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**WOOD INHABITING AGARICS ON  
DIFFERENT WOOD SPECIES IN RELATION TO  
WOOD DECAY**

**By**

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## ABSTRACT

Wood is one of the most important raw materials in the world. Wood as any naturally produced organic material may be subject to decay or fungal stains.

One key to the satisfactory use of forest products as building materials is an understanding of the agents and conditions that can lead to decay or other forms of deterioration.

Wood inhabiting fungi drew attention to themselves because of their effect on the lucrative timber market. Most decay fungi belong to the botanical class Basidiomycetes. A few are Ascomycetes. Several hundred species of fungi may decay wood products. Their scientific study therefore is of great importance.

Since large number of wood inhabiting fungi are present in natural habitats this study was confined to the lignicolous agarics found in wood species in natural habitats.

Wood decaying agarics were studied in their natural habitats during the period of one year from August 2003 to August 2004. The agarics were collected from both building timber and naturally infected decaying wood from the University premises, home gardens, building sites, saw mills, log yards and timber stores, and their habitats and macroscopic features were studied. They were collected in the proper way and suitably prepared for transport and short-term storage - A spore print was made on black-white paper.

The macroscopic and microscopic examination followed, together with the documentation and photographs. The identification of the agarics was undertaken by using reliable keys, illustrations and suitable descriptions.

Wood decaying agarics were identified as, *Armillaria mellea*, *Contharellus* spp, *Coprinus macropus*, *Caprinus pallidus*, *Favolaschia thwaitessi*, *Favolus ciliuris*, *Marasmius caryotae*, *Marasmius umbraculum*, *Mycena grisea*, *Pleurotus flabellatus*, *Pleurotus reticulatus*, *Lentinus giganteus*, *Lentinus lcomtie*, *Lentinus sajor-caju*, *Schizophyllum commune*, and *Volvariella volvacea*.

*Lentinus* spp were found as brown rot fungi while *Armillaria mellea* and *Pleurotus* spp found as white rot fungi.

*Schizophyllum commune* was found on a large number of wood species followed by genus *Lentinus*. The appearance of mushroom fruiting bodies coincided with the rain. Fruiting bodies of *Pleurotus reticulatus*, *Coprinus macropus* appeared during rainy seasons while *Schizophyllum commune* was found throughout the year. In *Coprinus macropus* and *Marasmius caryotae* fruiting bodies lasted only one day while *Schizophyllum commune* lasted for weeks. Most of the wood inhabiting agarics appeared as clumps and solitary specimens were very rare.

*Coprinus* spp and *Marasmius* spp were found on very old rotting logs and stumps while *Schizophyllum commune*, *Lentinus* spp and *Cantharellus* spp found on intermediately decayed tree trunk, stumps and building timber.

*Schizophyllum commune* was found on outer barks as well as sapwood and heartwood regions of logs and building timber. They appeared throughout the year and fruiting bodies were fresh under moist conditions, dry and leathery in dry seasons. *Schizophyllum commune* was able to attack a wide range of hardwood and softwood species

In the university premises and home gardens, most of the agarics found on stumps, fallen logs and tree trunks of various wood species which were kept in open areas for a long time, in contact with the ground and exposed to the sun and rain regularly. In timber stores fungal attack was very rare and attack was mainly on the outer bark or sapwood region of Rubber and Mango wood while saw mills and log yards fungi attack was found on many logs which were kept out doors for a long time.

*Chloroxylon swietenia*, *Vitex altissima*, *Manilkara hexandra* etc. could be categorized as durable timber species while *Swietenia macrophylla*, *Artocarpus heterophyllus* and *Pericopsis mooniana* categorized as a moderately durable timber. *Hevea brasiliensis*, *Mangifera indica* were categorized as susceptible timber species. Hence it is recommended to use preservative treatment for the effective utilization of these perishable timber species.

Results suggested that most of the wood examined were attacked by agarics when they were exposed to adverse environmental conditions for a long time.

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