Some additional records of follicolous fungi from North Central Tarai Forests of U.P.

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Abstract

The follicolous fungi was collected from Feb. 03-05, 2008 from Sirsa forest range of Shravasti District. The authors collected twenty plant species, representing fourteen families, parasitized by sixteen fungi species. Leptoxyphium buteae was found on Butea frondosa (Fabaceae), where as Pseudocercospora nigricans on Cassia occidentalis (Fabaceae); Pseudocercospora sp. on Heterofragma sp (Boraginaceae) Alternaria on Achyanthes aspera (Amaranthaceae), Syzygium sp. (Myrtaceae) and Corchorus olitorius (Tiliaceae); Corynespora on Lantana in(Verbenaceae), Croton roseiurlighty (Euphorbiaceae), Clerodendron sp. (Verbenaceae); Sirospora lantana on Lantana camera (Verbenaceae), Sirospora sp. on Carica papaya (Caricaceae); Stenella tectonic on Tectona grandis (Verbacaceae); Stenella sp. on Eucalyptus lauculatus (Myrtaceae); Stenella greviace on Grewia elastica (Tiliaceae); Cercospora sp. on Glycosmis pentaphylla (Rutaceae), Corchorus olitorius (Tiliaceae); Meliola sp. on Streblus asper (Moraceae); Astrotomella on Litsea chinensis (Laureaceae); Acrotyl sp. on Tinspora malavera (Menispermaceae); Passalora sp on Eupatarrium cannabinum (Asteraceae); Ortitum sp on Syzygium sp. (Myrtaceae) and Coccinia indica (Cucurbitaceae).

Keywords: - Follicolous fungi, Ethnomedicine

Introduction

The leaves provide a very suitable habitat for the growth and development of fungal pathogens by providing ample surface area and nutrient supply. Such leaf inhabiting fungi are known as follicolous fungi and invaded area of the leaf appear as leaf spot or leaf lesions. Taxonomic studies of such fungal forms have been generally considered as only of academic interest, taxonomic treatment of a fungal organism is the first requirement for any studies concerning its biology. Correct identification of a fungus absolutely free from ambiguities is vital for its employment in applied disciplines. In fact without being equipped for ascertaining the correct identity of a fungal pathogen all studies concerning its phytopathological aspects would be misleading. The weed and forest plants serve as reservoirs of leaf spot pathogens which on getting opportunity may spread to agriculture and horticulture plants keeping this in view the author surveyed the Sirsia forest range of Shravasti District on February, 03-05, 2008.

Materials and Method

During collection, infected leaf samples were taken in separate polythene bags. Suitable amounts of surface scrapping and free hand cut sections were prepared from infected portions of the leaf samples. Slides were prepared in cotton-blue lactophenol mixture, slides were examined and Camera lucida drawings were made which seems to be new. Morphotaxonomic determinations of taxa were done with the help of current literature and resident expertise available. All the fungal taxon were identified after making microscopic preparations and later confirmed by Prof. Kamal, Emeritus Scientist (DST), DDU Gorakhpur University, Gorakhpur.

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Results and Discussion

The author surveyed the Sirsia forest range of Shrawasti District on Feb. 03-05, 2008 so as to collect the follicolicous fungi. The authors collected twenty plant species, representing fourteen families, parasitized by sixteen fungi species. *Leptothyphium buteae* was found on *Butea frondosa* (Fabaceae), where as *Pseudocercospora nigricans* on *Cassia occidentalis* (Fabaceae); *Pseudocercospora* sp. on *Heterofragma* sp. (Boraginaceae) *Alternaria* on *Achyranthes aspera* (Amranthaceae), *Syzygium* sp. (Myrtaceae) and *Corchorus olitorius* (Tiliaceae); *Corynespora* on *Lantana* in (Verbenaceae), *Croton roxburghii* (Euphorbiaceae), *Clerodendron* sp. (Verbenaceae); *Sirosorium lantanae* on *Lantana camera* (Verbenaceae); *Sirosorium* sp. on *Carica papaya* (Caricaceae); *Stenella tecton* on *Thetona grandis* (Verbeaceae); *Stenella* sp. on *Eucalyptus lanculatus* (Myrtaceae); *Stenella greviae* on *Grewia elastica* (Tiliaceae); *Cercospora* sp. on *Glycosmis pentaphylia* (Rutaceae), *Corchorus olitorios* (Tiliaceae); *Meliola* sp. on *Streblus asper* (Moraceae); *Astrostomella* on *Litsea chinensis* (Lauraceae); *Acrodytis* sp. on *Tinospora malaverica* (Menispermacae); *Passalora* sp. on *Eopatarium cannabinum* (Asteraceae); *Oidium* sp. on *Syzygium* sp. (Myrtaceae) and *Coccinia indica* (Cucurbitaceae).

The literature (Bilgami et al., 1981; 1991; Goos and Hosagoudar, 1998; Hosagoudar and Goos, 1990; Hosagoudar 1996; Hosagoudar et al., 1997; Hosagoudar and Abraham 1998; Hosagoudar et al., 2007; Jamaluddin et al., 2004; Jana et al., 2005; and Singh and Mall, 2007) reveals that all fungal taxon has not been reported from north central tarai forest of Uttar Pradesh.

The follicolicous fungal pathogens interfere with the manufacturing rate of food and other valuable substances by damaging the photosynthetic elements of living leaves, bringing about qualitative and quantitative damage in the living tissue of the host in various ways. Several leaf spot pathogens are known to produce toxins of the various kinds. When the leaf spots are numerous or large, there is a considerable reduction in the photosynthetic area of the leaf. Some times rapid defoliation occurs due to such infections. The productivity of the host plants is reduced. The weeds and forest plants serve as reservoir of leaf spot pathogens which may also spread to agriculture and horticultural plants. The destruction caused by these enemies of leaves is serious problem because they also cause degradation of quality of ethnomedicine present therein.

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References


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