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Studies on Algal Flora and Physico-Chemical Characteristics of Kurnur Dam Akkalkot District Solapor, Maharashtra.

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Abstract:
Algal flora is an important component in aquatic food chain.The present investigation deals with the study of algal flora and water characteristics from Kurnur dam.The seasonal variation in water temperature,PH,dissolved oxygen,alkalinity,total hardness,total solids,nitrates,phosphate and calcium were studied.Algal flora is dominated by Chlorophyceae followed by Bacillariophyceae and Cyanophyceae.
Key Words: *Algal flora,physico-chemical characters.*

I. Introduction:

Kurnur dam is a minor reservoir is situated near Akkalkot in Solapur districts of Maharashtra.The area water spread is 46 hectares and height of reservoir is about 30feet.Zafer(1959)reported periodicity of unicellular algae from waterbodies of Hyderabad.The study of aquatic environment and ecology of phytoplanktion in fresh water studied by Jaybhaye et.al.(2007).study on algal flora from shikara reservoir of Nanded by Dhavle et.al.(2009).

The present investigation deals with the study of algal flora and seasonal variation in physico-chemical parameters of **Kurnur Dam of Akkalkot.** for the period of Octomber 2011 to September 2012. The reservoir water is mainly used for irrigation,drinking and domestics purposes.

II. Materials And Methods:

The algal collection was made at monthly interval from Octomber 2011 to September 2012 from **Kurnur Dam of Akkalkot.** in Solapu district of Maharashtra.The sampling sites were selected carefully,so as to get maximum number of algal forms growing in the varied habitats.All collection were preserved in 4% formalin for identification,The algae were identified by relevant monographs (Hustadt,1930, Pochman,1942, Desikachary 1959) and recent available literature. Algal samples analysed by standard methods(APHA,1959).The analysis of physico-chemical characteristics was carried out by standard methodology for water analysis given by Kodarkar et.al.(1998)and Trivedy and Goel(1986).

III. Results And Discussion:

In the present investigation three groups of algae Viz.Chlorophyceae,Bacillariophyceae and Cyanophyceae comprising 20 species were recorded.(Table 1).Green algae and diatoms were found to be dominant.The values of physic-chemical parameters are shown in Table 2.There was no significant difference in the range of physic-chemical parameters in rainy season.

Table 1: Algal flora of Kurnur Dam of Akkalkot.

Sr.No.	Class	Algae
1	Chlorophyceae	*Chara aspera* Griesenhagen, *Chlorococcum humicola* Robenborst,*Conococcus elongates* Carter,*Oedogonium crassum*,*Scenedesmus dimorphus* Kuetzing,*Spirogyra mirabilis* Kuetzing,*Spirogyra biformis* Jao,*Chlorella parasitica* Beijernck,*Nitella terrestris*Sundaraligam *Pondorina norum* Mull, *Cosmarium reniformae* Breb. ,*Pediastrum simplex* Meyen,
2	Bacillariophyceae	*Pinnularia viridis*,*Cymbella lanceolata*,*Fregillaria brevistriate* Mayer,*Navicula radiosa* kutz.,*Nitzchia fasciculate* Grun.
3	Cyanophyceae	*Oscillatoria subbrevis*,*Rivularia mehrai*,*Spirulina meneghinia* Ana.

Table 2: Physico-chemical properties of Kurnur Dam of Akkalkot.

Sr.No.	Parameters	Range
1	Water temperature (^{0}C)	24^0 C - 29^0C
2	PH	6.9 --8.3
3	Dissolved Oxygen (mg/l)	6.2 8.4
4	Alkalinity (mg/l)	35- 85
5	Total hardeness (mg/l)	85-110
6	Chlorinity (mg/l)	18-24

7	Total solids (mg/l)	180-520
8	Nitrates (mg/l)	0.80-1.20
9	Phosphates (mg/l)	0.05-1.4
10	Calcium (mg/l)	3.6-26.6

Temperature is the most important factor affecting the growth of diatoms(Patric et.al.1968).in present study during high temperature the growth of diatoms was maximum (Nandan S.N. 1993).At high concentration of PH showed significant effect of population of blue green algae and dissolved oxygen in water is favourable for higher percentage of Chlorophyceae.The other factors like alkalinity,chlorinity,hardness,nitrates,and calcium influenced the growth and development of algal flora.

References:

[1]. APHA.1975.American Publication Health Asso.New York 680.
[2]. Desikachary T.V.1959.Cyanophyta,ICAR New Delhi P.P. 686.
[3]. Dhavle S.D., Lakde H.M.,and S.D. Lohare 2009.Studies on algal flora and physic-chemical characterstics of Shikara reservoir.Ecology and fisheries 2 (2) 69 -72.
[4]. Hustadt F.1930.Bacillariophyta (diatomaceae) 10 P..P.466.
[5]. Jaybhaye,V.M.,Madlapure V.R. and Salve B.S.2007.Maharashtra,J.Aqua.Bio.22(2);27-32.
[6]. Kodarkar,M.S.,Diwan,A.D.,Murugan N.,KulkarniK.M.and Anuradha Ramesh 1998.Methodology of water analysis (Physico-chemical,Biological and Microbiological),Indian Association of Aquatic Biologists,Hyderabad,pp.12-102.
[7]. Nandan S.N.1993.Algal flora of fish pond in Dhule,Maharashtra,I.B.R.(1,2);61-63.
[8]. Trivedy R.K. and Goel P.K.1986.Chemical and biological methods for water pollution studies.Env.Pub.Karad.
[9]. Zafer A.R.1959.Indian Bot.Soc.38-549.