

# DIPTERA FROM ARUNACHAL PRADESH\* AND ASSAM FOOT HILLS, PART V, TIRAP DIVISION

By

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## INTRODUCTION

This is the last in this series of papers, the preceding one was published in this journal in 1976. It deals with the Diptera of Tirap Division collected by Dr. G. S. Arora during October-November 1971. As in the preceding paper, the geographical distribution is given only in cases where they have not been recorded in any of the earlier papers of the series.

The Families dealt with are Tipulidae, Sciaridae, Asilidae, Stratiomyidae, Tabanidae, Dolichopodidae, Syrphidae, Sepsidae, Muscidae, Celyphidae, Calliphoridae and Sarcophagidae.

## SYSTEMATIC ACCOUNT

### Family TIPULIDAE

#### 1. *Holorusia fulvolateralis* (Brunetti)

1911. *Tipula fulvolateralis* Brunetti, *Rec. Indian Mus.*, 6 : 249-250.  
1912. *Ctenacrosceles sikkimensis* Enderlein, *Zol. Jb. Syst.*, 32 : 4-5.  
1973. *Holorusia fulvolateralis* (Brunetti) : Alexander and Alexander, *A Catalog of Diptera of the Oriental Region*, 1 : 27.

*Material*.—1♂, Changlong, 540 m., 2.xi.1971.

*Remarks*.—It is widely distributed in the Eastern Himalaya, also recorded from Kumaon.

#### 2. *Nephrotoma consimilis* (Brunetti)

1911. *Pachyrhina consimilis* Brunetti, *Rec. Indian Mus.*, 6 : 268.  
1973. *Nephrotoma consimilis* (Brunetti); Alexander and Alexander, *A Catalog of Diptera of the Oriental Region*, 1 : 33.

*Material*.—1♂, 1♀, Khonsa, 800 m., 4.xi.1971.

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\* Formerly N. E. F. A.

3. *Nephrotoma serricornis* (Brunetti)

1912. *Pachyrhina serricornis* Brunetti, *Fauna Brit. India*, Diptera, Nematocera : 341.  
 1973. *Nephrotoma serricornis* (Brunetti): Alexander and Alexander, *A Catalog of Diptera of the Oriental Region*, 1 : 37.

*Material*.—1♂, Kheti Village, Khonsa, 900 m., 7.xi.1971.

4. *Tipula (Acutipula) subvernalis* Alexander

1918. *Tipula fasciculata* Brunetti, *Rec. Indian Mus.*, 15 : 269.  
 1927. *Tipula subvernalis* Alexander, *Rec. Indian Mus.*, 29 : 168.  
 (Preoccupied, renamed).  
 1973. *Tipula (Acutipula) subvernalis* Alexander : Alexander and Alexander, *A Catalog of Diptera of the Oriental Region*, 1 : 43.

*Material*.—1♂, Changlong, 540 m., 31.x.1971.

*Remarks*.—Recorded from Darjeeling, also from Tibet.

5. *Tipula (Emdotipula) stylostena* Alexander

1961. *Tipula (Lunatipula) stylostena* Alexander, *Phillippine J. Sci.*, 90 : 439.  
 1973. *Tipula (Emdotipula) stylostena* Alexander : Alexander and Alexander, *A Catalog of Diptera of the Oriental Region*, 1 : 45.

*Material*.—1♂, Jairampur, 225 m., 27.x.1971.

*Remarks*.—Recorded from Kumaon, India, also from Khoghhozi Pakistan.

6. *Conosia irrorata* (Wiedemann)

1828. *Limnobia irrorata* Wiedemann, *Ausser. zweifl.*, 1 : 574.  
 1912. *Conosia irrorata* (Wiedemann) : Brunetti, *Fauna Brit. India*, Diptera, Nematocera : 497.  
 1973. *Conosia irrorata* (Wiedemann) : Alexander and Alexander, *A Catalog of Diptera of the Oriental Region*, 1 : 175.

*Material*.—3♀♀, Deomali, 200 m., 9.xi.1971.

## Family SCIARIDAE

7. *Phorodonta exacta* (Brunetti)

1912. *Sciara exacta* Brunetti, *Fauna Brit. India*, Diptera, Nematocera : 132-133.  
 1973. *Phorodonta exacta* (Brunetti) : Steffan, *A Catalog of Diptera of the Oriental Region*, 1 : 466.

*Material*.—(i) 3♀♀ Jairampur, 225 m., 26.x.1971; (iv) 4♀♀ Changlong, 540 m., 30.x.1971; (iii) 60♀♀, Changlong, 540 m., 31.x.1971; (vi) 2♀♀ Changlong, 540 m., 1.xi.1971; (v) 15♀♀, Khonsa, 825 m., 6.xi.1971; (vi) 2♀♀ Khonsa, 800 m., 7.xi.1971 and (vii) 3♀♀ Deomali, 200 m., 10.xi.1971.

*Remarks.*—Recorded from Darjeeling, West Bengal, Kumaon, Uttar Pradesh, Ukhrul, Manipur; also from Shanghai, China; Ohiya, Ceylon.

Family STRATIOMYIDAE

8. *Sargus mactans* Walker

1860. *Sargus mactans* Walker, *Proc. Linn. Soc.*, London, 4 : 97.

1920. *Sargus mactans* Walker : Brunetti, *Fauna Brit. India*, Diptera, Brachycera : 83-84.

*Material.*—1♂, Khetti Village, Khonsa, 900 m., 7.xi.1971.

*Remarks.*—It is recorded from several localities in the Himalaya; also from Nepal, Ceylon and Malaya Archipelago.

Family TABANIDAE

9. *Chrysops designata* Ricardo

1911. *Chrysops designata* Ricardo, *Rec. Indian Mus.*, 4 : 383.

*Material.*—1♀, Jairampur, 225 m., 27.x.1971.

Family ASILIDAE

10. *Philodicus femoralis* Ricardo

1921. *Philodicus femoralis* Ricardo, *Ann. Mag. Nat. Hist.*, (9) 8 : 190.

1960. *Philodicus femoralis* Ricardo : Ratan Lal, *Catalogue of Indian Insects*, Part 29. Asilidae, Diptera : 35.

*Material.*—1♀, Changlong, 500 m., 31.x.1971.

11. *Clephroneura sundaica* (Jaennicke)

1867. *Asilus sundaicus* Jaennicke, *Abh. Senckenb. Naturf. Ges.*, 6 : 363.

1938. *Clephroneura sundaica* (Jaennicke) : Oldroyd, *Ann. Mag. Nat. Hist.*, (11) 1 : 454-455.

*Material.*—(i) 1♀, Changlong, 500 m., 1.xi.1971 and (ii) 1♀, 31.xi.1971.

*Remarks.*—This is the first record of the species from India, it is also new to Z.S.I. It was earlier reported from Burma, Malaya and Siam.

Family DOLICHOPODIDAE

12. *Dolichopus angustinervis* Becker

1922. *Dolichopus angustinervis* Becker, *Capita Zoological* 1 (4) : 9-10.

*Material.*—(i) 10♂♂, 5♀♀, Khonsa, 850 m., 4.xi.1971; (ii) 1♀, Khetti Village, Khonsa, 900 m., 7.xi.1971 and (iii) 1♀, Deomali Forest, 250 m., 9.xi.1971.

*Remarks.*—It is new to Z.S.I. collection.

## Family SYRPHIDAE

13. *Paragus serratus* (Fabricius)

1805. *Mulio serratus* Fabricius, *Syst. Antliat.*, :186.

1923. *Paragus serratus* (Fabricius) : Brunetti, *Fauna Brit. India*, Diptera, 3 : 31.

*Material.*—1♂, Jairampur, 225 m. 27.x.1971.

14. *Paragus rufiventris* Brunetti

1913. *Paragus rufiventris* Brunetti, *Rec. Indian Mus.*, 8 : 157.

1923. *Paragus rufiventris* Brunetti : Brunetti, *Fauna Brit. India*, Diptera, 3 : 34.

*Material.*—1♂, Jairampur, 225 m., 27.x.1971.

15. *Melanostoma orientale* (Wiedemann)

1824. *Syrphus orientale* Wiedemann, *Analec. Enl.*, : 36.

1923. *Melanostoma orientale* (Wiedemann) : Brunetti, *Fauna Brit. India*, Diptera, 3 : 48.

*Material.*—(i) 2♀♀, Jairampur, 225 m., 27.x.1971 and (ii) 1♀, Khonsa, 850 m., 4.xi.1971.

16. *Asarcina ericetorum* (Fabricius)

1781. *Syrphus ericetorum* Fabricius, *Spec. Ins.*, 2 : 425.

1923. *Asarcina ericetorum* (Fabricius) : Brunetti, *Fauna Brit. India*, Diptera, 3 : 63.

*Material.*—(i) 1♀, Pangsau Pass, 1265 m., 28.x.1971; (ii) 1♂, Deomali Forest, 250m., 9.xi.1971.

17. *Sphaerophoria indiana* Bigot

1884. *Sphaerophoria indiana* Bigot, *Ann. Soc. Ent.*, France, (6) 4 : 99:

1923. *Sphaerophoria indiana* Bigot : Brunetti, *Fauna Brit. India*. Diptera, 3 : 102-103, pl. III, figs. 1-6.

*Material.*—1♂, Changlong, 500 m., 1.xi.1971.

*Remarks.*—It is widely distributed all over India.

## Family SEPSIDAE

18. *Sepsis himalayensis* Brunetti

1909 *Sepsis himalayensis* Brunetti, *Rec. Indian Mus.*, 3 : 345-347.

*Material.*—1♂, Khonsa, 900 m., 7.xi.1971.

*Remarks.*—Originally described from Darjeeling. The National Zoological collection contains specimens from Simla, Bangalore and Austria.

19. *Sepsis viduata* Thomson

1868. *Sepsis viduata* Thomson, *Engene Resa* : 587.

1909. *Sepsis viduata* Thomson : Brunetti, *Rec. Indian Mus.*, 3 : 366.

*Material.*—(i) 1♂, Changlong, 500 m., 1.xi.1971 and (ii) 1♂, Deomali, 200 m., 10.xi.1971.

Family CELYPHIDAE

20. *Celyphus (Celyphus) obtectus* Dalman

1818. *Celyphus obtectus* Dalman, *K. Ventensk Akad. Handl.*, 39 : 73.

1972. *Celyphus (Celyphus) obtectus* Dalman : Tenorio, *Trans. R. Ent. Soc. London*, 123 (4) : fig. 19.

*Material.*—1♂, Changlong, 500., 1.xi.1971.

*Remarks.*—It is widely reported from the Oriental Region but in India it is so far recorded only from Assam.

Family MUSCIDAE

21. *Musca (Byomyia) pattoni* Austen

1910. *Musca pattoni* Austen, *Ann. Mag. Nat. Hist.*, (8) 5 : 114.

1965. *Musca (Byomyia) pattoni* Austen : Emden, *Fauna India*, Diptera, 7 (1) : 64

*Material.*—1♀, Nampong, 450 m., 28.x.1971.

22. *Musca (Philaematomyia) crassirostris* Stein

1903. *Musca crassirostris* Stein, *Mitt. Zool. Mus.*, Berlin, 2 : 199.

1965. *Musca (Philaematomyia) crassirostris* Stein : Emden, *Fauna India*, Diptera 7 (1) : 71.

*Material.*—(i) 1♂, 4♀♀, Jairampur 225 m. 27.x.1971; (ii) 1♂ Pangsau Pass, 225m., 28.x.1971 and (iii) 2♀♀, Deomali, 200 m., 10.xi.1971.

23. *Musca (Viviparomusca) bezzii* Patton and Cragg

1913. *Musca bezzii* Patton and Cragg, *Ind. J. Med. Res.*, 1 : 19.

1965. *Musca (Viviparomusca) bezzii* Patton and Cragg : Emden, *Fauna India*, Diptera, 7 (1) : 83.

*Material.*—1♂, Jairampur, 225 m., 27.x.1971.

24. *Musca (Ptilolepis) inferior* Stein

1909. *Musca inferior* Stein, *Tijdschr. Ent.*, 52 : 213.

1965. *Musca (Ptilolepis) inferior* Stein : Emden, *Fauna India*, Diptera, 7 (1) : 89-90.

*Material.*—1♂, Jairampur, 225 m., 27.x.1971.

25. *Orthellia coerulea* (Wiedemann)

1819. *Musca coerulea* Wiedemann, *Zool. Mag.*, 3 : 23.

1965. *Orthellia coerulea* (Wiedemann) : Emden, *Fauna India*, Diptera, 7 (1) : 124.

*Material*.—1♂, 1♀, Khetti Village, Khonsa, 900m., 7.xi.1971.

26. *Stomoxys calcitrans* (Linnaeus)

1958. *Conops calcitrans* Linnaeus, *Syst. Nat.*, 10 : 604.

1965. *Stomoxys calcitrans* (Linnaeus) : Emden, *Fauna India*, Diptera, 7(1) : 160.

*Material*.—1♂, 3♀♀, Khetti Village, Khonsa, 900 m., 7.xi.1971.

Family CALLIPHORIDAE

27. *Chrysomya megacephala* (Fabricius)

1784. *Musca megacephala* Fabricius, *Syst. Ent.*, 4 : 317.

1967. *Chrysomya megacephala* (Fabricius) : Kurahashi, *Science Reports of Kanazawa University*, 12 (2) : 270-271.

*Material*.—1♀, Jairampur, 225 m., 15.x.1971.

Family SARCOPHAGIDAE

28. *Parasarcophaga orchidea* (Bottcher)

1913. *Sarcophaga orchidea* Bottcher, *Ann. Mus. Nat. Hung.*, 11 : 375, fig. 1.

1940. *Sarcophaga hirtipes* Widemann var. *orchidea* Bottcher : Senior white, Aubertin and Smart, *Fauna Brit. India*, Diptera, 6 : 244-245.

1967. *Parasarcophaga orchidea* (Bottcher) : Kanyo, Field and Shinonaga, *Fauna Japonica*, Sarcophagidae : 43-45.

*Material*.—1♂, Deomali forest, 250 m., 11.xi.1971.

*Remarks*.—Widely distributed almost all parts of the world.

SUMMARY

This paper records twenty-eight species of Diptera belonging to twelve families. Of these *Clephydroneura sundaica* (Jaenicke) (Asilidae) is new to India.

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REFERENCES

- ALEXANDER, C. P. and M. M. ALEXANDER 1973. *A catalog of the Diptera of the Oriental Region*, Honolulu, 1 : ix+618 pp.
- BRUNETTI, E. 1912. *The Fauna of British India including Ceylon and Burma*, Diptera, Nematocera (excluding Chironomidae and Culicidae), Taylor and Francis, London, xxviii+574 pp.
- BRUNETTI, E. 1923. *The Fauna of British India including Ceylon and Burma*, Diptera, Taylor & Francis, London, 3 : xi+424 pp.

- EMDEN, F. V. 1965. *Fauna India*, Diptera, Calcutta, 7(1) : xiv + 647 pp.
- JOSEPH, A. N. T and K. RAMACHANDRA RAO 1972. Diptera from NEFA and Assam Foot Hills, Part 1, Kameng Frontier Division and Assam Foot Hills. *Rec. zool. Surv. India*, 66 (1-4) : 63-74.
- JOSEPH, A.N.T and K. RAMACHANDRA RAO 1972. Diptera from NEFA and Assam Foot Hills, Part. II, Kameng Frontier Division, Subansiri Frontier Division, North Lakhimpur and Assam Foot Hills. *Rec. zool. Surv. India*, 66(1-4) : 103-128.
- JOSEPH, A.N.T. and P. PARUI 1972. Diptera from NEFA and Assam Foot Hills, Part. III, Siang Frontier Division and North Lakhimpur. *Rec. zool. Surv. India*, 67 : 325-342.
- JOSEPH, A.N.T and K. K. RAY 1976. Diptera from Arunachal Pradesh and Assam Foot Hills. Part. IV, Lohit Frontier Division, Lakhimpur District and Sibsagar District. *Rec. zool. Surv. India* 69 : 275-290.
- RATTAN LAL. 1960. *Catalogue of Indian Insects*. Part 29, Asilidae, Diptera, New Delhi ii + 77 pp.
- TENERIO, J. M. 1972. A revision of the Celyphidae (Diptera) of the Oriental Region, *Trans. R. Ent. Soc. Lond.*, 123(4) : 359-543.