

**TABANIDAE (DIPTERA) COLLECTED BY DR. K. LINDBERG
IN AFGHANISTAN¹)**

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Introduction

Dr. K. Lindberg, who has kindly sent us the material of the family Tabanidae (Diptera) for examination, has worked on the faunistic research of Afghanistan for the last few years. This material contains seven species of this family, four of which are recorded as Afghan for the first time. In this paper we present a concise survey of all these species and give a survey of their total distribution and occurrence in Afghanistan.

During the last few years we have also had at our disposal the collections of J. Klapperich and Dr. H. G. Amsel, on which we have published two reports (Moucha and Chvála 1959, 1961). According to all this material and from records in literature, 23 species and 1 form of the family Tabanidae are known in Afghanistan up to the present time. There is no doubt that after further research other species of this family will be found in that country. For comparison we add that 53 species are recorded from the neighbouring country of Iran (Abbassian-Lintzen 1960) and 72 species from the Kazachstan SSR (Shevtshenko 1961).

The best investigated region of Afghanistan is the south-east highlands. Its fauna of horse-flies resembles on the average the well examined mountainous parts of Soviet Central Asia. The southern and south-western parts of Afghanistan have not yet been studied.

A survey of species examined***Chrysops (Heterochrysops) mlokosiewiczzi* Bigot, 1880**

Medium sized species, length 8—10 mm, female abdominal tergites yellow with four rows of small longitudinal black spots, the middle pair of these spots in male larger, so that they create a striking black central

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spot. The last tergites in male dark. This species is very similar to *Chrysops (Heterochrysops) vanderwulpi* Kröb., but differs in longer and darker antennae (first and second antennal segments darker) and in form of dark pattern on wings (the brown spot at the tip of the wing is very narrow, hardly visible).

The females are blood-sucking, they attack man, cattle, horse and camel. According to Shevtshenko (1961) this species occurs in the vicinity of rivers and at lake-shores. The males on blossoms of flowers.

Distribution: East Asian species, known from Japan (Honshu, Kiu-Siu), Mongolia and from many regions of China. In USSR recorded in Central Asiatic republics (Tadzhikistan, Uzbekistan and Kazakhstan), from whence it penetrates as far as Iran. From Afghanistan recorded for the first time.

Material examined: Kadjahkai 1100 m (70 km north-eastwards from Guerechk), 30. 4. 1958, 1 ♀; Doab Mekh Zarine 1450 m, 21. 7. 1960, 1 ♂.

Nemorius vitripennis Meigen, 1820

The only specimen of the genus *Nemorius* Rond., found in this material has the chief characters of *Nemorius vitripennis* Meig. Although the taxonomy of this genus has been discussed several times recently, only rare comparative material is at our disposal from Central Asia. It is possible that in these regions the genus *Nemorius* Rond. forms a number of vicarious species and geographical races. The examined species from Paropamise corresponds with *Nemorius vitripennis* Meig. in the length of antennae and in presence of bare spots on either side of frontal callus (so called "nebencalli"). The only species of this genus known from Afghanistan heretofore, *Nemorius klapperichi* Moucha et Chvála, differs very distinctly from the specimen collected by Dr. K. Lindberg.

The female attacks cattle and horse. Owing to their small size the species of genus *Nemorius* Rond. often escape the collector's attention.

Distribution: According to the existing knowledge of geographical distribution *Nemorius vitripennis* Meig. belongs among the mediterranean species. It is known from Spain, France and Italy, including the islands of Corsica and Sardinia, from the south-east parts of Central Europe (Austria, Carpat-Ukraine in Ukrainian SSR and Roumania) and from the Balkan Peninsula. Shevtshenko (1961) has recorded *Nemorius vitripennis* Meig. in Kazakhstan, Tadzhikistan and Uzbekistan as well. The literature gives some more areas of occurrence in Asia Minor. These reports, however, are to be revised. New record in Afghanistan.

Material examined: Hill of Sabzzak 2460 m (Paropamise, north-eastwards from Herat), 16. 6. 1959 1 ♀.

Tylostypia hunnorum Szilády, 1923

The only female in this material corresponds, in its entirely shining black colouration on abdominal tergites, to the dark form (f. *obscura*), which occurs frequently with the nominal form (Moucha and Chvála 1959).

The life history of the imago is fully described by Shevtshenko (1961). It is one of the most frequent species in the mountainous regions. Females attack cattle and man. The first specimens occur as late as the end of the first half of July and the flight period continues until the end of August or beginning of September. The numerous specimens from Afghanistan confirm these dates (Moucha and Chvála 1959).

Distribution: Mountains of Central Asia, where this species occurs in localities about 1200—4500 m a. s. l. In Afghanistan this species was collected in numerous localities by J. Klapperich.

Material examined: Yelgah; at the shore of the lake Koul-Mohammed Zaher 3150 m, 10. 8. 1960 1 ♀.

***Tylostypia zonata* Szilády, 1923**

This species is very similar to some related species (*T. tatarica* Ports., *T. shevtshenkoi* Ols. and *T. olsufjeviana* Moucha et Chvála), distributed in the mountainous region of Central Asia. There are present three specimens in the material of Dr. K. Lindberg, one female of which shows the characters of *Tylostypia zonata* Szilády. The other two species are rather defective after preservation in alcohol, but very probably they belong to the same species. From all these three above mentioned species *Tylostypia zonata* Szil. differs in black pubescence of the third and fourth abdominal tergites, which is striking in comparison with *Tylostypia tatarica* Ports. From *Tylostypia shevtshenkoi* Ols. this species differs also in the gold yellow hairs on face and thorax, from *Tylostypia olsufjeviana* Moucha et Chvála also in gold yellow hairs on frons, face and thorax and in shining black frontal triangle. The detailed characteristics of these mutually very similar species are given in the quoted literature (Olsoufiev 1937, Moucha et Chvála 1959 and Shevtshenko 1961).

Distribution: *Tylostypia zonata* Szil. belongs to a group of some nearly related species bound in their distribution to the mountainous regions of Central Asia. Olsoufiev (1937) records this species in the mountains of Pamir-Alay (Darvaza range and Peter I. range). We lack further reliable records. In Afghanistan recorded for the first time.

Material examined: Decht-Korang (westwards from Koul-Choghnan, Pamir of Chiva), 3000 m, 24. 7. 1959 1 ♀; between Doavi and Dad Ali (Pamir of Chiva), 2680, 21. 7. 1959 1 ♀; Sapak Koul (east-wards under Koul-Choghnan), 3000 m, 9. 8. 1960 1 ♀.

***Atylotus agrestis afghanisticus* Moucha et Chvála, 1959**

This subspecies differs from the nominal form in smaller size and in the following characters: the entire colouration lighter, the dark design on tergites less distinct, antennae yellowish brown without dark apex and central frontal callus as a rule brown.

Distribution: This species is distributed over a large area from North Africa and South Europe through the Peninsula of Crimea and as far as

Central Asia (Kazakhstan and Turkestan). In Afghanistan occurs a different race, which we have described on the material from the neighbourhood of Kabul.

Material examined: Kabul, 1780 m, 6. 8. 1959 1 ♂.

***Tabanus bactrianus* Olsoufieff, 1937**

Very similar to *Tabanus lunatus* Fabr., originally described by Olsoufieff as one of its subspecies. *Tabanus bactrianus* Ols. differs from *Tabanus lunatus* Fabr., which occurs in countries lying around the Mediterranean sea, in strikingly larger size and in much shorter hairs on eyes, which are visible only when magnified (at least 12 times).

According to Shevtshenko (1961) *Tabanus bactrianus* Ols. attacks man, cattle and horse. Dr. K. Lindberg collected numerous specimens of this species from horses in Afghanistan.

Distribution: This species is distributed in Central Asia and occurs in high mountains. Olsoufieff (1937) gives in his original description of this species the following areas of distribution: Ferghana range, Tadzhikistan and Uzbekistan. Shevtshenko (1961) observed this species in Alay and Hissar ranges. First record from Afghanistan.

Material examined: Decht-Révat (Pandjchir, about 130 km north-eastwards from Kabul), 2350 m, 3. 7. 1960 17 ♀♀; Masdjed-Tchoubi, Chileh Hamman (Paropamise, north-eastwards from Herat), 2190 m, 18. 6. 1959 1 ♀.

***Tabanus leleani* Austen, 1920**

Tabanus leleani Aust. is very similar to *Tabanus cordiger* Meig., *Tabanus golovi* Ols. and *Tabanus unifasciatus* Loew. It differs from the first two species in presence of the eye band. The male is easily to be distinguished from *Tabanus unifasciatus* Loew in larger size of head and in different size of eye facets, on the other hand the female can be distinguished only with difficulty, most probably according to the broader frontal stripe.

Distribution: This species is spread over a large area. It is known from North Africa, South and South-East Europe, from whence it penetrates as far as Asia Minor and Central Asia. Several localities are known in Afghanistan (Moucha and Chvála 1959, 1961).

Material examined: Between Ichkachim and Zébak (Badakhchan), 2680 m, 17. 7. 1959 1 ♀; Ichkachim, 2640 m, 31. 7. 1960 1 ♀.

The list of species of the family Tabanidae ascertained in Afghanistan

CHRYSOPINAE

Silvius irritans Ricardo

Nemorius klapperichi Moucha et Chvála

Nemorius vitripennis Meigen

Chrysops (Heterochrysops) flavipes askahabadensis Szilády

Chrysops (Heterochrysops) mlkosiewiczzi Bigot

TABANINAE

Tylostypia tropica Panzer
Tylostypia hunnorum Szilády
Tylostypia olsuffjeviana Moucha et Chvála
Tylostypia olsuffjeviana pseudozonata Moucha et Chvála
Tylostypia semipollinosa Olsoufieff
Tylostypia shnitnikovi Olsoufieff
Tylostypia zonata Szilády
Atylotus agrestis afghanisticus Moucha et Chvála
Tabanus autumnalis brunnescens Szilády
Tabanus bactrianus Olsoufieff
Tabanus bromius Linnaeus
Tabanus glaber Bigot
Tabanus golovi Olsoufieff
Tabanus grandis schiva Moucha et Chvála
Tabanus laetitinctus Becker
Tabanus leleani Austen
Tabanus semenovi Olsoufieff
Tabanus turpis Bogatchev et Samedov

HAEMATOPOTINAE

Haematopota bactriana Olsoufieff

Summary

In this paper the authors present the results of study of the material of the family Tabanidae (Diptera). This material was collected by Dr. K. Lindberg, Lund, in Afghanistan, in the years 1958—1960. There are seven species in this material, four of which have been captured in that country for the first time. At the present time there are 23 species and one form of the family Tabanidae known in Afghanistan. The species are not fully described. Only a brief characteristic of each species, its geographical distribution and some bionomic comments are given.

The authors conclude their paper with a list of all species of the family Tabanidae known in Afghanistan up to the present time.

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