

**NEW RECORDS OF TABANIDAE (DIPTERA) FROM
SAUDI ARABIA, FIRST RECORD OF *ATYLOTUS
VENTURII* LECLERCQ AND *TABANUS
SEPARATUS* EFFLATOUN.**

By

MIKKY A. AMOUDI AND MARCEL LECLERCQ

Department of Zoology, College of Science, King Saud University, P.P. Box 2455, Riyadh 11451, Saudi Arabia and Faculté des Sciences Agronomiques de Gembloux: Unité de Zoologie générale et appliquée (Prof. Ch. GASPAR), B-5030 Gembloux, Belgium.

ABSTRACT

Atylotus venturii Leclercq and *Tabanus separatus* Efflatoun (Diptera: Tabanidae) are 2 additional species in Saudi Arabia; they lift up to 26 taxa known from the country. Some comments on new record of other species, zoogeographical distribution of *Tabanus suffis*, taxonomic significance of eye pattern of Tabanidae, exemplification with *T. albifacies* and *T. unifasciatus*, rehydration of dry specimens, are presented.

INTRODUCTION

This article is supplementary to our previous studies on horse-flies from Saudi Arabia (Leclercq, 1982; 1986a; Amoudi, 1989 and Amoudi and Leclercq, 1988; 1992; 1993). The record of *Atylotus venturii* Leclercq and *Tabanus separatus* Efflatoun lift up to 26 the taxa known in the country. We give also new record of other species; *Tabanus albifacies* Loew, *T. suffis* Jaennické, *T. taeniola* Palisot de Beauvois and *T. unifasciatus* Loew. Informations on horse-flies from Sultanate of Oman are also given. The

difference between *T. albifacies* and *T. unifasciatus*, especially with eye-band on rehydrated specimens, is presented. This paper aimed to provide the total numbers of all known tabanids in Saudi Arabia.

MATERIALS AND METHODS

This investigation was carried out in Central and Eastern regions between April, 1993 and October, 1994. Horse-flies were netted at three different areas with different elevations. These areas were Al-Ahsa, Riyadh and Al Qassem. All collections have been done on clear days from different barns and farms localities with the aid of Japanese type net and catchers. The specimens have been prepared for identification, labelled and sorted out. The general label used for all specimens collected during trips elucidated the area when the specimens were collected, the date of collection and the name of the collectors. The area covered and the site of the collection are shown in the Fig.1, the world wide distribution of the two species *A. venturii* and *T. separatus* are also shown in Fig.2. A simple technique was used for rehydration of dry specimens is also illustrated in Fig.3.

LIST OF SPECIES

TABANINAE : Tabanini:

1. *Atylotus venturii* Leclercq, 1966.
Central region: Al-Qassem-Buraydah, 1♀, 7.7.1993.
Distribution: Italia (Leclercq, 1966), Spain, France, Tunisia (Schacht, 1980), Saudi Arabia.
2. *Tabanus albifacies* Loew, 1856.
Eastern region: Al Ahsa-Qatif-Abumaan, 1♀, 31.3.1994.
3. *Tabanus separatus* Eflatoun, 1930.
Central region: Riyadh-Draiyah, 1♀, 1.5.1994.
Distribution: Egypt (Eflatoun, 1930), Saudi Arabia.
4. *Tabanus suffis* Jaennické, 1867.
Central region: Riyadh-Draiyah, 6♀, 1.5.1994.
Eastern region: Al-Ahsa-Mobarraz, 2♀, 15.4.1994; Aougam, 2♀, 13.10.1994; Garodiah, 2 ♀ 27.4.1994; Dhahran, 1♀, 10.10.1994; Ras Tannora, 1♀, 14.4.1994; Qatif-Sokba, 2♀ 25.8.1994; Qatif-Sehat, 2♀,

15.4.1994; Qatif-Abumaan, 2♀, 31.3.1994; Holigelah, 2♀, 27.4.1994; Shaqeeq, 1♀, 14.4.1994; Bataliah, 1♀, 5.5.1994; Qarn, 1♀, 27.4.1994; Al-Hufuf, 1♀, 22.4.1994; Al-Moterfi, 1♀, 21.4.1994; Wiziah, 1♂, 9.4.1994.

About the distribution of *Tabanus sufis* Oldroyd (1954) has written: "Although the type locality of *sufis* in Nubia it is not properly a species of the Ethiopian Region. As its grey, dusty appearance indicates, it is a species of the semi-desert belts to the south and east of the Sahara. It is named, we are told, after the builder of the Great Pyramid". In Saudi Arabia, the species occurs in south-west zone (Leclercq, 1986; Amoudi and Leclercq, 1992; 1993). Dates: from March to October, except possibly July? at 220-1480 m altitude (Leclercq, 1986).

5. *Tabanus taeniola* Palisot de Beauvois 1817.
Eastern region - Al-Ahsa: Qatif-Sehat, 1♀, 15.4.1994; Dammam, 1♀
14.5.1994.
6. *Tabanus unifasciatus* Loew, 1858.
Central region: Riyadh-Draiyah, 2♀ 20.4.1993; Al-Qassem-Buraydah,
5♀, 7.7.1993.
Eastern region: Al-Ahsa-Garodiah 1♀, 27.4.1994.

DISCUSSION

Eye Pattern and Taxonomic Significance of Female Tabanidae: Taxonomic significance of eye pattern in female Tabanidae (living or rehydrated specimens) alone or in conjunction with other characters demonstrate that this character has potential value in the overall study of the systematics of the Tabanidae at subfamily, tribe, suprageneric, generic and species levels. The absence of eye pattern among all individuals implies that the unicolorous condition is primitive Price and Goodwin, (1979); Leclercq, 1966). Leclercq, (1986b), and Chvala et al. (1972) utilized both the presence or absence of bands and the number of bands as primary characters in their key to the Palaearctic and European species. Rehydration of Museum specimens is very easy: since the eye pattern is usually not visible in specimens for more than a few hours after death, we use a closed metallic box: the insect pin in the lid and the specimen is not in contact with water level at the bottom Fig.3. For us, eye patterns revived by this simple technique were always representative of the eye pattern in living specimens.

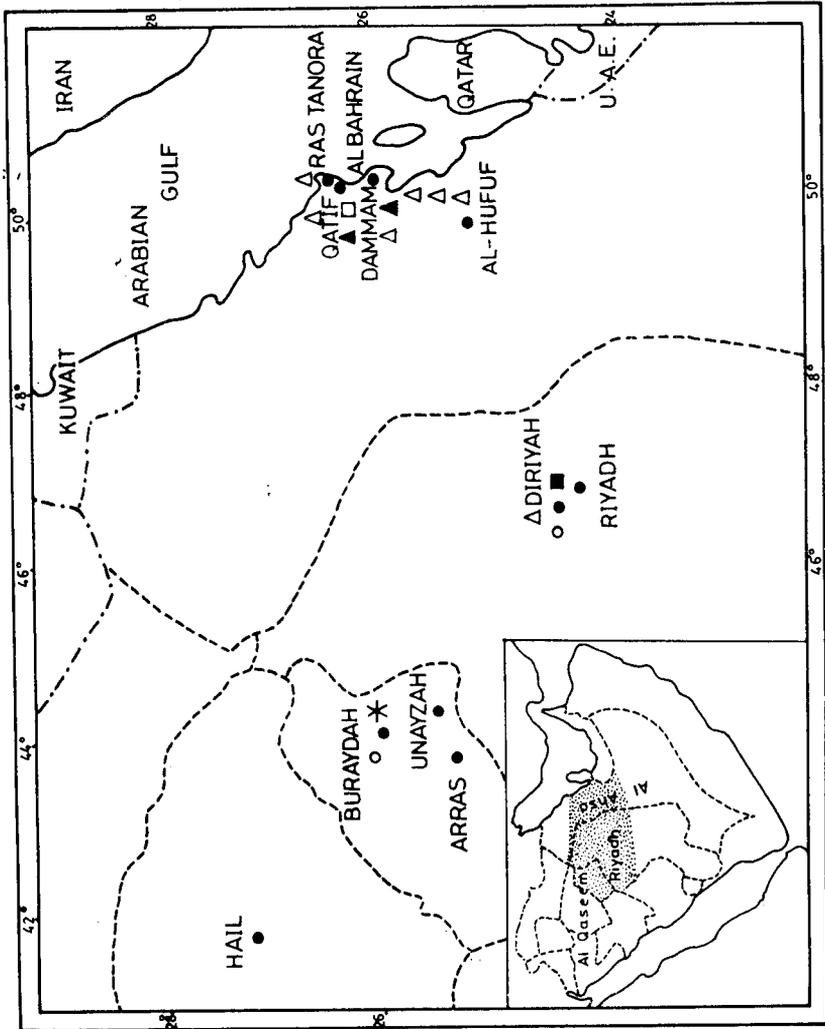


Fig. (1): Distribution of *Atrylotus venturii* (*), *Tabanus albifacies* (□), *T. separatus* (■), *T. sutils* (Δ), *T. taeniola* (▲) *T. unifasciatus* (○) in Central and Eastern regions of Saudi Arabia.

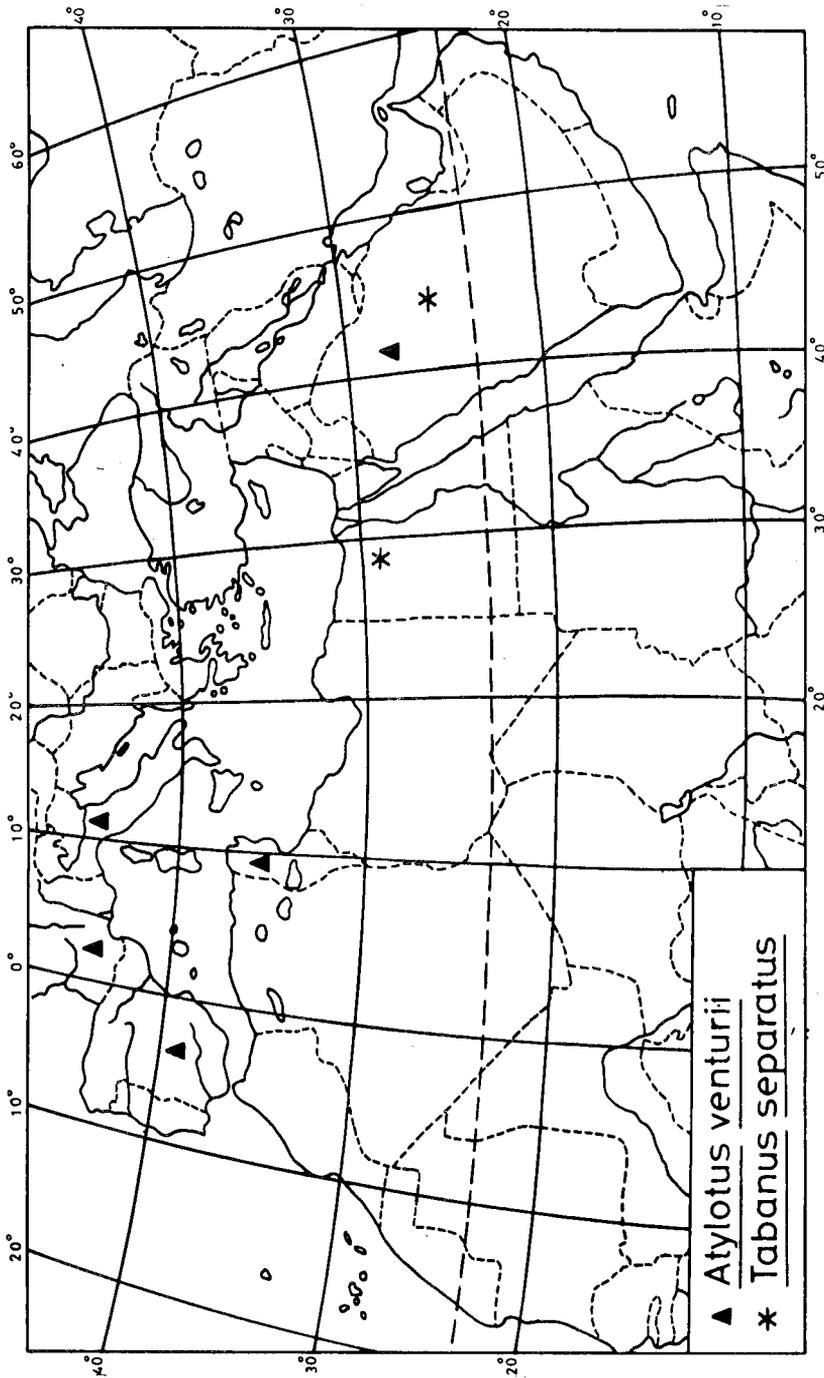


Fig. (2): Geographical distribution of *Atylotus venturii* and *Tabanus separatus* in the world.

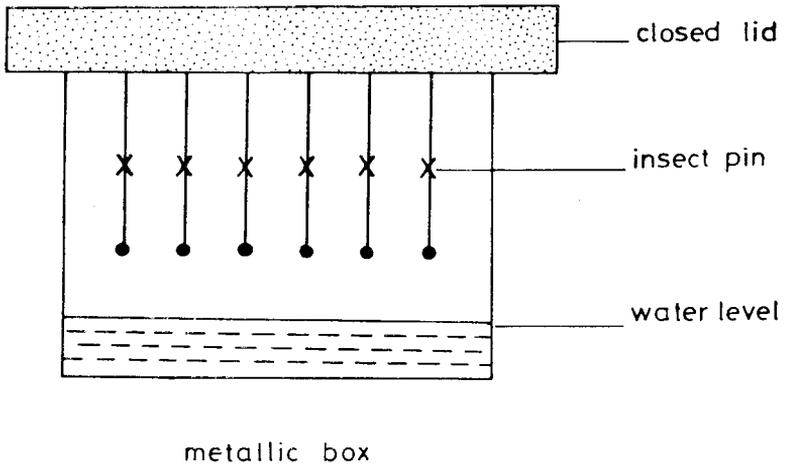


Fig. (3): Rehydration of dry specimens to show the eye pattern.

Three species of much same general pattern are primary distinguished by eye pattern:

- Eyes unicolorous without band *cordiger* Meigen
- Eyes dark green with one broad band crimson.....*unifasciatus* Loew
- Eyes dark green to dark green-blue with two broad bands crimson.....
..... *albifacies* Loew

The zoogeographical checkup of the fauna (Amoudi and Leclercq, 1992, 1993) is now 26 taxa from Saudi Arabia:

- Afrotropical : 11 species
- South-East of Sahara: : 1 species
- Palaearctic: 12 species (Mediterranean:10 and European: 2)
- Saudi Arabia only: 2 species

Thanks to the kindness of M D Gallacher Curator in the Oman Natural History Museum, Muscat (in letter is 6/3/1995), we can give the list of species in the collection, all from the Sultanate of Oman:

SCEPSIDINAE:

Adersia guichardi Oldroyd, 1957

TABANINAE: Tabanini:

- Tabanus mordax* Austen 1911
- Tabanus polygonus* Walker, 1854
- Tabanus sufis* Jaennické, 1867.

REFERENCES

- Amoudi, M.A. (1989):** New records of Tabanidae (Diptera) from southwest Saudi Arabia with some aspects on descriptions and biological informations. *J. Biol. Sci.*, **20(1)**: 115-127.
- Amoudi, M.A. and Leclercq, M. (1988):** *Tabanus riyadhae* (Diptera: Tabanidae) a new species from Saudi Arabia. *J. Med. Entomol.*, **25**: 399-401.
- Amoudi, M.A. and Leclercq, M. (1992):** The Horse-Flies from Saudi Arabia: Distribution and Zoogeography (Diptera: Tabanidae). *Notes Fauniques de Gembloux*, no **25**: 3-15.
- Amoudi, M.A. and Leclercq, M. (1993):** First records and additon of two species *Atylotus agricola* (Wiedemann) and *Haematopota minuscula* Austen (Diptera: Tabanidae) from Saudi Arabia. *Egypt. J. Appl. Sci.*, **8(12)**: 1087-1092.
- Chvala, M., Lyneborg, L. and Moucha, M. (1972):** The Horse-Flies of Europe (Diptera: Tabanidae). *Ent. Soc. Copenhagen, E.W. Classey*, London.
- Efflatoun, H.C. Bey (1930):** A Monograph of Egyptian Diptera, III, Family Tabanidae. *Mém. Soc. R. Entom. Egypte*, **4(1)**: 114.
- Leclercq, M. (1966):** Révision systématique et biogeographique des Tabanidae (Diptera) Paléarctiques, *Mém. Inst. Roy. Sci. Nat. Belg.*, **11, 80**: 237.
- Leclercq, M. (1982):** Insect of Saudi Arabia (Diptera Family Tabanidae). *Fauna of Saudi Arabia*, **4**: 447-449.
- Leclercq, M. (1986a):** Diptera: Fam. Tabanidae of Saudi Arabia (Part 2). *Fauna of Saudi Arabia*, **8**: 340-342.
- Leclercq, M. (1986b):** *Tabanus khalafi* n. sp. (Diptera: Tabanidae) d'Iraq. Importance taxonomique de la coloration des yeux des Tabanidae femelles. *Bull. Ann. Soc. R. Belge. Ent.*, **122**: 219-224.
- Oldroyd, H. (1954):** The Horse-Flies (Diptera: Tabanidae) of the Ethiopian Region, II *Tabanus* and related genera. *British Museum, Natural History*, London.
- Price, J.O. and Goodwin, J.T. (1979):** The taxonomic Significance of Eye Pattern in Female Tabanidae (Diptera). *Ann. Ent. Soc. America*, **72**: 725-734.
- Schacht, W. (1980):** Faunistische Beitrage Zu einigen seltenen Eropaischen Bremeen-Arten (Tabanidae., Diptera) *Entomofauna*, **1(9)**:384-396.