

## CERATOPOGONIDAE (DIPTERA) OF IRAN V. *CULICOIDES* FROM MAZANDARAN<sup>1</sup>

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This report is based on 782 specimens collected by me from the Caspian Littoral, Mazandaran province (Fig. 1). They were collected in the vicinity of Shahsavar during the last week of July and all of August 1967.

Collections were made during the night with light traps placed near their breeding areas or in houses. Collections were also made with oil paper sticky traps placed in stables, houses, and on outside mud walls.

Eight species are recorded herein, one of which is a new record for Iran.

*Culicoides circumscriptus* Kieffer. Amirabad—1 ♀, 1 ♂, light trap, 19 Aug. 1967; Hardoabrud—1 ♀, light trap, 13 Aug. 1967; Khoshamian—1 ♀, sticky paper, 23 Aug. 1967; Soleiman Mahale, forest area—7 ♀♀, sticky paper, 10 Aug. 1967.

*Culicoides heliophilus* Edwards. Garma Poshteh, forest area—23 ♀♀, light trap, 10 Aug. 1967; Hardoabrud—3 ♂♂, light trap, 19 Aug. 1967; Khoshamian—1 ♀, light trap, 23 Aug. 1967; Paskalayeh—2 ♀♀, 1 ♂, sticky paper, 28 July and 2 Aug. 1967; Shirud—5 ♀♀, 6 ♂♂, light trap, 8 and 25 Aug. 1967; Shirud—41 ♀♀, 4 ♂♂, sticky paper, 25 Aug. 1967.

*Culicoides lailae* Khalaf. Amirabad—7 ♀♀, 1 ♂, light trap, 16 Aug. 1967; Hardoabrud—111 ♀♀, 5 ♂♂, light trap, 13 Aug. 1967; Hardoabrud—4 ♀♀, 7 ♂♂, sticky paper, 13 Aug. 1967; Garma Poshteh, forest area—90 ♀♀, light trap, 10 Aug. 1967; Khoshamian—8 ♀♀, sticky

paper, 3 and 23 Aug. 1967; Lireh sar, forest area—20 ♀♀, sticky paper, 7 Aug. 1967; Paskalayeh—34 ♀♀, 1 ♂, sticky paper, 26 and 28 July and 2 Aug. 1967; Paskalayeh—12 ♀♀, light trap, 21 Aug. 1967; Shahsavar—3 ♀♀, light trap, 9 Aug. 1967; Shirud—22 ♀♀, 5 ♂♂, light trap, 8 and 25 Aug. 1967; Soleiman Mahaleh, forest area—21 ♀♀, 26 ♂♂, sticky paper, 10 Aug. 1967; Soleiman Mahaleh, forest area—1 ♀, 1 ♂, light trap, 3 Aug. 1967.

This is a new record for Iran.

Numerous specimens were caught, constituting more than one-half of all the specimens studied in this report. Included among the specimens were two gyandromorphs which have been described in a separate paper (Navai Sh., 1969). Also one specimen was found in which the so-called rudimentary spermatheca was almost as large as the other two.

*Culicoides longipennis* Khalaf. Amirabad—1 ♂, light trap, 29 Aug. 1967; Lireh sar, forest area—1 ♂, sticky paper, 7 Aug. 1967; Paskalayeh—3 ♀♀, sticky paper, 28 July, 1967; Shahsavar—1 ♀, light trap, 9 Aug. 1967; Shirud—13 ♀♀, light trap, 25 Aug. 1967; Soleiman Mahaleh, forest area—14 ♀♀, 1 ♂, sticky paper, 10 Aug. 1967.

*Culicoides odibilis* Austen. Amirabad—2 ♀♀, 2 ♂♂, light trap, 16 and 29 Aug. 1967; Garma Poshteh, forest area—3 ♀♀, light trap, 10 Aug. 1967; Hardoabrud—6 ♀♀, light trap, 13 Aug. 1967; Hardoabrud—10 ♀♀, 1 ♂, sticky paper, 13 Aug. 1967; Khoshamian—2 ♀♀, sticky paper, 3 and 23 Aug. 1967; Lireh sar, forest area—1 ♀, light trap, 7 Aug. 1967; Lireh sar, forest area—1 ♀, sticky paper, 7 Aug. 1967; Paskalayeh—1 ♀, light trap, 21 Aug. 1967; Shirud—1 ♀, light trap,

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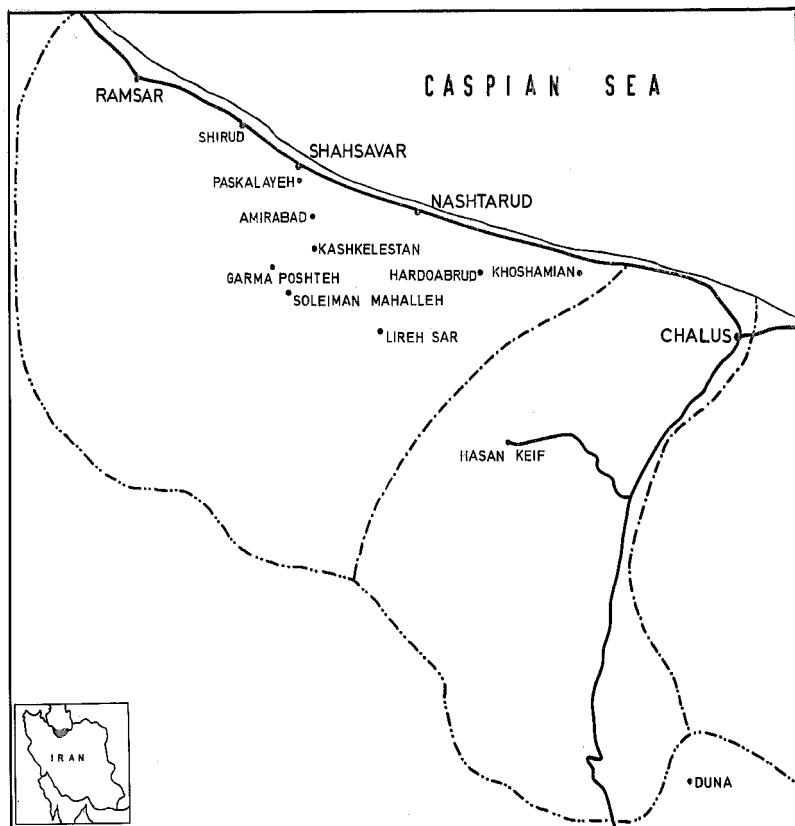


FIG. 1.—Area adjacent to Caspian Sea in Iran, showing *Culicoides* collection sites.

25 Aug. 1967; Soleiman Mahaleh, forest area—1 ♂, light trap, 3 Oct. 1967.

*Culicoides pulicaris* Linne. Garma Poshteh, forest area—10 ♀♀, light trap, 10 Aug. 1967; Hardoabrud—5 ♀♀, light trap, 13 Aug. 1967; Hardoabrud—91 ♀♀, sticky paper, 13 Aug. 1967; Lireh sar, forest area—17 ♀♀, sticky paper, 7 Aug. 1967; Paskalayeh—1 ♀, light trap, 21 Aug. 1967; Shirud—1 ♀, light trap, 8 Aug. 1967; Soleiman Mahaleh, forest area—1 ♀, sticky paper, 10 Aug. 1967.

*Culicoides puncticollis* Becker. Duna, Mountain area—2 ♀♀, light trap, 27 Aug. 1967.

*Culicoides schultzei* Enderlein. Amira-

bad—8 ♀♀, 8 ♂♂, light trap, 16 and 29 Aug. 1967; Hardoabrud—1 ♀, light trap, 13 Aug. 1967; Khoshamian—1 ♀, sticky paper, 23 Aug. 1967; Paskalayeh—1 ♂, sticky paper, 2 Aug. 1967; Paskalayeh—2 ♀♀, 1 ♂, light trap, 21 Aug. 1967; Shirud—1 ♀, 2 ♂♂, light trap, 25 Aug. 1967; Shirud—3 ♀♀, 2 ♂♂, sticky paper, 25 Aug. 1967; Soleiman Mahaleh, forest area—2 ♀♀, sticky paper, 10 Aug. 1967; Soleiman Mahaleh, forest area—1 ♂, light trap, 3 Oct. 1967.

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