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Additions to the fauna of Opomyzoidea in the Gemer area (Central Slovakia)

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Additions to the fauna of Opomyzoidea in the Gemer area (Central Slovakia) – Acta Mus. Siles. Sci. Natur. 73: 69–83, 2024.

Abstract: Additional records of Clusiidae (2 species), Acartophthalmidae (1), Opomyzidae (4), Anthomyzidae (5), Aulacigastridae (3), Stenomicridae (1), Periscelididae (4), Asteiidae (2) and Odiniidae (3) obtained in 2023 during the bioinventory field work in the Gemer in Central Slovakia are presented. Notes on distribution, biology, faunistics in Slovakia and/or nature conservation importance are given for the most interesting records. Two species are new additions to the fauna of Slovakia, viz. *Podocera delicata* (Collin, 1944), Stenomicridae (new easternmost record) and *Periscelis* (*Myodris*) *piricercus* Carles-Tolrá & Verdugo Páez, 2009, Periscelididae (new northernmost record). First records of *Geomyza subnigra* Drake, 1992 (Opomyzidae) and *Typhamyza bifasciata* (Wood, 1911) (Anthomyzidae) from the Cerová vrchovina PLA are given. Apart from the above faunal additions, the following rare or otherwise significant species have again been recorded from the Cerová vrchovina PLA: *Aulacigaster falcata* Papp, 1998 (Aulacigastridae), *Periscelis* (*M.*) *haennii* Pollini Paltrinieri & Roháček, 2022, *P.* (*P.*) *winnertzii* Egger, 1862 (Periscelididae), *Neoalticomerus fabricius* Withers & Papp, 2012, *N. formosus* (Loew, 1844) and *Odinia trinotata* Robineau-Desvoidy, 1830 (Odiniidae).

Keywords: Diptera, Clusiidae, Acartophthalmidae, Opomyzidae, Anthomyzidae, Asteiidae, Aulacigastridae, Periscelididae, Stenomicridae, Odiniidae, biodiversity, nature conservation, Slovakia, Gemer

Introduction

Representatives of acalyptrate families traditionally affiliated under Opomyzoidea have been reported from the Gemer area (Central Slovakia, Fig. 1) in several previous faunal treatments (see Černý 2012, Roháček 2012, 2013, Černý & Roháček 2020, Roháček 2023). However, it should be noted that the particular families of Opomyzoidea have been investigated unevenly in various parts of the Gemer territory, e.g. the largest family Agromyzidae has only been intensively studied in the Muránska planina National Park (Černý 2012, Černý & Roháček 2020). The previously most neglected part of the Gemer area, viz., the Cerová vrchovina Protected Landscape Area, has been systematically examined for flies (Diptera) only recently, with field work started in 2017. This short contribution is mainly aimed at presentation of some surprising findings made in 2023 in the Cerová vrchovina PLA but on this occasion a number of additional records from this area and the Muránska planina are also given. As in the last paper (Roháček 2023) the newly obtained data of species of Clusiidae, Acartophthalmidae, Opomyzidae, Anthomyzidae, Aulacigastridae, Periscelididae, Stenomicridae, Asteiidae and Odiniidae are presented below because the Agromyzidae of the Cerová vrchovina PLA (with a supplement to the fauna of the Muránska planina NP) will be treated separately in a subsequent study (Černý & Roháček in press).

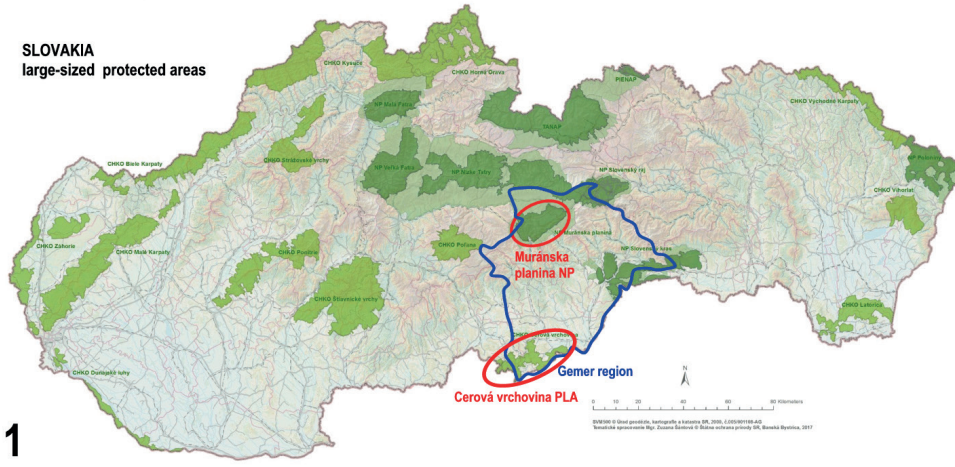


Fig. 1: Map of Slovakia with its National Park and Protected Land Areas, with Muránska planina NP and Cerová vrchovina PLA in red ellipses and borders of the Gemer region in blue.

Material and methods

Because the most recent survey of Opomyzoidea in the Gemer area (Roháček 2023) includes a complete review of all previously published records, with remarks on biology and distribution of most of species, these data are not repeated for species previously known from this area unless they are recorded from the Cerová vrchovina PLA or Muránska planina NP for the first time. All specimens listed below were identified by the author and the material examined is deposited in the Silesian Museum, Opava, Czech Republic (SMOC). The nomenclature used here largely follows the most recent Checklist of Diptera of the Czech Republic and Slovakia, electronic version 2 (Jedlička et al. 2009) unless given otherwise.

Species newly recorded from Slovakia are marked by "**" and those significant from a biogeographical, ecological or nature-conservancy point of view by "*" preceding the species' name. The endangered species are classified according to the Red (Ecosozological) List of Diptera of Slovakia (Jedlička & Stloukalová 2001) and the Red List of threatened species of the Czech Republic (Farkač et al. 2005). In cases where also other species should be considered endangered (for their rarity or because of stenotopic association with threatened habitats) they are commented on in the "Remarks" paragraph.

Specimens were collected in the field by a team of dipterists (J. Roháček, J. Ševčík, M. Tkoč, K. Sopuch, see Fig. 2) by means of sweeping and netting, Malaise traps (Figs 2, 4, 5) and traps baited with wine (Figs 6, 7, 17). The material obtained by traps is preserved in 80% ethanol but selected series of specimens were dried and mounted on pinned triangular cards to be deposited as voucher specimens in collections. In several specimens, genitalia preparations have been made; the dissected terminalia are preserved in glycerine in plastic microvials or tubes and each pinned below respective specimen.

Abbreviations used in text. Traps: MT = Malaise trap, WT = wine trap. Others: NP = National Park, PLA = Protected Landscape Area.

Figs 2-3: Collecting methods and team of dipterists. 2 – Malaise trap just installed in *Carex* boggy meadow on shore of Chrámec reservoir (13.iv.2023) with dipterists (from left): J. Roháček, M. Tkoč, K. Sopuch, J. Ševčík; 3 – the same Malaise trap destroyed by vandals on 15.vi.2023, with sample completely dried up (see collecting bottle on left), with K. Sopuch (left) and J. Roháček (right). Photo by J. Roháček (2) and J. Ševčík (3).

Figs 4-7: Collecting methods. 4 – Malaise trap in Trstie reserve, margin of peat-bog (14.vi.20123); 5 – Malaise trap in Chrámec-Vlčia dolina, ecotone between oak-hornbeam forest and steppe (14.ix.2023); 6 – wine trap just installed on hornbeam (*Carpinus betulus*) tree in thermophilous forest in Chrámec-Vlčia dolina (13.iv.2023); 7 – wine trap on oak (*Quercus robur*) tree in the same locality, with flies captured (15.vi.2023). Photo by J. Roháček.

Study area

As in previous studies the Gemer area (see map on Fig. 1) is treated as the territory of three national parks (= NP) and one protected landscape area (= PLA) in central Slovakia – Muránska planina NP, Slovenský raj NP, Slovenský kras NP and Cerová vrchovina PLA. The biodiversity research of Diptera in the Gemer area has been realized thanks to official collaboration with authorities of the Administrations of the Muránska planina NP and the Cerová vrchovina PLA and performed in areas under their care.

Also in 2023 the localities for faunal research of Diptera in 2023 have been selected on the basis of recommendation and agreement of zoologists and botanists of both above Administrations. In the most important localities more complex field work has been performed, including operation of Malaise traps and (sometimes) other collecting devices. The sampling plots with Malaise (and/or other) traps were in 2023 in localities and habitats as follows:

Muránska planina NP

Tisovec 3.9 km NW, Trstie res., 48°39‘39“N 19°59‘21“E, 1100 m, montane peat-bog, MT (Fig. 4)

Cerová vrchovina PLA

Chrámec 1.9 km SE, reservoir, 48°15’51”N, 20°11’55”E, 180 m, *Carex* growth on boggy shore of reservoir (on the inflow side), with predominant *Carex acutiformis* near reed growth, MT (Fig. 2). Unfortunately, the trap was destroyed by vandals between 11.v. and 15.vi.2023 (Fig. 3) and therefore we obtained only one sample (13.iv.-11.v.2023) from it.

Chrámec 3 km SW, Vlčia dolina (valley), 48°15’58”N, 20°09’01”E, 220 m, margin of hornbeam-oak forest, MT (Fig. 5), WT (Figs 6, 7).

Synopsis of species

Clusiidae

***Clusia flava* (Meigen, 1830)**

Material: Muránska planina NP: Tisovec 3.9 km NW, Trstie res., 48°39’39”N 19°59’21”E, 1100 m, MT, 16.viii.-13.ix.2023, 1♀, J. Roháček, J. Ševčík & M. Sopuch leg.

***Clusiodes albimanus* (Meigen, 1830)**

Material: Muránska planina NP: Pohronská Polhora 5.1 km SE, Čertova dolina res., 48°43‘55“N, 19°51‘32“E, 630 m, sweeping vegetation along brook in mixed forest, 13.ix.2023, 1♀, J. Roháček leg.

Acartophthalmidae

***Acartophthalmus nigrinus* (Zetterstedt, 1848)** (Fig. 12)

Material: Muránska planina NP: Tisovec 3.9 km NW, Trstie res., 48°39’39”N 19°59’21”E, 1100 m, MT, 10.v.-14.iv.2023, 2♀, 16.viii.-13.ix.2023, 6♂3♀, 13.ix.-11.x.2023, 4♂1♀, J. Roháček, J. Ševčík & M. Sopuch leg.

Opomyzidae

****Geomyza subnigra* Drake, 1992**

Material: Cerová vrchovina PLA: Chrámec 3 km SW, Vlčia dolina (valley), 48°15‘58“N, 20°09‘01“E, 220 m, margin of hornbeam-oak forest, MT, 17.viii.-14.ix.2023, 1♂, J. Roháček, J. Ševčík & M. Tkoč leg.

Remarks: The above record is the first from the Cerová vrchovina PLA and only the third from Slovakia. The species is rare in Central Europe and has been reported from the Gemer area only recently, from the vicinity of Muráň in the Muránska planina NP (Roháček (2023). It seems to be mainly associated with xerophilous and often sandy grassland (cf. Drake 1992, 1993, Roháček et al. 2022); also the specimen recorded here was captured in a Malaise trap situated in a dry ecotone between hornbeam-oak forest and grassy steppe. *G. subnigra* was classified as an endangered (EN) species in the Czech Republic (Martinek & Barták 2005). Considering its rare and local occurrence it should also be similarly treated in Slovakia.

Geomyza tripunctata Fallén, 1823

Material: Muránska planina NP: Tisovec 3.9 km NW, Trstie res., 48°39’39”N 19°59’21”E, 1100 m, MT, 14.iv.-12.vii.2023, 4♀, J. Roháček, J. Ševčík & M. Sopuch leg.; same locality, sweeping over peat-bog meadow, 12.vii.2023, 1♀, J. Roháček leg.

Cerová vrchovina PLA: Chrámec 3 km SW, Vlčia dolina (valley), 48°15’58”N, 20°09’01”E, 220 m, margin of hornbeam-oak forest, MT, 14.ix.-12.x.2023, 1♂, J. Roháček, J. Ševčík & M. Sopuch leg.

Opomyza florum (Fabricius, 1794)

Material: Muránska planina NP: Pohronská Polhora 5.1 km SE, Čertova dolina res., 48°43’55”N, 19°51’32”E, 630 m, sweeping vegetation along brook in mixed forest, 13.ix.2023, 1♀; Závadka n. H. 9.2 km S, Stožky (lodge), 48°46’08”N, 19°56’09”E, 860 m, sweeping forest margin and over fungi, 11.x.2023, 1♂2♀, J. Roháček leg.; Tisovec 3.9 km NW, Trstie res., 48°39’39”N 19°59’21”E, 1100 m, MT, 14.iv.-12.vii.2023, 5♂, 12.vii.-16.viii.2023, 8♂3♀, 16.viii.-13.ix.2023, 3♂2♀, 13.ix.-11.x.2023, 4♂4♀, J. Roháček, J. Ševčík & M. Sopuch leg.; same locality, sweeping over peat-bog meadow, 12.vii.2023, 3♂, sweeping undergrowth of mixed forest, 12.vii.2023, 1♂2♀, J. Roháček leg.

Cerová vrchovina PLA: Chrámec 3 km SW, Vlčia dolina (valley), 48°15’58”N, 20°09’01”E, 220 m, margin of hornbeam-oak forest, MT, 14.ix.-12.x.2023, 1♀, J. Roháček, J. Ševčík & M. Sopuch leg; same locality, sweeping over steppe meadow, 13.vii.2023, 1♂, 12.x.2023, 1♂2♀; Chrámec 1.9 km SE, reservoir, 48°15’51”N, 20°11’55”E, 180 m, sweeping *Carex acutiformis* on pond shore, 13.vii.2023, 1♂, J. Roháček leg.

Opomyza germinationis (Linnaeus, 1758)

Material: Muránska planina NP: Tisovec 3.9 km NW, Trstie res., 48°39’39”N 19°59’21”E, 1100 m, MT, 14.iv.-12.vii.2023, 1♂, 12.vii.-16.viii.2023, 1♂, J. Roháček, J. Ševčík & M. Sopuch leg.; same locality, sweeping over peat-bog meadow, 12.vii.2023, 1♂, J. Roháček leg.

Anthomyzidae

Anagnota bicolor (Meigen, 1838)

Material: Cerová vrchovina PLA: Chrámec 1.9 km SE, reservoir, 48°15’51”N, 20°11’55”E, 180 m, sweeping over *Carex* boggy meadow, 15.vi.2023, 2♂, J. Roháček leg.

Remarks: In the Gemer area *A. bicolor* is only known from the Cerová vrchovina PLA (first recorded recently from 3 localities by Roháček (2023)). The above record from the easternmost part of the same area originates from habitat typical for the species (Figs 10, see also Roháček 2009a).

Anthomyza gracilis Fallén, 1823

Material: Muránska planina NP: Tisovec 3.9 km NW, Trstie res., 48°39’39”N 19°59’21”E, 1100 m, sweeping over peat-bog meadow, 14.vi.2023, 1♀, J. Roháček leg.
Cerová vrchovina PLA: Chrámec 1.9 km SE, reservoir, 48°15’51”N, 20°11’55”E, 180 m, sweeping over boggy meadow (*Carex, Typha, Phalaris*), 11.v.2023, 1♂3♀, sweeping over *Carex* boggy meadow, 15.vi.2023, 7♂1♀, J. Roháček leg.

**Anthomyza neglecta* Collin, 1944

Material: Cerová vrchovina PLA: Chrámec 1.9 km SE, reservoir, 48°15’51”N, 20°11’55”E, 180 m, sweeping over *Carex* boggy meadow, 15.vi.2023, 7♂7♀, sweeping *Carex acutiformis* on pond shore, 13.vii.2023, 4♂3♀, J. Roháček leg.

Remarks: This is an additional record of a species associated with large sedges (*Carex, Scirpus*) in lowland marshland habitats (Roháček 2009a) from the Cerová vrchovina PLA (see also Fig. 10). *A. neglecta* is treated as a vulnerable (VU) species in the Czech Republic due to its restriction to threatened lowland wetlands (Roháček 2005).

***Stiphrosoma laetum* (Meigen, 1830)**

Material: Muránska planina NP: Tisovec 3.9 km NW, Trstie res., 48°39’39”N 19°59’21”E, 1100 m, MT,12.vii.-16.viii.2023, 3♀, 13.ix.-11.x.2023, 1♂, J. Roháček, J. Ševčík & M. Sopuch leg.

***Typhamyza bifasciata* (Wood, 1911)** (Fig. 9)

Material: Cerová vrchovina PLA: Chrámec 1.9 km SE, reservoir, 48°15’51”N, 20°11’55”E, 180 m, sweeping *Typha angustifolia* on pond shore, 13.vii.2023, 1♂3♀, J. Roháček leg.

Remarks: This nice species is monophagous on reed-mace (*Typha* spp.) and mainly occurs in marshland habitats at low altitudes. The records from Slovakia are scarce (see Roháček 2006, 2009a, 2012, 2023), with only one locality formerly known in the Gemer area (Muránska planina NP: Tisovec). Roháček (2023) predicted its occurrence in the Cerová vrchovina PLA which has now been confirmed by the above record from a stand of *Typha angustifolia* (Fig. 8).

Aulacigastridae

****Aulacigaster falcata* Papp, 1998**

Material: Cerová vrchovina PLA: Chrámec 3 km SW, Vlčia dolina (valley), 48°15’58”N, 20°09’01”E, 220 m, margin of hornbeam-oak forest, WT, 13.vii.-17.viii.2023, 1♂2♀, 17.viii.-14.ix.2023, 1♂2♀, 14.ix.-12.x.2023, 4♀, J. Roháček leg.

Remarks: This species is probably widespread in southern Europe with northernmost occurences reported from the Netherlands and Germany (for review of all country records see Roháček 2023). It is the most thermophilous and rarest species of all representatives of *Aulacigaster* in Slovakia. First records from Slovakia (all from the Cerová vrchovina PLA) have been published recently (Roháček 2023). Also the above records obatined by means of wine traps demonstrate the association of *A. falcata* with warm (preferably oak) deciduous forests (Figs 14, 17).

***Aulacigaster leucopeza* (Meigen, 1830)**

Material: Cerová vrchovina PLA: Chrámec 3 km SW, Vlčia dolina (valley), 48°15’58”N, 20°09’01”E, 220 m, margin of hornbeam-oak forest, WT, 13.iv.-11.v.2023, 2♀, 15.vi.-13.vii.2023, 2♀, 13.vii.-17.viii.2023, 5♂10♀, 17.viii.-14.ix.2023, 1♀, 14.ix.-12.x.2023, 5♂4♀, J. Roháček leg.

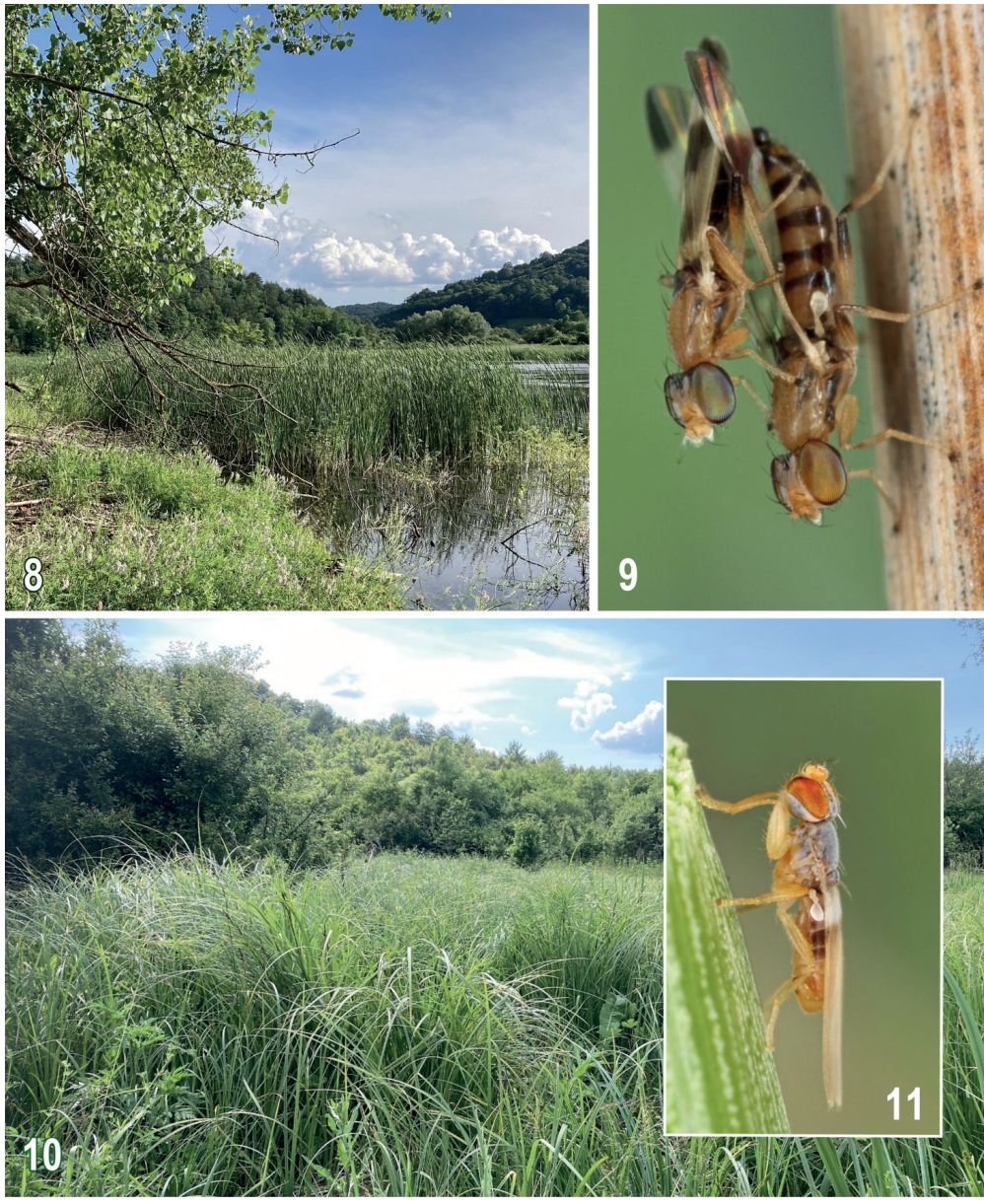
***Aulacigaster pappi* Kassebeer, 2001**

Material: Cerová vrchovina PLA: Chrámec 3 km SW, Vlčia dolina (valley), 48°15’58”N, 20°09’01”E, 220 m, margin of hornbeam-oak forest, WT, 11.v.-15.vi.2023, 1♂, 15.vi.-13.vii.2023, 3♂4♀, 13.vii.-17.viii.2023, 9♂17♀, 17.viii.-14.ix.2023, 6♂5♀, 14.ix.-12.x.2023, 2♂4♀, J. Roháček leg.; same locality, MT, 14.ix.-12.x.2023, 1♂, J. Roháček, J. Ševčík & K. Sopuch leg.

Remarks: The above records from an additional locality in the Cerová vrchovina PLA (Fig. 17) demonstrated that *A. pappi* can be equally or even more abundant than *A. leucopeza* in some localities (particularly those with more thermophilous woodland habitats) also in Slovakia.

Stenomicridae

Only five species belonging to two genera of Stenomicridae are known in the whole of the West Palaearctic area (Merz & Roháček 2005, Roháček 2011). In Slovakia, two species, viz. *Podocera soniae* (Merz & Roháček, 2005) and *Stenomicra cogani* Irwin, 1982 have been known, and both were also recorded from the Gemer area (Roháček 2012, 2023, Roháček et al. 2017). An additional species of *Podocera* is recorded below for the first time from the Cerová vrchovina PLA and the whole of Slovakia.



Figs 8-11: Flies and their habitats. 8 – shore of Chrámec reservoir, with stand of *Typha angustifolia* (13.vii.2023), habitat and host plant of *Typhamyza bifasciata*; 9 – mating pair of *Typhamyza bifasciata* (Wood, 1911) on dead stem of the host plant, sublaterally; 10 – *Carex* boggy meadow on shore of Chrámec reservoir with predominating *Carex acutiformis* (15.vi.2023), habitat of *Podocera delicata*, *Anagnota bicolor* and *Anthomyza neglecta*; 11 – male of *Podocera delicata* (Collin, 1944) on leaf of sedge, laterally. Photo by J. Roháček.

***Podocera delicata* (Collin, 1944)** (Fig. 11)

Material: Cerová vrchovina PLA: Chrámec 1.9 km SE, reservoir, 48°15'51"N, 20°11'55"E, 180 m, sweeping over *Carex* boggy meadow, 15.vi.2023, 2♂1♀, J. Roháček leg.

Remarks: This very tiny fly is known to be associated with large *Carex* species, particularly those forming tussocks (see e.g. Godfrey 1992, 1994a,b, 1998; Howe & Howe 2001; Howe et al. 2001) such as *Carex paniculata* but can also occur in other sedges, including *Carex acutiformis, C. pseudocyperus, C. rostrata, C. acuta, C. vesicaria* and *Scirpus sylvaticus,* for more detail see Roháček (2009b). Hitherto, it has only been known from W. and C. Europe: Great Britain (England, Wales), The Netherlands, Germany, Switzerland and the Czech Republic (for original records see Roháček 2009b, de Bree & Roháček 2020), with the easternmost record from Přemyšov res. near Polanka nad Odrou in the NE Moravia (Czech Republic, ca 18°11'E), see Roháček (2009b, 2011). Thus, the above record (from a *Carex acutiformis* dominated growth, see Fig. 10) is not only the first from Slovakia but also represents a new easternmost distribution limit of *P. delicata*.

Periscelididae

A total of five species of Periscelididae have recently been encountered in the Gemer area (Roháček 2023), with two species being hitherto only known from the Cerová vrchovina PLA. Our subsequent field work in the eastern part of the latter protected territory resulted in finding of an additional species (first recorded from Slovakia) belonging to the subgenus *Periscelis* (*Myodris*) and confirmation of the occurrence of three other species. Almost all specimens were collected by means of two wine traps, both installed at the margin of hornbeam-oak forest close to each other, one on a hornbeam tree (Fig. 6), the other on an oak tree (Figs 7, 17). With this addition, a total of six species is currently known from the Gemer area (and also Slovakia).

***Periscelis* (*Myodris*) *annulata* (Fallén, 1813)** (Fig. 30)

Material: Cerová vrchovina PLA: Chrámec 3 km SW, Vlčia dolina (valley), 48°15'58"N, 20°09'01"E, 220 m, margin of hornbeam-oak forest, WT, 11.v.-15.vi.2023, 2♂, 13.vii.-17.viii.2023, 16♂, 17.viii.-14.ix.2023, 67♂, 14.ix.-12.x.2023, 4♂, J. Roháček leg.

***Periscelis* (*Myodris*) *haennii* Pollini Paltrinieri & Roháček, 2022** (Fig. 12)

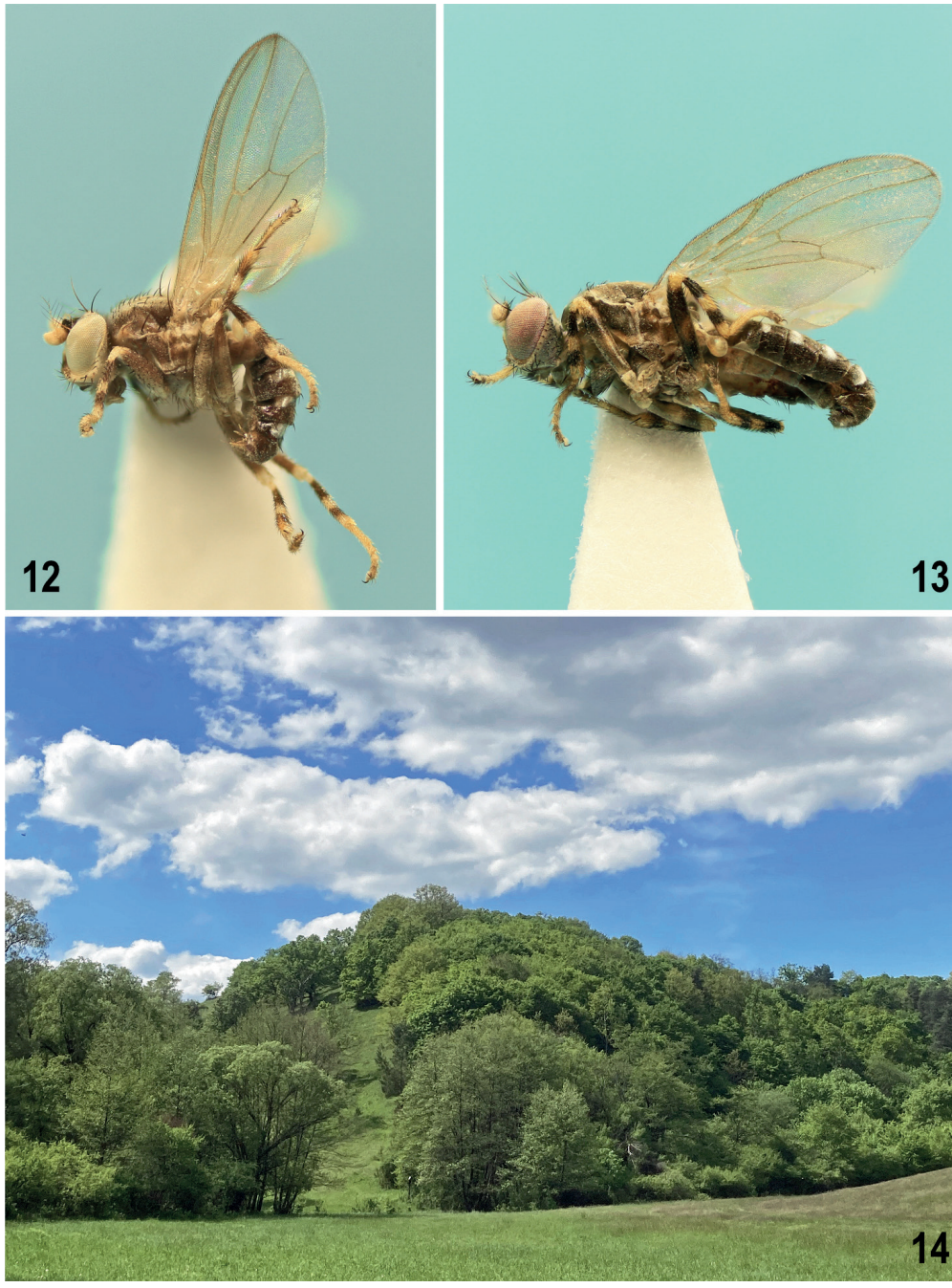
Material: Cerová vrchovina PLA: Chrámec 3 km SW, Vlčia dolina (valley), 48°15'58"N, 20°09'01"E, 220 m, margin of hornbeam-oak forest, WT, 13.vii.-17.viii.2023, 4♂, 17.viii.-14.ix.2023, 4♂, 14.ix.-12.x.2023, 2♂, J. Roháček leg.; same locality, MT, 17.viii.-14.ix.2023, 1♂, J. Roháček, J. Ševčík & M. Tkoč leg.

Remarks: This species, originally described from Switzerland (Pollini Paltrinieri & Roháček 2022) has subsequently been recorded from the Cerová vrchovina PLA in S. Slovakia (Roháček 2023) and is now confirmed by specimens collected in another locality. The European species of the subgenus *Myodris* can be identified only from males by morphology of terminalia (see Pollini Paltrinieri & Roháček 2022), and, therefore, females of this subgenus (more than 150 collected) are not listed here.

***Periscelis* (*Myodris*) *piricercus* Carles-Tolrá & Verdugo Páez, 2009** (Fig. 13)

Material: Cerová vrchovina PLA: Chrámec 3 km SW, Vlčia dolina (valley), 48°15'58"N, 20°09'01"E, 220 m, margin of hornbeam-oak forest, WT, 13.vii.-17.viii.2023, 3♂, J. Roháček leg.

Remarks: *Periscelis (M.) piricercus* was described from S. Spain by Carles-Tolrá & Verdugo Páez (2009) and later reported from Portugal (Roháček et al. 2016), Switzerland (Pollini Paltrinieri & Roháček 2022) and Croatia (Sladonja et al. 2023). As for other species of *Periscelis* most specimens have been obtained by means of various traps, with highest abundance in wine traps in warm Querco-Castagnetum forest (Pollini Paltrinieri, personal communication 2021). Because only 3 males of this species were captured in wine traps (Figs 7, 17) among 102 males of *Myodris* species in the above locality on a hill at the end of Vlčia dolina valley (Fig. 14), it seems that *P. (M.) piricercus* is rare in the Cerová vrchovina PLA. This record is not only the first from Slovakia but also represents a northernmost known occurrence of the species.



Figs 12-14: *Periscelis (Myodris*) species and their habitat. 12 – *P.* (*M.*) *haennii* Pollini Paltrinieri & Roháček, 2022, male paratype, laterally; 13 – *P.* (*M.*) *piricercus* Carles-Tolrá & Verdugo Páez, 2009, male laterally, voucher specimen from wine traps (Chrámec-Vlčia dolina, 13.vii.-17.viii.2023); 14 – habitat of both species, margin of hornbeam-oak forest near top of a hill at the end of Vlčia dolina (11.v.2023). Photo by J. Roháček.

***Periscelis* (*Periscelis*) *winnertzii* Egger, 1862**
syn. *Periscelis* (*Periscelis*) *fugax* Roháček & Andrade, 2017

Material: Cerová vrchovina PLA: Chrámec 3 km SW, Vlčia dolina (valley), 48°15‘58“N, 20°09‘01“E, 220 m, margin of hornbeam-oak forest, WT, 13.vii.-17.viii.2023, 2♂ 2♀, 17.viii.-14.ix.2023, 2♀, 14.ix.-12.x.2023, 2♂6♀, J. Roháček leg.

Remarks: The recently redescribed *Periscelis winnertzii* (see Roháček 2022) is in Slovakia only known from several localities in the Cerová vrchovina PLA (Roháček 2022, 2023) where all (but only a few) specimens were obtained by means of beer or wine traps in *Quercus cerris* forests. In contrast to some other localities (Roháček 2022) *P. laszloi* Roháček, 2022 has not been collected together with *P. winnertzii* in the above locality from the easternmost part of this area. Because *P. winnertzii* does not occur in numbers in traps it remains an uncommon and rather local species in Slovakia.

Asteiidae

***Asteia amoena* Meigen, 1830**

Material: Muránska planina NP: Pohronská Polhora 5.1 km SE, Čertova dolina res., 48°43’55”N, 19°51’32”E, 630 m, sweeping vegetation along brook in mixed forest, 13.ix.2023, 1♀; Tisovec 3.9 km NW, Trstie res., 48°39’39”N 19°59’21”E, 1100 m, MT, 12.vii.-16.viii.2023, 1♂, 13.ix.-11.x.2023, 1♀, J. Roháček, J. Ševčík & M. Sopuch leg.
Cerová vrchovina PLA: Chrámec 3 km SW, Vlčia dolina (valley), 48°15’58”N, 20°09’01”E, 220 m, sweeping over steppe meadow, 15.vi.2023, 1♂1♀, J. Roháček leg.

***Asteia concinna* Meigen, 1830**

Material: Cerová vrchovina PLA: Jestice 1.3 km SSE, Hradisko Mt., 48°12’31”N, 20°03’39”E, 255 m, sweeping over steppe meadow, 11.v.2023, 1♀; Chrámec 3 km SW, Vlčia dolina (valley), 48°15’58”N, 20°09’01”E, 220 m, sweeping over steppe meadow, 15.vi.2023, 1♂1♀; Chrámec 1.9 km SE, reservoir, 48°15’51”N, 20°11’55”E, 180 m, sweeping over *Carex* boggy meadow, 15.vi.2023, 2♀, all J. Roháček leg.

Odiniidae

In the Gemer area this family has been treated only very recently by Roháček (2023) who listed records of a total of six species, including two first recorded from Slovakia. The use of wine traps in a new locality in the easternmost part of the Cerová vrchovina PLA resulted in finding that some species of the genus *Neoalticomerus*, considered formerly to be very rare in Slovakia, can occur abundantly in thermophilous forests of the area (see below).

***Neoalticomerus fabricius* Withers & Papp, 2012** (Fig. 15)

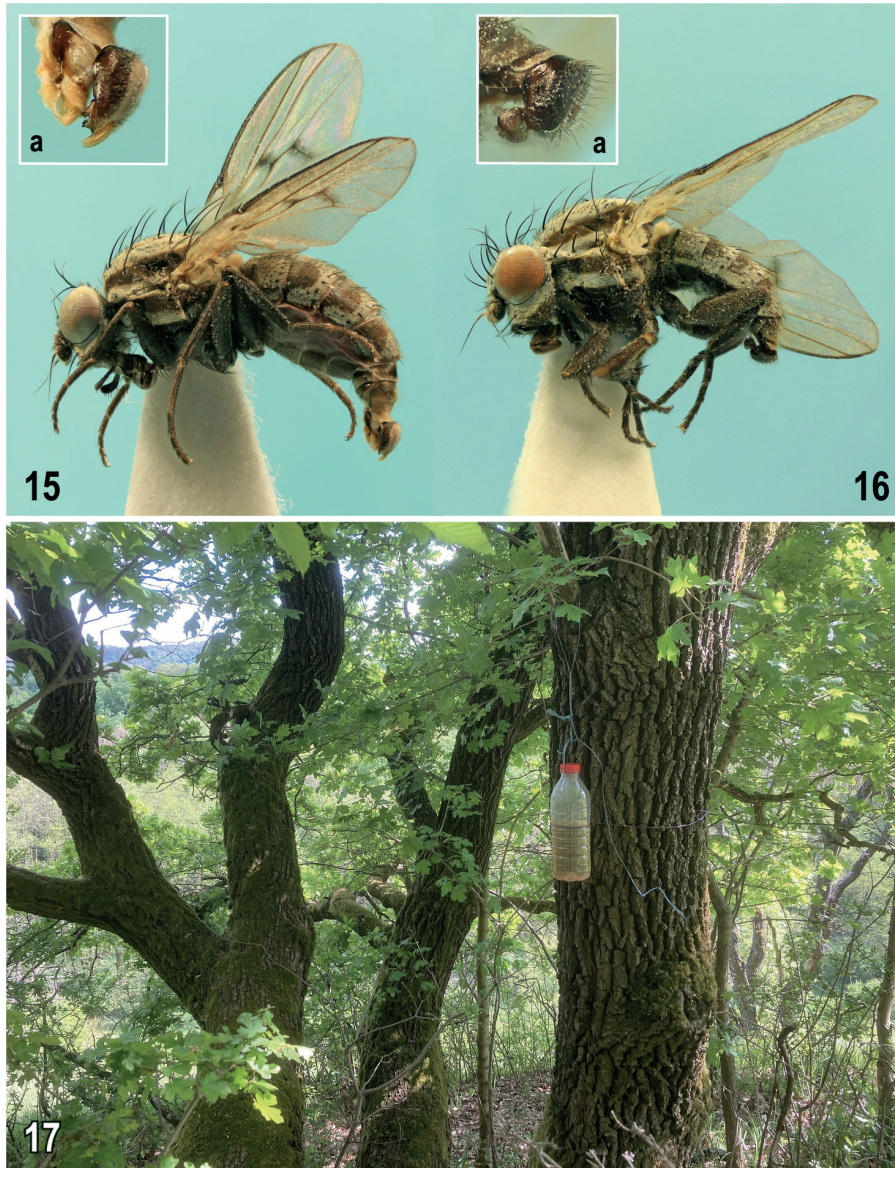
Material: Cerová vrchovina PLA: Chrámec 3 km SW, Vlčia dolina (valley), 48°15’58”N, 20°09’01”E, 220 m, margin of hornbeam-oak forest, WT, 15.vi.-13.vii.2023, 2♀, 13.vii.-17.viii.2023, 28♂61♀, 17.viii.-14.ix.2023, 3♂5♀, J. Roháček leg.

Remarks: A species first recorded from Slovakia from the Cerová vrchovina PLA by means of wine and beer traps in thermophilous *Quercus cerris* forests in three localities (Roháček 2023). Because only 6 specimens had been collected in 2017–2022, it is rather surprising that almost 100 specimens have been captured in the new locality (for habitat see Figs 14, 17). Thus, *N. fabricius* can be locally abundant in the Cerová vrchovina PLA and, based on the obtained data, has a distinct peak of adult occurrence in summer (July–August).

***Neoalticomerus formosus* (Loew, 1844)** (Fig. 16)

Material: Cerová vrchovina PLA: Chrámec 3 km SW, Vlčia dolina (valley), 48°15’58”N, 20°09’01”E, 220 m, margin of hornbeam-oak forest, WT, 13.vii.-17.viii.2023, 1♂3♀, 17.viii.-14.ix.2023, 2♀, J. Roháček leg.

Remarks: This species seems to be rare in the Cerová vrchovina PLA. Roháček (2023) recorded it from only one locality (Jestice-Hradisko) which was the second from Slovakia. As in the latter locality, *N. formosus* co-occurred with *N. fabricius* in wine traps (Figs 6, 7, 17) also in the new locality from the eastern part of the study area, again in a small number of specimens. Males of *N. formosus* can be easily distinguished from those of *N. fabricius* by the more robust (longer) epandrium and different gonostylus (Fig. 16a compare Fig. 15a) but identification of females can sometimes be problematic, particularly so in wet samples from traps.



Figs 15-17: *Neoalticomerus* species and their habitat. 15 – *Neoalticomerus fabricius* Withers & Papp, 2012, male and its terminalia (a) laterally (voucher specimen from wine trap, 13.vii.-17.viii.2023); 16 – *N. formosus* (Loew, 1844), ditto (voucher specimen from the same sample); 17 – microhabitat of both species, oak (*Quercus robur*) on margin of hornbeam-oak forest with wine trap hanging close to bark. Photo by J. Roháček.

******Odinia trinotata* **Robineau-Desvoidy, 1830**
syn. *Odinia maculata* (Meigen, 1830)

Material: Cerová vrchovina PLA: Chrámec 3 km SW, Vlčia dolina (valley), 48°15'58"N, 20°09'01"E, 220 m, margin of hornbeam-oak forest, WT, 11.v.-15.vi.2023, 1♂, 15.vi.-13.vii.2023, 1♂, 13.vii.-17.viii.2023, 1♀, 17.viii.-14.ix.2023, 3♂, J. Roháček leg.

Remarks: Roháček (2023) summarized previous data on the occurrence of this species in Slovakia. Only 3 females from 3 localities have hitherto been recorded from the country, two being reported recently from the Cerová vrchovina PLA. The above records (also including males) from an additional locality confirmed the occurrence of this rare species in this protected area and also its association with oak trees (Fig. 17). *O. trinotata* is classified as endangered species (EN) in the Czech Republic (Máca 2005) and should be treated as threatened also in Slovakia.

Discussion and conclusions

Results of previous studies (Roháček (2012, 2013) dealing with the biodiversity of the fauna of Opomyzoidea (excluding Agromyzidae) in the Gemer area have been recently summarized and significantly extended by Roháček (2023). Despite this, the new faunal data obtained in 2023, particularly in the Cerová vrchovina PLA, and presented in this paper, clearly demonstrated that knowledge of the local fauna is also far from complete in groups intensively studied in this territory. Not unexpectedly, both new additions to the fauna of Slovakia given here, viz. *Podocera delicata* (Stenomicridae) and *Periscelis* (*Myodris*) *piricercus* (Periscelididae) are from the southwestern part of the area, located near the border with Hungary. This is also true for records of other rare or otherwise interesting species.

Roháček (2023) stated that most families of Diptera Acalyptratae were formerly investigated only marginally in the Cerová vrchovina PLA, with very limited data published in the past by Martinek & Mocek (1995) and Straka (2016). The targeted study of the dipterous fauna in this area, performed by our dipterological team (J. Roháček, J. Ševčík, M. Tkoč + students) since 2017, yielded a lot of new occurrence data, it is true, but only a small part of them have been elaborated and published, viz. Preisler et al. (2022) (Heleomyzidae), Roháček (2023) (Opomyzoidea). It can be expected that a detailed study of the material of other families of Acalyptratae from the area will also result in similarly important and interesting findings.

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Dodatky k fauně skupiny Opomyzoidea v oblasti Gemeru (střední Slovensko)

Studie prezentuje nové údaje o výskytu zástupců čeledí Clusiidae (2 druhy), Acartophthalmidae (1), Opomyzidae (4), Anthomyzidae (5), Aulacigastridae (3), Stenomicridae (1), Periscelididae (4), Asteiidae (2) a Odiniidae (3) získané v 2023 během bioniventarizačního terénního výzkumu v oblasti Gemeru na středním Slovensku. U nejzajímavějších nálezů jsou uvedeny poznámky k rozšíření, biologii, faunistice na Slovensku a nebo významu pro ochranu přírody. Dva druhy jsou novými přírůstky pro faunu Slovenska, viz *Podocera delicata* (Collin, 1944) z čeledi Stenomicridae (nejvýchodnější známý nález) a *Periscelis* (*Myodris*) *piricercus* Carles-Tolrá & Verdugo Páez, 2009 z čeledi Periscelididae (nejsevernější nález). Jsou prezentovány také první nálezy druhů *Geomyza subnigra* Drake, 1992 (Opomyzidae) a *Typhamyza bifasciata* (Wood, 1911) v CHKO Cerová vrchovina. Kromě výše uvedených faunistických novinek byly z CHKO Cerová vrchovina opět zaznamenány následující vzácné či jinak významné druhy: *Aulacigaster falcata* Papp, 1998 (Aulacigastridae), *Periscelis* (*M.*) *haennii* Pollini Paltrinieri & Roháček, 2022, *P.* (*P.*) *winnertzii* Egger, 1862 (Periscelididae), *Neoalticomerus fabricius* Withers & Papp, 2012, *N. formosus* (Loew, 1844) a *Odinia trinotata* Robineau-Desvoidy, 1830 (Odiniidae).

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