Keraladiaptomus rangareddyi a new genus and new species of Diaptominae (Copepoda, Calanoida, Diaptomidae) from a temporary pond in Mattam, Kerala State, India

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Abstract

Calanoid copepods, belonging to the new genus and species Keraladiaptomus rangareddyi, were collected from temporary ponds in Kerala State, India. The new genus belongs to the family Diaptomidae, sub-family Diaptominae. It is described in detail and its affinity to the related genera, Arctodiaptomus Kiefer, 1932 and Eodiaptomus Kiefer, 1932, discussed.

Introduction

In two plankton samples from Kerala State, India, collected by one of us (F. K. Kakkassery) and studied during an international training course on lake zooplankton (1992–1993) at the University of Ghent, several specimens of a hitherto unknown calanoid genus and species were found. The aberrant structure of P5 in both the sexes, especially in the female, makes it impossible to allocate the specimens to any of the existing diaptomid genera.

The new monotypic genus is described and compared with Arctodiaptomus Kiefer, 1932 and Eodiaptomus Kiefer, 1932, which appear to be its closest relatives.

Material and methods

Before dissecting, the habitus of specimens in glycerol was drawn and measured. Each specimen was dissected on a separate glass slide and the preparations were sealed with glycerel.

Four male and four female paratypes (from the type locality) were examined by scanning electron microscopy (SEM) using a Jeol JSM-840 microscope. The specimens were put through a series of ethanol for dehydration, critical point dried, mounted on stubs and sputter coated with gold. All drawings were made with a Leitz Laborlux D compound microscope fitted with a camera lucida.

Type material was deposited in the Department of Invertebrate Zoology, National Museum of Natural History, Smithsonian Institution, Washington, D.C., USA (USNM), the British Museum, Natural History, London, Great Britain (BMNH), the Muséum National d'Histoire Naturelle, Paris, France (MNHN), the Indian Museum, Calcutta, India (IM) and the Ecological Institute of the University of Ghent, Belgium (UG).
Fig. 1–9. Keraladiaptomus rangareddyi gen. nov. et sp. nov. 1. Female habitus, dorsal view; 2. Male habitus, dorsal view; 3. Female last prosomites and urosome, dorsal view; 4. idem, lateral view; 5. Female, Mandible; 6. Female, Gnathobase of mandible (arrow A: protruding lobe); 7. Female, Antenna; 8. Female, Antennule: segments 16–25; 9. Female, Antennule: segments 1–15.

Abbreviations used: P1–P5 for first to fifth pair of swimming legs; Exp3P1 for the third exopodite-segment of the first pair of swimming legs; type loc. for Mattam, the type locality; 2nd loc. for Irinjalakuda, the second locality.