



A Checklist of Wood rotting fungi (non-gilled Agaricomycotina) of Uttarakhand

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ABSTRACT

Two hundred species of wood rotting non-gilled Agaricomycotina are being recorded from state of Uttarakhand (North Western Himalayas), India. These belong to 27 families spreading over 100 genera. These are recorded from various regions viz.: Dehradun, Mussoorie, Nainital, Rishikesh, Chamoli, Nanda Devi Biosphere Reserve, Uttarkashi, Hemkunt and Chakrata of study area. This constitutes the first consolidated account of these fungi from Uttarakhand state (N. W. Himalayas).

Key Words: Non-gilled Agaricomycotina, wood-rot, fungi, Uttarakhand.

INTRODUCTION

Wood is decomposed by fungi through several types of rot (Rypáček 1957; Rypáček 1966; Schwarze *et al.* 2000; Martínez *et al.* 2005). Some of these can be distinguished in the field according to their features in suitable decay stages to the genus or species level, e.g. *Armillaria* spp., *Phellinus nigrolimitatus*, *Fomitopsis pinicola* (Ryvarden and Gilbertson 1993, 1994). Woody tissues are degraded by fungi, and these wood-decay fungi fall into three types according to their mode of attack on the wood cell walls - white-rot fungi, soft-rot fungi and brown-rot fungi (Deacon, 2005). White-rot fungi are the most efficient degraders of lignocelluloses as they can degrade cellulose and hemicellulose, as well as lignin (Schmidt 2006) where as brown rot fungi (exclusively basidiomycetes) decompose hemicelluloses, cellulose and modify or cleave lignin but do not metabolise it. Wood affected by brown rot is usually dry and fragile, readily crumbles into cubes because of longitudinal and transverse cracks. There are some soft rot fungi which degrade only the cellulose and hemicelluloses. We provide here, the first checklist for wood-rotting (non-gilled) Agaricomycotina for the state of Uttarakhand (N. W. Himalayas). Till-to-date there is no consolidated account of these fungi available in literature for this area.

Study Area

The state of Uttarakhand extends between 28° C 43' N to 31° C 27' N latitude and 77° C 34' E to 81° C 02' E altitude. It is one of five states of the Indian Union which are a part of the N.W. Himalayan region. The region of Uttarakhand has a total area of 53,566 km² and is covered by mountains (approximately 93%) and forests show up on about 64% of the mountains. Most of the northern part of the state is covered by high Himalayan glaciers, passes, meadows, and trekking routs with several major rivers and tributaries like the Ganga, Yamuna, Alaknanda and Mandakani originating from here. Uttarakhand lies on the southern slope of the Himalayan range, and the climate and vegetation vary greatly with elevation, from glaciers at the highest elevations to subtropical forests at the lower elevations. The highest elevations are covered by ice and bare rock. Below them, between 3,000 and 5,000 metres (9,800 and 16,000 ft) are the western Himalayan alpine shrub and meadows. The temperate western Himalayan subalpine conifer forests grow just below the tree line. At 2,600 to 3,000 metres (8,500 ft to 9,800) elevation they transition to the temperate western Himalayan broad leaf forests, which lie in a belt from 1,500 to 2,600 metres (4,900 ft to 8,500) elevation. Below 1,500 metres (4,900 ft) elevation

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Below 1,500 metres (4,900 ft) elevation are present the Himalayan subtropical pine forests. The Upper Gangetic Plains moist deciduous forests and the drier Terai- Duar Savanna and grasslands cover the lowlands along the Uttar Pradesh border in a belt locally known as Bhabhar. These lowland forests have mostly been cleared for agriculture, but a few pockets remain. Uttarakhand has a great diversity of flora and fauna. It has a recorded forest area of 34651 km² which constitutes 65% of the total area of the state. Uttarakhand is home to rare species of plants and animals, many of which are protected by sanctuaries and reserves. National parks in Uttarakhand include the Jim Corbett National Park (the oldest national park of India) at Ramnagar in Nainital District, and Valley of Flowers National Park and Nanda Devi National Park in Chamoli District, which together are a UNESCO World Heritage Site. A number of plant species recorded in the valley are internationally threatened, including several that have not been recorded from elsewhere in Uttarakhand. Rajaji National Park in Haridwar District and Govind Pashu Vihar National Park and Sanctuary and Gangotri National Park in Uttarkashi District are some other protected areas in the state. Evergreen oaks, rhododendrons, and conifers predominate in the hills. *Shorea robusta*, *Bombax ciliata*, *Dalbergia sissoo*, *Mallotus philippensis*, *Acacia catechu*, *Bauhinia racemosa*, and *Bauhinia variegata* are some of the other trees of the region. *Albizia chinensis*, the sweet sticky flowers of which are favoured by sloth bears, are also part of the region's flora. The climate is stridently distinguished in its two diverse divisions: the major hilly terrain and the smaller plains. The climate however also varies within the mountains in accordance with the altitude of the place. The eastern edges of the Himalayan ranges are subject to heavy rainfall while the western division is relatively dry. However in Gangetic plains summers are extremely hot and humid with temperature crossing the 40^o C mark. Winters can be quite cold with temperature dipping below 5^oC at times. The vegetation of Uttarakhand varies from tropical forests to Alpine shrubs and meadows as per climatic changes due to elevate-changes. Uttarakhand also has rich variety of medicinal plants.

REVIEW OF WORK DONE IN INDIA/HIMALAYAS

Wight in the nineteenth century collected a number of fungi from Himalayas which were later examined by Klotzsch (1832, 1833) and Berkley (1839). Hooker and Thompson (1849, 1850) collected hundreds of specimens of fungi from Sikkim, Eastern Himalayas and Khasi Hills. Massee (1901-1912) published several accounts of Indian Fungi based on collection sent to Kew Herbarium. Wakefield (1916-22),

Bose(1919,1923,1924,1925,1927) gave comprehensive account of fungi of Bengal and its adjoining areas. Butler and Bisby(1931) prepared compilation of the fungi in their work "The Fungi of India" which included wood rotting fungi. Bagchee and Bakshi (1950), Bakshi (1958, 1971), Bakshi *et. al.* (1963), Balwant Singh(1961-66), Puri(1956), Sehgal *et al.*(1966), Roy (1968) were the workers who gave their great contribution to the fungi. Bakshi (1971) published "Indian Polyporaceae" which included 355 species of fifteen genera. Thind and co-workers (1956-1985), Rattan (1977), Dhanda (1978, 1978a) contributed extensively to these fungi from N. Western and Eastern Himalayas. Anjali Roy(1979,1981 a, b,1982,1983,1984) Harsh(1982), Natrajan & Raman(1980), Natrajan & Kolandavelu(1985), Vaidya(1987), Vadiya & Bhor(1990), Vaidya *et. al.*(1991), Sharma(1995) and Nanda(1996), Prasher(1997,1999), Prasher & Hem Chander(2006, 2007), Prasher *et.al.*(2011, 2012), Dhingra *et.al.*(2011,2011a, 2012) and Prasher & Lalita(2012) contributed to this group of fungi from India/ Himalayas. A review of the above mentioned literature reveals that not much is known about the wood rotting fungi of the Uttarakhand. In light of this, the studies were initiated to compile the fungi of this region in one volume after critical examination of the specimens and through survey of the published literature.

MATERIALS AND METHODS

The data provided in this communication is based on the examination of the collections made by us as well as collected by the previous workers and deposited in the Herbarium of Botany Department, Panjab University, Chandigarh (PAN), India. The observations are based on the fresh as well as dry specimens and those preserved in Formaldehyde, Alcohol and Water. All the collection cited in the text are those deposited in the PAN unless otherwise mentioned. Majority of the collections belonging to different species were critically examined macro and microscopically for different characters. However, the specimens of some collections were not available for examination by the authors, these have been mentioned on the basis of literature reports only and no herbarium numbers are mentioned for these species. The fungi recorded in this paper are classified after Kirk *et al.*(2008), Index Fungorum and Mycobank. Standard procedures were adopted to study the specimens after Prasher (1999).

The method of revival of the dried specimens and the different strains/reagents used are as follows: For microscopic study the section of dried fructifications were mounted in 3% KOH for measurements of various structures as basidiospores, basidia, cystidia, setae and stained with cotton blue(in lactic acid) for determining the cyanophilous reaction, Melzer's reagent(for

determining the amyloidity), 1% aqueous solution of congo red and Phloxine(to determine the presence or absence of clamps and for measuring the hymenial elements and hyphae), sulphobenzaldehyde(water 1.5 ml, pure sulphuric acid 5.0 ml and benzaldehyde 4.5 ml) for staining gloecystidia after Slysh (1960). The following information has been provided in the order stated:

- a) Name of the order and families.
- b) Name of the species with reference to the published report
- c) Distribution in Uttarakhand state
- d) Collection examined with herbarium number (PAN) deposited in the herbarium, Panjab University, Chandigarh.

e) Reference to the published report from where full description can be obtained.

Areas from where collections were made: The specimens were collected from the forests around the following places in Uttarakhand. The data concerning the main stations with its altitude, the localities and the nearby smaller and lesser known places around the main station along with the range of their altitude and the types of forest/s in the localities. Localities of Uttarakhand from where collections were made are given in table 1:



Fig. 1- Map of Uttarakhand showing localities of collection

Table 1: Localities of Uttarakhand from where collections were made

State	Station	Substation (Alt. in meters)	Forests type
Uttarakhand	Dehradun	Dehradun (1400 m.)	Chir & Sal forests
		Mussoorie (1800 m.)	<i>Cedrus deodara</i> & Oak forests
		Chakrata (7000-7250m.)	Oak, <i>Cedrus deodara</i> & Mixed forests
	Haridwar	Haridwar (250 m.)	Sal & Mixed
		Rishikesh (372 m.)	<i>Cedrus deodara</i> & Mixed forests
	Nainital	Nainital (1938 m.)	Sal forests
	Chamoli	Chamoli (926 m.)	Mixed forests
		NDBR (5749 m.)	Oak pine & Mixed forests
	Hemkunt	Hemkunt (4329 m.)	Pine & <i>Rhododendron</i> forests
	Uttarkashi	Uttarkashi (1352 m.)	Mixed forests

List of wood rotting Agaricomycotina:

Two hundred species of wood rotting fungi belonging to 27 families and 100 genera of Agaricomycotina (Table 2) are being listed.

Abbreviation used: NDBR: Nanda Devi Biosphere reserve, U.K: Uttarakhand,

Agaricales, Auriculariaceae

Auricularia auricula-judae (L.:Fr.) Schröt., Fl. Schles. 3:386, 1889.

Distribution: NDBR, 28223.

Agaricales, Auriculariaceae

Auricularia auricula-judae (L.:Fr.) Schröt., Fl. Schles. 3:386, 1889.

Distribution: NDBR, 28223.

Auricularia polytricha (Mont.) Sacc., Atti. Inst. Veneto Sci. let. 3:722, 1885.

Distribution: NDBR, 28630.

Schizophyllaceae

Schizophyllum commune Fr., Syst. Mycol. 1: 330, 1821.

Distribution: NDBR, 28221.

Stephanosporaceae

Cristinia helvetica (Pers.) Parm., Consp. Syst. Cort.:48, 1968.

Distribution: NDBR, 28188.

BOLETALES, CONIOPHORACEAE

Serpula lacrymans (Wulfen) Schröt. Meddn Soc. Fauna Flora Fenn. 11:21, 1885.

Distribution: NDBR, 29082.

Dacrymycetales, Dacrymycetaceae

Calocera viscosa (Pers.) Fr. Syst. Mycol. (Lundae) 1: 486, 1821

Distribution: NDBR, 28638.

ATHELIALES, ATHELIACEAE

Leptosporomyces adnatus (Rehill & B.K. Bakshi) S.S. Rattan, Bibliotheca Mycol. 60: 270, 1977.

Distribution: Chakrata, 5525.

Fomitopsidaceae

Antrodia albida (Fr.) Donk, Persoonia 4(3): 339(1966)=*Daedalea sepium* (Berk.) Aoshima Trans. Mycol. Soc. Japan, 8(1): 2, 1967

Distribution: Chakrata, 21260

Antrodia serialis (Fr.) Donk, Persoonia 4: 340: 1966=*Daedalea serialis* (Fr.) Aoshima Trans. Mycol. Soc. Japan 8(1): 2, 1967.

Distribution: Uttarkashi, 22366.

Antrodia xantha (Fr.) Ryv., Norw. J. Bot. 20: 8, 1973.

Distribution: NDBR, 21521.

Daedalea dickinsii Yasuda, Bot. Mag. Tokyo 36: 127, 1922 [1923] =*Trametes dickinsii* Berk. ex Cke., 19: 100, 1891

Distribution: Chakrata, Kumaun.

Daedalea dochmia (Berk. & Broome) T. Hatt., Mycoscience 46(5): 307 (2005) = *Fomitopsis dochmia* (Berk & Broome) Ryv., Norw. J. Bot. 19: 231, 1972

Distribution: NDBR. 28627.

Daedalea gollanii Masee, Bull. Misc. Inf., Kew: 217 (1908).

Distribution: Mussoorie, 221.

Daedalea quercina(L.) Pers., Syn. Meth. Fung. (Göttingen): 500, 1801

Distribution: NDBR, 21251

Daedalea sulcata (Berk.) Ryvarde, Norw. J. Bot. 24: 216 (1977) = *Hexagonia sulcata* Berk. London J. Bot. 6: 510, 1847.

Distribution: NDBR, 28596.

Fomitopsis pinicola (Sw. ex Fr.) Karst., Krit. Ofv. Finl. Basidsv. P. 306, 1889=*Polyporus pinicola* (Sw. ex Fr.) Cke., Grevillea 14: 17. 1885.

Distribution: Chakrata

Fomitopsis palustris (Berk. et. Curt.) Gilbn. & Ryv., Mycotaxon 22: 364, 1985=*Polyporus palustris* Berk. et Curt., Grev. 1: 51, 1872.

Distribution: Dehra Dun.

Fomitopsis rosea(Alb. & Schw. ex Fr.) Karst., Krit. Ofv. Finl. Basidv. P. 306, 1889=*Polyporus roseus*(Alb. et Schw. Fr.) Karst., Soc. F. F. Fenn. Meddel. 5:39, 1879.

Distribution: Nainital, 22367.

Fomitopsis rubidua(Berk.) Roy & De [as *rubidus*], Mycotaxon 60: 317(1996) = *Polyporus rubidus* Berk., Lond. J. Bot. 6:500, 1847.

Distribution: Dehra Dun

Fomitopsis rufolaccata(Bose) Dhanda [as '*rufolaccatus*'], in Thind & Dhanda, Indian Phytopath. 33(3): 386 (1981) [1980] =*Fomitopsis rufolaccatus* (Bose) Dhanda.

Distribution: Uttarkashi, 22372.

Laetiporus sulphureus(Bull.)Murr., Mycologia 12(1):11, 1920.=*Polyporus sulphureus* Bull. ex Fr., Syst. Mycol.1: 357, 1821.

Distribution: Chakrata, Kumaun, NDBR, 28606.

Postia guttulata (Peck ex Sacc.) Jülich, Persoonia 11(4): 423 (1982) =*Tyromyces guttulatus* (Peck.) Murr., North Am. Flora 9: 31, 1907.

Distribution: NDBR, 21756

Postia leucomallella (Murrill) Jülich, Persoonia 11(4): 423 (1982)=*Postia fragilis* (Fr.) Jülich. Sesu aut; fide Checklist of Basidiomycota of Great Britain & Ireland(2005)Persoonia 11, 423, 1982=*Polyporus fragilis* Fr., Elench. Fung. 1: 86, 1828=*Tyromyces fragilis* (Fr.) Donk. Meded. bot. Mus. Herb. Rijks- Univ. Utrecht 9: 148,1933.

Distribution: Chakrata, 6535.

Postia sericeomollis(Romell) Jülich, Persoonia 11(4): 423 (1982)=*Tyromyces sericeo-mollis* (Rom.) Bond. & Sing., Annl. Mycol., 39:51, 1941.

Distribution: Uttarkashi, 22348.

Hymenochaetales, Gloeophyllaceae

Gloeophyllum carbonarium(Berk. & M.A. Curtis) Ryvarde, Mycotaxon 20(2): 334 (1984) = *Trametes carbonaria*(Berk. & Curt.) Overh. Mycologia 23: 126,1931.

Distribution: NDBR, Chakrata, 28612.

Gloeophyllum sepiarium(Wulfen) P. Karst. [as '*Gloeophyllum*'], Bidr. Känn. Finl. Nat. Folk 37: 79 1882.

Distribution: Mussoorie, Dehra Dun, 21431.

Gloeophyllum subferrugineum(Berk.) Bondartsev & Singer, Annl. mycol. 39(1): 64 (1941)

Distribution : NDBR , 28934

Hericiaceae

Laxitextum bicolor(Pers. ex Fr.) Lentz U.S. D.A. Agri. Monogr. 24: 19.1955.= *Thelephora bicolor* Pers., Syn. Meth. Fung. P. 568. 1801. Fries, Syst. Mycol. 1: 438.1821.

Distribution: Mussoorie- Kempty fall, 5031.

Hymenochaetaceae

Aurificaria indica(Masee) D.A. Reid, Kew Bull. 17(2): 279,1963.

Distribution: Chakrata road, Dehra Dun, 225.

Coltricia cinnamomea(Jacq.)Murrill, Bull. Torrey bot. Club 31(6): 343 (1904)

Distribution: NDBR, 21285.

Coltricia perennis(L.) Murrill, J. Mycol. 9(2): 91 (1903)

Distribution: Mussoorie, NDBR, 216.

Coltricia montagnei(Fr.) Murrill, Mycologia 12(1): 13 (1920)= *Cycloporus turbinatus* Berk.166: 1854.

Distribution: Haridwar, 22350.

Fuscoporia contigua (Pers.) G. Cunn., Bull. N.Z. Dept. Sci. Industr. Res., Pl. Dis. Div. 73: 4 (1948)= *Phellinus contiguous* (Pers. ex Fr.) Bourd.& Galz. Hym.France p. 624. 1928.

Distribution: Uttarkashi, 22349.

Fomitiporia robusta(P. Karst.) Fiasson & Niemelä, Karstenia 24(1): 25 (1984) = *Phellinus robustus*(Karst.) Bourd & Galz.Mym. France: 616, 1928.

Distribution: NDBR, 21500

Fuscoporia ferruginosa (Schrad.) Murrill [as '*ferruginosus*'], N. Amer. Fl. (New York) 9(1): 5 (1907)= *Phellinus ferruginosus* (Schrad.) Pat. Essai Hymen. : 97, 1900

Distribution: NDBR, 6537.

Fuscoporia torulosa (Pers.) T. Wagner & M. Fisch., Mycol. Res. 105(7): 780 (2001)= *Phellinus torulosus* (Pers.) Bourd. & Galz. Bull. Trimest. Soc. Mycol. Fr. 41: 191, 1925

Distribution: NDBR, 21480

Onnia tomentosa (Fr.) P. Karst., Revue mycol., Toulouse 11(no. 47): 205 (1889)=*Coltricia tomentosa* (Fr.) Murr., Bull. Torrey bot. Club 31(6): 346, 1904.

Distribution: Dehradun, 22082.

Onnia circinata (Fr.) P. Karst., Bidr. Känn. Finl. Nat. Folk 48: 326 (1889).

Distribution: Dehradun 22368.

Phellinus allardii (Bres.) S. Ahmad, Basidiomyc. W. Pakist. 6: 57 (1972)

Distribution: NDBR, 21275.

Phellinus caryophylli (Racib.) G. Cunn., Bull. N.Z. Dept. Sci. Industr. Res., Pl. Dis. Div. 164: 238 (1965)

Distribution: NDBR, 6093.

Phellinus fastulosus (Lev.) Ryv., Norw. J. Bot. 19(3&4) : 234, 1972

Distribution: NDBR, 28247.

Phellinus gilvus (Schw.) Pat., Essai Tax. Hyménomyc.: 82, 1900

Distribution: NDBR, 21061.

Phellinus grenadensis (Murr.) Ryv., Norw. J. Bot. 19: 234, 1972.

Distribution: Uttarkashi, 22369.

Phellinus johnsonianus (Murr.) Ryv., Bull. N.Z. Dep. Scient. Ind. Res. 164: 238, 1965

Distribution: NDBR, 21583.

Phellinus linteus (Berk. & Curtis) Teng, Chung-kuo Ti Chen-chun, [Fungi of China]: 762, 1963.

Distribution: NDBR, 28958.

Phellinus merrillii (Murr.) Ryv., Norw. J. Bot. 19 : 234, 1972

Distribution: NDBR, 28189

Phellinus sanfordii (Lloyd) Ryv., Norw. J. Bot. 19: 235 (1972) = *Fomes sanfordii* Lloyd, Mycol. Writ. 4 (Synopsis of the Genus *Fomes*): 258 (1915).

Distribution: Mussoorie, NDBR, 28582

Phellinus xeranticus (Berk.) Pegler Kew Bull. 21: 44, 1967= *Polyporus xeranticus* Berk. Hook. J. Bot. 6: 161, 1854

Distribution: NDBR, 29083

Phylloporia pectinata (Klotzsch) Ryv., Syn. Fung. (Oslo) 5: 196 (1991) = *Fomes pectinatus* (Klotzsch) Gillet, Grevillea 14(no. 69): 20 (1885)

Distribution: Dehra Dun, 212.

Phylloporia ribis (Schumach.) Ryv., Grundr. Krauterk. 2: 371, 1978

Distribution: NDBR, 29091.

Porodaedalea pini (Brot.) Murrill, Bull. Torrey bot. Club 32(7): 367 (1905) = *Phellinus pini* (Brot.) Bond. & Sing. Atlas des Champignons de l'Europe 3(1): 517, 1941

Distribution: NDBR, 28604.

Schizoporaceae

Basidioradulum crustosum (Pers.) Zmitr., Malysheva & Spirin, Mycena 6: 44 (2006)=*Hyphodontia crustosa* (Pers. ex Fr.) Erikss. Symb. Bot. Upsal. 16: 104. 1958.

Distribution: Hemkunt, 4271.

Basidioradulum tuberculatum (Berk. & M.A. Curtis) Hjortstam, Mycotaxon 54: 183 (1995) = *Phlebia albida* Post. Ex Fr. emend. Bres., Ann. Mycol. 1: 90. 1903.

Distribution: Chakrata, Mussoorie, 5342.

Hyphodontia arguta (Fr.) Erikss., Symb. bot. upsal. 16: 104. 1958. = *Hydnum argutum* Fr., Syst. Mycol. P. 424. 1821.

Distribution: Hemkunt, 4024.

Hyphodontia aspera (Fr.) Erikss., Symb. bot. upsal. 16: 104. 1958. = *Grandinia aspera* Fr., Hym. Eur. P. 647. 1874.

Distribution: Cheena peak, Nainital, 4282.

Hyphodontia pallidula (Bres.) Erikss., Symb. bot. upsal. 16: 104. 1958. = *Gonatobotrys pallidula* Bres., Ann. Mycol. P. 127. 1903.

Distribution: Rishikesh, 5141.

Hyphodontia spathulata (Schard. ex Fr.) Parm., Consp. Syst. Cort. p. 123. 1968. = *Hydnum spathulatum* Schard. ex Fr., Syst. Mycol. 1: 423. 1821.

Distribution: Mussoorie, 4011.

Hyphodontia stipata (Fr.) Gilb., In Petersen, Evol. high. Basidiom. : 300. 1971. = *Hydnum stipatum* Fr., Syst. Mycol. 1: 425. 1821.

Distribution: Mussoorie, 4380

Oxyporus corticola (Fr.) Ryv., Persoonia 7: 19, 1972.

Distribution: NDBR, 29079.

Oxyporus cervinogilvus (Jungh.) Ryv., Norw. J. Bot. 20: 3, 1973 = *Polyporus cervinogilvus* Jungh.,

Verh. Batav. Genootsch. Kunst. Wetensch. 17:45, 1838.

Distribution: Dehra Dun

Oxyporus populinus(Schum.) Donk, Med. Bot. Mus. Univ. Utrecht.9:204, 1933=*Polyporus populinus* Schum.ex Fr., Syst.Mycol.1.367, 1821=*Fomes conatus* (Weinm.) Gill., France 1:687, 1878.

Distribution: Dehra Dun, Mussoorie.

Oxyporus ravidus (Fr.) Bond. & Sing., Ann. Mycol. 39:63, 1941=*Polyporus ravidus* Fr., 457, 1838. =*Trametes ravidus* (Fr.) Pilat., Atl. Polyp. 272, 1939.

Distribution: Dehra Dun, Chakrata.

Schizopora paradoxa(Scharf. ex Fr.) Donk, Persoonia 5: 104. 1967= *Hydnum paradoxum* Schrad. ex Fr., Syst. Mycol. 1: 424. 1967. = *Poria versipora* (Pers.) Rom. Svensk. Bot. Tidskr. 20:5. 1926.

Distribution: Dehradun, NDBR 29045.

Tubulicrinaceae

Tubulicrinis glebulosus(Fr.) Donk [as 'glebulosa'], Fungus, Wageningen 26(1-4): 14 (1956)=*Tubulicrinis gracillima* (Ell. & Ev.)Cunn., N.Z. Dept. Sci. Ind. Res. Bull. 145 p. 141.

Distribution: Dehra Dun, 19212.

Tubulicrinis umbraculus (G. Cunn.) G. Cunn., [as 'umbracula'], Bull. N.Z. Dept.Sci. Industr. Res., Pl. Dis. Div. 145: 142 (1963)

Distribution: NDBR, 28264.

Polyporales, Ganodermataceae

Ganoderma applanatum Karst., Hym. Eur.: 143, 1887

Distribution: NDBR, 28600

Ganoderma lucidum (Leyss.-Curt.:Fr.) Karst., Rev. Mycol. 3(9): 17, 1881

Distribution: NDBR, 28187

Lachnocladiaceae

Asterostroma cervicolor(Berk. & Curt.) Mass., J. Linn. Soc. Bot. 25: 154. 1889. = *Corticium cervicolor* Berk. & Curt., Grevillea 1: 179. 1891.

Distribution: Ranikhet, 5379.

Asterostroma muscicola(Berk. & M.A. Curtis) Masee, J. Linn. Soc., Bot. 25(no. 170): 155 (1889), *Asterostroma musicolum*(Berk. & Curt.) Mass. J. Linn. Soc. Bot. 25: 154. 1889.

Distribution: Hemkunt, 5433.

Dichostereum effusatum(Cooke & Ellis) Boidin & Lanq., Mycotaxon 6(2): 284 (1977)=*Vararia effusata* (Cooke & Ellis) Rog. & Jacks. Farlowia 1: 290. 1943. = *Corticium effusatum* Cooke & Ellis, Grevillea 9: 113. 1881.

Distribution: Dehra Dun, 5849.

Dichostereum pallescens(Schwein.) Boidin & Lanq., Mycotaxon 6(2): 284 (1977). = *Vararia pallescens* (Schw.) Rog. & Jacks. Farlowia 1: 309. 1943. =*Thelephora pallescens* Schw. Trans. Am. Phil. Soc. n.s. 4: 167. 1832.

Distribution: Chakrata, 5414.

Dichostereum rhodosporum (Wakef.) Boidin & Lanq., Mycotaxon 6(2): 284 (1977). =*Vararia rhodospora* (Wakef.) Cunn. Proc. Linn. Soc. NSW 77: 291. 1953. = *Asterostromella rhodospora* Wakef., Kew Bull. 372. 1915.

Distribution: Nainital, 5023.

Scytinostroma duriusculum(Berk. & Br.) Donk, Fungus 26: 20. 1956. = *Stereum duriusculum* Berk. & Br. J. Linn. Soc. Bot. 14: 66. 1873.

Distribution: Nainital, 5009.

Scytinostroma portentosum(Berk. & Curt.) Donk, Fungus 26: 20. 1956. = *Corticium portentosum* Berk. & Curt., in Berk., Grevillea 21: 3. 1873.

Distribution: Chakrata, 5365.

Scytinostroma rhizomorparum Rattan, Trans. Brit. Mycol. Soc. 63: 8-9. 1974.

Distribution: Hemkunt, 5431.

Meripileaceae

Physisporinus rivulosus(Berk. & M.A. Curtis) Ryv., [as 'rivulosa'], Mycotaxon 20(2): 353 (1984) =*Poria rivulosa* (Berk. & M.A. Curtis) Cooke, Grevillea 14(no. 72): 109 (1886)

Distribution: Uttarkashi, 22370.

Rigidoporus microporus(Sw.) Overeem, Icon. Fung. Malay. 5: 1 (1924) =*Oxyporus lignosus* (Kl.) Roy & De, Polyporaceae of India: 183, IBD, Dehra Dun.

Distribution: Dehra Dun.

Rigidoporus lineatus(Pers.) Ryv., Norw. J. Bot. 19: 236 (1972) = *Rigidoporus zonalis* (Berk.) Imaz. Bull. Govt. For. Exp. Stn. 57: 119, 1952.

Distribution: Chakrata.

Rigidoporus ulmarius(Sowerby) Imazeki, Bull. Gov. Forest Exp. St. Tokyo 57: 119 (1952) = *Fomes ulmarius* Fr., Hymenomyc. eur. (Ursaliae): 683 (1874).

Distribution: Mussoorie, NDBR, 28957.

Rigidoporus vinctus(Berk.) Ryv., Norw. J. Bot. 19:139-144, 1972.

Distribution: Dehra Dun, 21051.

Gloeophyllales, Meruliaceae

Abortiporus biennis(Bull.) Singer, Mycologia 36(1): 68 (1944).

Distribution: Uttarkashi, 22340.

Bjerkendera adusta(Fr.) Karst., Medd. Soc. Fauna Fl. Fenn. 5: 38, 1879.

Distribution: Chakrata-Dehra Dun, NDBR, 21362.

Bjerkendera fumosa(Pers.) Karst., Medd. Soc. Fauna Fl. Fenn. 5: 38, 1879.

Distribution: Dehra Dun, 21376.

Cabalodontia queletii(Bourd. & Galzin) Piątek, Polish Botanical Journal 49(1): 3 (2004)
Metulodontia queletii (Bourd. & Galz.) Parm. Consp. Syst. Cort. p.118.1968.

Distribution: Nainital, 4228.

Flavodon flavus (Klot.) Ryv., Norw. J. Bot. 20(1): 3, 1973=*Irpex flavus* Klotzsch Linnaea 8 : 488, 1833

Distribution: NDBR, 28592.

Gloeoporus theleporoides (Hook.) G. Cunn., Bull. N.Z. Dept. Sci. Industr. Res., Pl. Dis. Div. 164: 111 (1965) = *Polyporus conchoids*(Mont.) Lloyd Synop. Apus: 331, 1915

Distribution: NDBR, 28240.

Gyrophanopsis polonensis(Bres.) Stalpers & P.K. Buchanan, N.Z. J. Bot. 29(3): 333 (1991) = *Hypochnicium polonense*(Bres.) Strid, Wahlenb. 1 p. 68, 1975.

Distribution: Hemkunt, 19111.

Hyphoderma setigerum(Fr.) Donk, Fungus 27L 15. 1957. = *Thelephora setigera* Fr., Elench. Fung. 1:208. 1828.

Distribution: Mussoorie, 4330.

Inonotus cuticularis(Bull.) P. Karst., Meddn Soc. Fauna Flora fenn. 5: 39 (1879) = *Polyporus cuticularis* (Bull.) Fr., Syst. mycol. (Lundae) 1: 363 (1821).

Distribution: Mussoorie.

Inonotus dryadeus(Pers.) Murr., N. Amer. Fl. 9(2): 86, 1908

Distribution: NDBR, 28337

Inonotus tabacinus (Mont.) Cunn., Bull. N.Z. Dept. Sci. Industr. Res., Pl. Dis. Div. 78: 3, 1948

Distribution: NDBR, 29094.

Irpex consors Berk., J. Linn. Soc. Bot. 16: 51. 1877.

Distribution: Haridwar, 22351.

Irpex flavus(KI.) Ryv., Norw. J. Bot. 20: 3. 1973.

Distribution: Saharanpur, NDBR, 28298.

Irpex lacteus(Fr.) Fr., Elench. Fung. 1: 145, 1825.

Distribution: Dehra Dun, NDBR, 28607.

Irpex vellereus Berk. & Broome, J. Linn. Soc., Bot. 14(2): 61 (1875).

Distribution: NDBR, 28947.

Junghuhnia collabens(Fr.) Ryv., Persoonia 7(1): 18 (1972) = *Irpex collabens* (Fr.) Ryv. Persoonia 7: 18, 1972=*Polyporus collabens* Fr., Hym. Europ., p. 572, 1874=*Poria rixosa* Karst., Rev. Mycol. 3,9: 19, 1881.

Distribution: Chakrata, 6101.

Junghuhnia luteoalba(Karst.) Ryv., Persoonia 7: 18. 1972. = *Physisporus luteoalbus* Karst., Rev. Mycol. 9:10. 1887. = *Poria luteoalba* (Karst.) Sacc., Syll. Fung. 6:299. 1888.

Distribution: Chakrata, 21288.

Junghuhnia nitida (Pers. ex Fr.) Ryv., Persoonia 7: 18. 1972. = *Polyporus nitidus* Pers. ex Fr., Syst. Mycol. 1: 379. 1821. =*Poria eupora* (Karst.) Cooke, Grevillea 14: 110. 1886.

Distribution: Nainital, Chakrata, 21287.

Mycoacia fuscoatra (Fr.)Donk, Med. Nederl. Mycol. Ver. 20: 152. 1931. = *Hydnum fuscoatrum* Fr., Syst. Mycol. 1: 1821.

Distribution: Chakrata, 4270.

Mycoacia stenodon(Pers.) Donk, Med. Nederl. Mycol. Ver. 20: 151. 1931. = *Hydnum stenodon* Pers., Mycol Eur. II, 188. 1825.

Distribution: Chakrata, 21288.

Sarcodontia delectans (Peck) Spirin, Mycena 1(1): 64-71 (2001)

=*Spongipellis delectans* (Peck.) Murr. North Am. Fl. 9: 38, 1907.

Distribution: Nainital, 4347

Scopuloides hydroides (Cooke & Massee) Hjortstam & Ryv., Wiesner Festschrift : 57, 1979

Distribution: NDBR, 29076.

Steccherinum ochraceum (Pers. ex Fr.) Gray, Nat. Arrang. Brit. Pl. 1:651. 1821.= *Hydnum ochraceum* Pers. : Fr. , Syst. Mycol. 1: 414. 1821. = *Steccherinum rhois* (Schw.) Banker, Mem. Torrey Bot. Cl. 12: 12. 1906. =*Steccherinum resupinatum* Cunn, Trans. Roy. Soc. N.Z. 85: 596. 1958.

Distribution: Nainital, 4008.

Phanerochaetaceae

Antrodiella zonata (Berk.) Ryv., Boln Soc. argent. Bot. **28**(1-4): 228 (1992) = *Irpex zonatus* Berk. Hooker J. Bot. **6**:168, 1854
Distribution: NDBR, 6110.

Phlebiopsis flavidoalba (Cooke) Hjortstam, Windahlia 17: 58 (1987) = *Phanerochaete flavidoalba* (Cooke) Rattan Bibliotheca Mycol. 60: 262, 1977
Distribution: NDBR, 28224.

Phlebiopsis mussooriensis Priyanka, Dhingra & N. Kaur Mycotaxon 2011.
Distribution: Mussoorie.

Phlebiopsis ravenelii (Cooke) Hjortstam, Windahlia 17: 58 (1987) = *Phlebiopsis roumeguerii* (Bres.) Jülich & Stalpers, Verh. Kon. Ned. Akad. Wet. Ser. 2. vol.74: 190, 1980 = *Corticium roumeguerii* Bres. Fungi trid. 2 p. 36, 1892. = *Phlebia roumegueri* (Bers.) Donk Fungus 27: 18. 1957. = *Corticium roumegueri* Bres., Fungi Trident. 2: 36. 1892.
Distribution: Hemkunt, 5004.

Polyporaceae

Corioloopsis occidentalis(Ki.) Murr., Bull. Torrey Bot. Cl. 32. 358, 1905 = *Polyporus occidentalis* Kl., Linnaea 8: 486, 1833.
Distribution: Dehra Dun.

Corioloopsis telfairii(Klotzsch) Ryv. [as 'telfarii'], Norw. J Bot. 19(3-4): 230(1972). = *Corioloopsis zeylanicus* (Berk.) Roy & De, Polyporaceae of India (Dehra Dun):52 (1996).
Distribution: Kumaon

Cycloporus greenei(Berk.) Murr., Bull. Torrey bot. Club 31: 423, 1904.
Distribution: Nainital

Diplomitoporus rimosus (Murrill) Gilb. & Ryv., Mycotaxon 22(2): 364 (1985) = *Poria rimosus* Murrill, Mycologia 12(2): 91 (1920).
Distribution: Haridwar, 22353.

Daedaleopsis confragosa(Bolt. ex Fr.) Schroet., Pilze Schl. P. 493, 1888..
Distribution: Rishikesh , NDBR, 29005.

Datronia mollis(Sommerf. Ex Fr.) Donk, Persoonia 4: 338, 1966 = *Daedalea mollis* Sommerf. Ex Fr., Elench. Fung. P. 71, 1828.
Distribution: Chakrata

Datronia scutellata (Schwein.) Gilb. & Ryv., Mycotaxon 22(2): 364 (1985) = *Hexagonia scutellata*(Schw.) Roy & De, J. Mycopathol. Res. 36(1):31(1998). = *Polyporus scutellatus* Schw.,

Trans. Amer. Phil. Soc. II, 4: 157, 1832 = *Fomes scutellatus* (Schw.) Cke., Grevillea 14: 19, 1885.
Distribution: Chakrata.

Dichomitus leucoplacus(Berk.) Ryv., Norw. J Bot. **24**: 222 (1977) = *Poria leucoplaca* (Berk.) Cooke *Grevillea* **14**:113, 1886.
Distribution: NDBR, 28198.

Favolus tenuiculus P. Beauv., Fl. Oware 1(8): 74 (1806) = *Polyporus tenuiculus* (Beauv.) Fr. Syst. Mycol. 1: 344, 1821 = *Favolus brasiliensis* (Fr.) Fr. Elench, Fung. 1: 44, 1828.
Distribution: Dehra Dun, NDBR, 28998.

Fomes fomentarius (L.:Fr.) Kickx, Flore Crypt. Flandree 2: 237, 1867.
Distribution: Kumaun, NDBR, 28964.

Grammothele fuligo(Berk. & Broome) Ryv., Trans. Br. mycol. Soc. 73(1): 15 (1979) = *Porogramme revenlae* (Berk. & Br.) Pat. Essai Tax. Hym. P. 63. 1900. = *Polyporus ravenalae* Berk. & Br., J. Linn. Soc. Lond. 14: 53. 1875.
Distribution: Uttarkashi, 22371.

Hexagonia tenuis Hook, ex Fr. Epicr. Syst. Mycol. 498, 1838 = *Boletus tenuis* Hook. Ex Kunth, Syn. Pl. 1:10, 1822.
Distribution: Kumaun.

Lentinus fasciatus Berk., J. Bot. **2**: 146, 1840
Distribution: NDBR, 28910.

Lenzites adustus Mass., Kew. Bull. **11**: 250, 1910
Distribution: NDBR, 28213.
Distribution: NDBR, 28213.

Lenzites betulina (Fr.) Fr., epicr., P. 405, 1838.
Distribution: Nainital, Mussoorie, NDBR, 21372.

Lenzites palisoti(Fr.) Fr., Syst. Mycol. 1:335, 1821 = *Lenzites elegans* (Fr.) Pat., Essai Tax. P. 89, 1900.
Distribution: Dehra Dun, Mussoorie, NDBR, 29014.

Lenzites stereoides (Fr.) Ryv., Norw. J. Bot. 19(3-4): 232, 1972 = *Daedalea stereoides* Fr. Nov. Symb. Mycol. 1: 99, 1851.
Distribution: Dehra Dun, NDBR, 28208.

Lopharia cinerascens (Schw.) Cunn., Trans. Roy. Soc. N.Z. 83: 622. 1956. = *Thelephora cinerascens* Schw., Trans. Amer. Phil. Soc. 4: 167. 1832.
Distribution: Nainital, 5376.

Lopharia papyrina (Mont.) Boidin, Bull. Soc. Linn. Lyon 7: 210. 1959. = *Stereum papyrina* Mont. Ram. Sagr. Hist. Cuba P1. Cell. 374. 1842.
Distribution: Dehra Dun, 6569.

Peniophora rhodocarpa Rehill & Bakshi 1975. = *Lopharia rhodocarpa* (Rehill & B.K. Bakshi) S.S. Rattan 1977.

Distribution: Dehra Dun, 6569.

Macrohyporia inflata Overh. ex I. Johans. & Ryvarde, Trans. Br. mycol. Soc. 72(2): 192 (1979) = *Poria inflata* Overh., Proc. Pa. Acad. Sci. 13: 123, 1939.

Distribution: Dehra Dun, 6880.

Microporellus violaceinascens(Petch) David & Rajchenberg, Mycotaxon 22: 304, 1985.

Distribution: Dehra Dun.

Microporus affinis(Blume & T. Nees) Kuntze, Revis. gen. pl. (Leipzig) 3(2): 494 (1898) = *Microporus flebelliformis*(Klot.) Kuntze Rev.Gen. P1. 3: 494, 1898.

Distribution: Nainital, NDBR, 28985.

Microporus xanthopus(Fr.) Kuntze, Rev. Gen. P1. 3: 494, 1898.

Distribution: NDBR, 28602.

Nigroporus vinosus(Berk.) Murrill, Bull. Torrey bot. club 32(7): 361, 1905.

Distribution: Dehra Dun, NDBR, 28939.

Perenniporia medulla-panis(Jacq.) Donk, Persoonia 5(1): 76 (1967). = *Polyporus medullapanis* Jacq. ex Fr., Syst. Mycol. 1: 380. 1821.

Distribution: Mussoorie, Nainital, 6107.

Polyporus arcularis (Batsch) Fr., Syst. Mycol.1:342, 1821.

Distribution: Mussoorie, 21473.

Polyporus durus (Timm) Kreisell, Boletus, Schr. Reihe 1: 30, 1984

Distribution: NDBR, 28956

Polyporus grammocephalus Berk., Hook. Lond. J. Bot. 1: 148, 1842.

Distribution: Nainital, NDBR, 21433.

Polyporus squamosus Huds.ex Fr., Syst. Mycol. P. 343, 1821.

Distribution: Dehradun, 22341.

Polyporus squamosus Huds.ex Fr., Syst. Mycol. P. 343, 1821.

Distribution: Dehradun, 22341.

Poria auricoma (Lév) Cooke, Grevilles 15: 26, 1886.

Distribution: Nainital, Dehra Dun, 6868.

Poria conferata Overh., Pa Agr. Exp. Sta., Tech. Bull. 418: 25, 1942.

Distribution: Uttarkashi, 22342.

Poria fulviseda Bres., Acad. Rover. Agiati. Atti 3: 84, 1897

Distribution: NDBR, 6100.

Poria melleopora(Murr.) Sacc. And Trott., Sylloge Fung. 21: 330, 1912.

Distribution: Nainital, 6808.

Poria mesoleuca (Petch) Ryv., Norw. J. Bot. 19: 233, 1972.

Distribution: Nainital, 6438.

Poria nigrescense Bres., Acad. Rover. Agiati Atti 3: 83. 1897. = *Rigidoporus nigrescense* (Bers.) Donk, Persoonia 4: 341. 1966.

Distribution: Chakrata, Dehra Dun.

Poria vincta (Berk.) Cooke, Grevillea 14: 110. 1886. = *Polyporus vinctus* Berk., Ann. Mag. Nat. Hist. 9: 196. 1852.

Distribution: Dehra Dun.

Porostereum crassum (Lév.) Hjortstam & Ryvarde, Syn. Fung. (Oslo) 4: 29 (1990) = *Lopharia crassa* (Lév.) Boidin Bull Soc. Mycol. France 74: 479.1958. = *Thelephora crassa* Lev., Ann. Sci. Nat. Bot. 2: 209. 1844.= *Stereum umbrinum* Berk. & Curt. , Grevillea 1: 164. 1873.

Distribution: Dehra Dun.

Pycnoporus coccineus (Fr.) Bond & Sing., Annals Mycol. 39:59, 1941.

Distribution: Dehra Dun, NDBR 21094.

Pycnoporus sanguineus (L.) Murr., Bull. Torrey bot. club 31: 421, 1904.

Distribution: Dehra Dun, Mussoorie, 21346.

Skeletocutis amorphia (Fr.) Kotl. & Pouz., Ceska' Mykol. 12: 103, 1958.

Distribution: Dehradun, NDBR, 21272.

Skeletocutis nivea(Jungh.) Keller, Persoonia 10:353, 1979= *Polyporus semipileatus* Peck., Rep. New York Sta. Mus. 34: 43, 1883= *Polyporus niveus* (Jungh.) Ryv., Norw. J. Bot.19:232, 1972.

Distribution: Chakrata.

Trametes cingulata Berk., Hooker's J. Bot. Kew Gard. Misc. 6: 164, 1854.

Distribution: Nainital.

Trametes cotonea (Pat. & Har.) Ryv., Norw. J. Bot. 19(3-4): 236, 1972= *Polyporus cotoneus* Pat. & Har., Bull. Soc. Mycol. Fr. 9:208, 1893.

Distribution: Chakrata, Nainital.

Trametes cubensis (Mont.)Sacc., Syll. fung. (Abellini) 9: 198 (1891)=*Daedalea cubensis*

(Mont.) Roy Can. J. Bot. 60: 1012, 1982=*Polyporus cubensis* Mont., Ann. Sci. Nat., Bot. II, 8: 364, 1837=*Fomitopsis cubensis* (Mont.) Wright & Deschamps, Rev. Invest. Agropec. Ser. 5, 12: 140, 1975.

Distribution: Dehra Dun.

Trametes gibbosa(Pers.) Fr., Epicr. P. 492, 1838.

Distribution: Chakrata, NDBR, 28190.

Trametes hirsuta(Wulfen) Lloyd, Mycol. Writ. 7: 1319 (1924) = *Polyporus hirsutus* Wulf. ex Fr.Sys. Mycol. 1 : 367,1821.

Distribution: NDBR, 21253.

Trametes incerta(Curt.) Cke., Grevillea 15: 56, 1886=*Corioloopsis sprucei* (Berk.) Roy & Mitra Mycotaxon 26: 445, 1986=*Daedalea sprucei* Berk., Hook. J. Bot., 8: 236, 1856.

Distribution: Nainital, 21405.

Trametes lactinea (Berk.)Pat., Essai. Tax. p.92, 1900=*Coriolus lactineus* (Berk.) G. Cunn. 1950.

Distribution: Kumaon, 6617.

Trametes marianna (Pers.) Ryv., Persoonia 7(2): 309 (1973).

Distribution: Nainital, 6342.

Trametes roseola Pat. & Har., Champ. Senegal, J. de Bot., 14, 239, 1900.

Distribution: Chakrata.

Trametes scabrosa(Pers.)Cunn., Bull. N.Z. Dept. Sci. Industr. Res. 164:162-163, 1985.= *Polyporus scabrosa* Pers., Gaudich, Voyage aut Monde. p. 172, 1827= *Polyporus corrugatus* Pers. op. Cit. *Earliella cubensis* (Pers.) Murr., Bull. Torr. Bot. Cl. 32:478, 1905= *Fomitopsis corrugata* (Pers.) Imaz., Bull. Tokyo Sci. Mus. 6:92, 1943.

Distribution: Dehra Dun, Nainital.

Trametes versicolor (L.) Lloyd, Mycol. Notes (Cincinnati) 65: 1045 (1921) = *Coriolus versicolor* (L.) Qué., Enchir. fung. (Paris): 175 (1886).

Distribution: Nainital, 21423.

Trametopsis cervina (Schwein.) Tomšovský, Czech Mycol. 60(1): 8 (2008) = *Trametes cervina* (Schwein.) Bres. Ann. Mycol. 1(1/2): 81, 1903.

Distribution: NDBR, 21860.

Trichaptum abietinum (Dicks ex Fr.) Ryv., Norw. J. Bot. 19: 237, 1972.

Distribution: Kumaun, 21270.

Trichaptum bifforme (Fr.) Ryv., Norw. J. Bot. 19: 237, 1972.

Distribution: Dehra Dun, Kumaun, NDBR, 21254.

Trichaptum fusciolaceum (Ehrenb. ex. Fr.) Ryv., Norw. J. Bot. 19: 237, 1972.

Distribution: Dehra Dun, 21273.

Tyromyces lacteus (Fr.) Murrill, N. Amer. Fl. (New York) 9(1): 36 (1907) = *Postia lactea* (FrP. Karst., Revue mycol., Toulouse 3(no. 9): 17 (1881).

Distribution: Mussoorie, 21252.

Albatrellaceae

Albatrellus confluens(Alb. & Schw. ex Fr.) Kotl. & Pouz., Ceska Mykol.11: 154, 1957= *Polyporus confluens* Alb. & Schw. Ex Fr., Mycol. 1: 355, 1821.

Distribution: Chakrata, Mussoorie, 199.

Bondzarwiaceae

Heterobasidion araucariae P.K. Buchanan, Mycotaxon 32(1): 325 (1988) = *Heterobasidion annosum*(Fr.) Bref. Unters. Gesammtgeb. Mykol. 8: 154, 1888.

Distribution: NDBR, 28967.

Heterobasidion insulare(Murr.) Ryv., Norw. J. Bot. 19: 237, 1972.

Distribution: NDBR, 21299

Peniophoraceae

Metulodontia nivea (Karst.) Parm., Consp. Syst. Cort. p. 118. 1968. = *Kneiffia nivea* Karst., Hedwigia 35: 178. 1893.

Distribution: Mussoorie, 5134.

Peniophora pithya (Pers.) J. Erikss., Symb. bot. ups. 10: 5-45, 1950

Distribution: NDBR, 28311.

Stereaceae

Acanthofungus ahmadii (Boidin) Sheng H. Wu, Boidin & C.Y. Chien, Mycotaxon 76: 159 (2000) = *Xylobolus ahmadii*(Boidin) Boidin.

Distribution: Nainital, 5326.

Chaetoderma luna (Romell ex Rogers & Jacks.) Parmasto, Consp. System. Corticiac. (Tartu): 86, 1968

Distribution : NDBR, 5039.

Podoscypha petalodes(Berk.) Boidin, Revue Mycol., Paris 24: 230 (1959) = *Stereum petaloides* Berk. Mycol. 63: 796, 1971

Distribution: NDBR, 28632

Stereum acanthophysatum Rehill & Bakshi, Ind. For. Bull. 242:6. 1966. = *Stereum papollatosporum* Rehill & Bakshi, Ind. For. Bull. 242:11. 1966.

Distribution: Chakrata, 7171.

Stereum gauspatum (Fr.) Fr., Hym. Eur. P. 638. 1874. = *Thelephora gauspata* Fr. Elench 1: 171. 1828.

Distribution: Mussoorie, 5001.

Stereum hirsutum (Willd. ex Fr.) Gray, Nat. Arrangm. Brit. P.1: 653. 1821. = *Thelephora hirsute* Willd. ex Fr., Syst. Mycol. 1:439.1821.

Distribution: Nainital, 5373.

Stereum ostrea (Blume & Nees ex Fr.) Fr. Epicr. p. 547. 1838. = *Thelephora ostrea* Blume & Nees ex *Xylobolus frustulatus* (Pers.) Boidin, Revue Mycol., Paris 23: 341 (1958)

Distribution : NDBR, 5205.

Xylobolus subpileatus (Berk. & Curt.) Boidin, Revue Mycol. 23: 341. 1958. = *Stereum subpileatus* Berk & Curt., Hook. J. Bot. Kew Gard. Misc. 1: 238. 1829.

Distribution: Mussoorie, NDBR, 5169

Russuales, Wrightoporceae

Wrightoporia lenta (Overh. & J. Lowe) Pouzar, Česká Mykol. 20: 173 (1966) = *Poria lenta* Overh. & Lowe. Mycologia 38: 210, 1946

Distribution: NDBR, 28228

Thelephorales, Rickenellaceae

Peniophorella praetermissa (P. Karst.) K.H. Larss., Mycol. Res. 111(2): 192 (2007) = *Hyphoderma praetermissum* (Karst.) J.Eriksson & Strid, in J.Eriksson and Ryv., Cort. N. Europe 3 p.505, 1975

Distribution: Rishikesh, 19752.

Resinicium bicolor (Fr.) Parm., Consp. Syst. Cort. p. 98. 1968. = *Hydnum bicolor* Fr., Syst. Mycol. 1: 417. 1821.

Distribution: Nainital, 4333.

Sidera lenis (P. Karst.) Miettinen, in Miettinen & Larsson, Mycol. Progr. 10(2): 136 (2011) =

Skeletocutis lenis (Karst.) Niemelä Karstenia 31(1): 23, 1991 = *Antrodia lenis* (P. Karst.) Ryvarden, Norw. J. Bot. 20: 8 1973.

Distribution: Dehradun, Chakrata, NDBR, 21297.

Tremellales, Tremellaceae

Tremella foliacea Pers., Observ. mycol. (Lipsiae) 2: 98 (1800) [1799]

Distribution: NDBR, 29109.

Thelephoraceae

Tomentella badia (Link) Stalpers, Revue Mycol., Paris 39(2): 98 (1975) = *Tomentella fimbriata* Christ. Dansk Bot. Ark. 19: 258. 1960.

Distribution: Mussoorie, 5672.

Fr., Elench 1: 175. 1828. = *Stereum fasciatum* (Schw.) Fr. Epicr. 546. 1838. = *Stereum lobatum* (Kuntz.) Fr., Epicr. 547. 1838.

Distribution: Nainital, 5376.

Stereum rugosum Pers. ex Fr. Roemer Neus Mag. Bot. 1: 110. 1794. Fries, Epicr. Syst. Mycol. P. 552. 1838.

Distribution: Chakrata

Stereum sanguinolentum (Alb. & Schw.) Fr., Epicr. p.549. 1838. = *Thelephora sanguinolenta*

Tomentella bicolor (G.F. Atk. & Burt) Bourdot & Galz., Bull. trimmest. Soc. Mycol. France 40(1): 132, 1924. = *Hypochnus bicolor* Atk. & Burt., Ann. Missouri, Bot. Gard. 3: 229, 1916.

Distribution: Mussoorie, Nainital, 22347.

Tomentella botryoides (Schw.) Bourd. & Galz., Bull. Soc. Mycol. Fr. 40:159. 1924.

Distribution: Nainital, 5364.

Tomentella brevispina (Bourd. & Galz.) Larsen, Mycologia 62: 136, 1970. = *Tomentella spongiosa* (Schw.: Fr.) Bourd. & Galz. Var. *brevispora* Bourd. & Galz. Soc. Mycol. France 40: 154, 1924.

Distribution: Mussoorie, 22343.

Tomentella bryophila (Pers.) Larsen, Mycologia Mem. 4: 51. 1974 = *Tomentella pallidofulva* (Peck) Litsch. Ost. Bot. Zeitschr. 88:131. 1939.

Distribution: Mussoorie, 5831.

Tomentella calcicola (Bourd. & Galz.) M.J. Lars., Taxon 16:511, 1967. = *Caldesiella ferruginosa* var. *Calcicola* Bourd. & Galz., Hym. France p. 471.1928.

Distribution: Uttarkashi, 22344.

Tomentella clavigera Litsch., In Svrcce Sydowia 14: 192. 1960.

Distribution: Mussoorie, 22345.

Tomentella ferruginea (Pers.) Pat., Hyménomyc. Eur. (Paris): 154, 1887.

Distribution: Mussoorie, 5613.

Tomentella indica S.S. Rattan, Bibliotheca Mycologica 60:62, 1977.

Distribution: Hemkunt, 5350.

Tomentella subcorticioides S.S. Rattan, Bibliotheca Mycol.60:53 1977.

Distribution: Mussoorie, 5528.

Trechisporales, Hydnodontaceae

Subulicystidium longisporum (Pat.) Parm., Consp. Syst. Cort. p. 121.1968. = *Hypochnus longisporus* Pat., J. Bot. Paris 8: 221. 1894.

Distribution: Dehra Dun, 5652.

Trechispora candidissima(Schwein.) Bondartsev & Singer, Anns mycol. 39(1): 48 (1941) =*Poria candidissima* (Schwein.) Cooke 1886.

Distribution: Uttarkashi, 22346.

Trechispora farinacea (Pers.) Liberta, Taxon 15:318. 1966. = *Hydnum farinaceum* Pers. ex Fr., Syst. Mycol. 1: 419. 1821.

Distribution: Mussoorie, 4104.

Trechispora mutabilis (Pers.) Liberta, Taxon 15: 319. 1966.= *Hydnum granulosum* var. Mutabile Pers., Mycol. Eur. 2: 184. 1825.

Distribution: Mussoorie, 4244.

Two hundred (200) species of wood rotting fungi spreading over twenty seven families and one hundred genera have been collected and included in

this work. These are distributed in different phytogeographical regions of Uttarakhand which are: Dehradun, Mussoorie, Nainital, Rishikesh, Nanda Devi Biosphere reserve (NDBR), Hemkunt, Uttarkashi, Chamoli, Chakrata being recorded. These fungi belong to the families Auriculariaceae, Schizophyllaceae, Stephanosporaceae, Coniophoraceae, Dacrymycetaceae, Atheliaceae, Fomitopsidaceae, Gloeophyllaceae, Hericiaceae, Hymenochaetaceae, Schizoporaceae,

RESULTS AND DISCUSSION

Table 2: Number of genera and species of wood rotting fungi belonging to different families

Name of the Family	No. of Genera	No. of Species
Auriculariaceae	1	2
Schizophyllaceae	1	1
Stephanosporaceae	1	1
Coniophoraceae	1	1
Dacrymycetaceae	1	1
Atheliaceae	1	1
Fomitopsidaceae	7	17
Gloeophyllaceae	1	3
Hericiaceae	1	1
Hymenochateaceae	8	23
Schizoporaceae	4	12
Tubulicrinaceae	1	2
Ganodermataceae	1	2
Lachnocladiaceae	3	8
Meripilaceae	2	5
Meruliaceae	16	23
Phanerochataceae	2	4
Polyporaceae	28	58
Albatrallaceae	1	1
Bondzarwiaceae	1	1
Bondzarwiaceae	1	2
Peniophoraceae	2	2
Stereaceae	5	11
Wrightoporiaceae	1	1
Rickenellaceae	3	3
Tremellaceae	1	1
Thelephoraceae	4	10
Hydnodontaceae	2	4
Total 27 families	100	Total 200

Tubulicrinaceae, Ganodermataceae, Lachnocladiaceae, Meripileaceae, Meruliaceae, Phanerochaetaceae, Polyporaceae, Albatrellaceae, Bondzarwiaceae, Peniophoraceae, Stereaceae, Rickenellaceae, Tremellaceae, Thelephoraceae, Hydnodontaceae and Wrightoporiaceae.

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