



Moth flies (Diptera, Psychodidae) of Železné hory Protected landscape area and neighbouring areas, Czech Republic

Muchówki (Diptera, Psychodidae) z obszaru chronionego krajobrazu Železné hory i terenów sąsiednich, Republika Czeska

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ABSTRACT. The biodiversity of non-biting moth flies (Diptera: Psychodidae) from the Železné hory Mountains is presented. A total of 79 species are recorded. According to the Czech Red List, twelve species are critically endangered: *Trichomyia urbica* Haliday in Curtis, 1839, *Oomormia andrenipes* (Strobl, 1910), *Parajungiella pseudolongicornis* (Wagner, 1975), *Peripsychoda fusca* (Macquart, 1826), *Psycmera integella* (Jung, 1956), *Telmatoscopus advena* (Eaton, 1893), *Clytocerus (Boreoclytocerus) rivosus* (Tonnoir, 1919), *C. (B.) tetracorniculatus* Wagner, 1977, *Saraiella rotunda* (Krek, 1970), *Szaboiella hibernica* (Tonnoir, 1940), *Tonnoiriella nigricauda* (Tonnoir, 1919) and *Ulomyia plumata* (Tonnoir, 1919). Three species are endangered: *Pneumia rivularis* (Berdén, 1954), *P. stammeri* (Jung, 1956) and *P. vittata* (Tonnoir, 1919). Four species are considered vulnerable: *Parajungiella prikryli* Ježek, 1999, *Paramormia (Duckhousiella) cornuta* Nielsen, 1964, *Philosepedon (Philosepedon) hrudkai* Ježek, 1999, *Threticus silvaticus* Ježek, 1985. In addition, three species whose conservation status has not been assessed in the Czech Red List are now nationally scarce: *Krivosheinoscopus bartai* Ježek, 2004, *Philosepedon (Philosepedon) dumosum* Omelková & Ježek, 2012 and *Clytocerus (Boreoclytocerus) splendidus* Ježek & Hájek, 2007. Newly, based on the experience of the authors, NS (nationally scarce) status is added for *Logima sigma* (Kincaid, 1899) and *Berdeniella vimmeri* Ježek, 1995. A basic prerequisite for the understanding and protecting biodiversity is the establishment of a high-quality faunal and taxonomic base. This knowledge can be used to protect endangered species, and manage their habitats.

KEY WORDS: Trichomyiinae, Psychodinae, biodiversity, faunistics, distribution, zoogeography, threatened species, conservation potential, Bohemia, Moravia, Silesia, Europe, Palearctic Region

INTRODUCTION

The area of the Železné hory Mountains (762 km²) more or less forms a wave in the landscape which runs from the north-western tip of a slanted isosceles (shape of the area) to the alluvium of Chrudimka river in the east and to the meadows around the Doubrava river in the south. The area is roughly bounded by settlements Týnec nad Labem, Heřmanův Městec, Chrudim, Slatiňany, Skuteč, Ždírec nad Doubravou, Podmoklany, Chotěboř, Běstvina and Třemošnice nad Doubravou. There is a great variety of natural elements that make the homogenous nature complex. The general natural history of the entire study area was characterized in the past mainly by the guide “Kafkův ilustrovaný průvodce po království českém” (Kafka 1858-1929), and many interesting actual modern details were added, e.g., by Demek et al. (2006) and Bína & Demek (2012).

In general, dipterists didn't visit the area of the Železné hory Mts. in the past specifically to collect moth flies, and very little has been published so far: from the border of Mts. only *Tinearia alternata* (Say, 1824) (Fig. 1) – Golčův Jeníkov (Vimmer 1913, Ježek 1977) and *T. lativentris* (Berdén, 1952) – Čáslav (Ježek 1977). Newly published records from the studied area in recent decades are: *Krivoshainoscopus bartai* Ježek, 2004 – Lichnice NNR (Ježek 2004a); *Paramormia (Duckhousiella) cornuta* Nielsen, 1964 – Mokřadlo NR (Ježek 2003); *Philosepedon (Philosepedon) dumosum* Omelková & Ježek, 2012 – Zlatá louka NR (Omelková & Ježek 2012b, Tkoč et al. 2014); *Logima sigma* (Kincaid, 1899), *Psychoda crassipennis* Tonnoir, 1940 and *Psychodocha itoco* (Tokunaga & Komyo, 1955) – all Lichnice NNR (Ježek 2003); *Psychomora mycophila* (Vaillant, 1988) – Křižanovice (same); *Berdeniella matthesi* (Jung, 1954) – Barovice (same); *B. stavniensis* (Krek, 1969) – Barovice, Nasavrky, Lichnice NNR, Mezný and Sv. Jan (same); *Clytocerus (Boreoclytocerus) splendidus* Ježek & Hájek, 2007 – Barovice, Pařížov, Práčov, Strádovka NR, Zubří NR (Ježek & Hájek 2007, Tkoč et al. 2014); *C. (B.) tetracorniculatus* Wagner, 1977 – Buchtovka NR, Zlatá louka NR, Zubří NR (Ježek 2003); *Pneumia stammeri* (Jung, 1956) – Krásné, Nový Mlýn (same); *P. rivularis* (Berdén, 1954) – Křižanovice (same); *Szaboiella hibernica* (Tonnoir, 1940) – Mezisvětí (Ježek 2004a).



Fig. 1. *Logima sigma* (Kincaid, 1899) – adult. Photo by František Bednár.

The aim of our study is to present unpublished faunal data and supplement this with a summary of recently published data as a contribution to biodiversity research on moth flies (Diptera: Psychodidae) of Železné hory PLA and neighboring areas (Czech Republic).

MATERIAL AND METHODS

This study is based on 653 specimens (slides) of moth flies. The material was collected in the Železné hory Mts. (especially in the Železné hory PLA with adjacent unprotected areas and localities, e.g. the edges of the Žďárské vrchy PLA) between 1998 and 2001. The main driving force behind the biodiversity research project was the cooperation between the management of the Protected Landscape Area of Železné hory with the Department of Entomology of the National Museum in Prague. Our material was collected by sweep netting (Pavel Chvojka, Jan Ježek – both from National Museum in Prague and several times by Bohumil Mocek from Museum of Hradec Králové) during individual excursions and using Malaise traps emptied in three-week periods. The traps were installed by František Bárta (PLA Management); in general, only the date of sample collection is given in the list of material examined in the Results section. The names of the collectors are always given in the text. The captured moth flies were preserved in the field in 70% ethanol, cleared in chloralphenol, treated in xylol in laboratory identified by the first author, and mounted on glass slides in Canada balsam. The voucher specimens are deposited in the National Museum, Prague, Czech Republic (NMPC). The slides were numbered in the NMPC by INS = Inventory Slide Number of the family Psychodidae (see Tkoč et al. 2014). Most of the recent data come from a total of 106 localities; see the numbered list of collecting sites prepared according to the map used: Region Železné hory 1 : 75,000.

Note: Coordinates: in contrast to the single GPS mentioned in the list of all collecting areas, the locations of sweeping may deviate from the exact coordinates by tens of meters at different visits during the collecting season.

Detailed information was included and supplied with the codes of fields in the faunistic and floristic grid mapping system for Central Europe (Ehrendorfer & Hamann 1965, Zelený 1972, Pruner & Míka 1996).

The map in the figure was created using public domain layers (OpenStreetMap standard - <https://www.openstreetmap.org>), Czech Republic Administrative Districts (GADM) - <https://www.diva-gis.org>) in QGIS software (version 3.22.4-Białowieża, QGIS code branch 3.22 release). The area of interest in the overview map in Map 2 shows a polygon drawn by the outermost points (minimum bounding geometry, convex hull method).

Identification keys used: Vaillant (1971-1983), Szabó (1983), Withers (1989) and numerous unnamed original papers by various authors describing new species. Nomenclature is modified from Vaillant (1971-1983) and Wagner (1990, 2019) using the classifications of e.g. Ježek & van Harten (2005, 2009), Ježek (2007), Ježek et al. (2018, 2020, 2021, 2023b), Omelková & Ježek (2012a,b), Oboňa & Ježek (2014), Kvifte (2014) and Kroča & Ježek (2015, 2019, 2022).

Note: The Red List status follow the Czech Red List (Ježek 2005) supplemented by Ježek & Omelková (2012), Omelková & Ježek (2012c), Kroča & Ježek (2015, 2019, 2022), and Ježek et al. (2021).

Graphs with logarithmic trend lines were created in MS Excel. Linear regression and non-parametric methods (Spearman's rho) were also used to search for possible correlations.

Abbreviations used:

M = male; F = female; SW = sweeping; MT = Malaise trap; B = Bárta leg.; C = Chvojka leg.; J = Ježek leg.; Mo = Mocek leg.; PLA = protected landscape area; NNR = national nature reserve; NR = nature reserve; NNM = national nature monument (nature conservation area); NM = Nature Monument; Threatened species: CR = critically endangered; EN = endangered; VU = vulnerable; NS = (nationally scarce) species not included in the Czech Red List (Ježek 2005).

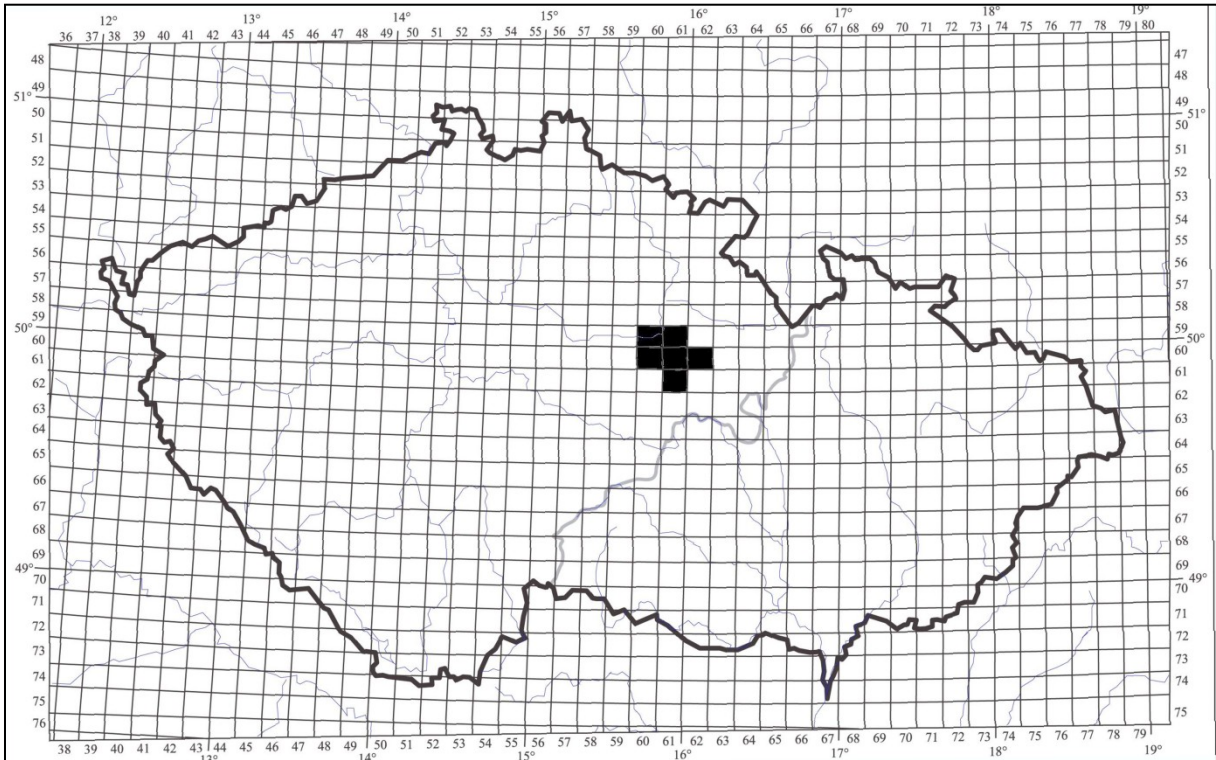
LIST OF ALL COLLECTING AREAS (Maps 1-2; Figs 2-7)



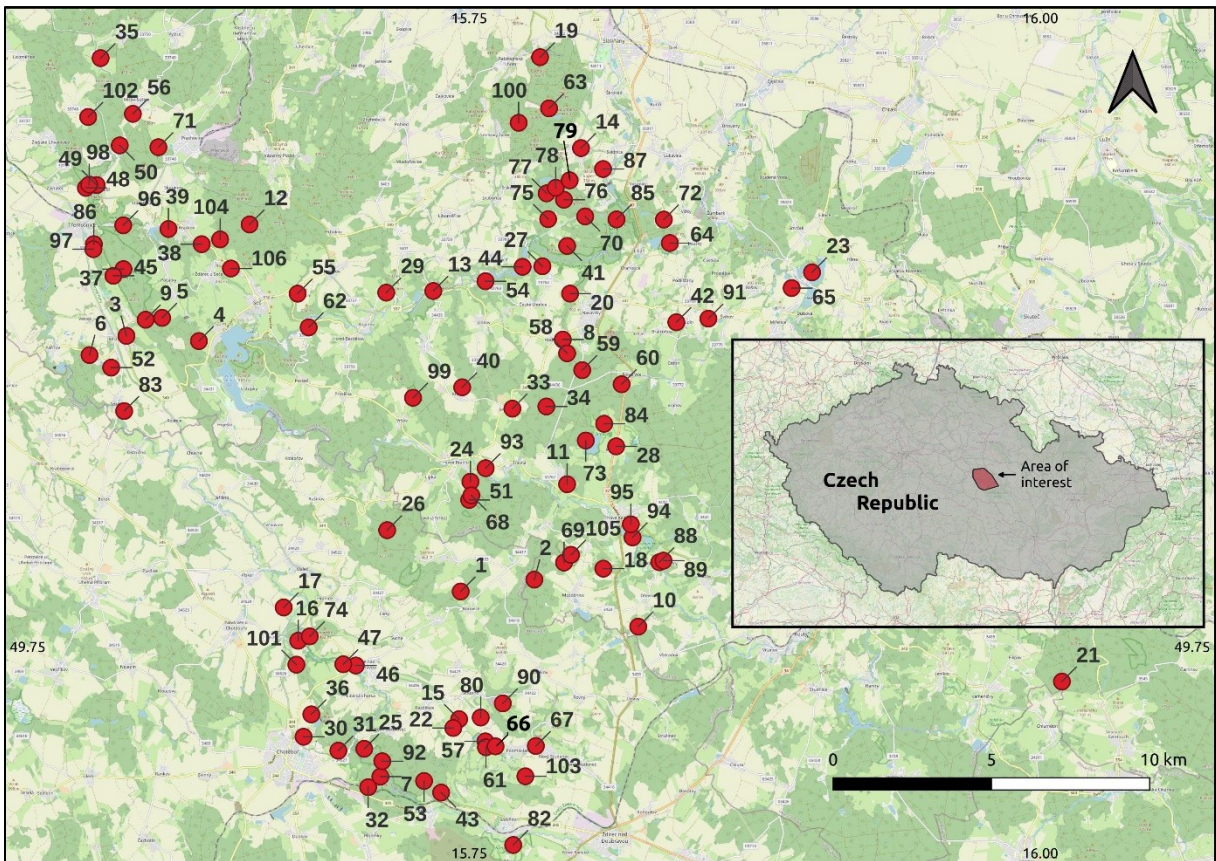
Fig. 2. Red sky at night in the area of Železné hory PLA. Photo by Zuzana Růžičková.



Fig. 3. Panoramic view of the arable land from the Železné hory Mts. at Štikov near Chotěboř. Photo by Zuzana Růžičková.



Map 1. Map of faunistic squares of the Czech Republic (created by Jozef Oboňa).



Map 2. Detailed map of sampled sites (created by Peter Manko).

1. **Barovice, Barovka brook**, forest, deep clough, Alnetum, Železné hory PLA, 606 m a.s.l., 6260, 49°45'N 15°44'E. Veg.: *Alnus*, *Larix*, *Sorbus*, *Fagus*, *Nasturtium*, Pteropsida.
2. **Barovice, tributary of Dlouhý potok brook**, forest swamps, Alnetum, Železné hory PLA, 570 m a.s.l., 6260, 49°46'N 15°46'E. Veg.: *Alnus*, *Nasturtium*, *Equisetum*, *Caltha*, Pteropsida.
3. **Běstvina - Hluboš**, manor pond, outflow, pollution, Železné hory Mts., 363 m a.s.l., 6159, 49°50'N 15°35'E. Veg.: *Acer*, *Alnus*, *Frangula*, *Urtica*, *Mentha*, *Nasturtium*, *Lemna*, Poaceae.
4. **Běstvina, Javorka brook**, Oheb's crystalinicum area, Fagetum, Železné hory PLA, 489 m a.s.l., 6159, 49°50'N 15°37'E. Veg.: *Fagus*, *Ulmus*, *Quercus*, *Asperula*.
5. **Běstvina, source area 1.5 km NE**, Železné hory Mts., 430 m a.s.l., 6159, 49°50'N 15°36'E.
6. **Between Běstvina and Pařížov**, pond, camping, spruce forest, Železné hory Mts., 326 m a.s.l., 6159, 49°49'N 15°35'E. Veg.: *Picea*, *Ulmus*, *Fagus*, *Carpinus*, *Sorbus*, *Nymphaea*, *Carex*, *Caltha*.
7. **Between Bílek and Chotěboř**, Čertův stolek rock, valley of Doubrava river (NR), forest swamps, small brook, Železné hory PLA, 520 m a.s.l., 6260, 49°42'N 15°42'E. Veg.: *Picea*, *Betula*, *Equisetum*, *Impatiens*, Pteropsida.
8. **Between Hodonín and Nasavrky**, brook, Železné hory PLA, 519 m a.s.l., 6160, 49°50'N 15°47'E. Veg.: *Alnus*, *Sorbus*, *Frangula*, *Filipendula*, *Carduus*, *Urtica*, Poaceae, Daucaceae, Pteropsida, Musci.
9. **Between Horní Počátky and Běstvina** (Kaňkovy hory hills), spring area, fountain, beech wood, Železné hory PLA, 472 m a.s.l., 6159, 49°50'N 15°36'E. Veg.: *Fagus*, *Alnus*, *Sambucus*, *Fraxinus*, *Rubus*, *Stachys*, *Aegopodium*, Pteropsida, Musci.
10. **Between Jančouř and Kocourov**, Trhová Kamenice env., forest pond, muddy dike, flocculated Fe, Železné hory PLA, 547 m a.s.l., 6260, 49°45'N 15°49'E. Veg.: *Picea*, *Pinus*, *Salix*, *Betula*, *Frangula*, *Urtica*, *Scirpus*, *Filipendula*, *Equisetum*, *Caltha*, *Rubus*.
11. **Between Kameničky and Trhová Kamenice**, small brook and swamps near road, Železné hory PLA, 546 m a.s.l., 6160, 49°47'N 15°47'E. Veg.: *Salix*, *Filipendula*, *Urtica*, *Nasturtium*, *Myosotis*.
12. **Between Seč and Vápenný Podol**, Zlatý potok brook, Železné hory PLA, 570 m a.s.l., 6159, 49°52'N 15°39'E. Veg.: *Picea* (forest), *Betula*, *Carpinus*, *Acer*, *Fagus*, *Impatiens*, *Geranium*, Daucaceae.
13. **Between Spáleníště and Petrkov**, Bojanov env., chalets, small brook, forest, Železné hory PLA, 420 m a.s.l., 6160, 49°51'N 15°44'E. Veg.: *Picea*, *Frangula*, *Corylus*, *Caltha*, Pteropsida, Musci.
14. **Between Svídnice and Trpišov**, meadows, spring area, brook, Železné hory PLA, 310 m a.s.l., 6060, 49°53'N 15°47'E. Veg.: *Alnus*, *Tilia*, *Crataegus*, *Sorbus*, *Caltha*, *Aegopodium*, *Mentha*, *Myosotis*, Pteropsida.
15. **Bezděkov, Lhotka pond**, Cerhovka river, small brooks, swamps, Železné hory PLA, 440 m a.s.l., 6260, 49°43'N 15°44'E. Veg.: *Alnus*, *Salix*, *Urtica*, *Myosotis*, *Scirpus*, *Filipendula*.
16. **Bezlejov env. Chotěboř**, Doubrava river, Železné hory PLA, 390 m a.s.l., 6260, 49°45'N 15°40'E. Veg.: *Alnus*, *Acer*, *Salix*, *Quercus*, *Crataegus*, *Eounymus*, *Urtica*, *Aegopodium*, *Lemna*.
17. **Bezlejov, tributary of Doubrava river**, Železné hory Mts., 397 m a.s.l., 6260, 49°45'N 15°40'E.

- 18. Buchtovka (NM) env. Trhová Kamenice**, Železné hory PLA, 542 m a.s.l., 6260, 49°46'N 15°48'E.
- 19. Čertův Hrádek** (small rock), Podhůra env., small forest and polluted brook, Železné hory PLA, 335 m a.s.l., 6060, 49°54'N 15°46'E. Veg.: *Pinus*, *Alnus*, *Fraxinus*, *Sambucus*, *Rubus*, *Impatiens*, *Urtica*, *Phragmites*, *Scirpus*, *Caltha*.
- 20. Debrný potok brook near Nasavrky**, waste water from town agglomeration, Železné hory PLA, 460 m a.s.l., 6160, 49°50'N 15°47'E. Veg.: *Populus*, *Frangula*, *Nasturtium*, *Urtica*, *Musci*.
- 21. Filipov near Kameničky**, source of Chrudimka river, forest, cluster of spruces, swamps, Žďárské vrchy PLA, 367 m a.s.l., 6261, 49°44'N 15°59'E. Veg.: *Picea*, *Caltha*, *Nasturtium*.
- 22. Hařilova Lhotka env. Sloupno**, small pond in meadows, small brooks, swamps, water tower, Železné hory PLA, 442 m a.s.l., 6260, 49°43'N 15°44'E. Veg.: *Alnus*, *Phragmites*, *Caltha*, *Nasturtium*.
- 23. Havlovice, Hoříčka pond**, smelly pools on the banks, Železné hory Mts., 369 m a.s.l., 6161, 49°51'N 15°54'E. Veg.: *Alnus*, *Sorbus*, *Populus*, *Iris*, *Poaceae*.
- 24. Horní Bradlo, Chrudimka river**, Železné hory PLA, 612 m a.s.l., 6160, 49°47'N 15°45'E.
- 25. Horní Mlýn**, Chotěboř env., muddy way near farm, Železné hory PLA, 489 m a.s.l., 6260, 49°43'N 15°42'E. Veg.: *Alnus*, *Acer*, *Picea*, *Sambucus*, *Impatiens*, *Urtica*, *Senecio*, *Rubus*, *Lamiaceae*, *Daucaceae*.
- 26. Hostětínky near Horní Bradlo**, forest, small pond, inflow, Železné hory PLA, 608 m a.s.l., 6160, 49°46'N 15°42'E. Veg.: *Picea*, *Alnus*, *Pteropsida*.
- 27. Hradiště**, Železné hory PLA, 456 m a.s.l., 6160, 49°51'N 15°46'E.
- 28. Hubský rybník pond env. Rohozná**, Železné hory PLA, 593 m a.s.l., 6160, 49°48'N 15°48'E.
- 29. Hůrka env. Bojanov, Zlatník brook**, swamps, Železné hory Mts., 443 m a.s.l., 6160, 49°51'N 15°42'E. Veg.: *Alnus*, *Picea*, *Betula*, *Scirpus*, *Filipendula*, *Urtica*.
- 30. Chotěboř – castle park**, pond, outflow, 475 m a.s.l., 6260, 49°43'N 15°40'E. Veg.: *Quercus*, *Carpinus*, *Sorbus*, *Sambucus*, *Rubus*, *Corylus*, *Asarum*, *Urtica*, *Phragmites*.
- 31. Chotěboř – eastern border**, forest edge, rocks, swamps, dried rill, Železné hory PLA, 490 m a.s.l., 6260, 49°43'N 15°41'E. Veg.: *Betula*, *Alnus*, *Picea*, *Rubus*, *Impatiens*, *Caltha*, *Geum*, *Carduus*.
- 32. Chotěboř – Lemna pools along road**, Železné hory PLA, 535 m a.s.l., 6260, 49°42'N 15°42'E. Veg.: *Alnus*, *Betula*, *Sorbus*, *Juncus*, *Musci*, *Poaceae*, *Leonurus*, *Lysimachia*, *Carex*.
- 33. Javorné – swamps near farm**, forest, Železné hory PLA, 570 m a.s.l., 6160, 49°49'N 15°46'E. Veg.: *Picea*, *Salix*, *Scrophularia*, *Urtica*, *Glyceria*, *Pteropsida*.
- 34. Javorné – brook**, forest edge, alluvium, Železné hory PLA, 626 m a.s.l., 6160, 49°49'N 15°47'E. Veg.: *Picea*, *Urtica*, *Scirpus*, *Nasturtium*, *Filipendula*, *Caltha*, *Equisetum*.
- 35. Jetonice**, Heřmanův Městec env., small forest brook, source area, Železné hory PLA, 465 m a.s.l., 6059, 49°54'N 15°35'E. Veg.: *Alnus*, *Picea*, *Betula*, *Sambucus*, *Rubus*, *Caltha*, *Mentha*.
- 36. Kamenný potok brook env. Chotěboř**, swamps, Železné hory PLA, 478 m a.s.l., 6260, 49°43'N 15°40'E. Veg.: *Betula*, *Sambucus*, *Picea*, *Carpinus*, *Rubus*, *Impatiens*, *Phragmites*.

- 37. Kaňkove hory hills (NNM) env. Třemošnice**, Železné hory PLA, 553 m a.s.l., 6159, 49°51'N 15°35'E.
- 38. Kraskov, Zlatý potok brook**, polluted village water, Železné hory PLA, 423 m a.s.l., 6159, 49°51'N 15°37'E. Veg.: *Carpinus*, *Picea*, *Alnus*, *Urtica*, Pteropsida.
- 39. Kraskov–Horní Peklo**, pond, inflow, Železné hory PLA, 391 m a.s.l., 6159, 49°52'N 15°37'E. Veg.: *Salix*, *Alnus*, *Frangula*, *Urtica*, *Galium*, *Ranunculus*, Daucaceae.
- 40. Krásné**, small forest brook, meadow, Železné hory PLA, 520 m a.s.l., 6160, 49°49'N 15°44'E. Veg.: *Picea*, *Alnus*, *Fagus*, *Nasturtium*, *Oxalis*, Musci, Pteropsida.
- 41. Krkanka (NR)**, Chrudimka river, fountain, chalets, Železné hory PLA, 418 m a.s.l., 6160, 49°51'N 15°47'E. Veg.: *Acer*, *Fagus*, *Picea*, *Anemone*.
- 42. Krupín, Bratroňovský potok brook**, fields, manure, Železné hory Mts., 431 m a.s.l., 6161, 49°50'N 15°50'E. Veg.: *Alnus*, *Sambucus*, *Salix*, *Aegopodium*, *Urtica*, *Galium*.
- 43. Křivý** (poultry farm) near Bílek, small forest water reservoirs, Železné hory PLA, 513 m a.s.l., 6260, 49°42'N 15°44'E. Veg.: *Alnus*, *Fraxinus*, *Salix*, *Picea*, *Nasturtium*, *Caltha*, *Rubus*, *Stachys*, *Impatiens*, *Lemna*.
- 44. Křižanovice**, water reservoir, chalets, branches of shrubs over water level, Železné hory PLA, 421 m a.s.l., 6160, 49°51'N 15°46'E. Veg.: *Picea*, *Carpinus*, *Rubus*, *Caltha*, *Filipendula*.
- 45. Lhotka**, spring area, Třemošnice env., Železné hory PLA, 422 m a.s.l., 6159, 49°51'N 15°35'E.
- 46. Libice nad Doubravou, Doubrava river valley (NR)**, meadows, Železné hory PLA, 420 m a.s.l., 6260, 49°44'N 15°42'E, Veg.: *Salix*, *Alnus*, *Sambucus*, *Frangula*, *Lysimachia*, *Aegopodium*, *Urtica*, Poaceae, Daucaceae.
- 47. Libice nad Doubravou, polluted pond**, outflow, Železné hory PLA, 417 m a.s.l., 6260, 49°44'N 15°41'E. Veg.: *Salix*, *Frangula*, *Alnus*, *Populus*, *Urtica*, *Impatiens*, *Lemna*, Musci.
- 48. Lichnice NNR (ruin of castle)**, mixed forest (Fig 4.), Železné hory PLA, approximately 400 m a.s.l., 6159, 49°52'N 15°34'E. Veg.: *Fagus* (acid beechwood), *Picea*, *Fraxinus*, *Alnus*, *Quercus*, *Robinia*, *Larix*.



Fig. 4. Characteristic landscape scenery – spring view from Lichnice (NNR).
Photo by Zuzana Růžičková.

- 49. Lovětínská rokle chasm**, Třemošnice env., Železné hory PLA, 455 m a.s.l., 6159, 49°52'N 15°35'E.
- 50. Lovětínský rybník pond near Rudov**, inflow, Alnetum, Železné hory Mts., 445 m a.s.l., 6059, 49°53'N 15°35'E. Veg.: *Alnus*, Musci, *Deschampsia*, *Scirpus*, *Rubus*, *Lysimachia*.
- 51. Malá Střítež**, Horní Bradlo env., forest source area, Železné hory PLA, 570 m a.s.l., 6160, 49°47'N 15°44'E, Veg.: *Picea*, *Nasturtium*, *Sphagnum*, *Oxalis*, *Equisetum*, *Vaccinium*, Pteropsida.
- 52. Malejov** near Běstvína, pond, swamps, rill, Železné hory Mts., 335 m a.s.l., 6159, 49°49'N 15°35'E. Veg.: *Alnus*, *Fraxinus*, *Rubus*, *Caltha*, *Aegopodium*, *Calamagrostis*, *Leonurus*.
- 53. Malochyně near Bílek**, Chotěboř env., pond, outflow, Alnetum, Železné hory PLA, 534 m a.s.l., 6260, 49°42'N 15°43'E. Veg.: *Alnus*, *Scirpus*, *Rubus*, *Carex*, *Sambucus*, *Filipendula*, *Caltha*, *Nasturtium*.
- 54. Mezisvětí env. Nasavrky**, swamps, fountain, forest way, chalets, Železné hory PLA, 425 m a.s.l., 6160, 49°51'N 15°45'E. Veg.: *Alnus*, *Picea*, *Rubus*, *Myosotis*, *Juncus*, *Senecio*.
- 55. Mezný** near Seč, wet meadows, brook, Železné hory PLA, 491 m a.s.l., 6160, 49°50'N 15°40'E. Veg.: *Salix*, *Betula*, *Alnus*, *Frangula*, *Nasturtium*, *Filipendula*, *Urtica*, Daucaceae.
- 56. Míčov**, Prachovice env., brook, branches over water level, Alnetum, Železné hory PLA, 502 m a.s.l., 6059, 49°54'N 15°36'E. Veg.: *Alnus*, Pteropsida, *Acer*, *Impatiens*, *Urtica*, Musci.
- 57. Mokřadlo (NR) near Podmoklany**, pond, Cerhovka brook, Železné hory PLA, 445 m a.s.l., 6260, 49°43'N 15°45'E. Veg.: *Alnus*, *Prunus*, *Salix*, *Carex*, *Filipendula*, *Polygonum*, *Carduus*, *Cirsium*, *Phragmites*, Daucaceae.
- 58. Nasavrky – V koutech (NM)**, Železné hory PLA, 531 m a.s.l., 6160, 49°49'N 15°47'E, Veg.: *Quercus*, *Pinus*, *Alnus*, *Salix*, *Betula*, *Carex*, *Calla*, *Leonurus*, *Equisetum*, *Scirpus*, *Lysimachia*.
- 59. Nasavrky**, forest edge, dried brook, Železné hory PLA, 555 m a.s.l., 6160, 49°49'N 15°47'E. Veg.: *Alnus*, *Frangula*, *Picea*, *Juncus*, *Urtica*, *Rubus*, Pteropsida, Daucaceae, Musci.
- 60. Nová Ves near Nasavrky**, forest, small dried brook, Železné hory PLA, 567 m a.s.l., 6160, 49°49'N 15°49'E. Veg.: *Picea*, *Betula*, *Sorbus*, *Frangula*, *Caltha*, *Rubus*, Pteropsida, Daucaceae, Musci.
- 61. Nový Mlýn** env. Branišov, brook, small pond, mill race, Železné hory PLA, 445 m a.s.l., 6260, 49°43'N 15°45'E. Veg.: *Salix*, *Populus*, *Alnus*, *Tilia*, *Urtica*, *Myosotis*, *Symphytum*, Pteropsida.
- 62. Padrt'ský Mlýn** near Seč, forest, small brook, Železné hory PLA, 450 m a.s.l., 6160, 49°50'N 15°40'E. Veg.: *Picea*, *Sambucus*, *Acer*, *Alnus*, *Senecio*, *Aegopodium*, *Nasturtium*, Musci, Daucaceae.
- 63. Perný rybník pond near Kochánovice**, Železné hory PLA, 334 m a.s.l., 6060, 49°54'N 15°47'E. Veg.: *Quercus*, *Pinus*, *Salix*, *Picea*, *Alnus*, *Leonurus*, *Scirpus*, *Lemna*, *Calamagrostis*, *Lysimachia*.
- 64. Pila u Libáně, Pařezný rybník pond**, drains, swamps, Železné hory Mts., 383 m a.s.l., 6160, 49°51'N 15°50'E. Veg.: *Tilia*, *Alnus*, *Sorbus*, *Fagus*, *Rubus*, *Carex*, *Iris*, *Lemna*, Poaceae, Pteropsida.
- 65. Podbošovský Mlýn near Miřetice**, Ležák brook, fields, Železné hory Mts., 370 m a.s.l., 6161, 49°51'N 15°53'E. Veg.: *Alnus*, *Fraxinus*, *Padus*, *Urtica*, *Myosotis*, *Galium*.

66. Podmoklany – Nový Mlýn, Cerhovka brook, swamps, Železné hory PLA, 445 m a.s.l., 6260, 49°43'N 15°45'E. Veg.: *Salix*, *Populus*, *Alnus*, *Frangula*, *Urtica*, *Aegopodium*, *Phragmites*.

67. Podmoklany – Odraneč, brook, Železné hory PLA, 475 m a.s.l., 6260, 49°43'N 15°46'E.

68. Polom (NR) (Fig. 5) env. Horní Bradlo, Železné hory PLA, 612 m a.s.l., 6160, 49°47'N 15°45'E.



Fig. 5. Polom (NR) env. Horní Bradlo. Xylophagous moth fly larvae are found in rotting wood of fallen trees. Photo by Zuzana Růžičková.

69. Polom, village brook, Železné hory PLA, 608 m a.s.l., 6260, 49°46'N 15°47'E. Veg.: *Alnus*, *Filipendula*, *Senecio*, *Nasturtium*, *Rubus*.

70. Práčov – pond, deer park, Železné hory PLA, 393 m a.s.l., 6160, 49°52'N 15°48'E. Veg.: *Picea*, *Pinus*, *Alnus*, *Betula*, *Quercus*, *Rubus*, *Lythrum*, *Alisma*, *Typha*, *Carex*.

71. Prachovice, Habřinka pond, forest, swamps, Železné hory Mts., 457 m a.s.l., 6059, 49°53'N 15°36'E. Veg.: *Picea*, *Alnus*, *Rubus*, *Equisetum*, *Deschampsia*, *Caltha*, Musci.

72. Radochlín, pond, Železné hory Mts., 394 m a.s.l., 6160, 49°52'N 15°50'E. Veg.: *Pinus*, *Quercus*, *Acer*, *Sorbus*, *Alnus*, *Iris*, *Equisetum*, *Caltha*, *Rubus*, *Calamagrostis*, Pteropsida.

73. Rohozná, Rohozenský rybník pond, Železné hory PLA, 589 m a.s.l., 6160, 49°38'N 16°25'E. Veg.: *Picea*, *Salix*, *Alnus*, *Nasturtium*, *Equisetum*, *Senecio*, *Carex*, *Juncus*, *Caltha*.

74. Rochňovec, Stavenov pond, swamps, Železné hory PLA, 405 m a.s.l., 6260, 49°45'N 15°40'E. Veg.: *Pinus*, *Picea*, *Quercus*, *Salix*, *Betula*, *Alnus*, *Caltha*, *Carex*, *Phragmites*, *Mentha*, *Lysimachia*, *Leonurus*, *Lythrum*.

75. Slavice near Nasavrky, forest pond, deer park, Železné hory PLA, 424 m a.s.l., 6160, 49°52'N 15°47'E. Veg.: *Quercus*, *Tilia*, *Aesculus*, *Urtica*, *Lemna*, *Alisma*, *Calamagrostis*, *Carex*, *Comarum*.

76. Slavická obora, Boušovka pond (NM) (Fig. 6), deer park, Železné hory PLA, 379 m a.s.l., 6160, 49°52'N 15°47'E. Veg.: *Alnus*, *Betula*, *Pinus*, *Sphagnum*, *Carex*, *Juncus*, *Scirpus*, *Musci*.



Fig. 6. Slavická obora deer park with the littoral zone of Boušovka pond (NM).
Photo by Zuzana Růžičková.

77. Slavická obora, Brožek pond, deer park, Železné hory PLA, 393 m a.s.l., 6160, 49°52'N 15°47'E. Veg.: *Picea*, *Betula*, *Salix*, *Quercus*, *Carpinus*, *Alisma*, *Comarum*, *Lemna*.

78. Slavická obora, small central pond, forest, deer park, Železné hory PLA, 379 m a.s.l., 6160, 49°52'N 15°47'E. Veg.: *Populus*, *Alnus*, *Betula*, *Picea*, *Carex*, *Calamagrostis*.

79. Slavický potok brook near Trpišov, Železné hory PLA, 356 m a.s.l., 6160, 49°52'N 15°47'E.

80. Sloupno, Lhotka pond, small dried water reservoir, Železné hory PLA, 453 m a.s.l., 6260, 49°43'N 15°45'E. Veg.: *Alnus*, *Fraxinus*, *Sambucus*, *Rubus*, *Myosotis*, *Urtica*, *Nasturtium*, *Lemna*.

81. Sobětuchy env. Chrudim, brook near church, Železné hory Mts., 274 m a.s.l., 6060, 49°55'N 15°45'E. Veg.: *Alnus*, *Tilia*, *Urtica*, *Convolvulus*, *Poaceae*.

82. Sobiňov – Na hrázi, alluvium of Doubrava river (NR), dustbins, Železné hory Mts., 538 m a.s.l., 6260, 49°41'N 15°46'E. Veg.: *Pinus*, *Sambucus*, *Calamagrostis*, *Polygonum*, *Rubus*, *Salix*, *Scirpus*.

83. Spačice, valley of Doubrava river, Železné hory Mts., 354 m a.s.l., 6159, 49°48'N 15°35'E.

- 84. Strádovka (NR) env. Rohozná**, Železné hory PLA, 578 m a.s.l., 6160, 49°48'N 15°48'E.
- 85. Strádovské Peklo (NR)**, Nasavrky env., Chrudimka river, brook, Železné hory PLA, 343 m a.s.l., 6160, 49°52'N 15°48'E. Veg.: *Acer*, *Alnus*, *Urtica*, *Impatiens*, *Lysimachia*, *Blechnum*, Musci.
- 86. Sv. Jan env. Třemošnice**, Železné hory PLA, 321 m a.s.l., 6159, 49°51'N 15°35'E. Veg.: *Picea*, *Fagus*, *Quercus*, *Populus*, *Alnus*, *Asperula*, Pteropsida.
- 87. Svídnice**, Chrudimka river, Železné hory PLA, 328 m a.s.l., 6060, 49°53'N 15°48'E.
- 88. Svobodné Hamry, antifire reservoir**, farm, dung, Žďárské vrchy PLA, 537 m a.s.l., 6260, 49°46'N 15°49'E. Veg.: *Betula*, *Alnus*, *Urtica*, *Comarum*, *Leonurus*, *Lemna*.
- 89. Svobodné Hamry, Zadní rybník pond (NR)**, outflow, Žďárské vrchy PLA, 533 m a.s.l., 6260, 49°46'N 15°50'E. Veg.: *Pinus*, *Betula*, *Salix*, *Frangula*, *Calla*, *Iris*, *Nasturtium*, *Carex*.
- 90. Štikov near Chotěboř** (Fig. 3), meadows, slope source area, Alnetum, Železné hory PLA, 607 m a.s.l., 6260, 49°44'N 15°45'E, Veg.: *Alnus*, *Sambucus*, *Scirpus*, *Caltha*, *Aegopodium*, *Filipendula*, *Carduus*, *Equisetum*.
- 91. Švihov env. Miřetice**, pond, swamps, Železné hory Mts., 415 m a.s.l., 6161, 49°50'N 15°51'E. Veg.: *Alnus*, *Sambucus*, *Caltha*, *Filipendula*, *Geum*, *Phragmites*, *Lysimachia*, *Myosotis*, *Carex*.
- 92. Točítý Vír env. Chotěboř**, Údolí Doubravy (NR), valley, wet rocky walls and banks, chalets, Železné hory PLA, 520 m a.s.l., 6260, 49°43'N 15°42'E. Veg.: *Fagus*, *Rubus*, Pteropsida, Marchantiopsida, Musci, *Oxalis*.
- 93. Travná**, Horní Bradlo env., gutter, Chrudimka river, Železné hory PLA, 518 m a.s.l., 6160, 49°48'N 15°45'. Veg.: *Alnus*, *Sorbus*, *Crataegus*, *Frangula*, *Caltha*, *Urtica*, *Aegopodium*, Pteropsida.
- 94. Trhová Kamenice, Dlouhý rybník pond**, Trhovokamenické rybníky (NM), swamps, chalets, Žďárské vrchy PLA, 526 m a.s.l., 6160, 49°46'N 15°49'E. Veg.: *Alnus*, *Betula*, *Frangula*, *Lemna*, *Carex*, *Comarum*, *Calla*, *Filipendula*.
- 95. Trhová Kamenice, old mill pond**, swamps, Žďárské vrchy PLA, 549 m a.s.l., 6160, 49°47'N 15°49'E. Veg.: *Calla*, *Alnus*, *Rubus*, *Caltha*, *Filipendula*, *Urtica*, *Scirpus*, *Leonurus*.
- 96. Třemošnice, Hedvičino údolí valley**, waterfall, Železné hory PLA, 378 m a.s.l., 6159, 49°52'N 15°35'E. Veg.: *Fagus*, *Blechnum*, *Urtica*, Pteropsida.
- 97. Třemošnice – Na Obůrce (NM)**, argillite spring area, crustated swamps, small lakes, Železné hory PLA, 321 m a.s.l., 6159, 49°51'N 15°35'E. Veg.: *Ulmus*, *Fraxinus*, *Sambucus*, *Aegopodium*, *Equisetum*.
- 98. Třemošnice, Lovětínský potok brook**, Železné hory PLA, 374 m a.s.l., 6159, 49°52'N 15°35'E.
- 99. Vršovská olšina alnetum (NR) env. Horní Bradlo**, small brook, wet pastures, outflow, Železné hory PLA, 586 m a.s.l., 6160, 49°49'N 15°43'E. Veg.: *Alnus*, *Rubus*.
- 100. Zabitý kopec Mt. near Smrkový Týnec**, forest, small pond, inflow, 363 m a.s.l., Železné hory PLA, 6060, 49°53'N 15°46'E. Veg.: *Picea*, *Alnus*, *Acer*, *Urtica*, *Lemna*, *Calamagrostis*.
- 101. Zastrání near Chotěboř**, small pond, source area, fields, Železné hory PLA, 424 m a.s.l., 6260, 49°44'N 15°40'E. Veg.: *Quercus*, *Sambucus*, *Crataegus*, *Salix*, *Picea*, *Caltha*, *Lythrum*, *Senecio*, *Calamagrostis*, *Urtica*.
- 102. Zbyslavce near Třemošnice**, forest, rill, Železné hory PLA, 512 m a.s.l., 6059, 49°53'N 15°34'E. Veg.: *Picea*, *Betula*, *Alnus*, *Rubus*, *Vaccinium*, Pteropsida, Musci.

103. Zlatá louka (NR) env. Podmoklany, swamps, rills, meadow, Železné hory PLA, 479 m a.s.l., 6260, 49°42'N 15°46'E. Veg.: *Alnus*, *Frangula*, *Scirpus*, *Lysimachia*, *Lythrum*, *Phragmites*, *Caltha*, *Nasturtium*, *Filipendula*, *Myosotis*, *Equisetum*, *Sphagnum*, Musci.

104. Zlatý potok brook near Kraskov, beech wood, Železné hory PLA, 430 m a.s.l., 6159, 49°51'N 15°38'E.

105. Zubří (NR) (Fig. 7) env. Trhová Kamenice, Železné hory PLA, 608 m a.s.l., 6260, 49°46'N 15°47'E.

106. Žďárec u Seče, arable land, brook, Železné hory PLA, 449 m a.s.l., 6159, 49°51'N 15°38'E. Veg.: *Alnus*, *Sambucus*, *Urtica*, *Filipendula*, *Nasturtium*, *Ranunculus*, *Aegopodium*, *Galium*, Poaceae.

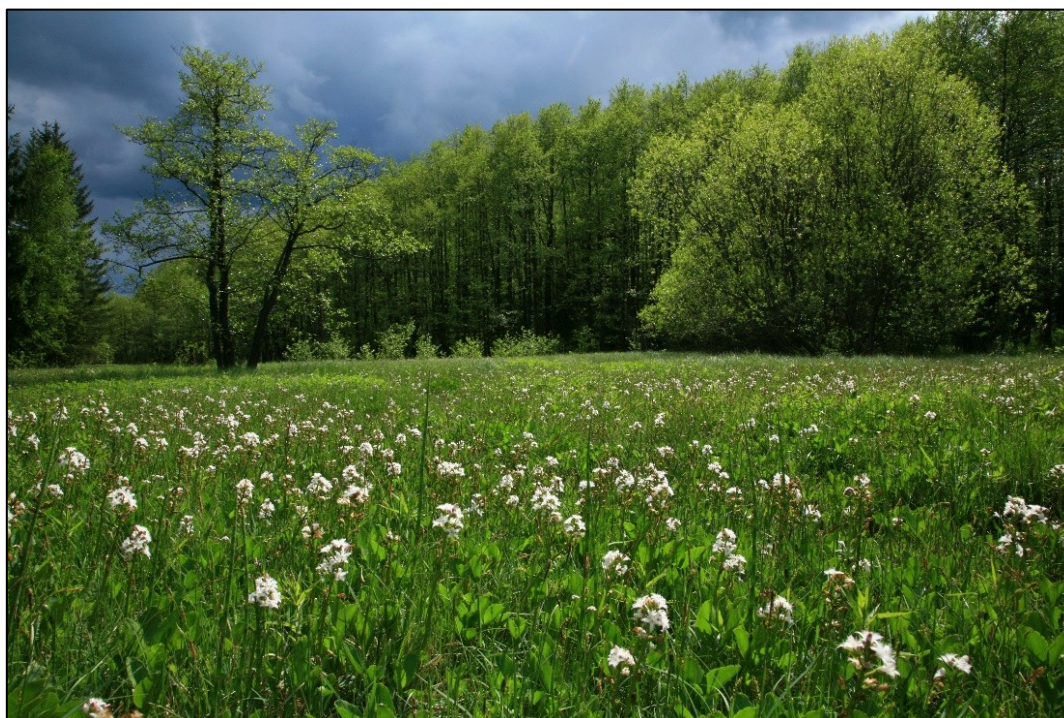


Figure 7. Zubří (NR) env. Trhová Kamenice: flowering growth of *Menyanthes trifoliata* L.
Photo by Zuzana Růžičková.

RESULTS AND DISCUSSION

Order Diptera

Family Psychodidae

Trichomyia urbica Haliday in Curtis, 1839

Unpublished record: Slavický potok brook near Trpišov (79), M, 1.7.1999, C, SW, INS 8990.

Red List status: Critically endangered (CR).

Comments: Recorded in 16 European countries, not known from the Iberian Peninsula and the Apennines, but recently recorded from Transcaucasia (Ježek et al. 2021), not common, xylophagous larvae are found in rotting wood of fallen trees.

***Oomormia andrenipes* (Strobl, 1910)**

Unpublished records: Libice nad Doubravou, polluted pond (47), M, 3.5.2000, J, SW, INS 10080. Padrťský Mlýn near Seč (62), M, 19.5.1998, J, SW, INS 7977.

Red List status: Critically endangered (CR).

Comments: Rare species of hillside forest headwaters and streams in hills and mountains. Ježek et al. (2008) as well as Ježek & Omelková (2012) reported occurrence in 6 European countries.

***Jungiella (Jungiella) hygrophila* Ježek, 1987**

Unpublished records: Between Svídnice and Trpišov (14), M, 21.5.1998, J, SW, INS 7961. Malochyně near Bílek (53), M, 11.6.1999, J, SW, INS 8880. Zlatá louka (NR) env. Podmoklany (103), M, 13.6.1999, J, SW, INS 8851.

Comments: Central European species of shady springs and streams, known only from the Czech Republic (Bohemia, Moravia) and Poland. Compare Ježek & Omelková (2012).

***Jungiella (Jungiella) soleata* (Walker, 1856)**

Unpublished records: Between Svídnice and Trpišov (14), M, 21.5.1998, J, SW, INS 7965. Malochyně near Bílek (53), M, 11.6.1999, J, SW, INS 8873. Zlatá louka (NR) env. Podmoklany (103), M, 13.6.1999, J, SW, INS 8854.

Comments: Distributed almost all over Europe, including the British Isles, extending as far as northern Iran. It has not been recorded from Scandinavia and the Iberian countries (Ježek et al. 2008, Ježek & Omelková 2012).

***Jungiella (Jungiella) valachica* (Vaillant, 1963)**

Unpublished records: Hařilova Lhotka env. Sloupno (22), M, 14.6.1999, J, SW, INS 9995. Malochyně near Bílek (53), M, 11.6.1999, J, SW, INS 8875. Sloupno, Lhotka pond (80), M, 14.6.1999, J, SW, INS 9960. Zlatá louka (NR) env. Podmoklany (103), M, 13.6.1999, J, SW, INS 8848.

Comments: Known from Austria, Czech Republic, Poland, Switzerland and Balkan countries – see Ježek & Omelková (2012). Species of lowlands and hilly areas, habitat as *J. soleata*: damp shady places with decaying organic matter.

***Krivosheinoscopus bartai* Ježek, 2004**

Published record: Lichnice NNR (ruin of castle) (48), see Ježek (2004a) and Tkoč et al. (2014).

Red List status: Species not included in the Czech Red List (Ježek 2005). Nationally scarce (NS) in Omelková & Ježek (2012c).

Comments: Very rare species, known only from CZ (spring area with clear fissure waters).

***Panimerus denticulatus* Krek, 1971**

Unpublished records: Hařilova Lhotka env. Sloupno (22), M, 14.6.1999, J, SW, INS 9997. Havlovice, Hoříčka pond (23), M, 25.6.2001, J, SW, INS 10765. Krupín, Bratroňovský potok brook (42), M, 25.6.2001, J, SW, INS 10776. Křivý (43), M, 14.6.1999, J, SW, INS 8935. Malochyně near Bílek (53), M, 11.6.1999, J, SW, INS 8876. Podbošovský Mlýn near Měretice (65), M, 25.6.2001,

J, SW, INS 10739. Štikov near Chotěboř (90), M, 14.6.1999, J, SW, INS 8946. Zlatá louka (NR) env. Podmoklany (103), 2 M, 30.7.1996 and 13.6.1999, J, B, SW, MT, INS 8841 and 10824.

Comments: Mainly European species, inhabiting different types of aquatic biotopes, extending into Transcaucasia (Azerbaijan and Georgia) – see Ježek et al. (2020, 2021).

***Panimerus notabilis* (Eaton, 1893)**

Unpublished record: Between Svídnice and Trpišov (14), M, 21.5.1998, J, SW, INS 7966.

Comments: Mainly European species, known from countries along the North Sea, including the British Isles, from Scandinavia, Poland, the Balkans, extending into northern Iran (Ježek et al. 2014).

***Parajungiella longicornis* (Tonnoir, 1919)**

Unpublished records: Between Kameničky and Trhová Kamenice (11), M, 27.6.2001, J, SW, INS 10763. Between Svídnice and Trpišov (14), M, 21.5.1998, J, SW, INS 7962. Hařilova Lhotka env. Sloupno (22), M, 14.6.1999, J, SW, INS 9996. Havlovice, Hoříčka pond (23), M, 25.6.2001, J, SW, INS 10784. Chotěboř – eastern border (31), M, 7.8.1999, J, SW, INS 8909. Javorné – brook (34), M, 20.5.1998, J, SW, INS 7936. Kraskov – Horní Peklo (39), M, 19.5.1998, J, SW, INS 7950. Křivý (43), M, 14.6.1999, J, SW, INS 8934. Malochyně near Bílek (53), M, 11.6.1999, J, SW, INS 8870. Mezný (55), M, 19.5.1998, J, SW, INS 7870. Mokřadlo (NR) near Podmoklany (57), M, 15.6.1999, J, SW, INS 8976. Perný rybník pond near Kochánovice (63), M, 12.8.1999, J, SW, INS 8940. Radochlín (72), M, 21.5.1998, J, SW, INS 7886. Rochňovec, Stavenov pond (74), M, 16.8.1999, J, SW, INS 8922. Sloupno, Lhotka pond (80), M, 14.6.1999, J, SW, INS 9964. Svobodné Hamry – Zadní rybník pond (NR) (89), M, 20.5.1998, J, SW, INS 7912. Štikov near Chotěboř (90), M, 14.6.1999, J, SW, INS 8948. Trhová Kamenice, Dlouhý rybník pond (94), M, 20.5.1998, J, SW, INS 8029. Zlatá louka (NR) env. Podmoklany (103), M, 13.6.1999, J, SW, INS 8842. Zubří (NR) env. Trhová Kamenice (105), M, 9.6.1996, B, MT, INS 9004.

Comments: The European-West Siberian species, recorded in Scandinavia, countries along the North Sea, British Islands, Central and Southern Europe, extending into Siberia (Novosibirsk). Habitats: ponds, banks of brooks, forest streams – see Ježek et al. (2014).

***Parajungiella prikryli* Ježek, 1999**

Unpublished record: Zlatá louka (NR) env. Podmoklany (103), M, 13.6.1999, J, SW, INS 8853.

Red List status: Vulnerable (VU).

Comments: Apparently a rare Central European species, known only from the Czech Republic and Slovakia (Oboňa & Ježek 2014, Ježek et al. 2021).

***Parajungiella pseudolongicornis* (Wagner, 1975)**

Unpublished records: Mezný (55), M, 19.5.1998, J, SW, INS 7869. Perný rybník pond near Kochánovice (63), M, 12.8.1999, J, SW, INS 8941.

Red List status: Critically endangered (CR).

Comments: Rare species, known only from 7 European countries (Ježek et al. 2021). Inhabits banks of ponds and water reservoirs.

Paramormia (Paramormia) polyascoidea (Krek, 1971)

Unpublished records: Horní Mlýn (25), M, 7.8.1999, J, SW, INS 8985. Chotěboř – castle park (30), M, 16.8.1999, J, SW, INS 8885. Krupín, Bratroňovský potok brook (42), M, 25.6.2001, J, SW, INS 10774. Zlatá louka (NR) env. Podmoklany (103), M, 30.7.1996, B, MT, INS 10823. Zubří (NR) env. Trhová Kamenice (105), M, 9.6.1996, B, MT, INS 9001.

Comments: European and West Siberian species, known from 10 countries, extending into Transcaucasia (Ježek et al. 2020, 2021).

Paramormia (Duckhousiella) cornuta Nielsen, 1964

Published record: Mokřadlo (NR) near Podmoklany (57) see Ježek (2003).

Red List status: Vulnerable (VU).

Comments: Known only from Madeira, Czech Republic and Poland (Ježek 2003, 2007, Ježek et al. 2018).

Paramormia (Duckhousiella) ustulata (Walker, 1856)

Unpublished records: Libice nad Doubravou, polluted pond (47), M, 8.9.1998, J, SW, INS 7902. Mokřadlo (NR) near Podmoklany (57), M, 15.6.1999, J, SW, INS 8975. Slavická obora, Brožek pond (77), M, 7.9.1998, J, SW, INS 7881. Sloupno, Lhotka pond (80), M, 14.6.1999, J, SW, INS 9943. Svobodné Hamry, antifire reservoir (88), M, 10.9.1998, J, SW, INS 8018.

Comments: Holarctic species. Recorded not only in 22 European countries, but also in Turkey, Azores, Canary I., Corsica, Madeira, Olanda I., Sardinia, Algeria, Israel, Morocco, Tunisia, Afghanistan, China, Iran, Mongolia and USA (Ježek & Yağci 2005, Ježek et al. 2018). It lives in the vicinity of extreme localities: salt works, thermal springs, calcareous waters and mineral-rich springs.

Peripsychoda auriculata (Haliday in Curtis, 1839)

Unpublished records: Between Svídnice and Trpišov (14), M, 21.5.1998, J, SW, INS 7964. Křivý (43), M, 14.6.1999, J, SW, INS 8937. Lovětínský rybník pond near Rudov (50), M, 28.7.1999, J, SW, INS 8864. Malochyně near Bílek (53), M, 11.6.1999, J, SW, INS 8877. Mokřadlo (NR) near Podmoklany (57), M, 15.6.1999, J, SW, INS 8977. Radochlín (72), M, 21.5.1998, J, SW, INS 7887. Slavický potok brook near Trpišov (79), M, 1.7.1999, C, SW, INS 8988. Sloupno, Lhotka pond (80), M, 14.6.1999, J, SW, INS 9965. Švihov env. Měretice (91), M, 25.6.2001, J, SW, INS 10724. Vršovská olšina alnetum (NR) env. Horní Bradlo (99) M, 26.6.2001, J, SW, INS 10759. Zlatá louka (NR) env. Podmoklany (103), 2 M, 30.7.1996 and 13.6.1999, J, B, SW, MT, INS 10825 and 8846.

Comments: European (23 countries) and Transcaucasian species (Abkhazia, Georgia, Armenia) – Ježek et al. (2018, 2020). Abundant, large black conspicuous species, very common, ranging from lowlands to hilly regions.

Peripsychoda fusca (Macquart, 1826)

Unpublished records: Třemošnice – Obůrka (97), 2 M, 4.5.2000, J, SW, INS 9927 and 9928.

Red List status: Critically endangered (CR).

Comments: Currently known to occur in 22 European countries – compare Ježek et al. (2020).

***Psycmera integella* (Jung, 1956)**

Unpublished records: Between Svídnice and Trpišov (14), M, 21.5.1998, J, SW, INS 7963. Zlatá louka (NR) env. Podmoklany (103), M, 13.6.1999, J, SW, INS 8839.

Red List status: Critically endangered (CR).

Comments: European – West Siberian species recorded from wet lowlands to hilly regions in Germany, Czech Republic, Slovakia, Bosnia and Herzegovina and Novosibirsk area (Russia) – e.g. Ježek et al. (2008), Oboňa & Ježek (2014).

***Seoda carthusiana* (Vaillant, 1972)**

Unpublished records: Between Spáleníště and Petrkov (13), M, 19.5.1998, J, SW, INS 7874. Between Svídnice and Trpišov (14), M, 21.5.1998, J, SW, INS 7971. Kraskov – Horní Peklo (39), M, 19.5.1998, J, SW, INS 7953. Mezný (55), M, 19.5.1998, J, SW, INS 7871. Zlatá louka (NR) env. Podmoklany (103), M, 13.6.1999, J, SW, INS 8844.

Comments: European species, known from the Czech Republic, France, Germany, Poland, Slovakia and Slovenia (Ježek & Omelková 2012, Ježek et al. 2018).

***Seoda gressica* (Vaillant, 1972)**

Unpublished records: Between Spáleníště and Petrkov (13), M, 19.5.1998, J, SW, INS 7862. Between Svídnice and Trpišov (14), M, 21.5.1998, J, SW, INS 7959. Kraskov – Horní Peklo (39), M, 19.5.1998, J, SW, INS 7956. Lichnice NNR (ruin of castle) (48), M, 22.5.2000, B, MT, INS 10055. Malochyně near Bílek (53), M, 11.6.1999, J, SW, INS 8874. Štikov near Chotěboř (90), M, 14.6.1999, J, SW, INS 8945. Třemošnice – Obůrka (97), M, 4.5.2000, J, SW, INS 9922. Zlatá louka (NR) env. Podmoklany (103), M, 13.6.1999, J, SW, INS 8855. Zubří (NR) env. Trhová Kamenice (105), M, 9.6.1996, B, MT, INS 9000.

Comments: European species, known from Austria, Czech Republic, France and Poland (Ježek & Omelková 2012, Ježek et al. 2008, 2018).

***Telmatoscopus advena* (Eaton, 1893)**

Unpublished record: Lichnice NNR, (ruin of castle) (48), M, 22.5.2000, B, MT, INS 10047.

Red List status: Critically endangered (CR).

Comments: A rare species known from France, Germany, Great Britain, Ireland, Slovakia and the Czech Republic. The larvae are associated with dendrotelmata, mainly in virgin floodplain forests (Ježek & Omelková 2012, Oboňa & Ježek 2012).

***Feuerborniella obscura* (Tonnoir, 1919)**

Unpublished record: Zlatá louka (NR) env. Podmoklany (103), F, 13.6.1999, J, SW, INS 8843.

Comments: The species is distributed in central Europe, along the Atlantic coast, in the British Isles, reaching and extending the Apennines in the south and the Balkan countries in the southeast (Ježek & Omelková 2012, Ježek et al. 2018).

***Philosepedon (Philosepedon) austriacum* Vaillant, 1974**

Unpublished records: Křižanovice (44), M, 26.6.2001, J, SW, INS 10748. Podbošovský Mlýn near Měritice (65), M, 25.6.2001, J, SW, INS 10735. Zlatá louka (NR) env. Podmoklany (103), M, 13.6.1999, J, SW, INS 8845.

Comments: Mainly European species, distributed in 7 countries and western Siberia (Ježek 1992, Ježek et al. 2018).

***Philosepedon (Philosepedon) dumosum* Omelková & Ježek, 2012**

Published record: Zlatá louka (NR) env. Podmoklany (103). See Omelková & Ježek (2012b) and Tkoč et al. (2014).

Red List status: Species not included in the Czech Red List (Ježek 2005). Nationally scarce (NS) in Omelková & Ježek (2012c).

Comments: Very rare species, known only from CZ (Bohemia – Železné hory Mts. and Moravia – Moravskoslezské Beskydy Mts.).

***Philosepedon (Philosepedon) hrudkai* Ježek, 1999**

Unpublished record: Lichnice NNR (ruin of castle) (48), M, 22.5.2000, B, MT, INS 10031.

Red List status: Vulnerable (VU), see Ježek (2005).

Comments: Very rare species, known only from CZ (Bohemia – Železné hory Mts. and Moravia – Moravskoslezské Beskydy Mts.).

***Philosepedon (Philosepedon) humerale* (Meigen, 1818)**

Unpublished record: Mokřadlo (NR) near Podmoklany (57), M, 8.9.1998, C, SW, INS 10092. Podbošovský Mlýn near Miřetice (65), M, 25.6.2001, J, SW, INS 10734. Zlatá louka (NR) env. Podmoklany (103), M, 30.7.1996, B, MT, INS 10805.

Comments: A very common and widespread European species known from approximately 11 countries, also recorded in North Africa (Ježek et al. 2018).

***Threticus lucifugus* (Walker, 1856)**

Unpublished records: Barovice, Barovka brook (1), M, 3.5.2000, J, SW, INS 10009. Hůrka env. Bojanov, Zlatník brook (29), M, 26.9.2000, J, SW, INS 9933. Kamenný potok brook env. Chotěboř (36), M, 16.8.1999, J, SW, INS 8930. Krkanka (NR) (41), M, 3.5.2000, J, SW, INS 9951. Mezný (55), M, 19.5.1998, J, SW, INS 7872. Padrt'ský Mlýn (62), M, 19.5.1998, J, SW, INS 7978. Strádovské Peklo (NR) (85), M, 7.9.1998, J, SW, INS 7885. Zabítý kopec Mt. near Smrkový Týnec (100), M, 12.8.1999, J, SW, INS 8889.

Comments: Species known from countries along the North Sea, extending into the British Isles, Central Europe and the Apennines (Ježek et al. 2008, 2018).

***Threticus silvaticus* Ježek, 1985**

Unpublished record: Javorné – brook (34), M, 20.5.1998, J, SW, INS 7939.

Red List status: Vulnerable (VU), see Ježek (2005).

Comments: Rare Central European species, known only from the Czech Republic and Slovakia (Oboňa & Ježek 2014, Ježek et al. 2021).

***Trichopsychoda hirtella* (Tonnoir, 1919)**

Unpublished records: Běstvina, source area (5), F, 20.7.1998, C, SW, INS 10028. Between Jančouř and Kocourov (10), F, 10.9.1998, J, SW, INS 7832. Between Kameničky and Trhová Kamenice (11), M, 27.6.2001, J, SW, INS 10760. Libice nad Doubravou, polluted pond (47), F, 8.9.1998, J, SW, INS 7900. Lichnice NNR (ruin of castle) (48), F, 22.5.2000, B, MT, INS 10054. Sobiňov – Na hrázi (82), M, 11.6.1999, J, SW, INS 8869. Zlatá louka (NR) env. Podmoklany (103), F, 30.7.1996, B, MT, INS 10800.

Comments: European species recorded from 12 countries, the southern border of its distribution reaching but not extending into the Apennines and the Balkans. Larvae are found in rotting plants and fruits. See in Ježek et al. (2021).

***Chodopsycha lobata* (Tonnoir, 1940)**

Unpublished records: Hůrka env. Bojanov, Zlatník brook (29), F, 26.9.2000, J, SW, INS 9934. Javorné, swamps near farm (33), M, 26.6.2001, J, SW, INS 10770. Křižanovice (44), F, 26.6.2001, J, SW, INS 10744. Lichnice NNR (ruin of castle) (48), M, 22.5.2000, B, MT, INS 10046. Strádovka (NR) env. Rohozná (84), 2 F, 27.7. and 8.8.1998, B, MT, INS 10066 and 10812. Trhová Kamenice, Dlouhý rybník pond (94), F, 10.9.1998, J, SW, INS 8023. Zlatá louka (NR) env. Podmoklany (103), F, 30.7.1996, B, MT, INS 10816. Zubří (NR) env. Trhová Kamenice (105), F, 5.8.1996, B, MT, INS 10810.

Comments: Common European species (21 countries), in Transcaucasia present in Georgia and Abkhazia (e.g., Wagner 1990, 2019, Ježek et al. 2020, 2021).

***Copropsychoda brevicornis* (Tonnoir, 1940)**

Unpublished record: Lichnice NNR (ruin of castle) (48), M, 22.5.2000, B, MT, INS 10050.

Comments: European – West Siberian species known from 13 countries, Novosibirsk region (Russia) and Turkey (Ježek & Yağci 2005, Ježek et al. 2020).

***Logima albipennis* (Zetterstedt, 1850)**

Unpublished records: Havlovice, Hoříčka pond (23), F, 25.6.2001, J, SW, INS 10767. Hubský rybník pond env. Rohozná (28), F, 13.5.2000, B, MT, INS 10067. Chotěboř – eastern border (31), F, 7.8.1999, J, SW, INS 8911. Kaňkovy hory hills (NNM) env. Třemošnice (37), F, 2001, B, MT, INS 10791. Krupín, Bratroňovský potok brook (42), F, 25.6.2001, J, SW, INS 10772. Křižanovice (44), F, 26.6.2001, J, SW, INS 10745. Lichnice NNR (ruin of castle) (48), F, 22.5.2000, B, MT, INS 10049. Píla u Libáně, Pařezný rybník pond (64), F, 21.5.1998, J, SW, INS 7924. Podbošovský Mlýn near Miřetice (65), F, 25.6.2001, J, SW, INS 10736. Polom (NR) env. Horní Bradlo (68), F, 29.7.1997, B, MT, INS 10815. Radochlín (72), F, 21.5.1998, J, SW, INS 7888. Sloupno, Lhotka pond (80), F, 14.6.1999, J, SW, INS 9966. Strádovka (NR) env. Rohozná (84), F, 18.6.1998, B, MT, INS 10813. Zlatá louka (NR) env. Podmoklany (103), 2 F, 30.7.1996 and 13.6.1999, J, B, SW, MT, INS 8850 and 10818. Zubří (NR) env. Trhová Kamenice (105), F, 5.8.1996, B, MT, INS 10808.

Comments: A cosmopolitan species, for some details see e.g. in Ježek & Yağci (2005) or Ježek et al. (2018, 2020).

***Logima erminea* (Eaton, 1893)**

Unpublished records: Mokřadlo (NR) near Podmoklany (57), F, 8.9.1998, C, SW, INS 10093. Zlatá louka (NR) env. Podmoklany (103), M, 30.7.1996, B, MT, INS 10802.

Comments: Palearctic species. In Europe, recorded in 11 countries, collected at different altitudes, also known from caves. Biology, unfortunately, little known. See e.g. Kvifte et al. (2011) and Ježek et al. (2018).

***Logima satchelli* (Quate, 1955)**

Unpublished records: Běštšina, source area (5), M, 21.7.1996, C, SW, INS 8006. Between Kameničky and Trhová Kamenice (11), F, 27.6.2001, J, SW, INS 10777. Bezlejov env. Chotěboř (16), M, 20.5.1999, C, SW, INS 10071. Buchtovka (NR) env. Trhová Kamenice (18), 2 F, 15.7. and 27.7.1998, B, MT, INS 10038 and 10728. Havlovice, Hoříčka pond (23), M, 25.6.2001, J, SW, INS 10768. Hubský rybník pond env. Rohozná (28), F, 13.5.2000, B, MT, INS 10068. Javorné – swamps near farm (33), F, 26.6.2001, J, SW, INS 10749. Kaňkovy hory hills (NNM) env. Třemošnice (37), M, 2001, B, MT, INS 10790. Kraskov – Horní Peklo (39), M, 19.5.1998, J, SW, INS 7947. Krupín, Bratroňovský potok brook (42), M, 25.6.2001, J, SW, INS 10771. Křižanovice (44), M, 26.6.2001, J, SW, INS 10746. Lhotka (45), F, 30.6.1999, C, SW, INS 8959. Lichnice NNR (ruin of castle) (48), M, 22.5.2000, B, MT, INS 10052. Mokřadlo (NR) near Podmoklany (57), M, 15.6.1999, J, SW, INS 8979. Podbošovský Mlýn near Měritice (65), F, 25.6.2001, J, SW, INS 10737. Prachovice, Habřinka pond (71), F, 28.7.1999, J, SW, INS 8905. Zlatá louka (NR) env. Podmoklany (103), M, 30.7.1996, B, MT, INS 10819. Zubří (NR) env. Trhová Kamenice (105), M, 5.8.1996, B, MT, INS 10807.

Comments: Holarctic species. Also known from Transcaucasia (Georgia incl. Abkhazia, Armenia, Azerbaijan) – see Ježek et al. (2023).

***Logima sigma* (Kincaid, 1899)**

Published record: Lichnice NNR (ruin of castle) (48), see Ježek (2003).

Red List status: Species not included in the Czech Red List (Ježek 2005). Newly, based on the experience of the authors, NS (nationally scarce).

Comments: Cosmopolitan species (Fig. 1), known from 9 European countries. The well-known European *Psychoda surcoufi* Tonnoir, 1922 was synonymized by Del Rosario (1936) with American *Psychoda sigma* Kincaid, 1899 – compare Ježek et al. (2018).

***Logima zetterstedti* Ježek, 1983**

Unpublished records: Between Bílek and Chotěboř (7), F, 11.6.1999, J, SW, INS 8859. Havlovice, Hoříčka pond (23), F, 25.6.2001, J, SW, INS 10766. Krupín, Bratroňovský potok brook (42), F, 25.6.2001, J, SW, INS 10773. Křižanovice (44), F, 26.6.2001, J, SW, INS 10747. Švihov env. Měritice (91), F, 25.6.2001, J, SW, INS 10727. Třemošnice, Lovětínský potok brook (98), M, 19.5.1999, C, SW, INS 10082.

Comments: European and West Siberian species (Novosibirsk region), known from 20 European countries, islands of the Atlantic and Pacific Oceans, East China Sea and the Philippine Sea. Larvae are saprobiont, adults are sometimes entrapped in sheaths of *Arum maculatum* L. and are responsible for pollination – Ježek et al. (2021).

***Psycha grisescens* (Tonnoir, 1922)**

Unpublished records: Kaňkovy hory hills (NNM) env. Třemošnice (37), M, 2001, B, MT, INS 10789. Lichnice NNR (ruin of castle) (48), M, 22.5.2000, B, MT, INS 10034.

Comments: European and North African species, known from almost 21 European countries, Algeria, Tunisia, and Morocco. For some details see e.g. Ježek et al. (2018).

***Psychoda crassipennis* Tonnoir, 1940**

Published record: Lichnice NNR (ruin of castle) (48), see Ježek (2003).

Comments: A European species – Scandinavia, British Isles, Central and Western European countries. Some females were recorded as pollinators in *Arum cylindraceum* sheaths. See Ježek & Omelková (2012) and Ježek et al. (2018).

***Psychoda phalaenoides* (Linné, 1758)**

Unpublished records: Běstvína, source area (5), M, 20.7.1998, C, SW, INS 10027. Between Kameničky and Trhová Kamenice (11), F, 27.6.2001, J, SW, INS 10764. Buchtovka (NR) env. Trhová Kamenice (18), F, 27.7.1998, B, MT, INS 10729. Debrný potok brook near Nasavrky (20), M, 21.7.1998, C, SW, INS 8999. Hůrka env. Bojanov, Zlatník brook (29), F, 26.9.2000, J, SW, INS 9929. Javorné – swamps near farm (33), F, 26.6.2001, J, SW, INS 10769. Jetonice (35), F, 28.7.1999, J, SW, INS 8954. Kaňkovy hory hills (NNM) env. Třemošnice (37), F, 2001, B, MT, INS 10788. Lhotka (45), M, 30.6.1999, C, SW, INS 8962. Libice nad Doubravou, Doubrava river (46), M, 26.9.2000, J, SW, INS 10086. Lichnice NNR (ruin of castle) (48), M, 22.5.2000, B, MT, INS 10045. Malochyně near Bílek (53), F, 11.6.1999, J, SW, INS 8879. Mokřadlo (NR) near Podmoklany (57), M, 8.9.1998, C, SW, INS 10090. Podbošovský Mlýn near Měřetice (65), M, 25.6.2001, J, SW, INS 10738. Prachovice, Habřinka pond (71), F, 28.7.1999, J, SW, INS 8901. Slavický potok brook near Trpišov (79), F, 1.7.1999, C, SW, INS 8989. Strádovka (NR) env. Rohozná (84), 2 F, 27.7. and 8.8.1998, B, MT, INS 10065 and 10814. Zlatá louka (NR) env. Podmoklany (103), M, F, 30.7.1996 and 13.6.1999, J, B, SW, MT, INS 8852 and 10821. Zubří (NR) env. Trhová Kamenice (105), M, 9.6.1996, B, MT, INS 9003.

Comments: Holarctic species – collected in 30 European countries, as well as in Transcaucasia, some islands of the Atlantic Ocean and Mediterranean, North Africa, Taiwan, Japan, New Zealand, Alaska and Canada (Wagner 1990, 2019, Ježek et al. 2021).

***Psychoda uniformata* Haseman, 1907**

Unpublished record: Slavická obora, rybník Brožek pond (77), F, 7.9.1998, J, SW, INS 7880.

Comments: Holarctic species, described from the USA, recorded in 7 European countries, extending into Turkey, Transcaucasia, North Africa, Israel, Mongolia and Iran. For details see Ježek & Braverman (2006), Ježek et al. (2008, 2021). Saprophagous larvae inhabit stables, cowsheds and kennels.

***Psychodocha gemina* (Eaton, 1904)**

Unpublished records: Běstvína, source area (5), F, 20.7.1998, C, SW, INS 10029. Buchtovka (NR) env. Trhová Kamenice (18), F, 15.7.1998, B, MT, INS 10037. Havlovice, Hoříčka pond (23), F, 25.6.2001, J, SW, INS 10786. Hradiště (27), F, 30.6.1997, B, MT, INS 10797. Hubský rybník pond

env. Rohozná (28), 2 F, 13. and 21.5.2000, B, MT, INS 10041 and 10043. Hůrka env. Bojanov, Zlatník brook (29), F, 26.9.2000, J, SW, INS 9932. Kamenný potok brook env. Chotěboř (36), M, 16.8.1999, J, SW, INS 8926. Krkanka (NR) (41), F, 3.5.2000, J, SW, INS 9931. Lichnice NNR (ruin of castle) (48), M, 22.5.2000, B, MT, INS 10048. Lovětínská rokle chasm (49), F, 8.7.1995, Mo, SW, INS 8009. Malochyně near Bílek (53), M, 11.6.1999, J, SW, INS 8872. Mokřadlo (NR) near Podmoklany (57), F, 15.6.1999, J, SW, INS 8974. Nasavrky – V koutech (NM) (58), F, 8.9.1998, J, SW, INS 7839. Slavický potok brook near Trpišov (79), F, 1.7.1999, C, SW, INS 8993. Sloupno, Lhotka pond (80), M, 14.6.1999, J, SW, INS 9963. Točitý Vír env. Chotěboř (92), F, 7.8.1999, J, SW, INS 8967. Zlatá louka (NR) env. Podmoklany (103), F, 30.7.1996, B, MT, INS 10817.

Comments: European species, known from 22 countries, extending into Transcaucasia. Larvae saprophagous, their development is also adapted to nests of water birds – Wagner (1990, 2019), Ježek et al. (2021).

***Psychodocha itoco* (Tokunaga & Komyo, 1955)**

Published records: Lichnice NNR (ruin of castle) (48) and Práčov – pond (70), see Ježek (2003).

Comments: Occurrence in Japan, Ryukyu Is. and Czech Republic (Bohemia, Moravia, Silesia) – Ježek et al. (2018) and Kroča & Ježek (2015, 2019, 2022).

***Psychodula minuta* (Banks, 1894)**

Unpublished records: Buchtovka (NR) env. Trhová Kamenice (18), F, 15.7.1998, B, MT, INS 10039. Hradiště (27), F, 30.6.1997, B, MT, INS 10798. Hubský rybník pond env. Rohozná (28), F, 21.5.2000, B, MT, INS 10040. Lichnice NNR (ruin of castle) (48), M, 22.5.2000, B, MT, INS 10053. Travná (93), F, 20.5.1998, J, SW, INS 7930. Zlatá louka (NR) env. Podmoklany (103), F, 30.7.1996, B, MT, INS 10801.

Comments: Holarctic species, known from many countries (for details see Ježek et al. 2020), inhabits lowlands, hilly regions and mountains, and even bat caves are suitable for development of saprobiont larvae (feces) – Ježek et al. (2008).

***Psychomora mycophila* (Vaillant, 1988)**

Published record: (as *vanharai* Ježek, 1995). Křižanovice (44), see Ježek (2003).

Comments: European species, known only from the Czech Republic, France, Slovakia, Slovenia, Switzerland and Ukraine – Ježek et al. (2017, 2018, 2021). Larvae are mycobionts.

***Psychomora trinodulosa* (Tonnoir, 1922)**

Unpublished records: Hradiště (27), M, 30.6.1997, B, MT, INS 10796. Hubský rybník pond env. Rohozná (28), M, 21.5.2000, B, MT, INS 10018. Libice nad Doubravou, Doubrava river (46), F, 26.9.2000, J, SW, INS 10085. Zlatá louka (NR) env. Podmoklany (103), F, 13.6.1999, J, SW, INS 8840. Zubří (NR) env. Trhová Kamenice (105), M, 5.8.1996, B, MT, INS 10809.

Comments: Holarctic species, recorded in 27 European countries, extending into Anatolia, Transcaucasia, distributed in North Africa, inhabiting Mediterranean islands, and with many records from the USA. For details see e.g. Ježek & Yağci (2005) and Ježek et al. (2021).

***Tinearia alternata* (Say, 1824)**

Unpublished records: Chotěboř – castle park (30), F, 16.8.1999, J, SW, INS 8882. Chotěboř – eastern border (31), M, 7.8.1999, J, SW, INS 8910. Kamenný potok brook env. Chotěboř (36), F, 16.8.1999, J, SW, INS 8929. Libice nad Doubravou, polluted pond (47), F, 8.9.1998, J, SW, INS 7898. Slavická obora, rybník Brožek pond (77), F, 7.9.1998, J, SW, INS 7879. Sobětuchy env. Chrudim (81), F, 12.8.1999, J, SW, INS 8900. Sobiňov – Na hrázi (82), F, 11.6.1999, J, SW, INS 8868. Zlatý potok brook near Kraskov (104), M, 9.9.1998, C, SW, INS 9005. Žďárec u Seče (106), M, 19.5.1998, J, SW, INS 7921.

Comments: Cosmopolitan species, for full distribution and environmental notes see e.g. Ježek & Yağci (2005) and Ježek et al. (2018, 2020).

***Tinearia lativentris* (Berdén, 1952)**

Unpublished record: Zlatá louka (NR) env. Podmoklany (103), F, 30.7.1996, B, MT, INS 10820.

Comments: Holarctic species, known from 20 European countries, extending into Turkey, Afghanistan and China, with few localities in Western Asia (Israel, Syria), North Africa and islands in the Mediterranean Sea and many localities in Canada, USA, Mexico and Nicaragua. For details see e.g. Ježek & Yağci (2005) and Ježek et al. (2021).

***Ypsydocha setigera* (Tonnoir, 1922)**

Unpublished record: Lichnice NNR (ruin of castle) (48), M, 22.5.2000, B, MT, INS 10033.

Comments: Holarctic species, recorded in 13 European countries, extending into Transcaucasia, Canada, USA and Japan. For some details see e.g. (Ježek 2003), Ježek et al. (2021) and Oboňa et al. (2019a,b).

***Berdeniella manicata* (Tonnoir, 1920)**

Unpublished records: Barovice, Barovka brook (1), M, 3.5.2000, J, SW, INS 10010. Between Svídnice and Trpišov (14), M, 21.5.1998, J, SW, INS 7960. Debrný potok brook near Nasavrky (20), M, 3.5.2000, J, SW, INS 9990. Horní Bradlo, Chrudimka river (24), M, 3.5.2000, C, SW, INS 10753. Horní Mlýn (25), M, 7.8.1999, J, SW, INS 8986. Kamenný potok brook env. Chotěboř (36), M, 16.8.1999, J, SW, INS 8925. Libice nad Doubravou, Doubrava river (46) M, 3.5.2000, C, SW, INS 10792. Padrt'ský Mlýn (62), M, 19.5.1998, J, SW, INS 7974. Sobětuchy env. Chrudim (81), M, 12.8.1999, J, SW, INS 8897. Točítý Vír env. Chotěboř (92), M, 7.8.1999, J, SW, INS 8968. Třešňovice, Lovětínský potok (brook) (98), M, 19.5.1999, C, SW, INS 10084. Žďárec u Seče (106), M, 19.5.1998, J, SW, INS 7919.

Comments: Currently known from 17 European countries and extending into Transcaucasia – Ježek et al. (2020) and Oboňa et al. (2019a,b).

***Berdeniella matthesi* (Jung, 1954)**

Published record: Barovice, Barovka brook (1), see Ježek (2003).

Comments: European species, known from 6 countries, inhabiting extreme wet biotopes with iron flocculation – Ježek et al. (2018, 2021).

***Berdeniella stavniensis* (Krek, 1969)**

Published records: Barovice, Barovka brook (1); Barovice, tributary of Dlouhý potok brook (2); Debrný potok brook near Nasavrky (20); Lichnice NNR (ruin of castle) (48); Mezný (55); Sv. Jan env. Třemošnice (86). Compare Ježek (2003).

Comments: European species, known from 8 countries – see Ježek et al. (2017).

***Berdeniella unispinosa* (Tonnoir, 1919)**

Unpublished records: Běstvína, source area (5), M, 21.7.1996, C, SW, INS 8007. Vršovská olšina alnetum (NR) env. Horní Bradlo (99), M, 26.6.2001, J, SW, INS 10758. Žďárec u Seče (106), M, 19.5.1998, J, SW, INS 7922.

Comments: European species, known from 19 countries. The distribution covers the central European zone from France to Poland and Slovakia. In the south the species penetrates into Apennines and the Balkans. For detailed information see Ježek et al. (2018, 2020).

***Berdeniella vimmeri* Ježek, 1995**

Unpublished records: Barovice, Barovka brook (1), M, 3.5.2000, J, SW, INS 10011. Běstvína, Javorka brook (4), M, 4.5.2000, C+J, SW, INS 10056.

Red List status: Species not included in the Czech Red List (Ježek 2005). Newly, based on the experience of the authors, NS (nationally scarce).

Comments: European species, currently known to occur in the Czech Republic (Bohemia, Moravia, Silesia), Slovakia, Ukraine, and Bulgaria (Ježek et al. 2020, Kroča & Ježek 2022).

***Clytocerus (Boreoclytocerus) dalii* (Eaton, 1893)**

Unpublished record: Krásné (40), M, 4.5.2000, J, SW, INS 9981.

Comments: European species, rather rare, recorded from 10 countries, bionomy is not known – e.g. Ježek (2003) and Ježek et al. (2018, 2021).

***Clytocerus (Boreoclytocerus) ocellaris* (Meigen, 1804)**

Unpublished records: Barovice, tributary of Dlouhý potok brook (2), M, 3.5.2000, J, SW, INS 9953. Between Jančouř and Kocourov (10), M, 10.9.1998, J, SW, INS 7833. Between Spáleníště and Petrkov (13), M, 19.5.1998, J, SW, INS 7876. Between Svídnice and Trpišov (14), M, 21.5.1998, J, SW, INS 7957. Bezděkov – Lhotka pond (15), M, 8.9.1998, J, SW, INS 7848. Bezlejov env. Chotěboř (16), M, 20.5.1999, C, SW, INS 10075. Buchtovka (NR) env. Trhová Kamenice (18), 2 M, 20.5. and 27.7.1998, B, MT, INS 10020 and 10733. Čertův Hrádek (19), M, 12.8.1999, J, SW, INS 8830. Debrný potok brook near Nasavrky (20), 2 M, 21.7.1998 and 3.5.2000, C, J, SW, INS 8998 and 9988. Filipov near Kameničky (21), M, 4.5.2000, J, SW, INS 9945. Chotěboř – eastern border (31), M, 7.8.1999, J, SW, INS 8914. Chotěboř – *Lemna* pools along road (32), M, 11.6.1999, J, SW, INS 8965. Javorné – brook (34), M, 20.5.1998, J, SW, INS 7940. Jetonice (35), M, 28.7.1999, J, SW, INS 8953. Kamenný potok brook env. Chotěboř (36), M, 16.8.1999, J, SW, INS 8932. Kraskov, Zlatý potok brook (38), M, 4.5.2000, J, SW, INS 9936. Kraskov – Horní Peklo (39), M, 19.5.1998, J, SW, INS 7955. Krásné (40), M, 4.5.2000, J, SW, INS 9982. Libice nad Doubravou, polluted pond (47), M, 8.9.1998, J, SW, INS 7905. Lovětínský rybník pond near Rudov (50), M, 28.7.1999, J, SW, INS 8862. Trhová Kamenice, Malejov (52), M, 9.9.1998, J, SW, INS 7855. Mezný (55), M, 19.5.1998, J, SW, INS 7882. Míčov

(56), M, 28.7.1999, J, SW, INS 8957. Mokřadlo (NR) near Podmoklany (57), M, 15.6.1999, J, SW, INS 8978. Nasavrky –V koutech (NM) (58), M, 8.9.1998, J, SW, INS 7838. Nový Mlýn (61), M, 8.9.1998, J, SW, INS 8003. Pila u Libáně, Pařezný rybník pond (64), M, 21.5.1998, J, SW, INS 7923. Práčov – pond (70), M, 7.9.1998, J, SW, INS 8016. Prachovice, Habřinka pond (71), M, 28.7.1999, J, SW, INS 8908. Radochlín (72), M, 21.5.1998, J, SW, INS 7891. Rohozná – Rohozenský rybník pond (73), M, 18.5.1998, J, SW, INS 7985. Rochňovec, Stavenov pond (74), M, 16.8.1999, J, SW, INS 8921. Slavice (75), M, 7.9.1998, C+J, SW, INS 7860. Slavická obora, Boušovka pond (76), M, 7.9.1998, J, SW, INS 7830. Slavický potok brook near Trpišov (79), M, 1.7.1999, C, SW, INS 8992. Sobiňov – Na hrázi (82), M, 11.6.1999, J, SW, INS 8866. Sv. Jan (NR) env. Třemošnice (86), M, 4.5.2000, C+J, SW, INS 9978. Travná (93), M, 20.5.1998, J, SW, INS 7931. Trhová Kamenice, Dlouhý rybník pond (94), M, 10.9.1998, J, SW, INS 8025. Trhová Kamenice, old mill pond (95), 2 M, 20.5. and 10.9.1998, J, SW, INS 7944 and 8026. Třemošnice, Lověťinský potok brook (98), M, 19.5.1999, C, SW, INS 10097. Zabitý kopec Mt. near Smrkový Týnec (100), M, 12.8.1999, J, SW, INS 8892. Zbyslavce near Třemošnice (102), M, 28.7.1999, J, SW, INS 8916. Zlatá louka (NR) env. Podmoklany (103), 2 M, 30.7.1996 and 13.6.1999, J, B, SW, MT, INS 8838 and 10804. Zubří (NR) env. Trhová Kamenice (105), 2 M, 9.6. and 5.8.1996, B, MT, INS 9002 and 10811. Žďárec u Seče (106), M, 19.5.1998, J, SW, INS 7916.

Comments: A very common European species, inhabiting the banks of streams and water reservoirs, spring areas and wet meadows, known from 24 countries and islands of the Mediterranean Sea (Sardinia, Sicily), extending through Central and Western Europe to the British Isles, reaching into Finland, in the south by the Apennines and the Balkans, in the east by Lithuania. See e.g. Wagner (2019) and Ježek et al. (2008, 2018, 2020).

Clytocerus (Boreoclytocerus) rivosus (Tonnoir, 1919)

Unpublished records: Buchtovka (NR) env. Trhová Kamenice (18), 2 M, 20.5. and 27.7.1998, B, MT, INS 10019 and 10732. Zlatá louka (NR) env. Podmoklany (103), M, 30.7.1996, B, MT, INS 10803.

Red List status: Critically endangered (CR).

Comments: European species with limited distribution (8 countries) – see Ježek (2003), Ježek et al. (2014, 2018).

Clytocerus (Boreoclytocerus) splendidus Ježek & Hájek, 2007

Published records: Barovice, Barovka brook (1); Between Běstvína and Pařížov (6); Práčov – pond (70); Strádovka (NR) env. Rohozná (84); Zubří (NR) env. Trhová Kamenice (105). See Ježek & Hájek (2007) and Tkoč et al. (2014).

Red List status: Species not included in the Czech Red List (Ježek 2005). Nationally scarce (NS) in Kroča & Ježek (2019).

Comments: European species known from Belgium, Czech Republic, Slovakia and Poland – see Ježek & Omelková (2012) and Ježek et al. (2018).

Clytocerus (Boreoclytocerus) tetracorniculatus Wagner, 1977

Published records: Buchtovka (NR) env. Trhová Kamenice (18); Zlatá louka (NR) env. Podmoklany (103); Zubří (NR) env. Trhová Kamenice (105). See Ježek (2003).

Red List status: Critically endangered (CR), see Ježek (2005).

Comments: Very rare species, known only from Germany, Czech Republic, Slovakia and Finland (Wagner 1990, 2018, Ježek & Omelková 2012, Ježek et al. 2021).

***Parabazarella subneglecta* (Tonnoir, 1922)**

Unpublished records: Běstvina, Javorka brook (4), M, 4.5.2000, C+J, SW, INS 10060. Bezděkov, Lhotka pond (15), M, 8.9.1998, J, SW, INS 7847. Bezlejov, tributary of Doubrava river (17), M, 16.8.1999, J, SW, INS 9994. Debrný potok brook near Nasavrky (20), M, 3.5.2000, J, SW, INS 9970. Horní Bradlo, Chrudimka river (24), M, 3.5.2000, C, SW, INS 10756. Mokřadlo (NR) near Podmoklany (57), M, 8.9.1998, C, SW, INS 10089. Nový Mlýn (61), M, 8.9.1998, J, SW, INS 8002. Travná (93), M, 20.5.1998, J, SW, INS 7929. Trhová Kamenice, Dlouhý rybník pond (94), M, 10.9.1998, J, SW, INS 8024.

Comments: A species of Eurasian distribution, not common, recorded from the Central European zone from Belgium to Poland, eastward to Lithuania; the southern border is reaching but not extending into the Balkans and Anatolia. A detailed distribution is given by Ježek et al. (2020, 2021).

***Pericoma (Pericoma) pseudoexquisita* Tonnoir, 1940**

Unpublished records: Horní Bradlo, Chrudimka river (24), M, 3.5.2000, C, SW, INS 10754. Libice nad Doubravou, Doubrava river (46), 2 M, 3.5.2000, C, J, SW, INS 10079 and 10779.

Comments: A species recorded from western, central and southern Europe, extending into Transcaucasia (Georgia incl. Abkhazia) – see Ježek et al. (2023b).

***Pericoma (Pachypericoma) blandula* Eaton, 1893**

Unpublished records: Běstvina – Hluboš (3), M, 9.9.1998, J, SW, INS 7990. Between Bílek and Chotěboř (7), M, 11.6.1999, J, SW, INS 8857. Between Hodonín and Nasavrky (8), M, 8.9.1998, J, SW, INS 7906. Between Seč and Vápenný Podol (12), M, 9.9.1998, J, SW, INS 7829. Between Svídnice and Trpišov (14), M, 21.5.1998, J, SW, INS 7958. Bezděkov, Lhotka pond (15), M, 8.9.1998, J, SW, INS 7846. Bezlejov env. Chotěboř (16), M, 20.5.1999, C, SW, INS 10070. Debrný potok brook near Nasavrky (20), 2 M, 21.7.1998 and 3.5.2000, C, J, SW, INS 8995 and 9969. Hařilova Lhotka env. Sloupno (22), M, 14.6.1999, J, SW, INS 9998. Horní Bradlo, Chrudimka river (24), M, 3.5.2000, C, SW, INS 10752. Chotěboř – castle park (30), M, 16.8.1999, J, SW, INS 8884. Kraskov, Zlatý potok brook (38), M, 4.5.2000, J, SW, INS 9919. Kraskov – Horní Peklo (39), M, 19.5.1998, J, SW, INS 7954. Krkanka (NR) (41), M, 3.5.2000, J, SW, INS 9930. Libice nad Doubravou, Doubrava river (46), 2 M, 3.5.2000, C, J, SW, INS 10077 and 10778. Mezný (55), M, 19.5.1998, J, SW, INS 7867. Míčov (56), M, 28.7.1999, J, SW, INS 8955. Mokřadlo (NR) near Podmoklany (57), M, 8.9.1998, C, SW, INS 10094. Nový Mlýn (61), M, 8.9.1998, J, SW, INS 7998. Padrťský Mlýn (62), M, 19.5.1998, J, SW, INS 7973. Podmoklany – Nový Mlýn (66), M, 3.5.2000, J, SW, INS 10001. Sv. Jan (NR) env. Slavický potok brook near Trpišov (79), M, 1.7.1999, C, SW, INS 8994. Sobětuchy env. Chrudim (81), M, 12.8.1999, J, SW, INS 8899. Třemošnice (86), M, 4.5.2000, C+J, SW, INS 9954. Točítý Vír env. Chotěboř (92), M, 7.8.1999, J, SW, INS 8972. Třemošnice, Lovětínský potok brook (98), M, 19.5.1999, C, SW, INS 10083. Zabítý kopec Mt. near Smrkový Týnec (100), M, 12.8.1999, J, SW, INS 8894. Žďárec u Seče (106), M, 19.5.1998, J, SW, INS 7920.

Comments: Known from Western and Central Europe, North Africa and Transcaucasia (Georgia incl. Abkhazia, Armenia, and Azerbaijan) – see Ježek et al. (2018, 2023b).

***Pericoma (Pachypericoma) fallax* Eaton, 1893**

Unpublished records: Between Bílek and Chotěboř (7), M, 11.6.1999, J, SW, INS 8856. Between Hodonín and Nasavrky (8), M, 8.9.1998, J, SW, INS 7907. Between Svídnice and Trpišov (14), M, 21.5.1998, J, SW, INS 7969. Bezlejev, tributary of Doubrava river (16, 17), 2 M, 20.5. and 16.8.1999, C, J, SW, INS 10015 and 10072. Buchtovka (NR) env. Trhová Kamenice (18), M, 20.5.1998, B, MT, INS 10022. Čertův Hrádek (19), M, 12.8.1999, J, SW, INS 8829. Havlovice, Hoříčka pond (23), M, 25.6.2001, J, SW, INS 10785. Horní Bradlo, Chrudimka river (24), M, 3.5.2000, C, SW, INS 10755. Horní Mlýn (25), M, 7.8.1999, J, SW, INS 8980. Chotěboř – castle park (30), M, 16.8.1999, J, SW, INS 8886. Kraskov – Horní Peklo (39), M, 19.5.1998, J, SW, INS 7951. Krkanka (NR) (41), M, 3.5.2000, J, SW, INS 9952. Křivý (43), M, 14.6.1999, J, SW, INS 8939. Libice nad Doubravou, Doubrava river (46), 2 M, 3.5.2000, C, J, SW, INS 10078 and 10793. Mezný (55), M, 19.5.1998, J, SW, INS 7864. Mokřadlo (NR) near Podmoklany (57), M, 8.9.1998, C, SW, INS 10088. Nová Ves near Nasavrky (60), M, 18.5.1998, J, SW, INS 7979. Nový Mlýn (61), M, 8.9.1998, J, SW, INS 7997. Perný rybník pond near Kochánovice (63), M, 1.7.1999, C, SW, INS 10030. Pila u Libáně, Pařezný rybník pond (64), M, 21.5.1998, J, SW, INS 7925. Podmoklany – Nový Mlýn (66), M, 3.5.2000, J, SW, INS 9999. Prachovice, Habřinka pond (71), M, 28.7.1999, J, SW, INS 8906. Sloupno, Lhotka pond (80), M, 14.6.1999, J, SW, INS 9962. Sobětuchy env. Chrudim (81), M, 12.8.1999, J, SW, INS 8898. Sobiňov – Na hrázi (82), M, 11.6.1999, J, SW, INS 8867. Svídnice (87), M, 21.7.1996, C, SW, INS 8010. Točitý Vír env. Chotěboř (92), M, 7.8.1999, J, SW, INS 8970. Travná (93), M, 20.5.1998, J, SW, INS 7928. Trhová Kamenice, Dlouhý rybník pond (94), M, 10.9.1998, J, SW, INS 8020. Trhová Kamenice, old mill pond (95), M, 20.5.1998, J, SW, INS 8028. Třemošnice, Hedvičino údolí valley (96), M, 9.9.1998, J, SW, INS 7884. Zabitý kopec Mt. near Smrkový Týnec (100), M, 12.8.1999, J, SW, INS 8890. Zlatá louka (NR) env. Podmoklany (103), M, 30.7.1996, B, MT, INS 10822. Žďárec u Seče (106), M, 19.5.1998, J, SW, INS 7918.

Comments: European and West Siberian species, also known from Transcaucasia (Georgia incl. Abkhazia, Azerbaijan) – Oboňa et al. (2019a,b) and Ježek et al. (2021, 2023b).

***Pneumia canescens* (Meigen, 1804)**

Unpublished records: Běstvína, Javorka brook (4), M, 4.5.2000, C+J, SW, INS 10061. Between Horní Počátky and Běstvína (9), M, 8.9.1998, J, SW, INS 7894. Kaňkovy hory hills (NNM) env. Třemošnice (37), M, 2001, B, MT, INS 10787. Libice nad Doubravou, polluted pond (47), M, 8.9.1998, J, SW, INS 7904. Malejov (52), M, 9.9.1998, J, SW, INS 7853. Sv. Jan (NR) env. Třemošnice (86), M, 4.5.2000, C+J, SW, INS 9977. Třemošnice – Obůrka (97), M, 4.5.2000, J, SW, INS 9921.

Comments: A species widely distributed in Europe, western Siberia and extending into Turkey, Armenia, Kyrgyzstan, Afghanistan and China. It occurs from lowlands to mountains, usually associated with mosses in stream habitats; its larvae are rheobiontic. For further details see e.g. Wagner (1990, 1919) and Ježek et al. (2020).

***Pneumia gracilis gracilis* (Eaton, 1893)**

Unpublished record: Čertův Hrádek (19), M, 12.8.1999, J, SW, INS 8828.

Comments: European subspecies known from 16 countries (Wagner 1990, 2019), extending into the Greater Caucasus (Ježek et al. 2018, 2020, 2023b).

***Pneumia mutua* (Eaton, 1893)**

Unpublished records: Barovice, tributary of Dlouhý potok brook (2), M, 3.5.2000, J, SW, INS 9955. Between Bílek and Chotěboř (7), M, 11.6.1999, J, SW, INS 8861. Between Kameničky and Trhová Kamenice (11), M, 27.6.2001, J, SW, INS 10762. Javorné – brook (34), M, 20.5.1998, J, SW, INS 7934. Krásné (40), M, 4.5.2000, J, SW, INS 9985. Lhotka (45), M, 30.6.1999, C, SW, INS 8960. Polom (NR) env. Horní Bradlo (68), M, 20.7.1996, C, SW, INS 7992.

Comments: A species distributed throughout Europe (18 countries), the northwestern border of the distribution running along the North Sea incl. the British Isles, extending into Scandinavia (Finland), eastward the occurrence is reaching by Poland and Lithuania, southern margin of distribution are Apennines and Balkans. For some details see e.g. Wagner (1990, 2019) and Ježek et al. (2018, 2021).

***Pneumia nubila* (Meigen, 1818)**

Unpublished records: Běstvína – Hluboš (3), M, 9.9.1998, J, SW, INS 7988. Běstvína, Javorka brook (4), M, 4.5.2000, C+J, SW, INS 10064. Between Běstvína and Pařížov (6), M, 9.9.1998, J, SW, INS 8011. Between Svídnice and Trpišov (14), M, 21.5.1998, J, SW, INS 7968. Bezděkov, Lhotka pond (15), M, 8.9.1998, J, SW, INS 7844. Bezlejev, tributary of Doubrava river (17), M, 16.8.1999, J, SW, INS 9992. Čertův Hrádek (19), M, 12.8.1999, J, SW, INS 8833. Debrný potok brook near Nasavrky (20), M, 3.5.2000, J, SW, INS 9967. Havlovice, Hoříčka pond (23), M, 25.6.2001, J, SW, INS 10783. Horní Mlýn (25), M, 7.8.1999, J, SW, INS 8983. Kraskov, Zlatý potok brook (38), M, 4.5.2000, J, SW, INS 9939. Kraskov – Horní Peklo (39), M, 19.5.1998, J, SW, INS 7946. Libice nad Doubravou, Doubrava river (46), M, 3.5.2000, C, SW, INS 10795. Libice nad Doubravou, polluted pond (47), M, 8.9.1998, J, SW, INS 7899. Malejov (52), M, 9.9.1998, J, SW, INS 7852. Mezný (55), M, 19.5.1998, J, SW, INS 7865. Mokřadlo (NR) near Podmoklany (57), M, 8.9.1998, C, SW, INS 10091. Nasavrky – V koutech (NM) (58), M, 8.9.1998, J, SW, INS 7840. Nová Ves near Nasavrky (60), M, 18.5.1998, J, SW, INS 7982. Nový Mlýn (61), M, 8.9.1998, J, SW, INS 8000. Perný rybník pond near Kochánovice (63), M, 12.8.1999, J, SW, INS 8943. Pila u Libáně, Pařezný rybník pond (64), M, 21.5.1998, J, SW, INS 7927. Podmoklany – Nový Mlýn (66), M, 3.5.2000, J, SW, INS 10003. Polom (69), M, 26.9.2000, J, SW, INS 9979. Prachovice, Habřinka pond (71), M, 28.7.1999, J, SW, INS 8902. Radochlín (72), M, 21.5.1998, J, SW, INS 7892. Rochňovec, Stavenov pond (74), M, 16.8.1999, J, SW, INS 8924. Slavice (75), M, 7.9.1998, C+J, SW, INS 7858. Slavická obora, Brožek pond (77), M, 7.9.1998, J, SW, INS 7877. Slavický potok brook near Trpišov (79), M, 1.7.1999, C, SW, INS 8987. Sloupno, Lhotka pond (80), M, 14.6.1999, J, SW, INS 9961. Sobětuchy env. Chrudim (81), M, 12.8.1999, J, SW, INS 8896. Svobodné Hamry, Zadní rybník pond (NR) (89), M, 20.5.1998, J, SW, INS 7909. Štikov near Chotěboř (90), M, 14.6.1999, J, SW, INS 8949. Švihov env. Mířetice (91), M, 25.6.2001, J, SW, INS 10726. Trhová Kamenice, Dlouhý rybník pond (94), M, 10.9.1998, J, SW, INS 8021. Třemošnice – Obůrka (97), M, 4.5.2000, J, SW, INS 9926. Třemošnice, Lovětínský potok brook (98), M, 19.5.1999, C, SW, INS 10098. Zabítý kopec Mt. near Smrkový Týnec (100), M, 12.8.1999, J, SW, INS 8888. Zbyslavce near Třemošnice (102), M, 28.7.1999, J, SW, INS 8917. Zlatá louka (NR) env. Podmoklany (103), 2 M, 8.9.1998 and 13.6.1999, J, SW, INS 7843 and 8847. Žďárec u Seče (106), M, 19.5.1998, J, SW, INS 7914.

Comments: Recorded from all over Europe (28 countries) and extending into Transcaucasia (Georgia incl. Abkhazia, Armenia, Azerbaijan) – Ježek et al. (2018, 2021, 2023b).

***Pneumia palustris* (Meigen, 1804)**

Unpublished records: Běstvína, Javorka brook (4), M, 4.5.2000, C+J, SW, INS 10063. Debrný potok brook near Nasavrky (20), M, 3.5.2000, J, SW, INS 9971. Sv. Jan (NR) env. Třemošnice (86), 2 M, 4.5.2000, C+J, SW, INS 9972 and 9973. Třemošnice – Obůrka (97), M, 4.5.2000, J, SW, INS 9925. Třemošnice, Lovětínský potok brook (98), M, 19.5.1999, C, SW, INS 10095.

Comments: European species (24 countries), also recorded in Turkey and Transcaucasia (Georgia incl. Abkhazia) – Ježek et al. (2020, 2021, 2023b).

***Pneumia pilularia* (Tonnoir, 1940)**

Unpublished records: Běstvína, Javorka brook (4), M, 4.5.2000, C+J, SW, INS 10062. Debrný potok brook near Nasavrky (20), M, 3.5.2000, J, SW, INS 9987. Kraskov – Horní Peklo (39), M, 19.5.1998, J, SW, INS 7949. Mezný (55), M, 19.5.1998, J, SW, INS 7883. Třemošnice, Lovětínský potok brook (98), M, 19.5.1999, C, SW, INS 10096. Žďárec u Seče (106), M, 19.5.1998, J, SW, INS 7913.

Comments: Distributed in 17 European countries, extending into Georgia, Armenia, Azerbaijan and Tajikistan as well as into North Africa – Wagner (1990, 2019), Ježek et al. (2020, 2021, 2023b).

***Pneumia rivularis* (Berdén, 1954)**

Published record: (as *Pericoma*, reclassified by Omelková & Ježek 2012a). Křižanovice (44), see Ježek (2003).

Red List status: Endangered (EN), see Ježek (2005).

Comments: A rare Palearctic species, known from 8 European countries and the Far East of Russia, some details were published by Ježek et al. (2018, 2021).

***Pneumia stammeri* (Jung, 1956)**

Published records: Krásné (40); Podmoklany – Nový Mlýn (66). Compare Ježek (2003).

Red List status: Endangered (EN), see Ježek (2005).

Comments: Known from 14 European countries (Ježek et al. 2020, Ježek & Omelková 2012).

***Pneumia trivialis* (Eaton, 1893)**

Unpublished records: Barovice, Barovka brook (1), M, 3.5.2000, J, SW, INS 10012. Barovice, tributary of Dlouhý potok brook (2), M, 3.5.2000, J, SW, INS 9957. Běstvína – Hluboš (3), M, 9.9.1998, J, SW, INS 7986. Běstvína, Javorka brook (4), M, 4.5.2000, C+J, SW, INS 10057. Běstvína, source area (5), M, 20.7.1998, C, SW, INS 10025. Between Běstvína and Pařížov (6), M, 9.9.1998, J, SW, INS 8012. Between Bílek and Chotěboř (7), M, 11.6.1999, J, SW, INS 8858. Between Hodonín and Nasavrky (8), M, 8.9.1998, J, SW, INS 7908. Between Horní Počátky and Běstvína (9), M, 8.9.1998, J, SW, INS 7893. Between Jančouř and Kocourov (10), M, 10.9.1998, J, SW, INS 7834. Between Seč and Vápenný Podol (12), M, 9.9.1998, J, SW, INS 7828. Between Spáleníště and Petrkov (13), M, 19.5.1998, J, SW, INS 7863. Between Svídnice and Trpišov (14), M, 21.5.1998, J, SW, INS 7972. Bezděkov – Lhotka pond (15), M, 8.9.1998, J, SW, INS 7850. Bezlejev, tributary of Doubrava river

(16, 17), 2 M, 20.5. and 16.8.1999, C, J, SW, INS 10016 and 10074. Buchtovka (NR) env. Trhová Kamenice (18), 3 M, 20.5., 15.7. and 27.7.1998, B, MT, INS 10021, 10036 and 10731. Čertův Hrádek (19), M, 12.8.1999, J, SW, INS 8831. Debrný potok brook near Nasavrky (20), 2 M, 21.7.1998 and 3.5.2000, J, C, SW, INS 8997 and 9989. Filipov near Kameničky (21), M, 4.5.2000, J, SW, INS 9944. Havlovice, Hoříčka pond (23), M, 25.6.2001, J, SW, INS 10782. Horní Bradlo, Chrudimka river (24), M, 3.5.2000, C, SW, INS 10757. Horní Mlýn (25), M, 7.8.1999, J, SW, INS 8982. Hostětínky near Horní Bradlo (26), M, 26.9.2000, J, SW, INS 9949. Hubský rybník pond env. Rohozná (28), 2 M, 13. and 21.5.2000, B, MT, INS 10042 and 10044. Chotěboř – castle park (30), M, 16.8.1999, J, SW, INS 8883. Chotěboř – eastern border (31), M, 7.8.1999, J, SW, INS 8913. Chotěboř – *Lemna* pools along road (32), M, 11.6.1999, J, SW, INS 8964. Javorné – brook (34), M, 20.5.1998, J, SW, INS 7935. Jetonice (35), M, 28.7.1999, J, SW, INS 8950. Kamenný potok brook env. Chotěboř (36), M, 16.8.1999, J, SW, INS 8928. Kaňkovy hory hills (NNM) (37), M, 2001, B, MT, INS 10806. Kras-kov, Zlatý potok brook (38), M, 4.5.2000, J, SW, INS 9938. Kras-kov – Horní Peklo (39), M, 19.5.1998, J, SW, INS 7952. Krupín, Bratroňovský potok brook (42), M, 25.6.2001, J, SW, INS 10775. Křivý (43), M, 14.6.1999, J, SW, INS 8936. Lhotka (45), M, 30.6.1999, C, SW, INS 8963. Libice nad Doubravou, Doubrava river (46), 2 M, 3.5.2000, C, J, SW, INS 10081 and 10794. Libice nad Doubravou, polluted pond (47), M, 8.9.1998, J, SW, INS 7897. Lichnice (NNR) (ruin of castle) (48), M, 9.7.1995, Mo, SW, INS 8004. Lovětínský rybník pond near Rudov (50), M, 28.7.1999, J, SW, INS 8863. Malá Střítež (51), M, 3.5.2000, J, SW, INS 10006. Malejov (52), M, 9.9.1998, J, SW, INS 7851. Malochyně near Bílek (53), M, 11.6.1999, J, SW, INS 8871. Mezisvěti env. Nasavrky (54), M, 26.6.2001, J, SW, INS 10740. Mezný (55), M, 19.5.1998, J, SW, INS 7866. Míčov (56), M, 28.7.1999, J, SW, INS 8956. Mokřadlo (NR) near Podmoklany (57), 2 M, 8.9.1998 and 15.6.1999, C, J, SW, INS 8973 and 10087. Nasavrky – V koutech (NM) (58), M, 8.9.1998, J, SW, INS 7836. Na-savrky (59), M, 18.5.1998, J, SW, INS 7991. Nová Ves near Nasavrky (60), 2 M, 18.5.1998 and 26.9.2000, J, SW, INS 7983 and 9947. Nový Mlýn (61), M, 8.9.1998, J, SW, INS 7999. Padrt'ský Mlýn (62), M, 19.5.1998, J, SW, INS 7976. Perný rybník pond near Kochánovice (63), M, 12.8.1999, J, SW, INS 8942. Pila u Libáně, Pařezný rybník pond (64), M, 21.5.1998, J, SW, INS 7926. Podmok-lany – Nový Mlýn (66), M, 3.5.2000, J, SW, INS 10004. Polom (NR) env. Horní Bradlo (68), M, 20.6.1995, Mo, SW, INS 8008. Polom (69), M, 26.9.2000, J, SW, INS 9993. Práčov pond (70), M, 7.9.1998, J, SW, INS 8017. Prachovice, Habřinka pond (71), M, 28.7.1999, J, SW, INS 8903. Ra-dochlín (72), M, 21.5.1998, J, SW, INS 7890. Rohozná, Rohozenský rybník pond (73), M, 18.5.1998, J, SW, INS 7984. Rochňovec, Stavenov pond (74), M, 16.8.1999, J, SW, INS 8920. Slavice (75), M, 7.9.1998, C+J, SW, INS 7859. Slavická obora, Boušovka pond (76), M, 7.9.1998, J, SW, INS 7831. Slavická obora, Brožek pond (77), M, 7.9.1998, J, SW, INS 7878. Slavická obora, small central pond (78), M, 7.9.1998, J, SW, INS 8015. Slavický potok brook near Trpišov (79), M, 1.7.1999, C, SW, INS 8991. Sloupno, Lhotka pond (80), M, 14.6.1999, J, SW, INS 9942. Sobětuchy env. Chrudim (81), M, 12.8.1999, J, SW, INS 8895. Spačice (83), M, 21.7.1995, Mo, SW, INS 7942. Strádovka (NR) env. Rohozná (84), M, 18.6.1998, B, MT, INS 10799. Sv. Jan (NR) env. Třemošnice (86), M, 4.5.2000, C+J, SW, INS 9975. Svobodné Hamry, antifire reservoir (88), M, 10.9.1998, J, SW, INS 8019. Svobodné Hamry, Zadní rybník pond (NR) (89), M, 20.5.1998, J, SW, INS 7911. Štikov near Chotěboř (90), M, 14.6.1999, J, SW, INS 8947. Švihov env. Mířetice (91), M, 25.6.2001, J, SW, INS 10725. Točitý Vír env. Chotěboř (92), M, 7.8.1999, J, SW, INS 8966. Travná (93), M, 20.5.1998, J, SW, INS 7933. Trhová Kamenice, Dlouhý rybník pond (94), M, 10.9.1998, J, SW, INS 8022. Trhová Kamenice, old mill pond (95), 2 M, 20.5. and 10.9.1998, J, SW, INS 7945 and 8027. Třemošnice, Hedvičino údolí valley (96), M, 9.9.1998, J, SW, INS 7873. Třemošnice – Obůrka (97), M, 4.5.2000, J, SW, INS 9924. Vršovská olšina alnetum (NR) env. Horní Bradlo (99), M, 26.6.2001, J, SW, INS 10741. Zabitý kopec

Mt. near Smrkový Týnec (**100**), M, 12.8.1999, J, SW, INS 8893. Zastrání near Chotěboř (**101**), M, 16.8.1999, J, SW, INS 8836. Zbyslavce near Třemošnice (**102**), M, 28.7.1999, J, SW, INS 8919. Zlatá louka (NR) env. Podmoklany (**103**), M, 8.9.1998, J, SW, INS 7842. Zlatý potok brook near Kraskov (**104**), M, 9.9.1998, C, SW, INS 9006. Žďárec u Seče (**106**), M, 19.5.1998, J, SW, INS 7915.

Comments: A ubiquitous European species (22 countries) covering a zone from the Iberian Peninsula and the British Isles to Poland and Ukraine, extending into boreal Scandinavia, the southern limit reaching by the Balkans. In the last decade, it was recorded from Transcaucasia (Azerbaijan and Georgia incl. Abkhazia) as well. See e.g. Wagner (1990, 2019) and Ježek et al. (2021, 2023b).

***Pneumia vittata* (Tonnoir, 1919)**

Syn: *Pneumia crispi* (Freeman, 1953)

Syn: *Pneumia hungarica* (Szabó, 1960) – reclassified by Ježek et al. (2020)

Unpublished records: Běstvína – Hluboš (**3**), M, 9.9.1998, J, SW, INS 7987. Between Horní Počátky and Běstvína (**9**), M, 8.9.1998, J, SW, INS 7896.

Red List status: Endangered (EN), see Ježek (2005).

Comments: Currently known to occur in 15 European countries – compare e.g. Wagner (1990), Krek (1999) and Ježek et al. (2020).

***Saraiella rotunda* (Krek, 1970)**

Unpublished record: Krásné (**40**), M, 4.5.2000, J, SW, INS 9980.

Red List status: Critically endangered (CR).

Comments: A European species recorded in Bosnia and Herzegovina, Bulgaria, Czech Republic, Italy, Kosovo, Macedonia, Poland, Serbia and Slovakia, extending into Transcaucasia (Azerbaijan and Georgia incl. Abkhazia) – see e.g. Ježek et al. (2020, 2021, 2023b).

***Szaboiella hibernica* (Tonnoir, 1940)**

Published record: Mezisvětí env. Nasavrky (**54**), see Ježek (2004a).

Red List status: Critically endangered (CR).

Comments: European species (11 countries), with a distribution covering the Iberian Peninsula, the British Isles, the coast of the North Sea and Central European mountains, the Apennines and the Balkan Peninsula, extending into Transcaucasia (Abkhazia) – see Ježek et al. (2021, 2023b).

***Tonnoiriella nigricauda* (Tonnoir, 1919)**

Unpublished records: Buchtovka (NR) env. Trhová Kamenice (**18**), 2 M, 20.5. and 27.7.1998, B, MT, INS 10023 and 10730. Malejov (**52**), M, 9.9.1998, J, SW, INS 7854. Prachovice, Habřinka pond (**71**), M, 28.7.1999, J, SW, INS 8907. Radochlín (**72**), M, 21.5.1998, J, SW, INS 7889. Rochňovec, Stavenov pond (**74**), M, 16.8.1999, J, SW, INS 8923. Svobodné Hamry, Zadní rybník pond (NR) (**89**), M, 20.5.1998, J, SW, INS 7910.

Red List status: Critically endangered (CR).

Comments: European species, recorded in 8 countries: Belgium, Great Britain, Czech Republic, Denmark, Germany, Hungary, Norway and Slovakia – Wagner (2019), Ježek et al. (2018, 2021).

***Tonnoiriella pulchra* (Eaton, 1893)**

Unpublished records: Běstvina, Javorka brook (4), M, 4.5.2000, C+J, SW, INS 10059. Běstvina, source area (5), M, 20.7.1998, C, SW, INS 10026. Between Svídnice and Trpišov (14), M, 21.5.1998, J, SW, INS 7967. Javorné – brook (34), M, 20.5.1998, J, SW, INS 7941. Kamenný potok brook env. Chotěboř (36), M, 16.8.1999, J, SW, INS 8927. Malejov (52), M, 9.9.1998, J, SW, INS 7857. Zastrání near Chotěboř (101), M, 16.8.1999, J, SW, INS 8837.

Comments: Known from Western, Southern and Central Europe (12 countries), also recorded in North Africa – e.g. Ježek & Omelková (2012), Ježek et al. (2018) and Wagner (2018).

***Ulomyia annulata annulata* (Tonnoir, 1919)**

Unpublished records: Bezděkov – Lhotka pond (15), M, 8.9.1998, J, SW, INS 7845. Horní Mlýn (25), M, 7.8.1999, J, SW, INS 8981. Libice nad Doubravou, polluted pond (47), M, 8.9.1998, J, SW, INS 7901.

Comments: Euro-West Siberian subspecies, known from Austria, Belgium, Czech Republic, Germany, Lithuania and Slovakia, extending into Novosibirsk region in Russia. Compare e.g. Ježek & Omelková (2012), Ježek et al. (2008, 2018) and Wagner (2018).

***Ulomyia cognata* (Eaton, 1893)**

Unpublished records: Barovice, Barovka brook (1), M, 3.5.2000, J, SW, INS 10007. Barovice, tributary of Dlouhý potok brook (2), M, 3.5.2000, J, SW, INS 9956. Čertův Hrádek (19), M, 12.8.1999, J, SW, INS 8827. Debrný potok brook near Nasavrky (20), M, 3.5.2000, J, SW, INS 9986. Filipov near Kameničky (21), M, 4.5.2000, J, SW, INS 9946. Horní Mlýn (25), M, 7.8.1999, J, SW, INS 8984. Chotěboř – castle park (30), M, 16.8.1999, J, SW, INS 8887. Chotěboř – eastern border (31), M, 7.8.1999, J, SW, INS 8912. Javorné – brook (34), M, 20.5.1998, J, SW, INS 7937. Jetonice (35), M, 28.7.1999, J, SW, INS 8951. Kamenný potok brook env. Chotěboř (36), M, 16.8.1999, J, SW, INS 8931. Kraskov, Zlatý potok brook (38), M, 4.5.2000, J, SW, INS 9940. Krkanka (NR) (41), M, 3.5.2000, J, SW, INS 9920. Libice nad Doubravou, Doubrava river (46), M, 3.5.2000, J, SW, INS 10076. Malá Střítež (51), 2 M, 3.5.2000, C, J, SW, INS 10005 and 10780. Míčov (56), M, 28.7.1999, J, SW, INS 8958. Nová Ves near Nasavrky (60), M, 18.5.1998, J, SW, INS 7980. Točítý Vír env. Chotěboř (92), M, 7.8.1999, J, SW, INS 8971. Zabitý kopec Mt. near Smrkový Týnec (100), M, 12.8.1999, J, SW, INS 8891. Zastrání near Chotěboř (101), M, 16.8.1999, J, SW, INS 8834. Zbyslavce near Třešňovice (102), M, 28.7.1999, J, SW, INS 8915.

Comments: European species known from 12 countries, extending into Transcaucasia (Armenia, Georgia incl. Abkhazia) – for some details see e.g. in Ježek et al. (2008, 2021, 2023b).

***Ulomyia fuliginosa* (Meigen, 1804)**

Unpublished records: Barovice, Barovka brook (1), M, 3.5.2000, J, SW, INS 10014. Barovice, tributary of Dlouhý potok brook (2), M, 3.5.2000, J, SW, INS 9958. Běstvina – Hluboš (3), M, 9.9.1998, J, SW, INS 7989. Běstvina, Javorka brook (4), M, 4.5.2000, C+J, SW, INS 10058. Běstvina, source area (5), 2 M, 21.7.1996 and 20.7.1998, C, SW, INS 8005 and 10024. Between Běstvina and Pařížov (6), M, 9.9.1998, J, SW, INS 8013. Between Bílek and Chotěboř (7), M, 11.6.1999, J, SW, INS 8860. Between Horní Počátky and Běstvina (9), M, 8.9.1998, J, SW, INS 7895. Between Jančouř and Kouřov (10), M, 10.9.1998, J, SW, INS 7835. Between Kameničky and Trhová Kamenice (11),

M, 27.6.2001, J, SW, INS 10761. Between Seč and Vápenný Podol (**12**), M, 9.9.1998, J, SW, INS 7827. Between Spáleníště and Petrkov (**13**), M, 19.5.1998, J, SW, INS 7875. Between Svídnice and Trpišov (**14**), M, 21.5.1998, J, SW, INS 7970. Bezděkov – Lhotka pond (**15**), M, 8.9.1998, J, SW, INS 7849. Bezlejov env. Chotěboř (**16**), M, 20.5.1999, C, SW, INS 10073. Čertův Hrádek (**19**), M, 12.8.1999, J, SW, INS 8832. Debrný potok brook near Nasavrky (**20**), 2 M, 21.7.1998 and 3.5.2000, C, J, SW, INS 8996 and 9991. Hostětínky near Horní Bradlo (**26**), M, 26.9.2000, J, SW, INS 9948. Hůrka env. Bojanov, Zlatník brook (**29**), M, 26.9.2000, J, SW, INS 9935. Chotěboř – castle park (**30**), M, 16.8.1999, J, SW, INS 8881. Javorné – brook (**34**), M, 20.5.1998, J, SW, INS 7938. Jetonice (**35**), M, 28.7.1999, J, SW, INS 8952. Kamenný potok brook env. Chotěboř (**36**), M, 16.8.1999, J, SW, INS 8933. Kraskov, Zlatý potok brook (**38**), M, 4.5.2000, J, SW, INS 9937. Kraskov – Horní Peklo (**39**), M, 19.5.1998, J, SW, INS 7948. Krásné (**40**), M, 4.5.2000, J, SW, INS 9984. Krkanka (NR) (**41**), M, 3.5.2000, J, SW, INS 9950. Křivý (**43**), M, 14.6.1999, J, SW, INS 8938. Lhotka (**45**), M, 30.6.1999, C, SW, INS 8961. Libice nad Doubravou, polluted pond (**47**), M, 8.9.1998, J, SW, INS 7903. Lovětínský rybník pond near Rudov (**50**), M, 28.7.1999, J, SW, INS 8865. Malá Stržitež (**51**), 2 M, 3.5.2000, C, J, SW, INS 10017 and 10781. Malejov (**52**), M, 9.9.1998, J, SW, INS 7856. Malochyně near Bílek (**53**), M, 11.6.1999, J, SW, INS 8878. Mezisvětí env. Nasavrky (**54**), M, 26.6.2001, J, SW, INS 10751. Mezný (**55**), M, 19.5.1998, J, SW, INS 7868. Mokřadlo (NR) near Podmoklany (**57**), M, 8.9.1998, C, SW, INS 10069. Nasavrky – V koutech (NM) (**58**), M, 8.9.1998, J, SW, INS 7837. Nová Ves near Nasavrky (**60**), M, 18.5.1998, J, SW, INS 7981. Nový Mlýn (**61**), M, 8.9.1998, J, SW, INS 8001. Padrťský Mlýn (**62**), M, 19.5.1998, J, SW, INS 7975. Podmoklany – Nový Mlýn (**66**), M, 3.5.2000, J, SW, INS 10002. Podmoklany – Odraneč (**67**), M, 20.7.1996, C, SW, INS 7995. Polom (NR) env. Horní Bradlo (**68**), M, 20.7.1996, C, SW, INS 7993. Prachovice, Habřinka pond (**71**), M, 28.7.1999, J, SW, INS 8904. Slavice (**75**), M, 7.9.1998, C+J, SW, INS 7861. Slavická obora, small central pond (**78**), M, 7.9.1998, J, SW, INS 8014. Sloupno, Lhotka pond (**80**), M, 14.6.1999, J, SW, INS 9941. Spačice (**83**), M, 21.7.1995, Mo, SW, INS 7943. Sv. Jan (NR) env. Třemošnice (**86**), M, 4.5.2000, C+J, SW, INS 9976. Štikov near Chotěboř (**90**), M, 14.6.1999, J, SW, INS 8944. Točitý Vír env. Chotěboř (**92**), M, 7.8.1999, J, SW, INS 8969. Travná (**93**), M, 20.5.1998, J, SW, INS 7932. Trhová Kamenice, old mill pond (**95**), M, 20.5.1998, J, SW, INS 8030. Třemošnice, Hedvičino údolí valley (**96**), M, 20.7.1996, C, SW, INS 7996. Třemošnice - Obůrka (**97**), M, 4.5.2000, J, SW, INS 9923. Vršovská olšina alnetum (NR) env. Horní Bradlo (**99**), M, 26.6.2001, J, SW, INS 10742. Zastrání near Chotěboř (**101**), M, 16.8.1999, J, SW, INS 8835. Zbyslavce near Třemošnice (**102**), M, 28.7.1999, J, SW, INS 8918. Zlatá louka (NR) env. Podmoklany (**103**), 2 M, 8.9.1998 and 13.6.1999, J, SW, INS 7841 and 8849. Žďárec u Seče (**106**), M, 19.5.1998, J, SW, INS 7917.

Comments: A very common and often frequent species, known in almost all of Europe (29 countries), extending into Lithuania – see Wagner (2018), Ježek et al. (2020, 2021).

Ulomyia plumata (Tonnoir, 1919)

Unpublished record: Polom (NR) env. Horní Bradlo (**68**), M, 20.7.1996, C, SW, INS 7994.

Red List status: Critically endangered (CR).

Comments: Known from Albania, Belgium, Czech Republic and France (Ježek 2004b, Ježek et al. 2018, 2023a,b).

The detailed overview of all recorded species per site is summarized in Table 1. The highest biodiversity was recorded at the following sites: 103 (32 spp.), 48 (19 spp.), 14 and 55 (16 spp.). Only one species was found at sites 49, 59, 67, 85, and 87. The highest biodiversity of species with conservation importance was recorded at sites 103 (5 spp.), 19 (4 spp.), 18 (3 spp.), sites 105, 1, 40 with two 2 spp., and 24 sites with one species with conservation potential.

Table 1. List of localities with recorded species (see map 1)

No.	Site	Recorded species
1	Barovice, Barovka brook	<i>lucifugus</i> , <i>manicata</i> , <i>matthesi</i> , <i>stavniensis</i> , <i>vimmeri</i> (NS), <i>splendidus</i> (NS), <i>trivialis</i> , <i>cognata</i> , <i>fuliginosa</i>
2	Barovice, tributary of Dlouhý potok brook	<i>stavniensis</i> , <i>ocellaris</i> , <i>mutua</i> , <i>trivialis</i> , <i>cognata</i> , <i>fuliginosa</i>
3	Běstvína – Hluboš	<i>blandula</i> , <i>nubila</i> , <i>trivialis</i> , <i>vittata</i> (EN), <i>fuliginosa</i>
4	Běstvína, Javorka brook	<i>vimmeri</i> (NS), <i>subneglecta</i> , <i>canescens</i> , <i>nubila</i> , <i>palustris</i> , <i>pilularia</i> , <i>trivialis</i> , <i>pulchra</i> , <i>fuliginosa</i>
5	Běstvína, source area	<i>hirtella</i> , <i>satchelli</i> , <i>phalaenoides</i> , <i>gemina</i> , <i>unispinosa</i> , <i>trivialis</i> , <i>pulchra</i> , <i>fuliginosa</i>
6	Between Běstvína and Pařížov	<i>splendidus</i> (NS), <i>nubila</i> , <i>trivialis</i> , <i>fuliginosa</i>
7	Between Bílek and Chotěboř	<i>zetterstedti</i> , <i>blandula</i> , <i>fallax</i> , <i>mutua</i> , <i>trivialis</i> , <i>fuliginosa</i>
8	Between Hodonín and Nasavrky	<i>blandula</i> , <i>fallax</i> , <i>trivialis</i>
9	Between Horní Počátky and Běstvína	<i>canescens</i> , <i>trivialis</i> , <i>vittata</i> (EN), <i>fuliginosa</i>
10	Between Jančouř and Kouřov	<i>hirtella</i> , <i>ocellaris</i> , <i>trivialis</i> , <i>fuliginosa</i>
11	Between Kameničky and Trhová Kamenice	<i>longicornis</i> , <i>hirtella</i> , <i>satchelli</i> , <i>phalaenoides</i> , <i>mutua</i> , <i>fuliginosa</i>
12	Between Seč and Vápenný Podol	<i>blandula</i> , <i>trivialis</i> , <i>fuliginosa</i>
13	Between Spáleniště and Petrkov	<i>carthusiana</i> , <i>gressica</i> , <i>ocellaris</i> , <i>trivialis</i> , <i>fuliginosa</i>
14	Between Svídnice and Trpišov	<i>hygrophila</i> , <i>soleata</i> , <i>notabilis</i> , <i>longicornis</i> , <i>auriculata</i> , <i>integella</i> (CR), <i>carthusiana</i> , <i>gressica</i> , <i>manicata</i> , <i>ocellaris</i> , <i>blandula</i> , <i>fallax</i> , <i>nubila</i> , <i>trivialis</i> , <i>pulchra</i> , <i>fuliginosa</i>
15	Bezděkov, Lhotka pond	<i>ocellaris</i> , <i>subneglecta</i> , <i>blandula</i> , <i>nubila</i> , <i>trivialis</i> , <i>a. annulata</i> , <i>fuliginosa</i>
16	Bezlejev env. Chotěboř	<i>satchelli</i> , <i>ocellaris</i> , <i>blandula</i> , <i>fallax</i> , <i>trivialis</i> , <i>fuliginosa</i>
17	Bezlejev, tributary of Doubrava river	<i>subneglecta</i> , <i>fallax</i> , <i>nubila</i> , <i>trivialis</i>

18	Buchtovka (NR) env. Trhová Kamenice	<i>satchelli, phalaenoides, gemina, minuta, ocellaris, rivosus</i> (CR), <i>tetracorniculatus</i> (CR), <i>fallax, trivialis, nigricauda</i> (CR)
19	Čertův Hrádek	<i>ocellaris, fallax, g. gracilis, nubila, trivialis, cognata, fuliginosa</i>
20	Debrný potok brook near Nasavrky	<i>phalaenoides, manicata, stavniensis, ocellaris, subneglecta, blandula, nubila, palustris, pilularia, trivialis, cognata, fuliginosa</i>
21	Filipov near Kameničky	<i>ocellaris, trivialis, cognata</i>
22	Hařilova Lhotka env. Sloupno	<i>valachica, denticulatus, longicornis, blandula</i>
23	Havlovice, Hoříčka pond	<i>denticulatus, longicornis, albipennis, satchelli, zetterstedti, gemina, fallax, nubila, trivialis</i>
24	Horní Bradlo, Chrudimka river	<i>manicata, subneglecta, pseudoexquisita, blandula, fallax, trivialis</i>
25	Horní Mlýn	<i>polyascoidea, manicata, fallax, nubila, trivialis, a. annulata, cognate</i>
26	Hostětínky near Horní Bradlo	<i>trivialis, fuliginosa</i>
27	Hradiště	<i>gemina, minuta, trinodulosa</i>
28	Hubský rybník pond env. Rohozná	<i>albipennis, satchelli, gemina, minuta, trinodulosa, trivialis</i>
29	Hůrka env. Bojanov, Zlatník brook	<i>lucifugus, lobata, phalaenoides, gemina, fuliginosa</i>
30	Chotěboř – castle park	<i>polyascoidea, alternata, blandula, fallax, trivialis, cognata, fuliginosa</i>
31	Chotěboř – eastern border	<i>longicornis, albipennis, alternata, ocellaris, trivialis, cognate</i>
32	Chotěboř – <i>Lemna</i> pools along road	<i>ocellaris, trivialis</i>
33	Javorné – swamps near farm	<i>lobata, satchelli, phalaenoides</i>
34	Javorné – brook	<i>longicornis, silvaticus</i> (VU), <i>ocellaris, mutua, trivialis, pulchra, cognata, fuliginosa</i>
35	Jetonice	<i>phalaenoides, ocellaris, trivialis, cognata, fuliginosa</i>
36	Kamenný potok brook env. Chotěboř	<i>lucifugus, gemina, alternata, manicata, ocellaris, trivialis, pulchra, cognata, fuliginosa</i>
37	Kaňkovy hory hills (NNM) env. Třemošnice	<i>albipennis, satchelli, grisescens, phalaenoides, canescens, trivialis</i>
38	Kraskov, Zlatý potok brook	<i>ocellaris, blandula, nubila, trivialis, cognata, fuliginosa</i>
39	Kraskov – Horní Peklo	<i>longicornis, carthusiana, gressica, satchelli, ocellaris, blandula, fallax, nubila, pilularia, trivialis, fuliginosa</i>
40	Krásné	<i>dalii, ocellaris, mutua, stammeri</i> (EN), <i>rotunda</i> (CR), <i>fuliginosa</i>
41	Krkanka (NR)	<i>lucifugus, gemina, blandula, fallax, cognata, fuliginosa</i>

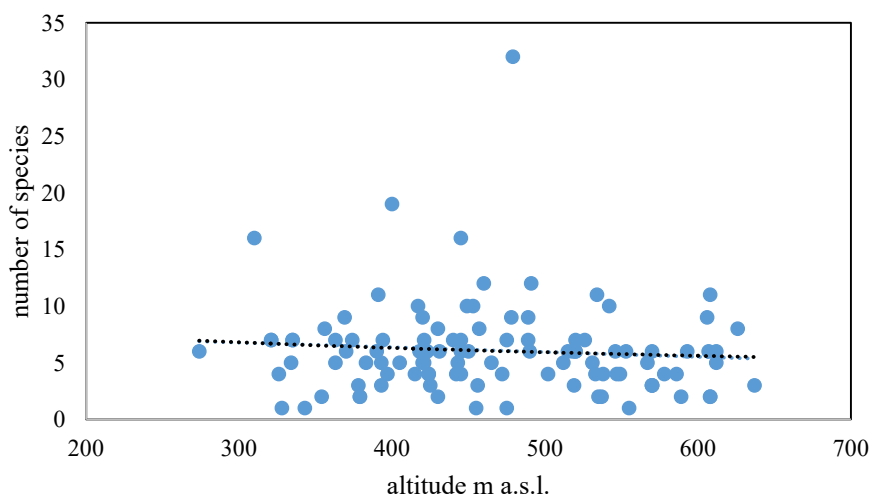
42	Krupín, Bratroňovský potok brook	<i>denticulatus, polyascoidea, albipennis, satchelli, zetterstedti, trivialis</i>
43	Křivý	<i>denticulatus, longicornis, auriculata, fallax, trivialis, fuliginosa</i>
44	Křižanovice	<i>austriacum, lobata, albipennis, satchelli, zetterstedti, mycophila, rivularis (EN)</i>
45	Lhotka	<i>satchelli, phalaenoides, mutua, trivialis, fuliginosa</i>
46	Libice nad Doubravou, Doubrava river	<i>phalaenoides, trinodulosa, manicata, pseudoexquisita, blandula, fallax, nubila, trivialis, cognata</i>
47	Libice nad Doubravou, polluted pond	<i>andrenipes (CR), ustulata, hirtella, alternata, ocellaris, canescens, nubila, trivialis, a. annulata, fuliginosa</i>
48	Lichnice NNR (ruin of castle)	<i>bartai (NS), gressica, advena (CR), hrudkai (VU), hirtella, lobata, brevicornis, albipennis, satchelli, sigma (NS), grisescens, crassipennis, phalaenoides, gemina, itoco, minuta, setigera, stavniensis, trivialis</i>
49	Lovětínská rokles chasm	<i>Gemina</i>
50	Lovětínský rybník pond near Rudov	<i>auriculata, ocellaris, trivialis, fuliginosa</i>
51	Malá Střítež	<i>trivialis, cognata, fuliginosa</i>
52	Malejov	<i>ocellaris, canescens, nubila, trivialis, nigricauda (CR), pulchra, fuliginosa</i>
53	Malochyně near Bílek	<i>hygrophila, soleata, valachica, denticulatus, longicornis, auriculata, gressica, phalaenoides, gemina, trivialis, fuliginosa</i>
54	Mezísveří env. Nasavrky	<i>trivialis, hibernica (CR), fuliginosa</i>
55	Mezný	<i>longicornis, pseudolongicornis (CR), carthusiana, lucifugus, stavniensis, ocellaris, blandula, fallax, nubila, pilularia, trivialis, fuliginosa</i>
56	Míčov	<i>ocellaris, blandula, trivialis, cognata</i>
57	Mokřadlo (NR) near Podmoklany	<i>longicornis, cornuta (VU), ustulata, auriculata, humerale, erminea, satchelli, phalaenoides, gemina, ocellaris, subneglecta, blandula, fallax, nubila, trivialis, fuliginosa</i>
58	Nasavrky – V koutech (NM)	<i>gemina, ocellaris, nubila, trivialis, fuliginosa</i>
59	Nasavrky	<i>Trivialis</i>
60	Nová Ves near Nasavrky	<i>fallax, nubila, trivialis, cognata, fuliginosa</i>
61	Nový Mlýn	<i>ocellaris, subneglecta, blandula, fallax, nubila, trivialis, fuliginosa</i>
62	Padrtšský Mlýn	<i>andrenipes (CR), lucifugus, manicata, blandula, trivialis, fuliginosa</i>
63	Perný rybník pond near Kochánovice	<i>longicornis, pseudolongicornis (CR), fallax, nubila, trivialis</i>
64	Pila u Libáně, Pařezný rybník pond	<i>albipennis, ocellaris, fallax, nubila, trivialis</i>

65	Podbošovský Mlýn near Miřetice	<i>denticulatus, austriacum, humerale, albipennis, satchelli, phalaenoides</i>
66	Podmoklany – Nový Mlýn	<i>blandula, fallax, nubila, stammeri</i> (EN), <i>trivialis, fuliginosa</i>
67	Podmoklany – Odraneč	<i>Fuliginosa</i>
68	Polom (NR) env. Horní Bradlo	<i>albipennis, mutua, trivialis, fuliginosa, plumata</i> (CR)
69	Polom	<i>nubila, trivialis</i>
70	Práčov – pond	<i>ocellaris, splendidus</i> (NS), <i>trivialis</i>
71	Prachovice, Habřinka pond	<i>satchelli, phalaenoides, ocellaris, fallax, nubila, trivialis, nigricauda</i> (CR), <i>fuliginosa</i>
72	Radochlín	<i>longicornis, auriculata, albipennis, ocellaris, nubila, trivialis, nigricauda</i> (CR)
73	Rohozná, Rohozenský rybník pond	<i>ocellaris, trivialis</i>
74	Rochňovec, Stavenov pond	<i>longicornis, ocellaris, nubila, trivialis, nigricauda</i> (CR)
75	Slavice	<i>ocellaris, nubila, trivialis, fuliginosa</i>
76	Slavická obora, Boušovka pond	<i>ocellaris, trivialis</i>
77	Slavická obora, Brožek pond	<i>ustulata, uniformata, alternata, nubila, trivialis</i>
78	Slavická obora, small central pond	<i>trivialis, fuliginosa</i>
79	Slavický potok brook near Trpišov	<i>urbica</i> (CR), <i>auriculata, phalaenoides, gemina, ocellaris, blandula, nubila, trivialis</i>
80	Sloupno, Lhotka pond	<i>valachica, longicornis, ustulata, auriculata, albipennis, gemina, fallax, nubila, trivialis, fuliginosa</i>
81	Sobětuchy env. Chrudim	<i>alternata, manicata, blandula, fallax, nubila, trivialis</i>
82	Sobiňov – Na hrázi	<i>hirtella, alternata, ocellaris, fallax</i>
83	Spačice	<i>trivialis, fuliginosa</i>
84	Strádovka (NR) env. Rohozná	<i>lobata, albipennis, phalaenoides, splendidus</i> (NS)
85	Strádovské Peklo (NR)	<i>Lucifugus</i>
86	Sv. Jan (NR) env. Třešňovice	<i>stavniensis, ocellaris, blandula, canescens, palustris, trivialis, fuliginosa</i>
87	Svídnice	<i>Fallax</i>
88	Svobodné Hamry, antifire reservoir	<i>ustulata, trivialis</i>
89	Svobodné Hamry, Zadní rybník pond (NR)	<i>longicornis, nubila, trivialis, nigricauda</i> (CR)
90	Štikov near Chotěboř	<i>denticulatus, longicornis, gressica, nubila, trivialis, fuliginosa</i>
91	Švihov env. Miřetice	<i>auriculata, zetterstedti, nubila, trivialis</i>
92	Točitý Vír env. Chotěboř	<i>gemina, manicata, blandula, fallax, trivialis, cognata, fuliginosa</i>

93	Travná	<i>minuta, ocellaris, subneglecta, fallax, trivialis, fuliginosa</i>
94	Trhová Kamenice, Dlouhý rybník pond	<i>longicornis, lobata, ocellaris, subneglecta, fallax, nubila, trivialis</i>
95	Trhová Kamenice, old mill pond	<i>ocellaris, fallax, trivialis, fuliginosa</i>
96	Třemošnice, Hedvičino údolí valley	<i>fallax, trivialis, fuliginosa</i>
97	Třemošnice – Obůrka	<i>fusca</i> (CR), <i>gressica, canescens, nubila, palustris, trivialis, fuliginosa</i>
98	Třemošnice, Lovětínský potok brook	<i>zetterstedti, manicata, ocellaris, blandula, nubila, palustris, pilularia</i>
99	Vršovská olšina alnetum (NR) env. Horní Bradlo	<i>auriculata, unispinosa, trivialis, fuliginosa</i>
100	Zabítý kopec Mt. near Smrkový Týnec	<i>lucifugus, ocellaris, blandula, fallax, nubila, trivialis, cognate</i>
101	Zastrání near Chotěboř	<i>trivialis, pulchra, cognata, fuliginosa</i>
102	Zbyslavce near Třemošnice	<i>ocellaris, nubila, trivialis, cognata, fuliginosa</i>
103	Zlatá louka (NR) env. Podmoklany	<i>hygrophila, soleata, valachica, denticulatus, longicornis, prikryli</i> (VU), <i>polyascoidea, auriculata, integella</i> (CR), <i>carthusiana, gressica, obscura, austriacum, dumosum</i> (NS), <i>humerale, hirtella, lobata, albipennis, erminea, satchelli, phalaenoides, gemina, minuta, trinodulosa, lativentris, ocellaris, rivosus</i> (CR), <i>tetracorniculatus</i> (CR), <i>fallax, nubila, trivialis, fuliginosa</i>
104	Zlatý potok brook near Kras-kov	<i>alternata, trivialis</i>
105	Zubří (NR) env. Trhová Kamenice	<i>longicornis, polyascoidea, gressica, lobata, albipennis, satchelli, phalaenoides, trinodulosa, ocellaris, splendidus</i> (NS), <i>tetracorniculatus</i> (CR)
106	Žďárec u Seče	<i>alternata, manicata, unispinosa, ocellaris, blandula, fallax, nubila, pilularia, trivialis, fuliginosa</i>

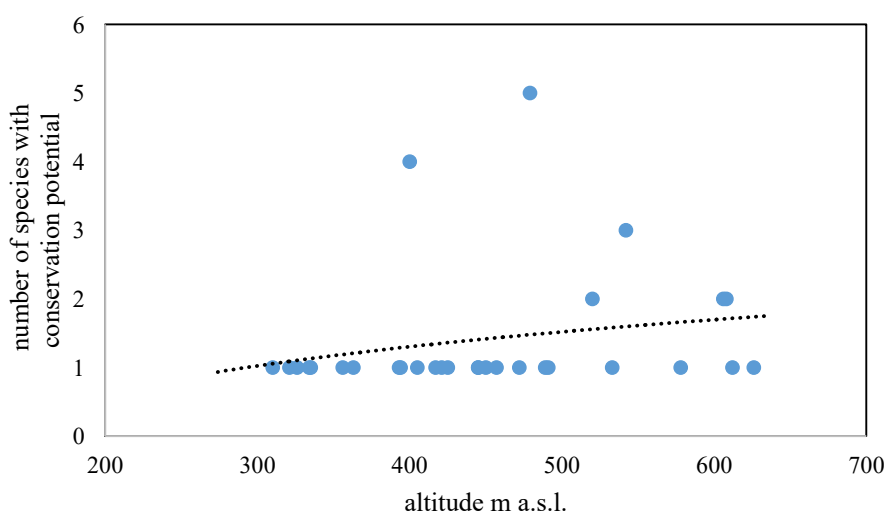
In the present study, 79 species were recorded, which represents about 44 % of all moth flies (Diptera, Psychodidae – 178 species, see appendix in Ježek et al. (2021)) known from the Czech Republic. In 30 sites (28 %) species with conservation importance / status were recorded.

Analyses of the relationships between altitude and the number of species found at the site did not confirm a significant relationship between these parameters. Although the trend line in Graph 1 initially indicates a decrease in the number of species with altitude, only 0.6% (coefficient of determination $R^2 = 0.006$) of the variance in the dependent variable is explained by the model and, in fact, the statistical significance of this relationship is not confirmed by any method, either regression or correlation analysis.



Graph 1. Altitude and the number of species of moth flies at sampling sites, with logarithmic trend line (created by Jozef Oboňa).

Analyses of the relationships between altitude and the number of species with conservation status (see in Kroča & Ježek 2015, 2019, 2022) found at the site did not confirm a significant relationship between these parameters. Similarly, to the total number of species, the trend line in Graph 2 at first glance indicates a trend, but in this case the increase in the number of species classified in one of the threat categories with altitude, only 8 % (coefficient of determination $R^2 = 0.08$) of the proportion of variance in the dependent variable is explained by the model, and moreover, the statistical significance of this relationship is not confirmed by any method (regression or correlation analysis).



Graph 2. Altitude and the number of species with conservation potential of moth flies at sampling sites, with logarithmic trend line (created by Jozef Oboňa).

A good knowledge of biodiversity is the basic building block of research, classification and, last but not least, knowledge of the ecology and biology of selected species. This knowledge can be used for the protection of endangered species as well as for the management of their habitats (Ježek et al. 2024).

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REFERENCES

- Bína J., Demek J. (2012) Z nížin do hor. Geomorfologické jednotky České republiky. 1. vyd. Praha, *Academia*, 344 pp.
- Del Rosario F. (1936) The American species of *Psychoda* (Diptera, Psychodidae). *The Philippine Journal of Science*, 59(1), 85–146.
- Demek J., Mackovčín P., Balatka B. et al. (2006) Zeměpisný lexikon ČR. Hory a nížiny. 2. vyd. Brno, Agentura ochrany přírody a krajiny, 582 pp.
- Ehrendorfer F., Hamann U. (1965) Vorschläge zu einer floristischen Kartierung von Mitteleuropa. *Berichte der Deutschen Botanischen Gesellschaft*, 78, 35–50.
- Ježek J. (1977) Reinstatement of the genus *Tinearia* Schellenberg (Diptera, Psychodidae). *Acta Entomologica Bohemoslovaca*, 74, 232–241.
- Ježek J. (1992) Siberian moth flies (Diptera, Psychodidae) – new faunistic records. *Časopis Národního Muzea, Řada přírodovědná*, 160, 63–64.
- Ježek J. (2003) New faunistic data and check list of non Phlebotomine moth flies (Diptera, Psychodidae) from the Czech and Slovak Republics. *Časopis Národního Muzea, Řada přírodovědná*, 172(1-4), 121–132.

- Ježek J. (2004a) New and interesting moth flies (Diptera, Psychodidae) from protected and underestimated natural areas of the Czech Republic. *Časopis Národního Muzea, Řada přírodovědná*, 173(1-4), 113–128.
- Ježek J. (2004b) New faunistic data of non-phlebotomine moth flies (Diptera, Psychodidae) from the Palaearctic region. pp. 141–151. In: Kubík Š., Barták M. (eds.): *Dipterologica Bohemoslovaca*, Vol. 11, *Folia Facultatis Scientiarum Naturalium Universitatis Masarykianae Brunensis, Biologia*, 109, 1–346.
- Ježek J. (2005) Psychodidae (koutulovití). In: Farkač J., Král D., Škorpík M. (eds.): Červený seznam ohrožených druhů České republiky, Bezobratlí. *Red list of threatened species in the Czech Republic, Invertebrates*, 760 pp. Agentura ochrany přírody a krajiny ČR, Praha.
- Ježek J. (2007) New records of moth flies (Diptera, Psychodidae) from Poland with description of *Apsycha* gen. nov. *Acta Zoologica Universitatis Comenianae*, 47(2), 145–160.
- Ježek J., Braverman Y. (2006) Non-biting moth flies (Diptera, Psychodidae) from Israel. In: Kinkorová J. (ed.): *Dipterologica Bohemoslovaca*, Vol. 13, *Acta Universitatis Carolinae, Biologia*, 50, 57–60.
- Ježek J., Chvojka P., Manko P., Oboňa J. (2017) Faunistic and bibliographical inventory of moth flies from Ukraine (Diptera, Psychodidae). *ZooKeys*, 693, 109–128. <https://doi.org/10.3897/zookeys.693.13652>
- Ježek J., Manko P., Fedorčák J., Koco Š., Varga J., Shumka S., Oboňa J. (2023a) Psychodidae of Albania. *Redia*, 106, 21–26. <https://doi.org/10.19263/REDIA-106.23.03>
- Ježek J., Manko P., Oboňa J. (2021) Psychodidae (Diptera) of Azerbaijan and Georgia – faunistics with biodiversity notes. *ZooKeys*, 1049, 15–42. Added: Supplementary material I – List of localities with altitudes and coordinates, 6 pp. <https://doi.org/10.3897/zookeys.1049.66063>
- Ježek J., Oboňa J., Grootaert P., Lock K., Manko P., Dekoninck W. (2020) Review of two Tonnoir moth fly species, overlooked for a century (Diptera: Psychodidae: Psychodinae). *Acta Entomologica Musei Nationalis Pragae*, 60, 517–526. <https://doi.org/10.37520/aemnp.2020.034>
- Ježek J., Oboňa J., Manko P. (2023b) Moth flies (Diptera: Psychodidae) of Abkhazia (western Caucasus, Georgia) with some additional faunistic data from Armenia, Georgia, and Russia. *Historia Naturalis Bulgarica*, 45(4), 57–82. <https://doi.org/10.48027/hnb.45.041>
- Ježek J., Oboňa J., Manko P. (2024) Review of Moth flies (Diptera, Psychodidae) of eastern Bohemia and western Moravia (Českomoravské mezihorí intermountain area), Czech Republic. *Biodiversity & Environment*, 16(1), 33–43.
- Ježek J., Oboňa J., Manko P., Trýzna M. (2021) Moth Flies (Diptera: Psychodidae) of the northern Hercynian mountains and adjacent localities (Czech Republic). *Acta Musei Silesiae, Scientiae Naturales*, 70, 135–182. <https://doi.org/10.2478/cszma-2021-0011>
- Ježek J., Oboňa J., Přikryl I., Mikátová B. (2018) Moth Flies (Diptera: Psychodidae) of the western Hercynian mountains, Sokolov open-cast coal mines and dumps (Czech Republic). *Acta Musei Silesiae, Scientiae Naturales*, 67, 193–292. <https://doi.org/10.2478/cszma-2018-0015>

- Ježek J., Omelková M. (2012) Moth flies (Diptera: Psychodidae) of the Bílé Karpaty Protected Landscape Area and Biosphere Reserve (Czech Republic). *In: Malenovský I., Kment P., Konvička O. (eds.): Species inventories of selected insect groups in the Bílé Karpaty Protected Landscape Area and Biosphere Reserve (Czech Republic). Acta Musei Moraviae, Scientiae biologicae* (Brno), 96(2), 763–802.
- Ježek J., Omelková M., Heřman P. (2014) Koutulovití (Psychodidae, Diptera) Českého krasu a přilehlých lokalit. Moth flies (Psychodidae, Diptera) of the Český kras/Bohemian Karst and neighbouring localities (Czech Republic). *Bohemia centralis*, Praha, 32, 321–344.
- Ježek J., van Harten A. (2005) Further new taxa and little known species of non-biting moth flies (Diptera, Psychodidae) from Yemen. *Acta Entomologica Musei Nationalis Pragae*, 45, 199–220.
- Ježek J., van Harten A. (2009) Order Diptera, Family Psychodidae. Subfamily Psychodinae (non-biting moth flies), pp. 686-711. *In: van Harten A. (ed.) Arthropod Fauna of the United Arab Emirates, Vol. 2. Dar Al Ummah Printing, Publishing, Distribution and Advertising, Abu Dhabi, 786 pp.*
- Ježek J., Vonička P., Preisler J. (2008) Koutulovití (Diptera: Psychodidae) Jizerských hor a Frýdlantska. Psychodidae (Diptera) of the Jizerské hory Mts and Frýdlant region (northern Bohemia, Czech Republic). *Sborník Severočeského muzea, Přírodní Vědy*, Liberec, 26, 129–151.
- Ježek J., Yağci Ş. (2005) Common non-biting moth flies (Insecta, Diptera, Psychodidae) new to the fauna of Turkey. *Acta Parasitologica Turcica*, 29, 188–192.
- Kafka J. (1858-1929) sv. 13, Železné a Žďárské hory, Praha: Grégr a syn, 1908, 143 pp.
- Krek S. (1999) Psychodidae (Diptera Insecta) Balkanskog Poluotoka. Federacija Bosne I Hercegovine, Ministarstvo Obrazovanja, Nauke, Kulture I Sporta, Studentska Štamparija Univerziteta Sarajevo, Sarajevo, 417 pp.
- Kročá J., Ježek J. (2015) Moth flies (Psychodidae: Diptera) of the Moravskoslezské Beskydy Mts and Podbeskydská pahorkatina Upland (Czech Republic). *Acta Musei Silesiae, Scientiae Naturales* 64, 27–50. <https://doi.org/10.1515/cszma-2015-0006>
- Kročá J., Ježek J. (2019) Moth flies (Psychodidae: Diptera) of the Moravskoslezské Beskydy Mts and Podbeskydská pahorkatina Upland (Czech Republic), II. *Acta Musei Silesiae, Scientiae Naturales* 68, 201–232. <https://doi.org/10.2478/cszma-2019-0021>
- Kročá J., Ježek J. (2022) Moth flies (Psychodidae: Diptera) of the Moravskoslezské Beskydy Mts and Podbeskydská pahorkatina Upland (Czech Republic), III. *Acta Musei Silesiae, Scientiae Naturales*, 71, 1–29. <https://doi.org/10.2478/cszma-2022-0001>
- Kvifte G. M. (2014) Nomenclature and taxonomy of *Telmatoscopus* Eaton and *Seoda* Enderlein; with a discussion of parameral evolution in Paramormiini and Pericomaini (Diptera: Psychodidae, Psychodinae). *Zootaxa*, 3878(4), 390–400. <https://doi.org/10.11646/zootaxa.3878.4.5>
- Kvifte G. M., Håland Ø., Andersen T. (2011) Moth flies (Diptera, Psychodidae) from Finnmark, northern Norway. *Norwegian Journal of Entomology*, 58, 180–188.

- Oboňa J., Dvořák L., Haenni J.-P., Hrivniak L., Japoshvili B., Ježek J., Kerimova I., Máca J., Muranyi D., Rendoš M., Słowińska I., Snegovaya N., Starý J., Manko P. (2019a) New and interesting records of Diptera from Azerbaijan and Georgia. *Zoosystematica Rossica*, 28 (2), 277–295. <https://doi.org/10.31610/zsr/2019.28.2.277>
- Oboňa J., Dvořák L., Haenni J.-P., Hrivniak L., Japoshvili B., Ježek J., Kerimova I., Máca J., Muranyi D., Rendoš M., Słowińska I., Snegovaya N., Starý J., Manko P. (2019b) Checklists of the Diptera families Anisopodidae, Blephariceridae, Campichoetidae, Dixidae, Drosophilidae, Limoniidae, Lonchopteridae, Pediciidae, Psychodidae, and Scatopsidae of Azerbaijan and Georgia. Electronic supplementary material 2. *Zoosystematica Rossica*, 28 (2), 300–310. <https://doi.org/10.31610/zsr/2019.28.2.277>
- Oboňa J., Ježek J. (2012) First records of dendrolimnetic moth flies (Diptera: Psychodidae) from Slovakia. Prvónálezy dendrotelmových kútoviek (Diptera: Psychodidae) zo Slovenska. *Klapalekiana* 48, 279–287.
- Oboňa J., Ježek J. (2014) Prodrómus of moth flies (Diptera: Psychodidae) from Slovakia. *Acta Musei Silesiae, Scientiae Naturales*, 63, 193–251. <https://doi.org/10.2478/csma-2014-0020>
- Omelková M., Ježek J. (2012a) Two new species of *Pneumia* Enderlein (Diptera, Psychodidae, Psychodinae) from the Palaearctic Region. *Zootaxa*, 3180, 1–18. <https://doi.org/10.11646/zootaxa.3180.1.1>
- Omelková M., Ježek J. (2012b) Two new species of *Philosepedon* Eaton (Diptera, Psychodidae, Psychodinae) from Europe, with comments on subgeneric classification. *Zootaxa* 3275, 29–42. <https://doi.org/10.11646/zootaxa.3275.1.3>
- Omelková M., Ježek J. (2012c) A new species of the genus *Trichomyia* (Diptera: Psychodidae) and new faunistic data on non-phlebotomine moth flies from the Podyjí NP and its surroundings (Czech Republic). *Acta Entomologica Musei Nationalis Pragae*, 52, 505–533.
- Pruner L., Míka P. (1996) Seznam obcí a jejich částí v České republice s čísly mapových polí pro síťové mapování fauny. List of settlements in the Czech Republic with associated map field codes for faunistic grid mapping system. *Klapalekiana* 32, (Suppl.), 1–115.
- Region Železné hory (Chrudim, Chotěboř, Hlinsko), map, 1:75 000, Příroda, kultura, rekreace, support of Železné hory PLA, Společnost přátel Železných hor, Žďárské vrchy PLA and Referát životního prostředí Chrudim.
- Szabó J. (1983) 10. család: Psychodidae – Lepkeszúnyogok. *Fauna Hungariae*, 156, 1–78.
- Tkoč M., Pecharová M., Ježek J. (2014) Catalogue of the type specimens of Diptera deposited in the Department of Entomology, National Museum, Prague, Czech Republic. Moth flies (Psychodidae). *Acta Entomologica Musei Nationalis Pragae*, 54(2), 789–837.
- Vaillant F. (1971-1983) Psychodidae–Psychodinae (not finished). In: Lindner E. (Ed.) Die Fliegen der palaearktischen Region. Stuttgart, 287(1971): 1–48; 291(1972), 49–78; 292(1972), 79–108; 305(1974), 109–142; 310(1975), 143–182; 313(1977), 183–206; 317(1978), 207–238; 320(1979), 239–270; 326(1981), 271–310; 328(1983), 311–358.
- Vimmer A. (1913) Seznam českého hmyzu dvoukřídlého (Catalogus Dipteriorum). *Entomologické příručky*, Praha, 8, 1–99.

- Wagner R. (1990) Family Psychodidae. *In*: Soós A., Papp L. (eds) *Catalogue of Palaearctic Diptera*, Vol. 2, Akademiai Kiado, Budapest, pp. 11–65.
- Wagner R. (2019) Fauna Europaea: Psychodidae. *In*: de Jong H. (ed.): *Fauna Europaea: Diptera Nematocera*. Fauna Europaea version 2018. Available on: <https://fauna-eu.org>. (accessed 21 October 2018).
- Withers P. (1989) Moth Flies. Diptera: Psychodidae. *Dipterists Digest*, 4, 1–83.
- Zelený J. (1972) Návrh členění Československa pro faunistický výzkum. Entwurf einer Gliederung der Tschechoslowakei für Zwecke der faunistischen Forschung. *Zprávy Československé společnosti entomologické při ČSAV*, 8, 3–16.

SUMMARY

A good knowledge of biodiversity is the basic building block of many studies, classifications and, last but not least, knowledge of the ecology and biology of selected species. These results represent a detailed overview of the biodiversity of the family Psychodidae from Železné hory Mts. A total of 79 species were recorded. Of these, 22 species have some conservation importance / status (12 spp. – critically endangered, 3 spp. – endangered, 4 spp. – vulnerable, and 5 spp. potentially requiring conservation status (nationally scarce, used in the past). A basic prerequisite for understanding and protecting biodiversity is the development of a high-quality faunal and taxonomic base. This knowledge can then be applied to the protection of endangered species and the management of their habitats.



Editorial remarks:

* Papers of the 40th volume of Dipteron are dedicated to the late Maria Grzybkowska

<https://pte.up.poznan.pl/pte/dipteron/redakcja.htm>

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