

Studied on the algal flora of Vidisha district of Madhya Pradesh

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SUMMARY

The present paper deals with systematic account of algal flora from Vidisha. The algal flora is represented by 78 genera and 114 species. These 78 genera belonging to 7 different classes viz., Cyanophyceae, Chlorophyceae, Charophyceae, Xanthophyceae, Bacillariophyceae, Euglenophyceae and Rhodophyceae.

Key words : Algal flora, Systematic account, Systematic enumeration

Vidisha district lies between 23°21' and 24°22' N latitude and 77°15'50" and 78°18'E longitude. The total area of district is about 7433 Km² and mean elevation is 428.96 MSL. The area receives an average rainfall of 1230 mm per annum and climate is sub-humid.

Systematic enumeration of algal flora of Madhya Pradesh was earlier made by Agarkar (1967), Agarkar and Agarkar (1972), Agarkar *et al.* (1986), Bendre and Agarkar (1965), Dixit and Agarkar (1974), Singh (1999), Singh and Samdariya (2005) and Samdariya *et al.* (2005). Since no work has been done on the algal flora of Vidisha district, the present work was undertaken.

MATERIALS AND METHODS

Algal samples were collected from various collection spot of Vidisha district. After collecting the algal material were preserved in 4% formaldehyde.

The systematic identification was done by the help of binocular research microscope at Botany Department, S.S.L.Jain P.G. College and with the help of standard works by Fritsch (1935), Desikachary (1959), Iyengar and Desikachary (1981), Philipose (1967) and Ramanathan (1964).

RESULTS AND DISCUSSION

In the present study 49 members of Cyanophyceae, 40 of Chlorophyceae, 2 of Charophyceae, 1 of Xanthophyceae, 12 of Bacillariophyceae, 9 of Euglenophyceae and 1 of Rhodophyceae were reported from the different sites in the Vidisha district (Table 1). The most dominant species were *Oscillatoria*, *Lyngbya*, *Cylindrospermum*, *Nostoc*, *Anabena*, *Scytonema*,

Tolypothrix, *Gloeotrichia*, *Pediastrum*, *Scenedesmus*, *Oedogonium*, *Spirogyra*, *Zygnema* and *Euglena*.

Cyanophyceae with 29 genera and 49 species was dominant class closely followed closely by Chlorophyceae members represented by 28 genera and 40 species. However, the Bacillariophyceae members were represented by 12 genera and 12 species, Xanthophyceae 1 genus and 1 species and Charophyceae 2 genera and 2 species. Euglenophyceae and Rhodophyceae were represented with 5 genera and 9 species and 1 genera and 1 species, respectively.

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Table 1 : Algal flora of Vidisha district

Class	Order	Family	Genus and species
Cyanophyceae	Chroococcales	Chroococcaceae	<i>Microcystis aeruginosa</i> Kuetz
			<i>M. bengalensis</i> Banerji
			<i>Chroococcus minutus</i> Nag.
			<i>Gloeocapsa montana</i> Kuetz
			<i>Gloeotheca rupestris</i> Bornet
			<i>Aphanocapsa biformis</i> A.Br.
			<i>A.koordersi</i> Strom
			<i>Merismopedia marssonii</i> Lemm.
			<i>Arthrospira platensis</i> Gomont
			<i>Spirulina princeps</i> W.et. G.S. West
	Nostocales	Oscillatoriaceae	<i>Oscillatoria annae</i> Van Goor
			<i>O.amphibia</i> Ag.
			<i>O.princeps</i> Vaucher ex Gomont
			<i>Porphyrosiphon notarisii</i> Kutz ex Gomont
			<i>Phormidium uncinatum</i> Gomont ex Gomont
			<i>Lyngbya hieron musii</i> . Lemm.
			<i>L.majuscula</i> Harvey ex Gomont
			<i>L. spiralis</i> Geitler
			<i>Microcoleus chthonoplastes</i> Thuret ex Gomont
			<i>Anabaenopsis circularis</i> Woloszynska and Miller
Nostocaceae	<i>Cylindrospermum majus</i> Kutz ex Bornet et Flahault		
	<i>C.licheniforme</i> Kutz ex Bornet et Flahault		
	<i>C.musicola</i> Kutz ex Bornet et Flahault		
	<i>Nostoc linckia</i> Bornet ex Bornet et Flahault		
	<i>N.carneum</i> Ag. ex Bornet et Flahault		
	<i>N.ellipsoforum</i> Rabenth ex Bornet et Flahault		
	<i>N. microscopicum</i> Cam. ex Bornet et Flahault		
	<i>Anabaena sphaerica</i> Bornet et Flahault		
	<i>A.iyengaraii</i> Bharadwaja		
	<i>A. fertilissima</i> Rao		
Scytonemataceae	<i>Aulosira fritschii</i> Bharadwaja		
	<i>A.implexa</i> Bornet et Flahault		
	<i>Plectonema nostocorum</i> Bornet ex Gomont		
	<i>Scytonema ocellatum</i> Lyngbye ex Bornet et Flahault		
	<i>S.pascheri</i> Bharadwaja		
	<i>S.hofmanni</i> Ag. ex Bornet et Flahault		
	<i>Tolypothrix bouteillei</i> Forti		
	<i>T. distorta</i> Kutz ex Bornet et Flahault		
	<i>T. arenophila</i> W.et G.S. West		
	<i>Microchaete aequalis</i> Desikachary		
Rivulariaceae	<i>Calothrix javanica</i> de Wilde		
	<i>Dichothrix orsiniana</i> Bornet et Flahault		
	<i>Rivularia aquatica</i> De Wildman		
	<i>Gloeotrichia intermedia</i> Geitler		
	<i>G. raciborskii</i> Woloszynska		
Stigonematales	Stigonemateceae	<i>G. pilgeri</i> Schmidle	
		<i>Haplosiphon welwitschii</i> W.et. G.S. West	
		<i>Stigonema minutum</i> Ag.	
		<i>Fischerella reptans</i> Geitler et Ruttner	
		Fischerellaceae	

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Chlorophyceae	Volvocales	Chlamydomonadaceae	<i>Chlamydomonas globosa</i> Snow		
		Volvocaceae	<i>Gonium compactum</i> Iyengar <i>Eudorina elegans</i> Ehr <i>Pandorina cylindricum</i> Iyengar <i>Volvox prolificus</i> Iyengar		
		Chlorococcales	Chlorococcaceae	<i>Chlorococcum humicola</i> Rabenhors Philipose	
			Chlorellaceae	<i>Chlorella vulgaris</i> Beijerinck	
			Micractiniaceae	<i>Golenkinia radiata</i> Chodat	
	Hydrodictyaceae		<i>Hydrodictyon reticulatum</i> Lagerheim <i>Pediastrum duplex</i> Meyen <i>P. simplex</i> Meyen <i>P. tetras</i> Ralfs		
		Botryococcaceae	<i>Botryococcus braunii</i> Kuetzing		
		Scenedesmaceae	<i>Scenedesmus armatus</i> Chodat <i>S. dimorphus</i> Kutzing <i>S. denticulatus</i> Lagerh.		
		Ulotrichales	Ulotrichaceae	<i>Uronema africanum</i> Borge <i>Ulothrix zonata</i> Kuetzing	
		Cladophorales	Cladophoraceae	<i>Cladophora fracta</i> Brand <i>Pithophora oedogonia</i> Wittrock <i>Rhizoclonium hieroglyphicum</i> Kutzing	
		Chaetophorales	Chaetophoraceae	<i>Chaetophora elegans</i> C.A. Agardh <i>Draparnaldiopsis indica</i> Bharadwaja <i>Stigeoclonium fasciculare</i> Kutzing	
				Coleochaetaceae	<i>Coleochaete scutata</i> de Brebisson
		Oedogoniales	Oedogoniaceae	<i>Oedogonium intermedium</i> Kutz <i>O. kurzii</i> Hirn	
		Conjugales	Zygnemaceae	<i>Spirogyra microspora</i> Jao <i>S. condensatta</i> Kutz. <i>S. silvicola</i> Britton <i>S. verrucosa</i> Krieger <i>Zygnema indicum</i> Misra <i>Z. sphaericum</i> Misra <i>Z. terrestre</i> Randhawa	
				Mougeotiaceae	<i>Mougeotia gelatinosa</i> Wittrock <i>M. quadrata</i> Randhawa <i>Sirogonium melanosporum</i> Transeau
	Desmidiaceae			<i>Closterium kuetzingii</i> Brebisson <i>Cosmarium nitidulum</i> De Notans <i>C. quadrum</i> Lundell	
Charophyceae	Charales			Characeae	<i>Chara zeylanica</i> Kliene ex Willd <i>Nittela furcata</i> Ag.
Xanthophyceae	Heterosiphonales			Vaucheriaceae	<i>Vaucheria sessilis</i> De Condolle
Bacillariophyceae	Bacillariales			Coscinodiscaceae	<i>Melosira granulata</i> Ralfs
		Fragilariaceae	<i>Fragilaria intermedia</i> Grun <i>Synedra ulna</i> Ehr.		
		Naviculaceae	<i>Eunotia major</i> Robenh <i>Navicula rhynchocephala</i> Kutz. <i>Pinnularia</i> sp. <i>Caloneis basillum</i> Mer.		

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		Cymbellaceae	<i>Cymbella naviculiformis</i> Krammer
		Bacillariaceae	<i>Nitzschia palea</i> W.Sm.
		Gomphonemaceae	<i>Gomphonema montanum</i> Schum
		Cymbellaceae	<i>Amphora</i> sp.
			<i>Achananthes minutissima</i> Kutz.
Euglenophyceae	Euglenales	Euglenaceae	<i>Euglena gracilis</i> Klebs
			<i>E. viridis</i> Ehr.
			<i>E. limnophila</i> Lemm.
			<i>Lepocinalis ovum</i> Lemm.
			<i>Phacus glaber</i> Pochm
			<i>P. inflexus</i> Pochm
			<i>Trachelomonas cylindrica</i> Ehrenberg
			<i>T. ovata</i> Roll
			<i>Strombomonas ovalis</i> Deflandre
Rhodophyceae	Nemalionales	Batrachospermaceae	<i>Batrachospermum moniliforme</i> C. Agardh

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