

**RECORDS OF CULICINE MOSQUITOES FROM BASTAR DISTRICT (MADHYA PRADESH) INDIA (DIPTERA : CULICIDAE), PART-I GENUS *TOXORHYNCHITES*, *TRIPTEROIDES*, *URANOTAENIA* AND *ORTHOPODOMYIA*.**

K.B. RAJPUT\* AND S.M. KULKARNI\*\*

*National Institute of Communicable Diseases/I.C.M.R. Scheme for Malaria, Jagdalpur - 494 001, M.P.*

INTRODUCTION

After the publication of monograph on Indian Anophelines (Christophers, 1933) and Culicines (Barraud, 1934), Prakash and Hussainy (1974) and Hussainy (1981) reported the distribution records of 18 species of Anophelines and 13 species of Culicines from Bastar District. The present communication deals with additional records of 7 species and 3 varieties belonging to 4 genera, collected during the period from 1980 to 1982.

1. *Toxorhynchites splendens* (Wiedemann)

1819. *Toxorhynchites splendens* (Wiedemann) *Zool. Mag.* 1 (3) : 2, Barraud, 1934 : 24; Stone *et al.*, 1959 : 64 and Knight and Stone, 1977 : 362.

This species is recorded from Oriental region including Burma, Sikkim and India, New Guinea, Fiji and Rotuma Islands.

*Specimens examined* : 21 ♀♀, 25 ♂♂ reared from larvae.

*Present records* : Bringpal - 1 ♂ (20 Jul. '81), 1 ♀, 6 ♂♂ (14 Sept. '81), 2 ♂♂ (24 Sept. '81). Chapar-Bhanpuri - 1 ♀, 1 ♂ (28 Aug. '81). Chindwada - 1 ♂ (15 Jul. '81), 2 ♀♀, 3 ♂♂ (29 Jul. '81), 5 ♀♀, 1 ♂ (10 Sept. '81). Darbha - 1 ♀ (5 Aug. '81). Dhaniyalur - 1 ♂ (30 Jul. '81), Jgadalpur - 1 ♂ (12 Nov. '81), Kakalgur - 10 ♀♀, 6 ♂♂ (29 Aug. '81), Takaraguda - 1 ♂, 1 larva (7 Jul. '81), Telengarapur - 2 ♂♂ (31 Aug. '81).

*Notes* : Most of the specimens were reared from larvae collected from pitcher-plant around tribal hutments in villages and a few from discarded motor tyres.

2. *Tripteroides aranoides* var. *serrata* (Barraud)

1901. *Tripteroides aranoides* (Theobald) *Mon. Cul.* 2 : 274; var. *serrata* (Barraud) 1929. *Indian J. Med. Res.* 16 : 1059; Barraud, 1934 : 42; Stone *et al.*, 1959 : 66 and Knight and Stone, 1977 : 317.

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\* Present address : Regional Tasar Research Station, Imphal 795002 (Manipur), INDIA  
\*\* Present address : National Institute of Virology, Pune - 411001 (Maharashtra), INDIA

This species has a wide distribution in the South-east Pacific region including Malaya, Singapore, Thailand, Java, Sumatra, Borneo, Indo-China, Hainan Island, Formosa, Burma, India, Ceylon, Andaman Islands. The var. *serrata* is known from India and Thailand.

*Specimens examined* : 37 ♀♀, 21 ♂♂ and larvae.

*Present records* : Adawal - 1 ♀ (2 Oct.'80), 1 ♀ (30 Sept.'81), 1 ♀ (20 Nov.'81), Bastar - 1 ♀ (27 Jan.'82), Darbha - 1 ♂ (23 Mar. '81), Dhaniyalur - 1 ♂ (23 Nov.'81), Kangoli - 1 ♀ (21 Nov. '81), Karanji - 1 ♂ (30 Mar.'81), Keslur - 1 ♂ (14 Dec. '81), Pandripani - 14 ♀♀, 11 ♂♂ and many larvae (17 Aug. '81), 10 ♀♀, 5 ♂♂ (14 Sept. '81), Rajur - 3 ♀♀ (7 Oct. '80), 1 ♀ (11 Jan. '82), Takaraguda - 1 ♀, 2 ♂♂ (17 Nov. '81), 1 ♀ (15 Dec. '81), Tokapal 1 ♀ (25 Jan. '82).

*Notes* : Adults were collected from outdoor habitats, but some were reared from larvae collected from Bamboo cuttings.

### 3. *Uranotaenia campestris* Leicester

1908. *Uranotaenia campestris* Leicester, *Cul. Malaya* : 213; Barraud, 1934 : 68; Stone *et al.*, 1959 : 111 and Knight and Stone, 1977 : 347.

It is recorded from Malaya, India, Nepal, Ceylon, Thailand, Sumatra, Java and Borneo.

*Specimens examined* : 46 ♀♀, 13 ♂♂.

*Present records* : Adawal - 1 ♀ (18 Dec.'81), Aghanpur - 1 ♀ (19 Mar.'81), Bastar - 3 ♀♀ (22 Dec. '81), 1 ♀ (12 Jan. '82), 1 ♀ (27 Jan. '82), Bhond - 1 ♂ (15 Dec. '81) Bringpal - 1 ♀, 1 ♂ (14 Dec. '81), 1 ♀ (18 Jan. '82), Chindawada 1 ♀, 1 ♂ (10 Dec. '81), 1 ♀ (28 Jan. '81), Darbha - 1 ♀ (17 Feb. '81) 1 ♂ (18 Mar. '81), 11 ♀♀, 1 ♂ (23 Mar. '81), Daurgaon - 1 ♀ (13 Nov. '81), 1 ♀ (19 Jan. '82), Dhaniyalur - 1 ♀ (16 Jan. '82), Kotamsar - 2 ♀♀ (5 Feb.'81), 1 ♂ (6 Feb. '81), Pakhanjore - 7 ♀♀, 5 ♂♂ (27-29 Nov. '81), Pandripani - 1 ♂ (14 Dec. '81), 1 ♀, 1 ♂ (18 Jan. '82), Potanar - 1 ♀ (31 Dec. '81), 3 ♀♀ (21 Jan.'82), Rajur - 2 ♀♀ (15 Nov.'80), Takaraguda - 2 ♀♀ (15 Dec. '81), Telengarapur - 1 ♀ (19 Nov.'80), 1 ♀ (13 Jan. '82).

*Notes* : 43 ♀♀, 12 ♂♂ were collected from outdoor habitats, 1 ♂ from indoor cattle shed, 2 ♀♀ from human bait and 1 ♂ was reared from larvae collected from a rock-pool at the edge of a nala.

### 4. *Uranotaenia campetris* var. *zelena* Barraud

1908. *Uranotaeria campetris* Leicester *Cul. Malaya* : 213; var. *zelena* Barraud, 1934 : 69; Stone *et al.*, 1959: 111 and Knight and Stone, 1977 : 350.

This species is recorded from India, Thailand and Hainan Island. The var. *zelena* is known from Bombay, India.

*Specimen examined* : 1 ♂.

*Present records* : Pakhanjore - 1 ♂ (27 Nov. '81).

*Notes* : Collected from outdoor habitat from a hole at the edge of a stream.

#### 5. *Uranotaenia tastacea* Theobald

1905. *Uranotaenia tastacea* Theobald, *Ann. Hist. Nat. Mus. Hung.* 3 : 113; Barraud, 1934 : 74; Stone *et al.*, 1959 : 119 and Knight and Stone, 1977 : 353.

This species is recorded from Singapore, Malaya, India, Burma, China and Philippines.

*Specimens examined* : 4 ♀♀.

*Present records* : Chindawada - 1 ♀ (28 Jan. '82), Darbha - 1 ♀ (18 Nov.'80), Orcha - 1 ♀ (30 Nov.'81) and Rajur - 1 ♀ (15 Nov.'80).

*Notes* : All the mosquitoes were collected from outdoor vegetation.

#### 6. *Uranotaenia maxima* Leicester

1908. *Uranotaenia maxima* Leicester, *Cul. Malaya* : 221; Barraud, 1934 : 77; Stone *et al.*, 1959; 115 Knight and Stone, 1977 : 342.

The species is recorded from Malaya, Thailand, Hainan Island. In India, it is known from Assam.

*Specimens examined* : 2 ♀♀.

*Present records* : Darbha - 1 ♀ (23 Mar.'81), Tekameta - 1 ♀ (10 Nov.'81).

*Notes* : The specimens were collected from forest vegetation.

#### 7. *Uranotaenia maculipleura* Leicester

1908. *Uranotaenia maculipleura* Leicester, *Cul. Malaya* : 223; Barraud, 1934 : 82; Stone *et al.*, 1959 : 82 and Knight and Stone 1977 : 342.

This species is recorded from Malaya and Formosa. In India it is known from Darjeeling and Uttar Pradesh.

*Specimens examined* : 7 ♀♀, 7 ♂♂

*Present records* : Adawal - 1 ♂ (2 Oct.'80), Bringpal - 1 ♂ (14 Dec.'81), Darbha - 1 ♀ (5 Nov.'80), 1 ♀ (23 Mar.'81), Pakhanjore - 5 ♀♀, 5 ♂♂ (27-29 Nov.'81).

*Notes* : All the specimens were collected from outdoor vegetation.

#### 8. *Uranotaenia bicolor* Leicester

1908. *Uranotaenia bicolor* Leicester, *Cul. Malaya* : 225; Barraud, 1934 : 83; Stone *et al.*, 1959 : 110 and Knight and Stone, 1977 : 339.

This species is recorded from Malaya and Hainan Island. In India it is known from Mysore.

*Specimens examined* : 2 ♀♀, 3 ♂♂.

*Present records* : *Darbha* - 1 ♂ (18 Mar.'81), 2 ♀♀, 2 ♂♂ (16 Sept.'81).

*Notes* : 1 ♂ was collected from outdoor habitat and 2 ♀♀, 2 ♂♂ were reared from larvae collected from sand-bottomed pit of a rocky stream edge in a dense forest.

#### 9. *Uranotaenia recondita* Edwards

1922. *Uranotaenia recondita* Edwards, *Bull. Ent. Res.*, 13 : 91; Barraud, 1934 : 83; Stone *et al.*, 1959 : 118 and Knight and Stone, 1977 : 344.

This species is recorded from Ceylon, Thailand, Hainan Island and from many places in India.

*Specimens examined* : 28 ♀♀, 58 ♂♂

*Present records* : *Adawal* - 4 ♀♀, 4 ♂♂ (2 Oct.'80), *Aghanpur* - 1 ♂ (23 Jan.'82), *Bhod* - 1 ♂ (4 Aug.'81), 1 ♂ (15 Dec.'81), *Bringpal* 1 ♂ (29 Dec.'81), *Chindawada* - 1 ♂ (18 Nov.'81), 1 ♀ (10 Dec.'81), 1 ♀, 1 ♂ (24 Dec.'81), 9, 12 ♂♂ (15 Jan.'82), 3 ♀♀, 2 ♂♂ (28 Jan.'82), *Darbha* - 1 ♂ (23 Mar.'81), *Dhaniyalur* - 1 ♂ (16 Jul.'81), 2 ♂♂ (13 Aug.'81), *Orcha* - 2 ♂♂ (30 Nov.'81), *Pakhanjore* - 5 ♀♀, 14 ♂♂ (27-29 Nov.'81), *Potanar* - 4 ♀♀, 12 ♂♂ (5-7 Dec.'81), 1 ♂ (21 Jan.'82), *Takaraguda* - 1 ♂ (17 Nov.'81), 1 ♂ (15 Dec.'81).

*Notes* : All the specimens were collected from outdoor habitats.

#### 10. *Orthopodomyia anopheloides* var. *maculata* Theobald

1903. *Orthopodomyia anopheloides* (Giles) *J.trop.Med.*, 6 : 315, var. *maculata*, Theobald, 1910, *Rec.Indian Mus*; 4 : 29; Barraud, 1934 : 98; Stone *et al.*, 1959: 122 and Knight and Stone, 1977 : 299.

This species is recorded from Ceylon, Thailand, Hainan Island and Java. In India, the var. *maculata* is known from Travancore.

*Specimens examined* : 10 ♀♀, 12 ♂♂

*Present records* : *Adawal* - 1 ♀ (9 Nov.'81), *Bastar* - 1 ♀, 1 ♂ (22 Dec.'81), 1 ♀ (12 Jan.'82), *Darbha* - 2 ♂♂ (18 Nov.'80), *Dhaniyalur* - 1 ♂ (11 Dec.'81), *Dongariguda* - 1 ♀ (31 Mar.'81), *Kakalgur* - 1 ♂ (24 Dec.'81), 1 ♂ (15 Jan.'82), *Keslur* - 1 ♂ (14 Dec.'81), *Kumarawand* - 1 ♀ (10 Sept.'81), 1 ♀ (21 Nov.'81), *Pandripani* - 1 ♀ (24 Sept.'81), *Rajur* - 1 ♀ (22 Jun.'81), *Sargipal* - 1 ♂ (23 Nov.'80), *Tekameta* - 1 ♀ (10 Nov.'81), *Tokapal* - 1 ♀, 4 ♂♂ (7 Sept.'81).

*Notes* : 9 ♀, 8 ♂ were collected from outdoor habitats and 1 ♀, 4 ♂♂ were reared from larvae collected from discarded log groove.

### DISCUSSION

The genera *Toxorhynchites*, *Tripteroides*, *Uranotaenia* and *Orthopodomyia* are recorded for the first time from the Bastar district of Madhya Pradesh. All these genera

were not recorded by Hussainy (1981). Out of 42 villages surveyed in the course of the present study, *Toxorhynchites splendens* was recorded from only a single village, *Tripteroides anopheloides* var. *Serrata* - 11, *Uranotaenia campestris* type form - 16, *U. campestris* var. *zelena* - 1, *U. tastacea* - 4, *U. maxima* - 2, *U. maculipleura* - 4, *U. bicolor* - 1, *U. recondita* - 11 and *Orthopodomyia anopheloides* var. *maculata* from 13 villages. Most of the *Toxorhynchites* specimens were reared from larvae, while the remaining genera were generally collected as adults from outdoor habitats. However, pitcher-plants for *Toxorhynchites*, bamboo-cuttings for *Tripteroides*, rocky stream edge habitat for *Uranotaenia* and wide hole or groove on log with heavy decaying matter for *Orthopodomyia* serve as the favourite breeding places in Bastar district. The breeding habits of *Toxorhynchites* are of significance, because the larvae are highly predaceous and are being tried as biological control agents.

### SUMMARY

Records and ecological notes for seven species and three varieties of Culicine mosquitoes viz., *Toxorhynchites splendens*, *Tripteroides aranoides* var. *serrata*, *Uranotaenia campestris*, *U. campestris* var. *zelena*, *U. tastacea*, *U. maxima*, *U. maculipleura*, *U. bicolor*, *U. recondita* and *Orthopodomyia anopheloides* var. *maculata* in 42 villages surveyed in Bastar district are presented in this communication.

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