

Seaweed Resources of Kerala, Tamil Nadu and Lakshadweep

Seaweeds are living and renewable marine resources which have tremendous commercial importance. Seaweeds are microscopic algae that grow in the littoral and sublittoral areas of marine environment when there is a suitable rocky or coral substratum. Based on the type of pigmentation they are mainly divided into green, brown and red algae. Seaweeds are known since time immemorial as food, fodder and manure in many of the countries of Europe, Scandinavia and Indo-Pacific region. Seaweeds contain more than 60 trace elements, protein in different concentrations, vitamins and several bio-active substances. Marine algae form an important raw material for the extraction of phytochemicals such as agar agar, algin, manittol etc.

The seaweed resources along the coast line of India are distributed in Tamil Nadu, Gujarat and Lakshadweep and Andaman and Nicobar islands. Fairly rich seaweed beds are also present in Bombay, Ratnagiri, Goa, Karwar, Varkala, Kovalam, Vizhinjam, Visakhapatnam and a few other places in Chilka and Pulicat lakes.

In recent years a number of industries manufacturing phycolloids such as agar-agar and algin have come up in India. Since the information on the availability of seaweed resources along the coast line will be useful to the industry, CMFRI has been carrying out investigations on the occurrence and abundance of the resources in India. CMFRI has also developed

technologies for culture of commercially important species of seaweeds.

Information on seaweed resources of certain maritime states such as Tamil Nadu, Gujarat, Maharashtra, Goa and Lakshadweep is available but not much data has been collected on the seaweeds occurring along the Kerala coast. Recently a detailed survey was carried out by a team of scientists and technicians of CMFRI led by Dr V S K Chennubhotla from Kollamkode to Manjeshwar to understand the substrata and resources available. The entire coastline of 600 km were covered and 35 species were recorded. Mainly 4 types of substrata are found in this coast. In the southern part of Kerala, from Poovar to Thirumullavaram, the coast is mostly sandy. However in this area different kinds of rocks and granite stones are found in pat-

ches in the intertidal and sublittoral regions. Many species of red, green and brown algae are found growing here.

In the area north of Thirumullavaram up to Parapanagadi the coast is sandy and the seawall laid with granite stones have helped some seaweeds to settle down on them. North of Parapanagadi up to Cannanore rocks and granite stones occur in the littoral and sublittoral regions in some places where seaweeds are found to be growing abundantly. Beyond Cannanore the coast is sandy up to Manjeshwar.

Out of the total density of 1000 tonnes of seaweeds 15% was economically important, agrophytes formed 27 tonnes followed by alginophytes and agaroidophytes. The abundance of seaweeds in this coast appears to be low compared to other seaweed areas of the



The Seaweed growth on rocks along Cannanore coast



The green seaweed Ulva lactuca

country. However attempts can be made to augment the resources by enhancing these substrata by artificial methods in some potential areas. Out of the 35 species of seaweeds occurring in Kerala *Gracilaria corticata* and *G. foefneri* are put into some use as a manure for coconut plantations in Thikkodi region. There is a possibility of introducing useful varieties from other regions of the country in suitable substrata.

Along the southern parts of east coast of India, standing crop of seaweeds is found to be abundant. A resource survey conducted from Mandapam to Colachel and the adjoining islands in Gulf of Mannar up to a depth of 4m revealed a standing crop of 22044 tonnes in the coastal area of 17125 ha comprising agrophytes, alginophytes and other seaweeds. The region between Tuticorin and Tiruchendur had a standing crop of around 9100 tonnes consisting of 58 species

of seaweeds and three species of seagrasses of industrial importance in an area of 660 km in the depth range of 5.5 to 21.5m.

A survey carried out in the Lakshadweep islands in January-March 1987 gave information about 80 species of algae such as *Hypnea*, *Gelidiella* & *Gelidiopsis*.

The coastal survey up to 4 m was done in collaboration with CSMCRI, Bhavanagar and Tamil Nadu State Dept. of Fisheries and the deep water survey in collaboration with CSMCRI, Bhavanagar.

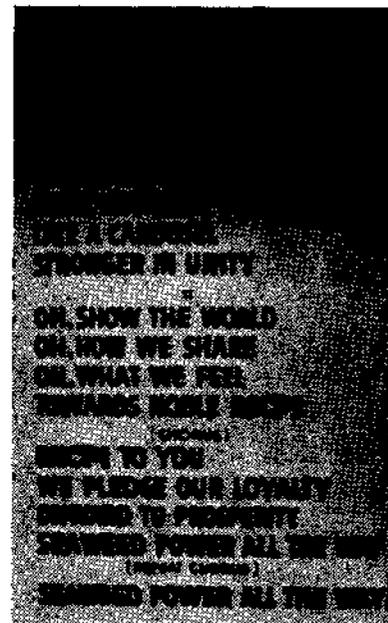
Seaweed
New Species Reported from Kerala

During the recent surveys along Kerala coast a very important seaweed *Porphyra kanyakumariensis* was found to be growing in Varkala, Mullur and Elathur. This seaweed forms an important food item in Japan. In India this alga is reported from Visakhapatnam, Goa, Gujarat, Colachel and Kanyakumari. If it is acceptable for human consumption, attempts can

be made to augment this resource through culture practices.

Adhoc Scheme on Seaweed Resources

The Indian Council of Agricultural Research has initiated a survey of seaweed resources off Lakshadweep, Andaman-Nicobar islands, Vishakapatnam and Chilka Lake areas. This adhoc scheme which is located at CMFRI, Cochin will make detailed studies on the seaweed resources and their biochemical aspects. Investigations have been carried out on the marine algae of Tamil Nadu and Lakshadweep. Such studies will help in understanding the chemical composition of the algal species based on which food and feed formulations can be worked out. Considering the ever-growing demand for proteinrich food for human consumption it is necessary to properly utilise the seaweed resources for the benefit of mankind.



The seaweed song of the workers of the Marine Colloids Philippines Incorporated; a multinational seaweed industry in Cebu.