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A checklist of xylophilous basidiomycetes (*Basidiomycota*) in mangroves

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Abstract — Based on intensive search of literature records of xylophilous basidiomycetes in mangroves, a list with 112 species is presented. These species are distributed in 63 genera, 27 families and 9 orders. *Polyporaceae* is the most represented family with 33 species; *Phellinus* is the genus with the highest number of species (7). Brazilian mangroves, with 55 species, are the best known areas. The most frequent host is *Rhizophora mangle* with 34 species recorded on it. For each species the localities and substrates are provided, when these data were available in the respective original article.

Key words — *Agaricales*, *Aphyllophorales*, *Auriculariales*, mycodiversity

Introduction

Mangroves are transitional coastal ecosystems situated at the confluence of land and sea (Alongi 2002). Their distribution is closely related to basic features of the marine environment, mainly salinity (Chapman 1977). The atmospheric temperature also influences the distribution of mangroves and they are found mostly in the tropics; however under special climatic conditions they occur in subtropical regions, such as Japan and the State of Santa Catarina in Brazil (Cintrón & Schaeffer-Novelli 1980).

Although tropical forests typically have a high diversity of plant species, mangroves are low diversity ecosystems and there are roughly 70 species of mangroves plants (Alongi 2002). The most diverse regions border the Pacific Ocean and west Indian Ocean (Cintrón & Schaeffer-Novelli 1980).

Mangrove species diversity is well known for animals and plants, but poorly known for other organisms such as fungi (Macintosh & Ashton 2002). The study of mangrove fungi began in the 1950's in Australia; however fungal species were reported from these ecosystems earlier by authors who did not study particularly the manglicolous mycota (Schmit & Shearer 2003). The data on mangrove fungi refer mainly to 'marine fungi', which grow and sporulate exclusively in marine or estuarine habitats (Kohlmeyer & Kohlmeyer 1979). In contrast, little is known about terrestrial fungi in mangrove forests (Hyde & Lee 1995).

Figure 1. Mangrove Forest of Itacorubi, Santa Catarina, Southern Brazil (photo by L. Trierveiler-Pereira).

Figure 2. Basidiomata of *Schizophyllum commune* growing on dead trunk of *Avicennia schaueriana* (photo by L. Trierveiler-Pereira).

The most extensive surveys of mangrove xylophilous basidiomycetes focus on corticioid fungi taxonomy (Maekawa et al. 2003, 2005) or polypore ecology (Gilbert & Sousa 2002, Gilbert et al. 2008). A remarkable number of species are recorded from Northern Brazilian mangroves due to the research of Campos et al. (2003) and Sotão et al. (1991, 2002, 2003). Other records correspond to isolated citations in several articles that have not focused exclusively on mangrove xylophilous basidiomycetes.

The objective of the present work is to compile data on mangrove xylophilous basidiomycetes and to present a list of species with the locality and substrate of each one.

Material and methods

This checklist has been compiled based on an intensive search of literature records of xylophilous basidiomycetes in mangroves. Nomenclature, taxonomic position and author names followed the databases: Index Fungorum – IFS (http://www.indexfungorum.org/Names/Names.asp) and The International Plant Names Index – IPNI (http://www.ipni.org).

Genera and species are listed alphabetically within each family and order. Genera with taxonomic position not well established are placed in 'incertae sedis'. Names not found either on the IFS database or in the literature were placed in a separated section named 'Doubtful names cited from mangroves'. This checklist only includes records identified to the species level.

The localities and substrate of each species is provided when these data were available in the original article. The genera of the substrates are abbreviated following this convention: *Ac.* = *Acanthus*; *Ae.* = *Aegineras*; *Av.* = *Avicennia*; *B.* = *Bruguiera*; *C.* = *Conocarpus*; *He.* = *Heritiera*; *Hi.* = *Hippomane*; *K.* = *Kandelia*; *La.* = *Laguncularia*; *Lu.* = *Lumnitzera*; *N.* = *Nypa*; *P.* = *Pouteria*; *R.* = *Rhizophora*; *S.* = *Sonneratia*; *Ta.* = *Tamarix*; *Th.* = *Thespesia*; *X.* = *Xylocarpus*.

Although the compiled list was carefully revised, minor errors can occur. We plan to regularly update the internet version of the checklist, so we gratefully encourage any remarks concerning errors or omitted data.

Results

The 112 xylophilous basidiomycetes species reported from mangroves are distributed among 63 genera, 27 families, and 9 orders. The most represented family is *Polyporaceae* with 33 species, followed by *Hymenochaetaceae* with 15 species. The genus with highest number of species is *Phellinus* with seven species, followed by *Trametes* with six species and *Trichaptum* with five species.

The mangrove areas with the highest number of species recorded are located in Brazil (55 species), Micronesia (19), Japan (17) and Puerto Rico (15). Other localities are represented by eight or fewer reported species.

Rhizophora mangle with 34 species recorded is the most common host, followed by *Bruguiera gymnorhiza* (17) and *Sonneratia alba* (15).

Checklist for the xylophilous basidiomycetes species cited from mangroves:

***AGARICALES* Underw.**
***Inocybaceae* Jülich**

Crepidotus krieglsteineri Singer, Z. Mykol. 54(1): 70. 1988.

LOCALITY: Florida – USA (Poonyth et al. 2000, Schmit & Shearer 2003).
SUBSTRATE: dead wood of *R. mangle* (Poonyth et al. 2000, Schmit & Shearer 2003).

Crepidotus uber (Berk. & M.A. Curtis) Sacc., Sylloge Fungorum 5: 878. 1887.

BASIONYM: *Agaricus uber* Berk. & M.A. Curtis.
LOCALITY: Cabo Rojo – Puerto Rico (Nieves-Rivera 2005, Nieves-Rivera et al. 2005).
SUBSTRATE: bark and dead woods of *R. mangle*, rotting aerial roots and upright tree trunks (Nieves-Rivera 2005, Nieves-Rivera et al. 2005).

***Marasmiaceae* Roze ex Kühner**

Calathella mangrovei E.B.G. Jones & Agerer, Bot. Mar. 35(4): 259. 1992.

LOCALITIES: Brunei, Malaysia and Maldives (Schmit & Shearer 2003).
SUBSTRATE: decaying *Av. marina*, *B. parviflora* and *K. candel* (Schmit & Shearer 2003).

***Niaceae* Jülich**

Halocyphina villosa Kohlm. & E. Kohlm., Nova Hedwigia 9: 100. 1965.

LOCALITIES: Brunei, Indonesia and Malaysia (Hyde & Alias 2000, Schmit & Shearer 2003); Godavari and Krishna delta mangroves (east coast) – India (Sarma et al. 2001, Schmit & Shearer 2003); west coast of India (Maria & Shridhar 2002); Bermuda, Belize, Columbia, Florida – USA, Ghana, Liberia, Saint Crox, Trinidad and Tobago, Andaman Islands, South Africa, Lakshadweep Islands, Maldives, Mauritius, Nicobar Islands, Sri Lanka, Sumatra, Seychelles, Fiji, Hawaii – USA, Macau,

Philippines, China, Singapore, Thailand and Australia (Schmit & Shearer 2003).
SUBSTRATE: *Avicennia* spp. (Sarma et al. 2001); *R. apiculata* (Sarma et al. 2001, Schmit & Shearer 2003); *N. fruticans* (Hyde & Alias 2000, Schmit & Shearer 2003); *Ac. ilicifolius*, *Ae. corniculatum*, *Av. alba*, *Av. germinans*, *Av. marina*, *Av. officinalis*, *B. cylindrica*, *B. gymnorrhiza*, *B. parviflora*, *C. erectus*, *K. candel*, *La. racemosa*, *R. mangle*, *R. mucronata*, *R. stylosa*, *S. alba*, *S. griffithii*, *Ta. gallica* and *X. granatum* (Schmit & Shearer 2003).

Nia vibrissa R.T. Moore & Meyers, Mycologia 51(6): 874. 1961.

LOCALITIES: Brazil (Kohlmeyer 1969, Kohlmeyer & Kohlmeyer 1971); Bermuda, Belize, Columbia, Florida – USA, Ghana, Liberia, Saint Croix, Tobago, Trinidad, Andaman Islands, Andhra Pradesh – India, East South Africa, Lakshadweep Islands, Maldives, Maharashtra – India, Mauritius, Nicobar Islands, Sri Lanka, Sumatra, Seychelles, Tamil Nadu – India, Brunei, Fiji, Hawaii – USA, Malaysia, Macau, Philippines, Shenzhen China, Singapore, Thailand, Victoria – Australia (Schmit & Shearer 2003).
SUBSTRATE: *R. mangle* (Kohlmeyer 1969, Kohlmeyer & Kohlmeyer 1971, Schmit & Shearer 2003); *Av. germinans*, *Av. marina*, *La. racemosa* (Schmit & Shearer 2003).

Psathyrellaceae **Vilgalys, Moncalvo & Redhead**

Psathyrella rhizophorae Singer, Beihefte zur Sydowia 7: 74. 1973.

LOCALITY: Hawaii – USA (Poonyth et al. 2000, Schmit & Shearer 2003).
SUBSTRATE: dead young plants of *R. mangle* (Poonyth et al. 2000, Schmit & Shearer 2003).

Physalacriaceae **Corner**

Physalacria maipoensis Inderb. & Desjardin, Mycologia 91(4): 666. 1999.

LOCALITY: Hong Kong (Inderbitzin & Desjardin 1999, Schmit & Shearer 2003).
SUBSTRATE: wood at the base of living *Av. marina* (Inderbitzin & Desjardin 1999, Schmit & Shearer 2003); decaying driftwood on swampy ground (Inderbitzin & Desjardin 1999).

Pleurotaceae **Kühner**

Pleurotus djamor (Rumph. ex Fr.) Boedijn, Rumphius Memorial Volume: 292. 1959.

BASIONYM: *Agaricus djamor* Rumph. ex Fr.
LOCALITY: Puerto Rico (Nieves-Rivera 2005).
SUBSTRATE: *R. mangle* (Nieves-Rivera 2005).

Pleurotus ostreatus (Jacq.) P. Kumm., Führ. Pilzk.: 104. 1871.

BASIONYM: *Agaricus ostreatus* Jacq.
LOCALITY: Amapá – Brazil (Sotão et al. 1991, 2003).
COMMENTS: recorded as *Pleurotus opuntiae* (Durieu & Lév.) Sacc. by Sotão et al. (1991, 2003).

Pleurotus ostreatoroseus Singer, Publicações Instituto Micologia, Universidade do Recife 304: 10. 1961.

LOCALITIES: Amapá – Brazil (Sotão et al. 1991, 2003); São Paulo – Brazil (Gugliotta & Capelari 1995, Gugliotta & Bononi 1999).
SUBSTRATE: dead branches of living *Av. schaueriana* and dead branches of fallen *Avicennia* sp. (Gugliotta & Bononi 1999).

Pterulaceae Corner

Radulomyces confluens (Fr.) M.P. Christ., Dansk bot. Ark. 19(2): 230. 1960.

BASIONYM: *Thelephora confluens* Fr.
LOCALITY: Okinawa – Japan (Maekawa et al. 2003).
SUBSTRATE: decaying branch of *B. gymnorrhiza* and *S. alba* (Maekawa et al. 2003).

Schizophyllaceae Quél.

Schizophyllum brasiliense W.B. Cooke, Mycologia 53(6): 593. 1961.

LOCALITY: Pará – Brazil (Sotão et al. 2002, 2003).

Schizophyllum commune Fr., Obs. Mycol 1: 103. 1815.

LOCALITIES: Amapá – Brazil (Sotão et al. 1991, 2003); Pará – Brazil (Campos et al. 2003, Sotão et al. 2002, 2003); Boquerón and Laguna Cartagena National Wildlife Refuges – Puerto Rico (Nieves-Rivera 2005, Nieves-Rivera & Lodge 1998); Lajas – Puerto Rico (Nieves-Rivera 2005, Nieves-Rivera et al. 2005).
SUBSTRATE: decaying *La. racemosa* and decaying *R. mangle* (Campos et al. 2003); decaying *Avicennia* sp. and decaying *Rhizophora* sp. (Sotão et al. 2002); *Avicennia* sp. and *R. mangle* (Cooke 1961, Kohlmeyer 1969);

dead wood of *R. mangle* (Nieves-Rivera & Lodge 1998); *R. mangle* (Schmit & Shearer 2003, Nieves-Rivera 2005); *R. mangle* bark (Nieves-Rivera et al. 2005); *Av. germinans* and *La. racemosa* (Nieves-Rivera 2005).

Schizophyllum umbrinum Berk., Hooker's J. Bot. Kew Gard. Misc. 3: 15. 1851.

LOCALITY: Pará – Brazil (Sotão et al. 2003).

***Strophariaceae* Singer & A.H. Sm.**

Hypholoma subviride (Berk. & M.A. Curt.) Dennis, Kew Bull. 15(1): 134. 1961.

BASIONYM: *Agaricus subviridis* Berk. & M.A. Curtis
LOCALITY: Amapá – Brazil (Sotão et al. 1991, 2003).

***AURICULARIALES* J. Schröt.**
***Auriculariaceae* Fr.**

Auricularia auricula-judae (Bull.) Quél., Enchir. fung.: 207. 1886.

BASIONYM: *Tremella auricula-judae* Bull.
LOCALITY: Pará – Brazil (Campos et al. 2003, Sotão et al. 2003).
SUBSTRATE: decaying *Av. germinans*, *La. racemosa* and *R. mangle* (Campos et al. 2003).
COMMENTS: cited as *Auricularia auricula* (L.) Underw. by Campos et al. (2003) and Sotão et al. (2003).

Auricularia fuscosuccinea (Mont.) Henn., Bot Jb. 17: 19. 1893.

BASIONYM: *Hirneola fuscosuccinea* Mont.
LOCALITY: Pará – Brazil (Campos et al. 2003, Sotão et al. 2003).
SUBSTRATE: decaying *R. mangle* (Campos et al. 2003).

Auricularia polytricha (Mont.) Sacc., Atti Inst. Veneto Sci. lett., ed Arti, Série 6 3: 722. 1885.

BASIONYM: *Exidia polytricha* Mont.
LOCALITIES: Amapá – Brazil (Sotão et al. 1991, 2003); Pará – Brazil (Sotão et al. 2002, 2003).
SUBSTRATE: decaying *Avicennia* sp. and *Rhizophora* sp. (Sotão et al. 2002).

***DACRYMYCETALES* Henn.**
***Dacrymycetaceae* J. Schröt.**

Calocera cornea (Batsch ex Fr.) Fr., Sitrp. Agri. Femison. 5: 67. 1827.

BASIONYM: *Clavaria cornea* Batsch
LOCALITY: Pará – Brazil (Campos et al. 2003, Sotão et al. 2003).
SUBSTRATE: decaying *R. mangle* (Campos et al. 2003).

Dacryopinax maxidorii Lowy, Mycotaxon 13(2): 428. 1981.

LOCALITY: Pará – Brazil (Campos et al. 2003, Sotão et al. 2003).
SUBSTRATE: decaying *R. mangle* (Campos et al. 2003).

Dacryopinax spathularia (Schwein.) G.W. Martin, Lloydia 11(2): 116. 1948.

BASIONYM: *Merulius spathularius* Schwein.
LOCALITY: Cabo Rojo – Puerto Rico (Nieves-Rivera 2005, Nieves-Rivera et al. 2005).
SUBSTRATE: *R. mangle* decay wood, sometimes in bark (Nieves-Rivera 2005, Nieves-Rivera et al. 2005).

***GLOEOPHYLLALES* Thorn**
***Gloeophyllaceae* Jülich**

Gloeophyllum mexicanum (Mont.) Ryvarden, Nordic J. Bot. 2(1): 79. 1982.

BASIONYM: *Lenzites mexicana* Mont.
LOCALITY: Amapá – Brazil (Sotão et al. 1991, 2003).

Gloeophyllum striatum (Sw.) Murrill, Bull. Torrey bot. Club 32(7): 370. 1905.

BASIONYM: *Agaricus striatus* Sw.
LOCALITIES: Pará – Brazil (Campos et al. 2003, Sotão et al. 2002, 2003); Cabo Rojo – Puerto Rico (Nieves-Rivera 2005, Nieves-Rivera et al. 2005).
SUBSTRATE: decaying *Av. germinans* and *R. mangle* (Campos et al. 2003); decaying *Rhizophora* sp. (Sotão et al. 2002); *R. mangle* bark (Nieves-Rivera 2005, Nieves-Rivera et al. 2005).

***HYMENOCHAETALES* Oberw.**
***Hymenochaetaceae* Imazeki & Toki**

Erythromyces crocicreas (Berk. & Broome) Hjortstam & Ryvarden, in Hjortstam & Tellería, Mycotaxon 37: 55. 1990.

BASIONYM: *Hymenochaete crocicreas* Berk. & Broome
LOCALITY: Pohnpei Island – Micronesia (Gilbert et al. 2008).
SUBSTRATE: *X. granatum* (Gilbert et al. 2008).

COMMENTS: despite the on-line databases and Kirk et al. (2001) place this genus in *Hymenochaetaceae*, its position in this family is probably wrong, since the genus is characterized by clamped generative hyphae (Hjortstam & Tellería 1990).

Fomitiporella caryophylli (Racib.) T. Wagner & M. Fisch., Mycologia 94(6): 1012. 2002.

BASIONYM: *Trametes caryophylli* Racib.
LOCALITY: Pohnpei Island – Micronesia (Gilbert et al. 2008).
SUBSTRATE: *He. littoralis* (Gilbert et al. 2008).
COMMENTS: recorded as *Phellinus caryophylli* (Racib.) G. Cunn. by Gilbert et al. (2008).

Fomitiporia punctata (Fr.: P. Karst.) Murrill, Lloydia 10: 254. 1957.

BASIONYM: *Polyporus punctatus* Fr.
LOCALITY: Amapá – Brazil (Sotão et al. 1991, 2003).
COMMENTS: recorded as *Phellinus punctatus* (Fr. ex P. Karst.) Pilát by Sotão et al. (1991, 2003).

Fuscoporia callimorpha (Lév.) Groposo, C.L. Leite & Góes-Neto, Mycotaxon 101: 57. 2007.

BASIONYM: *Polyporus callimorphus* Lév.
LOCALITY: Punta Galeta – Panama (Gilbert & Sousa 2002).
SUBSTRATE: *La. racemosa* (Gilbert & Sousa 2002).
COMMENTS: recorded as *Phellinus callimorphus* (Lév.) Ryvarden by Gilbert & Sousa (2002).

Fuscoporia gilva (Schwein.) T. Wagner & M. Fisch., Mycologia 94(6): 1013. 2002.

BASIONYM: *Boletus gilvus* Schwein.
LOCALITIES: Amapá – Brazil (Sotão et al. 1991, 2003); Pará – Brazil (Campos et al. 2003, Sotão et al. 2002, 2003); Punta Galeta – Panama (Gilbert & Sousa 2002); Punta Gorda, Florida – USA (Nieves-Rivera et al. 2005); Hawaii – USA (Kohlmeyer 1969, Schmit & Shearer 2003).
SUBSTRATE: decaying *Av. germinans* and *R. mangle* (Campos et al. 2003); *La. racemosa* (Gilbert & Sousa 2002, Nieves-Rivera et al. 2005); *R. mangle* (Kohlmeyer 1969, Schmit & Shearer 2003).
COMMENTS: Poonyth et al. (2000) reported this species from mangroves, but did not provide any information about location or host. The species was recorded as *Phellinus gilvus* (Schwein.) Pat. in all the articles above. Its presence in Puerto Rico mangroves must be confirmed, once Nieves-

Rivera et al. (2005) collected only a single basidiome eaten by insects and it was identified as *P*. cf. *gilvus*.

Fuscoporia senex (Nees & Mont.) Ghobad-Nejhad, Mycotaxon 101: 208. 2007.

BASIONYM: *Polyporus senex* Nees & Mont.
LOCALITY: Pará – Brazil (Sotão et al. 2003).
COMMENTS: recorded as *Phellinus senex* (Nees & Mont.) Imazeki by Sotão et al. (2003).

Inonotus luteoumbrinus (Romell) Ryvarden, Syn. Fungorum 21: 79. 2005.

BASIONYM: *Phaeoporus luteoumbrinus* Romell
LOCALITIES: Kosrae and Pohnpei Islands – Micronesia (Gilbert et al. 2008).
SUBSTRATE: *B. gymnorhiza, Lu. littorea, S. alba* and *X. granatum* (Gilbert et al. 2008).
COMMENTS: recorded as *Aurificaria luteoumbrina* (Romell) D.A. Reid by Gilbert et al. (2008).

Inonotus pachyphloeus (Pat.) T. Wagner & M. Fisch., Mycologia 94(6): 1009. 2002.

BASIONYM: *Polyporus pachyphloeus* Pat.
LOCALITIES: South Andaman, India and Philippines (Fidalgo 1968b).
SUBSTRATE: *Bruguiera* sp., *B. gymnorrhiza* and *R. mucronata* (Fidalgo 1968b).
COMMENTS: recorded as *Phellinus pachyphloeus* Pat. by Fidalgo (1968b).

Inonotus porrectus Murrill, Tropical Polypores: 68. 1915.

LOCALITY: Puerto Rico (Nieves-Rivera 2005).
SUBSTRATE: *La. racemosa* (Nieves-Rivera 2005).

Phellinus adhaerens J.E. Wright & Blumenf., Mycotaxon 21: 416. 1984.

LOCALITY: Punta Galeta – Panama (Gilbert & Sousa 2002).
SUBSTRATE: *La. racemosa* (Gilbert & Sousa 2002).

Phellinus fastuosus (Lév.) Ryvarden, Norweg. J. Bot. 19(3–4): 234. 1972.

BASIONYM: *Polyporus fastuosus* Lév.
LOCALITIES: Pará – Brazil (Campos et al. 2003, Sotão et al. 2003); Kosrae and Pohnpei Islands – Micronesia (Gilbert et al. 2008).
SUBSTRATE: decaying *Av. germinans* (Campos et al. 2003); *B. gymnorhyza, Lu. littorea, S. alba* and *X. granatum* (Gilbert et al. 2008).

Phellinus lamaensis (Murrill) Pat., Bull. Mus. Hist. nat. 29: 336. 1923.

BASIONYM: *Pyropolyporus lamaensis* Murrill
LOCALITY: Bengal – Bangladesh (Fidalgo 1968b).
SUBSTRATE: *Rhizophoraceae* species (Fidalgo 1968b).

Phellinus mangrovicus (Imazeki) Imazeki, Bull. Gov. Forest Exp. St. Tokyo 57: 114. 1952.

BASIONYM: *Fomes mangrovicus* Imazeki
LOCALITIES: Pará – Brazil (Campos & Cavalcanti 2000, Campos et al. 2003, Sotão et al. 2003); Kusai – Japan (Larsen & Cobb-Poulle 1990); Pohnpei Island – Micronesia (Gilbert et al. 2008).
SUBSTRATE: *R. mangle* (Larsen & Cobb-Poulle 1990); decaying *R. mangle* (Campos & Cavalcanti 2000, Campos et al. 2003); *X. granatum* (Gilbert et al. 2008).

Phellinus merrillii (Murrill) Ryvarden, Norweg. J. Bot. 19(3–4): 234. 1972.

BASIONYM: *Pyropolyporus merrillii* Murrill
LOCALITIES: Lajas – Puerto Rico (Nieves-Rivera 2005, Nieves-Rivera et al. 2005); Pohnpei Island – Micronesia (Gilbert et al. 2008).
SUBSTRATE: *R. mangle* bark and dead wood (Nieves-Rivera 2005, Nieves-Rivera et al. 2005); *X. granatum* (Gilbert et al. 2008).

Phellinus rimosus (Berk.) Pilát, Annls mycol. 38(1): 80. 1940.

BASIONYM: *Polyporus rimosus* Berk.
LOCALITY: São Paulo – Brazil (Bononi 1984).
SUBSTRATE: *R. mangle* (Bononi 1984).

Phellinus swieteniae (Murrill) S. Herrera & Bondartseva, in Bondartseva & Herrera, Mikol. Fitopatol. 14(1): 9. 1980.

BASIONYM: *Fulvifomes swieteniae* Murrill
LOCALITY: Punta Galeta – Panama (Gilbert & Sousa 2002).
SUBSTRATE: *Av. germinans* (Gilbert & Sousa 2002).

Schizoporaceae **Jülich**

Hyphodontia crustosa (Pers.) J. Erikss., Symb. bot. upsal. 16(1): 104. 1958.

BASIONYM: *Odontia crustosa* Pers.
LOCALITY: Okinawa – Japan (Maekawa et al. 2003).
SUBSTRATE: decaying branch of *Th. populnea* (Maekawa et al. 2003).

Hyphodontia gossypina (Parmasto) Hjortstam, Mycotaxon 39: 416. 1990.

BASIONYM: *Fibrodontia gossypina* Parmasto
LOCALITY: Okinawa – Japan (Maekawa et al. 2003).
SUBSTRATE: decaying branch of *P. obovata* (Maekawa et al. 2003).

Schizopora flavipora (Berk. & M.A. Curtis ex Cooke) Ryvarden, Mycotaxon 23: 186. 1985.

BASIONYM: *Poria flavipora* Berk. & M.A. Curtis ex Cooke
LOCALITY: Pohnpei Islands – Micronesia (Gilbert et al. 2008).
SUBSTRATE: *S. alba* (Gilbert et al. 2008).

PHALLALES E. Fisch.
Phallaceae Corda

Clathrus cf. *crispus* Turpin, Dict. Sci. Nat. Atlas Acotyl., Tab. 49. 1820.

LOCALITY: Lajas – Puerto Rico (Maldonado-Ramírez & Torres-Pratts 2005, Nieves-Rivera 2005).
SUBSTRATE: soil, humus and decomposing leaves of *R. mangle* (Maldonado-Ramírez & Torres-Pratts 2005, Nieves-Rivera 2005).

POLYPORALES Gäum.
Fomitopsidaceae Jülich

Antrodia serialis (Fr.) Donk, Persoonia 4(3): 340. 1966.

BASIONYM: *Polyporus serialis* Fr.
LOCALITY: São Paulo – Brazil (Almeida-Filho et al. 1993).

Antrodia sinuosa (Fr.) P. Karst., Meddn. Soc. Fauna Flora fenn. 6: 10. 1881.

BASIONYM: *Polyporus sinuosus* Fr.
LOCALITIES: Amapá – Brazil (Sotão et al. 1991, 2003); Pará – Brazil (Sotão et al. 2003).

Daedalea flavida Lév., Annls Sci. Nat., Bot., sér. 3 2: 198. 1844.

LOCALITY: Kosrae Island – Micronesia (Gilbert et al. 2008).
SUBSTRATE: *B. gymnorhiza* (Gilbert et al. 2008).

Laetiporus persicinus (Berk. & M.A. Curtis) Gilb., Mycotaxon 12(2): 385. 1981.

BASIONYM: *Polyporus persicinus* Berk. & M.A. Curtis
LOCALITIES: Amapá – Brazil (Sotão et al. 1991, 2003); Pará – Brazil (Sotão et al. 2003).
COMMENTS: recorded as *Amauroderma brittonii* Murrill by Sotão et al. (1991) and Sotão et al. (2003).

***Ganodermataceae* Donk**

Ganoderma applanatum (Pers.) Pat., Hyménomyc. Eur.: 143. 1887.

BASIONYM: *Boletus applanatus* Pers.
LOCALITIES: Amapá – Brazil (Sotão et al. 1991, 2003); Pará – Brazil (Sotão et al. 2002).

Ganoderma lucidum (Curtis) Karst., Revue mycol., Toulouse 3(9): 17. 1881.

BASIONYM: *Boletus lucidus* Curtis.
LOCALITY: Amapá – Brazil (Sotão et al. 1991, 2003).

Ganoderma resinaceum Boud., in Patouillard, Bull. Soc. mycol. Fr. 5: 72. 1889.

LOCALITY: Grenada (Schmit & Shearer 2003).
SUBSTRATE: *Hi. mancinellae* (Schmit & Shearer 2003).
COMMENTS: recorded as *Ganoderma pulverulentum* Murrill by Schmit & Shearer (2003).

Ganoderma tornatum (Pers.) Bres., Ann. Mycol. 10: 502. 1912.

BASIONYM: *Polyporus tornatus* Pers.
LOCALITY: Pohnpei Island – Micronesia (Gilbert et al. 2008).
SUBSTRATE: *R. apiculata* (Gilbert et al. 2008).

***Meripilaceae* Jülich**

Rigidoporus lineatus (Pers.) Ryvarden, Norweg. J. Bot. 19(3–4): 236. 1972.

BASIONYM: *Polyporus lineatus* Pers.
LOCALITY: Amapá – Brazil (Sotão et al. 1991, 2003).

Rigidoporus microporus (Sw.) Overeem, Icon. Fung. Malay. 5: 1. 1924.

BASIONYM: *Boletus microporus* Sw.
LOCALITY: Pohnpei Islands – Micronesia (Gilbert et al. 2008).
SUBSTRATE: *S. alba* (Gilbert et al. 2008).

Rigidoporus vinctus (Berk.) Ryvarden, Norweg. J. Bot. 19(2): 143. 1972.

BASIONYM: *Polyporus vinctus* Berk.
LOCALITIES: Kosrae and Pohnpei Islands – Micronesia (Gilbert et al. 2008).
SUBSTRATE: *R. apiculata* and *S. alba* (Gilbert et al. 2008).

***Meruliaceae* P. Karst.**

Cerocorticium molle (Berk. & M.A. Curtis) Jülich, Persoonia 8(2): 219. 1975.

BASIONYM: *Corticium molle* Berk. & M.A. Curtis
LOCALITY: Okinawa – Japan (Maekawa et al. 2003).
SUBSTRATE: decaying trunk of *B. gymnorrhiza*, decaying and decorticated trunk of *K. candel* (L.) Druce (Maekawa et al. 2003).

Cymatoderma dendriticum (Pers.) D.A. Reid, Kew Bull. 13: 523. 1959.

BASIONYM: *Thelephora dendritica* Pers.
LOCALITY: Amapá – Brazil (Sotão et al. 1991, 2003).

Hyphoderma ayresii (Berk. ex Cooke) Boidin & Gilles, Cryptog. Mycol. 12(2): 103. 1991.

BASIONYM: *Peniophora ayresii* Berk. ex Cooke
LOCALITY: Okinawa – Japan (Maekawa et al. 2003).
SUBSTRATE: decaying and decorticated trunk of *He. Littoralis* and decaying twig of *B. gymnorrhiza* (Maekawa et al. 2003).

Hyphoderma nudicephalum Gilb. & M. Blackw., Mycotaxon 33: 378. 1988.

LOCALITY: Okinawa – Japan (Maekawa et al. 2003).
SUBSTRATE: decaying trunk of *R. mucronata* (Maekawa et al. 2003).

Junghuhnia crustacea (Jungh.) Ryvarden, Persoonia 7(1): 18. 1972.

BASIONYM: *Laschia crustacea* Jungh.
LOCALITY: Pará – Brazil (Sotão et al. 2002, 2003).
SUBSTRATE: decaying *Rhizophora* sp. (Sotão et al. 2002).

Junghuhnia polycystidifera (Rick) Rajchenb., Nordic J. Bot. 7(5): 566. 1987.

BASIONYM: *Poria polycystidifera* Rick
LOCALITY: São Paulo – Brazil (Almeida-Filho et al. 1993).
SUBSTRATE: trunk of *La. racemosa* (Almeida-Filho et al. 1993).
COMMENTS: recorded as *Junghuhnia microspora* Rajchenb. by Almeida-Filho et al. (1993).

Junghuhnia undigera (Berk. & M.A. Curtis) Ryvarden, Mycotaxon 20(2): 359. 1984.

BASIONYM: *Polyporus undigerus* Berk. & M.A. Curtis
LOCALITY: Pará – Brazil (Sotão et al. 2003).

Phlebia acanthocystis Gilb. & Nakasone, in Nakasone & Gilbertson, Folia cryptog. Estonica 33: 85. 1998.

LOCALITY: Okinawa – Japan (Maekawa et al. 2003).
SUBSTRATE: decaying branch of *R. mucronata* and *B. gymnorrhiza*, decaying and decorticated branch of *B. gymnorrhiza* and *S. alba* (Maekawa et al. 2003).

Steccherinum subochraceum Bononi & Hjortstam, in Hjortstam & Bononi, Mycotaxon 26: 467. 1986.

LOCALITY: Amapá – Brazil (Sotão et al. 1991, 2003).

***Phanerochaetaceae* Jülich**

Antrodiella reflexa Ryvarden & Nuñez, in Nuñez & Ryvarden, Mycotaxon 71: 362. 1999.

LOCALITY: Paraná – Brazil (Ryvarden & Meijer 2002, Meijer 2006).
SUBSTRATE: dead standing trunk of *Av. schaueriana* (Ryvarden & Meijer 2002).

Ceriporia alachuana (Murill) Hallenb., Iranian Journal of Plant Pathology 15(1–4): 14. 1979.

BASIONYM: *Poria alachuana* Murrill
LOCALITY: Punta Galeta – Panama (Gilbert & Sousa 2002).
SUBSTRATE: *Av. germinans* (Gilbert & Sousa 2002).

Ceriporiopsis aneirina (Sommerf.) Dománski, Acta Soc. Bot. Pol. 32: 732. 1963.

BASIONYM: *Polyporus aneirinus* Sommerf.
LOCALITY: Punta Galeta – Panama (Gilbert & Sousa 2002).
SUBSTRATE: *R. mangle* (Gilbert & Sousa 2002).

Phanerochaete sordida (P. Karst.) J. Erikss. & Ryvarden, The Corticiaceae of North Europe 5: 1023. 1978.

BASIONYM: *Corticium sordidum* P. Karst.
LOCALITY: Okinawa – Japan (Maekawa et al. 2003).
SUBSTRATE: decaying branch of *B. gymnorrhiza* and *S. alba* (Maekawa et al. 2003).

Phanerochaete tropica (Sheng H. Wu) Hjortstam, Mycotaxon 54: 189. 1995.

BASIONYM: *Efibula tropica* Sheng H. Wu
LOCALITY: Okinawa – Japan (Maekawa et al. 2003).

***Polyporaceae* Fr. ex Corda**

Coriolopsis badia (Berk.) Murrill, Bull. Torrey bot. Club 34: 466. 1907.

BASIONYM: *Trametes badia* Berk.
LOCALITY: Florida – USA (Nieves-Rivera et al. 2005).
SUBSTRATE: *Av. germinans* dead trunks (Nieves-Rivera et al. 2005).
COMMENTS: recorded as *Coriolopsis badius* (Cooke) Murrill by Nieves-Rivera et al. (2005).

Coriolopsis caperata (Berk.) Murrill, N. Amer. Fl. 9(2): 77. 1908.

BASIONYM: *Polyporus caperatus* Berk.
LOCALITIES: Punta Galeta – Panama (Gilbert & Sousa 2002); Pon Sok, Manantí, Coco Solo and David – Panama (Parrent et al. 2004); Puerto Rico (Nieves-Rivera 2005).
SUBSTRATE: *La. racemosa* (Gilbert & Sousa 2002, Parrent et al. 2004); *R. mangle* (Gilbert & Sousa 2002, Nieves-Rivera 2005).
COMMENTS: recorded as *Datronia* (=*Coriolopsis*) *caperata* (Berk.) Ryvarden by Gilbert & Sousa (2002).

Coriolopsis floccosa (Jungh.) Ryvarden, Norweg. J. Bot. 19(3–4): 230. 1972.

BASIONYM: *Polyporus floccosus* Jungh.
LOCALITIES: Pará – Brazil (Sotão et al. 2002, 2003); São Paulo – Brazil (Almeida-Filho et al. 1993); Lajas – Puerto Rico (Nieves-Rivera 2005, Nieves-Rivera et al. 2005).
SUBSTRATE: dead trunk *La. racemosa* (Almeida-Filho et al. 1993); decaying *Rhizophora* sp. (Sotão et al. 2002); *R. mangle* barks (Nieves-Rivera 2005, Nieves-Rivera et al. 2005).
COMMENTS: recorded as *Coriolopsis rigida* (Berk. & Mont.) Murrill by Almeida-Filho et al. (1993) and Sotão et al. (2002, 2003).

Coriolopsis sanguinaria (Klotzch) Teng, Chung-kuo Ti Chen-chun: 760. 1963.

BASIONYM: *Polyporus sanguinarius* Klotzch
LOCALITIES: Kosrae and Pohnpei Islands – Micronesia (Gilbert et al. 2008).
SUBSTRATE: *R. apiculata* (Gilbert et al. 2008).

Diplomitoporus cf. *stramineus* Ryvarden & Iturr., Mycologia 95(6): 1069. 2003.

LOCALITY: Kosrae Island – Micronesia (Gilbert et al. 2008).
SUBSTRATE: *X. granatum* (Gilbert et al. 2008).

Earliella scabrosa (Pers.) Gilb. & Ryvarden, Mycotaxon 22(2): 364. 1985.

BASIONYM: *Polyporus scabrosus* Pers.
LOCALITY: Amapá – Brazil (Sotão et al. 1991, 2003).

COMMENTS: recorded as *Earliella corrugata* (Pers.) Murrill by Sotão et al. (1991).

Favolus tenuiculus P. Beauv., Fl. Oware 1(8): 74. 1806.

LOCALITY: Venezuela (Fidalgo 1968a).
SUBSTRATE: *La. racemosa* (Fidalgo 1968a).
COMMENTS: recorded as *Favolus brasiliensis* (Fr.) Fr. by Fidalgo (1968a).

Hexagonia hydnoides (Sw.) M. Fidalgo, Mem. New York Bot. Gard. 17: 64. 1968.

BASIONYM: *Boletus hydnoides* Sw.
LOCALITIES: Pará – Brazil (Campos et al. 2003, Sotão et al. 2002, 2003); São Paulo – Brazil (Gugliotta & Capelari 1995, Gugliotta & Bononi 1999); Puerto Rico (Nieves-Rivera 2005); Florida – USA (Nieves-Rivera et al. 2005).
SUBSTRATE: decaying *Av. germinans* and *R. mangle* (Campos et al. 2003); decaying *Rhizophora* sp. (Sotão et al. 2002); bark of *R. mangle* (Nieves-Rivera 2005, Nieves-Rivera et al. 2005).

Hexagonia variegata Berk., Ann. Mag. nat. Hist., Ser. 2 9: 196. 1852.

LOCALITIES: Amapá – Brazil (Sotão et al. 2003); Pará – Brazil (Campos et al. 2003, Sotão et al. 2003).
COMMENTS: recorded as *Hexagonia papyracea* Berk. by Campos et al. (2003) and Sotão et al. (2003).

Lentinus cladopus Lév., Annls Sci. Nat., Bot., sér. 3 2: 174. 1844.

LOCALITY: Amapá – Brazil (Sotão et al. 1991, 2003).

Lentinus crinitus (L.) Fr., Syst. Orb. Veg.: 77. 1825.

BASIONYM: *Agaricus crinitus* L.
LOCALITIES: Amapá – Brazil (Sotão et al. 1991, 2003); Pará – Brazil (Campos et al. 2003, Sotão et al. 2002, 2003); Cabo Rojo – Puerto Rico (Nieves-Rivera 2005, Nieves-Rivera et al. 2005).
SUBSTRATE: decaying *Avicennia* sp. and *Rhizophora* sp. (Sotão et al. 2002); fallen trunk of *R. mangle* (Nieves-Rivera 2005, Nieves-Rivera et al. 2005).
COMMENTS: recorded as *Panus crinitus* (L.) Singer by Nieves-Rivera (2005).

Lenzites elegans (Spreng.) Pat., Essai Tax. Hyménomyc.: 89. 1900.

BASIONYM: *Daedalea elegans* Spreng.

LOCALITIES: Pará – Brazil (Sotão et al. 2002, 2003); Santa Catarina – Brazil (Loguercio-Leite 1993); São Paulo – Brazil (Gugliotta & Capelari 1995, Gugliotta & Bononi 1999); Puerto Rico (Nieves-Rivera 2005).
SUBSTRATE: decaying *Avicennia* sp. (Sotão et al. 2002); rotten trunk of *Avicennia* sp. (Gugliotta & Bononi 1999); *R. mangle* (Nieves-Rivera 2005).
COMMENTS: recorded as *Trametes elegans* (Spreng.) Fr. by Loguercio-Leite (1993), Gugliotta & Capelari (1995), Gugliotta & Bononi (1999) and Sotão et al. (2002, 2003).

Lopharia cinerescens (Schwein.) G. Cunn., Trans. Roy. Soc. New Zealand 83: 622. 1956.

BASIONYM: *Telephora cinerescens* Schwein.
LOCALITIES: Pará – Brazil (Campos et al. 2003, Sotão et al. 2002, 2003).
SUBSTRATE: decaying *Av. germinans*, *La. racemosa* and *R. mangle* (Campos et al. 2003); decaying *Avicennia* sp. and decaying and living *Rhizophora* sp. (Sotão et al. 2002).
COMMENTS: recorded as *Stereum cinerescens* (Schwein) Massee by Campos et al. (2003) and Sotão et al. (2002, 2003).

Nigrofomes melanoporus (Mont.) Murrill, Bull. Torrey bot. Club 31(8): 425. 1904.

BASIONYM: *Polyporus melanoporus* Mont.
LOCALITY: Pohnpei Island – Micronesia (Gilbert et al. 2008).
SUBSTRATE: *B. gymnorhiza* (Gilbert et al. 2008).

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

BASIONYM: *Polyporus vinosus* Berk.
LOCALITY: Amapá – Brazil (Sotão et al. 1991, 2003).

Perenniporia tenuis (Schwein.) Ryvarden, Norweg. J. Bot. 20(1): 9. 1973.

BASIONYM: *Polyporus tenuis* Schwein.
LOCALITY: Pohnpei Island – Micronesia (Gilbert et al. 2008).
SUBSTRATE: *S. alba* (Gilbert et al. 2008).

Perenniporia tephropora (Mont.) Ryvarden, Norweg. J. Bot. 19(2): 233. 1972.

BASIONYM: *Polyporus tephroporus* Mont.
LOCALITY: Pohnpei Island – Micronesia (Gilbert et al. 2008).
SUBSTRATE: *S. alba* (Gilbert et al. 2008).

Poronidulus conchifer (Schwein.) Murrill, Bull. Torrey bot. Club 31(8): 426. 1904.

BASIONYM: *Boletus conchifer* Schwein.

LOCALITY: Amapá – Brazil (Sotão et al. 1991, 2003).
COMMENTS: recorded as *Trametes conchifer* (Schwein.) Pilát by Sotão et al. (1991, 2003).

Pycnoporus cinnabarinus (Jacq.) P. Karst., Revue mycol. 3: 18. 1881.

BASIONYM: *Boletus cinnabarinus* Jacq.
LOCALITY: Hawaii – USA (Lee & Baker 1973, Schmit & Shearer 2003).
SUBSTRATE: living roots of *R. mangle* above the tidal line (Lee & Baker 1973, Schmit & Shearer 2003).
COMMENTS: recorded as *Polyporus cinnabarinus* (Jacq.) Fr. by Lee & Baker (1973) and Schmit & Shearer (2003).

Pycnoporus sanguineus (L.:Fr.) Murrill, Bull. Torrey bot. Club 31(8): 421. 1904.

BASIONYM: *Boletus sanguineus* L.
LOCALITIES: Amapá – Brazil (Sotão et al. 1991, 2003); Pará – Brazil (Campos et al. 2003, Sotão et al. 2002, 2003); São Paulo – Brazil (Almeida-Filho et al. 1993); Cabo Rojo – Puerto Rico (Nieves-Rivera 2005, Nieves-Rivera et al. 2005).
SUBSTRATE: decaying *Rhizophora* sp. (Sotão et al. 2002); dead wood of *R. mangle* (Nieves-Rivera 2005, Nieves-Rivera et al. 2005).

Tinctoporellus epimiltinus (Berk. & Broome) Ryvarden, Trans. Br. mycol. Soc. 73(1): 18. 1979.

BASIONYM: *Polyporus epimiltinus* Berk. & Broome
LOCALITIES: Kosrae and Pohnpei Islands – Micronesia (Gilbert et al. 2008).
SUBSTRATE: *B. gymnorhiza* and *S. alba* (Gilbert et al. 2008).

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

LOCALITIES: Kosrae and Pohnpei Islands – Micronesia (Gilbert et al. 2008).
SUBSTRATE: *B. gymnorhiza*, *R. apiculata* and *S. alba* (Gilbert et al. 2008).

Trametes maxima (Mont.) A. David & Rajchenb., Mycotaxon 22(2): 315. 1985.

BASIONYM: *Irpex maximus* Mont.
LOCALITY: Amapá – Brazil (Sotão et al. 1991, 2003).

Trametes membranacea (Sw.) Kreisel, Monografias, Ciencias, Univ. Habana, Ser. 4 16: 83. 1971.

BASIONYM: *Boletus membranaceus* Sw.
LOCALITY: Amapá – Brazil (Sotão et al. 1991, 2003).

Trametes nivosa (Berk.) Murrill, N. Amer. Fl. 9(1): 42. 1907.

BASIONYM: *Polyporus nivosus* Berk.
LOCALITIES: Kosrae and Pohnpei Islands – Micronesia (Gilbert et al. 2008).
SUBSTRATE: *B. gymnorhiza* and *R. apiculata* (Gilbert et al. 2008).
COMMENTS: recorded as *Fomitopsis nivosa* (Berk.) Gilb. & Ryvarden by Gilbert et al. (2008).

Trametes rhizophorae Reichardt, Reise der Österr. Fregatte Novara: 139. 1870.

LOCALITY: Papua New Guinea (Poonyth et al. 2000, Schmit & Shearer 2003).
SUBSTRATE: trunk of *Rhizophora* and *R. mangle* (Kohlmeyer 1969, Poonyth et al. 2000, Schmit & Shearer 2003).

Trametes villosa (Sw.) Kreisel, Monografias, Ciencias, Univ. Habana, Ser. 4 16: 83. 1971.

BASIONYM: *Boletus villosus* Sw.
LOCALITIES: Amapá – Brazil (Sotão et al. 1991, 2003); Puerto Rico (Nieves-Rivera 2005).
SUBSTRATE: *C. erectus* (Nieves-Rivera 2005).

Trichaptum abietinum (Dicks.) Ryvarden, Norweg. J. Bot. 19(3–4): 237. 1972.

BASIONYM: *Boletus abietinus* Dicks.
LOCALITY: Pará – Brazil (Campos et al. 2003, Sotão et al. 2003).
SUBSTRATE: decaying *R. mangle* (Campos et al. 2003).

Trichaptum biforme (Fr.) Ryvarden, Norweg. J. Bot. 19(3–4): 237. 1972.

BASIONYM: *Polyporus biformis* Fr.
LOCALITY: Punta Galeta – Panama (Gilbert & Sousa 2002).
SUBSTRATE: *Av. germinans*, *La. racemosa* and *R. mangle* (Gilbert & Sousa 2002).

Trichaptum byssogenum (Jungh.) Ryvarden, Norweg. J. Bot. 19(3-4): 237. 1972.

BASIONYM: *Polyporus byssogenus* Jungh.
LOCALITY: Pará – Brazil (Campos et al. 2003, Sotão et al. 2002, 2003).
SUBSTRATE: decaying *R. mangle* (Campos et al. 2003); decaying *Avicennia* sp. and *Rhizophora* sp. (Sotão et al. 2002).

Trichaptum sector (Ehrenb.) Kreisel, Monografias, Ciencias, Univ. Habana, Ser. 4 16: 84. 1971.

BASIONYM: *Boletus sector* Ehrenb.
LOCALITIES: Pará – Brazil (Sotão et al. 2003); Paraná – Brazil (Rajchenberg & Meijer 1990); São Paulo – Brazil (Almeida-Filho et al. 1993).
SUBSTRATE: *La. racemosa* (Almeida-Filho et al. 1993); dead mangrove *La. racemosa* (Rajchenberg & Meijer 1990).

Trichaptum trichomallum (Berk. & Mont.) Murrill, Bull. Torrey bot. Club 31(11): 608. 1904.

BASIONYM: *Polyporus trichomallus* Berk. & Mont.
LOCALITY: Amapá – Brazil (Sotão et al. 1991, 2003).

Tyromyces chioneus (Fr.) P. Karst., Revue mycol. 3(9): 17. 1881.

BASIONYM: *Polyporus chioneus* Fr.
LOCALITIES: Amapá – Brazil (Sotão et al. 1991, 2003); Pará – Brazil (Campos et al. 2003, Sotão et al. 2002, 2003); Cabo Rojo – Puerto Rico (Nieves-Rivera 2005, Nieves-Rivera et al. 2005).
SUBSTRATE: decaying *R. mangle* (Campos et al. 2003); bark of *R. mangle* (Nieves-Rivera 2005, Nieves-Rivera et al. 2005); decaying *Avicennia* sp. and *Rhizophora* sp. (Sotão et al. 2002).
COMMENTS: Its presence in Puerto Rico mangroves must be confirmed, as Nieves-Rivera (2005) and Nieves-Rivera et al. (2005) have identified it as *T.* cf. *chioneus*.

RUSSULALES **Kreisel ex P.M. Kirk, P.F. Cannon & J.C. David**
Hericiaceae **Donk**

Laxitextum bicolor (Pers.) Lentz, U.S. Dept. Agric. Monogr. 24: 19. 1956.

BASIONYM: *Thelephora bicolor* Pers.
LOCALITY: Pará – Brazil (Sotão et al. 2002, 2003).
SUBSTRATE: decaying *Rhizophora* sp. (Sotão et al. 2002).
COMMENTS: recorded as *Stereum bicolor* (Pers.) Fr. by Sotão et al. (2002, 2003).

Lachnocladiaceae **D.A. Reid**

Scytinostroma portentosum (Berk. & M.A. Curtis) Donk, Fungus, 26(1-4): 20. 1956.

BASIONYM: *Corticium portentosum* Berk. M.A. Curtis
LOCALITY: Amapá – Brazil (Sotão et al. 1991, 2003).

***Peniophoraceae* Lotsy**

Peniophora albobadia (Schwein.) Boidin., Revue Mycol. 26(3): 164. 1961.

BASIONYM: *Thelephora albobadia* Schwein.
LOCALITY: Pará – Brazil (Campos et al. 2003, Sotão et al. 2003).
SUBSTRATE: decaying *R. mangle* (Campos et al. 2003).
COMMENTS: recorded as *Stereum albobadium* (Schwein.) Fr. by Campos et al. (2003) and Sotão et al. (2003).

***Stereaceae* Pilát**

Gloeocystidiellum moniliforme Sheng H. Wu, Mycotaxon 58: 40. 1996.

LOCALITY: Okinawa – Japan (Maekawa et al. 2003).
SUBSTRATE: decaying trunk of *R. mucronata* (Maekawa et al. 2003).

Gloeocystidiellum wakullum Burds., Nakasone & G.W. Freeman, Syst. Bot. 6(4): 431. 1981.

LOCALITY: Okinawa – Japan (Maekawa et al. 2003).
SUBSTRATE: decaying branch of *R. mucronata* (Maekawa et al. 2003).

Stereum hirsutum (Willd.) Pers., Observ. mycol. 2: 90. 1800.

BASIONYM: *Thelephora hirsuta* Willd.
LOCALITY: Pará – Brazil (Campos et al. 2003, Sotão et al. 2002, 2003).
SUBSTRATE: decaying *Av. germinans* and *R. mangle* (Campos et al. 2003); decaying *Avicennia* sp. (Sotão et al. 2002).

***TRECHISPORALES* K.H. Larss.**
***Hydnodontaceae* Jülich**

Subulicystidium longisporum (Pat.) Parmasto, Consp. System. Corticiac.: 121. 1968.

BASIONYM: *Hypochnus longisporum* Pat.
LOCALITY: Okinawa – Japan (Maekawa et al. 2003).
SUBSTRATE: decaying branch of *B. gymnorrhiza* and decaying and decorticated branch of *He. littoralis* (Maekawa et al. 2003).

Trechispora farinacea (Pers.) Liberta, Taxon 15(8): 318. 1966.

BASIONYM: *Hydnum farinaceum* Pers.
LOCALITY: Okinawa – Japan (Maekawa et al. 2003).
SUBSTRATE: decaying branch of *R. mucronata* and *S. alba* (Maekawa et al. 2003).

Trechispora nivea (Pers.) K.H. Larss., Symb. bot. upsal. 30(3): 110. 1995.

BASIONYM: *Odontia nivea* Pers.
LOCALITY: Okinawa – Japan (Maekawa et al. 2003).
SUBSTRATE: decaying branch of *B. gymnorrhiza* (Maekawa et al. 2003).

Tubulicium vermiferum (Bourdot) Oberw. ex Jülich, Persoonia 10(3): 335. 1979.

BASIONYM: *Peniophora vermifera* Bourdot
LOCALITY: Okinawa – Japan (Maekawa et al. 2003).
SUBSTRATE: decaying branch of *B. gymnorrhiza* (Maekawa et al. 2003).
COMMENTS: recorded as *Tubulicium raphidosporum* (Boidin & Gilles) Oberw., Kisim.-Hor. & L.D. Gómez by Maekawa et al. (2003).

Incertae sedis

Haloaleurodiscus mangrovei N. Maek., Suhara & K. Kinjo, Mycol. Res. 109(7): 827. 2005.

LOCALITY: Okinawa – Japan (Maekawa et al. 2005).
SUBSTRATE: decaying branch of living tree of *S. alba* and decaying and decorticated branch of living tree of *S. alba* (Maekawa et al. 2005).

Doubtful names recorded from mangroves

Fomes avicenniae Bacc.

LOCALITY: Somalia (Poonyth et al. 2000, Schmit & Shearer 2003).
SUBSTRATE: trunk of *Av. marina* (Forsk.)Vierh. (Poonyth et al. 2000, Schmit & Shearer 2003); *Avicennia* sp. (Kohlmeyer 1969).
COMMENTS: the reference of the publication where the species was originally decribed is not available in the IFS database or literature.

Inonotus cremeicinctus Corner, Beih. Nova Hedwigia 101: 71. 1991.

LOCALITY: Singapore (Poonyth et al. 2000).
SUBSTRATE: trunk of *Avicennia* spp. (Poonyth et al. 2000, Schmit & Shearer 2003).
COMMENTS: name considered invalid by Ryvarden (2005). The author was unable to study the type and believes that the material corresponds to *Phellinus* s. l.

Phellinus coelhoi Souza

LOCALITY: Algodoal-Maiandeua Island, State of Pará, Brazil (Sotão et al. 2003).

COMMENTS: this species was proposed in a thesis, but was not validly published.

Pistillaria ternissima (Curt.) Corn.

LOCALITY: Maracá Island, State of Amapá, Brazil (Sotão et al. 1991, 2003).
COMMENTS: no reference to this name was found in the IFS database or literature.

Pleurotus flabeliforme (Berk. & Br.) Sacc.

LOCALITY: Maracá Island, State of Amapá, Brazil (Sotão et al. 1991, 2003).
COMMENTS: probably *Pleurotus flabellatus* (Berk. & Broome) Sacc. and the species name was incorrectly typed in the article.

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Literature cited

Almeida-Filho OM, Bueno R, Bononi VLR. 1993. Algumas espécies de fungos basidiomicetos dos manguezais do Estado de São Paulo. Hoehnea 20(1/2): 87–92.

Alongi DM. 2002. Present state and the future of the world's mangroves forests. Environmental Conservation 29(3): 331–349.

Bononi VL. 1984. Basidiomicetos do Parque Estadual da Ilha do Cardoso. IV. Adições às famílias *Hymenochaetaceae*, *Stereaceae* e *Thelephoraceae*. Rickia 11: 43–52.

Campos EL, Cavalcanti MAQ. 2000. Primeira ocorrência de *Phellinus mangrovicus* (Imaz.) Imaz. para o Brasil. Acta bot. bras. 14(3): 263–265.

Campos EL, Sotão HMP, Cavalcanti MAQ, Luz AB. 2003. *Basidiomycetes* de manguezais da APA de Algodoal-Maiandeua, Pará, Brasil. Bol. Mus. Para. Emílio Goeldi, sér. Ciências Naturais 1(1): 97–102.

Chapman VJ. 1977. Introduction. In: Chapman VJ (ed.). Wet coastal ecosystems. Oxford: Elsevier.

Cintrón G, Schaeffer-Novelli Y. 1980. Introducción a la ecología del manglar. San Juan: Departament of Natural Resources and São Paulo: Instituto Oceanográfico, USP.

Cooke WB. 1961. The genus *Schizophyllum*. Mycologia 53(6): 575–599.

Fidalgo O. 1968a. A preliminary enumeration of Venezuelan *Polyporaceae*. Acta Biol. Ven. 6(2): 1–37.

Fidalgo O. 1968b. *Phellinus pachyphloeus* and its allies. Memoirs of the New York Botanical Garden 17(2): 109–147.

Gilbert GS, Gorospe J, Ryvarden L. 2008. Host and habitat preferences of polypore fungi in Micronesian tropical flooded forests. Mycol. Res. 112(6): 674–680.

Gilbert GS, Sousa WP. 2002. Host specialization among wood-decay polypore fungi in a Caribbean mangrove forest. Biotropica 34(3): 396–404.

Gugliotta AM, Bononi VLR. 1999. *Polyporaceae* do Parque Estadual da Ilha do Cardoso, São Paulo, Brasil. Bol. Inst. Bot. (São Paulo) 12: 1–112.

Gugliotta AM, Capelari M. 1995. *Polyporaceae* from Ilha do Cardoso, SP, Brazil. Mycotaxon 56: 107–113.

Hjortstam K, Tellería MT. 1990. *Columnocystis*, a synonym of *Veluticeps*. Mycotaxon 37: 53–56.

Hyde KD, Alias SA. 2000. Biodiversity and distribution of fungi associated with decomposing *Nypa fruticans*. Biodivers. & Conservation 9: 393–402.

Hyde KD, Lee SY. 1995. Ecology of mangrove fungi and their role in nutrient cycle: what gaps occur in our knowledge? Hydrobiologia 295: 107–118.

Inderbitzin P, Desjardin DE. 1999. A new halotolerant species of *Physalacria* from Hong Kong. Mycologia 91(4): 666–668.

Kirk PM, Cannon PF, David JC, Stalpers JA. 2001. Ainsworth & Bisby's Dictionary of the Fungi. 9th ed. Wallingford: CAB International.

Kohlmeyer J. 1969. Ecological notes on fungi in mangrove forests. Trans. Br. Mycol. Soc. 53(2): 237–250.

Kohlmeyer J, Kohlmeyer E. 1971. Marine fungi from tropical America and Africa. Mycologia 63(4):831–861.

Kohlmeyer J, Kohlmeyer E. 1979. Marine mycology: the higher fungi. New York: Academic Press.

Larsen MJ, Cobb-Poulle LA. 1990. *Phellinus* (*Hymenochaetaceae*) A survey of the world taxa. Synopsis Fungorum 3: 1–206.

Lee BKH, Baker GE. 1973. Fungi associated with the roots of red mangrove, *Rhizophora mangle*. Mycologia 65: 894–906.

Loguercio-Leite C. 1993. Polyporaceae II: *Trametes* Fr. na Ilha de Santa Catarina, SC, Brasil. Insula (22): 3–20.

Macintosh DJ, Ashton EC. 2002. Review of mangrove biodiversity conservation and management. Final Report, University of Aarhus, Denmark.

Maekawa N, Suhara H, Kinjo K, Kondo R. 2003. Corticioid fungi (*Basidiomycota*) in mangrove forests of the islands pf Iriomote and Okinawa, Japan. Mycoscience 44: 403–409.

Maekawa N, Suhara H, Kinjo K, Kondo R, Hoshi Y. 2005. *Haloaleurodiscus mangrovei* gen. sp. nov. (*Basidiomycota*) from mangrove forests in Japan. Mycol. Res. 109(7): 825–832.

Maldonado-Ramírez SL, Torres-Pratts H. 2005. First report of *Clathrus* cf. *crispus* (*Basidiomycota*: *Clathraceae*) occurring on decomposing leaves of *Rhizophora mangle* in Puerto Rico. Caribbean J. Sci. 41(2): 357–359.

Maria GL, Shridhar KR. 2002. Richness and diversity of filamentous fungi on woody litter of mangroves along the west coast of India. Curr. Sci. 83(12): 1573–1580.

Meijer AAR de. 2006. Preliminary list of the macromycetes from the Brazilian State of Paraná. Boletim do Museu Botânico Municipal, Curitiba 68: 1–55.

Nieves-Rivera AM. 2005. Coastal mycology of Puerto Rico: a survey and biological aspects of marine, estuarine, and mangrove fungi. Ph.D. Tesis in Marine Sciences (Biological Oceanography). University of Puerto Rico. 360 pp.

Nieves-Rivera AM, Lodge DJ. 1998. Contributions to the study of gasteromycetes of Puerto Rico. McIlvainea 13(2): 50–58.

Nieves-Rivera AM, Tattar TA, Ryvarden L. 2005. Manglicolous *Basidiomycetes* of southwestern Puerto Rico an southwestern Florida (U.S.A.). Hoehnea 32(1): 49–57.

Parrent JL, Garbelotto M, Gilbert GS. 2004. Population genetic structure of the polypore *Datronia caperata* in fragmented mangrove forests. Mycol. Res. 108(4): 403–410.

Poonyth AD, Hyde KD, Aptroot A, Peerally A. 2000. *Mauritiana rhizophorae* gen. et sp. nov. (*Ascomycetes*, *Riquienellaceae*), with a list of terrestrial saprobic mangrove fungi. Fung. Diversity 4: 101–116.

Rajchenberg M, Meijer AAR de. 1990. New and noteworthy polypores from Paraná and São Paulo States, Brazil. Mycotaxon 38: 173–185.

Ryvarden L. 2005. The genus *Inonotus* a sysnopsis. Syn. Fungorum 21. Oslo, Norway: Fungiflora. 149 p.

Ryvarden L, Meijer AAR de. 2002. Studies in neotropical polypores 14 New species from the State of Paraná, Brazil. Syn. Fungorum 15: 34–69.

Sarma VV, Hyde KD, Vittal BPR. 2001. Frequency of occurrence of mangrove fungi from the east coast of India. Hydrobiologia 455: 41–53.

Schmit JP, Shearer CA. 2003. A checklist of mangrove-associated fungi, their geographical distribution and known host plants. Mycotaxon 85: 423–477.

Sotão HMP, Bononi VLR, Figueiredo TS. 1991. *Basidiomycetes* de manguezais da Ilha de Maracá, Amapá, Brasil. Bol. Mus. Para. Emílio Goeldi, ser. Bot. 7(1): 109–114.

Sotão HMP, Campos EL, Costa SPSE, Melo OA, Azevedo JC. 2002. *Basidiomycetes* macroscópicos de manguezais de Bragança, Pará, Brasil. Hoehnea 29(3): 215–224.

Sotão HMP, Campos EL, Gugliotta AM, Costa SPSE. 2003. Fungos macroscópicos: *Basidiomycetes*. In MEB Fernandes (org). Os manguezais da costa norte brasileira. Maranhão: Fundação Rio Bracanga.