

Three Dematiaceous foliicolous fungi of West Bengal

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Three dematiaceous foliicolous fungi viz. *Pseudocercospora cannabina* (Wakefield), *Cercospora profusa* H & P. Sydow and *Cercospora sagittariae* Ellis & Killerman have been collected and illustrated. *Ps. cannabina* and *C. profusa* is reported for the first time in West Bengal while *C. sagittariae* from India.

Key Words : *Pseudocercospora cannabina*, *Cercospora profusa*, *Cercospora sagittariae*, taxonomy, West Bengal

INTRODUCTION

The present paper deals with two different genus of dematiaceous foliicolous fungi : *Pseudocercospora cannabina* (Wakefield), *Cercospora profusa* H & P. Sydow, and *Cercospora sagittariae* Ellis & Killerman. The fungi were collected from the districts of South 24 Parganas and North 24 Parganas of West Bengal respectively. The fungal specimens (*Pseudocercospora cannabina* and *Cercospora sagittariae*) were sent to International Mycological Institute (IMI), Kew Surrey, England and *Cercospora profusa* was identified in the Mycology Research Laboratory, Department of Botany, Presidency College, Calcutta (PCC), consulting different literatures for confirmed identification.

A large number of workers have done their work on this fascinating group of fungi viz. Bagyanarayana *et al.* (1995), Bilgrami and Jamaluddin, (1991), Chupp (1953), Deighton (1976, 1979, 1983, 1985), Ellis (1971, 1976), Haldar *et al.* (1997, 1998), Hawksworth *et al.* (1983), Katsuki and Kibayashi (1982), Khan *et al.* (1994), Meenu and Singh (1996), Mehrotra and Aneja (1998), Morgan-Jones and Phelps (1996), Mukherji and Bhasin (1986), Srivastava *et al.* (1994), Stevens (1993), Subramanian (1983), Sutton (1996) and Yen and Lim (1983).

DESCRIPTION OF TAXA

Pseudocercospora cannabina (Weakef.); Deighton. Mycol. Pap. Nos. 140 P. 141. 1976.

= *Cercospora cannabina* Wakefield, *Kew Bull* 1917 : 314. (1917).

(Fig. 1)

Leaf spots amphigenous, circular to sub-circular, sometimes raised margin, distinct on dorsal surface, indistinct on ventral surface, few, brown, 1-2 mm in diam; *caespituli* hypophyllous; *stroma* none or poorly developed; *mycelium* both immersed and superficial, external mycelial hyphae branched and septate arising from the base of the *fascicles*, producing conidiophores both laterally and terminally; *conidiophores* poorly fasciculate, 2-6 in a fascicle, very light brown, slightly paler towards the tip, straight to curved, smooth and thick walled, simple to branched, pleuriseptate upto 10, septa distinct, tip subobtuse with denticle, 23.79 - 54.6 x 2.94-5.04 μm ; *conidia* hyaline to subhyaline, obclavate, cylindrical to cylindrical, straight to bent, pleuriseptate upto 8, smooth and thick walled, base tapered to unthickened hilum, tip subobtuse, 29.4-40.11 x 7.56-9.24 μm .

Specimen studied; On the living leaves of *Cannabis sativa* Linn., (fam Cannabinaceae), Diamond Harbour, South 24 Parganas, West Bengal, India, IMI 370399, 7 July, 1995.

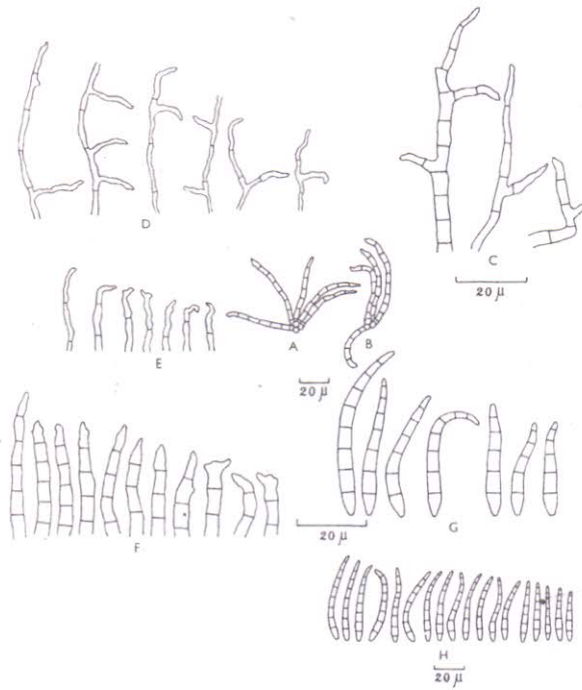


Fig. 1. *Pseudocercospora cannabina* : A-B. Conidiophore fascicles, C-D. External mycelial hyphae bearing conidiophores, E-F. Conidiophores, G-H. Conidia

Literature shows that *Pseudocercospora cannabina* is reported for the first time from the state of West Bengal.

Cercospora profusa H & P., Sydow *Ann. Mycol.* 7 : 175. 1909.

(Fig. 2)

Leaf spots amphigenous, indistinct, leaf margins are not affected, irregular, yellowish brown coalescent, 1-7 mm in diam; *caespituli* amphigenous, chiefly hypophyllous, irregularly distributed over the spots. blackish brown to black; *stroma* none or poorly developed; *conidiophores* solitary to fasciculate of 4-20 divergent stalks in a fascicle, coming out through the stomata, straight to flexuous, tortuous, midbrown smooth, thickwalled, usually simple, occasionally branched, distinctly multiseptate (3-12 septa), geniculate, conspicuous conidial scar lying at the tip or point of geniculation of the conidiophores, tip truncate, terminated with thickened scar 42.42-164.22 x 4.2-4.47 μm; *conidia* narrowly obclavate, cylindrical or acicular, olivaceous green, straight to curved, distinctly pleuriseptate (2-9 septa), smooth thin walled tip, acute to subacute, base truncate with a conspicuous thickened hilum, 12.6-134 x 4.2-7.6 μm.

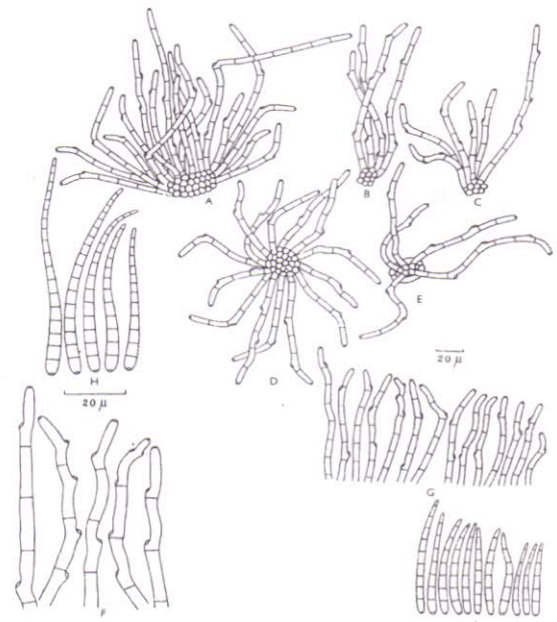


Fig. 2. *Cercospora profusa* : A-E. Conidiophore fascicles, F-G. Conidiophores, H-I. Conidia

Specimen studied : On the living leaves of *Acalypha hispida* Burm. f., (fam Euphorbiaceae), Subhasgram, South 24 Parganas, West Bengal, India, PCC 6227, 30 April, 1998.

Review of literature shows that this species has not been reported from the state of West Bengal. Hence it is reported for the first time from this state.

Cercospora sagittariae Ellis & Killerman *Jour. Mycol.* 2 : 1 1886.

(Fig. 3)

Leaf spots amphigenous, marginal, circular to semicircular, yellowish brown centre, surrounded by dark brown margin, scattered, a few, vein-limited, 1-2 mm in diam; *caespituli* amphigenous, effuse, brown, unevenly distributed over the spots; *stroma* poorly developed, *conidiophores* emerging through stomata, fasciculate (4-20), divergent, rarely solitary, straight to bent, usually simple, sometimes branched, pale brown, paler towards the apex, smooth, thin walled, pleuriseptate (1-5), breadth not uniform, 0-2 geniculate, with lateral scar, no. of scar 1-4 and diam of 1.5-2.5 μm, base swollen, apex roundish with prominent and distinct spore scar, 16.5-102.0 x 2.5-4.0 μm in diam; *conidia* obclavate, pale olivaceous, straight to curved, smooth, pleuriseptate (4-12), base truncate, apex obtuse, 38.0-125.5 x 3.0-4.0 μm.

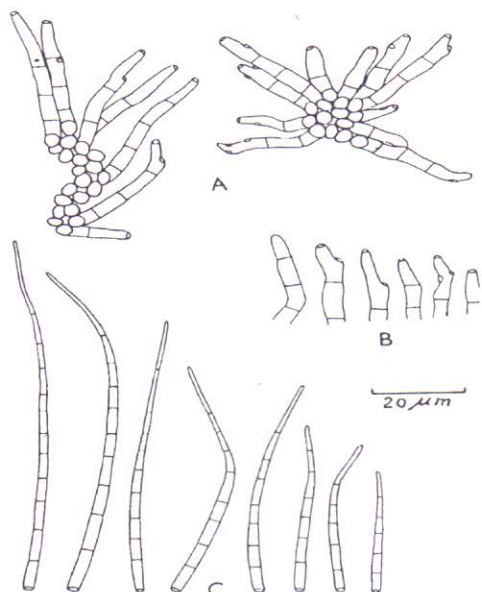


Fig. 3. *Cercospora sagittariae* : A. Conidiophore fascicles, B. Conidiophores, C. Conidia

Specimen studied : On leaves of *Sagittaria sagittifolia* L., (fam. Alismataceae) Paikpara, Bongaon, North 24 Parganas, West Bengal India, IMI 301289, 19 January, 1986.

It is reported for the first time from India.

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