

## SEAWEED DISTRIBUTION AND RESOURCES IN KERALA COAST

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### Abstract

Survey was conducted during May-June 1988 to study the seaweed distribution and resources along the Kerala coast. Algal collection was made at 15 localities from intertidal and subtidal regions and totally 35 species belonging to 28 genera and 18 families were recorded. The nature of the coastline, places of algal occurrence and their resources are given.

### Introduction

In recent years several seaweed industries manufacturing agar and sodium alginate have come up in India. In order to assess the seaweed potential for industrial requirements, it was felt that survey of seaweed resources along Indian coast is very essential. At present some information is available on the seaweed resources of Gujarat, Maharashtra, Goa, Karnataka, Tamilnadu Andhra pradesh, Orissa, Lakshadweep and Andaman Nicobar Islands (Kaliaperumal et al., 1987 and 1989 Anon 1989, 1990, 1993a. and 1993b; Gopinathan and Panigrahy 1983) The information available on the seaweed resources of Kerala coast is only for the southern coast (Koshy and John 1947; Balakrishnan Nair et al., 1982, 1986 a 1986 b, 1990, and 1993; Sobha and Nair, 1983 and 1985) Hence a preliminary survey on the marine algal distribution along the entire Kerala coast was undertaken during May-June 1988 and the list of species collected during the survey from the intertidal and subtidal region upto 1.5 m depth is presented in this paper. The nature of coastline, places of algal occurrence and their resources are given.

### Materials and Methods

Kerala is situated on the southwest coast of India between the Lat. 8°20' N to 12°51' N and Long 74°53' to 77°30' E. The length of the coastline is 560 km. During the period May-June 1988, survey of algae in 15 localities from Poovar to Manjeswar along Kerala coast was conducted (Fig. 1). Algae were collected randomly at each place from the intertidal and subtidal region upto 1.5 m depth. They were sorted out, identified and liquid specimens of all species preserved.

### Results

During the survey it was observed that in the southern Kerala for about 80 km distance from Poovar to Thirumallavaram, the coast is mostly rocky. In this area rocks of different kinds and granite stones are found in the intertidal and subtidal region with luxuriant growth of various green, brown and red algae. In this region rich growth of seaweeds occurred in the vicinity of Adimalathura, Chowra, Mullur, Vizhinjam, Varkala, Edava, Paravur, Thangaserry and Thirumallavaram. The coast is sandy from north of Thirumallavaram upto Parapanangadi without any vegetation. The rocks and granite stones occur again about 90 km. distance from north of Kadalundi to Koduvalla in the littoral and sublittoral region and some seaweed vegetation is found on them. The important places where seaweeds grow abundantly in this region are Elathur, Tikkoti, Madapalli, Chambala, Mahe, Thallayi, Tellicherry and Koduvalla. The coast is sandy beyond Koduvalla upto Manjeswar in the northern border of Kerala except the occurrence of some rocks behind the light house Mount Dilli at Ettikulam, Bekal port near Pallikere and Kanuthetha near Manjeswar where seaweeds grow. Apart from these places, algae thrive on the rocks at Vallaarangaal which is situated in the sea about 2-3 km. off Tikkoti and Dharmadam Island near Tellicherry.

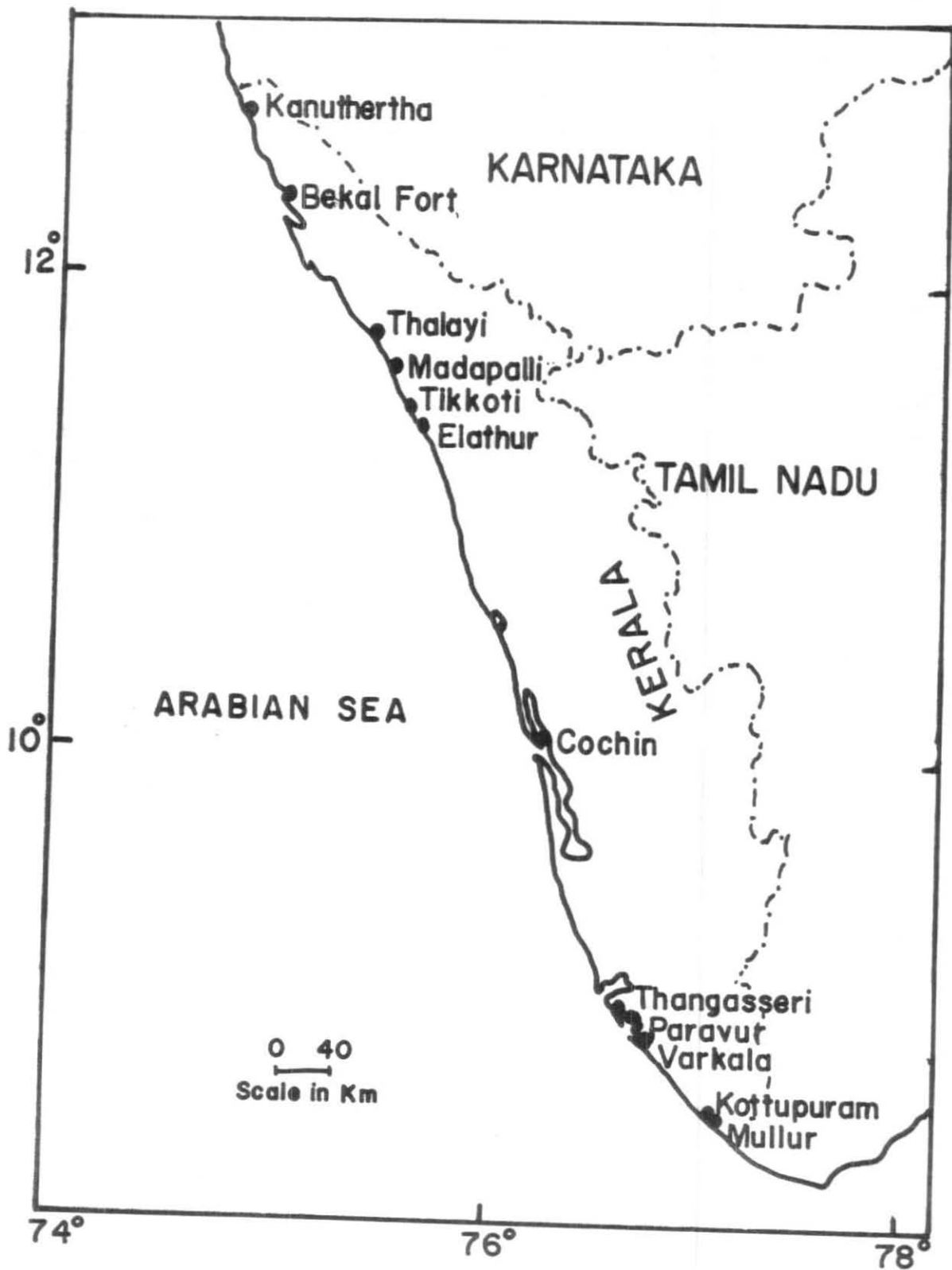


Fig. 1 Map showing the collection sites on the West Coast of South India

Table 1. Number of orders, families, genera and species of marine algae collected from Kerala coast

	Chlorophyta	Phaeophyta	Rhodophyta	Cyanophyta	Total
Order	3	2	4	1	10
Families	5	2	10	1	18
Genera	8	3	15	2	28
Species	13	3	17	2	35

The number of algal genera and species collected along the Kerala coast is given in Table 1. Totally 35 species of algae of 28 genera were recorded of which 8 genera and 13 species belong to Chlorophyta, 3 genera and 3 species to Phaeophyta, 15 genera and 17 species to Rhodophyta and 2 genera and 2 species to Cyanophyta. (Table 1.)

### Discussion

The total standing crop of seaweeds in Kerala is estimated as 1000 tons (wet wt) of which 150 tons are economically important seaweeds. The agarophytes formed 27 tons followed by alginophytes and agaroidophytes (Chennubhotla *et al* 1988). The abundance of seaweeds in Kerala coast is less when compared to most of the other seaweed growing areas in the country. However attempts could be made to augment the resources by enhancing the seaweed growing areas by artificial methods of providing suitable substrates. While carrying out the survey it was found that the coastal population at Tikkoti and Elathur were collecting fresh *Gracilaria corticata* var. *corticata* and *G. foliifera* and using them as manure for coconut plantation. Apart from this, there is no other commercial exploitation of seaweeds in Kerala coast. The present survey revealed that the agar yielding seaweeds such as *Gelidium*, *Gelidiella*, *Gracilaria* and *Pterocladia*; the agaroid yielding seaweeds *Hypnea* and *Acanthophora*; the algin yielding seaweed *Sargassum* and edible seaweeds *Ulva*, *Caulerpa*, *Enteromorpha*, *Porphyra* occur in appreciable quantities in Kerala coast. These commercially important seaweeds could be exploited for production of agar, algin, and carrageenan and for human consumption.

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