

FIVE MUSHROOM FROM SATPUDA RANGE OF JALGAON DISTRICT, MAHARASHTRA (INDIA)

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ABSTRACT

A survey was conducted for the collection and study of mushroom (macro fungi) of Satpuda range of Jalgaon district. Jalgaon district belongs to Khandesh region and Khandesh consist of three district. Jalgaon forest is having reach diversity of mushrooms. The present paper deals with addition of *Falvodon flavus* (Klotzsch) Ryvarden, *Fomitopsis scutellata* (Schwein.) Bondartsev & Singer, *Microporus xanthopus* (Fr.) Kuntze, *Polyporus arcularius* (Batsch) Fr., *Polyporus grammocephalus* Berk., these mushrooms are observed first time from Jalgaon district of Maharashtra. Morphotaxonomic studies of these were performed after identification and confirmation of the mushrooms.

Keywords: Five Mushroom, wood rotting, Satpuda range, Jalgaon district.

INTRODUCTION

A mushroom is described as the fruiting body of a fungus that typically appears above the ground and contains spores. *Aphylophorales* and *Agaricis* belongs to the class *Basidiomycetes*, many of these macro fungi cause plant disease and wood decay which are responsible for great economic loss in forestry as well as destruction of stored logs and wood product in common use. They cause brown rot, soft rot, white rot and heart rot. It is well known that it is breaking down of wood and changes in its physical and chemical properties that are term as wood decay. Mushrooms have been a part of our daily life since time immemorial. The floristic composition of this area has been studied by several researchers but the macrofungus which forms an important component of the ecosystem has been largely neglected in a biodiversity studies. The present study is an attempt to reveal a broad spectrum of diversity of mushrooms and their prevalent favorable ecological relationship in Satpuda range of Jalgaon district. The survey was conducted in 2019-2020 at different places which include mountain, hilly area, river banks etc of Satpuda range of Jalgaon district.

MATERIALS AND METHODS

Study and Collection Site: Satpuda range of Jalgaon having some dense forest area like Manudevi forest, Pal forest, Yawal forest, Langdha aamba forest, Devjiri forest, Waghjira forest etc of Jalgaon, Maharashtra. Collection with the help of sharp sterilized knife was used to collect the whole and parts of mushrooms growing on trees and on the ground. Mushroom samples collected were free of infection or insect attack. The dust and soil particles were isolated from the mushrooms. Proper care was taken to avoid the damaging of the mushroom. The mushrooms were collected, wrapped with tissue paper and kept inside a sterilized polythene bag. We have selected mushrooms of different size and shape for the study purpose. There are a few sporadic reports on mushrooms diversity on this region Firdousi SA and Khan TA (2015) and (2019). Preliminary identification of mushrooms was done with the available literature and monograph of Chandulal *et al.*, (2013), Dehariya *et al.*, (2010), Grimes (1994), Leelavathy and Ganesh (2002), Singer (1989), Spoerke Linco (1994) and Subramanian (1995).

RESULTS AND DISCUSSION

Mushrooms are commonly growing in the forest and other habitat as parasite, saprophyte and Symbiont. Satpuda range of Jalgaon district is still unexplored due to unawareness and less attention towards this

Research Article

subject. Following are five species of mushroom first time observed in the study area the detail descriptions are as follows

Falvodon flavus (Klotzsch) Ryvardeen, Norwegian Journal of Botany **20** (1): 3.1973. *Irpex flavus* KI, Linnaea, 8:488.1833.

It is a white rot fungus with lignin degrading capabilities and a secretor of exopolysaccharides. Recently, *F. flavus* has been found in the marine environment, as a symbiont with *Orbicella faveolata* (listed as "endangered" by the International Union for Conservation of Nature). Information on this (and additional *O. faveolata*-associated fungi) will be proved the mostly uncharted aspects (beneficial and detrimental) of fungal-coral interactions. Sequencing study and secondary metabolite potential compared with additional strains isolated from other coral samples and used for designing probes for in-situ analysis of coral-fungus interactions

Hyphal system dimitic, generative hyphae hyaline, thin walled, branched simple septate, 2.5-3.75 µm in diameter. skeletal hyphae, 4-7 µm in diameter. skeletal cystidia present, skeletal hyphae protruding into the hymenium with apical encrustation, 6-7 µm broad. Basidia long narrowly clavate Basidiospore hyaline, ovoid to broadly thin walled, non amyloid, smooth 5.5x2.5-3 µm

Fomitopsis scutellata (Schwein.) Bondartsev & Singer, Anns mycol. **39**(1): 55.1941.

Fruiting body, perennial or rarely. annual sessile, effused-reflexed, tough, and woody hard, often large 45-170 x 25-95 mm Pilus surface smooth, usually sulcate with distinct crust, or pink irregular knobs. Pore surface white light cream or pink, pores mostly small with pore surface, stratified, context white cream pink. suberose and binding hyphae hyaline, Cystidia none. Basidiospore hyaline, cylindrical ellipsoid, smooth, thin walled, non amyloid, dead woods cosmiliton genus.

Microporus xanthopus (Fr.) Kuntze, Genera Plantarum pl. (Leipzig) **3**(2): 494 (1898).

It is a member of family polyporaceae. It is wide spread distribution. It is a funnel shaped cap with concentrically zone in various shape of brown and which are supported by yellow footed stem. The cap or pilus is generally between 1 to 3 mm thick. Pilus has tiny pore (10 per mm and this feature is the source of genus name. cap in the maturity represents various shade of brown with a pale margin which is sometimes wavy. The cap may be up to 150 mm wide. In the initial stage primoridium of the fruiting body simply fleck is on the wood surface, yellow footed polypore or tiny pore. It is having broad basal disc, which is known a foot and it is yellow in color. A funnel shaped cap (or pilus) expands from apex of the stem. Fertile undersurface of the cap is white to dull yellow with minute pores (8 to 10 per mm) and extend down the stem (decurrent) the central or off center stem may be upto 40 mm long and 5mm

Polyporus arcularius (Batsch) Fr., Syst. mycol. (Lundae) 1: 342.1821.

Fruiting body, circular, convex to umbilicate, 1-8 cm in diameter, 1-4 mm thick, depressed, centre, squamulose, hispid-tomentose or glabrous, cinnamon-buff antimony-yellow white fresh, drying, brown, margin, acute, ciliate, straight, reflexed, or drying, context, white to pinkish, buff, 5-2 mm thick, tube-decurrent, white to pinkish buff drying, light pinkish, buff, tawny, 1-3 mm long, moth large, angular or honey comb, shaped pore, 1-2 per mm colures with tube. Stem central, slightly off, center, slender, 2-4, cm long, 2-3 mm thick squamulose, hispid tomentose or glabrous, pore-white spore hyaline smooth elongate, ellipsoidal, apiculate- non amyloid 11 x 2-3 µm.

Polyporus grammocephalus Berk., London J. Bot. **1**(3): 148.1842.

Basidiocarp annual, solitary, pileate, dimidiate, flabelliform or spatulate and laterally attach with base, upto 5 cm wide and long, 3mm thick at base pilus glabrous, achratrous, to tan or pale brown with numerous fine radial lines becoming more tufted towards the base. Pore surface cream, straw clouded, tan to pale brown in old specimen pore, thin walled and angular, sometimes slightly split, 2-4 mm. Tube upto 3mm thick context 1-2 mm thick cream to achraceous homogenous, hyphal system, dimitic, generative hyphae with clamps, 2-4 µm binding wall hyaline and smooth.

de expanding at the cap.



Falvodon flavus (Klotzsch) Ryvarden



Fomitopsis scutellata Schwein.



Polyporus arcularius (Batsch) Fr.



Polyporus gramocephalus Berk.,



Microporus xanthopus (Fr.) Kuntze

Plate I

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