

OCCURRENCE OF *HYMENICOIDES CARTER*
KEMP FROM THE RIVER GANGA AT VARANASI
TOGETHER WITH NOTES ON OTHER MATERIAL
OF THE SPECIES IN THE ZOOLOGICAL SURVEY
OF INDIA

By

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The genus *Hymenicoides carteri* was erected by Kemp in 1917 to accommodate his new monotypic species *Hymenicoides carteri*, twenty two specimens of which were collected from the banks of the river Hughli at Sibpur near Calcutta. According to Kemp "they were obtained in a timber bored by *Teredo (Xylotria) dunlopi* lying between tide marks. The water at the time they were found, was almost or quite fresh at all states of the tide, but it was doubtless brackish later in the year". Besides, Kemp had access to two more specimens collected near Khulna in the Gangetic delta.

Some time back, three specimens of this interesting species were collected by Shri D. V. Pahwa of the Central Inland Fisheries Research Sub-Station, Allahabad from the bed of the river Ganga at Nagwan Ghat, Varanasi (U.P.), and one of them which was in good condition was received from the Research Officer, Central Inland Fisheries Sub-Station, Allahabad for determination. After careful examination and comparison with the type, it was found that the specimen belonged to *H. carteri* Kemp. Interesting ecological observations made by Shri. Pahwa in this connection are given separately as an appendix to this paper.

In addition to the material mentioned above, the unidentified material of the Survey includes a bottle containing several specimens of this species from the Pulta Water Works, Barrackpore. Details of this material together with measurements of the largest and smallest crab available for study are given below:

Reg. No.	Locality and date of collection	No. of exs.
C. 3892/1	Amongst sponges and pupal cases of Trichopteran insects taken from the 51' pipe leading from the outlet channel	20

Reg. No.	Locality and date of collection	No. of exs.
	of final settling tank — 2.3.1937.	
C. 3896/1	In cistern of intake pipe, old filter bed 6— 19.5.1936.	3
C. 3894/1	On leaves and stems of <i>Vallisneria</i> sp. from the western edge of the last settling tank — 18.5.1936.	2
C. 3895/1	Under stones near the cistern — 20.11.1936.	1
C. 3893/1	On sand in new filter bed 10 — 14.12.1936	1

Measurements in mm.

Largest specimen:

Carapace: Greatest length — 9.5
 Greatest breadth — 8.3

Smallest specimen:

Carapace: Greatest length — 3.6
 Greatest breadth — 3.3

The tiny crabs of the family Hymenosomatidae appear to adapt themselves to different ecological environments. Majority of them are exclusively brackish or estuarine and only a few are known to occur in purely salt water. Most of them appear to inhabit places where the percentage of salinity is comparatively low. The most remarkable feature of this group, however, is that a few species also occur in freshwater, some surviving even in lakes at higher altitudes.

The new records of *Hymenicoides carteri* Kemp from Varanasi and Pulta Water Works situated at a distance of about 678 and 25 kilometres respectively from Calcutta adds to our knowledge on the distribution of the species and also progressive adaptation of the species from brackish to freshwater. In addition, it is remarkable that these crabs, besides inhabiting underneath stones and timber bored by molluscs, also occur in bottom biota, amongst sponges and pupal cases of trichopteran insect larvae and on the leaves and stems of an aquatic plant viz. *Vallisneria* sp.

The author is grateful to Dr. K. K. Tiwari, Deputy Director, Zoological Survey of India for kindly going through the manuscript and offering helpful criticism in the preparation of this note.

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APPENDIX

ECOLOGICAL NOTES

By

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Three specimens of this interesting crab were collected by me from the bed of the river Ganga at Nagwan Ghat, Varanasi on 8th January, 1960 around 4 p.m. These were obtained along with other benthic organisms such as Ephemeropterous larvae, Polychaetes and Gastropod molluscs. The bottom biota was obtained by means of an Ekman dredge generally used in sampling the soft surface layers of both lotic and lentic waters. Five samples of each of one sq. foot area were obtained in all from a depth of about 15 feet (4.6 metres) and at a distance of about 20-25 yds. (18-22 metres) from the west bank of the river. In general this bank at this season was shallow in depth with the pale olive coloured water flowing sluggishly.

The specimens along with bottom silt, vegetative debris and other aforesaid animals were alive at the time of the collection and were of scarlet colour. The temperature of the water both at surface and at bottom was 19°C. and the air temperature 16°C. These were actively nibbling the polychaete worms and insect larvae.