

THE NEUROPTEROID INSECTS OF BARKUDA ISLAND.

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Under this convenient title I propose to give a list of the various net-winged insects other than dragonflies and termites at one time included in the order Neuroptera, that have been taken on Barkuda. The Myrmeleonidae are the only family at all well represented on the island. Three species of *Palpares*, and two of *Acanthoclis* only were captured, but it is probable that a few smaller species belonging to other genera also occur. All the species have been carefully compared with authentically named specimens in the collection of the Zoological Survey of India.

Family EPHEMERIDAE.

An Ephemerid is abundant in the rains, breeding in the lake and in the pond. It is probably a species of *Caenis*.

Family HEMEROBIIDAE.

The only Hemerobiid taken on the island is a species of *Sisyra* on which Dr. Annandale remarks: "The insect is certainly a *Sisyra*, but is distinct from the only described Indian species, *S. indica* Needham¹. Its larva is parasitic on the sponge, *Spongilla alba*, in the pond on Barkuda, but leaves the water before pupating and spins a small cocoon on a blade of grass or some similar situation, often at a distance of several yards from the edge of the pond." Notes on the association of Indian *Sisyra* with sponges are given by Annandale in *Journ. As. Soc. Beng.* (n.s.) II, p. 194, 1906.

Family MYRMELEONIDAE.

Acanthoclis horridus Wlk.

Barkuda, 2 examples, 13-19-ix-19 (*Gravelly*).

Represented in the collection of the Zoological Survey of India from Cherria Island in Lake Chilka and Sibsagar in Assam. The species is fairly common on Barkuda, being found generally on the foliage or branches of the pipal tree (*Ficus religiosa*).

Acanthoclis edax Wlk.

Barkuda, 1 example, viii-19 (*Gravelly*).

¹ *Rec. Ind. Mus.*, iii, p. 206, 1909.

Represented in the Museum collection from Ramnad in South India, and Rambha in the Ganjam district.

Palpares contrarius Wlk.

Barkuda, 1 specimen, iv-20 (*Dover*).

The Museum has specimens from Khurda Road in Orissa, Coorg in South India, 2,000 feet, and the Koyna Valley in the Satara District of the Bombay Presidency. The example was taken on the trunk of the Banyan (*Ficus bengalensis*).

Palpares pardus Rbr.

Barkuda, many examples, 24-x-20 (*Annandale*); 12-x-20, 27-x-20 (*Annandale*, "at light") 3-19-ix-19 (*Gravelly*).

Represented in the Museum collection by specimens from Sikkim, Purulia in the Manbhum District, Ambaoli in the Ratnagiri District, Purneah District, Khurda Road, Rambha in Ganjam, Barkul on Lake Chilka, Dehra Dun and Bangalore. Apparently a widely distributed species in India, common on Barkuda, where it is often taken fluttering round lamps.

Palpares patiens Wlk.

Barkuda, 1 specimen, 15-22-vii-16 (*Annandale* and *Gravelly*).

This seems to be an extra-Indian species of which we have examples from Bushire and Seistan in Persia. After careful comparison I am unable to separate the Barkuda specimen from Persian examples.

Family NEMOPTERIDAE.

Croce filipennis Westw.

Barkuda, 1 example, 20-22-vii-20 (*Annandale*).

The Indian Museum possesses specimens of this handsome little insect from Calcutta, the Purneah District and Lucknow. In Calcutta it is often very common about April, and large numbers may sometimes be taken at dusk. In the day, as a general rule, they are found singly, resting on walls and window panes. The species is rare on Barkuda.¹

¹ Cf. Lefroy, *Fourn. Bomb. Nat. Hist. Soc.* XIX, p. 1005, 1910, for notes on the food and the larva of this species.