

Semester - I

Subject - Botany

Course - Major - I

Question: → Describe structure of *Batrachospermum*.

Answer: - *Batrachospermum*

Systematic Position:

Division: - Cryptogam

Sub division: - Thallophyta

Class: - Rhodophyceae

Sub-class: - Florideae

Order: - Nemalionales

Family: - Batrachospermaceae

Genus: - *Batrachospermum*.

Occurrence: *Batrachospermum* commonly known as "frog-spawn" also has a very wide range of distribution both in temperate and tropical regions. Generally it prefers cool, shady and well aerated situations in comparatively slowly flowing streams and margins of lakes. There are species which occur in rapidly flowing streams being attached to stones and similar other submerged objects. Most of the species are

annual but a few are perennial. (2)

Colour → This alga is usually bluish, olive green or violet green when growing in shallow water. But when it grows in deep water it is dark violet or reddish in colour. The change of colour in alga depends on the change of intensity of light.

Structure of Thallos →

The thallus of *Oedogonium* is filamentous, profusely branched and mucilaginous. The alga consists of main axis divided into nodes and internodes. It presents a moniliform shape due to the whorls of laterals at every node. The internodes are costate. The plant may attain a length of 20 cm long. The main axis represents the branch of unlimited growth which bears 4-6 short laterals (dwarf shoots) of limited growth and one long lateral of unlimited growth at each node. The group of such laterals of limited growth are called 'glomerule'. The

branch of unlimited growth is similar^③ to the main axis of the plant.

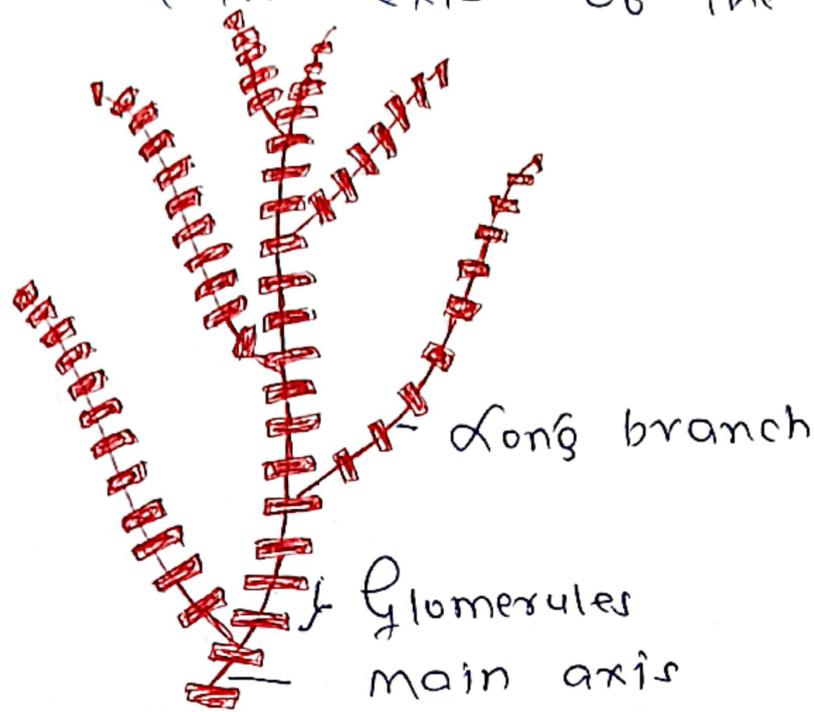


Figure \Rightarrow Structure of thallus of Batrachospermum.

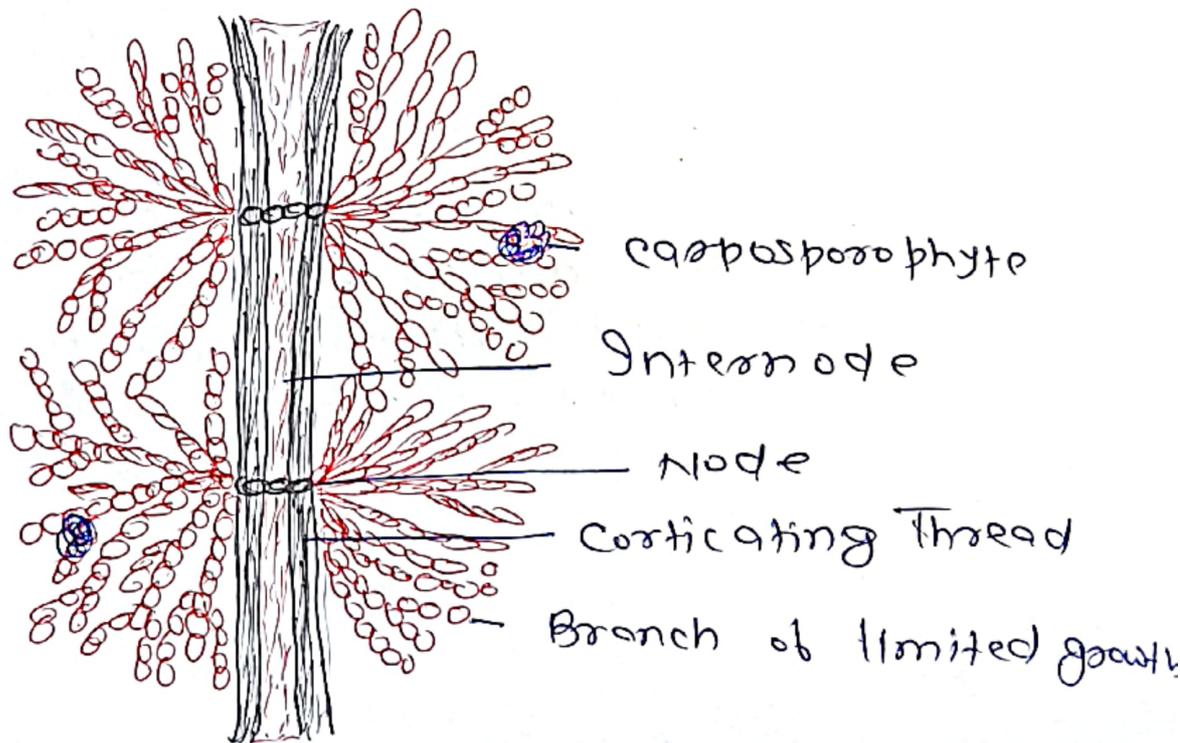


Figure \Rightarrow Structure of thallus of Batrachospermum in magnified view.

Cell Structure → The cell is provided ⁽⁴⁾ with a double layered cell wall. The outer cell wall is composed of pectin and the inner cell wall is made up of cellulose. Several parietal discoidal chromatophores are found along the cell wall. Each chromatophore contains one pyrenoid. Pyrenoid is proteinaceous body covered by starch. It helps in synthesis of starch, so called "starch factory." Cell is unicellular or monokaryotic. Floridean starch grains as reserve food are distributed in the vacuolated cytoplasm.

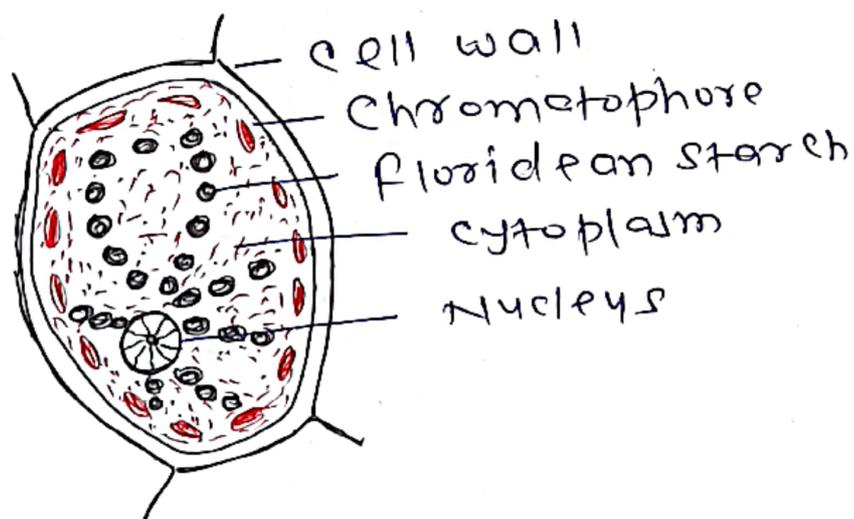


Figure → Cell structure of redogoni-um

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