ‘unmistakable’.

Type material

**Holotype**


**Paratype**


**Other material studied**


Description

**Male**

Body. Size up to 2.2 mm.

**Head.** Postfrons asetose. Eye bridge 3–4 ommatidia long dorsally. Antenna slightly longer than body. Scape and pedicel lighter than flagellum. Circumfila on flagellomeres 1–14, evenly ring-shaped. Neck of fourth flagellomere 1.2 times as long as node (Fig. 3E). Palpus 1.3 times as long as head height, 4 subcylindrical segments, fourth segment longest of all.

**Thorax.** Anepisternum and anepimeron setose. Wing (Fig. 3A) longer than body. Length/width 2.8. Rs strongly oblique, almost in line with R₅. Btv sinuous. A remnant M₁₂ present at wing margin. M₄ weak, approaches CuA. Legs densely covered with narrow scales, conspicuously light setae on third to fifth tarsomeres (therefore tarsi white-tipped). Claws moderately curved, 1 large and 2–4 smaller teeth basally. Empodia broad, as long as claws.

**Abdomen.** Sclerites entire, setae long, aligned on posterior margin, dispersed elsewhere. Pleural membrane sparsely setose.
Fig. 3. Morphology of *Glossostyles perspicua* Jaschhof & Sikora gen. et sp. nov. A. Wing, setae omitted (♀ from Tyresta). B. Gonostylus, lateral (specimen from Tyresta). C. Female genitalia, lateral view (specimen from Tyresta). D. Male genitalia, ventral (holotype). E. Male fourth flagellomere, lateral view (holotype). F. Female fourth flagellomere, lateral (specimen from Tyresta). Scale bars: A = 1 mm; B–F = 0.05 mm.
**Genitalia** (Fig. 3D). Ninth tergite subtrapezoid. Gonocoxae broad, sparsely setose ventrally, with membranous, glabrous lobe medially on posterior edge; apodemes thick, long. Gonostylus massive, but appears surprisingly slender in strict lateral view (Fig. 3B), slightly curved, longer than gonocoxa, broadest at mid-length, constricted subbasally, on apex a few thin spines intermingled with long microtrichia, setae of various lengths elsewhere. Tegmen subtrapezoid in ventral view, with narrow collar apically, small apodemes beyond mid-length. Ejaculatory apodeme longer than gonocoxites, moderately sclerotized.

**Female**

**Body.** Size up to 2.8 mm.

**Head.** Antenna with 11 flagellomeres. Flagellomeres with elongate-subcylindrical nodes, distinct necks, circumfila as in Fig. 3F. Neck of fourth flagellomere more than half as long as node.

**Genitalia** (Fig. 3C). As typical for Porricondylini, including unusually large ninth tergite, 2-segmented dorsal lamella. Distiscercus slightly smaller than basicercus.

**Note on identification**

The specimens of *G. perspicua* gen. et sp. nov. from Tyresta were initially identified as an unnamed species of Porricondylini by Voldemars Spungis, University of Latvia, who worked, but never published, on the Porricondylinae from the Tyresta insect inventory in the early 2000s. Due to the rather poor state of preservation, those specimens remained undescribed in Jaschhof & Jaschhof’s (2013) revision of Swedish Porricondylinae.

**New faunistic records**

*Anarettella iola* Pritchard, 1951

**Material**


**Distribution**

Widely distributed throughout the Holarctic realm (Gagné & Jaschhof 2014). New to CZ.

**Aprionus cornutus** Berest, 1986

**Material**

**Czech Republic:** 3 ♂♂, Bohemia, Šumava Mts, Rokytská slatě, 24 Jul.–28 Aug. 2000, MT, M. Barták and Š. Kubík leg. (TSPC); 1 ♂, Bohemia, Šumava Mts, Nová Hůrka, 13 May–24 Jun. 2000, MT, M. Barták and Š. Kubík leg. (TSPC).
Distribution
Recorded in several European countries, from Norway to Ukraine (Gagné & Jaschhof 2014). New to CZ.

*Aprionus dalarrensis* Mamaev, 1998

Material

Distribution
Until now recorded only from northern Europe (Gagné & Jaschhof 2014). New to CZ.

*Aprionus denticulus* Berest, 1986

Material

Distribution
European in distribution (Gagné & Jaschhof 2014). New to CZ.

*Aprionus dentifer* Mamaev, 1965

Material

Distribution
Widely distributed in Europe (Gagné & Jaschhof 2014). New to CZ.

*Aprionus flavidus* (Winnertz, 1870)

Material
CZECH REPUBLIC: 1 ♂, Moravia and Silesia, Šilheřovice, Černý les II. NR, 4 Sep. 2015, SW, T. Sikora and J. Ševčík leg. (TSPC).

Distribution
Widely distributed and very common in Europe (Gagné & Jaschhof 2014). New to CZ.

*Aprionus halteratus* (Zetterstedt, 1852)

Material

Distribution
Common and widely distributed in Europe (Gagné & Jaschhof 2014). New to SK.
Aprionus inquisitor Mamaev, 1963

Material

Distribution
Widely distributed in Palaearctic region (Gagné & Jaschhof 2014). New to CZ.

Aprionus lindgrenae Jaschhof, 2015

Material

Distribution
Recently described from Sweden and Germany (Jaschhof & Jaschhof 2015), probably more widely distributed in Europe. New to SK.

Aprionus oligodactylus Jaschhof, 2009

Material

Distribution
Recently described from northern Europe (Jaschhof & Jaschhof 2009). New to CZ.

Aprionus pigmentalis Mamaev, 1998

Material

Distribution
Palaearctic in distribution (Gagné & Jaschhof 2014). New to CZ.

Aprionus spiniger (Kieffer, 1894)

Material

Distribution
Common and widely distributed in the Holarctic realm (Gagné & Jaschhof 2014), including CZ and SK (Skuhravá 2004, 2009). An additional record from north-east Slovakia.
Bryomyia Kieffer, 1895

Bryomyia apsectra Edwards, 1938

Material

Distribution
A widespread Palaearctic species (Gagné & Jaschhof 2014). New to CZ.

Bryomyia bergrothi Kieffer, 1895

Material

SLOVAK REPUBLIC: 1 ♂, Muránská planina NP, Poľudnica NNR, 30 Sep. 2015, MT, J. Roháček and J. Ševčík leg. (TSPC).

Distribution
Very common and widespread in the Palaearctic region (Gagné & Jaschhof 2014). New to CZ and SK.

Bryomyia gibbosa (Felt, 1907)

Material


Distribution
Holarctic in distribution (Gagné & Jaschhof 2014). New to CZ and SK.

Bryomyia helmuti Jaschhof, 1998

Material

Distribution
Previously known only from the type locality in Germany (Gagné & Jaschhof 2014). New to SK.
Campylomyza Meigen, 1818

Campylomyza dilatata Felt, 1907

Material

Distribution
Widespread in Holarctic realm (Gagné & Jaschhof 2014). New to CZ.

Campylomyza paenebicolor Jaschhof, 2009

Material
CZECH REPUBLIC: 1 ♂, Moravia and Silesia, Podyji NP, Havraníky, 27 Sep.–14 Nov. 2001, MT, M. Barták and Š. Kubík leg. (TSPC).

Distribution
Widely distributed in Europe (Gagné & Jaschhof 2014). New to CZ.

Catocha incisa Jaschhof, 2009

Material

Distribution
Probably widely distributed in Europe (Jaschhof & Jaschhof 2009). New to CZ.

Heterogenella Mamaev, 1963

Heterogenella hybrida Mamaev, 1963

Material

Distribution
Palaearctic in distribution (Gagné & Jaschhof 2014). New to CZ.

Micromya Rondani, 1840

Micromya lucorum Rondani, 1840

Material
Distribution
The only member of the genus *Micromya* Rondani, 1840 in Europe (Gagné & Jaschhof 2014). An additional record for CZ (see Skuhravá 1994, 2009).

*Monardia* Kieffer, 1895

*Monardia (Xylopriona) atra* (Meigen, 1804)

Material
CZECH REPUBLIC: 1 ♂, Moravia and Silesia, Podyji NP, Havraníky, 27 Sep.–14 Nov. 2001, MT, M. Barták and Š. Kubík leg. (TSPC); 2 ♂♂, Moravia and Silesia, Podyji NP, Terasy, 3 May–2 Jun. 2003, MT, M. Barták and Š. Kubík leg. (TSPC); 1 ♂, Moravia and Silesia, Podyji NP, Braňava-letohrádek, 13 May–1 Jun. 2001, MT, M. Barták and Š. Kubík (TSPC).

SLOVAK REPUBLIC: 1 ♂, Muránská planina NP, Muránský hrad, 30 Oct. 2015, SW, J. Roháček leg. (TSPC); 4 ♂♂, Muránská planina NP, Mokrá Poľana NR, 1 Oct. 2015, SW, J. Roháček leg. (TSPC); 2 ♂♂, Muránská planina NP, Poľudnica NNR, 30 Sep. 2015, MT, J. Roháček and J. Ševčík leg. (TSPC).

Distribution

*Monardia (Monardia) obsoleta* Edwards, 1938

Material
CZECH REPUBLIC: 2 ♂♂, Moravia and Silesia, Šilheřovice, Černý les II. NR, adults emerged 15 Nov. 2015, reared from larvae found in mould on *Royoporus badius*, J. Ševčík and T. Sikora leg. (TSPC).

Distribution
Widely distributed in Europe (Gagné & Jaschhof 2014). Reported as new to CZ by Ševčík (2010), who found larvae living in mould on the polypore fungus *Royoporus badius*. Another rearing record from CZ is presented here.

*Monardia (Xylopriona) toxicodendri* (Felt, 1907)

Material

Distribution

*Monardia (Xylopriona) unguifera* Berest & Mamaev, 1997

Material
Distribution
A rarely collected species, previously known from a few specimens collected in Germany, Ukraine and Finland (Gagné & Jaschhof 2014). New to CZ.

*Neurolyga* Rondani, 1840

*Neurolyga acuminata* Jaschhof, 2009

Material

Distribution
Palaeartic in distribution (Gagné & Jaschhof 2014). New to CZ.

*Neurolyga excavata* (Yükawa, 1967)

Material

Distribution
Widely distributed in the Palaeartic region (Gagné & Jaschhof 2014). New to CZ.

*Neurolyga interrupta* Jaschhof, 2009

Material

Distribution
Previously known from northern Europe (Gagné & Jaschhof 2014). New to CZ.

*Peromyia* Kieffer, 1894

*Peromyia bidentata* Berest, 1988

Material

Distribution
A rarely collected Palaeartic species (Gagné & Jaschhof 2014). New to CZ.
**Peromyia fungicola** (Kieffer, 1901)

**Material**


**Distribution**

Holarctic in distribution (Gagné & Jaschhof 2014). Previously reported from CZ by Ševčík (2010). This is an additional record for CZ.

**Peromyia ramosa** (Edwards, 1938)

**Material**


**Distribution**

Widely distributed in the Palaeartic region (Gagné & Jaschhof 2014). New to CZ.

**Polyardis** Pritchard, 1947

**Polyardis adela** Pritchard, 1947

**Material**


**Distribution**

Holarctic in distribution (Gagné & Jaschhof 2014). New to SK.

**Skuhraviana** Mamaev, 1963

**Skuhraviana triangulifera** Mamaev, 1963

**Material**

CZECH REPUBLIC: 2 ♂♂, Moravia and Silesia, Šilheřovice, Černý les II. NR, 4 Sep. 2015, SW, J. Ševčík and T. Sikora leg. (TSPC).

**Distribution**

Holarctic in distribution (Gagné & Jaschhof 2014). New to CZ.

**Winnertiinae** Panelius, 1965

**Diallactia** Gagné, 2004

**Diallactia crocea** (Kieffer, 1894)

**Material**

**Ekmanomyia Jaschhof, 2013**

**Ekmanomyia svecica** Jaschhof, 2013

**Material**

**Distribution**
Recently described from Sweden (Jaschhof & Jaschhof 2013). New to CZ.

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**Winnertzia Rondani, 1860**

**Winnertzia globifera** Mamaev, 1963

**Material**

**Distribution**
This species was recently recorded from CZ by Mantič et al. (2015). New to SK.

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**Winnertzia parvispina** Jaschhof, 2013

**Material**

**Distribution**
Previously known only from Sweden (Gagné & Jaschhof 2014). New to SK.

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**Winnertzia xylostei** Mamaev, 1963

**Material**

Distribution
A common Palaearctic species (Gagné & Jaschhof 2014). New to CZ and SK.

Porricondylinae Kieffer, 1913
Asynapta Loew, 1850

Asynapta inflata Spungis, 1988

Material
CZECH REPUBLIC: 1 ♂, Moravia and Silesia, Podyji NP, Braïtava-lethorâdek, 13 May–1 Jun. 2001, MT, M. Barták and Š. Kubík leg. (TSPC).

Distribution
This species was hitherto known only from Sweden, Latvia and Ukraine (Gagné & Jaschhof 2014). New to CZ.

Asynapta strobi (Kieffer, 1920)

Material
CZECH REPUBLIC: 1 ♂, Moravia and Silesia, Hrubý Jeseník Mts, 1182 m, Velká Kotlina glacial cirque, 4 Sep.–24 Nov. 2006, MT, J. Roháček and J. Ševčík leg. (TSPC).


Distribution
Widely distributed in the Palaearctic region (Gagné & Jaschhof 2014). New to SK.

Camptomyia Kieffer, 1894

Camptomyia abnormis Mamaev, 1961

Material

Distribution
Widely distributed in Europe (Gagné & Jaschhof 2014). New to CZ.

Camptomyia corticalis Loew, 1851

Material
SLOVAK REPUBLIC: 1 ♂, Muránská planina NP, Poľudnica NNR, 8 Jul. 2015, MT, J. Roháček and J. Ševčík leg. (TSPC).

Distribution
Previously recorded from SK by Skuhrová & Košel (1995) as Camptomyia innotata Kieffer, 1894; another record for SK is presented here.
Camptomyia flavocinerea Panelius, 1965

Material

Distribution
This species has recently been reported from both the Czech Republic and Slovakia by Mantič et al. (2015). Additional records for CZ.

Camptomyia gigantea Spungis, 1989

Material

Distribution
Until now this species has been known only from Sweden and Latvia (Gagné & Jaschhof 2014). New to central Europe including SK.

Camptomyia multinoda (Felt, 1908)

Material

Distribution
Holarctic in distribution (Gagné & Jaschhof 2014). New to SK.

Camptomyia spinifera Mamaev, 1961

Material

Distribution
Reported as new to CZ by Skuhrová (2004). New to SK.

Camptomyia ulmicola Mamaev, 1961

Material
Distribution
Previously known mostly from northern Europe (Gagné & Jaschhof 2014). New to CZ.

*Cassidoides* Mamaev, 1960

*Cassidoides fulviventris* (Mamaev, 1964)

Material

Distribution
Widely distributed in the Palaearctic region (Gagné & Jaschhof 2014). New to SK.

*Cassidoides fulvus* (Kieffer, 1896)

Material

Distribution
Holarctic in distribution (Gagné & Jaschhof 2014). New to SK.

*Claspettomyia* Grover, 1964

*Claspettomyia hamata* (Felt, 1907)

Material


Distribution
Holarctic in distribution (Gagné & Jaschhof 2014). New to CZ and SK.

*Coccopsis* Harris, 2004

*Coccopsis marginata* (Meijere, 1901)

Material

Distribution
**Coccopsis paneliusi** (Yukawa, 1971)

**Material**


**Distribution**

Palaeartic in distribution (Gagné & Jaschhof 2014). New to CZ and SK.

*Dendrepidosis* Mamaev, 1990

**Dendrepidosis longipennis** (Spungis, 1981)

**Material**


**Distribution**

A rarely collected European species (Gagné & Jaschhof 2014). New to SK.

*Dicerura* Kieffer, 1898

**Dicerura dispersa** Jaschhof, 2013

**Material**


**Distribution**

This is the first record of this species outside the type locality in Sweden (Gagné & Jaschhof 2014). New to SK.

*Divellepidosis* Fedotova & Sidorenko, 2007

**Divellepidosis hypoxantha** (Panelius, 1965)

**Material**


**Distribution**

Widely distributed in Europe (Gagné & Jaschhof 2014). New to CZ.
**Divellepidosis lutescens** (Spungis, 1981)

**Material**
CZECH REPUBLIC: 1 ♂, Moravia and Silesia, Šilheřovice, Černý les II. NR, 4 Sep. 2015, SW, J. Ševčík and T. Síkora leg. (TSPC).


**Distribution**
Previously known from several European countries (Gagné & Jaschhof 2014). New to central Europe including CZ and SK.

**Divellepidosis pallescens** (Panelius, 1965)

**Material**


**Distribution**
Previous records from northern Europe (Gagné & Jaschhof 2014). New to CZ and SK.

**Divellepidosis vulgata** Jaschhof, 2013

**Material**

**Distribution**
Recently described from Sweden (Jaschhof & Jaschhof 2013). New to CZ.

**Holoneurus** Kieffer, 1895

**Holoneurus ciliatus** Kieffer, 1896

**Material**

**Distribution**
Previously known from France and Sweden (Gagné & Jaschhof 2014). New to central Europe including SK.
**Monepidosis** Mamaev, 1966

*Monepidosis pectinatoides* Jaschhof, 2013

**Material**


**Distribution**

Only recently described from Sweden, but probably intermixed with *M. pectinata* Mamaev, 1966 by previous authors and thus more widespread (Jaschhof & Jaschhof 2013). The first record of a species of *Monepidosis* in CZ.

**Neocolpodia** Mamaev, 1964

*Neocolpodia gukasiani* (Mamaev, 1990)

**Material**


**Distribution**

Previously known from Siberian Russia and Sweden (Gagné & Jaschhof 2014). New to central Europe including CZ.

**Paneliusia** Jaschhof, 2013

*Paneliusia albimanoides* Jaschhof, 2013

**Material**


**Distribution**

A widespread Palaearctic species (Jaschhof & Jaschhof 2013). Two males from CZ were reared from reed canary grass, *Phalaris arundinacea* (see above). New to CZ and SK.

*Paneliusia aurantiaca* (Panelius, 1965)

**Material**

Distribution
Widely distributed in Europe (Gagné & Jaschhof 2014). New to SK.

_Parepidosis_ Kieffer, 1913

_Parepidosis arcuata_ Mamaev, 1964

Material


Distribution
Widely distributed in Europe, also occurring in Uzbekistan (Gagné & Jaschhof 2014). New to CZ and SK.

_Parepidosis planistylata_ Jaschhof, 2013

Material

Distribution
Recently described from Sweden (Jaschhof & Jaschhof 2013). New to CZ.

_Parepidosis venustior_ (Kieffer, 1901)

Material

Distribution
Widely distributed in Europe (Gagné & Jaschhof 2014). New to SK.

_Porricondyla_ Rondani, 1840

_Porricondyla colpodioides_ Mamaev, 1963

Material

Distribution
Palaearctic in distribution (Gagné & Jaschhof 2014). New to CZ.
**Porricondyla errabunda** Mamaev, 2001

**Material**

**Distribution**
Previously found to occur in western Siberia and Sweden (Gagné & Jaschhof 2014). New to central Europe including CZ.

**Porricondyla microgona** Jaschhof, 2013

**Material**

**Distribution**
Recently described from Sweden (Gagné & Jaschhof 2014). New to central Europe including SK.

**Porricondyla neglecta** Mamaev, 1965

**Material**

**Distribution**
Known from several European countries (Gagné & Jaschhof 2014), including CZ (see Skuhrová 1994). New to SK.

**Porricondyla nigripennis** (Meigen, 1830)

**Material**


**Distribution**
A very common Holarctic species (Gagné & Jaschhof 2014). These are the first records from Moravia and Silesia (CZ).
**Porricondyla tetranchistica** Mamaev, 1988

**Material**

**Distribution**
A rarely collected species previously known only from Sweden and the Near East (Gagné & Jaschhof 2014). New to central Europe including SK.

**Rostellatayla** Jaschhof, 2013

**Rostellatayla rostellata** (Panelius, 1965)

**Material**
CZECH REPUBLIC: 1 ♂, Moravia and Silesia, Šilheřovice, Černý les II. NR, 4 Sep. 2015, SW, J. Ševčík and T. Sikora leg. (TSPC).

**Distribution**
Widely distributed in Europe (Gagné & Jaschhof 2014). New to CZ.

**Serratyla** Jaschhof, 2013

**Serratyla pubescens** (Walker, 1856)

**Material**


**Distribution**
Widely distributed in Europe (Gagné & Jaschhof 2014). New to CZ and SK.

**Schistoneurus** Mamaev, 1964

**Schistoneurus irregularis** Mamaev, 1964

**Material**

Distribution
Previously recorded from northern and eastern Europe (Gagné & Jaschhof 2014). New to central Europe including CZ and SK.

*Spungisomyia* Mamaev & Zaitzev, 1996

*Spungisomyia fenestrata* Jaschhof, 2013

Material

Distribution
Recently described from Sweden (Gagné & Jaschhof 2014). New to central Europe including CZ.

*Spungisomyia media* (Spungis, 1981)

Material

Distribution
Palaearctic in distribution (Gagné & Jaschhof 2014). New to SK.

*Tetraneuromyia* Mamaev, 1964

*Tetraneuromyia hirticornis* (Zetterstedt, 1850)

Material

Distribution
The most common and widely distributed species of *Tetraneuromyia* Mamaev, 1964 in Europe (Gagné & Jaschhof 2014). New to CZ and SK.

*Tetraneuromyia lamellata* Spungis, 1987

Material

Distribution
Previously known from Sweden, Latvia and European Russia (Gagné & Jaschhof 2014). New to central Europe including CZ.
Material


Distribution

Previously known only from Sweden and Latvia (Gagné & Jaschhof 2014). New to central Europe including CZ.

Discussion

Only 44 species of the fungivorous subfamilies have previously been recorded from all of the Czech Republic and Slovakia (Skuhravá & Košel 1995; Jaschhof 1998, 2015; Mantič et al. 2015; Skuhravá 1997, 2004, 2009; Ševčík 2010; Tóth & Lukáš 2004). In this paper, a total of 49 species are for the first time reported from the Czech Republic and 33 species from Slovakia. Thirty-nine species are new to the fauna of central Europe. Many of the newly recorded species have only recently been discovered and described from Sweden (see Jaschhof & Jaschhof 2013). The level of current knowledge of the mycophagous gall midge fauna in the Czech Republic and Slovakia is difficult to estimate, but must certainly be considered as preliminary. Based on species inventories in other well-wooded European countries, such as Germany (Jaschhof 2009) and Sweden (Jaschhof & Jaschhof 2009, 2013, 2015), we estimate the number of species of the fungivorous subfamilies in the Czech and Slovak Republics at more than 400, meaning we are at the very beginning with our efforts.

Most of the species found during our survey belong, as far as is known, to a group of boreo-montane and/or silviculous species, although several localities sampled represent rather thermophilous forests or forest steppes, especially in the Podyji and Muránska planina national parks. Recent results regarding other families of Bibionomorpha (e.g., Mantič et al. 2015) indicate a distribution pattern in which principally Mediterranean species extend to central Europe, but no such species of Cecidomyiidae were found during this study.

Our inventory of fungivorous Cecidomyiidae in the Czech and Slovak Republics will be continued, with a focus on those localities that in the past proved to be particularly rich in species. Collecting techniques other than Malaise trapping will be tested, including those providing biological information (cf. Ševčík & Roháček 2008).

Our results add to the pool of data that are necessary for meaningful biogeographical and ecological analyses of these gall midges (cf. Jaschhof & Jaschhof 2009). Considering that almost all the insect samples interpreted here have been collected in nature reserves and national parks, our data are useful for highlighting the extraordinary natural richness of those areas, and also in supporting decision-making processes in nature conservation in the future.

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References


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