



International Journal of Fauna and Biological Studies

Available online at www.faujournal.com

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International
Journal of
Fauna And
Biological
Studies

ISSN 2347-2677

IJFBS 2014; 1 (6): 16-18

Received: 17-07-2014

Accepted: 13-08-2014

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Two new records of Scleractinian Corals from Saint Martin's Island, Bangladesh.

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Abstract

Two species of scleractinian corals *Favites melieerum* Ehrenberg, 1834 belonging to the Family Faviidae and *Porites profundus* Rehberg, 1892 belonging to the family Poritidae were collected from Saint Martin's Island, Bangladesh in 2002. These species have been deposited in Environmental Lab of Institute of Environmental Studies, University of Karachi, Karachi, Pakistan. The present study presents detailed morphological and taxonomical description of the present collection.

Keywords: Scleractinia, Faviidae and Poritidae, St. Martin's Island

1. Introduction

Coral reefs are one of the most biologically diverse ecosystem on earth and can provide several ecosystem services important for human welfare (i.e fisheries, tourism aesthetic and cultural values ^[1]. Corals Reefs of Bangladesh are found in only Narilkal Jinjira (Saint Martin's Island) is located on the southernmost tip of Bangladesh, roughly between 20° 34' - 20° 39' N and 92° 18' - 92° 21' E and 17 kilometers off Taknaf, the most southern mainland of Bangladesh. Taxonomy of order scleractinia is primarily based on the morphological feature of skeleton of the coral ^[2, 3]. Identification of corals has usually relied on simply visible a character ^[4, 5, 6, 7]. The corallites wall, costae, septa, coenosteum, columellae, paliform lobes, colour, massive, branching are the main characters of the identification of any coral species ^[2, 8, 9]. Some of the quantitative data on the corals in Bangladesh has been provided by earlier workers ^[10, 11, 12, 13]. Present study consists of taxonomical characterization of two species of coral, one belonging to Faviidae and the other to Poritidae of Saint Martin's Island, Bangladesh.

2. Material and Methods

Samples were collected from Saint Martin's Island, Bangladesh. The specimens were sampled to examine detailed morphological characters for taxonomic study. Samples were identified using the morphological and taxonomic characters on completion of the examination of taxonomic features, accepted morphological characters, such as color, branching pattern, corallite wall, septa, coenosteum, columellae. Picture of the specimen was taken by a professional photographer. Taxonomic identification was made following the catalogue, keys and literature of ^[7-9-14-15-16-17-18-19-20-21]. The specimens were deposited in Environmental Lab of the Institute of Environmental Studies, University of Karachi.

3. Results

Favites melieerum

3.1 Family Faviidae Gray, 1900

Colonies solitary and colonial, massive, encrusting, plocoid or cerioid; mostly hermatypic, with either extratentacular or intratentacular budding; septothecate or parathecate, rarely partially synapticulothecate; septa exsert, laminar formed one or two fan system, either from simple or compound trabeculae, with dentate margins; paliform lobes common; columella typical trabecular or laminar. This family comprises 24 genera and over 100 nominal species that are all zooxanthellate.

3.2 *Favites* Link, 1807

Type species: *Madrepora abdita* Ellis and Solander, 1786.

Colonies massive, submassive, encrusting; corallites cerioid with fused walls, corallites

polygonal; columella trabe cularsepta; septa alternating in size at the wall budding intra-tentacular.

3.3 *Favites melieerum* (Ehreberg), 1834

Syn. Ascræa Melicerum Ehrenberg, 1834, p. 320.

Favia pentagona (non Esper) Matthai, 1914, p. 95; pl. fig. 5; pl. 24, figs. 2-4; pl. 36, fig. 4.

Favires melicerum Vaughan, 1918, p. 112; pl. 41, figs. 6, 6a; (synonymy). Wijsman. Best, 1972, p. 29; pl. S, fig. 3.

Colony massive; corallites polygonal and typically pentagonal, 5mm in length and 3 mm in depth; septa are exsert and dentate; septa 22 to 26 of which 10 to 14 reach to the columella; walls fused, 1mm thick.

Distribution: Madagascar; Maldives, Bangladesh.

Porites profundus

3.4 Family Poritidae Gray, 1842

Colonies massive, laminar or ramose; corallites are plocoid to cerioid, wide 1-2 mm size, but compact with little or no coenosteum; corallites are close together, with a small amount of coenosteum between them; walls of corallites are formed of clearly detached trabeculae, connected by synapticalae (synapticulotheca); septa consist of a row of vertical trabeculae, of which internal trabeculae form septal denticles. Walls and septa are porous; columellae stylifrom; coenosteum covered with spinules.

3.5 *Porites* Link, 1807

Type species: *Madrepora porites* Pallas, 1766

Porites polymorphus Link, 1807

Colonies massive, branching, ramose, encrusting, flat (foliaceous), spherical or hemispherical, small and helmet or dome-shaped when large and over 5 m in diameter; corallites small, immersed 2 to 5 mm in diameter; septa arranged in two cycles, the total number of septa 12; lateral septa of the second cycle and ventral directive septum are fused along the internal margins, septa trabecular and internal trabecular form a denticale; Pali; synapticalae; columella present.

3.6 *Porites profundus* Rehberg, 1892

Porites profundus Rehberg, 1892, pAS; pl.3, figs. 4, 5, 6.

Porites Madagascar I Bernard, 1905, p. 228.

Corallum ramose, branching; upper branchlets are digitiforms, 2 to 4 cm long, 8 to 12 mm thick; calices are large, deep with irregular septa; corallites are polygonal, 2 mm in length and 1.3 mm in depth; septa are irregular, meeting of the wall, lateral pairs of septa are hardly visible, since they descend vertically down into the columella tangle; columella deep which septa are merge; pali suppressed; outer synaptical ring fused with the wall and not visible, inner around the columella.

Distribution: Madagascar; Maldives, Bangladesh.

4. Discussion

In the present study 2 species, belonging to two different genera and 2 families faviidae and Poritidae of scleractinian corals have been identified. The study of hard corals were compared with the previous research such as catalogue of Madreporarian corals^[15] that comprised of corals collected for the first time for the British Museum, Natural History from the sub-continent. The descriptive catalogue of different genera such as, *Porite*, *Goniopora* and *Madreporaria* from Atlantic and West Indian Areas^[15], 75 genera and 241 species of hard

corals were reported from Maldives^[20], outline of the classification of scleractinian corals of Arabic, Indo-pacific and a few Atlantic genera^[22]. The descriptions of coral fauna from Bangladesh have been presented by Khan MAR, Mahmood N, Tomascik T^[10, 11, 12, 13]. Who described 66 species and 22 genera belonging to 10 families of Scleractinian corals of Saint Martin's Island, Bangladesh. This paper reports for the first time taxonomical attributes of two species of scleractinian corals. Despite thorough literature search on coral of the area, we are unaware of any record of the two species of corals reported here from St. Martin Island, Bangladesh. Since these two species have not been reported previously from Bangladesh, they will be an important addition to the database on Scleractinian corals of the country. It is suggested that further extensive surveys should be conducted in near future to get more comprehensive data on diversified species.

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