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A STUDY OF BRACHYURAN CRABS AT CHINNANGUDI COASTAL WATERS

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ABSTRACT

The present study was carried out to identify the brachyuran crabs in Chinnangudi coastal waters during the period of November 2018- February 2019. Totally 12 species of Brachyuran crabs have been recorded over a period of four months. Crabs were identified with the help of available literature and a check- list has been provided. There recorded crabs of present observation belonging to Portunidae, Bythograeidae, Eriphiidae and Pilumnidae. In the present study the morphology and anatomical structure of crabs were observed and also sexes of crabs (male and female) were identified. A survey to identify the Brachyuran crabs along the Chinnangudi coast is recommended.

KEY

Brachyuran crabs, Chinnangudi coastal waters.

INTRODUCTION

Brachyuran crabs are more diverse group of crustaceans alive today. Tropical subtropical regions have move number of crabs species compared to temperatures and cold regions (Fransozo and Negreiros –Fransozo, 1996; Boschi, 2000 a). Brachyuran crabs, comprise about 700 genera and 5000 to10000 species worldwide Kaestner, 1970; Melo, 1996; Ng, 1998; Martin and Davis, 2001; Sternberg and Cumberlidge, 2001; Ng *et al.,* 2008, Yeo *et al.,* 2008, out of which 2600 are present in Ino-west Pacific (Serene, 1968). Boschi (2000) and Hendrickx (1995 and 1999) prepared major species of crabs lists for the Americas. In India 705 Brachyuran crabs species, 28 families, 270 genera have been reported (Venkataraman and Wafar, 2005). TamilNadu coast, one of the state in India has 404 species of crabs belonging to 26 families and 152 genera (Kathirvel, 2008). Maximum percentages of crab catches are landed from Gulf of Mannar, Palk Bay, Nagapattinam and Puducherry landings centre (Rao *et al.,* 1973).Chennai coast has witnessed an annual crab landings were over 1500 tons (Thangaraj Subramanian, 1998). There is high demand for edible crabs in the local and international markets,

because of its high meat quality, taste and large size. The edible crabs are captured and exported to other countries, and commands a high prize most of the edible species was found to be a continuous breeder and the brood stock is available throughout the year (Willams and Primavera, 2001).

Among the marine edible crustaceans crabs rank third by virtue of their delicacy and demand from both domestic consumption and export trade, which the first two are shrimps and lobsters. Crabs were exploited by indigenous gears such as gill net, boat seine, shore seine and cast net in the inshore marine region and stake net, drag net, cast net and dip net in the brackish water areas and the catches has steadily increased due to mechanized trawling (Kathirvel *et al*., 2007). Understanding of the diversity of Brachyuran crabs of Chinnangudi coastal ecosystem is an important basic need. Practically nothing is known about the Brachyuran crabs diversity occur along the Chinnangudi coast. Hence the present study aims to provide basic information on Brachyuran crabs inhabiting the Chinnangudi coastal waters. It is believed that the present preliminary observation may stimulate better investigations in future for the thorough understanding of the particular ecosystem and the faunal diversity along the Chinnangudi coast.

In the Chinnangudi coastal ecosystem, the shell fishes, especially the Brachyuran crab contribute considerably to the biomass and species diversity. However studies on Brachyuran crab of Indian seas are very much restricted. Further noting is known about the Brachyuran diversity occur along the Chinnangudi coast. Hence the present preliminary investigation on Brachyuran crab landed at Chinnangudi Coast is attempted to provide baseline information. Chinnangudi is a small fishing village located off the Coromandel Coast, under Pillaiperumal Nallur Panchayat in Nagappattinam District. It is located 35 kilometres north of Karaikal (a part of the union Territory of Pondicherry). The Chinnangudi beach also plays host to other fishing related activities like cleaning and repairing nets, drying fish and making catamarans.

MATERIALS AND METHODS

For the present study (November 2018 - February 2019) Brachyuran crabs were collected from the fish landing Centre of the Chinnangudi coast. Then the crabs were washed and preserved in 10% neutralized Formaldehyde solution for further analysis subsequently the preserved materials were identified up to species level by referring the publications of Antony Fernando, S and Oliva J. Fernando (2002). The crabs were identified by the following characters; colour, shape, shape of the chelate legs, formation of spines on carapace and other places, structure of walking and swimming legs etc. A total of 12 species of crabs were collected and identified from the study area for the period of four months.

RESULTS AND DISCUSSION

As a result of this preliminary observation, over a period of four months (November 2018 - February 2019) 12 species of Brachyuran crabs were collected, identified and check-list had also been provided based on the material collected from the study area. The Brachyuran crabs belonging to the families Portunidae, Bythograeidae, Eriphiidae and Pilumnidae were also represented. No uniformity has been observed regarding the distribution of Brachyuran crabs in the present investigation for the study period of four months. According to the classification of Brachyuran crabs most of the edible crabs were belonging to the family Portunidae. The morphology and anatomical structure were observed. In crabs sexes are separate sexes can be distinguished from the shape of the abdomen. In female crab's underside, there's a flap with a distinct shape. This flap is called apron. Male crabs have a long pointy is called jimmies (Josileen *et al*., 2005). The distribution and complexity of Brachyuran crabs were studied by several of brachyuran crabs had been studied by several authors (Alcock, 1985- 1990; Gravely, 1927; Sankarankutty, 1976; Rao *et al*., 1973; Sampath, 1998; Jayabaskaran *et a.l.*, 2000; Kathirvel *et al.*, 2007; Gokul and Venkatraman, 2008; Varadharajan *et al.*, 2009 ; Kollimalai Sakthivel and Antony Fernando, 2012; Ravi *et al*.,2013; Epifanio *et al.*, 2016; Sathiya and Valarmathi, 2017) on the various places of Indian Coastal waters.The present preliminary investigation is an inventory of biodiversity of Brachyuran crabs at Chinnangudi coastal waters. The study was carried out during November 2018 to February 2019. Crabs were collected, identified and classified from the above study area.

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