The liver which was removed from the shark weighed 47 Kgs but yielded only ½ Kg of poor quality oil. The shark was sold for Rs. 45/– and was taken to Odangudi for exhibition. After exhibiting it for a few days the carcass was finally buried for manure.

We wish to express our sincere thanks to Thiru Nalluchinnappan, Research Asst. (Biology) for his help in identifying the species.

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TWO NEW RECORDS OF DEMOSPONGIAE FROM THE INDIAN OCEAN

Thomas

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.

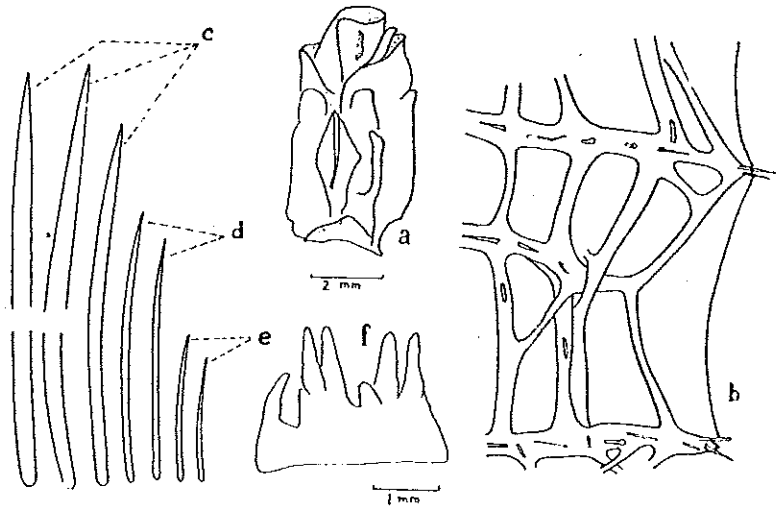

Fig. 1 a. *Phyllospongia dendyi* Lendenfeld, entire specimen; b. details of the skeleton; c. *Ciocalypta polymastia* (Lendenfeld), large styles; d. slender styles, and f. entire specimen.

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 tangetially 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.

I am thankful to Dr. S. Z. Qasim, Director, Central Marine Fisheries Research Institute, Cochin–18, India, for permitting me to publish this account. My thanks are also due to Mr. M. Alimanikfan, C. M. F. R. I. Regional Centre, Mandapam Camp for making these specimens available to me.

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ON SOME GONADIAL ABNORMALITIES IN *SARDINELLA DAYI* REGAN, *S. CLUPEOIDES* (BLEEKER) AND *S. SIRM* (WALBAUM)

ABSTRACT

Some gonadial abnormalities observed in three species of Indian sardines, *Sardinella dayi* Regan, *S. clupeoides* (Bleeker) and *S. sirm* (Walbaum) from Vizhinjam are described.

INSTANCES of gonadial abnormalities have been recorded in a number of Indian fishes (Lal Mohan, 1970) which include cases of hermaphroditism and different types of peculiarities such as constriction of gonadial lobes, partial or total atrophy, malformation, and so on. Among the Indian sardines, abnormalities have been recorded only for *Sardinella longiceps* (Antony Raja, 1963; Bensam, 1964 and 1969; Dhulkhed, 1965) and *S, sirm* (Gnanamekalai, 1963). Hence, the present report of instances of gonadial abnormalities in two other species, *Sardinella dayi* and *S.clupeoides* in addition to two more instances in *S. sirm* should be of interest.

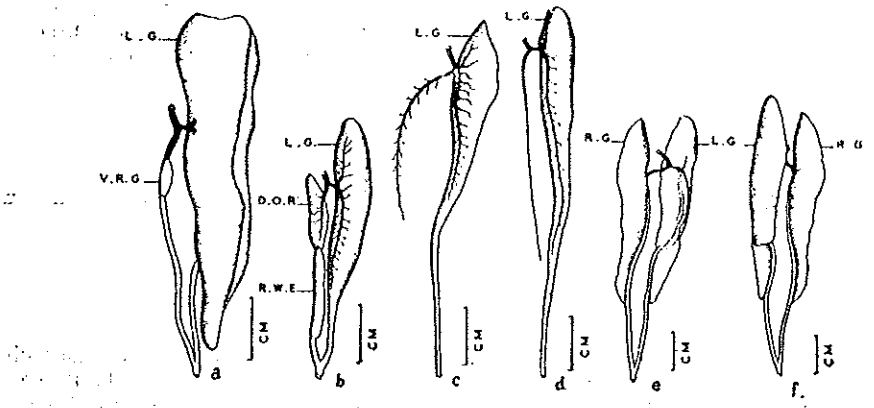

Fig. 1. Gonadial abnormalities in a few Indian sardines. a-e Ventral views of abnormal gonads: a. testis of *Sardinella dayi;* b. ovary of *S. dayi*; c. ovary of *S. clupeoides;* d. ovary of *S. sirm*; e. testis of *S. sirm*; and f. dorsal view of abnormal testis of *S. sirm*. D.O.R.- Dwarfed ovarian region; L. G. - Left gonad; R. G. - Right gonad; R. W. E.- Region without eggs; V.R.G.-vestigial right gonad.

Sardinella dayi Regan

Testicular abnormality (Fig. 1 a): In a specimen of 144 mm (T. L.) observed on 20–12–1971 the right gonad was represented by a vestigial testis, measuring 5 mm in length and 2 mm in maximum breadth while the normal left testis measuring 54 mm length and 16 mm breadth was in stage V of maturity occupying the entire absominal cavity. A roughly similar gonadial abnormality has been described by Bensam (1964) in the Indian oil sardine, *Sardinella longiceps.*