CARIDINA PSEUDOGRACILIROSTRIS SP. NOV. (*ATYIDAE: CARIDINA*) FROM THE COCHIN BACKWATER

ABSTRACT

A few specimens of *Caridina* collected from the Cochin Backwater during try net operations, resembled *Caridina gracilirostris* de Man in many respects. But close examination of the material revealed that they differed from it in the shape and armature of the telson and the absence of the appendix interna on the first pleopod of male specimens. Therefore, a new species *Caridina pseudogracilirostris* is proposed to describe the animal. Detailed description of the new species and its affinities to allied species are given in the present note.

TRY net collections from the Cochin Backwater on 16-1-1972, 21-11-1972 and 23-11-1972 contained specimens of *Caridina*. They resemble *C. gracilirostris* in general shape, especially in the nature of the rostrum with its characteristic dentition. But, close examination of the material shows that the present specimens are quite distinct from *C. gracilirostris;* the appendix interna is totally absent on the endopods of the first pleopods of males of these specimens while in *C. gracilirostris* it is always present; the telson in *C. gracilirostris* terminates in a distinct median point whereas the posterior end of the telson is not produced into a point in the present material. In view of these important morphological differences it is described here as *Caridina pseudogracilirostris* sp. nov.

FAMILY : ATYIDAE
Genus : *Caridina* H. Milne Edwards, 1837

Caridina pseudogracilirostris sp. nov.

Material: Holotype, female 33 mm; Allotype, male 25 mm; Paratype, females 31–42 mm.

The type specimens have been deposited at the Reference collections, Museum of the Regional Centre of the CMFRI., Mandapam Camp and the type numbers are as follows:

Holotype, female	:	CMFRI – T 114/1
Allotype, male	:	CMFRI – T 114/2
Paratype	:	CMFRI – T 114/3

Type locality: Cochin Backwater.

Description: Rostrum very long and slender, twice the length of scaphocerite. The upturned tip appears bifid due to the presence of a subapical tooth on the dorsal side. More than half of the dorsal margin of the rostrum, behind the subapical tooth, devoid of dentition. The proximal part of the rostrum bears 7–10 teeth, dorsally, with only one tooth placed behind the orbit. Teeth widely separated, the larger distal ones being more apart than those at the proximal end (Fig. 1 a) The lower margin of the rostrum bears a series of 23–31 pointed teeth. The inferior boundary of the orbit distinctly rounded. Eyes well developed, the cornea being pigmented and round. Antennal spine well developed. Pterygostomian angle broadly rounded and slightly produced. The stylocerite slender and pointed, reaching beyond the middle of the basal segment of the antennular peduncle; but falls short of its distal end (Fig. 1 b). Anterolateral

tooth of this segment well developed, although not reaching the middle of the second segment of the antennular peduncle. A sharp and well developed spine present at the base of the scaphocerite.

Middle segment of the endopod of the third maxilliped longer than the other two segments (Fig. 1 c). Epipods present at the bases of first four pereiopods. Carpus of first pereiopod 1. 4–1.7 times as long as wide, excavated anteriorly (Fig. 1 d) and shorter than chela (Fig. 1 e). Penultimate segment of third pereiopod (Fig. 1 f) 4.5-5.2 times as long as distal segment. Dactylus with 6 spines, while carpus, merus and ischium bear one, three and one spines respectively. Propodus of fifth pereiopod similar in length to that of third. Dactylus of fifth pereiopod bears 32–35 spinules, forming a comb (Fig. 1 g). Merus and carpus have two and one spines respectively. Endopod of first pleopod of male oval in shape and without any trace of appendix interna (Fig. 1 k). Appendix masculina of the endopod of second pleopod (Fig 1 l) nearely twice as long as appendix interna and bears strong spines on the distal and inner margins. Sixth abdominal segment about 0. 8 times as long as carapace (rostrum excluded). Diaeresis of uropod with 6–9 spines (Fig. 1 i).

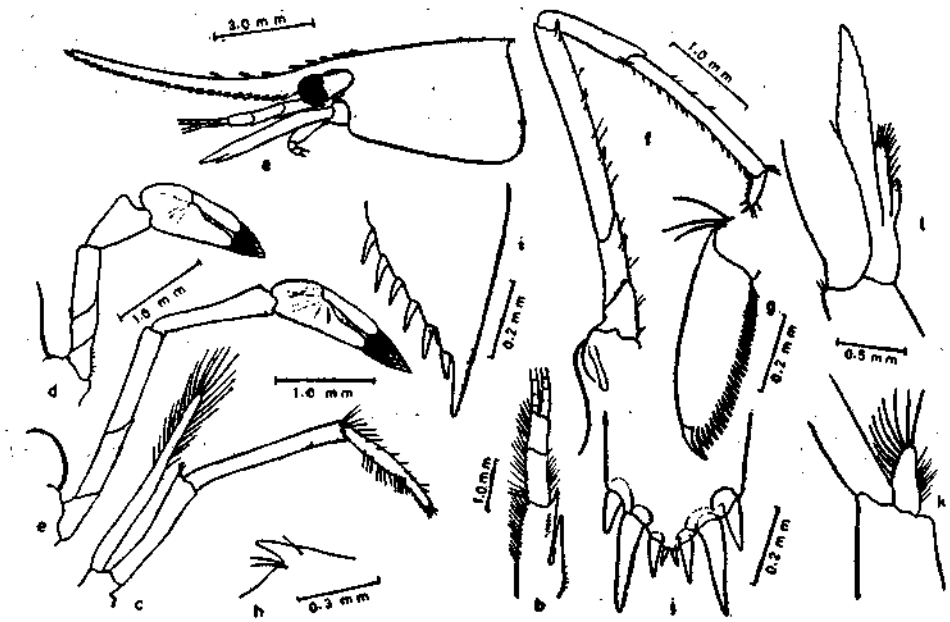

Fig. 1. *Caridina pseudogracilirostris* sp. nov. : a - anterior part of body in lateral view; b - antennule; c - third maxilliped; d - first pereiopod; e - second pereiopod; f - third pereiopod; g - dactylus of fifth pereiopod; h - pre-anal carina; i - outer part of diaeresis; j - telson tip; k - endopod of first pleopod, and l - endopod of second pleopod.

Preanal carina with a strong, backwardly directed spine (Fig. 1 h). Telson bears 4 pairs of dorsal spines (Fig. 1 j) the innermost pair being very small in mature specimen although, proportionately larger in younger specimens. The intermediate pair of the same size as the outer one. The fecundity of the species has been estimated to be 982 in a specimen measuring 42 mm in total length. The eggs were 0. 32 -0.46 mm long and 0.28 - 0.35 mm broad.

The present species closely resembles *Caridina gracilirostris* de Man, (1892) in many respects. The characteristic shape, length and dentition of the

rostrum and disposition of the rostral teeth are very similar. Besides, in the structure of the appendages and most of the general morphological features *Caridina pseudogracilirostris* agrees well with *C. gracilirostris* de Man. The important criterion on which Holthuis (1965) has based his key for identification of various species of *Caridina* is the presence or absence of appendix interna on the endopod of the first pleopod of male. Accordingly, *Caridina gracilirostris* is included by him in the group which possesses apendix interna in the male. Therefore, the total absence of appendix interna on the endopod of the first pleopod in male at once distinguishes the present species from *C. gracilirostris*. In addition, the nature of the telson clearly establishes that the present material is distinct from *C. gracilirostris*. The telson does not end in a median point at the tip. Also, there are four pairs of distal spines on the telson as against two pairs in *C. gracilirostris*. *Caridina pseudogracilirostris*, however, resembles *C. gracilirostris* H. Milne Edwards in the presence of four pairs of spines on the telson (Holthuis, 1964). But in that species the posterior tip of the telson ends in a median point and appendix interna is present on the first pleopod of male.

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REFERENCES

HOLTHUIS, L. B. 1965. *Mem. Mus. Hist. Nat.*, **33** (1): 1–48.

MAN, J. G. de 1892. *Weber (M) Zoologische Ergebnisse einer Reise in Niederlandisch Ost-Indiea*, **2** : 265–527.