

Regular Article

Biodiversity Studies on Oscillatoriaceae form Jalgaon Nala of Ashti Taluka in Beed District, India

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Abstract

A Critical study has been made on biodiversitital studies of oscillatotiaceae (cyanophyceae) in Jalgaon Nala of Ashti Taluka in Beed district during the period form June 2007 to May 2009. Algal samples were collected at monthly interval form five sites of Jalgaon Nala during the period of investigation. Microphotograph and line drawings of algal taxa were made by Digital camera and camera lucida. Algal taxa of cyanophyceae were indentified with the help of standard monographs and recent literature. In present study oscillatoriaceae included six genera. Viz *Arthrospira*, *Spirulina*, *Oscillatoria*, *Phormidium*, *Lyngbya*, and *Mircocoleus* were recorded. A total 33 algal taxa of oscillatoriaceae were recorded in present biodeversitital study. Among 33 algal taxa species of oscillatoria are dominant compared to other taxa.

Key words: Jalgaon nala, Cyanophyceae , Oscillatoriaceae, Beed

Introduction

Algae constitute the main autotrophic component of aquatic ecosystem. It gain its importance in the modern time not only as alternative potential source of protein for the hungry man but als as the primary source of food for aquatic animals. Jalgaon Nala is the one of well known Nala in Ashti Taluka in Beed District. Except few reports (Kamat 1962; Ashtekar and Kamat 1978. Ashtekar 1980, Talekar 2009) verely rare attention has been paid towards Cyanophycean diversity of fresh water habitats in Marathwada resion.

To full fill this lacuna it has been decided to work on Biodiversitital studies on oscillatoriaceae form Jalgaon Nala of Ashti Taluka.

Material and Methods

The present investigation for biodiversitital studies on oscillatoriaceae was carried out form June 2009 - May 2010 on Jalgaon Nala of Ashti Taluka in Beed District. To study the algal biodiversity five sites were selected for the collection of algal samples. Algal samples were collected at monthly intervals in acid washed collection bottles. Floating planktonic, submerged and attached epiphytic algal samples were collected separately in collection bottles. After collection, algal samples were brought immediately in the Laboratory. The fresh as well as preserved algal forms were observed under microscope and indentified with the help of standard literature on algae (Gonzalves 1981, Sarode and Kamat 1979).

Results

A total 33 algal taxa under 6 genera of oscillatoriaceae were indentified during the period of investigation (Table: 1). The algal genera found at all sites were *Oscillatoria*, *Phormidium*, and *Lyngbya*. The genus *Arthrospira* were represented by a sigal species. The *Spirulina*, *Oscillatoria*, *Phormidium* and *Lyngbya* were observed in every months. On the basis of dominance summer is the more sutable for the growth of oscillatoriaceae. The similar kinds of observation were made by Jain (2002) and Magar (2008).

Table1. Algal Taxa of osdlatiariaceae from Jalgaon Nala of Ashti Taluka in Beed District of India

| Name of algae | S ₁ | S ₂ | S ₃ | S ₄ | S ₅ |
|---|----------------|----------------|----------------|----------------|----------------|
| <i>Arthrospira platensis</i> (Nordst.) Gomont | - | - | + | - | - |
| <i>Spirulina gigantea</i> Schmidle | - | + | + | + | + |
| <i>Spirulina labyrinthiformis</i> (Menegh.) Gomont | + | - | - | - | - |
| <i>Spirulina laxissima</i> West G.S. | - | - | - | - | + |
| <i>Spirulina major</i> Kuetzing et Gomont | + | + | - | + | - |
| <i>Spirulina meneghiniana</i> zanard ex Gomont | - | - | + | - | - |
| <i>Oscillatoria acuta</i> Brahl at Biswas orth. Mut. Gertler | - | + | - | - | - |
| <i>Oscillatoria obscura</i> Brahl at Biswas | + | + | + | + | - |
| <i>Oscillatoria chlorina</i> Kuetz ex. Gomont | - | + | - | - | - |
| <i>Oscillatoria curviceps</i> Ag. Form (after Rao C.B. locit) | - | - | + | - | - |
| <i>Oscillatoria princeps</i> Vaucher ex Gomont | - | - | + | + | - |
| <i>Oscillatoria ornata</i> Kuetz | - | + | - | - | - |
| <i>Oscillatoria splendida</i> Grev. ex Gomont | - | - | + | + | - |
| <i>Oscillatoria margaritifera</i> (Kuetz.) Gomont | - | - | - | - | - |
| <i>Oscillatoria subbrevis</i> Schmidle | - | - | - | + | + |
| <i>Oscillatoria tenuis</i> Ag. Ex Gomont | + | + | - | - | - |
| <i>Phormidium abronema</i> Skuja | + | + | - | - | - |
| <i>Phormidium ambiguum</i> Gomont | - | - | - | - | - |
| <i>Phormidium bigranulatum</i> Garder | - | - | - | - | - |
| <i>Phormidium jenkelianum</i> Schmid G. | + | + | + | + | + |
| <i>Phormidium molle</i> (Kuetz.) Gomont | + | + | + | + | + |
| <i>Phormidium mucosum</i> Gardner | - | + | - | + | + |
| <i>Phormidium rubroterricola</i> Gardner | + | - | - | - | - |
| <i>Phormidium usterii</i> Schmidle | + | + | - | - | - |
| <i>Phormidium valderianum</i> (Delp) Gomont | - | - | - | - | + |
| <i>Phormidium stignina</i> Rao C.B. | - | - | - | + | - |
| <i>Lyngbya aestuarii</i> Liebm ex Gomont | - | + | + | - | - |
| <i>Lyngbya ceylanica</i> Wille | + | - | + | + | - |
| <i>Lyngbya major</i> Menegh ex Gomont | + | + | + | + | - |
| <i>Lyngbya subconferoides</i> Borge | - | - | + | + | + |
| <i>Lyngbya majuscula</i> Harbey at Gomont | - | - | - | + | - |
| <i>Microcoleus acutissimus</i> Gardner | + | + | + | + | + |
| <i>Microcoleus subtorulosus</i> (Breb.) Gomont. | - | + | - | + | - |

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