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OCCURRENCE OF PEACRABS *PINNOTHERES GRACILIS* BURGER AND *P. ALCOCKI* RATHBUN AT KAKINADA

ABSTRACT

Peacrabs *Pinnotheres gracilis* Burger and *P. alcocki* Rathbun associated with bivalves *Amusium pleuronectes* (Linnaeus) and *Anadara granosa* (Linnaeus) respectively are described in detail. These two molluscs are the new hosts recorded and *P. alcocki* is recorded for the first time from Indian waters.

It is well known that Pinnotherid crabs are associates of various host animals representing most of the larger phyla, in temperate and tropical waters. A number of bivalves occurring at Kakinada were found to be commensalised by peacrabs. These crabs were identified as *Pinnotheres gracilis* Burger and *Pinnotheres alcocki* Rathbun.

Pinnotheres gracilis Burger (Fig. 1)

Pinnotheres gracilis Burger 1895, p. 368-369; Tesch 1918, p. 249; 253; Pillai 1951, p. 26; Silas and Alagarwami 1967, p. 1199; George and Noble 1968, p. 392.

Material: 3 females - One Ovigerous and two 2nd stage females from the mantle cavity near the inhalent siphon of *Amusium pleuronectes* (Linnaeus) collected from the commercial trawlers of Kakinada.

Host: Previous records of this crab are from the hosts *Solen* spp. and *Katetyisia opima*.

This is the first record from the host *Amusium pleuronectes*.

Distribution: This species has been reported from Indian waters by George and Noble (1968) along the west coast of India. The present report extends its distribution to the east coast.

Remarks: Length of the carapace ranges from 3 to 7 mm; ratio of length of carapace to the breadth of carapace 1:1.09; of dactylus to length of upper border of palm 1:1.66; of dactylus to width of palm 1.5:1; dactylus of external maxilliped almost reaches the propodus. Second pair of legs and dactylus of the same the longest. Asymmetry in walking legs observed even in 3 mm size crab, legs on the right side being longer than those of the left side.

Incidence of infestation is 2% and the length (Dorso-ventral measurement) of the

Male: Carapace smooth and harder than in female; antero-lateral angles though rounded, more pronounced; anterior portion slightly elevated, but not separated from body, its width being more than $\frac{1}{4}$ of carapace width and slightly notched in the middle. External maxilliped resembles that of the female. Chelate legs more robust; walking

appendages long cylindrical, tips bent in the shape of a claw, bear coarse hairs near both margins.

Colour in live condition : Females pale in colour with dark-brown and orange-yellow reproductive system; legs and other parts paler. Male diffuse dark brown and

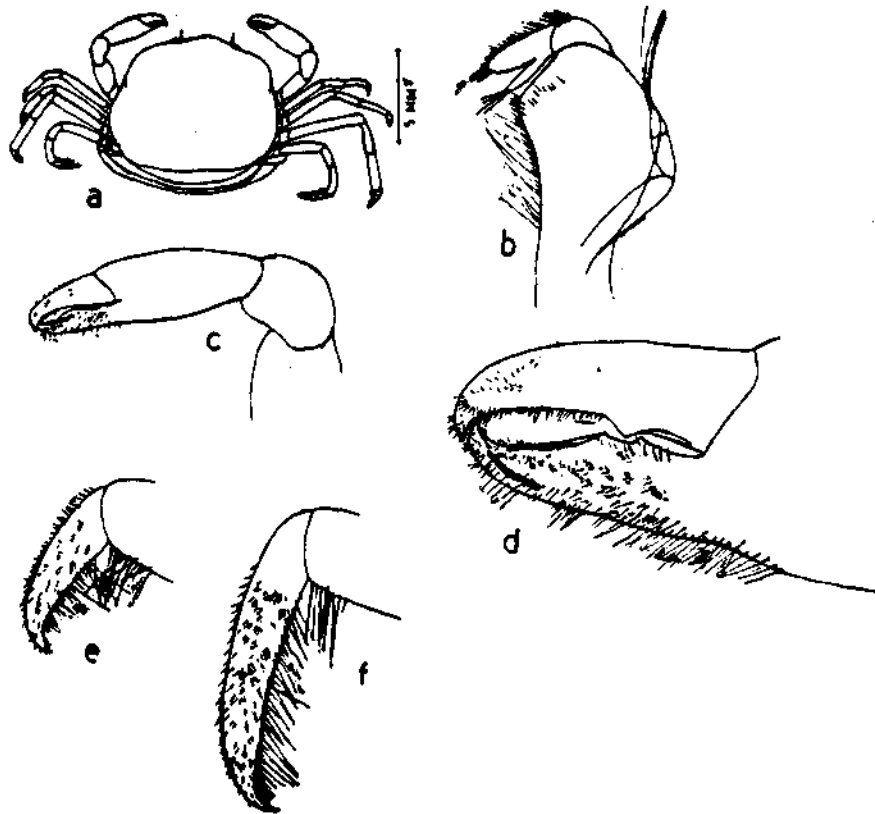


Fig. 2. a. *Pinnotheres aclocki* Rathbun - female dorsal view, b. 3rd maxilliped 10 x 6, c. Chelate leg 2.5 x 6, d. Part of chelate leg enlarged 10 x 6 and e and f. dactylus of the 3rd and 4th walking legs respectively 10 x 6.

legs slender, but stronger than in those of females; 3rd leg is the longest; walking legs with long tuft of hairs on lower surfaces of merus, ischium, carpus and propodus.

light yellow-orange colouration. Testis as white specks on either side of dark-brown alimentary canal. Colour changes were noticed.

Abdomen narrow, 6 jointed, fringe of hairs on its border. Anterior male abdominal

Remarks : A symmetry in the walking legs has been noticed both in males and

bivalve shells varied from 20-50 mm. No instances of multiple infestation recorded.

The presence of small-sized crabs in the small sized oyster (20 mm in length) indicates the invasion of these crabs in the early stages and they grow in size with the host, making the association a life long partnership especially in female crabs as observed by Lalitha Devi (1979) in *P. placunae* inhabiting the windowpane oyster *Placenta placenta*.

Indonesia, Burias, Philippines. This is the first record from Indian Waters and from the host *Anadara granosa*.

Description: Female: Body soft and membranous; carapace slightly broader than long, circular, smooth and flat, anterolateral angles though rounded are pronounced; ratio of carapace length to width 0.83 - 0.87.

External maxillipeds with anterointernal angle of the ischium-merus rounded;

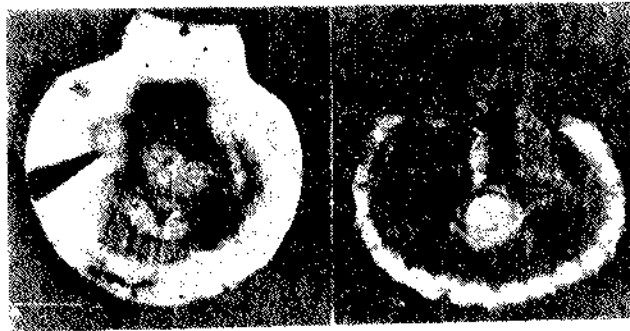


Fig. 1. *Pinnotheres gracilis* Burger in *Anostium pleuronectes* (Left) and *Pinnotheres alcocki* Rathbun in *Anadara granosa* (Smaller one male while the other female) (right).

***Pinnotheres alcocki* Rathbun (Fig. 1-3)**

Pinnotheres parvulus de waai 1888 b, p. 105.

Pinnotheres alcocki, Rathbun 1910, p. 303-367; Tesch 1918, p. 248; Sakai 1395, p. 194-199. Gordon 1936, p. 163-180; Silas and Alagarwami 1967, p. 1195.

Material: 10 females - 7 Ovigerous females and 3 hard-shelled males from the mantle cavity of *Anadara granosa* (Linnaeus) collected from the catches at a depth of 2 m in the mudflats of Kakinada Bay.

Host: Previous records of this species are from *Cytherca* sp. and *Mytilus* spp.

Distribution: Mergui Archipelago; Burma, Pedang, Noordwachter Island near Batavia

dactylus not exceeding propodus in length, the apex of which is narrow and rounded; dactylus of chela four-fifths of dorsal border of palm. Walking legs have the following relative lengths 1:1.28; 1.67 and 1.29. Ratio between fourth and third dactylus 5:3. Length of propodus by length of dactylus of 2nd to 4th legs 2.08; 1.9; 1.09 respectively, dactylus of fourth leg is more compressed and with a series of long setae on the ventral margin and is longer relatively to the second dactylus and is shorter than propodus; long setae present on the ventral margin of propodus and dactylus of third leg. Setae on the dactyli of two posterior legs occur on all sides.

females. Legs on the right side are longer than those on the left side. *P. alcocki* closely resembles *P. similis* Burger, but differs in

cunae which occurs in this region in the proportion of the lengths of legs and the presence of spinules on the dactylus of the last leg.

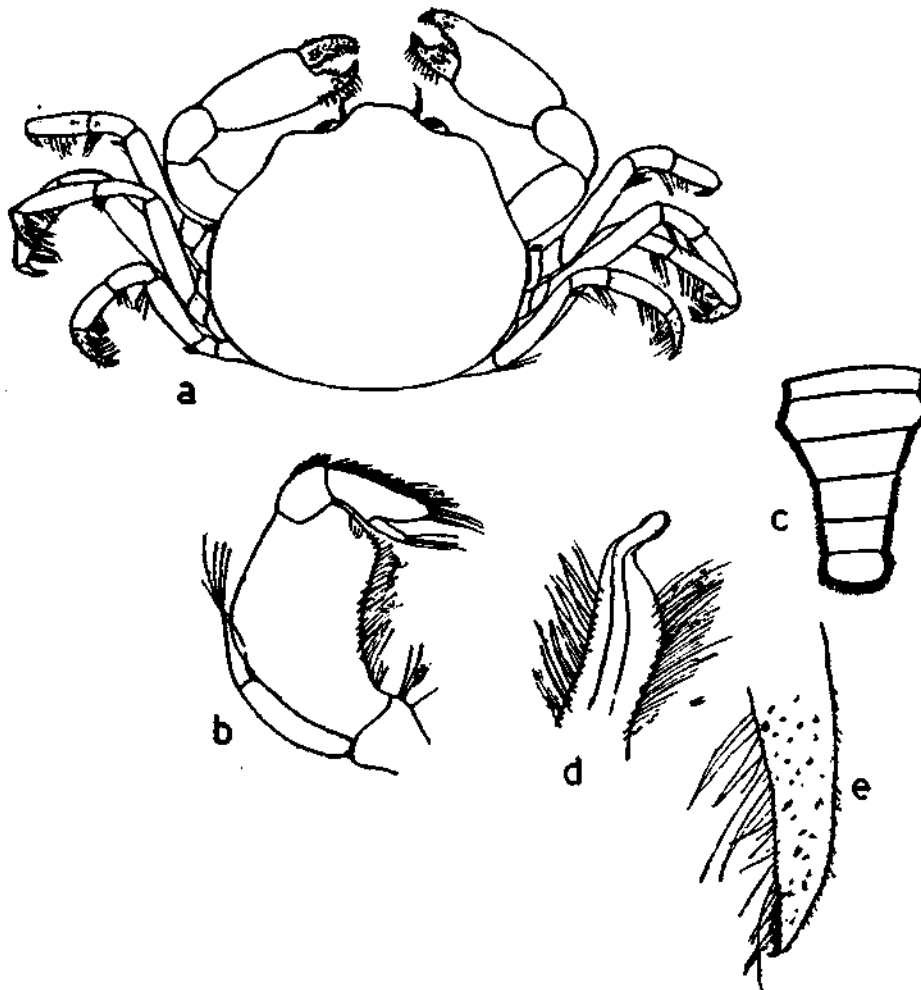


Fig. 3. a. *P. alcocki* Rathbun-male dorsal view 2.5 x 6, b. 3rd maxilliped 10 x 6, c. Abdomen 2.5 x 6, d. Terminal portion of copulatory pleopod 10 x 15 and e. Distal part of dactylus of 4th leg 10 x 6.

the proportion of length of propodus to dactylus of the last walking leg and number of spinules on the dactylus of the last walking leg. *P. alcocki* differs from *P. pla-*

Incidence of infestation is 16% (80 specimens) and on only one occasion, double infestation is recorded in which a male and an ovigerous female occurred together

in a host. No traces of damage to the varied from 29-55 mm (antero-posterior parts of the body were observed. Size of host axis).

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ON A NEW RECORD OF CUVIER'S BEAKED WHALE *ZIPHIUS CARVIROSTRIS* FROM THE INDIAN WATERS

ABSTRACT

The Cuvier's beaked whale *Ziphius cavirostris* Cuvier, 1823 is a rare species mostly leading a solitary life, but is said to be cosmopolitan in distribution. However, this species has been hitherto never recorded from the Indian Ocean from an area ranging from the east coast of South Africa to Tasmania. In view of this topical interest a few notes of a male specimen of this species stranded on the reef flat of Minicoy are provided here.

THERE are many records of stranding of different species of whales from the mainland and adjacent coasts of Indian subcontinent in the past and are mainly documented by several authors (James and Soundararajan, 1979). However, there appears to be no mention of the occurrence of Cuvier's beaked whale *Ziphius cavirostris* Cuvier, 1823 (Ziphiidae, Cetacea) from this area. The species is monotypic and is said to enjoy a cosmopolitan distribution, though rare and solitary (Harper and Shipley, 1902). Mitchell and Houck (1967) and later Gaskin (1972) have summarised the available data on distribution of this species as to: South Africa, New Zealand,

Tasmania, off Japan, Midway Island, Hawaii, Aleutian Islands, British waters, France, Spain, west coast of North America, California and Puerto Rico, but not Arctic or Antarctic. From the above it is evident that there is wide gap in the known distribution of this species in the Indian Ocean from 30°S northward including the Red Sea. However, Daugherty (1965) felt that the species "may be much more common than realised because they are solitary and inconspicuous".

During a reconnaissance survey of the leeward reef flat of Minicoy Atoll in Lakshadweep on 10-11-1982 we sighted a stranded