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# The Brown-Rot Polypore Clade in the Neotropical and Andean Regions of South America: A Bibliographic Synthesis of Species Diversity and Distribution, and Species Records

## El clado de políporos de pudrición parda en las regiones neotropical y andina de Sudamérica: listado de la diversidad, la distribución y registros de especies

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## Abstract

At a global scale, brown-rot fungi are proportionally less diverse than white-rot fungi, a pattern reported in several regional studies. Several studies have further suggested that both species richness and the relative proportion of brown-rot and white-rot fungi follow climatic and latitudinal patterns, with brown-rot polypores generally considered less diverse in tropical regions and proportionally more abundant in temperate and cold climates. However, this apparent pattern may be influenced by uneven sampling effort, particularly the comparatively limited study of brown-rot fungi in tropical regions. The diversity and distribution of brown-rot fungi in the Neotropics therefore remain poorly understood. The present study addresses this gap by providing

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an updated bibliographic checklist of species belonging to the 'brown-rot polypore clade' recorded in the Neotropical and Andean regions of America. We present a curated list of 88 brown-rot polypore species, distributed across 27 genera and 9 families. For each taxon, we synthesize available information on nomenclature, geographic distribution, substrate associations, and ecoregional occurrence, and we discuss broader patterns of taxonomic richness, climatic distribution, substrate use, biogeographic structure, and taxonomic uncertainty. Particular attention is given to historical and extra-continental records, doubtful occurrences, and cases in which current nomenclature does not fully reflect phylogenetic placement. This checklist provides a baseline for future taxonomic, phylogenetic, biogeographic, and ecological studies of brown-rot polypores in South America.

**Keywords:** Brown-rot fungi; checklist; wood-decaying fungi.

## Resumen

En diversos estudios regionales a escala global se ha observado que los hongos de pudrición marrón son proporcionalmente menos abundantes que los de pudrición blanca. Algunos estudios sugieren que tanto la riqueza como la proporción relativa de especies de hongos de pudrición marrón y pudrición blanca siguen un patrón climático y latitudinal, es así como los hongos de pudrición marrón son considerados generalmente menos diversos en regiones tropicales y proporcionalmente más abundantes en regiones frías con clima templado. Sin embargo, este aparente patrón podría estar influenciado por esfuerzos de muestreo desiguales, considerando la baja cantidad de estudios sobre hongos de pudrición marrón en áreas tropicales. Por consiguiente, la diversidad y distribución de estos hongos en el Neotrópico siguen siendo poco conocidas. El presente estudio tiene como objetivo abordar esta brecha proporcionando una lista actualizada basada en literatura de las especies de "políporos de pudrición marrón" registradas en el Neotrópico y las ecorregiones de clima templado del sur de Sudamérica. Presentamos una lista de 88 especies de pudrición marron, distribuidas en 27 géneros y 9 familias. Para cada grupo taxonómico se discuten patrones geográficos de distribución y climáticos, asociación a sustratos, además de discutir de manera mas general patrones de riqueza, distribución climática y posición taxonómica. Este constituye el primer listado detallado de políporos de pudrición marrón para las regiones neotropical y andina, y es una base para futuros estudios taxonómicos, biogeográficos y ecológicos.

**Palabras clave:** Checklist; hongos de pudrición marrón; hongos de la madera.

## INTRODUCTION

At a global scale, the diversity of brown-rot fungi is markedly lower than that of white-rot fungi (Zhang, 2003; Wu *et al.*, 2020). Several regional studies have suggested that both species richness and the proportion of brown-rot fungi relative to white-rot fungi follow climatic and latitudinal patterns. In North America, it has been estimated that approximately 6% of polypore species cause brown rot, with most species occurring on gymnosperm hosts (Gilbertson, 1980, 1981). In northern China, about 14% of polypores are reported to produce brown rot, with species richness decreasing toward lower latitudes and more tropical regions of the country (Zhou & Dai, 2012; Dai *et al*., 2015; Cui *et al.*, 2019; Wu *et al*., 2021).

In southern South America, particularly in Argentina, brown-rot fungi account for only about 18% of polypore species associated with wood decay in living trees (Rajchenberg & Robledo, 2013). Argentina includes subtropical and temperate climates and the proportion of brown rot fungi with respect to white rot fungi increases towards temperate Patagonia. In Paraguay, a comparatively smaller country with a subtropical climate, the proportion is lower, only ≈10% of the wood rotting fungi are brown-rot species (Popoff & Wright, 1998; Maubet *et al.*, 2020; Campi *et al.*, 2025).

These observations have led to the general assumption that brown-rot polypore are less diverse in tropical regions and proportionally more abundant in temperate to cold climates (Ryvarden 1991; Stokland *et al.*, 2012; Zhou & Dai, 2012). However, this apparent pattern may be influenced by uneven sampling effort. For example, in Argentina, the low number of recorded brown-rot species has been attributed, at least in part, to limited sampling in subtropical areas of the country (Rajchenberg & Robledo, 2013). As a result, the diversity and distribution of brown-rot fungi in the Neotropics remain poorly understood. In particular, the 'brown-rot polypore clade', one of the main lineages of brown-rot polypores, lacks a comprehensive synthesis integrating scattered records and recent taxonomic advances from the region. The present study aims to address this gap by providing an updated checklist of the species of the "brown-rot polypore clade" recorded in the Neotropics, thereby providing a baseline for future taxonomic, biogeographic, and ecological studies.

## MATERIALS AND METHODS

### Geographic scope and distribution data

The geographic scope of this checklist follows the Neotropical region as delimited by Morrone *et al.* (2022). Records from the temperate ecoregions of southern South America corresponding to the Andean region *sensu* Morrone (2015) were also included because of their biogeographic relevance to the group studied. Distribution data were compiled at two spatial scales: country and ecoregion (Fig. 1).

The assignment of records to specific ecoregions was based on the Ecoregions 2017 interactive platform (https://ecoregions.appspot.com/), used as an operational tool to locate records within the broader biogeographic framework adopted here (Dinerstein *et al.*, 2017). For species with broad distributions spanning multiple countries and ecological regions, all corresponding ecoregions were included in order to reflect their full known range.

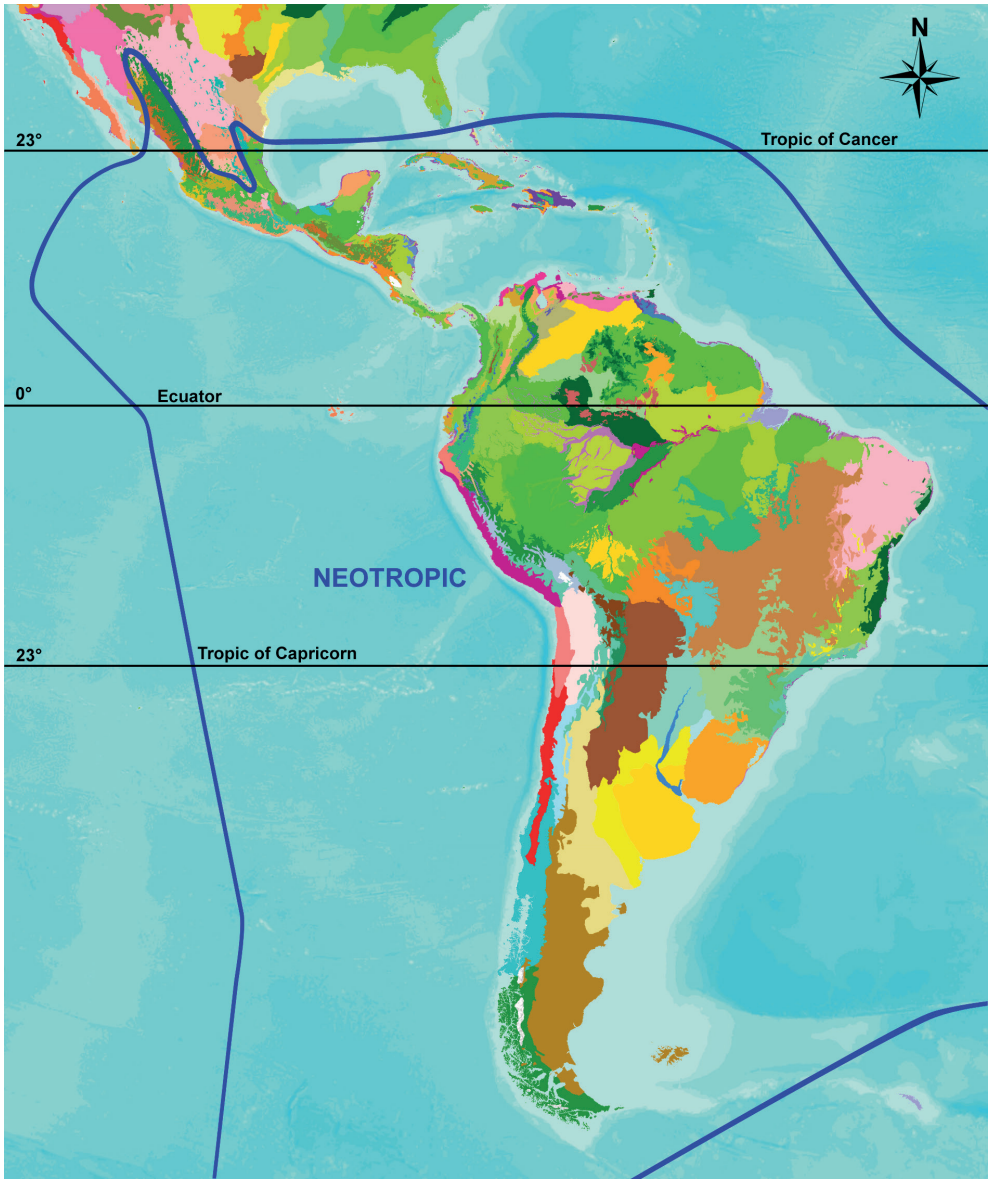



**Fig. 1.** Neotropical region as delimited by Morrone *et al.* (2022).

**Fig. 1.** Región neotropical según la delimitación de Morrone *et al.* (2022).

## Taxonomic and nomenclatural framework

Most taxonomic boundaries of the 'Antrodia clade', hereafter referred to as the "brown-rot polypore clade", followed Liu *et al.* (2023a, 2023b) at the generic and family levels (Fig. 2). For taxa within Fomitopsidaceae, the classification proposed by Spirin *et al.* (2024) was adopted. Species were included when they were either (i) assigned to genera recognized within the clade of brown-rot polypores under the taxonomic framework adopted here, or (ii) supported by published phylogenetic evidence as belonging to the clade, even when their currently valid nomenclatural combination does not reflect that placement. In the latter cases, the nomenclaturally accepted name was retained and the phylogenetic placement was discussed explicitly. Nomenclature was checked against Index Fungorum (Species Fungorum, 2026) and MycoBank (Robert *et al.*, 2013), and only validly published names, according to the *International Code of Nomenclature for algae, fungi, and plants* (Turland *et al.*, 2025) were considered. Because the nomenclature of several species has changed substantially, the basonym was included whenever possible in order to facilitate the interpretation of synonymy and historical combinations.

## Sources of data and treatment of records

A complete guide for the search methodology used and the criteria of inclusion and exclusion of taxa can be found in Supplementary Material S1. As a summary, the checklist was compiled from available literature, including historical and recent publications, as well as academic theses. Searches were conducted mainly with Google Scholar and other academic search engines using the genera recognized within the clade of brown-rot polypores according to Liu *et al.* (2023a, 2023b), combined with the names of South American countries and additional keywords such as "Antrodia clade", "brown-rot", and "wood-rotting fungi". All sources used for the compilation, together with the names under which species are recognized at the moment, are documented in Table 1 and cited in the reference section of the manuscript. Type locality was checked in the original publication when available, or otherwise in Index Fungorum. Substrate data were annotated from the type locality and from the records documented within the geographical range defined above. The checklist is based on published literature records and does not include revision of type material or herbarium material.

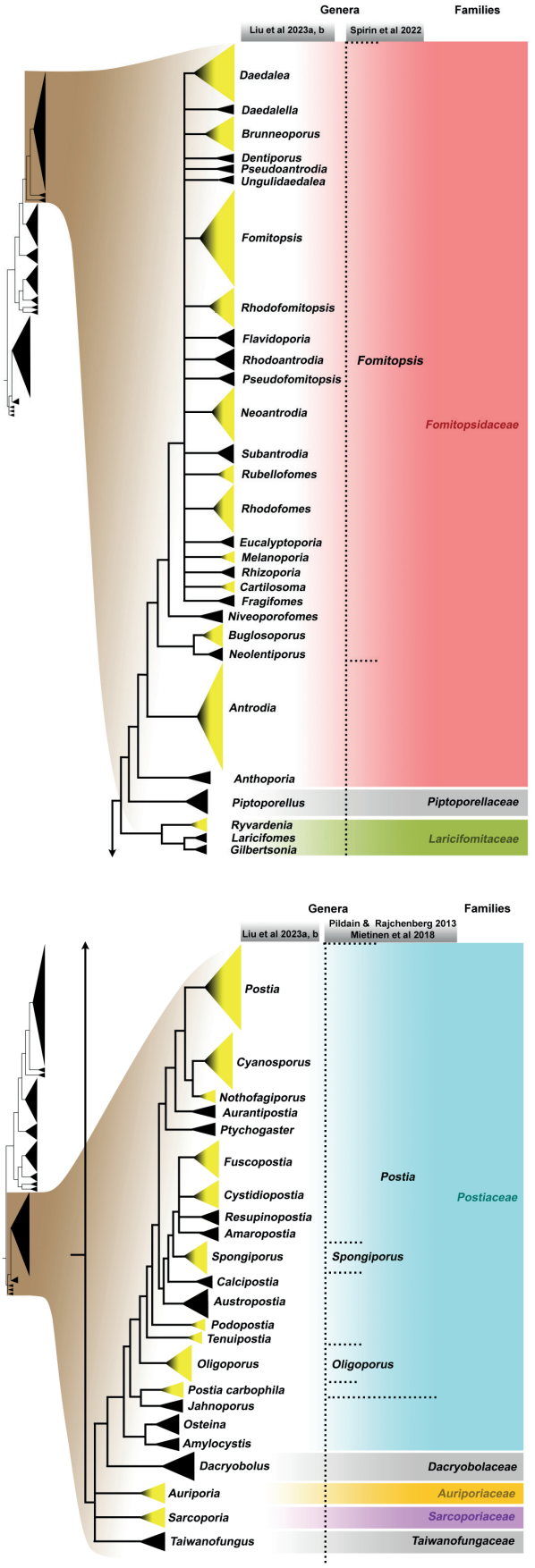



**Fig. 2.** Schematic representation of phylogenetic relationships and proposed taxonomic hypotheses for brown-rot polypore clade based broadly on the global phylogeny of Liu *et al.* (2023a, 2023b), including alternative hypotheses in *Fomitopsis* (Spirin *et al.*, 2024), *Laetiporus* (Campi *et al.*, 2022) and *Postia* (Pildain & Rajchenberg 2013, Miettinen *et al.*, 2018). Clades that are not supported in Liu et al (2023a, b) have been represented in columns to the right of the clades. The generic-level clades highlighted in yellow include species present in this checklist, as well as families highlighted in color.

**Fig. 2.** Esquema de relaciones filogenéticas e hipótesis taxonómicas propuestas para los políporos de pudrición marrón, basado de manera general en las topologías de filogenias globales de Liu et al (2023a, b), incluyendo hipótesis alternativas en *Fomitopsis* (Spirin et al 2024), *Laetiporus* (Campi et al 2022) y *Postia* (Pildain & Rajchenberg 2013, Mietinen 2018). Los clados que no tienen soporte en Liu et al (2023a, b), se han representado en columnas a la derecha de los peines. Los clados a nivel de género resaltados en amarillo incluyen especies presentes en este checklist, así como las familias resaltadas en color.

**Table 1 (1 of 11).** Annotated checklist for the species of the brown-rot polypore clade from the Neotropics Andean regions. Genera and species are listed in the order of the schematic phylogeny in Fig. 2.

**Tabla 1 (1 de 11).** Listado de especies del clado de políporos de pudrición marrón del Neotrópico y la Región Andina de Sudamérica. Los géneros y las especies se enumeran en el orden en que aparecen en la filogenia esquemática de la Fig. 2.

| Species | Basionym Type locality: substrate | Record per country (sub-strate) | Ecosystem | Record status | Reference |
|---|---|---|---|---|---|
| *Fomitopsis aethalodes* (Mont.) Spirin | *Trametes aethalodes* Mont.<br>Brazil: unknown | Argentina (*Piptadenia macrocarpa*), Brazil, Panama and Paraguay | Isthmian-Pacific moist forests, Southern Andean Yungas, Caatinga,Cerrado, Dry and Humid Chaco and Humid pampas | Accepted | Montagne (1856, as *Trametes aethalodes*); Rajchenberg (1986); Popoff & Wright, (1998); Cristaldo *et al*., (2022); Núñez & Ryvarden (1999); Gibertoni *et al*. (2004, 2007); Robledo & Rajchenberg (2007)<br>All as *Daedalea aethalodes* |
| *Fomitopsis cajanderi* (P. Karst.) Kotl. & Pouzar | *Fomes cajanderi* P. Karst.<br>Russia: *Larix* sp | Dominican Republic (*Pinus occidentalis*) and Mexico (*Pinus* spp) | Trans-Mexican Volcanic Belt and Sierra Madre del Sur pine-oak forests | Accepted, extra-continental record | Carranza-Morse & Gilbertson (1986, 1989) |
| *Fomitopsis carnea* (Blume & T. Nees) Imazeki | *Polyporus carneus* Blume & T. Nees<br>Indonesia: peatswamp forest (ND) | Mexico | Balsas dry forests | Accepted, extra-continental record | Carranza-Morse & Gilbertson (1986, 1989) |
| *Fomitopsis caseosa* Vlasák & Spirin | *Fomitopsis caseosa* Vlasák & Spirin<br>Costa Rica: *Peltogyne* sp. (probably) | Costa Rica | Southern mesoamerican pacific mangroves | Accepted | Spirin *et al*. (2024) |
| *Fomitopsis cellularis* Vlasák & Spirin | *Trametes cystidiata* I. Lindblad & Ryvarden<br>Costa Rica: dead deciduous tree | Costa Rica | Costa Rican seasonal moist forests | Accepted | Spirin *et al*. (2024) |
| *Fomitopsis condensa* Ryvarden & Vlasák | *Melanoporia condensa* Ryvarden & Vlasák<br>Costa Rica: hardwood | Costa Rica | Costa Rican seasonal moist forests | Accepted | Vlasák *et al*., (2016) |
| *Fomitopsis cupreorosea* (Berk.) J. Carranza & Gilb. | *Polyporus cupreoroseus* Berk.<br>Brazil: unknown | Belize, Brazil, Colombia, Costa Rica, Cuba, French Guyana, Guayana, Mexico and Peru. | Widely extended in Tropical & Subtropical Moist Broadleaf Forests | Accepted | Carranza-Morse & Gilbertson (1986); Góes-Neto (1999); Gerber & Loguercio-Leite (2000); Ryvarden & de Meijer (2002); Gibertoni *et al*. (2004, 2007); Meijer (2006); Soares *et al*. (2017, as *Rhodofomitopsis cupreorosea*); Spirin *et al*., (2024) |

**Table 1 (2 of 11).** Annotated checklist for the species of the brown-rot polypore clade from the Neotropics Andean regions. Genera and species are listed in the order of the schematic phylogeny in Fig. 2.

**Tabla 1 (2 de 11).** Listado de especies del clado de políporos de pudrición marrón del Neotrópico y la Región Andina de Sudamérica. Los géneros y las especies se enumeran en el orden en que aparecen en la filogenia esquemática de la Fig. 2.

| Species | Basionym Type locality: substrate | Record per country (sub-strate) | Ecosystem | Record status | Reference |
|---|---|---|---|---|---|
| *Fomitopsis feei* (Fr.) Kreisel | *Polyporus feei* Fr. Brazil: unknown | Argentina (*Schinopsis lorentzii*), Bolivia, Brazil, Colombia, Costa Rica, El Salvador, Guatemala, Mexico Nicaragua and Venezuela | Tropical & Subtropical: Moist Broadleaf Forests (Baapa y Amazonas) and Dry Broadleaf Forests (Caatinga) | Accepted | Carranza-Morse & Gilbertson (1986); Gerber & Loguercio-Leite (2000); Ryvarden & de Meijer (2002); Gibertoni *et al*., (2004, 2007); Meijer (2006); Drechsler-Santos *et al*., (2008); Gomes-Silva *et al*. (2015); Soares *et al*. (2017, as *Rhodofomitopsis roseomagna*) |
| *Fomitopsis flabellata* A.M.S. Soares & Gibertoni | *Fomitopsis flabellata* A.M.S. Soares & Gibertoni Brazil: hardwood | Brazil | Tropical & Subtropical Moist Broadleaf Forests (Amazon) | Accepted | Soares *et al*. (2017) |
| *Fomitopsis globispora* (Ryvarden & Aime) Spirin | *Trametes globospora* Ryvarden & Aime Belize: hardwood | Belize and Mexico | Petén-Veracruz moist forests | Accepted | Ryvarden *et al*., (2009, as *Trametes globospora*); Decock *et al*., (2021) |
| *Fomitopsis leioderma* (Mont.) Spirin & Vlasak | *Polyporus leiodermus* Mont. French Guiana: unknown | French Guiana | Guianan lowland moist forests | Accepted | Montagne (1854); Spirin *et al*., (2024) |
| *Fomitopsis lignea* (Berk.) Ryvarden | *Polyporus ligneus* Berk. Saint Vincent and the Grenadines: unknown | Belize, Costa Rica, Cuba, Ecuador, Jamaica & Panamá | Cuban dry forest, Petén-Veracruz, Jamaican, Windward Islands and Isthmian-Pacific moist forests | Accepted | Ryvarden (2015); Spirin *et al*., (2024); Carranza-Morse & Gilbertson (1986, as *F. dochmia*) |
| *Fomitopsis lignicolor* Vlasák & Spirin | *Fomitopsis lignicolor* Vlasák & Spirin Costa Rica: unknown | Costa Rica | Costa Rican seasonal moist forests | Accepted | Spirin *et al*. (2024) |
| *Fomitopsis lilacinogilva* (Berk.) J.E. Wright & J.R. Deschamps | *Polyporus lilacinogilvus* Berk. Australia: charred wood | Argentina and Brazil (likely to represent misidentified *F. cupreorosea* (Soares *et al*., 2017) | Humid Pampas, Bahia interior forests, Uatumã-Trombetas, Xingu-Tocantins-Araguaia and Purus-Madeira moist forests, southern atlantic brazilian mangroves and caatinga | Accepted, extra-continental record | Carranza-Morse & Gilbertson (1989); Gomes-Silva *et al*., (2015) |
| *Fomitopsis maculatissima* (Lloyd) Spirin | *Polyporus maculatissimus* Lloyd Tasmania: unknown | Argentina and Chile | Valdivian temperate forest and Patagonian Steppe | Accepted, extra-continental record | Rajchenberg (1995a) |

**Table 1 (3 of 11).** Annotated checklist for the species of the brown-rot polypore clade from the Neotropics Andean regions. Genera and species are listed in the order of the schematic phylogeny in Fig. 2.

**Tabla 1 (3 de 11).** Listado de especies del clado de políporos de pudrición marrón del Neotrópico y la Región Andina de Sudamérica. Los géneros y las especies se enumeran en el orden en que aparecen en la filogenia esquemática de la Fig. 2.

| Species | Basionym Type locality: substrate | Record per country (sub-strate) | Ecosystem | Record status | Reference |
|---|---|---|---|---|---|
| *Fomitopsis malicola* (Berk. & M.A. Curtis) Spirin | *Trametes malicola* Berk. & M.A. Curtis USA: unknown | Argentina, Brazil (*Araucaria angustifolia*), Costa Rica and Guadaloipe | Serra do mar coastal forests, Atlantic forest, Costa Rican seasonal moist forests and Yungas | Accepted | Ryvarden & de Meijer (2002); Robledo & Rajchenberg (2007); Ryvarden (2015); Pires *et al* (2017); Westphalen & Silveira (2013); Ortiz-Santana *et al*., (2013, sequences) All as *Antrodia malicola* |
| *Fomitopsis meliae* (Underw.) Gilb. | *Polyporus meliae* Underw. USA: *Melia azedarach* | Argentina, Brazil, Colombia, Costa Rica, French Guiana, Jamaica, Martinique, Peru, Puerto Rico | Guianan lowland moist forests; Magdalena-Urabá, Isthmian-Pacific, Ucayali and Jamaican moist forests; atlantic forest; Amazon-Orinoco-Southern Caribbean mangroves; Talamacan Montane Forest | Accepted | Murril (1907, as *Trametes submurina*); Rajchenberg & De Meijer (1990); Robledo & Rajchenberg (2007); Spirin *et al*., (2024) |
| *Fomitopsis minuta* Aime & Ryvarden | *Fomitopsis minuta* Aime & Ryvarden Guyana: *Dicymbe corymbosa*-dominated forest | Guyana | Guianan lowland moist forests | Accepted | Aime *et al*. (2007) |
| *Fomitopsis minutispora* Rajchenb. | *Fomitopsis minutispora* Rajchenb. Argentina: *Nothofagus* spp | Argentina and Chile | Patagonian Steppe and Valdivian temperate forests | Accepted | Rajchenberg (1995b); Sandoval & Rajchenberg (2011) |
| *Fomitopsis modesta* (Kuntze ex Fr.) Vlasák & Spirin | *Polyporus modestus* Kunze ex Fr. Suriname: unknown | Brazil, Costa Rica, French Guiana, Guyana and Surinam | Tropical moist broadleaf forest; Amazon-Orinoco-Southern Caribbean mangroves; Guianan lowland and highland moist forests; Bahia coastal forests; Talamancan montane forests; Central American dry forests; Costa Rican seasonal moist forests | Accepted | Montagne (1841, as *Polyporus monochrous*); Berkeley (1856, as P. albocervinus); Carranza & Ryvarden (1998); Cristaldo *et al*., (2022, as *Daedalea rajchenbergiana*); Spirin *et al*. (2024) |
| *Fomitopsis neotropica* (D.L. Lindner, Ryvarden & T.J. Baroni) Vlasák | *Daedalea neotropica* D.L. Lindner, Ryvarden & T.J. Baroni Belize: *Quercus* sp | Belize and Costa Rica | Petén-Veracruz moist forests | Accepted | Lindner *et al*. (2011); Vlasak both as *Daedalea neotropica*); |
| *Fomitopsis nivosa* (Berk.) Gilb. & Ryvarden | *Polyporus nivosus* Berk. Brazil: dead wood | Brazil (*Rhizophora mangle* and *Syagrus romanzoffiana*) and Mexico | Pernambuco and Serra do Mar coastal forests and Oaxacan montane forests | Doubtful | Berkeley (1856, as *Polyporus nivosus*); Ryvarden & Guzmán (2001); Ryvarden & Meijer (2002); Soares *et al*., (2017) |
| *Fomitopsis nivosella* (Murrill) Spirin & Vlasák | *Tyromyces nivosellus* Murrill Cuba: *Roystonea regia* | Brazil (*Syagrus romanzoffiana*), Colombia, Cuba, Puerto Rico, Venezuela | Uatumã-Trombetas, Puerto Rican and Cuban moist forests and Cordillera la costa montane forest | Accepted | Murrill (1907, as *Tyromyces nivosellus* and *T. palmarum*); Spirin *et al*., (2024); Motato-Vásquez *et al*., (2025) |

**Table 1 (4 of 11).** Annotated checklist for the species of the brown-rot polypore clade from the Neotropics Andean regions. Genera and species are listed in the order of the schematic phylogeny in Fig. 2.

**Tabla 1 (4 de 11).** Listado de especies del clado de políporos de pudrición marrón del Neotrópico y la Región Andina de Sudamérica. Los géneros y las especies se enumeran en el orden en que aparecen en la filogenia esquemática de la Fig. 2.

| Species | Basionym Type locality: substrate | Record per country (sub-strate) | Ecosystem | Record status | Reference |
|---|---|---|---|---|---|
| *Fomitopsis palustris* (Berk. & M.A. Curtis) Gilb. & Ryvarden | *Polyporus palustris* Berk. & M.A. Curtis USA: *Pinus palustris* | Belize, Brazil & Costa Rica | Petén-Veracruz moist forests | Accepted | Gomes-Silva *et al*., (2015); Ryvarden (2015); Figueiro *et al*., (2018); Spirin *et al*., (2024) |
| *Fomitopsis pannucea* Runnel & Spirin | *Fomitopsis pannucea* Runnel & Spirin French Guiana: angiosperm | French Guiana | Amazon-Orinoco-Southern Caribbean mangroves | Accepted | Spirin *et al*., (2024) |
| *Fomitopsis psilodermea* (Berk. & Mont.) Spirin & Vlasák | *Polyporus psilodermeus* Berk. & Mont. Brazil: unknown | Brazil, Costa Rica (*Peltogyne* sp) and Venezuela | Bahia Coastal Forest, Guianan piedmont and Isthmian-Pacific moist forests and Guianan savanna | Accepted | Montagne (1849); Ryvarden & Iturriaga (2003, as Trametes supermodesta); Spirin *et al*., (2024) |
| *Fomitopsis ramentacea* (Berk. & Broome) Spirin & Vlasák | *Polyporus ramentaceus* Berk. & Broome Great Britain: On dead sticks | Argentina and Paraguay | Humid Chaco and Humid Pampas | Accepted, extra-continental record | Rajchenberg, (1982); Poppoff (2000) Both as *Antrodia ramentacea* |
| *Fomitopsis rosea* (Alb. & Schwein.) P. Karst. | *Boletus roseus* Alb. & Schwein. Norway: *Abies* sp | Brazil and Mexico (*Pseudotsuga menziesii*) | Serra do Mar coastal forests and Trans-Mexican Volcanic Belt pine-oak forests | Accepted, extra-continental record | Baltazar & Gibertoni (2009); Carranza-Morse & Gilbertson (1986) |
| *Fomitopsis roseoalba* A.M.S. Soares, Ryvarden & Gibertoni | *Fomitopsis roseoalba* A.M.S. Soares, Ryvarden & Gibertoni Brazil: unknown | Brazil | Uatumã-Trombetas moist forests | Accepted | Tibpromma *et al*. (2017) |
| *Fomitopsis roseofusca* (Romell) Spirin & Vlasák | *Polyporus roseofuscus* Romell Brazil: unknown | Brazil, French Guiana & Venezuela | Cerrado, Guianan savanna, Guianan lowland moist forests and transition between Negro-Branco moist forests and Pantepui forests & shrublands | Accepted | Romell (1901); Ryvarden & Iturriaga (2003, as *Nigroporus macroporus*); Spirin *et al*. (2024) |
| *Fomitopsis sagraeana* (Mont.) Vlasák & Spirin | *Polyporus sagraeanus* Mont. Cuba: unknown | Costa Rica, Cuba and Dominican Republic | Isthmian-Atlantic and Hispanolian moist forests, Central American and Cuban dry forests | Accepted | Montagne (1842); Spirin *et al*. (2024) |
| *Fomitopsis scalaris* (Cooke) Ryvarden | *Fomes scalaris* Cooke Brazil: unknown | Brazil, French Guiana & Venezuela | Transition between Negro-Branco moist forests and Pantepui forests & shrublands, Japurá-Solimões-Negro moist forests, Tocantins/Pindare moist forests, Guianan lowland moist forests | Accepted | Cooke (1885); Spirin *et al*. (2024) |

**Table 1 (5 of 11).** Annotated checklist for the species of the brown-rot polypore clade from the Neotropics Andean regions. Genera and species are listed in the order of the schematic phylogeny in Fig. 2.

**Tabla 1 (5 de 11).** Listado de especies del clado de políporos de pudrición marrón del Neotrópico y la Región Andina de Sudamérica. Los géneros y las especies se enumeran en el orden en que aparecen en la filogenia esquemática de la Fig. 2.

| Species | Basionym Type locality: substrate | Record per country (sub-strate) | Ecosystem | Record status | Reference |
|---|---|---|---|---|---|
| *Fomitopsis serialis* (Fr.) Spirin & Runnel | *Polyporus serialis* Fr.<br>Norway: *Picea abies* | Argentina (*Ocotea acutifolia* and *Fraxinus americana*) | Yungas | Accepted, extra-continental record | Robledo & Rajchenberg (2007); Rajchenberg & Robledo, (2013), both as *Antrodia serialis* |
| *Fomitopsis stereoides* (Fr.) Spirin | *Daedalea stereoides* Fr.<br>Costa Rica: unknown | Costa Rica | Costa Rican seasonal moist forests | Accepted, | Ryvarden (2015) |
| *Fomitopsis subectypa* (Murrill) Spirin & Vlasák | *Coriolus subectypus* Murrill<br>USA: unknown | Costa Rica and Jamaica | Jamaican moist forests | Accepted | Murrill (1910, as Coriolus hollickii); Spirin *et al*., (2024) |
| *Antrodia albida* (Fr.) Donk | *Daedalea albida* Fr.<br>Sweden: *Betula* sp | Dominican republic and Brazil | Hispaniolan and Araucaria moist forests | Accepted, extra-continental record | Angelini & Losi (2015, as Antrodia albida); Drechsler-Santos *et al*. (2014) |
| *Antrodia aurantia* Lodge | *Antrodia aurantia* Lodge<br>Dominican Republic: *Pinus occidentalis* | Dominican Republic (*Pinus occidentalis*) | Hispaniolan pine forests | Accepted | Lodge *et al*., (2001) |
| *Antrodia favescens* (Schwein.) Vlasák & Spirin | *Polyporus favescens* Schwein.<br>USA: unknown | Costa Rica | Costa Rican seasonal moist forests | Accepted | Ortiz-Santana *et al*., (2013) |
| *Antrodia neotropica* Kaipper-Fig., Robledo & Drechsler-Santos | *Antrodia neotropica* Kaipper-Fig., Robledo & Drechsler-Santos<br>Brazil: *Baccharis uncinella* | Brazil (*Baccharis uncinella*) | Araucaria moist forests | Accepted | Kaipper-Figueiro *et al*., (2016) |
| *Antrodia pini-cubensis* Vampola, Kotl. & Pouzar | *Antrodia pini-cubensis* Vampola, Kotl. & Pouzar<br>Cuba: *Pinus cubensis* | Cuba | Cuban pine forest | Accepted, historical record | Vampola, Kotlaba & Pouzar (1994) |
| *Antrodia porothelioides* (Berk. & M.A. Curtis ex Cooke) Ryvarden | *Poria porothelioides* Berk. & M.A. Curtis ex Cooke<br>Venezuela: Unknown | Venezuela | Unknown | Accepted, historical record | Ryvarden (1988) |

**Table 1 (6 of 11).** Annotated checklist for the species of the brown-rot polypore clade from the Neotropics Andean regions. Genera and species are listed in the order of the schematic phylogeny in Fig. 2.

**Tabla 1 (6 de 11).** Listado de especies del clado de políporos de pudrición marrón del Neotrópico y la Región Andina de Sudamérica. Los géneros y las especies se enumeran en el orden en que aparecen en la filogenia esquemática de la Fig. 2.

| Species | Basionym Type locality: substrate | Record per country (sub-strate) | Ecosystem | Record status | Reference |
|---|---|---|---|---|---|
| *Daedalea hydnoides* I. Lindblad & Ryvarden | *Daedalea hydnoides* I. Lindblad & Ryvarden<br>Costa Rica: angiosperm | Costa Rica | Isthmian-Atlantic moist forests | Doubful | Lindblad & Ryvarden (1999); Spirin *et al*., (2024) |
| *Daedalea jamaicensis* Henn. | *Daedalea jamaicensis* Henn.<br>Jamaica: unknown | Jamaica | Jamaican moist forest | Accepted, historical record | Hennings (1898) |
| *Daedalea ryvardeniana* Drechsler-Santos & Robledo | *Daedalea ryvardeniana* Drechsler-Santos & Robledo<br>Brazil: angiosperm branches | Brazil | Caatinga and cerrado | Accepted, uncertain phylogenetic placement | Santos *et al*., (2018) |
| *Buglossoporus americanus* D.A. Reid | *Buglossoporus americanus* D.A. Reid<br>Costa Rica: unknown | Costa Rica | Tropical moist broadleaf forest | Accepted | Ortiz-Santana *et al*. (2013) (sequence) Vlasák *et al*. (2020) |
| *Coriolellus delbustoi* J.E. Wright & J.R. Deschamps | *Coriolellus delbustoi* J.E. Wright & J.R. Deschamps<br>Argentina: *Prunus persica* | Argentina (*Prunus persica*) | unknown | Accepted, historical record | Wright *et al*. (1973) |
| *Ryvardenia campyla* (Berk.) Rajchenb. | *Polyporus campylus* Berk.<br>Tasmania: *Nothofagus* sp | Argentina (*Nothofagus* sp) | Magellanic subpolar forests | Accepted, extra-continental record | Hjohtstam & Ryvarden (1985); Rajchenberg (1994) |
| *Ryvardenia cretacea* (Lloyd) Rajchenb. | *Polyporus cretaceus* Lloyd<br>Tasmania: unknown | Argentina (*Nothofagus dombeyi*) | Valdivian temperate forest | Accepted, extra-continental record | Pildain *et al*. (2013) |
| *Adustoporia sinuosa* (Fr.) Audet | *Polyporus sinuosus* Fr.<br>Unknown: *Eucalyptus* sp | Brazil | Atlantic Rainforest and Amazon forest | Accepted | Baltazar *et al*., (2009, as *Antrodia sinuosa*) |
| *Amyloporia nothofaginea* Rajchenb. & Gorjón | *Amyloporia nothofaginea* Rajchenb. & Gorjón<br>Argentina: *Nothofagus dombeyi* | Argentina | Patagonian Steppe | Accepted | Pildain & Rajchenberg (2013) |
| *Amyloporia stratosa* (J.E. Wright & J.R. Deschamps) Rajchenb., Gorjón & Pildain | *Poria stratosa* J.E. Wright & J.R. Deschamps<br>Argentina: *Nothofagus dombeyi* | Argentina | Patagonian Steppe | Accepted | Rajchenberg *et al*. (2011) |

**Table 1 (7 of 11).** Annotated checklist for the species of the brown-rot polypore clade from the Neotropics Andean regions. Genera and species are listed in the order of the schematic phylogeny in Fig. 2.

**Tabla 1 (7 de 11).** Listado de especies del clado de políporos de pudrición marrón del Neotrópico y la Región Andina de Sudamérica. Los géneros y las especies se enumeran en el orden en que aparecen en la filogenia esquemática de la Fig. 2.

| Species | Basionym Type locality: substrate | Record per country (sub-strate) | Ecosystem | Record status | Reference |
|---|---|---|---|---|---|
| *Fibroporia gossypium* (Speg.) Parmasto | *Poria gossypium* Speg. Argentina: vines | Argentina (vines), Argentina (*Nothofagus pumilio*) and Chile (*Pinus radiata*) | Temperate Grasslands, Savannas & Shrublands (Humid pampa) Patagonian Steppe | Accepted | Spegazzini (1899); Robles *et al*., (2021); Pildain & Rajchenberg (2013); Rajchenberg (1982, as *Fibroporia gossypia*) |
| *Fibroporia radiculosa* (Peck) Parmasto | *Polyporus radiculosus* Peck USA: *Populus tremuloides* | Dominican Republic | Moist Forest | Accepted | Angelini & Losi (2015, as *Antrodia radiculosa*) |
| *Fibroporia vaillantii* (DC.) Parmasto | *Boletus vaillantii* DC. Europe (France?): unknown | Argentina: *Austrocedrus chilensis* | Temperate Grasslands, Savannas & Shrublands (Patagonian steppe) | Accepted, extra-continental record | Rajchenberg (1983) |
| *Laetiporus caribensis* Banik & D.L. Lindner | *Laetiporus caribensis* Banik & D.L. Lindner Puerto Rico: *Guarea guidonia* | Costa Rica and Puerto Rico | Puerto Rican Moist forest | Accepted | Banik *et al*., (2012) |
| *Laetiporus gilbertsonii* Burds. | *Laetiporus gilbertsonii* Burds. USA: *Eucalyptus* sp | Argentina, Brazil, Paraguay (*Eucalyptus* sp), Venezuela (*Eucalyptus globulus*) and Uruguay | Bahia and Serra do Mar coastal forests, Humid Chaco, Uruguayan savanna, Venezuelan Andes montane forests | Accepted | Ryvarden & de Meijer (2002, as *Laetiporus sulphureus*); Holmquist *et al*., (2009, as *L. sulphureus*); Vasaitis *et al*., (2009); Rajchenberg & Robledo (2013); Pires *et al*., (2017); Campi *et al*. (2022) |
| *Laetiporus lobatus* Vlasák f., Kout & D.L. Lindner | *Laetiporus lobatus* Vlasák f., Kout & D.L. Lindner Costa Rica: hardwood | Costa Rica | Central American dry forests | Accepted | Kout *et al*., (2019) |
| *Laetiporus portentosus* (Berk.) Rajchenb. | *Polyporus portentosus* Berk. Australia: *Nothofagus dombeyi, N. pumilio* | Argentina and Chile | Patagonian Steppe and Valdivian temperate forests | Accepted, extra-continental record with uncertain phylogenetic placement | Rajchenberg (1994; 2006) |
| *Laetiporus pratigiensis* C.D. Santos, J.L. Bezerra, J.P.A.F. Oliveira, P.A.S. Marbach & G. Marques | *Laetiporus pratigiensis* C.D. Santos, J.L. Bezerra, J.P.A.F. Oliveira, P.A.S. Marbach & G. Marques Brazil: angiosperm | Brazil | Atlantic Rain Forest | Accepted | Rizinde *et al*., (2024) |

**Table 1 (8 of 11).** Annotated checklist for the species of the brown-rot polypore clade from the Neotropics Andean regions. Genera and species are listed in the order of the schematic phylogeny in Fig. 2.

**Tabla 1 (8 de 11).** Listado de especies del clado de políporos de pudrición marrón del Neotrópico y la Región Andina de Sudamérica. Los géneros y las especies se enumeran en el orden en que aparecen en la filogenia esquemática de la Fig. 2.

| Species | Basionym Type locality: substrate | Record per country (sub-strate) | Ecosystem | Record status | Reference |
|---|---|---|---|---|---|
| *Macrohyporia dictyopora* (Cooke) I. Johans. & Ryvarden | *Polyporus dictyoporus* Cooke Australia: Charred wood | Argentina (*Nothofagus pumilio* and *N. dombeyi*) | Patagonian Steppe | Accepted, extra-continental record | Rajchenberg (1996); Rajchenberg (2006) |
| *Macrohyporia pileata* Ryvarden & Núñez | *Macrohyporia pileata* Ryvarden & Núñez Panama: unknown | Panama | Isthmian-Pacific moist forests | Accepted, historical record | Nuñez & Ryvarden (1999) |
| *Kusaghiporia talpae* (Cooke) Campi, Drechsler-Santos & Robledo | *Polyporus talpae* Cooke Brazil: unknown | Brazil, Jamaica, Paraguay, Puerto Rico, Trinidad and Surinam | Puerto Rican, Jamaican and Guianan lowland moist forests, Serra do Mar coastal forests and Humid Chaco | Accepted | Fidalgo & Fidalgo (1967); Lindner & Banik (2008); Campi *et al*., (2022) |
| *Berkcurtia persicina* (Berk. & M.A. Curtis) Robledo & Campi | *Polyporus persicinus* Berk. & M.A. Curtis USA: unknown | Brazil and Costa Rica | Serra do Mar coastal forests and Araucaria moist forest | Accepted | Carranza-Velázquez & Ryvarden (1998); Baltazar & Gibertoni (2009) Both as *Laetiporus persicinus* |
| *Atlantiporus squalidus* (R.M. Pires, Motato-Vásq. & Gugliottta) Azevedo-Oliveira, Drechsler-Santos & Robledo | *Laetiporus squalidus* R.M. Pires, Motato-Vásq. & Gugliottta Brazil: *Schinus engleri* | Brazil | Serra do Mar coastal forests | Accepted | Pires *et al*., (2015); Campi *et al*. (2022) |
| *Phaeolus amazonicus* De Jesus & Ryvarden | *Phaeolus amazonicus* De Jesus & Ryvarden Brazil: terrestrial | Brazil | Japurá-Solimões-Negro moist forest | Accepted, historical record | de Jesus & Ryvarden (2010, as *Phaeolus amazonica*) |
| *Phaeolus schweinitzii* (Fr.) Pat. | *Polyporus schweinitzii* Fr. Sweden: unknown | Argentina, Costa Rica, Dominican Republic and Uruguay | Talanmancan monatane forest and Pinus plantations | Accepted, extra-continental record | Wright & Bolontrade (1994); Carranza & Ruiz-Boyer (2005); Rajchenberg & Robledo (2013); Angelini & Losi, (2021) |
| *Phaeolus subbulbipes* (Henn.) O. Fidalgo & M. Fidalgo | *Polystictus subbulbipes* Henn. Brazil: unknown | Brazil | Unknown | Accepted, historical record | Fidalgo & Fidalgo (1957) |

**Table 1 (9 of 11).** Annotated checklist for the species of the brown-rot polypore clade from the Neotropics Andean regions. Genera and species are listed in the order of the schematic phylogeny in Fig. 2.

**Tabla 1 (9 de 11).** Listado de especies del clado de políporos de pudrición marrón del Neotrópico y la Región Andina de Sudamérica. Los géneros y las especies se enumeran en el orden en que aparecen en la filogenia esquemática de la Fig. 2.

| Species | Basionym Type locality: substrate | Record per country (sub-strate) | Ecosystem | Record status | Reference |
|---|---|---|---|---|---|
| *Melanoporella carbonacea* (Berk. & M.A. Curtis) Murrill | *Polyporus carbonaceus* Berk. & M.A. Curtis<br>Cuba: unknown | Brazil, Costa Rica and Cuba (*Ceiba pentandra*) | Cerrado, Central American and cuban dry forests | Accepted, historical record | Murrill (1919); Lowe (1966); Ryvarden (2015, as *M. carbonaceus*), Vlasák *et al*., (2016, 2020, as *M. carbonaceus*) |
| *Postia caesia* (Schrad.) P. Karst. | *Boletus caesius* Schrad.<br>Germany, Denmark, Czech Republic (Neotype): *Picea abies* and *Fagus sylvatica* | Argentina (*Nothofagus* sp, *Salix humboldtiana*, *Pinus* spp and *Polylepis australis*) | Dry chaco and valdivian temperate forest | Accepted, extra-continental record | Wright *et al*., (1973); Robledo *et al*., (2006); Pildain & Rajchenberg (2013) |
| *Postia caesioflava* (Pat.) V. Papp | *Polyporus caesioflavus* Pat.<br>Ecuador: unknown | Costa Rica (*Alnus* sp) & Ecuador | Costa rican seasonal moist forests and northwest andean montane forest | Accepted, historical record | Patouillard & Lagerheim (1892, as *Polyporus caesioflavus*); Carranza (1982, as *Tyromyces caesioflavus*) |
| *Postia carbophila* Rajchenb. | *Postia carbophila* Rajchenb.<br>Argentina: *Nothofagus* spp | Argentina | Valdivian temperate forests | Accepted | Pildain & Rajchenberg (2013) |
| *Postia minuta* Rajchenb. | *Postia minuta* Rajchenb.<br>Argentina: *Chusquea culeou* | Argentina (*Nothofagus betuloides*) | Valdivian temperate forests and magellanic subpolar forests | Accepted, historical record | Rajchenberg (2001) |
| *Postia pelliculosa* (Berk.) Rajchenb. | *Polyporus pelliculosus* Berk.<br>Tasmania: unknown | Argentina (*Nothofagus dombeyi* and *N. alpina*) | Valdivian temperate forests | Accepted, extra-continental record | Pildain & Rajchenberg (2013, as *Postia pelliculosa*) |
| *Postia punctata* Rajchenb. & P.K. Buchanan | *Postia punctata* Rajchenb. & P.K. Buchanan<br>Argentina: *Nothofagus dombeyi* | Argentina and Chile | Patagonian Steppe and valdivian temperate forests | Accepted | Rajchenberg & Buchanan (1996) |
| *Postia subviridis* (Ryvarden & Guzmán) Spirin | *Tyromyces subviridis* Ryvarden & Guzmán<br>Mexico: probably *Abies* or *Picea* | Mexico | Trans-mexican volcanic belt pine-oak forests | Accepted, historical record | Ryvarden & Guzmán (2001, as *Tyromyces subviridis*) |
| *Postia tephroleuca* (Fr.) Jülich | *Polyporus tephroleucus* Fr.<br>Sweden: *Pinus* and *Fagus* | Brazil, Costa Rica and Dominican Republic | Isthmian-Atlantic moist forests, hispaniolan moist forests and alto Paraná atlantic forest | Accepted, extra-continental record | Carranza & Ryvarden (1998, as *Oligoporus tephroleucus*); Ryvarden & de Meijer (2002, as *O. tephroleucus*); Angelini & Losi, (2021) |
| *Spongiporus altocedronensis* Murrill | *Spongiporus altocedronensis* Murrill<br>Cuba: rotten wood | Cuba | Cuban dry forests | Accepted, historical record | Murrill (1907) |
| *Spongiporus balsameus* (Peck) A. David | *Polyporus balsameus* Peck<br>USA: unknown | Argentina (*Saxegothaea conspicua* and *Nothofagus dombeyi*) | Temperate Broadleaf & Mixed Forest (Valdivian temperate forest) | Accepted | Pildain & Rajchenberg (2013) |

**Table 1 (10 of 11).** Annotated checklist for the species of the brown-rot polypore clade from the Neotropics Andean regions. Genera and species are listed in the order of the schematic phylogeny in Fig. 2.

**Tabla 1 (10 de 11).** Listado de especies del clado de políporos de pudrición marrón del Neotrópico y la Región Andina de Sudamérica. Los géneros y las especies se enumeran en el orden en que aparecen en la filogenia esquemática de la Fig. 2.

| Species | Basionym Type locality: substrate | Record per country (sub-strate) | Ecosystem | Record status | Reference |
|---|---|---|---|---|---|
| *Oligoporus rennyi* (Berk. & Broome) Donk | *Polyporus rennyi* Berk. & Broome United Kingdom: hardwood | Argentina (*Austrocedrus chilensis*) | Valdivian temperate forest | Accepted, extra-continental record | Pildain & Rajchenberg (2013, as *Postia rennyi*) |
| *Oligoporus subcaesius* (A. David) Ryvarden & Gilb. | *Tyromyces subcaesius* A. David France: *Malus domestica* | Brazil | Araucaria moist forest | Accepted, extra-continental record | Rajchenberg & de Meijer (1990, as Postia subcaesia); Ryvarden & de Meijer, (2002); Loguercio-Leite *et al*., (2008) |
| *Nothofagiporus venatus* (Rajchenb. & J.E. Wright) B.K. Cui & Shun Liu | *Tyromyces venatus* Rajchenb. & J.E. Wright Argentina: *Nothofagus dombeyi* | Argentina and Chile | Patagonian Steppe and valdivian temperate forests | Accepted | Rajchenberg (1983, as *Tyromyces venatus*) Pildain & Rajchenberg (2013, as *Postia venata*) |
| *Fuscopostia leucomallella* (Murrill) B.K. Cui, L.L. Shen & Y.C. Dai | *Tyromyces leucomallellus* Murrill USA: *Taxodium distichum* | Dominican Republic (*Pinus occidentalis*) and Mexico (*Pinus patula*) | Hispaniolan moist forests and Trans-Mexican Volcanic Belt pine-oak forests | Accepted | Ryvarden & Guzman (2001, as *Oligoporus leucomallellus*); Angelini & Losi (2023) |
| *Cystidiopostia hibernica* (Berk. & Broome) B.K. Cui, L.L. Shen & Y.C. Dai | *Polyporus hibernicus* Berk. & Broome Ireland: *Pinus* sp | Costa Rica & Mexico (*Abies* sp) | Trans-Mexican Volcanic Belt pine-oak forests | Accepted, extra-continental record | Gilbertson & Ryvarden (1987, as Oligoporus hibernicus) Valenzuela *et al*., (2006, as *O. hibernicus*, sequence) |
| *Amaropostia stiptica* (Pers.) B.K. Cui, L.L. Shen & Y.C. Dai | *Boletus stipticus* Pers. Europe: unknown, possible Gymnosperm | Brazil (*Pinus* sp) | Pinus plantations | Accepted, extra-continental record | Ryvarden & de Meijer (2002, as *Oligoporus stipticus*) |
| *Tenuipostia dissecta* (Cooke) B.K. Cui & Shun Liu | *Polyporus exiguus* Colenso New Zealand: unknown | Argentina and Chile (*Austrocedrus chilensis*) | Valdivian temperate forests | Accepted, extra-continental record | Pildain & Rajchenberg (2013, as *Postia dissecta*); Rajchenberg (2022 as *Postia exigua*) |
| *Podopostia dominicana* Angelini, Losi & Vizzini | *Podopostia dominicana* Angelini, Losi & Vizzini Dominican Republic: terrestrial, under *Coccoloba uvifera* | Dominican Republic | Hispaniolan moist forests | Accepted | Angelini *et al*., (2026) |

**Table 1 (11 of 11).** Annotated checklist for the species of the brown-rot polypore clade from the Neotropics Andean regions. Genera and species are listed in the order of the schematic phylogeny in Fig. 2.

**Tabla 1 (11 de 11).** Listado de especies del clado de políporos de pudrición marrón del Neotrópico y la Región Andina de Sudamérica. Los géneros y las especies se enumeran en el orden en que aparecen en la filogenia esquemática de la Fig. 2.

| Species | Basionym Type locality: substrate | Record per country (sub-strate) | Ecosystem | Record status | Reference |
|---|---|---|---|---|---|
| *Polyporus leucomallus* Berk. & M.A. Curtis [≡ *Oligoporus leucomallus* (Berk. & M.A. Curtis) Vlasák, nom. inval.] | *Polyporus leucomallus* Berk. & M.A. Curtis<br>Cuba: angiosperm | Cuba | unknown | Accepted, nomenclaturally problematic | Berkeley & Curtis (1869) |
| *Sarcoporia neotropica* Ryvarden | *Sarcoporia neotropica* Ryvarden<br>Costa Rica: hard wood log | Costa Rica | Isthmian-Pacific moist forests | Accepted, historical record | Ryvarden (2012) |
| *Sarcoporia polyspora* P. Karst. | *Sarcoporia polyspora* P. Karst.<br>Finland: *Abies* sp | Brazil (*Pinus taeda*) | Pinus plantation | Accepted, extra-continental record | Baldoni *et al*., (2014) |
| *Auriporia brasilica* G. Coelho | *Auriporia brasilica* G. Coelho<br>Brazil: *Luehea divaricata* | Brazil | Transition between atlantic humid forest and uruguayan savanna | Accepted, historical record | Coelho (2005) |

Once the checklist was compiled, records were classified into two main categories: accepted and doubtful. Accepted records were further flagged, when applicable, as historical, extra-continental, nomenclaturally problematic, or with uncertain phylogenetic placement. Historical records corresponded to taxa typified in the geographical area delimited in this study, rarely reported in the literature and lacking molecular data; extra-continental records referred to accepted occurrences of taxa originally described or primarily known from outside America; and nomenclaturally problematic records involved issues of name validity, synonymy, or generic placement without questioning the occurrence itself. Records were considered doubtful only when published evidence directly questioned the taxonomic identity or phylogenetic placement of the species within the brown-rot polypore clade. Doubtful records were discussed and included in Table 1, but were excluded from the species counts and summary statistics presented in the Results section.

## RESULTS

The literature search resulted in the record of 88 brown-rot polypore species in the Neotropical region and temperate region of South America. These species are distributed across 27 genera and 9 families. The most frequently recorded genus was *Fomitopsis* (34 spp.), followed by *Postia* (8 spp.), *Antrodia* (6 spp.) and *Laetiporus* (5 spp.) (Table 1; Fig. 3).

Regarding climatic "distribution", 72% species have been found exclusively in tropical/subtropical ecoregions for the defined area of this checklist while the species distributed in temperate areas comprise only 25% of the total taxa of the brown-rot polypore clade in the neotropics and Andean region (Fig. 4). Finally, only three (3%) species appear from subtropical areas and cross the Tropic of Capricorn reaching temperate areas of Argentina and Uruguay: *Postia caesia* (Schrad.) P. Karst. *Laetiporus gilbertsonii* Burds. and *Fomitopsis lilacinogilva* (Berk.) J.E. Wright & J.R. Deschamps.

Regarding substrate, most species were found on angiosperm, both in temperate and tropical to subtropical climates and only 10 species (11%) were recorded exclusively in gymnosperm hosts. Finally, only three species were found in both types of substrates: *Fibroporia gossypium* (Speg.) Parmasto and *Spongiporus balsameus* (Peck) A. David for temperate areas and *Postia caesia* in both temperate and tropical to subtropical regions.

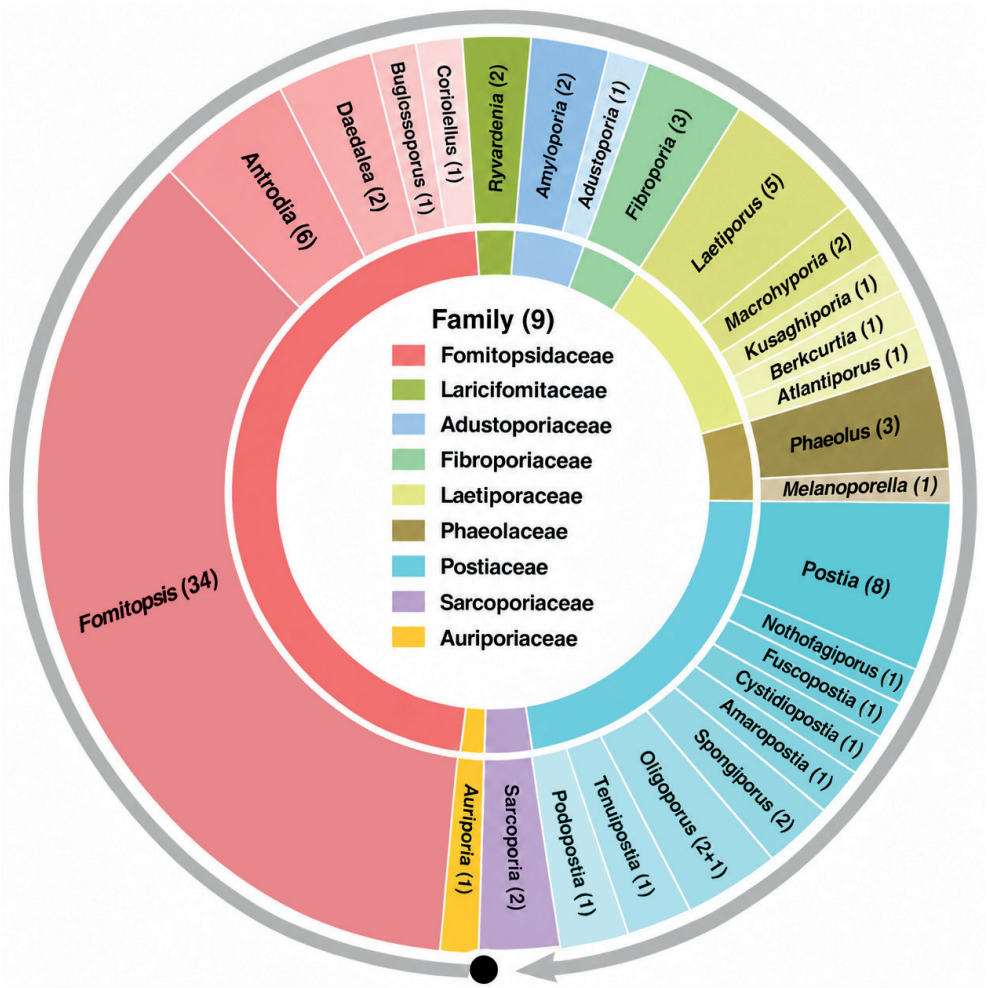



**Fig. 3.** Composition of families and genera of the brown-rot polypore species present in this checklist. From the starting point (●) and clockwise, the families are presented in the order of appearance in Fig. 2A to 2C. In *Oligoporus*, 2+1 denotes two species assigned to the genus plus *Polyporus leucomallus*, included because of its phylogenetic affinity with the group.

**Fig. 3.** Composición de familias y géneros de las especies de políporos de pudrición marrón registradas en este checklist. Desde el punto de inicio (●) y en sentido horario, las familias se presentan en el orden de aparición en la Fig. 2A a 2C. En *Oligoporus*, 2+1 designa dos especies asignadas al género más *Polyporus leucomallus*, incluida debido a su afinidad filogenética con el grupo.

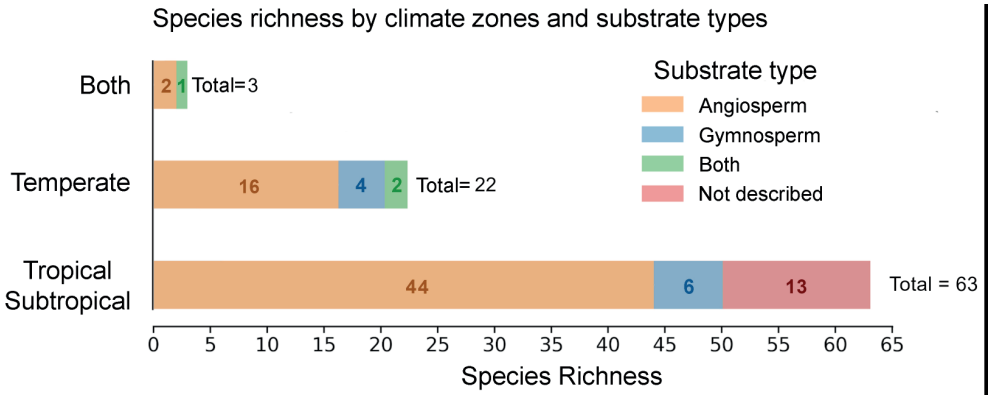



**Fig. 4.** Species richness by climate zone and type of substrate association in the neotropics and the Andean regions of South America.

**Fig. 4.** Riqueza de especies en el Neotrópico y la región andina, de acuerdo a ecorregiones y asociación a determinado tipo de sustrato.

## DISCUSSION

### *Antrodia*

A total of ten species of *Antrodia* have been recorded in South America, although four have subsequently been transferred to other genera. Based on phylogenetic analyses, the concept of *Antrodia sensu stricto* has been proposed to include species closely related to the type species (Spirin *et al*., 2013). *Antrodia albida* (Fr.) Donk, *A. favescens* (Schwein.) Vlasák & Spirin, and *A. neotropica* Kaipper-Fig., Robledo & Drechsler-Santos belong to *Antrodia s.s.*, whereas *A. pini-cubensis* Vampola, Kotl. & Pouzar clusters within the *Antrodia crassa* clade (Spirin *et al*., 2013, 2015; Kaipper-Figueiró *et al*., 2016). In contrast, *Antrodia aurantia* Lodge, Ryvarden & Perd.-Sánch., *A. porothelioides* (Berk. & M.A. Curtis ex Cooke) Ryvarden and *Coriolellus delbustoi* J.E. Wright & J.R. Deschamps, described from Neotropical type localities, have not yet been included in molecular analyses, therefore their phylogenetic affinities remain unresolved (Lodge *et al*., 2001; Ryvarden, 2015). Among the species reassigned to other genera, two were transferred to *Fomitopsis—Fomitopsis malicola* (Berk. & M.A. Curtis) Spirin and *F. ramentacea* (Berk. & Broome) Spirin & Vlasák (Spirin *et al*., 2024), while *Polyporus radiculosus* Peck was reassigned to *Fibroporia* and *Poria stratosa* J.E. Wright & J.R. Deschamps to *Amyloporia* (Parmasto, 1968; Rajchenberg *et al*., 2011).

Regarding substrate, only one species of *Antrodia* has been described on *Pinus* spp within the study area. *Antrodia pini-cubensis* is native to Cuba and was described growing on *Pinus cubensis* Griseb. (Vampola *et al*., 1994). By contrast, *A. albida* was typified from material collected on *Betula* sp. in Sweden and has been reported from various angiosperm substrates in Central and South America (Angelini & Losi, 2015; Drechsler-Santos *et al*., 2014). *Antrodia favescens* was originally described from the USA and

has also been recorded in tropical countries such as Costa Rica (Spirin *et al*., 2015). *Antrodia porothelioides* and *A. neotropica*, both described from angiosperm substrates in South America, are both known only to grow on angiosperm, and *A. neotropica* has been described as specific to *Baccharis uncinella* (Kaipper-Figueiró *et al*., 2016). Lastly, *Coriolellus delbustoi* J.E. Wright & J.R. Deschamps, was described growing on exotic angiosperm *Prunus persica* (Wright *et al.*, 1973).

## Adustoporiaceae and Fibroporiaceae: *Amyloporia* and *Fibroporia*

The taxa traditionally included within *Antrodia sensu lato* have historically been divided among several lineages, including *Antrodia* s.s., *Amyloporia*, and *Fibroporia*. Within the latter two genera, several species have been recorded in the study area. According to Index Fungorum, four species are currently accepted within *Amyloporia*. Among them, *Amyloporia nothofaginea* Rajchenb. & Gorjón is endemic to the Valdivian temperate forests of South America, where it occurs on *Nothofagus* spp. *Amyloporia stratosa* (J.E. Wright & J.R. Deschamps) Rajchenb., Gorjón & Pildain also exhibits an austral distribution and has been recorded on *Nothofagus dombeyi* (Mirb.) Oerst. in Argentina and on *Eucalyptus obliqua* L'Hér. in Tasmania (Rajchenberg, 2006; Rajchenberg *et al*., 2011). By contrast, *Adustoporia sinuosa* (Fr.) Audet has been reported from exotic *Pinus* spp in Brazil. This association with an introduced conifer may help explain its occurrence across both tropical Brazil and temperate regions of the USA and Russia (Kaipper-Figueiró, 2015).

With respect to *Fibroporia*, two species, *Fibroporia gossypium* and *F. vaillantii* (DC.) Parmasto, show a predominantly austral distribution in South America, where they are associated with coniferous hosts (Rajchenberg *et al*., 2011). A third taxon, *F. radiculosa* (Peck) Parmasto, has been reported from the Dominican Republic on small branches of deciduous trees (Angelini & Losi, 2015). The type specimen of this species was originally collected in the USA from soil and wood chips of *Populus tremuloides* Michx., indicating a broader ecological and geographic range than that of the other two species (Gilbertson & Ryvarden, 1986).

## *Laetiporus* group: Laetiporaceae and Phaeolaceae

The number of *Laetiporus* species occurring in South America has been a recurring question since molecular analyses revealed that *Laetiporus sulphureus* (Bull.) Murrill represents a complex of numerous species worldwide. To date, 12 species have been recorded in South America in this group, most of them within the Laetiporaceae-Phaeolaceae clade. Regarding

*Laetiporus* s.s., the four currently recorded species, namely *L. caribensis* Banik & D.L. Lindner, *L. gilbertsonii* Burds., *L. lobatus* Vlasák f., Kout & D.L. Lindner, and *L. pratigiensis* C.D. Santos, J.L. Bezerra, J.P.A.F. Oliveira, P.A.S. Marbach & G. Marques, form a well-supported Neotropical clade in which additional undescribed species may still occur (Campi *et al*., 2022; Rizinde *et al*., 2024). *Laetiporus portentosus* (Berk.) Rajchenb. is a known species from Argentine and Chilean Patagonia and has a broader southern distribution, including New Zealand, Australia, New Guinea and New Caledonia. This is the only species in the group for which phylogenetic relationships remain unresolved (Rajchenberg, 1995a; 2022).

*Atlantiporus squalidus* (R.M. Pires, Motato-Vásq. & Gugliottta) Azevedo-Oliveira, Drechsler-Santos & Robledo, originally described from Australia as *Laetiporus squalidus* R.M. Pires, Motato-Vásq. & Gugliottta, was placed in a separate genus because of its phylogenetically isolated position (Campi *et al*., 2022). However, it was subsequently shown to cluster with specimens identified as *Macrohyporia dictyopora* (Cooke) I. Johans. & Ryvarden from Australia (Yang *et al*., 2025), suggesting a synonymy under *Macrohyporia.* Additionally, *Macrohyporia dictyopora* shows morphological differences across specimens from different continents (Rajchenberg 2006, 2022) but to date, no molecular study including specimens from across its geographic range has confirmed whether these populations represent a single species. From a micromorphological perspective, both *Macrohyporia* and *Atlantiporus* can be interpreted as resupinated to effused-reflexed taxa of *Laetiporus*.

Regarding *Macrohyporia* in America, *Macrohyporia dictyopora* is known from subantarctic Patagonian forests, where it causes heartwood rot in *Nothofagus dombeyi* and *N. pumilio* (Poepp. & Endl.) Krasser (Rajchenberg 2006, Rajchenberg & Robledo 2013). *Macrohyporia pileata* was described from tropical Central America and is so far known only from the type specimen (Nuñez & Ryvarden, 1999).

A similar situation occurs in *Laetiporus dilatohyphus* (Ryvarden & Gilb.) Robledo & Campi, recently recombined in *Laetiporus* (Campi *et al*., 2022), which, depending on the phylogenetic analysis (taxon sampling and number of genes), is placed either within or as a basal sister clade to *Laetiporus* s.s. (Campi *et al*., 2022; Liu *et al*., 2023a; Yang *et al*., 2025). This raises the question on the delimitation of *Laetiporus*, particularly regarding the possible inclusion of *Macrohyporia* and *Atlantiporus*.

*Polyporus talpae* Cooke was recently transferred to the genus *Kusaghiporia* (Campi *et al*., 2022). It is a distinctive species due to the colossal size of its basidiomata, which typically arise from ground in association with the roots of its parasitized host (Fig. 5e). Together with two Paleotropical species, *K. usumbarensis* J. Hussein, S. Tibell & Tibuhwa from Africa and *K. mesoltapae* (Lloyd) K.L. Yang, Jia Y. Lin & Zhu L. Yang from Asia, it forms a well-supported phylogenetic lineage (Yang *et al*., 2025). These species share the same macro- and microorphological characteristics that distinguish them within the ‘laetiporus’ group.

Another species in the group, *Laetiporus persicinus* (Berk. & M.A. Curtis) Gilb., also forms an independent phylogenetic clade that is not closely related to *Laetiporus* s.s. Consequently, a separate genus, *Berkcurtia* Robledo & Campi was proposed for this species (Campi *et al*., 2022). Its combination in *Kusaghiporia* has also been proposed, and it has been suggested that the species may be restricted to the southern United States (Paez *et al*., 2023). Therefore, the record included in this checklist needs confirmation. At present, however, all available phylogenetic analyses continue to recover *Berkcurtia persicina* as a sister lineage to *Kusaghiporia*.

*Phaeolus schweinitzii* has traditionally been treated as a single species with a broad distribution across the Northern Hemisphere and commonly associated there with coniferous hosts. Recent molecular evidence has shown that it represents a species complex comprising distinct lineages distributed across Europe, North America, and Asia, while the concept of *P. schweinitzii sensu stricto* appears to be restricted to Eurasia (Yuan *et al*., 2022). Records from Argentina and Uruguay on plantations of exotic *Pinus* (Wright & Bolontrade, 1994) may therefore correspond to *P. schweinitzii*, possibly as a result of introduction from Europe. The other two recorded species, *Phaeolus amazonicus* M.A. De Jesus & Ryvarden and *Phaeolus subbulbipes* (Henn.) O. Fidalgo & M. Fidalgo, are only known from their original descriptions and have not yet been included in phylogenetic analyses.

*Melanoporella carbonacea* was stablished based on *Poria carbonacea* (Berk. & M.A. Curtis) Sacc., a distinctive resupinate brown-rot polypore characterized by purplish-brown to purplish-black basidiomata and known from the Caribbean region (Lowe, 1966; Ryvarden, 2015). Phylogenetic analyses have shown that it groups as a sister lineage to *Wolfiporia* within Phaeolaceae (Liu *et al*., 2023a).

## Postiaceae: *Postia* and related genera

Historically, the genera *Postia*, *Oligoporus*, and *Spongiporus* have been treated either as synonyms (Ryvarden, 1991; Gilbertson & Ryvarden, 1987; Núñez & Ryvarden, 2001; Pildain & Rajchenberg, 2013) or as separate genera (Erkkilä & Niemelä, 1986; Renvall, 1992). More recently, comprehensive phylogenetic analyses of the brown-rot polypore clade have supported their recognition as distinct lineages, and eight new genera were proposed: *Amaropostia*, *Aurantipostia*, *Austropostia*, *Calcipostia*, *Fuscopostia*, *Nothofagiporus*, *Resupinopostia*, and *Tenuipostia*. In addition, the reinstatement of *Cyanosporus* and the recognition of four other genera within Postiaceae were proposed (Shen *et al*., 2019; Liu *et al*., 2023a; Liu *et al*., 2023b).

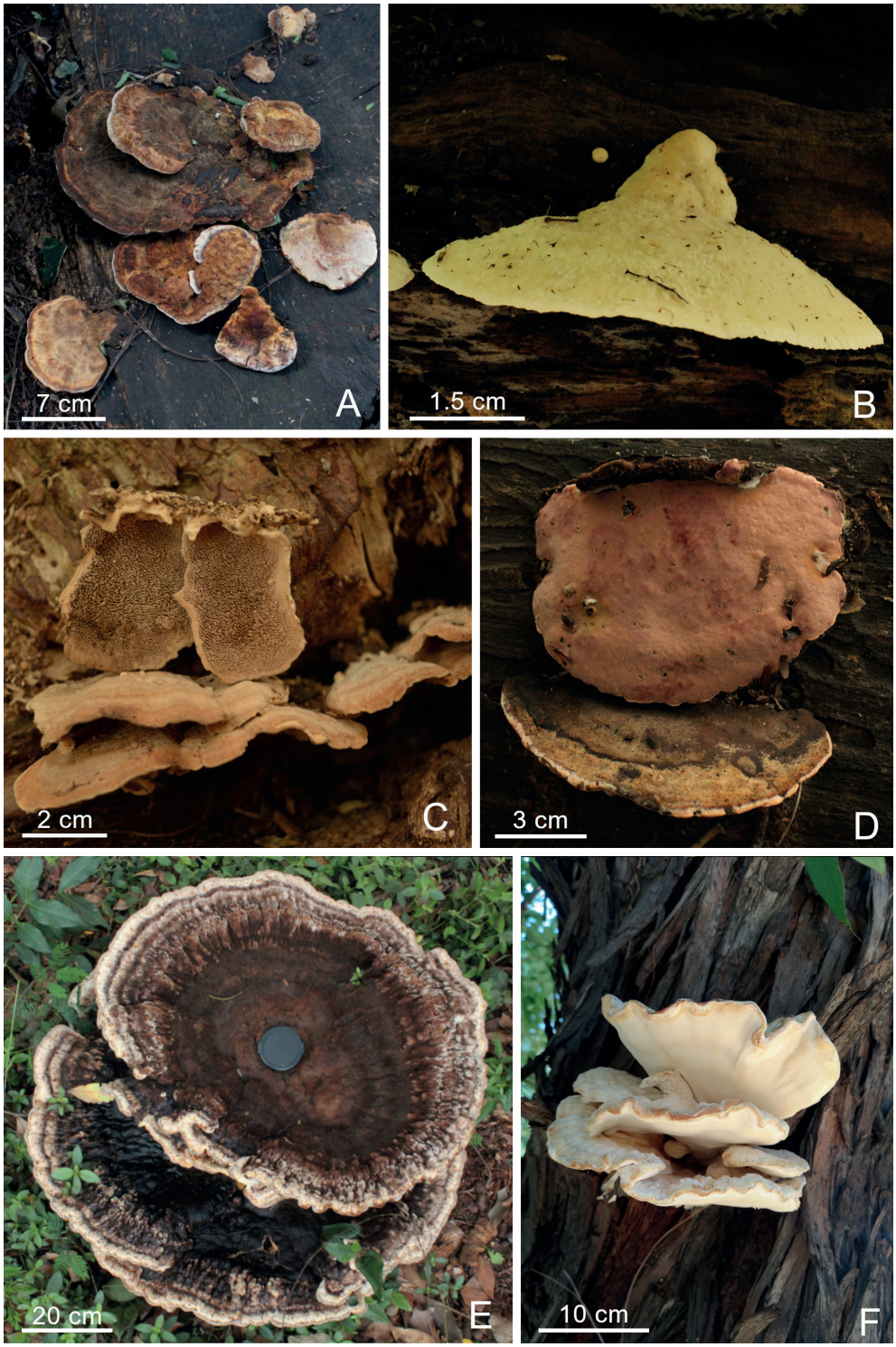



**Fig. 5.** Fresh basidiomata of species of the brown-rot polypore clade found in the Neotropics and Andean regions. A) *Fomitopsis aethalodes.* B) *Fomitopsis modesta.* C) *Fomitopsis stereoides.* D) *Fomitopsis feei*. E) *Kusaghiporia talpae.* F) *Laetiporus gilbertsonii.*

**Fig. 5.** Basidiomas frescos de especies del clado de políporos de pudrición marrón que se encuentran en el neotrópico y la región andina. A) *Fomitopsis aethalodes*. B) *Fomitopsis modesta*. C) *Fomitopsis stereoides*. D) *Fomitopsis feei*. E) *Kusaghiporia talpae*. F) *Laetiporus gilbertsonii*.

However, this classification presents several challenges. Two of the aforementioned generic names are not validly published under the *International Code of Nomenclature for algae, fungi, and plants*: *Austropostia* under Art. 40.1 and *Cyanosporus* under Art. 36.1 (Turland *et al*., 2018; Valenzuela, 2023; Miettinen *et al*., 2018). In addition, some of the morphological characters used to delimit genera, such as the presence of encrusted cystidia in *Cystidiopostia* or a bitter taste in *Amaropostia*, also occur in other members of *Postiaceae*, reducing their diagnostic value. For the present checklist, we therefore follow the taxonomic framework proposed by Liu *et al*. (2023a), while avoiding the use of invalidly published names.

Based on this delimitation, 19 species are considered in this section, including 18 species distributed among nine genera of Postiaceae and *Polyporus leucomallus*, which is included because of its phylogenetic affinity with the group. Of these, *Postia caesioflava* (Pat.) V. Papp, *Spongiporus altocedronensis* Murrill, *Podopostia dominicana* Angelini, Losi & Vizzini, and *Polyporus leucomallus* Berk. & M.A. Curtis [≡ *Oligoporus leucomallus* (Berk. & M.A. Curtis) Vlasák, nom. inval. under Art. 41.1] are species exclusively found in tropical and subtropical areas of the Americas. A second group comprises species native to temperate southern South America. *Postia carbophila* Rajchenb., *P. minuta* Rajchenb., *P. punctata* Rajchenb. & P.K. Buchanan, and *Nothofagiporus venatus* (Rajchenb. & J.E. Wright) B.K. Cui & Shun Liu were typified from Argentina and are associated mainly with Valdivian, Patagonian, or Magellanic environments; *P. punctata* and *N. venatus* are also recorded from Chile (Pildain & Rajchenberg, 2013).

In contrast, *Amaropostia stiptica* (Pers.) B.K. Cui, L.L. Shen & Y.C. Dai, *Cystidiopostia hibernica* (Berk. & Broome) B.K. Cui, L.L. Shen & Y.C. Dai, *Oligoporus subcaesius* (A. David) Ryvarden & Gilb. and *Postia tephroleuca* (Fr.) Jülich were originally described from temperate regions of Europe but have subsequently been recorded in tropical or subtropical areas of the Americas (Carranza-Morse, 1982; Gilbertson & Ryvarden, 1987; Ryvarden & de Meijer, 2002; Loguercio-Leite *et al*., 2008). Whether these records represent introduced populations associated with exotic host trees, broadly distributed species, or undescribed native taxa requires further investigation.

Other extra-continental taxa show a predominantly temperate-to-temperate distribution. *Oligoporus rennyi* (Berk. & Broome) Donk was described from the United Kingdom and is recorded from Argentina, whereas *Postia caesia* (Schrad.) P.Karst. was typified from temperate Europe and is also recorded in Argentina (Wright *et al.*, 1973; Pildain & Rajchenberg 2013, Miettinen *et al.*, 2018). The latter, however, is not strictly restricted to temperate environments in the study area because records also occur in the Dry Chaco associated with the native species *Polylepis australis* Bitter (Robledo *et al.*, 2006). These two populations require closer study since they could represent distinct lineages. *Postia pelliculosa* (Berk.) Rajchenb. and *Tenuipostia dissecta* (Cooke) B.K. Cui & Shun Liu show circum-austral

and Austral-antarctic distributions respectively, with type localities in Tasmania and New Zealand, and records from temperate South America (Rajchenberg, 2022). Finally, *Postia subviridis* (Ryvarden & Guzmán) Spirin was originally reported from Mexico and extends into temperate regions of the United States (Ryvarden & Guzmán, 2001; Miettinen *et al*., 2018).

Regarding substrate, *Amaropostia stiptica*, *Fuscopostia leucomallella* (Murrill) B.K. Cui, L.L. Shen & Y.C. Dai, *Postia subviridis* and *Tenuipostia dissecta* (Cooke) B.K. Cui & Shun Liu are associated predominantly with coniferous hosts in the records considered here (Ryvarden & Guzman, 2001; Ryvarden & de Meijer, 2002; Miettinen *et al*., 2018; Angelini & Losi, 2023; Rajchenberg, 2022). *Oligoporus rennyi*, *Postia caesia*, *Postia tephroleuca* and *Spongiporus balsameus* have been reported from both coniferous and angiosperm substrates (Ryvarden & de Meijer 2002; Robledo *et al.*, 2006; Baltazar & Gibertoni 2009; Pildain & Rajchenberg, 2013; Pires *et al*., 2017; Miettinen *et al*., 2018). The occurrence of *Cystidiopostia hibernica* in Mexico can be attributed to its association with *Abies* sp. however, the available record from Costa Rica does not provide a substrate, so the same explanation cannot yet be extended to both countries. Likewise, *Oligoporus subcaesius* and *Postia tephroleuca* show records on different hosts groups, so their presence in tropical regions cannot presently be attributed to the association to a specific tree species.

Among the species native to temperate South America, several are closely associated with native angiosperm vegetation. *Nothofagiporus venatus*, *Postia carbophila*, and *P. punctata* occur on *Nothofagus*, whereas *P. minuta* was described from *Chusquea culeou* (Rajchenberg & Buchanan, 1996; Rajchenberg, 2001; Pildain & Rajchenberg, 2013). Among the native tropical species, *Polyporus leucomallus* (=*Oligoporus leucomallus*) and *Postia caesioflava* are native to Cuba and Ecuador, respectively, and both were likely described from angiosperm hosts (Carranza-Morse, 1982; Vlasák *et al.*, 2016). Finally, *Podopostia dominicana* Angelini, Losi & Vizzini is a terrestrial species described from the Dominican Republic, growing under *Coccoloba uvifera*, whereas *Spongiporus altocedronensis* Murrill is a native species described from Cuba with an unknown substrate.

## Fomitopsidaceae: *Fomitopsis* and related genera

Within Fomitopsidaceae, some monospecific genera have been proposed, including A*nthoporia*, *Daedallela*, *Dentiporus*, *Fragifomes*, *Pseudoantrodia*, *Rhizoporia* and *Ungulidaedalea* whereas genera such as *Antrodia*, *Daedalea* and *Fomitopsis* have included several species. In addition, the morphological circumscription of these latter genera has been difficult because of the high morphological variability among their species (Lindner *et al*., 2011; Spirin *et al*., 2013; Han *et al*., 2016; Liu *et al*., 2023a).

More recently, based on morphological and molecular evidence, a more broadly circumscribed classification recognizing only three genera within the family —*Anthoporia*, *Antrodia* and *Fomitopsis* —was proposed (Spirin *et al*., 2024). Under this framework, *Fomitopsis* includes several species previously assigned to other genera recorded in the Americas, such as *Daedalea* or *Rhodofomitopsis* (Fig. 5a, b, c, d).

A total of 34 species of *Fomitopsis* have been recorded in the study area. Of these, 32 occur in tropical or subtropical ecoregions of the Neotropics and three occur in temperate areas, with *F. lilacinogilva* represented in both climatic regions. Accordingly, *F. lilacinogilva* extends from tropical areas in Central and South America into the temperate pampas of southern Argentina (Carranza-Morse & Gilbertson 1989). In addition, two of the three species occurring in temperate climates exhibit a southern disjunct distribution between temperate South America and Oceania: *Fomitopsis maculatissima* (Lloyd) Spirin and *F. lilacinogilva* (Berk.) J.E. Wright & J.R. Deschamps, whereas *F. minutispora* Rajchenb. is restricted to the andean region (Rajchenberg 1995a; 1995b; Sandoval & Rajchenberg, 2011). *Fomitopsis nivosa* is not considered further in this section because it represents a doubtful record in Table 1. Records published under this name should be re-evaluated, as they may correspond to *F. nivosella* or closely related taxa.

Regarding substrate associations, most species were recorded in hardwoods and appeared to have broad host ranges rather than strict substrate specialization. Some species were recorded in both coniferous and angiosperm hosts, including *Fomitopsis rosea* (Alb. & Schwein.) P. Karst. and *Fomitopsis cupreorosea* (Berk.) J. Carranza & Gilb.), although it has been argued that the latter may comprise several sibling taxa with more specific substrate assocations (Spirin *et al*., 2024). Other species appear to be more frequently associated with specific hosts. *Fomitopsis palustris* (Berk. & M.A. Curtis) Gilb. & Ryvarden is commonly recorded on *Pinus* spp. (Ryvarden, 2015), although its southernmost record corresponds to a specimen collected on exotic *Fraxinus excelsior* in Argentina (Kaipper-Figueiró, 2015). *Fomitopsis maculatissima* is native from Australia where it typically occurs on *Eucalyptus* spp. but in Southern Argentina it is commonly found on *Nothofagus* spp. (Rajchenberg, 1995b).

Additionally, some species that were typified in other continents are recorded for this area: *Fomitopsis cajanderi* (P. Karst.) Kotl. & Pouzar, *Fomitopsis carnea* (Blume & T. Nees) Imazeki, *Fomitopsis serialis* (Fr.) Pass. ex P. Karst., *Fomitopsis ramentacea* (Berk. & Broome) Spirin & Vlasák and *Fomitopsis rosea*. Unlike the southern disjunctions discussed above, the occurrence of these taxa in the study area cannot readily be attributed to a circum-Austral distribution, and most records are not clearly associated with introduced hosts. Among them, only *F. cajanderi* has been recorded on a native gymnosperm in the Dominican Republic (Carranza-Morse & Gilbertson 1986).

The identity of the records of *Fomitopsis meliae* (Underw.) Gilb. From Argentina and Brazil also require further evaluation. The Brazilian collection has been suggested to possibly correspond to *F. nivosa* or other related species (Ryvarden & de Meijer, 2002).

## Other small genera in South America

Several small genera, such as *Auriporia*, *Ryvardenia*, and *Sarcoporia*, are represented in South America by only one or two species. *Auriporia* is primarily a temperate genus, with a single tropical–subtropical species, *A. brasilica* Coelho, known only from its type locality in Brazil (Coelho, 2005). However, the presence of a dimitic hyphal system with skeletal hyphae in *A. brasilica* together with its disjunct distribution suggest that its taxonomic placement warrants further evaluation. Additional studies incorporating molecular data are needed to clarify its relationship to other members of *Auriporia*, particularly in light of recent phylogenetic evidence that led to the reassignment of *Auriporia pileata* Parmasto to a separate genus (Shen *et al*., 2019).

The other two genera are each represented by two species. *Sarcoporia* is a small genus comprising four species, two of which are recorded from the Americas: *S. polyspora* P. Karst., originally described from North America, where it grows predominantly on conifers and later reported from *Pinus* sp in Brazil; and *S. neotropica* L. Ryvarden, described from Costa Rica and recorded on hardwood substrates (Ryvarden, 2012; Baldoni *et al*., 2014). *Ryvardenia*, in contrast, exhibits an Austral-antarctic distribution restricted to temperate regions of Oceania and South America and is almost exclusively associated with *Nothofagus* hosts (Rajchenberg, 1994; Hjortstam & Ryvarden, 1985; Pildain & Rajchenberg, 2013).

Finally, *Daedalea*, along with most genera previously placed in Fomitopsidaceae, has been synonymized with *Fomitopsis*. Nevertheless, some species assigned to *Daedalea*, including *D. ryvardeniana* Drechsler-Santos & Robledo and *D. hydnoides*, fall outside *Fomitopsis* as presently circumscribed (Spirin *et al*., 2024). The type material of *D. hydnoides* morphologically resembles the white-rot species *Fuscocerrena portoricensis* (Fr.) Ryvarden (Spirin *et al*., 2024). Accordingly, *D. hydnoides* is treated as a doubtful record in the present checklist, and its inclusion within the brown-rot polypore clade requires confirmation. In addition, *D. ryvardeniana*, historically placed in *Daedalea* and included in the most recent broad phylogenetic analysis of Fomitopsidaceae, does not cluster within *Fomitopsis* (Spirin *et al*., 2024). *Daedalea jamaicensis* Henn., described by Hennings, is known only from the type collection (Hennings, 1898). Whether this name corresponds to a distinct species or to a taxon currently treated under *Fomitopsis* in the Neotropics requires further study.

## General comments on diversity, distribution and taxonomy

In general, species richness appears to be unevenly distributed among genera. Some genera, such as *Fomitopsis* in tropical areas and *Postia* in temperate regions of South America, are represented by multiple records, often across several countries. Some species also appear to have relatively broad substrate ranges, including apparently generalist habits, as observed in *Postia tephroleuca* and *Spongiporus balsameus*. In contrast, other genera are represented by a single species known from only few records, as in *Auriporia brasilica*, *Adustoporia sinuosa* and *Melanoporella carbonacea* (Coelho, 2005; Baltazar *et al.*, 2009; Ryvarden, 2015; Vlasák *et al.*, 2020). This disparity may reflect, at least in part, uneven sampling effort, the scarcity of specialists focusing on certain groups, the existence of isolated or local studies, and the limited inclusion of some taxa in broader phylogenetic frameworks.

With respect to distribution and climatic affinity, most species show a marked latitudinal pattern. Interestingly, excluding species with extra-continental distributions, only three species extend from tropical to subtropical regions southward beyond the Tropic of Capricorn: *Fomitopsis lilacinogilva*, *Postia caesia* and *Laetiporus gilbertsonii* (Carranza-Morse *et al*., 1989; Campi *et al*., 2022). By contrast, some genera, such as *Postia*, are represented predominantly in temperate regions, although a few species have been described from tropical climates, including *Postia caesioflava* and *Postia subviridis* (Patouillard & Lagerheim, 1892; Ryvarden & Guzmán, 2001). Conversely, *Fomitopsis* is represented mainly by tropical and subtropical species in the study area, whereas *F. minutispora* and *F. maculatissima* appear to be restricted to temperate Patagonia (Rajchenberg 1995a, 1995b; Sandoval & Rajchenberg, 2011). This pattern suggests that climatic affinity may be more strongly associated with individual species than with a specific genera in most cases.

For species reported outside the Neotropics, caution is warranted when interpreting apparently broad or cosmopolitan distributions. In several fungal groups, taxa once regarded as cosmopolitan have subsequently been shown to comprise distinct lineages restricted to particular substrates, hosts, or ecoregions (Wang *et al*., 2012, Montoya *et al*., 2018; Costa-Rezende *et al*., 2020). Within the present group, *Antrodia neotropica* provides one such example, and a similar pattern may also emerge in Neotropical members of the *Fomitopsis feei* complex, such as *Fomitopsis lilacinogilva* and *Fomitopsis cupreorosea* (Spirin *et al*., 2024).

## Taxonomy and Systematics

The taxonomy of the brown-rot polypore clade remained poorly resolved until relatively recently, with uncertainty at both the generic and family levels. The most recent attempt to classify the entire clade into families and genera was presented by Liu *et al*. (2023a), whereas a substantially different classification was later proposed for Fomitopsidaceae by Spirin *et al*. (2024). This situation raises a broader question regarding the overall taxonomic framework of the brown-rot polypore clade: should classification favor numerous narrowly circumscribed genera, or broader generic concepts with wider macromorphological diagnoses and numerous well defined species? Both approaches can be supported by the evidence currently available, but their practical implications differ according to the taxonomic framework adopted.

This tension is not new, either in fungal taxonomy more broadly or within the brown-rot polypore clade itself. As early as 1909, *Cyanosporus* McGinty was introduced by Lloyd under a pseudonym as a criticism of the excessive proliferation of names, rather than as a serious taxonomic proposal (Stevenson & Cash, 1936, *p. 75*; Miettinen *et al*., 2018). In the most recent phylogenetic treatment of the group, this tendency toward fine taxonomic segregation is especially evident in Postiaceae, where at least four monospecific genera—*Aurantipostia*, *Calcipostia*, *Nothofagiporus*, and *Tenuipostia*—are currently recognized (Liu *et al*., 2023a).

Although taxonomic discussions within the group are ongoing, species delimitation and the recognition of taxonomic diversity in the Neotropics and other insufficiently explored regions remain unresolved in many cases. For example, the broad distribution of *Laetiporus gilbertsonii* and its occurrence on both *Eucalyptus* and native hosts in South America suggest that this taxon may represent a species complex requiring further resolution (Campi *et al*., 2022). Likewise, specimens identified as *Fomitopsis modesta* in Paraguay, the uncertain identity of *Fomitopsis nivosa* and the possible presence of cryptic taxa within *Fomitopsis lilacinogilva* illustrate additional taxonomic problems that remain to be clarified (Spirin *et al*., 2024). These examples highlight that the diversity of the brown-rot polypore clade in the study area is still incompletely understood. In this context, the present checklist is intended to provide a baseline for future taxonomic, biogeographic, and phylogenetic studies of the group.

## CONCLUSION

We present a curated list of 88 brown-rot polypore species in the Neotropical and Andean regions of America, distributed across 27 genera and nine families. The most species-rich genera are *Fomitopsis* (34 spp.), followed by *Postia* (8 spp.), *Antrodia* (6 spp.) and *Laetiporus* (5 spp.). Regarding substrate associations, most species were recorded exclusively on angiosperm (62 spp), whereas only 10 species were recorded exclusively on gymnosperm. Three species were recorded on both substrate types within the study area.

Regarding climatic distribution, 63 species occur in tropical or subtropical ecoregions within for the defined area of this checklist while the species distributed in temperate areas comprise only 22 of the total taxa of the brown-rot polypore clade in the neotropics. Finally, only three species are distributed in both temperate and tropical to subtropical ecoregions.

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## CONFLICT OF INTEREST

The authors declare that they have no conflict of interest between themselves or against third parties.

## REFERENCES

Aime, L., Ryvarden, L. & Henkel, T. W. (2007). Studies in Neotropical polypores 22. Additional new and rare species from Guyana. *Synopsis Fungorum* 23: 15-31.

Angelini, C. & Losi, C. (2015). Annotaded list of polyporoid fungi in the Dominican Republic. 4th Part. Rivista micologica romana. *Bollettino dell’Associazione Micologica Ecologica Romana* 96: 3-19.

Angelini, C. & Losi, C. (2021). Fungus flora of the Dominican Republic. VII. Some unrecorded polyporoid, corticioid, stereoid and clavarioid fungi. *Bollettino dell'Associazione Micologica Ecologica Romana*: 3-33.

Angelini, C. & Losi, C. (2023). Fungus flora of the Dominican Republic. VIII. Some unrecorded polyporoid, corticioid, stereoid and clavarioid fungi. Rivista micologica romana. *Bollettino dell'Associazione Micologica Ecologica Romana*: 3-18.

Angelini, C., Losi, C. & Vizzini, A. (2026). *Podopostia dominicana*, a new genus and a new species in the family Postiaceae (Polyporales, Basidiomycota). *Phytotaxa* 740 (2): 121-137.

Baldoni, D. B., Ortiz-Santana, B., Coelho, G., Antoniolli, Z. I. & Jacques, R. J. (2014). Sarcoporia polyspora (Basidiomycota, Polyporales): a rare wood-decay fungus newly recorded from South America. *Nova Hedwigia* 1-2: 177-187.

Baltazar, J. M. & Gibertoni, T. B. (2009). A checklist of the aphyllophoroid fungi (Basidiomycota) recorded from the Brazilian Atlantic Forest. *Mycotaxon* 109 (1): 439-442.

Baltazar, J. M., Trierveiler-Pereira, L. & Loguercio-Leite, C. (2009). A checklist of xylophilous basidiomycetes (Basidiomycota) in mangroves. *Mycotaxon* 107 (1): 221-224.

Banik, M. T., Lindner, D. L., Ortiz-Santana, B. & Lodge, D. J. (2012). A new species of *Laetiporus* (Basidiomycota, Polyporales) from the Caribbean basin. *Kurtziana* 37: 15-21.

Berkeley, M. J. (1856). Decades of fungi. Decades LIX - LX. Rio Negro fungi. Hooker's *Journal of Botany and Kew Garden Miscellany* 8: 233-241.

Berkeley, M. J. & Curtis, M. A. (1869). Fungi Cubenses (Hymenomycetes). *Journal of the Linnean Society. Botany* 10: 280-392.

Campi, M. G., Azevedo-Olivera, C., Costa-Rezende, D., Maubet, Y., Morera, G., Urcelay, C., ... & Robledo, G. L. (2022). What are the *Laetiporus* species present in southern South America?. *Lilloa* 59 (Suplemento): 193-218. https://doi.org/10.30550/j.lil/2022.59.S/2022.09.19

Campi, M. G., Maubet, Y., Cristaldo, E. & Robledo, G. L. (2025). Funga del Paraguay Tomo I. Hongos degradadores de la madera. (1° Ed). Universidad Nacional de Asunción, Paraguay.

Carranza-Morse, J. (1982). Polypores new to Costa Rica. *Mycotaxon* 15: 405-408.

Carranza-Morse, J. & Gilbertson, R. L. (1986). Taxonomy of the *Fomitopsis rosea* complex (Aphyllophorales; Polyporaceae). *Mycotaxon* 25 (2): 469-486.

Carranza-Morse, J. & Gilbertson, R. L. (1989). Cultural studies on the *Fomitopsis rosea* complex. *Mycologia* 81 (1): 85-97.

Carranza-Velázquez, J. & Ryvarden, L. (1998). Additional list of pore fungi of Costa Rica. Lista adicional de hongos poliporos de Costa Rica. *Mycotaxon* 69: 377-390.

Carranza-Velázquez, J. & Ruiz-Boyer, A. (2005). Checklist of polypores of Costa Rica. *Revista Mexicana de Micología* 20: 45-52.

Cristaldo, E., Kossmann, T., Campi, M., Maubet, Y., Costa-Rezende, D., Drechsler-Santos, R. & Robledo, G. (2022). Neotropical *Daedalea* (Basidiomycota, Fomitopsidaceae) revisited: *Daedalea rajchenbergiana* sp. nov. from Brazil. *Lilloa* 59: 273-289. https://doi.org/10.30550/j.lil/2022.59.S/2022.09.16

Coelho, G. (2005). A Brazilian new species of Auriporia. *Mycologia* 97 (1): 263-267.

Cooke, M. C. (1885). Praecursores ad Monographia Polypororum. *Grevillea* 14 (69): 17-21.

Costa-Rezende, D. H., Robledo, G. L., Drechsler-Santos, E. R., Glen, M., Gates, G., de Madrignac Bonzi, B. R., ... & Góes-Neto, A. (2020). Taxonomy and phylogeny of polypores with ganodermatoid basidiospores (Ganodermataceae). *Mycological Progress* 19 (8): 725-741. https://doi.org/10.1007/s11557-020-01589-1

Cui, B. K., Li, H. J., Ji, X., Zhou, J. L., Song, J., Si, J., ... & Dai, Y. C. (2019). Species diversity, taxonomy and phylogeny of Polyporaceae (Basidiomycota) in China. *Fungal Diversity* 97: 137-392. https://doi.org/10.1007/s13225-019-00427-4

Dai, Y. C., Wei, Y. L. & Zhou, L. W. (2015). Polypore richness along an elevational gradient: a case study in Changbaishan Nature Reserve, Northeastern China. *Fungal Ecology* 13: 226-228. https://doi.org/10.1016/j.funeco.2014.07.002

de Jesus, M. A. & Ryvarden, L. (2010). Studies in neotropical polypores 28. Two new species from Amazonas, Brazil. *Synopsis Fungorum* 27: 73-77.

Decock, C. A., Ryvarden, L., & Amalfi, M. (2022). *Niveoporofomes* (Basidiomycota, Fomitopsidaceae) in Tropical Africa: Two additions from Afromontane forests, *Niveoporofomes oboensis* sp. nov. and *N. widdringtoniae* comb. nov. and *N. globosporus* comb. nov. from the Neotropics. *Mycological Progress* 21 (2): 29. https://doi.org/10.1007/s11557-022-01787-z

Dinerstein, E., Olson, D., Joshi, A., Vynne, C., Burgess, N. D., Wikramanayake, E., ... & Saleem, M. (2017). An ecoregion-based approach to protecting half the terrestrial realm. *BioScience* 67 (6): 534-545. https://doi.org/10.1093/biosci/bix014

Drechsler-Santos, E. R., Groposo, C. & Loguercio-Leite, C. (2008). Additions to the knowledge of lignocellulolytic Basidiomycetes (Fungi) in forests from Santa Catarina State, Brazil. *Mycotaxon* 103: 197-200.

Drechsler-Santos, E. R., Demetrio, A. M., Salvador-Montoya, C. A., Souza-Aguiar, C. D., Costa-Rezende, D. H., Mafalda-Freire, F., ... & Ferreira-Lopes, V. (2014). Macrofungos do Parque Nacional de São Joaquim: Aspectos preliminares sobre a micodiversidade. Parque Nacional de São Joaquim: *Portal do Conhecimento. Editora Santarém*: 23-44.

Erkkilä, R. & Niemelä, T. (1986). Polypores in the parks and forests of the City of Helsinki. Societas Mycologica Fennica. *Kartstenia* 26: 1-40.

Fidalgo, O. & Fidalgo, M. E. P. K. (1957). Revisão de Fungi São Paulensis. *Arquivos do Museu Nacional Rio de Janeiro* 43: 157-188.

Fidalgo, O., & Fidalgo, M. E. P. K. (1967). Polyporaceae from Trinidad and Tobago. II. *Mycologia* 59 (5): 833-869.

Gerber, A. L. & Loguercio-Leite, C. (2000). Polyporoid wood-rotting fungi (Basidiomycetes) II – new records from Southern Brazil. *Mycotaxon* 76: 175-185.

Gilbertson, R. L. (1980). Wood-rotting fungi of North America. *Mycologia* 72: 1-49.

Gilbertson, R. L. (1981). North American wood-rotting fungi that cause brown rots. *Mycotaxon* 12: 372-416.

Gilbertson, R. L. & Ryvarden, L. (1987). North American Polypores. Vol. II. (1° Ed.) Fungiflora, Oslo.

Gibertoni, T. B., Ryvarden, L. & Cavalcanti, M. A. Q. (2004). Poroid fungi (Basidiomycota) of the Atlantic Rain Forest in Northern Brazil. *Synopsis Fungorum* 18: 33-43.

Gibertoni, T. B., Santos, P. J. P. & Cavalcanti, M. A. Q. (2007). Ecological aspects of Aphyllophorales in the Atlantic rain forest in northeast Brazil. *Fungal Diversity* 25: 49-67.

Góes-Neto, A. (1999). Polypore diversity in the state of Bahia, Brazil: a historical review. *Mycotaxon* 72: 43-56.

Gomes-Silva, A. C. & Nogueira-Melo, G. S. (2015). Notes on *Fomitopsis* (Polyporales, Agaricomycetes) from North and Northeast Brazil. *The Journal of the Torrey Botanical Society* 142 (2): 179-185. https://doi.org/10.3159/TORREY-D-12-00076.1

Han, M. L., Chen, Y. Y., Shen, L. L., Song, J., Vlasák, J., Dai, Y. C. & Cui, B. K. (2016). Taxonomy and phylogeny of the brown-rot fungi: *Fomitopsis* and its related genera1. *Fungal Diversity* 80: 343-373. https://doi.org/10.1007/s11557-011-0758-x

Hennings, P. (1898). Fungi jamaicensis. *Hedwigia* 37: 277-282.

Hjohtstam, K. & Ryvarden, L. (1985). New and noteworthy Basidiomycetes (Aphyllophorales) from Tierra del Fuego, Argentina. *Mycotaxon* 22: 159-167.

Holmquist, O., Cadenas, A., Pietrantonio, P., Maggiorani, A. & Bracamonte, L. (2009). Notas sobre *Laetiporus sulphureus* s. lat. (Aphyllophorales-Basidiomycetes) en Venezuela. *La Revista Forestal Venezolana* 53 (2): 129-135.

Kaipper-Figueiró, G. (2015). Aspectos taxonômicos e filogenéticos de *Antrodia* s.l. com a inclusão de espécimes da região Neotropical (Tesis de Maestría), Universdidade Federal de Santa Catarina, Brasil.

Kaipper-Figueiró, G., Robledo, G. L., Reck, M. A., Goes-Neto, A. & Drechsler-Santos, E. R. (2016). *Antrodia neotropica* sp. nov. (Polyporales, Basidiomycota): a new South American species of *Antrodia* ss from

Brazil based on morphological, molecular and ecological data. *Nova Hedwigia* 103 (1-2): 125-143. https://doi.org/ 10.1127/nova_hedwigia/2016/0340

Kout, J., Vlasák, J. & Banik, M. T. (2019). *Laetiporus lobatus* (Basidiomycota, Polyporales), a new fungal species from Costa Rica. *Phytotaxa* 408 (3): 208-214. https://doi.org/10.11646/phytotaxa.408.3.5

Lindblad, I. & Ryvarden, L. (1999). Studies in neotropical polypores. 3. New and interesting Basidiomycetes (Poriales) from Costa Rica. *Mycotaxon* 71: 335-359.

Lindner, D. & Banik, M. (2008). Molecular phylogeny of *Laetiporus* and other brown-rot polypore genera in North America. *Mycologia* 100 (3): 417-430. https://doi.org/10.3852/07-124R2

Lindner, D., Ryvarden, L. & Baroni, T. (2011). A new species of *Daedalea* (Basidiomycota) and a synopsis of core species in *Daedalea* sensu stricto. *North American Fungi* 6 (4): 1-12. https://doi.org/10.2509/naf2011.006.004

Liu, S., Chen, Y. Y., Sun, Y. F., He, X. L., Song, C. G., Si, J., ... & Cui, B. K. (2023a). Systematic classification and phylogenetic relationships of the brown-rot fungi within the Polyporales. *Fungal Diversity* 118 (1): 1-94. https://doi.org/10.1007/s13225-022-00511-2

Liu, S., Shen, L. L., Xu, T. M., Song, C. G., Gao, N., Wu, D. M., Sun, Y. F. & Cui, B. K. (2023b). Global diversity, molecular phylogeny and divergence times of the brown-rot fungi within the Polyporales. *Mycosphere* 14 (1): 1564-1664. https://doi.org/10.5943/mycosphere/14/1/18

Lodge, D. J., Ryvarden, L. & Perdomo Sánchez, O. P. (2001). Studies in neotropical polypores 11: *Antrodia aurantia*, a new species from the Dominican Republic, Greater Antilles. *Mycotaxon* 80: 261-266.

Loguercio-Leite, C., Michels, J. & Baltazar, J. M. (2008). New records of lignocellulolytic basidiomycetes (Fungi): Parque Estadual da Serra do Tabuleiro (PEST), Santa Catarina, Brazil. *Biotemas* 21 (3): 7-14.

Lowe, J. L. (1966). Polyporaceae of North America. The genus Poria. Technical Publication of the State University College of Forestry at Syracuse University 90: 1-183.

Mardones, M., Tenorio, L. U., Montero, M. D. M. G., Mata, M., Hidalgo, A. R. B., Piepenbring, M., ... & Velázquez, J. C. (2024). The first annotated checklist of Costa Rican fungi. *Funga Latina* 2: V2A7. https://doi.org/10.5281/zenodo.14165034

Maubet, Y., Campi, M. & Robledo, G. L. (2020). Hymenochaetaceae from Paraguay: revision of the family and new records. *Current Research in Environmental and Applied Mycology* 10 (1): 242-261. https://doi.org/10.5943/cream/10/1/24

de Meijer, A. A. R. (2006). Preliminary list of the macromycetes from the Brazilian state of Paraná. *Boletim do Museu Botânico Municipal* 68: 1-55.

Miettinen, O., Vlasák, J., Rivoire, B. & Spirin, V. (2018). *Postia caesia* complex (Polyporales, Basidiomycota) in temperate northern hemisphere. *Fungal Systematics and Evolution* 1 (1): 101-129. https://doi.org/10.3114/fuse.2018.01.05

Montagne, J. P. F. C. (1841). Séconde centurie de plantes cellulaires exotiques nouvelles, Décade IX. Annales des Sciences Naturelles. *Botanique* 16: 108-128.

Montagne, J. P. F. C. (1842). Troisième Centurie de plantes cellulaires exotiques nouvelles, Décades I, II, III et IV. Fungi cubenses. Annales des Sciences Naturelles. *Botanique* 17: 119-128.

Montagne, J. P. F. C. (1849). Sixièmes Centurie de plantes cellulaires nouvelles, tant indigènes qu'exotiques. Décade VII. Annales des Sciences Naturelles. *Botanique* 11: 235-246.

Montagne, J. P. F. C. (1854). Cryptogamia Guyanensis seu plantarum cellularium in Guyana gallica annis 1835-1849 a cl. Leprieur collectarum enumeratio universalis. Annales des Sciences Naturelles. *Botanique* 1: 91-144.

Montagne, J. P. F. C. (1856). Septième centurie de plantes cellulaires nouvelles, tant indigènes qu'exotiques. Annales des Sciences Naturelles. *Botanique* 5: 333-374.

Motato-Vásquez, V., Pires, R. M. & Gugliotta, A. D. M. (2015). Polypores from an Atlantic rainforest area in southeast Brazil: pileate species. *Brazilian Journal of Botany* 38: 149-164. https://doi.org/10.1007/s40415-014-0109-7

Motato-Vásquez, V., Vinasco-Diaz, L. K., Londoño-Caicedo, J. M., & Bolaños-Rojas, A. C. (2025). Hidden treasures of Colombia's Pacific mangrove: new fungal species and records of macrofungi (Basidiomycota). *Journal of Fungi* 11 (6): 459. https://doi.org/10.3390/jof11060459

Montoya, C. A., Costa-Rezende, D. H. C., Ferreira-Lopes, V., Borba Silva, M. A. & Popoff, O. F. (2018). *Tropicoporus drechsleri* (Hymenochaetales, Basidiomycota), a new species in the "*Inonotus linteus*" complex from northern Argentina. *Phytotaxa* 338 (1): 075-089. https://doi.org/10.11646/phytotaxa.338.1.6

Morrone, J. J., Escalante, T., Rodríguez-Tapia, G., Carmona, A., Arana, M. & Mercado-Gómez, J. D. (2022). Biogeographic regionalization of the Neotropical region: New map and shapefile. *Anais da Academia Brasileira de Ciências* 94: e20211167. https://doi.org/10.1590/0001-3765202220211167

Murrill, W. A. (1907). Polyporaceae, Part 1. *North American Flora* 9 (1): 1-72.

Murrill, W. A. (1910). The Polyporaceae of Jamaica. *Mycologia* 2: 183-197.

Murrill, W. A. (1919). Cuban polypores and agarics. *Mycologia* 11 (1): 22-32.

Núñez, M. & Ryvarden, L. (1999). Studies in neotropical polypores 4. New and noteworthy species from Coiba National Park, Panama. *Mycotaxon* 71: 361-368.

Ortiz-Santana, B., Lindner, D. L., Miettinen, O., Justo, A. & Hibbett, D. S. (2013). A phylogenetic overview of the antrodia clade (Basidiomycota, Polyporales). *Mycologia* 105 (6): 1391-1411. https://doi.org/10.3852/13-051

Paez, C. A., Kraisitudomsook, N., Smith, J. A., Loyd, A. L., Lindner, D. L. & Smith, M. E. (2023). Revising the taxonomic placement of *Laetiporus persicinus* within the Laetiporaceae. *Mycologia* 115 (1): 107-121. https://doi.org/10.1080/00275514.2022.2139144

Parmasto, E. (1968). Conspectus Systematis Corticiacearum. 1-261.

Patouillard, N. T. & Lagerheim, G. de (1892). Champignons de l'Equateur (Pugillus II). *Bulletin de la Société Mycologique de France* 8 (2): 113-140.

Pildain, M. B. & Rajchenberg, M. (2013). The phylogenetic position of *Postia* sl (Polyporales, Basidiomycota) from Patagonia, Argentina. *Mycologia* 105 (2): 357-367. https://doi.org/10.3852/12-088

Pires, R. M., Motato-Vásquez, V. & Gugliotta, A. M. (2016). A new species of *Laetiporus* (Basidiomycota) and occurrence of *L. gilbertsonii* Burds. in Brazil. *Nova Hedwigia* 102 (3-4): 477-490. https://doi.org/10.1127/nova_hedwigia/2016/0320

Pires, R. M., Motato-Vásquez, V., Westphalen, M. C. & Gugliotta, A. D. M. (2017). Polyporales and similar poroid genera (Basidiomycota) from Parque Estadual da Serra do Mar, São Paulo State, Brazil. *Hoehnea* 44: 145-157. https://doi.org/10.1590/2236-8906-93/2016

Popoff, O. F. & Wright, J. E. (1998). Fungi of Paraguay. I. Preliminary checklist of wood-inhabiting polypores (Aphyllophorales, basidiomycota). *Mycotaxon* 67: 323-340.

Rajchenberg, M. (1982). El género *Poria* Pers. en la República Argentina (Tesis doctoral). Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires, Argentina.

Rajchenberg, M. (1983). Basidiomicetos xilófilos de los bosques andinopatagónicos. Adiciones y correcciones. I. *Boletín de la Sociedad Argentina de Botánica* 22 (1-4): 41-56.

Rajchenberg, M. (1986). On Trametes aethalodes and other species of Daedalea (Polyporaceae). *Canadian Journal of Botany* 64 (9): 2130-2135.

Rajchenberg, M. (1994). A taxonomic study of the subantarctic Piptoporus (Polyporaceae, Basidiomycetes) I. *Nordic Journal of Botany* 14 (4): 435-449.

Rajchenberg, M. (1995a). A taxonomic study of the subantarctic Piptoporus (Polyporaceae, Basidiomycetes) II. *Nordic Journal of Botany* 15 (1): 105-119.

Rajchenberg, M. (1995b). New polypores from the *Nothofagus* forests of Argentina. *Mycotaxon* 54: 427-453.

Rajchenberg, M. (1996). Wood-rotting fungi of Nothofagus pumilio (lenga): Identification of cultures. *Bosque* 17 (2): 87-100.

Rajchenberg, M. (2001). *Postia minuta* sp. nov. from southern Argentina. *Harvard Papers in Botany* 6 (1): 183-87.

Rajchenberg, M. (2006). Los políporos (Basidiomycetes) de los bosques Andino-Patagónicos de Argentina. (1° Ed). Cramer.

Rajchenberg, M. (2022). An approach to the biogeography of polypore fungi (Agaricomycotina, Basidiomycota) in southern South America. *Darwiniana, nueva serie* 10 (2): 451-479. https://doi.org/10.14522/darwiniana.2022.102.1058

Rajchenberg, M. & de Meijer, A. (1990). New and noteworthy polypores from Paraná and São Paulo states, Brazil. *Mycotaxon* 38: 173-185.

Rajchenberg, M. & Buchanan, P. K. (1996). Two newly described polypores from Australasia and southern South America. *Australian Systematic Botany* 9 (6): 877-885.

Rajchenberg, M., Gorjón, S. P. & Pildain, M. B. (2011). The phylogenetic disposition of *Antrodia* sl (Polyporales, Basidiomycota) from Patagonia, Argentina. *Australian Systematic Botany* 24 (2): 111-120. https://doi.org/10.1071/SB11003

Rajchenberg, M. & Robledo, G. (2013). Pathogenic polypores in Argentina. *Forest Pathology* 43: 171-184. https://doi.org/10.1111/efp.12032

Renvall, P. (1992). *Postia lateritia* n. sp. and its rust-coloured relatives. *Karstenia* 32: 43-60.

Rizinde Hakizimana, J. C., Amalfi, M., Balezi, A. & Decock, C. (2024). *Laetiporus* (Laetiporaceae, Basidiomycota) in tropical Africa is represented by a single Afromontane lineage and four species, including *Laetiporus discolor*, *Laetiporus oboensis*, sp. nov., *Laetiporus tenuiculus*, sp. nov., and *Laetiporus* sp. 1. *Mycologia* 116 (6): 1083-1100. https://doi.org/10.1080/00275514.2024.2395688

Robert, V., Vu, D., Amor, A. B. H., van de Wiele, N., Brouwer, C., Jabas, B., Szoke, S., Dridi, A., Triki, M., Ben Daoud, S., Chouchen, O., Vaas, L. A. I., de Cock, A., Stalpers, J. A., Stalpers, D., Verkley, G. J. M., Groenewald, M., dos Santos, F. B., Stegehuis, G. J., … Crous, P. W. (2013). MycoBank gearing up for new horizons. *IMA Fungus* 4 (2): 371-379. https://doi.org/10.5598/imafungus.2013.04.02.16

Robledo, G., Urcelay, C., Dominguez, L. & Rajchenberg, M. (2006). Taxonomy, ecology, and biogeography of polypores (Basidiomycetes) from Argentinian *Polylepis* woodlands. *Botany* 84 (10): 1561-1572. https://doi.org/10.1139/b06-109

Robledo, G. & Rajchenberg, M. (2007). Preliminary polypore mycota (Basidiomycetes) from northwestern Argentinean Yungas. *Mycotaxon* 100: 5-9.

Robles, C. A., Pildain, M. B., Sautua, F., Carmona, M. A. & Rajchenberg, M. (2021). *Fibroporia gossypium* isolated from an indoor environment in Argentina. *Mycotaxon* 136 (3): 645-660.

Romell, L. (1901). Hymenomycetes Austro-Americani in itinere Regnelliano primo collecti 1. *Bihang til Kongliga Svenska Vetenskaps-Akademiens Handlingar* 26 (16): 3-61(comb. Spirin *et al.*, 2024).

Ryvarden, L. (1988). Type studies in the Polyporaceae. 19. Species described by MC Cooke. *Mycotaxon* 51: 45-58.

Ryvarden, L. (1991). Genera of Polypores. Nomenclature and Taxonomy. Fungiflora.

Ryvarden, L. (2012). Studies in Neotropical polypores 32. Some new species from Costa Rica. *Synopsis Fungorum* 30: 33-43.

Ryvarden, L. (2015). Neotropical polypores part 2. Polyporaceae Abortiporus-Nigroporus. *Synopsis Fungorum* 34: 1-443.

Ryvarden, L. & Guzmán, G. (2001). Studies in neotropical polypores 12. New and noteworthy polypores from Mexico. *Mycotaxon 78*: 245-256.

Ryvarden, L. & de Meijer, A. D. (2002). Studies in neotropical polypores 14. New species from the state of Paraná, Brazil. *Synopsis Fungorum* 15 (1): 34-69.

Ryvarden, L. & Iturriaga, T. (2003). Studies in neotropical polypores 10. New polypores from Venezuela. *Mycologia* 95 (6): 1066-1077.

Ryvarden, L., Aime, M. C. & Baroni, T. J. (2009). Studies in neotropical polypores 26. A new species of Trametes and revisitation of an old. *Synopsis Fungorum* 26: 27-32.

Sandoval, P. & Rajchenberg, M. (2011). *Fomitopsis minutispora* Rajchenb., nuevo registro de Polyporales para la micobiota chilena. Gayana. *Botánica* 68 (2): 319-322. http://dx.doi.org/10.4067/S0717-66432011000200021

Santos, C. D., Silva, R. O., Soares, A. C., Drechsler-Santos, E. R. & Bezerra, J. L. (2018). First record of *Daedalea ryvardeniana* Drechsler-Santos & Robledo (Agaricomycetes, Polyporales, Fomitopsidaceae) in the Caatinga area of Bahia, Brazil. *Check List* 14 (1): 173-176. https://doi.org/10.15560/14.1.173

Shen, L. L., Wang, M., Zhou, J. L., Xing, J. H., Cui, B. K. & Dai, Y. C. (2019). Multi-gene phylogeny and taxonomy of the brown-rot fungi: *Postia* (Polyporales, Basidiomycota) and related genera. *Persoonia-Molecular Phylogeny and Evolution of Fungi* 42 (1): 101-126. https://doi.org/10.3767/persoonia.2019.42.05

Soares, A. M., Nogueira-Melo, G., Plautz Jr, H. L. & Gibertoni, T. B. (2017). A new species, two new combinations and notes on Fomitopsidaceae (Agaricomycetes, Polyporales). *Phytotaxa* 331 (1): 75-83. https://doi.org/10.11646/phytotaxa.00.0.0

Spegazzini, C. (1899). Fungi Argentini novi vel critici. *Anales del Museo Nacional de Historia Natural de Buenos Aires* 6: 81-288.

Species Fungorum (2026). Published on the Internet https://www.speciesfungorum.org, The Royal Botanic Gardens, Kew. [Retrieved 24 September 2026].

Spirin, V., Vlasák, J., Niemelä, T. & Miettinen, O. (2013). What is *Antrodia* sensu stricto? *Mycologia* 105 (6): 1555-1576. https://doi.org/10.3852/13-039

Spirin, V., Runnel, K., Vlasák, J., Miettinen, O. & Põldmaa, K. (2015). Species diversity in the *Antrodia crassa* group (Polyporales, Basidiomycota). *Fungal Biology* 119 (12): 1291-1310. https://doi.org/10.1016/j.funbio.2015.09.008

Spirin, V., Runnel, K., Vlasák, J., Viner, I., Barrett, M. D., Ryvarden, L., ... & Miettinen, O. (2024). The genus *Fomitopsis* (Polyporales, Basidiomycota) reconsidered. *Studies in Mycology* 107 (1): 149-249. https://doi.org/10.3114/sim.2024.107.03

Stevenson, J. A. & Cash, E. K. (1936). The new fungus names proposed by C. G. Lloyd. *Bulletin of the Lloyd Library* 35:1-209

Stokland, J. N., Siitonen, J. & Jonsson, B. G. (2012). Biodiversity in dead wood. (1° Ed), Cambridge University Press.

Tibpromma, S., Hyde, K. D., Jeewon, R., Maharachchikumbura, S. S., Liu, J. K., Bhat, D. J., ... & Karunarathna, S. C. (2017). Fungal Diversity notes 491–602: taxonomic and phylogenetic contributions to fungal taxa. *Fungal Diversity* 83: 1-261. https://doi.org/10.1007/s13225-017-0378-0

Turland, N. J., Wiersema, J. H., Barrie, F. R., Greuter, W., Hawksworth, D. L., Herendeen, P. S., ... & Smith, G. F. (Eds.) (2018). International Code of Nomenclature for algae, fungi, and plants (Shenzhen Code). Koeltz Botanical Books. https://doi.org/10.12705/Code.2018

Vasaitis, R., Menkis, A., Lim, Y. W., Seok, S., Tomsovsky, M., Jankovsky, L., Lygis, V., Slippers, B. & Stenlid, J. (2009). Genetic variation and relationships in *Laetiporus sulphureus* s. lat., as determined by ITS rDNA sequences and in vitro growth rate. *Mycological Research* 113 (3): 326-336. https://doi.org/10.1016/j.mycres.2008.11.009

Valenzuela, R., Palacios-Pacheco, M. R., Raymundo, T. & Bautista-Hernández, S. (2006). Especies de poliporáceos poco conocidas en México. *Revista Mexicana de Biodiversidad* 77 (1): 35-49.

Valenzuela, R. (2023). Outline of Fungi – Note 810: Austropostia (K. D. Hyde & M. T. Noorabadi, Eds.). Outline of Fungi. https://outlineoffungi.org/pdf/Outlineoffungi.org%20-%20Note%20810%20Austropostia.pdf

Vampola, P., Kotlaba, F. & Pouzar, Z. (1994). *Antrodia pini-cubensis*, a new polypore from the Caribbean area. *Czech Mycology* 47 (189): e192.

Velázquez, J. C. & Ruiz-Boyer, A. (2005). Checklist of polypores of Costa Rica. *Revista Mexicana de Micología* 20: 45-52.

Vlasák, J., Vlasák, J. J. & Ryvarden, L. (2016). Studies in Neotropical polypores 42. New and noteworthy polypores from Costa Rica and two new species *Elmerina phellinoides* and *Melanoporia condensa*. *Synopsis Fungorum* 35: 9-33.

Vlasák, J., Vlasák, J. J. & Ryvarden, L. (2020). Studies in Neotropical polypores 46 Some new and noteworthy polypores from Costa Rica. *Synopsis Fungorum* 42: 30-33.

Wang, X. C., Xi, R. J., Li, Y., Wang, D. M. & Yao, Y. J. (2012). The species identity of the widely cultivated *Ganoderma*, '*G. lucidum*'(Ling-zhi), in China. *PLOS ONE* 7 (7): e40857. https://doi.org/10.1371/journal.pone.0040857

Westphalen, M. C. & Silveira, R. M. B. (2013). Pileate polypores from Araucaria Forests in Southern Brazil. *Hoehnea* 40: 77-86. https://doi.org/10.1590/S2236-89062013000100003

Wright, J.E., Deschamps, J.R., and Rovetta, G.S. (1973). Basidiomicetos xilófilos de la Región Mesopotámica. I. *Revista de investigaciones agropecuarias: Patología vegetal* 10: 117-228.

Wright, J. E. & Bolontrade, M. F. (1994). An undesirable immigrant. *Mycologist* 8: 14-15.

Wu, F., Yuan, H. S., Zhou, L. W., Yuan, Y., Cui, B. K. & Dai, Y. C. (2020). Polypore diversity in South China. *Mycosystema* 39: 653-681.

Wu, Y., Mao, W. & Yuan, Y. (2021). Comparison of polypore florae and diversity from temperate to subtropical forest zones in China. *Biodiversity Science* 29 (10): 1369. https://doi.org/10.17520/biods.2021094

Yang, K. L., Lin, J. Y., Li, G. M. & Yang, Z. L. (2025). New and interesting fungi from Guangzhou City, South China. *Phytotaxa* 707 (1): 1-95. https://doi.org/10.11646/phytotaxa.707.1.1

Yuan, Y., Wu, Y.-D., Wang, Y.-R., Zhou, M., Qiu, J.-Z., Li, D.-W., Vlasák, J., Liu, H.-G. & Dai, Y.-C. (2022). Two new forest pathogens in *Phaeolus* (Polyporales, Basidiomycota) on Chinese coniferous trees were confirmed by molecular phylogeny. *Frontiers in Microbiology* 13: 942603. https://doi.org/ 10.3389/fmicb.2022.942603

Zhang, D. Z. (2003). Three brown rot polypores new to Taiwan and their cultural studies. *Taiwania* 48: 1-5. https://doi.org/10.6165/tai.2003.48(1).1

Zhou, L. W. & Dai, Y. C. (2012). Recognizing ecological patterns of wood-decaying polypores on gymnosperm and angiosperm trees in northeast China. *Fungal Ecology* 5: 230-235. https://doi.org/10.1016/j.funeco.2011.09.005

## SUPPLEMENTARY MATERIAL S1

### Literature search strategy and treatment of taxonomic records

The literature survey was designed to maximize the recovery of published records of species belonging to the brown-rot polypore clade within the geographic scope of the study. The search strategy was developed iteratively and combined taxonomic, geographic, nomenclatural, and bibliographic approaches.

**1. Initial taxonomic framework**.— The search started from the genera included in the 'Antrodia clade' hereafter referred to as the brown-rot polypore clade; according to Liu et al. (2023a, 2023b). For Fomitopsidaceae, the generic circumscriptions proposed by Spirin et al. (2024) were followed. Each genus was treated individually during the literature survey. Historical generic synonyms, basionyms, and previously used combinations were identified through the taxonomic literature, MycoBank, and Index Fungorum and were used as additional search terms in order to recover older or overlooked records.

Historical names, basionyms, and later combinations were used as search tools to recover older records. Species subsequently synonymized were generally treated according to the most recent taxonomic framework adopted here. Nomenclatural status and phylogenetic placement were evaluated independently when necessary, particularly in cases where the currently valid name did not reflect the phylogenetic position of the taxon.

**2. Operational criterion for inclusion in the brown-rot polypore clade**.— Species were included when they met at least one of the following criteria:

they were assigned to genera recognized within the brown-rot polypore clade according to Liu et al. (2023a, 2023b), with the classification of Spirin et al. (2024) taking precedence for Fomitopsidaceae; or

published phylogenetic evidence supported their placement within the brown-rot polypore clade even when their currently valid nomenclatural combination did not reflect that placement.

**3. Literature search strategy**.— Each accepted genus name, together with relevant historical names and synonyms, was searched in Google Scholar, SciELO and Research Gate. Searches combined the taxon name with geographic and ecological terms, including:

"Neotropics"
names of South American countries
"Antrodia clade"
"brown rot"
"brown-rot fungi"
"wood-rotting fungi"
"polypore"

Particular attention was given to countries with a comparatively rich published record of polypores. Searches were exploratory and iterative rather than restricted to a single fixed query, because nomenclatural changes and historical combinations varied substantially among taxa. No publication date limits were applied. Historical and recent literature were considered equally, provided that the record could be traced to a published or otherwise verifiable source.

**4. Regional and national checklists**.— Published regional and national fungal checklists were used as an additional source of records, particularly those available for Argentina, Brazil and Costa Rica. Additionally, the series "Neotropical polypores" published by Ryvarden was used. References cited in these works were screened to identify original publications and additional records that were not recovered through direct keyword searches. Whenever possible, records cited in secondary sources were traced back to the original publication.

**5. Nomenclatural database searches**.— All generic names included in the adopted taxonomic framework were searched in MycoBank and Index Fungorum. These databases were used to verify validly published names, basionyms, synonyms, historical combinations, and type localities. This strategy was particularly useful for detecting historical or rarely cited taxa that were not readily recovered through general literature searches. Names identified in this way were subsequently traced in the literature and evaluated under the taxonomic framework adopted in the present study.

**6. Taxa with nomenclature–phylogeny incongruence**.— Some taxa required individual evaluation because their valid nomenclatural name and phylogenetic placement were not fully congruent. For example, *Polyporus leucomallus* was retained under its validly published name. Although a combination in *Oligoporus* has been proposed, that combination is nomenclaturally invalid. Nevertheless, published sequence evidence supports an affinity with taxa of the brown-rot polypore clade. Therefore, the species was retained in the checklist under the valid name *Polyporus leucomallus*.

Conversely, taxa historically placed in genera of the brown-rot polypore clade were excluded from the main checklist when subsequent evidence indicated that they likely belong outside the clade. For example, *Fomitopsis nivosa* was historically associated with Fomitopsidaceae, but molecular evidence discussed by Spirin et al. (2024) excluded an affinity with that family and left its phylogenetic position unresolved. Such taxa were treated separately as excluded or taxonomically uncertain records.

**7. Molecular-only records**.— Records based exclusively on molecular database entries, including GenBank sequences lacking an associated published taxonomic or occurrence record not associated to publications, were not considered as distribution records for the checklist. Molecular evidence was used only when it formed part of a published taxonomic or phylogenetic study and contributed to the interpretation of the placement of a taxon.

**8. Treatment of doubtful and secondary records**.— Records cited only in secondary literature were considered doubtful when the original source could not be located or verified. These records were not used as confirmed evidence of species distribution. Likewise, records involving unresolved identifications, ambiguous taxonomic assignments, or names whose application could not be reliably interpreted under the current taxonomic framework were excluded from the confirmed checklist or treated separately when relevant to the historical literature.

**9. Temporal and bibliographic scope**.— No temporal limits were imposed on the literature search. Historical taxonomic publications, recent articles, books, regional and national checklists, and academic theses were considered. The final checklist was based exclusively on published or otherwise verifiable bibliographic records. Herbarium specimens and type material were not re-examined as part of this study.

**10. Scope and limitations**.— Because the study is based on published literature and nomenclatural databases rather than direct examination of herbarium or type material, it should be interpreted as a comprehensive bibliographic synthesis rather than as a taxonomic revision. The strategy was designed to maximize the recovery of historical and contemporary records and to account for major nomenclatural changes. However, some records may remain undetected because of inaccessible literature, poorly indexed historical publications, unresolved nomenclature, or incomplete geographic documentation.

This distinction is particularly relevant for historical extra-continental records and taxa whose identity remains uncertain under modern taxonomic concepts. Such records were retained when the published evidence supported their association with the brown-rot group, for example through reported decay type, morphology, or other available data, but were flagged when taxonomic confirmation was considered necessary. Reassessing the identity of these collections or resolving uncertain phylogenetic relationships falls outside the scope of the present study.