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RESEARCH NOTE

Studies on soil algae of beed district Maharastra

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SUMMARY : An extensive study was carried out on algal taxonomy of Beed district in Marathwada region of Maharashtra for the period of three years *i.e.* from January 2006 to December 2008. Different habitats were selected as study area like pools, ponds, cisterns, talaos, dams, streams, streamlets, rivers, polluted water passages, puddles, nursery ponds, dripping rocks and moist soil. The present paper deals with a total of 66 taxa under 24 genera belonging to Chlorophyceae, Xanthophyceae and Cyanophyceae encountered as soil algae. In present investigation, the members of Cyanophyceae were found dominant.

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Algal taxonomy, Soil algae

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Diversity of algae in India from different habitats has been extensively studied by many workers, but little attention has been paid on soil algae in Maharashtra. (Marathe, 1960, 1969; Kamat and Patel, 1973; Ashtekar, 1980; Kolte and Goyal, 1985; Bhoge *et al.,* 2007 a and b) and to fulfil this lacuna, the present investigation was carried out.

Algae growing on the moist soil are found mostly during the rainy seasons. The collections were made from the moist soils of the sides of streams, talaos, dams, rivers. The algal samples were collected from moist soils and all the necessary precautions were taken while collecting the samples.On return to laboratory, the collections were observed under the light microscope and collections were preserved in 4 per cent formalin added with 5 per cent glyecrin. The identifications were performed by reffering to the standard literature and monographs (Desikachary, 1959).

A total of 66 taxa under 24 genera was encountered from soil samples, of which 59 taxa were under 19 genera which belonged to Cyanophyceae, 1 genus of Xanthophyceae and 6 taxa under 4 genera of Chlorophyceae. *Botrydium granulatum* represented the Xanthophyceae. Among Chlorophyceae Protococcus was found very dominantly followed by *Gloeocystis*, *Elakatothrix* and *Closterium* are all were found with single species. Among Cyanophyceae *Oscillatoria* dominated the algal flora followed by *Phormidium*, *Lyngbya*, *Chroococcus Gloeocapsa*. The genera like *Aphanothece*, *Aphanocapsa*, *Nostoc* and *Calothrix* were found in good number. *Gloeothece*, *Merismopedia*, *Myxosarcina*, *Hydrococcus*, *Schizothrix*, *Symploca*, *Microcoleus*, *Hydrocoleus*, *Cylindrospermum* and *Anabaena* were found with their single species. Overall the soil algal flora was dominated by the members of Cyanophyceae. (Ashtekar, 1980; Kamat and Patel, 1973; Sardeshpande and Goyal, 1981; Bhoge *et al.,* 2007 (a and b); Gonzalves and Gangla (1949); Chaporkar *et al.* (1984).

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Table 1: Total occurence of algal taxa on moist soil

Sr. No.	Class	Genera	Species
1.	*Chlorophyceae*	04	06
2.	*Xanthophyceae*	01	01
3.	*Cyanophyceae*	19	59
	Total	24	66

Chlorophyceae**:** *Gloeocystis gigas, Gloeocystis vesiculosa, Elakatothrix gelatinosa, Elakatothrix viridis, Protococcus viridis, Closterium parvulum*

Xanthophyceae**:** *Botrydium granulatum*

Cyanophyceae**:** *Chroococcus dispersus, Chroococcus giganteus, Chroococcus limneticus, Chroococcus limneticus v. distans, Chroococcus pallidus, Chroococcus tenax, Gloeocapsa compacta, Gloeocapsa polydermatica, Gloeocapsa punctata, Gloeocapsa quaternata, Gloeocapsa stegophila, Gloeothece rupestris, Aphanocapsa biformis, Aphanocapsa grevillei, Aphanothece bullosa, Aphanothece pallida, Aphanothece saxicola, Merismopedia tenuissima, Myxosarcina spectabilis, Hydrococcus, rivularis, Oscillatoria animalis, Oscillatoria annae, Oscillatoria annae v. major, Oscillatoria amphibia, Oscillatoria amphigranulata, Oscillatoria chalybea, Oscillatoria curviceps, Oscillatoria margaritifera, Oscillatoria martini, Oscillatoria okeni, Oscillatoria princeps, Oscillatoria pseudogeminata, f. longa, Oscillatoria quadripunctulata, Oscillatoria quadripunctulata v. unigranulata, Oscillatoria subbrevis, Phormidium ambiguum, Phormidium ambiguum v. major, Phormidium corium, Phormidium microtomum, Phormidium molle, Phormidium molle f. tenuior, Phormidium retzii f. major, Phormidium tenue, Lyngbya bergii, Lyngbya dendrobia, Lyngbya lagerheimii, Lyngbya laxespiralis, Lyngbya semiplena, Lyngbya spiralis, Schizothrix friesii, Symploca cartilaginea, Microcoleus lacustris, Hydrocoleum cantharidosum, Cylindrospermum sphaerica f. cylindricum, Nostoc ellipsosporum, Nostoc piscinale, Anabaena torulosa, Calothrix clavata, Calothrix thermalis.*

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