

ON THE AQUATIC STICK INSECT *CERCOTMETUS*  
*PILIPES* DALL (HEMIPTERA : NEPIDAE)

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(With 3 Text-figures)

INTRODUCTION

Aquatic nepids pose a serious menace in fish cultural operations by destroying fish fingerlings and even small fishes. Effective control of mosquito larvae can be carried out by these insects. On account of the above mentioned importance, in the present paper a detailed description of *Cercotmetus pilipes* Dall, hitherto not been reported from India is given.

***Cercotmetus pilipes* Dall**

(Text-fig. 1)

1849. *Ranatra* (*Cercotmetus*) Dall, *Tr. E. S.* p. 2.

1908. *Cercotmetus pilipes* Montand, *Bull. Soc. Sci. Bucarest*, XII, 110.

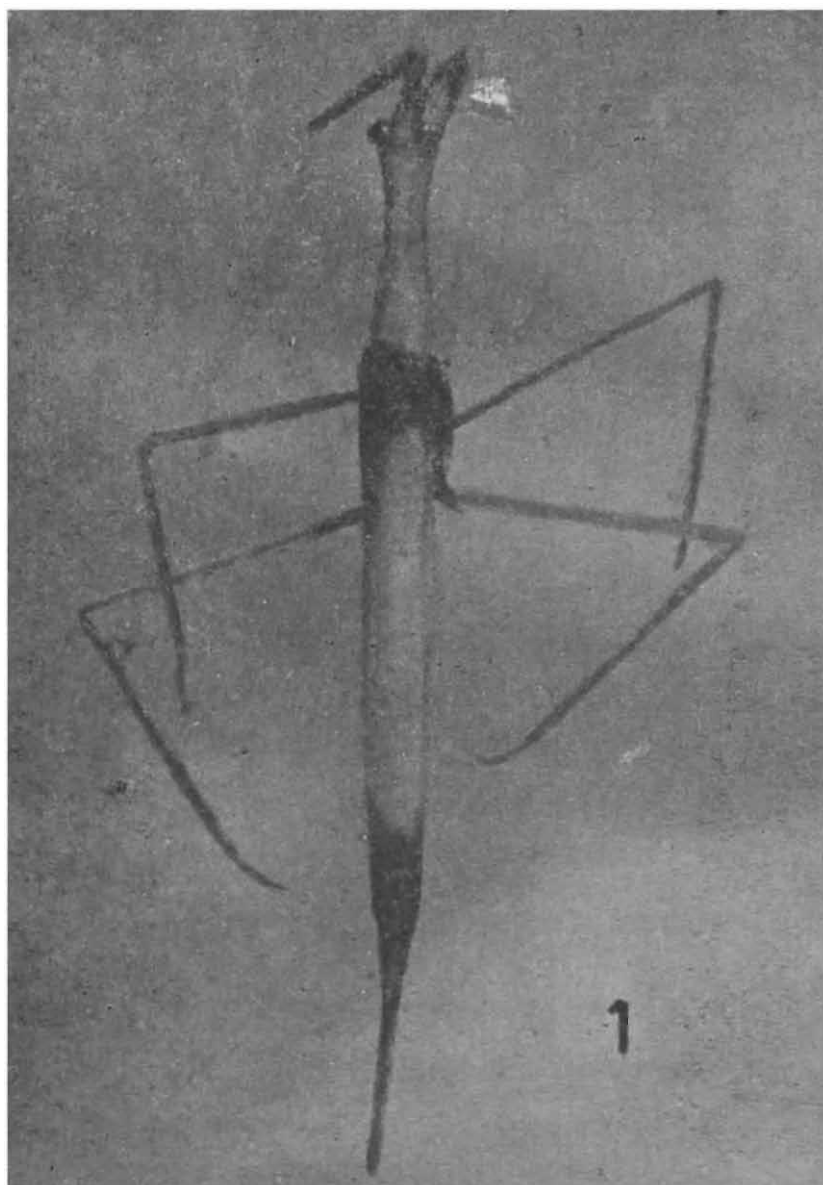
MATERIALS AND METHODS

Four adult insects were collected from a slow running canal on 9th August and two on 14th September, 1978 from a pond both in Chackai about 4 km west of Trivandrum city. The figures were drawn with the help of a camera lucida and the specimens are deposited in the Museum of the Department of Aquatic Biology & Fisheries, Aquarium, Kerala University.

*Measurements* : Body length : 44 mm (excluding anal appendages), Head length : 2 mm, width : 4 mm, Thorax length : 15 mm, width : 5 mm, Abdomen length : 24 mm, width : 4 mm, rostrum : 3 mm, respiratory filament : 11 mm, wings : 21 mm, Legs : 20 mm, 26 mm, 36 mm.

*Description* : Body elongated, cylindrical. Length 44 mm and maximum width 5 mm across the thoracic region.

Colour yellowish brown or dark brown. Legs banded with pale brown markings. Head prognathous, small and subconical. An acute tubercle on the vertex between the eyes.



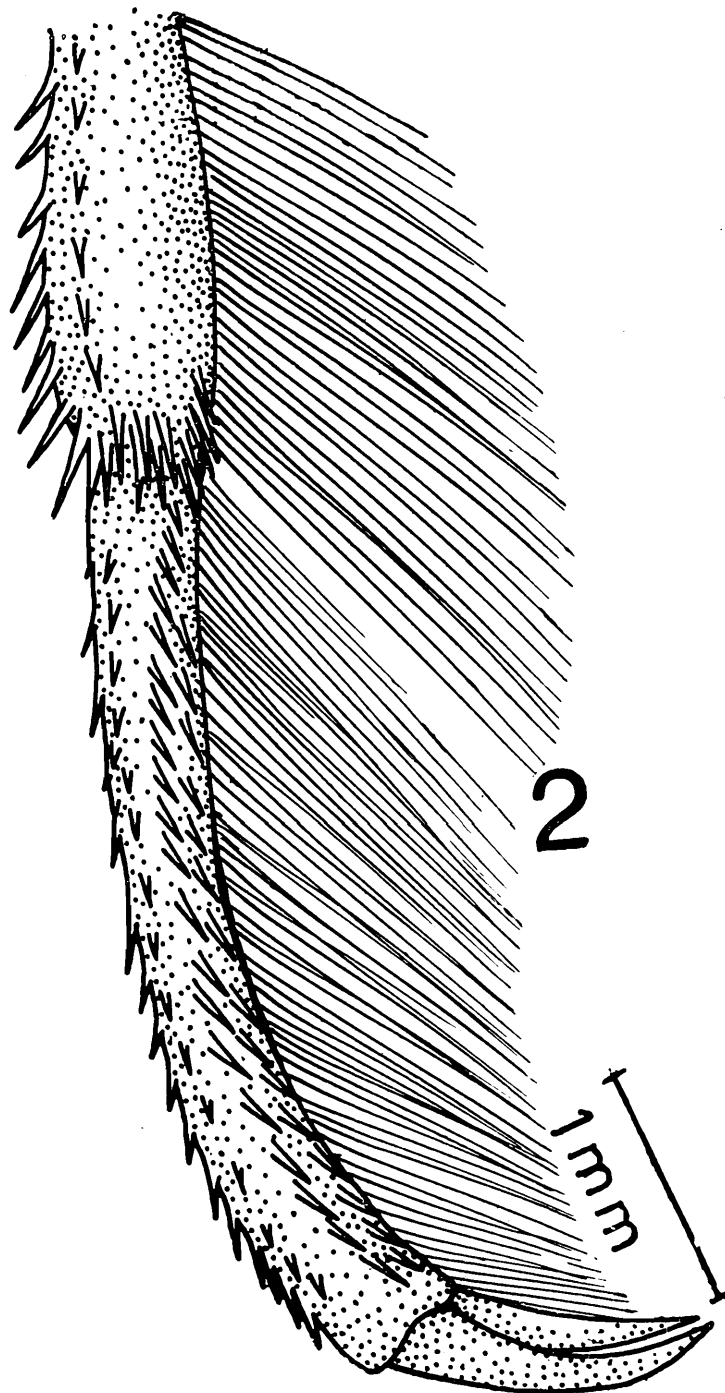
*Cercotmetus pilipes* Dall

Text-fig. 1. Adult

Eyes large, rounded, prominent and placed anterolaterally. Ocelli absent. Mouth parts are greatly modified to form a three-jointed piercing and sucking beak inserted near the anterior end of the head. Antenna small, three-segmented and hidden.

Prothorax narrower than head. Narrower anteriorly and progressively broader posteriorwards. Elongated, slender and free. Meso and metathorax are united. Prosternum with two deep, long longitudinal furrows extending its whole length. The front coxae inserted at the front margin of the prosternum. Coxae are shorter. Forelegs are strongly prehensile and claws are absent. Femur of the foreleg is considerably shorter than the pronotum, stouter and the tibia and tarsus may be folded back against the femur. The whole set up thus acts as a scissor. Pronotum longer than the intermediate femora. The mid and hind legs are longer and adapted for walking. Beset with

a double row of spines laterally and fringed with a double row of regularly arranged long yellow hairs on the inner sides (Text-fig. 2). Tarsi one-segmented bearing spines and hairs and paired claws are present.

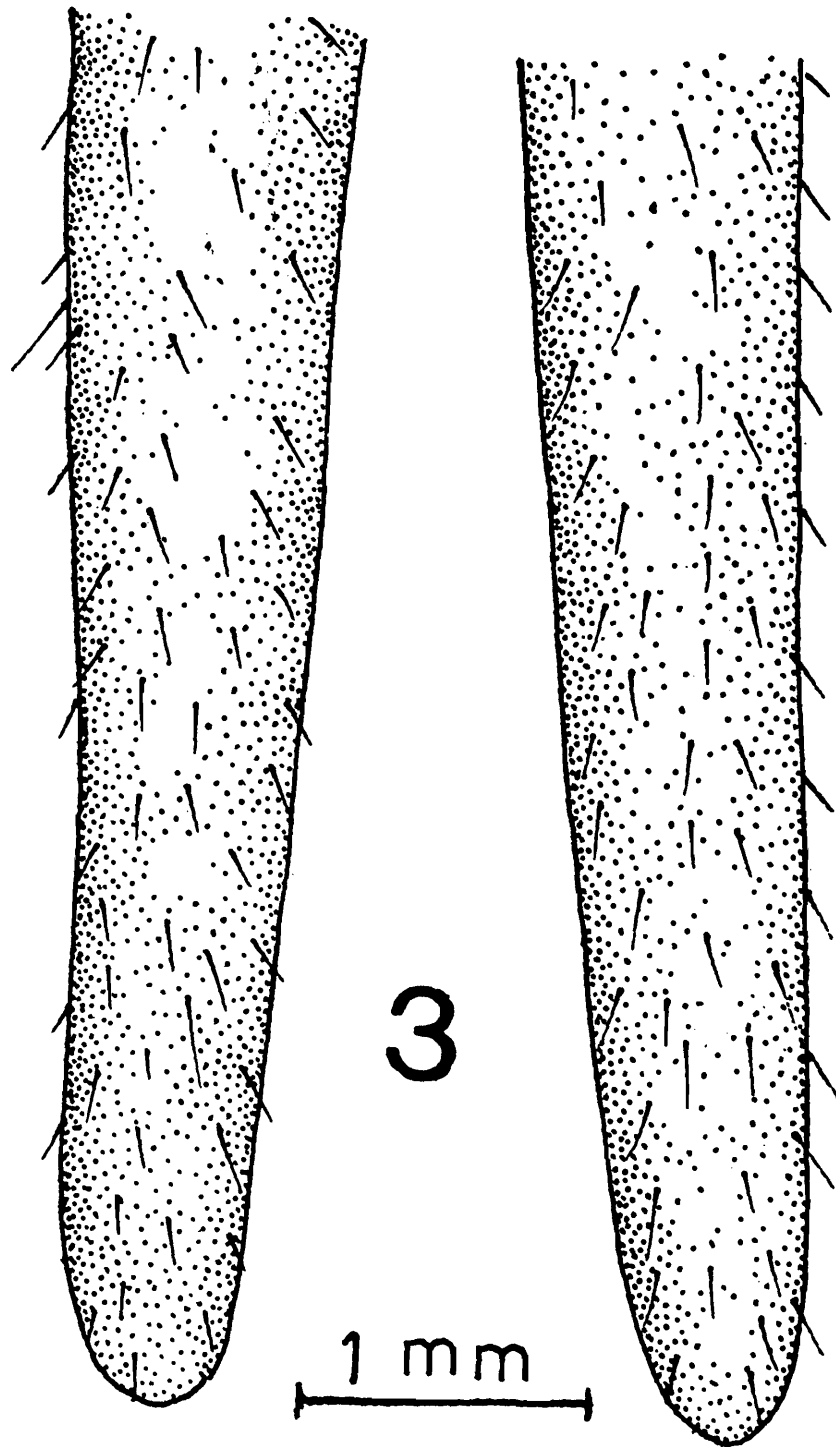


*Cercotmetus pilipes* Dall

Text-fig. 2. Hind tibiotarsus showing long yellow hairs

Abdomen slender, elongated and cylindrical. The two pairs of wings are straw yellow in colour and are folded back over the abdomen. Hemelytra not reaching the apex of the penultimate abdominal segment. Membrane of the hemelytra reticulately veined. Ventral part of the abdomen brownish in colour with sloping lateral sides. The abdomen beneath strongly keeled, the keel continued upwards along the sternum,

disappearing about the centre of the mesosternum. Three pairs of false spiracles are present on the third, fourth and fifth segments ventrally. Posterior end of the abdomen bears a pair of caudal filaments which a striking feature of the family (Text-fig. 3). They are very short, not more than  $\frac{1}{4}$ th the length of the body, broad, compressed and strongly pilose externally.



*Cercotmetus pilipes* Dall

Text-fig. 3. Distal end of the caudal filaments enlarged

*Biological note* : *Cercotmentus pilipes* is a comparatively rare species as compared with cosmopolitan *Ranatra filiformis*. Linear and elongated this species closely resembles floating straws and sticks. They are inconspicuous owing to their protective colouration against the back-

ground of dead leaves, decaying vegetation and also because of their sluggish movements. They usually cling on to the substrate but remain in close contact with the surface film. They differ from *Ranatra filiformis* in the darker colour, larger size, shorter coxae and the shorter fore femora. The eggs resemble those of *Ranatra filiformis* and are laid on the stems of aquatic vegetation just like *Ranatra filiformis*. Each egg bears two long thin filaments at its apex, and is laid inside the stems floating on the water. These bugs are highly voracious and attack fish fry, tadpoles, mosquito larvae and even small fishes.

*Previous record* : Bhutan.

*Remarks* : *Cercotmetus pilipes* has been previously collected by Dall (1849) and Montand (1903) from Bhutan. Based on the description of *C. pilipes* by the above authors Distant (1906) has given a brief description of this species in the Fauna of British India. Since the previous description is brief without proper illustrations a more detailed description with appropriate diagrams are given in the present study.

The present specimen differs only in the length of the body (44 mm) which is longer than the specimens collected from Bhutan (41 mm) and the colouration. Previously described insects have yellowish brown colouration while the present collection represented both yellowish brown and dark brown specimens. This species is apparently quite distinct from any other *Cercotmetus* species by virtue of the presence of the border of long yellow hairs to the intermediate and posterior tibiae and tarsi.

#### SUMMARY

Full illustrated description of the aquatic nepid *Cercotmetus pilipes* Dall which has, hitherto not been reported from this country is presented on the basis of materials collected from a slow running canal and a pond in Trivandrum, Kerala, India.

#### REFERENCES

- DALL, 1849. *Ranatra (Cercotmetus)*. *Tr. E. S.* p. 2.  
MONTAND, 1903. *Cercotmetus pilipes*. *Bull. Soc. Sci. Bucarest*. **12** : 110.  
DISTANT, W. L. 1906. The Fauna of British India including Ceylon and Burma, Rhynchota, III. Taylor and Francis, London.