

Collection of *Aiptasia mutabilis* (Cnidaria: Anthozoa) From Andaman Coastal Region, India

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Abstract: The paper reports the first time collection of the actinarian *Aiptasia mutabilis* (Gravenhorst, 1831) which was found at the intertidal environment of rocky shore at Carbyns cove, Port Blair (Andaman and Nicobar Islands) during February 2011. Till date there are no records available on this species in Indian waters. The last comprehensive work on actinaria by Parulekar (1990) was also not mentioned this species. Based on above review it has been proposed that *Aiptasia mutabilis* is the first report in Indian waters. This new record extends the known geographical distribution of the species.

Key words: *Aiptasia mutabilis* andaman • Port Blair • New record and Anthozoa

INTRODUCTION

The anthozoan subclass Octocorallia includes over 3000 described species of soft corals, sea fans and sea pens [1]. Octocorals are ecologically diverse and important members of a wide variety of marine communities, from shallow tropical coral reefs to the deep sea. For example, soft corals are abundant and ecologically dominant organisms on coral reefs throughout the Indo-West Pacific, often occupying 50% or more of the available primary substrate [2-6].

Actinarians are popularly called 'sea-anemones' because of their flower-like appearance of the expanded oral disc. They are very common animals of the sea-shore and muddy intertidal belt of rocky shore. They belong to the phylum cnidarians having solitary, cylindrical body. The body is divided into oral disc, column and base [7]. The Andaman and Nicobar Islands have rich coral reef ecosystem with fringing reef on the eastern side and barrier reef on the western side of the islands [8]. Earlier biodiversity studies are very meagre but valuable collections from Andaman's enhanced our knowledge of the coral fauna of Andaman Islands [9, 10].

According to Vafidis *et al.* [11], 35 Actiniaria species are known from the Mediterranean Sea, 2 of them belonging to the genus *Aiptasia*. The first one, *Aiptasia diaphana*, has been reported in large pools and on vertical walls (2-3 m, [12]) and under stones (2-15m, [13]) from the American coasts, Eastern Atlantic Ocean,

Mediterranean Sea [12], Adriatic Sea [13] and Red Sea [11], as well as from the Turkish coasts [14]. *Aiptasia mutabilis* is known from the eastern Atlantic Ocean, from Ireland to the Canary Islands [12] and from the Azores [15]. Additionally, this species has been reported from the Western Mediterranean [16], Adriatic [17] and Greek Aegean Sea, where it was firstly recorded in the 1980s [18]. Reproduction of this species is sexual and asexual mode [19, 20]. The Actiniaria from the Turkish coasts are poorly known, as no particular investigation has been performed and information can be gained only from a few general zoobenthic studies [14, 21, 22, 23]. 40 species of Actinarians under 33 genera, 17 family and 13 species were new records in India [24]. Under the *Aiptasia* genus only one species was reported at Bombay intertidal waters. The habitat of this genus was marine littoral condition.

The present study aims to provide new inventory and information of fauna about octocorallia species that have been recently collected and photographed alive in Andaman waters, along with details on their distribution and habitat. This new record extends the known geographical distribution of the species.

MATERIALS AND METHODS

During February 2011 a faunistic survey was carried out at Carbyns cove, Port Blair andaman and Nicobar Islands, India, in order to investigate marine benthic communities.

Location: Carbyn's cove (Lat.11°38'20.25" N; Long. 92°44'54.24" E), at tide pool. Port Blair andaman and Nicobar Islands, India.

RESULTS AND DISCUSSION

On 12th February 2011, more than ten specimens of *Aiptasia mutabilis* was observed in the Carbyns cove intertidal rocky shore tide pool (Fig. 1).

Description: *Aiptasia mutabilis* is a tall trumpet-shaped anemone (Fig. 2), up to 10-12 cm length, with a slender column not divided into regions and flaring outwards to the broad oral disc. The column diameter is about 2 cm at its base and 4 cm near the mouth. The tentacles, up to about 100 and not readily retracted, are steeply graduated in size, the inner being longer than the outer ones, stout at the base and tapering to fine (Fig. 3). Tiny perforations, cinclides, can be observed when the column is well extended. On the lower half of the column, numerous adhesive spots (or verrucae) are present, by which this anemone may be fixed to the substrate. The column is yellowish brown often with irregular streaks of white spots and the tentacles are transparent with white band

(Fig. 4). Its marble pattern distinguishes it from the very similar species; *A. diaphana*. The overall brownish coloration may have a blue tint [13, 25, 26].

This anemone is commonly found from the supralittoral to depths of 50 m, mainly on hard shady substrates, vertical walls, under stones, or beneath overhangs, where it may occur in considerable numbers. In the present study, *Aiptasia mutabilis* was found along with *Padina* algae. It can also be found among calcareous seaweeds and in *Posidonia oceanica* meadows [13, 26]. The earlier reported specimen length was approximately 5 cm, with about 60 long transparent brown and stout tentacles, with white streaks [27]. The present observed specimen length was 10-12cm with 30 long and stout transparent tentacles. The marginal tentacles were longer than the central ones and all tentacles were tapered (Fig. 3). Thread-like acontia are visible by transparency through the translucent tentacles wall (Fig. 4).

Aiptasia mutabilis were reported in the algae of fucoxanthin as a symbiotic relationship. The shrimp *Periclimenes amethysteus*, the amphipod *Caprella acanthifera* were observed alive among the tentacles [28]. *Pilumnus spinifer* and *Eriphia verrucosa* were reported near to this species [18].

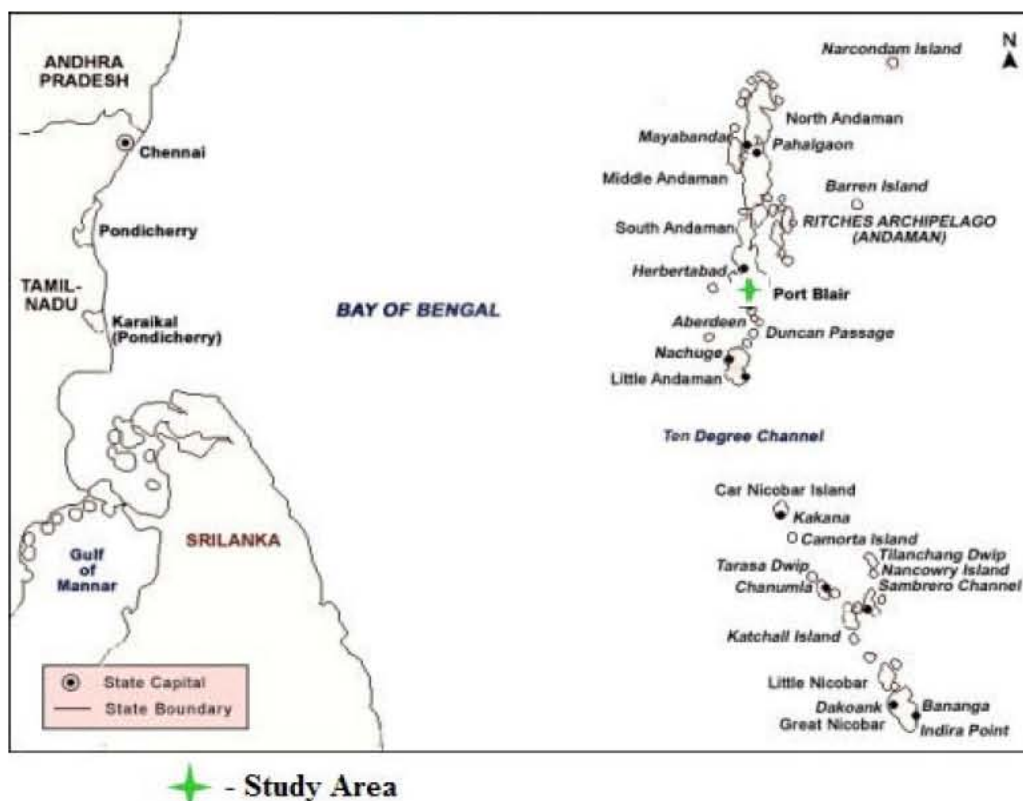


Fig. 1: The location of Carbyn's cove, the recorded *Aiptasia mutabilis*



Fig. 2: *Aiptasia mutabilis* attached with Rocky environment at Carbyn's Cove



Fig. 3: Full body and tentacles of *Aiptasia mutabilis*



Fig. 4: Head and tentacles of *Aiptasia mutabilis*

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