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NEW RECORD OF *PORITES ANNAE* CROSSLAND AND *PORITES CYLINDRICA* DANA FROM GULF OF MANNAR AND ANDAMAN WATERS

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INTRODUCTION

Most of the species of the genus *Porites* are commonly known as boulder corals because of their massive structure and size. They are the real barriers in the seas protecting the islands from erosion. *Porites* has wide range of growth forms such as massive, sub massive, laminar and encrusting. World wide, 52 species have been recorded so far (Veron, 2000). Pillai (1983) recorded 10 species of *Porites* from India. Venkataraman *et. al.*, (2003) reported 11 species from the four major reef areas *viz.* Gulf of Mannar, 7; Andaman and Nicobar Islands, 6; Gulf of Kachchh, 3 and Lakshadweep Islands, 6 species. Complexity in structure and very small corallite size require thorough microscopic examination for identifying species.

Family Poritidae is the third largest family in the world and includes the genera *Porites, Goniopora, Alveopora, Slylaraea* and *Poritopora* comprising 89 known species. Genus *Porites* having 52 species is the third largest genus in the world after *Acropora* (170 species) and *Montipora* (72 species). The present paper reports two new record such as *Porites annae* Crossland, 1952 and *Porites cylindrica* Dana, 1846 from and Gulf of Mannar Biosphere Reserve and Andaman Island respectively.

SYSTEMATIC ACCOUNT

Phylum CNIDARIA

Class ANTHOZOA

Subclass ZOANTHARIA DeBlainville, 1830

Order SCLERACTINIA Bourne, 1905

Family PORITIDAE Gray, 1842

Genus ***Porites*** Link, 1807

The family Poritidae is colonial and hermatypic. They are mostly extant. Colony formation is primarily by extra-tentacular budding. Corallites have porous walls of clearly differentiated synapticulae and trabeculae and corallites are closely compacted with little coenosteum (Veron and Pichon, 1982; Veron 2000). Except *Poritopora*, all the other genera are reported in India (Venkataraman *et. al.*, 2003; Raghuram and Venkataraman, 2003).

Colonies of the genus *Porites* are massive or columnar. Massive colonies are spherical or hemispherical, small, helmet or dome shaped. Corallites are small, immersed with calices less than 2 mm in diameter and filled with septa. *Porites* resembles *Montipora* (Veron, 2000).

Porites annae Crossland, 1952

(Figs. 1-4)

1952. *Porites annae* Crossland. Madreporaria, Hydrocoralline, *Heliopora* and *Tubipora. Sci. Rep. Great Barrier Reef Exped.* 1928-29. *Br. Mus. (Nat. Hist.)*, **6**(3), 85-257.

1982. *Porites (Porites) annae* (Crossland) Veron and Pichon, Australian *Inst. of Mar. Sci.*, Australia. Vol. **5**, 48-51.

2000. *Porites annae* (Crossland) Veron, Australian. *Inst. of Mar. Sci.*, Australia, **3** : 310-311.

Material Examined : During the coral reef status survey of GoMBR (January and March 2003), colonies of *Porites annae* were collected in the intertidal reef flat from the Poomarichan (Lat. 9° 14'38"N; Long. 79° 10' 51" E) and Talairi Islands (Lat. 9° 10' 58" N; Long. 78° 56' 03" E) of GoMBR (Reg. No. ZSI/MBS-C/0009 dt. 18.08.03) by K. P. Raghuram, Marine Biological Station, ZSI, Chennai.

Characters : Colonies are columnar to sub massive. Nodular branches usually anastomose or are columnar. Corallites have 5 larger palli and 3 smaller palli. Corallites are 1.28 mm in diameter; Calices are 0.91 mm in diameter. Corallites, coenosteum are porous. Columella is small or absent, triplet has free margins (Figs. 2 and 3).

Distribution : It is a new record to India. World wide it is distributed in Great Barrier Reef, Paupa New Guinea, Phillipines, Indonesia and coral sea (Veron, 2000).

Remarks : *Porites annae* is uncommon in GoMBR. In Poomarichan Island it was found in the southern side. It was seen in the vicinity of breaker zone where the depth is about four feet. *Porites annae* colonies were seen associated with *Montipora digitata* and *M. hispida*. Colony greenish brown in colour. In Talairi Island it was found in the eastern side 10 m off the shore. Lagoon constituted only sand with a few *Acropora* sp. and sea grasses, and the present species was found on the sand substratum, no other fauna or flora was observed near the specimen. The colonies

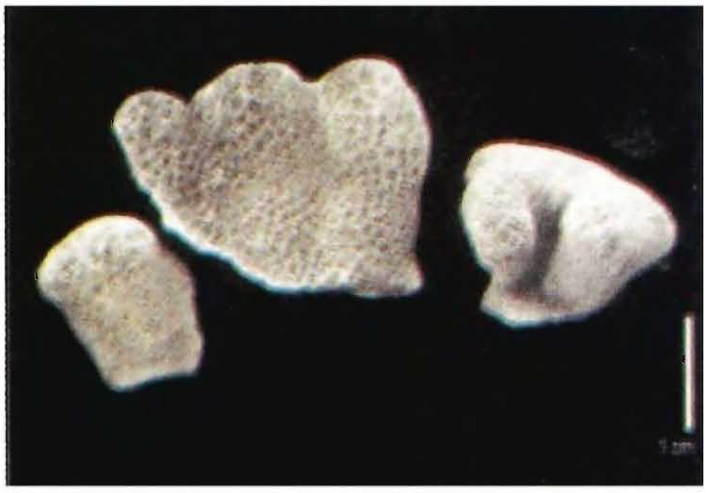

Fig. 1 : *Porites annae* (A small portion of colony).

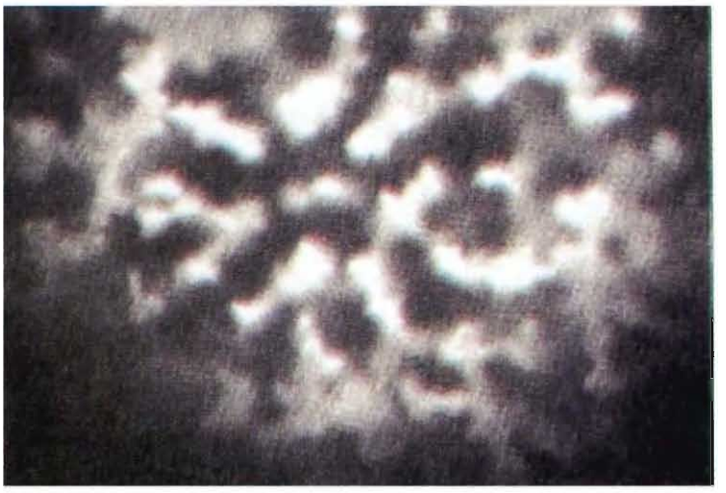

Fig. 2 : Plan view of a corallite (enlarged).

Fig. 3 : Plan view of a corallite (enlarged).

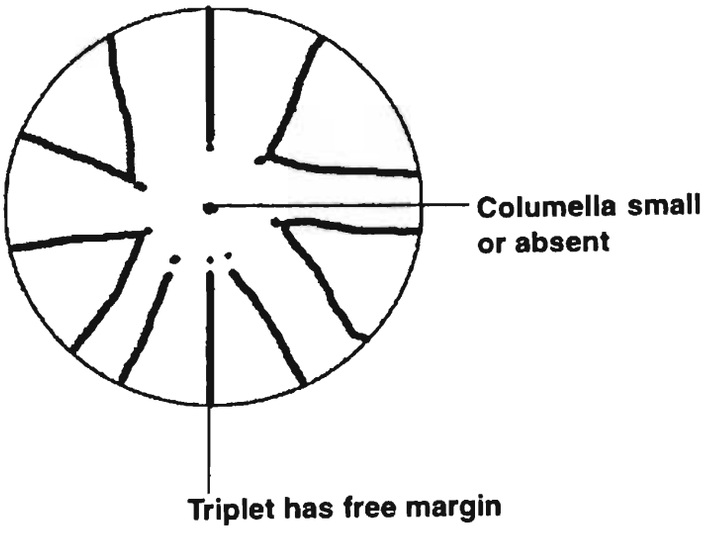

Fig. 4 : Schematic representation of a plan view of *P. annae* corallite.

were of 3 ft length, 3 ft width, 1.5 ft height and 8.5 ft circumference. Upper portion of the colony was bleached probably due to intensive exposure to sunlight. Colonies from both the islands were found in turbid free environment.

Pontes cylindrica Dana, 1846

(Figs. 5-7)

1846. *Porites cylindrica* Dana. *U.S. Explor. Exped.*, **7**, 1-740, pl. 1-61.

1918. *Porites andrewsi* Vaughan, *Pap. Dep. Mar. Biol. Carnegie Inst. Wash.*, **9**, p. 203, pl.91.

1973. *Porites andrewsi* (Vaughan) Pillai and Scheer. *Zool. Hahrb. Abt. Syst. Oekol. Geogr. Tiere.*, 100, p. 471.

1982. *Porites cylindrica* (Dana) Veron and Pichon. Veron and Pichon. Australian, *Inst. of Mar. Sci.*, Australia. Vol. **5**, 35-38.

Material examined : During the 'India Australia Training and Capacity Building on Coral Reefs' at Andaman (March, 2003), colonies were photographed in the reef slope of the North Reef, Andaman.

Characters : Colonies are branched and closely packed. Secondary branches are small. Colonies are found to grow on other corals as an encrusting form and later become branching or columnar. Colonies measures more than one meter across in the reef slope.

Distribution : In India *P. cylindrica* has been recorded only in Minicoy Island, Lakshadweep by Pillai 1971 as *P. andrewsi* Vaughan, however Veron and Pichon (1982) synonymised *P. andrewsi* with *P. cylindrica* Dana. In Andaman and Nicobar Islands Pillai (1971) recorded *P. eridani* Umbgrove as *P. cylindrica*, Veron (2000) described *P. eridani* as a separate species. Hence the present species is a new record to Andaman waters.

Remarks : Colonies are light green in colour and are found in the reef slope, where the depth is about 12 ft. The height of the colony is not more than one foot. Colonies of *P. cylindrica* have nodular anastomosing branches or columns with encrusting bases (Fig. 5). Whereas in *P. eridani* Umbgrove, 1940, colonies have large basal laminae, often with contorted branches. Corallites are found both in laminae and branches (Fig. 6).

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Fig. 5 : *Porites cylindrica* along side by *Fungia* sp. from North Bay, Andaman.

Fig. 6 : *P. eridani* (brown colour) at North Bay, Andaman.

Fig. 7 : *Porites cylindrica* from North Bay.

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