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OCCURRENCE OF KING CRAB, TACHYLEUS GIGAS (MULLER), OFF THE NORTHEAST COAST OF INDIA

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ABSTRACT

The occurrence of Tachypleus gigas (Muller) at 35-81 m depths off Orissa coast, between Paradwip and Palmyras Point (Lat. 20° 31’ - 20° 47’ N and Long. 87° 63’ - 87° 41’ E) is reported, based on the collections of FORV Sagar Sampada. The earlier reports show that this species is marine, distributed from the intertidal zone to 40 m depth. The species is described based on five specimens, two females and three males ranging in size from 270 to 390 mm along with a brief description of the ecology of the collection ground.

INTRODUCTION

Tachypleus gigas (Muller) has been reported earlier from the inshore regions of West Bengal and Orissa by Rao and Rao (1974). They have also studied three specimens from the collections of the Zoological Survey of India, two of them collected by Dr. J. Anderson from Mergui, Burma coast and the third by an unknown collector from the Orissa coast. During a programme of experimental fishing in the EEZ by FORV Sagar Sampada as part of her Cruise 36, the authors could collect five specimens of T. gigas from the depth range of 35-81 m off Orissa coast while operating Chalut Trawl (400 mesh). The earlier recorded distribution of this species has been only upto 40 m depth and the present observation indicates an extended occurrence beyond this. However, the species is found mainly on sandy and muddy bottoms in the intertidal to 40 m area (Annandale, 1909; Sewell, 1912) and also commonly along the deltaic region of Ganges and Mahanadi (Panikkar, 1951).

Class : Arachnida
Subclass : Merostomata
Order : Xiphosura
Family : Xiphosuridae
Subfamily : Tachyleinae

Tachypleus gigas (Muller)


MATERIAL

Lat. 20° 30’N Long. 87° 36’ E : One specimen, 390 mm in total length, collected at Station 1204 from 70 m depth on 6-10-87 between 1440 and 1540 hrs (Figs. 1 & 2).

Lat. 20° 24’N Long. 87° 37’ E : Two specimens, 300 and 305 mm in total length, collected at Station 1205 from 81 m depth on 6-10-87 between 1730 and 1830 hrs. The left side of opisthosoma in the 300 mm specimen and anterior right margin of the prosoma in the 305 mm specimen were found deformed.

Lat. 20° 38’N Long. 87° 22’ E : One specimen, 270 mm in total length, collected at Station 1206 from 35 m depth on 7-10-87 between 0645 and 0730 hrs.

Lat. 20° 47’N Long. 87° 41’ E : One specimen, 300 mm in total length, collected at Station 1207 from 42 m depth between 1015 and 1100 hrs.

Diagnosis : Triangular caudal spine crested dorsally and concave ventrally. The other species (Carcinoscorpius rotundicauda) known to occur in Indian waters is reported to have round caudal spine (Rao and Rao, 1974).

Size : The minimum and maximum sizes recorded were 270 mm and 390 mm respectively. The details of other body measurements are given in Table-1.

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Sex: Of the five specimens, two were female and three male. In males and young females lateral spines of opisthosoma were long, but the posterior ones were short in the adult female. The claspers of the male were hemichelate.

Colour: Prosoma and opisthosoma glossy ash grey, caudal spine dark-brown, lateral spines cream-yellow and eyes black.

Ecology: The stations from where the specimens were collected had muddy bottom. The salinity of the water in the first two stations was found to be higher than that of the other two stations; 21.67% in Station 1204 and 21.31% in station No. 1205. In Station 1206 and 1207 the salinity noted was 17.32% and 12.8% respectively. Dissolved oxygen values were found low in station 1204 and 1205 (4.89 and 2.53 ml/l respectively) and higher in Station 1206 (5.46 ml/l) and 1207 (5.37 ml/l). Thus, the animal seems to tolerate wide ranges of salinity and oxygen. The water temperature recorded at the stations ranged narrowly: 30.5°C at 1205 and 1207 and 29.6°C and 29.4°C respectively at stations 1204 and 1206. The fish fauna landed along with the crabs were: Rastrelliger kanagurta, Arionna indica, Decapterus russellii, Upeneus vittatus, Lutjanus malabaricus, Nemipterus metopias, Priacanthus hamrur, Johnius dussumieri, Saurida undosquamus, Lisha megaloptera, Trichiurus lepturus, skates, rays, Leiognathus bigudus, and L. lineolatus. The prawns, Penaeus canaliculatus and P. semisulcatus and the weeping mussel Modiolus sp. were found in stray numbers.
TABLE 1. Morphometric measurements (mm) of Tachypleus gigas

<table>
<thead>
<tr>
<th></th>
<th>Specimen No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Total length</td>
<td>390</td>
</tr>
<tr>
<td>Length of prosoma</td>
<td>115</td>
</tr>
<tr>
<td>Length of opisthosoma</td>
<td>75</td>
</tr>
<tr>
<td>Length of caudal spine</td>
<td>190</td>
</tr>
<tr>
<td>Inter-orbital distance</td>
<td>95</td>
</tr>
<tr>
<td>Maximum width of prosoma</td>
<td>175</td>
</tr>
<tr>
<td>Maximum width of opisthosoma</td>
<td>115</td>
</tr>
<tr>
<td>Sex</td>
<td>Female</td>
</tr>
</tbody>
</table>

Distribution: The area of the present collections is shown in Fig. 3. Out of 22 stations covered during the cruise between Visakhapatnam and Plamyras Point, the king crab could be collected only from four, between Paradip and Plamyras Point. The earlier reports suggest its distribution from Bay of Bengal to Malay Archipelago besides the deltaic region of Ganges and Mahanadi.

Remarks

The maximum size of king crab reported so far is 300 mm (Rao and Rao, 1974), and the 390 mm specimen in the present collection seems to be the largest recorded so far. The king crabs are described as "mobile museums of natural history" as they carry varied epifauna on the dorsal and ventral surfaces of the body. But in the present collection no epifauna was present. The species known to occur up to 40 m depth from previous records, is now shown to enjoy wider distribution.

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References


