

SUMMARY

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In present investigation various, forms of aquatic fungi in and around Satara city and Satara District have been studied. The aquatic forms were collected from various water bodies in different season, at various localities from Aug. 2007 – Nov. 2008. Various known and new fungal forms were collected, studied and preserved. More concentration has been given toward aquatic hyphomycetes (Fam.- Moniliaceae and Dematiaceae) only.

31 species have been collected and identified from different water bodies. Out of these, 4 species are new to India and 13 species are new to fungi of Maharashtra and 2 new varieties have been proposed.

Fam.- Moniliaceae is represented by 6 genera with 7 species. Out of them 3 species viz. *Campylospora filicladia* Nawawi, *Cephalosporium curtipes* Sacc. and *Triscelophorus acuminatus* Nawawi have been reported first time from Maharashtra and one new variety has been proposed *Flabellocladia tetracladia* (Nawawi) Nawawi var. *mahabaleshwarensis* var. nova..

The Fam.- Dematiaceae is a largest family exploited and studied from various localities in foam as well as on various substrates. It is represented by 14 genera with 24 species. Out of those 14 species, 4 species have been reported for the first time from India. They are *Beltraniopsis tanzaniensis* Pirozynski, *Helicosporium cinerium* Peck, *H. polysporum* (Morg.) Saccardo and *Phaeoisaria sparsa* Sutton While, 10 spp. are new to fungi of Maharashtra and a new variety has been proposed here as *Tetraploa aristata* Berk. and Br. var. *satarensis* var. nova.

The genus *Helicosporium* Nees is represented with 5 species and the genus *Beltrania* Penzig with 3 species. The peculiar morphological characters, especially conidia and spore structure have been studied. All the materials / slides / samples were properly preserved and deposited in M.H.B.D.Y.C.I.S. Satara.

Thus, in the present investigation from Aug. 2007- Nov. 2008 survey of various aquatic hyphomycetous fungi as well as Saprolegniales were taken, but only hyphomycetous fungi have been represented in this study.

Various aquatic fungi were collected and studied by people time to time from Western Ghats. But from Satara region of Western Ghats very few records have been made. Therefore, total survey of aquatic fungi has been carried out. Some fungi are

reported for the first time from India as well as from Maharashtra e.g. *Beltraniopsis* Batista and Bezerra and *Phaeoisaria* Hohnel are the new generic records to the fungi of India.

Efforts were also made to culture the aquatic forms in various culture media but very few are able to grow on them. In rainy and winter season, aquatic fungi were observed in large extent as compared to summer season. All these from were collected in well aerated surface layer of water, either free floating or reservoir.