


# **CLASSIFICATION OF CHLOROPHYCEAE (GREEN ALGAE)**

**BSc I Botany Hons.**



**Dr. Navi Ranjan**  
Assistant Professor  
Department of Botany  
M. V. College, Buxar  
Veer Kunwar Singh University, Ara

## Classification of Chlorophyceae (Green Algae)

Chlorophyceae are divided into nine Orders which may be distinguished as follows:

### 1. Volvocales:

- Unicellular or colonial; motile throughout life or form sedentary colonies which readily revert to a motile condition; reproduce asexually as well as sexually; mainly freshwater.

**Examples:** Chlamydomonas, Sphaerella, Pandorina, Eudorina, Volvox, etc.

### 2. Chlorococcales:

- Unicellular or colonial; non-motile in the vegetative condition, reproduced by zoospores or aplanospore; almost exclusive fresh water.

**Examples:** Hydrodictyon, Pediastrum, etc.

### 3. Ulotrichales:

- Filamentous, simple and unbranched or cellular expanse with small cells; chloroplasts parietal, axial or stellate; sometimes filaments simple and with large multinucleate cell; mostly isogamous; mostly species freshwater, some are marine.

**Examples:** Ulothrix, Ulva, etc.

#### 4. Cladophorales:

- Simple or branched, filamentous with cells containing two to many nuclei and usually with elaborate large chloroplasts; mostly isogamous; freshwater and marine.

**Example:** Cladophora.

#### 5. Chaetophorales:

- Filamentous and sharply differentiated into prostrate and erect portions (heterotrichous); erect portion often reduced and the prostrate portion often forming discoid expanse; hairs of diverse type are often present; mostly isogamous and freshwater.

**Examples:** Chaetophora, Enteromorpha, Draparnaldiopsis, Trentepohlia. Coleophaete, Protococcus, etc.

#### 6. Oedogoniales:

- Simple or branched, filamentous; zoospores multiflagellate; oogamous; cell divisions characterized by intercalation of strips of membrane between two parts of the mother cell; entirely freshwater.

**Example:** Oedogonium.

## 7. Conjugales:

- Unicellular or colonial (generally filamentous) with elaborate chloroplasts; motile gametes unknown; reproduction by vegetative cell division or by conjugation of amoeboid gametes; exclusively freshwater.

**Examples:** Spirogyra, Zygnema, Cosmarium, Closterium, etc.

## 8. Siphonales:

- Filamentous; without septa or elaborately differentiated; all parts coenocytic; chloroplasts numerous and discoid; sexual reproduction mainly isogamous, sometimes oogamous, unknown in many cases; mostly marine.

**Examples:** Vaucheria, Caulerpa, Bryopsis, etc.

## 9. Charales:

- Thallus well-differentiated into nodes and internodes; internodes sometimes corticated; branches of limited growth in whorls; chloroplasts numerous and discoid; cells usually uninucleate; reproduction vegetative and sexual with elaborate oogonia and antheridia; germination of zygote indirect; fresh water and brackish water.

**Examples:** Chara, Nitella, etc.