

PRELIMINARY DESCRIPTIONS OF TWO NEW SPECIES OF *PALAEMON* FROM BENGAL.

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IN studying the collection of Palaemons from Bengal preserved in the Zoological Survey of India, with the ultimate object of revising the genus *Palaemon*, I have come across two species which are new to science. As a complete revision of this large genus is likely to take sometime, I have considered it desirable to publish brief descriptions, giving the major diagnostic characters of these two species. Fuller descriptions and illustrations will be published later.

***Palaemon villosimanus*, sp.nov.**

This species resembles *P. carcinus* (Fabr.) in the structure of rostrum and telson, and *P. weberi* deMan (from Celebes) and *P. idae* Heller, in the structure of second peraeopods. It can, however, be distinguished from these by a combination of the following characters :—

Rostrum is long and narrow, exceeding the antennal scale by one-fifth to one-third its length. The proximal part of the rostrum is conspicuously convex over the eyes and the distal half is strongly upturned. The rostral formula is $\frac{12-14}{7-10}$ (usually $\frac{13}{8-9}$). Of the teeth on the upper border, the first two, rarely three, are on the cephalothorax behind the orbital border. The first 8, 9 or 10 teeth are more closely situated than the rest, which are more widely spaced. The last tooth is usually sub-apical, and the penultimate tooth is very near the last. The lower teeth are almost equidistant. There are scattered small spinules, chiefly over the dorsal surface, on the carapace.

The first peraeopods exceed the antennal scale by the chela and a portion of the carpus. The second peraeopods are long and slender, much longer than the body in fully mature males. The entire cheliped is beset with spinules, which are much better developed on the under-surface. The merus and palm are sub-equal, the palm being usually slightly shorter. The carpus is long, slender, cylindrical and of uniform thickness. It is about one-third of the entire cheliped. The chela is usually slightly shorter than the carpus, but rarely may be equal to it, or even slightly longer (cf. *P. idae* and *P. weberi*). The fingers are short, being usually a little less than half the length of the palm. The mobile finger is densely pubescent and free from spinules whereas the fixed finger is sparsely pubescent on the upper and lower surfaces only, and also beset with spinules. Telson is as in other Palaemons but the apex is rather long and acute, and the inner sub-terminal spinules fail to reach the apex.

I have examined a large number of adult males of this species from Calcutta and Chittagong hill tracts, and two males from Rangoon.

Holotype.—*Male*: Reg. No. C $\frac{2841}{1}$, Zoological Survey of India.

Rostral formula $1\frac{3}{8}$, third tooth on the orbital border. Body 146.4 mm. Carapace 34.0 mm. Rostrum 38.0 mm.

		*I	M	C	P	F	Total
II Peraeopods	{ Right	21.1	25.6	33.5	23.0	11.3	114.5
	{ Left	25.1	28.5	42.3	26.0	13.8	135.7

Locality.—Calcutta, Pulta Waterworks, May 1941.

One of the bottles, containing three examples of the present species from Calcutta Bazar, is labelled as "*Palaemon villosimanus*, Blyth." As I have not been able to find a reference to this name in literature, I have retained it for this species.

***Palaemon kempi*, sp.nov.**

This species is based on the material collected by the late Drs. Annandale and Kemp from the Chittagong district and as a mark of respect to the memory of that great Carcinologist, I name it after Dr. Kemp. This species closely resembles *P. hendersoni* de Man, but can be distinguished from it by (i) the absence of fluting and pubescence on the fingers and (ii) the presence of a dense felt of hair on the inner border of the palm, the latter character being specific of this species only. This species can be easily recognised by the following characters:—

Rostrum is short, reaching up to the middle or the end of the third segment of the antennular peduncle. The upper edge of the rostrum is moderately convex with the apex sloping downwards. The rostral formula is $\frac{8}{2-3}$. The first two teeth of the upper edge are placed on the carapace behind the orbital border. The distance between successive teeth diminishes as they approach the tip. The carapace is rough. The first peraeopods exceed the antennal scale by almost the entire chela. The second peraeopods are stout, more than half as long as the body, coarsely granular, and very variable as regards the proportion of different segments. The carpus is shorter than the merus, palm and fingers, and its distal end is somewhat thickened. It is about one-third to two-fifths as long as the entire chela. The palm is slightly thicker than the distal end of the carpus; it is somewhat compressed and bears a dense felt of hair on its inner border. Fingers are equal, slightly shorter than palm; pubescence and grooving are absent. Telson and its spinules are as in *Palaemon hendersoni* de Man.

*The abbreviations I, M, C, P and F stand for ischium, merus, carpus, palm, and finger respectively.

Types.—Regd. No. C $\frac{2842}{1}$, Zoological Survey of India.

Male—Rostral formula $8\frac{2}{2}$. Body 48.0 mm. Carapace 13.0 mm., Rostrum 5.0 mm.

	I	M	C	P	F	Total
II. Peraeopod Left.	4.5	5.5	4.3	7.6	6.9	28.8

Female (egg-bearing) Rostral formula $8\frac{2}{3}$. Body 43.0 mm. Carapace 11.0 mm.,
Rostrum 6.0 mm.

	I	M	C	P	F	Total
II. Peraeopod left.	4.3	4.7	3.9	5.9	5.2	24.0

Locality.—In a small stream between Chittagong and Sultan Bagu Bastan, January 1913.