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## Diversity and Status of Susceptible Host for Foliar Fungi from North Tarai Forests of Uttar Pradesh, India.

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## Research Article

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**ABSTRACT**

The present report elucidates a rich and unique profile of Mycobial as well as Phytodiversity of research area surveyed with two hundred four angiospermic host plant species representing one hundred fifty two genera of sixty three different families being parasitized by two hundred thirty seven fungal species representing sixty three fungal genera. The survey and documentation has resulted more than twenty one new host records and twenty three new fungal species to Indian mycoflora.

**INTRODUCTION**

The leaves provide a very suitable habitat for the growth & development of fungal pathogen by providing ample surface area and nutrient supply. Such leaf inhabiting fungi are known as Foliicolous fungi and the invaded area of the leaf appears as leaf spot or leaf lesion. The weed and forest plants serve as reservoir of leaf spot pathogen which on getting opportunity may spread to agricultural and horticultural plants.

World constitute twenty mega diversity countries in which warm tropical region between the tropic of cancer and tropic of capricorn on either side of the equator (between 23½°N and 23½° S around the globe) have since long provided the most suitable habitat for living organisms with a rich and diverse plant, animal and microbial life forms constituting twelve mega diversity countries. The twelve mega diversity countries constitute about 65% of the total biodiversity.

India is one of the twelve mega diversity countries of the world has two of the world's eighteen biodiversity hot spots located in the Western Ghat and in the Eastern Himalayas. In north of North Tarai Forests, the Himalayas rise as a virtual wall beyond the snow line. Above the alluvial plain lies the Tarai strips, a seasonally marshy zone of sand & clay soils. The Tarai has higher rainfall than the plains and the downward-rushing rivers of the Himalayas show down and spread out in the flatter tarai zone depositing fertile silt and reproductive means during the monsoon season and receding in the dry season. The Tarai, as a result has high water level and is characterized by moist sub-tropical conditions and a luxuriant turn-over of green vegetation all the year around. The climatological and topographical conditions favour the luxuriant growth & development of foliar fungi. This North-Tarai region of U.P. is next only to Eastern and Western Ghat as one of the hottest spots for biodiversity in general and the diversity of fungal organism inhabiting plant leaves in particular offers an ideal opportunity for the morphotaxonomic exploration of fungal organism in general and foliicolous fungi in particular [12]. The Foliicolous Fungi causes huge losses every year in different parts of world. The fungal pathogens producing leaf spots infect a large variety of hosts including most of the crops, forests and other plants. The destruction caused by these enemies of leaves is a serious problem before us. The focus of this research is identification & documentation of foliicolous fungi which will assist in the discovery of new fungicides and ideas to overcome from the severity of these enemies of nature as well as in the protection of floral diversity from the infection of these pathogens and also in the conservation of valuable flora of the area. Keeping this in view the authors surveyed the North Western Tarai forests of U.P. which include East & West Sohelwa, Shrawasti, Bahraich forest division, Katarniaghat Wildlife Sanctuary, Dudhwa tiger Reserve, Kishanpur Wildlife Sanctuary and Pilibhit Forest Division during July, 2006 to September, 2011.

MATERIALS AND METHODS

During collection, infected leaf samples were taken in separate polythene bags. Suitable mounts of surface scrapping and hand cut sections were prepared from infected portions of the leaf samples. Slides prepared in cotton blue lactophenol mixture were examined and camera lucida drawing were made which seems to be new as described by Verma *et al.*, 2008 and Mall, 2011. 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. The fungal Holotype specimen has been deposited in HCIO, IARI, New Delhi. References given in the text has also been provided with their wave links which are available.

RESULT AND DISCUSSION

The authors surveyed periodically the very diversified habitat of North Western Tarai Region of Uttar Pradesh during July, 2006 to September, 2011 so as to collect and document foliicolous fungi. The author collected two hundred four angiospermic host plant species representing one hundred fifty two genera belonging to sixty three different families being parasitized by two hundred thirty seven fungal species representing sixty three fungal genera. The host plants and their parasites are enumerated below-

List of Hosts with their respective Foliicolous Fungi

S.No.	Name of the family & Host	Name of the fungus	**
1.	Acanthaceae Justicia sp. Linn.	Cercospora justicicola Tai.	31
2.	Alismaceae Sagittaria sagittifolia Linn.	Alternaria bahraichensis sp. nov.	20
3.	Amaranthaceae Achyranthes aspera Linn. Alternanthera sp. Forsk. Aerva sp. Linn.	Alternaria sp. Nees. Cercospora achyranthina Thrim. & Chupp. Cercospora achyranthina Thrim. & Chupp. Stenella sp. Syd. Pseudocercospora alternantherae Yen. Kar. & Das Stenella sp. Syd.	01 20 21 36 11 23
4.	Anacardiaceae Mangifera indica Linn.	Ascochyta mangiferae Batista Meliola rhois P. Henn. Meliola rhois P. Henn. Periconia sp. Tode Sooty mold	17 20 17 01 17
5.	Annonaceae Annona squamosa Linn. Miliusa tomentosa H. & F.	Asteromella sp. Coelo. Cercospora sp. Fres. Pseudocercospora miliusae Mehrotra & Verma	19 27 11
6.	Apocynaceae Ichnocarpus frutescens (Linn.) R.Br. Carissa carandus Linn. Carissa congesta Weight. Holarrhena antidysentrica Wall. Alstonia scholaris R. Br.	Alternaria ichnocarpicola sp. nov. Alternaria ichnocarpicola Singh & Mall Alternaria sp. Nees. Alternaria sp. Nees. Cercospora sp. Fres. Corynespora ichnocarpii sp. nov. Corynespora ichnocarpii Singh & Mall Meliola frutiscentis Hosagoudar et al. Pseudocercospora apocynacearum Gupta & Kamal Corynespora carissae sp. nov. Corynespora carissae Singh & Mall Pseudocercospora carissae Singh & Mall Sirosporium sp. Bubak & Scrab. Sirosporium sp. Bubak & Scrab. Sirosporium sp. Bubak & Scrab. Sirosporium sp. Bubak & Scrab. Discosia hiptages Tilak. Glomerella cingulata (Stonem) Spauld & Shrenk Periconia byssoides Pers. ex. Mandel	11 12 19 11 19 20 11 19 21 20 19 11 21 20 19 21 11 27 20 02 01

7.	Araceae	Stenella sp. Syd.	26
	Colocasia esculenta Linn.	Colleotricum dematium (Pers. ex. Fr.) Grove	17
8.	Asclepiadaceae Calotropis procera R. Br. Calotropis gigentia R. Br.	Drechslera colocaceae Tandan & Bhargava	19
		Alternaria aterata (Fr.) Keissler.	20
		Alternaria aterata (Fr.) Keissler.	21
		Passalora sp. Fr. et. Mont.	22
		Passalora sp. Fr. et. Mont.	21
		Alternaria aterata (Fr.) Keissler.	17
9.	Asparagaceae Dracaena marginiata Linn.	Alternaria sp. Nees.	17
		Asterina sp. Lev.	18
		Stenella sp. Syd.	17
10.	Asteraceae Canthemus tinctorius Linn. Eupatorium cannabinum Linn. Parthenium hysterophorus Linn. Ageratum conyzoides Linn. Sphaeranthus indicus Linn. Xanthium strumarium Linn. Elephantopus scabens Linn. Spilanthes echmella Hook f. Chrysanthamum roseum Linn. Echinopus sp. Linn. Tridax sp. Linn.	Alternaria carthami Chawdhury et al.	19
		Alternaria tejensis sp. nov.	20
		Alternaria sp. Nees.	01
		Corynespora sp. Gissow.	11
		Leptoxyphium sp. Speg.	01
		Passalora sp. Fr. et. Mont.	22
		Passalora sp. Fr. et. Mont.	01
		Alternaria zinniae Ellis Pape.	01
		Alternaria sp. Nees.	20
		Alternaria sp. Nees.	09
		Cercospora sphaeranthi Patil	21
		Cercospora neo-sphaeranthia Bhartiya Kumari & Singh	20
		Cercospora xanthicola Heald. & Worf.	17
		Pseudocercospora sp. Speg.	19
		Corynespora elephantopii sp. nov.	23
		Oidium spilanthes Link. ex. Fr.	36
		Pseudocercospora sp. Speg.	11
		Puccinia pulvinata Rabenn.	01
		Stenella sp. Syd.	36
		11.	Basellaceae Basella alba Linn.
Sclerotium rellsii Sacc.	01		
12.	Barringtonaceae Barringtonia acutangula Gaertn.	Phomopsis barringtoniae Kamal & Singh	11
		Phomopsis barringtoniae Kamal & Singh	19
13.	Bignoniaceae Haplophragma adenophyllum (Wall) P. Dop. Heterophragma sp. Linn.	Leptoxyphium sp. Speg.	11
		Mycovellosiella haplophragmatis Kamal & Singh	21
		Oidium sp. Link. ex. Fr.	17
		Passalora sp. Fr. et. Mont.	23
		Passalora sp. Fr. et. Mont.	32
		Passalora sp. Fr. et. Mont.	18
		Phoma sp. Desm.	27
14.	Boraginaceae Cordea mixa H.S.K. Heleotropium indicum Linn. Cordia dichotoma Forst. Cordia creanata Delile Fl.	Pseudocercospora sp. Speg.	01
		Alternaria tenuis Nees.	10
		Leptoxyphium sp. Speg.	11
		Meliola eugeniae jamboloidis Hansf.	09
		Oidium sp. Link. ex. Fr.	11
		Phaeoramularia cordiae Kumar & Kamal	10
		Stenella myxa J. E. Gray	36
		Alternaria raphani Groves. & Skolko	23
15.	Brassicaceae Raphanus sativus Linn. Lunaria annuum Linn. Brassica campestris Linn. Brassica oleracea var. capitata Linn. Brassica oleracea Linn.	Alternaria sp. Nees.	17
		Curvularia lunata (Walker) Bold.	24
		Rhizoctonia solani Kiihn.	19
		Sclerotinia sclerotiarum (Linn.) Bac.	22
		Asterina sp. Lev.	20
		Phoma sp. Desm.	27
16.	Burseraceae Commiphora macrophylla Jacq.	Pseudocercospora sp. Speg.	32

17.	Caesalpiniaceae	Pseudocercospora sp. Speg.	01	
	Cassia tora Linn.	Pseudocercospora cassiae Singh & Bhalla	11	
	Cassia fistula Linn.	Stenella cassicola Kamal et. al.	11	
18.	Capparidaceae	Asterina sp. Lev.	02	
	Capparis horrida Linn.			
19.	Cannabinaceae	Phomopsis cannabina Curzi	17	
	Cannabis sativa Linn.	Pseudocercospora cannabina (Wakef.)	36	
20.	Caricaceae	Corynespora sp. Gissow.	23	
	Carica papaya Linn.	Oidium caricae Noack.	17	
		Sirosporium sp. Bubak & Scrab.	17	
		Sirosporium sp. Bubak & Scrab.	01	
		Corynespora celostricola sp. nov.	20	
21.	Celastraceae	Stenella celastrae Rai & Kamal	11	
	Celastrus peniculatus Willd.	Stenella hippocratiae Srivastava et al.	33	
	Hippocratea sp. Linn.	Alternaria aterata (Fr.) Keissler.	21	
22.	Chenopodiaceae	Rhizoctonia solani Kiihn.	19	
	Spinacia oleracia Linn.	Pernospora parasitica (Pers.)	22	
	Chenopodium album Linn.	Cercospora sp. Fres.	31	
23.	Combretaceae	Corynespora tomenticola sp. nov	20	
	Terminalia arjuna W. & A.			
	Terminalia tomentosa W & A.			
24.	Convolvulaceae	Cercospora ipomoeae Wint.	20	
	Ipomoea fistulosa Linn.	Cladosporium sp. Link.	22	
		Periconia sp. Tode	22	
		Stenella sp. Syd.	11	
		Phyllosticta alangii Hasija.	24	
25.	Cornaceae			
Alangium salvifolium (Linn.f.) Wang.				
26.	Cucurbitaceae	Alternaria aterata (Fr.) Keissler.	01	
	Luffa acutangula (L.) Roxb.	Cercospora citrullina Cook.	21	
	Cucurbita maxima Linn.	Leveillula taurica (Lev.) Arnaud	21	
	Momordica charantia Roxb.	Cercospora momordica Mc. Rai.	11	
	Lagenaria siceraria (Mol.) Standl.	Cladosporium cucumerinum Ellis & Arth	21	
	Lagenaria vulgaris Ser.	Curvularia verruculosa Ellis.	24	
	Coccinia indica W. & A.	Glomerella cingulata (Stonem) Spauld & Shrenk.	19	
	Trichoxanthes dioica Roxb.	Oidium sp. Link. ex. Fr.	01	
		Oidium sp. Link. ex. Fr.	22	
	Pseudocercospora lagerstroemiiyenna Gon. & Hsien.	33		
	27.	Cycadaceae	Alternaria sp. Nees.	17
Cycas circinalis Linn.		Drechslera monoceros Subram . Jain.	17	
		Sphaeropsis cycadis Mundkar & Ahmad	17	
		Stenella sp. Syd.	17	
		Meliola sp. Fr.	22	
28.	Cyperaceae			
	Typha sp. Linn.			
29.	Dipterocarpaceae	Ceratophorum helicosporum Sacc.	31	
	Shorea robusta Gorten. f.	Ceratophorum helicosporum Sacc.	10	
		Mycovellosiella sp. Rangel.	31	
		Pseudocercospora shoreae (Thirum&Kot suki) Deighton	10	
		Pseudocercospora shoreae (Thirum&Kot suki) Deighton	17	
30.	Ebenaceae	Aecidium rhyismoideum Berk. & Br.	11	
	Diospyros tomentosa Roxb.	Cercospora kaki Ell. & Ev.	11	
		Diospyros abrms Yurk.	Diatrypella quercina (Ces. & De Not.) Sac.	02
		Diospyros melanoxylon Roxb.	Trichothecium roseum Link.	02
			Leptoxyphium sp. Speg.	11
			Pseudocercospora kelleri (Earle) Deight	09
			Sarcinella gorakhpurensis Kamal & Singh	10
	Alternaria aterata (Fr.) Keissler.	18		
31.	Euphorbiaceae			

	Codiaeum variegatum Bl. & Hort . Spiral leaf Croton.	Alternaria aternata (Fr.) Keissler.	17
	Codiaeum variegatum Bl. & Hort . Small leaf Croton.	Alternaria aternata (Fr.) Keissler.	21
	Codiaeum variegatum Bl. & Hort . Narrow leaf Croton.	Alternaria kamalella sp. nov.	24
	Mallotus philippensis Muell. Arg.	Alternaria kamalella Singh and Mall	25
	Euphorbia pulcherrima Wild ex. Klotz.	Corynespora sp. Gissow.	19
	Putranjiva roxburghii Wall.	Glomerella cingulata (Stonem) Spauld & Shrenk.	20
	Croton roxburghii Bat.	Mycovellosiella malloti Bhalla et al.	09
	Jatropha baladona Linn.	Mycovellosiella malloti Bhalla et al.	12
	Euphorbia hirta Linn.	Pestalotiopsis palmarum(Cke.) Stey.	10
	Bridilia stipularis Blum.	Phoma malloti Desm.	24
		Phoma malloti Desm.	25
		Zygisporium sp. Mont.	11
		Zygisporium sp. Mont.	26
		Alternaria tenuissima (Kunz ex. Pers.) Wittshire	11
		Phyllactinia sub-spiralis Lev.	02
		Cercospora putranjivae Khan.	20
		Cladosporium sp. Link.	20
		Corynespora bahraichiana sp. nov.	01
		Corynespora bahraichiana Singh & Mall	17
		Phoma sp. Desm.	26
		Pseudocercospora sp. Speg.	17
		Stenella brideliicola Srivastava et al.	31
		Alternaria bauhinia sp.nov.	19
		Alternaria bauhinia Singh and Mall	20
		Corynespora sp. Gissow.	2122
		Corynespora sp. Gissow.	30
		Corynespora sp. Gissow.	36
		Alternaria delbergicola Nees.	36
		Phoma nivea (Syd.) Majumdar et al.	36
		Phyllactinea sp. Lev.	17
		Alternaria tenuis Nees.	11
		Cercospora dolchi. Ellis & Ev.	17
		Cercospora dolchi. Ellis & Ev.	17
		Phoma herbarum West.	24
		Phoma herbarum West.	20
		Pseudocercospora dolichi Ell & Ev.	23
		Pseudocercospora dolichi Ell & Ev.	11
		Cercospora sp. Fres.	20
		Cercospora sp. Fres.	20
		Carynospora albizicola Sharma et al.	19
		Corynespora pongamcola sp. nov.	02
		Fusicladium pongamiae Syd.	02
		Corynespora sp. Gissow.	02
		Diatrype disciformis Kar & Maity	02
		Haplosporella baumontina Ahmad.	01
		Leptoxyphium buteae Speg.	17
		Leptoxyphium buteae Speg.	21
		Stenella buteae Mishra et al.	21
		Macrophomina phaseolina (Tass) Goia	22
		Mycovellosiella sp. Rangel.	17
		Oidium sp. Link. ex. Fr.	02
		Pestolotia lambertiae Petr.	19
		Phoma sp. Desm.	27
		Phoma sp. Desm.	28
		Phomopsis bauhiniae Bansa Alealdi	20
		Phomopsis bauhiniae Bansa Alealdi	01
		Pseudocercospora acacia Kamal & Singh	17
32.	Fabaceae		
	Bauhinia vahlii W. & A. Prod.		
	Dalbergia sissoo Roxb.		
	Cassia fistula Linn.		
	Dolichos lablab Linn. Lynos.		
	Medicago sativa Linn.		
	Flemingia bracheata Roxb.		
	Albizia lebbek Benth.		
	Pongamia pinnata Vent.		
	Acacia bipar Linn.		
	Inga edulcis (Roxb.) Kurtz.		
	Butea frondosa Koen. ex. Roxb.		
	Bauhinia varigata Linn.		
	Desmodium pulchellum Benth ex.		
	Desmodium trifolium DC.		
	Bauhinia racemosa Lamk.		
	Bauhinia purpurea Linn.		
	Acacia concinna Wall.		
	Cassia occidentalis Linn.		
	Millettia sp. W. & A. Fl. Brit.		
	Mellettia ovalia W. & A. Fl.		

		Pseudocercospora nigricans Cooke.	01
		Pseudocercospora nigricans Cooke.	17
		Septori sp. Sacc.	20
		Pseudocercospora sp. Speg.	26
		Stenella melletiae Chaudhary et al.	
33.	Flacoutiaceae	Meliola flacourticola sp. nov.	37
	Flacourtia indica Merrill		
34.	Lamiaceae	Alternaria sp. Nees.	19
	Ocimum sanctum Linn.	Cercospora ocimicola Petrak & Ciferri	17
	Nepta hindostana (Roth.) Hains.	Cercospora ocimicola Petrak & Ciferri	11
	Ocimum basillicum Benth.	Cercospora neptae Trehan	19
		Meliola sp. Fr.	02
35.	Lauraceae	Alternaria longipes (Ellis. & Ev.) Mason	11
	Litsea chinensis Lamk.	Alternaria longipes (Ellis. & Ev.) Mason	20
	Litsea sp. Lour.	Asteromella sp. Coelo.	02
	Litsea polyanthus Juss.	Asteromella sp. Coelo.	10
	Litsea glutinosa (Lour.) C.R. Robinson	Fuligomyces indica Khan & Kamal	11
	Litsea albernaria Lour.	Fuligomyces indica Khan & Kamal	31
		Mycovellosiella litseae Munjal & Kulshreshtha	21
		Phomopsis litseae Kamal & Singh	17
		Phomopsis litseae Kamal & Singh	10
		Corynespora sp. Gissow.	27
		Phoma sp. Desm.	33
		Diatrype citricola Ellis & Ev.	10
		Mycovellosiella litseae Munjal & Kulshreshtha	21
		Pseudocercospora litseae Singh & Kamal	22
		Stenella litseae sp. nov.	33
		Phoma sp. Desm.	27
36.	Lecythidaceae	Acrodictys sp. Ellis.	11
	Barringtonia acutangula Gaertn.	Pestalotiopsis sp. Steyaert.	26
	Careya arborea Roxb.	Zygosporium echnosporum Mont.	02
37.	Lytheraceae	Alternaria aterata (Fr.) Keissler.	33
	Lagerstroemia parviflora Roxb.	Cercospora lythracearum Heald & Wolf.	11
38.	Malvaceae	Alternaria dianthi Stev. & Hall.	01
	Hibiscus mutabilis Linn.	Alternaria longipes (Ellis. & Ev.) Mason	01
	Hibiscus rosa-sinensis Linn.	Microxphium fagi (Pers.) Hughs.	20
	Abutilon indicum Sweet. Hort.	Cercospora sp. Fres.	33
	Sida rhombifolia Linn.	Phomopsis abutilonis M C. Rai.	11
		Phomopsis abutilonis M C. Rai.	17
		Oidium sp. Link. ex. Fr.	11
39.	Meliaceae	Acremonium sp. Link.	11
	Toona ciliata Roem.	Alternaria aterata (Fr.) Keissler.	23
	Azadirachta indica A Juss.	Stenella sp. Syd.	27
		Oidium azadirachtae Narayan & Ramakr.	17
		Septori sp. Sacc.	17
40.	Menispermaceae	Acrodictys sp. Ellis.	01
	Tinospora malaverica Miers.	Acrodictys sp. Ellis.	19
	Tiliocora acuminata (Lam) Miers.	Acremonium moniformae Fr.	11
		Phoma sp. Desm.	10
		Phoma sp. Desm.	33
		Phoma sp. Desm.	35
	Teliocorpa sp. (Hook f.)	Stenella sp. Syd.	11
	Tinospora cordifolia Willd.	Acremonium zonatum Gams.	11
	Tinospora sp. Linn.	Colleotrichum capsici Butter & Bisby	21
	Menispermum canadense Linn.	Pseudocercospora cocculi (Syd.) Deight	19
		Sirosporium sp. Bubak & Scrab.	11
41.	Mimosaceae	Cercospora albizicola Fres.	37

	Albizzia procera Linn. Benth.	Cercospora oudhensis Mall	11
	Indopiptandenia oudhensis (Brandis) Brenum	Phomopsis mendex(Sacc.) Trab.	17
	Albizzia lebbeck Linn. Benth.	Ramularia sp. Sacc.	20
	Albizzia sp. Linn. Benth.	Pseudocercospora sp. Speg.	37
42.	Moraceae	Alternaria aterata (Fr.) Keissler.	01
	Ficus carica Linn.	Cladosporium fici-carica sp. nov.	31
	Ficus glomerata Linn.	Alternaria aterata (Fr.) Keissler.	20
	Artocarpus heterophyllus Lamk.	Uredo fici Cast.	22
	Ficus rumphi Blume Bijdr.	Alternaria tenuissima (Kunz ex.Pers.)Wittshire	20
	Ficus scabrella Roxb.	Cladosporium artocarpi Kuthare & Singh	19
	Streblus asper Lour.	Pseudocercospora artocarpi (HP. Seed) Deighton	02
	Ficus benghalensis Linn.	Rhizoctonia solani Kiihn.	17
	Ficus religiosa Linn.	Alternaria sp. Nees.	11
	Ficus hispida Linn.	Botrydiploidia theobromae Pat.	19
	Morus alba Linn.	Colleotricum dematium (Pers. ex. Fr.) Grove	21
	Ficus sp. Linn.	Oidium sp. Link. ex. Fr.	17
		Phomopsis sp. Sacc.	10
		Phyllachora ficuum Niessa Blume	10
		Sooty mold	23
		Alternaria sp. Nees.	11
		Asterina sp. Lev.	26
		Asterina sp. Lev.	19
		Asterina sp. Lev.	10
		Meliola sp. Fr.	01
		Meliola sp. Fr.	02
		Pseudocercospora strebli Singh.	02
		Cercospora fici Heald & Worf.	02
		Cercospora fici - religiosa Heold & Worf.	03
		Fuligomyces sp. Morgan Jones & Kamal	02
		Mycovellosiella fici Rai. & Kamal	20
		Pseudocercospora mori (Hard) Deighton	36
		Stenella rajendrella sp. nov.	20
43.	Musaceae	Alternaria sp. Nees.	17
	Musa paradisiaca Linn.		
44.	Myrtaceae	Alternaria pemphiddioides Cooke	37
	Syzygium sp. Linn.	Alternaria sp. Nees.	02
	Syzygium euginia Linn.	Meliola syzygium sp. nov.	37
	Euginia sp. Linn.	Oidium sp. Link. ex. Fr.	01
	Syzygium heynianum Wallex. Duthie.	Oidium sp. Link. ex. Fr.	20
	Psidium gujava Linn.	Asterina eugeniae Yates.	09
	Eugenia jambolina Linn.	Asterina eugeniae Yates.	21
	Syzygium cumini Linn. Skeel.	Asterina sp. Lev.	37
	Eugenia myrtifolia Linn.	Cladosporium tennussisma Cke.	19
	Eucalyptus lanceolatus Hill. Malpea.	Mycovellosiella myrtacearum Rai & Kamal	36
		Mycovellosiella myrtacearum Rai & Kamal	20
		Rhizoctonia solani Kiihn.	17
		Meliola eugeniae jamboloidis Hansf.	11
		Penicillum expansum Link. ex. SF Gray.	11
		Meliola eugeniae jamboloidis Hansf.	20
		Penicillum expansum Link. ex. SF Gray.	01
		Meliola sp. Fr.	01
		Stenella sp. Syd.	22
		Stenella sp. Syd.	24
		Stenella sp. Syd.	01
45.	Nyctanthaceae	Stenella sp. Syd.	23
	Nyctanthes arbor-tristis Linn.	Stenella sp. Syd.	17
46.	Nyctaginaceae	Pseudocercospora sp. Speg.	11

47.	Boerhavia diffusa Linn.	Helminthosporium sp. Link.	21
	Papilionaceae	Phoma cajani Rangel Khune and Kapoor	17
	Pisum sativum Linn.		
	Cajanus cajan (Linn.) Millsp.		
48.	Phyllanthaceae	Colleotrichum gleosporiodes Penz.	02
	Bridelia retusa Spreng.	Periconia byssoides Pers. ex. Mandel	01
49.	Poaceae	Cladosporium sp. Link.	20
	Arunda donax Linn.	Helminthosporium sp. Link	32
	Saccharum munja Linn.	Pestalotiopsis sp. Steyaert.	20
	Calanus tenuis Linn.	Ramularia sp. Sacc.	11
	Saccharum spontaneum Linn.	Ramularia sp. Sacc.	19
50.	Polygonaceae	Asterina sp. Lev.	37
	Polygonum chinensis Willd.	Cercospora poligonii Narayan et al.	37
	Polygonum sp. Willd.	Pseudocercospora polygona Speg.	37
51.	Rhamnaceae	Meliola ziziphi Hosagouder et al.	23
	Ziziphus sp. Willd.	Meliola ziziphi Hosagouder et al.	19
	Ventilago sp. Linn.	Pseudocercospora zizyphicola (Yen)	32
	Zizyphus xylopyrus Willd.	Pseudocercospora zizyphi sp. nov.	23
		Stenella sp. Syd.	31
		Tandonella sp. Prasad & Verma	23
52.	Rosaceae	Acremonium sp. Link.	01
	Rosa indica Linn.	Coelomyces sp.	22
	Prunus persica Stocks.	Stenella sp. Syd.	33
	Eribotrya japonica Linn.		
53.	Rubiaceae	Cercospora adininae Srivastava et al.	01
	Adina cardifolia Hook. f.	Cercospora adininae Srivastava et al.	37
	Mitragyna parvifolia Korth.	Cercospora adinicola (Kar & Mondal)	21
	Gardenia gummifera Linn.	Corynespora sp. Gissow.	20
		Mycovellosiella adinae Firdousi et al.	20
		Pseudocercospora adinae Singh & Kamal	11
		Pseudocercospora adinae Singh & Kamal	20
		Pseudocercospora adinae Singh & Kamal	21
		Pseudocercospora sp. Speg.	20
		Cercospora mitrangynae Bhargava & Nath	20
		Corynespora mitragynae sp. nov.	22
		Mycovellosiella mitragynae Kumar & Kamal	21
		Stenella sp. Syd.	20
		Stenella sp. Syd.	37
54.	Rutaceae	Alternaria aternata (Fr.) Keissler.	01
	Citrus lemon Linn.	Alternaria citri Ellis & Pierce	23
	Citrus maxima Linn.	Curvularia tuberculosa Ellis.	24
	Citrus medica Linn.	Geotrichum canadidum Link. ex. Pers.	19
	Citrus sp. Linn.	Meliola sp. Fr.	19
	Glycosmis pentaphylla Correa. Willd.	Alternaria citri Ellis & Pierce	21
	Murraya exotica Linn.	Coniella citri Agarwal & Sharma	19
	Murraya paniculata Spreng.	Leptoxyphium graminum Pat.	21
	Murraya sp. Linn.	Alternaria sp. Nees.	11
	Aegle marmelos Linn. Correa.	Cercospora glycosmidis Abbasi et al.	02
	Murraya koehigii Spreng	Cercospora glycosmidis Abbasi et al.	11
		Corynespora glycosmidis Abbasi et al.	20
		Corynespora sp. Gissow.	11
		Corynespora sp. Gissow.	23
		Phoma sp. Desm.	24
		Phomopsis sp. Sacc.	20
		Phomopsis sp. Sacc.	21
		Stenella sp. Syd.	19
		Botrydiploidia theobromae Pat.	11



		Colleotrichum exoticum Pavgi & Singh	02
		Leptoxyphium sp. Speg.	11
		Phoma herbarum West.	11
		Pestalotiopsis sp. Steyaert.	19
		Stenella peniculata Tripathi et al.	19
		Coelomyces sp. Keilin.	27
		Pseudocercospora murroicola Cooke	27
		Pseudocercospora murroicola Cooke	21
		Colleotrichum capsici Butter & Bisby	20
		Phoma glomerata (Cda.) Wr.	02
		Stenella sp. Syd.	31
55.	Samaydaceae	Pseudocercospora caseariae sp. nov.	21
	Casearia tomentosa Linn.		
56.	Scrophularaceae	Pseudocercospora scopariicola Yen. Deighton	17
	Scoparia dulcis Linn.		
57.	Smilacaceae	Stenella smilacis Kumar et al.	20
	Smilax Macrophylla Roxb.		
58.	Solanaceae	Alternaria aternata (Fr.) Keissler.	20
	Solanum tuberosum Linn.	Cladosporium sphaerospermum Penz.	21
	Solanum melongena Linn.	Alternaria solani Nees.	19
	Lycopersicon esculentum Linn.	Cladosporium oxysporum Berk & Curt	21
	Datura stramonium Linn.	Cladosporium tennussimum Cke.	19
	Capsicum anum Linn.	Colleotrichum capsici Butter & Bisby	21
	Solanum nigrum Linn.	Phomopsis capsici Magn.	24
		Pseudocercospora atromarginalis (Atk.) Deighton	24
59.	Sterculiaceae	Meliola sp. Fr.	27
	Sterculia sp. Linn.		
60.	Teliaceae	Cercospora macutensis Syd.	02
	Corchorus olitorius Linn.	Phomopsis sp. Sacc.	28
	Grewia asiatica Linn.	Pseudocercospora grewiicola Bagyanarayan et al.	20
	Grewia sp. Linn.	Stenella grewiae Syd.	01
	Grewia elastica Linn.	Stenella grewiae Syd.	02
		Stenella sp. Syd.	20
61.	Ulmaceae	Colleotrichum dematium (Pers. ex. Fr.) Grove	02
	Holoptelia integrifolia Planch.	Phoma exigua Desm.	02
	Trema sp. Blume	Zygisporium sp. Mont.	33
62.	Verbenaceae	Amerosporium polynematoides Speg.	20
	Clerodendron inerme Linn. Gaertn.	Cercospora clerodendri Miyake.	20
	Clerodendrum indicum Linn.	Fusarium concolor Reink.	19
	Clerodendrum viscosum Linn.	Corynespora clerodendri viscosae Giisow	20
	Clerodendrum sp. Linn.	Pseudocercospora clerodendri Speg.	19
	Lantana camara Linn.	Pseudocercospora clerodendri Speg.	28
	Lantana indica Linn.	Stenella clerodendri Syd.	17
	Premna mucronata Roxb.	Stenella clerodendri Syd	24
	Clerodendrum phlomidis Linn.	Corynespora clerodendri Myake.	01
	Tectona grandis Linn.	Corynespora clerodendroni viscosi Pal et al.	31
	Vernonia cinerea Less.	Corynespora clerodendri viscosae Giisow	11
		Corynespora lanthanum Sharma et al.	17
		Sirosporium lantana Bubak & Scrab.	01
		Sirosporium lantana Bubak & Scrab.	02
		Corynespora nana Meenu & Kamal	02
		Corynespora nana Meenu & Kamal	01
		Pseudocercospora sp. Speg.	20
		Cercospora premnae sp. nov.	02
		Cercospora phlomidicola Mall.	01
		Phomopsis varioforum Sacc.	23
		Phomopsis varioforum Sacc.	17

		Stenella tectonic syd.	01
		Stenella tectonic syd.	23
		Uredo sp. Pers.	11
		Veronaea tectoni Cif. & Montem.	23
		Pseudocercospora cinereae (Pavgi & Singh) Deighton	19
		Cercospora cucumina Srivastava et al.	19
63.	Zingiberaceae		
	Curcuma domestica Linn.		

**\*\* Places of Collection**

- A. **Sohelwa Wildlife Sanctuary**
  1. Sohelwa Forest Range East
  2. Sohelwa Forest Range West
  3. Barahwa Forest Range
  4. Bankatwa Forest Range
  5. Tulsipur Forest Range
  6. Tulsipur unit (Village)
  7. Rampur Forest Range
  8. Bhabhar Forest Range
- B. **Shravasti Forest Division**
  9. Hardutt Nagar Girant Forest Range
  10. Kakardari Forest Range
  11. Bhingra Forest Range
  12. Payagpur Forest Range
- C. **Bahraich Forest Division**
  13. Chakia Forest Range
  14. Rupaidiha Forest Range
  15. Abdulaganj Forest Range
  16. Nanpara Forest Range
  17. Bahraich Forest Range
  18. Kaisarganj Forest Range
- D. **Katarniaghat Wildlife Sanctuary**
  19. Katarniaghat Forest Range
  20. Nishangara Forest Range
  21. Murtiha Forest Range
  22. Dharpur Forest Range
  23. Motipur Forest Range
  24. Kakarha Forest Range
- E. **Dudhwa Tiger Reserve**
  25. Belraya Forest Range
  26. Sonaripur Forest Range North
  27. Sonaripur Forest Range South
  28. Gaurifanta Forest Range
  29. Bankati Forest Range
  30. Sathiana Forest Range
  31. Dudhwa Forest Range
  32. Dudhwa Paryatan
- F. **Kishanpur Forest Division**
  33. Kishanpur Forest Range
  34. Mailani Forest Range
- G. **Pilibhit Forest Division**
  35. Pilibhit Forest Range
  36. Botanical Survey of India Allahabad
  37. Mahabaleshwar Forest Range Satara Maharashtra

The perusal of the table reveals that there are two hundred four angiospermic host plant species representing one hundred fifty two genera belonging to sixty three families are being parasitized by two hundred thirty seven species of foliicolous fungi representing

sixty three fungal genera in the whole surveyed area. The sixty three families can be categorized in to four categories. The category first has family Fabaceae with twenty host plants where as category second is being represented by Asteraceae and Moraceae being parasitized by eleven hosts each; category third is represented by Cucurbitaceae, Euphorbiaceae, Menispermaceae, Myrtaceae, Rutaceae, Solanaceae, and Verbenaceae with seven, ten, six, nine, ten, six and ten host plants parasitized respectively. Rest of the fifty three families are being represented by one to five parasitized hosts. No family has been found infected with more than twenty hosts.

*Mallotus philippensis*, *Ficus rumphi*, *Glycosmis pentaphylla* are found to be most susceptible host being parasitized by seven fungus each whereas *Eupatorium cannabinum*, *Haplophragma adenophyllum*, *Litsea chinensis* and *Adina cardifolia* are found to be infected with six fungus each; *Shorea robusta* with five fungus; *Mangifera indica*, *Cycas circinalis*, *Diospyros tomentosa*, *Artocarpus heterophyllum*, *Syzygium sp.*, *Mitragyna parvifolia* and *Tectona grandis* has been found to be infected with four fungus each. Rest of the hosts are being found to be infected with two to three fungus and majority are being parasitized by a single foliicolous fungus. There are a number of the hosts which had been collected infected with the same fungus either in different season or in different locality or simultaneously both having different ecological condition shows the adaptability of the fungus in different ecological or climatological conditions.

Twenty one hosts are the new hosts record viz., *Tinospora malaverica*, *Teliacora sp.*, *Eugenia sp.*, *Albizia procera*, *Lagerstroemia parviflora*, *Shorea robusta*, *Clerodendrum sp.*, *Glycosmis pentaphylla*, *Litsea chinensis*, *Clerodendrum viscosum*, *Trichonthea dioica*, *Murraya sp.*, *Polygonum sp.*, *Albizia lebbek*, *Saccharum spontaneum*, *Carissa carandas*, *Grewia elastica*, *Tectona grandis*, *Eriobotrya japonica*, *Zizyphus xylophyrus*, *Tectona grandis* whereas twenty three fungal taxon are new species to their respective genera viz., *Alternaria bauhinia*, *Alternaria bahraichensis*, *Alternaria ichnocarpicola*, *Alternaria kamalella*, *Alternaria tejensis*, *Cercospora oudhensis*, *Cercospora phlomidicola*, *Cercospora premnae*, *Cladosporium fici-caricae*, *Corynespora bahraichiana*, *Corynespora carissae*, *Corynespora celastricola*, *Corynespora elephantopii*, *Corynespora ichnocarpia*, *Corynespora mitragynae*, *Corynespora pongamicola*, *Corynespora tomenticola*, *Meliola flacourticola*, *Meliola syzyginea*, *Pseudocercospora caseariae*, *Pseudocercospora zizyphii*, *Stenella litseae*, *Stenella rajendrella*,

The review of literature Bilgrami et al., Ellis and Ellis, Jamaluddin et al., Mukerji et al., Sarbhoy et al., Verma et al., [1,2,3,4,5,6,7,8,9,10,11,13] reveals that all the fungus which has been reported to be a new record to Indian mycoflora.

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