ON TWO NEW RECORDS OF CODIACEAE FROM INDIA

DURING the course of studies on marine algae growing around Mandapam (79° 8′ E., 9° 17′ N.) the author collected two green algae of the family Codiaceae; namely *Udotea javensis* A. & E. S. Gepp and *Penicillus sibogae* A. & E. S. Gepp. As these two algae have not hitherto been recorded from the Indian coast, their occurrence is reported in this communication.

Udotea javensis (Fig. 1) was collected from surfaces of dead corals in the sublittoral zone near Pamban and Krusadai Islands. *Penicillus sibogae* (Fig. 2) was first gathered near Pamban and subsequently several collections were made from Mandapam, Pudumadam and Shingle Island. It grows as small patches on sand-covered rocks in the sublittoral fringe and sublittoral zones and sometimes specimens of *Penicillus sibogae* were found on dead coral pieces along with *Udotea javensis* as reported by Gepp and Gepp (1911). Brief descriptions of the Indian plants are given below.

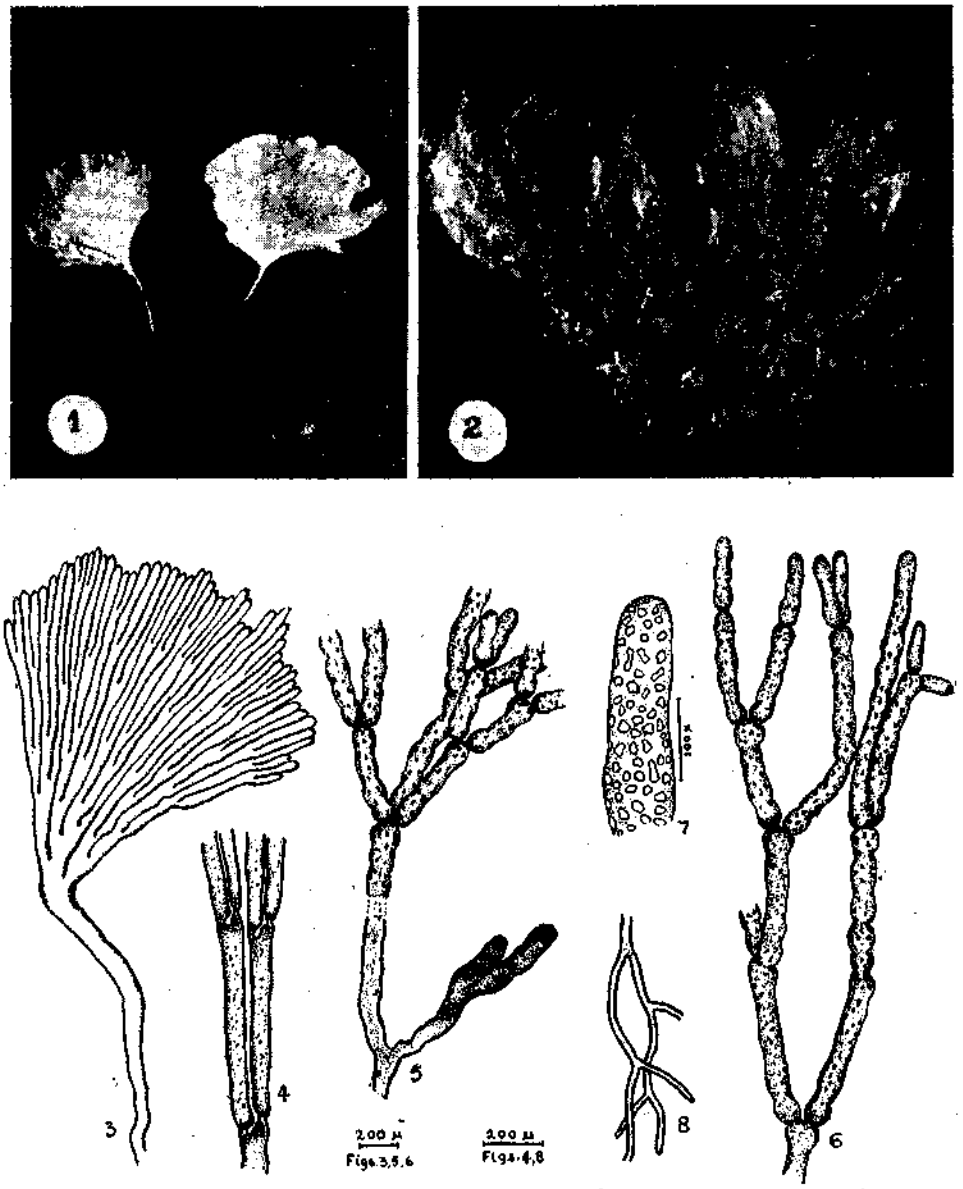
Udotea javensis A. & E. S. Gepp

Plants simple, 0.5 to 1.0 cm. long with a stipe below and fan-shaped frond above; stipes simple, colourless, 100 to 160 μ thick, monosiphonous, uncalcified, not corticated with rhizoids; fronds dull green in colour, fan-shaped, often fringed or lacerate, monostromatic, formed by repeated dichotomous divisions of the filaments; filaments without appendages or laterals, 30 to 65 μ in diameter, straight, with uneven constrictions above the dichotomies, joining laterally to form a fan-shaped thallus.

The Indian plant (Figs. 1, 3 & 4) agrees in all respects with the descriptions given by Gepp and Gepp (1911) and Okamura (1907-1909). Two species of *Udotea* have so far been reported from the Indian coast. Boergesen (1930) recorded the occurrence of *U. indica* A. & E.S. Gepp from Dwarka on the west coast. Gepp and Gepp (1911) have cited in their monograph on the Codiaceae of *Siboga Expedition* the collections of *U. flabellum* (Eillis & Solander) Howe made by Thurston and Wight from Madras and Tuticorin.

Plants of *U. indica* and *U. flabellum* are 10 to 15 cm. tall and several cells thick with a prominent stipe and entire or lobed fronds. Lateral appendages, which

occur on the filaments, are short, truncate and sometimes deeply lobed (Boergesen, 1930) in *U. indica* and they are profusely branched in *U. flabellum*. *U. javensis*



FIGS. 1, 3&4. *Udotea javensis* : 1, habit ; 3, young plant with monosiphonous stipe and one cell thick frond ; 4, filament showing uneven constrictions above the dichotomies.

FIGS. 2, 5, 8. *Penicillus sibogae* : 2, habit, 5 & 6, subtorulose filamen s showing basal and upper parts and di- and trichotomous branching ; 7, tip of a filament showing porose calcium sheath ; 8, rhizoid.

can be distinguished from the above two species by its small size and simple nature of the thallus (Fig. 3) and by the absence of appendages on the filaments.

U. javensis has been reported first from Java and later from many stations in the Malayan Archipelago, Ceylon (Gepp & Gepp, 1911), Japan (Okamura, 1907-09) and Mauritius (Boergesen, 1954). The present report extends its distribution to India.

Penicillus sibogae A. & E.S. Gepp

Plants 1.0 to 2.5 cm. tall, consisting of loosely branched filaments ; filaments 80 to 130 μ in diameter, attached by rhizoids arising from the basal parts of the filaments ; rhizoids 16 to 20 μ thick, hyaline and dichotomously branched : filaments colourless, uncalcified at the lower parts, green in colour and calcified at the upper parts, calcarious sheath porose ; branching dichotomous, occasionally trichotomous, alternate ; branches slightly bulged below the dichotomies, beaded or subtorulose in appearance either immediately above the branches or at intervals.

Plants collected around Mandapam (Figs. 2 & 5-8) agree well with the description and figures of Gepp and Gepp (1911), except in the size of the plant. The plant reported by them is about 1.0 cm. tall, whereas at Mandapam specimens reaching a height of 2.0 to 2.5 cm. were collected. Occurrence of rhizoids (Fig. 8) observed in the present material, was not mentioned in the description given by Gepp and Gepp (1911).

Gepp and Gepp (1911) reported *Penicillus sibogae* based on the material dredged between 8 and 36 m. depth, near the Bay of Noimini, south coast of Timor. There appears to be no report of this turf-like species of *Penicillus* from any other locality and the present report from India seems to be the second record of this alga. Its occurrence in India extends the distribution of this species from Timor to the south east coast of India.

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Central Marine Fisheries Research Institute, Mandapam Camp. M. UMAMAHESWARA RAO

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