Dr. Rachana Shalini
Deptt. of Botany
Class : Deg. I (Hons)
Paper : I (Group - 'A')
Topic : Life-cycle of Fucus (Continued)
Lecture No. - 58
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Life-cycle of Fucus (Continued):

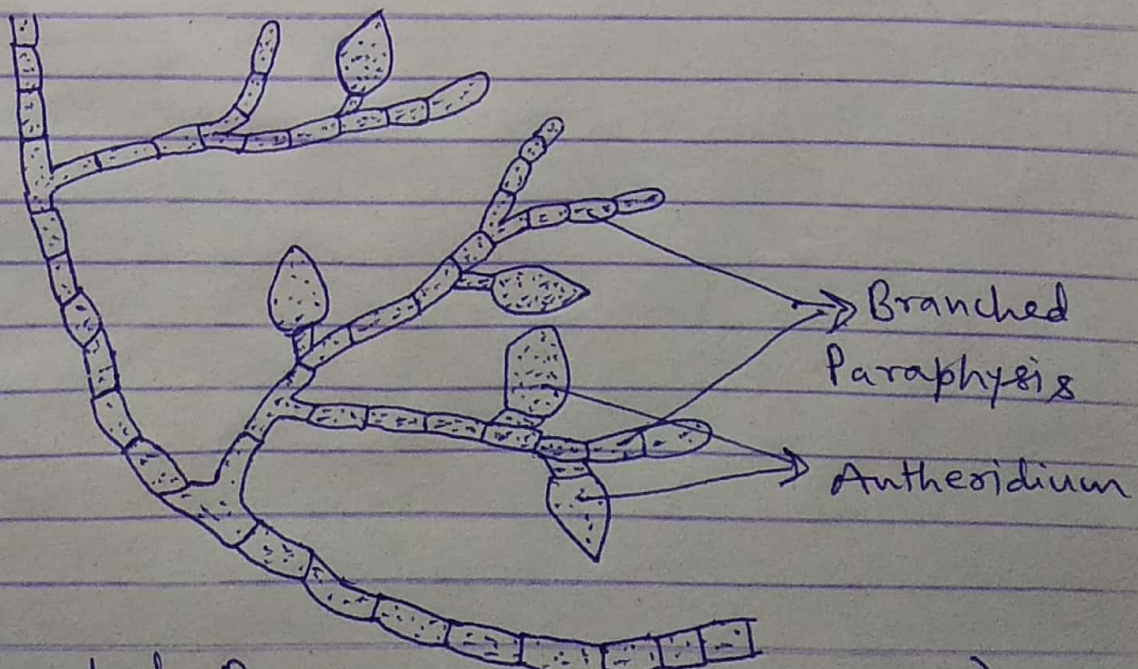
- **Antheridium:**
- **Structure:**

The antheridium are small oval structures, borne on branched hairs arising from the wall of the conceptacles.
The mature antheridium consists of a small ovoid orange coloured sac with a two layered wall. They are borne in clusters usually on the lower branches of the richly branched paraphysis.

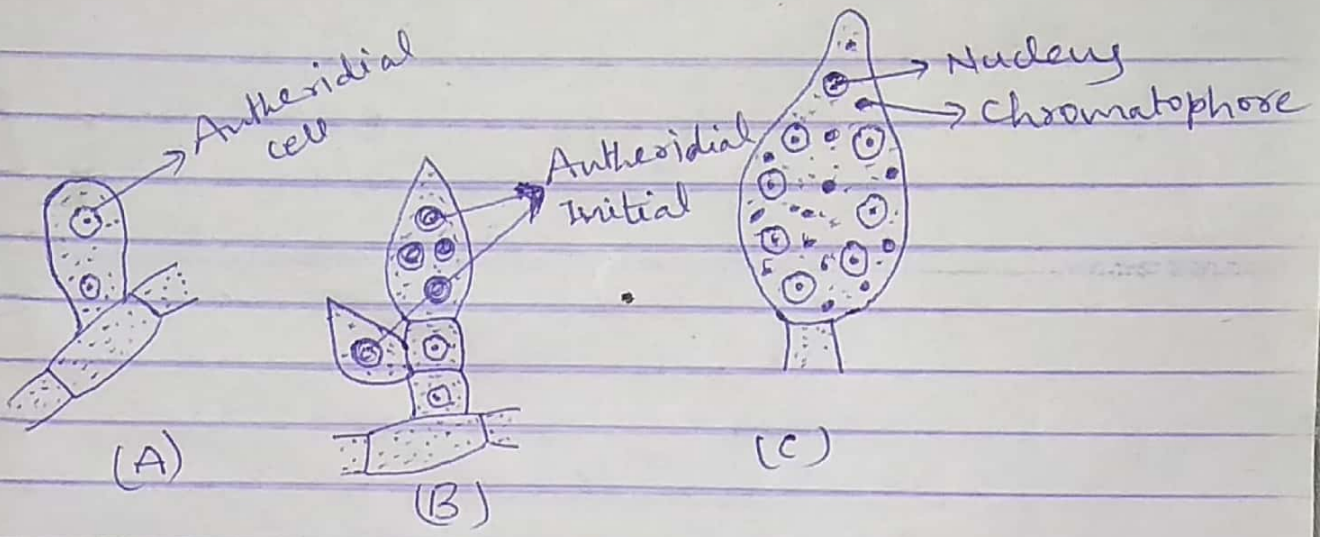
- **Development:**

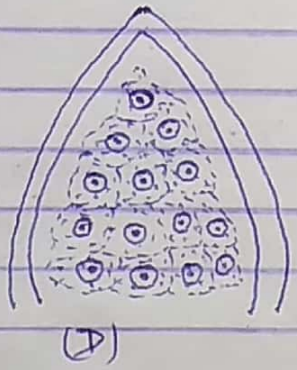
At first, antheridium arises as a papilla-like outgrowth of the wall-cell.
It divides into a basal stalk cell and the upper antheridium cell, latter enlarges to form the terminal antheridium.
The stalk cell grows into a branch pushing the terminal antheridium to one side.

Branch cell, after division, again bears the terminal antheridium. This process is repeated indefinitely and results a richly branched paraphysis bearing antheridia is formed.
The antheridial nucleus divides repeatedly to form 64 daughter nuclei.
Finally each daughter nucleus with a certain amount of cytoplasm and a single orange coloured chromoplast becomes a male cell or sperm or antherozoid.
When antheridium mature, the wall of antheridium ruptures and antherozoids are librated.
Librated sperms or antherozoids are slightly elongated, pear shaped cell with two laterally inserted flagella of unequal length.
The shorter flagellum is directed foreward and the longer backward.

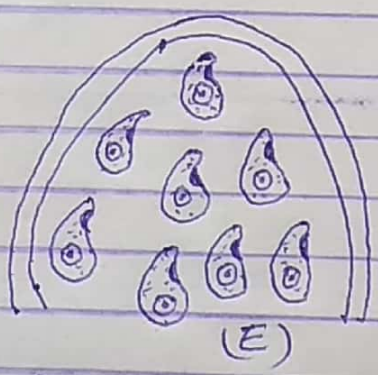


(Fig: Branched Paraphysis bearing antheridia)

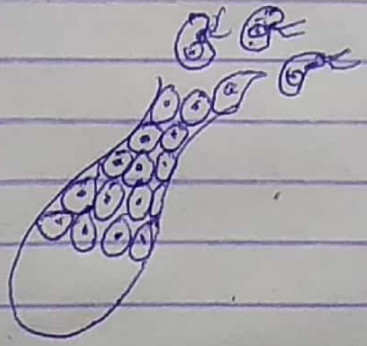



(D)

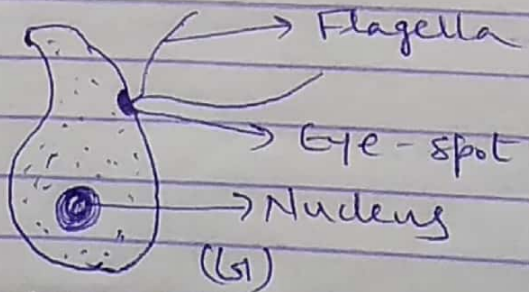
(Cleavage of the Protoplast)


(E)

(Formation of sperm)


(F)

(Liberation of sperm)



(G)

(Liberated sperm)

(Fig: Development of Antheridium in Fucus)

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