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It is produced by a single apical cell and is differentiated into nodes and internodes. Numerous branches of limited and unlimited growth arise from the node.

(a) Branches of Limited growth:— They are also known as laterals which arise in whorls from the nodes and are of equal in size. Their cells are arranged like a beads. These laterals are very short in comparison to the main filament. The clusters of the laterals at nodes are called the glomerules.

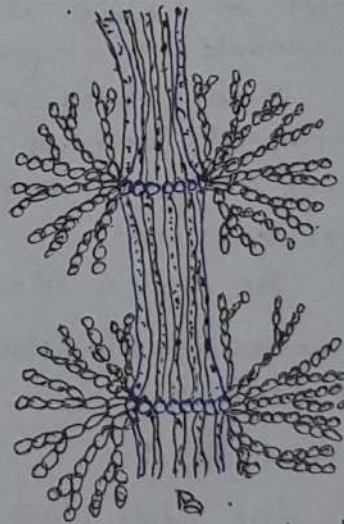
(b) Branches of Unlimited growth:—

They arise from the basal cells just below the septa. They are also differentiated into nodes and internodes. Branches of limited growth arise from the nodes of these branches. The cells are comparatively larger.



A.

Appearance of plant.



B.

Two whorls of laterals

Fig. Batrachospermum spp.

ON LINE STUDY MATERIAL (e-content)

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College: S.S. College, Jabalpur

Department: Botany

Subject: Algae

Topic: Batrachospermum

Medium of Teaching: WhatsApp & college web-site.

Date: 14.09.2020

Time: 11:00-12:00

Teacher: Dr. S.S. Sharma

Class: B.Sc (Bot) II - PI

Biotechnology Sub. - PI

Batrachospermum

1. Taxonomic Hierarchy (ISIS) :-

Kingdom - Plantae

Sub-kingdom - Biliphyta

Division - Rhodophyta

Class - Florideophyceae

Order - Batrachospermales

Family - Batrachospermaceae

Genus - Batrachospermum

2. Habit and Habitat :

Batrachospermum is a fresh water alga found in cool and ^{slowly} running water streams. Colour may vary with the changing intensity of light. It may be dark violet or reddish or olive green. Most of the species are annuals but a few are perennial.

It has a very wide range of distribution both in temperate and tropical region. It prefers cool, shady and well aerated areas such as banks of lakes and ponds.

The alga is also known as "frog spawn". The plants are mucilaginous, moniliform or beaded in appearance.

3. Plant Body :-

The adult plant is soft, filamentous, profusely branched with gelatinous texture. The central axis is made up of large, elongated cylindrical cells placed end to end in a single row.

4) Cell, Structure:-

The cells are uninucleate and remain surrounded by two layered cell walls. The outer layer is made up of pectic compounds while inner layer is made up of cellulose. Cell has many irregular chromatophores. Each chromatophore has single pyrenoid. The pigments present in the cell are - Phycoerythrin, phycocyanin, chlorophyll. a; chl. b; carotene and xanthophyll.

The central cells of the axis are connected by cytoplasmic connections. Floeridean starch is found ^{in the cell} as the reserved food material.

5) Special Features of Batrachospermum:-

- i) Complete ~~of~~ absence of any flagellate cell in the life cycle.
- ii) Sexual reproduction is highly advanced ^{sagemonous} type. The female sex organ is - carpogonium, provided with a trichogyne.
- iii) The post fertilisation stage is elaborated with the formation of carposporangium and carpospore.
- iv) The heterotrichous filament is formed by the germination of carpospore. It is known as "Chytrantasia stage" or Juvenile stage.