Diversity of Macrofungi from North Maharashtra-I

S. Y. Patil
S. S. V. P. S. L. K. Dr. P. R. Ghogrey Science College, Dhule
sambhajiyp@rediffmail.com

ABSTRACT:
Macrofungi (Mushrooms) are an important and integral component of the ecosystem. Mostly mushrooms are fleshy, sub fleshy or sometimes leathery, umbrella like sporophore, saprophytic in nature. The survey was conducted in rainy and winter season of 2015 in 3 different places which included Mountains, Grassland and Forest areas of North Maharashtra. A total number of fourteen species belonging to thirteen genera were recorded viz. Agaricus silvaticus, Agaricus xanthodermus, Artomyces pyxidata, Bolbitus titubans, Coprinus micaceus, Cyathus striatus, Dacryopinax spathularia, Geastrum triplex, Laccaria laccata, Lenzites betulina, Marasmius siccus, Mycena subcaerulea, Polyporous umbellatus and Stereum hirsutum. Among those except Agaricus silvaticus and Agaricus xanthodermus remaining were found rarely.

Keywords: Macrofungi, Pimpalner, North Maharashtra

Introduction:
Macro fungi are generally mushrooms, which possess fleshy, sub fleshy, leathery, umbrella like fruiting bodies, which bears spore producing gills. These macro fungi are edible or poisonous. Mushrooms are seasonal fungi with diverse importance in the forest ecosystem.

Mushrooms have been extensively studied in most of the parts of India. Berkely (1852) described 15 species of mushrooms in his ‘Decades of Fungi’ from Darjiling. Latter on Murrill (1915), Saini and Atri (1981, 1982, and 1984), Natarajan and Raman (1980) made a major contribution in Boletaceae. Sathe and Deshpande (1979) discovered new genus Chlorolepiota of Agaricales from India.


Materials and Methods:

Regular field trips were carried out during 2015 in rainy and winter seasons at Pimpalner, Toranmal forests. Macroscopic observations like shape, size, colour of fruiting bodies were made at time of collection. Collected fruiting bodies of fungi packed in polythene bags and holes were made to bags for aeration, collected samples brought to laboratory on same day to avoid decay for further work. Microscopic details were studied by free hand sections mounted in 10 % KOH, stained with 1 % Cango red solution. Some sections were mounted in Cotton Blue. Identification of fungi with the help of Lakhanpal (1996), John Ramsbottom (1969), Peter Roberts and Shelley Evans (2011), Hakimi et al (2013) and other relevant literature.

Results

Taxonomic Account:

1) **Agaricus silvaticus** Schaeffer
   Habitat: In wood land growing on ground, saprobes.
   Cap brown to reddish brown, covered with scales, weakly convex up 150 mm diameter.
   Gills greyish pink to brown at maturity. Stem long smooth up to 150 mm height, large pendulus ring. Spores long ellipsoid 7x3 μm.

2) **Agaricus xanthodermus** Genevier
   Habitat: In wood land growing on ground, in debris, in clusters.
   Cap smooth, white to cream coloured, largely convex, diameter up to 150 mm, gills pink, chocolate brown at maturity, stem long, smooth, and white to cream, up to 150 mm in height, with a thin pendulous ring, the base of stem bulbous. Spores 4.5-6x2-3 μm

3) **Bolbitius titubans** (Bulliard)Fries
   Habitat: In wood land growing on ground, in debris.
   Cap smooth, bright yellow, cone shaped, thin, with striate margin, up to 40 mm wide, gills pale yellowish, stem narrow, fragile, pale yellow, up to 100 mm in height.

4) **Artomyces pyxidata** (Pers.) Julich
   Habitat: On tree trunks
   The sunset spindle produces smooth, tubular or slightly flattened branched fruiting bodies with pointed tips. Height up to 75 mm and diameter up to 5 mm.

5) **Coprinus micaceus** (Bolton) Vilgalys et al
   Habitat: In wood land growing on ground, in debris.
   Cap up to 5 cm wide, conical to campanulate, margins curved upward, narrow striations, gills thin, black, liquefying, stem to 8 cm in height, thick, white brittle.

6) **Cyathus striatus** (Hudson) Persoon
   Habitat: In wood land growing on ground, in debris.
The fluted Bird’s Nest forms fruiting bodies that first looks like a tiny, shaggy, brown goblet with a smooth, whitish top. This top surface ruptures at maturity to reveal the grey egg like peridioles below. Height of fruiting body up to 15 mm and diameter up to 8 mm.

7) *Dacryopinax spathularia* (Schweinitz) Martin

Habitat: On tree trunks

The fan shaped jelly produces yellow-orange, rubbery-gelatinous fruiting bodies that are fan or spatula shaped at the top, with gelatinous or cartilaginous stalk. Cap diameter up to 10 mm, height up to 25 mm.

8) *Geastrum triplex* Junghuhn

Habitat: In wood land growing on ground, in debris.

The collared earthstar produces fruiting bodies that are onion-shaped at first, with pointed tip. At maturity thick outer skin splits and peels back to form 4-7 rays or arms, revealing puffball spore sac at the center. Height up to 60 mm and diameter up to 120 mm.

9) *Laccaria laccata* (Scopoli) Cooke

Habitat: On tree trunk

Caps convex, expanding at maturity, wavy at margins, smooth cream colour, diameter up to 50 mm gills distinct, stem fibrous, cap coloured, spores 3-5x2.5-3 µm

10) *Lenzites betulina* (Linnaeus) Fries

Habitat: On tree trunks

Fruiting bodies leathery, finely hairy caps, zoned in grey and yellow colours, gills irregular, often splitting or joining together, cap thickness up to 5 mm and diameter up to 50 mm. Spores white to cream.

11) *Marasmius siccus* (Scop.) Fr.

Habitat: On tree trunk

Cap up to 5 cm wide, campanulate, yellowish red to rose brown, darker in the center, gills white to pale reddish brown, stem up to 4 cm long, thick dark brown


Habitat: In wood land growing on ground, in debris

Cap up to 10 mm wide, conical to campanulate, brown in center, yellowish at margins, gills pale flesh colour, stem 3-4 cm long, thick, white.

13) *Polyporous umbellatus* (Persoon) Fries

Habitat: On tree trunks

Umbrella like large, compound fruiting bodies with multiple caps arising from central stem, height and diameter up to 500 mm. The caps are grey-brown, smooth, and almost circular, pores are white to cream, and strongly decurrent.

14) *Stereum hirsutum* (Willdenow) Persoon

Habitat: On tree trunks
Thick leathery bracket-like fruiting bodies, caps are finely hairy, zoned in shades of grey, ocher, brown, or red brown, sometimes green-tinted by algae, margins are wavy, cap 2mm in thickness, 40 mm in diameter.

*Agaricus silvicus* Schaeffer

*Agaricus xanthodermus* Genevier

*Bolbitius titubans* (Bulliard)Fries

*Coprinus micaceus* (Bolton) Vilgalys et al

*Artomyces pyxidata* (Pers.) Julich

*Cyathus striatus* (Hudson) Persoon
**Dacryopinax spathularia** (Schweinitz) Martin

**Geastrum triplex** Junghuhn

**Laccaria laccata** (Scopoli) Cooke

**Lenzites betulina** (Linnaeus) Fries

**Marasmius siccus** (Scop.) Fr.

**Mycena subcaerulea** (Peck) Sacc.
Polyporous umbellatus (Persoon) Fries

Stereum hirsutum (Willdenow) Persoon

Conclusion:

The macrofungi play an important ecological role in bio deterioration to maintain the balance of forest ecosystem. Some of them have high medicinal value while some cause wood rotting. The present article reports fourteen species of macrofungi among them Artomyces pyxidata, Dacryopinax spathularia, Laccaria laceata, Lenzites betulina Marasmius siccus, Polyporous umbellatus and Stereum hirsutum were found on tree trunks causing wood rotting and remaining were saprobes.

Acknowledgements’:

Author greatly thankful to Head, Principal and Management of S. S. V. P. S. L. K. Dr. P. R. Ghogrey Science College, Dhule, Maharashtra for laboratory and library facilities and kind support.
References:


