SPECIES OF ALTERNARIA WERE REPORTED FIRST TIME FROM HATAIKHEDA DAM OF BHOPAL (M.P.)

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ABSTRACT
During the present investigation periods (2014-2015) six fungal species of Alternaria i.e. Alternaria raphani, A. tenuissima, A. longissima, A. longipes and A. solani, were isolated first time from the Hathaikheda dam.

KEYWORDS: Fungal species, Isolation, Hathaikheda dam.

INTRODUCTION
The Capital of Madhya Pradesh “Bhopal” is famous for its beauty; Lakes, Mosque and Historical Architecture. There are 8 water bodies present in Bhopal. One of these water bodies is Hathaikheda Dam. It was constructed in 1964, 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 and the purpose of construction was irrigation. A number of different group of fungi are found in water including Mastigomycotina, Zygomycotina, Ascomycotina and Deuteromycotina. Fungi are important components of the ecosystem typically constituting more of biomass than bacteria, especially in soil, depending on growth and nutrients conditions. They live as saprophytes or parasite on plants and animals. Saprophytic fungi grown in decaying plant material (branches, twigs, leaves, fruits) whereas parasitic fungi grown in (fishes, tadpoles, living organism). During the present investigation period 2014-2015, six species of Alternaria were isolated. These are Alternaria alternata, A. longipes, A. longissima, A. solani, Alternaria raphani and A. tenuissima.
MATERIALS AND METHODS

Water samples including scum, foam, decaying organic matter and soil were collected in sterilized bottles and plastic bags from different sites of Dam in such a manner that the collected water represents the entire water bodies at monthly interval during the period 2014-2015.

Collection, Isolation, preservation has been done by the methods of 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 likes Gilman(1959), Ellis (1971,1976), Barnett and Hunter(1972).

Diagrams

Fig. 1: Alternaria raphani.

Fig. 2: Alternaria tenuissima
Fig. 3: *Alternaria longissima.*

Fig. 4: *Alternaria longipes.*

Fig. 5: *Alternaria solani.*
RESULTS AND DESCRIPTION
Alternaria Nees ex Fr; Nees, 1816, syst. Pilze Schwamme: 72; Fries, 1821, Syst.mycol.,1: XLVI.

Colonies effuse usually grey, dark blackish brown or black. Conidiophore macronematous, mononematous, simple or irregularly and loosely branched, pale brown or brown. Conidia catenate or solitary, dry, typically, ovoid or obclavate, often rostrate, pale or mid olivaceous brown or brown, transverse and frequently also oblique or longitudinal septa.

- *Alternaria raphani* Groves & Skolko, 1944, *Can. J. Res., Sect .C*, 22:227. (Fig. 1) Conidiophore upto 150µm long, 3-7µm thick, with conidial scar. Conidia in chain of 2-3 straight or slightly curved, with short beak, 50-130µm long, 14-30µm thick. Collected on sesamum seed, grass blades, cannabis.

- *Alternaria tenuissima* Kunze ex Pears. Wiltshire, 1933, *Tran. Br. Mycol. Soc.*, 18:157. (Fig. 2) Conidiophores up to 115µm long, 4-6µm thick. Conidia solitary, 4-7 transverse septa, length 22-95µm, 8-19µm thick, beak2-4µm thick, swollen open 4-5µm wide. Collected on sesamum seed, grass blades, cannabis.

- *Alternaria longissima* Deighton & MacGarvie,1968, *Mycol. Pap.*, 113-10. (Fig 3) Conidiophore erect or ascending, simple or occasionally branched, up to 150µm long, 3-5µm thick with 1to several conidial scar. Conidia solitary or catenulate, extremely variable in shape and size. Many are very long (upto500µm) with 5-40 transverse septa 4-1µm long. Collected on sesamum seed, grass blades, cannabis

- *Alternaria longipes* (Ellis &Everh.) Mason, 1928, *Mycol. Pap.*, 2-19. (Fig 4) Conidiophore arising singly or in groups, erect, up to 80µm long, 3-5µm thick with conidial scar. Conidia sometime solitary but usually in chains, length 35-110µm, 11-21µm thick. Collected on sesamum seed, grass blades, cannabis.

- *Alternaria solani*. Sorauer, 1896, Z. PflKrankh., 6:6. (Fig. 5) Conidiophore arise singly or in small groups, straight or flexuous, septate, up to110µm long, 6-10µm thick. Conidia usually solitary, straight, length usually 150-300µm, 15-19µm thick with 9-11 septa, beak sometime branched, 2.5-5µm thick tapering gradually.
REFERENCES


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