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WOOD DECAYING FUNGI FROM SOYGAON TEHSIL, DISTRICT AURANGABAD (M.S.) INDIA

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ABSTRACT

In the present investigation, ninety-three specimens of macro-fungi were collected from different areas of Soygaon Tehsil, District Aurangabad (M.S.) India, from that twenty-seven specimens were identified. Based on morphological and microscopic characteristics which belong to twenty-two genera and twenty-seven species. It was observed that *Auricularia mesenterica*, *Auricularia nigricans*, *Cellulariella acuta*, *Corioliopsis brunneoleuca*, *Daldinia concentrica*, *Favolus grammacephalus*, *Favolus roseus*, *Flavodonf lavus*, *Earliella scabrosa* *Hypoxylon haematostroma*, *Lopharia cinerascens*, *Naviporus floccosus*, *Phellinus badius*, *Schizophyllum commune*, *Scytinostroma duriusculum*, *Trametes cingulata*, and *Truncospora tephropora* were most abundantly found while *Amylosporus campbellii*, *Auricularia delicata*, *Fomitiporia* sp.1 *Ganoderma mediosinense*, *Gymnopilus pampeanus*, *Leucocoprinus cepistipes*, *Phellinus mori*, *Pycnoporus sanguineus*, *Trametes ellipsospora*, and *Xylaria polymorpha* are rarely observed macro-fungi.

Keywords : Macro-fungi, Microscopic, Morphological, Saprophytic, Sporocarps.

Introduction

Wood-decaying Macro-fungi are distinguished by their fruiting structures (sporocarps) visible to the naked eyes. Most macro-fungi belong to the Phyla Basidiomycota and Ascomycota and their fruiting bodies vary in shape, size, colour, texture, and odour. Macro-fungi are important component of the forest ecosystems and play a major role in ecosystem dynamics, such as litter decomposition, nutrient cycling and transport. Most of the macro-fungi are saprobes and occur on living trees, wood logs, humus, and plant litter, among others. The saprophytic members constitute major recyclers of nutrients, they are known to break down the lignocelluloses and thus help in litter degradation, converting large molecular complex into simpler compounds. The activities of these macro-fungi aid in return of carbon, hydrogen, nitrogen and minerals back into the ecosystem to be utilized by plants and other organisms. Brown-rot fungi degrade cellulose in an unusual manner that differ from cellulolytic organism, they causes rapid de-polymerization and thus are very destructive (Cowling, 1961). Attack on cell wall by brown-rot fungi, similar to white-rot, is predominantly initiated by hyphae growing in lumen in contact with tertiary wall (Liese, 1970; Wilcox, 1970). Lignin is degraded by white-rot fungi and this work has been extensively reviewed (Kirk and Highley, 1973). Two new species of Polyporaceae recorded (Bose, 1921). New records of Hymenomycetes from India (Bakshi, 1958). New record of Polypores from India (Sharma, 1999). Taxonomy and Diversity of *Ganoderma* from the Western parts of Maharashtra (Bhosle *et al.*, 2010). Checklist of Aphyllorphorales diversity data from Western Ghats of

Maharashtra state India (Ranadive *et al.*, 2011). Aphyllorphorales from Parbhani and Nanded (Raibhole and Mali 2013). Diversity of Aphyllorphorales from Latur district, Maharashtra (Chouse and Mali, 2020). From the Jalgaon district, various regions of the forest area five species of *Xylaria* were reported (Firdousi and Khan, 2021). Fourteen genera and fifteen species of wood-decaying fungi from Dr. BAMU, campus Aurangabad (Gore and Mali, 2021).

Materials and Methods

The survey and collection of wood-decaying fungi were done from July 2016 to November 2019, 20-25 days after heavy rainfall from different localities of the Soygaon Tehsil, Aurangabad district. The basidiocarp were photographed at site and all important morphological characters were noted according to hosts name, locality, collection number, collection date, color, pilear surface, hymenial surface, and the dimension of basidiocarp. All specimens were identified according to macroscopic and microscopic characteristics with respect to appropriate literature (Gilbertson & Ryvarden 1986; Nunez & Ryvarden 2000). Preserved specimens were kept in the brown paper packet as per international mycological herbarium guidelines. The freehand thin section cutting of basidiocarp done with the help of sharp razor blades, stained and studied in 10% KOH, Lacto phenol, and Melzer's reagent, and microscopic observations were made under 40X and 100X Magnification under a compound light microscope in a laboratory.

Results and Discussion

In the present study, twenty-seven species of wood-decaying fungi were identified according to the macroscopic

and microscopic character (Photo plate 1), collected from Soygaon Tehsil, Aurangabad district (M.S.) India, have been summarized below.

***Amyloporus campbellii* (Berk.) Ryv.**

Basidiocarp annual, pileate, sessile to stipitate, 3.2-12.9 × 2.9-8.6 × 1.2-3.4 cm, thick at base, becoming buff to pale brownish at maturity. Upper surface moist, cream colored to buff, with darker spots to cinnamon brown on drying. Lower surface cream to white, pores 2-4 per mm, round to angular. Hyphal system dimitic, generative hyphae thin-walled, 3.5-12 µm wide, skeletal hyphae thick-walled, 2.5-6.5 µm wide, gloeoplerous hyphae present. Basidia clavate, 5.5-12 × 2.5-4 µm. Spores hyaline 4-5.5 × 2.5-4 µm.

Collection examined: INDIA; Maharashtra, Marathwada, Aurangabad district, Taluka Soygaon, Soygaon forest, 09/11/2019, on the roots on living tree *Wrightia tinctoria* R.Br, 523m, 20°28'33" N75°23'56" E, VUG/VPM-776, Vijay Gore.

***Auricularia delicata* (Mont.exFr.) Henn.**

Basidiocarp annual, lignicolous, jelly like semi-transparent, soft when fresh, brittle on drying. Pileus 4.3 × 3.7 cm, up to 0.3 cm thick, ear like. Upper surface smooth to slightly sulcate, orange brown to reddish brown when young, almost reddish brown to brownish black on drying. Lower surface smooth, sulcate to vein like, creamy orange to orange brown. Hyphal system monomitic, generative hyphae 2.4-3 µm wide, clamped, Spores 11-13 × 4.5-5 µm, allantoid.

Collection examined: INDIA; Maharashtra, Marathwada, Aurangabad district, Taluka Soygaon, Gondagaon, 16/10/2016, on the wood log of *Acacia nilotica* (L.) Delile, 321m, 20°33'43" N75°20'37" E, VUG/VPM-598, Vijay Gore.

***Auricularia mesenterica* (Dicks.) Pers.**

Basidiocarp annual, resupinate to effused reflex, pileate, 0.5-10.9 × 0.5-4.8 cm, up to 0.2 cm thick, ear-shaped. Upper surface, hairy, yellowish-brown to greyish brown. Lower surface smooth to slightly wrinkled, bluish to purplish brown with a whitish bloom. Hairs thick-walled, up to 3 mm long. Hyphal system monomitic, generative hyphae 2.5-5 µm wide, Spores hyaline, reniform to allantoids, 11.5-13.5 × 5-5.5 µm.

Collection examined: INDIA; Maharashtra, Marathwada, Aurangabad district, Taluka Soygaon, Tidka, 16/10/2016, on wood log of *Terminalia bellirica* (Gaertn.) Roxb, 333m, 20°30' 27" N75°23'16" E, VUG/VPM-580, Vijay Gore.

***Auricularia nigricans* (Sw.) Birkebak, Looney & Sanchez-Garcia.**

Basidiocarp annual, pileate, 0.5-2.1 × 0.5-1.6 cm, up to 0.2 cm thick, loosely attached with small tapered stalk, ear-shaped, jelly like. Upper surface hairy. Lower surface smooth. Hyphal system monomitic, generative hyphae 2.5-4.5 µm wide, Spores 13.5-15 × 4-5 µm, cylindrical to allantoid.

Collection examined: INDIA; Maharashtra, Marathwada, Aurangabad district, Taluka Soygaon, Tidka, 16/10/2016, on wood log of *Terminalia bellirica* (Gaertn.) Roxb, 333m 20°30'27" N75°23'16" E, VUG/VPM-581, Vijay Gore.

***Cellulariella acuta* (Berk.) Zmitr. & Malysheva**

Basidiocarp annual, rarely perennial, pileate, 7.3-12.4 × 5.6-8.9 × 0.9-2.1 cm thick at base, semicircular to flabelliform. Upper surface azonate to concentrically zonate, weakly sulcate, cream to pale ochraceous to bay coloured. Lower surface poroid, mostly angular to maize like to lamellae, pores 1-4 mm wide, cream to buff to tan colours, mostly with a yellowish tint. Hyphal system trimitic, generative hyphae hyaline, 1.5-3 µm wide, skeletal hyphae thin-walled, 3.5-6 µm wide, binding hyphae 2.5-4 µm wide. Spores cylindrical, 6-7.5 × 2-3 µm, smooth, thin-walled.

Collection examined: INDIA; Maharashtra, Marathwada, Aurangabad district, Taluka Soygaon, Vakdi, 16/10/2016, on wood log of *Acacia nilotica* (L.) Delile, 303m, 20°32'20" N75°21'57" E, VUG/VPM-591, Vijay Gore.

***Corioloopsis brunneo-leuca* (Berk.) Ryv.**

Basidiocarps annual, pileate, almost resupinate to effuse reflexed. 1.5-18.4 × 1-9.1 × 0.3-0.7 cm thick at base. Upper surface concentrically sulcate or zoned but also radially striate, the tomentum becomes paler, grayish brown to brown then becomes blackish. Lower surface ochraceous to pale brown, pores round to angular, mostly 2-3 per mm. Hyphal system trimitic, generative hyphae 1-3 µm wide, skeletal hyphae thick-walled, 3.5-5 µm wide, binding hyphae 2.5-4 µm wide. Basidia clavate, 25-30 × 5.5-6 µm wide. Spores cylindrical, hyaline, thin-walled, 9-12 × 2.5-4 µm.

Collection examined: INDIA; Maharashtra, Marathwada, Aurangabad district, Taluka Soygaon, Tidka, 16/10/2016, on wood log of *Azadirachta indica* A.Juss, 334m, 20°29'58" N75°23'25" E, VUG/VPM-573, Vijay Gore.

***Daldinia concentrica* (Bolton) Ces. & De Not.**

Basidiocarp annual, hemispherical to variously shaped cushions 1.5-2.9 × 1.4-2.8 cm diam., reddish-brown to purplish brown to black. The outer surface is smooth, dotted with minute pores formed by the ostiole of the perithecia. In a vertical section, fruiting body show distinct concentric zonation, with fibrous hyphal tissues. Perithecia crowded in a single layer just below the outer crust, possess a conical neck. Asci cylindrical, 80-150 × 8-12 µm, with a long stalk. Ascospores 13-16.5 × 6.5-9.5 µm.

Collection examined: INDIA; Maharashtra, Marathwada, Aurangabad district, Taluka Soygaon, Nimbayati Phata, 09/11/2019, on the main trunk of living tree *Butea monosperma* (Lam.) Taub, 335m, 20°32'55" N75°31'26" E, VUG/VPM-784, Vijay Gore.

***Earliella scabrosa* (Pers.) Gilb. & Ryvarden**

Basidiocarp annual, resupinate, effused-reflexed to pileate 4.9-44.8 × 3.9-11.6 × 0.3-0.6 cm, thick at base. Upper surface glabrous, zoned, white to cream, reddish black cuticle starting from the base, Lower surface white to cork coloured, pores angular to semi-daedaleoid, 2-3 per mm. Hyphal system trimitic, generative hyphae thin-walled, 1.5-3 µm wide, skeletal hyphae thick-walled, hyaline, 3.5-5 µm wide, binding hyphae 3.5-5 µm wide. Basidia clavate, 16-20 × 4-5 µm wide. Spores cylindrical to oblong-ellipsoid, thin-walled, hyaline, 7-9.5 × 3-4 µm.

Collection examined: INDIA; Maharashtra, Marathwada, Aurangabad district, Taluka Soygaon, Amkheda, 09/11/19, on the dead fallen tree of *Butea*

monosperma (Lam.) Taub, 361m, 20°35'39" N 75°35'39" E, VUG/VPM-788, Vijay Gore.

***Favolus grammocephalus* (Berk.) Imazeki**

Basidiocarp annual, pileate, 11.3-14.9 × 10.4-12.8 × 0.3-0.5 cm, thick at base, laterally attached with a stipe, Upper surface ochraceous to pale brown. Lower surface, ochraceous to straw coloured to pale brown, pores thin-walled and angular, 3-5 per mm. Hyphal system dimitic, generative hyphae 2.5-4 µm wide, binding hyphae thick-walled, up to 10 µm thick at the main trunk. Spores oblong-ellipsoid 5-7 × 2-3 µm.

Collection examined: INDIA; Maharashtra, Marathwada, Aurangabad district, Taluka Soygaon, Vakdi, 16/10/2016, on the wood log of *Ficus amplissima* Sm, 295m, 20°32'21" N 75°21'52" E, VUG/VPM-592, Vijay Gore.

***Favolus roseus* Lloyd.**

Basidiocarps annual, pileate, 1.1-6.6 × 0.9-5.4 × 0.3-0.5 cm, thick at base, Upper surface fiabelliform, spatulate to semicircular, white when fresh, cream or pale ochraceous when dry, glabrous. Lower surface pores hexagonal to radially elongated, 1-3 per mm, white to very pale ochraceous. Hyphal system dimitic, generative hyphae hyaline, 2.5-3.5 µm wide, skeletal hyphae thick-walled, hyaline. Basidia clavate, 25-30 × 4.5-6 µm. Spores cylindrical, 9.5-12 × 2-3 µm, hyaline, thin-walled.

Collection examined: INDIA; Maharashtra, Marathwada, Aurangabad district, Taluka Soygaon, Kankarada, 09/11/2019, on the wood log of *Acacia nilotica* (L.) Delile, 333m, 20°35'45" N 75°35'03" E, VUG/VPM-787, Vijay Gore.

***Flavodon flavus* (Klotzsch) Ryvarden.**

Basidiocarp annual, pileate, resupinate to effused reflex, 0.5-17.2 × 0.5-9.1 × 0.2-0.5 cm, thick at the base, Upper surface azonate to concentric zones, finely hispid, glabrous, greyish yellow to yellow to pale yellow. Lower surface poroid, 1-2 per mm, hydroid with irregular teeth or dentate lamellate. sulphurous yellow, yellowish brown and with age fading to ochraceous. Hyphal system dimitic, generative hyphae hyaline, 2.5-4 µm wide, skeletal hyphae hyaline, thick-walled, up to 7 µm wide. Spores broadly ellipsoid, smooth, hyaline, thin-walled, 5-6.5 × 3-4.5 µm.

Collection examined: INDIA; Maharashtra, Marathwada, Aurangabad district, Taluka Soygaon, Tidka, 09/11/2019, on the wood log of *Azadirachta indica* A. Juss. 330m, 20°30'26" N 75°23'16" E, VUG/VPM-777, Vijay Gore.

***Fomitiporia* spl.**

Basidiocarp perennial, sessile, 9 × 5.5 × 5.4 cm, thick at basewoody hard when fresh, corky hard on drying. Upper surface smooth, glabrous, zonate, sulcate, yellowish brown when young, soon brownish black. Lower surface poroid, round, pores 5-7 per mm, yellowish brown to reddish brown. Hyphal system dimitic; generative hyphae 1.5-3 µm wide. skeletal hyphae 4-6 wide, thick-walled Setae 17-30 × 5.5-7µm, ventricose, thick-walled, smooth, septate at base, dark brown. Basidia 12-13 × 5-6.5µm, broadly clavate. Spores 4.2-5.8 × 3.8-5.1µm, broadly ellipsoid to sub globose.

Collection examined: INDIA; Maharashtra, Marathwada, Aurangabad district, Taluka Soygaon, Soygaon forest, 16/10/2016, on the living tree at main trunk of *Albizia lebbbeck* (L.) Benth., 559 m, 20°28'11" N 75°23'48" E, VUG/VPM-571, Vijay Gore.

***Ganoderma mediosinense* J.D. Zhao**

Basidiocarp annual, pileate, 13.3 × 10.8 × 2.9 cm, thick at base leathery when fresh, corky to woody on drying. Upper sterile surface sulcate, weakly zonate, glabrous, reddish brown turn to coca brown. Lower surface poroid round, pores 3-4 per mm, creamy when young to pale brown when old. Hyphal system trimitic, generative hyphae 1.5-3 µm wide, skeletal hyphae 2.5-5 µm wide, binding hyphae 1.5-3 µm wide. Basidia clavate, 4-sterigmate, clamped at base. Spores 8.5-10 × 5-6 µm, ovoid to ellipsoid.

Collection examined: INDIA; Maharashtra, Marathwada, Aurangabad district, Taluka Soygaon, Tidka, 16/10/2016, on the wood log of *Azadirachta indica* A. Juss, 315m, 20°31'18" N 75°22'52" E, VUG/VPM-583, Vijay Gore.

***Gymnopilus pampeanus* (Speg.) Singer.**

Basidiocarps annual, 2.6-3.8 cm diam., convex when young, becoming plane then depressed at the center. depression often deepens to the stipe, surface deep yellow when young, grayish orange at maturity. Gills free, 13-16 per cm, sinuate to adanate, golden yellow. Stipe 4.5-5.3 × 0.3-0.9 cm, pale yellowish-white, on bruising change to pale reddish-brown. Basidia 22-24 × 6.5-8 µm wide. Spores 6.5-8 × 4-5 µm, broadly ellipsoid.

Collection examined: INDIA; Maharashtra, Marathwada, Aurangabad district, Taluka Soygaon, Gondegaon, 16/10/2016, on the wood log of *Acacia nilotica* (L.) Delile, 320m, 20°33'38" N 75°20'56" E, VUG/VPM-595, Vijay Gore.

***Hypoxylon haematostroma* Mont**

Basidiocarp annual, resupinate, hard, 0.5-14.2 × 0.4-4.9 × 0.1-0.2 cm. Fertile surface minutely papillate, cinnabar red to blood red when fresh, reddish when mature. Perithecia long tubular 950-2300 × 250-600 µm. Ostioles are lower than stromatal surface. Ascii 160-200 × 6-9 µm, broadly cylindrical. Spore 15.5-18 × 5.5-8.5 µm, elliptic-fusiform.

Collection examined: INDIA; Maharashtra, Marathwada, Aurangabad district, Taluka Soygaon, Soygaon forest, 07/09/2014, on the dried tree of *Ficus benghalensis* L, 619m, 20°27'23" N 75°23'59" E, VUG/VPM-85, Vijay Gore.

***Lopharia cinerascens* (Schw.) Cunn.**

Basidiocarp annual, often resupinate to effused reflexed 1.5-14.1 × 1.2 × 6.3 × 0.1-0.3 cm. Upper surface strigose hairy, brownish grey to greyish black, concentrically sulcate. Lower surface smooth, cinnamon to violaceous brown. Hyphal system dimitic, generative hyphae up to 4 µm wide, skeletal hyphae up to 5 µm wide, thick-walled. Basidia 13-20 × 4.5-6 µm wide, 4-spored. Spores 10-13 × 6.5-7 µm, broadly ellipsoid.

Collection examined: INDIA; Maharashtra, Marathwada, Aurangabad district, Taluka Soygaon, Tidka 16/10/2016, on the wood log of *Acacia nilotica* (L.) Delile, 333m, 20°30'27" N 75°23'16" E, VUG/VPM-578, Vijay Gore.

***Leucocoprinus cepistipes* (Sowerby) Pat.**

Basidiocarp annual, lignicolous, fleshy fibrous and tough when fresh. Pileus 2.1–3.2 cm in diameter, obovoid then conical, obtusely umbonate, finally comanulate or expanded, truncate at centre, chalky white with pale pink tints. Gills free 15–18 per cm, rather crowded, creamy white. Context thin, soft, solid but becoming hollow with maturity, chalky white. Stalk 3.5–5.6 × 0.4–0.8 cm. Annulus present. Hyphal system monomitic; generative hyphae 3.5–5 µm wide, Spores 7.5–10 × 5–7 µm, ovoid.

Collection examined: INDIA; Maharashtra, Marathwada, Aurangabad district, Taluka Soygaon, Soygaon forest, 09/11/2019, on the living tree at main trunk at base of *Terminalia bellirica* (Gaertn.) Roxb, 423m, 20°28'30" N 75°23'54" E, VUG/VPM-775, Vijay Gore.

***Naviporus floccosus* (Bres.) Ryvarden**

Basidiocarp annual, pileate. Pileus 18.9 × 11.2 × 5.9 cm, semicircular, imbricate, broadly attached. Upper sterile surface smooth, hard crusty, glabrous, surface often covered with a cinnamon powder of deposited spores, cocoa brown. Lower fertile surface poroid, round, regular, pores 2–3 per mm, creamy white when fresh, dull creamy when dried. Context up to 35 mm thick at base. Tubes up to 24 mm long, woody brown. Hyphal system dimitic, generative hyphae 2.5–4 µm wide, clamped, skeletal hyphae 2–4 µm wide, Spores 8.5–11 × 5–5.5 µm oblong ellipsoid.

Collection examined: INDIA; Maharashtra, Marathwada, Aurangabad district, Taluka Soygaon, Nimbayati phata, 09/11/19, on living tree of main trunk *Butea monosperma* (Lam.) Taub., 335m, 20°32'55" N 75°31'26" E, GVU/MVP- 785, Gore Vijay.

***Phellinus badius* (Berk.:Cke.) Cunn.**

Basidiocarp perennial, pileate, sessile, hoof-shaped 7.2 × 4.6 cm, up to 3.1 cm thick at base, woody hard. Upper surface yellowish brown when young, soon becoming brownish black. Lower surface dark brown to reddish brown, glancing, pores 4–7 per mm. Hyphal system dimitic, generative hyphae hyaline 3–4 µm wide, skeletal hyphae thick-walled, 4–5 µm wide. Basidia broadly clavate, 11.5–14 × 5.5–7 µm. Spores broadly ellipsoid to sub globose, 6–7.5 × 6–6.5 µm.

Collection examined: INDIA; Maharashtra, Marathwada, Aurangabad district, Taluka Soygaon, Soygaon forest, 07/09/2014, on the main trunk of living tree *Acacia nilotica* (L.) Delile, 339m, 20°34'26" N 75°33'01"

***Phellinus mori* Y.C. Dai & B.K. Cui**

Basidiocarp annual to perennial, solitary, resupinate, 11.2–28.9 × 1.8–7.6 × 0.1–0.6 cm, initially arises in the form of small patches then spread long area, velvety, tough to hard, heavy when fresh, woody hard on drying inseparable, broadly elongated. Fertile surface poroid, round, regular, pores 5–7 per mm, decurrent toward margin yellowish brown to golden brown when young, umber brown to reddish brown in old fruiting bodies. Hyphal system dimitic; generative hyphae 1.5–3 µm wide, skeletal hyphae 3.5–5 µm wide, Basidia 10.5–12 × 6.5–8 µm. Spores 4–5 × 3–4.2 µm, broadly ellipsoid to subglobose.

Collection examined: INDIA; Maharashtra, Marathwada, Aurangabad district, Taluka Soygaon,

Tidka, 16/10/2016, on the wood log of *Ricinus communis* L., 333m, 20°30'27" N 75°23'16" E, VUG/VPM-582, Vijay Gore.

***Pycnoporus sanguineus* (L. : Fr.) Murr.**

Basidiocarp annual, sessile, pileate, 3.1–3.6 × 1.9–2.3 × 0.3–0.7 cm, applanate. Upper surface orange red to salmon-buff in some old specimens, glabrous on older portions, azonate. Lower surface dark red, pores rounded, 5–6 per mm, orange buff, concentrically zonate with alternating zones of pale buff and pale orange. Hyphal system trimitic, generative hyphae thin-walled, hyaline, with frequent clamps, rarely branched, 2.5–3 µm wide, skeletal hyphae thick-walled, hyaline, 2.5–5 µm wide, binding hyphae thick-walled, 2.5–3 µm wide. Basidia clavate, 11.5–15 × 4–6 µm wide. Spores cylindrical, 5.5–6 × 2–2.5 µm.

Collection examined: INDIA; Maharashtra, Marathwada, Aurangabad district, Taluka Soygaon, Tidka, 16/10/2016, on the wood log of *Terminalia arjuna* (Roxb. ex DC.) Wight & Arn., 333 m, 20°30'26" N 75°23'16" E, VUG/VPM-577, Vijay Gore.

***Schizophyllum commune* Fr.**

Basidiocarp annual, pileate, 0.5–3 cm diam., thin, flabelliform, laterally attached by a small base, Upper surface pale to dark greyish brown, villose. Lower surface falsely lamellate, separating along the 'lamellae-edge' in dry conditions so that the two surfaces become recurved, geryish brown to greyish black. Hyphal system monomitic, hyphae thin to thick-walled 4–6.5 µm wide. Basidia 16–20 × 4–6 µm, narrowly clavate. Spores 3.5–5 × 1–1.5 µm, allantoid.

Collection examined: INDIA; Maharashtra, Marathwada, Aurangabad district, Taluka Soygaon, Soygaon forest, 07/09/2014, on the dried tree *Boswellia serrata* Roxb. Ex Colebr, 543 m, 20°28'07" N 75°23'46" E, VUG/VPM-91, Vijay Gore.

***Scytinostroma duriusculum* (Berk. & Broome) Donk.**

Basidiocarp annual, membranous, 0.9–10.4 × 0.7–7 cm, resupinate to widely effused thin, brittle on drying. Fertile surface smooth, when touched gives velvety sensation. Cream to pale yellow to greyish yellow. Hyphal system dimitic, generative hyphae thin-walled, 1.5–2.3 µm wide. Skeletal hyphae 1.5–2 µm wide. Spores 5.5–7 × 4–7.5 µm wide, globose.

Collection examined: INDIA; Maharashtra, Marathwada, Aurangabad district, Taluka Soygaon, Soygaon forest, 07/09/2014, on the living tree at main trunk of *Wrightia antidysenterica* (L.) R.Br, 581m, 20°28'05" N 75°23'55" E, VUG/VPM-87, Vijay Gore.

***Trametes cingulata* Berk.**

Basidiocarp annual to perennial, pileate, 4.9–6.3 × 3.2–4.3 × 0.3–0.7 cm thick at base, applanate, semicircular with a contracted base, Upper surface glabrous, dull to semiglossy, whitish to ochraceous becoming greyish to sooty black concentrically zonate and sulcate. Lower surface cream to ochraceous, pores round and regular, 4–6 per mm. Hyphal system trimitic, generative hyphae 1.5–3 µm wide, skeletal hyphae 3.5–5 µm wide, binding hyphae 1.5–3 µm wide. Basidia clavate, 17–22 × 5–6 µm. Spores broadly ellipsoid, 4–6 × 3–3.5 µm.

Collection examined: INDIA; Maharashtra, Marathwada, Aurangabad district, Taluka Soygaon, Tidka, 16/10/2016, on the wood log of *Terminalia arjuna* (Roxb. ex DC.) Wight & Arn., 333 m, 20°30'26"N 75°23'16"E, VUG/VPM-576, Vijay Gore.

***Trametes ellipsospora* Ryvarden**

Basidiocarp annual, resupinate to effused reflex to pileate, sessile 0.9-3.4 × 0.7-1.9 × 0.2-0.4 cm, thick at base. Upper surface covered strigose hairs, shiny, sulcate, weakly zonate, cream to pale yellow to pale brown tint. Lower surface poroid 4-6 per mm pores, angular, somewhat toothed, cream to pale yellow. Hyphal system dimitic, generative hyphae hyaline, thin-walled, 1.5-3 µm wide, skeletal hyphae hyaline, thick-walled, 2.5-5 µm wide. Binding hyphae 2.5-3.5 µm wide. Basidia clavate, thin-walled, 12-14 × 4.5-6 µm. Spores 3.5-5.5 × 2.5-3.5 µm, ellipsoid.

Collection examined: INDIA; Maharashtra, Marathwada, Aurangabad district, Taluka Soygaon, Soygaon forest, 07/09/2014, on the living tree at twigs of *Hardwickia binata* Roxb, 567m, 20°28'13" N 75°23'50" E, VUG/VPM-89, Vijay Gore.

***Truncospora tephropora* (Mont.) Zmitr.**

Basidiocarp perennial, resupinate, 46.9 × 18.1 × 0.7 cm thick at centre, woody hard on drying. Fertile surface clay, buff to grey to pale umber, pores round to angular, 4-6 per

mm. Hyphal system trimitic, generative hyphae thin-walled, 2.2-3 µm wide, skeletal hyphae thick-walled, 3-4.5 µm wide, binding hyphae thin to thick-walled, 1.6-3 µm wide. Basidia narrowly clavate, 12.5-16 × 4-5 µm wide. Spores broadly ellipsoid, thick-walled, 4.5-6 × 3-4.5 µm wide.

Collection examined: INDIA; Maharashtra, Marathwada, Aurangabad district, Taluka Soygaon, Vakdi, 16/10/2016, on the wood log of *Acacia nilotica* (L.) Delile, 296m, 20°31'53" N 75°22'35" E, VUG/VPM-586, Vijay Gore.

***Xylaria polymorpha* (Pers.) Grev.**

Basidiocarp annual, 2.3-7.5 × 0.5-2.6 cm, extremely variable in shape and size, cylindrical to cylindro-clavate. Grayish white to tan when fresh, becoming dull blackish brown to black when old. Perithecia 530-790 × 330-430 µm wide. Asci long-stipitate, 8-spored, 160-230 × 6.5-15 µm wide, spore bearing part 90-145 µm wide, with apical ring rectangular, 4 - 6.5 × 3 - 4 µm wide. Ascospores 23-28 × 5.5-7 µm wide, ellipsoid-inequilateral.

Collection examined: INDIA; Maharashtra, Marathwada, Aurangabad district, Taluka Soygaon, Nimbayati Phata, 20°32'54" N 75°31'025" E, alt 336m, on the living tree of main trunk of *Butea monosperma* (Lam.) Taub; 09/11/19, VUG/VPM-784, Vijay Gore.

Photo plate 1



Amylosporus campbellii (Berk.) Ryv.



Auricularia delicata (Mont. ex Fr.) Henn.



Auricularia mesenterica (Dicks.) Pers.



Auricularia nigricans (Sw.) Birkebak, Looney & Sanchez.



Cellulariella acuta (Berk.) Zmitr. & Malysheva



Corioloopsis brunneo-leuca (Berk.) Ryv.



Daldinia concentrica (Bolton) Ces. & De Not.



Earliella scabrosa (Pers.) Gilb. & Ryvarden



Favolus grammocephalus (Berk.) Imazeki



Favolus roseus Lloyd.



Flavodon flavus (Klotzsch) Ryvarden.



Fomitiporia sp1.



Ganoderma mediosinense J.D. Zhao



Gymnopilus pampeanus (Speg.) Singer.



Hypoxylon haematostroma Mont



Lopharia cinerascens (Schw.) Cunn.



Leucocoprinus cepistipes (Sowerby) Pat.



Naviporus floccosus (Bres.) Ryvarden



Phellinus badius (Berk.: Cke.) Cunn.



Phellinus mori Y.C. Dai & B.K. Cui



Pycnoporus sanguineus (L.: Fr.) Murr.



Schizophyllum commune Fr.



Scytinostroma duriusculum (Berk. & Broome) Donk.



Trametes cingulata Berk.



Trametes ellipsospora Ryvarden



Truncospora tephropora (Mont.) Zmitr.



Xylaria polymorpha (Pers.) Grev.

Conclusion

Ninety-three wood-decaying fungi were collected during the present study represented twenty-two genera and twenty-seven species belongs to fourteen families Agaricaceae, Auriculariaceae, Bondarzewiaceae, Fomidopsidaceae, Ganodermataceae, Hymenochaetaceae, Hymenogastraceae, Hypoxylaceae, Irpicaceae, Lachnocladiaceae, Phanerochaetaceae, Polyporaceae, Schizophyllaceae, and Xylariaceae. From the above observation and discussion, it is concluded that the family Polyporaceae was dominant consisting of eight genera. Mostly dominating macrofungi were observed *Auricularia mesenterica*, *Auricularia nigricans*, *Cellulariella acuta*, *Coriopsis brunneo-leuca*, *Daldinia concentrica*, *Earliella scabrosa*, *Flavodon flavus*, *Gymnopilus pampeanus*, *Hypoxylon haematostroma*, *Lopharia cinerascens*, *Naviporus floccosus*, *Phellinus badius*, *Schizophyllum commune*, *Scytinostroma duriusculum*, *Trametes cingulata*, and *Truncospora tephropora* while, *Amylosporus campbellii*, *Auricularia delicata*, *Favolus gramocephalus*, *Favolus roseus*, *Fomitiporia* sp, *Ganoderma mediosinense*, *Leucocoprinus cepistipes*, *Phellinus mori*, *Pycnoporus sanguineus*, *Trametes ellipsospora*, and *Xylaria polymorpha* were rare occurrence. The macrofungi reported during this study belonged to thirteen hosts *Acacia nilotica*, *Albizia lebbek*, *Azadirachta indica*, *Boswellia serrata*, *Butea monosperma*, *Ficus amplissima*, *Ficus benghalensis*, *Hardwickia binata*, *Ricinus communis*, *Terminalia arjuna*, *Terminalia bellirica*, *Wrightia antidysenterica*, and *Wrightia tinctoria*.

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