

SARGASSUM

Q. Describe the systematic position, occurrence, structure and mode of reproduction in Sargassum (Gulfweed)?

Ans:- Systematic Position →

Class - Phaeophyceae

Order - Fucales

Family - Sargassaceae

Genus - Sargassum

Occurrence → Sargassum grows abundantly in the seas of Australia, Japan, Africa, America, West-Indies and India. Sargassum natans known as Sargasso weed grows as large floating masses in the Sargasso sea near the West-Indies. The name of the genus has bearing with Sargasso sea. Majority of the species occur in the warmer seas of the tropical areas. It is a Lithophyte in the earlier stages. But when old it becomes free floating. Some species are entirely free floating. Sargassum inerve is an ornamental soft and is eaten by Japanese fisher men. All together 50 species has been reported out of that 21 species found in India. (Agardh 1948 and Boergesen 1933) In India many species grow abundantly on the southern and western coasts of Okha and Dwarka etc.

Thallus structure → The plant is bushy and looks like a small angiospermic plant. It is differentiated into Rhizoids (Hold fast) main axis ~~and~~ (stem) and lateral branches (leaf). The plant is sporophytic and is more than 30 cm in length. Lateral branches are spirally arranged in main axis, one or two lateral branches in the lower part of the thallus may become transfer into air.

bladders (Pneumatocysts). While the remaining branches became converted into reproductive receptacles bearing both fertile and sterile conceptacles (Cryptoblast). The growth of a thallus takes place by the activity of a three sided meristematic cell present deeply at the base of a funnel shaped notch of the apex of the thallus.

Anatomy of the Thallus → Internally the structure of main axis differentiated into following structure.

① **Meristoderm (Epidermis)** → It is outer single layered meristematic in nature. Where cuticle may be present or may not be present above the meristoderm. Which is made up of parenchymatous tissue.

② **Cortex** → It is multi layered broad made up of parenchymatous tissue and absent in free floating species.

③ **Medula** → It present in the central region of main axis. Which confers the function of conduction like other algae. Some scalariform are present on the wall of medullary cells. All internal cell are interconnected by means of pores (Hauster). But in s-filipendula there is absence of pore in some species medula is absent. Where species is filled with air.

In the Anatomy of lateral branches (leaves). There is conceptacle ring is also present.

between the cortex and medulla. which produce the reproductive organ. That conceptacle may be sterile or fertile.

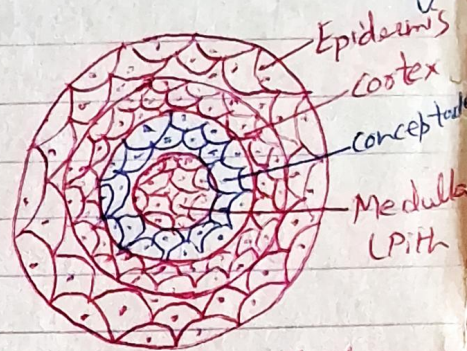
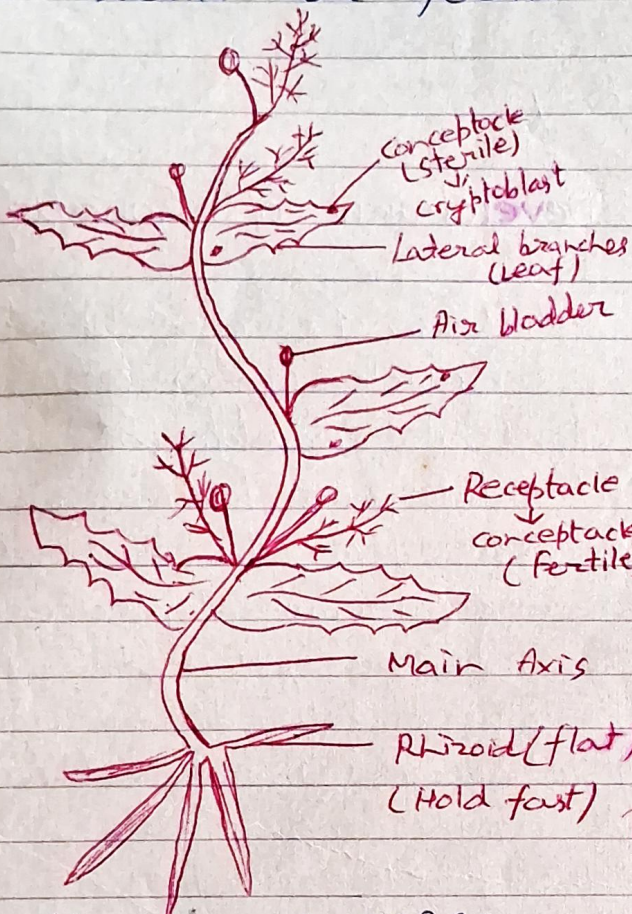


Fig - T.S of Lateral branch or Receptacle

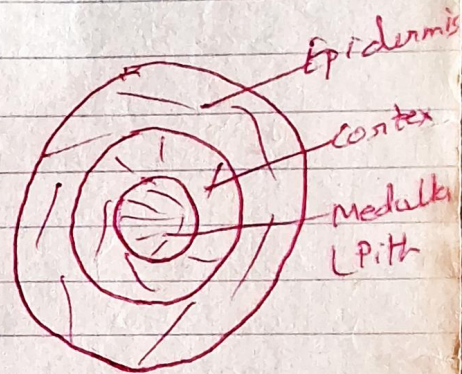


Fig - T.S of Main Axis

HABIT OF SARGASSUM

Reproduction → It takes place by two methods. like

- 1. Vegetative Reproduction** → Some free floating species like *S. natan* (Collins 1917) and others reproduces by means of fragmentation of the thallus and each fragment germinate and develop into a new thallus.