# NOTES ON SOME INDIAN POTAMONID CRABS (CRUSTACEA; DECAPODA).

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This short note deals with certain features, hitherto overlooked, in some species of Indian freshwater crabs. Some new records have also been added, and the burrowing habits of *Potamon* (*Acanthotelphusa*) *martensi* Woodmason have been described.

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## **Paratelphusa (Barytelphusa) jacquemontii** Rathbun.

1910. *Paratelphusa* (*Barytelphusa*) *jacquemontii*, Alcock, *Cat. Ind. Dec. Crust.* pt. i, fasc. ii, pp. 79-82, pl. xii, fig. 55.

Alcock stated that " In the abdomen of the adult male the length of the 6th segment is equal to its greatest breadth, the segment being squarish with the sides slightly concave; the length of the 7th segment exceeds its greatest breadth." I have, however, found that in a majority of cases the length of sixth abdominal segment of an adult male is somewhat shorter than its greatest breadth, and the length of the seventh segment equals its greatest breadth. The table of measurements (in millimeters) of twenty one adult males from various localities, given on page 90 clearly indicates this feature.

The following are the additional records of the distribution of this species :—

| Regd. No. | Locality. | Collector and Date of Collection. |
|---|---|---|
| C 2656/1 | Dwaraka, Kathiawar. .. | S. P. Agarkar. 9-3-1948. |
| C 2903/1 | Kudranaia, midway between Kudradam and Abu cart road (Rajputana) .. .. .. | K. S. Pradhan. 16-12-1912. |
| C 2904/1 | River Soorpur, 3 miles from Dungarpur town, Rajputtana .. | B. N. Chopra & M. L. Roonwal. 26-10-1941. |
| C 2905/1 | Mirzapur, U. P. .. .. | T. N. V. Nair. 12-12-1946. |
| C 2619/1 | River Jumna, Allahabad, U. P. | A. D. Imms. 1-3-1911. |
| C 2604/1 | Chilka Lake, Orissa .. .. | N. Annandale. 23-11-1913. |

## **Paratelphusa (Liotelphusa) austrina** Alcock.

1910. *Paratelphusa* (*Liotelphusa*) *austrina*, Alcock, *Cat. Ind. Dec. Crust.*, pt. i, fasc. ii, p. 112, pl. viii, fig. 29.

*Measurements in millimeters of 21 male specimens of* **Paratelphusa (Barytelphusa) jacquemonti** *Rathbun.*

| Reg. No. | Locality. | Donor. | Carapace. | | Abdomen 6th segment. | | | Abdomen 7th segment. | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Length. | Greatest breadth. | Depth. | Length. | Greatest breadth. | Length. | Greatest breadth. |
| 3561/34 | Calicut, S. India .. .. | G, Hadfield .. | 38·8 | 52·95 | 21·6 | 7·65 | 9·8 | 7·4 | 7·4 |
| C.2602/1 | Bhawani river Nilgiry hills .. | Dr. Annandale .. | 34·4 | 47·1 | 18·8 | 7·05 | 8·3 | 6·9 | 6·9 |
| C.2602/1 | Ditto .. .. | Ditto .. | 29·8 | 40·1 | 16·0 | 5·9 | 7·2 | 6·1 | 6·0 |
| C.2610/1 | Bhawani river Nilgiris slope .. | Dr. Annandale .. | 31·5 | 42·2 | 17·8 | 6·3 | 8·1 | 6·6 | 6·6 |
| C.2610/1 | Ditto .. .. | Ditto .. | 19·1 | 25·2 | 10·1 | 4·1 | 5·0 | 3·9 | 3·9 |
| C.2610/1 | Ditto .. .. | Ditto .. | 24·0 | 31·4 | 12·2 | 4·8 | 5·9 | 5·2 | 5·2 |
| 4113/4 | Upper Godavari .. .. | Dr. Gaffrey.. .. | 50·5 | 69·0 | 28·25 | 9·9 | 10·25 | 9·6 | 9·6 |
| .. | Eastern Ghats, .. .. | H. S. Pruthi .. | 27·6 | 37·4 | 13·9 | 5·8 | 7·2 | 5·4 | 5·4 |
| 4109/4 | Nasik .. .. | Cap. Houghton .. | 68·3 | 99·2 | 42·6 | 13·4 | 15·8 | 13·7 | 12·2 |
| C.2654/1 | Kurki river .. .. | R. P. Mollins .. | 27·9 | 37·0 | 14·6 | 6·0 | 6·6 | 5·2 | 5·2 |
| C.2654/1 | Ditto .. .. | Ditto .. | 32·1 | 43·45 | 17·8 | 7·0 | 7·8 | 6·0 | 6·0 |
| .. | Khandla, Bombay .. | B. N. H. S... .. | 31·5 | 43·6 | 17·0 | 7·0 | 7·5 | 6·3 | 6·3 |
| .. | In rock pools below great-Head waters, Belgaum Dt. | Drs. Prashad and H. S. Rao. | 23·2 | 30·2 | 12·6 | 5·1 | 6·1 | 5·0 | 5·0 |
| C.2655/1 | Dindori, Mandla Dt. (C. P.) .. | Dr. B. N. Chopra .. | 46·3 | 65·8 | 26·8 | 9·8 | 11·6 | 9·5 | 8·9 |
| C.2645/1 | Dangarh (Rewa St.) 2800 feet .. | H. S. Pruthi .. | 21·5 | 28·6 | 11·1 | 5·00 | 5·6 | 4·5 | 4·5 |
| 4034/4 | Hardwar, (U. P.) .. .. | F. Day .. .. | 19·5 | 25·2 | 10·2 | 4·8 | 5·6 | 4·0 | 4·0 |
| 5452/10 | Manbhum, Bihar .. .. | K. Hallowes .. | 22·6 | 30·08 | 11·9 | 4·65 | 5·8 | 4·5 | 4·5 |
| 5451/10 | Manbhum, Bihar .. .. | K. Hallowes .. | 20·02 | 26·8 | 11·2 | 4·2 | 5·2 | 4·25 | 4·25 |
| 6417/3 | Parashnath hills .. .. | F. Stoliczka .. | 26·8 | 36·45 | 14·6 | 6·1 | 6·7 | 5·7 | 5·7 |
| 6902/3 | Birbhum .. .. | Mus. Collector .. | 21·7 | 28·45 | 10·4 | 4·25 | 5·6 | 4·25 | 4·25 |
| C.2609/1 | Purnagarh .. .. | J. Taylor .. .. | 31·2 | 41·8 | 16·85 | 6·2 | 8·2 | 6·2 | 6·2 |

Alcock described this species from a single male specimen from South India. Since then, it has not been reported from anywhere else. I refer four examples from Peradeniya (Ceylon), (Reg. No. C 6822-25/10), to this species. One of the specimens which, apparently is, an adult male, yields the following measurements :—

*Carapace.*

| | |
|---|---|
| Length .. .. .. .. .. | 14·7 mm. |
| Greatest breadth .. .. .. .. | 19·6 mm. |
| Depth .. .. .. .. .. | 9·4 mm. |
| Front-length .. .. .. .. .. | 5·6 mm. |

*Abdomen.*

| | | |
|---|---|---|
| 6th segment. | Length .. .. .. .. | 2·9 mm. |
| | Greatest breadth .. .. .. | 2·9 mm. |
| 7th segment. | Length .. .. .. .. | 2·9 mm. |
| | Greatest breadth .. .. .. | 2·45 mm. |

Front is less than one third the greatest breadth of the carapace. Chelipeds are unequal in both sexes, more so in the males. Under surface of merus is rugulose, but the carapace and hand are smooth. Inner angle of carpus possesses a blunt spine. In the larger cheliped fingers are shorter than hand. Fixed finger is slightly broadened, and the dactylus is arched so that the fingers gape a good deal, when the tips are apposed. The teeth are not very large. Four teeth on the fixed finger, and two on the dactylus can be distinctly made out.

Abdomen of the adult male is triangular, with last three segments narrow. The sixth abdominal segment has parallel sides and is as long as its proximal breadth. Seventh segment is tongue-shaped and longer than its maximum breadth.

## **Potamon (Acanthotelphusa) feae** de Man.

1910. *Potamon (Acanthotelphusa) feae*, Alcock, *Cat. Ind. Dec. Crust.*, pt. i, fasc. ii, p. 66, pl. xi, fig. 51.

One adult male from the river Mainimukh, Chittagong Hill tracts, (East Pakistan), (Reg. No. C. 2906/1) which is referable to this species, differs from the description in certain features which are described below :—

The antero-lateral borders of the carapace are carved out into three teeth, exclusive of the orbital tooth. They are blunt and hence not clearly marked. The carapace is more convex, specially the gastric region. The corrugations on the surface of the carapace are well pronounced, more so the transverse corrugations of the epibranchial region. Front is broader, more deflexed, and broadly bilobed. Its edges are rugose and appear beaded to the naked eye. Cervical groove can only be traced in the posterior mesogastric region, where it is slightly deep. The spine on the inner angle of carpus of the chelipeds is blunt and very short.

This species was first described by de Man[1] from Upper Irrawadi, Burma. Later, Alcock, reported it from Suddea, hill stream near Harmotti and Dafla hills in Assam. The specimens at my disposal are from these localities—Teesta valley, Girish river and Bengal duars Terai, which extends the range of distribution of this species westwards along the Eastern Himalayan region.

**Potamon (Acanthotelphusa) martensi** Woodmason.

1910. *Potamon (Acanthotelphusa) martensi*, Alcock, *Cat. Ind. Dec. Crust.*, pt., i, fasc., ii, p. 68, pl. xi, fig. 52.

This species had so far been recorded from Bengal, Bihar and Uttar Pradesh (U. P.). Among the examples preserved in the Zoological Survey of India, there are several specimens from Danster-Wah, a canal in Larkhana District, Sindh, (Reg. No. C 2911/1), which can be referred to this species and thus extending its range of distribution to the west for a considerable distance.

Extensive observations were made on the burrowing habits of this species at Banaras, where it was found in abundance along the right bank of the Varuna river.

The burrows were situated right from the water level up to a distance of 40 to 50 feet away from water. They were surrounded by pellets of mud heaped up, so as to give an appearance of a small mound varying in height from 2 to 5 inches. Mc Cann[2] has given an account of such mounds, (he calls them castles), ranging in height from 2 to 8 inches, with reference to one of the common land crabs of Salsette Islands, *Paratelphusa (Barytelphusa) guerini* M. Edw.

The burrows were of various depths, ranging from 6 inches to a maximum of 3½ feet. They were slanting and not vertical and sufficiently broad to allow the sideway movements of the crab. Another interesting feature is that these burrows were 6 to 7 inches in depth near the edge of the water, but they became gradually deeper at distances away from the water level. It is no doubt, in search of wet soil, as such a habitat is quite essential for purposes of respiration. I wish to mention here Hora's[3] account about two species of crabs, *Varuna literata* (Fabr.) and *Sesarma tetragonum* (Fabr.), living in burrows at great depths ranging from 4 to 8 feet.

Usually only one crab was found in each of these burrows. The burrows were never inter-connected as was noticed by Wagle[4] in the case of some land crabs from western India.

These mounds were noticed during the winter months only, *i.e.*, between November and January.

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[1] de Man, J. G., *Ann. Mus. Genoa*, (2) XIX, p. 393 (1898).

[2] Mc Cann, C., *Jour. Bombay, Nat. Hist. Soc.* XXXIX, pp. 531-542 (1937).

[3] Hora, S. L., *Proc. Zool. Soc. London*, pp. 881-884 (1933).

[4] Wagle, P. V., *Dept. Agric. Bombay, Bull.* No. 118, p. 20 1924).