



BIODIVERSITY OF ALGAE FROM THE STANDING WATER SOURCE

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ABSTRACT :

During an extensive study on algal taxonomy in the the Beed district Marathwada region of Maharashtra, the authors came across the interesting collection of algae. The algal samples were collected from different standing water habitats such as pools, ponds, cisterns, talaos, dams, puddles. A total of 61 taxa under 32genera were encounteredand identified from during the period of investigation.

Key words: Phytoplankton, Taxonomy, Standing water source

INTRODUCTION

In the course of studies on algae, the review of literature reveals that, India has a very rich and diversified algal flora. In the present century great advances have been made in the investigations of fresh water algae, marine algae, soil algae and particular attention has been paid to their Taxonomy, Ecology and applied aspects. In Maharashtra tremendous work has been done on algal taxonomy by various workers. In Marathwada region except few reports very rare (Ashtekar 1980, Milind Jadhav 2007, Andhale 2008) attention has been paid towards algal taxonomy, although the climatic conditions are most suitable to grow algae luxuriantly and in diverse form, therefore to fulfill this lacuna present work was carried out. The Beed district is located on Deccan plateau at 16.65° N-74.13° E. The average temperature ranges between 31° c to 40° c. The average rainfall is 666 mm.

MATERIALS AND METHODS

The algal samples were collected from different standing water habitats of Beed district. The samples were collected in acid washed collection bottles. The samples were preserved in 4% formalin added with 5% glycerin for further taxonomic investigations. The line drawings were made with the help of mirror type camera Lucida under appropriate magnifications. The algae were identified under light microscope by referring standard literature on algae (Philipose 1967; Prescott, 1951; Desikachary1959; Smith, 1920) The identified taxa are shown in table 1.

RESULTS:

Table 1: Total occurrence of Algal taxa:

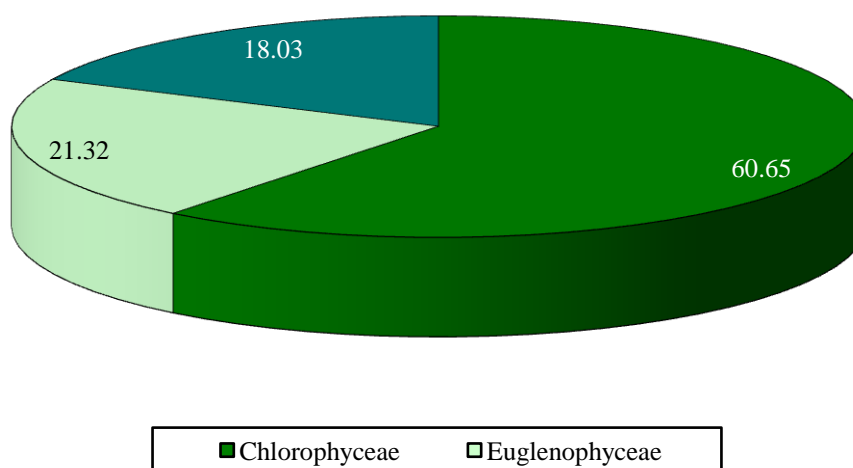
| Sr. No. | Class | Genera | Species |
|---------|-----------------------|--------|---------|
| 1 | <i>Chlorophyceae</i> | 20 | 37 |
| 2 | <i>Euglenophyceae</i> | 04 | 13 |
| 3 | <i>Cyanophyceae</i> | 08 | 11 |
| | Total | 32 | 61 |

CHLOROPHYCEAE: *Chlamydomonas angulosa*, *Eudorina elegans*, *Sphaerocystis schroeteri*, *Gloeocystis gigas*, *Gloeocystis vesiculosa*, *Protococcus viridis*, *Oedogonium franklinianum*, *Oedogonium tapeinosporum*, *Characium curvatum*, *Trochiscia reticularis*, *Pediastrum boryanum*, *Pediastrum braunii*, *Pediastrum tetras* v. *tetradon*, *Tetraedron limneticum* v. *gracile*, *Tetraedron muticum*, *Tetraedron regulare* v. *granulata*, *Tetraedron tumidulum*, *Oocystis crassa*, *Oocystis pusilla*, *Nephrocystium lunatum*, *Dactylococcus infusionum*, *Scenedesmus bernardii*, *Scenedesmus bijugatus*, *Scenedesmus incrassatulus*, *Scenedesmus platydiscus*, *Scenedesmus quadricauda*, *Scenedesmus quadricauda* v. *eualternans*, *Scenedesmus quadricauda* v. *longispina*, *Mougeotia bangalorensis*, *Mougeotia floridana*, *Zygnema mucigenum*, *Closterium aciculare*, *Euastrum spinulosum*, *Cosmarium laeve*, *Cosmorium laeve* v. *acervatum*, *Cosmorium libogense*, *Staurastrum quebecense*

EUGLENOPHYCEAE: *Euglena acus*, *Euglena ehrenbergii*, *Euglena elongata*, *Lepocinclis acuta*, *Lepocinclis glabra*, *Phacus acuminatus*, *Phacus acuminatus* v. *granulata*, *Phacus longicauda*, *Phacus pleuronectes*, *Trachelomonas acanthostoma*, *Trachelomonas hispida*, *Trachelomonas robusta*, *Trachelomonas triangularis*.

CYANOPHYCEAE: *Chroococcus turgidus*, *Rhabdoderma gorskii*, *Rhabdoderma lineare*, *Myxosarcina burmensis*, *Oscillatoria princeps*, *Oscillatoria pseudogeminata* v. *unigranulata*, *Phormidium pachydermaticum*, *Lyngbya cryptovaginata*, *Lyngbya dendrobia*, *Nostoc ellipsosporum*, *Calothrix geitonos*

Graph 1: Classwise percentage contribution of algae
(values in percentage)



DISCUSSION:

During present investigation a total of 61 taxa under 32 genera were encountered from the standing water sources which the members of chlorophyceae were found dominantly (37 taxa under 20 genera) followed by 13 taxa under 4 genera belonged to euglenophyceae and 11 taxa under 8 genera were belonged to cyanophyceae. The species of *Scenedesmus* were found dominantly and followed by the species of *Pediastrum*, *Tetraedron* and *Cosmarium* among the chlorophyceae. The species of *Phacus* and *Trachelomonas* were found dominantly and represents the euglenophyceae and the species of *Oscillatoria* and *Lyngbya* are dominantly found from cyanophyceae.

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