

A new host record of *Myrothecium roridum* from India

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Leaf spot disease due to *Myrothecium roridum* Tode ex Fr. on *Malvastrum coromandelianum* (L.) Garcke. is a new host record for the world. *M. roridum* is a wide spread fungus and has earlier been reported to be pathogenic on 34 hosts belonging to 20 families of Angiosperms.

Key words: Biocontrol, fungal pathogen, *Malvastrum coromandelianum*, weed

INTRODUCTION

Malvastrum coromandelianum (L.) Garcke. (syn. *M. tricuspidatum* A. Gray.) (Family Malvaceae), is an introduced perennial weed from Brazil (South America) to the Orient and has adapted exceedingly well in India (King, 1974; Anonymous, 1992). It is a common weed occurring chiefly in open places near cultivation (Osmaston, 1978). Although the plant flowers throughout the year, the maximum vegetative growth occurs during September to December at Kurukshetra. The present paper describes a new leaf spot disease of *M. coromandelianum* caused by *Myrothecium roridum*.

OBSERVATIONS

During suveys conducted in search of naturally occurring fungal pathogens of various terrestrial weeds of Haryana state, a new leaf spot disease was observed in September, 1997, on *M. coromandelianum* population in the Kurukshetra University campus. Infected leaves were collected in sterilised polyethylene bags and brought to the laboratory for study of symptoms, isolation and pathogenicity test of the fungal pathogen(s) involved.

Symptoms were characterised as large, pale brown water soaked circular spots on leaves, which eventually drop out giving a shot hole effect. Isolation of the pathogen on potato dextrose agar+yeast extract medium (PDA+Y) yielded a fungus isolate which was later on identified following the monographs of Ellis (1971, 1976) as *Myrothecium roridum* Tode ex Fr. Microscopic observation of the fungal isolate revealed that conidiophores are macronematous, mononematous closely packed together to form sporodochia. Sporodochia are sessile, often in concentric zones, confluent, at first green later black, without setae. Conidiogenous cells are phialides, closely compacted into parallel rows forming a dense hymenial layer, 10-12 x 1 - 2 μ m. Conidia are rod shaped, smooth, cylindrical with rounded ends, hyaline to pale olive, guttulate and aggregated in dark green or black slimy masses, 6-8 x 1.5-2.5 μ m. Pathogenicity of the isolated pathogen was determined *in vitro*. Typical disease symptoms were observed on both wounded and non-wounded leaves, when inoculated with pathogen. The inoculated pathogen was reisolated and found similar to the original isolate in cultural characteristics thus confirming the pathogenicity of *M. roridum* to *Malvastrum coromandelianum*.

A literature search (Ellis, 1971, 1976; Holiday, 1980;

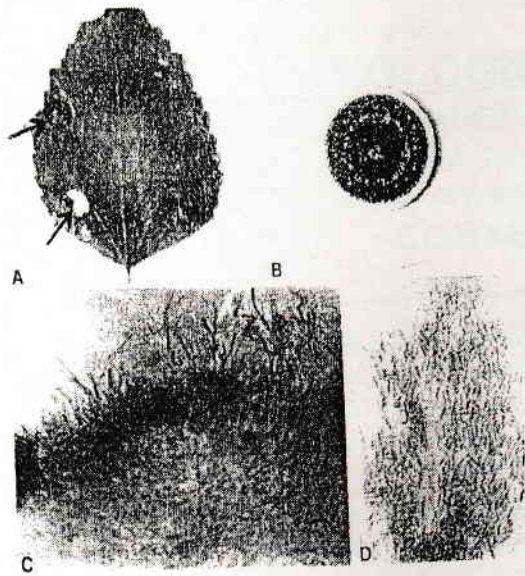


Fig 1

Mukerji and Bhasin, 1986; Panday *et al.*, 1990; Bilgrami *et al.*, 1991) indicated that *M.roridum* on *Malvastrum coromandelianum* is a new host record for the world. Fungus is plurivorous and widespread and has been reported to be pathogenic on 34 hosts belonging to 20 families of Angiosperms. *M.roridum* was found to be weakly pathogenic to the associated host plants, during surveys, thus ruling out the possibility of this fungus to be a potential biocontrol agent for *Malvastrum coromandelianum*.
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