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FIRST RECORD OF *PORPITA PORPITA* LINNAEUS, 1758 (CNIDARIA, HYDROZOA) FROM SUNHARI BEACH BLUE SEA, PAKISTAN.

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Abstract

Porpitidae (Goldfuss, 1818) is a family of marine hydrozoa, a pair of rare sited hydrozoa species, Porpita porpita Linnaeus, 1758 was found in the Sunhari beach deep blue sea, Karachi, Pakistan for the first time in this coast, in the month of May, 2023. The specimen was identified; the morphology and habitat characteristics were also described. The present specimen distribution record will extend the global distribution and region limits of the above species.

Introduction

The Arabian Sea is susceptible by anthropogenic stresses, urbanization, climatic change, contamination, over fishing, eutrophication etc., Such stressors embrace legitimate conditions for both tropical and non-indigenous species empowering them to move to new areas and set up flourishing populaces, which have critical ecological, financial and human wellbeing impacts (Boudouresque, *et al*., 2017).

The class Hydrozoa contains more than 3800 species around the world (Schuchert, 2014, 2018). The biodiversity of the Arabian hydrozoa is evolving drastically, taxonomic information on hydrozoa from waters of Pakistan is limited to relatively few studies, including those of (Haque, 1977; Moazzam & Moazzam, 2006; Ali-Khan & Shehnaz, 2001a, b & Gul & Gravili, 2014). *P. porpita* belonging to class Hydrozoa is a Chondrophore possess polyp's colonies, which act as their defensive organ. It is a passive feeder, benefits from both living and dead creatures for the most part fish eggs, hatchlings, little fish and zooplankton. It is an untamed sea species mostly found on the surface of the ocean or sea and in warm waters.

Porpitidae Goldfuss, (1818) is a family of marine hydrozoa studies have revealed and deal with by Kirkendale & Calder, 2003; Edwards and Richardson, 2004; Richardson and Schoeman, 2004 & Fisner *et al*., (2008) have called attention to the co-event of *P. porpita* on the shore with other pelagic structures and other classification. According to Fredrick and Ravichandran, (2010) the vast majority of the species contain bioactive mixes having antimicrobial impacts. Although *P. porpita* is a well-known species all over the world but no record from Sunhari beach, Pakistan so far. This paper represents the first record of *Porpita porpita,* formerly documented as "Blue Button" from Sunhari beach.

Materials and Methods

Sunhari beach (25°54’ N 61°44’ E) is located around 20 Km far right from Hawks bay in the west of the Hub river mouth. It is surrounded by mountain at the boundary between Balochistan and Sindh. During monsoon, May 2023 a pair of *P. porpita* was collected from Sunhari beach. The present specimen was identified and preserved in 5% formaldehyde solution and deposited.

Order Anthoathecata Cornelius, 1992
Family: Porpitidae Goldfuss, 1818
Genus: *Porpita* Lamarck, 1801
Species: *porpita*
Biological name: *Porpita porpita* (Linnaeus, 1758)

Material examined.

The present investigation of hydrozoa (Fig 1) was collected in May, 2023 from Sunari beach, (25°54’ N 61°44’ E) Pakistan.

Description

Specimens disc width ranged between 18–23 mm; The animal is a round, floating hydroid colony having a large, gas-filled flat disc provided with a prominent central pore and numerous minute pores or stigmata in rows radiating from the centre, giving a specific pattern to the upper surface. The lower side of the disc has a small, central gastrozooid with a terminal mouth and is surrounded by many gonozooids, and dactylozooids towards periphery. Tentacles are present only on dactylozooids. These tentacles are short, capitates and are arranged in three longitudinal rows.

Remarks

Porpita porpita Linnaeus, (1758) was collected specimens is divided into two main parts; the first part is round disc like golden-brown in color while the second part is hydroid colony bright blue in color. The characteristic of the specimens are similar throughout its distribution area. Hubco power plant is near to our collection site which continuously releasing warm water, the collected specimens are first time reported from Sunhari beach also confirms its occurrence in warm water. In addition, their occurrence may be related to higher water temperature resulting from global warming (Edwards & Richardson 2004; Richardson & Schoeman 2004 & Oiso *et al*. 2005). Floating hydrozoans are commonly reported by Fryer and Stanley, (2004) in the warmer ocean.

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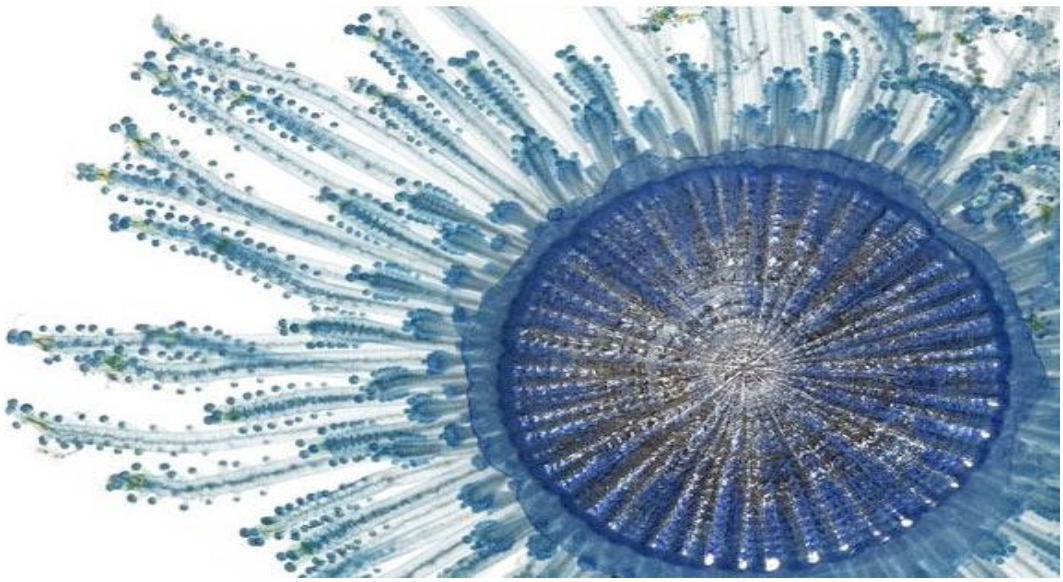

Figure 1 A view of the first hydrozoa *P. porpita* collected from Sunhari beach

Geographical distribution

It is an open ocean species distributed in tropical and temperate seas. Its habitat mainly consists of open sea and warm waters. It has been extensively distributed in the Atlantic and Indo-Pacific Oceans and the Mediterranean Sea (Chun, 1897; Moser, 1925; Totton, 1954; Brinckmann-Voss, 1970; Daniel, 1979; Page`s *et al*., 1992; Medel & Lo´pez-Gonza´lez, 1996; Schuchert, 1996; Zhang, 1999; Wirtz & Debelius, 2003; Bouillon *et al*., 2004; Kubota & Tanase, 2007; Fisner *et al*., 2008 & Gravili *et al*., 2008). A few recent records from eastern Arabian Sea (west coast of India) include Apte *et al*., (2012) and a report by (CMFRI, 2010). Very recently, *P. porpita* has been reported in large numbers along the coastline of the Sea of Japan, in the northern region (Kubota & Tanase, 2007). They are mainly found in/around Australia but also indo-pacific and Atlantic waters throughout the world.

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