



---

DIVERSITY OF MACROFUNGI IN DIFFERENT FORESTS OF MALNAD  
REGIONS OF KARNATAKA STATE

Dr. Ashok Chittaragi

Department of P. G. Studies & Research in Applied Botany, Mycological Laboratories, Bio-Science Complex, Jnana Sahyadri, Kuvempu University, Shankaraghatta, Shivamogga (Dist), Karnataka, India.

**ABSTRACT:**

An examination on occasional assorted variety of macrofungi was led for two successive years (2010-2012) in Shimoga evergreen forest area of Karnataka. Because of the investigation, distinctive macrofungi were accounted for speaking to 38 species, 28 genera and 19 families. Most extreme species were saprophytic (28) in nature occupying the dead logs, leaf litter, fertilizer and so forth while 3 species were mycorrhizal with trees. Just 2 species were parasitic while 2 species were termitophilic. Most extreme recurrence of event was displayed by *Schizophyllum* collective (half) and furthermore the most astounding thickness was of the equivalent species (4.44). *Lentinus polychrous* was the most copious species (12.33). Species Richness Index was most astounding in stormy season (4.57) followed by summer season (1.57) and winter (0.84). At present there is no proof on the status of large scale parasites of this piece of the state. With respect to significance of organisms in different parts of life and for the preservation reason, the present examination has been embraced.

**KEYWORDS:** Jalukbari save backwoods, Assam, Parasites, Regular assorted variety, Species extravagance, Shimoga forests.

**INTRODUCTION:**

Macrofungi is a particular counterfeit gathering of organisms dependent on size. It incorporates species with enormous and unmistakable fruiting bodies which might be either epigeous or hypogeous. Macrofungi show up essentially just under exact blends of conditions like land areas, temperature, dampness, light and encompassing verdure. Macrofungi are lovely as well as assume a critical job in industry, agribusiness, medication (6), and from various perspectives. Out of 1.5 million types of parasites assessed (3), a sum of just 21,679 macrofungi of Ascomycetes and basidiomycetes have been enrolled (7) from four major land areas of the world. Environmentally macrofungi can be characterized into three noteworthy gatherings: saprophytes, parasites and symbionts (mycorrhizas); among them many structure compulsory



association with plant/trees. Quick exhaustion of the woods zone in this area because of human exercises has brought about the quick decrease of plant species in this manner diminishing the quantity of macrofungi from timberlands. This may bring status of numerous macrofungi as wiped out even without being reported. A few specialists have contemplated decent variety of macrofungi from various pieces of India to be specific Kashmir (8), Garhwal (9), Tamil Nadu (5) etc. However exceptionally less number of reports showed up from north eastern piece of India. No endeavor has been started to report

macrofungi from this area. An endeavor was made by researchers to discover some palatable mushrooms of Dhemaji region of Assam (2). Somewhere in the range of 12 eatable organisms were observed to be used by the ethnic clans of this locale. No such endeavors have been produced using Kamrup locale of Assam. Despite the fact that, the locale is encompassed by backwoods from three sides; quick formative exercises in the region is diminishing it at a quicker rate. Henceforth documentation of macrofungi from this locale is of most extreme significance before they are cleared out from the substance of the earth. Keeping this viewpoint in view the present examination was directed during 2010-2012 to archive the full scale parasitic species and their employments.

## MATERIALS AND METHODS

### Study site

The present examination was led in the Bhadra Reserve Forest of Shimoga district of Karnataka. It is situated between 25°5' - 25°53' N scope and 91°22' E to 91°28' E longitude toward south west corner of Shimoga region and in the southern bank of waterway Bhadra. The normal all out territory secured was roughly 40 km<sup>2</sup>, a large portion of which are undulating sloping landscape and floodplains of stream Brahmaputra. The zone is exceedingly rich with regular and developed greenery. Different sorts of vegetation are found all through Malnad hold woodland which speaks to evergreen, semi-evergreen, deciduous sort, bushes and meadows of tall and short. The herbs and bushes are for the most part ruled by *Ageratum conyzoids*, *Bigonia lanciniata*, *B. roxburghii*, *Centella asiatica*, *Hydrocotyle rotundifolia*, *Eupatorium odoratum*, *Melastoma malabarthicum* and *Lantana camera*. The normal vegetation included *Cassia fistula*, *C. sophera*, *C. nodosa*, *C. tora*, *M. prurita*, *Psidium guava*, *Citrus* sp, *Murraya koenigii*, *Ficus religiosa*, *F. glomarata*, *F. benghalensis*, *Aegle marmelos*, *Bombax ceiba*, *Zizyphus jujuba* and so forth. The *Polialthia longifolia*, *Dalbergia sisso*, *Eucalyptus alba* and *Tectona grandis* are normally discovered planted trees. The temperature runs between 10.6°C-32°C and the normal yearly precipitation runs between 300-400 mm. The most precipitation happens during rainstorm period with a greatest temperature of 32°C and least temperature of 24°C and relative mugginess between 55.5-85.5 %.

### Collection of Macrofungi

The investigation was directed for two successive years from November, 2010 to October, 2012. So as to gather macrofungi, three plots of about were chosen arbitrarily covering the entire hold forest regions. Inspecting was finished during summer, stormy and winter seasons every year. The examples were gathered with consideration to maintain a strategic distance from the harm utilizing blade or forceps, and transported to the lab in independent and disinfected compartments/polythene sacks. Increase number were apportioned to each example and different subtleties like host/substratum, shading, smell (assuming any) of the sporocarp and other noticeable highlights were recorded at site. Proper photos were taken in the natural surroundings just as subsequent to achieving the lab. Pen, book, focal point and marks were additionally conveyed alongside for account and significant data. Date and spot of accumulation were likewise promptly recorded.

### Identification of macro fungi

The sporocarps experienced were recognized by correlation utilizing applicable literary works (1), (4) (11). Protection of the examples was done in 2 % and 4 % formaldehyde relying on sporocarp's surface.

### Data analysis

Three characteristics of the species in the network: Density (number of sporophores per unit region), which is a proportion of the numerical people in respect to species; Frequency (what number of tests contain sporophores of a given animal categories), which estimates the normality of the species and Dominance, the rate at which the species happens most in the inspecting territory.

---

## CONCLUSION

During the present investigation, 38 species were gathered which were conveyed in 19 families and genera. The assorted variety of verdure and climatic conditions in the woods locale has made conditions for the development and advancement of a wide assortment of large scale parasitic species. These large scale growths assume a significant job in the support of environment and furthermore fill in as a substitute of sustenance for the neighbourhood occupants. The innate network accumulates wild growths from the timberland for utilization just as for selling in the neighbourhood advertise. Thinking about the significance of full scale growths with respect to condition, wellbeing and economy, their documentation is extremely basic. Subsequently further overview of large scale growths in this district is of incredible significance and ought to be done for protection before it is cleaned from the essence of the earth because of human mediation.

## ACKNOWLEDGEMENT

We thank the Chairman of the Department of Applied Botany, Mycological laboratory, Jnana Sahyadri, Kuvempu University Shankaraghatta-577451, Shimoga for giving opportunities.

## REFERENCES

1. Afyon A, Konuk M, Yagiz D and Helfer S. 2005. A study of Wood Decaying Macrofungi of the Western Black Sea region of Turkey. *Mycotaxon*, 93: 319-322.
2. Alexopolous CJ, Mims CW and Blackwell M. 1996. *Introductory Mycology*. John Wiley & sons, New York. 554.
3. Bates SC. 2006. A Preliminary Checklist of Arizona Macrofungi. *Canotia* 2 (2): 47-78.
4. Champion HG and Seth SK. 1963. *A Revised Survey of the Forest types of India*. The Manager Govt. of India Press, Nasik. 351.
5. Cowan A. 2001. Fungi – Life Support for Ecosystems. *Essential ARB* 4: 1-5.



**Dr. Ashok Chittaragi**

**Department of P. G. Studies & Research in Applied Botany, Mycological Laboratories, Bio-Science Complex, Jnana Sahyadri, Kuvempu University, Shankaraghatta, Shivamogga (Dist), Karnataka, India.**