
Studies on the Foliicolous Hyphomycetous fungi of West Bengal

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The present paper deals with four specimens of hyphomycetous fungi which have been collected and described from West Bengal. These are: *Chlamydomyces palmarum* (Cooke) Mason, *Trichothecium roseum* (Pers) Link ex Fries, *Curvularia phallescens* Boedijn and *Curvularia verruculosa* Tandon & Bilgrami. These specimens are reported for the first time from West Bengal.

Key words: Hyphomycetes, West Bengal.

INTRODUCTION

There are several foliicolous hyphomycetous fungi in West Bengal and some of them have already been reported (Bilgrami *et al.*, 1979-1981; Ellis, 1971, 1976; Sarbhoy *et al.*, 1977-1981). Subramanian (1971) have reviewed excellently the Indian hyphomycetes. In the present paper another four foliicolous hyphomycetous fungi have been reported.

MATERIALS AND METHODS

The infected leaves of different ages were collected intact from the host plant and they were kept in the polythene bags. The materials were spread out in between two blotting papers and dried following standard technique. The infected host tissue was detached and mounted on a glass slide in a drop of lactophenol and covered with a cover glass and heated. Following this technique, several slides from both dorsal and ventral portions were made seperately. The specimens were examined by compound microscope of varying magnification ranges and camera lucida drawings were also made.

DESCRIPTION

Chlamydomyces palmarum (Cooke) Manson,

Annotated Account of Fungi received at the Imperial Bureau of Mycology, List 2 (Fascicle 1) : 37 (1928).

Synonym : *Trichobasis palmarum* Cooke, Grevilleae 5 : 102, pl. 86, f. 9(1877).

Uredo palmarum (Cooke) de Toni in Sacc., Syll. Fung. 7 : 855(1888).

Mycogone meliolarum Pat., Bull. Soc. mycol. Fr. 8 : 55, pl. 7, f. 3(1892).

Mycogone flava Zimmermann, Z. Bakt. Abt. 2, 8 : 218 (1902).

Chlamydomyces diffusus Bainier, Bull. Soc. mycol. Fr 23 : 240, pl. 28, f. 4-6 (1907).

Mycogone ulmariae Potebnia, Ann. mycol. Berl. 5 : 21, pl. 2, f. 26 (1907).

Mycogone cervina Ditm. var. *theobromae* Sacc., Nuovo G. bot. Ital. N. S. 23 : 212 (1916).

Mycogone rufa Petch, Ann. R. Bot. Gdns Peradeniya 6 : 246 (1917).

Incidence in late rainy season, spots formed on lamina, amphigenous, circular to irregular, sometimes aggregate to coalescent, virulent, scattered, Older leaves more affected, whitish centre surrounded by blackish brown margin, 0.5—10mm. in extent ; caespituli amphigenous, forming mycelial aggregation ; mycelial hyphae slender branched, septate hyaline ; conidiophores straight to bent, hyaline, smooth simple or branched, pluriseptate (2-7 septa), mostly tapered towards the tip, 2.00-9.00 μ m wide, phialophores simple, hyaline, septate (0-6 septa), stipe 5.00 μ m wide and vesicles 3.50-9.50 μ m in diameter, aspergilliform ; conidia ovoid, 2-celled, not constricted, upper cell yellowish brown, large and verrucose, lower cell hyaline, small and smooth, base truncate, 22.50-30.00 x 30.50-49.50 μ m phialospores 1-celled, hyaline, oblong to elliposoid, catenate, smooth, phialides upto 7.50 μ m long, ampulliform.

Specimen studied : On *Zea mays* Linn. (fam : Poaceae) Dhapa, Calcutta, West Bengal, India, PCC 4939 (= IMI 309166), leg. T.K. De, 15 August, 1985.

Trichothecium roseum (Pers.) Link ex Fries Syst. Mycol. 3 427 (1832), Link, Mag. Ges. naturf. Freunde Berlin 3 : 18 (1809).

Synonym : *Trichoderma roseum* Pers., syn Meth. Fung. P. 231 (1801).

Trichoderma roseum Pers., Roemer's Neues Mag. Bot. 1 : 92 (1794).

Hypheia rosea (Pers.) Fries, Syst. Orb. Veg. p. 149 (1825).

Puccinia rosea (Pers.) Corda, Icon. fung. 1 : 6 (1837)

Dactylium rosenm (Pers.) Berk., Ann. Mag. nat. Hist. 6 : 437 (1841).

Cephalothecium roseum Corda, Icon. Fung. 2 : 14 (1838).

Incidence in autumn, spots formed on lamina, amphigenous, circular to subcircular, (rarely irregular) virulent, scattered, sometimes coalescent, whitish centre surrounded by blackish margin, 1-6 mm in extent; caespituli amphigenous. stroma none; mycelium mostly immersed, partly superficial, external mycelial hyphae creeping, septate, branched, pale olivaceous; conidiophores slender, long, simple, straight to flexuous, pluriseptate (1-9 septa), 3.00-3.50 x 55.03-350.00 μm ; conidia acrogenous, ovoid to ellipsoid, nipple like projection at one end, strictly 2-celled, septate 1, distinct, mostly hyaline, often pale olivaceous with bright oil drop like, 7.50-11.00 x 18.50-25.00 μm .

Specimen Studied

On *Cucurbita maxima* Duchesne (fam. Cucurbitaceae), Thakurpukur, 24-Parganas (S), West Bengal, India PCC 3375 (= IMI 299593), leg. T. K. De, 1 September, 1985.

Curvularia phallescens Beodijn, Bull. Jard. bot. Buitenz. Ser. 3, 13 : 127-8, f. 3 (14), (1933).

Incidence in rainy season, spots formed on lamina, amphigenous, circular to irregular, sometimes aggregated to coalescent, more prominent on the upper surface, whitish centre surrounded by blackish grey margin, 0.1-4mm in extent; caespituli amphigenous, chiefly epiphyllous, brownish; stroma none; conidiophores arising laterally from superficial hyphae, erect, simple, straight to flexuous slender, smooth, blackish brown, geniculate (1-4), pluriseptate (2-10 septa), spore scar (1-6) situated towards the apex of the conidiophores, 3.00-5.00 x 7.50-230.00 μm ; conidia ellipsoid to fusiform, pale brown, central 1 cell or 2 cells more darker than the end cells straight to curved, smooth, septa 1-3, septa distinct, 18.00-30.00 μm long, 6.00-9.50 μm wide in the broadest part.

Specimen Studied

On *Imperata arundinacea* Grill (fam: Poaceae), Kalyani, Nadia, West Bengal, India, PCC 4937 (= IMI 309164), leg. T. K. De, 7 July, 1985. *Curvularia verruculosa* Tandon & Bilgrami, Curr. Sci. 31 : 254 (1962).

Incidence in rainy season, spots formed on lamina, amphigenous, circular to irregular, often coalescent, greyish white centre surrounded by dark brownish margin, 2-8 mm in extent; caespituli amphigenous, deep brownish; stroma none; conidiophores emerging through stomata, straight to flexuous, simple, thickwalled, smooth, fasciculate to solitary, light brown, paler near the tip,

geniculate near the apex, pluriseptate (0-7 septa), swollen at the base, 3.50-5.00 x 65.50-150.00 μm ; conidia fusiform, curved or straight, the third cell from the base darker and broader than the other cells and curved, basal cell hyaline, others brown, thick-walled, septa 3, verruculose, 11.50-15.00 x 19.00-30.00 μm .

Specimen Studied

On *Zea mays* Linn. (fam: Poaceae) Tarakeswar, Hooghly, West Bengal India, PCC 4963 (= IMI 311127) leg. T. K. De, 25 August, 1986.

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