

Dr. Rachana Shalini

Dept. of Botany

Class : Deg. I (Hons.)

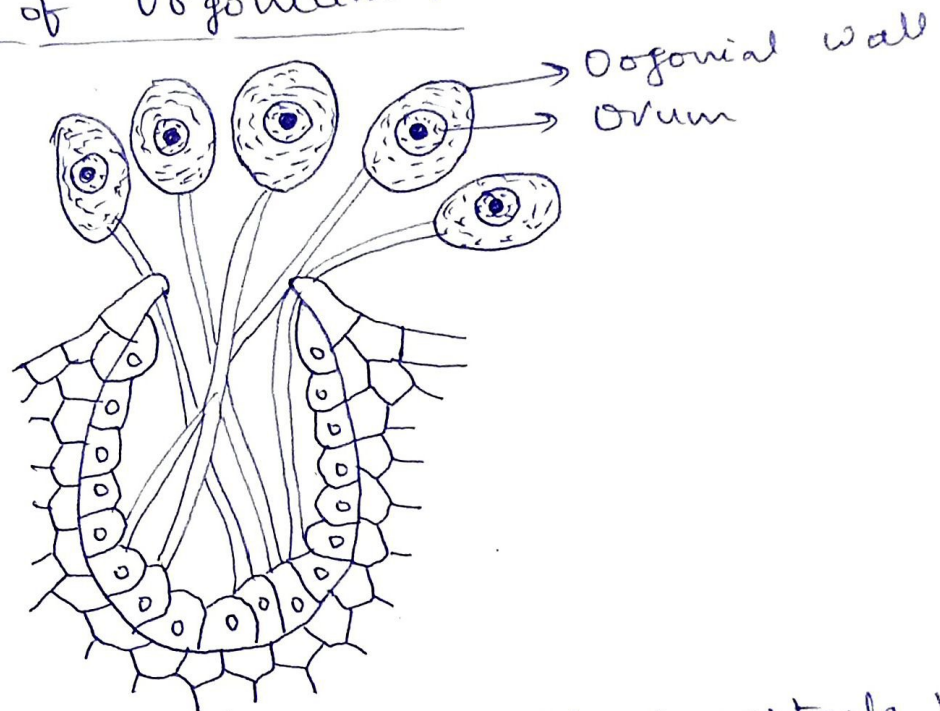
Paper : I (Algae)

Topic : Sargassum (Continued.)

Lecture No. - 93

Date : 26/09/2020

- Sexual Reproduction in Sargassum (Contd.)
- Development of Oogonium :

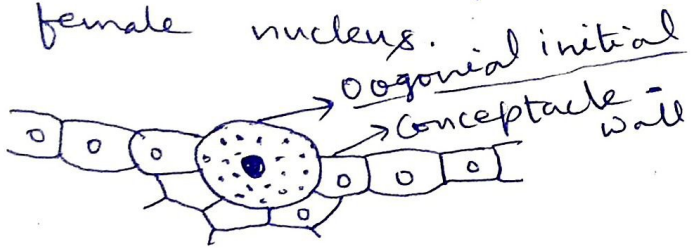


(Fig: Extruded Oogonia attached to Conceptacle wall by long stalk in Sargassum.)

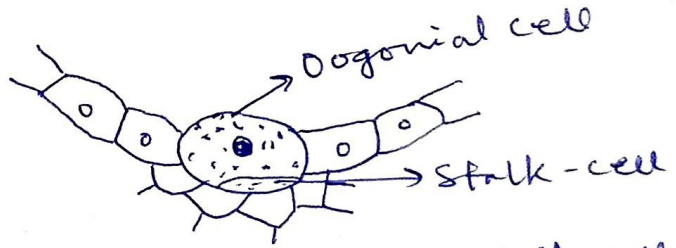
- Any cell in the wall of the conceptacle may function as the oogonial initial.
- Later, oogonial initial grows in size, then divides by an asymmetrical transverse division to form ~~to~~ two unequal cells, lower smaller called stalk-cell and upper Oogonial cell.

The Oogonial cell increases in size and filled with dense cytoplasm. It has plenty of oil drops. Its single nucleus undergoes three successive divisions to form eight daughter nuclei. The first nuclear division is reductional. Thus, in Sargassum, reduction division takes place during gamete formation.

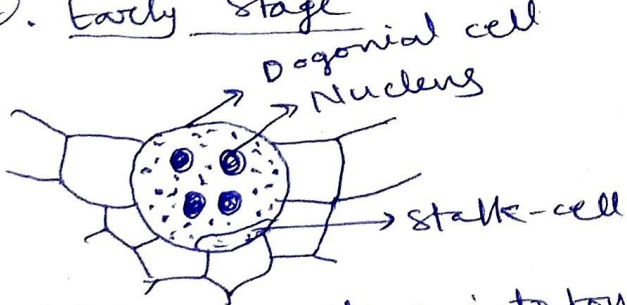
The protoplast of the oogonium withdraws from the oogonial wall and rounds off to form a single ovum. It has 8-nuclei. One of these migrates to the centre and 7-nuclei gradually degenerate. The central one, that survives, enlarges to become the functional female nucleus.



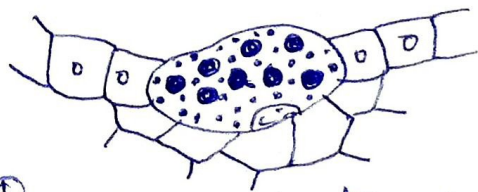
①. Early Stage



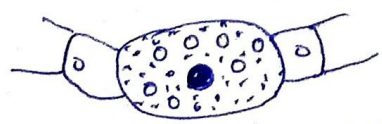
②. Formation of stalk-cell and Oogonial-cell.



③. Division of nucleus into four daughter nuclei



④. 8-Nucleate stage



⑤. One large functional nucleus and 7-degenerating nuclei



⑥. Oogonium with Ovum.

(Continued - - - -)