

NEW DATA ON THE HOVERFLIES (DIPTERA: SYRPHIDAE) OF SERBIA AND MONTENEGRO

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Abstract

The results of a survey of hoverflies (Syrphidae) collected by the members of the pre-conference trip of the 5th International Symposium on Syrphidae are presented. Fieldwork took place from 8-22 June 2009 and involved 18 localities (12 in Serbia and 6 in Montenegro). The sites visited are described and short notes are given on some rare species. During the 15 days of fieldwork, about 5600 specimens were collected, representing 59 genera and 249 species. Seven species are recorded for the first time for Serbia: *Epistrophe obscuripes*, *Merodon equestris*, *Merodon haemorrhoidalis*, *Microdon miki*, *Platycheirus angustipes*, *Rhingia borealis* and *Sphegina verecunda*; and 19 species are recorded for the first time for Montenegro: *Cheilosia crassisetata*, *Cheilosia lasiopa*, *Cheilosia pubera*, *Cheilosia rufimana*, *Cheilosia subpictipennis*, *Eumerus clavatus*, *Eumerus sogdianus*, *Lejogaster tarsata*, *Merodon haemorrhoidalis*, *Merodon serrulatus*, *Myolepta dubia*, *Neoascia interrupta*, *Neoascia tenur*, *Platycheirus aurolateralis*, *Platycheirus occultus*, *Platycheirus tatricus*, *Sericomyia silentis*, *Sphaerophoria laurae* and *Trichopsomyia flavitarsis*. The threat category of the endangered species according to Vujić *et al.* (2001) is given for the species treated in the result section. For the records of new species, additional data from the collection of the Department of Biology and Ecology of Novi Sad, Serbia (FSUNS) are also presented. Some morphological characters useful to differentiate *Anasimyia femorata* Šimić, 1987 from *A. transfuga* (Linnaeus, 1758) and *Merodon haemorrhoidalis* Sack, 1913 from *M. constans* (Rossi, 1794), are given. The female lectotype of *M. haemorrhoidalis* is studied and shows that it is a distinct species similar to *M. constans*.

KEY WORDS: Syrphidae, Montenegro, Serbia, fauna, new records, threatened species.

Introduction

With about 6000 described species, hoverflies (Diptera: Syrphidae) represent one of the most species-rich dipteran families (Rotheray & Gilbert, 2011).

The Syrphidae of Serbia and Montenegro are well studied (Glumac, 1955, 1959; Vujić & Glumac, 1994; Vujić, 1996; Vujić & Šimić, 1994, 1998; Šimić, 1987; Šimić *et al.*, 2008; Šimić *et al.*, 2009; Radenković, 2008; Nedeljković *et al.*, 2009; Nedeljković, 2011; Šimić & Vujić, 1996; Vujić *et al.*, 2001; 2002; 2013). Šimić *et al.* (1998) presented the first checklist of hoverflies for Serbia and Montenegro, which included 414 species.

In June 2009, prior to the 5th International Symposium on Syrphidae, a group of entomologists studied the Syrphidae of Serbia and Montenegro. Several new additions to the known fauna and some species of conservation importance were found. The results are presented in this paper, which also includes additional data from the collection in the Department of Biology and Ecology of Novi Sad (FSUNS).

Material and Methods

The research was conducted between 8 and 22 June 2009 on visits to 18 localities (12 in Serbia and 6 in Montenegro). Specimens were collected primarily by hand net and most of the collected material was prepared and pinned, but some was stored in alcohol. In total, about 5600 specimens were collected. The following references were used for identification: Van Der Goot (1981), Van Veen (2004), Nedeljković (2011), Speight & Sarthou (2013), and specialized literature for diverse genera: Dušek & Láska (1976), Claussen & Torp (1980), Goeldin De Tiefenau (1989), Vujić (1990), Mazánek *et al.* (1999), Marcos-García *et al.* (2000), Hippa *et al.* (2001), Van Steenis & Lucas (2011), Vujić *et al.* (2013) and Van Steenis *et al.* (2014). Part of the material from the genus *Cheilosia* Meigen, 1822 was identified by Claus Claussen (CCF) and the specimens of *Platycheirus* Lepeletier & Serville, 1828 were identified by Tore Nielsen (TNS). The material is deposited in the Natural History Museum, Vienna, Austria (NHMV) and the following private collections: K. Goudsmits, Doorn, the Netherlands (KGD); G. Pennards, Amersfoort, the Netherlands (GPA); A. Ssymank, Wachtberg, Germany (ASW); J. Van Steenis, Amersfoort, the Netherlands (JSA); W. Van Steenis, Breukelen, the Netherlands (WSB); M.P. Van Zuijlen, Wageningen, the Netherlands (MPW). The material deposited in the collection of the Department of Biology and Ecology of Novi Sad (FSUNS) is indicated by its acronym. Material collected by Theo Zeegers, Soest, the Netherlands (TZS), is now in col. WSB and all the other material is deposited in the private collection of the collector as indicated in the section "New data". All photos are from JSA, except one, which is from ASW and indicated as such.

Collecting sites and localities

In the following section a detailed description of the localities is given, which includes geographical coordinates in WGS84 (World Geodetic System 1984, measured with a Garmin GPS45 device), altitude, collecting date as well as habitat and vegetation information. Collecting sites less than 3 km apart but with similar habitats have usually been grouped together. Part of the data was collected at precise microsites; however, other data collected in parallel excursions may overlap with that of the microsites. Plant names used in the locality descriptions follow that of Flora Europaea (Tutin *et al.*, 2010a, 2010b).

1. Stara Planina (Srb). A mountainous area towards the eastern border of Serbia, close to the city of Pirot. Two sites comprising meadows in different forest types, as described below, were visited on 8 June 2009, at an altitude of 950-1020 m a.s.l.

No. 1: Dojkinci, valley of the river Dojkinačka (Fig. 1A), Stara Planina mountain range, ca. 18 km NE of Pirot; 43°14'38" N, 22°46'37" E, 940 m a.s.l.; river valley with species-rich nutrient-poor grasslands and on the slopes with Moesian beech forests (*Fagus moesiaca*).

No. 2: Surroundings of Rsovci, ca. 7-10 km east of Pirot; 43°10'55" N, 22°42'28" E and 43°10'49" N, 22°40'26" E, 1000-1020 m a.s.l.; nutrient-poor mountain pastures, partly with ruderal vegetation along the roadside and *Picea abies*-forest margins.



Figures 1 A-B. Serbia. A) Stara Planina, Dojkinačka River; B) Suva Planina, Bancarevo.

2. Suva Planina (Srb). Low mountain area in eastern Serbia between Pirot and Niš. An area with ski slopes at 900 m a.s.l. and a forested locality with small meadows and a stream at 300 m a.s.l. were visited on 9 June 2009.

No. 3: Bancarevo east of Niška Banja (Fig. 1B), Suva Planina mountain range; 43°17'16" N, 22°06'36" E, 305 m a.s.l.; valley of a small brook with open ruderal nitrophytic vegetation (mainly *Urtico-Aegopodietum podagrariae*) and mixed remnants of alluvial *Populus-Salix* forest.

No. 4: Bojanine Vode, Studena, higher parts of the Suva Planina mountain range (ca. 12 km SE of Niš); ca. 43°13'13" N, 22°06'49" E to 43°13'02" N, 22°07'19" E, 900-1000 m a.s.l.; Moesian beech forests (*Fagus moesiaca*) on often shallow calcareous soils, partly shaded rocks in the forest with ferns like *Asplenium scolopendrium*, nitrophytic tall herb forest margins with *Aegopodium podagraria* and *Chaerophyllum temulum*, small open pastures (partly with ski slopes) in the forest.

3. Kopaonik (Srb). Kopaonik National Park, the largest Serbian mountain range with its highest peak, Pančičev Vrh (2017 m altitude), where 5 sites were visited, ranging from dry grasslands on hilltops to brook sides within coniferous forest and from flower-rich wet meadows to peat bog. Visited from 10-12 June 2009 at an altitude of 1250-1910 m a.s.l.

No. 5: Ravniška Planina (Fig. 2A), Zaplanina (Kopaonik N. P.), 43°15'26" N, 20°50'54" E to 43°15'30" N, 20°50'47" E, 1260-1400 m a.s.l., 10 June 2009; small valley of a stream with lush fringing herb vegetation of *Trollius europaeus*, *Senecio* sp., *Geum rivale*; slopes and species-rich mountain pastures with many *Ornithogalum*, isolated *Juniperus*-shrubs, small springs and fens, but partly disturbed by previous mining activities.

No. 6: Kopaonik village, surroundings of the Hotel Olga, Marina Voda, Tourist Center Kopaonik N. P. and Karaman Greben (skiing facilities); 43°17'03" N, 20°49'02" E to 43°17'30" N, 20°49'03" E, 1715-1730 m a.s.l., 10-11 June 2009; wet vegetation of brooks and springs on the lower slopes, with abundant *Caltha palustris* vegetation in full flower, including forest margins and mixed forest cover.

No. 7: Velika Gobelja (Fig. 2D), Kopaonik, 4 km northeast of the village; both on slopes and hilltop, 43°18'17" N, 20°49'27" E, to 43°19'05" N, 20°49'17" E, 1780-1943 m a.s.l., 11 June 2009; species-poor Nardion grassland with *Juniperus* bushes and flowering *Ranunculus*, grazed by sheep on the south slope, with *Juniperus* bushes combined with humid *Trollius europaeus* grasslands on the north slope.

No. 8: Samokovska River (Fig. 2B), Kopaonik N. P.; 43°19'08" N, 20°45'52" E to 43°19'16" N, 20°46'22" E, 1490-1520 m a.s.l., 11 June 2009; different types of humid grasslands (*Scirpetum sylvatici*, Calthion) with abundant *Ranunculus repens*, including a transitional bog (Jankova Bara, Fig 2C) with *Valeriana dioica*, *Potentilla erecta*, *Eriophorum angustifolium*, locally *Caltha palustris*, surrounded by mixed *Picea* forest, with some collecting along mesic to wet herb fringes of forest paths (e.g. with *Myosotis palustris* and *Stellaria nemorum*).

No. 9: Lisinska River (Fig. 2E, F), Lisina, Kopaonik N.P.; 43°16'51" N, 20°45'29" E to 43°16'55" N, 20°45'45" E, 1220-1250 m a.s.l., 12 June 1990; a small valley with a rich habitat mosaic of wet meadows (Calthion vegetation with *Scirpus sylvaticus*) and tall herb fringes along a small brook and quite dry species-rich meadows with *Ornithogalum* species on the slopes to partial *Juniperus communis* scrub and succession phases to the adjacent Moesian beech forest.

4. Lake Skadar (Mne). A large lake in southeastern Montenegro close to Albania, south of Podgorica. Two sites along the shore of the lake with rich helophyte vegetation, at an altitude of 10 m a.s.l. were visited on 13 June 2009.

No. 10: Podhum, Humsko Blato (Fig. 3), Lake Skadar, ca. 14 km SSE of Podgorica; 42°18'41" N, 19°21'19" E, 20 m a.s.l., 13 June 2009; mesic grassland, alluvial willow-forest, reed beds and floating water vegetation with *Nymphaea alba* and *Nuphar lutea*.

No. 11: Vranjina, Lake Skadar; 42°16'43" N, 19°08'40" E, 30 m altitude, 13 June 2009; large reed beds (*Phragmites australis*) in a shallow depression with abundant *Butomus umbellatus*, and some ruderal vegetation close to the roadside with *Polygonum persicaria*.

5. Morinj (Mne). Inlet of a little stream with springs to Kotor Bay in the southwest of Montenegro, visited in the morning of 14 June 2009, at 0-20 m a.s.l.

No. 12: Morinj, SW of Risan; 42°29'17" N, 18°39'08" E, 10-20 m a.s.l., 14 June 2009; small springs (limnocrenes) and a small river with *Juncus*-rich wetland remnants. Most of the natural site has been destroyed by developments including housing, gardens with fruit trees and lawns as well a parking lot.



Figures 2 A-F. Kopaonik National Park, Serbia. A) Ravniška Planina; B) Samokovska River; C) Jankova Bara; D) Velika Gobelja; E-F) Lisinska River.

6. Risan (Mne). On the way from Morinj to Durmitor two short stops were made on the plateau near Risan. The habitat was dry calcareous grasslands with some shrubs and trees. Visited at 14 June 2009, at an altitude of 570-650 m a.s.l.

No. 13: Sv. Nikola and Grkavac, ca. 2-4 km NNE of Risan; 42°31'41" N, 18°42'20" E, to 42°32'52" N, 18°42'49" E, 570-650 m a.s.l., 14 June 2009; dry calcareous species-rich sheep-grazed pastures with *Ostrya carpinifolia* shrubs, ruins of former buildings and dry forest margins.



Figures 3 A-B. Montenegro. A) Humsko Blato, Lake Skadar; B) Kotor Bay, Morinj (Photo ASL).

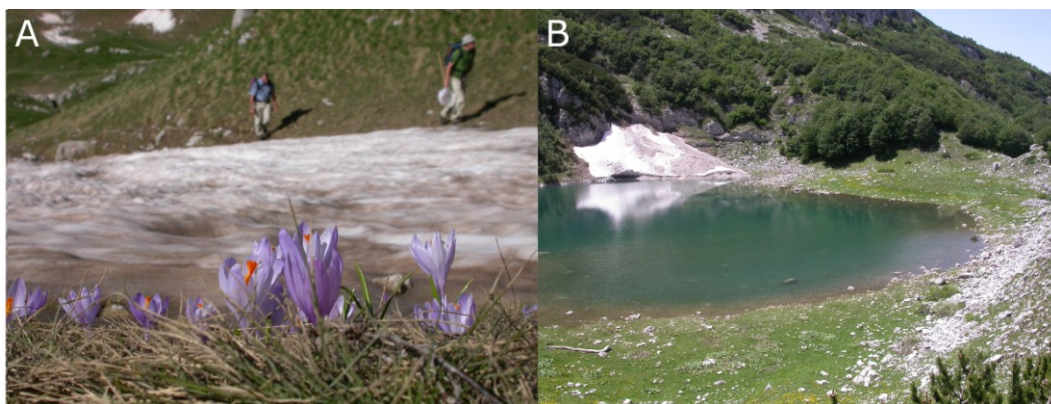


Figure 4. Barno Lake, Žabljak, Durmitor N.P., Montenegro.

7. Durmitor Mountains (Mne). Durmitor National Park. Large mountain area in Montenegro with a high peak of 2522 m a.s.l. near Žabljak. Two sites were visited on 15 and 16 June 2009, ranging from forested lakes and peaty grasslands to mountaintops and rocky outcrops at altitudes between 1450-2150 m a.s.l.

No. 14: Surroundings of Žabljak, Durmitor N.P., Autocamp Kod Boce and paths to lakes Crno (Black) Jezero and Barno Jezero (Fig. 4) from Žabljak; 43°08'36" N, 19°07'01" E, to 43°09'22" N, 19°05'33" E, 1450-1500 m a.s.l., 15 June 2009; mountain hay meadows with flowering *Crataegus monogyna* shrubs, small brooks with fringing herb vegetation in the *Picea abies* forests, small fens on the slopes and a larger wetland complex with *Calthion* grasslands and a mesotrophic quaking bog on the Barno Lake with abundant *Menyanthes trifoliata*.

No. 15: Mountain track from the road to Škrčko Ždrijelo (Fig. 5A) and Malo Škrčko Jezero (lake) (Fig. 5B), Durmitor N.P.; 43°07'51" N, 19°01'30" E to 43°06'20" N, 19°00'53" E, 1700-2115 m a.s.l., 16 June 2009; calcareous high mountain vegetation with Seslerion grasslands, rock carpets with *Dryas octopetala*, calcareous screes, snowfields with flowering willows, a lake fringed by dry species-rich meadows with *Ornithogalum* species and flowering *Sorbus* bushes, a small mountain pass on a nearby small summit at Škrčko Ždrijelo offered an opportunity to collect hilltopping insects.



Figures 5. A-B. Durmitor N. P., Montenegro. A) Mountain track to Škrčko Ždrijelo; B) Lake Malo Škrčko .

8. Obedska Bara (Srb). Obedska Bara is a large protected alluvial complex associated with the Sava River ca. 40 km west of Belgrade with alluvial oak forests, large poplar plantations, oxbow lakes and open swamp vegetation with sedge and reed beds and a riverine forest along the Sava River. Four different sites were visited at 18 June 2009, altitude 80 m a.s.l. The forests were very dry during our visit and the number of specimens collected here was low.

No. 16: Obedska Bara, eastern margin of the village Obrež, Hotel "Obedska Bara" (Fig. 6); 44°44'07" N, 19°59'12" E, 80-90 m a.s.l., 18 June 2009; habitat complex of an oxbow lake, an old river branch of the Sava with eutrophic water vegetation and reed beds (*Phragmites australis*, *Glyceria maxima*, *Butomus umbellatus* and *Typha angustifolia*).



Figure 6. Reed beds near Hotel "Obedska Bara", Serbia.

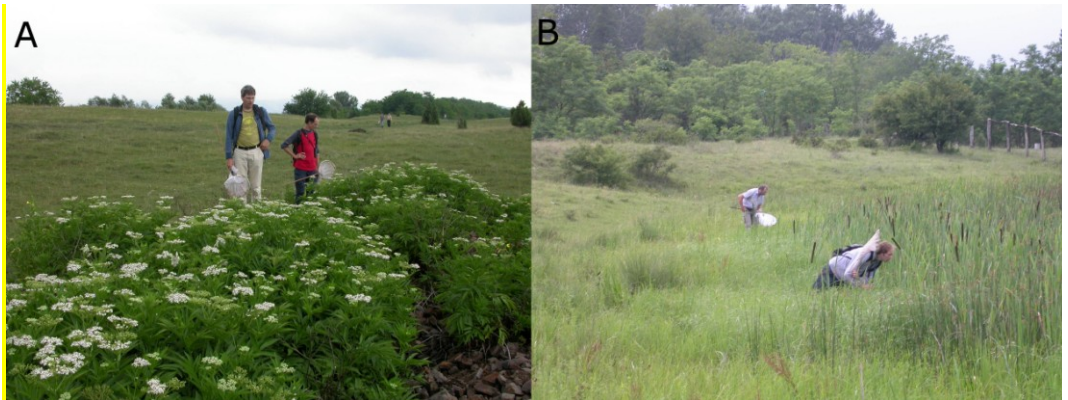
No. 17: Obedska Bara, oxbow of the Sava directly west of the village Kupinovo; from 44°42'13" N, 20°00'35" E to approximately 44°42'13" N, 19°57'21" E, 80 m a.s.l., 18 June 2009; the inner part of the oxbow borders a complex of alluvial forests, with some remnants of semi-natural alluvial oak forests near Kupinovo. However, the majority of the area comprises poplar plantations intermingled with a few reed beds and some aquatic vegetation (e.g. *Oenanthe aquatica*) along the many drainage canals, as well as ruderal vegetation along forest paths. The western part of the oxbow, opposite Obrež, close to the Sava River has more open alluvial habitats with less cover of poplar plantations and larger reed beds with *Phragmites australis* and *Oenanthe aquatica*.

9. Fruška Gora (Srb). A low hill range west of Novi Sad with deciduous forest, which was also the site of the Fifth International Symposium on Syrphidae. Visited 19-21 June 2009, at an altitude of 160-300 m a.s.l.

No. 18: Fruška Gora National park, a small mountain range close to Novi Sad, with a mixture of different deciduous forest types, mainly oak-hornbeam with silver lime (*Tilia tomentosa*) and partly with beech forest. Collecting localities were in the immediate surroundings of the conference hotel CePTOR in Andrevlje, 45°10'28" N, 19°38'50" E, ca. 150-280 m a.s.l., mixed deciduous oak-hornbeam forests with silver lime, mesic to dry grasslands surrounded by forest, forest margins with mesic, partly eutrophic tall herb stands with different flowering Apiaceae.

10. Deliblato Sands (Srb). The largest Pannonian inland sand dune complex, in Vojvodina, northern Serbia. Due to cold and cloudy weather the number of species collected here was very low; nonetheless, two species new for the collecting trip were found; a female *Parhelophilus versicolor* and a larva of *Cheilosia grossa*.

No. 19: Deliblato Sands (Fig. 7), 4 km NW of Ram, near the Danube River (Bara Đuric), 44°50'21" N, 21°18'05" E, 70 m a.s.l., 22 June 2009; Habitats were species-rich dry Pannonic steppe grasslands, partly invaded by *Asclepias syriaca*, and close to the Danube River with willow scrub and reed beds with *Phragmites australis*.



Figures 7 A-B. Bara Đuric, Deliblato Sands, Serbia.

Results

The present paper gives data on 249 species (213 from Serbia and 150 from Montenegro). Of the total number of specimens collected, 168 could not be identified to species level: most of these were females of the genera *Heringia* Rondani, 1856 (subgenus *Neocnemodon* Goffe, 1944), *Paragus* Latreille, 1804 (subgenus *Pandasyopthalmus* Stuckenberg, 1954), *Pipizella* Rondani, 1856 and *Sphaerophoria* Lepeletier & Serville, 1828 and the species pair *Cheilosia albitarsis* (Meigen, 1822) and *C. ranunculi* Doczkal, 2000. The full species list along with the number of specimens collected per site is given in Appendix 1.

Species list

Anasimyia femorata Šimić, 1987

Threatened on the Balkans (Vujić *et al.*, 2001).

New data. Montenegro, Daljšan, Podhum, Humsko Blato (marshland), Lake Skadar, 15 km SSE Podgorica, 42°18'41" N, 19°21'19" E, 10 m a.s.l., 13.06.2009, 10♂, 17♀, leg. GPA, JSA, WSB, MZW, ASW, KGD.

Ecology. The specimens were collected in the marsh bordering Lake Skadar (Fig. 3A). Almost all specimens occurred in the area covered in part with standing water to a depth of 15-50 cm with floating or submersed vegetation (mainly *Nuphar lutea* and *Nymphaea*). The flies were resting on top of or underneath leaves, mostly 0-25 cm above the water surface, or were flying fast within the vegetation. Many more specimens were seen than could be collected because of their nervous behavior and rapid movement. Flower-visiting on

Nuphar lutea was seen once. The habitat was shared with *Mesembrius peregrinus* (Loew, 1846), which had comparable densities and behavior.

Discussion. Previously known only from the type material (1♂, 1♀). All our material was collected at the type locality where a large population probably exists that heavily depends on the presence of the shallow waters around the perimeter of the large lake.

The characteristics mentioned by Speight & Sarthou (2013) are not accurate as the sternites are yellow to black in both *A. femorata* and *A. transfuga* (Linnaeus, 1758). *Anasimyia femorata* is very similar to *A. transfuga* in nearly all other characters, except that only tergite IV sometimes has a narrow black shiny vitta (as found also in *A. contracta* Claussen & Torp, 1980) and furthermore, tergites II-IV in the male have an orange tinge, which is not evident in *A. transfuga*.

Anasimyia transfuga (Linnaeus, 1758)

New data. Serbia, Hotel Obedska Bara, Obrež, 44°44'07" N, 19°59'12" E, 80 m a.s.l., 18.06.2009, 2♂, 1♀, leg. ASW, JSA. Additional material from col. FSUNS: Bezdán, 16.09.1994, 1♂, leg. Radnović; Žabalj, 28.05.1998, 1♀, leg. Prodana.

Ecology. This is a wetland species preferring margins of mesotrophic pools and lakes with *Scirpus* or *Sparganium*, and it is widespread in Europe (Speight, 2013). Collected within the reed beds flying among the lush vegetation.

Brachypalpus laphriformis (Fallén, 1817)

New data. Montenegro, Žabljak, Autocamp Kod Boce, Durmitor NP, 43°08'36" N, 19°07'01" E, 1500 m a.s.l., 16.06.2009, 1♀, leg. ASW.

Second record for Montenegro (Durmitor) after Vujić & Milankov (1999).

Ecology. A saproxylic species occurring in over-mature *Fagus* and *Quercus* forest with senescent trees and fallen, rotting timber (Speight, 2013).

Ceriana vespiformis (Latreille, 1804)

Decreasing on the Balkans (Vujić *et al.*, 2001).

New data. Montenegro, Morinj, 5 km SE of Risan, 42°29'17" N, 18°39'08" E, 14.06.2009, 10♂, 2♀, leg. ASW, JSA, GPA, KGD, WSB, MZW.

Ecology. A species associated with evergreen oak forest including *Quercus suber* and *Q. ilex* with over-mature trees (Speight, 2013). In Montenegro confined to the Adriatic coast (Vujić *et al.*, 2001). Adults mimic small Hymenoptera in color and flight behavior. Collected in an otherwise dry area from thorny bushes of *Paliurus spina-christi*, where the males were flying very rapidly among the flower heads and females were feeding on the flowers. Also collected on white Apiaceae near a small stream.

Chalcosyrphus eunotus (Loew, 1873)

New data. Serbia, Dojkinačka River, Stara Planina, 2 km N of Dojkinci, 18 km NE of Piroć, 43°14'38" N, 22°46'37" E, 950 m a.s.l., 8.06.2009, 1♂, leg. MZW; Serbia, Jankova Bara, Kopaonik NP [road through forest], 43°19'08" N, 20°45'52" E, 1500 m a.s.l., 11.06.2009, 1♂, leg. GPA. Additional material from col. FSUNS: Dubašnica, Lunga, 15.05.1994, 1♂, leg. Radnović; Demizlok, 12.06.1994, 1♀, leg. Vujić.

Rare in Serbia (Vujić & Milankov, 1999).

Ecology. A saproxylic species of stream sides in deciduous (*Carpinus*, *Fagus*, *Quercus*) or mixed forest, including *Fraxinus* woodland, alluvial hardwood forest and brook floodplain forest; up to 1000 m. Although found more often in association with permanently running water, this species can be found along the bed of seasonal forest streams, where these contain fallen timber (Speight, 2013). Collected along a stream resting on leaves in the forest edge.

Cheilosia barbafacies Vujić & Radenković, 2013

Recently described species from Mt. Durmitor.

New data. Montenegro, Durmitor NP, Škrčko Ždrijelo to Lake Malo Škrčko, 43°07'32" N, 19°01'17" E, 1800-2100 m a.s.l., 16.06.2009, 1 ♂, leg. GPA.

Ecology. Deciduous forests (Vujić *et al.*, 2013).

Cheilosia crassiseta Loew, 1859 = *Cheilosia (Nigrocheilosia)* sp. in Vujić (1996) = *Cheilosia vangaveri* Timon-David, 1937 sensu Claussen in Speight (2013).

New to Montenegro.

New data. Montenegro, Durmitor NP, Škrčko Ždrijelo, 43°07'07" N, 19°00'53" E, 2150 m a.s.l., 16.06.2009, 3♂, leg. JSA, MPW; Montenegro, Durmitor NP, Škrčko Ždrijelo, 43°07'32" N, 19°01'17" E, 1800-2100 m a.s.l., 16.06.2009, 3♂, 2♀, leg. JSA & WSB.

Ecology. Occurs in unimproved, montane grassland and open, grassy areas in the upper parts of the *Abies/Picea* zone and on through the *Larix* zone into unimproved, calcareous and non-calcareous sub-alpine grassland to above 2500 m (Speight, 2013). Found in high mountains and also on hilltops.

Cheilosia cumanica (Szilády, 1938)

New data. Serbia, Andrevlje, Beočin, Fruška Gora NP, 45°10'04" N, 19°38'32" E, 170-300 m a.s.l., 20.06.2009, 1♂, leg. JSA, det CCF. Additional material from col. FSUNS: Dubašnica, Lazareva River Gorge, 29.04.1995, 1♂, leg. Vujić, 29.04.-1.05.1995, 6♂, leg. Vujić, 22.08.1995, 1♀, leg. Vujić, 24.08.1995, 1♂, leg. Vujić, 23.04.1996, 2♂, leg. Vujić, 3.-5.05.1996, 7♂, leg. Vujić, 21.05.1996., 4♂, 1♀, 1.06.1996., 1♀, leg. Vujić, 19.04.1997., 6♂, leg. Radnović, 2♂, leg. Radišić, 1♂, leg. Mičić, 18♂, 1♀, leg. Vujić, 20.04.1997., 3♂, leg. Vujić, 29.04.1997., 5♂, leg. Vujić, 25.07.1997., 5♂, 1♀, leg. Vujić, 21.08.1997., 1♂, leg. Vujić, 19.09.1997., 1♂, leg. Vujić; Demizlok, 30.04.1995., 2♂, leg. Vujić, 23.08.1995., 1♂, leg. Vujić, 17.-20.05.1996., 1♂, leg. Vujić, 7.06.1997., 1♂, leg. Vujić, 1.07.1998., 2♂, leg. Vujić; Dubašnica Lunga, 1.-2.07.1998., 3♂, leg. Vujić; Malinik, 5.07.1995., 1♀, leg. Vujić; ka Vidikovcu, 3.05.1996., 1♂, 1♀, leg. Vujić, 18.05.1996., 3♂, leg. Vujić; Manastirište, 3.06.1996., 1♂, leg. Radenković.

Ecology. Occurs in deciduous forest; herb-rich open areas in thermophilous *Quercus* forest (*Q. cerris/Q. pubescens*) (Speight, 2013). In the Fruška Gora NP, collected in the oak-hornbeam deciduous forest.

Cheilosia faucis (Becker, 1894)

Threatened on the Balkans (Vujić *et al.*, 2001).

New data. Montenegro, Durmitor NP, Škrčko Ždrijelo, 43°07'32" N, 19°01'17" E, 1800-2100 m a.s.l., 16.06.2009, 1 ♀, leg. WSB, det. CCF.

An additional record from Durmitor of this rarely recorded species (Vujić, 1996).

Ecology. Found in open areas in montane *Picea* forest (Vujić, 1996) and upwards into open areas within *Alnus viridis* thickets and on into unimproved, subalpine grassland to 2000 m (Speight, 2013). The Durmitor specimen was collected on south-facing alpine meadows at 2000 m a.s.l.

Cheilosia flavipes (Panzer, 1798)

New data. Serbia, Jankova Bara, Kopaonik NP, 43°19'08" N, 20°45'52" E, 1500 m a.s.l., 11.06.2009, 1♀, leg. MZW. Additional material from col. FSUNS: Sefkerin-Opovo, 23.04.2000, 2♀, leg. Radišić; Deliblatska Sands, Devojački Bunar, 07.05.1997, 5♂, leg. Vujić, 2♀, leg. Dragin, 25.04.1998, 1♀, leg. Radišić; Tilva, 25.04.1998, 1♀, leg. Radišić; Dubašnica, Lazareva River Gorge, 29.04.1995, 1♂, leg. Radenković, 03.05.1996, 1♂, leg. Radišić; Demizlok, 30.04.1995, 2♂, leg. Vujić, 1♂, leg. Radenković, 1♀, leg. Radišić, 04.05.1996, 1♀, leg. Vujić, 19-20.05.1996, 2♂, 2♀, leg. Dožić; Brestovačka Banja, 04.05.1996, 1♀, leg. Radišić; Malinik, 01.05.1995, 2♂, leg. Radišić, 1♀, leg. Vujić, 1♂, 1♀, leg. Radenković; Mt. Šar Planina, Brezovica, 14.05.1997, 2♂, leg. Vujić.

New for the Kopaonik National Park.

Ecology. Found in small open areas in humid *Fagus* forest upwards through the *Picea* zone and into the subalpine zone (Speight, 2013). Collected in open meadows around a carpark with predominantly coniferous forest bordering the meadow.

Cheilosia laeviseta Claussen, 1987

Decreasing on the Balkans (Vujić *et al.* 2001).

New data. Montenegro, Škrčko Ždrijelo to Lake Malo Škrčko, 1♂, 4♀, leg. GPA, MZW, TZS.

Ecology. Known from open, grassy areas in the *Larix* zone upwards into unimproved, calcareous and non-calcareous subalpine grassland to above 2000m into the alpine zone, including sparsely vegetated, stony ground and close to snow patches (Speight, 2013).

Cheilosia lasiopa Kowarz, 1885

New to Montenegro.

New data. Montenegro, Black Lake-Barno Lake, Žabljak, Durmitor NP, 43°09'11" N, 19°05'39" E, 1450 m a.s.l., 15.06.2009, 1♀, leg. GPA, det CCF; Montenegro, Zminje Jezero (Snake Lake), Barno Lake, Žabljak, Durmitor NP, 43°09'22" N, 19°05'33" E, 1500 m a.s.l., 15.06.2009, 1♀, leg. WSB. Additional material from col. FSUNS: Durmitor, Sušica-Sastavci, 24-26.05.1996, 2♂, 1♀, leg. Vujić; Sušica Canyon, 31.05.-2.06.1998, 2♂, leg. Milenković; Lake Sušica-Sastavci, 31.05.-01.06.1998, 2♂, 1♀, 20.06.1998, 1♀, leg. Vujić; Sušica-Škrke, 25-26.05.1996, 1♀, leg. Vujić; Đurđevića Tara, 29.04.2000, 1♂, leg. Vujić; Lake Sušica-Mlinovi, 05.05.2000, 1♂, leg. Vujić; Lake Sušica, 19.05.2000, 1♂, 1♀, leg. Vujić.

Ecology. Habitat preferences include both deciduous and coniferous forest, particularly scrub woodland (Speight, 2013). One of the females in Durmitor was collected among several other *Cheilosia* in the *Picea* forest, visiting the flowers of white Apiaceae.

Cheilosia pubera (Zetterstedt, 1838)

New to Montenegro.

New data. Montenegro, Durmitor NP, Škrčko Ždrijelo, 43°07'32" N, 19°01'17" E, 1800-2100 m a.s.l., 16.06.2009, 1♂, 1♀, leg. JSA, KGD, det CCF. Additional material from col. FSUNS: Durmitor, Sušica-Škrke, 25-26.05.1996, 1♂, 2♀, leg. Vujić; Mlinski Potok, 03.06.1998, 4♂, 3♀, leg. Vujić & Milenković, 07.05.2000,

1♂, leg. Vujić, 24.05.2000, 1♂, leg. Vujić; Lake Sušica-Skakala, 31.05.-01.06.1998, 1♂, 1♀, leg. Vujić; Krecmani-Škrčko Lake, 22.06.1998, 1♂, leg. Vujić; Sušica Canyon, 08-09.05.1998, 1♂, leg. Vujić, 31.05.-02.06.1998, 1♂, 3♀, leg. Vujić & Milenković; Sušica-Jatara Canyon, 1♂, 2♀, 19.05.2000, leg. Vujić; Lake Sušica-Razmlini, 20.05.2000, 1♀, leg. Vujić; Skakala, 23.05.2000, 1♂, 1♀, leg. Vujić.

Ecology. Found in unimproved montane pasture and fen carr and beside streams in *Fagus/Picea* forest (Speight, 2013). This species was found on the north slope of Škrčko Ždrijelo towards Lake Malo Škrčko along a small stream.

Cheilosia rufimana (Becker, 1894)

New to Montenegro.

New data. Montenegro, Black Lake-Barno Lake, Žabljak, Durmitor NP, 43°09'11" N, 19°05'39" E, 1450 m a.s.l., 15.06.2009, 1♀, leg. GPA, det CCF; Serbia, Bojanine Voda, Studena, Suva Planina, 6 km east of Niška Banja. 12 km SE of Niš, 43°13'13" N, 22°06'49" E, 900 m a.s.l., 09.06.2009, 1♀, leg. GPA, det CCF; Serbia, Jankova Bara, Kopaonik NP, 43°19'16" N, 20°46'22" E, 1500 m a.s.l., 11.06.2009, 1♂, leg. JSA, det. CCF.

Ecology. Occurs in humid *Fagus* forest and in the vicinity of springs and flushes in more open country (Speight, 2013).

Cheilosia subpictipennis Claussen, 1998

New to Montenegro.

New data. Montenegro, Malo Škrčko Lake, Durmitor NP, 43°07'51" N, 19°01'05" E, 1700 m a.s.l., 16.06.2009, 1♀, leg. MZW. Additional material from col. FSUNS: Durmitor, Sušica-Škrke, 25-26.05.1996, 2♀, leg. Vujić; Skakala, 26.05.1996, 1♂, 28.04.2000, 1♂, leg. Vujić; Sušica-Sastavci, 24-26.05.1996, 1♂, leg. VUJIĆ; Lake Sušica-Mlinovi, 05.05.2000, 1♂, leg. Vujić; Sušica Canyon, 08-09.05.1998, 1♀, leg. Vujić.

Ecology. Preferring open areas, either grassy or with tall herb vegetation, within the *Abies/Picea* zone and, when along streams, down into the *Fagus* zone; also unimproved, non-calcareous montane grassland up to 1500 m; and up to 2000 m in unimproved, non-calcareous subalpine grassland (Speight, 2013). The female was found near the shore of a small lake (Fig. 5B) resting on a stone.

Criorhina asilica (Fallén, 1817)

New data. Serbia, Dojkinačka River, Stara Planina, 2 km N of Dojkinci, 18 km NE of Pirot, 43°14'38" N, 22°46'37" E, 950 m a.s.l., 08.06.2009, 1♀, leg. ASW. Additional material from col. FSUNS: Dubašnica, Lunga, 06.06.1993, 1♂, leg. Radnović, 21.05.1996, 1♂, leg. Vujić; Dubašnica, Demizlok, 07.06.1997, 1♂, leg. Vujić.

Rare in Serbia, new record for Kopaonik (Vujić & Milankov, 1999).

Ecology. Found in mesophilous and humid *Fagus* forest and *Quercus/Carpinus/Ulmus* forest with over-mature trees. On occasion, may also occur in association with *Fraxinus* (Speight, 2013). Observed in the forest margin of a Moesian beech forest, bordering a species-rich nutrient-poor meadow, visiting flowers of *Rubus idaeus*.

Epistrophe obscuripes (Strobl, 1910)

New to Serbia.

New data. Serbia, Lisina, Kopaonik NP, 43°16'55" N, 20°45'45" E, 1250 m a.s.l., 12.06.2009, 1♂, leg. ASW.
Ecology. Preferring montane conifer forest of *Picea* (Speight, 2013). Observed in a wet meadow (*Calthion*) with clumps of *Scirpus sylvaticus* reed beds on a brookside not far from the forest margin.

Eriozona syrphoides (Fallén, 1817)

Decreasing on the Balkans (Vujić *et al.* 2001).

New data. Serbia, Lisina, Kopaonik NP, 43°16'55" N, 20°45'45" E, 1250 m a.s.l., 12.06.2009, 1♂, leg. GPA.
Additional material from col. FSUNS: Karaman, 07.06.1985, 1♀, leg. Vujić.

Ecology. A species occurring in mature *Picea/Abies* forest and plantations (Speight, 2013).

Eumerus clavatus Becker, 1921

New to Montenegro.

New data. Montenegro, Grkavac, 4 km NNE Risan, 42°32'52" N, 18°42'49" E, 650 m a.s.l., 14.06.2009, 2♂, leg. MZW, KGD; Montenegro, Sv. Nikola, 2 km NNE Risan, 42°31'41" N, 18°42'20" E, 570 m a.s.l., 14.06.2009, 1♂, leg. WSB.

Ecology. Adults are found in mesophilous *Fagus* forest (Speight, 2013). The male in Sv. Nikola was perching on the leaves of herbs along the border of a small scrub woodland. Specimens were also observed flying through the low vegetation at the forest edge.

Eumerus sogdianus Stackelberg, 1952

New to Montenegro.

New data. Montenegro, Daljšan, Podhum, Humsko blato, Lake Skadar, 15 km SSE Podgorica, 42°18'41" N, 19°21'19" E, 10 m a.s.l., 13.06.2009, 2♂, 1 ♀, leg. JSA; Serbia, Obedska Bara, Kupinovo, 44°42'13" N, 20°00'35" E, 80 m a.s.l., 18.06.2009, 2♂, leg. JSA. Additional material from col. FSUNS: Žabalj, 07.07.1998., 1♀, 13.07.1998., 1♂, 2♀, 22.07.1998., 1♀, 26.08.1998., 1♀, 25.08.2000., 4♂, 2♀, leg. Prodana J.; Bačko Gradište, 13.08.1985., 1♀, leg. Vujić.

Ecology. A species occurring in dry, unimproved pasture and montane grassland; farmland, particularly potato fields, on sandy soils, especially in coastal dune systems, and sandy alluvial floodplains, plus humid, unimproved grassland. This species may also occur along the landward edge of *Phragmites* beds, in grassland in southern Europe (Speight, 2013). Found on the dryer parts of the habitats, in Montenegro along the dry gravel road at the foot of a small hill. The species is new to Obedska Bara (Radenković *et al.*, 2004), where it was collected on the dry lawn of the hotel.

Lejogaster tarsata (Meigen, 1822)

New Montenegro.

New data. Montenegro, Vranjina, Lake Skadar, 18 km SSW Podgorica, 42°16'43" N, 19°08'40" E, 10 m a.s.l., 13.06.2009, 1♀, leg. MZW.

Ecology. Found in clean water streams, springs in fens and spring-fed ponds (Speight, 2013). The specimen was collected on a white *Apiaceae* near the shore line of the lake.

Melanogaster aerosa (Loew, 1840)

Decreasing on Mt. Durmitor (Vujić *et al.*, 2001).

New data. Montenegro, Barno Lake, Žabljak, Durmitor NP, 43°09'22" N, 19°05'33" E, 1500 m a.s.l., 15.06.2009, 2♂, leg. WSB.

Ecology. Adults prefer acid fen and valley bog lagg, and flushes, pools and small streams in moorland (Speight, 2013). Collected near the mesotrophic bog of Barno Lake.

Merodon desuturinus Vujić, Šimić & Radenković, 1995

Decreasing on the Balkans (Vujić *et al.*, 2001).

New data. Serbia, Dojkinačka River, Stara Planina, 2 km N of Dojkinci, 18 km NE of Pirot, 43°14'38" N, 22°46'37" E, 950 m a.s.l., 08.06.2009, 1♀, leg. ASW; Serbia, Ravniška Planina, Zaplanina (Brzeće), Kopaonik NP, 43°15'26" N, 20°50'54" E, 1250-1400 m a.s.l., 10.06.2009, 3♂, 10♀, leg. ASW, GPA, JSA, WSB, KGD; Serbia, Velika Gobelja, Kopaonik NP. Hill top, 43°19'05" N, 20°49'17" E, 1850-1910 m a.s.l., 11.06.2009, 1♂, leg. JSA; Serbia, Lisina, Kopaonik NP, 43°16'55" N, 20°45'45" E, 1250 m a.s.l., 12.06.2009, 2♀, leg. ASW, WSB. Additional material from col. FSUNS: Kopaonik, 1994., 1♀, 07.06.1998., 3♂, 1♀, leg. Vujić; Jasle-Čukara, 08.06.1998, 1♀, 20.06.1996., 1♀, leg. Vujić.

Ecology. Found on open, dry, grassy areas within humid *Fagus/Picea/Abies* forest (Speight, 2013). We collected this species at four different mountain sites in Serbia on dry slopes with species-rich grassland with a vegetation pattern of low height structure often in close proximity to streams in valleys.

Merodon equestris (Fabricius, 1794)

New to Serbia.

New data. Serbia, Dojkinačka River, Stara Planina, 2 km N of Dojkinci, 18 km NE of Pirot, 43°14'38" N, 22°46'37" E, 950 m a.s.l., 8.06.2009, 1♂, leg. WSB; Montenegro, Black Lake-Barno Lake, Žabljak, Durmitor NP, 43°09'11" N, 19°05'39" E, 1450 m a.s.l., 15.06.2009, 1♂, leg. WSB; Montenegro, Durmitor NP, Škrčko Ždrijelo, 43°07'07" N, 19°00'53" E, 2150 m a.s.l., 16.06.2009, 2♂, leg. JSA & MZW; Montenegro, Žabljak, Autocamp Kod Boce, Durmitor NP, 43°08'36" N, 19°07'01" E, 1500 m a.s.l., 16.06.2009, 1♀, leg. ASW.

Ecology. A species from open areas in humid deciduous forest and at higher altitudes, up into the subalpine zone; significantly anthropophilic, occurring also in suburban gardens and on horticultural land (Speight, 2013). The male observed at Dojkinačka River was flying through the low grassland vegetation.

Merodon haemorrhoidalis Sack, 1913

New to Serbia and Montenegro.

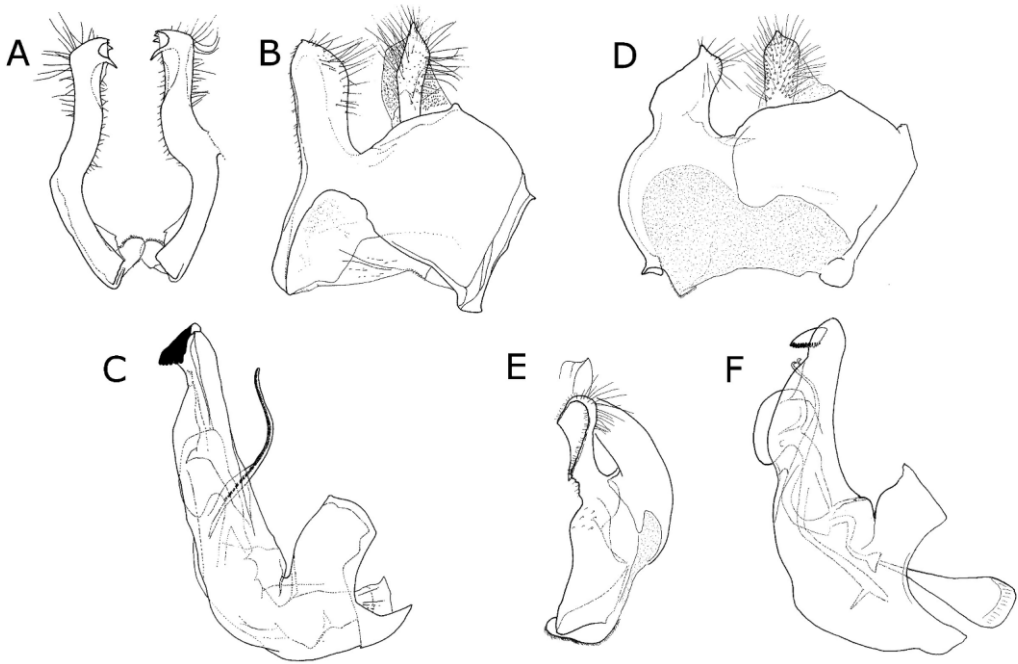
New data. Montenegro, Daljšan, Podhum, Humsko blato, Lake Skadar, 15 km SSE Podgorica, 42°18'41" N, 19°21'19" E, 10 m a.s.l., 13.06.2009, 1♂, 2♀, leg. GPA, WSB; Montenegro, Vranjina, Lake Skadar, 18 km SSW Podgorica, 42°16'43" N, 19°08'40" E, 10 m a.s.l., 13.06.2009, 1♀, leg. GPA; Serbia, Hotel Obedska Bara, Obrež, 44°44'07" N, 19°59'12" E, 80 m a.s.l., 18.06.2009, 1♀, leg. JSA; Serbia, Obedska Bara, Kupinovo, 44°42'13" N, 20°00'35" E, 80 m a.s.l., 18.06.2009, 1♂, leg. MZW; Serbia, Kupinovo, Obedska Bara, 44°42'52" N, 20°02'14" E, 80 m a.s.l., 18.06.2009, 1♂, leg. GPA; Serbia, Andrevlje, Beočin, Fruška Gora NP, 45°10'04" N, 19°38'32" E, 170-300 m a.s.l., 20.06.2009, 2♂, leg. GPA.

Additional material studied: Lectotype *Merodon haemorrhoidalis*: Josefstahl, Niederosterreich, 1866, 1♀ (NHMV).

Ecology. At Lake Skadar, the specimens were collected along a path in a wet grassland having vegetation height of 50-80 cm within a willow forest. The specimens were flying over the gradient between higher grasses in the vegetation and the lower vegetation on the path. At the Obedska Bara Hotel, the female was

collected on the lawn of the hotel close to the parking lot some distance from the habitat as described in the section on collecting sites and localities.

Discussion. Treated as a possible synonym of *M. constans* (Rossi, 1794) by Speight (2013). These two species are similar, but are clearly differentiated by the structure of male genitalia (Fig. 8) and the diagnostic features presented in Table I.



Figures 8 A-F. Male genitalia. A-C) *Merodon haemorrhoidalis* (Skadar lake, Montenegro); D-F) *Merodon constans* (Fruška Gora National Park, Serbia). A) Surstyli, dorsal view; B, D) Epandrium, lateral view; E) Surstylus, lateral view; C, F) Hypandrium, lateral view.

Table I. Morphological differences between *Merodon constans* and *M. haemorrhoidalis*.

	<i>Merodon constans</i>	<i>Merodon haemorrhoidalis</i>
Color of tergites	At least partly reddish (especially tergites 3-4)	Black
Color of pile on tergites 4-5	Orange to reddish	Yellow with strong contrast to black color on central part of tergites 1-3
Male metatibiae	With small apicoventral thorn-shaped projection	With strong apicoventral triangular prolongation

Merodon serrulatus Wiedemann, 1822

New to Montenegro.

New data. Montenegro, Morinj, 5 km SE of Risan, 42°29'17" N, 18°39'08" E, 14.06.2009, 1♀, leg. ASW; Montenegro, Sv. Nikola, 2 km NNE Risan, 42°31'41" N, 18°42'20" E, 570 m a.s.l., 14.06.2009, 2♂, 1♀, leg. GPA, MZW; Montenegro, Grkavac, 4 km NNE Risan, 42°32'52" N, 18°42'49" E, 650 m a.s.l., 14.06.2009, 56♂, 30♀, leg. GPA, JSA, KGD, MZW, ASW, WSB.

Ecology. A species found in thermophilous *Quercus* forest; *Castanea* forest, evergreen oak forest (*Quercus ilex* and *Q. suber*), dry *Pinus* forest; lentisc (*Pistacia* sp.) scrub; dry, well-vegetated, calcareous and non-calcareous, unimproved grassland; hedgehog heath (Speight, 2013). Found on a species-rich meadow with dry scrub, close to a forest margin. Most specimens were resting on leaves of shrubs and trees or flying through the low vegetation.

Microdon miki Doczkal & Schmid, 1999

New to Serbia.

New data. Serbia, Dojkinačka River, Stara Planina, 2 km N of Dojkinci, 18 km NE of Pirot, 43°14'38" N, 22°46'37" E, 950 m a.s.l., 08.06.2009, 1♀, leg. GPA; Serbia, Lisina, Kopaonik NP, 43°16'55" N, 20°45'45" E, 1250 m a.s.l., 12.06.2009, 1♂, leg. WSB.

Ecology. Found in open areas within *Pinus sylvestris* forest and *Picea* forest (Speight, 2013). The male at Lisina was flying along the road verge but stopped to land on the vegetation.

Myolepta dubia (Gmelin, 1790)

New to Montenegro.

New data. Montenegro, Morinj, 5 km SE of Risan, 42°29'17" N, 18°39'08" E, 14.06.2009, 1♂, leg. KGD; Serbia, Bojanine Vode, Studena, Suva Planina, 6 km east of Niška Banja.12 km SE of Niš, 43°13'13" N, 22°06'49" E, 900 m a.s.l., 09.06.2009, 6♂, 2♀, leg. GPA, ASW; Serbia, Lisina, Kopaonik NP, 43°16'55" N, 20°45'45" E, 1250 m a.s.l., 12.06.2009, 2♂, leg. GPA, JSA.

Ecology. Adults prefer alluvial hardwood forest, mesophilous *Fagus*; acidophilous *Quercus*; thermophilous *Quercus* forest; *Q. suber* forest maintained for cork production; maquis of evergreen *Q. ilex/Q. suber*, with over-mature and senescent trees and sometimes old orchards with ancient trees (Speight, 2013). Collected on flowering *Chaerophyllum temulum* in shaded small open pastures within the beech forest. In Lisina, collected on white Apiaceae along Lisinska River bordered by deciduous trees and arable land.

Myolepta nigratarsis Coe, 1957

New data. Serbia, Bojanine Vode, Studena, Suva Planina, 6 km east of Niška Banja.12 km SE of Niš, 43°13'13" N, 22°06'49" E, 900 m a.s.l., 09.06.2009, 2♂, 1♀, leg. GPA, JSA. Additional material from col. FSUNS: Dubašnica, Podgorac, 02.06.1996., 1♂, leg. Vujić; ka Maliniku, 02.06.1995., 1♂, leg. Vujić; Demizlok, 12.06.1994., 1♂, leg. Radnović.

Ecology. Found in over-mature and senescent evergreen oak forest of *Q. ilex* and *Q. suber*; also recorded from thermophilous *Q. pubescens* forest (Speight, 2013). Flying among the more numerous *M. dubia*, also visiting flowers of *Chaerophyllum temulum*.

Myolepta potens (Harris, 1780)

New data. Serbia, Bojanine Vode, Studena, Suva Planina, 6 km east of Niška Banja.12 km SE of Niš, 43°13'13" N, 22°06'49" E, 900 m a.s.l., 09.06.2009, 1♀, leg. ASW. Additional material from col. FSUNS: Malinik, 03.06.1989, 1♂, leg. Vujić.

New for Suva Planina and Malinik, only known from Vojvodina (Vujić & Glumac, 1994; Nedeljković *et al.*, 2009).

Ecology. Prefers mesophilous *Fagus*, thermophilous *Quercus* (*Q. pubescens*) and *Q. suber* forest containing over-mature/senescent trees; also alluvial forest with ancient *Populus* (Speight, 2013). One female was found among the numerous *M. dubia*.

Neoascia interrupta (Meigen, 1822)

New to Montenegro.

New data. Montenegro, Daljšan, Podhum, Humsko Blato, Lake Skadar, 15 km SSE Podgorica, 42°18'41" N, 19°21'19" E, 10 m a.s.l., 13.06.2009, 3♀, leg. GPA, KGD, WSB; Serbia, Hotel Obedska Bara, Obrež, 44°44'07" N, 19°59'12" E, 80 m a.s.l., 18.06.2009, 1♀, leg. JSA; Serbia, Obedska Bara, Kupinovo, 44°42'13" N, 20°00'35" E, 80 m a.s.l., 18.06.2009, 1♂, leg. JSA.

Ecology. Found along edges of permanent standing-water bodies from small ponds up to the scale of large lakes; also along the margins of the potomal stretches of major rivers, where stands of reeds or tall sedges occur, or beside standing-water ditches with abundant emergent vegetation of, for example, *Apium* (Speight, 2013). The females at Lake Skadar were collected both in the floating vegetation and in the grasslands within the alluvial willow forest. The male and female in Obedska Bara were collected in the wettest parts of the reed beds where they were flying low through the vegetation.

Neoascia tenur (Harris, 1780) = *Neoascia dispar* (Meigen, 1822) in Šimić, 1987

New to Montenegro.

New data. Montenegro, Daljšan, Podhum, Humsko Blato, Lake Skadar, 15 km SSE Podgorica, 42°18'41" N, 19°21'19" E, 10 m a.s.l., 13.06.2009, 3♂, 2♀, leg. JSA, KGD, ASW; Montenegro, Black Lake-Barno Lake, Žabljak, Durmitor NP, 43°09'11" N, 19°05'39" E, 1450 m a.s.l., 15.06.2009, 5♂, 2♀, leg. KGD, MZW, ASW; Serbia, Ravniška Planina, Zaplanina (Brzeće), Kopaonik NP, 43°15'26" N, 20°50'54" E, 1250-1400 m a.s.l., 10.06.2009, 9♂, 3♀, leg. JSA, KGD, MZW, ASW; Serbia, Karaman Greben (Skilift), Tourist Center Kopaonik, Kopaonik NP, 43°17'03" N, 20°49'02" E, 1700 m a.s.l., 11.06.2009, 21♂, 15♀, leg. JSA, MZW, ASW, WSB; Serbia, Jankova Bara, Kopaonik NP, 43°19'16" N, 20°46'22" E, 1500 m a.s.l., 11.06.2009, 13♂, 21♀, leg. JSA, GPA, KGD, WSB, ASW; Serbia, Lisina, Kopaonik NP, 43°16'55" N, 20°45'45" E, 1250 m a.s.l., 12.06.2009, 1♂, 1♀, leg. ASW, MZW; Serbia, Hotel Obedska Bara, Obrež, 44°44'07" N, 19°59'12" E, 80 m a.s.l., 18.06.2009, 1♂, leg. ASW.

Ecology. Found in flushes and streams in blanket bog, around the periphery of raised bogs, acid and rich fen, humid, oligotrophic grassland, pond and lake margins and along brooks (Speight, 2013). This species was observed in alluvial reed beds of large rivers (Sava), as well as along small brooks with flushes, in very wet meadows (*Calthion*) and reed beds of *Scirpus sylvaticus* but also in floating vegetation mats on lakes (*Nymphaea*) and within quaking bogs. The species was observed to visit flowers of *Ranunculus repens* and *Potentilla erecta*.

Orthonevra montana Vujić, 1999

New data. Serbia, Ravniška Planina, Zaplanina (Brzeće), Kopaonik NP, 43°15'26" N, 20°50'54" E, 1250-1400 m a.s.l., 10.06.2009, 1♂, 1♀, leg. JSA, TZS; Serbia, Marina Voda, Tourist Center, Kopaonik NP, 43°17'40" N, 20°49'03" E, 1730 m a.s.l., 10.06.2009, 3♂, leg. JSA, KGD; Serbia, Karaman Greben (Skilift), Tourist Center Kopaonik, Kopaonik NP, 43°17'03" N, 20°49'02" E, 1700 m a.s.l., 11.06.2009, 2♂, leg. JSA, ASW; Serbia, Jankova Bara, Kopaonik NP, 43°19'16" N, 20°46'22" E, 1500 m a.s.l., 11.06.2009, 2♂, 2♀,

leg. JSA, WSB, ASW; Serbia, Velika Gobelja, Kopaonik NP. Hill top, 43°19'05" N, 20°49'17" E, 1850-1910 m a.s.l., 11.06.2009, 31♂, 1♀, leg. JSA, KGD, MZV, WSB. Additional material from col. FSUNS: Marina Voda, 01.08.1997., 1♂, leg. Vujić.

Ecology. Found by flushes and close to brooks above 1000 m in open *PicealPinus* forest (Speight, 2013). Found visiting flowers of *Trollius europaeus* on Velika Gobelja, together with *Platycheirus tatricus* and *P. melanopsis*. Also observed in *Caltha palustris* vegetation in small mountain flushes at Karaman Greben.

Platycheirus angustipes Goeldlin, 1974

New to Serbia.

New data. Serbia, Jankova Bara, Kopaonik NP [road through forest], 43°19'08" N, 20°45'52" E, 1500 m a.s.l., 11.06.2009, 2♂, leg. ASW, KGD.

Ecology. Occurs in fen and marsh; beside streams and lakes in montane grassland or open forest, from 1000 m upwards into the alpine grassland zone, where it occurs in very wet sites (Speight, 2013). Found on a wet, semi-shaded, forest track with *Myosotis palustris* and *Stellaria nemorum*.

Platycheirus aurolateralis Stubbs, 2002

New to Montenegro.

New data. Montenegro, Zminje Jezero (Snake Lake), Barno Lake, Žabljak, Durmitor NP, 43°09'22" N, 19°05'33" E, 1500 m a.s.l., 15.06.2009, 1♂, leg. MZV.

Ecology. Prefers deciduous scrub, both Atlantic (*Corylus*) and Alpine (*Corylus/Alnus viridis*). However, this species has also been found in mature, urban/suburban parkland and suburban gardens (Speight, 2013). Possibly collected while sweep-netting through the vegetation.

Platycheirus occultus Goeldlin, Maibach & Speight, 1990

New to Montenegro.

New data. Montenegro, Black Lake-Barno Lake, Žabljak, Durmitor NP, 43°09'11" N, 19°05'39" E, 1450 m a.s.l., 15.06.2009, 1♀, leg. KGD; Serbia, Ravniška Planina, Zaplanina (Brzeće), Kopaonik NP, 43°15'26" N, 20°50'54" E, 1250-1400 m a.s.l., 10.06.2009, 5♀, leg. JSA, KGD, MZV, WSB; Serbia, Jankova Bara, Kopaonik NP, 43°19'16" N, 20°46'22" E, 1500 m a.s.l., 11.06.2009, 1♂, 2♀, leg. ASW, KGD; Serbia, Lisina, Kopaonik NP, 43°16'55" N, 20°45'45" E, 1250 m a.s.l., 12.06.2009, 2♂, leg. KGD, MZV.

Ecology. Prefers deciduous scrub, both Atlantic (*Corylus*) and Alpine *Corylus/Alnus viridis* (Speight, 2013).

Platycheirus tatricus Dušek & Láska, 1982

New to Montenegro.

New data. Montenegro, Durmitor NP, Škrčko Ždrijelo, 43°07'07" N, 19°00'53" E, 2150 m a.s.l., 16.06.2009, 15♂, 3♀, leg. JSA, MZV, ASW, WSB; Serbia, Jankova Bara, Kopaonik NP [road through forest], 43°19'08" N, 20°45'52" E, 1500 m a.s.l., 11.06.2009, 6♀, leg. ASW; Serbia, Velika Gobelja, Kopaonik NP. Hill top, 43°19'05" N, 20°49'17" E, 1850-1910 m a.s.l., 11.06.2009, 9♀, leg. JSA, MZV, WSB.

Ecology. Found on open ground; from the *Larix* zone upwards, in thinly vegetated, unimproved, calcareous and non-calcareous, alpine grassland, up to 2000 m, particularly along the edges of torrents; open, heathy areas in *Pinus uncinata* forest (Speight, 2013). The males on Durmitor were hilltopping a short distance north of the hilltop, just in the lee of the hilltop. They were hovering at 50-100 cm above rather tall grass vegetation.

The females on Velika Gobelja hilltop were mostly resting on leaves or flying at some distance around the hilltop. See also under *Orthonevra montana*.

Psilota nana Smit & Vujić, 2008

New data. Serbia, Bojanine Vode, Studena, Suva Planina, 6 km east of Niška Banja. 12 km SE of Niš, 43°13'13" N, 22°06'49" E, 900 m a.s.l., 09.06.2009, 1♀, leg. GPA.

New for Suva Planina, second record for Serbia (Smit & Vujić, 2008).

Ecology. Adults occur in thermophilous deciduous and broad-leaved evergreen forests; *Castanea sativa* forest with *Laurus nobilis* understory; *Quercus ilex* forest and Balkan white-oak forest (Speight, 2013). Collected on the flowers of small white Apiaceae along a shaded track within the beech forest.

Rhingia borealis Ringdahl, 1928

New to Serbia.

New data. Serbia, Bojanine Vode, Studena, Suva Planina, 6 km east of Niška Banja. 12 km SE of Niš, 43°13'13" N, 22°06'49" E, 900 m a.s.l., 9.06.2009, 1♂, leg. WSB. Additional material from col. FSUNS: Kopaonik, Duboka River, 06.07.1986., 1♀, leg. Šimić; Samokovska River Gorge, 07.06.1998., 1♂, leg. Vujić.

Ecology. Found in humid *Fagus/Picea* forest and upwards into the *Abies/Picea* zone; also sometimes in alluvial hardwood forest (Speight, 2013). The male at Bojanine Vode was found within the beech forest, along a very shaded forest track.

Sericomyia silentis (Harris, 1776)

New to Montenegro.

New data. Montenegro, Black Lake-Barno Lake, Žabljak, Durmitor NP, 43°09'11" N, 19°05'39" E, 1450 m a.s.l., 15.06.2009, 1♀, leg. GPA; Serbia, Jankova bara, Kopaonik NP, 43°19'16" N, 20°46'22" E, 1500 m a.s.l., 11.06.2009, 1♂, leg. TZS.

Ecology. Wet moorland, valley bog, fen and *Alnus/Salix* carr; along streams in humid coniferous and deciduous forest (Speight, 2013). Collected beside a small stream in the forest, resting on a leaf.

Sphaerophoria laurae Goeldlin, 1989

New to Montenegro.

New data. Montenegro, Škrčko Ždrijelo-Lake Malo Škrčko, Durmitor NP, 43°07'32" N, 19°01'17" E, 1800-2100 m a.s.l., 16.06.2009, 3♂, leg. JSA, MZW, WSB; Serbia, Ravniška Planina, Zaplanina (Brzeće), Kopaonik NP, 43°15'26" N, 20°50'54" E, 1250-1400 m a.s.l., 10.06.2009, 11♂, leg. JSA, MZW, WSB; Serbia, Velika Gobelja, Kopaonik NP. Hill top, 43°19'05" N, 20°49'17" E, 1850-1910 m a.s.l., 11.06.2009, 3♂, leg. MZW.

Ecology. Found on humid, sparsely-vegetated, unimproved, calcareous and non-calcareous alpine grassland from 2000 m upwards (Speight, 2013). The males from Montenegro were collected on the south slope of the mountain in Seslerion grasslands. They were flying slowly through the vegetation. In Serbia this species was collected in herbaceous and flower-rich grassland partly by sweeping through vegetation.

Sphegina clavata (Scopoli, 1763)

New data. Serbia, Bojanine Vode, Studena, Suva Planina, 6 km east of Niška Banja. 12 km SE of Niš,

43°13'13" N, 22°06'49" E, 900 m a.s.l., 09.06.2009, 2♂, 2♀, leg. JSA, ASW, WSB; Serbia, Ravniška Planina, Zaplanina (Brzeće), Kopaonik NP, 43°15'26" N, 20°50'54" E, 1250-1400 m a.s.l., 10.06.2009, 1♂, leg. KGD; Serbia, Surrounding of Hotel CePTOR, Andrevlje, Beočin, Fruška Gora NP., 45°10'26" N, 19°38'48" E, 160 m a.s.l., 19.06.2009, 1♀, leg. JSA. Additional material from col. FSUNS: Dubašnica Lunga, 06.06.1993., 1♂, leg. Radnović; Demizlok, 12.06.1994., 1♂, leg. Milanov; Felješana – Debeli Lug, 28.04.1989., 2♂, 1♀, leg. Vujić; Kukavica, 02.05.1989., 1♂, 06.05.1989., 1♂, leg. Vujić.

New for Suva Planina, Dubašnica and Fruška Gora (Vujić, 1990).

Ecology. Found along streams in humid *Fagus* forest, up to well within the *Fagus/Picea* zone; riparian *Fraxinus/Alnus/Populus* gallery forest within *Fraxinus/Q. robur* forest; also *Alnus/Populus* forest (Speight, 2013). On Suva Planina collected on flowering *Chaerophyllum temulum* in shaded small open pastures and on flowering white Apiaceae along shaded tracks within the beech forest. On Fruška Gora, collected along a small stream within the beech forest near the hotel.

Sphegina elegans Schummel, 1841

New data. Serbia, Bancarevo, Suva Planina, 4 km N of Niška Banja, 9 km E of Niš, 43°17'16" N, 22°06'36" E, 300 m a.s.l., 09.06.2009, 6♂, 4♀, leg. GPA, WSB; Serbia, Bojanine Vode, Studena, Suva Planina, 6 km east of Niška Banja. 12 km SE of Niš, 43°13'13" N, 22°06'49" E, 900 m a.s.l., 9.06.2009, 5♂, 7♀, leg. JSA, GPA, KGD, ASW, WSB; Serbia, Surroundings of Hotel CePTOR, Andrevlje, Beočin, Fruška Gora NP, 45°10'26" N, 19°38'48" E, 160 m a.s.l., 19.06.2009, 2♂, leg. JSA. Additional material from col. FSUNS: Dubašnica, Demizlok, 25.08.1996., 1♀, leg. Vujić; Kopaonik, Samokovska River Gorge, 14.08.1997., 1♂, leg. Vujić, 4♀, leg. Prodana J., 1♀, leg. Milidragović, 1♀, leg. Devi., 07.09.1997., 1♀, leg. Vujić; Mt. Šar Planina, Čop Potok, 12.07.1996., 1♂, 2♀, leg. Radišić.

New for Suva Planina and Fruška Gora (Vujić, 1990).

Ecology. Found in humid deciduous forest (*Fagus* and *Quercus*) (Speight, 2013). At Bancarevo and Fruška Gora collected along a small stream within the forest flying close to or feeding on flowers of white Apiaceae (*Chaerophyllum temulum*). At Bojanine Vode flying together with *S. clavata*, *S. clunipes* and *S. verecunda*.

Sphegina verecunda Collin, 1937

New to Serbia.

New data. Serbia, Bojanine Vode, Studena, Suva Planina, 6 km east of Niška Banja. 12 km SE of Niš, 43°13'13" N, 22°06'49" E, 900 m a.s.l., 9.06.2009, 2♀, leg. JSA, GPA.

New for Suva Planina (Vujić, 1990).

Ecology. Found in various types of humid deciduous forest (*Fagus* and *Quercus*) (Speight, 2013). See under *S. elegans*.

Trichopsomyia flavitarsis (Meigen, 1822)

New to Montenegro.

New data. Montenegro, Black Lake-Barno Lake, Žabljak, Durmitor NP, 43°09'11" N, 19°05'39" E, 1450 m a.s.l., 15.06.2009, 3♀, leg. KGD, ASW; Serbia, Ravniška Planina, Zaplanina (Brzeće), Kopaonik NP, 43°15'26" N, 20°50'54" E, 1250-1400 m a.s.l., 10.06.2009, 1♀, leg. MZW.

New for Kopaonik.

Ecology. Prefers rich and acid fen, marsh, boggy moorland, including *Myrica* stands; oligotrophic *Molinia* grassland (formed by invasion of old peat cuttings); brook floodplains; tall herb open areas in *Alnus incana* alluvial forest; humid, unimproved grassland with flushes in montane and sub-alpine pasture and *Pinus mugo* ssp. *uncinata* forest; towards the southern fringe of its range also in humid deciduous forests (Speight, 2013). Recorded in a fen with seeping water on a mountain slope at Black Lake.

Triglyphus escalerae Gill Collado, 1929

Threatened and decreasing on the Balkans (Vujić *et al.*, 2001).

New data. Montenegro, Morinj, 5 km SE of Risan, 42°29'17" N, 18°39'08" E, 14.06.2009, 5♀, leg. GPA, JSA.

Ecology. Found in thermophilous oak forest of *Q. pubescens* with *Carpinus orientalis* and *Ruscus*, evergreen oak forest and maquis of *Q. ilex* with *Ostrya* and more humid secondary forests of *Castanea sativa* with *Laurus nobilis* (Speight, 2013). The specimens were flying low through the wet and partly shaded vegetation close to the springs; some females were seen visiting flowers of *Ranunculus* spp. and small white flowers possibly of a species of Apiaceae.

Discussion: The population in Morinj is strongly endangered due to human activity as the natural site is heavily affected by housing, the presence of a new parking lot and gardens with fruit trees and lawns.

Xylota abiens Meigen, 1822

New data. Serbia, Dojkinačka River, Stara Planina, 2 km N of Dojkinci, 18 km NE of Pirot, 43°14'38" N, 22°46'37" E, 950 m a.s.l., 08.06.2009, 1♂, leg. WSB; Serbia, Obedska Bara, Kupinovo, 44°42'13" N, 20°00'35" E, 80 m a.s.l., 18.06.2009, 1♂, leg. MZW. Additional material from col. FSUNS: Dubašnica, Mikuljska River, 04.06.1993., 2♀, leg. Vujić; Demizlok, 14.05.1994., 1♀, leg. Vujić, 1♂, leg. Radenković, 1♀, leg. Radnović, 12.06.1994., 1♂, leg. Milankov, 2♂, 1♀, leg. Radišić, 3♂, leg. Radnović, 1♀, leg. Vujić; 19.07.1994., 2♂, leg. Vujić, 04.06.1995., 1♀, leg. Vujić, 19.-20.05.1996., 1♂, leg. Vujić, 07.06.1997., 1♀, 01.07.1998., 1♂, 1♀, leg. Vujić.

Rare species, only known from Fruška Gora (Vujić & Milankov, 1999). New to Stara Planina and Obedska Bara (Radenković *et al.*, 2004).

Ecology. Found in over-mature deciduous forest of humid *Quercus* and *Carpinus/Quercus/Ulmus*, also alluvial hardwood forest (Speight, 2013). The male from Stara Planina was perching on leaves of shrubs on the forest border of the Moesian beech forest.

Discussion

The Syrphidae fauna of Serbia and Montenegro appears to be under-recorded. In only two weeks of investigation, 249 hoverflies species were collected, of which 7 are new records for Serbia and 19 are new records for Montenegro. This also highlights the rich biodiversity of Serbia and Montenegro. From this study, Lisinska River Kopaonik N. P., Ravniška Planina Kopaonik N. P. and Žabljak Durmitor N. P. had the highest number of species recorded: 84, 82 and 81, respectively. It must be noted that species diversity was not as high as expected for most saproxylic and xerophilic species and in particular the number of specimens of the genera *Xylota*, *Eumerus* and *Cheilosia* was low, with only a few specimens collected per species. The final list of hoverflies of Serbia and Montenegro is not complete and we can expect to find additional taxa to be recorded for the investigated areas in the future.

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References

- Claussen, C. & Torp, E. (1980). Untersuchungen über vier euroäische Arten der Gattung *Anasimyia* Schiner, 1864 (Insecta, Diptera, Syrphidae). *Mitteilungen aus dem Zoologischen Museum der Universität Kiel*, 1(4), 1–16.
- Dušek, J. & Láška, P. (1976). European species of *Metasyrphus*: key, descriptions and notes (Diptera, Syrphidae). *Acta entomologica Bohemoslovaca*, 73, 263–282.
- Glumac, S. (1955). Osolike muve Srbije (Syrphidae Diptera) iz zbirke Prirodnačkog Muzeja Srpske zemlje u Beogradu. *Posebna otisak iz časopisa "Zaštita bilja"*, 27, 1–43.
- Glumac, S. (1959). Syrphidae (Diptera) Fruške gore. *Zbornik Matice srpske za prirodne nauke*, 17, 37–78.
- Goeldlin De Tiefenau, P. (1989). Sur plusieurs espèces de *Sphaerophoria* (Dipt., Syrphidae) nouvelle sou méconnues des régions paléarctique et néarctique. *Bulletin de la Société Entomologique Suisse*, 62, 41–66.
- Hippa, H., Nielsen, T.R. & Van Steenis, J. (2001). The West Palaearctic species of the genus *Eristalis* Latreille (Diptera, Syrphidae). *Norwegian Journal of Entomology*, 48, 289–327.
- Marcos-García, A., Mazánek, L., Láška, P., Bičík, V. & Rojo, S. (2000). Description of the male of *Eupeodes lucasi* (Marcos-García & Láška, 1983) and biological data on the species (Diptera, Syrphidae). *Volucella*, 5, 129–138.
- Mazánek, L., Láška, P. & Bičík, V. (1999). Two new Palearctic species of *Eupeodes* similar to *E. bucculatus* (Diptera, Syrphidae). *Volucella*, 4(1/2), 1–9.
- Nedeljković, Z. (2011). *Taksonomska analiza vrsta iz podfamilije Syrphinae (Diptera: Syrphidae) u Srbiji*. Doktorska Disertacija. Universitas Studiorum Neoplantensis, Novi Sad, 247 pp.
- Nedeljković, Z., Vujić, A., Šimić, S. & Radenković, S. (2009). The fauna of hoverflies (Diptera: Syrphidae) of Vojvodina province, Serbia. *Archives of Biological Sciences*, 61(1), 147–154.
- Radenković, S. (2008). *Fauna podfamilije Eristalinae (Diptera: Syrphidae) u Srbiji*. Phd thesis, Univerzitet u Novom Sadu, Serbia, 352 pp.
- Radenković, S., Vujić, A. & Šimić, S. (2004). New data on hoverfly diversity (Insecta: Diptera: Syrphidae) of the special nature reserve the Obedska Bara marsh (Ramsar site in Serbia). *Proceedings for Natural Sciences, Matica Srpska*, 107, 21–31.
- Rotheray, G.E. & Gilbert, F. (2011). *The Natural History of Hoverflies*. Forrest Text, The Blisset Group, London, 334 pp.
- Šimić, S. (1987). *Syrphidae (Insecta, Diptera): Biogeografska i ekološka analiza faune osolikih muva Durmitora sa osvrtom na faunu osolikih muva Crne gore*. Crnogorska akademija nauka i umjetnosti, Odeljenje prirodnih nauka, knjiga 13, 154 pp.
- Šimić, S. & Vujić, A. (1996). Hover fly fauna (Diptera: Syrphidae) of the southern part of the mountain Stara planina, Serbia. *Acta entomologica serbica*, 1(1/2), 21–30.

- Šimić, S., Vujić, A., Radenković, A. & Radišić, P. (2008). Hoverflies (Insecta: Diptera: Syrphidae) of the Fruška gora mountain. In: Šimić, S. (ed.): *Invertebrates (Invertebrata) of the Fruška gora mountain*, pp. 77–89.
- Šimić, S., Vujić, A., Radenković, S., Radišić, P. & Nedeljković, Z. (2009). *Fauna osolikh muva u ritovima Vojvodine*. Matica srpska, Novi Sad, 224 pp.
- Šimić, S., Vujić, A., Radišić, P. & Radenković, S. (1998). The hoverfly (Syrphidae) fauna of F. R. Yugoslavia. In: Ismay, J.W. (Ed.): *Fourth International Congress of Dipterology*. Abstracts Volume, Oxford, pp. 204–205.
- Smit, J.T. & Vujić, A. (2008). The Palaearctic species of the genus *Psilota* Meigen (Diptera, Syrphidae) with the description of two new species. *Studia dipterologica*, 14, 345–364.
- Speight, M.C.D. (2013). *Species accounts of European Syrphidae (Diptera)*, 2013. Syrph the Net, the database of European Syrphidae, Vol.72, Syrph the Net publications, Dublin, 316 pp.
- Speight, M.C.D. & Sarthou, J-P. (2013). *StN keys for the identification of adult European Syrphidae (Diptera)/Clés StN pour la détermination des adultes des Syrphidae Européens (Diptères)*. Syrph the Net, the database of European Syrphidae, Vol. 74, 133pp.
- Tutin, T.G., Burges, N.P., Chater, A.O., Edmondson, J.R., Heywood, V.H., Moore, D.M., Valentine, D.H., Walters, S.M. & Webb, D.A. (2010a). *Flora Europaea. Volume 1: Psilotaceae to Plantanaceae*. Cambridge University Press, 581 pp. (paperback edition).
- Tutin, T.G., Heywood, V.H., Burges, N.P., Moore, D.M., Valentine, D.H., Walters, S.M. & Webb, D.A. (2010b). *Flora Europaea. Volume 2: Rosaceae to Umbelliferae*, 469 pp; *Volume 3: Diapensiaceae to Myoporaceae*, 385 pp.; *Volume 4: Plantaginaceae to Compositae*, 595 pp. + 5 maps; *Volume 5: Alismataceae to Orchidaceae*, 452 pp. + 5 maps, Cambridge University Press (paperback edition).
- Van Der Goot, V.S. (1981). *De zweefvliegen van Noord-west Europa en Europees Rusland, in het bijzonder van de Benelux*. Bibliotheek KNNV 32, 226 pp.
- Van Steenis, J. & Lucas, J.A.W. (2011). Revision of the West-Palaearctic species of *Pipizella* Rondani 1856 (Diptera, Syrphidae). *Dipterists Digest*, 18, 127–180.
- Van Steenis, W., Bot, S. & Barendregt, A. (2014). Twee nieuwe Citroenzweefvliegen voor Nederland: *Xanthogramma dives* en *X. stackelbergi* (Diptera: Syrphidae). *Nederlandse Faunistische Mededelingen*, 43, 27–36.
- Van Veen, M. (2004). *Hoverflies of Northwest Europe: Identification keys to the Syrphidae*. KNNV Publishing, Utrecht, 255 pp.
- Vujić, A. (1990). Genera *Neoascia* Williston 1886 and *Sphegina* Meigen, 1822 (Diptera: Syrphidae) in Yugoslavia and description of species *Sphegina sublatifrons* sp. nova. *Bulletin of Natural History Museum in Belgrade*, 45, 77–93.
- Vujić, A. (1996). *Genus Cheilosia Meigen and related genera (Diptera: Syrphidae) on the Balkan Peninsula*. Department of Natural Science of Matica Srpska. Novi Sad, Matica Srpska, 194 pp.
- Vujić, A. & Glumac, S. (1994). *Fauna of hover flies (Diptera: Syrphidae) of Fruška gora*. Matica Srpska, Novi Sad, 81 pp. [in Serbian].
- Vujić, A. & Milankov, V. (1999). New data for the tribes Milesiini and Xylotini (Diptera, Syrphidae) on the Balkan Peninsula. *Dipteron*, 2(6), 113–132.
- Vujić, A. & Šimić, S. (1994). *Fauna osolikh muva (Diptera: Syrphidae) Vršačkih planina*. Matica Srpska, Novi Sad: 162 pp.
- Vujić, A. & Šimić, S. (1998). Genus *Eumerus* Meigen 1822 (Diptera: Syrphidae) in area of former Yugoslavia. *Bulletin of Natural History Museum, Belgrade*, 49, 173–190.
- Vujić, A., Šimić, S. & Radenković, S. (2001). Endangered species of hoverflies (Diptera: Syrphidae) on the Balkan Peninsula. *Acta entomologica serbica*, 5, 93–105.
- Vujić, A., Šimić, S.D. & Radenković, S. (2002). New data on hoverflies diversity (Insecta: Diptera: Syrphidae) on the Fruška Gora mountain (Serbia). *Proceedings for Natural Sciences, Matica Srpska*, 103, 91–106.

Vujić, A., Radenković, S., Trifunov, S. & Nikolić, T. (2013). Key for European species of the *Cheilosia proxima* group (Diptera, Syrphidae) with a description of a new species. *Zookeys*, 269, 33–50.

НОВИ ПОДАЦИ ЗА ФАУНУ ОСОЛИКИХ МУВА (DIPTERA: SYRPHIDAE) СРБИЈЕ И ЦРНЕ ГОРЕ

ЈЕРОЕН ВАН СТЕЕНИС, ВОУТЕР ВАН СТЕЕНИС, АКСЕЛ ССИМАНК, МЕННО П. ВАН ЗУИЈЕН,
ЗОРИЦА НЕДЕЉКОВИЋ, АНТЕ ВУЈИЋ И СНЕЖАНА РАДЕНКОВИЋ

Извод

У овом раду су презентовани резултати фаунистичких истраживања у периоду од 8.-22. јуна 2009. године, на подручју Србије и Црне Горе. Поједини учесници Петог међународног симпозијума о сирфидама су сакупили 5600 примерака са укупно 18 локалитета (12 у Србији и 6 у Црној Гори). У раду је дат кратак опис ових локалитета, као и информације о ретким врстама. Током ових теренских истраживања забележено је 249 врста из 59 родова. Седам врста је регистровано по први пут за Србију: *Epistrophe obscuripes*, *Merodon equestris*, *Merodon haemorrhoidalis*, *Microdon miki*, *Platycheirus angustipes*, *Rhingia borealis*, *Sphagina verecunda* и 19 за Црну Гору: *Cheilosia crassiseta*, *Cheilosia lasiopa*, *Cheilosia pubera*, *Cheilosia rufimana*, *Cheilosia subpictipennis*, *Eumerus clavatus*, *Eumerus sogdianus*, *Lejogaster tarsata*, *Merodon haemorrhoidalis*, *Merodon serrulatus*, *Myolepta dubia*, *Neoascia interrupta*, *Neoascia tenur*, *Platycheirus aurolateralis*, *Platycheirus occultus*, *Platycheirus tatricus*, *Sericomyia silentis*, *Sphaerophoria laurae* и *Trichopsomyia flavitarsis*. За регистроване врсте је дат степен угрожености према Вујић и сар. (2001). Такође су подаци допуњени новим налазима из збирке Департамента за биологију и екологију, Универзитета у Новом Саду (ФСУНС). За поједине сродне врсте су дати диференцијални морфолошки карактери: *Anasimyia femorata* Šimić, 1987 и *A. transfuga* (Linnaeus, 1758); *Merodon haemorrhoidalis* Sack, 1913 и *M. constans* (Rossi, 1794). Анализом лектотипа врсте *M. haemorrhoidalis* је потврђено да је у питању добра врста, сродна врсти *M. constans*.

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Appendix 1

Tabular review of the species collected in Serbia and Montenegro from 8 June 2009 until 22 June 2009. Species are listed in alphabetical order. For each collecting site the number of specimens collected and identified is listed. Species new to Serbia and Montenegro are marked with &, species new only to Serbia are marked with §, species new only to Montenegro are marked with @.

Species	Site name									
	Stara Planina	Suva planina	Kopaonik N.P.	Lake Skadar	Morinj	Risan	Durmitor N.P.	Obedška Bara	Fruška Gora N.P.	Dejlihlato Sands
<i>Anasimyia femorata</i>				27						
<i>Anasimyia lineata</i>							9	2		2
<i>Anasimyia transfuga</i>								3		
<i>Baccha elongata</i>		4					1			
<i>Blera fallax</i>			1				2			
<i>Brachypalpoidea lentus</i>	1	1	2							
<i>Brachypalpus chrysites</i>			3				1			
<i>Brachypalpus laphriformis</i>							1			
<i>Caliprobola speciosa</i>	1		3							
<i>Ceriana vespiformis</i>					12					
<i>Chalcosyrphus eunotus</i>	1		1							
<i>Chalcosyrphus nemorum</i>									1	
<i>Cheilosia aerea</i>			1			2			1	
<i>Cheilosia albitarsis</i>	8	4	10							
<i>Cheilosia barbafacies</i>							1			
<i>Cheilosia barbata</i>	5	51	14				11		1	
<i>Cheilosia bracusi</i>			3				1			
<i>Cheilosia carbonaria</i>		2					3			
<i>Cheilosia chrysocoma</i>			1				2			
<i>Cheilosia crassiseta</i> @							8			
<i>Cheilosia cumanica</i>									1	
<i>Cheilosia faucis</i>							1			
<i>Cheilosia flavipes</i>			1							
<i>Cheilosia fraterna</i>			3							
<i>Cheilosia frontalis</i>		1	31							
<i>Cheilosia gagatea</i>							7			
<i>Cheilosia gigantea</i>	1		13				2			
<i>Cheilosia grisella</i>			1				6			
<i>Cheilosia grossa</i>										1
<i>Cheilosia hercyniae</i>							13			
<i>Cheilosia himantopus</i>	1		9							

Species (Table continued)	Site name									
	Stara Planina	Suva Planina	Kopaonik N.P.	Lake Skadar	Morinj	Risan	Durmitor N.P.	Obedska Bara	Fruška Gora N.P.	Deliblato Sands
<i>Cheilosia hypena</i>	1	7								
<i>Cheilosia illustrata</i>		1	1				1			
<i>Cheilosia impressa</i>	26	2	17				12			
<i>Cheilosia laeviseta</i>							5			
<i>Cheilosia lasiopa</i> @							2			
<i>Cheilosia laticornis</i>		2				1				
<i>Cheilosia latifrons</i>								1		
<i>Cheilosia lenis</i>			6				3			
<i>Cheilosia melanopa</i>							1			
<i>Cheilosia melanura</i>							1			
<i>Cheilosia mutabilis</i>	6	4	1				1		1	
<i>Cheilosia nigripes</i>	1		5				1			
<i>Cheilosia pagana</i>	1	1	1						2	
<i>Cheilosia proxima</i>		1	1				2	3	2	
<i>Cheilosia pubera</i> @							2			
<i>Cheilosia ranunculi</i>	5		1				2			
<i>Cheilosia rhynchops</i>			12				2			
<i>Cheilosia rufimana</i> @		1	1				1			
<i>Cheilosia sahlbergi</i>							1			
<i>Cheilosia scutellata</i>	1	2					2			
<i>Cheilosia soror</i>	2	28				1		5	21	
<i>Cheilosia subpictipennis</i> @							1			
<i>Cheilosia urbana</i>		1					18			
<i>Cheilosia variabilis</i>		13	2				1		1	
<i>Cheilosia vernalis</i>			1				1		1	
<i>Cheilosia vicina</i>	1		1							
<i>Cheilosia vujici</i>			1							
<i>Cheilosia vulpina</i>							1			
<i>Chrysogaster solstitialis</i>	1	12							1	
<i>Chrysotoxum arcuatum</i>			5							
<i>Chrysotoxum bicinctum</i>		4								
<i>Chrysotoxum cautum</i>	18	1	17				2			
<i>Chrysotoxum elegans</i>	17	5	31				4			
<i>Chrysotoxum fasciolatum</i>			1				1			
<i>Chrysotoxum festivum</i>	3	1	11				4			
<i>Chrysotoxum octomaculatum</i>		3	1							
<i>Chrysotoxum orthostylus</i>			6				1			
<i>Chrysotoxum tomentosum</i>	1		7				1			

Species (Table continued)	Site name									
	Stara Planina	Suva Planina	Kopaonok N.P.	Lake Skadar	Morinj	Risan	Durmitor N.P.	Obedska Bara	Fruška Gora N.P.	Dejlihlato Sands
<i>Chrysotoxum vernale</i>	7		3		1		1			
<i>Chrysotoxum verralli</i>									2	
<i>Criorhina asilica</i>	1									
<i>Criorhina berberina</i>	1		2				5			
<i>Dasysyrphus albostrigatus</i>								1		
<i>Dasysyrphus friuliensis</i>			46				5			
<i>Dasysyrphus hilaris</i>	11		2							
<i>Dasysyrphus lenensis</i>			2							
<i>Dasysyrphus pinastris</i>	1		45				21			
<i>Dasysyrphus postclaviger</i>			2							
<i>Dasysyrphus tricinctus</i>			10				1			
<i>Dasysyrphus venustus</i>	2		3							
<i>Didea fasciata</i>			1				2			
<i>Didea intermedia</i>							1			
<i>Doros profuges</i>			2							
<i>Epistrophe diaphana</i>			1							
<i>Epistrophe eligans</i>			1							
<i>Epistrophe flava</i>			3							
<i>Epistrophe nitidicollis</i>	1		2							
<i>Epistrophe obscuripes</i> §			1							
<i>Episyrphus balteatus</i>	3	3	4	1	1		1	7	3	
<i>Eriozona syrphoides</i>			1							
<i>Eristalinus aeneus</i>								1	2	
<i>Eristalinus sepulchralis</i>				11				24		
<i>Eristalinus taeniops</i>					1	1				
<i>Eristalis alpina</i>			4							
<i>Eristalis arbustorum</i>	7	9	17		2	3	4	18	12	
<i>Eristalis horticola</i>			1							
<i>Eristalis intricaria</i>								1	2	
<i>Eristalis jugorum</i>			28				1			
<i>Eristalis nemorum</i>		1	6							
<i>Eristalis pertinax</i>		5	5				1			
<i>Eristalis rupium</i>			14							
<i>Eristalis similis</i>	1	1	22				9	2	1	
<i>Eristalis tenax</i>	7	4	9				6	5	2	1
<i>Eumerus amoenus</i>				3	1	3				
<i>Eumerus basalis</i>						1				
<i>Eumerus clavatus</i> @						3				

Species (Table Continued)	Site name									
	Stara Planina	Suva Planina	Kopaonik N.P.	Lake Skadar	Morinj	Risan	Durmitor N.P.	Obedska Bara	Fruška Gora N.P.	Deliblato sands
<i>Merodon armipes</i>			13				51			
<i>Merodon aureus</i>		8	16			2	12			
<i>Merodon avidus</i> A = <i>avidus</i>	4	1	3	4	6	49		1		
<i>Merodon avidus</i> B = <i>moenium</i>	38	12	129			1	96		5	
<i>Merodon constans</i>								1	5	
<i>Merodon desuturinus</i>	1		16							
<i>Merodon equestris</i> §	1						4			
<i>Merodon funestus</i>					7	1				
<i>Merodon haemorrhoidalis</i> &				4				3	2	
<i>Merodon ruficornis</i>			1				12			
<i>Merodon serrulatus</i> @					1	89				
<i>Mesembrius peregrinus</i>				87				22		
<i>Microdon analis</i>		3	3				1			
<i>Microdon devius</i>	7						1			
<i>Microdon miki</i> §	1		1							
<i>Microdon mutabilis/mymicae</i>	17		9				10			
<i>Myathropa florea</i>	3	1	8				2	4	2	
<i>Myolepta dubia</i> @		8	2		1					
<i>Myolepta nigrirarsis</i>		3								
<i>Myolepta potens</i>		1								
<i>Neoscasia annexa</i>	5	1	24							
<i>Neoscasia interrupta</i> @				3				2		
<i>Neoscasia meticulosa</i>	1		14					1		
<i>Neoscasia podagrica</i>			4	1	34					
<i>Neoscasia tenur</i> @			84	5			7	1		
<i>Orthonevra montana</i>			43							
<i>Orthonevra nobilis</i>	1	1	1							
<i>Paragus bicolor</i>		3		6		12				
<i>Paragus haemorrhous</i>			1	2	1	1		2	2	
<i>Paragus pecchiolii</i>		2		1	11	5		3	14	
<i>Paragus punctulatus</i>							5			
<i>Paragus quadrifasciatus</i>				7		2		1	1	
<i>Paragus testaceus</i>		1							1	
<i>Paragus tibialis</i>				1		3		1		
<i>Parasyrphus annulatus</i>	5		19				13			
<i>Parasyrphus lineolus</i>			26				3			
<i>Parasyrphus macularis</i>			5							
<i>Parasyrphus nigrirarsis</i>			2							

Species (Table continued)	Site name									
	Stara Planina	Suva Planina	Kopaonik N.P.	Lake Skadar	Morinj	Risan	Durmitor N.P.	Obedska Bara	Fruška Gora N.P.	Deliblato Sands
<i>Sphegina latifrons</i>			96							
<i>Sphegina sublatifrons</i>			53							
<i>Sphegina verecunda</i> §		2								
<i>Syritta flaviventris</i>				12				3		
<i>Syritta pipiens</i>	5	3	5	16	1	4	7	8	3	3
<i>Syrphus nitidifrons</i>							1			
<i>Syrphus ribesii</i>	14	3	21	2	1		10	2	3	
<i>Syrphus torvus</i>	3	1	46				7		1	
<i>Syrphus vitripennis</i>		1	4	1	2	2		2	2	
<i>Temnostoma bombylans</i>			1					1	1	
<i>Temnostoma meridionale</i>								1		
<i>Temnostoma vespiforme</i>		1						1		
<i>Trichopsomyia flavitarsis</i> @			1				3			
<i>Trichopsomyia joratensis</i>							1			
<i>Triglyphus escalerae</i>					5					
<i>Volucella bombylans</i>	3	7	3				1			
<i>Volucella inflata</i>		2						6		
<i>Volucella pellucens</i>		1	1						1	
<i>Volucella zonaria</i>		5			1					
<i>Xanthandrus comtus</i>		1	14				12			
<i>Xanthogramma citrofasciatum</i>	1									
<i>Xanthogramma dives</i>	2	3						10		
<i>Xanthogramma laetus</i>		1								
<i>Xanthogramma pedissequum</i>					1			2	1	
<i>Xanthogramma stackelbergi</i>		6							1	
<i>Xylota abiens</i>	1							1		
<i>Xylota segnis</i>	1	2	5					3	5	
<i>Xylota xanthocnema</i>		1							1	
Total number of taxa	70	86	144	29	26	27	114	56	48	10