

THE FREE-LIVING THYSANURA OF BARKUDA ISLAND.

By CEDRIC DOVER, F.E.S.

Only four free-living species of Thysanura have been collected on the island, *Japyx indicus* is found among decaying vegetation and under fallen branches at the base of fig-trees in the jungle, an *Acrotelsa* and a Machilid are common both in the house and among dried water-weeds on the shore of Barkuda, while *Ctenolepisma* is also probably common in the bungalow though only two specimens have been collected. These fish-insects are all common species, but as little is known of the distribution of even the commonest Thysanurans, it is hoped that this note will have some value.

Several termitophilous and myrmecophilous species also occur, these are now being worked out by Professor Silvestri of Portici.

Family JAPYGIDAE.

Japyx indicus Oudm.

Barkuda, several examples, 15-22.vii.16 (*Gravelly*).

Silvestri in a report on the Thysanura in the Indian Museum¹ records specimens of this species from Peradeniya in Ceylon. We also have specimens from Misty Hollow, 2200 feet, on the western side of the Dawna Hills (*Gravelly*, 22-30.xi.11), from Farm Caves near Moulmein² (*Gravelly*, 17.xi-4.xii.11), Lower Burma; and from the pass between Chaibassa and Chakradharpur in Chota Nagpur. Lefroy³ records a species of *Japyx* found among decaying vegetation and soil from Pusa in Bihar and Nagpur, and says that it is probably common throughout the plains. Judging from his figure and brief description, and the fact that Dr. Gravelly has taken specimens near Nagpur I think that Lefroy's species is probably *Japyx indicus*. It would seem that this is the common Japygid of the Indian plains and that it will eventually be found throughout Peninsular India, Burma, and Ceylon. These interesting insects by reason of their small size, larva-like shape and peculiar habits do not generally attract the attention of the ordinary collector and this seems to be the reason why little is known about them.

¹ *Rec. Ind. Mus.* IX, p. 52, fig. 1 (1913).

² Cf. Annandale and Gravelly, *Fourn. Asiat. Soc. Beng.* (n.s.) IX, p. 405 (1913).

³ *Indian Insect Life*, p. 44, fig. 2 (Calcutta: 1909).

Family MACHILIDAE.

A species similar to *Machilontus gravelyi* Silvestri¹ is fairly common in the house and on the shore of the island. It appears to be most abundant in August.

Family LEPISMATIDAE.

Acrotelsa collaris Fabr.

Barkuda, several examples, 15·22·vii·16; 25·vii-4·viii·17, (*Annandale* and *Gravely*).

This species is represented in the collection of the Zoological Survey of India from: Stilbrook Garden, Coonoor, Nilgiri Hills; Bangalore, 3000 feet, Mysore State (*Annandale*, 14·x·10); Rambha, Lake Chilka (*Annandale*, ix·13); Khurda Road, Orissa (*Gravely*, "at light," 13·xi·12); Barkul, 0-1000 feet (*Gravely*, "in bungalow," xi·12 and 1-3·viii·14), and Balugaon to Barkul in Orissa (*Gravely*, "from nest of *Stegodyphus sarasinorum*," 1·viii·14), Peradeniya, Ceylon (27·vi·10), Sasan, Kathiawar (*Agharkar*, 5-7·xii·12), Valvan and Kas, 3700 feet in the Satara District, Bombay Presidency; Pass between Chakradharpur, Chota Nagpur (*Gravely*, 2-4·iii·13), Allahabad, United Provinces (*Imms*, "in bungalow," 19·viii·07 and 2·iv·10), Calcutta (*Gravely*, "among old paper," 19·xi·10; *Annandale*, "in entomological room of museum," 29·vi·12 and 21·iv·14; *Annandale*, "museum wall," 1·xi·10, "museum compound," 11·xi·11; *Gravely*, "in house," 1·vi·12), Tollygunj near Calcutta (*Gravely*, xii·16); Ross I., Andamans (*Paiva*, "under flower pot," 26·iii·11); Municipal Office, Darjiling, 6000-7000 feet (*Carmichael* collection, 29·vi·14); Simla, 7000 feet, W Himalayas (*Annandale*, 12-13·v·13).

Acrotelsa collaris has a very wide distribution, having been recorded from the West Indies, Sa Guayra, Curaçao, Maracaibo, Dahome, the Seychelles, Java, Ceylon and Madagascar, and also occurs in most parts of India. We have no records of this species from Burma though it probably occurs there and also in Malaya. In 1906 the late Mr. Paiva wrote² that "it may be quite common in houses among old books, etc., but very few specimens have been collected in Southern Asia." Further investigation seem to show that this is one of the commonest fish-insects in houses in Peninsular India, and the above list of localities where it has been collected prove that Paiva's remarks are no longer applicable to this Lepismatid. Lefroy³ states that *Lepisma saccharina* is apparently the Himalayan species, but as the Indian Museum has no specimen of this cosmopolitan fish-insect from the Himalayas, though fairly extensive collections of Thysanura have been made there, and I can find no record of it from India in the

¹ *Zool. Anz*, XL, p. 6 (1912).

² *Journ. Asiat. Soc. Beng.* (n. s.) II, p. 346 (1906).

³ *Indian Insect Life*, p. 45 (Calcutta: 1909).

literature I am inclined to doubt that it occurs in India at all. But further observations must be made before a definite opinion can be expressed.

***Ctenolepisma longicauda* Esch.**

Barkuda, two examples, 15-22.vii.16 (*Gravelly*).

The Indian Museum has specimens from Bangalore, 3000 feet (*Annandale*, 16.x.10); Marikuppam, 2500 feet, S. India (22.x.10), Kulattupuzha, western base of Western Ghats, Travancore (*Annandale*, "on wall of bungalow," 19.xi.08); Waltair, Madras Presidency (*Kemp*, v.10); Calcutta (*Annandale*, "museum house," vii.11 and 11.1.12); Allahabad (*Imms*, 14.viii.10), Sarah, Nepal Terai (24.ii.08); near Bhowali, Kumaon, 5200 feet, W Himalayas (*Imms*, "in house," viii.09); base of Dawna Hills, Amherst District, Lower Burma (*Annandale*, 1.iii.08). This species is also recorded by *Silvestri*¹ from Peradeniya in Ceylon, Siliguri in N. India and Darjiling, but I cannot find the specimens from these localities in the Museum collection. *C. longicauda* appears to be widely distributed in British India and often occurs in company with *Acrotelsa collaris*.

¹ *Rec. Ind. Mus.* IX, p. 57 (1913).

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