

Further records of rare brachyuran crab *Eucrate indica* (Crustacea: Decapoda: Brachyura Euryplacidae) along the Chennai coast, Tamil Nadu, India

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Resumo

Novos registros do caranguejo raro *Eucrate indica* (Crustacea: Decapoda: Brachyura: Euryplacidae) ao longo da costa de Chennai, Tamil Nadu, Índia. Este estudo relata uma nova ocorrência do caranguejo *Eucrate indica* (Crustacea: Decapoda: Brachyura: Euryplacidae) ao longo da costa de Chennai, Tamil Nadu, Índia. Os caranguejos foram obtidos a uma profundidade de 40-60 m, através de captura acidental de arrasto. As características morfológicas, cor e distribuição destes caranguejos são dadas.

Palavras-chave: Distribuição; Rede de arrasto

Abstract

This study reports further occurrence of the crab *Eucrate indica* (Crustacea: Decapoda: Brachyura: Euryplacidae) along the Chennai coast, Tamil Nadu, India. The crabs were obtained from a depth of 40-60 m in the trawl by-catch. The morphological features, color and distribution of these crabs are given.

Key words: Distribution; Trawl-by catch

Introduction

Earlier the Euryplacid crabs as a subfamily were included in the family Goneplacidae Mac Leay, 1838. Based on the extensive critical study of relevant literatures Števcíć (2005), and examination of type specimens (CASTRO, 2007; CASTRO; NG, 2010),

the family Euryplacidae Stimpson, 1871 was created to accommodate 14 genera, namely, *Eucrate* De Haan, 1835, *Euryplax* Stimpson, 1859, *Frevillea* A. Milne Edwards, 1880, *Henicoplax* Castro and Ng, 2010, *Heteroplax* Stimpson, 1858, *Machaerus* Leach, 1818, *Nancyplax* Lemaitre, Garcia-Gomez, von Sternberg and Campos, 2001, *Platyozius* Borradaile, 1902,

Psopheticoides, Sakai, 1969, *Systroplax* Castro and Ng, 2010, Guinot, 1984, *Trissoplax* Castro and Ng, 2010, *Trizocarcinus* Rathbun, 1914, *Villoplax* Castro and Ng, 2010 and *Xenocrate* Ng and Castro, 2007. According to Castro and Ng (2010), only eight species of the genus *Eucrate* have been accommodated, of which, *Eucrate alcocki* Serene in Serene and Lohavanijaya, 1973; *Eucrate crenata* (De Haan, 1835) and *Eucrate indica* Castro and Ng (2010) were reported from Indian waters. Based on the specimens collected from Chennai and Vellar estuary, southeast coast of India, *Eucrate indica* has described by Castro and Ng (2010), which had reported as *Eucrate crenata* var. *dentata* from Palk Bay by Alcock (1900) and Sankarankutty (1966) and from Gulf of Mannar by Sankarankutty (1966) and as *Eucrate alcocki* from Vellar estuary, Parangipettai by Rajkumar et al. (2009). The present report deals with the further collection of *Eucrate indica* from Chennai as well as from Ennore, 25 km north of Chennai.

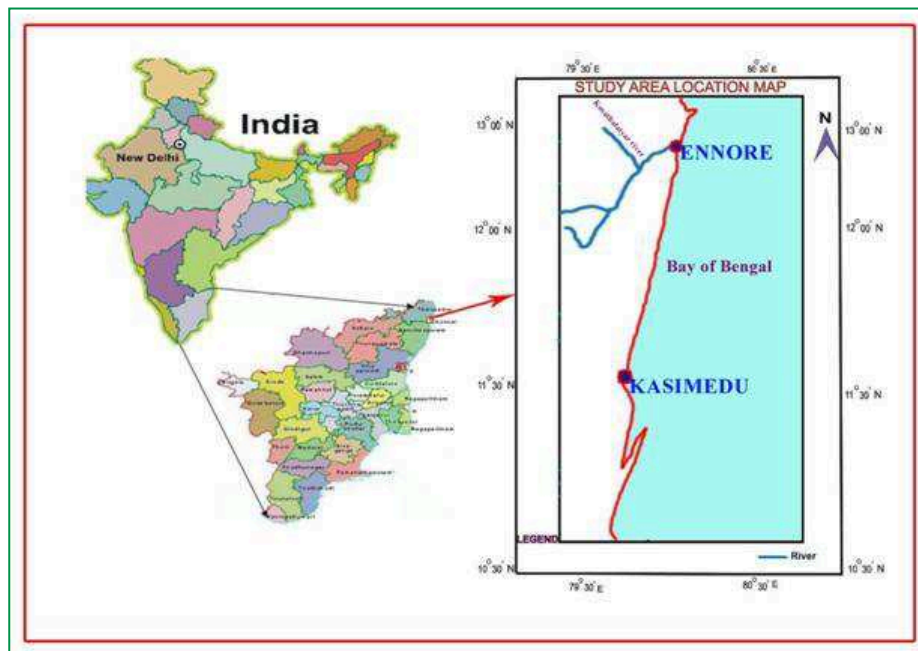
Materials and Methods

Chennai coast which is lying at (13°06'N and 80°18' E) and comprises more than 80 coastal villages.

The coast extends from Pulicat Lake in the north to Kalpakkam in the south and stretches for about 140 km. The coastal fishing grounds lie in the depth range of 10 to 70 m at a distance of 15 to 80 km from the shoreline, extending between Ongole in South Andhra Pradesh and Nagapattinam to the south of Chennai. The two specimens were collected from Kasimedu fishing harbour (13°07'36"N, 80°17'52"E) and Ennore coast (80°25'E; 13°14'N) (Figure 1). Kasimedu fishing harbor is a protected area with placid waters.

In this study, 2 mature female specimens were examined. The crabs were measured to the nearest 0.1 mm using vernier calipers. The collected material was identified, measured, and preserved in 10% formalin and its taxonomy was confirmed up to species level using various keys (NG; DAVIE, 2002; RAJKUMAR et al., 2009; CASTRO; NG, 2010; KAZMI; MOAZZAM, 2012). Measurements provided (in millimeters) are of the Carapace length (CL) and Carapace width (CW), respectively. The specimen was deposited in the Department of Zoology, Sir Theagaraya College, Chennai, Tamil Nadu, India.

FIGURE 1: Map of the sampling areas along the Chennai coast, Tamil Nadu.



Results and Discussion

SYSTEMATICS

Order DECAPODA

Family EURYPLACIDAE Stimpson, 1871

Genus *Eucrate* De Haan, 1835

Eucrate indica Castro and Ng, 2010

(Figure 2 and 3)

Materials examined

ZOMUSP 231, 16.IX.2013, 2 female, (Figure 2), trawl catch, Kasimedu fishing harbour (13°07'36"N,

80°17'52"E) and Ennore coast (80°25'E; 13°14'N) Coll. K. Silambarasan.

Synonyms

Eucrate alcocki Ng and Davie (2002, p. 378); Rajkumar et al. (2009, p. 832, Figure 1)

(?) *Eucrate crenata* var. *dentata* – Alcock (1900, p. 299 [in key] & p. 301); Sankarankutty (1966, p. 350 [in list]).

Eucrate indica Castro and Ng (2010, p. 32).

FIGURE 2: Dorsal view of *Eucrate indica* (Castro & Ng, 2010).



FIGURE 3: Female thoracic sternum and abdomen of the *Eucrate indica* (Ventral view).



The effective conservation and management of species depends on better understanding of all components of biodiversity. Hence, makes the timely reporting of expansion or shrinkage of species range important for conservation and management of the species (SILAMBARASAN et al., 2015). This contribution adds further records of *Eucrate indica* along the Chennai coast. This further record of species from Chennai coastal waters indicates the possible extension in the distribution range of species; it contributes to the species database and builds the biodiversity data base of the area as well.

Diagnosis

Anterolateral margin armed with two teeth, excluding the external orbital tooth; the second tooth acutely triangular; third anterolateral tooth large and sharp. The carapace is with relatively long postero-lateral borders. Fifth pereopod propodus is slender; eight irregular, large, red-brown spots on median portion of the dorsal surface of carapace, each flanked by two smaller, vertically placed spots.

Measurements

The Table 1 presents the measurements of *Eucrate indica*.

TABLE 1: Measurements of *Eucrate indica* (Castro & Ng, 2010).

Carapace data	Kasimedu (mm)	Ennore (mm)
Carapace width	23	21
Carapace length	27	26
Frontal width	8	7
Posterior width of carapace	42	38
Abdominal width	12	10
Abdominal length	17	15
Cheliped data	(mm)	(mm)
Propodus length	16	12
Propodus width	4	3
Dactylus length	9	6
Merus length	17	14
No of lateral spines	02	02

Distribution

India: Ennore (present report), Chennai (CASTRO; NG, 2010; present report), Vellar estuary (RAJKUMAR et al., 2009; CASTRO; NG, 2010), Palks Bay (ALCOCK, 1900; SANKARANKUTTY, 1966), Gulf of Mannar (SANKARANKUTTY, 1966).

Elsewhere: Malaysia and Thailand (CASTRO; NG, 2010).

Remarks

The specimens in our collection agree with original description and figure of *E. indica* given by Castro and Ng, (2010). The colour pattern also agrees with the observation by Rajkumar et al. (2009) and Castro and Ng, (2010).

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