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On a New Species of *Palaemon* from Banaras, with a Note on *Palaemon lanchesteri* de Man

By
Krishna Kant Tiwari

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ON A NEW SPECIES OF *PALAEMON* FROM BANARAS, WITH A NOTE ON *PALAEMON LANCHESTERI* DE MAN.

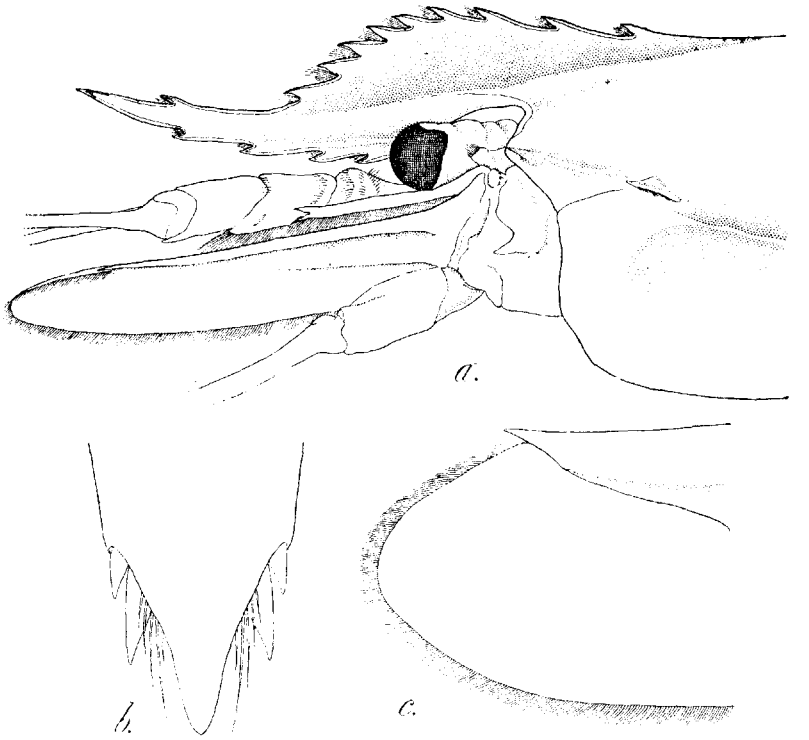
By KRISHNA KANT TIWARI, *M.Sc., Research Scholar, Zoological Survey of India, Banaras.*

The material for this paper was obtained partly from the fish market in Banaras in the U. P., and partly from collections preserved in the Zoological Survey of India.

Of the two species dealt with in this note, one is new to science, while the other is recorded from India for the first time and is of considerable interest from the zoogeographical point of view. I am indebted to Dr. S. L. Hora and Dr. B. N. Chopra for constant help and guidance in the course of this work.

Palaemon choprai, sp. nov.

The rostrum in this species is rather short (Text-fig. 1*a*), usually extending as far as the spine of the antennal scale. In some cases it



TEXT-FIG. 1.—*Palaemon choprai*, sp. nov.

a. Lateral view of the anterior region of the body of an adult male: ×2; *b*. Dorsal view of the posterior end of the telson in the same animal: ×20; *c*. Anterior end of the antennal scale: ×4⅔.

just reaches the end of the antennular peduncle, and very rarely it may extend upto the end of the antennal scale. The proximal two-third of the dorsal edge of the rostrum forms an elevated, highly convex keel, very much like that in *Palaemon weberi* de Man* (from Celebes), the distal one-third being narrow, sharp, tapering towards the apex, and occasionally slightly upturned distally. A well-marked lateral ridge separates the dorsal, deep, convex keel from the narrow ventral edge.

The proximal keel on the dorsal border of the rostrum usually bears about 9 or 10 teeth, rarely 8 or 11, the narrow distal portion carrying one or two, rarely three teeth. In the 23 specimens examined the following is the arrangement of the dorsal teeth :—

	2	specimens bear	8	proximal teeth	;
	8	„ „	9	„ „	;
	12	„ „	10	„ „	;
	1	specimen bears	11	„ „	;
and	12	specimens have	1	distal tooth	;
	10	„ „	2	„ teeth	;
	1	specimen has	3	„ „	.

The usual number of dorsal teeth may thus be represented as 9 or 10+1 or 2, whereas the total range of variation is 8 to 11+1 to 3. The lower edge usually bears four or five, occasionally six teeth, which are carried on the distal two-thirds of the ventral edge, and are more or less equidistant. Of the proximal teeth on the dorsal edge, the two posterior most are more widely separated from each other and are borne on the carapace just behind the orbital border. The distal teeth are more widely spaced. When there is only one distal tooth it often stands mid-way between the anterior most proximal tooth and the apex, when more than one, the last tooth is usually sub-apical and smaller than the rest.

The carapace is rough and scabrous as in *Palaemon malcolmsoni* H.M.-Edw. The hepatic spine is shorter than the antennal spine. A deep, oblique, sub-hepatic sulcus is present below the hepatic spine (Text-fig. 1*a*). The branchial region is clearly defined by another deep groove which starts behind the sub-hepatic sulcus and arches upwards towards the posterior border. Another groove runs dorsally for a short distance on the posterior half of the carapace.

The cornea is broader than the eyestalks and the ocelli is well marked. The antennular peduncle is normal in form. The lateral process of its basal segment extends upto the middle of the second segment and bears a small tooth. In dorsal view the third segment appears to be slightly longer than the second. The outer antennular flagellum is fused with its fellow of the inner side for about one-sixth of its length. The antennal scale is parallel-sided with its outer margin straight and apex oval (Text-fig. 1*c*).

The mandibular palp is three-segmented.

The third maxillipeds reach almost upto the middle of the antennal scale.

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* De Man, J. G., *in Max Webber's Zool. Ergeb. Niederland. Ost-Ind.* II, pp. 421-427, Taf. XXV, Fig. 33 (1892).

The first peraeopods exceed the antennal scale by the chela and about half the carpus. In an adult male, from the Ganga at Banaras, measuring 168·0 mm., the first peraeopod of the right side has the following measurements (in mm.) :—

Ischium	Merus	Carpus	Palm	Finger	Total
13·0	19·5	25·5	5·0	4·5	67·0

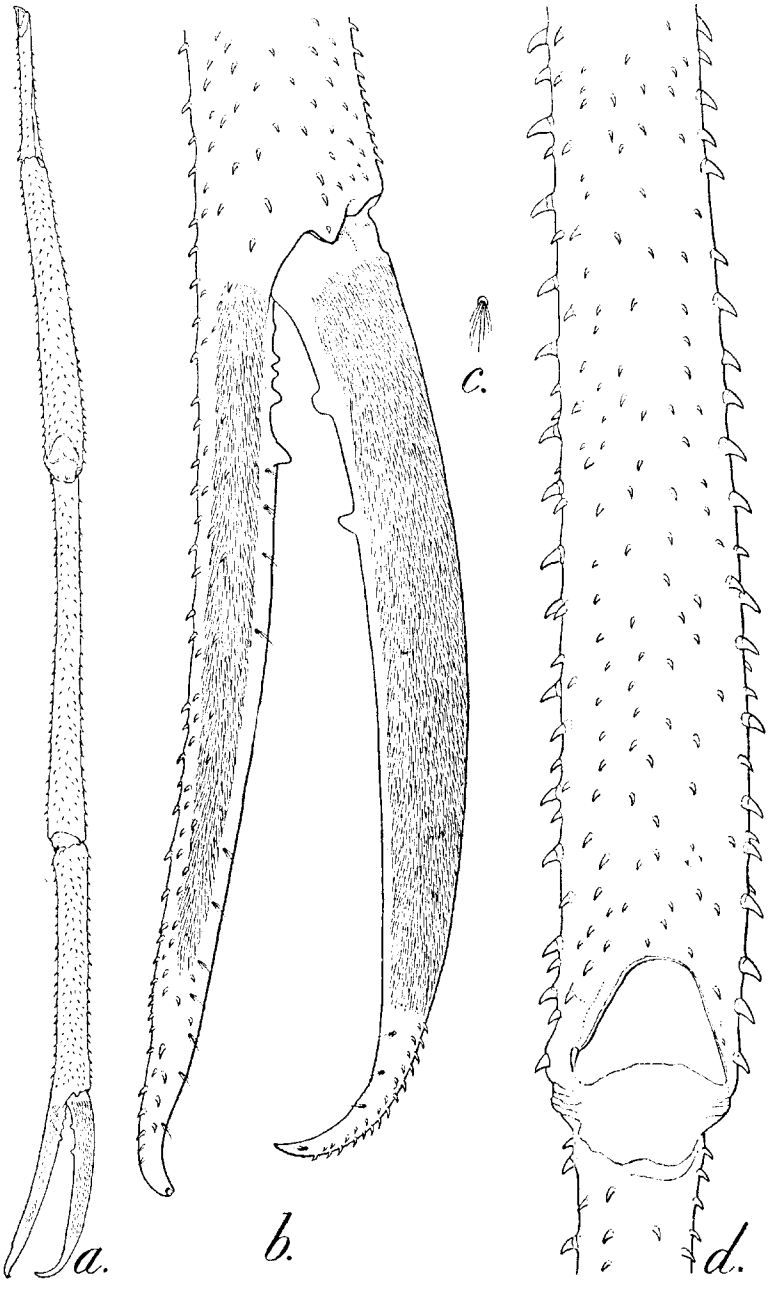
The merus is about three-fourths the length of the carpus ; the carpus is slightly less than three times the length of the chela and is about three-eighth of the entire peraeopod. The fingers are slightly shorter in length than the palm. The fingers, lower border of the palm, inner edge of the ischium, and the basis are setose, the rest of the ischium is scabrous.

The second peraeopods (Text-fig. 2*a*) are stout, subequal and always longer than the body in an adult male, being about one and a third to about one and two-thirds of the body-length. All the joints of the second peraeopods, with the exception of a major portion of the mobile finger, are beset with strong, broad-based forwardly-directed spinules. The spinules are larger on the undersurface (Text-fig. 2 *d*) of the merus and carpus. The remaining portions bear rather smaller spinules which continue, although scantily, on the immobile finger. Only the tip of the mobile finger is spinulose (Text-fig. 2*b*).

In the example from the Ganga, referred to above, the following are the dimensions of the second peraeopods :—

	Ischium	Merus	Carpus	Palm	Finger	Total
Right .	35·8	56·0	72·1	51·9	32·8	248·6
Left .	35·4	56·6	71·8	54·0	33·1	250·9

The ischium is, as usual, compressed and laterally grooved. The merus is cylindrical and of more or less uniform thickness, its distal end, however, being slightly swollen (Text-fig. 2*a*) and thicker than the carpus. One of the characteristic features of *Palaemon choprai* is that the merus is *usually longer than the palm*. In seven adult males from Banaras, the merus is longer than the palm, while in three it is slightly shorter. In many examples from Assam and Bihar in the Zoological Survey collection, this feature of merus is constant. In this respect *P. choprai* conspicuously differs from *P. malcolmsoni* in which *the merus is always shorter than the palm*. Taking the total length of the entire cheliped as 100, the length of the merus is usually between 20·8—23·0 (average 22·0). The carpus is slenderer than the merus, cylindrical and very slightly thickened distally (Text-fig. 2*a*). In the male, measurements of which are given above, the length of the carpus is about eleven times its distal thickness. The average length of the carpus is about 29 per cent. of the entire peraeopod, the range of variation being from 25·7 per cent. to 30·5 per cent. The carpus, therefore, appears to be more variable in length than the merus. The palm is cylindrical, uncompressed, usually shorter than the merus. Distally there is a longitudinal groove along each side of the palm. It measures from 20·4 per cent. to 24·2 per cent. of the entire cheliped. The fingers are about three-fifths the length of the palm (variation in percentage length being 11·9—14·7 per cent.). The tip of the mobile finger is acutely incurved (Text-fig. 2*b*) and is spinulose, while that of the fixed finger is less so.



Text-fig. 2.—*Palaemon choprai*, sp. nov.

a. Entire left second peraeopod of an adult male: ×2; *b*. Anterior half of the chela: ×3⅓; *c*. A tuft of hair on the finger: ×3⅓; *d*. Dorsal view of the anterior portion of the merus: ×3⅓.

The inner edge of the mobile finger is concave and bears two conical teeth ; the distal tooth which is sharper, being situated at a distance of about one-third length of the finger, from the joint. The proximal tooth is situated midway between the distal tooth and the joint (Text-fig. 2*b*) and is blunt. The mobile finger is densely pubescent except towards the tip and along the inner edge, and in the area covered with hair it is free from spinules. The outer border of the fixed finger forms a slight curve with the border of the palm, the inner, cutting edge having the same curve. This finger is sparsely spinulose and is pubescent along its dorsal and ventral surfaces. The inner edge bears a big conical tooth which fits between the two teeth of the mobile finger. This tooth is followed by a crenated ridge bearing two or three tubercles. When the fingers close, their tips cross each other, and there is a more or less narrow gap between the apposed margins, the gap being slightly wider distally.

A table of measurements of the various joints in the second peraeopods of some adult examples from Banaras is given on pages 343, 344.

The last three pairs of peraeopods are comparatively slender. With the exception of their dactyli all are scabrous. All the three pairs exceed the antennal scale by their dactyli and half of the propodites. The fifth pair is the longest. The merus is about nine to 10 times as long as thick and is about two and a half times longer than the carpus in the third and fourth pairs and about twice as long as the carpus in the fifth. The dactyli are slightly curved, spineless and have their outer margins fringed with setae.

The sixth abdominal somite, measured dorsally, is one and a half times as long as the fifth, and about three-fourths of the length of the telson. The telson bears the usual two pairs of dorsal spinules and ends in a rather acute apex (Text-fig. 1*b*). The outer sub-terminal spinules are very small, the inner pair is about twice as long as the outer and fails to reach the apex of the telson.

Appendix masculina is fully developed in all the male examples.

Females.—As usual in a large number of Palaemons, *P. choprai* exhibits considerable sexual dimorphism. In females, the body is usually shorter, less stout, smooth, and the second peraeopods are about half the length of the body. The rostrum is proportionately longer and the dorsal keel is not so deep as in the males. In the second pair of legs, *the propodus is shorter than the carpus*, the palm is proportionately much shorter than the merus and the ischium is much longer.

The first and second peraeopods of an egg-bearing female, 130·5 mm. in body-length, have the following measurements (in mm.) :—

		Ischium	Merus	Carpus	Palm	Finger	Total
I Peraeopod	Right	8·1	10·9	14·1	3·2	2·8	39·1
	Left	8·0	10·6	14·0	3·2	2·6	38·4
II Peraeopod	Right	15·0	12·2	18·1	8·7	6·6	60·6
	Left	14·9	12·3	18·3	8·7	6·7	60·9

It will be seen from the above measurements that both the merus and the palm are considerably shorter than the ischium in the second peraeopods.

Young.—Although no young specimens were obtained from the Ganga at Banaras, the collections in the Zoological Survey of India contain many young examples, males and females, from Assam and Bihar. In younger examples, the rostrum is longer and usually exceeds the antennal scale. The convex keel over the dorsal edge of the proximal half of the rostrum is not as prominent as in adult males, and the narrow distal region is as long as the proximal keeled region. The carapace is smooth, although the characteristic sculpturing is visible. The tip of the telson is more acute than in adult examples, and the inner-sub-terminal spinules at its tip are proportionately longer and nearly reach the tip.

The second peraeopods are considerably shorter than the body, usually even less than half the entire body-length in very young examples. In examples measuring below 130 mm. in body-length, the second peraeopods are shorter than the body and have nearly the same proportions as in a female. In a specimen measuring 150·0 mm. in total body length the chelipeds are longer than the body, and have acquired the characters of adult males. It should thus be presumed that the sexual differentiation in the adult males begins somewhere beyond 130·0 mm. stage and by the time the animal attains 150·0 mm. the chelipeds show complete secondary sexual characters.

Even in very young examples, the males can be distinguished from the females by the characteristics of their chelae, which are longer than the carpus in the males but shorter in females. The fingers are proportionately longer, being about four-fifths of the length of the palm. In a very young male example from Bihar the fingers are longer than the palm. In this specimen which measures 71·0 mm. (from the tip of the rostrum to the apex of the telson), the rostrum exceeds the antennal scale by about one-fifth of its length and the proximal keeled region is as long as the narrow distal portion, the former bearing 10 and the latter two teeth, whereas the lower border carries five equidistant teeth. The second peraeopods exceed the antennal scale by the entire length of the chela and about one-third length of the carpus. The following are the measurements (in mm.) of the left leg of the second pair in this individual :—

Ischium	Merus	Carpus	Palm	Fingers	Total
7·0	7·0	8·0	4·0	6·5	32·5

It is thus seen that the finger is more than one and a half times longer than the palm, which is half as long as the carpus. In another male individual from Assam (?), with the rostral formula $\frac{(2)9+2}{4}$ and a body length of 91·0 mm. the second peraeopods show the following dimensions :—

	Ischium	Merus	Carpus	Palm	Finger	Total
Right . .	7·7	7·2	9·0	5·6	4·6	34·1
Left . . .	10·1	9·2	11·1	6·1	6·9	43·4

In this case also the propodus is longer than the carpus and the finger slightly longer than the palm in the left leg.

A study of *P. choprai* at various stages of growth yields the following information which, on detailed investigations may appear to be applicable to a large number of other species of *Palaemon*.

In *P. choprai* (i) sexual dimorphism appears at quite an early stage, the chelae being shorter than the carpus in females and longer in males : and (ii) in young males the fingers are proportionately long and in very young specimens are longer than the palm. An examination of the large collection in the Zoological Survey of India has shown that these characters are found in the young of many other species of *Palaemon* also.

Affinities : *Palaemon choprai* resembles *Palaemon weberi* de Man (*loc. cit*) in the shape of its rostrum and rostral formula but can be easily distinguished from it by its bigger size and much longer and stouter second cheliped. In the largest male of *P. weberi*, described by De Man, with a body length of 104 mm., the chela is a little smaller than the carpus, and the finger in the right foot less than half the length of the palm and in the left foot only about one-third of its length. In *P. choprai* the chela in the male is always longer than the carpus and the finger is always more than half the length of the palm.

Palaemon malcolmsoni H. M.-Edw. appears to be the nearest Indian ally of *P. choprai*. In the number of rostral teeth on the upper and lower edges, and the general build of the body both these species are more or less alike. *P. choprai* can, however, be distinguished from *P. malcolmsoni* by the keeled rostrum, and by the dimensions of the second peraeopods ; in *P. choprai* the palm is usually shorter than the merus, but in *P. malcolmsoni* it is always *longer*. The carpus is also proportionately longer in *P. choprai*.

Size.—The largest male example from the Ganga at Banaras measures 188·5 mm. (from the tip of the rostrum to the apex of the telson) and the smallest egg-bearing female is 130·5 mm. long. As the specimens were not examined fresh, coloration could not be noted.

Locality.—The types and paratypes of *Palaemon choprai* were purchased from the Banaras fish market. These prawns were caught by fishermen at Rajghat in the Ganga, near the Dufferin Bridge close to Banaras.

Besides Banaras, *P. choprai* is represented in the collection of Zoological Survey of India from the following localities :

Locality	*Collected by*	*Date*
1. The River Ganga at Monghyr, Bihar.	Dr. H. A. Hafiz . .	March 1945.
2. Bankipore, Patna .	?	June 1942.
3. Bijlee Bheel, Kamrup, District Assam.	L. W. Middleton Esq. .	Jan.-Feb. 1911.
4. Saran District (?) Bihar	Mr. Mackenzie . .	Jan. 17, 1901.
5. Mangaldai and Tezpur, Darrang District, Assam.	Dr. B. Prashad and Dr. S. L. Hora.	Nov. 1939.

The Types.—*Male* :—*Rostrum* with proximal half strongly keeled, exceeds the antennular peduncle by 4·7 mm., fails to reach the apex of antennal scale, rostral formula $\frac{9^2+3}{6}$, first *three* teeth more widely separated, distal end somewhat upturned. *Second peraeopods* one and three quarters as long as the body, strong, robust, spinulated, exceeding the antennal scale by three-fourths the merus.

Measurements : Body 175·0 mm. ; Carapace 48·5 mm. ; Rostrum 29·8 mm.

Second peraeopods—

	Ischium	Merus	Carpus	Palm	Finger	Total length
Right .	42·9 mm.	71·1 mm.	93·7 mm.	65·2 mm.	36·8 mm.	309·7 mm.
Left .	42·1 mm.	70·5 mm.	90·2 mm.	62·7 mm.	38·4 mm.	303·9 mm.

Female.— *Rostrum* longer than in the male, reaching the apex of the antennal scale ; proximal keel somewhat less prominent, rostral formula $\frac{10^2+2}{5}$, somewhat wider gap between the tenth and eleventh tooth, distal end slightly upturned ; *second peraeopod* of right side (left broken) about half as long as the body, exceeds the antennal scale by half of the carpus, weak, feebly spinulated, non-pubescent.

Measurements : Body 116·5 mm. ; Carpace 30·0 mm. ; Rostrum 22·7 mm.

	Ischium	Merus	Carpus	Palm	Finger	Total length
Second peraeopod, right	14·0 m.m.	12·8 m.m.	18·4 m.m.	9·2 m.m.	7·2 m.m.	61·6 m.m.

Regd. No. C $\frac{2843}{1}$, Zoological Survey of India.

Palaemon lanchesteri de Man.

1901. *Palaemon paucidens*, Lanchester, *Proc. Zool. Soc. London*, pp. 568-570, pl. xxxiii. fig. 4, (not *P. paucidens*, Hilgendorf, *Sitzber. Ges. naturf. Freunde, Berlin*, Jahrg 1893, p. 155).

1911. *Palaemon* (*Eupalaemon*) *lanchesteri*, de Man, (*nom. nov.* for *P. paucidens*. Lanchester, *nec.* Hilgendorf.) *Notes Leyden Mus.* XXXIII, p. 264. footnote.

1918. *Palaemon lanchesteri*, Kemp, *Mem. As. Soc. Bengal* VI, pp. 257-258.

This species, originally described from Singora, in Malaya, by Lanchester and later on from the Talé Sap, near Lampam, in Siam by Kemp, is recorded from India for the first time. I had the opportunity of examining these prawns from the Baroda State sent to the Survey for identification by Dr. Moses, and from Nagpur preserved in the collections of the Zoological Survey of India.

The Indian specimens agree in most characters with the description given by Lanchester and Kemp. Still, on comparison with Kemp's specimens from the Talé Sap, they show certain differences which may prove to be of more than local importance.

The following are the characters in which the Indian specimens differ from the Malayan examples :—

1. *Rostral formula.*—Lanchester gives the rostral formula of Singora examples as $\frac{5\text{-}8}{3\text{-}4}$ (usually $\frac{6}{3\text{-}4}$). The specimens from Baroda have the formula $\frac{6\text{-}9}{4\text{-}5}$ (commonly $\frac{7\text{-}8}{4\text{-}5}$) and the Nagpur specimens $\frac{6\text{-}9}{3\text{-}5}$ (usually $\frac{7\text{-}8}{4}$). Thus the rostral formula of the Indian specimens may be taken as $\frac{6\text{-}9}{3\text{-}5}$ (usually $\frac{7\text{-}8}{4\text{-}5}$) and the total range of variation in the rostral formula of *P. lanchesteri* may be represented as $\frac{5\text{-}9}{3\text{-}5}$.

2. *Carapace.*—In the Baroda examples the carapace is nearly equal to or slightly longer than the rostrum, but in the Nagpur examples it is distinctly longer.

3. *Second peraeopods.*—The Indian examples agree with Lanchester's description and measurements of the second peraeopods, but differ from the Talé Sap specimens. The following are the average percentage lengths of the various segments of the second peraeopod in examples from Malaya, Siam, and India :—

	Merus	Carpus	Palm	Finger
Singora ..	28·57	40·00	18·57	13·00
Talé Sap ..	29·20	44·00	15·20	11·50
Baroda ..	27·88	40·46	18·56	12·87
Nagpur ..	28·47	39·00	17·80	13·40

The above measurements show that in Kemp's examples from the Talé Sap, the carpus is proportionately longer, whereas the palm is shorter. Kemp had also noticed this difference. (Table 2 on page 345 gives measurements of the joints of second peraeopods in some specimens from Nagpur and Baroda).

4. *Eggs.*—Lanchester has not given the size of eggs in the Singora examples. According to Kemp the eggs in Talé Sap examples measure 1·05 mm.×0·78 mm. The Indian specimens have bigger eggs varying from 1·20 mm.-1·64 mm. in longer diameter and 1·00 mm.-1·24 mm. in the shorter diameter.

5. *Size.*—The Indian specimens are slightly bigger in size than those from Malaya and Siam.

Affinities.—Lanchester doubted the validity of his species (*P. paucidens*) and he thought it might prove to be a young stage of *P. idae* Heller. It is now certain that *P. lanchesteri* is distinct from *P. idae*, from whom it differs in size, rostral formula and proportions of second peraeopods. Even in very young examples of *P. idae* the number of teeth on the upper

edge of rostrum is usually much more than in *P. lanchesteri*, and the chela is longer.

Palaemon dayanus Henderson has a rostral formula nearly like that of *P. lanchesteri* but in *P. dayanus* the chela of the second peraeopods is longer than the carpus and this species shows sexual dimorphism.

Palaemon talvarae Blanco[1] from the Philippines does not show sexual dimorphism, and the telson in this species resembles that of *P. lanchesteri*. It has, however, a different rostral formula and the fingers are as long as the palm.

Palaemon lamarrei H. M.-Edw. also appears to be a close ally of *P. lanchesteri*. Both these species are primitive in as much as they do not show any sexual dimorphism; in both of them the second peraeopods of male are slender, and the carpus is much longer than the chela.

P. lamarrei, however, differs from *P. lanchesteri* in having a longer rostrum with a larger number of ventral teeth. The carpus of the second peraeopods of *P. lamarrei* is proportionately longer and in this respect it resembles the examples of *P. lanchesteri* from the Talé Sap.

Distribution.—The record of this Malayan species from the Satpura Trend of Mountains (Nagpur and Baroda) is of special interest. In the case of hill-stream fishes, Hora[2] has adduced evidence to show that waves of migration of Malayan fauna passed over the Eastern Himalayas and Assam Hills to the Satpura Trend of Mountains and thence to the Western Ghats and the extreme south of India. The discontinuous distribution of *Palaemon lanchesteri* lends support to the hypothesis advanced by Hora.

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[1] Blanco, G. J., *Philippine Jour. Sci.* LXIX, pp. 168-169, pl. *ii*, (1939).

[2] Hora, S. L., *Proc. Nat. Inst. Sci. India* X, pp. 423-439 (1944). (See list of references for earlier literature).

TABLE 1.—*Measurements of* Palaemon choprai, *sp. nov., from Banaras, U. P.*

No.	Sex	Rostral formula	Total length of the body	Length of carapace	Length of rostrum	Second Peraeopods					
						Total length	Ischium	Merus	Carpus	Palm	Finger
1	♂	$\frac{(2)\ 9+3}{6}$	188·5	47·0	31·0	R 307·2	40·3	70·8	93·8	65·5	36·8
						L 301·1	39·7	70·0	90·1	62·9	38·4
2	♂	$\frac{(2)\ 9+2}{4}$	186·5	45·7	32·1	R 306·0	39·1	67·8	89·0	69·7	40·4
						L 318·7	40·5	69·6	95·5	70·0	43·1
3	♂	$\frac{(2)\ 10+1}{5}$	178·0	45·0	28·8	L 260·4	36·3	58·4	75·9	53·8	35·4
						R 284·5	40·0	63·8	86·4	59·3	35·0
4	♂	$\frac{(2)\ 10+2}{4}$	177·0	..	..	L 288·3	40·0	65·0	86·8	61·1	35·4
5	♂	$\frac{(2)\ 10+1+1}{5}$	176·2	44·4	30·0	R 200·4	32·0	42·5	51·5	45·0	29·4
						L 202·8	33·0	42·2	53·8	44·0	29·8
6	♂	$\frac{8+1+1}{4+(2)}$	174·0	..	..	R 251·9	34·7	56·1	74·2	53·3	33·3
						L 243·5	33·0	55·0	69·0	54·9	31·6
7	♂	$\frac{(2)\ 10+1}{5}$	173·1	43·5	28·5	R 247·7	37·3	55·7	71·4	51·7	31·6
						L 252·5	36·7	56·8	7[illegible]·0	53·8	33·2
8	♂	$\frac{(3)\ 11+1}{5}$	168·5	38·3	28·8	R 220·6	30·6	47·0	6[illegible]·2	52·0	27·8
						L 225·7	30·7	48·3	6[illegible]·0	63·0	28·8
9	♂	$\frac{10+1}{4}$	166·0	..	..	R 216·2	30·0	47·8	6[illegible]·4	49·4	26·6
						L 227·0	32·0	49·9	6[illegible]·6	51·1	28·4

N.B.—(i) All measurements are taken in millimeters.
(ii) The abbreviations R and L denote the peraeopod of right and left sides respectively.

TABLE 1.- *Measurements of* Palaemon choprai, *sp. nov., from Banaras, U. P.* –contd.

No.	Sex	Rostral formula	Total length of the body	Length of carapace	Length of rostrum	Second Peraeopods					
						Total length	Ischium	Merus	Carpus	Palm	Finger
10	♂	$\frac{(2)\ 10+1}{5}$	164·0	38·5	29·5	R 215·3	30·2	47·0	62·6	46·5	29·0
						L 215·5	31·0	46·7	62·5	46·6	28·7
11	♀ (egg-bearing)	$\frac{(2)\ 10+2}{6}$	130·5	28·2	26·8	R 60·6	15·0	12·2	18·1	8·7	6·6
						L 60·9	14·9	12·3	18·3	8·7	6·7
12	♂ „	$\frac{(2)\ 10+2}{5}$	129·5	28·8	24·6	R 62·7	14·8	13·0	18·6	9·1	7·2
						L 62·8	15·0	13·0	18·4	9·3	7·1

TABLE 2.– *Measurements of* Palaemon lanchesteri, *de Man.*

Locality	No.	Sex	Rostral formula	Total length of the body	Length of carapace	Length of rostrum	Second Peraeopods					
							Ischium	Merus	Carpus	Palm	Finger	Total length.
Nagpur, C. P. . .	1	♀ (egg-bearing)	$\frac{1}{7/4}$	52·8	12·8	7·7	R 4·6	4·9	6·5	3·3	2·5	21·8
							L 4·5	4·7	6·3	3·4	2·4	21·3
,, ,, . .	2	♀ (,,)	$\frac{1}{7/4}$	51·6	11·3	9·2	R 5·2	4·8	6·4	3·1	2·2	21·7
							L 5·1	4·7	6·5	3·3	2·1	21·7
,, ,, . .	3	♀ (,,)	$\frac{1}{7/4}$	50·4	10·5	9·0	R 4·8	4·9	6·8	2·9	2·3	21·7
							L 4·6	4·6	6·7	3·1	2·0	21·0
,, ,, . .	4	♀ (,,)	$\frac{2}{9/5}$	46·8	10·7	8·0	L 4·4	4·4	6·0	3·0	2·0	19·8
Baroda . . .	5	♀ (,,)	$\frac{1}{7/5}$	54·8	10·8	10·2	4·9	5·0	7·3	3·0	2·7	22·9
,, . . .	6	?	$\frac{1}{7/5}$	54·5	10·6	10·6	4·5	4·5	7·2	3·3	2·2	21·7
,, . . .	7	♀	$\frac{1}{7/4}$	51·2	10·5	9·5	4·3	4·6	6·1	2·9	1·8	19·7
,, . . .	8	♀	$\frac{1}{7/4}$	50·8	9·6	9·1	4·6	4·6	6·6	3·1	2·1	21·0
,, . . .	9	♂	$\frac{1}{7/4}$	38·5	7·9	8·3	3·7	3·5	4·8	2·2	1·6	15·8