

TWO NEW RECORDS OF DEMOSPONGIAE FROM THE INDIAN OCEAN

ABSTRACT

Two species of Demospongiae (*Phyllospongia dendyi* Lendenfeld and *Ciocalypta polymastia* (Lendenfeld)) are collected from Minicoy Island and brief descriptions of these species are presented in this paper. Both these species are previously recorded from Australia and West-Central Pacific and by the re-discovery of these two species from Minicoy Island their distribution has been extended to the Indian Ocean.

DURING the years 1964-'69 an extensive collection of sponges from Minicoy Island (Long. 73°E. Lat. 8° 14'N) was made by my colleagues Dr. C. S. Gopinadha Pillai, Mr. K. K. Appukuttan and Mr. M. Alimanikfan. A study of these materials revealed the presence of about 41 species of sponges in this Island.

This paper embodies the description and distribution of two species [*Phyllospongia dendyi* Lendenfeld and *Ciocalypta polymastia* (Lendenfeld)] hitherto not known from Indian Seas. *P. dendyi* is known previously from Australia (Lendenfeld 1889; Burton, 1934) and Palau Island (Bergquist, 1965), and *C. polymastia* from east Australia (Lendenfeld, 1888) and New Zealand (Bergquist, 1970).

Order KERATOSIDA Grant

Family SPONGIIDAE Gray

Phyllospongia dendyi* Lendenfeld (Fig.1 a, b)Phyllospongia dendyi* Lendenfeld, 1889, p. 177, pl. 14 fig. 5.var. *frondosa* Lendenfeld, 1889, p. 178, pl. 14 fig. 5.var. *digitata* Lendenfeld, 1889, p. 178.*Phyllospongia dendyi* Burton, 1934 p. 573; Bergquist, 1965, p. 132, fig. 4 a, 4 b.**Material:** One specimen.

Description: Body lamellar, lamellae arranged like petals of a partly opened flower; height, 50 mm and thickness of lamella, 1-2 mm. Colour dark brown when dry. Consistency fleshy when fresh, leathery on drying. Oscules and pores not visible when dry; surface conulose, conules 0.1-0.6 mm high and 0.2-0.6 mm apart; older parts smooth and both surfaces of lamella alike in ornamentation.

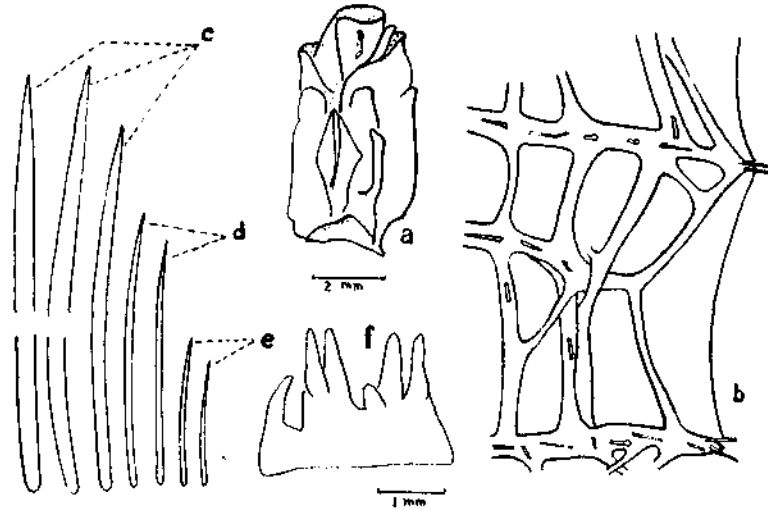


Fig. 1 a. *Phyllospongia dendyi* Lendenfeld, entire specimen; b. details of the skeleton; c. *Cio-calypsa polymastia* (Lendenfeld), large styles; d. slender styles, and f. entire specimen.

Skeleton: It is a well developed reticulation of primaries and secondaries; primaries are about 0.05-0.1 mm in diameter and are cored with arenaceous spicule fragments; secondaries are not cored by spicules generally, but rarely fragments of spicules are noted; diameter varies from 0.01-0.045 mm; a sand cortex is absent in this specimen. Details regarding cortex and endosome are given in Bergquist (1965).

Remarks: A lengthy discussion regarding the systematic position of this species is given by Bergquist (1965) and as recommended by him, the specific status of this species is retained here also.

Distribution: Pacific Ocean, Indian Ocean.

Order HALICHONDRIDA Vosmaer

Family HALICHONDRIDAE Gray

Ciocalypta polymastia (Lendenfeld) (Fig 1, c-f)

Material: Three bits, probably parts of the same specimen.

Description: Body thickly encrusting; encrusting portion 6-10 mm thick; and with several upright conical branches arising from upper part, branches 10-12 mm high, and diameter, at base, about 5 mm, adjacent branches rarely fuse. Colour white when dry. Consistency firm and incompressible. Surface smooth, but some places, especially in between adjacent branches, conulose; conules about 1 mm high and 1-1.5 mm apart; oscules and pores are not traceable.

Skeleton: Thickness of ectosome is about 0.3 mm and when dry it is snow white in colour; extensive subdermal canals seen beneath ectosome; ectosomal skeleton consists of tangentially or vertically placed styles and is supported by large spicules of endosomal skeleton; spongin is sparsely noted; endosomal skeleton rather confused in interior, but towards surface, spicules form irregular bands and support dermal skeleton.

Spicules: Styles of three size are noted.

a). *Large styles:* Shaft fusiform and slightly curved; greatest width in distal half. Size 0.491-0.868 (0.622 mm) x 0.011-0.032 (0.018 mm). b). *Slender styles:* Shaft slightly curved and width almost uniform. Size 0.37-0.40 (0.38mm) x 0.003-0.007 (0.006mm). c). *Small styles:* Slightly curved, size 0.18-0.24 (0.19mm) x 0.002-0.004 (0.003mm).

Remarks: Burton (1959) synonymised this species with *Ciocalypta penicillus* Bowerbank with some hesitation. Bergquist (1970), based on the material collected from New Zealand, re-established the status and validity of this species and the present record of this species from the Indian Ocean helps to confirm its specific status.

Distribution: Western Pacific Ocean, Indian Ocean.

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