

Short Communication

Redescription of *Cyclestheria hislopi* (Baird, 1859) (Crustacea: Branchiopoda: Diplostraca: Cyclestherida) from Chennai, Tamil Nadu

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Key words: *Cyclestheria*, Clam Shrimp, redescription, Branchiopoda.

Conchostracans are commonly known as “Clam Shrimps” because their superficial resemblance with that of bivalved molluscs. There are five families established under this group and their interrelationships to each other are unclear until today. All of them possess a bivalved carapace with two valves joined by a strong adductor muscle. Reduced abdomen and their ability to be completely enclosed within a bivalved carapace is the key and unique character which isolate this group from other anostracans and notostracans

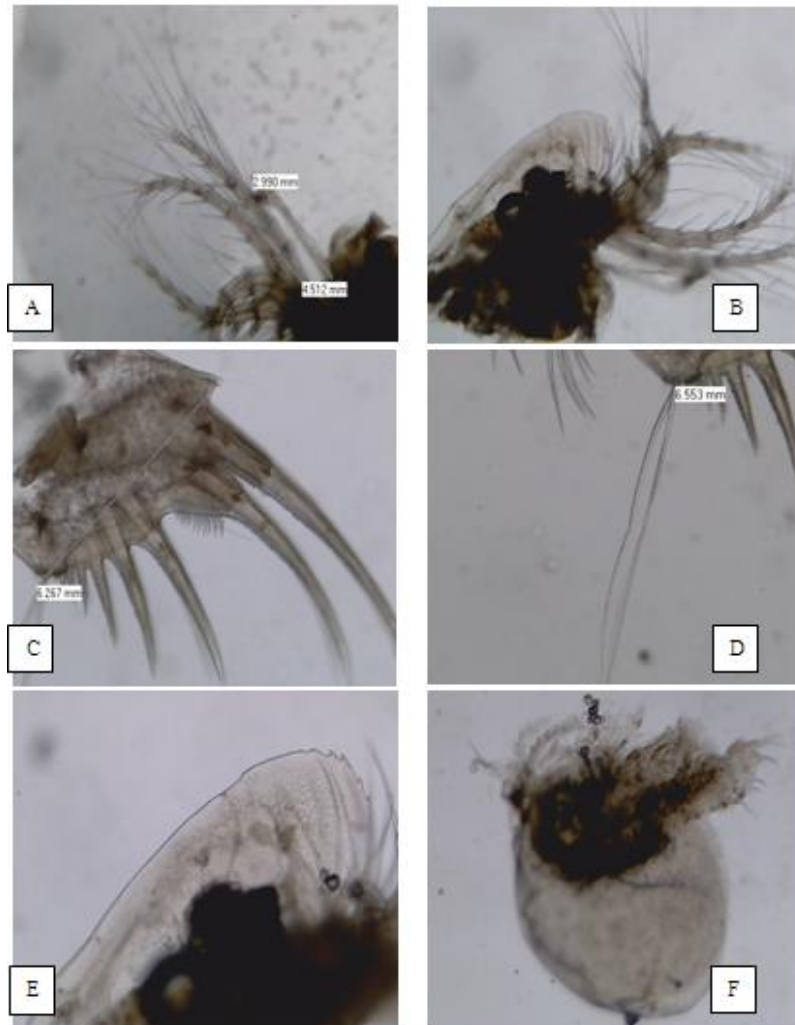
The conchostracans are commonly found as free swimming littoral animals in lakes, ponds and temporary fresh water pools. As a group they have a wide geographic distribution record. They are usually found during the late spring and summer months of the year in the temperate zones.

The suborder laevicaudata, spiucaudata and cyclestherida are formerly known as the order conchostraca (Martin and Davis, 2001). *Cyclestheria hislopi* is the only one member of the family cyclestheridae and the suborder cyclestherida is reported from some

permanent water bodies and it is associated with aquatic vegetation. *C. hislopi* is basically a circumtropical species. They are distributed in the warmer parts of the world (Sisson, 1980). It occurs in open waters also. The habitat preferences of this group seem to be unusual (Timms, 1986).

Chenglepet and Pallikaranai lakes are rich in aquatic vegetation mostly during September month. The Chenglepet lake was muddy and mostly polluted by cattle wastage. The organisms were collected using 100 µm and 120 µm mesh size plankton nets near the littoral sites where aquatic vegetation was spread over. Zooplankton samples were fixed in 4% formalin for taxonomical identification.

First antenna of the female is tubular, where the setation restricted up to distal tip. First thoracopod of male is modified as claspers, second thoracopod is unmodified. Head without stalked dorsal organ protruding anterodorsally. Embryos were always carried within the valves of carapace. *C. hislopi* has circular bivalved carapace with simple tubular first antenna (2.9 mm) and serrated anterodorsal border of the rostrum (Fig. 1). The trunk of the



Figures: A. Head with antennae, B. Antennae, C. Telson, D. Telson- biramous filament, E. Serrated antero dorsal border, F. Embryo.

conchostracan terminates into a broad truncate telson which bears spines. These are the key characteristic features of the organism. The developmental stages of *Cyclestheria* sp. are unique and occur within the confines of the carapace valves.

C. hislopi was first described by Baird (1859) from fresh water bodies located in India and reported later from other Asian localities as well as from Australia, North

Central and South America and Africa (Olesen *et al.*, 1996).

C. hislopi has been referred as a “link species” between the group conchostraca and cladocera because of the similarity in their mode of development, referred as the direct development in dorsal brood chamber of the individual. Similar type of compound eyes also resemble that of cladocera eyes (Olesen *et al.*, 1997; Olesen, 1998).

Systematics

Class : Branchiopoda
Order : Diplostraca
Suborder : Cyclestherida
Family : Cyclestheridae
Genus : *Cyclestheria*
Species : *hislopi*

Out of the plankton collection carried out from the two lakes no males were found. Among the four females encountered from these lakes two were fully matured with embryos embedded inside. The other two were small in size without the eggs. The size of the small individuals measured as 1.1 mm and large female carrying well developed embryos were measured as 3.3 mm. Second antenna is longer (4.5 mm) than the first antenna (2.9 mm). The width of the telson was 6.3 mm and the length of the biramous filament was 6.6 mm. Inside the carapace, fully developed embryos (VIII post larval stages) were present. Embryonic development within the valves of the carapace is the unique character for conchostracan.

The suborder spinicaudata reported from East Asia reviewed by Naganawa (1999). Records from South East Asia included only circumtropical species. *C. hislopi* reported from Thailand (Junk, 1977), from unspecified localities in Java, Sumatra and Sulawesi by Olesen *et al.* (1997). *C. hislopi* already been reported from India, Cambodia, America, Africa and Australia (Olesen *et al.*, 1997; Nayar and Nair (1968) reported *C. hislopi* and *L. brachyurus* from southern India and described two species of spinicaudatans from India as well. Prasad and Simhachalam (2009) also reported the *C. hislopi* from Nagpur. *C. hislopi* has circumtropical distribution. Based on the known distribution of *C. hislopi*,

redescription of the species collected from Chennai is not surprising.

Acknowledgements

We thank UGC [No. F.33-362/2007(SR)] for financial assistance.

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