

# PSOCOPTERA OF CALCUTTA AND ENVIRONS (WEST BENGAL: INDIA)

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## INTRODUCTION

The Psocid fauna of India did not receive much attention because of their minute size and little economic importance, excepting a few damaging books and stored cereal products. A few individual may occasionally disseminate plant diseases by feeding pathogenic fungi and leaving viable spores in faeces deposited elsewhere (New, 1971).

Seventy nine species belonging to thirteen families of Psocoptera were recorded earlier by Enderlein (1903), Banks (1914), Navas (1934), Pearman (1942), Menon (1938 & 1942), Datta (1963, 1965, 1966 and 1969, a, b, c, d.) Thornton and Wong (1966, 1968) Lee and Thornton (1967) and Behura and Dash (1968). Out of this twenty five species were known from West Bengal. Twelve species viz., *Psococerastis taprobanes* (Hagen) *Liposcelis paetus* Pearman, *Ectopsocus ramburi* Datta, *Ectopsocus bangalensis* Datta, *Pseudocaecilius fletcheri* Datta, *Psococerastis asiaticá* Datta, *Tapinella fasciata* Thornton and Wong, *Peritroctes bengalensis* Thornton and Wong, *Peripsocus sclerotus* Thornton and Wong *Ectopsocus cinctus* Thornton and Wong, *Hemipsocus ornatus* Datta, and *Lichenomima indica* Datta, were recorded from Calcutta and its environs.

The present paper deals with seventeen species of Psocoptera representing fourteen genera and eleven families collected from Calcutta and its surrounding four districts viz. 24 Parganas, Howrah, Hooghly and Barasat. Two families and seven species among these, are new to India.

## SYSTEMATIC ACCOUNT

### Family PSOCATROPIDAE

#### 1. *Psocatropos* (= *Granthakita*) *cuttackae* (Behura & Dash)

1968. *Granthakita Cuttackae* Behura and Dash, *Prak Utk. Univ. J. (Sc.)* 5: (2) : 47-51.

**Material** : 2 ♂ ♂, 3 ♀ ♀; Ballygunge, South Calcutta, 15. vii. 1975; ex. book; body length (in alcohol) : 1.2 mm. (♂) 1.3 mm. (♀).

**Remarks** : The veins of the wings are variable; venation vary even in the two wings of the same individual. They are common in the dwelling houses throughout the year (Behura and Dash, 1968).

**Distribution** : INDIA : Cuttack; Orissa and Calcutta (first record).

#### Family LIPOSCOLIDAE

### 2. *Liposcelis transvaalensis* (Enderlein)

1909. *Troctes transvaalensis* Enderlein, *Stett. ent. ztgc.*, 70 : 272.

1967. *Liposcelis transvaalensis* (Enderlein). Smithers, *Austr. Zool.*, 14, Pt. I : 28.

**Material** : 4 ♀ ♀ (apterous forms); Jabakusum House, Central Calcutta, 10. viii, 1975, ex. book; body length (in alcohol): 1.2 mm.

**Remarks** : The specific identification was confirmed with characteristics as recorded by Enderlein (1909).

**Distribution** : INDIA : Bombay; Maharashtra and Calcutta [first record]. SOUTH AFRICA (Transvaal).

#### Family PACHYTROCTIDAE

### 3. *Tapinella formosana* Enderlein

1908. *Tapinella formosana* Enderlein, *Zool. Anz.*, 33 : 774.

1967. *Tapinella formosana* Enderlein. Smithers, *Austr. Zool.*, 14, Pt. I : 28.

**Material** : 1 ♀ (alate form), Botanical garden, Sibpur, Howrah 7. ix. 1974; ex. leaf litter; body length (in alcohol): 1.3 mm.

**Distribution** : INDIA : Bombay; Maharashtra and Sibpur; West Bengal [first record]. FORMOSA.

### 4. *Tapinella fasciata* Thornton & Wong

1966. *Tapinella fasciata* Thornton and Wong, *Trans. R. ent. soc. Lond.*, 118 (1) : 1-4.

**Material** 3 ♂ ♂, 7 ♀ ♀ (alate forms), Batanagar, 24-Parganas; 28. ii. 1976; ex. dry banana leaves; body length (in alcohol) : 1.2 mm. (♂); 1.3 mm. (♀).

**Remarks** : The dominating character in the specimens are the lateral stripes running down the body which are found in the nymphs also.

**Distribution** : INDIA : Calcutta, Batanagar [second record]; West Bengal.

5. *Pachytroctes (Psacadium) georgi* (Menon)

1938. *Psacadium georgi* Menon, *Proc. Ind. Acad. Sci. (B)* 8 (4) : 280-283.

1967. *Pachytroctes (Psacadium) georgi* (Menon). Smithers, *Austr. Zool.*, 14, Pt. I : 30.

*Material* : 2 ♀♀ (apterous forms), Botanical garden, Sibpur, Howrah, 17. i. 1975; ex. leaf litter; body length (in alcohol) : 1.5 mm.

*Remarks* : The antennae of the specimens are very long and thin in relation to body.

*Distribution* : INDIA : Bombay; Maharashtra and Sibpur; West Bengal (first record).

6. *Peritroctes bengalensis* Thornton & Wong

1966. *Peritroctes bengalensis* Thornton and Wong, *Trans. R. ent. Soc. Lond.* 118, Pt. I : 4.

*Material* : 1 ♀ (apterous form), Barasaat, 24-Parganas, 27. viii. 1975; ex. dry leaf litter; body length (in alcohol): 1 mm.

*Remarks* : The antennae of the specimen are longer than the sub-globular abdomen.

*Distribution* : INDIA : Calcutta, Barasaat [second record]; West Bengal:

## Family CAECILIIDAE

7. *Caecilius muggenburgi* Enderlein

1903. *Caecilius muggenburgi* Enderlein, *Ann. Hist. nat. Mus. Hung.*, 1 : 269.

1967. *Caecilius muggenburgi* Enderlein. Smithers, *Austr. Zool.*, 14, Pt. I : 44.

*Material* : 1 ♀, Tollygunge, South Calcutta, 10. x. 1975; ex. semidry bush; body length (in alcohol); 1.4 mm.

*Distribution* : INDIA (first record). SINGAPORE, JAVA, PHILIPPINES and FORMOSA.

## Family AMPHIPSOCIDAE

8. *Dasypsocus solox* (Enderlein)

1903. *Kolbea solox* Enderlein, *Ann. Hist. nat. Mus. Hung.*, 1 : 278.

1967. *Dasypsocus solox* (Enderlein). Smithers, *Austr. Zool.*, 14, Pt. 1 : 57.

*Material* : 1 ♀, Sheoraphuli, Hooghly, 24. x. 1975; ex. dry banana leaf; body length (in alcohol) : 2.5 mm.

*Distribution* : INDIA (first record). SINGAPORE.

## Family LACHESILLIDAE

9. *Lachesilla pedicularia* (Linne)

1746. *Hemerobius flavicans* Linne, *Faun. suecica*, 223.

1919. *Lachesilla Pedicularia* (Linne). Enderlein, *Cat. Coll. S-L*, 3 : 16.

*Material* : 1 ♂, 3 ♀♀, Baruipur, 24-Parganas, 25. xi. 1975; ex. dry date leaves; body length (in alcohol): 1.4 mm. (♂); 1.5 mm. (♀).

*Distribution* : INDIA [first record]. NEPAL, EAST AFRICA, EUROPE, NORTH AMERICA, ARGENTINA and JAPAN.

## Family PERIPSOCIDAE

10. *Ectopsocus bengalensis* Datta

1965. *Ectopsocus bengalensis* Datta, *J. Beng. nat. Hist. Soc.*, 34 (1) : 58-60.

*Material* : 1 ♂, 1 ♀, in vicinity of Rabindra Sarobar, South Calcutta, 18. ix. 1975; ex. dry foliage; body length 1.5 mm. (♂); 1.9 mm. (♀).

*Distribution* : INDIA: Barrackpore and Calcutta [second record]; West Bengal.

11. *Ectopsocus cinctus* Thornton

1962. *Ectopsocus cinctus* Thornton, *Trans. R. ent. Soc. Lond.*, 114 : 305.

1967. *Ectopsocus cinctus* Thornton : Smithers, *Austr. Zool.*, 14, Pt. I : 65.

*Material* : 3 ♀♀, from table-top, JabaKusum House, Central Calcutta, 24.ix.1975; body length (in alcohol) : 1 mm. - 1.3 mm.

*Remarks* : The specimens are generally found on dry leaves. The material studied are collected from table-top.

*Distribution* : INDIA : Calcutta [second record]. HONG KONG, VIETNAM and MALAYSIA.

12. *Peripsocus sclerotus* Thornton & Wong

1966. *Peripsocus sclerotus* Thornton and Wong, *Trans. R. ent. Soc. Lond.*, 118, Pt. I : 16-18.

*Material* : 1 ♀, in vicinity of Rabindra Sarobar, South Calcutta, 21. viii. 1975; ex. dry foliage; body length (in alcohol) : 1.5 mm.

*Distribution* : INDIA : Calcutta (second record).

13. *Peripsocus anoplus* Thornton & Wong

1968. *Peripsocus anoplus* Thornton and Wong, *Pacif. Ins. Monogr.*, 19 : 33-34.

**Material** : 2 ♂ ♂, 3 ♀ ♀, Dankuni, Hooghly, 22.i.1976. ex. dry date-leaves; body-length (in alcohol) : 1.9 mm. (♂); 2 mm. (♀).

**Distribution** : INDIA (first record). MALAYSIA.

Family HEMIPSOCIDAE

14. *Hemipsocus chloroticus* (Hagen)

1858. *Psocus chloroticus* Hagen, *Verh. zool. bot. Ges. Wein*, 8 : 474.

1967. *Hemipsocus chloroticus* (Hagen). *Smithers, Austr. Zool.*, 14, Pt. I : 72.

**Material** : 3 ♂ ♂, Sheoraphuli, Hooghly, 24. x. 1975.; ex. dry banana-leaves; body length (in alcohol) : 2.3mm. -2.9 mm.

**Distribution** : INDIA [first record]. CEYLON, SINGAPORE, SUMATRA, JAVA, SARAWAK, PHILIPPINES, FORMOSA and JAPAN.

Family PSEUDOCAECILIIDAE

15. *Pseudocaecilius citricola* (Ashmead)

1903. *Pseudocaecilius elutus* Enderlein, *Ann. hist. nat. Mus. Hung.*, 1 : 261.

1976. *Pseudocaecilius citricola* (Ashmead). *Turner, Sys. Ent.*, 1 : 212.

**Material** : 2 ♀ ♀, Botanical garden, Sibpur, Howrah, 19.xi.1974; ex. green vegetation; body length (in alcohol) : 1.8 mm.

**Distribution** : INDIA : Sibpur; West Bengal [second record]. JAVA, SINGAPORE, MADAGASCAR, SOUTH AFRICA, MOSAMBIQUE, CONGO, PORTO RICA, NORTH AMERICA.

Family ARCHIPSOCIDAE

16. *Archipsocus recens* Enderlein

1903, *Archipsocus recens* Enderlein, *Ann. Hist. Nat. Mus. Hung.* 1 : 286: Fig. 1 : Pl. viii.

**Material** : 2 ♀ ♀ (micropterous forms), in vicinity of Rabindra Sarobar, 4 vii. 1974; ex. bark; body length (in alcohol) : 1.5 mm.

**Remarks** : The figure and the key attributes directly and tallys with *Archipsocus recens*, recorded by Enderlein (1903) from Singapore. Its specific status is further confirmed as it agrees, without any deviation to the supplementation made by Badonnel (1966 : 409).

**Distribution** : INDIA [first record]. SINGAPORE and INDONESIA

Family PSOCIDAE

17. *Trichadenotecnum apertum* Thornton

1961. *Trichadenotecnum apertum* Thornton, *Trans. R. ent. Soc. Lond.*, 113 : 7

1976. *Trichadenotecnum apertum* : Ray and Srivastava *Newsl. zool. Surv. India*, 2 (1) : 26.

*Material* : 1 ♀, Botanical garden, Sibpur, Howrah, 19.xi.1974, ex. dry leaves; body length (in alcohol) : 2.3 mm.

*Distribution* : INDIA [first record]. HONG KONG.

#### SUMMARY

This paper deals with seventeen species of Psocoptera from Calcutta and Environs; of these seven are new records to India; viz, *Caecilius muggenburgi* Enderlein, *Dasypsocus solox* (Enderlein), *Lachesilla pedicularia* (Linne), *Peripsocus anoplus* Thornton and Wong, *Hemipsocus Chloroticus* (Hagen), *Archipsocus recens* Enderlein and *Trichadenotecnum apertum* Thornton.

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