

TABANIDAE (DIPTERA) OF IRAN.

VII. ADDITIONAL RECORDS OF HORSEFLIES FROM SOUTHEAST IRAN. NOTES ON *TABANUS CANIPALPIS* BIGOT.*

by

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INTRODUCTION

A small but interesting collection of Tabanidae (29 specimens: 2 genera, 7 species) from southeast Iran was received shortly after the main report from this region (Abbassian-Lintzen, 1961) was in press. The collection was made by Mr. E.R. Shahgudian, Senior Entomologist of the Institute of Parasitology and Malariology, together with members of a special Malaria Research team of the Institute during October 1960.

Except two specimens, these tabanids were captured in the evening outside of the tent near a petrol gaslamp. The collection contains therefore an unusual high percentage of males, and probably it is not accidental, that only species of the genus *Tabanus* s. str. and (in one case) *Atylotus* showed positive phototropism.

Investigations made during the last two years, confirmed that in the subtropical part of Iran Tabanidae as well as many other groups of insects partly or entirely disappear during the great heat of the summer months (mid of June to mid of September). All species of the present collection have been recorded earlier in 1960 (April to June) from other parts of southeast Iran (Baluchistan and Jiroft area). The fresh and unrubbed condition of many specimens brought back by Mr. Shahgudian indicates, that the flies emerged recently, and

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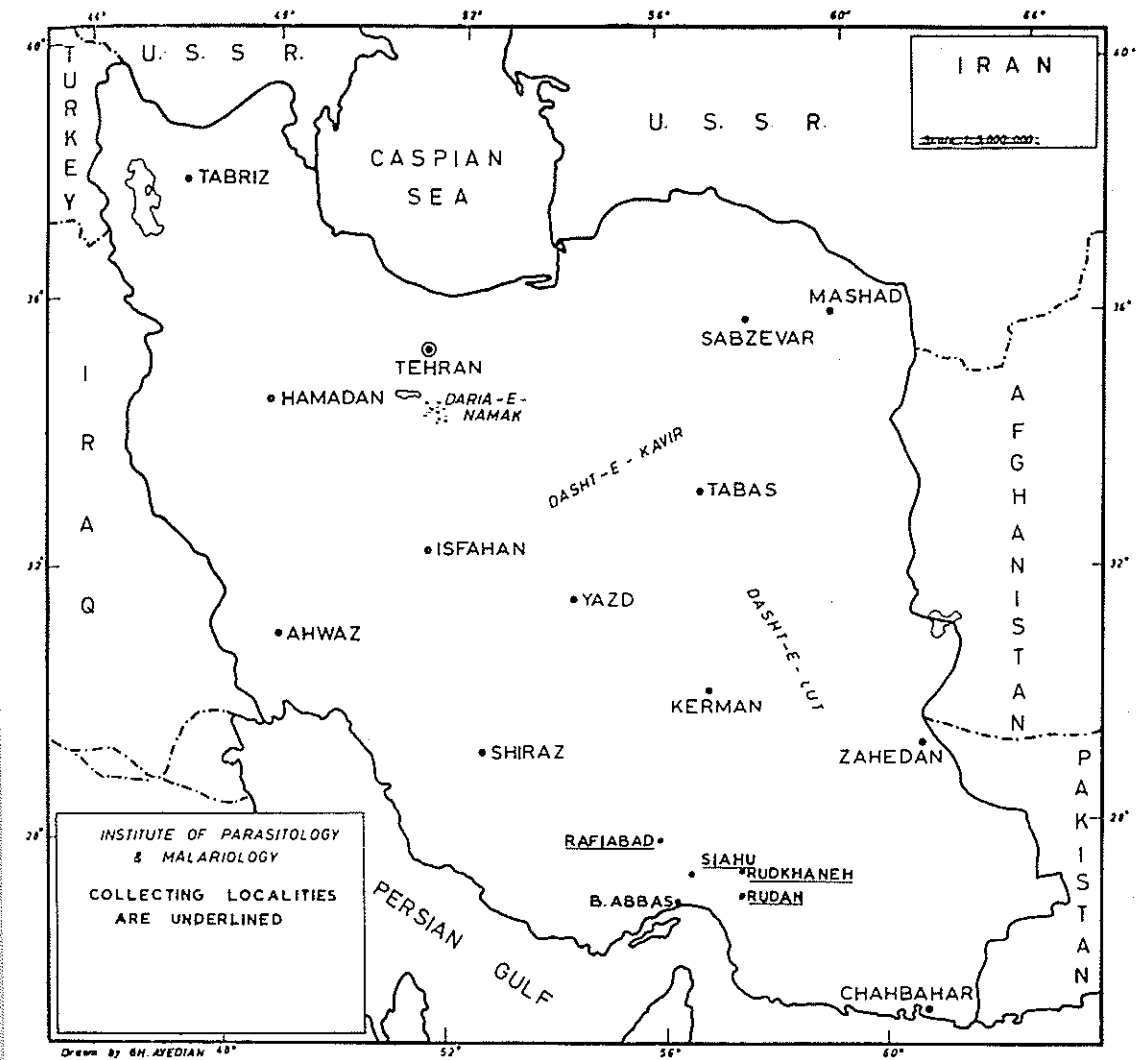


Fig. 1. — Map of Iran showing collecting localities of Tabanidae in the Bandar Abbas district.

therefore one can assume, that in certain parts of southeast Iran the here mentioned species of Tabanidae are breeding twice during the year (spring and autumn).

The collecting localities (all small, remote date groves) belong to the district of Bander Abbas (Kerman province) and are the followings (see fig. 1):

1. Rafiabad, 19. IX. 60. (appr. 950 m.)
2. Siahu, 9. X. 60. (appr. 750 m.)
3. Fariab (Rudan), 15. - 22. X. 60. (appr. 350 m.)
4. Kahnu-Bala (Rudan), 19. X. 60. (appr. 400 m.)
5. Rahdar (Rudkhaneh), 23. X. 60. (appr. 500 m.)
6. Bahadorak (Rudkhaneh), 23. - 28. X. 60. (appr. 500 m.)

The maximum temperature recorded during the collecting time at the above localities was between 32.5-35° C.

The collection allowed to give the description of the males of *Tabanus canipalpis* Bigot and *Tabanus mofidii* Leclercq, which were unknown in both species up to now.

LIST OF RECORDED SPECIES *

1. *Atylotus pulchellus* Loew
1 F, Rafiabad, near lamp.
2. *Tabanus autumnalis brunescens* Szilady
1 F, Bahadorak, near lamp.
3. *Tabanus canipalpis* Bigot (fig. 2)

The present species is little-known and probably restricted to southeast Iran, where it seems to replace *Tabanus bromius bromius* L. in subtropical areas up to the upper limit of date palms or slightly beyond it. The species may also occur in the adjacent part of Pakistanian Baluchistan.

Bigot's original description (1892), not available to the present writer, has obviously been repeated by Ricardo (1911, p. 246). Kröber (1925, p. 110) provided a more complete description of the only known sex (F), which deviates in several aspects from our material. In order to make the taxonomical characters of *T. canipalpis* better known, a detailed description of female based on 20 specimens collected from different parts of southeast Iran, is herewith given together with the description of the previously unknown male.

A rather small greyish species, with one-banded eyes, similar to *T. bromius bromius* L., but in both sexes differing from the latter

* F = Female M = Male

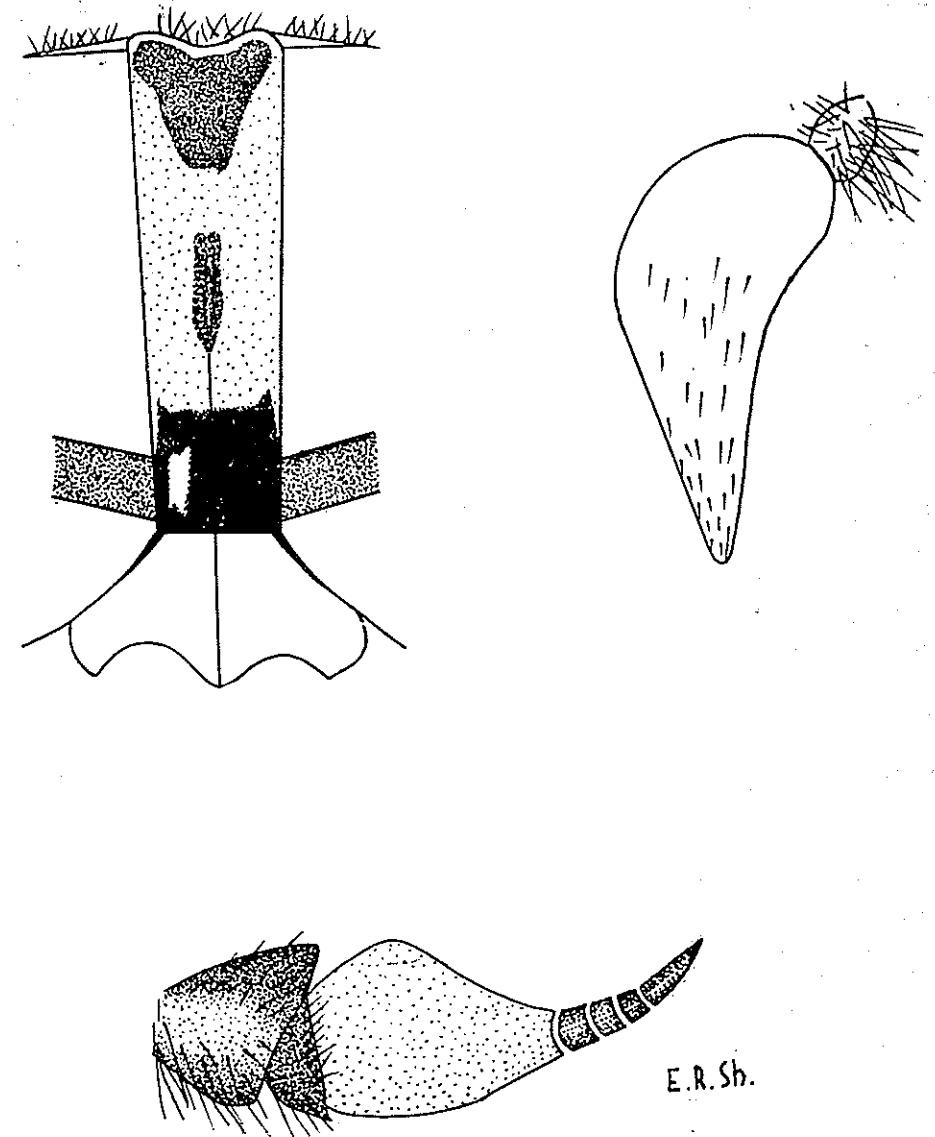


Fig. 2. — *TABANUS CANIPALPIS* Bigot, frons, palpus and antenna of female

in having the palpi more swollen and a regularis-like pattern of abdomen. In case of female the lower callus reaches the eyes and the occiput is broader; in male the head is hemispherical and the enlarged facets are occupying about three-fourth of total eye area.

Female.-Head: wider than thorax. Eyes bare, with one purple band, green in life. Frons proportions: 5:4:16, index 4-4.8. Lower callus in most specimens higher than broad, sometimes as high as broad, quadrate-shaped, shining black, reaching the eyes and the subcallus below, inflated. Upper callus connected with lower callus by a fine line, spindle-shaped, black. Tomentum of frons dark yellow (sometimes white-yellowish), densely covered with short black and white-yellow hairs. Vertex without ocellar tubercle, but always with a more or less largely expanded shining black area. Occiput relatively broad, white tomentum and with relatively long light grey hairs, which are sometimes mingled with a few black ones at vertex. Subcallus of moderate length, slightly inflated, covered with dark yellow-brown tomentum. Face and buccae white grey, with long whitish hairs, which are dense on the buccae. Upper part of parafacials of same colour as subcallus. Antennae brown, first and second segment in most cases brown to reddish-yellow, but sometimes blackish, with thin grey tomentum and short black hairs above and longer whitish hairs below. Third segment in most cases brown (in two specimens blackish), annulate portion often infuscated. Plate of moderate width, with a dorsal blunt right angle. Palpi: terminal segment white to white-light yellow, with short white hairs and fewer black ones (sometimes no black hairs are present), basal half swollen (about twice to twice and half as long as broad), pointed at apex.

Thorax: mesonotum black, thinly covered with dark grey tomentum, with five longitudinal light grey stripes, clothed with yellowish and black hairs. Notopleural lobe grey tomentum, with predominantly long black hairs. Pleura light grey, with long whitish hairs. Wings hyaline, r^4 without appendix, veins brown, basal ones yellow, no stigma visible. Basicosta setose. Halteres: whitish to white-yellow, basal part of knobs dark brown. Legs: coxae like pleura, femora black, with thick silvery grey tomentum, extreme apical part yellowish, with long whitish hairs and a few black ones. Tibiae yellowish or yellowish-grey, fore tibiae same colour as femora, anterior part of basal third (or basal half) yellowish. Fore tarsi blackish, rest blackish-brown.

Abdomen: rather narrow and elongate. Dorsum blackish with three longitudinal rows of spots: in nearly all specimens the median

triangles broadened anteriorly to nearly parallel-sided light grey trapezoids, forming a narrow contiguous median stripe, the lateral light grey oblique spots small. The light grey spots are covered with whitish hairs and the remaining dark part of dorsum with black ones. Tergite I-VI with a narrow grey-white or grey yellowish posterior border. Several specimens show on both sides of tergite II-III (or II-IV) an underlying light brown to brown-reddish colour. Venter: light grey or pinkish-grey, with whitish hairs and a few longer black hairs. Sternite I-VI with a narrow lighter coloured posterior border. Length of body (excl. ant.): 10-13.5mm.

Male.-Head: enlarged, hemispherical, broader than thorax. Eyes bare, holoptic, the area of enlarged faces about three-fourth of total eye area, brown in dried insects, sharply differentiated from small facets. The latter ones are blackish and reach as a narrow, nearly parallel-sided occipital margin to the vertex. In relaxed specimens one purple band is present, running along the upper border of small facets just below the large ones. Ocellar tubercle at eye level, elongate, ovoid, light grey tomentum, with short black hairs on posterior half. Occiput very narrow, light grey tomentum, with a fringe of very short whitish-grey hairs. Frontal triangle yellowish-grey tomentum, dark dirty brown at apex. Antennae as in female, but third segment more slender. Terminal segment of palpi white-yellowish, clothed with long white and a few black hairs, swollen (about one and a half times longer than broad), not pointed at apex.

Thorax, wings, legs and abdomen as in female except that hairs of mesonotum and abdomen are longer and more erect. Length of body (excl. ant.): 11-11.5mm.

4 F, 2 M, Bahadorak, near lamp; other records (Abbassian-Lintzen, 1961): 6F, Kalage-Moki (Saravan, Iranian Baluchistan), 18.V.6., donkey; 1 F, Bonab (Saravan) 20.V.60., donkey; 1 F, Derunesk, (Saravan), 24.V.60, donkey; 2 F, Saghder (Jiroft, Kerman province), 6.VI.60., bull; 6 F, Shahsamangan (Jiroft), 12.VI.60., bull; 1 F, Tangeh-Sargaz (Jiroft), 24.VI.60., bull.

4. *Tabanus gratus* Loew

2 M, Fariab, near lamp.

5. *Tabanus leleani* Austen

9 F, 1 M, Bahadorak, near lamp and 1 F in car, 1 M, Sياهو, near lamp.

6. *Tabanus mofidii* Leclercq

1 F, Fariab near lamp; 2 F, Rahdar, near lamp; 3 M, Bahadorak,

near lamp, 1 F, ibidem, in car.

The description of the previously unknown male of *T. mofidi* Lecl. is as follows.

Male.— Head: enlarged, hemispherical, broader than thorax. Eyes bare, holoptic, area of enlarged facets about three-fourth of total eye area, light brown in dried insects, sharply differentiated and demarked from small facets, which are blackish, reaching as a narrow nearly parallel-sided occipital margin to the vertex. In relaxed specimens one purple band is present running along the upper border of small facets just below the large ones. Ocellar tubercle at or slightly sunken below eye level, elongate, ovoid, light grey toment, with short white-yellowish hairs at posterior half. Occiput very narrow, light grey toment, with a fringe of short white-yellowish hairs. Frontal triangle grey-yellowish toment, slightly darker near apex, the latter of same colour as basal part of frontal triangle. Antennae yellow, third segment more slender, otherwise as in female. Terminal segment of palpi white-yellowish, with long white hairs, swollen (about one and a half times longer than broad), not pointed at apex. Thorax, wings, legs and abdomen as in female, except that ground colour of scutellum is brown instead of dark brownblackish, hairs of mesonotum more yellowish and erect.

Length of body (excl. ant.): 10.5-12mm.

7. *Tabanus sufis* Jaenicke

1 F Kahnu-Bala, near lamp.

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Summary

7 Species (*Atylotus pulchellus*, *Tabanus autumnalis brunnescens*, *T. canipalpis*, *T. gratus*, *T. leleani*, *T. mofidii*, *T. sufis*) have been collected in southeast Iran in 1960. *T. canipalpis* (female) is redescribed and figured, the description of the previously unknown male of *T. canipalpis* and *T. mofidii* is given.

Résumé

7 espèces (*Atylotus pulchellus*, *Tabanus autumnalis brunnescens*, *T. canipalpis*, *T. gratus*, *T. leleani*, *T. mofidii*, *T. sufis*) ont été collectées dans sud-est de l'Iran en 1960. *T. canipalpis* (femelle) est redécrite et dessinée, la description de mâle de *T. canipalpis* et *T. mofidii*, précédemment inconnus, est donnée.

References

- Abbassian-Lintzen (R.), 1961.- Tabanidae (Diptera) of Iran. VI. Records of horseflies from southeast Iran (Iranian Baluchistan and the Jiroft area). Description of *Tabanus kermani* n. sp. and *Tabanus leclereqi* n. sp. Bull. Soc. Path. exot. 54:128-147.
- Kröber (O.), 1925.- Tabanidae in Lindner: die Fliegen der palaearktischen Region. 19, 146 pp.
- Kröber (O.), 1938.- Katalog der palaearktischen Tabaniden nebst Bestimmungstabellen und Zuätzen zu einzelnen Arten sowie Neubeschreibungen. Acta Inst. Mus. Zool. Univ. Athen. 2: 57-245.
- Leclercq (M.), 1960.- Tabanidae (Dipt.) d'Iran, III, *Tabanus mofidii* nova species. Arch. Inst. Razi 12:39-41.
- Olsufiev (N.G.), 1937.- Faune de l'URSS. Dipt. 7, No. 2, Fam. Tabanidae, Moscou & Leningrad, 434 pp.
- Ricardo (G.), 1911.- A revision of the species of *Tabanus* from the Oriental Region including notes on species from surrounding countries. Rec. Ind. Mus. 4 : 111-258.