

Tachinidae (Diptera) of the Jizerské hory Mts, Frýdlant region and Liberec environs (northern Bohemia, Czech Republic)

Kuklicovití (Diptera: Tachinidae) Jizerských hor, Frýdlantska a okolí Liberce (severní Čechy, Česká republika)

Erikas Lutovinovas¹, Miroslav Barták², Pavel Vonička³ & Petr Mückstein⁴

¹) Nature Research Centre, Akademijos 2, LT-08412 Vilnius 21, Lithuania;
e-mails: wohlfahrtia@gmail.com, erikas.lutovinovas@gamtostyrimai.lt

²) Department of Zoology and Fisheries, Faculty of Agrobiological,
Food and Natural Resources, Czech University of Life Sciences Prague,
CZ-165 21 Praha 6-Suchdol, Czech Republic; e-mail: bartak@af.czu.cz

³) North Bohemian Museum, Masarykova 11, CZ-460 01 Liberec 1, Czech Republic;
e-mail: pavel.vonicka@muzeumlb.cz

⁴) Nature Conservation Agency of the Czech Republic, Žďárské vrchy PLA Administration,
Brněnská 39, CZ-591 01 Žďár nad Sázavou, Czech Republic;
e-mail: muckstein@email.cz

Abstract. Altogether 117 species of the family Tachinidae are reported from the Jizerské hory Mts, Frýdlant region and vicinity of the Liberec city. Together with seven other species published earlier, 124 species are known from this region, representing 25.8% of all tachinids known from the Czech Republic and 31.6% of all tachinids known from Bohemia (including species recorded herewith for the first time but excluding unnamed species). Two species (*Ceranthia tristella* and *Peribaea longirostris*) are recorded for the first time from the Czech Republic and one more species (*Nowickia atripalpis*) represents the first record from Bohemia. None of the species found are listed in the Red List of Invertebrates of the Czech Republic.

Key words: Diptera, Tachinidae, Jizerské hory Mts, Frýdlantská pahorkatina Hills, Liberecká kotlina Basin, Ještědský hřbet Ridge, Czech Republic, faunistics, new records

INTRODUCTION

Adult tachinids are mostly strongly bristled flies, ranging from 2 to 20 mm in length, bearing meral setae and a well developed convex subscutellum. Their larvae are parasitoids of larval Lepidoptera, Coleoptera or Hymenoptera, but also adults of Coleoptera, Heteroptera and Orthoptera (occasionally also some other insect orders or even other arthropods) are among their hosts. Tachinids may be regarded as key parasitoids that are able to affect balance in invertebrate communities, and economically beneficial when developing in agricultural and forestry pests. Data on host preferences for about one third of the Czech species have been provided by Vaňhara et al. (2009). More information about host preferences can be found in Herting (1960) or Tschorsnig & Herting (1994). Tachinids occur throughout Central Europe, but they prefer warmer landscapes with close-to-nature vegetation (deciduous woods, mixed woods, heathland, xerothermic meadows, etc.). Considerably less species are present in wet mountains, coniferous forests or intensively cultivated agricultural areas (Tschorsnig & Richter 1998).

Tachinidae rank among the largest families of flies with about 8,500 species recognized worldwide (O'Hara 2014), and almost 900 species reported from Europe (Tschorsnig et al. 2013). Currently, 478 species are listed for the Czech Republic – 390 from the historical land of Bohemia and 428 from Moravia (Vaňhara & Tschorsnig 2009; Lutovinovas et al. 2014). For the main characters of the family and keys to the Central European genera and species, see Tschorsnig & Herting (1994), with an on-line authorized version in English translation from 2001. However, newly incoming sources should be consulted for the identification of recently described species (Andersen 1996; Ziegler & Shima 1996; Ziegler 1999, 2000, 2012; Bystrowski 2001; Zhang & Shima 2006; Bergström 2007).

Records of 20 species of Tachinidae were previously published from the Jizerské hory Mts by Čepelák (1983). Here we present new records collected during the faunistic survey in the Jizerské hory Mts and Frýdlant region in 2002–2008 (Vonička & Preisler 2008, 2009), and later records collected from this region and the vicinity of the Liberec city in 2010–2015. Several older specimens from the collection of the North Bohemian Museum, collected in the Ještědský hřbet Ridge in 1992 by R. Čtvrtečka have supplemented our data.

MATERIAL AND METHODS

Description of the study area

The study area includes the Jizerské hory Protected Landscape Area, the north located smaller territory of the Frýdlant region and extending south to the Liberec city and its environs. Geographically, it is a part of the Krkonoše-Jeseniky Mts system and Krkonoše Mts subsystem (Demek 1987). Particular areas are a part of the geomorphological complexes and subcomplexes of the Jizerské hory Mts, Frýdlantská pahorkatina Hills, Žitavská kotlina Basin (as a subcomplex of the Liberecká kotlina Basin) and Ještědsko-Kozákovský hřbet Ridge (as a subcomplex of the Ještědský hřbet Ridge). The surveyed area covers a wide range of altitudes; the highest elevations include the top of Smrk Mt. (1124 m a.s.l.) in the Jizerské hory Mts, and the top of Ještěd Mt. (1012 m a.s.l.) in the Ještědský hřbet Ridge; the lowest elevation is the water level of the Smědá river on the Polish state border in the Frýdlant region (208 m a.s.l.).

Geologically, the study area belongs to the Lugicum area, which forms the north-eastern part of the Bohemian Massif. The Jizerské hory Mts are a part of the Krkonoše-Jizerské hory crystalline complex, which has been divided into six sections; in the surveyed area there are two sections: the Jizera gneiss complex and the Variscan Krkonoše-Jizerské hory granite massif (Chaloupský 1989). The Frýdlantská pahorkatina Hills is a part of the Lužice Massif, built of Cadomian granitoids. The prevailing part of the Ještědský hřbet Ridge belongs to the Ještěd crystalline complex. Along the Smědá river in the Frýdlant region and in the Liberecká kotlina basin, Tertiary fresh-water sediments have been preserved. In the south-western part of the Frýdlantská pahorkatina Hills and sporadically in the Jizerské hory Mts, solitary Tertiary basaltic knobs protrude. In the Frýdlant region, Quaternary sediments are significantly represented: loess earth and glaciuvial sediments (gravels and pits). In higher altitudes in the Jizerské hory Mts, organic sediments (peat) occur.

The climate of the study area is significantly affected by the fact that the Jizerské hory Mts are situated on the windward side to the prevailing western winds. They create a barrier to the moist and cold air currents from the Atlantic ocean, which results in high rainfall and snow cover. The average annual precipitation in the period between 1900 and 1950 ranged from 1000 to 1705 mm (the meteorological station U Studánky, locality Bílý Potok). The total amount of precipitation in the Frýdlantská pahorkatina Hills and Liberecká kotlina basin was about 900 mm, in the warmer western part of the Frýdlant region 800 mm only and in the eastern moist part almost 1000 mm. The Jizerské hory Mts are situated in a cold climatic region. The average annual temperature falls below 5 °C in the Jizerské hory Mts, in higher altitudes below 4 °C. The average annual temperature in the Frýdlant region ranges from 7 to 8.5 °C, in the Liberecká kotlina basin it is about 7 °C (Quitt 1971).

The rivers of the study area flow to the North and Baltic Seas. Many watercourses rise in the Jizerské hory Mts. Lužická Nisa drains waters from the northern and western parts of the Jizerské hory Mts to the Odra (Oder) river and to the Baltic Sea; the most important tributary of the Lužická Nisa is Smědá which drains waters from the Frýdlant region. Jizera is the most significant river which drains waters from the southern and eastern parts of the Jizerské hory Mts to the Labe (Elbe) river and the North Sea; an important tributary of Jizera is Kamenice. In the Jizerské hory Mts there are several water reservoirs. In the Frýdlant region, several ponds can be found; the greatest of them is the Dubák pond near Černousy. Natural water bodies occur in the Jizerské hory Mts too: small peat lakes in the peat bogs.

From the phytogeographical point of view, the study area belongs predominantly to Oreophyticum, district 92. Jizerské hory Mts, in the southeastern part district 93. Krkonoše Mts. The lower altitudes belong to Mesophyticum, districts 48. Lužická kotlina Basin, 49. Frýdlantská pahorkatina Hills and 54. Ještědský hřbet Ridge (Skalický 1988).

Except for the southern foothills, the whole territory of the Jizerské hory Mts is almost continuously covered by forest ecosystems. Forests are significantly modified by forest management, the originally predominant beech was substituted by spruce. Continuous beechwoods remain preserved on the northern and northwestern slopes of the Jizerské hory Mts only. Originally mixed forests were significantly changed, silver fir became almost extinct and even the native spruce declined markedly. Except for small fragments, mountain spruce beechwoods were not preserved. The forests in the central part of the mountains were destroyed during the ecological disaster resulting from high air pollution load and larch tortrix and bark beetle outbreaks in the 1970-90s. Damaged spruce stands were preserved in protected areas (nature reserves) only. Extensive clearcuts were reforested mostly with spruce (*Picea excelsa*), partly with introduced exotic species of spruce and pine (*Picea pungens*, *Pinus* spp.). At present, the central part of the mountains is covered by young spruce stands under 40 years of age. Peat ecosystems are the most valuable natural sites in the central part of the Jizerské hory Mts. They are represented by many peat bogs differing in size and quality. Mesophilic and hydrophilic meadows are present near the southern border of the mountains; the most valuable of them are developed in the Malá Strana and Bukovec Nature Reserves and in the Tichá říčka Natural Monument.

Major part of the Frýdlant region is covered by farmland. Besides arable land there are large areas of cultural meadows and pastures. Near-natural grasslands are found mostly in the floodplain of the Smědá river. Diverse aquatic and wetland plant communities are developed near ponds in the whole area, most significantly near the Dubák pond. Cultural meadows and pastures occur throughout the region, especially on the steep slopes at the northern foothills of the Jizerské hory Mts. The forests in the Frýdlant region are mostly cultivated. Spruce (*Picea abies*) and Scots pine (*Pinus sylvestris*) predominate in the species composition, near-natural components include the sessile oak (*Quercus petraea*) and pedunculate oak (*Q. robur*), beech (*Fagus sylvatica*), littleleaf linden (*Tilia cordata*) and hornbeam (*Carpinus betulus*).

Much of the Liberecká kotlina basin is urbanized, other large areas are arable lands and cultural grasslands. Relatively near-natural vegetation is preserved in small areas. Forests are notably modified by forest management; small near-natural stands are preserved on the slopes in the valleys. Mesophilic and hydrophilic meadows and wetlands are important non-forest communities.

List of localities

Data are presented in the following order: locality name (grid mapping square code); abbreviation of the geomorphological complex; nearest village, city or its part (where appropriate); coordinates; altitude; habitat type (where appropriate). The localities are listed alphabetically.

Abbreviations used: NM – Natural Monument, NR – Nature Reserve, NNR – National Nature Reserve; FP – Frýdlantská pahorkatina Hills, JE – Ještědský hřbet Ridge, JH – Jizerské hory Mts, LK – Liberecká kotlina Basin.

Bílý Potok (5157); JH; 50°52'49"N, 15°13'03"E; 450 m; ponds and wetland northeast of railway station.

Bukovec NR (5158); JH; Kořenov-Jizerka; 50°48'40"N, 15°21'21"E; 900 m; damp meadow.

Černousy-V Poli (5056); FP; 50°59'46"N, 15°02'48"E; 210 m; alder groves.

Francouzské kameny (5157); JH; Lázně Libverda; 50°53'15"N, 15°14'38"E; 800 m; banks of the Velká Rybí voda stream.

Hmrštejn NR (5255); JE; Liberec-Machnín; 50°46'48"N, 14°58'06"E; 400 m; mixed forest.

Holubník Mt. (5157); JH; Hejnice; 50°49'57"N, 15°10'51"E; 900 m; Bílé bukovi beech forest.

Horní Maxov (5257); JH; Lučany nad Nisou; 50°45'32"N, 15°13'03"E; 700 m; Smržovský potok valley.

Horní Řasnice (5057); FP; 50°58'26"N, 15°12'45"E; 400 m; deserted sand pit.

Chrastná (5255); JE; Osečná; 50°42'19"N, 14°53'02"E; 350 m.

Jablonec nad Nisou-Mšeno (5256-5257); JH; 50°44'27"N, 15°10'57"E; 580 m.

Janov nad Nisou (5256); JH; 50°46'41"N, 15°08'48"E; 750 m; peatbog north of Hašlerova chata.

Jedlový důl NR (5257); JH; Josefův Důl; 50°47'22"N, 15°14'28"E; 700 m; mixed forest.

Ještědský hřbet (without specification of precise locality).

Jizerka (5158); JH; Kořenov; 50°49'09"N, 15°20'51"E; 850 m.

Klíkuvá louka NR (5156); JH; Bedřichov; 50°48'07"N, 15°08'12"E; 750 m; peatbog.

Karlové bučiny NNR (5255); JE; Liberec-Karlovy; 50°46'22"N, 14°58'37"E; 450 m; deciduous forest.

Liberec-Lidové sady (5256); LK; 50°46'43"N, 15°05'04"E; 450 m; mixed forest.

Liberec-Perštýn (5256); LK; 50°45'53"N, 15°04'05"E; 350 m.

Liberec-Rochlice (5256); LK; 50°45'38"N, 15°04'23"E; 400 m; wetland in the Broumovská housing estate.

Liberec-Rudolfov (5256); JH; 50°48'17"N, 15°06'34"E; 650–700 m; mixed forest around the Černá Nisa valley, Javorový vrch Mt., skála Krabice (rock).

Liberec-Starý Harcov (5256); LK; 50°46'21"N, 15°05'38"E; 400 m.

Liberec-Vesec (5256); LK; 50°44'07"N, 15°04'33"E; 380 m; wetlands in the Vesecké údolí valley.

Liberec-Vratislavice nad Nisou (5256); LK; 50°44'58"N, 15°05'11"E; 400 m.

Malá Strana NR (5257); JH; Lučany nad Nisou-Horní Maxov; 50°45'58"N, 15°12'09"E; 700 m; damp meadow, wetland, pond.

Meandry Smědé NR (5056); FP; Černousy; 50°59'54"N, 15°02'21"E; 210 m; Smědá valley.

Nová louka NR (5156); JH; Bedřichov; 50°48'50"N, 15°09'40"E; 760 m; peatbog.

Panský lom NM (5256); JE; Liberec-Horní Hanychov; 50°43'28"N, 15°00'54"E; 600 m; mixed forest.

Poustecká obora (game reserve) (5056); FP; Višňová-Pouстка; 50°57'33"N, 15°03'50"E; 270 m; mixed forest.

Pouстка (5056); 50°56'44"N, 15°03'10"E; FP; Višňová; 300 m; meadow ca. 2 km southeast of the village.

Rašeliniště Jizerky NNR (5158); JH; Kořenov-Jizerka; 50°49'40"N, 15°20'13"E; 870 m; Klugeho louka peatbog.

Rašeliniště Jizery NNR (5158); JH; Kořenov-Jizerka; 50°50'59"N, 15°21'10"E; 830 m; peatbog.

Rybí loučky NR (5158); JH; Kořenov-Jizerka; 50°50'46"N, 15°20'32"E; 850 m; peatbog.

Šolcův rybník (pond) (5156); JH; Raspenava; 50°52'49"N, 15°06'52"E; 350 m; alder groves, wetland.

Špičák Mt. (5156); JH; Jizerskohorské bučiny NNR; Oldřichov v Hájích; 50°51'56"N, 15°04'43"E; 600 m; beech forest.

Tichá říčka NM (5257); JH; Janov nad Nisou-Hrabětice; 50°47'02"N, 15°11'29"E; 750 m; damp meadow.

Višňová (5056); FP; 50°59'50"N, 15°01'44"E; 230 m; meadow.

Výpřež (pass) (5256); JE; Liberec-Horní Hanychov; 50°44'40"N, 14°58'44"E; 780 m; mixed forest.

Collecting methods and material

The material was obtained using the following collecting methods: vegetation sweeping (especially flowering plants of the family Apiaceae), yellow pan water traps, Malaise traps and emergence traps. Some specimens on the locality Liberec-Rudolfov were collected using meat traps (all methods are described by Vonička 2008).

Most of the material were collected by J. Preisler and P. Vonička between 2002 and 2015 (527 specimens were selected from this material), and a small part by R. Čtvrtečka in 1992 (5 specimens were preserved in the collection). Selection of the material from the traps set up by J. Preisler and P. Vonička and their preparation were done by J. Preisler and M. Barták. A major part of the selected material was identified by E. Lutovinovas (collected in 1992, 2002–2003, 2006, 2008 and 2010–2014; 505 specimens), whereas a smaller part by P. Mückstein (collected in 2005; 26 specimens). One specimen was also identified by M. Barták (collected in 2015). Voucher specimens are deposited in collections of the second author of this report (M. Barták) and of the North Bohemian Museum in Liberec.

The species nomenclature was taken from Tschorsnig et al. (2013) with minor exceptions (see Discussion). New species for the Czech Republic are marked with symbol **CZ!**, new species for Bohemia with symbol **B!** and those whose presence was validated only by the previous source (Čepelák 1983) are marked in square brackets in the species list.

RESULTS

List of species

TACHINIDAE

DEXIINAE

Athrycia trepida (Meigen, 1824)

Palearctic, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I. (it comprises the island of Great Britain and all surrounding islands and island groups including Orkney, Shetland, the Outer and Inner Hebrides, Anglesey, the Isles of Scilly and the Isle of Man), Norway, Finland and the north of Russia (Tschorsnig et al. 2013). Very frequent in Central Europe, prefers forest edges, meadows. Hosts (Tschorsnig & Herting 1994): various Noctuidae, primarily *Orthosia* spp. (Lepidoptera).

Material examined: Bukovec NR, 20.v.–21.vii.2010, 2 ♂♂, 1 ♀. Rašeliniště Jizery NNR, 30.iv.–04.vi.2002, 1 ♂. Šolcův rybník, 26.iv.–13.vi.2011, 7 ♂♂, 4 ♀♀.

Blepharomyia pagana (Meigen, 1824)

Palearctic, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Not rare in Central Europe, prefers deciduous forests. Hosts (Tschorsnig & Herting 1994): various Geometridae living in deciduous forests, rarely also a few other Lepidoptera.

Material examined: Bukovec NR, 02.–21.vii.2010, 1 ♂. Šolcův rybník, 11.–26.v.2011, 1 ♀.

Blepharomyia piliceps (Zetterstedt, 1859)

European, from the uplands of Spain and Bulgaria to Britain I., Norway and Finland (Tschorsnig et al. 2013). Rather rare in Central Europe, most often in reared material; prefers cooler places, mountains. Hosts (Tschorsnig & Herting 1994): various Geometridae (primarily *Eulithis populata*), rarely also a few Noctuidae (Lepidoptera).

Material examined: Holubník Mt., 11.v.–16.vi.2011, 1 ♂, 3 ♀♀.

Campylocheta inepta (Meigen, 1824)

Palearctic, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Locally frequent in Central Europe, prefers areas of heath, bushes, thin forest edges. Hosts (Tschorsnig & Herting 1994): various Geometridae, rarely also a few other Lepidoptera.

Material examined: Bukovec NR, 02.–21.vii.2010, 7 ♀♀. Holubník Mt., 11.v.–03.viii.2011, 3 ♂♂, 9 ♀♀.

Campylocheta praecox (Meigen, 1824)

Palearctic, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Not rare in Central Europe, prefers deciduous forests. Hosts (Tschorsnig & Herting 1994): *Colotois pennaria*, *Crocallis elinguarua* (Lepidoptera: Geometridae).

Material examined: Rašeliniště Jizery NNR, 30.iv.–04.vi.2002, 1 ♀. Výpřež, 09.v.–12.vi.2013, 1 ♂.

***Chetoptilia puella* (Rondani, 1862)**

Palaeartic, in Europe from France, Italy and Bulgaria to Sweden and Poland, but apparently absent from Britain I. (Tschorsnig et al. 2013). Rather rare in Central Europe, prefers warmer places. Host (Tschorsnig & Herting 1994): *Byctiscus betulae* (Coleoptera: Curculionidae). Material examined: Šolcův rybník, 01.vii.–03.viii.2011, 1 ♀.

***Dinera fuscata* Zhang & Shima, 2006**

Palaeartic, in Europe from Spain, Italy and Bulgaria to Britain I., Sweden and Lithuania (J. Ziegler, pers. comm.). This species was listed under the name *D. carinifrons* in the checklist of flies of the Czech Republic (Vaňhara & Tschorsnig 2009); its identity has been clarified only recently (Lutovinovas et al. 2013). Locally frequent in Central Europe, prefers forest edges, meadows. Host (Belshaw 1993): *Agrilinus ater* (Coleoptera: Aphodiidae). Material examined: Bukovec NR, 02.ix.–15.x.2010, 1 ♂. Šolcův rybník, 24.viii.–06.x.2011, 1 ♀.

***Dufouria chalybeata* (Meigen, 1824)**

Palaeartic, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Frequent in Central Europe, however, only single individuals found; prefers bushes, forest edges. Hosts (Tschorsnig & Herting 1994): *Cassida* spp. (Coleoptera: Chrysomelidae). Material examined: Šolcův rybník, 26.v.–01.vii.2011, 1 ♂, 5 ♀♀.

***Eriothrix rufomaculata* (De Geer, 1776)**

Palaeartic, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Norway, Finland and the north of Russia (Tschorsnig et al. 2013). Frequent in Central Europe, prefers meadows, ruderal areas, fields. Host (Paston & Rotheray 2009): *Chrysoteuchia culmella* (Lepidoptera: Crambidae). Published data: Bílý Potok, 12.viii.1964, 2 ♀♀ (Čepelák 1983). Material examined: Bukovec NR, 21.vii.–15.x.2010, 2 ♂♂, 2 ♀♀. Poustka, 08.viii.2012, 1 ♀.

***Klugia marginata* (Meigen, 1824)**

Palaeartic, in Europe from Spain, Italy, Bulgaria and Ukraine to Norway, Finland and vicinity of St. Petersburg, but apparently absent from Britain I. (Tschorsnig et al. 2013). Rather rare in Central Europe, prefers forest edges, meadows, dunes. Host unknown. Material examined: Šolcův rybník, 26.v.–13.vi.2011, 1 ♂, 1 ♀.

***Microsoma exiguum* (Meigen, 1824)**

Palaeartic, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Sweden, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). In Central Europe frequently caught by Malaise traps, otherwise uncommon; prefers meadows, forest edges, also fields. Hosts (Tschorsnig & Herting 1994): *Sitona* spp., rarely also a few other Curculionidae (Coleoptera). Material examined: Bílý Potok, 03.–16.vi.2005, 1 ♂. Šolcův rybník, 11.–26.v.2011, 1 ♀.

***Phyllomya volvulus* (Fabricius, 1794)**

Palaeartic, throughout Europe, from Spain, Italy, Bulgaria and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Locally frequent in Central Europe, prefers forests, deforested areas, bushes. Hosts (Tschorsnig & Herting 1994): various Tenthredinidae (Hymenoptera).

Material examined: Bílý Potok, 03.–16.vi.2005, 1 ♂. Bukovec NR, 02.vii.–02.ix.2010, 8 ♂♂, 7 ♀♀. Ještědský hřbet, 01.vii.1992, 1 ♂. Šolcův rybník, 26.v.–13.vi.2011, 1 ♀.

***Ramonda spathulata* (Fallén, 1820)**

Palaeartic, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Frequent in Central Europe, prefers meadows, bushes, forest edges. Hosts (Tschorsnig & Herting 1994): various Noctuidae (Lepidoptera).

Material examined: Bílý Potok, 19.v.–03.vi.2005, 1 ♀. Holubník Mt., 01.vii.–13.ix.2011, 1 ♂, 1 ♀.

***Rondania fasciata* (Macquart, 1834)**

European, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Norway and Finland (Tschorsnig et al. 2013). In Central Europe frequently caught by Malaise traps, otherwise uncommon; prefers forest edges, bushes. Hosts (Tschorsnig & Herting 1994): *Strophosoma* spp. (Coleoptera: Curculionidae).

Material examined: Bukovec NR, 15.vi.–21.vii.2010, 1 ♂, 3 ♀♀. Holubník Mt., 11.v.–16.vi.2011, 1 ♀. Poustecká obora, 27.iv.–16.v.2012, 1 ♂. Šolcův rybník, 26.v.–13.vi.2011, 1 ♂, 1 ♀.

***Thelaira nigripes* (Fabricius, 1794)**

Palaeartic, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Very frequent in Central Europe, prefers deciduous forests, bushes. Hosts (Tschorsnig & Herting 1994): various Erebidae, rarely also a few other Lepidoptera.

Published data: Bílý Potok, 04.viii.1961, 1 ♀ (Čepelák 1983).

Material examined: Višňová, 30.v.2014, 2 ♂♂.

***Trixa conspersa* (Harris, 1776)**

Palaeartic, in Europe from France, Italy, Greece and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Frequent in Central Europe, prefers meadows, forest edges, usually cooler places (highlands). Hosts (Tschorsnig & Herting 1994): various *Pharmacis* spp. (Lepidoptera: Hepialidae).

Material examined: Bukovec NR, 02.–21.vii.2010, 1 ♀.

***Voria ruralis* (Fallén, 1810)**

Cosmopolitan, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Very frequent in Central Europe, prefers meadows, bushes, forest edges. Hosts (Tschorsnig & Herting 1994): various *Autographa* spp. (primarily *A. gamma*), rarely also a few other Noctuidae (Lepidoptera).

Material examined: Bukovec NR, 02.vii.–06.viii.2010, 1 ♂, 1 ♀. Liberec-Rudolfov, 25.viii.2013, 1 ♀.

EXORISTINAE

***Admontia grandicornis* (Zetterstedt, 1849)**

Holarctic, in Europe from France, Italy and Hungary to Britain I., Norway, Finland and the north of Russia (Tschorsnig et al. 2013). Not rare in Central Europe, prefers damp meadows, wet woodland. Hosts (Tschorsnig & Herting 1994): various *Tipula* spp. (Diptera: Tipulidae). Material examined: Bukovec NR, 06.viii.–02.ix.2010, 1 ♀. Holubník Mt., 16.vi.–13.ix.2011, 4 ♀♀. Špičák Mt., 28.vi.2005, 1 ♂.

***Allophorocera ferruginea* (Meigen, 1824)**

Palearctic, in Europe from France, Italy, Bulgaria and Ukraine to Britain I., Norway, Finland and the north of Russia (Tschorsnig et al. 2013). Frequent in Central Europe, prefers coniferous and deciduous woodland, moderately damp meadows. Hosts (Tschorsnig & Herting 1994): various *Tipula* spp. (Diptera: Tipulidae).

Published data: Bílý Potok, 01.viii.1961, 1 ♂; 04.viii.1961, 1 ♀; 12.viii.1964, 1 ♀. Hejnice, 04.viii.1961, 1 ♂ (all Čepelák 1983, as *Pilatea ferruginea*).

Material examined: Jablonec nad Nisou-Mšeno, 01.viii.2012, 1 ♂. Liberec-Rudolfov, 07.viii.2012, 1 ♂, 3 ♀♀.

***Bactromyia aurulenta* (Meigen, 1824)**

Palearctic, throughout Europe, from Spain, Italy, Bulgaria and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013; Haraldseide 2012). Not rare in Central Europe, prefers bushes, deciduous forest edges. Hosts (Tschorsnig & Herting 1994): various *Yponomeuta* spp. (Yponomeutidae), rarely also a few other Lepidoptera.

Material examined: Šolcův rybník, 03.viii.–06.x.2011, 2 ♂♂.

***Bessa parallela* (Meigen, 1824)**

Palearctic, in Europe from France, Italy, Bulgaria and Ukraine to Britain I., Sweden and Poland (Tschorsnig et al. 2013). Not rare in Central Europe, most often in reared material; prefers hedges, bushes, orchards, thin deciduous woodland. Hosts (Tschorsnig & Herting 1994): various Yponomeutidae, Tortricidae and Pyralidae, rarely also a few other Lepidoptera.

Material examined: Poustecká obora, 16.v.–12.vi.2012, 1 ♂. Šolcův rybník, 26.v.–13.vi.2011, 1 ♂, 1 ♀.

***Bessa selecta* (Meigen, 1824)**

Palearctic, throughout Europe, from Spain, Italy, Bulgaria and Ukraine to Britain I., Sweden, Finland and the north of Russia (Tschorsnig et al. 2013). Not rare in Central Europe, most often in reared material; prefers hedges, bushes, orchards, thin deciduous woodland. Hosts (Tschorsnig & Herting 1994): various Tenthredinidae, rarely also a few other Symphyta (Hymenoptera).

Material examined: Poustecká obora, 16.v.–12.vi.2012, 1 ♂. Šolcův rybník, 24.viii.–06.x.2011, 3 ♀♀.

***Blondelia nigripes* (Fallén, 1810)**

Palearctic, throughout Europe, from Spain, Italy, Bulgaria and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Frequent in Central Europe, prefers hedges, bushes, orchards, deciduous woodland, meadows. Hosts (Tschorsnig & Herting 1994): various Lepidoptera and Tenthredinidae (Hymenoptera).

Published data: Bílý Potok, 01.viii.1961, 3 ♀♀; 12.viii.1964, 1 ♂, 6 ♀♀. Hejnice, 04.viii.1961, 1 ♂ (all Čepelák 1983).

Material examined: Bukovec NR, 02.–21.vii.2010, 1 ♂. Poustka, 08.viii.2012, 1 ♀.

[*Blondelia piniariae* (Hartig, 1838)]

European, from the Netherlands, Czech Republic and Slovakia to Sweden, but apparently absent from Britain I. (Tschorsnig et al. 2013). Very rare in Central Europe and only reared material from the specific host could have been assigned to this sibling species; sometimes considered as a variety of *B. nigripes* (Bergström & Bystrowski 2011). Host (Tschorsnig & Herting 1994): *Bupalus piniaria* (Lepidoptera: Geometridae).

Published data only: Bílý Potok, 12.viii.1968, 1 ♀ (Čepelák 1983, as a new species for Bohemia).

***Bothria subalpina* Villeneuve, 1910**

Palearctic, in Europe from Spain and Italy to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013; Horsfield et al. 2013). Rather rare in Central Europe, prefers deciduous woodland. Host (Tschorsnig & Herting 1994): *Cosmia trapezina* (Lepidoptera: Noctuidae).

Material examined: Jedlový důl NR, 15.iii.–20.vi.2008, 1 ♂. Liberec-Rudolfov, 24.iii.–01.v.2012, 2 ♂♂, 1 ♀ (meat trap). Šolcův rybník, 08.iv.–11.v.2011, 1 ♂, 1 ♀.

***Compsilura concinnata* (Meigen, 1824)**

Old World (also introduced into Nearctic), in Europe from Spain, Italy, Greece and Ukraine to Britain I., Sweden and Lithuania (Tschorsnig et al. 2013; Pakalniškis et al. 2006). Locally frequent in Central Europe, most often in reared material; prefers dry, warm forest edges, bushes. Hosts (Tschorsnig & Herting 1994): various Lepidoptera, rarely also a few Tenthredinidae (Hymenoptera).

Material examined: Šolcův rybník, 03.viii.–06.x.2011, 1 ♂, 1 ♀.

***Cyzenis albicans* (Fallén, 1810)**

Palearctic (also introduced into Nearctic), throughout Europe, from Spain, Italy, Croatia and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Frequent in Central Europe, prefers deciduous woodland, bushes, orchards. Host (Tschorsnig & Herting 1994): *Operophtera brumata* (Geometridae), rarely also a few other deciduous woodland dwelling Lepidoptera.

Material examined: Karlovské bučiny NNR, 25.iv.2013, 1 ♂. Liberec-Rudolfov, 01.–20.v.2013, 1 ♀ (meat trap). Meandry Smědé NR, 27.iv.2012, 1 ♀. Panský lom NM, 09.v.2013, 1 ♂. Poustecká obora, 27.iv.–16.v.2012, 1 ♂. Šolcův rybník, 08.iv.–11.v.2011, 1 ♂.

***Cyzenis jucunda* (Meigen, 1838)**

Euro-Siberian, in Europe from France, Italy and Romania to Sweden, Finland and vicinity of St. Petersburg, but apparently absent from Britain I. (Tschorsnig et al. 2013). Rather rare in Central Europe, prefers deciduous woodland. Host unknown.

Material examined: Klikvová louka NR, 21.v.2014, 1 ♀. Šolcův rybník, 08.iv.–11.v.2011, 3 ♀♀.

***Drino lota* (Meigen, 1824)**

Old World, in Europe from France, Italy and Bulgaria to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Rather rare in Central Europe, most often in reared material; prefers forest edges. Host (Tschorsnig & Herting 1994): *Deilephila elpenor*, rarely also a few other Sphingidae (Lepidoptera).

Material examined: Šolcův rybník, 13.vi.–03.viii.2011, 1 ♂, 2 ♀♀.

***Epicampocera succincta* (Meigen, 1824)**

Palearctic, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Frequent in Central Europe, prefers meadows, forest edges. Hosts (Tschorsnig & Herting 1994): various *Pieris* spp. (Lepidoptera: Pieridae), rarely also a few other Lepidoptera.

Material examined: Bukovec NR, 15.vi.–02.vii.2010, 1 ♀. Šolcův rybník, 01.vii.–13.ix.2011, 3 ♂♂, 6 ♀♀.

[*Eumea linearicornis* (Zetterstedt, 1844)]

Palearctic, throughout Europe, from Spain, Italy, Bulgaria and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Frequent in Central Europe, prefers deciduous woodland, bushes. Hosts (Tschorsnig & Herting 1994): deciduous woodland dwelling Tortricidae (primarily *Archips* spp.) and Crambidae (*Anania hortulata*), rarely also a few other Lepidoptera.

Published data only: Bílý Potok, 12.viii.1964, 1 ♂ (Čepelák 1983, as *E. spernenda*).

***Eumea mitis* (Meigen, 1824)**

Palearctic, in Europe from Spain, Italy, Bulgaria and Ukraine to Britain I., Norway, Finland and the north of Russia (Tschorsnig et al. 2013; Perry 2011b). Not rare in Central Europe, prefers deciduous woodlands, bushes. Hosts (Tschorsnig & Herting 1994): various Tortricidae and Crambidae living in deciduous woodland, rarely also a few other Lepidoptera.

Material examined: Bukovec NR, 15.vi.–02.vii.2010, 1 ♀. Šolcův rybník, 24.viii.–06.x.2011, 1 ♂.

***Exorista rustica* (Fallén, 1810)**

Palearctic, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Very frequent in Central Europe, prefers open countryside, dry to damp meadows, gardens, fields, wasteland. Hosts (Tschorsnig & Herting 1994): various Tenthredinidae (Hymenoptera).

Published data: Bílý Potok, 12.viii.1964, 3 ♀♀ (Čepelák 1983).

Material examined: Bílý Potok, 03.–16.vi.2005, 1 ♀. Meandry Smědé NR, 08.viii.2012, 1 ♀.

***Gonia divisa* Meigen, 1826**

Palaeartic, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Sweden, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Locally frequent in Central Europe, prefers thin woodland, dry meadows. Host unknown.

Material examined: Šolcův rybník, 08.iv.–11.v.2011, 2 ♀♀.

***Huebneria affinis* (Fallén, 1810)**

Palaeartic, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Common in Central Europe, prefers meadows, forest edges. Hosts (Tschorsnig & Herting 1994): *Arctia caja*, *Phragmatobia fuliginosa*, rarely also a few other Erebidae (Lepidoptera).

Published data: Bílý Potok, 01.vi.1961, 1 ♀; 12.viii.1964, 3 ♂♂, 2 ♀♀ (Čepelák 1983).

Material examined: Šolcův rybník, 13.vi.–01.vii.2011, 1 ♀.

***Lecanipa bicincta* (Meigen, 1824)**

Euro-Siberian, in Europe from Switzerland, Bulgaria and Ukraine to Belgium, Finland and vicinity of St. Petersburg, but apparently absent from Britain I. and Scandinavia (Tschorsnig et al. 2013). Rather rare in Central Europe, prefers dry and warm forest edges, bushes. Host unknown.

Material examined: Bukovec NR, 02.vii.–06.viii.2010, 3 ♀♀. Šolcův rybník, 01.vii.–03.viii.2011, 2 ♀♀.

***Lydella stabulans* (Meigen, 1824)**

Palaeartic, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Locally common in Central Europe, prefers herbage in deforested areas, damp meadows, wet woodland. Hosts (Tschorsnig & Herting 1994): various boring Noctuidae (Lepidoptera).

Material examined: Šolcův rybník, 13.vi.–01.vii.2011, 2 ♀♀.

***Medina collaris* (Fallén, 1820)**

Palaeartic, throughout Europe, from Spain, Italy, Bulgaria and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Frequent in Central Europe, however only single individuals found; prefers warm, dry localities. Hosts (Tschorsnig & Herting 1994): *Xanthogaleruca luteola*, *Lochmaea* spp. (Coleoptera: Chrysomelidae).

Material examined: Šolcův rybník: 11.v.–03.viii.2011, 3 ♂♂, 3 ♀♀.

***Medina separata* (Meigen, 1824)**

Palaeartic, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Norway and Finland (Tschorsnig et al. 2013). Frequent in Central Europe, prefers bushes, hedges, forest edges. Hosts (Tschorsnig & Herting 1994): various Coccinellidae and Chrysomelidae (Coleoptera).

Material examined: Bukovec NR, 02.–21.vii.2010, 1 ♂. Karlovské bučiny NNR, 04.–19.vi.2013, 1 ♂. Šolcův rybník, 11.v.–06.x.2011, 2 ♂♂, 5 ♀♀.

***Meigenia dorsalis* (Meigen, 1824)**

Palaeartic, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Norway, Finland and the north of Russia (Tschorsnig et al. 2013). Frequent in Central Europe, prefers hedges, bushes, gardens, forest edges. Hosts (Tschorsnig & Herting 1994): various Chrysomelidae (Coleoptera).

Material examined: Jablonec nad Nisou-Mšeno, 01.viii.2012, 5 ♂♂. Šolcův rybník, 01.vii.–03.viii.2011, 1 ♂.

[*Meigenia mutabilis* (Fallén, 1810)]

Palaeartic, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Very frequent in Central Europe, prefers hedges, bushes, gardens, deciduous forest edges. Hosts (Tschorsnig & Herting 1994): various Chrysomelidae and Curculionidae (Coleoptera).

Published data only: Bílý Potok, 12.viii.1964, 1 ♀ (Čepelák 1983).

***Meigenia uncinata* Mesnil, 1967**

Palaeartic, in Europe from Spain, Italy, Bulgaria and Ukraine to the Netherlands and vicinity of St. Petersburg, but apparently absent from Britain I. and Scandinavia (Tschorsnig et al. 2013). Locally frequent in Central Europe, prefers dry scrubby slopes. Hosts (Cerretti & Tschorsnig 2010; Lutovinovas 2012): *Agelastica alni*, *Altica brevicollis*, *Gonioctena quinquepunctata* (Coleoptera: Chrysomelidae).

Material examined: Šolcův rybník, 24.viii.–06.x.2011, 1 ♂.

***Meigenia* spp. [sibling females]**

Material examined: Bukovec PR, 02.vii.–06.viii.2010, 2 ♀♀. Šolcův rybník, 13.vi.–01.vii.2011, 2 ♀♀.

***Myxexoristops abietis* Herting, 1964**

European, from Switzerland and Austria to Sweden and Finland, but apparently absent from Britain I. (Tschorsnig et al. 2013). Rather rare in Central Europe, most often in reared material; prefers spruce forests, rather cold areas. Host (Tschorsnig & Herting 1994): *Cephalcia abietis* (Hymenoptera: Pamphiliidae).

Material examined: Bukovec NR, 21.vii.–06.viii.2010, 1 ♀.

***Ocytata pallipes* (Fallén, 1810)**

Palaeartic, throughout Europe, from Spain, Italy, Bulgaria and Ukraine to Britain I., Norway and Finland (Tschorsnig et al. 2013; Pohjoismäki & Kahanpää 2014). Frequent in Central Europe, prefers forest edges, bushes, meadows. Host (Tschorsnig & Herting 1994): *Forficula auricularia*, rarely also a few other Forficulidae (Dermaptera).

Material examined: Hamrštejn NR, 09.vii.–02.viii.2013, 4 ♂♂. Jablonec nad Nisou-Mšeno, 01.viii.2012, 1 ♂. Karlovské bučiny NNR, 09.vii.–02.viii.2013, 1 ♂.

***Pales pavidata* (Meigen, 1824)**

Palaeartic, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013; Haraldseide 2012). Frequent in

Central Europe, prefers forest edges, bushes, meadows. Hosts (Tschorsnig & Herting 1994): various Lepidoptera.

Published data: Bílý Potok, 12.viii.1964, 1 ♂, 1 ♀ (Čepelák 1983).

Material examined: Šolcův rybník, 24.viii.–06.x.2011, 1 ♂.

***Paracraspedothrix montivaga* Villeneuve, 1919**

European, from Spain and Italy to Britain I., Norway, Finland and the north of Russia (Tschorsnig et al. 2013; Haraldseide 2012). In Central Europe not rare in Malaise traps, otherwise rather rare; prefers forest edges. Host unknown.

Material examined: Jablonec nad Nisou-Mšeno, 01.viii.2012, 1 ♂.

***Phorinia aurifrons* Robineau-Desvoidy, 1830**

Palearctic and Oriental, in Europe from Spain, Italy, Bulgaria and Ukraine to the Netherlands and vicinity of St. Petersburg, but apparently absent from Britain I. and Scandinavia (Tschorsnig et al. 2013). Not rare in Central Europe, prefers dry deciduous woodland edges, hedges, bushes, heath. Host (Tschorsnig & Herting 1994): *Cyclophora punctaria* (Lepidoptera: Geometridae).

Material examined: Meandry Smědé NR, 18.vii.2012, 1 ♀.

***Phorocera obscura* (Fallén, 1810)**

Palearctic, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Very frequent in Central Europe, prefers deciduous woodland, orchards. Hosts (Tschorsnig & Herting 1994): various Geometridae living in deciduous woodland, rarely also a few Noctuidae.

Material examined: Rašeliniště Jizery NNR, 30.iv.–04.vi.2002, 1 ♂.

***Phryno vetula* (Meigen, 1824)**

Palearctic, in Europe from Spain, Italy, Greece and Ukraine to Britain I., Sweden and Lithuania (Tschorsnig et al. 2013; Pakalniškis et al. 2006). Frequent in Central Europe, prefers deciduous woodland, bushes. Hosts (Tschorsnig & Herting 1994): deciduous woodland dwelling Noctuidae (primarily *Orthosia* spp.), rarely also a few Geometridae (Lepidoptera).

Material examined: Jedlový důl NR, 19.–30.v.2005, 1 ♂. Liberec-Rudolfov, 01.–20.v.2013, 1 ♀ (meat trap). Meandry Smědé NR, 27.iv.2012, 2 ♂♂. Panský lom NM, 08.–11.v.2012, 2 ♂♂. Poustecká obora, 27.iv.–16.v.2012, 1 ♂. Šolcův rybník, 08.iv.–11.v.2011, 2 ♂♂.

***Phryxe nemea* (Meigen, 1824)**

Palearctic, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013; Haraldseide 2012). Frequent in Central Europe, prefers deciduous forest edges, bushes, hedges, orchards. Hosts (Tschorsnig & Herting 1994): various Lepidoptera.

Material examined: Holubník Mt., 11.v.–16.vi.2011, 1 ♀.

***Platymya fimbriata* (Meigen, 1824)**

Palearctic, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Frequent in Central Europe, prefers meadows, bushes, forest edges. Host unknown.

Published data: Bílý Potok, 12.viii.1964, 1 ♀ (Čepelák 1983).
Material examined: Bukovec NR, 20.v.–06.viii.2010, 1 ♂, 7 ♀♀.

***Smidtia conspersa* (Meigen, 1824)**

Palearctic, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Norway and Finland (Tschorsnig et al. 2013; Haraldseide 2012). Frequent in Central Europe, prefers deciduous woodland, bushes. Hosts (Tschorsnig & Herting 1994): various Geometridae living in deciduous woodland, rarely also a few Noctuidae, primarily *Orthosia* spp. (Lepidoptera).

Material examined: Holubník Mt., 11.v.–16.vi.2011, 1 ♀. Jedlový důl NR, 19.–30.v.2005, 1 ♀. Karlovské bučiny NNR, 16.v.2013, 1 ♂. Rašeliníště Jizerky NNR, 19.v.–03.vi.2005, 1 ♀.

***Sturmia bella* (Meigen, 1824)**

Palearctic and Oriental, in Europe from Spain, Italy, Greece and Ukraine to Britain I., Finland and vicinity of St. Petersburg, but apparently absent from Scandinavia (Tschorsnig et al. 2013). Not rare in Central Europe, more often in reared material; prefers meadows, bushes, warmer forest edges. Hosts (Tschorsnig & Herting 1994): various Nymphalidae, rarely also a few other Lepidoptera.

Material examined: Šolcův rybník, 24.viii.–06.x.2011, 2 ♀♀.

***Vibrissina turrata* (Meigen, 1824)**

Palearctic, in Europe from France, Italy and Greece to Sweden and vicinity of St. Petersburg, but apparently absent from Britain I. (Tschorsnig et al. 2013). Locally common in Central Europe, prefers forest edges, areas of heath. Hosts (Tschorsnig & Herting 1994): various Tenthredinidae and Argidae (Hymenoptera).

Material examined: Šolcův rybník, 13.vi.–06.x.2011, 2 ♂♂.

***Winthemia quadripustulata* (Fabricius, 1794)**

Palearctic, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Norway, Finland and the north of Russia (Tschorsnig et al. 2013). Frequent in Central Europe, prefers bushes, deciduous woodland. Hosts (Tschorsnig & Herting 1994): various Noctuidae (primarily *Cucullia* spp.), rarely also a few other Lepidoptera.

Material examined: Špičák Mt., 28.vi.2005, 1 ♂.

PHASIINAE

***Cinochira atra* Zetterstedt, 1845**

European, from France, Italy and Romania to Britain I., Norway and vicinity of St. Petersburg (Tschorsnig et al. 2013). In Central Europe frequently caught by Malaise traps, otherwise rather rare; prefers forest edges, bushes. Hosts (Tschorsnig & Herting 1994): various Lygaeidae (Hemiptera).

Material examined: Liberec-Stary Harcov, 15.viii.2013, 1 ♀. Šolcův rybník, 24.viii.–06.x.2011, 1 ♂.

***Cistogaster globosa* (Fabricius, 1775)**

Palaeartic, in Europe from France, Italy, Bulgaria and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Frequent in Central Europe, prefers dry meadows, warmer places. Hosts (Tschorsnig & Herting 1994): various *Aelia* spp. (Hemiptera: Pentatomidae).

Material examined: Poustka, 08.viii.2012, 1 ♀.

***Ectophasia crassipennis* (Fabricius, 1794)**

Palaeartic, in Europe from Spain, Italy, Greece and Ukraine to Sweden and Lithuania, but apparently absent from Britain I. (Tschorsnig et al. 2013; Pakalniškis et al. 2006; Bergström & Hall 2008). Frequent in Central Europe, prefers dry slopes, meadows. Hosts (Tschorsnig & Herting 1994): various Pentatomidae, rarely also a few other Hemiptera.

Material examined: Horní Řasnice, 07.viii.2013, 1 ♀. Liberec-Perštýn, 19.viii.2014, 1 ♂. Meandry Smědé NR, 08.viii.2012, 1 ♂. Poustka, 08.viii.2012, 1 ♂.

***Ectophasia oblonga* (Robineau-Desvoidy, 1830)**

West Palaeartic, in Europe from Spain, Italy, Greece and Ukraine to Germany and Poland; absent from Britain I. and Scandinavia (Tschorsnig et al. 2013). Locally common in Central Europe, prefers dry, warm areas. Hosts (Tschorsnig & Herting 1994): various Pentatomidae (primarily *Eurygaster* spp.), rarely also a few other Hemiptera.

Material examined: Meandry Smědé NR, 08.viii.2012, 1 ♂. Poustka, 08.viii.2012, 1 ♂, 1 ♀.

***Eliozeta pellucens* (Fallén, 1820)**

Palaeartic, in Europe from Spain, Italy, Greece and Ukraine to Sweden, Finland and vicinity of St. Petersburg, but apparently absent from Britain I. (Tschorsnig et al. 2013). Locally common in Central Europe, prefers dry, warm, open countryside. Hosts (Tschorsnig & Herting 1994): *Tritomegas bicolor*, *Cydnus aterrimus* (Hemiptera: Cydnidae).

Material examined: Šolcův rybník, 11.–26.v.2011, 1 ♂.

***Gymnosoma nudifrons* Herting, 1966**

Palaeartic, in Europe from Spain, Italy, Greece and Ukraine to Norway and Finland, but apparently absent from Britain I. (Tschorsnig et al. 2013). Locally frequent in Central Europe, prefers pine forests, dry meadows. Hosts (Tschorsnig & Herting 1994): various Pentatomidae (Hemiptera).

Material examined: Chrastrná, 09.vii.1992, 1 ♂. Poustka, 08.viii.2012, 2 ♂♂, 1 ♀.

***Gymnosoma rotundatum* (Linnaeus, 1758)**

Palaeartic, in Europe from Spain, Italy, Greece and Ukraine to Britain I., Denmark and vicinity of St. Petersburg, but apparently absent from Scandinavia (Tschorsnig et al. 2013). Frequent in Central Europe, prefers meadows, forest edges. Hosts (Tschorsnig & Herting 1994): various Pentatomidae (Hemiptera).

Material examined: Liberec-Starý Harcov, 15.viii.2013, 1 ♂. Poustka, 08.viii.2012, 1 ♂, 1 ♀.

***Hemyda vittata* (Meigen, 1824)**

Palearctic, throughout Europe, from Spain, Italy, Bulgaria and Ukraine to Britain I., Sweden, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013; Pohjoismäki & Kahanpää 2014). Locally common in Central Europe, prefers deciduous woodland. Hosts (Tschorsnig & Herting 1994; Clemons 1999): *Arma custos*, *Dinorhynchus dybowskyi*, *Troilus luridus* (Hemiptera: Pentatomidae).

Material examined: Šolcův rybník, 28.vi.–14.viii.2005, 1 ♀.

***Lophosia fasciata* Meigen, 1824**

Palearctic, in Europe from France, Italy, Bulgaria and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Locally common in Central Europe, prefers deciduous forest edges. Hosts (Tschorsnig & Herting 1994): *Acanthosoma haemorrhoidale*, *Aelia acuminata* (Hemiptera: Pentatomidae).

Material examined: Francouzské kameny, 13.vii.–03.viii.2006, 1 ♂. Karlovské bučiny NNR, 09.vii.–02.viii.2013, 2 ♂♂. Šolcův rybník, 26.v.–03.viii.2011, 1 ♂, 1 ♀. Špičák Mt., 22.vi.2005, 1 ♀.

***Phasia aurulans* Meigen, 1824**

Palearctic, in Europe from France, Italy, Bulgaria and Ukraine to Norway, Finland and the north of Russia, but apparently absent from Britain I. (Tschorsnig et al. 2013). Rather rare in Central Europe, prefers dry meadows. Host unknown.

Material examined: Horní Řasnice, 07.viii.2013, 2 ♂♂. Liberec-Starý Harcov, 15.viii.2013, 1 ♂.

***Phasia barbifrons* (Girschner, 1887)**

Palearctic and Oriental, in Europe from Spain and Italy to Britain I., Sweden and Finland (Tschorsnig et al. 2013; Bergström & Bartsch 2005; Pohjoismäki & Kahanpää 2014). Locally common in Central Europe, prefers deciduous woodland, meadows. Host unknown.

Material examined: Bílý Potok, 03.–16.vi.2005, 1 ♀; 15.vi.2012, 3 ♂♂, 1 ♀. Bukovec NR, 02.–21.vii.2010, 1 ♂. Jablonec nad Nisou-Mšeno, 01.viii.2012, 2 ♂♂, 3 ♀♀. Jizerka, 27.ix.–16.x.2003, 1 ♂. Liberec-Rudolfov, 07.viii.2012, 1 ♂. Liberec-Starý Harcov, 15.viii.2013, 1 ♂. Liberec-Vratislavice nad Nisou, 21.vi.2013, 1 ♀. Panský lom NM, 13.viii.2012, 2 ♂♂. Poustecká obora, 24.ix.–23.x.2012, 1 ♂. Poustka, 08.viii.2012, 5 ♂♂. Rybí loučky NR, 12.–20.viii.2003, 1 ♂. Šolcův rybník, 26.v.–13.ix.2011, 4 ♂♂, 2 ♀♀. Višňová, 30.v.2014, 1 ♂, 1 ♀.

***Phasia hemiptera* (Fabricius, 1794)**

Palearctic, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013; Haraldseide 2012). Locally frequent in Central Europe, prefers dry slopes, meadows, warm forest edges. Hosts (Tschorsnig & Herting 1994; Nishiyama et al. 1995): *Palomena prasina*, *Pentatoma rufipes*, a few other Pentatomidae (Hemiptera).

Material examined: Jablonec nad Nisou-Mšeno, 01.viii.2012, 2 ♂♂, 1 ♀. Panský lom NM, 13.viii.2012, 1 ♀. Poustka, 08.viii.2012, 4 ♂♂, 3 ♀♀.

***Phasia obesa* (Fabricius, 1798)**

Palaeartic, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Norway, Finland and the north of Russia (Tschorsnig et al. 2013). Frequent in Central Europe, prefers dry meadows. Hosts (Tschorsnig & Herting 1994): *Neottiglossa pusilla*, *Zicrona caerulea* (Hemiptera: Pentatomidae), rarely also a few other Hemiptera.

Material examined: Meandry Smědé NR, 08.viii.2012, 1 ♂. Poustka, 08.viii.2012, 2 ♀♀. Rybí loučky NR, 12.–20.viii.2003, 1 ♀.

***Phasia pusilla* Meigen, 1824**

Palaeartic, throughout Europe from Spain, Italy, Greece and Ukraine to Britain I., Norway and Finland (Tschorsnig et al. 2013). Not rare in Central Europe, prefers meadows, deforested areas. Hosts (Tschorsnig & Herting 1994): various Lygaeidae, rarely also a few other Hemiptera.

Material examined: Meandry Smědé NR, 08.viii.2012, 2 ♂♂.

***Strongygaster globula* (Meigen, 1824)**

Palaeartic, in Europe from Spain, Italy, Bulgaria and Ukraine to Belgium, Finland and vicinity of St. Petersburg, but apparently absent from Britain I. and Scandinavia (Tschorsnig et al. 2013). Not rare in Central Europe, prefers meadows, dry deciduous woodland. Hosts (Tschorsnig & Herting 1994): *Lasius niger*, *L. alienus* (Hymenoptera: Formicidae).

Material examined: Poustka, 08.viii.2012, 1 ♂.

***Subclytia rotundiventris* (Fallén, 1820)**

Palaeartic, in Europe from France, Italy and Bulgaria to Britain I., Norway, Finland and the north of Russia (Tschorsnig et al. 2013). Rather rare in Central Europe, prefers forest edges. Host (Tschorsnig & Herting 1994): *Elasmucha grisea*, rarely also a few other Acanthosomatidae (Hemiptera).

Material examined: Poustka, 08.viii.2012, 1 ♂. Šolcův rybník, 13.vi.–06.x.2011, 1 ♂, 1 ♀.

TACHININAE

[*Actia crassicornis* (Meigen, 1824)]

Palaeartic, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Norway, Finland and the north of Russia (Tschorsnig et al. 2013). Locally common in Central Europe, prefers dry, warm areas. Hosts (Tschorsnig & Herting 1994): various Elachistidae (primarily *Depressaria* spp.), rarely also a few Tortricidae (Lepidoptera).

Published data only: Bílý Potok, 04.viii.1961, 1 ♂ (Čepelák 1983 as *A. dubitata*, as a new species for Czechoslovakia).

***Actia pilipennis* (Fallén, 1810)**

Palaeartic, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Norway, Finland and the north of Russia (Tschorsnig et al. 2013). In Central Europe not rare in Malaise traps, otherwise rather rare; prefers deciduous woodland, bushes. Hosts (Tschorsnig & Herting 1994): various Tortricidae (primarily *Tortrix* spp.), rarely also a few other Lepidoptera.

Published data: Bílý Potok, 12.viii.1964, 1 ♂, 1 ♀ (Čepelák 1983).

Material examined: Poustecká obora, 27.iv.–16.v.2012, 1 ♂.

***Aphantorhaphopsis brunnescens* (Villeneuve, 1921)**

European, only fragmentary distribution from the uplands of Spain to Germany and the Czech Republic; absent from the Britain I., Scandinavia and Eastern Europe (Tschorsnig et al. 2013). In Central Europe locally common in Malaise traps, almost never found without this trapping method; prefers forest edges. Host unknown.

Material examined: Poustecká obora, 27.iv.–16.v.2012, 1 ♂.

***Aphantorhaphopsis samarensis* (Villeneuve, 1921)**

European, from France and Italy to Sweden, Finland and vicinity of St. Petersburg, but apparently absent from Britain I. (Tschorsnig et al. 2013). Rather rare in Central Europe, prefers warm deciduous woodland. Hosts (Tschorsnig & Herting 1994): *Lymantria dispar*, *Orgyia recens* (Lepidoptera: Erebidae).

Material examined: Jizerka, 20.vii.2013, 1 ♀. Poustecká obora, 16.v.–18.vii.2012, 3 ♂♂.

***Aphantorhaphopsis siphonoides* (Strobl, 1898)**

European, from Switzerland and Slovakia to Denmark and Finland, but apparently absent from Britain I. and Scandinavia (Tschorsnig et al. 2013). Rather rare in Central Europe, prefers highlands. Hosts (Tschorsnig & Herting 1994): *Ecliptopera silaceata*, *Xanthorhoe biriviata*, *Cabera pusaria* (Lepidoptera: Geometridae).

Material examined: Bukovec NR, 21.vii.–06.viii.2010, 2 ♀♀.

***Appendicia truncata* (Zetterstedt, 1838)**

Euro-Siberian, in Europe from Belgium and the Czech Republic to Britain I., Norway, Finland and the north of Russia (Tschorsnig et al. 2013). Locally common in Central Europe, prefers grassy edges of pine forest. Host (Tschorsnig & Herting 1994): *Cerapteryx graminis* (Lepidoptera: Noctuidae).

Material examined: Rašeliniště Jizery NNR, 30.iv.–04.vi.2002, 2 ♂♂.

***Bithia spreta* (Meigen, 1824)**

Palearctic, in Europe from Spain, Italy, Bulgaria and Ukraine to Britain I., Sweden and vicinity of St. Petersburg (Tschorsnig et al. 2013). Locally frequent in Central Europe, prefers meadows, dry and warm forest edges. Host (Tschorsnig & Herting 1994): *Agapeta zoegana* (Lepidoptera: Tortricidae).

Material examined: Meandry Smědé NR, 08.viii.2012, 1 ♂.

***Ceranthia lichtwardtiana* (Villeneuve, 1931)**

European, from Italy and Bulgaria to Britain I., Norway, Finland and the north of Russia (Tschorsnig et al. 2013). Rather rare in Central Europe, prefers thin forest edges. Hosts (Tschorsnig & Herting 1994): various Geometridae (primarily *Eupithecia* spp.), rarely also a few Pterophoridae (Lepidoptera).

Material examined: Bukovec NR, 02.vii.–06.viii.2010, 3 ♂♂. Karlovské bučiny NNR, 16.v.–04.vi.2013, 1 ♂. Liberec-Rudolfov, 07.viii.2012, 1 ♀.

***Ceranthis tristella* Herting, 1966**

CZ!

European, from Spain and Italy to Britain I., Norway and Finland (Tschorsnig et al. 2013; Pohjoismäki & Kahanpää 2014). This is the first record of this species from the Czech Republic (Vaňhara & Tschorsnig 2009). Very rare in Central Europe, prefers highlands. Hosts (Tschorsnig & Herting 1994): *Eupithecia silenata*, *E. undata* (Lepidoptera: Geometridae). Material examined: Bukovec NR, 15.vi.–02.vii.2010, 1 ♂, 1 ♀. Holubník Mt., 11.v.–16.vi.2011, 1 ♀.

***Ceromya bicolor* (Meigen, 1824)**

Holarctic, in Europe from Spain, Italy and Romania to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Rather rare in Central Europe, prefers dry, warm forest edges, bushes. Host (Tschorsnig & Herting 1994): *Lasiocampa quercus*, rarely also a few other Lasiocampidae (Lepidoptera).

Material examined: Holubník Mt., 03.viii.–13.ix.2011, 1 ♀. Horní Maxov, 23.v.2012, 1 ♂. Liberec-Rudolfov, 01.–30.v.2012, 1 ♂ (meat trap). Nová louka NR, 26.v.–11.vii.2014, 4 ♂♂.

***Ceromya silacea* (Meigen, 1824)**

Palaearctic and Oriental, in Europe from Spain and Italy to Britain I., Norway, Finland and the north of Russia (Tschorsnig et al. 2013). Locally common in Central Europe, prefers bushes, forest edges. Host (Tschorsnig & Herting 1994; Shima 1999): *Deltote pygarga*, rarely also a few other Noctuidae (Lepidoptera).

Material examined: Poustecká obora, 16.v.–08.viii.2012, 4 ♂♂. Šolcův rybník, 26.v.–01.vii.2011, 1 ♂.

[*Dexiosoma caninum* (Fabricius, 1781)]

Palaearctic, in Europe from France, Italy, Bulgaria and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Frequent in Central Europe, prefers forest edges, bushes. Host unknown.

Published data only: Bílý Potok, 01.viii.1961, 2 ♂♂; 04.viii.1961, 1 ♂; 12.viii.1964, 1 ♀ (Čepelák 1983).

***Eloceria delecta* (Meigen, 1824)**

European, from Spain, Italy and Romania to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013; Haraldseide 2012). In Central Europe frequently caught by Malaise traps, otherwise rather rare; prefers dry, warm forest edges, bushes. Hosts (Tschorsnig & Herting 1994): various *Lithobius* spp. (Myriapoda: Lithobiidae).

Material examined: Jablonec nad Nisou-Mšeno, 01.viii.2012, 1 ♂.

***Entomophaga nigrohalterata* (Villeneuve, 1921)**

European, from Switzerland and Slovakia to Britain I., Sweden and Finland (Tschorsnig et al. 2013). In Central Europe locally common in Malaise traps, otherwise rather rare; prefers deciduous woodland. Hosts (Tschorsnig & Herting 1994): various *Ypsoplopha* spp. (Lepidoptera: Ypsolophidae).

Material examined: Špičák Mt., 30.iv.2014, 1 ♂.

***Entomophaga sufferta* (Villeneuve, 1942)**

European, from Germany and the Czech Republic to Britain I., Norway and Finland (Tschorsnig et al. 2013). Rather rare in Central Europe, prefers spruce forests. Host unknown. Material examined: Poustecká obora, 27.iv.–16.v.2012, 2 ♂♂.

[*Eurithia anthophila* (Robineau-Desvoidy, 1830)]

Palearctic, throughout Europe, from Spain, Italy, Bulgaria and Ukraine to Britain I., Norway, Finland and the north of Russia (Tschorsnig et al. 2013). Frequent in Central Europe, prefers meadows, bushes, forest edges. Hosts (Tschorsnig & Herting 1994): *Spilosoma lutea*, *S. lubricipeda* (Erebidae), rarely also a few other Lepidoptera. Published data only: Bílý Potok, 01.viii.1961, 1 ♀; 12.viii.1964, 1 ♂, 2 ♀♀ (Čepelák 1983).

***Eurithia connivens* (Zetterstedt, 1844)**

Palearctic, in Europe from France, Italy, Romania and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Locally common in Central Europe, prefers moderately damp to dry meadows, forest edges. Host (Tschorsnig & Herting 1994): *Euplexia lucipara* (Lepidoptera: Noctuidae). Material examined: Liberec-Rudolfov, 10.viii.2013, 1 ♂. Šolcův rybník, 01.vii.–06.x.2011, 3 ♀♀.

***Gymnocheta viridis* (Fallén, 1810)**

Palearctic, in Europe from Spain, Italy, Bulgaria and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Frequent in Central Europe, prefers forest edges, meadows. Hosts (Tschorsnig & Herting 1994): *Mesapamea secalis* and *Photedes* spp. (Lepidoptera: Noctuidae). Material examined: Malá Strana NR, 7.v.–12.vi.2015, 1 ♀.

***Linnaemya picta* (Meigen, 1824)**

Palearctic and Oriental, in Europe from Spain, Italy, Bulgaria and Ukraine to Britain I., the Netherlands and vicinity of St. Petersburg, but apparently absent from Scandinavia (Tschorsnig et al. 2013; Bentley & Raper 2010). Frequent in Central Europe, prefers warm forest edges, bushes. Hosts (Tschorsnig & Herting 1994): *Mamestra brassicae*, *Xestia* spp. (Lepidoptera: Noctuidae). Material examined: Rašeliniště Jizerky NNR, 28.vii.–17.viii.2005, 1 ♂.

***Loewia foeda* (Meigen, 1824)**

European, from France, Italy, Romania and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). In Central Europe not rare in Malaise traps, otherwise rather rare; prefers forests, bushes, meadows. Host (Haraldseide & Tschorsnig 2014): *Lithobius forficatus* (Myriapoda: Lithobiidae). Material examined: Bukovec NR, 02.vii.–06.viii.2010, 2 ♀♀. Holubník Mt., 03.viii.–13.ix.2011, 1 ♀. Šolcův rybník, 13.vi.–01.vii.2011, 1 ♀.

***Loewia phaeoptera* (Meigen, 1824)**

West Palaearctic, in Europe from Spain, Italy, Bulgaria and Ukraine to Central Europe (precise distribution is unknown because of previous confusion with *Loewia erecta*). Not rare in Central Europe, prefers warm forest edges, bushes, meadows. Host unknown.

Material examined: Bukovec NR, 02.–21.vii.2010, 1 ♀. Holubník Mt., 16.vi.–13.ix.2011, 2 ♀♀. Jablonec nad Nisou-Mšeno, 01.viii.2012, 1 ♂. Šolcův rybník, 13.vi.–01.vii.2011, 1 ♀.

***Lydina aenea* (Meigen, 1824)**

Palaearctic, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). In Central Europe frequently caught by Malaise traps, otherwise rather rare; prefers forest edges, bushes. Host unknown. Published data: Bílý Potok, 12.viii.1964, 1 ♀ (Čepelák 1983).

Material examined: Bukovec NR, 20.v.–15.vi.2010, 5 ♀♀.

***Lypha dubia* (Fallén, 1810)**

Palaearctic, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Norway, Finland and the north of Russia (Tschorsnig et al. 2013). Very frequent in Central Europe, prefers deciduous woodland, rarely also in pine and larch forest. Host (Tschorsnig & Herting 1994): *Operophtera brumata*, rarely a few other Geometridae and also Tortricidae (Lepidoptera).

Material examined: Bukovec NR, 20.v.–21.vii.2010, 2 ♀♀. Hamrštejn NR, 16.v.–04.vi.2013, 1 ♀. Holubník Mt., 11.v.–16.vi.2011, 5 ♀♀. Karlovské bučiny NNR, 25.iv.–04.vi.2013, 4 ♂♂, 1 ♀. Klikvová louka NR, 21.v.2014, 1 ♀. Liberec-Rudolfov, 24.iii.–01.v.2012, 1 ♀ (meat trap); 01.v.2012, 1 ♂. Meandry Smědé NR, 27.iv.–16.v.2012, 2 ♀♀. Panský lom NM, 11.v.2012, 1 ♀. Poustecká obora, 27.iv.–16.v.2012, 1 ♀. Šolcův rybník, 26.v.–13.vi.2011, 1 ♀. Výpřež, 09.v.–12.vi.2013, 2 ♂♂.

***Macquartia dispar* (Fallén, 1820)**

Palaearctic, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Sweden, Finland and the north of Russia (Tschorsnig et al. 2013). Locally frequent in Central Europe, prefers forest edges, bushes. Hosts (Tschorsnig & Herting 1994): *Timarcha normanna*, *Chrysolina* spp. (Coleoptera: Chrysomelidae).

Material examined: Šolcův rybník, 26.v.–13.vi.2011, 1 ♀.

***Macquartia grisea* (Fallén, 1810)**

West Palaearctic, in Europe from Spain, Italy, Bulgaria and Ukraine to Britain I., Sweden and Lithuania (Tschorsnig et al. 2013; Pakalniškis et al. 2006). Frequent in Central Europe, prefers bushes, forest edges. Hosts (Tschorsnig & Herting 1994): various *Chrysolina* spp. (Coleoptera: Chrysomelidae).

Published data: Bílý Potok, 01.viii.1961, 1 ♂ (Čepelák 1983).

Material examined: Bukovec NR, 20.v.–06.viii.2010, 3 ♀♀. Holubník Mt., 11.v.–06.x.2011, 1 ♂, 5 ♀♀. Ještědský hřbet, 28.viii.1992, 1 ♂.

***Macquartia pubiceps* (Zetterstedt, 1845)**

Palaeartic, in Europe from Spain, Italy, Romania and Ukraine to Britain I., Sweden and vicinity of St. Petersburg (Tschorsnig et al. 2013). Not rare in Central Europe, prefers forest edges, bushes. Host unknown.

Material examined: Šolcův rybník, 01.vii.–03.viii.2011, 1 ♂, 1 ♀.

***Macquartia tenebricosa* (Meigen, 1824)**

Palaeartic, throughout Europe, from Spain, Italy, Bulgaria and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Frequent in Central Europe, prefers forest edges, meadows. Hosts (Tschorsnig & Herting 1994): various *Chrysolina* spp., primarily *C. varians* (Coleoptera, Chrysomelidae).

Published data: Bílý Potok, 01.viii.1961, 1 ♂; 12.viii.1964, 4 ♀♀ (Čepelák 1983).

Material examined: Bukovec NR, 20.v.–06.viii.2010, 2 ♂♂, 5 ♀♀. Meandry Smědé NR, 19.–30.v.2005, 1 ♂, 1 ♀. Šolcův rybník, 11.–26.v.2011, 1 ♀.

***Macquartia viridana* Robineau–Desvoidy, 1863**

European, from Spain, Italy, Bulgaria and Ukraine to Britain I., the Netherlands and Finland, but apparently absent from Scandinavia (Tschorsnig et al. 2013; Pohjoismäki & Kahanpää 2014). Not rare in Central Europe, prefers dry meadows, bushes. Host (Tschorsnig & Herting 1994): *Colaphus sophiae* (Coleoptera: Chrysomelidae).

Material examined: Bukovec NR, 20.v.–15.vi.2010, 3 ♀♀. Holubník Mt., 11.v.–16.vi.2011, 3 ♀♀. Karlovské bučiny NNR, 16.v.2013, 1 ♀. Šolcův rybník, 08.iv.–11.v.2011, 1 ♀.

***Nowickia atripalpis* (Robineau–Desvoidy, 1863)**

B!

Palaeartic, in Europe from Spain, Italy, Bulgaria and Ukraine to the Netherlands and Poland; absent from Britain I. and Scandinavia (Tschorsnig et al. 2013). This is the first record of this species from Bohemia (Vaňhara & Tschorsnig 2009). Rather rare in Central Europe, prefers highlands. Host unknown.

Material examined: Chrastná, 09.vii.1992, 1 ♂.

***Panzeria rudis* (Fallén, 1810)**

Palaeartic, throughout Europe, from Spain, Italy, Bulgaria and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Frequent in Central Europe, prefers deciduous and pine forests. Host (Tschorsnig & Herting 1994): *Panolis flammea*, rarely also a few other Noctuidae (Lepidoptera).

Material examined: Bukovec NR, 20.v.–15.vi.2010, 1 ♂. Poustecká obora, 27.iv.–16.v.2012, 3 ♂♂. Šolcův rybník, 13.vi.–01.vii.2011, 1 ♂.

***Pelatachina tibialis* (Fallén, 1810)**

Palaeartic, throughout Europe, from Spain, Italy, Bulgaria and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Frequent in Central Europe, prefers bushes, forest edges. Hosts (Tschorsnig & Herting 1994): various Nymphalidae (Lepidoptera).

Material examined: Bukovec NR, 02.–21.vii.2010, 1 ♀.

***Peribaea longirostris* Andersen, 1996**

CZ!

European, from Italy to the Netherlands and Finland; absent from Britain I., and Scandinavia (Tschorsnig et al. 2013; Pohjoismäki & Kahanpää 2014). This is the first record of this species from the Czech Republic (Vaňhara & Tschorsnig 2009). Rather rare in Central Europe, prefers thin forest edges, bushes, heath. Host unknown.

Material examined: Karlovské bučiny NNR, 09.vii.–02.viii.2013, 1 ♂. Šolcův rybník, 01.vii.–03.viii.2011, 2 ♂♂.

***Peribaea setinervis* (Thomson, 1869)**

Palaeartic and Oriental, in Europe from France, Italy, Serbia and Ukraine to Britain I., Norway, Sweden and Belarus (Tschorsnig et al. 2013). Not rare in Central Europe, prefers deciduous woodland. Hosts (Tschorsnig & Herting 1994): various Geometridae (Lepidoptera). Material examined: Karlovské bučiny NNR, 16.v.–04.vi.2013, 1 ♂. Poustecká obora, 27.iv.–08.viii.2012, 3 ♂♂, 1 ♀.

***Phytomytera cingulata* (Robineau–Desvoidy, 1830)**

European, from Spain, Italy and Greece to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). In Central Europe not rare in Malaise traps or in reared material, otherwise rather rare; prefers forests. Hosts (Tschorsnig & Herting 1994): various *Nemapogon* spp. (Tineidae), rarely also a few other Lepidoptera.

Material examined: Jizerka, 22.vii.2013, 1 ♀.

***Phytomytera minutissima* (Zetterstedt, 1844)**

European, from Spain and Italy to Britain I., Norway, Finland and the north of Russia (Tschorsnig et al. 2013; Perry 2011a). In Central Europe not rare in Malaise traps, otherwise rather rare; prefers bushes, forest edges. Host unknown.

Material examined: Šolcův rybník, 24.viii.–06.x.2011, 1 ♀.

***Phytomytera nigrina* (Meigen, 1824)**

Palaeartic, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Rather rare in Central Europe, more often in reared material; prefers bushes, forest edges, orchards. Hosts (Tschorsnig & Herting 1994): various Tortricidae, Pterophoridae, Gelechiidae (Lepidoptera).

Material examined: Šolcův rybník, 13.vi.–01.vii.2011, 1 ♂.

***Pseudopachystylum gonioides* (Zetterstedt, 1838)**

Palaeartic, in Europe from France, Italy and Bulgaria to Norway, Finland and vicinity of St. Petersburg, but apparently absent from Britain I. (Tschorsnig et al. 2013). Rather rare in Central Europe, prefers coniferous forests. Hosts (Tschorsnig & Herting 1994): various *Acantholyda* spp. and *Cephalcia* spp. (Hymenoptera: Pamphiliidae).

Material examined: Šolcův rybník, 26.v.–13.vi.2011, 1 ♂.

***Siphona boreata* Mesnil, 1960**

Palaeartic, in Europe from Spain and Romania to Britain I., Norway, Finland and the north

of Russia (Tschorsnig et al. 2013). Rather rare in Central Europe, prefers pine forests. Host (Zolubas et al. 2001): *Lymantria dispar* (Lepidoptera: Erebidae).

Material examined: Holubník Mt., 03.viii.–06.x.2011, 1 ♂. Šolcův rybník, 01.vii.–03.viii.2011, 1 ♂.

***Siphona confusa* Mesnil, 1961**

Palaeartic, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Rather rare in Central Europe, prefers forest edges. Host unknown.

Material examined: Bukovec NR, 15.v.–02.vii.2010, 3 ♀♀. Panský lom NM, 08.v.2012, 1 ♂.

***Siphona flavifrons* Staeger, 1849**

Palaeartic, in Europe from France, Italy, Bulgaria and Ukraine to Norway, Finland and the north of Russia, but apparently absent from Britain I. (Tschorsnig et al. 2013). Locally frequent in Central Europe, prefers forest edges. Host (Robertson & Shaw 2012): *Tipula* sp. (Diptera: Tipulidae).

Published data: Bílý Potok, 04.viii.1961, 1 ♀ (Čepelák 1983).

Material examined: Bukovec NR, 21.vii.–15.x.2010, 3 ♂♂, 1 ♀. Hamrštejn NR, 09.vii.–02.viii.2013, 1 ♀. Horní Maxov, 21.vii.2013, 1 ♂. Jablonec nad Nisou-Mšeno, 01.viii.2012, 1 ♂, 1 ♀. Janov nad Nisou, 11.vii.2014, 1 ♂. Jedlový důl NR, 12.vii.2005, 1 ♂, 2 ♀♀. Jizerka, 29.viii.2013, 1 ♀. Liberec-Lidové sady, 03.vii.2014, 1 ♀. Liberec-Rochlice, vii.2011, 1 ♂ (without date). Liberec-Rudolfov, 16.vii.2013, 3 ♂♂. Panský lom NM, 13.viii.2012, 1 ♀.

***Siphona geniculata* (De Geer, 1776)**

Palaeartic (also introduced into Nearctic), throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Very frequent in Central Europe, prefers damp meadows, wet woodland. Hosts (Tschorsnig & Herting 1994): various *Tipula* spp. (Diptera: Tipulidae).

Material examined: Bukovec NR, 21.vii.–06.viii.2010, 1 ♂. Hamrštejn NR, 09.vii.–02.viii.2013, 1 ♀. Jedlový důl NR, 12.vii.2005, 3 ♂♂ 5 ♀♀. Meandry Smědé NR, 12.vi.–08.viii.2012, 2 ♂♂, 3 ♀♀. Poustecká obora, 12.vi.–18.vii.2012, 1 ♂. Rašeliniště Jizerky NNR, 15.–17.vi.2012, 1 ♂. Šolcův rybník, 13.vi.–01.vii.2011, 1 ♂.

***Siphona hokkaidensis* Mesnil, 1957**

Holarctic, in Europe from Spain, Italy and Croatia to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). In Central Europe locally common in Malaise traps, otherwise rather rare; prefers forest edges. Host (Tschorsnig & Herting 1994): *Tipula irrorata* (Diptera: Tipulidae).

Material examined: Bukovec NR, 02.vii.–06.viii.2010, 4 ♂♂, 1 ♀. Jablonec nad Nisou-Mšeno, 01.viii.2012, 2 ♂♂. Jizerka, 29.viii.2013, 1 ♂. Karlovské bučiny NNR, 19.vi.–09.vii.2013, 1 ♂. Liberec-Rudolfov, 05.–16.vii.2013, 2 ♂♂ (meat trap). Panský lom NM, 13.viii.2012, 2 ♂♂. Poustecká obora, 16.v.–08.viii.2012, 2 ♂♂. Šolcův rybník, 01.vii.–06.x.2011, 4 ♂♂.

***Siphona ingerae* Andersen, 1982**

Euro-Siberian, in Europe from Switzerland and Hungary to Britain I., Norway and Finland (Tschorsnig et al. 2013). Rather rare in Central Europe, prefers forest edges. Host unknown. Material examined: Šolcův rybník, 08.iv.–11.v.2011, 1 ♂.

***Siphona maculata* Staeger, 1849**

Holarctic, in Europe from France, Austria, Bulgaria and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Common in Central Europe, prefers forest edges. Host (Tschorsnig & Herting 1994): *Euxoa obelisca* (Lepidoptera: Noctuidae). Material examined: Hamrštejn NR, 16.v.2013, 1 ♀. Horní Maxov, 21.vii.2013, 1 ♂. Liberec-Vesec, 14.v.2013, 1 ♀. Meandry Smědé NR, 16.v.–12.vi.2012, 1 ♂. Panský lom NM, 28.iv.–08.v.2012, 2 ♂♂, 1 ♀.

***Siphona pauciseta* Rondani, 1865**

Palearctic, throughout Europe, from Spain, Italy and Greece to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). In Central Europe frequently caught by Malaise traps, otherwise rather rare; prefers meadows, forest edges, orchards. Hosts (Tschorsnig & Herting 1994; Zeegers 1998): *Achlya flavicornis* (Lepidoptera: Drepanidae), *Mythimna straminea* (Lepidoptera: Noctuidae). Material examined: Šolcův rybník, 13.ix.–06.x.2011, 1 ♀. Višňová, 30.v.2014, 1 ♂.

***Siphona setosa* Mesnil, 1960**

Palearctic, in Europe from Spain, Italy, Croatia and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Rather rare in Central Europe, prefers dry forest edges, meadows. Hosts (Tschorsnig & Herting 1994): *Allophyes oxyacanthae* (Lepidoptera: Noctuidae), *Eupithecia succenturiata* (Lepidoptera: Geometridae). Material examined: Bukovec NR, 02.ix.–15.x.2010, 2 ♀♀. Liberec-Rudolfov, 20.viii.2012, 1 ♀.

[*Solieria pacifica* (Meigen, 1824)]

Palearctic, throughout Europe, from Spain, Italy, Bulgaria and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). Very frequent in Central Europe, prefers moderately damp to dry meadows, forest edges. Hosts (Tschorsnig & Herting 1994): *Celypha striana*, *C. rurestrana* (Lepidoptera: Tortricidae). Published data only: Bílý Potok, 12.viii.1964, 1 ♂ (Čepelák 1983).

***Synactia parvula* (Rondani, 1861)**

European, from France, Italy, Romania and Ukraine to Germany and Poland; absent from Britain I. and Scandinavia (Tschorsnig et al. 2013). Not rare in Central Europe, prefers forest edges, dry slopes. Host unknown. Material examined: Holubník Mt., 03.viii.–06.x.2011, 6 ♀♀.

***Tachina fera* (Linnaeus, 1761)**

Palearctic, throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Norway, Finland and the north of Russia (Tschorsnig et al. 2013). Frequent in Central Europe, prefers

forests, meadows. Hosts (Tschorsnig & Herting 1994): various Noctuidae (Lepidoptera). Material examined: Poustka, 08.viii.2012, 2 ♂♂. Šolcův rybník, 01.vii.–03.viii.2011, 1 ♀.

***Tachina lurida* (Fabricius, 1781)**

West Palaearctic, in Europe from Spain, Italy, Greece and Ukraine to Britain I., the Netherlands and vicinity of St. Petersburg, but apparently absent from Scandinavia (Tschorsnig et al. 2013). Not rare in Central Europe, prefers deciduous woodland, bushes. Hosts (Tschorsnig & Herting 1994): *Orthosia stabilis*, *O. cruda* (Noctuidae), rarely also a few other Lepidoptera. Material examined: Poustecká obora, 27.iv.–16.v.2012, 1 ♂.

***Tachina magnicornis* (Zetterstedt, 1844)**

Palaearctic, in Europe from Spain, Italy, Greece and Ukraine to Norway, Finland and vicinity of St. Petersburg, but apparently absent from Britain I. (Tschorsnig et al. 2013). Common in Central Europe, prefers open, dry habitats. Hosts (Tschorsnig & Herting 1994): various Noctuidae, primarily *Agrotis* spp. (Lepidoptera). Material examined: Ještědský hřbet, 28.viii.1992, 1 ♀. Tichá říčka NM, 11.vii.2014, 1 ♂.

***Tachina ursina* Meigen, 1824**

Palaearctic, in Europe from Spain, Italy, Serbia and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013; Haraldseide 2012). Rather rare in Central Europe, prefers warm and dry forest edges, forest roads. Host unknown. Material examined: Liberec-Rudolfov, 02.–16.ix.2012, 1 ♂ (meat trap); 02.iii.–01.v.2013, 1 ♀. Meandry Smědé NR, 27.iv.–16.v.2012, 1 ♀. Poustecká obora, 27.iv.–16.v.2012, 5 ♀♀.

***Triarthria setipennis* (Fallén, 1810)**

West Palaearctic (also introduced into Nearctic), throughout Europe, from Spain, Italy, Greece and Ukraine to Britain I., Norway, Finland and vicinity of St. Petersburg (Tschorsnig et al. 2013). In Central Europe very frequently caught by Malaise traps, otherwise uncommon; prefers forest edges, bushes. Host (Tschorsnig & Herting 1994): *Forficula auricularia*, rarely also a few other Forficulidae (Dermaptera). Material examined: Holubník Mt., 16.vi.–03.viii.2011, 1 ♀. Šolcův rybník, 11.–26.v.2011, 1 ♂.

DISCUSSION AND CONCLUSIONS

Altogether 117 species of the family Tachinidae are reported from the Jizerské hory Mts, Frýdlant region and the vicinity of the Liberec city. Together with seven other species published earlier (Čepelák 1983), 124 species in total are known from this region, representing 25.8% of all tachinids known from the Czech Republic and 31.6% of all tachinids known from Bohemia (including species first recorded herewith but excluding unnamed species). None of the species found are listed in the Red List of Invertebrates of the Czech Republic (Vaňhara 2005).

Two species (*Ceranthia tristella* and *Peribaea longirostris*) are first recorded from the Czech Republic and one more species (*Nowickia atripalpis*) represents the first record from Bohemia (Vaňhara & Tschorsnig 2009). *Ceranthia tristella* has already been mentioned for

the Czech Republic by Andersen (1996), who cited the catalogue of Herting (1984), but the species was not provided for the Czech Republic in the latter publication, and therefore, was considered as a citation mistake, and was omitted by the authors of the checklist of flies of the Czech Republic (H.-P. Tschorsnig, pers. comm.). Here we provide the first reliable record of this species from the Czech Republic (confirmed by H.-P. Tschorsnig).

Blondelia piniariae is sometimes considered not as a valid species, but rather a variety of *B. nigripes* (Bergström & Bystrowski 2011), but is mentioned here, because it was mentioned in the checklist of flies of the Czech Republic (Vaňhara & Tschorsnig 2009). At the same time, *Dinera fuscata* was not listed in the checklist of flies of the Czech Republic (Vaňhara & Tschorsnig 2009); however, after recent studies on the *Dinera carinifrons* species complex (Lutovinovas et al. 2013), the studied specimens turned out to be representatives of the former species, which replaces the previous name in the fauna of the Czech Republic.

Acknowledgements. We thank our colleagues: J. Preisler (Liberec, Czech Republic) for his help during the field survey and for material selection, H.-P. Tschorsnig (Stuttgart, Germany) for the confirmation of *Ceranthia tristella*, and J. Vaňhara (Brno, Czech Republic) and J. Ziegler (Berlin, Germany) for valuable comments on the manuscript.

REFERENCES

- ANDERSEN S. 1996: The Siphonini (Diptera: Tachinidae) of Europe. *Fauna Entomologica Scandinavica* **33**: 1–148.
- BELSHAW R. 1993: *Tachinid Flies (Diptera: Tachinidae)*. In: DOLLING W. R. & ASKEW R. R. (eds): *Handbooks for the identification of British insects, Vol. 10, Part 4a(i)*. Royal Entomological Society of London, 170 pp.
- BENTLEY H. & RAPER C. 2010: *Linnaemya picta* (Meigen, 1824) (Diptera, Tachinidae) new to Britain. *Dipterists Digest* (2) **17**: 77–78.
- BERGSTROM C. 2007: *Loewia erecta* n. sp. (Diptera: Tachinidae) – a new parasitic fly from Fennoscandia and Poland. *Stuttgarter Beiträge zur Naturkunde, Serie A (Biologie)* **708**: 1–16.
- BERGSTROM C. & BARTSCH H. 2005: *Phasia barbifrons* (Girschner, 1887) – en småväxt parasitfluga (Dipt., Tachinidae) ny för Norden. *Entomologisk Tidskrift* **126**: 187–190.
- BERGSTROM C. & HALL K. 2008: De första fynden av parasitflugan *Ectophasia crassipennis* (Fabricius, 1794) (Diptera, Tachinidae) från Norden. *Entomologisk Tidskrift* **129(2)**: 95–98.
- BERGSTROM C. & BYSTROWSKI C. 2011: The identity of *Blondelia pinivora* (Ratzeburg) (Diptera: Tachinidae), a parasitoid of processionary moths (Lepidoptera: Thaumetopoeidae). *Stuttgarter Beiträge zur Naturkunde A, Neue Serie* **4**: 321–334.
- BYSTROWSKI C. 2001: A new species of the genus *Campylocheta* Rondani, 1859 (Diptera: Tachinidae) from Poland. *Annales Zoologici* **51(3)**: 279–281.
- CERRETTI P. & TSCHORSNIG H.-P. 2010: Annotated host catalogue for the Tachinidae (Diptera) of Italy. *Stuttgarter Beiträge zur Naturkunde A, Neue Serie* **3**: 305–340.
- CHALOUPSKÝ J. (ed.) 1989: *Přehledná geologická mapa Krkonoš a Jizerských hor (1:100000)*. [Geological map of the Krkonoše and Jizerské hory Mts (1:100000)]. Ústřední ústav geologický, Praha (in Czech).
- CLEMONS L. 1999: The Phasiinae (Dip.: Tachinidae) of Kent with a confirmed host for *Hemyda vittata* (Meigen, 1824). *Entomologist's Record and Journal of Variation* **111**: 27–35.
- ČEPELÁK J. 1983: První poznatky o vyšších dvoukřídlých Jizerských hor. (Erste Kenntnisse über die höheren Zweiflüger des Isergebirges (Diptera, Calypttrata)). *Sborník Severočeského Muzea, Přírodní Vědy* **13**: 95–100 (in Czech, German summary).
- DEMEK J. (ed.) 1987: *Zeměpisný lexikon ČR. Hory a nížiny*. [Geographic lexicon of the Czech Republic. Mountains and lowlands]. Academia, Praha, 584 pp. (in Czech).
- HARALDSEIDE H. 2012: Contributions to the knowledge of Norwegian Tachinidae (Diptera, Oestroidea). Part 1, including an updated checklist. *Norwegian Journal of Entomology* **59**: 43–58.
- HARALDSEIDE H. & TSCHORSNIG H.-P. 2014: On the biology of *Loewia foeda* (Meigen) (Diptera: Tachinidae). *The Tachinid Times* **27**: 15–19.

- HERTING B. 1960. Biologie der westpaläarktischen Raupenfliegen (Dipt., Tachinidae). *Monografien zur Angewandten angewandte Entomologie* **16**: 1–166.
- HERTING B. 1984: Catalogue of Palearctic Tachinidae (Diptera). *Stuttgarter Beiträge zur Naturkunde, Serie A (Biologie)* **369**: 1–228.
- HORSFIELD D., RAPER C. & MACDONALD M. 2013: Bothria subalpina Villeneuve (Diptera, Tachinidae) new to Britain from Scotland. *Dipterists Digest (2)* **20**: 63–68.
- LUTOVINOVAS E. 2012: New country and host records for Lithuanian Tachinidae (Diptera). *Entomologica Fennica* **23**: 231–238.
- LUTOVINOVAS E., MALENOVSKÝ I., TOTHOVÁ A., ZIEGLER J. & VAŇHARA J. 2013: Taxonomic approach to the tachinid flies *Dinera carinifrons* (Fallén) (Diptera: Tachinidae) and *Dinera fuscata* Zhang and Shima using molecular and morphometric data. *Journal of Insect Science* **13(139)**: 1–18.
- LUTOVINOVAS E., TSCHORSNIG H.-P., BARTÁK M. & KUBÍK Š. 2014: Tachinidae (Diptera) of Vráž nr. Písek (Czech Republic). Pp. 106–137. In: KUBÍK Š. & BARTÁK M. (eds): *6th workshop on biodiversity, Jevany*. Česká zemědělská univerzita, Praha.
- NISHIYAMA M., IWASA M. & HORIKAWA K. 1995: Parasitism by Tachinid flies (Diptera, Tachinidae) of Heteropterous Insects in Tokachi, Hokkaido. *Japanese Journal of Entomology* **63(1)**: 159–165.
- O'HARA J. E. 2014: *World genera of the Tachinidae (Diptera) and their regional occurrence*. Version 8, http://www.nadsdiptera.org/Tach/WorldTachs/Genera/Gentach_ver8.pdf (accessed in December 2014).
- PAKALNIŠKIS S., BERNOTIENĖ R., LUTOVINOVAS E., PETRAŠIŪNAS A., PODĖNAS S., RIMŠAITĖ J., SÆTHER O. A. & SPUNGIS V. 2006: Checklist of Lithuanian Diptera. *New and Rare for the Lithuania Insect Species* **18**: 16–154.
- PASTON S. & ROTHERAY G. E. 2009: *Eriothrix rufomaculata* (De Geer, 1776) (Diptera, Tachinidae) reared from *Chrysoteuchia culmella* (Linnaeus) (Lepidoptera, Pyralidae) – a first British host record. *Dipterists Digest (2)* **16**: 3–6.
- POHJOISMÄKI J. & KAHANPÄÄ J. 2014: Checklist of the superfamilies Oestroidea and Hippoboscoidea of Finland (Insecta, Diptera). *ZooKeys* **441**: 383–408.
- PERRY I. 2011a: Two species of Phytomyzinae (Diptera, Tachinidae) new to Britain. *Dipterists Digest (2)* **18**: 73–74.
- PERRY I. 2011b: *Eumea mitis* (Meigen) (Diptera, Tachinidae) new to Britain. *Dipterists Digest (2)* **18**: 75–76.
- QUITT E. 1971: Klimatické oblasti ČSSR. [Climatic zones in Czechoslovakia]. *Studia Geographica* **16**: 1–74 (in Czech).
- ROBERTSON D. M. & SHAW M. R. 2012: Further rearing records of some West Palearctic Tachinidae (Diptera). *Entomologist's Gazette* **63**: 161–172.
- SHIMA H. 1999: Host-parasite catalog of Japanese Tachinidae (Diptera). *Makunagi Acta Dipterologica Supplement* **1**: 1–108.
- SKALICKÝ V. 1988: Regionálně fytogeografické členění. [Regionally phytogeographical division]. Pp. 103–121. In: HEJNÝ S. & SLAVÍK B. (eds): *Květena České republiky 2. (Flora of the Czech Republic 2)*. Academia, Praha, 544 pp. (in Czech, English summary).
- TSCHORSNIG H.-P. & HERTING B. 1994: Die Raupenfliegen (Diptera: Tachinidae) Mitteleuropas: Bestimmungstabellen und Angaben zur Verbreitung und Ökologie der einzelnen Arten. *Stuttgarter Beiträge zur Naturkunde, Serie A (Biologie)* **506**: 1–170.
- TSCHORSNIG H.-P. & RICHTER V. A. 1998: Family Tachinidae. Pp. 691–827. In: PAPP L. & DARVAS B. (eds): *Contributions to a Manual of Palearctic Diptera (with special reference to flies of economic importance)*. Higher Brachycera, Volume 3. Science Herald, Budapest.
- TSCHORSNIG H.-P., RICHTER V. A., CERRETTI P., ZEEGERS T., BERGSTRÖM C., VAŇHARA J., VAN DE WEYER G., BYSTROWSKI C., RAPER C., ZIEGLER J. & HUBENOV Z. 2013: Fauna Europaea: Tachinidae. In: PAPE T. & BEUK B. (eds): *Fauna Europaea: Diptera, Brachycera*. Fauna Europaea version 2.6.2., <http://www.fauaenr.org>, most data not changed since 2004 (accessed in December 2014).
- VAŇHARA J. 2005: Tachinidae (kuklicovití). Pp. 367–369. 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*. Agentura ochrany přírody a krajiny České republiky, Praha, 760 pp. (in Czech and English).

- VAŇHARA J. & TSCHORSNIG H.-P. 2009: Tachinidae Robineau–Desvoidy 1830. In: JEDLIČKA L., STLOUKALOVÁ V. & KÚDELA M. (eds): *Checklist of Diptera of the Czech Republic and Slovakia*. Electronic version 2, <http://www.edvis.sk/diptera2009/> (accessed in December 2014).
- VAŇHARA J., TSCHORSNIG H.-P., HERTING B., MÜCKSTEIN P. & MICHALKOVÁ V. 2009: Annotated host catalogue for the Tachinidae (Diptera) of the Czech Republic. *Entomologica Fennica* **20**: 22–48.
- VONIČKA 2008: Entomologický výzkum Jizerských hor a Frýdlantska v letech 2000–2007. (Entomological survey of the Jizerské hory Mts and Frýdlant region in 2000–2007). *Sborník Severočeského Muzea, Přírodní Vědy* **26**: 3–12 (in Czech, English summary).
- VONIČKA P. & PREISLER J. (eds) 2008: Výsledky entomologického výzkumu Jizerských hor a Frýdlantska I. (Results of the entomological survey in the Jizerské hory Mts and Frýdlant region I). *Sborník Severočeského Muzea, Přírodní Vědy* **26**: 1–287 (in Czech, English summary).
- VONIČKA P. & PREISLER J. (eds) 2009: Výsledky entomologického výzkumu Jizerských hor a Frýdlantska II. (Results of the entomological survey in the Jizerské hory Mts and Frýdlant region II). *Sborník Severočeského Muzea, Přírodní Vědy* **27**: 1–278 (in Czech, English summary).
- ZEEGERST T. 1998: An annotated checklist of the Dutch tachinid flies (Diptera: Tachinidae). *Entomologische Berichten* **58**: 165–200.
- ZHANG C.-T. & SHIMA H. 2006: A systematic study of the genus *Dinera* Robineau–Desvoidy from the Palaearctic and Oriental Regions (Diptera: Tachinidae). *Zootaxa* **1243**: 1–60.
- ZIEGLER J. 1999: Eine neue paläarktische Art aus der Raupenfliegengattung *Chetogena* (Diptera, Tachinidae). *Studia Dipterologica* **6(2)**: 437–444.
- ZIEGLER J. 2000: 5.3.83. Tachinidae. Pp. 201–229. In: ZIEGLER J. & MENZEL F. (eds): Die historische Dipteren-Sammlung Carl Friedrich Ketel. Revision einer zwischen 1884 und 1903 angelegten Sammlung von Zweiflüglern (Diptera) aus Mecklenburg-Vorpommern. *Nova Supplementa Entomologica* **14**: 3–229.
- ZIEGLER J. 2012: Bemerkenswerte Raupenfliegen (Diptera, Tachinidae) aus dem Bundesland Sachsen-Anhalt. *Entomologische Nachrichten und Berichte* **56(3–4)**: 229–239.
- ZIEGLER J. & SHIMA H. 1996: Tachinid flies of the Ussuri area (Diptera: Tachinidae). *Beiträge zur Entomologie* **46**: 379–478.
- ZOLUBAS P., GEDMINAS A. & SHIELDS K. 2001: Gypsy moth parasitoids in the declining outbreak in Lithuania. *Journal of Applied Entomology* **125**: 229–234.

SOUHRN

V práci jsou shrnuty údaje o výskytu kuklicovitých (Diptera: Tachinidae) z Jizerských hor, Frýdlantska a okolí Liberce, získané v letech 2002–2015 v rámci entomofaunistického výzkumu tohoto regionu. Doplňeny jsou údaje o několika druzích ze sbírky Severočeského muzea v Liberci, sbíraných R. Čtvrtečkou v oblasti Ještědského hřbetu v roce 1992.

Materiál byl získán následujícími metodami sběru: smýkáním vegetace, zvláště kvetoucích porostů miříkovitých rostlin (Apiaceae), odchytem do žlutých misek, Malaiseho pastí a emergenčních pastí. Několik exemplářů sedmi druhů bylo zachyceno na lokalitě Liberec-Rudolfov i v masových pastích. Podrobněji tyto metody popisuje např. Vonička (2008). Všechny materiály z let 2002–2015 sbírali P. Vonička a J. Preisler (celkem 527 ex.), vzorky vytřídili a preparaci provedli J. Preisler a M. Barták.

Větší část materiálu determinoval E. Lutovinovas (celkem 505 ex. z let 1992, 2002–2003, 2006, 2008 a 2010–2014), menší část P. Mückstein (celkem 26 ex. z roku 2005). Jeden ex. z roku 2015 determinoval M. Barták. Dokladové exempláře jsou uloženy ve sbírkách České zemědělské univerzity v Praze a Severočeského muzea v Liberci.

Nomenklatura je až na několik výjimek (viz kap. Discussion and conclusions) převzata z práce Tschorsnig et al. (2013). Nové druhy pro Českou republiku jsou označeny symbolem

CZ!, nový druh pro Čechy symbolem **B!** a druhy, které jsou z území uváděny pouze na základě literárních údajů (Čepelák 1983), jsou uzavřeny v hranatých závorkách.

Celkem uvádíme nově ze sledovaného území 117 druhů, společně s dalšími sedmi druhy, publikovanými dříve z Jizerských hor Čepelákem (1983), je z tohoto regionu známo 124 druhů čeledi Tachinidae, což představuje 25,8% všech druhů kuklicovitých dosud známých z České republiky a 31,6% druhů známých z Čech (včetně druhů poprvé uváděných v této práci). Žádný ze zjištěných druhů není zařazen v červeném seznamu (Vaňhara 2005).

Dva druhy (*Ceranthia tristella* a *Peribaea longirostris*) jsou uvedeny z České republiky poprvé, jeden druh (*Nowickia atripalpis*) je nový pro území Čech (Vaňhara & Tschorsnig 2009). *Ceranthia tristella* byla již z České republiky zmíněna Andersenem (1996), který cituje katalog Hertinga (1984), ale v dalších publikacích tento druh nebyl z České republiky uváděn. Proto bylo ohlášení výskytu tohoto druhu v ČR považováno za omyl a ani autoři posledního seznamu dvoukřídlých České republiky (Vaňhara & Tschorsnig 2009) tento druh nezařadili (H.-P. Tschorsnig, pers. comm.). V této práci tedy uvádíme první spolehlivý údaj z České republiky.

Blondelia piniariae není v současné době považována za validní druh, ale spíše za varietu druhu *B. nigripes* (Bergström & Bystrowski 2011), přesto jsme ji do této práce zařadili, neboť je uvedena v nejnovějším seznamu dvoukřídlých České republiky (Vaňhara & Tschorsnig 2009).

Dinera fuscata nebyla v seznamech dvoukřídlých České republiky uváděna, nicméně na základě recentní studie druhového komplexu *Dinera carinifrons* (Lutovinovas et al. 2013) bylo zjištěno, že zkoumané vzorky patří ke druhu *D. fuscata*, který tak nahrazuje předchozí druhové jméno ve fauně České republiky.