# AMEIRA CONFLUENS N. SP. AND PARONYCHOCAMPTUS ANOMALUS N. SP. (COPEPODA, HARPACTICOIDA) FROM LAKE KOLLERU, SOUTH INDIA 

BY<br>Y. RANGA REDDY<br>Department of Zoology, Nagarjuna University, Nagarjunanagar - 522 510, India

During the course of an investigation on the free-living copepod fauna of Lake Kolleru, four new species were encountered, two of which have already been described (Ranga Reddy, 1979; Ranga Reddy \& Radhakrishna, 1982), and the remaining two are described herewith. All the specimens (adults) described below were picked out from the plankton samples collected from the surface and subsurface waters, using an ordinary plankton net made of No. 21 bolting silk.

The nomenclature and descriptive terminology used here are adopted from Lang (1948, 1965). All figures are made with a camera lucida. The abbreviations used throughout the paper are: A1 = antennule, A2 = antenna, Md. = mandible, $\mathrm{Mx} .=$ maxilla, $\mathrm{Mxl} .=$ maxillula, $\mathrm{Mxp} .=$ maxillipede, $\mathrm{P} 1-\mathrm{P} 6=\mathrm{leg}$ 1- leg 6, Exp. = exopodite, Benp. = baseoendopodite.

## Ameira confluens n. sp. (figs. 1-23)

Material. - $9 \uparrow \%, 50^{\circ} \circ^{\circ}$. One female, designated the holotype, is deposited in the Department of Zoology, Nagarjuna University, Nagarjunanagar, India, and the paratypes ( $3 \uparrow \subset$, $20^{\circ} 0^{\circ}$ ) are in the British Muscum (Natural History), London (No. 1982: 273).

Female (figs. 1-18). - Total length $0.54-0.71 \mathrm{~mm}$, average 0.61 mm . Body (fig. 1) slender, prosome only slightly broader than urosome; no sharp demarcation between prosome and urosome. Head and 1st pedigerous segment fused to form cephalic somite, which is as long as the succeeding 3 pedigerous segments combined. Greatest diameter of the body at the posterior border of the cephalic somite, which slowly attenuates anteriorly and ends in a small, rounded rostral projection in front. Epimeral plates of pedigerous segments 2-4 rounded.

Urosome (fig. 3) 4-segmented; genital double-somite subdivided by a transverse suture, and as long as the succeeding two segments; anal segment shorter than the preceding one. At the posterior margins of the genital segment and the following two segments, there is a transverse row of spinules, interrupted only middorsally. Anal operculum perfectly smooth. Caudal rami
slightly broader than long (5:4) and the articulation with the anal segment armed with a transverse row of spinules both on the dorsal and ventral aspects (figs. 3, 5). Each ramus with 6 setac; of the 3 apical setae, the middle one slightly exceeds the urosome in length and stretches over twice the length of the outer apical seta; the inner apical seta and the distal lateral seta of equal length; the proximal lateral seta and dorsal seta of same length and shorter than the others. Relative lengths of the urosomites are as follows:

| $1+2$ | 3 | 4 | 5 | caudal rami |
| :---: | ---: | ---: | ---: | :---: |
| 29 | 15 | 13 | 8 | 5 |

Details of genital field are depicted in fig. 4.
A1 (fig. 6): 8-segmented, as long as the cephalic somite, slightly curved, and posterolaterally directed. Segment 4 with an aesthetasc, which extends beyond the apex of the last segment.

A2 (fig. 7): Basis and 1st segment of enp. separated by a faint septum. Internally, the basis bears a few spinules and a seta. Exp. small, unsegmented, with its terminal part slightly dilated, bearing 2 strong setae, one of which is terminal and the other subterminal. Enp. 2-segmented, distal segment longer and slightly dilated distally, with 6 terminal setae, of which the outermost and the innermost ones short and non-geniculate; the outermost seta fused with its immediate neighbour at base; in addition, the distal segment of enp. spinulose on both margins and with 2 short, internal, subterminal spines.
Md. (fig. 8): Precoxa produced into a slender cutting edge, bearing a few fine teeth and a seta. Palp very small; coxa-basis short, with 1 long, sturdy seta, which is slightly swollen at its base, and hairy. Enp. unsegmented with 4 equally long and slender setae.
Mxl. (fig. 9): Arthrite well developed with 7 spiniform setae; a pair of short setae arises from the distal external angle of the arthrite; coxa and basis with a distinct endite each, carrying 2 and 3 setae, respectively. Enp. represented by a single seta, and exp. by a pair of unequal setae.
Mx. (fig. 10): With 2 endites; coxal endite small with 3 setae, the basal endite stronger and coalescent with a strong, curved spine beset with a spinule. Enp. represented by one seta only.

Mxp. (fig. 11): Chelate; coxa with a distal internal seta; basis slightly swollen, with fine spinules along its outer margin; enp. 2-segmented, basal segment small, apical segment in the form of a slender, acutely pointed dactylus, which is nearly as long as the basis.

P1 (fig. 12): Basis with an external seta and an internal spine and spinulose posterior border. Both exp. and enp. 3-segmented. In the exp., the proximal and middle segments bear an external spine each and no internal seta; the terminal segment with 3 external and 2 apical appendices. In the enp., the proximal segment longer than the combined length of the distal two segments, reaching only up to the middle of the terminal segment of the exp., and having

