

Honours
Part-I
Lecture No. 05

Group-A
ALGAE
CHARA-II

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Structure and development of female reproductive organ: Formation of Archegonium are also form Basal nodal cell of Primary lateral. In oogonal initial ~~the~~ transverse division are three celled in a series. Upper cell is Oogonal mother cell, middle cell median and lower cell is pedicel cell. 5 sheath initial forms vertical division in median cell which surrounds central cell and Oogonal mother cell are also surrounded by sheath initial to upwards. Again by transverse division to upwards forms coronal cell in sheath initial and to downward forms tube cell. Coronal cell becomes long and form cap like structure on the apex of Oogonium. Now tube cell becomes elongated. Oogonium surrounded by spiral shaped structure which is twisted. Oogonium mother cell forms stalk cell through transverse ~~cell~~ division and to upwards form Oogonium. Inner inclusion forms a ovum. The Oogonium produces a large uninucleate cell.

Fertilization: Shortly before fertilization the tube cells ~~at~~ separate slightly from one another below the

Corona to form five narrow slits.
 Through these slits the sperms gain
 entrance into the sheath. One of
 the sperms makes its way through
 the gelatinised apex of the oogonal
 wall. It penetrates the ovum at
 the receptive spot and fuses with
 the egg nucleus. Each spermatogeno-
 us filament consists of 5 to 200
 short, discoid sperm mother cells.
 The egg is retained within the
 oogonium and fertilization is
 internal. Each spermatozoid mother
 cell gives rise to a single
 biflagellate sperm.

Germination: After fertilization in
 favorable condition firstly zygote
 divided by mitotically ~~div~~. After
 that by meiotic division four
 haploid nucleus forms. The zygote
 or the oospore germinates after
 a resting period. Prior to
 germination the zygote nucleus
 divides ~~two~~ to form four
 daughter nuclei. It is suggestive
 of zygotic meiosis. Three of the
 haploid nuclei gradually dege-
 nerate. The Chara plant thus
 haploid.
