HOVER FLIES (SYRPHIDAE, DIPTERA) FROM STRANDZHA MOUNTAIN, BULGARIA

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Abstract

The literature data about syrphid flies in Strandzha Mountain has been summarized and new data, collected in the period 1986-2009 has been added. As a result of the study held in the region 78 new species have been established in total as well as two varieties of syrphid flies. Out of these, 26 species and two varieties belong to subfamily Syrphinae, 49 – to subfamily Milesiinae and one – to subfamily Microdontinae. Eleven of the species were new for the syrphid fauna of Strandzha. The established species were grouped in 19 zoogeographic categories. The zoogeographic character of the syrphid fauna in the studied region was determined primarily by Palaearctic species.

Key words: Diptera, Syrphidae, hover flies, Strandzha Mountain, Bulgaria

INTRODUCTION

Until now the syrphid fauna of Strandzha Mountain has not been a subject of a specific regional investigation. The data about the syrphid flies established in the studied region comes so far from two scientific studies. In one of them Drenski (1934) reported 19 species in 4 habitats and in the other one Bankowska (1967) published 51 species and two varieties from 6 habitats in the region.

MATERIAL

The material from the new studies was collected during the period 1986-2009 from 23 habitats in total in the region of Strandzha Mountain (Fig. 1). From 1986 to 1989 the material was collected periodically, and after this period the obtained data was a result of non-periodic collections. The systematic order of the established species is represented after Peck (1988).

RESULTS AND DISCUSSION

As a result of the study held in the region 78 new species have been established in total as well as two varieties of syrphid flies. Out of these, 26 species and two varieties belong to subfamily Syrphinae, 49 species – to subfamily Milesiinae and one – to subfamily Microdontinae. Eleven of the species were new for the syrphid fauna of Strandzha Mountain. These species are marked with an asterisk (*). New habitats were pointed out for a number of species in comparison to the ones listed in the references.
List of reported syrphid species (based on literary and original data)

**SYRPHINAE**

*Doros conopseus* (Fabricius, 1775)

*Episyphus balteatus* (De Geer, 1776)
Reference data: Gramatikovo, Ropotamo, Primorsko (Bankowska, 1967). New data: Gabar, 25.05.1988, 2 ♀♀, 2 ♂♂; Novo Panicharevo, 25.05.1988, 2 ♀♀, 3 ♂♂, 27.05.1988 3 ♂♂; Yasna polyana, 25.05.1988, 3 ♀♀, 2 ♂♂; peak Bosna, 26.05.1988, 2 ♀♀, 3 ♂♂; Brashlyan, 28.05.1988, 2 ♀♀, 2 ♂♂; Malko Tarnovo, 28.05.1988, 3 ♀♀, 2 ♂♂; Gramatikovo, 28.05.1988, 2 ♀♀; Balgari, 28.05.1988, 2 ♀♀, 1 ♂; Primorsko, 15.07.2005, 2 ♀♀; 10.07.2007, 3 ♂♂; Sinemorets, 13.07.2002, 2 ♀♀, 3 ♂♂; 20.07.2003 4 ♀♀; Rezovo, 20.07.2003, 3 ♀♀; 2 ♂♂.

*Meliscaeva auricollis* (Meigen, 1822)
Reference data: Ropotamo (Bankowska, 1967).

*Metasyphus lapponicus* (Zetterstedt, 1838)
Reference data: Gramatikovo (Bankowska, 1967). New data: Brashlyan, 28.05.1988, 1 ♀; Balgari, 28.05.1988, 1 ♀; Rezovo, 20.07.2003, 1 ♀, 1 ♂.

*Metasyphus corollae* (Fabricius, 1794)
Reference data: Arkutino, Primorsko (Bankowska, 1967). New data: Gabar, 17.08.1988, 2 ♀♀, 1 ♂; Zidarovo, 16.08.1989, 1 ♂; Novo Panicharevo, 16.08.1989, 2 ♀♀, 2 ♂♂; Indzhe voyvoda, 24.08.1987, 1 ♀; peak Bosna, 18.08.1988, 3 ♀♀, 1 ♂; Malko Tarnovo, 19.08.1988, 3 ♀♀; Gramatikovo, 19.08.1988, 1 ♀, 2 ♂♂; Primorsko, 18.07.2005, 2 ♂♂; 18.07.2005, 1 ♀, 2 ♂♂; 10.07.2007, 4 ♀♀, 1 ♂; 18.08.2008, 3 ♂♂;
Kiten, 15.08.2004, 3 ♀♀, 2 ♂♂; Lozenets, 09.09.2006, 2 ♀♀; Sinemorets, 20.08.2006, 2 ♀♀, 1 ♂; Rezovo, 20.07.2003, 2 ♀♀.

*Metasyrphus latentasciatus* (Macquart, 1829)
New data: Gabar, 19.10.1988, 1 ♂; Indzhe voyvoda, 20.10.1988, 1 ♂; peak Bosna, 18.08.1988, 1 ♀, 1 ♂; Malko Tarnovo, 21.10.1988, 1 ♀; Primorsko, 10.07.2007, 1 ♂; Lozenets, 09.09.2006, 2 ♂♂; Sinemorets, 20.07.2002, 2 ♂♂; 25.08.2006, 1 ♂.

*Metasyrphus nitens* (Zetterstedt, 1843)
Reference data: Ropotamo (Bankowska, 1967). New data: Gramatikovo, 20.08.1989, 1 ♀; Sinemorets, 12.07.2003, 2 ♂♂; 25.08.2006, 2 ♀♀.

*Scaeva albomaculata* (Macquart, 1842). Reference data: Tsarevo (Drenski, 1934).

*Scaeva pyrastri* (Linnaeus, 1758)
Reference data: Gramatikovo, Arkutino (Bankowska, 1967). New data: Zidarovo, 25.05.1987, 1 ♂; Indzhe voyvoda, 26.05.1988, 1 ♂; 18.08.1988, 2 ♀♀; Malko Tarnovo, 25.08.1987, 2 ♀♀; Balgari, 14.10.1986, 2 ♀♀; Brodilovo, 20.08.1988, 1 ♂; Kiten, 15.08.2004, 2 ♀♀, 2 ♂♂; Tsarevo, 19.08.1988, 2 ♀♀; Sinemorets, 25.08.2006, 1 ♂.

*Scaeva selenitica* (Meigen, 1822)
New data: Gramatikovo, 25.08.1987, 2 ♂♂; 28.08.1988, 1 ♂, 1 ♂; 28.05.1989, 1 ♂; Balgari, 25.08.1987, 1 ♂, 1 ♂; Tsarevo, 19.08.1988, 1 ♂; Sinemorets, 26.07.2008, 1 ♂; 18.08.2008, 1 ♂.

*Sphaerophoria philanthus* (Meigen, 1822)
New data: Gabar, 20.05.1986, 1 ♂; peak Bosna, 26.05.1988, 1 ♂; Byala voda, 26.05.1988, 2 ♂♂; Brashlyan, 28.05.1988, 1 ♂; Malko Tarnovo, 25.08.1987, 2 ♀♀, 1 ♂; 19.08.1988, 2 ♀♀; 20.08.1989, 1 ♂, 2 ♂♂; Brodilovo, 20.08.1988, 2 ♂♂; Primorsko, 15.07.2005, 2 ♀♀; 14.08.2009, 2 ♂♂; Kiten, 20.08.2004, 2 ♂♂; Sinemorets, 20.07.2002, 1 ♂, 2 ♂♂; 12.07.2003, 2 ♂♂.

*Sphaerophoria rueppelli* (Wiedemann, 1830)
Reference data: Tsarevo (Drenski, 1934); Arkutino (Bankowska, 1967). New data: Gabar, 17.08.1988, 1 ♂; Indzhe voyvoda, 18.08.1988, 1 ♂; peak Bosna, 26.05.1988, 2 ♂♂; Stoilovo, 19.08.1987, 1 ♂; Malko Tarnovo, 20.08.1989, 1 ♂, 1 ♂; Gramatikovo, 25.08.1987, 1 ♂; 20.08.1989, 2 ♂♂; Primorsko, 18.08.2008, 1 ♂.

*Sphaerophoria scripta* (Linnaeus, 1758)
Reference data: Primorsko, Ropotamo (Bankowska, 1967). New data: Zidarovo, 13.10.1987, 2 ♂♂; 25.05.1988, 1 ♂; Novo Panicharevo, 27.05.1988, 1 ♂; 16.08.1989, 1 ♀, 3 ♂♂; Indzhe voyvoda, 24.08.1987, 1 ♂; 17.08.1989, 2 ♂♂; peak Bosna, 26.05.1988, 2 ♀♀; 18.08.1988, 2 ♀♀, 2 ♂♂; Byala voda, 26.05.1988, 1 ♂; Mladezhko, 18.08.1988, 2 ♀♀, 1 ♂; Zvezdets, 26.05.1988, 1 ♀, 18.08.1988, 2 ♂♂, 3 ♂♂; Brashlyan, 26.05.1986, 2 ♂♂; 28.05.1988, 2 ♀♀, 3 ♂♂; Stoilovo, 26.08.1988, 2 ♂♂; Malko Tarnovo, 28.05.1988, 1 ♂, 1 ♂; Gramatikovo, 28.05.1988, 2 ♂♂; 19.08.1988, 1 ♂; 20.08.1989, 2 ♂♂; Primorsko, 18.08.2008, 1 ♂.

*Syrphus ribesii* (Linnaeus, 1758)
Reference data: Gramatikovo, Arkutino (Bankowska, 1967). New data: Gabar, 20.05.1986, 2 ♀♀; Zidarovo, 25.05.1988, 2 ♀♀, 2 ♂♂; Novo Panicharevo, 25.05.1988, 2 ♂♂; peak Bosna, 24.08.1987, 3 ♀♀, 1 ♂; Malko Tarnovo, 25.08.1987, 2 ♀♀;
19.08.1988, 2 ♂♀, 1 ♂; Gramatikovo, 25.08.1987, 3 ♂♀; 1 ♂; Primorsko, 18.07.2005, 3 ♂♀, 2 ♂♂; 18.08.2008, 3 ♂♀, 1 ♂; 14.08.2009, 1 ♂; Kiten, 20.08.2004, 3 ♂♂; Lozenets, 09.09.2006, 1 ♂.

*Syrphus vitripennis* Meigen, 1822
Reference data: Gramatikovo, Arkutino (Bankowska, 1967). New data: Gabar, 20.05.1986, 1 ♂, 1 ♂; 16.08.1989, 2 ♂♂; Brashlyan, 28.05.1988, 2 ♂♂; 18.08.1988, 2 ♂♀, 1 ♂; 20.08.1989, 1 ♂; Stoilovo, 18.08.1988, 1 ♂; Izgrev, 19.08.1988, 2 ♂♀, 1 ♂; 20.08.1989, 2 ♂♂; Kiten, 15.08.2004, 2 ♂♂; 20.08.2004, 1 ♂, 1 ♂; Tsarevo, 19.08.1988, 2 ♂♀; Sinemorets, 25.08.2006, 3 ♂♀.

*Chrysotoxum elegans* Loew, 1841
New data: Zvezdets, 28.05.1988, 1 ♂; Brashlyan, 26.05.1986, 1 ♂; 28.05.1988, 1 ♂; Gramatikovo, 21.05.1989, 1 ♂; Primorsko, 18.07.2005, 2 ♂♂; 19.09.2008, 1 ♂; 14.08.2009, 2 ♂♀.

*Chrysotoxum impressum* Becker, 1921
Reference data: Gramatikovo (Bankowska, 1967).

*Chrysotoxum intermedium* Meigen, 1822

*Chrysotoxum parmense* Rondani, 1845
Reference data: Rezovo (Drenski, 1934). New data: Brashlyan, 28.05.1988, 1 ♂.

*Chrysotoxum vernale* Loew, 1841
Reference data: Malko Tarnovo (Bankowska, 1967). New data: Gabar, 25.05.1988, 2 ♂♂; peak Bosna, 23.05.1986, 1 ♂; Brashlyan, 28.05.1988, 1 ♂, 1 ♂; Primorsko, 13.07.2002, 1 ♂; 10.07.2007, 3 ♂♀; Rezovo, 20.07.2003, 2 ♂♀, 1 ♂.

*Melanostoma mellinum* (Linnaeus, 1758)
Reference data: Tsarevo, Malko Tarnovo (Drenski, 1934); Gramatikovo (Bankowska, 1967). New data: Zidarovo, 13.10.1987, 1 ♂; Novo Panicharevo, 13.10.1987, 1 ♂; 27.05.1988, 1 ♂; 1 ♂; Yasna polyana, 13.10.1987, 2 ♂♂; Zvezdets, 18.08.1988, 2 ♂♀, 1 ♂; Malko Tarnovo, 19.08.1988, 1 ♂; Gramatikovo, 19.08.1988, 1 ♂; Kiten, 20.08.2004, 1 ♂, 3 ♂♂; Sinemorets, 13.07.2002, 1 ♂, 1 ♂; 25.08.2006, 2 ♂♀, 2 ♂♂; Rezovo, 20.07.2003, 2 ♂♀, 1 ♂.

*Xanthandrus comtus* (Harris, [1780])
Reference data: Gramatikovo (Bankowska, 1967). New data: Indzhe voyvoda, 24.08.1988, 1 ♂; Malko Tarnovo, 25.08.1987, 1 ♂; Brodilovo, 20.08.1988, 1 ♂.

*Paragus tibialis* (Fallen, 1817)
Reference data: Gramatikovo (Bankowska, 1967). New data: Gabar, 17.08.1988, 2 ♂♀, 1 ♂; Indzhe voyvoda, 18.08.1988, 2 ♂♀; peak Bosna, 18.08.1988, 2 ♂♀; Braslyan, 26.05.1986, 1 ♂, 2 ♂♂; 18.08.1988, 3 ♂♀; 2 ♂♂; Malko Tarnovo, 28.05.1988, 1 ♂, 2 ♂♂; Balgari, 28.05.1988, 3 ♂♀, 1 ♂; 20.08.1989, 2 ♂♀, 4 ♂♂; Primorsko, 15.07.2005, 2 ♂♀, 1 ♂; 26.07.2008, 2 ♂♀; Kiten, 20.08.2004, 2 ♂♂; Rezovo, 20.07.2003, 3 ♂♀.

*Paragus tibialis* var. *meridionalis* Becker, 1921
Reference data: Ropotamo, Primorsko (Bankowska, 1967)

*Paragus albifrons* (Fallen, 1817)
Reference data: Arkutino (Bankowska, 1967). New data: Novo Panicharevo, 20.05.1989, 1 ♂; Zidarovo, 25.05.1988, 1 ♂; Zvezdets, 28.05.1988, 2 ♂♂; Gramatikovo, 25.05.1988, 2 ♂♀; 20.08.1989, 2 ♂♀; Balgari, 28.06.1988, 1 ♂; 20.08.1989, 1 ♂, 2
♂♂; Primorsko, 15.07.2005, 2 ♂♂; 18.08.2009, 2 ♀♀; Kiten, 15.08.2002, 2 ♀♀, 1 ♂; 20.08.2004, 2 ♂♂; Tsarevo, 19.08.1988, 2 ♂♂; Rezovo, 20.07.2003, 2 ♂♂.

*Paragus bicolor* (Fabricius, 1794)

New data: Gabar, 20.05.1986, 2 ♀♀; Zidarovo, 25.05.1988, 1 ♂; 16.08.1089, 1 ♀; Yasna polyana, 21.05.1989, 1 ♂; 19.10.1988, 1 ♂; Indzhe voyvoda, 17.08.1989, 1 ♀, 1 ♂; peak Bosna, 23.05.1986, 1 ♂; 20.10.1988, 1 ♂; Brashlyan, 21.05.1989, 1 ♂; Lozenets, 09.09.2006, 1 ♀; Sinemorets, 25.08.2006, 1 ♀, 1 ♂.

*Paragus bicolor* var. *testaceus* Meigen, 1822

Reference data: Gramatikovo (Bankowska, 1967)

*Paragus strigatus* Meigen, 1822

Reference data: Tsarevo (Drenski, 1934)

**MILESIINAE**

*Pipizella virens* (Fabricius, 1805)

Reference data: Gramatikovo (Bankowska, 1967). New data: Novo Panicharevo, 25.05.1988, 1 ♀, 1 ♂; peak Bosna, 23.05.1986, 1 ♀, 1 ♂; Brashlyan, 21.05.1989, 2 ♀♀; Malko Tarnovo, 26.05.1986, 1 ♀, 1 ♂; 21.05.1989, 1 ♀; Brodilovo, 20.08.1988, 1 ♂; Sinemorets, 25.08.2006, 2 ♀♀; Rezovo, 20.07.2003, 1 ♀, 1 ♂.

*Cheilosia antiqua* (Meigen, 1822)

Reference data: Tsarevo, Malko Tarnovo (Drenski, 1934).

*Cheilosia melanopa* (Zetterstedt, 1843)

Reference data: peak Papiya (Drenski, 1934). New data: peak Bosna, 23.05.1986, 1 ♂.

*Cheilosia mutabilis* (Fallen, 1817)

Reference data: Malko Tarnovo (Bankowska, 1967). New data: Gabar, 20.05.1986, 2 ♂♂; peak Bosna, 23.05.1986, 2 ♂♂; Brashlyan, 28.05.1988, 1 ♀, 1 ♂; Gramatikovo, 21.05.1989, 1 ♀, 2 ♂♂.

*Cheilosia proxima* (Zetterstedt, 1843)

Reference data: Arkutino (Bankowska, 1967). New data: Indzhe voyvoda, 24.08.1987, 2 ♂♂; Malko Tarnovo, 19.08.1988, 1 ♀, 1 ♂; Gramatikovo, 25.08.1987, 2 ♂♂; Kiten, 15.08.2004, 1 ♀, 2 ♂♂; Rezovo, 20.07.2003, 2 ♂♂.

*Cheilosia schineri* Egger, 1860

Reference data: Tsarevo (Drenski, 1934).

*Cheilosia scutellata* (Fallen, 1817)

Reference data: Gramatikovo (Bankowska, 1967). New data: Novo Panicharevo, 20.05.1989, 1 ♂; Indzhe voyvoda, 26.05.1988, 1 ♂; Brashlyan, 28.05.1988, 1 ♂; Lozenets, 09.09.2006, 1 ♀; Sinemorets, 25.08.2006, 2 ♂♂.

*Cheilosia vulpina* (Meigen, 1822)

Reference data: Zidarovo, 20.05.1989, 1 ♂; Indzhe voyvoda, 26.05.1988, 1 ♀, 1 ♂; Brashlyan, 21.05.1989, 1 ♂.

*Ferdinandea cuprea* (Scopoli, 1763)


*Volucella pellucens* (Linnaeus, 1758)

New data: Yasna polyana, 25.05.1988, 1 ♀, Zvezdets, 28.05.1988, 1 ♀; Balgari, 28.05.1988, 1 ♂; 21.05.1989, 1 ♂; Primorsko, 23.07.2002, 2 ♀♀; Lozenets, 09.09.2006, 1 ♂; Sinemorets, 25.08.2006, 2 ♀♀.
Volucella zonaria (Poda, 1761)
Reference data: Ropotamo, Primorsko (Bankowska, 1967). New data: Indzhovooyvoda, 24.08.1987, 2 ♀; 18.08.1988, 1 ♀; Mladezhko, 18.08.1988, 1 ♀; Malko Tarnovo, 19.08.1988, 1 ♂; Gramatikovo, 19.08.1988, 2 ♀; Lozenets, 10.09.2006, 2 ♀; Rezovo, 20. 07.2003, 1 ♂.

Chrysogaster solstitialis (Fallen, 1817)
Reference data: Gramatikovo (Bankowska, 1967). New data: Novo Panicharevo, 21.05.1989, 2 ♀; 4 ♂; Malko Tarnovo, 19.08.1989, 3 ♀, 3 ♂; Gramatikovo, 21.05.1989, 2 ♀; Kiten, 15.08.2004, 2 ♀; Lozenets, 09.09.2006, 2 ♂.

Chrysogaster viduata (Linnaeus, 1758)
Reference data: Ahtopol (Bankowska, 1967). New data: Gabar, 20.05.1986, 5 ♀, 3 ♂; peak Bosna, 18.08.1988, 2 ♀, 5 ♂; 17.08.1989, 3 ♀, 3 ♂; Brashlyan, 21.05.1989, 2 ♀; Malko Tarnovo, 28.05.1988, 3 ♀, 2 ♂; Balgari, 21.05.1989, 3 ♀, 5 ♂; Primorsko, 15.07.2005, 2 ♂.

*Lejogaster splendida* (Meigen, 1822)
New data: Malko Tarnovo, 21.05.1989, 1 ♂; Gramatikovo, 21.05.1989, 2 ♂; Kosti, 28.05.1988, 1 ♀; Primorsko, 18.07.2005, 2 ♂; 14.08.2009, 2 ♀.

Myolepta luteola (Gmelin, 1790)
Reference data: Tsarevo (Drenski, 1934).

Orthonevra frontalis (Loew, 1843)
Reference data: Tsarevo (Drenski, 1934).

Neoascia interrupta (Meigen, 1822)
Reference data: Arkutino (Bankowska, 1967). New data: Brashlyan, 25.08.1987, 1 ♀; 2 ♂; Balgari, 25.08.1987, 2 ♀; Kiten, 15.08.2004, 1 ♀.

Sphegina kimakowiczi (Strobl, 1897)
Reference data: Gramatikovo (Bankowska, 1967).

Eumerus ruficornis Meigen, 1822
Reference data: Arkutino (Bankowska, 1967). New data: Tsarevo, 19.08.1988, 1 ♀; Sinemorets, 25.08.2006, 2 ♀.

Eumerus strigatus (Fallen, 1817)

Merodon aberrans Egger, 1860
Reference data: Rezovo, Malko Tarnovo (Drenski, 1934). New data: Sinemorets, 12.07.2003, 1 ♂.

Merodon albifrons Meigen, 1822
Reference data: Rezovo, Malko Tarnovo (Drenski, 1934); Primorsko (Bankowska, 1967). New data: Novo Panicharevo, 25.05.1988, 1 ♂; Brashlyan, 28.05.1988, 1 ♂.

Merodon clunipes Sack, 1913
Reference data: Tsarevo (Drenski, 1934); Ropotamo (Bankowska, 1967).

Merodon crymensis Paramonov, 1925
Reference data: Ropotamo (Bankowska, 1967). New data: Gabar, 20.05.1986, 2 ♀, 2 ♂; Brashlyan, 28.05.1988, 3 ♀; Gramatikovo, 21.05.1989, 3 ♀, 2 ♂; Sinemorets, 12.07.2003, 2 ♀, 1 ♂; Rezovo, 20.07.2003, 1 ♀, 1 ♂.

Merodon nanus (Sack, 1931)

**Merodon ruficornis** Meigen, 1822

**Merodon rufus** Meigen, 1838
Reference data: Gramatikovo. New data: Tsarevo (Drenski,1934)

**Merodon spinipes** (Fabricius, 1794)

**Merodon velox** Loew, 1869
Reference data: Tsarevo (Drenski, 1934)

**Psarus abdominalis** (Fabricius, 1794)
Reference data: Gramatikovo (Bankowska, 1967)

**Sphiximorpha binominata** (Verrali, 1901)
Reference data: Rezovo (Drenski, 1934)

**Eristalinus sepulchralis** (Linnaeus, 1758)
Reference data: Arkutino, Ropotamo (Bankowska, 1967). New data: Gabar, 20.05.1986, 3 ♂♂; Mladezhko, 18.08.1988, 2 ♀♀, 1 ♂; Gramatikovo, 21.05.1989, 1 ♂; Kiten, 18.08.2004, 2 ♂♂; Losevets, 10.09.2006, 2 ♂♂; Rezovo, 20.07.2003, 1 ♂.

**Eristalinus taeniops** (Wiedemann, 1818)
Reference data: Tsarevo (Drenski, 1934).

**Eristalinus aeneus** (Scopoli, 1763)
Reference data: Ropotamo (Bankowska, 1967). New data: Gabar, 19.10.1988, 2 ♀♀, 3 ♂♂; Indzhe voyvoda, 20.05.1989, 1 ♀; peak Bosna, 18.08.1988, 3 ♀♀, 1 ♂; Balgari, 20.08.1989, 1 ♀, 1 ♂.

**Eristalis abusiva** Collin, 1931
New data: Indzhe voyvoda, 26.06.1988, 2 ♀♀, 1 ♂; Malko Tarnovo, 28.05.1988, 1 ♂; Gramatikovo, 28.05.1988, 1 ♂; Balgari, 28.05.1988, 1 ♂.

**Eristalis arbustorum** (Linnaeus, 1758)
Reference data: Gramatikovo, Primorsko, Ropotamo (Bankowska, 1967). New data: Gabar, 20.05.1986, 2 ♀♀, 1 ♂; 25.05.1988, 1 ♂; Indzhovo voyvoda, 24.08.1987, 3 ♀♀; 18.08.1988, 1 ♂; peak Bosna, 26.05.1988, 3 ♀♀, 1 ♂; 18.08.1988, 3 ♀♀, 2 ♂♂; 17.08.1989, 2 ♀♀, 2 ♂♂; Brashlyan, 28.05.1988, 6 ♀♀, 2 ♂♂; Malko Tarnovo, 26.05.1986, 5 ♀♀, 4 ♂♂; 28.05.1988, 2 ♀♀, 4 ♂♂; 19.08.1988, 3 ♀♀, 4 ♂♂; Gramatikovo, 28.05.1988, 5 ♀♀; Balgari, 28.05.1988, 1 ♀, 5 ♂♂; Izgrev, 28.05.1988, 3 ♀♀; Kiten, 15.08.2004, 1 ♂; Tsarevo, 19.08.1988, 4 ♀♀, 2 ♂♂; Rezovo, 20.07.2003, 1 ♂.

**Eristalis tenax** (Linnaeus, 1758)
New data: Gabar, 20.05.1986, 2 ♀♀, 1 ♂; 25.05.1988, 1 ♂; 17.08.1988, 4 ♀♀, 2 ♂♂; 19.10.1988, 2 ♀♀, 3 ♂♂; Novo Panicharevo, 25.05.1988, 1 ♀; 4 ♂♂; 20.05.1989, 3 ♀♀; Indzhe voyvoda, 20.10.1988, 2 ♀♀, 2 ♂♂; peak Bosna, 23.05.1986, 3 ♀♀, 1 ♂; Mladezhko, 28.05.1988, 1 ♀; 20.10.1988, 1 ♂; Brashlyan, 25.05.1985, 4 ♀♀; Malko Tarnovo, 28.05.1988, 1 ♂; 21.10.1988, 3 ♂♂; Gramatikovo, 28.05.1988, 1 ♀; Balgari, 28.05.1988, 2 ♂♂; 21.10.1988, 3 ♂♂; Izgrev, 21.10.1988, 2 ♂♀, 2 ♂♂; Kiten, 20.08.2004, 2 ♂♂; Lozenets, 09.09.2006, 3 ♂♂.
Helophilus parallelus (Harris, [1776])

Helophilus frutetorum (Fabricius, 1775)
New data: Balgari, 28.05.1988, 1 ♂; Primorsko, 19.08.2008, 1 ♂; Tsarevo, 19.08.1988, 1 ♂.

Mesembrius peregrinus (Loew, 1846)
Reference data: Tsarevo (Drenski, 1934); Arkutino (Bankowska, 1967).
Myathropa florea (Linnaeus, 1758)
Reference data: Arkutino (Bankowska, 1967). New data: Brashlyan, 25.08.1987, 2 ♀♀; Gramatikovo, 25.08.1987, 2 ♂♂; Malko Tarnovo, 19.08.1988, 1 ♂; Kiten, 20.08.2004, 2 ♂♂.

Milesia craboriformis (Fabricius, 1775)
Reference data: Ropotamo (Bankowska, 1967)
Milesia semilutifera (Villers, 1789)
Reference data: Ropotamo (Bankowska, 1967)
Spilomyia saltuum (Fabricius, 1794)

Siritta flaviventris Macquart, 1842

Siritta pipiens (Linnaeus, 1758)
Reference data: Primorsko, Arkutino, Ropotamo (Bankowska, 1967). New data: Zidarovo, 25.05.1988, 1 ♀; Indzhe voyvoda, 24.08.1987, 1 ♀, 1 ♂; 18.08.1988, 1 ♂; peak Bosna, 26.05.1988, 1 ♀; 18.08.1988, 3 ♀♀; Brashlyan, 25.08.1987, 2 ♀♀, 1 ♂; Stoilovo, 25.08.1988, 2 ♂♂; Malko Tarnovo, 25.08.1987, 1 ♂♂; 25.08.1988, 1 ♂; 19.08.1988, 2 ♂♂; Gramatikovo, 25.08.1987, 2 ♀♀; Balgari, 28.05.1988, 2 ♀♀, 1 ♂; Kosti, 20.08.1988, 2 ♀♀; Brodilovo, 20.08.1988, 2 ♂♂; Sinemorets, 23.07.2003, 2 ♀♀, 1 ♂; 25.08.2006, 2 ♂♂.

Chalcosyrphus femoratus (Linnaeus, 1758)
Reference data: Gramatikovo (Bankowska, 1967).
Xylota segnis (Linnaeus, 1758)
Reference data: Arkutino (Bankowska, 1967).

MICRODONTINAE

Microdon devius (Linnaeus, 1761)
Reference data: Gramatikovo (Bankowska, 1967). New data: Malko Tarnovo, 26.05.1986, 1 ♀; Gramatikovo, 21.05.1989, 1 ♀, 1 ♂.

Zoogeographical notes
The established species from Syrphidae family are distributed in 19 zoogeographic categories, grouped into two complexes on the basis of contemporary data about their geographic distribution. (Peck, 1988), (Table 1).
Species, distributed within and outside of the Palaearctic

This complex (23 species – 29.5%) includes 7 zoogeographic categories. Highest representation per cent is shown by the species from the categories Palaearctic-Nearctic (8 species – 10.3%) and Palaearctic-Nearctic-Orientalian (6 species – 7.7%).

Species, distributed in Palaearctic only

In this complex in Strandzha have been established 55 species (70.5%) in total, distributed in 12 zoogeographic categories. The character of the complex is determined mainly by Palaearctic species, which are prevailing in number (20 species – 25.6%) and partially by the South-European species (6 species – 7.7%).

Table 1
Zoogeographic characteristic of the family Syrphidae from Strandzha Mountain

<table>
<thead>
<tr>
<th>Zoogeographic categories</th>
<th>Number of species</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Species, distributed within and outside of Palaearctic</td>
<td>23</td>
<td>29.5</td>
</tr>
<tr>
<td>Palaearctic-Nearctic</td>
<td>8</td>
<td>10.3</td>
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<tr>
<td>Palaearctic-Nearctic-Orientalian</td>
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<td>7.7</td>
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<tr>
<td>Palaearctic-Nearctic-Orientalian-Afrotropic-Australian</td>
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<td>1.3</td>
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<tr>
<td>Palaearctic-Orientalian</td>
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</tr>
<tr>
<td>Palaearctic-Orientalian-African-Australian</td>
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<td>2.6</td>
</tr>
<tr>
<td>Palaearctic-Oriental-Afrotropical</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Palaearctic-Afrotropic-Neotropical</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Species, distributed in Palaearctic only</td>
<td>55</td>
<td>70.5</td>
</tr>
<tr>
<td>Palaearctis</td>
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<td>25.6</td>
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<tr>
<td>West-Palaearctic</td>
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<tr>
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<td>6.4</td>
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</tr>
<tr>
<td>North-Central-Palaearctic</td>
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<td>1.3</td>
</tr>
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<tr>
<td>European</td>
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<td>5.1</td>
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<tr>
<td>Central European</td>
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<td>South European</td>
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</tr>
<tr>
<td>South and Central European</td>
<td>4</td>
<td>5.1</td>
</tr>
</tbody>
</table>
REFERENCES


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