



FIRST RECORD OF *ANISOPS TAHITIENSIS* LUNDBLAD (HEMIPTERA: NEPOMORPHA: NOTONECTIDAE) FROM MAINLAND INDIA

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INTRODUCTION

The Notonectidae is one of the largest families of the Nepomorpha with eleven genera and 400 described species (Henry, 2009), represented well in both temperate and tropical areas of the World (Nieser, 2004). The genus *Anisops* Spinola, 1837 is characterized by hair-lined pit on the hemelytral commissure, one segmented fore tarsi on both the sexes and the presence of rostral prong as well as stridulatory comb on fore tibia of males. They are adapted to swim with their back, thus bearing the common name back swimmers and some species are generally attracted to light. Thirumalai (2007) recorded 19 species of *Anisops* from India, subsequently Jehamalar and Chandra (2013) added one more species to the Indian fauna by recording *Anisops occipitalis* from Great Nicobar Island. Out of the 20 species, 19 species including the present record of *A. tahitiensis*, are known from mainland India, out of which 14 species of *Anisops* including the new record are known from West Bengal that contributes about 70 percent of *Anisops* from India. Distribution records are highly essential to understand the zoogeography, interestingly the present record of *Anisops tahitiensis* from mainland India is very important to understand the distribution, dispersion and the intrusion of southeast Asian elements into India.

Backswimmers (Notonectidae) are very aggressive predators, that attack many pelagic and benthic invertebrates, including their own larvae, invertebrates that fall onto the water surface

(larvae and adults of various insects, mites, small crustaceans, annelids, and molluscs), and small vertebrates like fish larvae and amphibian tadpoles (Giller, 1986). They are predators of mosquito and some other blood-sucking Diptera (e.g., Ceratopogonidae) larvae and pupae, which they attack as surface prey (Papáček, 2001).

MATERIALS AND METHODS

In the present study, the specimens have been collected by using aquatic insect net from a sewage fed pond (a part of East Kolkata wetlands) at Anandapur, Kolkata, West Bengal. The specimens were preserved in 75 percent ethanol, studied and photographed through Leica Stereozoom microscope using the software Leica Application Suite (Las V 3.8). The studied materials are deposited in National Zoological Collection, Hemiptera Section, ZSI, Kolkata.

RESULTS

- Infraorder NEPOMORPHA Popov, 1968
Superfamily NOTONECTOIDEA Latreille, 1802
Family NOTONECTIDAE Latreille, 1802
Subfamily ANISOPINAE Hutchinson, 1929
Tribe ANISOPINI Hutchinson, 1929
Genus *Anisops* Spinola, 1837
Anisops tahitiensis Lundblad, 1934
1934. *Anisops tahitiensis* Lundblad, *Bull. Bishop. Mus. Honolulu*, **113**: 121.
2013. *Anisops tahitiensis* Lundblad: Jehamalar & Chandra, *Rec. zool. Surv. India*, **113** (Part-2): 57.

Material examined: INDIA, West Bengal, Kolkata, Anandapur, East Kolkata Wetlands, 22.xi.2012, (2♂, 1♀ exs.), Coll. Paulami Maiti and Durba Bhattacharya.

Diagnosis: (Figs. 1A–C) *Male:* Length, 5.27 – 5.40 mm; colour: yellowish white to black, wings yellowish white to hyaline; synthlipsis about one third the anterior width of vertex (Fig. 1A); head anteriorly slightly truncate; tylus slightly swollen with blunt carina, rostral prong longer than third rostral segment, originating middle of the segment, tip of the prong anteriorly curved upward (Fig. 1B); stridulatory comb on fore tibia of males with 23–34 teeth (Fig. 1C); scutellum often with three dark brown longitudinal rectangular bands, prominent in alcohol. *Female:* Length, 5.56 mm; tylus slightly convex; females slightly larger than males.

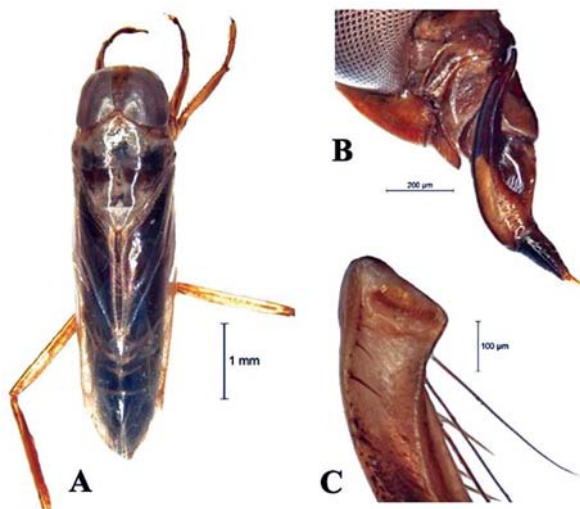


Fig. 1. A–C *Anisops tahitiensis*: A, male, dorsal view; B, male head tip, showing rostral prong; C, base of male fore tibia, showing stridulatory comb.

Distribution: INDIA: Andaman and Nicobar Islands and West Bengal. *Elsewhere:* Australia, French Polynesia, Japan, Malaysia, Singapore, Solomon Islands and Vietnam.

Remarks: Yang & Kovac, 1995 and Nieser (2004) remarked that this species is found only in lentic waters, but the first author collected this species from slow flowing forest streams of Great Nicobar Island and in the present study, it has been collected from a sewage-fed pond of the East Kolkata Wetlands, West Bengal. *Anisops tahitiensis* can be easily distinguished from the other closely resembling species *Anisops paranigrolineatus* by its smaller anterior width of vertex, pale colour of scutellum and the long and apically curved rostral prong.

DISCUSSION

A total of 20 species of the genus *Anisops* are known from India. Last revisionary work on this genus was done by Brooks (1951), where in 19 species were included from India and later on no species has been newly described from India despite of thorough surveys undertaken throughout the country. So, the knowledge on *Anisops* of India is quite good. The present finding of *A. tahitiensis* is a quite interesting because it has been reported from Kolkata, a place which is considered as a well explored area on water bugs. This study reveals that faunal surveys are essential even for the areas considered to an explored one, which will help in understanding faunal distribution and dispersal patterns. Although *A. tahitiensis* Lundblad is distributed throughout the Great Nicobar Biosphere Reserve, yet it has been rarely recorded from Andaman Islands. This species shows a discontinuous distribution and it is thus important to study its dispersal route.

ACKNOWLEDGEMENT

The authors are thankful to the Director, Dr. K. Venkataraman, Zoological Survey of India Kolkata for facilities and encouragements. A part of this work is funded by UGC, New Delhi.

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