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Class : Deg. I (Hons.)

Paper : I (Algae)

Topic : Life-cycle of Fucus (contd.)

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Life-Cycle of Fucus (Continued):

• Fertilization:

Eggs are large and passive, while the antherozoids are minute, ciliate and active.

A large number of antherozoids swim to the oogonium, being attracted by some chemical substances and each gets attached to it by one cilium.

Their vibration around the egg makes it rotate.

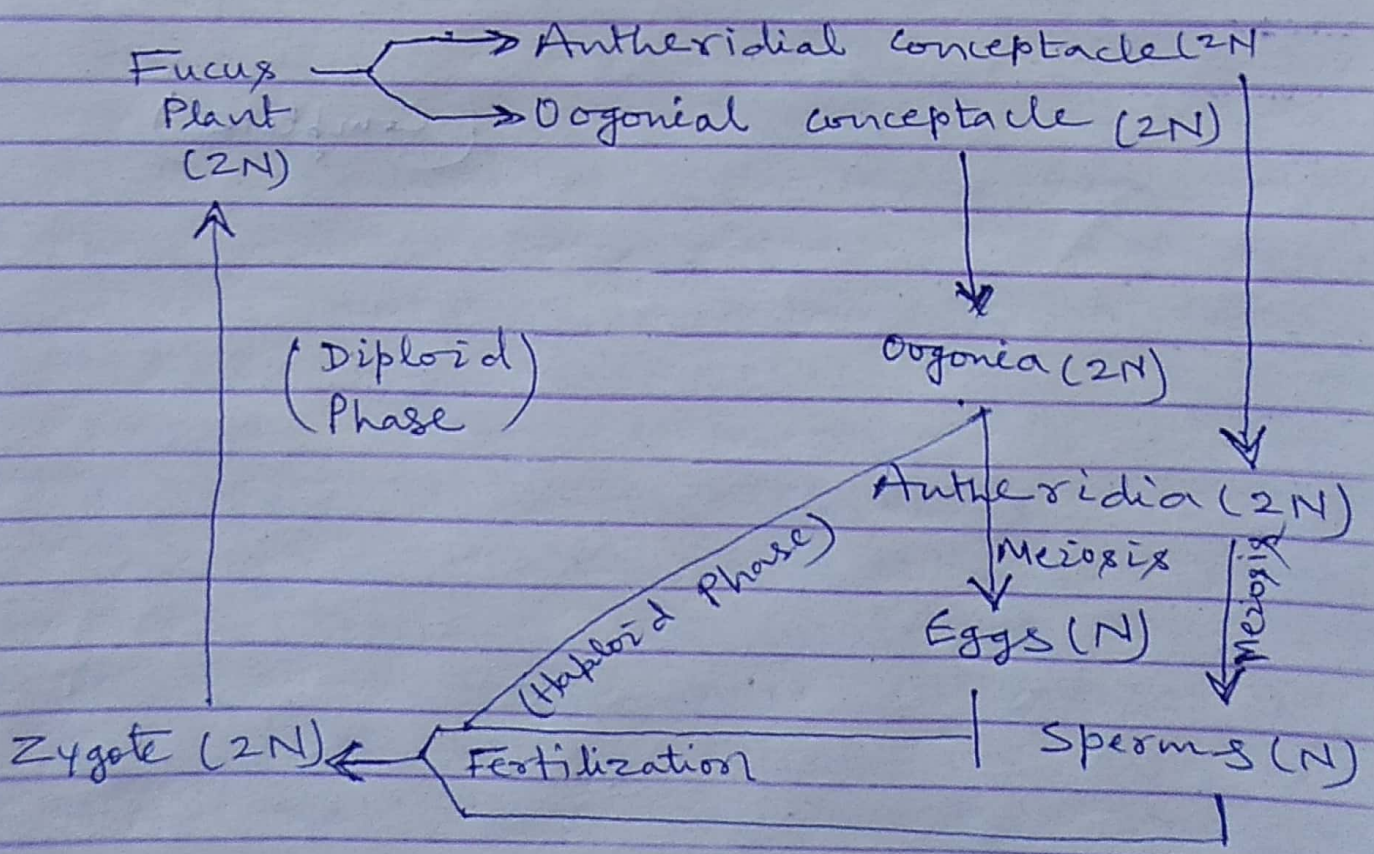
One or more antherozoids may enter the egg, but only one fuses with the egg-nucleus.

The fertilized egg or zygote clothes itself with a wall, which helps it to stick with substratum. It germinates without any delay.

The zygote immediately divides and grows into a new thallus of Fucus plant.

• Alternation of Generation:

There is no alternation of generation in Fucus. The plant itself is diploid, i.e., sporophytic. Reduction division takes place during the formation of gametes (egg and antherozoid). So, the gametes are haploid, i.e., gametophytic. The diploid condition is restored in the zygote after fertilization of the gametes.



(Fig: Graphical representation of life-cycle of Fucus)

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Fucus plant being a sporophyte with diploid chromosomes, the so-called antheridium is looked upon as a microsporangium producing small motile microspores, which functions as antherozoids and the oogonium as a megasporangium producing large immobile megaspores which function as eggs.
Thus, Fucus is heterosporous.

(Complete)