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## Wood Rotting Fungi (Aphylophorales) From Ashti -1

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### ABSTRACT

Wood rot fungi are integral part of ecosystem associated with the recycling of the dead wood biomass of the earth. This communication will enrich the treasure of unexplored Ashti Tal. Dist. Beed district mycofloral wealth of the state. Survey of wood rot fungi (Aphylophorales) from Ashti Tal Dist. Beed in Maharashtra. Study was carried out for the period of July 2011 to January 2013. During present survey 61 number of mycofloral specimens were collected after critical studies of herbarium specimens and following the identification manual above specimens are falling under the 27 species and 23 genera. mycofloral diversity indicates that there are possibility to record more numbers of species under these genus and other good number of species. Species like *Phellinus badius*, *Ganoderma lucidum*, *Coriolopsis brunieo leuca*, *Flavodon flavus*, are the dominating representative types of the area.

**Key word** : Wood-rot fungi, Aphylophorales, Ashti.

### INTRODUCTION

Aphylophorales is the largest order in Basidiomycetes. It includes around 3200 species known till date. Studies on Aphylophorales were initiated with the launch of studies in Indian fungi. Species of Aphylophorales play a major role in the process of wood decay, resulting serious damage to the forest economy of our country (cause damage to wood or timber). Almost all Aphylophorales are lignicolous and grow on bark and wood e.g. on wood of Tamarind, Mango, Babul etc. Aphylophorales also cause white rot, where in Lignin is degraded and cellulose is partially degraded. Aphylophorales also cause damage to the stem of, Neem, Babul and Sandal wood etc. These fungi decay wood by releasing cellulolytic and Lignolytic enzymes which specially digest complex organic components of wood like cellulose, hemicelluloses and lignin. It is therefore, very important to identifying the species of the group Aphylophorales that course a great damage to stem/timbers of valuable forest.



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## MATERIAL AND METHODS

Fruit bodies of wood rotting fungi were collected in Ashti (Deolali forest and Beed Sangvi forest and other parts of Ashti) done during the month of July- August just after the first rainfall and September to Middle October (i.e. after rainfall). As this period was found to be congenial luxuriant growth, development and availability of Aphylophorales. Preliminary morphological features of collected specimens were recorded from fresh material. Specimens were then dried under sunlight. Dried specimens were labelled and conserved in plastic “minigrip” bags for further microscopic investigations. Colour codes of dried fruit bodies were assigned according to Kornerup & Wanscher (1978). For microscopic investigations, fine sections through the basidiocarp were made using a razor blade under a microscope and mounted in 5 % potassium hydroxide (KOH), in Cotton Blue and in Melzer’s reagent (Kreisel & Schauer 1987). Line drawings and measurements were made at all the identified specimens were kept in brown paper bags and their tops tightened with rubber band as per the international mycological herbarium guidelines. Collected specimen was labeled with its name locality and host name. One or two naphthalene balls were kept in each pocket to avoid damage by insects. All studied specimens, including type material of new species, are deposited in Botanical survey of India, Northern Circle, Deheradun.

## RESULT AND DISCUSSION

During the period of present investigation, around 61 types of mycofloral specimens were collected for their through observations. Subsequently in manual form, their identifications were made and then they were put under 27 species and 23 genera.

Detail is as under in table form.



Sr. No.	Genus	Host	Locality
1	<i>Albatrellus confluence</i> (alb. & Schw.:Fr.) Kotl. & Pouz.	<i>Prosopis julifera</i>	Kada
2	<i>Athelia arachnoidea</i> (Berk.) Jülich.	<i>Ficus bengalensis</i> Linn.	Devineemgaon
3	<i>Ceraceomyces reidii</i> (Thind & Rattan) Rattan	<i>Santalum album</i> Linn.	Beed Sangavi and Mahdeodera
4	<i>Coriolopsis brunneo-leuca</i> (Berk.) Ryv.	<i>Diospyros melaxylon</i>	Beed Sangavi, Mahadeodera
5	<i>Daedaleopsis confrogosa</i> (Bolt. : Fr.) Schroet	<i>Moringa pterigosperma</i> Gaert.	Shirapur
6	<i>Epithele fulva</i> Cunn.	<i>Dalbergia sissoo</i> Roxb.	Kada
7	<i>Favolus brasilensis</i> (Fr.) Fr.	<i>Zizyphus jujuba</i> Lamk.	Mahadeo Dera
8	<i>Flavodon flavus</i> (Kl.) Ryv.	<i>Annona reticulate</i> Linn. <i>Azadirachta indica</i> Juss <i>Mangifera indica</i> Linn. <i>Acacia leucophloea</i> Willd.	Limbodi, Shirapur, Devineemgaon, Dhamangao.
9	<i>Funalia leonine</i> (Kl.) Pat.	<i>Mangifera indica</i> Linn.	Devineemgaon
10	<i>Ganoderma lucidum</i> (Curt. & Fr.) Karst.	<i>Acacia arabica</i> Willd., <i>Tamarindus indica</i> Linn.	Kada, Limbodi, Pimala, Khilad, Kada and Devineemgaon
11	<i>Hexagonia tenuis</i> (Hook.) Fr.	<i>Mangifera indica</i> Linn. <i>Glericidia sepium</i>	Mahadeodara, Khilad
12	<i>Hypochnicium sphaerosporum</i> Hoehn. & Litsch.	<i>Zizyphus jujuba</i> Lamk.	Devineemgao
13	<i>Lenzites acuta</i> Berk.	<i>Azadirachta indica</i> Juss.	Khilad
14	<i>Lopharia cinerascens</i> (Schw.) Cunn.	<i>Bougainvillea spectabilis</i> Willd.	Kada
15	<i>Lopharia rhodocarpa</i> (Rehill & Bakshi) Rattan	<i>Bougainvillea spectabilis</i> Willd.	Kada
16	<i>Loweporus tephroporus</i> (Mont.) Ryv.	<i>Melia azadirach</i>	Devineemgaon and Shirapur
17	<i>Phellinus badius</i> (Berk. & Cke.) Cunn.	<i>Acacia nilotica</i> and <i>Acacia leucophloea</i>	Patan Sangavi, Loni, Pimala, Kada,



18	<i>Phellinus gilvus</i> var. <i>gilvoides</i> (Schw.) Fr.	<i>Acacia nilotica</i>	Limbodi
19	<i>Pyrofomes albo-marginatus</i> (Lev.) Ryv.	<i>Melia azadirachta</i>	Devineemgaon
20	<i>Phlebia hydnoidea</i> (Cooke & Mass.) Christ.	<i>Santalum album</i>	Mahadeodara
21	<i>Porogramme ravenalae</i> (Berk. & Br.) Pat.	<i>Melia azadirachta</i> , <i>Glericidia</i>	Limbodi and Mahadeodera
22	<i>Schizophyllum commune</i> Fr. ex Fr.	<i>Tamarindus indica</i> , <i>Acacia nilotica</i> and <i>Mangifera indica</i>	Kada, Doithan, Sangavi, Dongargan and Dadegaon
23	<i>Scytinostroma rhizomorpha</i> Rattan	Unknown climber	Sangavi
24	<i>Stereum hirsutum</i> (Willd. : Fr.) Gray	<i>Santalum album</i> , <i>Glericidia</i>	Mahadeodera and Sangavi
25	<i>Stereum sanguinolentum</i> (Alb. & Schw. : Fr.) Fr.	<i>Tamarindus indica</i>	Khilad and Limbodi
26	<i>Trametes cingulata</i> Berk.	<i>Melia azadirachta</i>	Limbodi and Devineemgaon
27	<i>Trametes pubescens</i> (Schw. : Fr.) Pilat.	<i>Melia azadirach</i>	Devineemgaon, Shirapur

### Discussion

61 collected specimens were identified to their respective 23 genera and 27 species (collected from Ashti Taluka). From among 27 taxa and 23 genera the genus *Phellinus badius* was found copious in quantity and were dominant followed by *Ganoderma lucidum*, *Flavodon flavus*, The genera like *Porogramme* and *Albatrellus confluence* were found to be feeble in quantity. Effect of weather parameters such as precipitation, relative humidity, and temperature and host specialization in the prevailing respective ecosystems on collected members of Aphyllophorales was studied. The genera like, *Albatrellu* and , *Stereum* have to occur and grow during precipitation, where as precipitation preceding genera like *Schizophyllum*, *Coriolorpsis*, *Flavodon*, *Lenzites* etc. which occurred immediately after precipitation and *Phellinus*, and



*Ganoderma* occurred in delayed form after rains. The genera like *Albatrellus* and *Scytinostroma*, have been recorded for the first time from Marathwada.

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### Photographs of Wood rot fungi



*Albatrellus confluence*    *Athelia arachnoidea*    *Ceraceomyces reidii*    *Corioloopsis brunneo-leuca*

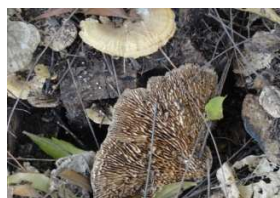


*Daedaleopsis confragosa*    *Epithele fulva*    *Favolus brasiliensis*    *Flavodon flavus*



*Funalia leonine*    *Ganoderma lucidum*    *Hexagonia tenuis*    *Hypochnicium sphaerosporum*





*Lenzites acuta*



*Lopharia cinerascens*



*Lopharia rhodocarpa*



*Loweporus tephroporus*



*Phellinus badius*



*Phellinus gilvus*



*Pyrofomes albo-marginatus*



*Phlebia hydnooides*



*Porogramme ravenalae*



*Schizophyllum commune*



*Scytinostroma rhizomorparum*



*Stereum hirsutum*



*Stereum songulantum*



*Trametes cingulata*



*Trametes pubescens*