STUDIES ON FRESHWATER ALGAE FROM SHIVANA TAKALI RESERVOIR TAHESIL KANNAD DISTRICT AURANGABAD (MAHARASHTRA)

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Abstract: *The present paper deals with studies on fresh water algae from shivana takali reservoir of Kannad in Aurangabad district of Maharashtra. In all 20 different algae were observed. The observed algae belongs to Chlorophyceae (10), Cyanophyceae (04), Bacillariophyceae (05), Euglenophyceae (01) etc. The maximum algae were observed from chlorophyceae. Bacilariophyceae and Cyanophyceae. The water from this shivana takali reservoir are used for irrigation and drinking purpose. The present investigation mainly focus on freshwater algal diversity. This study of fresh water algae can increase the knowledge of diversity of algae found the reservoir.*

Keywords: *Freshwater algae, Shivana takali reservoir, diversity of algae, Kannad Maharashtra*

Introduction:

Algae are an important part in an aquatic ecosystem. The algae are found in two forms viz. lentic (standing water) and lotic (running water) many of them are terrestrial. The aquatic algae are found in association with soil fungi and lichen. According to (Desikachary, 1959). The algae are worldwide in distribution found everywhere in lakes, ponds, moist places, surfaces and fresh water etc. The fresh water ecosystem has variable in size and shape which contains large amount of a different organisums (Chatterjee and Raziuddin, 2006) they may be single celled, colonial or filamentous etc. Algae are the autotrophic which are most useful in various fields such as food, fodder, bioremediation and bioenergy. The biodiversity of fresh water algae studied by Dalal et.al, 2012. The algal flora of fresh water are varies in size (Kamat N.D., 1975). The algae are the important source of carbohydrates, proteins, essential fatty acids and minerals.(Dawes,1998). Some workers studied fresh water algae from various regions (Snehal Dhumal et.al, 2020, Yenkar, 2015, Jena et.al. 2006, Kalwale et.al.2012).

Materials and Methods:

This work is carried out near shivana takali reservoir of Kannad region of district Aurangabad. Samples were collected from five different sites of reservoir. The collected samples were observed under microscope and identified in laboratory. It was stained with 1% iodine solutions Identification of these freshwater algal taxa by standard keys of Desikachary,1959 and Anand ,1959, Forest ,1954, Prescott G.W. ,1954, N.D.Kamat ,1975, Edmondson,1959) etc.

Study Area: The freshwater algae were collected and studied from Shivana takali reservoir. Shivana river is a minor but important tributary of Godavari lying entirely within Aurangabad district of Maharashtra. It rises in Kannad tahesil from south-east slope of Ajanta hills, satmala hills. The river founds in southeast direction and imposed by another dam known as shivana takali dam. The total capacity of reservoir is 38,190 km^3 and surface area of 887km^2. This river shivana collects drain out streams in the Gautala sanctuary from Sothern slopes of ranges. From its origin it flows down towards Kannad town, here the river interrupts by the Ambadi dam. The river ends itself by merging into Nathsagar reservoir and formed by Jayakwadi dam on river Godavari.

Results and Discussion: Study of freshwater algae is really the study of organisums from many diverse habitats. Some of which are not entirely fresh water, as the oceans are clearly saline or salty and most of the lakes are in comparison to dilute in this regard. But there is an emerging variations in the chemical compositions of non-marine habitats that the algae occupies. Some genera with terrestrial species such as Nostoc, Chlorella, etc. found in streams and lakes (Smith, 1950, Whitton, 1975).

Freshwater algae are sensitive to changes in water quantity and so reflects positive habitats and deterioted condition from any human activities results. The present studies of freshwater of this reservoir indicates that the maximum amount of genera from chlorophyceae and cyanophyceae. The Chlorophycean (10) alga was ***Chlorella vulgaris, Spirogyra fluviatilis, Spirogyra ternate, Zygnema extenue, Zygnema circumcarinatum, Ulothrix zonata, Pithophora roettleri, Cladophora glomerata, Oedogonium spp., Chara braunii,*** etc. The Cyanophycean (04) alga are ***Chroococcus spp., Nostoc spp., Anabaena Spp., Oscillatoria spp***. etc. The Bacillariophyceaean (05) alga are ***Navicula oblonga, Synedra ulna, Frustulia vulgaris, Pinnularia notate, Nedium affine*** etc. observed. One more observed from euglenophyceae (01) was ***Euglena gracilis***. etc.

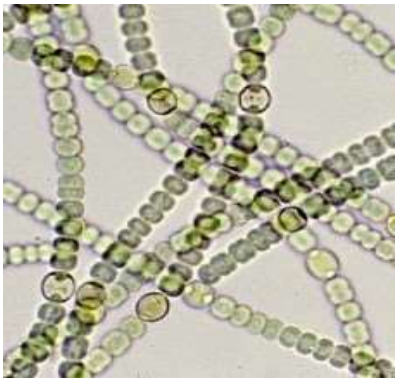

Fig a) Anabaena Spp.

Fig.b) Chara braunii

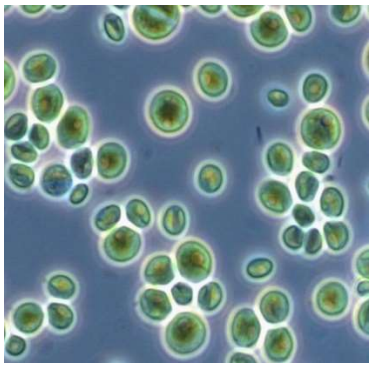

Fig.c Chlorella vulgaris

Fig.d) Chroococcus spp

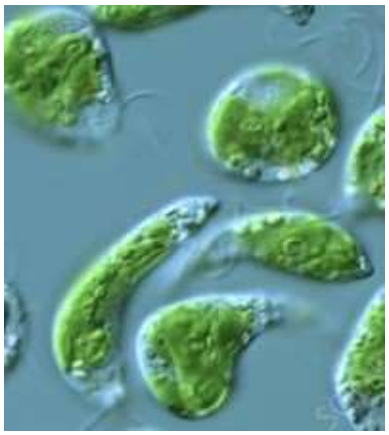

Fig.e) Euglena gracilis

Fig.f) Frustulia vulgaris

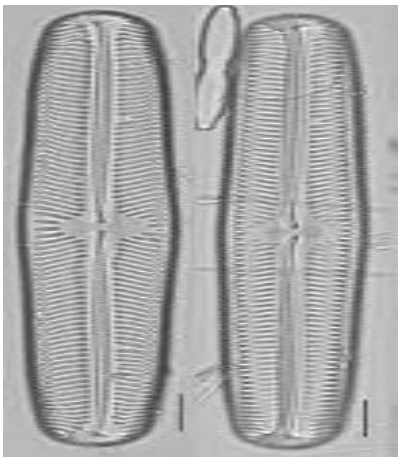

Fig.g) Navicula oblonga

Fig.h) Nedium affine

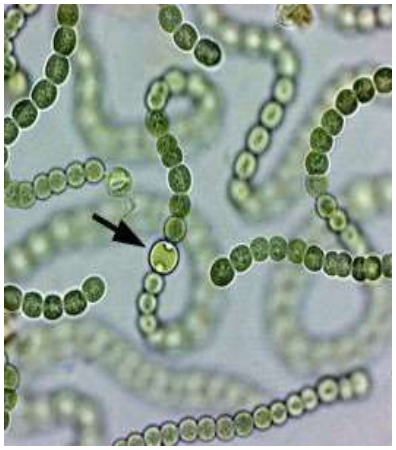

Fig. i) Nostoc spp

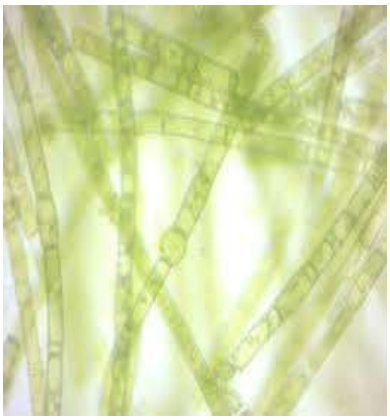

Fig. j) Oedogonium spp.

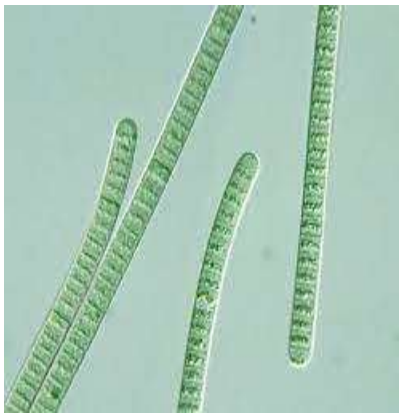

Fig. k) Oscillatoria spp.

Fig. l) Pinnularia notate.

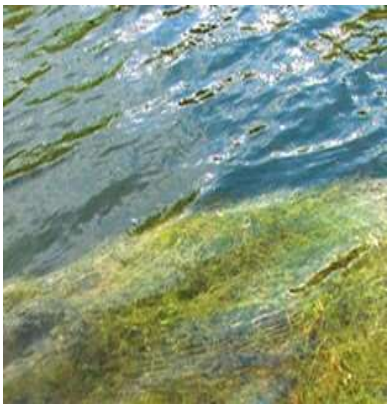

Fig. m) Pithophora roettleri

Fig. n) Spirogyra ternate

Fig. o) Spirogyra fluviatilis.

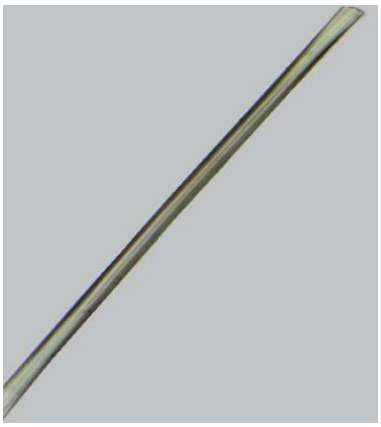

Fig. p) Synedra ulna

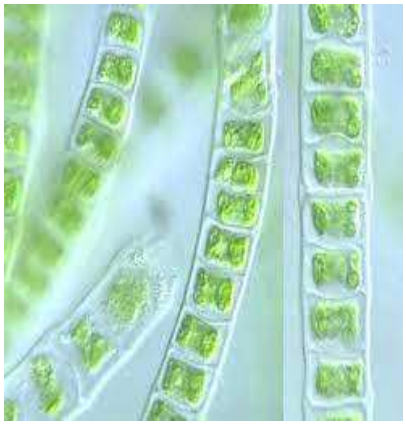

Fig. q) Ulothrix zonata

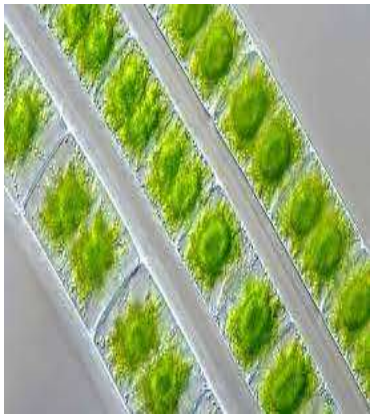

Fig. r) Zygnema circumcarinatum

Conclusion: It is conclude that the maximum number of algae found in fresh water of shivana reservoir is chlorophycean and Cyanophycean members that indicates dominance in this region of water bodies.

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