

A new species of *Palaemon* (Decapoda: Caridea) from Bangladesh

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Introduction

As part of a study on the taxonomy and distribution of prawns in the Karnafuli River, specimens closely resembling *Palaemon* (*Nematopalaemon*) *tenuipes* (Henderson 1893) were recorded in Karnafuli Estuary. A comparative study showed that the specimens from the estuary were new. Three species of the genus *Palaemon* have now been recorded from Bangladesh waters: *P. (N.) tenuipes* (see Khan 1976), *P. (Exopalaemon) styliiferus* H. Milne Edwards 1840 (see Ahmed 1957, Khandker and Patra 1971, Shafi *et al.*, 1975, Khan 1976) and the new species described below.

Palaemon (*Nematopalaemon*) *karnafuliensis* sp. nov.

The specific name is derived from the type locality.

Location. Karnafuli Estuary, Chittagong, Bangladesh.

Material. From June 1975 to May 1976, 2118 specimens, including 30 ovigerous females, were collected and ranged in size from 29-57 mm. Types: HOLOTYPE—female carrying eggs, 53 mm in length, British Museum (Natural History) registration number BM(NH) 1979; PARATYPES—BM(NH) 1970; further paratype material deposited in the Department of Marine Biology, University of Chittagong, Bangladesh.

Description. Carapace (fig. 1a): rostrum rather short, not as long as the scaphocerite; dorsal margin of rostrum moderately convex in basal region with 4-6 teeth and a single tooth near the tip; ventral margin of rostrum with 4-5 teeth evenly spaced. Adrostral carina originates from distal end of elevated basal region of rostrum and fuses with orbital edge. Antennal spine stronger than branchiostegal spine, former may extend to middle of optic peduncle.

Antenna 1 (figs. 1a, 1c): peduncle about 2/3 length of scaphocerite, stylocerite sharply pointed, less than half the length of basal segment of peduncle. Anterolateral spine of basal segment is distinct and straight, reaching the distal edge of the second antennular segment. Anterior margin of basal segment strongly convex.

Antenna 2 (fig. 1a): scaphocerite with outer margin more or less straight. Carapocerite reaches slightly beyond the outer margin of the eye.

Mandible (fig. 1d): three segmented palp, distal segment not much longer than second segment; incisor process narrows slightly distally, with 4 teeth; molar process with 4 blunt teeth distally.

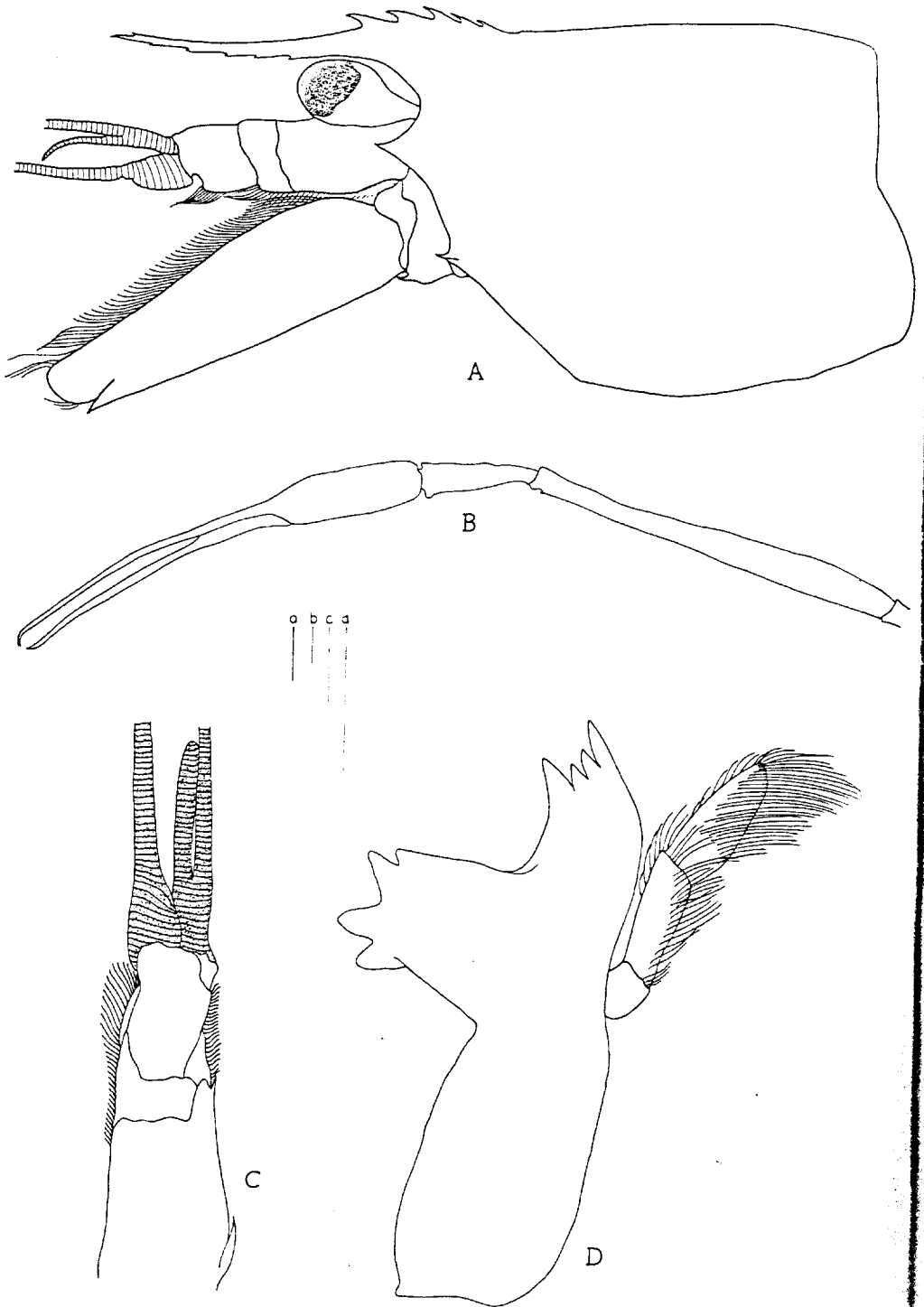


FIG. 1. *Palaemon* (*Nematopalaemon*) *karnafuliensis* sp. nov. A. lateral view of anterior part of body; B. pereopod 2; C. antenna 1, peduncle; D. mandible. Bar scales a-d = 1 mm.

Maxilla 1 (fig. 2a): palp bilobed and fringed with a few setae.

Maxilla 2 (fig. 2b): endopod pointed distally; basal endites expanded and fringed with setae on posterior margin.

Maxillipeds 1-3 (figs. 2c-e): similar to those described for *Palaemon* (*Nematopalaemon*) *tenuipes* in Kemp 1917 (as *Leander tenuipes* Henderson).

Pereiopod 1: just reaches to end of scaphocerite; propodus (palm + fixed finger) shorter than, merus longer than, carpus; propodus longer than ischium; dactyl and fixed finger of propodus much longer than the palm of propodus.

Pereiopod 2: (fig. 1b): chela reaches beyond scaphocerite; anterior of merus swollen, merus longer than carpus and ischium but shorter than propodus (palm + fixed finger); palm of propodus about half length of dactyl and fixed finger.

Pereiopods 3-5: dissimilar from pereiopods 1, 2 and have unusually long, threadlike dactyli.

Uropod: exopod elongate and oval shaped distally; endopod pointed distally. Outer margin of exopod bears distinct tooth with a smaller spine on its anterior margin.

Telson: with one pair of dorso-lateral spines, narrows sharply distally with 2 pairs of spines at tip, outer pair very short, inner pair long and slender, enclosing 2 (usually) median plumose setae.

Colour: Body is creamy brown, antenna 1 peduncle and inner margin of scaphocerite reddish, posterior margins of abdominal segments bright red and distal part of uropods and telson with red spots.

Discussion

The specimens belong to the genus *Palaemon* indicated by the presence of a branchiostegal spine, the absence of an hepatic spine, presence of a segmented mandibular palp and transverse rows of setae on the distal part of the propodus of pereiopod 5. The specimens belong to the subgenus *Nematopalaemon* as pereiopods 3-5 have unusually long dactyli and the stylocerite has a dorsal tooth. The new species is closely related to *Palaemon* (*Nematopalaemon*) *tenuipes* but may be separated on the following characters:

- (1) In *P. (N.) tenuipes* the rostrum reaches beyond the end of the scaphocerite whereas in *P. (N.) karnafuliensis* the rostrum is short and does not reach to the end of the scaphocerite.
- (2) In *P. (N.) tenuipes* the distal part of the rostrum is strongly upturned whereas in *P. (N.) karnafuliensis* the rostrum is virtually straight.
- (3) The basal segment of antenna 1 peduncle in *P. (N.) karnafuliensis* with longer anterolateral spine reaching outer distal end of the second segment of antenna 1 peduncle; in *P. (N.) tenuipes* the anterior margin of the basal segment of antenna 1 is not as strongly convex as in *P. (N.) karnafuliensis*.

Summary

Palaemon (*Nematopalaemon*) *karnafuliensis* sp. nov. (Decapoda: Caridea) is described from Karnafuli Estuary, Chittagong, Bangladesh. It has the long dactyli characteristic of the subgenus *Nematopalaemon* and may be separated from closely related species by the short, straight rostrum.

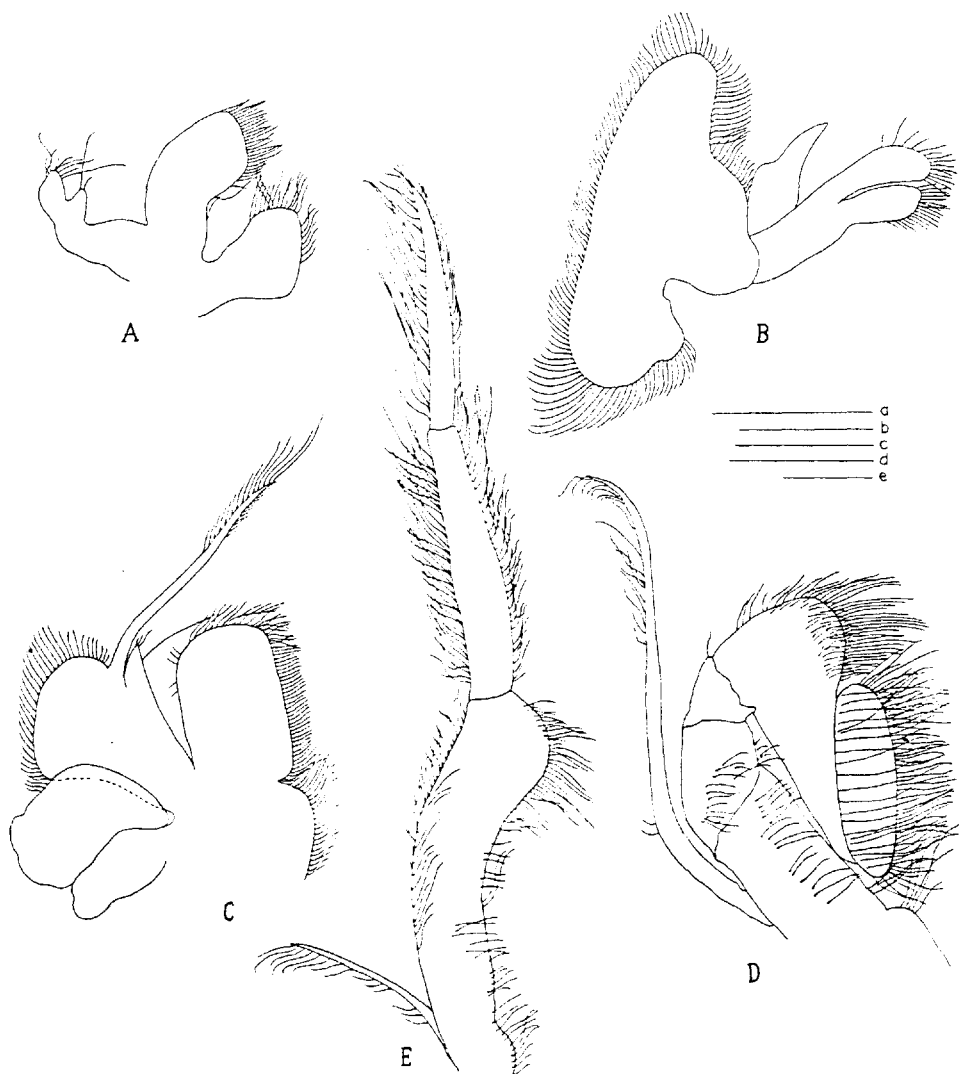


FIG. 2. *Palaemon (Nematopalaemon) karnafuliensis* sp. nov. (a) maxilla 1; (b) maxilla 2; (c) maxilliped 1; (d) maxilliped 2; (e) maxilliped 3. Bar scales a-e = 1 mm.

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