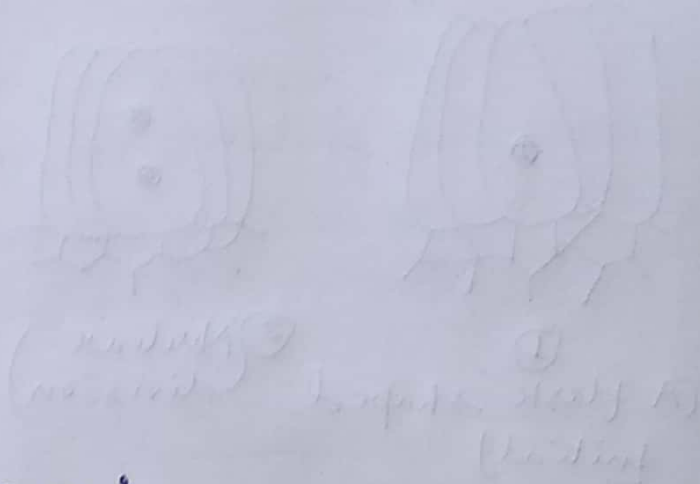


Dr. Rachana Shalini
 Dept. of Botany
 class : Deg-1 (Hons.)
 Paper : 1 (Algae)
 Topic : Sargassum (Contd.)
 Lecture No. - 89
 Date : 24/09/2020



Reproduction in Sargassum :

• Asexual Reproduction :

Asexual reproduction by means of spores is lacking. Sargassum reproduces vegetatively by means of fragmentation. The older parts die and decay, and separating the younger parts. The latter continue to grow and finally developed into full-filled Sargassum plants.

• Sexual Reproduction :

- In Sargassum, it is the usual method of reproduction and is isogamous.
- The sex-organs are produced in flask-shaped cavities called the conceptacles, borne on the sporophyte plants.
- The conceptacles are aggregated in the upper region of the axillary branch system. These may be cylindrical or flattened and are called receptacles.

• Conceptacle:

It is a cavity in the thallus. It lies in the superficial part of medulla of receptacle. The conceptacle wall consists of a few layers of compactly arranged flat cells, rich in chromatophores.

Conceptacle wall separates its cavity from the loose tissue of the medulla and bears many branched, hair-like filaments, called paraphyses. Paraphyses consists of bevel-shaped cells with scanty chromatophores.

Each conceptacle opens to the exterior by means of ostiole.

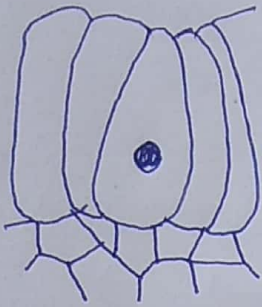
• Development of Conceptacle:

Conceptacle is formed from a single superficial flask-shaped initial cell. It is distinguishable from others by its larger size, slower rate of division and large nucleus.

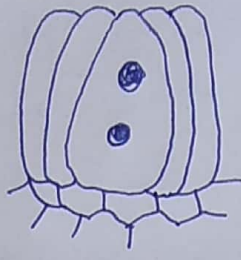
The initial cell divides by a curved septum into two unequal daughter cells. Upper daughter cell is called tongue cell and the lower basal cell.

The tongue cell remains separate from the adjoining tissue. The basal cell divides repeatedly to form the wall of the conceptacle except its upper narrow portion.

The tongue cell merely elongates and persists or in some cases divides to form a row of few cells.



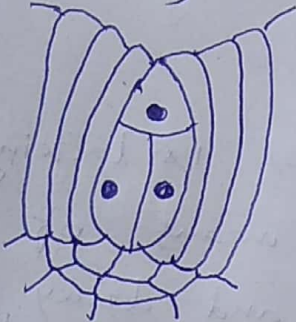
① (A flask shaped Initial)



② Nuclear division

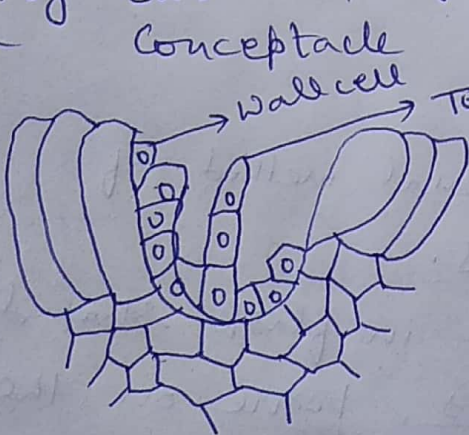


③ Formation of Basal cell and Tongue cell

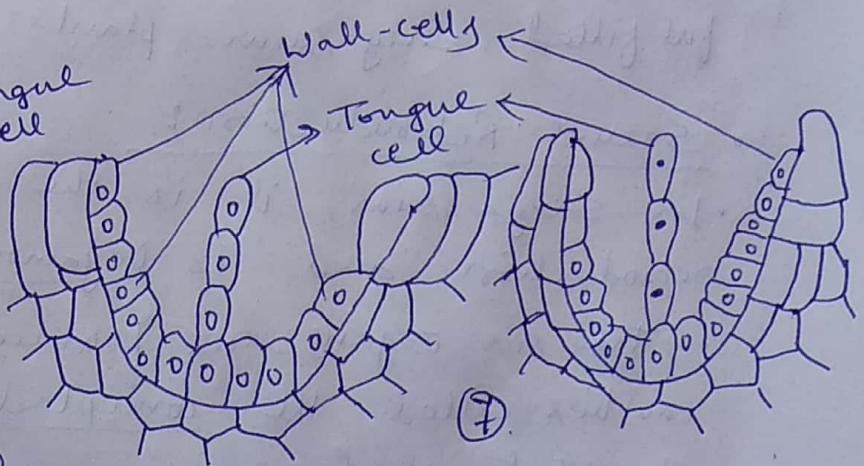


④ (Basal cell divided into two by a vertical wall)

(Fig: Earlier stages in the development of Conceptacle)



⑤



⑥

⑦

(Later stages in the development of Conceptacle)

• Sterile conceptacles, called cryptoblast, often occur scattered over the thallus.

(Continued - - -)