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Polypores from Shennongjia Nature Reserve in Hubei Province, Central China

Juan LI [a, b], *Hong Xia XIONG* [b]
& Yu Cheng DAI [a*]
[a] *Institute of Applied Ecology, Chinese Academy of Sciences, Shenyang 110016, China, smilejuanzili@sina.com*

[b] *Graduate University, Chinese Academy of Sciences, Beijing 100049, China,*

Abstract – During 2004 to 2006, investigations on wood-inhabiting fungi were carried out in Shennongjia Nature Reserve of Hubei Province, in central China. About 600 specimens of poroid wood-inhabiting fungi were collected, among which several specimens of an unidentified species of *Albatrellus*, described and illustrated as *Albatrellus zhuangii* sp. nov. 139 species belonging to 55 genera of polypores were also identified from this Nature Reserve, of which about 60% new for the studied area.

***Albatrellus* / China / Polyporales / taxonomy**

Résumé – Entre 2004 et 2006, 600 spécimens de champignons lignivores ont été collectés dans la réserve naturelle de Shennongjia dans la province centrale du Hubei, Chine. Parmi ces collectes, une espèce non décrite d'*Albatrellus* a été mise en évidence. Elle est décrite et illustrée sous le nom d'*Albatrellus zhuangii*. 139 espèces de polypores ont également été identifiées parmi ces collectes, 60 % de ceux-ci étant nouveaux pour la région.

***Albatrellus* / Chine / Polyporales / taxonomie**

INTRODUCTION

The Shennongjia Nature Reserve lies in Hubei Province, in central China, between 31° 15 '-31° 75' N and 109° 56'-110° 58' E. it covers a total area of 70647 hectares. The area was established as a national reserve in 1978, and is now recognized by the UNESCO as an International Biosphere Reserves.

Five vegetation belts can be identified in Shennongjia Nature Reserve: (i) evergreen broad-leaved forest (altitude less than 900 m), (ii) evergreen and deciduous broad-leaved mixed forest (900-1500 m), (iii) deciduous broad-leaved forest (1500–1800 m), (iv) coniferous and broadleaved mixed forest (1800–2600 m), (v) coniferous forest (above 2600 m) (Zhao and Chen, 2002). The studied area has a high diversity of tree species. The common angiosperm tree are *Castanea seguinii*, *Betula albo-sinensis*, *Fagus engleriana*, *F. lucida, Populus davidiana*, *Quercus variabilis* and several species of *Acer*, *Carpinus*, *Cerasus* and *Coriaria* etc.

* Corresponding author

while the main gymnosperm trees are *Abies fargesii, Cunninghamia lanceolata, Pinus armandii* and *P. massoniana* (Zhao & Chen, 2002). However, fungi are still poorly known and about 60 species of polypores were previously recorded from the area (Tai, 1979; Zhang, 1989; Teng, 1996; Zhao, 1998; Mao, 2000; Zhao & Zhang, 2000; Zhang & Dai, 2005).

Recently, studies on diversity and ecology of wood-inhabiting fungi were carried out in different forest ecosystems of China (Dai & Niemelä, 2002; Dai *et al*. 2003; Dai *et al*. 2004; Dai & Yuan, 2005; Dai & Penttilä, 2006). Three field trips were made in Shennongjia Nature Reserve during 2004 to 2006. Around 600 specimens of poroid wood-inhabiting fungi were collected. 139 species of polypores (including the Polyporaceae, Ganodermataceae, and poroid species in the Hymenochaetaceae and Corticiaceae) belonging to 55 genera were identified from these materials including an undescribed species of *Albatrellus* Gray, described and illustrated as *Albatrellus zhuangii*.

MATERIALS AND METHODS

The present study is based on materials collected by the authors, and the studied specimens are deposited at the herbarium of the Institute of Applied Ecology, Chinese Academy of Sciences (IFP). Some duplicates are preserved at the herbarium of the Institute of Microbiology, Chinese Academy of Sciences (HMAS). The microscopic routine used in the study is as presented by Dai *et al*. (2004).

The authors of scientific names are according to the second edition of Authors of Fungal Names (http://www.indexfungorum.org/AuthorsOfFungalNames.htm).

TAXONOMY

Albatrellus zhuangii Y.C. Dai & Juan Li **sp. nov.** Figs. 1-2

Carpophorum annuum, stipitatum. Facies pororum albida vel cremea, pori 2–3 per mm. Systema hypharum monomiticum, hyphae generatoriae sine fibulis, hyphae contexti 5-13 µm in diam. Sporae perlate ellipsoideae, amyloideae, 5-6 × 3.9-4.5 µm.

Holotype: CHINA, Hubei Province, Shennongjia Nature Reserve, alt. 2200 m, on ground in mixed forest close to timberline, 24.IX.2004 *Dai 5864* (holotype in IFP, isotype in H).

Etymology. — (Lat.): in honor of the Chinese mycologist Zhuang, Jian-Yun.

Fruitbody. — Basidiocarps annual, terrestrial, centrally or laterally stipitate, solitary, fleshy and watery, without odour or taste when fresh, becoming fragile with an unpleasant odour upon drying. Pileus more or less circular, 5-10 cm in diam., up to 6 mm thick at centre. Pileal surface covered by a very thin cuticle, pinkish buff to buff, smooth and viscid when fresh, becoming yellowish brown or dirty brown, wrinkled upon drying, azonate; margin sharp, sometimes lobed,

Fig. 1. Fresh basidiocarps of *Albatrellus zhuangii* Y.C. Dai & Juan Li.

incurved when dry, pale buff when fresh, becoming pale brown upon drying. Pore surface white to cream when fresh, becoming yellowish brown when dry; pores angular, 2–3 per mm, tube mouths thin, even to slightly lacerate. Context white to cream, fleshy and watery when fresh, dark brown and fragile to brittle upon drying, up to 2 mm thick. Tubes concolorous with pore surface, soft when fresh, become brittle when dry, decurrent, up to 4 mm long. Stipe pale brown, fleshy and watery when fresh, becoming dark brown, wrinkled and brittle upon drying, up to 6 cm long, and 1 cm in diam.

Hyphal structure. — Hyphal system monomitic; generative hyphae simple septate, IKI–, CB–.

Context. — Contextual hyphae hyaline, thin- to slightly thick-walled, frequently simple septate, occasionally branched, some encrusted by fine crystals, some collapsed, interwoven, 5-13 μm in diam., sometimes inflated up to 20 μm in diam.; gloeoplerous hyphae absent; hyphae in stipe similar to contextual hyphae.

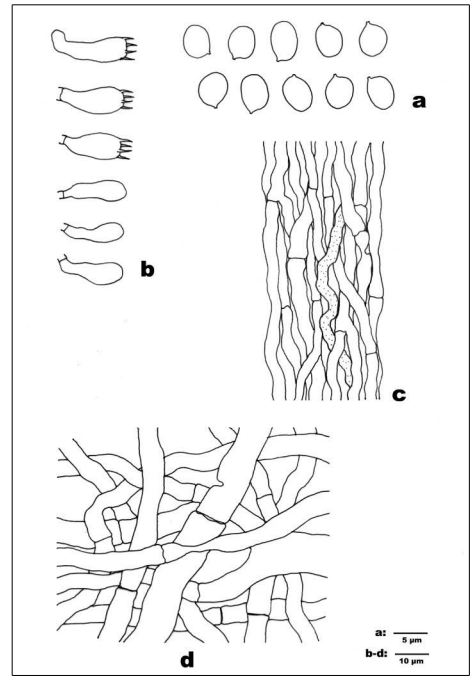

Fig. 2. Anatomical details of *Albatrellus zhuangii* Y.C. Dai & Juan Li (drawn from the holotype). -a: Basidiospores. -b: Basidia and basidioles. -c: Hyphae from trama. -d: Hyphae from context.

Tubes. — Tramal hyphae hyaline, thin-walled, frequently simple septate, rarely branched, more or less straight and parallel along the tubes, strongly agglutinated, 3-5.5 μm in diam; gloeoplerous hyphae occasionally present. Cystidia and cystidioles absent; basidia clavate, with four sterigmata and a basal simple septum, 18-25 × 6-8 μm; basidioles in shape similar to basidia, but slightly smaller. Plenty yellow oily substance present.

Spores. — Basidiospores broadly ellipsoid, hyaline, thin to slightly thick-walled, smooth, moderately amyloid, CB–, bearing a large guttule, 5-6(-6.5) × (3.5-)3.9-4.5 μm, L = 5.4 μm, W = 4.1 μm, Q = 1.3-1.31 (n = 60/2).

Habitat. — On ground in coniferous and broad-leaved mixed forest near the timberline.

Known distribution. — Hubei Province, central China.

Other specimens examined (paratypes). — CHINA, Hubei Province, Shennongjia Nature Reserve, on ground in mixed forest, 21.IX.2004 *Wei 2016* (IFP); Hubei Province, Shennongjia Nature Reserve, on ground in mixed forest, 5.IX.2005 *Li 624* (IFP)

Remarks. — The new species is characterized by large basidiocarps with a buff to pinkish-buff viscid pileal surface, large pores, and amyloid basidiospores. It grows in coniferous and broad-leaved mixed forest near the timberline.

Albatrellus zhuangii is very close to *Albatrellus yasudae* (Lloyd) Pouzar by the viscid pileal surface, the monomitic hyphal system with simple septa, and the similar basidiospore size. Material of *A. yasudae* was studied; it differs from *A. zhuangii* by a bright greenish-blue colour over the pileal surface, and slightly smaller pores (4-5/mm). In addition, basidiospores of *A. yasudae* are negative in Melzer's reagent.

Albatrellus confluens (Alb. & Schwein.) Kotl. & Pouzar is similar to the new species, both sharing the large, pinkish buff basidiocarps. However, *A. confluens* has both clamped and simple septate generative hyphae, and its basidiospores are weakly amyloid and smaller (3.9-5.1 × 2.9-3.5 μm, Niemelä, 2005).

Albatrellus avellaneus Pouzar and *Albatrellus tianschanicus* (Bondartsev) Pouzar have both a basidiospore size range similar to that of *A. zhuangii*. However, they are not amyloid in *A. avellaneus*, which furthermore has pilei with squamules. *Albatrellus tianschanicus* has apricot coloration and squamulose pilei, and its pileal surface is not viscid (Zheng et al., 2004).

CHECKLIST

In the following, an alphabetical list (according to genera and then species) of polypores found in Shennongjia Nature Reserve is given. Species printed in bold face are new to the studied area.

Albatrellus cristatus (Schaeff.) Kotl. & Pouzar, ground in evergreen and deciduous broad-leaved mixed forest, *Li 1269*

Albatrellus dispansus (Lloyd) Canf. & Gilb., ground in evergreen and deciduous broad-leaved mixed forest, *Dai 5924 & 5960, Li 679*

Albatrellus zhuangii Y.C. Dai & Juan Li, ground in coniferous and broadleaved mixed forest, *Dai 5864, Li 624, Wei 2016*

Anomoporia bombycina (Fr.) Pouzar, rotten wood, *Li 750*

Antrodia albida (Fr.:Fr.) Donk, fallen angiosperm branch, *Dai 5903, Li 676 & Wei 2033*; fallen angiosperm twig, *Wei 1930 & 2064*; rotten angiosperm wood, *Li 1337*; angiosperm stump, *Li 691*

Antrodia heteromorpha (Fr.:Fr.) Donk, fallen branch of *Abies*, *Li 1332*; stump of *Cunninghamia*, *Wei 2102*; fallen gymnosperm branch, *Wei 2101*; dead tree of *Pinus*, *Li 728*; fallen trunk of *Pinus*, *Li 747*; fallen branch of *Pinus*, *Li 723*

Antrodia malicola (Berk. & M.A. Curtis) Donk, dead angiosperm tree, *Wei 2091*; fallen angiosperm trunk, *Dai 5984, Li 690 & 1518*; fallen angiosperm branch, *Dai 5898 & 5904, Li 628 & 1219*; fallen angiosperm twig, *Li 1371, Wei 2091*; rotten angiosperm wood, *Li 707*; fallen trunk of *Celtis*, *Dai 5963*; fallen twig of *Fagus*, *Wei 2100a*

Antrodia sinuosa (Romell) P. Karst., fallen branch of *Abies*, *Li 613 & 1330*

Antrodiella albocinnamomea Y.C. Dai & Niemelä, stump of *Acer*, *Wei 1942*; rotten angiosperm wood, *Dai 5916, Li 670 & 698*; angiosperm stump, *Li 660*

Antrodiella aurantilaeta (Corner) T. Hattori & Ryvarden, fallen angiosperm trunk, *Li 1444 & 1338*; fallen angiosperm branch, *Li 1270*

Antrodiella brunneimontana (Corner) T. Hatt., dead angiosperm tree, *Wei 2072*; fallen angiosperm trunk, *Li 1440*; fallen branch of *Castanea*, *Wei 2136*; rotten wood, *Wei 1998*

Antrodiella micra Y.C. Dai, rotten angiosperm wood, *Li 781*

Antrodiella romellii (Donk) Niemelä *sensu lato*, fallen angiosperm branch, *Li 612, 684, 701 & 1475*

Antrodiella semisupina (Berk. & M.A. Curtis) Ryvarden *sensu lato*, dead angiosperm tree, *Wei 2086*; fallen angiosperm trunk, *Li 597*; fallen angiosperm branch, *Dai 5866, Li 592 & 626, Wei 1977*; fallen angiosperm twig, *Li 731*; angiosperm stump, *Li 593*; dead tree of *Betula*, *Wei 1946*

Antrodiella zonata (Berk.) Ryvarden, fallen trunk of *Celtis*, *Dai 5893*; stump of *Celtis*, *Dai 5932*; stump of *Coriaria*, *Wei 2060*

Bjerkandera adusta (Willd.:Fr.) P. Karst., fallen angiosperm trunk, *Li 665 & 1243*; fallen angiosperm branch, *Li 1294, Wei 2111*; angiosperm stump, *Wei 1922*; fallen branch of *Betula*, *Wei 2059*; stump of *Castanea*, *Wei 2082*

Ceriporia purpurea (Fr.) Donk, fallen angiosperm branch, *Wei 2015*

Ceriporia reticulata (Hoffm.) Domański, rotten angiosperm wood, *Li 1387*

Ceriporia viridans (Berk. & Broome) Donk, fallen angiosperm trunk, *Dai 5914*; fallen angiosperm branch, *Li 718*; rotten angiosperm wood, *Dai 5975*; fallen trunk of *Betula*, *Li 787*

Ceriporiopsis balaenae Niemelä, fallen angiosperm trunk, *Li 1202*; angiosperm stump, *Li 1235*

Ceriporiopsis gilvescens (Bres.) Domański, fallen angiosperm trunk, *Li 695 & 737*

Cerrena unicolor (Bull.:Fr.) Murrill, fallen angiosperm trunk, *Dai 5991*

Chaetoporellus latitans (Bourdot & Galzin) Singer, fallen angiosperm trunk, *Li 683 & 1333*; rotten angiosperm wood, *Li 774 & 1391*

Coltricia cinnamomea (Jack.) Murrill, ground in coniferous and broadleaved mixed forest, *Li 617 & 1360*, *Wei 2012*

Coriolopsis strumosa (Fr.:Fr.) Ryvarden, fallen angiosperm branch, *Li 1210*

Cyclomyces lamellatus Y.C. Dai & Niemelä, fallen angiospem twig, *Wei 2074*

Cyclomyces xeranticus (Berk.) Y.C. Dai & Niemelä, fallen angiosperm trunk, *Li 662*; rotten angiosperm wood, *Wei 2085*; angiosperm stump, *Li 713, Wei 1915, 2113 & 2117*

Daedalea dickinsii Yasuda, fallen angiosperm trunk, *Dai 5920*; angiosperm stump, *Wei 2099*; stump of *Quercus*, *Wei 1918*

Daedaleopsis tricolor (Bull.:Mérat) Bondartsev & Singer, dead angiosperm tree, *Wei 2061*; fallen angiosperm trunk, *Li 602 & 641*; fallen angiosperm branch, *Wei 2248*

Datronia mollis (Sommerf.) Donk, dead angiosperm tree, *Wei 2088*; fallen angiosperm trunk, *Li 1538*; dead branch of living angiosperm tree, *Li 503*; fallen angiosperm twig, *Dai 5922*; angiosperm wood, *Wei 2196*

Diplomitoporus lindbladii (Berk.) Gilb. & Ryvarden, fallen trunk of *Abies*, *Li 1369*; fallen branch of *Pinus*, *Li 717, 721, 724, 758 & 785*

Fomes fomentarius (L.:Fr.) Fr., dead angiosperm tree, *Li 596 & 608*; fallen trunk of *Betula*, *Wei 1956 & 1979*; stump of *Betula*, *Wei 1991*

Fomitiporia hartigii (Allesch. & Schnabl) Fiasson & Niemelä, stump of *Abies*, *Wei 1974*

Fomitiporia punctata (P. Karst.) Murrill, dead branch of living *Acer*, *Wei 2053*; living angiosperm tree, *Wei 2042*; dead angiosperm tree, *Li 1325 & 1461*; fallen angiosperm trunk, *Dai 5971, Li 1456*; fallen angiosperm branch, *Dai 5880*, *Li 1417*; angiosperm stump, *Li 1441 & 1478*; fallen trunk of *Betula*, *Li 682*; dead tree of *Fagus*, *Li 1395 & 1482*; fallen trunk of *Quercus*, *Dai 5902*

Fomitiporia robusta (P. Karst.) Fiasson & Niemelä, dead angiosperm tree, *Li 630*

Fomitopsis feei (Fr.) Kreisel, fallen angiosperm trunk, *Li 1273*; angiosperm stump, *Li 1236*

Fomitopsis palustris (Berk. & M.A. Curtis) Gilb. & Ryvarden, fallen angiosperm trunk, *Li 657 & 711*

Fomitopsis pinicola (Sw.:Fr.) P. Karst., fallen trunk of *Abies*, *Wei 1939 & 1951*

Fomitopsis rosea (Alb. & Schwein.:Fr.) P. Karst., stump of *Cunninghamia*, *Wei 2106*

Fomitopsis spraguei (Berk. & M.A. Curtis) Gilb. & Ryvarden, living tree of *Castanea*, *Dai 5983*

Funalia trogii (Berk.) Bondartsev & Singer, fallen angiosperm branch, *Li 726, 807, 1205 & 1275*; angiosperm wood, *Wei 1929*

Ganoderma australe (Fr.) Pat., living tree of *Cinnamomum*, *Dai 5978 & 5979*

Gelatoporia subvermispora (Pilát) Niemelä, fallen trunk of *Pinus*, *Li 1372*

Gloeophyllum abietinum (Bull.:Fr.) P. Karst., fallen trunk of *Pinus*, *Li 777*

Gloeoporus dichrous (Fr.:Fr.) Bres., fallen angiosperm trunk, *Li 1304*; dead tree of *Fagus*, *Li 1390*

Haploporus alabamae (Berk. & M.A. Curtis) Y.C. Dai & Niemelä, fallen trunk of *Acer*, *Wei 1966*; dead angiosperm tree, *Wei 1999*; dead branch of living angiosperm tree, *Wei 1961 & 2047*; living tree of *Carpinus*, *Wei 2039*; dead branch of living *Carpinus*, *Wei 2029*

Haploporus odorus (Sommerf.) Bondartsev & Singer, dead angiosperm tree, *Li 1237*; fallen angiosperm trunk, *Dai 5876, Li 595, Wei 1997*; fallen angiosperm branch, *Li 1340*; rotten angiosperm wood, *Dai 5870*; dead branch of living *Cerasus*, *Dai 5862*; fallen trunk of *Prunus*, *Dai 5883*; fallen trunk of *Salix*, *Dai 5867*

Haploporus papyraceus (Schwein.) Y.C. Dai & Niemelä, fallen angiosperm trunk, *Dai 5863, Li 605, Wei 2001*; fallen angiospem branch, *Dai 5865 & 5874, Li 594 & 1334*; fallen angiosperm twig, *Li 792 & 1407*; living tree of *Actinidia*, *Wei 1934*; fallen branch of *Betula*, *Li 640*; dead branch of living *Sorbus*, *Wei 2032*

Haploporus subtrameteus (Pilát) Y.C. Dai & Niemelä, fallen angiosperm branch, *Li 1241*; rotten angiosperm wood, *Li 1211, 1280 & 1479*

Heterobasidion insulare (Murrill) Ryvarden, fallen trunk of *Pinus*, *Li 803*; stump of *Pinus*, *Li 761 & 763*

Heterobasidion parviporum Niemelä & Korhonen, stump of *Abies*, *Li 1315 & 1320*

Hyphodontia flavipora (Cooke) Sheng H. Wu, fallen angiosperm trunk, *Li 658, 1416 & 1476, Wei 2141*; fallen angiosperm branch, *Dai 5909 & 5970, Li 688, 697, 706, 730, 752, 788, 793, 1398 & 1467, Wei 2065, 2129 & 2176*; fallen angiosperm twig, *Li 601, Wei 2058 & 2094*; rotten angiosperm wood, *Li 753*; angiosperm root, *Li 703*; fallen trunk of *Celtis*, *Dai 5951*; fallen branch of *Celtis*, *Dai 5952*; stump of *Coriaria*, *Wei 2090*; fallen trunk of *Fagus*, *Wei 2135*; dead tree of *Juglans*, *Dai 6000*; stump of *Quercus*, *Wei 1924*

Hyphodontia paradoxa (Schrad.:Fr.) Langer & Vesterh., dead angiosperm tree, *Li 1222*; fallen angiosperm branch, *Wei 1985 & 1996*; fallen branch of *Betula*, *Dai 5869, Wei 2013*; fallen twig of *Betula*, *Wei 1936*; dead tree of *Juglans*, *Dai 5997*

Hyphodontia radula (Pers.) Langer & Vesterh., fallen angiosperm branch, *Li 1198 & 1480*; fallen angiosperm twig, *Li 1244*

Inonotus radiatus (Sowerby:Fr.) P. Karst., dead angiosperm tree, *Dai 5999*; fallen angiosperm twig, *Li 722*; living tree of *Betula*, *Li 633*; fallen branch of *Betula*, *Li 615, Wei 2021, 2024 & 2040*; stump of *Betula*, *Dai 5878*

Irpex lacteus (Fr.:Fr.) Fr. *sensu lato*, fallen branch of *Betula*, *Wei 2084*; fallen trunk of *Celtis*, *Dai 5961*; living tree of *Prunus*, *Dai 5977*; living tree of *Sorbus*, *Wei 1923*

Junghuhnia collabens (Fr.) Ryvarden, rotten angiosperm wood, *Li 986*

Junghuhnia luteoalba (P. Karst.) Ryvarden, rotten angiosperm wood, *Li 1453*

Junghuhnia nitida (Pers.:Fr.) Ryvarden, fallen angiosperm trunk *Li 1230, 1309, 1397 & 1406*; fallen angiosperm branch, *Li 591 & 1413, Wei 1992*; dead branch of living angiosperm tree, *Wei 1978*; rotten angiosperm wood, *Li 1480*; angiosperm stump, *Li 1329, Wei 2002*; fallen branch of *Betula*, *Dai 5884*; fallen trunk of *Rosa*, *Wei 1981*; fallen trunk of *Salix*, *Li 1274*

Laetiporus sulphureus (Bull.:Fr.) Murrill, fallen trunk of *Castanea*, *Dai 5890*

Lenzites betulinus (L.:Fr.) Fr., fallen angiosperm branch, *Wei 1926*

Leucophellinus irpicoides (Pilát) Bondartsev & Singer, angiosperm stump, *Li 681*

Lindtneria trachyspora (Bourdot & Galzin) Pilát, rotten wood of *Pinus*, *Li 746*

Megasporoporia rhododendri Y.C. Dai & Y.L. Wei, dead angiosperm tree, *Li 1414*; angiosperm stump, *Li 715*

Megasporoporia setulosa (Henn.) Rajchenb., dead angiosperm tree, *Wei 2036*; fallen angiosperm trunk, *Wei 2045*

Megasporoporia subcavernulosa Y.C. Dai & Sheng H. Wu, fallen angiosperm branch, *Dai 5882, Li 623, 659, 677, 789, 790, 1327, 1432, 1471 & 1474, Wei 1938 & 1971*; fallen angiosperm twig, *Li 708, 1204, 1335 & 1404, Wei 2092*; fallen branch of *Betula*, *Li 636*; fallen twig of *Castanea*, *Dai 5937*

Microporus subaffinis (Lloyd) Imazeki, fallen twig of *Fagus*, *Wei 2100b*

Microporus vernicipes (Berk.) Kuntze, fallen angiosperm twig, *Li 689, 1370 & 1411*; fallen branch of *Fagus*, *Li 1439*

Oxyporus corticola (Fr.) Ryvarden, living angiosperm tree, *Li 673*; fallen angiosperm trunk, *Li 795 & 1213*; fallen angiosperm branch, *Li 729*; fallen angiosperm twig, *Li 748*; fallen trunk of *Quercus*, *Li 1357*

Oxyporus cuneatus (Murrill) Aoshima, fallen trunk of *Cunninghamia*, *Dai 5989, 5990, 5994 & 5998*; stump of *Cunninghamia*, *Li 642, Wei 2097 & 2110*

Oxyporus obducens (Pers.:Fr.) Donk, fallen angiosperm trunk, *Li 588*; rotten angiosperm wood, *Li 1459*

Oxyporus populinus (Schumach.:Fr.) Donk, fallen angiosperm trunk, *Wei 1989*; dead tree of *Betula*, *Li 622*

Oxyporus subulatus Ryvarden, fallen angiosperm trunk, *Li 648 & 1209*; angiosperm stump, *Li 725, 796 & 1215*; fallen trunk of *Celtis*, *Dai 5892 & 5929*

Perenniporia* cf. *corticola (Corner) Decock, fallen angiosperm trunk, *Li 1240*; rotten angiosperm wood, *Li 797*; angiosperm stump, *Li 735*

Perenniporia narymica (Pilát) Pouzar, fallen angiosperm trunk, *Li 1408*; fallen gymnosperm trunk, *Li 1223*

Perenniporia piceicola Y.C. Dai, dead branch of living *Abies*, *Li 625, Wei 1940*; fallen branch of *Abies*, *Wei 1952*

Perenniporia subacida (Peck) Donk, dead angiosperm tree, *Wei 2077*; fallen angiosperm trunk, *Li 643 & 1458*; rotten angiosperm wood, *Li 791 & 798*; angiosperm stump, *Li 655*

Perenniporia tenuis (Schw.) Ryvarden var. *tenuis*, fallen angiosperm branch, *Li 1201*

Phellinus baumii Pilát, fallen trunk of *Acer*, *Wei 1968*; fallen angiosperm trunk, *Wei 2010*; rotten angiosperm wood, *Li 804*; dead tree of *Cerasus*, *Dai 5875*; dead tree of *Coriaria*, *Wei 2073*; stump of *Coriaria*, *Wei 2120*

Phellinus collinus Y.C. Dai & Niemelä, dead tree of *Sorbus*, *Wei 1944*

Phellinus conchatus (Pers.:Fr.) Quél., living angiosperm tree, *Li 1314*; dead angiosperm tree, *Li 1307, 1373 & 1484*; fallen angiosperm trunk, *Li 1207*; stump of *Quercus*, *Li 1208*

Phellinus contiguus (Pers.:Fr.) Pat., dead angiosperm tree, *Li 755 & 1306*; fallen angiosperm branch, *Li 1195, 1199, 1283 & 1336*; angiosperm stump, *Li 1368*; angiosperm root, *Li 740*

Phellinus ferreus (Pers.) Bourdot & Galzin, fallen angiosperm trunk, *Wei 2007*; fallen trunk of *Betula*, *Wei 1964*; fallen branch of *Betula, Dai 5885*; fallen twig of *Betula*, *Wei 1941, 1955, 1959 & 1976*

Phellinus ferruginosus (Schrad.:Fr.) Pat., dead angiosperm tree, *Li 1221 & 1234*; fallen angiosperm trunk, *Li 1311*; fallen angiosperm branch, *Li 1197 & 1212*; rotten angiosperm wood, *Li 1206*; angiosperm stump, *Li 1216*; rotten wood of *Castanea*, *Dai 5949*

Phellinus gilvus (Schwein.:Fr.) Pat., fallen angiosperm trunk, *Li 799 & 1464*; fallen angiosperm branch, *Li 802, 1216, 1226, 1242 & 1477, Wei 2079, 2081*; fallen angiosperm twig, *Li 1323, Wei 2122*

Phellinus himalayensis Y.C. Dai, fallen gymnosperm trunk, *Li 805*

Phellinus laevigatus (P. Karst.) Bourdot & Galzin, fallen angiosperm trunk, *Wei 2044*; dead tree of *Betula*, *Wei 2017*; fallen branch of *Betula*, *Li 635*

Phellinus tremulae (Bondartsev) Bondartsev & Borisov, angiosperm stump, *Li 757*; living tree of *Carpinus*, *Wei 2037*; dead tree of *Sorbus*, *Wei 2030*

Phellinus tuberculosus (Baumg.) Niemelä, living tree of *Cerasus*, *Wei 1982 & 2051*

Physisporinus rivulosus (Berk. & M.A. Curtis) Ryvarden, stump of *Cunninghamia*, *Wei 2108*

Physisporinus sanguinolentus (Alb. & Schwein.:Fr.) Pilát, rotten wood of *Abies*, *Li 611*; fallen gymnosperm trunk, *Li 1232*

Piptoporus soloniensis (Dubois:Fr.) Pilát, dead angiosperm tree, *Li 1203*; angiosperm stump, *Li 716 & 1435*

Polyporus arcularius Batsch:Fr., fallen angiosperm branch, *Wei 2046*; rotten angiosperm wood, *Wei 2000 & 2027, Dai 5868*

Polyporus badius (Pers.:Gray) Schwein., fallen angiosperm branch, *Li 589 & 786*; dead tree of *Sorbus*, *Wei 2023*

Polyporus hemicapnodes Berk. & Broome, fallen angiosperm trunk, *Li 1281*; rotten angiosperm wood, *Li 1367*

Polyporus melanopus (Pers.:Fr.) Fr., fallen angiosperm trunk, *Wei 1993*; fallen angiosperm branch, *Li 1393, Dai 5919*; stump of *Carpinus*, *Wei 2028*

Polyporus mikawai Lloyd, fallen angiosperm trunk, *Li 1470*; fallen angiosperm branch, *Li 1436 & 1445*

Polyporus mongolicus (Pilát) Y.C. Dai, angiosperm stump, *Dai 5953*; fallen twig of *Betula*, *Dai 5879*

Polyporus mori (Pollini:Fr.) Fr., fallen angiosperm branch, *Wei 1990*; angiosperm stump, *Dai 5910*

Polyporus tenuiculus (Beauv.) Fr., fallen angiosperm branch, *Li 709 & 1455*

Polyporus varius Pers.:Fr., fallen angiosperm branch, *Wei 2049*; living tree of *Acer*, *Wei 2011*; living angiosperm tree, *Wei 2056*; fallen angiosperm trunk, *Li 1326, Wei 1969*; fallen angiosperm branch, *Li 639 & 1366, Wei 1995*; fallen angiosperm twig, *Li 1361*; dead tree of *Sorbus*, *Wei 2018*

Postia alni Niemelä & Vampola, dead angiosperm tree, *Wei 2038*; fallen angiosperm trunk, *Dai 5908*; fallen angiosperm branch, *Li 607*; angiosperm stump, *Li 800*

Postia caesia (Schrad.:Fr.) P. Karst., fallen trunk of *Cunninghamia*, *Dai 5986*; fallen twig of *Pinus*, *Li 675*

Postia fragilis (Fr.:Fr.) Jülich, fallen trunk of *Pinus*, *Li 685*

Postia gloeocystidia Y.L. Wei & Y.C. Dai, fallen trunk of *Abies*, *Li 1276 & 1308*; fallen gymnosperm branch, *Li 1194*

Postia hibernica (Berk. & Broome) Jülich, fallen trunk of *Pinus*, *Li 754*; fallen branch of *Pinus*, *Li 734 & 738*

Postia lactea (Fr.:Fr.) P. Karst., living tree of *Abies*, *Li 1322*; dead angiosperm tree, *Li 780*

Postia pileata (Parmasto) Y.C. Dai & Renvall, fallen trunk of *Abies*, *Li 1317*; fallen branch of *Abies*, *Li 1299*; fallen twig of *Abies*, *Li 1298*; fallen trunk of *Pinus*, *Li 687*

Postia simanii (Pilát) Jülich, fallen angiosperm twig, *Wei 2124*

Postia tephroleuca (Fr.) Jülich, dead angiosperm tree, *Li 699*; fallen angiosperm trunk, *Li 590*; fallen angiosperm branch, *Li 603, 606, 710 & 749, Wei 2043*

Postia undosa (Peck) Jülich, fallen trunk of *Pinus*, *Li 727*

Protomerulius caryae (Schwein.) Ryvarden, fallen angiosperm trunk, *Li 1437 & 1447*

Pycnoporus cinnabarius (Jacq.:Fr.) P. Karst., fallen angiosperm trunk, *Li 1239*

Pycnoporus sanguineus (L.:Fr.) Murrill, angiosperm wood, *Wei 2083*

Pyrrhoderma scaura (Lloyd) Ryvarden, angiosperm stump, *Li 652*

Rigidoporus crocatus (Pat.) Ryvarden, fallen angiosperm trunk, *Dai 5899 & 5901*; fallen angiosperm branch, *Li 686*; rotten angiosperm wood, *Li 775*

Rigidoporus eminens Y.C. Dai, fallen angiosperm trunk, *Li 674, 668 & 705*; fallen angiosperm branch, *Li 1463, Dai 5969*; stump of *Pinus*, *Li 672*

Rigidoporus lineatus (Pers.:Fr.) Ryvarden, root of living *Magnolia*, *Li 1220 & 1224*

Sistotrema confluens Pers., angiosperm root, *Li 772*

Skeletocutis alutacea (J. Lowe) Jean Keller, fallen angiosperm trunk, *Li 1358*; fallen gymnosperm trunk, *Li 1462*

Skeletocutis biguttulata (Romell) Niemelä, rotten wood of *Abies*, *Li 1282*; fallen angiosperm twig, *Li 1438*; rotten angiosperm wood, *Li 744 & 1402*; fallen gymnosperm trunk, *Li 1231*; fallen trunk of *Pinus*, *Li 773*

Skeletocutis lenis (P. Karst.) Niemelä, stump of *Abies*, *Wei 2035*

Skeletocutis nivea (Jungh.) Jean Keller, fallen angiosperm trunk, *Li 1238 & 1301*; fallen angiosperm branch, *Dai 5921 & 5980, Li 650, 1228 & 1363, Wei 2145 & 2150*; fallen angiosperm twig, *Li 733, 1399, 1468 & 1472, Wei*

1920; rotten angiosperm wood, *Li 1356*; fallen branch of *Fagus*, *Wei 2126 & 2133*

Skeletocutis subvulgaris Y.C. Dai, fallen angiosperm trunk, *Li 1229*; fallen gymnosperm trunk, *Li 1225 & 1233*

Skeletocutis vulgaris (Fr.) Niemelä & Y.C. Dai, fallen trunk of *Abies*, *Li 620, 1277, 1300, 1305 & 1374*; rotten wood of *Abies*, *Li 1271, 1272, 1279, 1303, 1328 & 1359*; fallen angiosperm trunk, *Li 739 & 773*

Stromatoscypha fimbriata (Pers.:Fr.) Donk, fallen angiosperm branch, *Li 1443*; rotten angiosperm wood, *Li 1362*

Trametes gibbosa (Pers.:Fr.) Fr., angiosperm stump, *Li 771*; fallen trunk of *Celtis*, *Dai 5955*; stump of *Celtis*, *Dai 5917*

Trametes hirsuta (Wulfen:Fr.) Pilát, rotten angiosperm wood, *Wei 1933*

Trametes ochracea (Pers.) Gilb. & Ryvarden, fallen angiosperm trunk, *Dai 5897*; fallen angiosperm branch, *Wei 2112 & 2115*; rotten angiosperm wood, *Wei 2078*; angiosperm stump, *Dai 5900*

Trametes pubescens (Schumach.:Fr.) Pilát, living angiosperm tree, *Dai 5957*; fallen angiosperm branch, *Wei 2009, 2123 & 2124*; rotten angiosperm wood, *Wei 2003*; fallen branch of *Castanea*, *Wei 2066*

Trametes suaveolens (Fr.:Fr.) Fr., fallen angiosperm trunk, *Li 696*

Trametes velutina (Fr.:Fr.) G. Cunn., fallen trunk of *Castanea*, *Dai 5930*; fallen trunk of *Celtis*, *Dai 5972*; fallen branch of *Fagus*, *Wei 2139*

Trametes versicolor (L.:Fr.) Pilát, angiosperm stump, *Li 694*; fallen trunk of *Betula*, *Wei 1949*; dead tree of *Pinus*, *Li 762*

Trechispora candidissima (Schwein.) Bondartsev & Singer, fallen angiosperm branch, *Li 616*; rotten angiosperm wood, *Li 1394, 1400, 1449 & 1452*; rotten angiosperm stump, *Li 1388*

Trechispora mollusca (Pers.:Fr.) Liberta, fallen branch of *Betula*, *Li 627*

Trichaptum abietinum (Pers.:Fr.) Ryvarden, fallen twig of *Abies*, *Wei 1960 & 1973*; fallen branch of *Pinus*, *Li 712*

Trichaptum pargamenum (Fr.) G. Cunn., fallen angiosperm trunk, *Li 664, Wei 1967*; fallen angiosperm branch, *Dai 5894 & 5896*; fallen branch of *Betula*, *Li 637, Wei 2034*; fallen trunk of *Castanea*, *Dai 5965*; fallen trunk of *Celtis*, *Dai 5918*; dead tree of *Populus*, *Wei 2107*

Tyromyces chioneus (Fr.) P. Karst., fallen angiosperm trunk, *Li 621*; living angiosperm tree, *Wei 2050*; dead angiosperm tree, *Li 779*; fallen angiosperm trunk, *Dai 5946, Li 666*; fallen angiosperm branch, *Dai 5967, Li 1454*; fallen angiosperm twig, *Li 1318*; fallen branch of *Betula*, *Dai 5877*

Wolfiporia dilatohypha Ryvarden & Gilb., dead angiosperm tree, *Li 1193*

DISCUSSIONS

139 species of polypore were identified based on around 600 specimens of wood-inhabiting fungi. The majority of these species are new records from the area considered. Among these species, *Albatrellus zhuangii, Fomes fomentarius, Fomitopsis pinicola, Hapaloporus alabamae, H. odorus* and *H. papyracea* mainly occur in the coniferous and broadleaved mixed forest belts, which is mostly composed of *Abies fargesii* and *Betula albo-sinensis*. While *Albatrellus dispansus, Antrodiella brunneimontana, Daedalea dickinsii, Fomitiporia punctata, Skeleto-*

cutis biguttulata and *Stromatoscypha fimbriata* are always found in evergreen and deciduous broadleaved mixed forest. Species including *Antrodia albida, A. heteromorpha, A. malicola, Antrodiella semisupina, Cyclomyces xeranticus, Junghuhnia nitida, Megasporoporia subcavernulosa, Polyporus varius, Schizopora flavipora, Skeletocutis nivea, Trichaptum pargamenum* and *Tyromyces chioneus* are common in the whole studied area, while *Leucophellinus irpicoides, Lindtneria trachyspora, Phellinus himalayensis, Sistotrema confluens* and *Wrightoporia dilatohypha* can be considered as rare for the area.

Due to the high diversity of tree species in Shennongjia Nature Reserve, more polypores and other wood-inhabiting species could be found in the future. The above checklist is far from the complete flora of polypores in the area, and further investigations are needed.

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