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## Diversity of crabs in Tekkali creek, Srikakulam district, Andhra Pradesh

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### Abstract

Tekkali Creek is located on the East coast of India in Srikakulam District, Andhra Pradesh being connected by different channels, canals, streams etc. The creek was surveyed for different crab populations. Fifteen species belonging to five families– Ocypodidae, Grapsidae, Sesarmidae, Portunidae and Varunidae and nine genera– *Ocypode*, *Uca*, *Grapsus*, *Sesarma*, *Perisesarma*, *Episesarma*, *Portunus*, *Scylla* and *Hemigrapsus* were recorded. Of the species identified seven were marine and eight were brackish water.

**Keywords:** Tekkali Creek, Brachyuran Crabs.

### 1. Introduction

Crabs are one of the important faunal communities serving as very good food source to human beings in the marine and brackish water ecosystems. They are predacious carnivores and scavengers and playing an important role in detritus formation, recycling of nutrients and overall dynamics of ecosystems [1]. Crabs are distributed up to 6000 m depth [2]. About 5000 to 10,000 species of brachyuran crabs belonging to 700 genera have been reported worldwide [2-9]. In Indian waters 990 species of marine brachyuran crabs belonging to 281 genera and 36 families are recorded [10]. An attempt has been made for first time to list the brachyuran crabs along the Tekkali Creek of Srikakulam District, Andhra Pradesh.

### 2. Material and Methods

The Tekkali Creek is a back-water intrusion of the sea into the land starting at Bhavanapadu village and extending up to Kollipadu village (18°33'48.7"N, 84°21'19.6"E to 18°30'30 N, 84°15'30 E) covering a distance of 16 km (Fig1). It was connected laterally on either side by various streams, channels, agricultural and aquaculture outlets. At the end the creek was connected by Desigedda and Garibulagedda streams at Kollipadu village. Mangroves were found as patches on either side of the creek and also at the centre. The study area, mainly the mud flats and the mangroves was surveyed at random for crab collection. Hooks were used for the collection of burrowing crabs. Gill nets were used for the collection of crabs in water column, rocky shore crabs were collected by hand picking. Diluted formalin was poured in the burrows to collect the burrowing crabs. The specimens were photographed and preserved in 4% formalin for further identification. The preserved specimens were identified to the species level using different identification keys [11-17].

### 3. Results and Discussion

Fifteen species of brachyuran crabs were recorded belonging to five families and nine genera (Table 1). Family Ocypodidae was represented by *Ocypode macrocera* (Fig 1), *Ocypode platytarsis* (Fig 2) *Uca pugilator* (Fig 3), *U. chlorophthalmus* (Fig 4), *U. annulipes* (Fig 5). Family Grapsidae was represented by *Grapsus grapsus* (Fig 6) and the Family Sesarmidae was represented by *Sesarma reticulatum* (Fig 7), *Sesarma cinereum* (Fig 8), *Episesarma versicolor* (Fig 9) and *Perisesarma bidens* (Fig10). In the family Portunidae *Portunus pelagicus* (Fig 11), *P. sanguinolentus* (Fig 12), *Scylla tranquebarica* (Fig 13) and *S. serrata* were found (Fig 14). The family Varunidae was represented by *Hemigrapsus oregonensis* (Fig 15).

Crabs play an important role in the maintenance of mangrove ecosystems [18] and conserve nutrients for the growth of mangroves [19]. In Mudasal Odai, South East India, 34 species

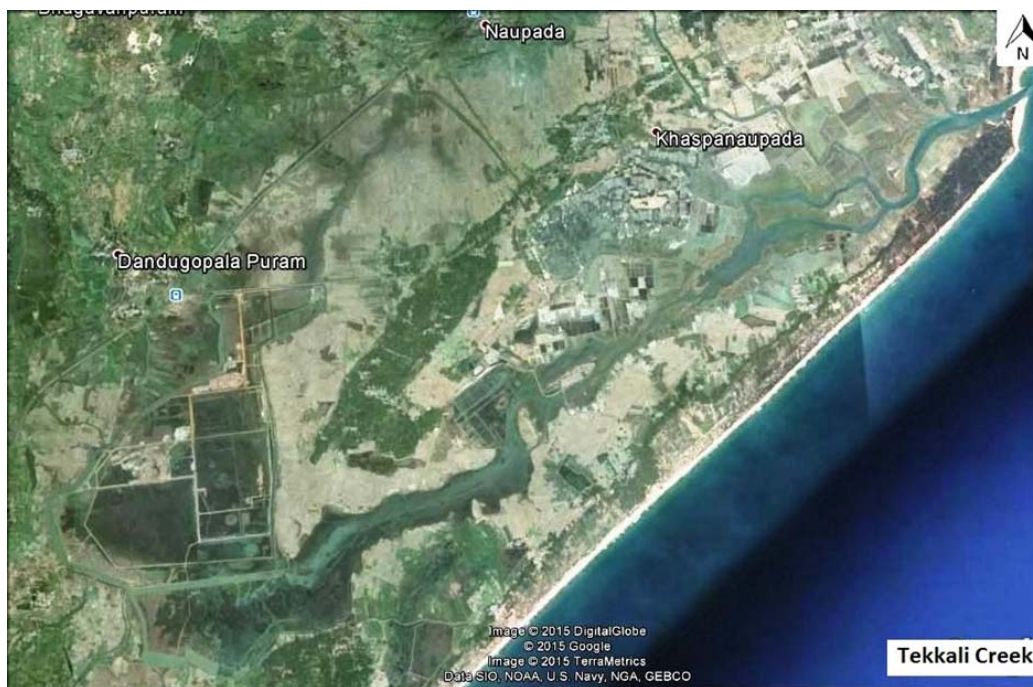
belonging to 15 genera and 7 families and in Nagapattinam coast 31 species belonging to 15 genera and 7 families have been recorded [20]. From Chilika Lake, Pulicat Lake and Vembanad Lake a total of 57 species of crabs belonging to 37 genera and 11 families have been reported [21]. In Tamil Nadu, 33 crab species belonging to the family Grapsidae and Ocypodidae have been reported at 8 mangrove areas viz., Pichavaram, Vellar, Pazhayar, Muthupet, Manakudi, Gulf of Mannar, Ennore creek and Punnaikayal [22]. At Mahi and Dhadhar estuarine region of Gujarat, 14 species of brachyuran crabs have been recorded [23].

In Nallavadu lagoon of Puducherry, 9 species of crabs have been recorded [24]. In the intertidal areas of Mumbai region three species of fiddler crabs namely *Uca annulipes*, *U. vocans* and *U. dussumieri* have been reported [25]. In Kanyakumari

District, Tamil Nadu, 40 species of brachyuran crabs belonging to 16 genera from 7 families have been recorded [26]. From Arukkattuthurai to Pasipattinam, South East Coast of India, 79 crab species belonging to 21 families have been identified [27]. At Marine National Park, Gulf of Kutch, 22 species of marine crabs belonging to 11 families have been reported [28]. 19 species of brachyuran crabs belonging to 13 genera and 8 families have been recorded in Pondicherry mangrove environment, South East coast of India [29].

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**Fig 1:** Study area

**Table 1:** List of Brachyuran crabs at Bhavanapadu Creek

<b>Brachyuran crabs</b>	
Phylum	Arthropoda
Subphylum	Crustacea
Class	Malacostraca
Order	Decapoda
Family	Ocypodidae
Genus	<i>Ocypode</i>
Species	<sup>[1]</sup> <i>macrocera</i> (H. Milne Edwards, 1852)
Species	<sup>[2]</sup> <i>platytarsis</i> (H. Milne Edwards, 1852)
Genus	<i>Uca</i>
Species	<sup>[3]</sup> <i>pugilator</i> (Bosc, 1802)
Species	<sup>[4]</sup> <i>chlorophthalmus</i> (H. Milne-Edwards, 1837)
Species	<sup>[5]</sup> <i>annulipes</i> (H. Milne Edwards, 1837)
Family	Grapsidae
Genus	<i>Grapsus</i>
Species	<sup>[6]</sup> <i>grapsus</i> (Linnaeus, 1758)
Family	Sesarmidae
Genus	<i>Sesarma</i>
Species	<sup>[7]</sup> <i>reticulatum</i> (Say, 1817)
Species	<sup>[8]</sup> <i>cinereum</i> (Bosc, 1802)
Genus	<i>Perisesarma</i>
Species	<sup>[9]</sup> <i>bidens</i> (De Hann, 1835)

Genus	<i>Episesarma</i>
Species	<sup>[10]</sup> <i>versicolor</i> (Tweedie, 1940)
Family	Portunidae
Genus	<i>Portunus</i>
Species	<sup>[11]</sup> <i>pelagicus</i> (Linnaeus, 1758)
Species	<sup>[12]</sup> <i>sanguinolentus</i> (Herbst, 1783)
Genus	<i>Scylla</i>
Species	<sup>[13]</sup> <i>tranquebarica</i> (Fabricius, 1798)
Species	<sup>[14]</sup> <i>serrata</i> (Forsskal, 1775)
Family	Varunidae
Genus	<i>Hemigrapsus</i>
Species	<sup>[15]</sup> <i>oregonensis</i> (Dana, 1851)
Family	Grapsidae
Genus	<i>Grapsus</i>
Species	<sup>[6]</sup> <i>grapsus</i> (Linnaeus, 1758)
Family	Sesarmidae
Genus	<i>Sesarma</i>
Species	<sup>[7]</sup> <i>reticulatum</i> (Say, 1817)
Species	<sup>[8]</sup> <i>cinereum</i>



Fig 1: *Ocypode macroceras*



Fig 2: *Ocypode platytarsis*



Fig 3: *Uca pugilator*



Fig 4: *Uca chlorophthalmus*



Fig 5: *Uca annulipes*



Fig 6: *Grapsus grapsus*



Fig 7: *Sesarma reticulatum*



Fig 8: *Sesarma cinereum*



Fig 9: *Sesarma versicolor*



Fig 10: *Perisesarma bidens*



Fig 11: *Portunus pelagicus*



Fig 12: *Portunus sanguinolentus*



Fig 13: *Scylla tranquebarica*



Fig 14: *Scylla serrata*



Fig 15: *Hemigrapsus oregonensis*

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