A NEW SPECIES OF RHINEDIAPTOMUS KIEFER (COPEPODA, CALANOIDA) FROM SOUTH INDIA

BY

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The genus Rhinediaptonus was established by Kiefer (1936) and it is still known to be monotypic with R. indicus Kiefer. A plankton sample obtained from a pool at Mahanandi, a pilgrim centre 12 km from Nandyal town (15°30'N 78°29'E) in Andhra Pradesh, South India, on 23 July 1974, contained large number of specimens of this genus. A critical examination of same indicates that, in spite of some close similarities to R. indicus, they possess certain unique morphological features justifying the description of a new species, which is named after its type locality as Rhinediaptonus mahanandiensis, in the present paper.

Rhinediaptonus mahanandiensis n. sp. (figs. 1-10)

The holotype has been deposited in the Department of Zoology, Nagarjuna University, Nagarjunanagar, and the paratypes (5 females and 5 males) in the British Museum (Natural History), London, (nos. 1978.244-252).

Female

Total length ranging from 1.64 to 1.72 mm, average of 20 specimens 1.65 mm. Body (figs. 1-2) rather stout, greatest width at the posterior margin of the second pedigerous segment. Head separate from first pedigerous segment, narrow, and rounded anteriorly. Fourth and fifth pedigerous segments completely fused; metasomal wings small and asymmetrical, the left wing being more produced than the right one; each wing with a pair of hyaline spines, one of which is postero-lateral and the other internal and drawn over the dorsum; spines of both wings equal in size.

Urosome (fig. 3) three-segmented; genital segment longer than the other segments, including the caudal rami, combined and bearing a small hyaline spine proximally on either side; second urosomite smallest; third or anal segment dilated at both ends and narrow in the middle. Caudal rami parallel, 1.25 times as long as broad, and furnished with hairs along inner and outer margins. Caudal setae normal.

Rostrum (fig. 2) short and bearing a pair of small ventro-posteriorly directed spines.
Both antennules are identical and 25-segmented, reaching a little beyond the apices of the caudal rami. Proportional lengths of the segments, arrangement and number of setae, spines, and aesthetascs, are shown in fig. 4.

The structure of the antennae, the oral parts and the natatory legs is in conformance with the typical diaptomid pattern.

The fifth pair of legs (fig. 5) is symmetrical; the coxa bears a small hyaline spine at its distal outer corner; the basis is smaller than the coxa and carries on its external margin a seta which is much shorter than the first exopodite-segment; first exopodite-segment longer than broad, the second segment (i.e., the end claw) carries short, stiff hairs along its outer and inner margins; the third segment is very small with a pair of unequal spines. In addition, a small spine arises from the outer proximal corner of the end claw. Endopodite distinctly two-segmented with its apex triangular, having a circlet of short fine hairs and an external spinule in the subapical position.

The ovigerous female bears a single, ventral, roughly oval egg sac (fig. 6) with a deep furrow in the middle. It carries about 50 individual eggs.

Male

Total length ranging from 1.37 to 1.51 mm, average of 20 specimens 1.48 mm. Body more slender, but otherwise resembles the general body form of the female. Metasomal wings less conspicuous and slightly asymmetrical; each wing bears a pair of small, delicate spines, the lateral spine of the right wing being stronger than the others (fig. 7).

Urosome 5-segmented; the genital segment carries, at its right distal corner, a spine, which is shorter than the succeeding segment. Second and third urosomites armed with long, coarse hairs on their ventral surface (fig. 8). Anal segment along with the caudal rami somewhat bent to the right side of the main axis of the urosome (fig. 7).

Left antennule as in the female. Right antennule geniculate, the joint lying between segments 18 and 19. Segments 13-18 swollen. Segments 10, 11, 13-16 bear a spine each (fig. 9); the spine on segment 13 is the longest and inconspicuously bifid at its apex, and that on 16 is the shortest; the length of the spine on segment 14 appears to be somewhat variable as depicted in figs. 9 and 9b. The antepenultimate segment carries a short comb-like process having about 7 teeth; below this process the segment is lined with a narrow, hyaline membrane (fig. 9a).

Fifth pair of legs asymmetrical, the left leg being much shorter than the right one. Coxa of the right leg (fig. 10) large, roughly spherical and with a short hyaline lobe carrying a strong hyaline spine at about its mid-distal margin. Basis longer than broad, carrying four hyaline lobes, of which the one at the proximal inner corner is more conspicuous with a pair of obliquely directed, unequal spiniform processes; the relative size, shape and position of the lobes can best be understood from the figure. In addition, a shorter seta arises from the distal outer margin of the same segment. Exopodite two-segmented; proximal segment small with its