

Minor Research Project

on

**‘Study of Fungal Biodiversity infecting the
Forest Trees of the jalgaon districts’**

By

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Summary and Publication

Summary

An extensive and intensive survey was conducted in order to collect, observe and study to the fungal specimens in the forest of Jalgaon District. Specimens were collected and brought for identification and Preservation. Photograph of interesting disease of plant were taken.

Study sites were selected in the natural forest, nursery and plantation.

- **Study sites were**

- 1) Maudevi forest
- 2) Chopra forest
- 3) Devghri forest
- 4) Yawal Forest
- 5) Nursery of JK Forest
- 6) Nursery of Yawal
- 7) Plantation
- 8) Fields

Besides that road side plantation gardens and farmers fields also surveyed. There are about five hundred plant species of plants are growing in the forest of Jalgaon. About 95 trees species are found in this localities, About seventy fungal disease were collected in whole. Study areas photograph of some important disease were taken.

List of some important interesting pathogens found in the forest of Jagaon district

- 1) *Alternaria alternaria*
- 2) *Astromella butae*
- 3) *Astromella parabutae*
- 4) *Cercospora adinanii*
- 5) *Cercospora apii*
- 6) *Cercospora aegilis*
- 7) *Cercospora aegicola*
- 8) *Cercospora ahmadi*
- 9) *Cercospora alibiziae*
- 10) *Cercospora annulata*
- 11) *Cercospora benghlensis*
- 12) *Cercospora boswellata*
- 13) *Cercospora butae*
- 14) *Collelotrichum* sp
- 15) *Cornyspora morindae*
- 16) *Cylindrocladium* sp
- 17) *Dothiorella* sp
- 18) *Erysiphaecichoraeorum*
- 19) *Fomes* sp
- 20) *Fusicladium* sp
- 21) *Fusarium* sp,
- 22) *Glomerata cingulate*
- 23) *Hymenochaete* sp
- 24) *Mycovellosiella adinae*

- 25) *Mycovellosiella adinicola*
- 26) *Mycovellosiella brideliae*
- 27) *Myrothecium roridum*
- 28) *Phoma jolyana*
- 29) *Phoma glomerata*
- 30) *Phyllosticta amaltasia*
- 31) 21)*Phyllosticta dalbergiae*
- 32) *Phyllochora* sp
- 33) *Phaeoseptoria* sp
- 34) *Phyllctenia* sp.
- 35) *Phellinus lividus*
- 36) *Phelinus budius*
- 37) *Phellinus pacyphloeus*
- 38) *Pereniphora* sp
- 39) *Polyporus zonal*
- 40) *Tremetes* sp
- 41) *Psuedocercospora indica*
- 42) *Pseudoercospora kaiseri*
- 43) *Psudocercospora kydinae*
- 44) *Psedocerospora lagerstroemiae*
- 45) *Psudocercospora leucaenicola*
- 46) *Psuedocercospora madhulensis*
- 47) *Psuedocercospora morsideniae*
- 48) *Psuedocercospora .melicola*
- 49) *Psuedocercospora meliacearum*
- 50) *Psuedocercospora tomentosa*
- 51) *Psuedocercospora subsillis*

- 52) *Psuedocercospora syzgium*
- 53) *Psudocercospora tectonae*
- 54) *Psuedocercospora tecticola*
- 55) *Psuedocercospora ziziphicola*
- 56) *Psuedocercospora sagarenesis*
- 57) *Psuedocercospora ziziphae*
- 58) *Psuedocercospora woodfordigena*
- 59) *Psuedocercospora wrighticola*
- 60) *Psuedocercospora wrighticola*
- 61) *Psudocercospora wrightiae*
- 62) *Psuedocercospora wrighticola*
- 63) *Psucdoercospora viticola*
- 64) *Psuedocercospora viginicola*
- 65) *Passalora annonacearum*
- 66) *Passalora bambusa*
- 67) *Passalora bauhintigena*
- 68) *Passalora buteae*
- 69) *Passalora dalberengiae*
- 70) *Raveniella* sps
- 71) *Regidoporus* sp
- 72) *Uredo* sp

• **List of diseases**

- 1) Powdery mildew of Teak by *Uncinula tectonae*
- 2) Powdery mildew of Dabergia sissoo by *Phyllactenia* .

- 3) Leaf spot and blight of *Poongamia pinnata* caused by *fusicladium pooogamiae*.
- 4) Tarspot of *lagerstroemia parviflora* by *Rhytisma* sp
- 5) Leaf spot of *lagerstoemia parviflora* by *Psuedocerspora* sp
- 6) Leaf spot of *Pestliopsis* sp.
- 7) Leaf spot of *Bridaliaretusa* by *Colleotrichum* sp
- 8) Leaf spot of *Adina cordifolia* by *Mycovellosiella* sp.
- 9) Leaf spot of *Miliusa tomentosa* by *Altenaria alternate*.
- 10) Leaf spot of *Terminalia tomentosa* by *Pestalotiopsis* sp
- 11) Leaf blight of *terminalia tomentosa* by *Coniella terminaliae*.
- 12) Leaf spot of *Mitrgyna parviflora* by *Mycovellosiella* sp
- 13) Leaf spot of *Emblica officilais* by *Stenella* sp.
- 14) Leaf spot of *Holarrhena antidysenterca* by *altenaria*.
- 15) A Leaf spot of *Ficus benghalensis* by *Phoma* sp.
- 16) A Leaf spot of *Ficus religiosa* sp.
- 17) Leaf spot of *Azadirachta indica* by *Psuedocerspora* sp.
- 18) Root and stem rot of *Dalbergia* by *Ganoderma* sp.
- 19) Root and stem rot of *Azadirachta indica* by *Gaoderma* sp.
- 20) Root and stem rot by *Ganoderma* sp.
- 21) Leaf spot of *Morinda citrifolia* by *Cornyspora* sp.
- 22) Root and stem rot of *Lagerstroemia parviflora* by *Ganoderma* sp,
- 23) Rust of *Poongamia pinnata* by *Ravenelia* sp
- 24) leaf spot of *Bridellia retusa* caused by *Collelotrichum* sp
- 25) Rust of *Terminalia arjuna* caused by *Uredo terminaliae paniculata*,

Important Rust Disease of the Forest Trees

S.N.	Host	Pathogen	Locality	Period
1	Acaccia catechu	Ravenalia tandonii	Behind M.I.D.C Jalgaon	October to November
2	Acaccia arabica	Ravenalia indica	Manudevi Forest	November to March
3	Abrus tintorius	Ravenalia ovanata	Manudevi Forest	September to March
4	Acacia catechu	Ravenalia indica	Behind M.I.D.C Jalgaon	October to February
5	Albizzia lebbec	Ravenalia indica	Road side plantation	October to February
6	Dalbergia sisso	Marvalia achora	Nursery	October to February
7	Poongamia pinnata	Ravenalia sessilis	plantation	January to March.
8	Tectona grandis	Uredo sp	Devghiri forest	February to March

Powdered Mildew Disease of Trees of Jalgaon District

S.N.	Host	Pathogen	Locality	Period
1	Azadirachta indica	oidium sp	Manudevi forest	October to February
2	Acacia catechu	Erysphae accaciae	Yawal forest	February to March
3	Acacia catechu	Marcaccia rostoma sp	Around jalgaon	March to April
4	Albezzia lebbeck	Erysiphae sp	plantation	October to February
5	Albizzaia procera	Erysiphae	All sites	February to April
6	Dalbergia sissoo	Phyllactenia dalbergiae	Manudevi forest	February to March
7	Tectona grandis	Uncinula tectonae	plantation	November to march
8	Poongamia pinnata	Oidium sp	Nueries plantation	October to February
9	Mangifera indica	Oidium sp	Devgheri forest	December to March
10	Terminalia arjuna	Phyllactenia terminaliae	Manudevi forest	October to February

Root Rot and Heart Rot Diseases of Forest Trees of Jalgaon District.

S.N.	Host	Pathogen	Locality	Period
1	<i>Accacia catechu</i>	<i>G.tsuga</i>	MIDC, Jalgaon	August to January
2	<i>Azadirachta indica</i>	<i>Ganoderma lucidum</i>	Scrubbed forest Jalgaon	July to December
3	<i>Albezzia procera</i>	<i>Ganoderma lucidum</i>	University campus	August to January
4	<i>Albezzia lebbeck</i>	<i>Ganoderma lucidum</i>	Citygarden	August to January
5	<i>Butea monosperma</i>	<i>Ganoderma lucidum</i>	Around Jalgaon	August to January
6	<i>Bauhinia variegata</i>	<i>Ganoderma lucidum</i>	MIDC plantation , jalgaon	August to January
5	<i>Delonex regia</i>	<i>Ganoderma lucidum</i>	Jk parkjalgaon	September to February
7	<i>Dalbergia sisso</i>	<i>Ganoderma lucidum</i>	MIDC,jalgaon	July to December
8	<i>Lagerstoemia parviflora</i>	<i>Ganoderma lucidum</i>	Devghiri forest Chopra	Julyto December
9	<i>Morus alba</i>	<i>Ganoderma lucidum</i>	Road side plantation	August to January
10	<i>Muraya koenigii</i>	<i>Polyporus sp</i>	Farmers field, Jalgaon	August to January
11	<i>Mangifera indica</i>	<i>Ganoderma sp</i>	Jalgaon city	September to January
12	<i>Tamarandus indica</i>	<i>G.ahmadi</i>	Manudeviforest	August to January
13	<i>Terminalia arjuna</i>	<i>Ganoogerma sp</i>	Yawal forest	August to January

New disease-

- Leaf spot of *Bridellia retusa* caused by *Collelotrichum sp*
- Leaf spot of *Morinda citrifolia* caused by *Sirosporium sp*
- Leaf spot *Morinda citrfolia* caused by *Cornyspora sp*
- Leaf spot *Dioscoria* caused by *Cladosporium sp*,

New species found here

- 1) Sirosporium sp
- 2) Cornyspora sp
- 3) Cercospora sp
- 4) Cladosprium sp

Conclusion :

An extensive and intensive survey was conducted in order to collect the diseased specimen of different sites of the forest area of Jalgaon District in the session 2013 to 2015 in the different season. In about 72 fungal specimen or pathogens have been identified to cause different type of disease of the forest trees. In all about 25 severe disease were detected. Among the different type of disease 8 rust disease, powdery mildew 10, root and stem rot 13 were found. The whole fungal pathogen pseudocercospora – 23, Cercospora 10, Alternaria 1, Ascomela 2, Colleotrichum 1, Fusicladium 1, Phoma 2, Phyllostica 2, Mycovelosiella 1, Cylendrocladium 1, Dothiorella 1, Erysiphae 2, Passolarea 4 have been reported.

4 new diseases have been discovered and 4 new species of Hyphomycetus fungus were reported.