Desmid flora of Chulband Dam, Gondia district, Maharashtra, (India).

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prashant_26184@rediffmail.com.**Abstract:**

Water is the most important constituent as well as factor for the maintenance of any ecosystem anywhere in the world. The quality of water determines the biological components of the aquatic ecosystem. Any shift in the physiochemical nature of water will automatically reduce the fresh water biodiversity. For qualitative study of Desmid flora, samples were collected at monthly intervals from Chulband dam during Feb 2010 to Jan 2011. The algal taxa of Desmids were identified with the help of relevant monographs & standards literatures. In all 21 forms of Desmids could be collected and identified which belongs to 5 Genus as *Cosmarium*, *Euastrum*, *Staurastrum*, *Micrasteria* and *Closterium*. The *Cosmarium* genus is represented as 9 species while *Closterium* is represented by 5 species and *Staurastrum* is represented by 3 species. The *Euastrum* and *Micrasteria* are represented by 2 species each. Total seven species i.e. 3 sps. of *Cosmarium*, 2 sps. each of *Euastrum* and *Staurastrum* were present at Chulband dam. One species each of *Cosmarium*, *Staurastrum* and two sps of *Closterium* were sewage sensitive. The biodiversity of micro flora of Chulband dam was not yet explored and hence the presence study is focused on exploring the various components of desmid flora of this Dam.

Keywords: Fresh water, desmids, Chulband Dam, Gondia.

Introduction

Desmids are microscopic single celled green algae with typical attractive appearance. The rich cell wall ornamentation in combination with deep semi cellular incisions or long processes, render these algae in an appealing elegant appearance. Awareness of the existing biodiversity of micro flora and its changing pattern in the coming years is essential to prevent further environmental degradation of our water bodies. The algal flora is widely distributed and is an important component of various ecosystems like marine, fresh water rivers, ponds and streams, etc. It is the basic food for aquatic fauna and fish. Like other algal flora it is an important indicator of pollution (Patrick and Reimer, 1966). The study on desmids in Maharashtra is known through the work of Ashtekar and Kamat (1978), Freitas and Kamat (1978) Barhate and Tarar (1983), Tarar et al., (1998), Jawale et al., (2005), Jadhavar and Papdiwal (2011), Mahajan (2011) Bhosale et al., (2012).

Cherian and Shahare, (2011) reported 18 forms of algae of which 9 belongs to Cyanophyceae, 3 to Chlorophyceae and 6 to Bacillariophyceae were reported from Chulband River, Gondia district.

Shahare and Cherian, (2012) reported 20 forms of desmids were observed from Chulband River, Gondia district. Shahare and Cherian, (2012) reported 32 forms of Cyanophyceae were observed from Chulband Dam, Gondia district. In all 21 forms of Desmids could be collected and identified which belongs to 5 Genus as *Cosmarium*, *Euastrum*, *Staurastrum*, *Micrasteria* and *Closterium* were observed from Chulband Dam, Gondia district, Maharashtra.

Materials and Methods

- A. Collection: samples were collected at monthly intervals from Chulband dam during Feb 2010 to Jan 2011.
- B. Identification: The algal taxa of Desmids were identified with the help of relevant monographs & standards literatures (Desikachary, 1959; West and West, 1905; Bruhl and Biswas, 1926; Prescott, 1951; Turner, 1978; Gerrath, 2005; Coesel and Meesters, 2007). All identified taxa of Desmid were arranged taxonomically in table-1.
- C. Site map: The map -1 & 2 illustrate the location of Gondia District of Vidarbha region in Maharashtra State. Chulband dam is shown in Map-2.

Map-1: of Maharashtra highlighting Gondia.Dist.

Map-2: Selected spot highlighting Chulband dam.

Result and Discussion:

In the present study total 21 desmids species could be identified from Chulband dam in different season. The list of desmids occurrence is given in the table no.1. The 21 forms belongs to 5 genus as *Cosmarium*, *Euastrum*, *Staurastrum*, *Micrasteria* and *Closterium*. The *Cosmarium* genus is represented as 9 species while *Closterium* is represented by 5 species and *Staurastrum* is represented by 3 species. The *Euastrum* and *Micrasteria* are represented by 2 species each. Shahare and Cherian (2012) reported 32

forms of Cyanophycean diversity at Chulband Dam, Gondia Dist.(M.S.), India.

Conclusion:

From the present study it can be concluded that the Chulband dam shows a variety of 21 Desmid species growing luxuriantly. There are periodic changes in the abundance of different forms in different seasons. The biodiversity of micro flora of Chulband dam was not yet explored and hence the present study is focused on exploring the various components of desmid flora of this Dam.

Desmid Flora of Chulband dam, Gondia district Maharashtra.

Table No. 1 Desmid Flora of Chulband dam, Gondia district Maharashtra.

Sr. No.	Name of Desmids	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
1	<i>Closterium cyanthia</i>	P	A	P	P	A	A	A	P	P	A	P	A
2	<i>Closterium didymotocum</i>	A	P	A	A	A	A	A	A	A	P	P	P
3	<i>Closterium ehrenbergii</i>	A	A	A	A	A	A	P	P	P	A	P	P
4	<i>Closterium moniliferum</i>	P	P	A	A	A	A	A	A	P	P	A	P
5	<i>Closterium parvulum</i>	P	A	A	A	A	A	A	A	A	P	P	A
6	<i>Cosmarium bioculatum</i>	P	P	A	A	A	A	A	A	P	P	P	A
7	<i>Cosmarium contractum</i>	P	A	P	P	A	A	P	P	A	A	P	P
8	<i>Cosmarium cucurbitum</i>	A	A	A	A	A	A	P	P	P	A	A	A
9	<i>Cosmarium impressulum</i>	P	P	A	P	A	A	A	A	A	P	P	A
10	<i>Cosmarium margaritatum</i>	A	A	A	A	A	P	A	P	A	P	A	A
11	<i>Cosmarium mononazum</i>	P	P	P	A	A	A	A	A	A	A	P	P
12	<i>Cosmarium ocellatum</i>	A	A	A	A	A	A	A	P	P	P	A	P
13	<i>Cosmarium subspecioum</i>	A	P	A	P	P	A	A	A	P	P	P	A
14	<i>Cosmarium vittatum</i>	P	P	A	A	A	A	P	P	A	P	P	A
15	<i>Euastrum dubium</i>	P	P	P	A	A	A	A	A	P	A	P	P
16	<i>Euastrum spinulosum</i>	A	A	P	P	P	A	A	A	A	A	A	A
17	<i>Micrasterias foliacea</i> ,	P	A	A	A	A	A	A	A	A	A	P	P
18	<i>Micrasterias pinnatifida</i>	A	P	P	A	A	A	A	A	A	P	A	P
19	<i>Staurastrum gracile</i>	A	A	A	A	A	A	P	P	A	P	P	P
20	<i>Staurastrum natator</i>	A	A	A	A	A	A	A	A	P	P	P	A
21	<i>Staurastrum orientale</i>	A	P	A	A	A	A	A	P	A	P	P	A

*P=Present, A=Absent.

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