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Paleoplast granules appear in a ring at the margin of hyaline layer. Each granule gives rise to single flagella. Now the whole structure is transferred into a single zoospore. Zoospore comes out in a vesicle after the rupture of cell wall. Vesicle soon disappears and zoospores are set free.

Zoospore is uninucleate, multi-flagellate and spherical, ovoid or pyriform in structure. Motility remains for an hour, then the anterior end becomes attached to the substratum. Now a transverse division takes place so that two cells are formed. The lower cell forms the holdfast while the upper cell divides and redivides to form new filament.

### 2) Joy Akinetes:-

According to Handa (1928), akinetes are formed in unfavourable condition. They are thick walled, reddish brown, more or less rounded resting spores. They germinate directly and give rise to new filament in favourable condition.

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ONLINE STUDY MATERIAL (Content)

Name of the College: S.S. College, T. had

Name of the Department: Botany

Subject : Algae

Topic : Oedogonium.

Platform of Teaching: What's App, College website

Date : 02-09-2020

Time : 11:00-12:00

Name of the Faculty: Dr. S.S. Chandra

Subject: Botany - Pt

Biotech. sub - Pt

Oedogonium : Occurrence & Structure

Oedogonium is derived from Gr. 'Oedoi' - Swelling and 'gonos' - reproductive body.

i) Occurrence :-

Oedogonium is a long, unbranched, filamentous, fresh water green alga. It is found attached with the substratum (stone, wood, leaf of aquatic plant etc.) in young condition but later becomes free floating. Epiphytic and terrestrial species are also reported. Out of 400 species 200 are reported from India. They are very common in pools, ponds and lakes.

ii) Plant Body :-  
= Thallus Plant body is green, unbranched,

multicellular filament which consists of a single row (uniseriate) of cells placed end to end.

iii) Cell structure :- The plant body has 3 types of cells i.e. -

(a) the lower most or basal cell which is

(iv) Reproduction - It is of three types i.e.,

- a) Vegetative reproduction
- b) Asexual reproduction
- c) Sexual reproduction

(a) Vegetative Reproduction :-

It takes place with the help of fragmentation. During this process, oedogonium filament breaks into small segments / fragments. Each fragment develops into new plant.

(b) Asexual Reproduction :-

By Zoospore - It takes place with the help of zoospores during favourable conditions. During the process, the cell contents recede from the cell wall of any cap cell (i.e. young cell). The nucleus moves towards one side of the protoplast. Finally, protoplast becomes round and a hyaline region is formed between the wall and the nucleus.

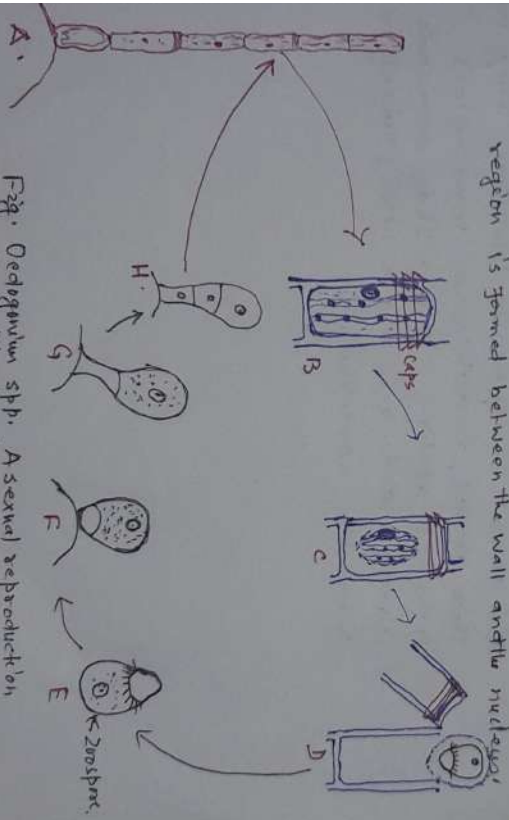


Fig: Oedogonium sphaerocarpum Asexual reproduction.  
 A - Plaque body / Filament  
 B - H - Formation and germination of Zoospore.

