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**U.R. COLLEGE ROSERA
(SAMASTIPUR)**

B.Sc. PART- I
(BOTANY SUBSIDIARY).
[GROUP- A]

(i) STRUCTURE OF
ECTO CARPUS.

Group - 'A'

Structure of Ectocarpus

Classification

Division → Cryptogam

Sub-division → Thallophyta

Group → Algae

Class → Phaeophyceae

Order → Ectocarinales

Family → Ectocarpaceae

Genus → Ectocarpus

Species → *E. arabicus*

→ *E. brevistriculatus*

→ *E. desmonematis*

→ *E. enali*

→ *E. biliber*

→ *E. seminifuctus*

→ *E. thysoides*

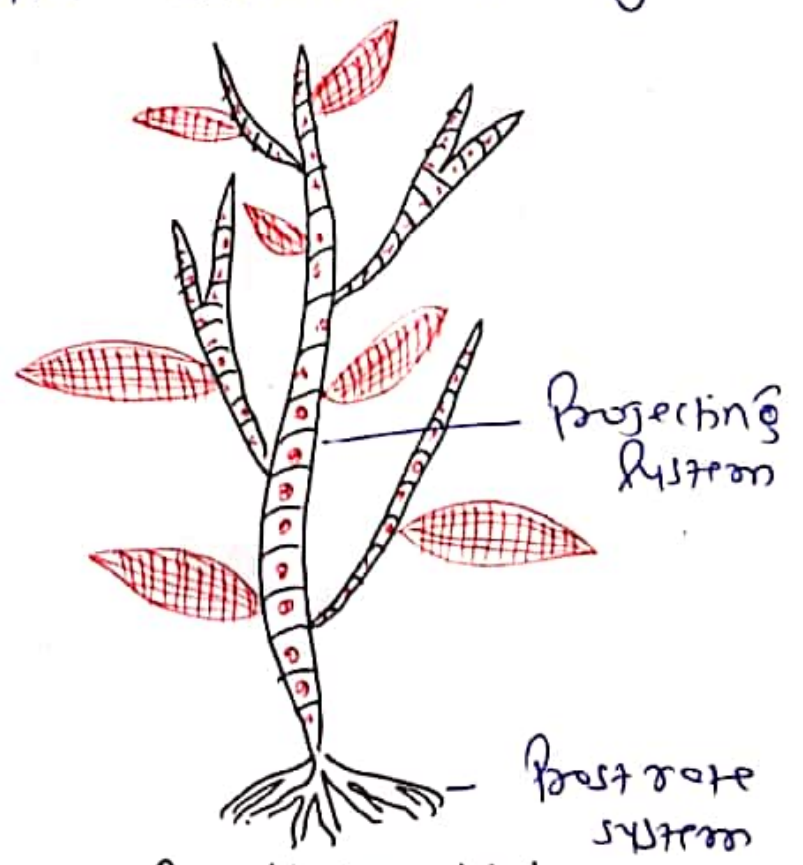
Occurrence → Ectocarpus is a marine and most primitive brown alga. It comprises many species which are worldwide in distribution but especially found in colder seas of temperate and polar region. It occurs in abundance along the Atlantic sea-coast. It

is found in India along the west sea² coast. Some species are endophytes and some are epiphytes on algae of fucales and laminariales orders.

Habit → Ectocarpus is a branched bilaminar alga. It is found attached with the help of rhizoidal hapteron from the substratum. The plant body of alga presents a heterotrichous habit. It is differentiated into prostrate or creeping branches and erect or projecting branches. The prostrate system is irregularly and frequently branched and is attached to the substratum by means of rhizoids.



A → Habit of Ectocarpus



B → Heterotrichous habit of Ectocarpus.

The erect system consists of a ③ number of copiously branched filaments arising from prostrate system. The branches arise just beneath the septa and are lateral in position. The branches usually taper into a colourless elongated hairs. The branches contain a large number of barrel shaped uniseriately arranged cells.

Cell structure → The cells are small, uninucleate, cylindrical and rectangular. The cell wall is thick and differentiated into three layers. The outer layer is composed of pectic compounds. The middle layer is of calcium and the inner layer is of cellulose. The protoplast of the cell consists of cytoplasm, one nucleus and one or more golden brown chromatophores, which may be discoid or ribbon like or irregular band shaped with several naked projecting pyrenoids.

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