

**ADDITIONS TO THE ALGAL FLORA OF THE GULF OF MANNAR
AND PALK BAY FROM MANDAPAM AREA**

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INTRODUCTION

As early as 1927, Prof. M. O. P. Iyengar gave a brief account of the flora of Krusadai Island and other collecting grounds in the Gulf of Mannar and Palk Bay areas near Mandapam. Later on, Boergesen (1937a, b ; 1938) reported a large number of the algae occurring around Mandapam in his contributions on south Indian algal flora, but the green algae of this area were not included in this work. Since then, detailed attempts have not been made to study the algal flora of Mandapam, but for a provisional list of algae of Krusadai Island (Chacko *et al.*, 1955) and a paper on a new species of *Halicystis* (Iyengar & Ramanathan, 1954). While working on some ecological aspects of marine algae of Mandapam, the author had the opportunity to collect algae in the different seasons of the year, in the vicinity of Mandapam (79°8' E, 9°17' N) and nearby places like Pudumadam and Kilakarai. Among the collections made since 1964 some plants have not been previously recorded from Mandapam area ; a list of these algae is given in this report with brief notes on their distribution.

LIST OF SPECIES

CHLOROPHYCEAE

- Chaetomorpha antennina* (Bory.) Kuetz. On rocks exposed to surf action, lower part of the midlittoral zone, Pudumadam.
- **Chaetomorpha clavata* (C. Ag.) Kuetz. Attached to dead coral pieces, sublittoral zone, Palk Bay side at Mandapam. Boergesen (1935) reported this alga from a single filament collected in Bombay.
- **Rhizoclonium kochianum* Kuetz. Entangled with different algae growing in the sublittoral zone, Mandapam.
- Cladophora colabense* Boergs. Plants 3-5 cm. tall, on rocks in the sublittoral fringe zone, Gulf of Mannar side at Mandapam and Pamban. This species seems to agree with the description of Boergesen (1935), except as regards the size of the plant.
- **Valonia aegagropila* C. Ag. As low mats on sand stones, sublittoral fringe zone, Gulf of Mannar side at Mandapam.
- **Cladophoropsis zollingeri* (Kuetz.) Boergs. On sand covered rocks, sublittoral fringe zone, Pudumadam, Mandapam and Dhanushkodi.

- **Boodlea composita* (Harv. & Hook. fil.) Brand. As spongy tufts on corals, sublittoral zone, Mandapam.
- Acetabularia caliculus* Quoi et Gaimard. Attached to small coral pieces, sublittoral zone, Palk Bay side near Mandapam and Pamban.
- **Bryopsis hypnoides* Lamour. Plants very small, 2-3 cm. height, on dead corals, sublittoral zone, Mandapam.
- **Bryopsis plumosa* (Huds.) C. Ag. On sheltered or semi-exposed rocky surfaces, sublittoral fringe zone, Mandapam and Pudumadam.
- **Caulerpa scalpelliformis* f. *dwarkensis* Boergs. Gathered from the sublittoral zone and from the cast ashore weeds, Kilakarai and Pudumadam.
- Caulerpa sertularioides* (Gmel.) Howe. Two forms namely f. *brevipes* (J. Ag.) Sved. and f. *longiseta* (Bory.) Sved. were collected. Forma *brevipes* was found attached to rocks in the sublittoral fringe and sublittoral zones and forma *longiseta* on muddy substratum at 2.0 m. depth in Palk Bay, Mandapam.
- **Caulerpa verticillata* J. Ag. f. *typica*. On mud covered rocks, sublittoral zone, Pamban, Pullivasal Island and Thonithorai.
- **Caulerpa racemosa* v. *laete-virens* f. *laxa* (Grev.) Web. v. Bosse. On rocks and corals, sublittoral fringe and sublittoral zones, Krusadai Island and Mandapam.
- Udotea flabellum* (Ell. et Sol.) Howe On muddy substratum, sublittoral zone, Hare Island near Mandapam.

PHAEOPHYCEAE

- Ectocarpus breviarticulatus* J. Ag. On rocks in the sublittoral fringe zone, as epiphyte on *Microdictyon*, Gulf of Mannar side at Mandapam.
- Bachelotia antillarum* (Grun.) Gerl. On sand-covered rocks, midlittoral zone, Mandapam on the Gulf of Mannar side.

RHODOPHYCEAE

- Litorea erecta* Zeh. Attached to sand stones, sublittoral fringe zone, Mandapam and Pudumadam.
- Scinaia bengalica* Boergs. On coral pieces, sublittoral zone, Palk Bay side near Mandapam.
- Galaxaura oblongata* (Ell. et Sol.) Lamour. On small stones, sublittoral zone, Pamban and Shingle Island.
- **Asparagopsis taxiformis* (Deli.) Coll & Harv. Plants 10-15 cm. tall, attached to rocks exposed to wave action, sublittoral fringe zone, Pudumadam, also gathered

from the cast up weeds near Mandapam on the Gulf of Mannar side. (Syn. *A. sanfordiana* Harv.).

- **Gelidium pusillum* (Stack.) Le Jol. Firmly attached to rocks, sublittoral fringe zone, Mandapam and Pudumadam.
- Amphiroa anceps* (Lamx.) Decne. On coral heads, sublittoral zone, Krusadai and Pullivasal Islands.
- **Cheilosporum spectabile* Harv. On sand stones, sublittoral fringe zone, Mandapam and Pudumadam.
- Grateloupia lithophila* Boergs. On rocky surfaces exposed to surf, sublittoral fringe zone, Pudumadam.
- Gracilaria bursa-pastoris* (Gmel.) Silva. On coral pieces, sublittoral zone, Palk Bay side at Mandapam. (Syn. *G. compressa* (Ag.) C. Ag.).
- **Solieria robusta* (Grev.) Kylin. From cast ashore algae, Mandapam, Pamban and Pudumadam.
- **Gigartina acicularis* (Wulff.) Lamour. On sheltered rocks, sublittoral fringe zone, Pudumadam and Mandapam on the Gulf of Mannar side.
- Botryocladia leptopoda* Kylin. From the cast up vegetation and shore seines operated in the Gulf of Mannar at Mandapam and Pudumadam.
- **Haloplegma duperreyi* Mont. Washed ashore near Kuntagal point, Pamban.
- **Griffithsia tenuis* C. Ag. As epiphyte on many algae and on rocks of the sublittoral fringe zone, Mandapam.
- Dictyurus purpurascens* Bory. From cast ashore plants, Kutangal point, Pamban.
- **Falkenbergia hillebrandii* (Born.) Falkenb. Attached to rocks in the sublittoral fringe zone, well developed and sterile plants were collected from the cast ashore algae, Pudumadam and Mandapam on the Gulf of Mannar side. *Falkenbergia* was found to be the alternate phase of *Asparagopsis* (Taylor, 1960; Dixon, 1964). The material collected at Mandapam is identified as above and placed separately since a detailed study is necessary on *Asparagopsis* and *Falkenbergia* as emphasised by Dixon (1964).
- Lophocladia lallemandi* (Mont.) Schm. On dead corals, sublittoral zone, Manoli Island.
- **Chondria cornuta* Boergs. On sand-covered rocks, sublittoral fringe zone, Mandapam on the Gulf of Mannar side.

GENERAL REMARKS

In the contributions on South Indian algal flora Boergesen (1938) pointed out that many algae found in the northern parts of the Arabian sea were not met with in the southern parts of India. Of the 35 algae listed here, eight species and two forms of green algae and nine species of red algae (marked with asterisk) are algae occurring at Okha, Dwarka and other areas on the west coast (Boergesen, 1930 ;

1931 ; 1932a, b ; 1933 ; 1934 a, b ; and 1935 ; Thivy & Visalakshmi, 1963). There are no records of their occurrence on the east coast of India till now. As some rare and interesting forms like *Haloplegma* and *Dictyurus* were collected from the weeds cast ashore, detailed sublittoral surveys may further add to the number of algae that are common to the east and west coasts of India. The remaining fifteen algae included in the list have been recorded from other localities in South India.

SUMMARY

Fifteen green algae, two brown algae and eighteen red algae are listed, being new records for the localities around Mandapam.

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