



Two new species of Spinicaudata (Crustacea: Branchiopoda) in south India with a key to *Leptestheriella* and *Eocycticus*

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Abstract

Five species of *Leptestheriella* (Daday 1923) have been described from India, but variability in many characters suggests only two are valid: *L. nobilis* (Sars 1900) and *L. sarsi* Daday 1923. We add *Leptestheriella simhadrii* **sp. nov.** which is distinct in its carapace and growth line ornamentation and in females of having the endopodital palp on the fifth endite of the third thoracopod slightly longer than the sixth endite. A key is provided to distinguish the three species. Eight described and one unconfirmed species of *Eocycticus* (Daday 1915) have been reported from India. We add *Eocycticus palpalis* **sp. nov.** from south India and present a key to local species. *Eocycticus palpalis* **sp. nov.** is distinct by reason of its ornamentation of the carapace, the presence of a palp on the fourth endite of the third thoracopod and the fifth endite of the sixth and seventh thoracopods which bears a palp and plumose setae in males.

Key words: Spinicaudata, *Leptestheriella simhadrii*, *Eocycticus palpalis*, Racharla in Andhara Pradesh, India, Crustacea

Introduction

There are about 200 species of clam shrimp (Spinicaudata, Laevicaudata, Cyclestherida) world-wide (Belk 1982; Garcia & Pereira 2003; Brendonck *et al.*, 2008) grouped into five families: Cyclestheriidae (Cyclestherida), Cyzicidae, Leptestheriidae, Limnadiidae (Spinicaudata) and Lynceidae (Laevicaudata) (Negrea *et al.*, 1999, Martin 1992, Martin & Davis 2001). Thirty seven species of these are known from India (Durga Prasad & Simhachalam 2009; Subhash Babu & Bijoy Nandan 2010) arranged in nine genera: *Cyclestheria* (1 species), *Eocycticus* (8), *Caenestheria* (1), *Caenestheriella* (6), *Sewellestheria* (1), *Leptestheria* (3), *Leptestheriella* (2), *Eulimnadia* (10), and *Lynceus* (5).

Leptestheriella is represented by five species in India: *L. nobilis* (Sars 1900), *L. hendersoni* (Sars 1900), *L. sarsi* Daday 1923, *L. gigas* Karande & Inamdar 1960 and *L. maduraensis* Nayar & Nair 1968. Each of the five species exhibit wide, somewhat overlapping, variation so that Durga Prasad & Simhachalam (2009) accepted only two of these as valid, *L. nobilis* and *L. sarsi*, but without substantiation, as did Brtek (1997) and Garcia and Pereira (2003).

Eocycticus is represented in India by one unconfirmed species (Karande and Inamdar 1964) eight confirmed species: *E. hutchinsoni* Bond 1934, *E. deterrana* Bond 1934, *E. pellucidus* Tiwari 1962, *E. plumosus* Royan & Sumitra 1973, *E. bouvieri* Daday 1915, *E. orientalis* Daday 1913, *E. dhilloni* Battish 1981, *E. acuta* Nayar 1965 and *E. orientalis* Daday 1913. The last one is also known from China and in the Indo-Malayan region (Fig. 7).

Clam shrimps have not been systematically collected from the Indian subcontinent. Moreover some species are poorly described, sometimes using age-dependent characters (such as number of growth lines, number of trunk segments), some lack type material, and sometimes type localities are not mentioned. This makes taxonomic comparisons difficult.

In this paper we add two species to the Indian fauna: *Leptestheriella simhadrii* **sp. nov.** and *Eocycticus palpalis* **sp. nov.**