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Description of a new subspecies, *Macrobrachium aemulum madhusoodani* (Decapoda: Palaemonidae) from Neyyar River, Kerala, S. India

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Abstract

Macrobrachium aemulum madhusoodani, a new subspecies of *M. aemulum* (Nobili, 1906) is described and illustrated. The distinctive characters of the subspecies are: rostral formula 9–13/2, second pereopods dissimilar in shape and unequal in size, movable finger of larger second pereopod with 2 large denticles on the proximal part and 6 weak denticles on distal part. Similar pattern of dentition is present on immovable finger also. In second small pereopod, fingers stout, equal, unarmed with distinct gap in between when closed. Numerous stiff setae present on cutting edges of fingers. Telson extends beyond the level of the outer lateral spine of the uropodal exopod. Some of the distinctive morphometric and meristic characters of the specimens did not conform to that collected and described from New Caledonia by Nobili (1906) and recorded from India by Jayachandran and Joseph (1988). Since the features cannot be reckoned as mere growth variations, it is described herein as a new subspecies.

Key words: taxonomy, Palaemonidae, *Macrobrachium*, Carapace, subspecies, India, Kerala

Introduction

Tiwari (1955) has described the distribution of 34 species of the genus *Palaemon* from India and Burma. Many of these Palaemonids are now transferred to the genus *Macrobrachium* Bate, 1868. According to Tiwari, the genus *Palaemon* has a marine origin and has invaded freshwater habitats by immigration from sea to the inland water bodies through rivers. The process of adaptation to a freshwater species can be found in estuaries and they still depend on brackish water for breeding. Several species have become completely acclimatized to freshwater and are found not only in streams, but also other inland water bodies. As per the IUCN Red List of Threatened Species, Version 2013.1., *M. aemulum* is known from New Caledonia and French Polynesia. There are also records from Kerala and Tamil Nadu in India (Jayachandran 2001), but these are considered doubtful in the justification part of the Red List. The species occurs in freshwater streams and rivers. In view of the wide distribution and the absence of any known, major threats, *M. aemulum* is considered to be a species with least concern.

During a survey for the study of Palaemonid prawns along the lower reaches of Southern Western Ghats, a biodiversity hot spot in the southwest coast of India, the present authors collected several species from the middle reaches of Neyyar River (>50 m Mean Sea Level). Among these, nine specimens shared some of the taxonomic characters with *M. aemulum* (Nobili, 1906) collected from New Caledonia by Nobili and from India by Jayachandran and Joseph (1988) and presented in the book Palaemonid Prawns—Biodiversity, Taxonomy, Biology and Management by Jayachandran (2001). However, several of the distinctive morphometric and meristic features did not totally conform to *M. aemulum* (Nobili, 1906), and cannot be treated as mere growth variations; hence described herein as a new subspecies of *M. aemulum*.

Materials and methods

During the survey of Palaemonid prawns of Neyyar River for diversity assessment, several species like *M.*