

New Faunistic Record of Horse Flies (Diptera: Tabanidae) in Turkey

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ABSTRACT

Horseflies are known worldwide as important mechanical vectors of virus, bacteria, protozoans and helminthes, which cause diseases in many wild and domestic animals, even human. Tabanidae is representing with 165 species and 13 subspecies in Turkey. In this study, 134 ♀ and 17♂ *Tabanus terterjani* (Andreeva & Zeynalova, 2002) which is a new record for the Turkish fauna, were collected from different location in Turkey. The morphological characteristics are described. The taxonomical features of the species are compared with holotype specimens.

Keywords: Tabanidae, *Tabanus terterjani*, New Record, Diptera, Turkey

INTRODUCTION

The Brachyceran family Tabanidae consists of about 4300 species of medium to very large biting flies; indeed, it contains some of the largest blood-sucking insects. The sheer size of tabanids and the pain their bite can cause mean they are not easily ignored. Large accumulations of flies do occur in some areas, and with their painful bite tabanids can be pests of both livestock and humans. Livestock worry can reach a level at which economic losses occur (Lehane, 2005).

Tabanidae family is representing with about 650 species in Palearctic Region (Chvala, 1988) and 3 subfamily, 9 genus, 165 species and 13 subspecies in Turkey (Kılıç 2006). Many studies can be found in literature about systematic and distributions of Tabanidae species in Turkey (Kılıç, 2001a; b; c; 2003; 2004; 2005; 2006; Kılıç & Öztürk, 2002; Yaman & Yağcı, 2004; Karsavuran et al. 2005; Erdoğan, 2005; Andreeva et al. 2009). Nevertheless, faunal complex of Turkey completely are not known. In this paper, *Tabanus terterjani* (And. & Zey. 2002) reported from Turkey, for the first time. The morphological characteristics are described and these taxonomical features of the species are compared with holotype specimens.

MATERIAL AND METHODS

Tabanidae species used in this study were collected different regions of Turkey with Malaise Traps and water traps and preserved in the Zoological Museum of Anadolu

University (AUZM). The morphological features of these specimens were compared with holotype specimens, which is caring in AUZM.

RESULTS AND DISCUSSION

Family: Tabanidae

Subfamily: Tabaninae

Tribus: Tabanini

Genus: *Tabanus* Linne, 1758

Species: *Tabanus terterjani* (Andreeva & Zeynalova, 2002)

Female

Head; Eyes naked, with one band. Frons whitish-grey dusted, rather narrow and parallel-sided, frontal stripe 5-5.5 times as long as broad at base; lower callus polished black, beneath touching the subcallus and touching the eyes. Median callus black, spindle-shaped and connected with lower callus. Different from holotype, antenna are entirely reddish-brown, dorsal angle of 3rd antennal segment right and pointed. Palpi whitish, stouter near base, apical palpal segment 2-2.2 times as long as broad. Face and cheeks, in holotype, are whitish-grayish dusted and long pale haired. Nevertheless in some collected specimens, face and cheeks are whitish dusted and long black also pale haired.

Thorax; Blackish-grey, mesonotum with short pale and black hairs, and with rather distinct paler longitudinal stripes. Notopleural lobes grey and distinctly short black haired. Pleura whitish-grey and longer pale haired. Legs; coxae and femora grayish dusted and pale haired. Posterior four tibiae yellowish-brown, tarsi brown. Other hand, colors of tibia have wide variability. Wings clear, veins dark brown. Halteres yellowish-brown.

Abdomen; Grey, with three rows of paler grayish to grey-white colored and haired patches. Unlike holotype, in some species, abdomen blackish colored on the surface, with three rows of paler grayish to grey colored. Median triangles usually are stretched along the whole width of tergites, lateral spots changing from oval to rounded. Venter unicolorous, light grey, sometimes, sternites last 2 or 3 blackish.

Genitalia; Subgenital plate, V-shaped 0.71 mm long and 0.68 mm broad and light brown colored, with apical part dark brown colored. All parts of the subgenital plate are densely long black haired. Cerci, 0.49 mm long and 0.86 mm broad and light brown colored, and densely long black haired. Terminal tergites 0.92 mm long and 0.35 mm broad, dark brown colored and long black haired

Spermatecha, furca wide U-shaped, posterior end of bars like thick hook turned inward. Length of the sclerotized part of the ejection apparatus is 125 µm, with valve formed by 4 plates in distal end, there is no plate in its proximal end. Diameter of first plate of the distal valve some wider than the others and corrugated like lacework. Other plates have approximately same diameters. Reservoirs oblong shaped its length 2.6 times longer than width.

Male

Head not very large and not broader than thorax. Eyes naked and with one band. The facets on the upper two-thirds of eyes are large and sharply separated from the lower area by small facets. Vertex with a row of long pale hairs, postocular margin rather narrower, whitish. Antennae as in the ♀, but segment 3 more slender, with small, nearly rectangular dorsal tooth at base. Palpi yellowish-brown, oval and rather slender, distinctly pointed; clothed with longer pale and black hairs, especially anteriorly. Legs and thorax including mesonotum with much longer pale hairs, abdomen densely and longer black haired. Length 10-12.5 mm.

Material Examined: Hakkari (Yüksekova): 1710 m. 127 ♀♀, 14 ♂♂, 08.08.1983; Eskişehir (Hekim Dağ): 1320 m. 2 ♀♀, 1 ♂, Artvin (Yusufoğlu): 1520 m. 5 ♀♀, 1 ♂.

T. terterjani (And. & Zey.) was described from Armenia (Garni area of the Khosrov Reserve) as a subspecies of *Tabanus canipalpis* Bigot occurring in South-eastern Iran (Baluchistan province in subtropics) and changed the rank of this species by Andreeva and Zeynalova (2002), due to several important differences. This species reported in Armenia, Russia, Ukraine, Iran, and Azerbaijan. It can be said that spear area of *T. terterjani* (And. & Zey.) generally Russia and Caucasus zone. Even collected specimens found at the altitude, 1280 m and over, this characteristic point out this species is able to spread in our country, different zones with similar heights and habitat properties.

Turkey is a large country which has different geographical regions having distinct climatic properties. It can be inferred that many new species and new records can be introduced by the determination of faunal complexity of our country. In fact, authors previously described a new subspecies to the science world and new record for Turkish Tabanidae fauna (Andreeva et al. 2009). Consequently, as could be interpreted in this study, it brings out necessity of researches on geographical distribution of species and faunal studies of Turkey.

REFERENCES

- Andreeva, R. and Zeynalova, Z.A., 2002, On Taxonomic Position of Some Horsefly Species (Diptera, Tabanidae) from Talysh Province. *Vestnik Zoologii*, 36 (1): 25-27.
- Andreeva, R., Altunsoy, F., Kılıç, A. Y., 2009, New Contribution to Information about Tabanidae (Diptera) Adult and Larvae from West Anatolia. *Journal of the Entomological Research Society*, 11(3): 19-30.
- Chvala, M., 1988, *Family Tabanidae*. In Soos A. & Papp L. (Eds.) Catalogue of Palearctic Diptera, Vol. 5, Athericidae-Asilidae, Akademiai Kiado, Budapest, 87-171.
- Erdoğan, Z. S., 2005, Tabanidae Species (Diptera) in the Elazığ Province of Turkey. *Fırat Üniversitesi Sağlık Bilimleri Dergisi*, 20(1), 65-68.
- Karsavuran, Y., Pehlivan, E., Tezcan, E., Kılıç, A. Y., 2005, Notes on Tabanidae (Diptera) fauna of Turkey. *Türkiye Entomoloji Dergisi*, 29(3): 187-195.
- Kılıç, A.Y., 2001a, The Tabanidae (Diptera) Fauna of Balıkesir Province. *Turkish Journal of Zoology*, 25: 395-402.
- Kılıç, A.Y., 2001b, The Tabanidae (Diptera) Fauna of Çanakkale Province. *Turkish Journal of Zoology*, 25: 403-411.
- Kılıç, A.Y., 2001c, The Tabanidae (Diptera) Fauna of Kütahya Province of Turkey. *Journal of the Entomological Research Society*, 3(3): 29-41.

- Kılıç, A.Y., & Öztürk, R., 2002, Sultandağı çevresinin Tabanidae (Diptera) Faunası üzerine çalışmalar. *Anadolu Üniversitesi Bilim ve Teknoloji Dergisi*, 3(2): 307-316.
- Kılıç, A.Y. 2003, Bursa ve Yalova İleri Tabanidae (Diptera) faunası Üzerinde Araştırmalar. *Türkiye Entomoloji Dergisi*, 27(3): 207-221.
- Kılıç, A.Y., 2004, Bolu ili Tabanidae (Insecta:Diptera) Faunası. *Türkiye Entomoloji Dergisi*, 28(1): 57-68.
- Kılıç, A.Y., 2005, Sinop ili Tabanidae (Insecta: Tabanidae) Faunası. *Anadolu Üniversitesi Bilim ve Teknoloji Dergisi*, 5(2): 207-221.
- Kılıç, A.Y., 2006, New addition and erata to the checklist of Tabanidae (Insecta: Diptera) fauna of Turkey. *Turkish Journal of Zoology*, 30(2): 335-343.
- Lehane, M.J., 2005, *The Biology of Blood-Sucking in Insects*, Cambridge University Press, Cambridge. pp 237-240.
- Yaman, M., Yağcı, Ş., 2004, Hatay yöresindeki Tabanidae (Diptera) Türleri Üzerine Araştırmalar. *Türkiye Parazitoloji Dergisi*, 28(2): 113-117.

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