



STUDY OF AQUATIC FUNGI (ORDER MONILIALES) FROM HATAIKHEDA DAM BHOPAL.

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ABSTRACT

Six genera of aquatic fungi were isolated from order Moniliales group from Deuteromycotina. *Torula*, *Alternaria*, *Curvularia*, *Drechslera*, *Scytalidium* and *Cephalophora* were found. For isolation of particular fungi special baiting technique was used. This is the first report of aquatic fungal flora in Hataikheda dam and the data is compared with previous studies.

KEYWORDS: Fungi, Isolation, Baiting Technique, Taxonomic identification.

INTRODUCTION

Bhopal the capital of Madhya Pradesh is famous for number of lakes and is one of the beautiful cities of India. Hataikheda dam was constructed in 1964 and it is located at latitude 23°16'18"N and longitude 77°29'25"E. It has been used for irrigation purpose. Length of Dam is 1581m and maximum height above foundation is 17.1m. The reservoir holds water throughout the year. The detritus pathway is an essential component of the functioning of many Ecosystems (Wallace *et al.*, 1997). Fungi are decomposer which decomposes the organic matter found in the aquatic habitat. The genera and species of fungi vary from season to season and also dependent on quality of water.

Study of fungal flora has been taken firstly from Hataikheda Dam. During the investigation period January 2015 to December 2016 six different fungal forms belonging to the order Moniliales have been identified *viz.* *Torula*, *Alternaria*, *Curvularia*, *Drechslera*, *Scytalidium* and *Cephalophora*.

Isolation, Identification and Preservation

Water samples including scum, foam, decaying organic matter (leaves/roots/ twigs) and soil was collected in sterilized bottle and plastic bags from different sites of Hataikheda Dam on monthly intervals. Baiting Technique was used to isolate particular group of fungi from various habitats. Different types of baits are used as Hemp seeds, Grass blade, Til- Sesamum seeds, Defatted hair, Bird feather for the proper nourishment of the fungi. Collection, Isolation, preservation has been done by the

methods of Webster and Descals (1981), Iqbal and Webster (1973), Agarwal and Hasija (1986). These fungi were identified with the help of various books, reviews, manuals, monographs, research papers and published books on taxonomy of fungi by various authors like Gilman(1959), Ellis (1971,1976), Barnett and Hunter(1972). Identification of these fungi was also done by the help of the experts of the mycological field. Preservation of samples was done by F.A.A (1:1:1).

RESULTS AND DESCRIPTION

1. *Torula* Persoon ex Fries; Persoon, 1975 (Fig. 1)
Colonies usually effuse, but sometimes small and discrete, olive, brown, dark brown or often velvety. Conidiophores unbranched or irregularly branched, straight or flexuous, sub hyaline to mid brown. Conidia dry, ellipsoidal or sub spherical, smooth with 0, 1 or several transverse septa.

2. *Alternaria* Nees ex Fr; Nees, 1816 (Fig. 2)
Colonies effuse usually grey, dark blackish brown or black. Conidiophores macronematous, mononematous, simple and loosely branched pale brown or brown with transverse and longitudinal septa.

3. *Curvularia* Boedijn, 1933. (Fig. 3)
Colonies effuse, brown grey or black, hairy, cottony or velvety. Conidiophore macronematous, mononematous straight or flexuous, often geniculate, sometimes nodose, brown usually smooth. Conidia solitary, simple often curved, clavate, ellipsoidal, fusiform with 3 or more transverse septa.

4. *Drechslera* Ito, 1930. (Fig. 4)

Colonies effuse, grey, black or brown or blackish brown, often hairy sometimes velvety. Conidiophores macronematous, mononematous, straight or flexuous, often geniculate, unbranched or in a few species loosely branched, brown, smooth in most species. Conidia solitary, Conidiophores simple, straight or curved, clavate, pale to dark brown.

5. *Scytalidium* Pesante 1957. (Fig. 5)

Colonies effuse dark blackish brown. Hyphae smooth some narrow, cylindrical, colourless, and pale to mid

brown very dark septa. Conidiophores branched or unbranched straight or flexuous, colourless and brown smooth. Conidia catenate, separating, dry, smooth, 0-septate.

6. *Cephalophora* Thaxter, 1903. (Fig. 6)

Colonies effuse buff or reddish brown. Conidiophore straight or flexuous, unbranched with terminal ampulla. Conidia solitary, simple, formed over the curved surface of conidiogenous cell, cuneiform, cylindrical with a protuberant hilum, often darken at the septa.

Diagrams

Fig. 1: *Torula* sp.

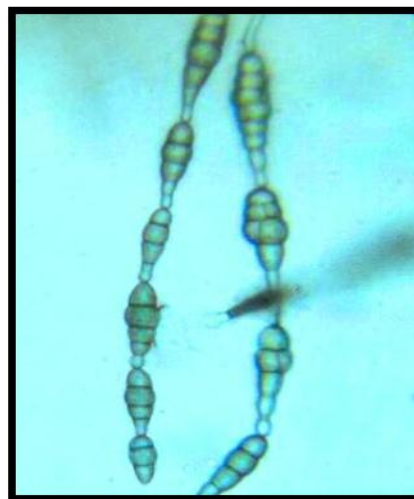


Fig. 2: *Alternaria* sp.



Fig. 3: *Curvularia* Sp.



Fig. 4: *Dreschlera* sp.

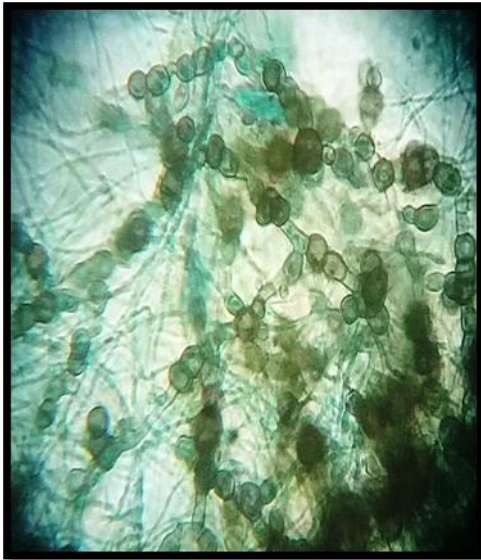


Fig. 5: *Scytallidium sp.*

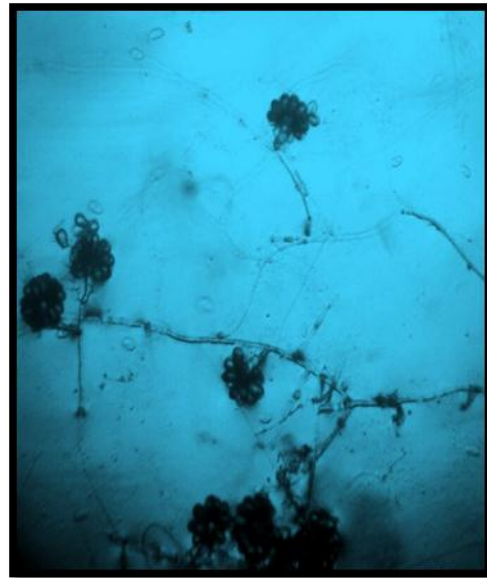


Fig. 6: *Cephalophora sp.*

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