

**THE TABANIDS FAUNA (TABANIDAE, DIPTERA)
OF STARA PLANINA (BULGARIA) .I.**

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ABSTRACT. A study of the tabanid fauna (Tabanidae, Diptera) in the Tvurdishka and Slivenska mountains (Stara Planina mountain, Bulgaria) has been carried out. The Tvurdishka and Slivenska mountains are respectively parts of the Middle and Eastern Stara Planina mountains. As a result of the research 25 species from 7 genera have been reported: *Silvius* (1), *Chrysops* (1), *Atylotus* (1), *Hybomitra* (2), *Tabanus* (15), *Haematopota* (4) и *Philipomyia* (1). The *Tabanus smirnovi* Olsufjev, 1962 species has been identified to be part of the Bulgarian fauna for the first time; 21 species have been reported to exist in the studied region for the first time.

KEY WORDS: tabanids, fauna, Stara Planina mountain, Bulgaria

INTRODUCTION

Stara Planina is the longest mountain chain in Bulgaria, characterized by important geographical position and biogeographic significance. The relief diversity, as well as its climate peculiarities and biota determine the mountain being part of three Bulgarian biogeographic regions – North Bulgarian, Middle Bulgarian and Mountain (Gruev and Kuzmanov, 1994). The richness of water resources, the pasture, dendriform and shrubby vegetation abundance, as well as the presence of hooved cattle on the other hand, are an important premise for the development of blood-sucking flies from the Tabanidae family. Yet, the data concerning the distribution of this group of flies in Stara Planina mountain is very scarce and fragmentary. At the beginning of the previous century Nedialkov (1912) reported six species collected in the regions of Vratsa (5 species), Svoge (2 species), Sliven (1 species), Stoletov peak (1 species) and Cherepishki monastery (1 species). Later on, Drensky (1929) identified 21 species, four of which have already been reported to exist in Stara

Planina (Nedialkov, 1912). Furthermore, with the species he has identified, Drensky has added up to the list of tabanid localities.

New data, concerning the Tabanidae distribution in Stara Planina Mountain has been published by Moucha and Chvála (1961) and Trifonov et al.(1964). Moucha and Chvála (1961) reported a locality of *Tabanus quatuornotatus* Mg in the Kalofer region; whereas Trifonov et al (1964) established 7 Tabanidae species in Eastern Stara Planina (Karnobat region).

The literature data analysis shows that 28 species from 10 genera have been reported existent in Stara Planina mountain. According to Chvála (1988) four of the species *Atylotus quadrifarius* (Loew, 1874), *Hybomitra tropica* (Linnaeus, 1758), *Dasyrhamphis nigrinus* (Fabricius, 1794) and *Tabanus rectus* Loew, 1858 have not been observed in Bulgaria. Up to now, the Bulgarian tabanid fauna has been characterized by 73 species and subspecies (Ganeva, 2004). The tabanids identified in Stara Planina mountain and confirmed to be present in Bulgaria, represent 32.87% of the current Bulgarian tabanid fauna.

The lack of any thorough and complete research on the tabanids in Stara Planina mountain, along with the presence of contradictory data about the existence of some species determine the aim of this work. This study is meant to set the beginning of a lot of research on the tabanid distribution in the different parts of Stara Planina mountain. Consequently, our goal is to prepare a thorough and complete list of the tabanid fauna in the region.

MATERIAL AND METHODS

The study has been carried out in Tvurdishka and Slivenska mountains. The Tvurdishka mountain is part of the Eleno-Tvurdishki portion of the Middle Stara planina mountain; whereas, the Slivenska mountain represents the south part of the Eastern Stara Planina mountain that starts from the Vratnik passage (Nikolov and Iordanova, 2002). The study material was being collected from 20 localities – 7 in the Tvurdishka mountain (Borov dol village, Tvurdishki passage, Kozarevo village, Bozhevtsi village, “Sini briag” reserve, Novachevo village, Gradsko village) and 13 in the Slivenska mountain (Ablanovo area, “Asenovets”dam, Byala village, Daulite, Karandila area, “Sinite kamuni”Nature park, Ichera village, Katunishte village, Heikovo village, Rakovo village, Chukata area, Vratnik passage, “Kutelka”reserve. Most of the material has been collected in the period July-August 2004. Single collections have been gathered during August 2001, May and September 2002, and June 2003. The tabanids have been captured with a standard entomological net directly from animals at the pastures, or from the interior of transport vehicles. The collections have been preserved in tube-glasses with acetic ether and after that processed and identified in laboratory conditions.

The identification of the specimens followed the keys by Chvála et al. (1972) and Olsufjev (1977). The sequence of species arrangement is according to Chvála (1988).

RESULTS

As a result of the study 1148 female and 2 male specimens have been collected. The identification process has established 25 species, belonging to 7 genera: *Silvius* (1), *Chrysops* (1), *Atylotus* (1), *Hybomitra* (2), *Tabanus* (15), *Haematopota* (4) и *Philipomyia* (1) (Table 1).

The localities, collection dates and number of specimens caught of the identified species are listed below.

LIST OF TABANIDS

Silvius alpinus (Scopoli, 1763) - Ichera, 11.08.04, 2♀.

Chrysops caecutiens (Linnaeus, 1758) - Chukata, 06.08.04, 1♀.

Atylotus loewianus (Villeneuve, 1920) – Rakovo, 6.08.04, 1♀; Ichera, 11.08.04, 34♀; Bozhevtsi, 12.08.04, 2♀; Katunishte, 12.08.04, 19♀; res. “Sini briag”, 12.08.04, 39♀; Vratnik, 12.08.04, 1♀; Nejkovo, 12.08.04, 13♀; Ablanovo, 13.08.04, 5♀; Byala, 13.08.04, 23♀; Gradsko, 13.08.04, 11♀.

Hybomitra ciureai (Séguy, 1937) – “Asenovets” dam, 04.07.04, 1♀; Ablanovo, 13.08.04, 1♀.

Hybomitra distinguenda (Verrall, 1909) - res. “Sini briag”, 12.08.04, 1♀.

Tabanus bromius Linnaeus, 1758 – “Asenovets” dam, 04.07.04, 1♀; Rakovo, 6.08.04, 1♀; Ichera, 11.08.04, 6♀; Katunishte, 12.08.04, 3♀; Nejkovo, 12.08.04, 3♀; res. “Sini briag”, 12.08.04, 2♀; Byala, 13.08.04, 8♀, 1♂; Gradsko, 13.08.04, 1♀.

Tabanus cordiger Meigen, 1820 – Katunishte, 12.08.04, 1♀; Gradsko, 13.08.04, 1♀.

Tabanus exclusus Pandellé, 1883 – “Sinite kamuni”, 05.08.04, 1♀; 13.08.04, 5♀; Ablanovo, 06.08.04, 2♀; 13.08.04, 39♀; Chukata, 06.08.04, 13♀; Daulite, 6.08.04, 1♀; Rakovo, 6.08.04, 4♀; Ichera, 11.08.04, 4♀; Bozhevtsi, 12.08.04, 2♀; Katunishte, 12.08.04, 16♀; Nejkovo, 12.08.04, 15♀; Byala, 13.08.04, 45♀; Gradsko, 13.08.04, 13♀; res. “Kutelka”, 13.08.04, 4♀; Novachevo, 13.08.04, 37♀.

Tabanus glaucopis Meigen, 1820 – Kozarevo, 21.09.02, 2♀; Ichera, 03.08.04, 47♀; 11.08.04, 55♀; 12.08.04, 9♀; Chukata, 05.08.04, 5♀; 06.08.04, 29♀; Ablanovo, 08.08.01, 3♀; 06.08.04, 3♀; 13.08.04, 22♀; Bozhevtsi, 12.08.04, 19♀; Katunishte, 12.08.04, 8♀; res. “Sini briag”, 12.08.04, 23♀; “Sinite kamuni”, 12.08.04, 58♀; 13.08.04, 14♀; Nejkovo, 12.08.04, 22♀; Vratnik, 12.08.04, 1♀; Byala, 13.08.04, 108♀, 1♂; Novachevo, 13.08.04, 30♀; res. Kutelka, 13.08.04, 1♀; Gradsko, 13.08.04, 13♀.

Tabanus maculicornis Zetterstedt, 1842 – res. “Sini briag”, 12.08.04, 1♀; Ablanovo, 13.08.04, 1♀.

Tabanus prometheus Szilady, 1923 – Novachevo, 13.08.04, 1♀.

Tabanus quatuornotatus Meigen, 1820 – “Sinite kamuni” - Haramiyata, 18.05.02, 1♀; Borov dol, 25.05.02, 4♀; Tvurdishki passage, 25.05.02, 7♀.

Tabanus shannonellus Kröber, 1936 – “Sinite kamuni”, 12.08.04, 2♀; Nejkovo, 12.08.04, 1♀; Novachevo, 13.08.04, 8♀.

Tabanus spectabilis Loew, 1858 – Ablanovo, 13.08.04, 1♀.

**Tabanus smirnovi* Olsufjev, 1962 - Ichera, 11.08.04, 1♀; Gradsko, 13.08.04, 1♀.

Tabanus spodopterus ponticus Olsufjev, Moucha & Chvála, 1967 – Karandila, 24.06.03, 1♀.

Tabanus sudeticus Zeller, 1842 – Katunishte, 12.08.04, 2♀; res. “Sini briag”, 12.08.04, 1♀; Gradsko, 13.08.04, 1♀.

Tabanus tergestinus Egger, 1859 – Karandila, 24.06.03, 3♀; “Asenovets” dam, 04.07.04, 4♀; Ablanovo, 06.08.04, 1♀; 13.08.04, 5♀; Chukata, 06.08.04, 3♀; Ichera, 11.08.04, 1♀; Katunishte, 12.08.04, 3♀; Nejkovo, 12.08.04, 3♀; Novachevo, 13.08.04, 1♀; Byala, 13.08.04, 2♀; Gradsko, 13.08.04, 1♀.

Tabanus tinctus Walker, 1850 – Ablanovo, 13.08.04, 1♀.

Tabanus unifasciatus Loew, 1858 – Katunishte, 12.08.04, 1♀; res. “Kutelka”, 13.08.04, 1♀.

Haematopota italica Meigen, 1804 – Ichera, 10.08.04, 1♀; 11.08.04, 27♀; 12.08.04, 6♀; Nejkovo, 12.08.04, 3♀; Katunishte, 12.08.04, 6♀; Byala, 13.08.04, 3♀; Gradsko, 13.08.04, 1♀.

Haematopota pandazisi (Kröber, 1936) – Ichera, 10.08.04, 5♀; 11.08.04, 76♀; 12.08.04, 18♀; “Sinite kamuni”, 11.08.04, 1♀; Katunishte, 12.08.04, 47♀; res. “Sini briag”, 12.08.04, 8♀; Nejkovo, 12.08.04, 6♀; Novachevo, 13.08.04, 10♀.

Haematopota pluvialis (Linnaeus, 1758) – res. “Sini briag”, 12.08.04, 1♀.

Haematopota scutellata (Olsufjev, Moucha & Chvála, 1964) – Ichera, 11.08.04, 1♀; Vratnik, 12.08.04, 1♀; res. “Sini briag”, 12.08.04, 8♀.

Philipomyia aprica (Meigen, 1820) – Ichera, 3.08.04, 1♀.

DISCUSSION

According to the study results 25 species from 7 genera have been reported to exist in the area of Tvurdishka and Slivenska mountains (Table 2)

Nedialkov (1912) and Drensky (1929) identify the presence of 9 species in the Sliven region, 2 (*Atylotus quadrifarius* and *Dasyrhamphis nigritus*) of which have been reported nonexistent in Bulgaria according to Chvála (1988). In the process of our study in the Tvurdishka and Slivenska mountains, we registered the activity of 4 (*Chrysops caecutiens*, *Atylotus loewianus*, *Tabanus bromius* and *Tabanus cordiger*) of the remaining 7 species.

Thus, it is the first time that 21 tabanid species are reported to exist in the study region. Being part of them, *Tabanus smirnovi* is considered also a new species for the Bulgarian fauna as a whole. Two female specimens from *Tabanus smirnovi* have been captured respectively in the pastures of Ichera village (600 meters above sea-level) and Gradsko village (550 meters above sea-level).

Among the registered in the Tvurdishka and Slivenska mountains tananids, with numerical superiority are characterized the late summer species *Tabanus glaucopsis* – 41.13 %, *Tabanus exclusus* – 17.48 %, *Haematopota pandazisi* – 14.87 % and *Atylotus loewianus* – 12.87 % (Table 1). The maximum of their seasonal activity (August) coincides with the period when most of the collections in Stara

planina mountain have been made; thus, the great number of specimen captured from this species is easily explainable.

The 25 tabanid species, identified in the Stara planina study region represent 34. 25 % of the reported to exist in Bulgaria tabanids.

CONCLUSION

1. As a result of the tabanid study carried out in the Middle and Eastern Stara Planina mountain 25 species, belonging to 7 genera have been identified: *Silvius* (1), *Chrysops* (1), *Atylotus* (1), *Hybomitra* (2), *Tabanus* (15), *Haematopota* (4) и *Philipomyia* (1).

2. *Tabanus smirnovi* Olsufjev, 1962 has been reported for the first time in Bulgaria and 21 tabanid species - for the first time in the region studied.

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Table 1. Distribution of established species

GENUS	NUMBER OF SPECIES	% of established species
<i>Silvius</i>	1	4
<i>Chrysops</i>	1	4
<i>Atylotus</i>	1	4
<i>Hybomitra</i>	2	8
<i>Tabanus</i>	15	60
<i>Haematopota</i>	4	16
<i>Philipomyia</i>	1	4
TOTAL: 7	25	100 %

Table 2. The tabanids fauna of Stara Planina mountain

SPECIES	NUMBER OF SPECIMENS	% of total specimens
<i>Silvius alpinus</i> (Scopoli, 1763)	2	0.17
<i>Chrysops caecutiens</i> (Linnaeus, 1758)	1	0.09
<i>Atylotus loewianus</i> (Villeneuve, 1920)	148	12.87
<i>Hybomitra ciureai</i> (Séguy, 1937)	2	0.17
<i>Hybomitra distinguenda</i> (Verrall, 1909)	1	0.09
<i>Tabanus bromius</i> Linnaeus, 1758	25♀ + 1♂	2.26
<i>Tabanus cordiger</i> Meigen, 1820	2	0.17
<i>Tabanus exclusus</i> Pandellé, 1883	201	17.48
<i>Tabanus glaucopis</i> Meigen, 1820	472♀ + 1♂	41.13
<i>Tabanus maculicornis</i> Zetterstedt, 1842	2	0.17
<i>Tabanus prometheus</i> Szilady, 1923	1	0.09
<i>Tabanus quatuornotatus</i> Meigen, 1820	12	1.04
<i>Tabanus shannonellus</i> Kröber, 1936	11	0.96
<i>Tabanus smirnovi</i> Olsufjev, 1962 *	2	0.17
<i>Tabanus spectabilis</i> Loew, 1858	1	0.09
<i>Tabanus spodopterus ponticus</i> Olsufjev, Moucha & Chvála, 1967	1	0.09
<i>Tabanus sudeticus</i> Zeller, 1842	4	0.35
<i>Tabanus tergestinus</i> Egger, 1859	27	2.35
<i>Tabanus tinctus</i> Walker, 1850	1	0.09
<i>Tabanus unifasciatus</i> Loew, 1858	2	0.17
<i>Haematopota italica</i> Meigen, 1804	47	4.08
<i>Haematopota pandazisi</i> (Kröber, 1936)	171	14.87
<i>Haematopota pluviialis</i> (Linnaeus, 1758)	1	0.09
<i>Haematopota scutellata</i> (Olsufjev, Moucha & Chvála, 1964)	10	0.87
<i>Philipomyia aprica</i> (Meigen, 1820)	1	0.09
TOTAL: 25 species	1148♀ + 2♂	100 %

* new species

Table 3. *Distribution of established species on biotopes*

LOCALITIES	GENUS	SPECIES	NUMBER OF CAPTURED SPECIEMENS	% OF TOTAL SPECIMENS
TVURDISHKA PLANINA:				
BOROV DOL	1	1	4	0.35
BOZHEVTSI	2	3	23	2.00
GRADSKO	3	9	43	3.74
KOZAREVO	1	1	2	0.17
NOVACHEVO	2	6	87	7.57
TVURDISHKI PASSAGE	1	1	7	0.61
RES."SINI BRJAG"	4	9	84	7.30
SLIVENSKA PLANINA				
ABLANOVO	3	8	84	7.30
ASENOVETS	2	3	6	0.52
BYALA	3	6	191	16.61
DAULITE	1	1	1	0.09
ICHERA	5	11	294	25.56
KARANDILA	1	2	4	0.35
KATUNISHTE	4	10	106	9.22
RES."KUTELKA"	1	3	6	0.52
NEJKOVO	3	8	66	5.74
RAKOVO	2	3	6	0.52
NP"SINITE KAMUNI"	2	5	82	7.13
VRATNIK PASSAGE	3	3	3	0.26
CHUKATA	2	4	51	4.43
TOTAL : 20	7	25	1150	99.99 %