



*Original Contribution*

## HORSE FLIES OF SREDNA GORA MOUNTAINS, BULGARIA

D. Ganeva\*

Department of Biology and Aquaculture, Faculty of Agriculture, Trakia University, Stara Zagora, Bulgaria

### ABSTRACT

Based on the study on the composition of the tabanid fauna of the Sredna Gora Mountains and the summarized reference data 54 species and 2 subspecies of 10 genera have been identified: *Silvius* (1 species), *Chrysops* (4 species), *Atylotus* (4 species), *Therioptectes* (2 species and 1 subspecies), *Hybomitra* (5 species), *Tabanus* (23 species and 1 subspecies), *Heptatoma* (1 species), *Haematopota* (10 species), *Dasyrhamphis* (2 species) and *Philipomyia* (2 species). For the first time, data on the tabanid fauna of the Ihtimanska and Sashtinska Sredna Gora Mountains have been reported. For the Ihtimanska Sredna Gora Mountains 17 species of 4 genera have been identified: *Atylotus* (1 species), *Tabanus* (12 species), *Haematopota* (2 species) and *Philipomyia* (2 species), and for Sashtinska - 20 species of 6 genera: *Chrysops* (2 species), *Atylotus* (2 species), *Hybomitra* (1 species), *Tabanus* (12 species), *Haematopota* (2 species), and *Philipomyia* (1 species). The species *Atylotus latistriatus* Brauer in Br. & Bergenstamm, 1880, *Tabanus spodopterus* Meigen, 1820 and *Philipomyia aprica* (Meigen, 1820), registered in the Ihtimanska and the Sashtinska Sredna Gora Mountains have been reported for the first time for the fauna of the Sredna Gora Mountains.

**Key words:** tabanids, fauna, new data, Ihtimanska Sredna gora Mountains, Sashtinska Sredna Gora Mountains, Bulgaria

### INTRODUCTION

The Sredna Gora Mountains are the second longest mountains in Bulgaria (over 250 km), located south of the Balkan Mountains in a west-east direction. It is divided into three parts (Ihtimanska, Sashtinska and Sarnena) from the deep valleys of the rivers Topolnitsa and Stryama (1). The climatic conditions and the vegetation on the territory of the mountains are a prerequisite for the rich species diversity of the tabanid fauna in the region and the high number of blood-sucking flies. According to reference data (2-6), the research level of the group in the region is low and it mainly affects the eastern part of the Sarnena Sredna Gora Mountains. This drew our

attention to the development of a research project, related to the study of the composition and distribution of tabanid fauna in the Sredna Gora Mountains. Summarized reference data and the results obtained in the study on the composition and distribution of tabanids in the Sarnena Sredna Gora Mountains (eastern part of the Sredna Gora Mountains) have already been published by (7-8). The present paper presents the data from the study on the tabanid fauna in the other two parts of the mountains - the Ihtimanska and Sashtinska Sredna Gora Mountains and summarizes the results of the species richness and distribution of tabanids in the Sredna Gora Mountains.

### MATERIAL AND METHODS

The study on the composition of the tabanid fauna of the Sredna Gora Mountains has been carried out as a result of funding for the scientific research project: "Studies on the fauna and phenology of blood-sucking flies of the family

\*Correspondence to: Diana GANEVA, Department of Biology and Aquaculture, Faculty of Agriculture, Trakia University, Student Campus, 6 000 Stara Zagora, Bulgaria; Tel.: (+359) 42 699 324, [d\\_ganeva2000@yahoo.com](mailto:d_ganeva2000@yahoo.com)

Tabanidae (Diptera) in the Sredna Gora Mountains”.

The tabanid fauna was studied on the basis of materials collected from 10 localities on the territory of Ihtimanska Sredna Gora Mountains, 16 localities on the territory of Sasthinska Sredna Gora Mountains and 13 localities on the territory of Sarnena Sredna Gora Mountains. Data on the composition of the tabanid fauna in the Sarnena Sredna Gora Mountains have been published by (8). Tabanids were collected by sweep net in the period May-August, 2009 during route crossings in the three parts of the mountains. The processing of the insects was carried out in the laboratory. The collected specimens were identified according to the keys of (9-10). 1207♀ и 45♂ specimens were collected, processed and determined to species. 317 ♀ and 2♂ specimens out of them have already been reported about the Sarnena Sredna Gora Mountains (8), and 890♀ и 43♂ specimens represent new data.

A list of the identified tabanid species and a list of the studied localities on the territory of Sasthinska and Ihtimanska Sredna Gora Mountains are presented. The biotopes in Ihtimanska Sredna Gora in which material was collected (№ 11, 12, 13, 14, 15, 19, 20, 21, 22, 23) are marked in italics in the list of localities.

The sequence of species was done according to the Catalogue of Palaearctic Diptera (11). The list of the localities indicates the altitude, coordinates, collection dates and the number of collected specimens. Altitude and geographical coordinates were obtained through measurement with a Garmin GPS Navigator Etrex Vista HCx.

The dominant structure of the tabanid assemblages in the Ihtimanska and Sasthinska Sredna gora Mts. was analysed on the basis of Skufin's criteria (12) for the relative abundance of species (RA): dominant species ( $RA \geq 8\%$ ), subdominant species ( $2\% \leq RA \leq 8\%$ ), scarce species ( $0.5\% \leq RA \leq 2\%$ ) and rare species ( $RA \leq 0.5\%$ ).

The degree of similarity between tabanid assemblages in the three parts of the mountain has been determined by Sørensen's similarity index (13):  $S = \frac{2c}{a+b} \times 100$ , where

$$a+b$$

a - the number of species during the study in one part of the mountain;

b - the number of species in the other part of the mountain;

c – the number of species common to the studied parts of the mountain.

#### List of localities in Ihtimanska and Sasthinska Sredna gora Mts.

**Locality 1 (L1).** The fork for the village of Malo Krushevo, next to the Pyasachnik dam, **307 m a. s. l.**, 41.42 N, 24.51 E: **19.06.09.**, 9♀+1♂; **17.07.09.**, 1♀+1♂; **12.08.09.**, 1♀;

**Locality 2 (L2).** To an oak forest, 5 km before the town of Strelcha, in the direction of the town Panagyurishte, **328 m a. s. l.**, 42.48 N, 24.38 E: **19.06.09.**, 26♀+1♂; **17.07.09.**, 1♀+1♂; **12.08.09.**, 0;

**Locality 3 (L3).** At the turnoff of the road Strelcha- Panagyurishte, **484 m a. s. l.**, 42.49 N, 24.24 E: **17.05.09.**, 10♀; **17.06.09.**, 1♀; **16.07.09.**, 30♀;

**Locality 4 (L4).** 1 km before the fork for the historic site Oborishte, near a pine forest, **570 m a. s. l.**, 42.51 N, 24.13 E: **15.07.09.**, 43♀+9♂; **12.08.09.**, 22♀+1♂;

**Locality 5 (L5).** 1 km after the fork for the historic site Oborishte, near an oak forest, **657 m a. s. l.**, 42.51 N, 24.11 E: **15.07.09.**, 5♀+1♂; **12.08.09.**, 64♀+24♂; **14.08.09.**, 85♀+3♂;

**Locality 6 (L6).** 7 km before the town of Koprivshitsa, to the right of the road Strelcha-Koprivshitsa, **1061 m a. s. l.**, 42.58 N, 24.36 E: **19.06.09.**, 101♀; **17.07.09.**, 1♀;

**Locality 7 (L7).** 3 km southwest of the town of Koprivshitsa, to the river Topolnitsa, **1065 m a. s. l.**, 42.60 N, 24.36 E: **19.06.09.**, 15♀; **17.07.09.**, 34♀; **13.08.09.**, 34♀;

**Locality 8 (L8).** 5.5 km southeast of Koprivshitsa, **1087 m a. s. l.**, 42.58 N, 24.37 E: **13.08.09.**, 69♀;

**Locality 9 (L9).** 12 km after the town of Koprivshitsa, in the direction of the town of Strelcha, **877 m a. s. l.**, 42.57 N, 24.33 E: **17.06.09.**, 12♀+1♂; **14.08.09.**, 13♀;

**Locality 10 (L10).** 3 km before the town of Strelcha, to the right of the road Koprivshitsa-Strelcha, near an oak forest, **638 m a. s. l.**, 42.54 N, 24.33 E: **17.06.09.**, 7♀; **19.06.09.**, 21♀; **17.07.09.**, 7♀; **14.08.09.**, 25♀;

**Locality 11 (L11).** 4.5 km after the village of Poibrene, in the direction of the village of Belitsa, **589 m a. s. l.**, 42.49 N, 23.96 E: **14.08.09.**, 85♀;

**Locality 12 (L12).** 2 km before the village of Belitsa, in the direction of the town of Vakarel, **916 m a. s. l.**, 42.50 N, 23.91 E: **16.07.09.**, 49♀; **14.08.09.**, 39♀;

**Locality 13 (L13).** To the fork for Suevtsi, **1016 m a. s. l.**, 42.54 N, 23.84 E: **14.08.09.**, 2♀;

**Locality 14 (L14).** In a beech forest to the right of the road to Vakarel (3.5 km after the fork for Suevtsi), **1080 m a. s. l.**, 42.55 N, 23.82 E: **16.07.09.**, 5♀; **14.08.09.**, 19♀;

**Locality 15 (L15).** After the fork for the village of Mechkovtsi (1.5 km before the town Vakarel), **874 m a. s. l.**, 42.56 N, 23.73 E: **14.08.09.**, 17♀;

**Locality 16 (L16).** 3 km after the town of Zlatitsa, in the direction of Panagyurishte colonies, **696 m a. s. l.**, 42.717 N, 24.13 E: **17.06.09.**, 20♀; **15.07.09.**, 13♀;

**Locality 17 (L17).** 10 km after the town of Zlatitsa, in the direction of Panagyurishte colonies (by the river), **15.07.09.**, 12♀;

**Locality 18 (L18).** 6 km after Panagyurishte colonies, in the direction of the town Panagyurishte (next to the fountain), **17.06.09.**, 2♀; **15.07.09.**, 7♀;

**Locality 19 (L19).** At the deviation for the chapel "St. Georgi" (4 km after the village of Belitsa, in the direction of Vakarel) **16.07.09.**, 7♀;

**Locality 20 (L20).** 3 km after the village of Belitsa, in the direction of the village of Poibrene, **953 m a. s. l.**, 41.95 N, 23.40 E: **16.07.09.**, 10♀;

**Locality 21 (L21).** To the river Topolnitsa, to the right of the road Muhovo-Plovdiv, **660 m a. s. l.**, 42.42 N, 23.90 E: **1.08.09.**, 3♀;

**Locality 22 (L22).** In the area of the hut "Shindar", **888 m a. s. l.**, 42.43 N, 23.928 E: **1.08.09.**, 15♀;

**Locality 23 (L23).** 4 km before the village of Muhovo, in the direction of the town of Plovdiv, **882 m a. s. l.**, 42.408 N, 23.977 E: **1.08.09.**, 11♀;

**Locality 24 (L24).** 4 km after the village of Muhovo, in the direction of Plovdiv, **655 m a. s. l.**, 42.42 N, 23.90 E: **1.08.09.**, 7♀;

**Locality 25 (L25).** To the bridge before the village of Tserovo, in the direction of Plovdiv, **411 m a. s. l.**, 42.38 N, 23.04 E: **1.08.09.**, 18♀;

**Locality 26 (L26).** In the area of the town Koprivshitsa, north of the town **1030 m a. s. l.**, 42.633 N, 24.350 E: **17.06.09.**, 3♀.

## RESULTS AND DISCUSSION

As a result of the field research, 1207♀ and 45♂ specimens of tabanids from a total of 39 localities in the Sredna Gora Mountains have been collected and determined down to species. The collected materials from the three parts of the Sredna Gora mountains are distributed as follows: 245♀ specimens from the localities in the Ihtimanska Sredna Gora Mountains, 645♀ and 43♂ - from the Sashtinska Sredna Gora Mountains and the remaining 317♀ and 2♂ specimens from the Sarnena Sredna Gora Mountains (already commented by 8) (Table 1).

**Table 1.** Species composition of *Tabanidae* (Diptera) in the Sredna gora Mts.

Species	Ihtimanska Sredna gora Mts.	Sasthinska Sredna gora Mts.	Sarnena Sredna gora Mts.	Number of specimens	RA (%)
<i>Silvius alpinus</i> (Scopoli, 1763)			4♀	4♀	0.32
<i>Chrysops caecutiens</i> (Linnaeus, 1758)		1♀	8♀	9♀	0.72
<i>Chrysops viduatus</i> (Fabricius, 1794)		1♀	1♀	2♀	0.16
<i>Atylotus latistriatus</i> Brauer in Br. & Bergenstamm, 1880		15♂		15♂	1.20
<i>Atylotus loewianus</i> Villeneuve, 1920)	51♀	25♀+1♂	1♀	77♀+1♂	6.23
<i>Hybomitra ciureai</i> (Séguy, 1937)			8♀	8♀	0.64
<i>Hybomitra distinguenda</i> (Verrall, 1909)		3♀	2♀	5♀	0.39

<i>Tabanus autumnalis</i> Linnaeus, 1761		1♀		1♀	0.08
<i>Tabanus bifarius</i> Loew, 1858			13♀	13♀	1.04
<i>Tabanus briani</i> Leclercq, 1962			2♀	2♀	0.16
<i>Tabanus bromius</i> Linnaeus, 1758	19♀	89♀+11♂	20♀	128♀+11♂	11.10
<i>Tabanus cordiger</i> Meigen, 18820	2♀	10♀	3♀	15♀	1.20
<i>Tabanus exclusus</i> Pandellé, 1883	20♀	16♀		36♀	2.88
<i>Tabanus glaucopis</i> Meigen, 1820	71♀	233♀+4♂	7♀	311♀ +4♂	25.16
<i>Tabanus indrae</i> Hauser, 1939	1♀			1♀	0.08
<i>Tabanus maculicornis</i> Zetterstedt, 1842	2♀	63♀	101♀	166♀	13.26
<i>Tabanus prometheus</i> Szilady, 1923	2♀			2♀	0.16
<i>Tabanus quatuornotatus</i> Meigen, 1820			30♀	30♀	2.39
<i>Tabanus rupium</i> (Brauer in Br.& Bergenstamm, 1880)		3♀		3♀	0.24
<i>Tabanus shannonellus</i> Kröber, 1936	14♀	15♀+5♂		29♀+5♂	2.71
<i>Tabanus spodopterus</i> Meigen, 1820	17♀			17♀	1.36
<i>Tabanus sudeticus</i> Zeller, 1842	1♀	1♀	16♀+1♂	18♀ +1♂	1.52
<i>Tabanus tergestinus</i> Egger, 1859	28♀	112♀+7♂	67♀+1♂	207♀+8♂	17.17
<i>Tabanus tinctus</i> Walker, 1850	13♀	6♀		19♀	1.52
<i>Tabanus unifasciatus</i> Loew, 1858		2♀		2♀	0.16
<i>Haematopota grandis</i> Meigen, 1820	1♀			1♀	0.08
<i>Haematopota italica</i> Meigen, 1804		2♀		2♀	0.16
<i>Haematopota pluvialis</i> (Linnaeus, 1758)	1♀	16♀	1♀	18♀	1.44
<i>Philipomyia aprica</i> (Meigen, 1820)	1♀			1♀	0.08
<i>Philipomyia graeca</i> (Meigen, 1820)	1♀	46♀	33♀	80♀	6.39
<b>Total number of species</b>	<b>17</b>	<b>20</b>	<b>17</b>	<b>30</b>	
<b>Total number of specimens</b>	<b>245♀</b>	<b>645♀+43♂</b>	<b>317♀+2♂</b>	<b>1207♀+45♂</b>	<b>100%</b>

The study in the Ihtimanska Sredna Gora Mountains was conducted in 10 localities with altitudes varying from 589 m (L11) to 1080 m (L14). The material was collected during the months of July (63♀) and August (182♀) during the route crossings (Table 2). In their identification, 17 species of 4 genera were identified: *Atylotus* (1 species), *Tabanus* (12 species), *Haematopota* (2 species) and *Philipomyia* (2 species). Data on the species structure of the tabanid assemblage show that the greatest species diversity is in the genus *Tabanus* - 12 species, while the other three genera are represented by 1 (*Atylotus*) or 2 species (*Haematopota* and *Philipomyia*). The established composition of the tabanid fauna in the Ihtimanska Sredna Gora Mountains is the first

report of the tabanids distribution in this area. The dominant structure of the tabanid assemblage in the Ihtimanska Sredna Gora Mountains includes 4 dominant species (*Atylotus loewianus*, *Tabanus exclusus*, *T. glaucopis* and *T. tergestinus*), 4 subdominant species (*T. bromius*, *T. shannonellus*, *T. spodopterus* and *T. tinctus*), 3 – scarce species (*T. cordiger*, *T. maculicornis* and *T. prometheus*) and 6 rare species (Table 2). It is noteworthy that with the exception of *T. tergestinus*, which is a polyseasonal species, in terms of their phenological characteristics, the other three dominant species are late summer (*A. loewianus*, *T. exclusus* and *T. glaucopis*). Their mass activity is in August. The obtained results regarding the registered dominant species fully correspond to their phenological characteristics.

**Table 2.** Species composition of *Tabanidae* (Diptera) in the Ihtimanska Sredna gora Mts.

Species	June	July	August	Number of specimens	RA (%)
<i>Atylotus loewianus</i> Villeneuve, 1920)		2♀	49♀	51♀	20.82
<i>Tabanus bromius</i> Linnaeus, 1758		8♀	11♀	19♀	7.75
<i>Tabanus cordiger</i> Meigen, 1820		1♀	1♀	2♀	0.82
<i>Tabanus exclusus</i> Pandellé, 1883			20♀	20♀	8.16
<i>Tabanus glaucopis</i> Meigen, 1820		2♀	69♀	71♀	28.98
<i>Tabanus indrae</i> Hauser, 1939			1♀	1♀	0.41
<i>Tabanus maculicornis</i> Zetterstedt, 1842		2♀		2♀	0.82
<i>Tabanus prometheus</i> Szilady, 1923			2♀	2♀	0.82
<i>Tabanus shannonellus</i> Kröber, 1936			14♀	14♀	5.71
<i>Tabanus spodopterus</i> Meigen, 1820		16♀	1♀	17♀	6.94
<i>Tabanus sudeticus</i> Zeller, 1842			1♀	1♀	0.41
<i>Tabanus tergestinus</i> Egger, 1859		22♀	6♀	28♀	11.42
<i>Tabanus tinctus</i> Walker, 1850		8♀	5♀	13♀	5.30
<i>Haematopota grandis</i> Meigen, 1820			1♀	1♀	0.41
<i>Haematopota pluvialis</i> (Linnaeus, 1758)			1♀	1♀	0.41
<i>Philipomyia aprica</i> (Meigen, 1820)		1♀		1♀	0.41
<i>Philipomyia graeca</i> (Meigen, 1820)		1♀		1♀	0.41
<b>Total number of species</b>		<b>10</b>	<b>14</b>	<b>17</b>	
<b>Total number of specimens</b>		<b>63♀</b>	<b>182♀</b>	<b>245♀</b>	<b>100 %</b>

In the Sashtinska Sredna Gora Mountains the tabanid fauna was studied on the basis of collected material from 16 localities. Their altitude varies from 307 meters above sea level (L1) to 1087 m above sea level (L8). 645♀ and 43♂ specimens were caught and determined down to species (Table 3). Tabanids were collected in June, July and August with the largest number of specimens caught in August (324♀ и

28♂) (Table 3). The identified 20 species belong to 6 genera: *Chrysops* (2 species), *Atylotus* (2 species), *Hybomitra* (1 species), *Tabanus* (12 species), *Haematopota* (2 species) and *Philipomyia* (1 species). This is the first report on the tabanids distribution on the territory of the Sashtinska Sredna Gora Mountains. The analysis of the species structure of the tabanid assemblage shows that again the genus *Tabanus* is

represented by the most species (12) and the other 5 genera participate with 2 (*Chrysops*, *Atylotus* and *Haematopota*) or 1 (*Hybomitra* and *Philipomyia*) species. The species structure of the tabanid assemblage in the Sashtinska Sredna Gora Mountains includes species of the two genera *Chrysops* and *Hybomitra*, which have not been registered so far in the Ihtimanska Sredna Gora Mountains, but have been reported for the

Sarnena Sredna Gora Mountains (Table 1). The dominant structure of the tabanid assemblage in the Sashtinska Sredna Gora Mountains is represented by 4 dominant species (*T. bromius*, *T. glaucopis*, *T. maculicornis* and *T. tergestinus*), 5 subdominant (*A. latistriatus*, *A. loewianus*, *T. exclusus*, *T. shannonellus*, *H. pluvialis* and *Philipomyia graeca*), 2 scarce (*T. cordiger* and *T. tinctus*) and 6 rare species (Table 3).

**Table 3.** Species composition of *Tabanidae* (Diptera) in the Sashtinska Sredna gora Mts.

Species	June	July	August	Number of specimens	RA (%)
<i>Chrysops caecutiens</i> (Linnaeus, 1758)	1♀			1♀	0.14
<i>Chrysops viduatus</i> (Fabricius, 1794)			1♀	1♀	0.14
<i>Atylotus latistriatus</i> Brauer in Br.& Bergenstamm, 1880			15♂	15♂	2.18
<i>Atylotus loewianus</i> Villeneuve, 1920)		4♀	21♀+1♂	25♀+1♂	3.78
<i>Hybomitra distinguenda</i> (Verrall, 1909)	3♀			3♀	0.44
<i>Tabanus autumnalis</i> Linnaeus, 1761	1♀			1♀	0.14
<i>Tabanus bromius</i> Linnaeus, 1758	15♀+1♂	53♀+9♂	21♀+1♂	89♀+11♂	14.53
<i>Tabanus cordiger</i> Meigen, 1820	3♀	3♀	4♀	10♀	1.45
<i>Tabanus exclusus</i> Pandellé, 1883		1♀	15♀	16♀	2.33
<i>Tabanus glaucopis</i> Meigen, 1820		4♀	229♀+4♂	233♀+4♂	34.45
<i>Tabanus maculicornis</i> Zetterstedt, 1842	47♀	16♀		63♀	9.16
<i>Tabanus rupium</i> (Brauer in Br.& Bergenstamm, 1880)	3♀			3♀	0.44
<i>Tabanus shannonellus</i> Kröber, 1936			15♀+5♂	15♀+5♂	2.91
<i>Tabanus sudeticus</i> Zeller, 1842	1♀			1♀	0.14
<i>Tabanus tergestinus</i> Egger, 1859	61♀+2♂	38♀+3♂	13♀+2♂	112♀+7♂	17.30
<i>Tabanus tinctus</i> Walker, 1850		5♀	1♀	6♀	0.87
<i>Tabanus unifasciatus</i> Loew, 1858	1♀	1♀		2♀	0.29
<i>Haematopota italica</i> Meigen, 1804			2♀	2♀	0.29
<i>Haematopota pluvialis</i> (Linnaeus, 1758)	13♀	1♀	2♀	16♀	2.33
<i>Philipomyia graeca</i> (Meigen, 1820)	44♀	2♀		46♀	6.69
<b>Total number of species</b>	<b>12</b>	<b>11</b>	<b>12</b>	<b>20</b>	
<b>Total number of specimens</b>	<b>193♀+3♂</b>	<b>128♀+12♂</b>	<b>324♀+28♂</b>	<b>645♀+ 43♂</b>	<b>100 %</b>

As a result of the study in the Sarnena Sredna Gora Mountains (8) reported that 317♀ and 2♂ specimens from 13 localities had been collected and determined. 17 species of 7 genera have been identified: *Silvius* (1 species), *Chrysops* (2 species), *Atylotus* (1 species), *Hybomitra* (2 species), *Tabanus* (9 species), *Haematopota* (1 species) and *Philipomyia* (1 species).

The summarized data from the three parts of the Sredna Gora Mountains show that in the course of the tabanid fauna study in the region 30 species of 7 genera have been identified: *Silvius* (1 species), *Chrysops* (2 species), *Atylotus* (2 species), *Hybomitra* (2 species), *Tabanus* (18 species), *Haematopota* (3 species) and *Philipomyia* (2 species) (Table 1). Of these, 20 species have been registered in the Sashtinska

Sredna Gora Mountains and in the Ihtimanska and Sarnena Sredna Gora Mountains - 17 species each. Nine of the identified species are found in all three parts of the mountains. There are three common species for the Ihtimanska and Sashtinska Sredna Gora Mountains (*T.exclusus*, *T. shannonellus* and *T. tinctus*) and for the Sashtinska and Sarnena Sredna Gora Mountains the common species are *C.caecutiens*, *C.vidiatus* and *H.distinguenda*, respectively. Each of the three parts of the mountains is distinguished by the presence of 5 species, which for the period of the study were registered in only one of them. (Table 1). The analysis of the tabanid fauna in the three parts of the Sredna Gora Mountains shows that the similarity index between the Ihtimanska and Sashtinska Sredna Gora Mountains is 64.86%. The same similarity index has been found between the Sashtinska and Sarnena Sredna Gora Mountains, while between the Ihtimanska and Sarnena Sredna Gora Mountains it was 48.64%.

The species *Atylotus latistriatus*, *Tabanus spodopterus* and *Philipomyia aprica*, registered in the Ihtimanska and Sashtinska Sredna Gora Mountains, are reported for the first time for the fauna of the Sredna Gora Mountains.

*Atylotus latistriatus* Brauer in Br.& Bergenstamm, 1880 - 15 ♂ caught on 12.8.09. in **L4** (1♂, 570 m a.s.l.) and **L5** (14♂, 657 m a.s.l) (the Sashtinska Sredna Gora Mountains). The species *Atylotus latistriatus* was first reported for the fauna of Bulgaria by (3) for the region of the Central Rhodopes. With the present study we also note it for the territory of the Sredna Gora Mountains.

*Tabanus spodopterus* Meigen, 1820 - 17 ♀ caught on 16.07.09. (**L12**, 7♀, 916 m a.s.l.; **L14**, 1♀, 1080 m a.s.l.; **L19**, 5♀ and **L20**, 3♀, 953 m a.s.l) and on 1.08 .09 (**L22**, 1♀, 888 m a.s.l) (the Ihtimanska Sredna Gora Mountains). According to (14-15), the species has so far been reported from the Strandzha, Rila, Pirin, Rhodopes, Vitoshka, Stara Planina and Belasitsa mountains.

*Philipomyia aprica* (Meigen, 1820) - 1 ♀ registered on 16.7.2009 in **L12** located at 916 m a.s.l. (the Ihtimanska Sredna Gora Mountains). So far, according to summarized reference data (14), the species has been reported from the Rila,

Pirin, Rhodopes, Lozen, Strandzha and Stara Planina mountains (Sliven Balkans).

## CONCLUSIONS

In conclusion, based on the results of the present study and the analyzed reference data on the distribution of tabanids in the Sredna Gora Mountains we established that the tabanid fauna of the Sredna Gora Mountains is represented by 54 species and 2 subspecies of 10 genera: *Silvius* (1 species), *Chrysops* (4 species), *Atylotus* (4 species), *Theriopectes* (2 species and 1 subspecies), *Hybomitra* (5 species), *Tabanus* (23 species and 1 subspecies), *Heptatoma* (1 species), *Haematopota* (10 species), *Dasyrhamphis* (2 species) and *Philipomyia* (2 species). The data collected in the present study represent the first report on the composition of the tabanid fauna in the Ihtimanska and Sashtinska Sredna Gora Mountains.

For the first time, the species *Atylotus latistriatus* Brauer in Br. & Bergenstamm, 1880, *Tabanus spodopterus* Meigen, 1820 and *Philipomyia aprica* (Meigen, 1820), registered in the Ihtimanska (*Tabanus spodopterus* and *Philipomyia aprica* C) and the Sashtinska Sredna Gora Mountains (*Atylotus latistriatus*).

## Checklist of Tabanidae (Diptera) from Sredna Gora Mountains

### Family Tabanidae

#### Subfamily Chrysopsinae

#### Genus *Silvius* Meigen, 1820

*Silvius* (*Silvius*) *alpinus* (Scopoli, 1763)

#### Genus *Chrysops* Meigen, 1803

*Chrysops* (*Chrysops*) *caecutiens* (Linnaeus, 1758)

*Chrysops* (*Chrysops*) *ludens* Loew, 1858

*Chrysops* (*Chrysops*) *relictus* Meigen, 1820

*Chrysops* (*Chrysops*) *viduatus* (Fabricius, 1794)

#### Subfamily Tabaninae

#### Genus *Atylotus* Osten-Sacken, 1876

*Atylotus flavoguttatus* (Szilady, 1915)

*Atylotus latistriatus* Brauer in Br.& Bergenstamm, 1880

*Atylotus loewianus* (Villeneuve, 1920)

*Atylotus rusticus* (Linnaeus, 1767)

#### Genus *Theriopectes* Zeller, 1842

*Theriopectes gigas* (Herbst, 1787)

*Theriopectes tricolor* Zeller, 1842

*Theriopectes tricolor pallidicauda* (Olsufjev, 1937)

**Genus *Hybomitra* Enderlein, 1922**

*Hybomitra caucasi* (Szilady, 1923)  
*Hybomitra ciureai* (Séguy, 1937)  
*Hybomitra decora* (Loew, 1858)  
*Hybomitra distinguenda* (Verrall, 1909)  
*Hybomitra pilosa* (Loew, 1858)

**Genus *Tabanus* Linnaeus, 1758**

*Tabanus autumnalis* Linnaeus, 1761  
*Tabanus bifarius* Loew, 1858  
*Tabanus bovinus* Linnaeus, 1758  
*Tabanus briani* Leclercq, 1962  
*Tabanus bromius* Linnaeus, 1758  
*Tabanus cordiger* Meigen, 1820  
*Tabanus exclusus* Pandellé, 1883  
*Tabanus glaucopsis* Meigen, 1820  
*Tabanus indrae* Hauser, 1939  
*Tabanus lunatus* Fabricius, 1794  
*Tabanus maculicornis* Zetterstedt, 1842  
*Tabanus miki* Brauer in Br. & Bergenstamm, 1880  
*Tabanus prometheus* Szilady, 1923  
*Tabanus quatuornotatus* Meigen, 1820  
*Tabanus regularis* Jaenicke, 1866  
*Tabanus rupium* (Brauer in Br. & Bergenstamm, 1880)  
*Tabanus shannonellus* Kröber, 1936  
*Tabanus spectabilis* Loew, 1858  
*Tabanus spodopterus* Meigen, 1820  
*Tabanus spodopterus ponticus* Olsufjev, Moucha & Chvála, 1967  
*Tabanus sudeticus* Zeller, 1842  
*Tabanus tergestinus* Egger, 1859  
*Tabanus tinctus* Walker, 1850  
*Tabanus unifasciatus* Loew, 1858

**Genus *Heptatoma* Meigen, 1803**

*Heptatoma pellucens* (Fabricius, 1776)

**Genus *Haematopota* Meigen, 1803**

*Haematopota bigoti* Gobert, 1880  
*Haematopota csikii* Szilady, 1922  
*Haematopota grandis* Meigen, 1820  
*Haematopota italica* Meigen, 1804  
*Haematopota longeantennata* (Olsufjev, 1937)  
*Haematopota ocelligera* (Kröber, 1922)  
*Haematopota pandazisi* (Kröber, 1936)  
*Haematopota pluvialis* (Linnaeus, 1758)  
*Haematopota scutellata* (Olsufjev, Moucha & Chvála, 1964)  
*Haematopota subcylindrica* Pandellé, 1883

**Genus *Dasyrhamphis* Enderlein, 1922**

*Dasyrhamphis ater* (Rossi, 1790)  
*Dasyrhamphis umbrinus* (Meigen, 1820)

**Genus *Philipomyia* Olsufjev, 1964**

*Philipomyia aprica* (Meigen, 1820)  
*Philipomyia graeca* (Fabricius, 1794)

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