

### STUDIES ON INDIAN CORALS—3

REPORT ON A NEW SPECIES OF *DENDROPHYLLIA* (SCLERACTINIA,  
DENDROPHYLLIDAE) FROM GULF OF MANNAR\*+

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WHILE engaged in a systematic study of the stony corals of the seas around India, the author received two specimens of *Dendrophyllia* which he could not identify with any of the described species of this genus. The specimens are described below under a new specific name.

Suborder Dendrophyllina Vaughan and Wells, 1943

Family : DENDROPHYLLIDAE Gray, 1847

Genus *Dendrophyllia* de Blainville, 1830

Type species : *Madrepora ramea* Linnaeus, 1758.

*Generic characters* : Colonial, dendroid, colony formation by extratentacular budding. Wall porous and costate. Septa follow Pourtales' plan. Columella well developed, spongy or trabecular.

#### *Dendrophyllia indica* n. sp.

*Description of the holotype* : Corallum arborescent. A branch 18 cm. in height has a basal thickness of 4 cm. at the broken edge. The main stem bifurcates almost at its mid-height ; the tip of one of the branches being slightly flattened.

Corallites arranged all around the main stem and the branches ; adjacent ones being 10 to 15 mm. apart. Corallites are placed at different angles to the long axis of the stem, a few being at right angles ; and are projecting 10 to 12 mm. Calices rounded, generally 10 mm. in diameter, a few are smaller only 8 mm. ; and are 7 to 8 mm. deep. Septa in four complete cycles. Rarely there may be 50 or 52 septa in larger calices. The fourth cycle of septa from either side always fuse to the third almost near the columella before the latter reach the columella. Septa very narrow, non-exsert, obsolete at the wall and vertically descending. Sides of septa with numerous minute, rounded or pointed granulations recognisable only under a lens. Septa perforate behind ; edges entire. The first three cycles always reach the columella. Septa very thin, very little projecting into the calices ; dis-

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+ Extracted from the Ph.D. Thesis approved by the University of Kerala.

inction between primaries and secondaries clear. Columella formed of loose trabeculae, not projecting, 4 to 5 mm. broad, oval or elongated in outline.

Wall of the corallites moderately porous at the top, dense below. Costae wavy, extending to the base, intercostal spaces narrower than the costae. Spinulations on the costae small, rounded and scattered. Surface of the branches ridged, moderately porous, the ridges being supplied with 2 to 3 rows of granulations.

*Description of the paratype* : (Plate-II). A second specimen which is designated as the paratype of this species has got the following characters.

It is a young, entire, club-shaped corallum, with a greater diameter of 28 mm., starting from a narrow base. The colony has a total height of 30 mm. with 14 corallites. Corallites are very little projecting, sometimes upto 3 mm. Larger calices 8 to 9 mm. in diameter about 5 mm. deep, with newly formed smaller ones in between. Septal and other characters as in the holotype and needs no further comments.

*Colour* : The holotype was received in a washed and dried condition. The paratype was preserved in alcohol for a long time, but found to retain its original eosine colour which is lost on cleaning.

*Type locality* : Tuticorin (Long. 78° 9' E, Lat. 8° 58' N.). Depth about 5 meters.

Both the holotype and the paratype will be deposited in the Reference Collection Museum of the Central Marine Fisheries Research Institute, Mandapam Camp.

*Remarks* : Bourne (1905) has reported three species of *Dendrophyllia* from Ceylon, viz. *D. gracilis* Milne Edwards and Haime, *D. minuscula* Bourne and *D. robusta* (Bourne). *D. gracilis* and *D. minuscula* are related to each other and possess smaller calices and an entirely different growth form than the present. *D. robusta* is remarkably different from *D. indica*. *D. cornigera* (Lamarck) is an arborescent species with stout stems as in the present, but possess larger corallites which are about 20 mm. in diameter (Milne Edwards and Haime, 1848). In their general appearance, *D. indica* and *D. micranthus* (Ehrenberg) var. *grandis* Crossland, 1952 and var. *fruticosa* Nemenzo, 1960 resemble each other. But the type as well as the varieties of *D. micranthus* possesses only three cycles of septa (with traces of occasional fourth), that generally do not undergo any fusion. *D. boschmai* Horst, 1926 (= *D. japonica* Horst, 1922 (Non Rehberg) is very near to the present species but appears to differ in their septal characters. In *D. boschmai* the 'septal all project above the edge of the calice, those of the first and second cycle being somewhat thicker than the others' (Horst, 1922). But in the present, none of the septa is exsert and all are obsolete and narrow at the wall. Further in *D. boschmai* the third cycle of septa being very short do not reach the columella whereas in *D. indica* the third cycle of septa fuse with the columella. The edges of the lower cycles of septa in *D. boschmai* are serrated but in the present species it is entire. All the more the arrangement of septa in the two are markedly different.

#### SUMMARY

*Dendrophyllia indica*—a new species of stony coral—from the pearl banks of Tuticorin in the Gulf of Mannar is described and its affinities are discussed.



*Dendrophyllia indica*, holotype from Tuticorin  $\times$  I.



*Dendrophyllia indica* paratype from Tuticorin  $\times 3.4$

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