

## EVOLUTION OF SEX

When the sexual reproduction had become established both the gametes were flagellated and of the same size. Morphologically as well as physiologically they were identical. This condition is retained by some of the green and brown algae such as Chlamydomonas, Cladophora and Ectocarpus. The reproduction is isogamous. They fuse in water. They are produced in veg. cell. This kind of sexual reproduction and which consists in the fusion of morphologically and physiologically similar gametes is called isogamy.

In Ulothrix, the gametes are similar but fusion takes place only between two gametes produced in distinct filaments. It means that the gametes though similar externally yet show functionally disparity. They don't have male and female characteristics but positive and negative strains.

## Physiological anisogamy in Spirogyra

eg. Spirogyra

Here gametes are alike but they are also distinguishable by their degree of motility. The gametes of one filament pass over and combine with the gametes in the other filament. The active motile gamete may be male gamete while passive one are female gametes.

## Anisogamy

eg. Chlamydomonas braunii Revelante

Here gametes are different in size. They are called anisogametes and reproduction as anisogamy. The anisogametes are produced by gametangia. The smaller ones are called the male gametangia and larger as female gametangia. The smaller gamete is male while a larger as female.

## Oogamy

eg. Chlamydomonas (Coccifera Eudorina)  
Volvox

Distinct sex-organs are present, the male being called antheridia and the female oogonia. The gametes are male and female. The smaller male gametes is active and may be called as sperm while larger gametes is immobile and may be called the egg.

Primitive type of oogamy is exhibited by Fucus where sex-organs are fused. They fuse externally in water.

## Advanced type in sexuality eg oedogonium

The male gamete is small and flagellated. It is called the sperm. It is produced in single called male sex-organ called the antheridium. The egg is larger non motile and produced singly. It is retained within the oogonium. The antheridium and oogonia are spl. sex organs. Gametic union no longer takes place in water.

## Advanced oogamy in Chara vaucheri

The gametes in these forms are borne in spl. sex organs (Globule and nucule). These are an entirely distinct from the vegetative cells and are not developed from them. They arise as spl. reproductive branches.

From the above description it is clear that the evolution of sex, which involves the differentiation of gametes was accompanied by differentiation of sex organs. It gives a good start to the org. organism in life which is great survival to sps.