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SOME TAXA OF FOLIICOLOUS HYPHOMYCETES GENUS *Pseudocercospora combretii* AND *Pseudocercospora pouzolziae* FROM AZAMGARH DISTRICT OF NORTH UTTAR PRADESH, INDIA

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ABSTRACT

This paper deals with description and illustration of two species of hypomycetes fungus genus *Pseudocercospora combretti* and *Pseudocercospora pouzolziae* collected on living leaves of *Terminallia bellarica* (Combretaceae) and *Pouzolzia indica*(Urticaceae) respectively from forest flora of North eastern Uttar Pradesh specially Azamgarh District.

KEYWORDS : *Pseudocercospora,* Foliiculous, Hyphomycetes, Azamgarh

Many works have been published for the new generic name *Pseudocercospora.* Valuable contribution to the taxonomy of *Pseudocercospora* were made during 1970's by Deighton (1576-1579). In these publications, he described twentyone new species (including five of which the names were previously not validly published), thierty one new combination and two new names in *Pseudocercospora* for homonyms originally published in *Cercospora.*

A survey of literature shows that the first new species of *Pseudocercospora* was reproted by Kamal and one of his coworkers from India. The auther who have made the significant contributions are Deighton,1981; Singh et al.,1985;Kamal and Singh,1980;Srikantha and Srivanesan,1980;Rai and Kamal,1982 and Srivastava and Topal,1985.

More recently (from 1990 till date), new species of *Pseudocercospora* have been repoted from the India sub-continent by several a workers viz., Das ,1991; Rai et al.,1993 and Singh et al.,1996.

Some more recent contribution to the taxonomy of genus *Pseudocercospora* have been of Singh et al. (1996, 1997), who have described six novel species viz., *Pseudocercospora justicicola, P. hibiscigena, P.pileae, P.anisomelicola var. ramosa, P.biophytiicola* and *P. climaticola* occurring on J*usticia simplex, Hibiscus species, Pilea umbrosa, Anisomeles indica, Biophytum sensitivum* and *Clematis* species respestively. Most recently Rao et al. (1998), have described four new species of the genus viz., *P. asiatica* (*Glochidion lanceolatum*), *P. melochiigena* (*Melochia corchorifolio*), *P. operculinae* (*Operculina terpethum*) and *P. trewiae-nodiflorae* (*Trewia nodiflora*) occurring in Indian sub-continent.

MATERIALS AND METHODS

Infected leaf samples were collected from forest areas of North Uttar Pradesh.The host plants were tentatively identified in the field and their identities were confirmed later in the laboratory. From the fresh collection scraping and hand cut section in lactofuchsin mounts were prepared for the examination of taxonomic characters .Taxonomic determination were made with the help of standard literature keeping in view the current concepts about the organism described and by the expertise available in the Depatment. Detailed taxonomic study was done with the help of compound microscope and cameralucida drawings.

RESULTS AND DISCUSSION

***P.combretii* sp. nov**

Maculae, foliicolae, amphigenae, irregulares, interdum, circulares, usque 2.5 cm in diam,brunneae vel atra. Bruunneae. Coloneae plerumque epiphyllae naturies interdum hypophyllae, fuscae, per paene totam maculae sparases. Mycelium ex hyphis immersis, hyalinis, septatis ramosis, 2.5-3 µm er. Stromata evoluta pseudoparenchymatica, atra, brunneae, usque 50 µm in diam. Conidiophora macro vel semi-macronematosa, manonematica, sarvea, vulgo haudramosa, aseptata, olivvaceo-brunneae, erecta vel flexuosa, plus minusve, geniculata, 15-25X4.5-5 µm. Cellulae conidiogenae, integratae, terminales, maturiores polyblasticae et

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sympodiales. Cicatries conidales, non incrassata, usque 1.5-2 µm lata. Conidia sicca, Simplicia, acrogena velacropleurogena, erecta vel cutvata, haud-ramosa, angustiora ad basim plus-minusve, obclavata, cylindrica, slurisepta, usque 30 septa, crassotunicate, sallide- olivaceo brunneae, Sub accuta et obtusa ad apicum, Crasso-septata, conico- trincata ad basim, 40-120X4.7-6 µm

Hab in foliis vivis *Terminaliae bellericae* Roxb.(Combretaceae),Feb 2002, SNC-Herb No.- 2000/151, IMI-256096, Azamgarh,leg. D.K.Srivastava.

Infection spots folicolous, amhigenous, irregular up to 2.5cm in diam, brown to dark brown, scattered all over the leaf surface, blackish, dispersed on whole spots. Mycelium of hyphae immersed or semi-immerse, hyaline, septate, branched, 2.5-3µm thick .Stroma developed, pseudoparenchymatous, dark brown, up to 50µm in diam. Conidiophores macro to semimacronematous, Mononematous, short, mostly unbranched, aseptate, olivaceous brown, straight or flexuous , more or less geniculate measuring 15-25x4.5-5µm. Conidiogenous cells integrated, terminal, polyblastic and sympodial in older ones. Conidial scars unthickened, up to 1.5-2 µm wide Conidia dry, simple, acrogenous, straight or curved, sometimes sigmoid, unbranched, gradually narrowing towards the apex and base, more or less obclavato-cylindric, multiseptate (up to 30 septate), thick walled, pale olivaceous brown with conidiophores, subaccute to obtuse at apices with thick septation, slightly conico-truncate at base, measuring 40-120x4.7-6 µm (Figure, 1).

On living leaves of *Terminallia bellarica* Roxb.(Combretaceae), Feb,2002,Herb No.- 2000/151, IMI-

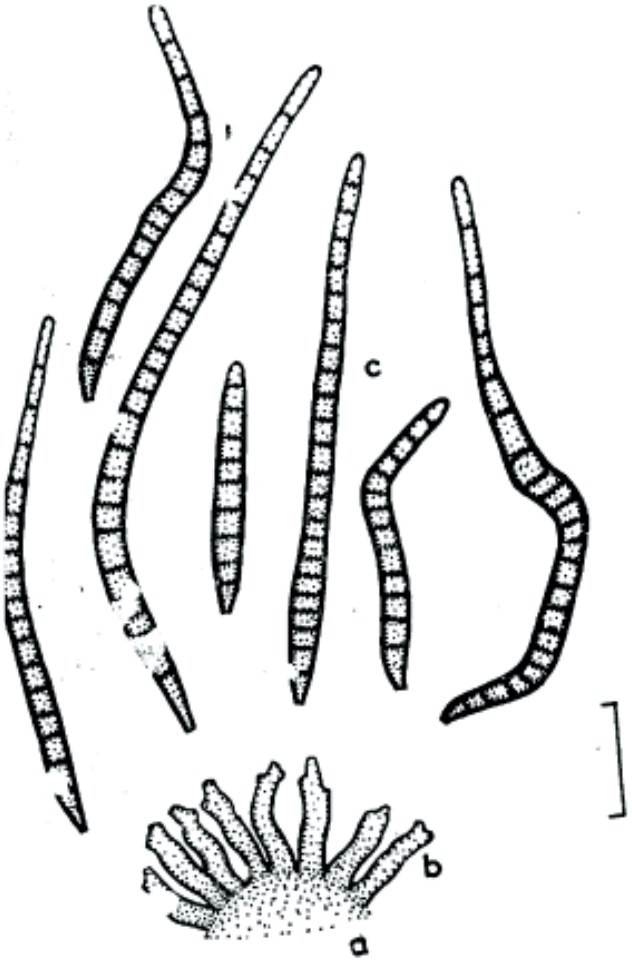

Figure 1: ***Pseudocercospora combrettii*** **sp.nov**
a.Stroma
b.Conidiophore
c.Conidia
Bars:a-c=20um

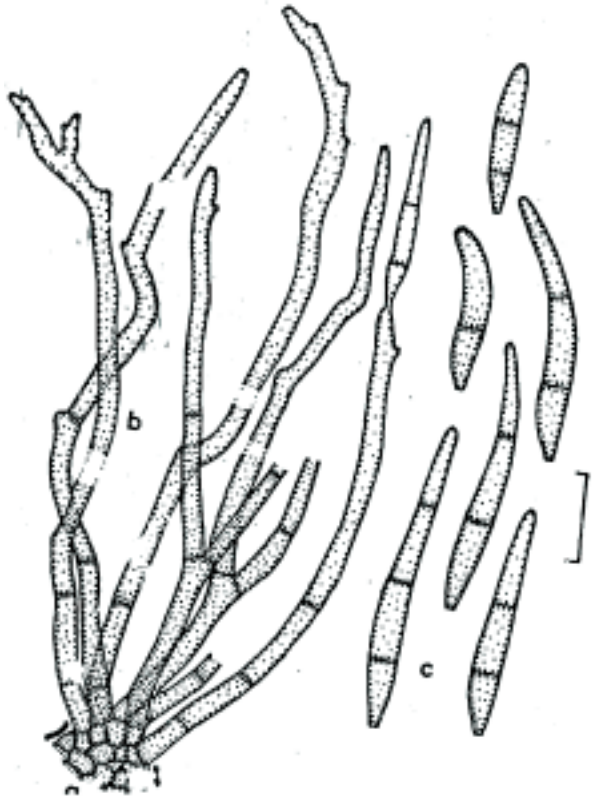

Figure 1: ***Pseudocercospora pouzolziae*** **sp.nov**
a.Stroma
b.Conidiophore
c.Conidia
Bars:a-c=20um

256096, Azamgarh, leg. D.K.Srivastava.

***P. pouzolziae* sp. nov**

Maculae foliicolae, hypogenae, irregulars vel angular, parvae, usage 5 mm longa, fuscae, interdum confluentes. Coloniae hypophyllae, Cristate Pilosae, atrabrunneae vel fuscae. Mycelium ex hyphis immeris, ramosis, septatis, hyalinis vel paulum flavido-brunnis. Stromata leniter evoluta,pseudoparenchymatica, atra brunnea. Conodiophora macronematica, mononematica fasciculata, rarosolitaria, Stomatobus vel substomatibus. Geniculata, gregario-ramosa, pluri-septata, cylindrica vel subcylindrica, angustiora ad apicem, pallide-brunnea, laevia, continuosa, 50-260 µm longa et 3-5 µm in diam . Celluale, conidiogenae, integrate, terminales, monoblasticae, noncicatrices, maturiores polyblasticae, Sympodiales, denticulatatae. Conidia solitaria, sicca acrogena vel acropleurogena, Pallidiora vel olivacea brunnea, haud-ramosa, cylindrica vel subcylindrica, obclavata, evecta vel sub evecta, 1-4 septate, laevia, tenue-tunicata, ongustiora ad obtuso vel rotundata apicem, 25-60 µm long, 3.5-5 µm in diam. Obconicotruncata ad basim .

Hab in foliis viris *Pouzolziae indicae* Gaud (Urticacearum), Feb 2002, SNC-Herb No.- 2000/152, IMI 248961, Azamgarh, leg D.K. Srivastava.

Infection spots foliicolous, hypogenous, irregular to angular, small, not more than 5 mm in length, blackish sometime onfluent. Colonies commonly hypophyllous, hairy dark brown to brown to blackish. Storm not developed, composed of a few cells below the ruptured .Mycelium of hyphae immersed, branched, septate,hyaline to slightly yellowish brown.epidermis, pseudoparenchymatous, dark brown . Conidiophores macronematous, mononematous, fasciculate, rarelysolitary, stomatal to substomatal, geniculate, profusely branched, multiseptate, cylindric to subcylindric somewhat narrowed towards the apical region, brown, smooth, continuous, 50-260 µm long 3-5 µm in diam. Conidiogenous cells integrated, terminal, monoblastic, later polyblastic, sympodial, deniculate, conidia solitary, dry, acrogenous to acropleurogenous, somewhat obclavate, straight to substright, 1-4 septate, smooth, thin walled , somewhat narrowing towards the obtuse rounded apex, measuring 25-60 x 3.5-5 µm with obconicotruncate base. (Figure, 2).

On living leaves of *Pouzolzia indica* Gaud. (Urticaceae), Feb 2002, Herb no- IMI-248961, Azamgarh, leg . D.K.Srivastava .

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