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Research Article

New Data on the Diversity and Distribution of the Balkan Tachinidae (Diptera: Oestroidea)

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Abstract: Data on 48 species of the family Tachinidae from the Balkan Peninsula are listed. Of them, 27 species are recorded for the first time for different Balkan countries, specifically for Bulgaria (12 spp.), Croatia (8 spp.), Greece (6 spp.) and Slovenia (1 sp.). These records also include four species considered as new records for the fauna of the Balkan Peninsula: *Athrycia curvinervis*, *Admontia grandicornis*, *Aphantorhaphopsis siphonoides* (first Bulgarian records) and *Prosethilla kramerella* (first Croatian record). The remaining 21 species listed are recorded from only one or two countries in this region and are considered as regionally rare. However, a considerable number of new findings is not considered as regionally rare records and might be explained by the insufficient knowledge of the family in some countries of this region.

Key words: Tachinid flies, faunistics, distribution, new or rare records, Balkan Peninsula

Introduction

Tachinid flies are one of the largest families in the order Diptera, representing the largest group of the Calyptrata section (Pape et al. 2011). Adults have small to large size, dark to bright colours, and usually strongly developed body bristles that have great taxonomic value (Tschorsnig & Richter 1998). Adult insects play a role as pollinators of some plants and often feed exclusively from their flowers (Al-Dobai et al. 2012). Their immature stages develop as parasitoids in various insect hosts, preferring those of larger size (specifically moth caterpillars, sawfly larvae, beetle larvae and adults, crane fly larvae, true bugs, crickets, etc.) or other terrestrial arthropods (centipedes and scorpions), and as such have great ecological importance (Stireman et al. 2006). Diversity of hosts influences parasitoid diversity, which is valid for habitats that receive less anthropogenic influence. Thus, these flies are not among those that we encounter on the daily basis in severely urbanised environment. Tachinid larvae are resistant to immune reactions of the hosts and tend to be less specialist parasitoids in contrast to parasitoids in other insect orders. Often the strategy for reaching hosts with specific life strategies indicate their trophic selectivity. Host-reaching strategies of tachinid flies are summarised by Stireman et al. (2006) and data on host preferences of the Palaearctic species are surveyed by Tschorsnig (2017).

There are almost 900 species of the family Tachinidae known from Europe and 614 species (more than 2/3 of this number) recorded from the Balkan region (Hubenov 2008, Ziegler 2010,

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Tschorsnig et al. 2013, Zeegers 2017, Lutovinovas et al. 2018). Most tachinids are thermophilic and the fauna of Southern Europe is therefore richer than that of Central Europe where tachinids have been thoroughly studied (Tschorsnig & Herting 1994). However, the fauna of Southern Europe remains less known and requires further investigations. This paper enriches the knowledge about tachinid flies in the Balkan countries.

Materials and Methods

The material of this study was collected by the Czech dipterologists M. Barták, J. Fechtner, J. Halada, M. Kafka, V. Vrabec and the Croatian colleague B. Kokan. Tachinid flies were sorted by the junior authors (L. Kanavalová, M. Barták) and were identified by the first author of this report (E. Lutovinovas). Identification mainly followed Cerretti (2010), with few exceptions. Taxonomy and general distribution were acquired primarily from Herting & Dely-Draskovits (1993) and O'Hara et al. (2009), while European distribution followed Tschorsnig et al. (2013), Ziegler (2016), and regional distribution in the Balkan Peninsula followed Hubenov (2008) and more recent sources (Stanković et al. 2014, Zeegers 2017, Lutovinovas et al. 2018). Taxonomic position of the species of the tribe Eutherini (*Euthera fascipennis*) is treated in accordance with O'Hara & Wood (2004), O'Hara et al. (2009) and Cerretti (2010).

Specimens are stored in the collection at the Czech University of Life Sciences Prague (CULSP). Names of the localities are presented next to each recorded species; their coordinates and other details are provided separately (Table 1).

Results

Altogether, 48 species of the family Tachinidae from Balkan countries are reported in the present article. These include 27 species considered as new country records and other 21 species recognised as rarely recorded. Records are marked with an asterisk (*) if mentioned for the first time from a Balkan country and with two asterisks (**) if considered new for the Balkan region. Those species recorded from only one or two countries in this region are considered as regionally rare, while those recorded from several countries are not considered as regionally rare. Thus, only the new country records of the last group are provided in this publication.

Subfamily Dexiinae Macquart, 1834

***Athrycia curvinervis* (Zetterstedt, 1844) – Bulgaria: 7 km NE Dospat, 19.–20.VI.2018, 2♂♂. Palaearctic, in Europe from Northern Italy and Hungary throughout Central Europe to Norway, Sweden and Finland but apparently restricted to mountainous areas in southern countries (Tschorsnig & Herting 1994, Ziegler 2016); new for Bulgaria and the rest of the Balkan Peninsula (see Hubenov 2008, Tschorsnig et al. 2013, Stanković et

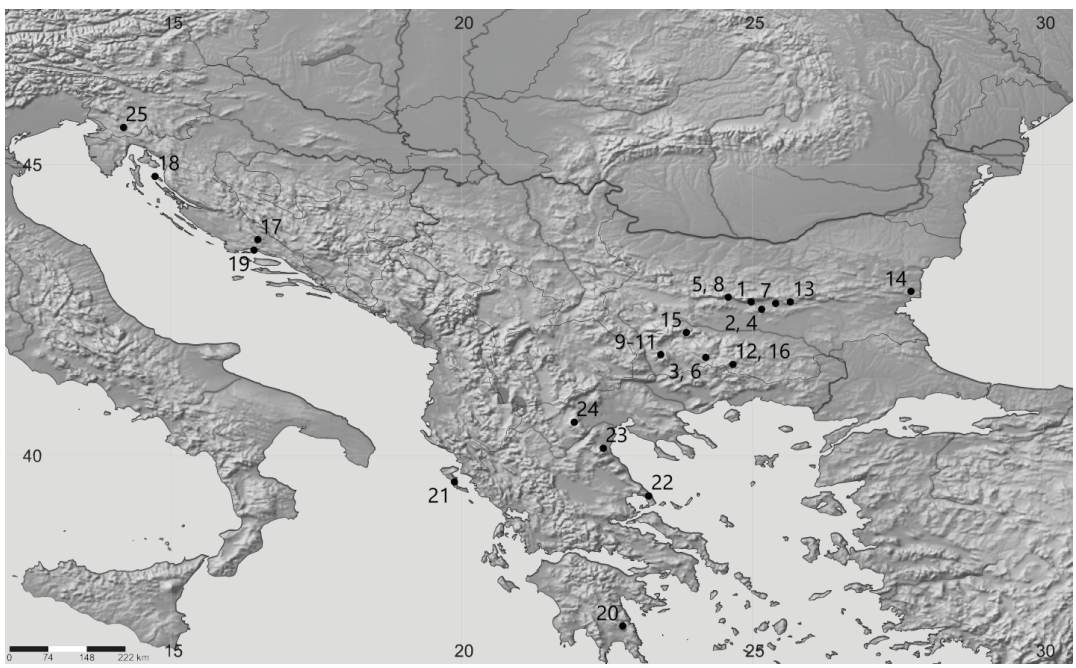

Fig. 1. Map of the Balkans, showing collecting sites in the study area (numbering of the sites corresponds to Table 1).

Table 1. Details of sampling locations of Tachinidae in the Balkan Peninsula.

No.	Country	Locality	Latitude	Longitude	Altitude (m)	Collector
1	Bulgaria	3 km N Kalofer	42.637	24.977	730	M. Barták
2	Bulgaria	6 km S Pavel Banya	42.546	25.179	500	M. Barták
3	Bulgaria	7 km NE Dospat	41.670	24.263	1170	M. Barták
4	Bulgaria	12 km S Pavel Banya	42.488	25.210	900	M. Barták
5	Bulgaria	13 km SW Troyan	42.787	24.624	1350	M. Barták
6	Bulgaria	E Dospat	41.663	24.222	1240	M. Barták
7	Bulgaria	Gorno Sahrane	42.633	25.219	480	M. Barták
8	Bulgaria	Hristo Danovo	42.736	24.621	1160	M. Barták
9	Bulgaria	Pirin NP, Begovica	41.669	23.425	1760	J. Fechtner
10	Bulgaria	Pirin NP, Vikhren hut	41.756	23.415	2000	M. Barták
11	Bulgaria	Pirin NP, SE Bansko	41.783	23.483	1500	M. Barták
12	Bulgaria	E Pamporovo	41.650	24.733	1600	M. Barták
13	Bulgaria	Shipka pass	42.748	25.335	1240	M. Barták
14	Bulgaria	Slanchev Bryag	42.740	27.750	150	M. Barták
15	Bulgaria	Yundola	42.063	23.854	1300	M. Barták
16	Bulgaria	W Smolyan	41.569	24.631	1260	M. Barták
17	Croatia	Gornji Muć	43.691	16.496	500	B. Kokan
18	Croatia	Rab Is., Kampor	44.761	14.715	8	J. Halada
19	Croatia	Split, Marjan	43.508	16.426	-	B. Kokan
20	Greece	20 km SW Leonido	37.133	22.766	850	J. Halada
21	Greece	Corfu Is., Barbati	39.583	19.866	-	V. Vrabec
22	Greece	S Neochori	39.300	23.216	-	M. Barták
23	Greece	N Litohoro	40.144	22.505	50	M. Barták
24	Greece	E Naousa, Pigadia	40.642	21.969	1400	M. Barták
25	Slovenia	Narin	45.649	14.199	540	M. Kafka

al. 2014, Zeegers 2017, Lutovinovas et al. 2018), thus considered as regionally rare.

**Campylocheta inepta* (Meigen, 1824) – Bulgaria: E Dospat, 22.–23.VI.2019, 1♂; W Smolyan, 25.VI.2016, 1♂. Palaearctic, widespread in Europe, from Spain, Italy and Greece throughout Central Europe to Norway, Sweden, Finland and vicinity of St. Petersburg; new for Bulgaria but recorded from several Balkan countries, see Hubenov (2008), Tschorsnig et al. (2013), Lutovinovas et al. (2018), thus not considered as regionally rare.

Chetoptilia puella (Rondani, 1862) – Bulgaria: Slanchev Bryag, 18.–20.VI.2019, 1♀. Euro-Siberian, in Europe from France, Italy and Bulgaria throughout Central Europe to Sweden but apparently absent in northern part of the latter country (Tschorsnig & Herting 1994); only recorded from Bulgaria in the Balkan Peninsula, see Hubenov (2008), Tschorsnig et al. (2013), thus considered as regionally rare.

Estheria bohemani (Rondani, 1862) – Bulgaria: Pirin NP, Begovica, 10.VIII.2005, 1♀. European, from Spain, Italy and Bulgaria throughout Central Europe to Norway and Sweden but apparently restricted to mountainous areas (Tschorsnig & Herting 1994); besides of Bulgaria, only recorded from Serbia or Montenegro in the Balkan Peninsula (precise locality unspecified), see Hubenov (2008), Tschorsnig et al. (2013), thus considered as regionally rare.

Euthera fascipennis (Loew, 1854) – Croatia: Rab Is., Kampor, 28.VIII.2018, 1♂. South Palaearctic and Palaeotropical, in Europe from littoral zone of the few Mediterranean countries but more recently also from northern Italy (Francati et al. 2017); besides of Croatia, only recorded from Greece in the Balkan Peninsula, see Hubenov (2008), Tschorsnig et al. (2013), Lutovinovas et al. (2018), thus considered as regionally rare.

**Rondania fasciata* (Macquart, 1834) – Bulgaria: Pirin NP, SE Bansko, 01.VII.2016, 1♀; E Pamporovo, 22.–24.VI.2016, 1♀; W Smolyan, 14.–26.VI.2019, 2♀♀. European, from Spain, Italy and Greece throughout Central Europe to Norway, Sweden and Finland; new for Bulgaria but recorded from several Balkan countries (Hubenov 2008, Tschorsnig et al. 2013), thus not considered as regionally rare.

Stomina calvescens Herting, 1977 – Croatia: Gornji Muć, 1.–28.IX.2018, 2♀♀. South European, from Spain, Italy and Greece to France and Switzerland; besides of

Croatia, only recorded from Greece in the Balkan Peninsula, see Hubenov (2008), Tschorsnig et al. (2013), Zeegers (2017), Lutovinovas et al. (2018), thus considered as regionally rare.

Subfamily Phasiinae Robineau-Desvoidy, 1830

**Besseria reflexa* Robineau-Desvoidy, 1830 – Slovenia: Narin, 6.VII.2015, 3♂♂, 2♀♀. South and Central European, from Spain, Italy and Greece to Germany but apparently absent in northern part of the latter country (Tschorsnig & Herting 1994); new for Slovenia but recorded from several Balkan countries (Hubenov 2008, Tschorsnig et al. 2013, Lutovinovas et al. 2018), thus not considered as regionally rare.

**Cylindromyia interrupta* (Meigen, 1824) – Greece: E Naousa, Pigadia, 14.VIII.2012, 1♂, 1♀. Holarctic, in Europe from Spain, Italy and Bulgaria throughout Central Europe to Norway, Sweden, Finland and vicinity of St. Petersburg; new for Greece, but recorded from several Balkan countries, see Hubenov (2008), Tschorsnig et al. (2013), Zeegers (2017), Lutovinovas et al. (2018), thus not considered as regionally rare.

Subfamily Tachininae Robineau-Desvoidy, 1830

***Aphantorhaphopsis siphonoides* (Strobl, 1898) – Bulgaria: Pirin NP, Vikhren hut, 27.VI.2016, 1♀; W Smolyan, 14.–26.VI.2019, 1♂. European, recorded from Northern Italy and Slovakia throughout Central Europe to Finland, but apparently restricted to mountainous areas in southern countries (Tschorsnig & Herting 1994, Ziegler 2016); new for Bulgaria and the rest of the Balkan Peninsula (see Hubenov 2008, Tschorsnig et al. 2013, Stanković et al. 2014, Zeegers 2017, Lutovinovas et al. 2018), thus considered as regionally rare.

Ceromya flaviseta (Villeneuve, 1921) – Bulgaria: 12 km S Pavel Banya, 1.–3.V.2018, 1♂. – Croatia: Gornji Muć, 9.VI.–8.VII.2018, 1♂. Palaearctic, in Europe from Italy and Bulgaria throughout Central Europe to Denmark, Poland and Ukraine; only recorded from Bulgaria and Croatia in the Balkan Peninsula, see Hubenov (2008), Tschorsnig et al. (2013), Lutovinovas et al. (2018), thus considered as regionally rare.

**Eurithia gemina* (Mesnil, 1972) – Bulgaria: 7 km NE Dospat, 23.VI.2016, 5♂♂; 13 km SW Troyan, 15.–22.VI.2017, 2♂♂; Hristo Danovo, 15.VI.2017, 1♂; E Pamporovo, 14.–18.VI.2018, 1♂; Pirin NP, Vikhren hut, 27.VI.2016, 2♂♂; Shipka pass, 21.VI.2017, 5♂♂. South and Central European, from Spain, Italy and Montenegro to Germany but apparently restricted to mountainous areas (Tschorsnig & Herting 1994); new for Bulgaria, and only recorded from Montenegro in the Balkan Peninsula, see Hubenov (2008), Tschorsnig et al. (2013), thus considered as regionally rare.

Hyalurgus lucidus (Meigen, 1824) – Bulgaria: Pirin NP, Vikhren hut, 27.VI.2016, 1♂. Palaearctic, in Europe from Spain, Italy and Bulgaria throughout Central Europe to Norway, Sweden, Finland and the North of Russia but apparently restricted to mountainous areas in southern countries (Tschorsnig & Herting 1994); besides of Bulgaria, only recorded from Romania in the Balkan Peninsula, see Hubenov (2008), Tschorsnig et al. (2013), thus considered as regionally rare.

Hyperaea sanguinea (Meigen, 1824) – Croatia: Gornji Muć, 9.VI.–8.VII.2018, 1♀. Mediterranean, from littoral zone of the few Mediterranean countries; only recorded from Croatia in the Balkan Peninsula, see Hubenov (2008), Tschorsnig et al. (2013), Lutovinovas et al. (2018), thus considered as regionally rare.

Linnaemya rossica Zimin, 1954 – Bulgaria: 7 km NE Dospat, 23.VI.2016, 2♂♂; E Pamporovo, 22.–24.VI.2016, 2♂♂; Yundola, 30.VI.2016, 1♂. Palaearctic, in Europe very fragmentary distributed from Bulgaria to Sweden, Finland and the North of Russia but apparently restricted to mountainous areas in southern countries (Tschorsnig & Herting 1994); besides of Bulgaria, only recorded from Serbia or Montenegro in the Balkan Peninsula (precise locality unspecified), see Hubenov (2008), Tschorsnig et al. (2013), thus considered as regionally rare.

**Loewia foeda* (Meigen 1824) – Croatia: Gornji Muć, 19.V.–28.IX.2018, 2♀♀. European, from France, Italy and Romania throughout Central Europe to Norway, Sweden, Finland and vicinity of St. Petersburg; new for Croatia but recorded from several Balkan countries, see Hubenov (2008), Tschorsnig et al. (2013), Lutovinovas et al. (2018), thus not considered as regionally rare.

Loewia setibarba Egger, 1856 – Bulgaria: Slanchev Bryag, 18.–20.VI.2019, 1♂. European, very fragmentary distributed from Italy and Bulgaria to vicinity of St. Petersburg; besides of Bulgaria, only recorded from Romania in the Balkan Peninsula, see Hubenov (2008), Tschorsnig et al. (2013), thus considered as regionally rare.

**Loewia submetallica* (Macquart, 1855) – Croatia: Split, Marjan, 12.X.–24.XI.2017, 1♀. European, from Spain and Bulgaria throughout Central Europe to Sweden but apparently absent in northern part of the latter country (Tschorsnig & Herting 1994); new for Croatia but recorded from several Balkan countries, see Hubenov (2008), Tschorsnig et al. (2013), Lutovinovas et al. (2018), thus not considered as regionally rare.

**Macquartia tenebricosa* (Meigen, 1824) – Greece: N Litohoro, 24.–25.V.2007, 1♂. Palaearctic, in Europe from Spain, Italy and Bulgaria throughout Central Europe to Norway, Sweden, Finland and vicinity of St. Petersburg; new for Greece but recorded from several Balkan countries, see Hubenov (2008), Tschorsnig et al. (2013), Zeegers (2017), Lutovinovas et al. (2018), thus not considered as regionally rare.

**Melisoneura leucoptera* (Meigen, 1824) – Bulgaria: Yundola, 24.VI.2018, 2♂♂, 1♀. West and Central Palaearctic, in Europe from Spain, Italy and Greece throughout Central Europe to Germany and Poland; new for Bulgaria but recorded from several Balkan countries, see Hubenov (2008), Tschorsnig et al. (2013), thus not considered as regionally rare.

**Petagnia subpetiolata* Rondani, 1859 – Croatia: Gornji Muć, 8.VII.–1.IX.2018, 1♂. West Palaearctic, in Europe from France, Italy and Bulgaria throughout Central Europe to Poland but apparently absent in northern part of the latter country (Tschorsnig & Herting 1994); new for Croatia but recorded from several Balkan countries, see Hubenov (2008), Tschorsnig et al. (2013), Lutovinovas et al. (2018), thus not considered as regionally rare.

Phytomyptera abnormis (Stein, 1924) – Bulgaria: Pirin NP, Vikhren hut, 27.VI.2016, 1♂, 1♀. South European, from Spain and Bulgaria to Hungary (actually, from only these three countries); only recorded from Bulgaria in the Balkan Peninsula, see Hubenov (2008), Tschorsnig et al. (2013), thus considered as regionally rare.

**Phytomyptera vaccinii* Sintenis, 1897 – Croatia: Gornji Muć, 9.VI.–8.VII.2018, 1♀. European, from France, Italy and Macedonia throughout Central Europe to Sweden and Estonia; new for Croatia but recorded from several Balkan countries, see Hubenov (2008), Tschorsnig et al. (2013), Lutovinovas et al. (2018), thus not considered as regionally rare.

**Siphona hokkaidensis* Mesnil, 1957 – Bulgaria: Pirin NP, Begovica, 10.VIII.2005, 1♂. Holarctic, in Europe from Spain, Italy and Croatia throughout Central Europe to Norway, Sweden, Finland and vicinity of St. Petersburg; new for Bulgaria, and only recorded from Croatia in the Balkan Peninsula, see Hubenov (2008), Tschorsnig et al. (2013), Lutovinovas et al. (2018), thus considered as regionally rare.

**Siphona pilistyla* Andersen, 1996 – Croatia: Gornji Muć, 9.VI.–8.VII.2018, 1♂; Split, Marjan, 30.III.–16.IV.2017, 3♂♂, 2♀♀. East Mediterranean, only recorded from Greece and Turkey; new for Croatia, and only recorded from Greece in the Balkan Peninsula, see Hubenov (2008), Tschorsnig et al. (2013), Lutovinovas et al. (2018), thus considered as regionally rare.

**Siphona setosa* Mesnil, 1960 – Bulgaria: Yundola, 30.VI.2016, 1♀. Palaearctic, in Europe from Spain, Italy and Croatia throughout Central Europe to Norway, Sweden, Finland and vicinity of St. Petersburg; new for Bulgaria, and only recorded from Croatia in the Balkan Peninsula, see Hubenov (2008), Tschorsnig et al. (2013), Lutovinovas et al. (2018), thus considered as regionally rare.

Ziminia masiceraeformis (Portshinsky, 1881) – Croatia: Gornji Muć, 9.VI.–1.IX.2018, 3♀♀. West and Central Palaearctic, in Europe from Portugal, Italy and Bulgaria to Switzerland; besides of Croatia, only recorded from Bulgaria in the Balkan Peninsula, see Hubenov (2008), Tschorsnig et al. (2013), Lutovinovas et al. (2018), thus considered as regionally rare.

Subfamily Exoristinae Robineau-Desvoidy, 1863

***Admontia grandicornis* (Zetterstedt, 1849) – Bulgaria: 3 km N Kalofer, 16.–27.VI.2017, 1♀; Hristo Danovo, 15.VI.2017, 1♂; Pirin NP, Vikhren hut, 27.VI.2016, 2♂♂, 1♀. Holarctic, in Europe from France, Northern Italy and Hungary throughout Central Europe to Norway, Sweden, Finland and the North of Russia but apparently restricted to mountainous areas in southern countries (Tschorsnig & Herting 1994, Ziegler 2016); new for Bulgaria and the rest of the Balkan Peninsula, see Hubenov (2008), Tschorsnig et al. (2013), Stanković et al. (2014), Zeegers (2017), Lutovinovas et al. (2018), thus considered as regionally rare.

Allophorocera ferruginea (Meigen, 1824) – Bulgaria: W Smolyan, 25.VI.2016, 1♂, 1♀. Palaearctic, in Europe from France, Italy and Bulgaria throughout Central Europe to Norway, Sweden, Finland and the North of Russia but apparently restricted to mountainous areas in southern countries (Tschorsnig & Herting 1994, Ziegler 2016); besides of Bulgaria, only recorded from Romania in the Balkan Peninsula, see Hubenov (2008), Tschorsnig et al. (2013), thus considered as regionally rare.

Amphicestonia dispar Villeneuve, 1939 – Greece: Corfu Is., Barbati, 16.–24.VI.2002, 1♀. West and Central Palaearctic, in Europe from littoral zone of the few Mediterranean countries; only recorded from Greece in the Balkan Peninsula, see Hubenov (2008), Tschorsnig et al. (2013), Zeegers (2017), thus considered as regionally rare.

**Belida angelicae* (Meigen, 1824) – Greece: Corfu Is., Barbati, 16.–24.VI.2002, 2♂♂. Palaearctic, in Europe from Spain, Italy and Croatia throughout Central Europe to Norway, Sweden, Finland and vicinity of St. Petersburg; new for Greece but recorded from several Balkan countries, see Hubenov (2008), Tschorsnig et al. (2013), Zeegers (2017), Lutovinovas et al. (2018), thus not considered as regionally rare.

**Carcelia puberula* Mesnil, 1941 – Bulgaria: 3 km N Kalofer, 20.–27.VI.2017, 1♂. Palaearctic, in Europe from Spain, Italy and Greece throughout Central Europe to Sweden but apparently absent in northern part of the latter country (Tschorsnig & Herting 1994); new for Bulgaria but recorded from several Balkan countries, see Hubenov (2008), Tschorsnig et al. (2013), thus not considered as regionally rare.

Chetogena micronychia (Masson, 1969) – Croatia: Gornji Muć, 8.VII.–1.IX.2018, 1♂. Mediterranean, from littoral zone of the few Mediterranean countries; only recorded from Croatia in the Balkan Peninsula, see Tschorsnig et al. (2013), Lutovinovas et al. (2018), thus considered as regionally rare.

**Erycia fasciata* Villeneuve, 1924 – Bulgaria: Hristo Danovo, 23.–24.VI.2017, 1♀. West and Central Palaearctic, in Europe from Spain, Italy and Montenegro to Germany but apparently absent in northern part of the latter country (Tschorsnig & Herting 1994); new for Bulgaria but recorded from several Balkan countries, see Hubenov (2008), Tschorsnig et al. (2013), Lutovinovas et al. (2018), thus not considered as regionally rare.

**Erynniopsis antennata* (Rondani, 1861) – Croatia: Gornji Muć, 1.–28.IX.2018, 2♀♀. West Palaearctic, in Europe from Spain, Italy and Bulgaria to France and Ukraine but apparently absent in northern parts of these countries (Tschorsnig & Herting 1994); new for Croatia, and only recorded from Bulgaria in the Balkan Peninsula, see Hubenov (2008), Tschorsnig et al. (2013), Lutovinovas et al. (2018), thus considered as regionally rare.

**Eurysthaea scutellaris* (Robineau-Desvoidy, 1848) – Greece: Corfu Is., Barbati, 16.–24.VI.2002, 4♀♀. Palaearctic, in Europe from Spain, Italy and Bulgaria throughout Central Europe to the Netherlands, Lithuania and vicinity of St. Petersburg; new for Greece but recorded from several Balkan countries, see Hubenov (2008), Tschorsnig et al. (2013), Zeegers (2017), Lutovinovas et al. (2018), thus not considered as regionally rare.

**Gaedia connexa* (Meigen, 1824) – Croatia: Gornji Muć, 09.VI.–08.VII.2018, 1♀. West Palaearctic, in Europe from Spain, Italy and Greece throughout Central Europe to Denmark and Central Part of European Russia; new for Croatia but recorded from several Balkan countries, see Hubenov (2008), Tschorsnig et al. (2013), Lutovinovas et al. (2018), thus not considered as regionally rare.

Istocheta sublutescens Herting, 1975 – Croatia: Gornji Muć, 9.VI–8.VII.2018, 1♀. South European, from Croatia to Switzerland (actually, from only these two countries); only recorded from Croatia in the Balkan Peninsula, see Hubenov (2008), Tschorsnig et al. (2013), Lutovinovas et al. (2018), thus considered as regionally rare.

**Lomachantha parra* Rondani, 1859 – Greece: 20 km SW Leonido, 29.V.2016, 1♂, 2♀♀. West and Central Palaearctic, in Europe from Spain, Italy and Bulgaria to Germany but apparently absent in northern part of the latter country (Tschorsnig & Herting 1994); new for Greece and only recorded from Bulgaria in the Balkan Peninsula, see Hubenov (2008), Tschorsnig et al. (2013), Zeegers (2017), thus considered as regionally rare.

Medina melania (Meigen, 1824) – Croatia: Gornji Muć, 19.V–9.VI.2018, 3♀♀. Palaearctic, in Europe from Spain and Italy throughout Central Europe to Germany, Poland and vicinity of St. Petersburg; besides of Croatia only recorded from Slovenia in the Balkan peninsula, see Hubenov (2008), Tschorsnig et al. (2013), Lutovinovas et al. (2018), thus considered as regionally rare.

Myxexoristops stolida (Stein, 1924) – Bulgaria: 3 km N Kalofer, 20.–27.VI.2017, 1♂. Palaearctic, in Europe from Italy and Bulgaria throughout Central Europe to Norway, Sweden, Finland and vicinity of St. Petersburg but apparently restricted to mountainous areas in southern countries (Tschorsnig & Herting 1994); besides of Bulgaria, only recorded from Romania in the Balkan Peninsula, see Hubenov (2008), Tschorsnig et al. (2013), thus considered as regionally rare.

Neophryxe vallina (Rondani, 1861) – Bulgaria: 6 km S Pavel Banya, 5.–6.V.2018, 1♂. European, from Spain, Italy and Bulgaria to the Netherlands and Slovakia, though only fragmentary distributed in Central Europe (Tschorsnig & Herting 1994); only recorded from Bulgaria in the Balkan Peninsula, see Hubenov (2008), Tschorsnig et al. (2013), thus considered as regionally rare.

**Nilea innoxia* Robineau-Desvoidy, 1863 – Bulgaria: Gorno Sahrane, 30.IV.–9.V.2018, 1♂. Palaearctic, widespread in Europe, from Spain, Italy and Greece throughout Central Europe to Norway, Sweden, Finland and vicinity of St. Petersburg; new for Bulgaria but recorded from several Balkan countries, see Hubenov (2008), Tschorsnig et al. (2013), thus not considered as regionally rare.

**Phorinia aurifrons* Robineau-Desvoidy, 1830 – Greece: S Neochori, 6.VII.2014, 1♂. Palaearctic and Oriental, in Europe from Spain, Italy and Bulgaria throughout Central Europe to the Netherlands, Finland and vicinity of St. Petersburg (Pohjoismäki & Kahanpää 2014); new for Greece but recorded from several Balkan countries, see Hubenov (2008), Tschorsnig et al. (2013), Zeegers (2017), Lutovinovas et al. (2018), thus not considered as regionally rare.

***Prosethilla kramerella* (Stein, 1924) – Croatia: Gornji Muć, 21.IV.–19.V.2018, 1♀. Euro-Siberian, in Europe from France, Austria and Hungary to the Netherlands and Germany; new for Croatia and the rest of the Balkan Peninsula, see Hubenov (2008), Tschorsnig et al. (2013), Stanković et al. (2014), Zeegers (2017), Lutovinovas et al. (2018), thus considered as regionally rare.

Tlephusa cincinna (Rondani, 1859) – Bulgaria: E Dospat, 22.–23.VI.2019, 1♀; E Pamporovo, 14.–18.VI.2018, 1♂. Palaearctic, in Europe from Spain, Italy and Bulgaria throughout Central Europe to Norway, Sweden, Finland and the North of Russia but apparently restricted to mountainous areas in southern countries (Tschorsnig & Herting 1994, Ziegler 2016); besides of Bulgaria, only recorded from Romania in the Balkan Peninsula, see Hubenov (2008), Tschorsnig et al. (2013), thus considered as regionally rare.

Vibrissina debilitata (Pandellé, 1896) – Bulgaria: Hristo Danovo, 23.–24.VI.2017, 1♀. European, from Spain, Italy and Bulgaria throughout Central Europe to vicinity of St. Petersburg, though only fragmentary distributed in northern countries (Tschorsnig & Herting 1994); only recorded from Bulgaria in the Balkan Peninsula (see Hubenov 2008, Tschorsnig et al. 2013), thus considered as regionally rare.

Xylotachina diluta (Meigen, 1824) – Bulgaria: Slanchev Bryag, 18.–20.VI.2019, 1♂. Palaearctic, in Europe from Spain, Italy and Bulgaria throughout Central Europe to Norway, Sweden and Finland; only recorded from Bulgaria in the Balkan Peninsula, see Hubenov (2008), Tschorsnig et al. (2013), thus considered as regionally rare.

Discussion

Altogether, 48 species are listed in this publication, including those 27 species recorded for the first time for different Balkan countries. These are Bulgaria (12 spp.), Croatia (8 spp.), Greece (6 spp.) and Slovenia (1 sp.). The remaining 21 species listed are recorded from only one or two countries in this region and considered here as regionally rare. On the other hand, the species known from several Balkan countries (*Macquartia tenebricosa*, *Phorinia aurifrons*, etc.) are considered as common and widespread, suggesting that numerous new findings of these insects do not necessarily represent the rare species. Their absence in some of the countries as proposed by the literature (Hubenov 2008, Tschorsnig et al. 2013) is explained by the insufficient knowledge of this family in those countries.

Some of the recorded species are restricted to the certain areas in the Palaearctic region and, therefore, these records are considered as worthy for noting. Thus, *Eurithia gemina* (first Bulgarian record) is a mountain species, whereas both *Athrycia curvinervis* and *Admontia grandicornis* (first Bulgarian records) are common and widespread in Northern and Central Europe but restricted to mountainous areas in southern countries (Tschorsnig & Herting 1994, Ziegler 2016). Moreover, the latter two species are newly recorded for the Balkan region (Hubenov 2008, Tschorsnig et al. 2013), sharing data about their southernmost records. Both European species *Aphantorhaphopsis siphonoides* (first Bulgarian record) and Euro-Siberian species *Prosethilla kramerella* (first Croatian record) are also newly recorded for this region (Hubenov 2008, Tschorsnig et al. 2013), representing their southernmost records. On the other hand, *Siphona pilistyla* (first Croatian record) is an East Mediterranean species, previously only recorded from Greece and Turkey (Andersen 1996, Tschorsnig et al. 2013); the present study provides the northernmost record of this species. There are now in total 618 species of the family Tachinidae presently known from the Balkan Peninsula, when new records of this publication are considered. These data supplement the knowledge about the overall distribution of several species and show the significance of such studies for the less studied European regions.

Further revisions of collected materials from more diverse habitats would surely reveal additional species in this region. The climate warming will also cause diffusion of the warmth-loving species from more southern or littoral areas of the Balkans towards northern and central areas. Thus, year by year, new records will replenish the fauna of the Balkan countries. The scale of these studies, however, will mostly depend on the interest of researchers rather than on the scientific institutions because such activities are rarely supported by grant agencies. This influences basically the slow process of faunistic studies, including the areas with less knowledge in this group of insects in the Balkan region.

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