

## RESULTS AND CONCLUSION

In the present investigation, the fungal biodiversity of some of the localities of Western Ghats, in Satara District (M.S.), has been carried out. The study was mainly concentrated on Ascomycetous and few Deuteromycetous fungi growing as parasites and saprophytes on leaves i.e. foliicolous one. The one year explorations gave some interesting results. The study was concentrated on taxonomic features of fungi their identification, nomenclature and preservation.

In present investigation, 31 species are recorded on different 46 angiospermic and a gymnospermic host. Out of which, 10 species are new to India, 7 new varieties have been proposed, 3 species have been recorded new to Maharashtra and 24 hosts have been identified as new additional host records to the fungi of Maharashtra.

As far as the class-Ascomycotina is concerned, two suborders viz. Pseudosphaeriineae and Dothideineae of the order-Dothideales have been studied so far (von Arx, J.A. and Muller 1975).

From the suborder-Pseudosphaeriinae, 2 families are studied viz. Mycosphaerallaceae and Micropeltidaceae.

The family-Mycosphaerallaceae is represented by the two genera, *Didymella* Sacc. and *Mycosphaerella* Johnson. Both are new species records to the fungi of India.

The other largest family-Micropeltidaceae was represented by 4 genera, viz. *Dictyothyria* Theissen and Sydow, *Dictyothyrium* Theissen, *Micropeltis* Montagne and *Stomiopeltis* Theissen. The genus *Dictyothyria* Theissen and Sydow is studied with a new host record to the fungi of Maharashtra. While the genus-*Dictyothyrium* Theissen is represented by a new variety *D. ocoteae* (Batista) Batista var. *phaseoli* var. nov. on *Phaseolus vulgaris* L. and a species *D. hironymi* (Rehm.) Bat, comb. nov., new to fungi of India. The genus-*Micropeltis* Montagne is studied with the 3 species and all species are recorded for the first time from India. The genus-*Stomiopeltis* Theissen, is also recorded as a new species to the fungi of India.

Thus, the suborder-Pseudosphaeriinae was studied with 6 genera and 7 species. All these species are new records to the fungi of India occurred on 8 angiospermic hosts. While, one host is a new addition to the fungi of Maharashtra.

The second suborder-Dothideineae, is again represented by 2 families namely Schizothyriaceae and Leptopeltidaceae. The family-Schizothyriaceae is studied with 4 genera viz. *Ciferriotheca* Bat. and Lima, *Leptophyma* Sacc., *Myriangiella* Zimm. and *Schizothyrium* Desmaziers.

According to von Arx J.A. and Muller (1975) classification, the genus *Ciferriotheca* Bat. and Lima is transferred to the genus-*Metathyriella* Syd., as a synonymous one. But in this investigation, due to peculiar nature of ascomata, asci and ascospores a separate existence has been maintained. The genus-*Ciferriotheca* Bat. and Lima, is studied with, a formation of a new variety *Ciferriotheca pere* (Bat.) Bat. var. *clausenae* var. nov. on the host *Clausena indica* (Dalz.). While the genus-*Leptophyma* Sacc. is represented here by a new variety *L. ugandensis* (Hansf.) Arx var. *pittosporri* var. nov. on *Pittosporum daxycaulon* Miq. and also on a new host *Mangifera indica* L., which is recorded for the first time from Maharashtra. The genus-*Myriangiella* Zimm. is studied, with the formation of a new variety, *Myriangiella arcuta* Toro var. *lanceolata* var. nov. on the host *Olea dioica* Roxb. The collections of genus-*Schizothyrium* Desmaziers, is represented by 2 new varieties viz. *S. melanoplacum* (Mont.) Sacc. var. *memecyliae* var. nov. on *Memecylon umbellatum* Burn. and *S. jaapii* (Rhem.) Sacc. var. *sahyadrensis* var. nov. on 2 different hosts, while 2 species have been recorded for the first time from India and 3 new hosts have been recorded as new additions to the fungi of Maharashtra.

The family-Leptopeltidaceae is represented by a single genus-*Leptopeltopsis* Petrak. The species *Leptopeltopsis nebulosa* Petrak occurs on wide range of angiospermic hosts and all these are new host records to the fungi of Maharashtra.

Thus, the 5 genera were recorded on 24 angiospermic hosts. 2 species were recorded as new to fungi of India, 5 new varieties have been proposed and 14 hosts are additions to the fungi of Maharashtra.

Class-Ascomycotina have been studied with 9 species and all are recorded for the first time in India, 6 new varieties have been proposed and 15 hosts record are observed for the first time from Maharashtra. Total 33 new hosts have been collected.

The another class-Deuteromycotina was represented by two orders namely

Moniliales and Melanconiales. The order-Moniliales is represented by a single family-Dematiaceae with 3 distinct genera viz. *Alternaria* Nees ex Fr., *Curvularia* Boedijn and *Zygosporium* Mont. The genus-*Alternaria* Nees ex Fr. was observed on 5 angiospermic hosts. It is represented by 2 new species and 3 new host records to the fungi of Maharashtra. A species of *Alternaria tenussima* (Kurze ex Pers.) Wittshire, is observed on endangered species i.e. *Abitulon ranadei* Woodr. and Stapf. of Western Ghats. The genus-*Curvularia* Boedijn, was studied, as a new species record to the fungi of Maharashtra. While the genus-*Zygosporium* Mont. is represented by single species new to India and with 3 new host records to the fungi of Maharashtra.

Thus, the family-Dematiaceae is represented by a species, new to India, 3 species are new to Maharashtra and 6 hosts have been recorded for the first time from Maharashtra.

The other order-Melanconiales is represented by family-Melanconiaceae, with a single genus-*Pestalotia* de Notaris. It is collected on 4 different hosts, including a gymnospermous taxa *Zamia*. The collection is recorded as a new proposed variety, *Pestalotia betazamiae* Guba var. *satarensis* var. nov. on *Zamia* sps., while three are new host records to the fungi of Maharashtra.

Thus, the class-Deuteromycotina is represented in the present investigation by a species, new to India, a new variety and 3 new species are recorded from Maharashtra for the first time. While 9 hosts are the additional host records to the fungi of Maharashtra.

Thus, in the present investigation, fungal biodiversity of Western Ghats were studied from various localities. They were properly identified and arranged as per recent classification. The germplasm is deposited in Mycological Herbarium Botany Department Y.C.I. Institute of Science, Satara with numbers 1 to 31. All the slides are also properly labeled, arranged in wooden slide box and preserved in the herbarium.

Apart from these new fungi, the known fungi from various groups were collected studied and are also deposited in Botany Department (appendix attached).