



Research article

Inventory of woody and fleshy poroid macrofungi from Koderma wildlife sanctuary, Jharkhand

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[Accepted: 01 December 2019]

Abstract: Present communication deals with the taxonomic studies on woody and fleshy poroid macrofungi of the Koderma wildlife sanctuary, Jharkhand, which were carried out during 2010–2017. This was the first and systematic approach to survey and collection of macrofungi from this protected area. In this period more than 400 samples of macrofungi from Koderma wildlife sanctuary were collected and studied. Thorough macro- and micro-morphological examination of these collections revealed 88 species belonging to 44 genera and 12 families. The result of present study is discussed in the present communication. A provisional key to genera for all the collected genera is also provided to ease the identification.

Keywords: Jharkhand - Koderma - Macrofungi - Taxonomy.

[Cite as: Parihar A, Das K, Prasanna PV, Rao YV, Padal SB & Hembrom ME (2019) Inventory of woody and fleshy poroid macrofungi from Koderma wildlife sanctuary, Jharkhand. *Tropical Plant Research* 6(3): 452–461]

INTRODUCTION

Jharkhand is one of the states of India with rich forest and mineral resources. 29.61% of its total area comes under forest cover (Mishra 2013). There are one National Park and 11 Wildlife Sanctuaries in this state. The Koderma Wildlife Sanctuary (KWS) is one of those protected areas (Fig. 1). Rich vegetation of different tree species in this area makes a dense forest cover. Some notable tree species from KWS are *Shorea robusta* Gaertn., *Diospyros melanoxylon* Roxb., *Tectona grandis* L.f., *Butea monosperma* (Lam.) Taub., *Boswellia serrata* Roxb. ex Colebr., *Acacia nilotica* (L.) Delile, *Sida acuta* Burm.f., *Syzygium cumini* (L.) Skeels etc. These trees are the hosts for the saprophytic (growing on dead and decaying tree-trunks) and parasitic (growing on living trees) macrofungi. A few of them are ectomycorrhizal (establishing symbiotic relationship with root-lets of trees) however, the study of macrofungi is being neglected so far and any detailed account about the diversity of woody and fleshy poroid macrofungi of this important area is unavailable till the present work is undertaken in recent past. Sporadic reports of macrofungi from the Jharkhand are only being available (Berkeley 1854a, b, c, d, Bodding 1925–1940, Panigrahi 1966, Hembrom *et al.* 2016, 2017, Parihar *et al.* 2013, 2014, 2018a, b, Wang *et al.* 2019) till date. To fill this lacuna the taxonomic study on these important groups of macrofungi was undertaken on KWS. This study will substantially enhance our current knowledge about the existing wealth of wood rotting macrofungi in Jharkhand state and macrofungal diversity of KWS in particular. In this communication, we are presenting a detailed account of wood rotting and fleshy poroid fungal species collected from KWS, Jharkhand with their voucher details, collection sites, altitudinal variations and herbarium where the vouchers are housed.

MATERIALS AND METHODS

Study site

Koderma district of Jharkhand is situated on National Highway 31 with 41% of forest cover. The reserved forest area of Koderma district is declared as Koderma wildlife sanctuary and is located between 24° 25' N to

24° 38' N and 85° 25' E to 85° 40' E. Koderma enclosure, Lokai, Kharhariya forest, Meghatari NRF, Taraghati, Khalakhtambhi, Mughalamaran, Basraun, Koderma NRF, Jamsoti, Dhodhakhola, Chatarbar, Suggi point, Durwasha rishi pahar, Phulwaria, Dhavajadhari pahar, Sambhu bhura mines and Meghatari are some of the important areas of these sanctuary and they are characterized by the different types of tree species which serves as host to the different species of wood rotting fungi. The rich vegetation of different tree species in this area make a dense forest cover and broken tree logs, broken branches, dead/decaying tree trunks and association of ectomycorrhizal tree species act as suitable host for the growth of different types of woody and fleshy poroid fungi.

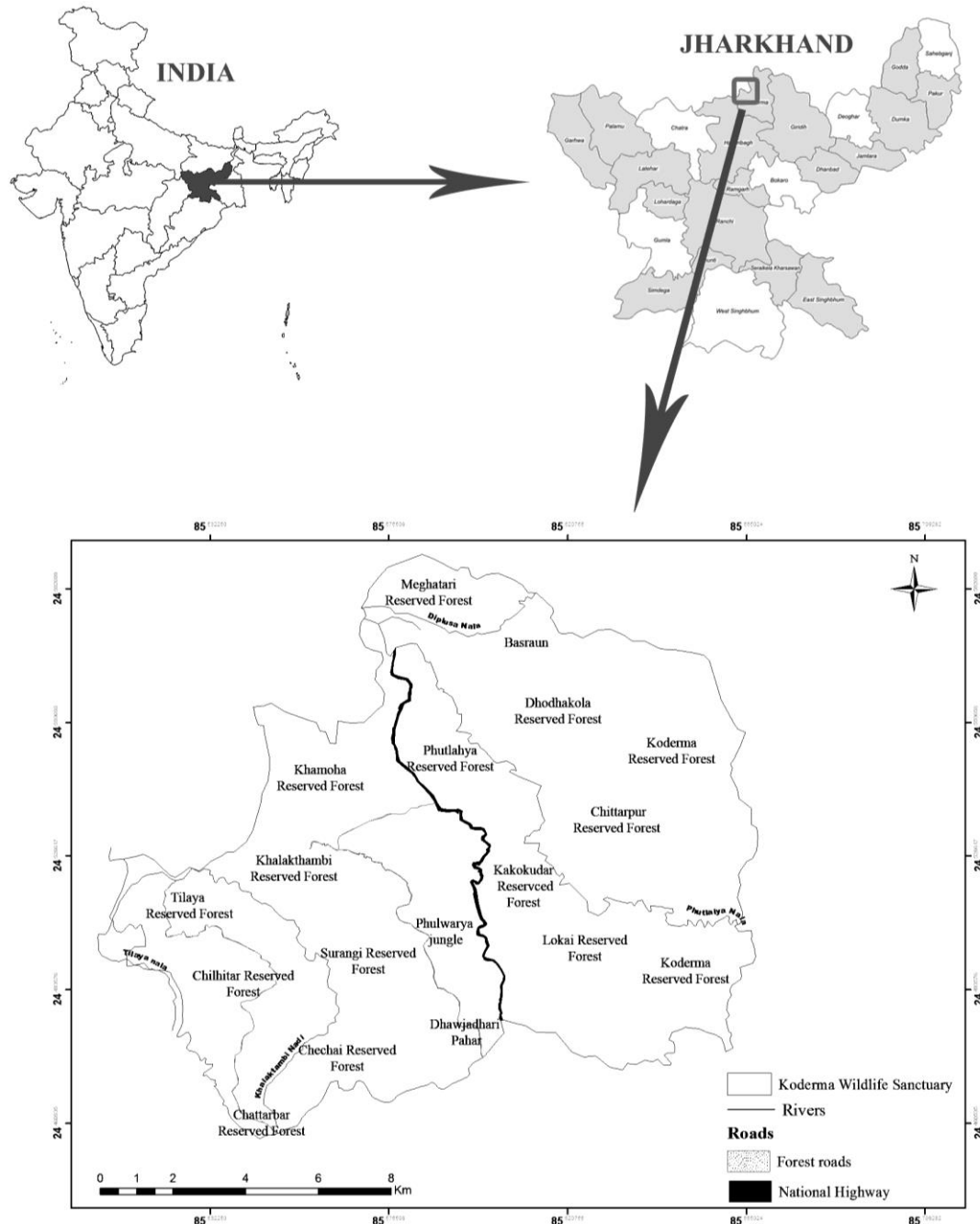


Figure 1. Location map of Koderma Wildlife Sanctuary, Jharkhand, India.

Survey and collection

Four long and three short duration macrofungi survey tours were undertaken between 2010–2017 in order to collect the macrofungi samples from different locations of the Koderma wildlife sanctuary, Jharkhand. Field photographs of collected samples were captured with the aid of Olympus C 5060 and Cannon Powershot A 450 camera. Photographs were captured to show different macro-morphological characters like colour of pileus, surface, hymenophore, colour and colour changes (on bruising), which are the key features determining of systemic position of a species. Samples were collected in brown paper bags. GPS data were recorded with the www.tropicalplantresearch.com



Figure 2. Some Marofungal species from Koderma wildlife sanctuary, Jharkhand: **A**, *Inonotus shorae* (Wakef.) Ryvarden; **B**, *Corioliopsis telfairii* (Klotzsch) Ryvarden; **C**, *Hexagonia tenuis* (Hook.) Fr.; **D**, *Cellulariella acuta* (Berk.) Zmitr. & V. Malysheva; **E**, *Ganoderma lucidum* (Curtis) P. Karst.; **F**, *Indoporus shoreae* A. Parihar, K. Das, Hembrom & Vizzini; **G**, *Borofutus dhakanus* Hosen & Zhu L. Yang; **H**, *Gloeophyllum striatum* (Fr.) Murrill; **I**, *Loweporus tephroporus* (Mont.) Ryvarden; **J**, *Datronia mollis* (Sommerf.) Donk; **K**, *Microporus xanthopus* (Fr.) Kuntze.; **L**, *Trametes cingulata* Berk.

help of a Garmin 12 XL machine for almost all the sites. A specific field number was provided for each collection. In the base camp a detailed macro-morphological characterization was undertaken and a number of characters i.e. shape, size colour and colour change of pileus, stipe (if present), hymenophore and context etc. were recorded for each sample and their photographs with scale (showing range of morphological features) were captured. Colour codes mostly follow Kornerup & Wanscher (1978). After recording all important details all the samples were dried in the sun. In the laboratory micromorphological characterization were undertaken from the freehand sections of the dry basidiomata either mounted in lactophenol cotton blue and Melzer's reagent separately or treated in a mixture of 5% KOH, 1% phloxine and 1% Congo red and then mounted in 30%

glycerol and observed with the help of Olympus CX 41 microscope, in order to observe key micromorphological features for identification of the collected specimens. All the specimens were deposited at herbarium CAL. Herbarium codes follow Thiers (2019). In the present communication a list of species recorded from the study area with their collection site and collection number is given. A provisional key of recorded genera, based on their macro and micro-morphological features is also provided.

RESULTS AND DISCUSSION

Thorough morphological examination of these collections followed by literature survey revealed 88 species belonging to 44 genera and 12 families (Fig. 2). Among the collected species 66 are annual while 22 are perennial. The basidiomata of 15 species are resupinate, nine species are effused reflexed, 19 species are effused reflexed to pileate, and 31 species are pileate while 14 species are found to be stipitate to sub-stipitate or with a tapered base. These fungi grow on a wide range of hosts. Among the collected species 57 were found on dead tree trunks, 17 on living as well as on dead trees, 12 on living trees and 2 near root base or ground.

The members of Polyporaceae, Hymenochaetaceae, Phanerochaetaceae and Ganodermataceae were found to be most dominant. Polyporaceae (21 genera) appeared to be the most diversified family followed by Hymenochaetaceae (six genera), whereas, the families like Bondarzewiaceae, Ganodermataceae, Gloeophyllaceae, Lachnocladiaceae, Schizoporaceae and Serpulaceae are represented by single genera. Similarly, *Phellinus* Quél and *Trametes* Fr. are most diverse genera representing ten and nine species respectively. *Phylloporia pectinata* (Klotzsch) Ryvarden, *Ganoderma lucidum* (Curtis) P. Karst, *Microporus xanthopus* (Fr.) Kuntze, *Flavodon flavus* (Klotzsch) Ryvarden, *Hymenochaete rubiginosa* (Dicks.) Lév. and *Polyporus grammacephalus* Berk. are the most common species and widely distributed in the sanctuary area, whereas, *Amyloporus campbelli* (Berk.) Ryvarden, *Coltricia pyrophila* (Wakef.) Ryvarden, *Borofuturus dhakanus* Hosen & Zhu L. Yang are restricted to specific localities.

A provisional key to the genera

Genera with their key morphological characters and species reported from the study area for the particular genera have been provided below.

Synoptic key to the groups

- Fresh fruiting bodies fleshy with fertile poroid surface; mycorrhizic with plants Group A
 Fresh fruiting not as above; saprophytic or parasitic with plants Group B

Morphology based key to the Genera studied in KWS

Group A

1. Fertile surface with large hexagonal pores *Borofuturus*
 1. Fertile surface with relatively small pores 2
 2. Cap of fruiting bodies with squamules *Indoporus*
 2. Cap of fruiting bodies smooth 3
 3. Basidiospores with ridged outer surface *Boletellus*
 3. Basidiospores with smooth outer surface *Aureoboletus* sp.

Group B

1. Basidiomata blacking with KOH 2
 1. Basidiomata not as above 7
 2. Basidiomata stalked *Coltricia*
 2. Basidiomata bracketed or crust like 3
 3. Context duplex separated by a thin black line *Phylloporia*
 3. Not as above 4
 4. Hyphal system monomitic *Inonotus*
 4. Hyphal system dimitic 5
 5. Incrusted hyphae present near tube mouth *Fuscoporia*
 5. Incrusted hyphae never present near tube mouth 6
 6. Young abhymenial surface glabrous; dissepiments relatively thick *Phellinus*
 6. Young abhymenial surface velutinate; dissepiments relatively thin *Fulvifomes*
 7. Fresh Basidiomata soft, spongy, pulpy *Serpula*
 7. Fresh Basidiomata not as above 8
 8. Fertile surface maize like 9

8. Fertile surface distinctly poroid	11
9. Cystidia present	<i>Gloeophyllum</i>
9. Cystidia absent	10
10. Basidiomata ochraceous when dry, usually larger and highly variable in shaped including fertile surface	<i>Cellulariella</i>
10. Basidiomata chalky white when dry, medium size with appanate shaped and lenzitoid fertile surface	<i>Lenzites</i>
11. Basidiospores truncate	12
11. Basidiospores not as above	15
12. Basidiomata resupinate or crust like	<i>Loweporus</i>
12. Basidiomata bracket shaped	13
13. Basidiomata cherry red with KOH	<i>Pyrofomes</i>
13. Basidiomata not as above	14
14. Basidiomata with laccate pilear surface	<i>Ganoderma</i>
14. Basidiomata without laccate pilear surface	<i>Perenniporia</i>
15. Basidiospores spinose	<i>Amylosporus</i>
15. Basidiospores smooth	16
16. Hyphal system monomitic	17
16. Hyphal system di-trimitic	21
17. Basidiomata without cystidia	<i>Ceriporia</i>
17. Basidiomata with cystidia	18
18. Cystidia smooth	<i>Cabalodontia</i>
18. Cystidia Incrusted	19
19. Hymenophore with rounded minute pores	<i>Junghuhnia</i>
19. Hymenophore with Hexagonal large pores	20
20. Basidiomata resupinate	<i>Oxyporus</i>
20. Basidiomata effused reflexed	<i>Leucophellinus</i>
21. Hyphal system dimitic	22
21. Hyphal system trimitic	27
22. Generative hyphae simple septate	23
22. Generative hyphae clamped	24
23. Fertile surface citrus yellow	<i>Flavodon</i>
23. Fertile surface not as above	23
23. Fertile surface yellowish brown on maturity	<i>Rigidoporus</i>
23. Fertile surface violet on maturity	<i>Nigrofomes</i>
24. Skeletal hyphae dextrinoid, spores navicular	<i>Navisporus</i>
24. Not as above	25
25. Skeletal hyphae not dark coloured in KOH	<i>Antrodia</i>
25. Skeletal hyphae dark coloured in KOH	26
26. Spore >5 μ in size	<i>Datronia</i>
26. Spore <5 μ in size	<i>Tinctoporellus</i>
27. Basidiomata with distinct stalk; conical to fan shaped	28
27. Basidiomata without any stalk; crust to bracket shaped	31
28. Stalk base with distinct mycelial pad and pores minute	<i>Microporus</i>
28. Stalk base lacking mycelial pad and pores relatively larger in size	29
29. Pores hexagonal	30
29. Pores round to angular	<i>Polyporus</i>
30. Stalk lateral	<i>Favolus</i>
30. Stalk central	<i>Neofavolus</i>
31. Basidiomata resupinate; inseparable from the host; hymenophore lying only on the wall of tubes	<i>Grammothele</i>
31. Basidiomata and hymnophore not as above	32
32. Basidiomata partially or completely red in colour when matured	33
32. Basidiomata brownish to pale yellowish when matured	34

33. Entire Basidiomata red in colour	<i>Pycnoporus</i>
33. Upper sterile surface of Basidiomata/pileus with red cuticle near base	<i>Earliella</i>
34. Skeletal hyphae pale yellowish to brownish in water or KOH	35
34. Skeletal hyphae hyaline in water or KOH	36
35. Fertile surface with hexagonal pores	<i>Hexagonia</i>
35. Fertile surface with round to angular pores	<i>Coriolopsis</i>
36. Upper sterile surface of Basidiomata/pileus with erect hairs	<i>Funalia</i>
36. Upper sterile surface of Basidiomata/pileus with velvety hairs or smooth	37
37. Always on dead trees and timbers	<i>Trametes</i>
37. Always on living trees	8
38. Basidiomata leathery when fresh tough and corky when dried	<i>Fomitopsis</i>
38. Basidiomata not as above	<i>Antrodiella</i>

Table 1. Inventory of woody and fleshy poroid macrofungi.

S.N.	Species	Collection Sites	Collection Number(s)
Boletaceae Chevall.			
1	<i>Aureoboletus</i> sp.	Chatarbar, Lokai	AP 44944, AP 6671, AP 6683, AP 6695
2	<i>Boletellus shoreae</i> A. Parihar	Chatarbar, Lokai	AP 6679, AP 6692, AP 6696, AP 6699, AP 6700
3	<i>Borofutus dhakanus</i> Hosen & Zhu L. Yang	Chatarbar, Dhodhakhola	AP 6675, AP 6694
4	<i>Indoporus shoreae</i> A. Parihar, K. Das, Hembrom & Vizzini	Chatarbar, Lokai	AP 6647, AP 6670, AP 6673, AP 6693, AP 6694, AP 6697, AP 6698
Bondarzewiaceae Kotl. & Pouzar			
5	<i>Amylosporus campbellii</i> (Berk.) Ryvarden	Meghatari, Taraghati, Khalakhtambhi	AP 44970, AP 45095, AP 6601
Fomitopsidaceae Jülich			
6.	<i>Antrodia serialis</i> (Fr.) Donk	Lokai.	AP 6582
7.	<i>Fomitopsis feei</i> (Fr.) Kreisel	Mughalamaran.	AP 6659
Ganodermataceae Donk			
8.	<i>Ganoderma applanatum</i> (Pers.) Pat.	Basraun.	AP 6615
9.	<i>Ganoderma colossus</i> (Fr.) C.F. Baker	Taraghati.	AP 6608
10.	<i>Ganoderma curtisii</i> (Berk.) Murrill	Koderma enclosure.	AP 45022
11.	<i>Ganoderma lucidum</i> (Curtis) P. Karst.	Mughlamaran, Diplaswana, R.F.O. office, Lokai, Meghatari, Koderma enclosure.	AP 44912, AP 44978, AP 45004, AP 45010, AP 45012, AP 45013, AP 45060, AP 6574
12.	<i>Ganoderma stipitatum</i> (Murrill) Murrill	Meghatari NRF.	AP 44966
Gloeophyllaceae Jülich			
13.	<i>Gloeophyllum striatum</i> (Fr.) Murrill	Dhodhakhola, Meghatari, Phulwaria, Tara ghati.	AP 45085, AP 6530, AP 6559, AP 6639
14.	<i>Gloeophyllum subferrugineum</i> (Berk.)	Meghatari.	AP 45057
Hymenochaetaceae Donk			
15.	<i>Coltricia pyrophila</i> (Wakef.) Ryvarden	Dhavjadhari Pahar, Khalakhtambhi, Meghatari.	AP 44948, AP 45024, AP 45037
16.	<i>Fulvifomes durissimus</i> (Lloyd) Bondartsev & S. Herrera	Meghatari, Phulwariya.	AP 6551, AP 6567
17.	<i>Fulvifomes glaucescens</i> (Petch) Y.C. Dai	Meghatari.	AP 44965, AP 45026
18.	<i>Fulvifomes inermis</i> (Ellis & Everh.) Y. C. Dai	Meghatari.	AP 45052, AP 45071
19.	<i>Fuscoporia callimorpha</i> (Lév.) Groposo, Log-Leite & Góes-Neto	Suggi point.	AP 6555
20.	<i>Fuscoporia rhabarbarina</i> (Berk.) Groposo, Log-Leite & Góes-Neto	Chatarbar.	AP 6656
21.	<i>Fuscoporia senex</i> (Nees & Mont.) Ghob.-Nejh.	Chatarbar.	AP 6655
22.	<i>Inonotus luteoumbrius</i> (Romell) Ryvarden	Dhodhakhola.	AP 45081
23.	<i>Inonotus shorae</i> (Wakef.) Ryvarden	Near NH-31.	AP 44980

24.	<i>Phellinus adamantinus</i> (Berk.) Ryvarden	Koderma enclosure, Near taraghati.	AP 44961, AP 6690
25.	<i>Phellinus allardii</i> (Bres.) S. Ahmad	Koderma enclosure, Meghatari, Basraun.	AP 44955, AP 6545, AP 6610
26.	<i>Phellinus badius</i> (Cooke) G. Cunn.	Meghatari, Khalakhtambhi, Tara ghati.	AP 45058, AP 6511, AP 6543, AP 6607, AP 6686
27.	<i>Phellinus crocatus</i> (Fr.) Ryvarden	Meghatari.	AP 6508
28.	<i>Phellinus extensus</i> (Lév.) Pat.	Chatarbar.	AP 6627
29.	<i>Phellinus fastuosus</i> (Lév.) S. Ahmad	Meghatari, Koderma NRF.	AP 6507, AP 6593, AP 6641
30.	<i>Phellinus gilvus</i> (Schwein.) Pat.	Mughlamaran, Phulwariya, Basraun, Koderma enclosure, Chatarbar, Koderma NRF.	AP 44901, AP 44924, AP 44937, AP 44982; AP 45018; AP 45029, AP 45031, AP 6588
31.	<i>Phellinus grenadensis</i> (Murrill) Ryvarden	Chatarbar, Meghatari.	AP 6620, AP 45061
32.	<i>Phellinus merrillii</i> (Murrill) Ryvarden	Meghatari, Chatarbar.	AP 45050, AP 6619
33.	<i>Phellinus rhytiphloeus</i> (Mont.) Ryvarden	Basraun.	AP 6612
34.	<i>Phellinus rimosus</i> (Berk.) Pilát	Jamsoti, Dhodhakhola.	AP 6645, AP 6691
35.	<i>Phellinus</i> sp.1	Mughlamaran.	AP 6664
36.	<i>Phellinus</i> sp. 2	Meghatari.	AP 45078
37.	<i>Phylloporia pectinata</i> (Klotzsch.) Ryverden	Mughlamaran, Koderma NRF, Dhodhakhola, Koderma enclosure, Meghatari, Phulwaria, Lokai, Khalakhtambhi, Phutlaiya nala, Chatarbar, Lokai.	AP 44908, AP 44913, AP 44923, AP 44943, AP 44945, AP 45019, AP 45045, AP 45056, AP 6514, AP 6552, AP 6554, AP 6571, AP 6580 AP 6604, AP 6616, AP 6625, AP 6650
38.	<i>Phylloporia ribis</i> (Schumach.) Ryverden	Meghatari, Jamsoti nala, Khalakhtambhi.	AP 45038, AP 6538, AP 6539, AP 6557; AP 6590, AP 6666
Meripilaceae Jülich			
39.	<i>Rigidoporus lineatus</i> (Pers.) Ryvarden,	Meghatari.	AP 6516
40.	<i>Rigidoporus vincatus</i> (Berk.) Ryvarden	Phulwaria, Chatarbar.	AP 6558, AP 6630
Meruliaceae P. Karst.			
41.	<i>Cabalodontia subcretacea</i> (Litsch.) Piątek	Tara ghati.	AP 6688
42.	<i>Flavodon flavus</i> (Klotzsch.) Ryverden	Meghatari, Khalakhtambhi, Chatarbar, Taraghati.	AP 44976, AP 45053, AP 45077, AP 6529, AP 6534, AP 6602, AP 6624, AP 6635
43.	<i>Junghuhnia carneola</i> (Bres) Rajchenb.	Meghatari, Mughalamaran.	AP 6523, AP 6660, AP 6681
44.	<i>Junghuhnia nitida</i> (Pers.) Ryvarden	Tara ghati.	AP 6631
45.	<i>Junghuhnia rhizomorpha</i> H. S. Yuan & Y.C. Dai	Meghatari, Chatarbar.	AP 6513, AP 6669
Phanerochaetaceae Jülich			
46.	<i>Antrodiella fissiliformis</i> (Pilát) Gilb. & Ryvarden	Meghatari, Taraghati.	AP 45040, AP 6597
47.	<i>Ceriporia xylostromatoides</i> (Berk.) Ryvarden	Near Koderma rest house.	AP 6501
Polyporaceae Fr. ex Corda			
48.	<i>Cellulariella acuta</i> (Berk.) Zmitr. & V. Malysheva	Mughalamaran, Dhodhakhola, Koderma enclosure.	AP 44903, AP 45092, AP 6576
49.	<i>Coriolopsis brunneoleuca</i> (Berk.) Ryvarden	Meghatari.	AP 45054, AP 45062, AP 45072, AP 45074, AP 45075, AP 6528, AP 6684
50.	<i>Coriolopsis telfairii</i> (Klotzsch) Ryvarden	Phulwaria.	AP 6566
51.	<i>Datronia mollis</i> (Sommerf.) Donk	Meghatari.	AP 6525
52.	<i>Datronia scutellata</i> (Schwein.) Gilb. & Ryvarden	Koderma enclosure, Khalakhtambhi.	AP 44957, AP 6663

53.	<i>Earliella scabrosa</i> (Pers.) Gilbertson and Ryvarden	Phutlaiya nala, Meghatari, Near Koderma rest house, Baghitaan Road, Dhodhakhola, Phulwaria, Lokai.	AP 44934, AP 44969, AP 44972, AP 44981, AP 44985, AP 45003, AP 45059, AP 45063, AP 45086, AP 6505, AP 6519, AP 6536, AP 6547, AP 6549, AP 6553, AP 6565, AP 6581
54.	<i>Favolus tenuiculus</i> P. Beauv.	Dhodhakhola.	AP 45080
55.	<i>Funalia caperata</i> (Berk.) Zmitr. & V. Malysheva	Chitarpur.	AP 6617
56.	<i>Funalia polyzona</i> (Pers.) Niemelä, in Härkönen, Niemelä & Mwasumbi	Dhodhakhola.	AP 45082
57.	<i>Funalia sanguinaria</i> (Klotzsch) Zmitr. & V. Malysheva	Lokai, Meghatari.	AP 6585, AP 6685
58.	<i>Grammothele delicatula</i> (Henn.) Ryvarden, In Ryvarden & Johansen	Dhodhakhola.	AP 45091
59.	<i>Hexagonia tenuis</i> (Hook.) Fr.	Mughalamaran, Meghatari, Dhodhakhola, Taraghati.	AP 44979, AP 45041, AP 45068, AP45069, AP 45070, AP 45089, AP 6596, AP 6638
60.	<i>Lenzites elegans</i> (Fr.) Pat.	Meghatari, Chatarbar (Near NIC).	AP 6521, AP 6587
61.	<i>Lenzites stereoides</i> (Fr.) Ryvarden	Deoghar.	AP 44941
62.	<i>Lenzites</i> sp.1	Meghatari.	AP 6524
63.	<i>Loweporus tephroporus</i> (Mont.) Ryvarden	Mughalamaran, Koderma NRF, Near Forest rest house, Lokai, Koderma enclosure, Meghatari, Phulwaria.	AP 44909, AP 44920, AP 44984, AP 45011, AP 45017, AP 45023, AP 45030, AP 45039, AP 6550, AP 6560
64.	<i>Microporus xanthopus</i> (Fr.) Kuntze.	Koderma enclosure, Meghatari, Mughalamaran.	AP 44962, AP 44963, AP 44964, AP 6510, AP 6665, AP 6676
65.	<i>Navisporus floccosus</i> (Bres.) Ryvarden	Near NH-31.	AP 6503
66.	<i>Neofavolus alveolaris</i> (DC.) Sotome & T. Hatt.	Meghatari.	AP 44967
67.	<i>Nigrofomes melanoporus</i> (Mont.) Murrill	Tara Ghati.	AP 44967, AP 6632
68.	<i>Oxyporus latemarginatus</i> (Durieu & Mont.) Donk	Koderma NRF.	AP 44921
69.	<i>Oxyporus vellereus</i> (Berk. & Broome) Roy & De	Khalakhtambhi.	AP 6662
70.	<i>Perenniporia medulla-panis</i> (Jacq.) Donk	Meghatari.	AP 6677, AP 6678.
71.	<i>Perenniporia ochroleuca</i> (Berk.) Ryvarden	Basraun, Meghatari.	AP 44929, AP 45048.
72.	<i>Polyporus grammocephalus</i> Berk.	Basron, Dhodhakhola, Meghatari, Koderma enclosure, Koderma NRF, Phutlaiyaa nala, Chatarbar.	AP 44928, AP 44933, AP 44971, AP 44987, AP 45033, AP 45049, AP 45065, AP 45076, AP 45087, AP 45090, AP 6512, AP 6614, AP 6618, AP 6621
73.	<i>Polyporus tricholoma</i> Mont.	Meghatari.	AP 6541
74.	<i>Pycnoporus sanguineus</i> (L.) Murrill	Chatarbar.	AP 6672
75.	<i>Pyrofomes albomarginatus</i> (Zipp. ex Lév.) Ryvarden	Koderma enclosure, Nh-31 Jamsoti, Chatarbar.	AP 44991, AP 6591, AP 6622
76.	<i>Tinctoporellus epimiltinus</i> (Berk. & Broome) Ryvarden	Meghatari.	AP 6682
77.	<i>Trametes cingulata</i> Berk.	Koderma enclosure, Meghatari, Baghitan road, Khalakhtambhi, Dhodhakhola.	AP 44952, AP 44975, AP 45008, AP 45025, AP 45044, AP 45088
78.	<i>Trametes cotonea</i> (Pat. & Har.) Ryvarden	Chatarbar.	AP 6628
79.	<i>Trametes lactinea</i> (Berk.) Sacc.	Meghatari.	AP 45066

80.	<i>Trametes leonina</i> (Klotzsch) Imazeki	Meghatari, Mughalamaran.	AP 6540, AP 6657
81.	<i>Trametes menziesii</i> (Berk.) Ryverden	Jamsoti, Mughalamaran, Khalakhtambhi, Taraghati.	AP 6594, AP 6561, AP 6599, AP 6687
82.	<i>Trametes pubescens</i> (Schumach.) Pilát	Dhodhakhola, Meghatari.	AP 44932, AP 44973
83.	<i>Trametes trogii</i> Berk.	Taraghati.	AP 45094
84.	<i>Trametes variegata</i> (Berk.) Zmitr., Wasser & Ezhov	Mughalamaran, Meghatari, Jamsoti.	AP 44906, AP 6526, AP 6589
85.	<i>Trametes vespacea</i> (Pers.) Zmitr., Wasser & Ezhov	Lokai.	AP 45009
86.	<i>Trametes villosa</i> (Sw.) Kreisel	Meghatari.	AP 6537, AP 6572
Schizoporaceae Jülich			
87.	<i>Leucophellinus hobsonii</i> (Berk. ex Cooke) Ryvardeen	Baghitaan road, Lokai.	AP 45007, AP 6586
Serpulaceae Jarosch & Bresinsky			
88.	<i>Serpula similis</i> (Berk. & Broome.) Ginns.	Dhawajadhari pahar, Koderma NRF, Mughalamaran.	AP 44925, AP 45032, AP 6658

ACKNOWLEDGEMENTS

The authors are grateful to the Director, Botanical Survey of India (BSI), Kolkata, and Dr. V. P. Prasad (Central National Herbarium, BSI) for providing all kinds of facilities during the present study. Help rendered by forest officials of Jharkhand Forest Department during survey and collection is duly acknowledged. One of the Authors (AP) is thankful to Mr. Parmeshwar for helping him in many ways during field survey and collection.

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