INTERNATIONAL JOURNAL OF RESEARCHES IN BIOSCIENCES, AGRICULTURE AND TECHNOLOGY
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www.ijrbat.in

ALGAL TAXONOMIC DIVERSITY OF FAMILY OSCILLATORIACEAE OF CLASSCYANOPHYCEAE IN DIMBHE-DAM FROM AMBEGAON TEHSIL OF PUNE DISTRICT (MAHARASHTRA-INDIA)

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ABSTRACT:
The Ambegaon tehsil in Pune District situated in between 19°7'0" Northern 73°44'0" Eastern latitude on the northern part of Deccan Plateau and composed of undulating hills. Ambegaon tehsil covers the area from Bhimashankar to Lakhanpur. This tehsil has survived with the blessings of Kulguru Shree Khanderaiya of Bhimashankar. Agriculture is the main occupation of this region. Adivasi Tribes found in large number in this region. All Investigations are done during October 2015 to October 2017 and I have collected 55 algal specimens. Out of these 50 species, 04 varieties and 01 forma belonging to 07 genera of Family Oscillatoriaceae i.e. Arthrospira-01, Schizothrix-02, Microcoleus-03 Spirullina-06,Phormidium-08 ,Lyngbya-11, Oscillatoria-24. Oscillatoria is more densely occured, while Arthrospira & Schizothrix are observed in less number in Ambegaon tehsil.

Keywords: Oscillatoriaceae, Dimbhe dam, Ambegaon,Pune.

INTRODUCTION:

Collections of freshwater algae were done from streams, rivers, ponds, puddles, and impoundments during and after monsoon season from Ambegaon tehsils of Pune District. Algae of different habitats were collected from these localities such as - planktonic, benthic, epiphytic, terrestrial, epiphyllous and from tree-trunk. Quantitative Analysis of phytoplanktons was done of the Dimbhe Dam impoundment .

Filamentous algae were collected from mass growths by hand. Sub-aerial algae growing attached to tree barks, on damp walls or other such substrata were collected by scraping with a scalpel and then picked up with the help of a forceps.. The present investigation is undertaken with keep in mind that to study the algal population from selected stations of study area.

MATERIAL AND METHODS:

The samples were preserved in a mixture of 50 ml of 95% ethyl alcohol, 5 ml of glacial acetic acid, 10 ml of 40% commercial formalin and 35 ml of water.The specimens are observed under microscope for 10X, 40X, 100X and Photographs were taken with the help digital camera under appropriate magnifications. Identification of specimens was mostly based on the keys given in standard monographs and literatures.The Vaucher specimens have been deposited at Dept. of Botany, Hon. BaladahebJadhav College, Ale, Tal. Junnar, Dist. Pune.

Periodical collections of algae from the study area were done from the Dam as well as Rivers, Lake's, Puddles, Pulls etc. from Ambegaon Tehsil. Sampling stations were carried away. The samples were bringing to laboratory for identification; Identification were done with the help of Indian monographs and other standard literature like Desikachari (1959), Randhawa (1959), Venkatraman (1961), Prescott (1951), Bourrlly (1970), Philipose (1967), Gonzalvies (1981), Iyengar and Desikachari (1981), Desikachari*et al* (1990) and Anand (1998). The collected algal forms had been preserved in 4% formalin.

SUMMARY:

Since the dawn of civilization, water has been the most important raw material for civilization. It is one of the vital sources of all kinds of life on the earth. Economically, culturally and biologically water is most useful natural resource on the earth. We use water for drinking, bathing, cooking, cooling, irrigation, transportation, energy power and recreation. Thus, water is nature's gift to the living world including human race. Our biosphere consists of 71 % of water out of which fresh water environment occupied only 2.6 %. For the usable purpose only 0.62 % water from lakes, streams, rivers and other resources are available for the living organisms.

In India most of the cities, towns, villages and industries are situated at the bank of rivers and lakes. Due to uncontrolled population, the huge quantity of untreated sewage is being added everyday in these different water reservoirs. Besides these, industrial wastes,

residues of insecticides, pesticides, excess agricultural fertilizers also added in these fresh water eco-systems causing pollution and creates health hazards.

CONCLUSION:

Present study is on the taxonomic data of algal species were collected from Dimbhe Dam, It is located on Ghod River at Dimbhe 11 kms away from Ghodegaon in Ambegaon Tehsil. Water samples were collected periodically from Dimbhe Dam.

- This research work helps us to know type of algal flora of the study area.
- The data gathered serves as base line data for planning utilization and conservation strategies of algae.
- Phytoplankton studies helps us to know primary producers (Qualitatively and quantitatively) of the study area.
- This research work may help all the phycological students to study the algal vegetation in Ambegaon.
- List of Algal Specimens

Sr. No.	Algal Specimen
Family: Oscillatoriaceae	
Genus – *Arthrospira*	
1	*Arthrospiragomontiana*Setchell
Genus – *Spirullina*	
2	*Spirulina gigantea* Schmidle
3	*Spirulina labyrinthiformis* (Menegh.) Gomont
4	*Spirulina major*Kuetz.ex. Gomont
5	*Spirulina meneghiniana* Zanard. ex Gomont
6	*Spirulina princeps* W. et G. S. West
7	*Spirulina subtilissima*Kuetz ex Gomont
Genus – *Oscillatoria*	
8	*Oscillatoria acuta* Bruhl et Biswas
9	*Oscillatoria agardhii* Gomont
10	*Oscillatoria amphigranulata* Van Goor
11	*Oscillatoria chalybea* (Mertens) Gomont
12	*Oscillatoria chalybea* (mertens) Gomont v. *insularis* Gardner
13	*Oscillatoria curviceps* Ag. ex Gomont
14	*Oscillatoria irrigua*Kuitz. Gomont
15	*Oscillatoria limosa* Ag. ex Gomont
16	*Oscillatoria margaritifera* (Kuetz) Gomont
17	*Oscillatoria minnesotensis* Tilden
18	*Oscillatoria nigra* Vaucher
19	*Oscillatoria obscura* Bruhl*et* Biswas
20	*Oscillatoria princeps*Vaucher ex Gomont
21	*Oscillatoria princeps* Vaucher ex Gomont v. *pseudolimosa* Ghose
22	*Oscillatoria raciborskii* Wolosz.
23	*Oscillatoriarubescens* DC ex Gomont
24	*Oscillatoriasalina* Biswas f. *major* f. nov.
25	*Oscillatoria sancta* (Kutz.) Gomont
26	*Oscillatoria simplicissima* Gomont
27	*Oscillatoria subbrevis* Schmidle
28	*Oscillatoria subtilissima* Kuetz.
29	*Oscillatoria tenuis* Ag ex Gomont
30	*Oscilatoriaterebriformis* Ag. Ex Gomont
31	*Oscillatoria vizgapatensis* Rao C.B.
Genus – *Phormidium*	
32	*Phormidium ambiguum*Gom.
33	*Phormidium anomala*Rao, C. B.
34	*Phormidium corium* (Ag.) Gomont
35	*Phormidium increstatum* (Nageli) Gomont
36	*Phormidium laminosum* Gomont
37	*Phormidium lucidum* Kuetzing ex Gomont
38	*Phormidium rubroterricola* Gardner
39	*Phormidium usterii* Schmidle
Genus – *Lyngbya*	
40	*Lyngbya baculum* Gomont
41	*Lyngbya connectens*Bruhl et Biswas
42	*Lyngbya digueti*Gomont
43	*Lyngbya hitronymusii*Lemm.
44	*Lyngbya lachneri* (Zimmermann) Geitler
45	*Lyngbya magnifica* Gardner
46	*Lyngbyamajuscula*Harvey ex Gomont
47	*Lyngbya majuscula*Harvey ex Gomont v. *chakiensis* Writes J De Toni
48	*Lyngbya subconfervoides* Borge
49	*Lyngbya truncicola* Ghose
50	*Lyngbya versicolor* (Wartmann) Gomont
Genus *Schizothrix*	
51	*Schizothrix arenaaria* (Berk) Gomont v. *non-constricta* Gose
52	*Schizothrix ericetorum* Lemmermann
Genus - *Microcoleus*	
53	*Microcoleus acutissimus* Gerdener
54	*Microcoleus chthonoplastes* Thuret ex Gomont
55	*Microcoleus lacustris* (Rabenh.) Farlow.

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