



## Checklist of the fungi associated with the rubber tree (*Hevea brasiliensis*)

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### Abstract

This publication offers a comprehensive and up-to-date checklist of fungi found on the Rubber tree (*Hevea brasiliensis*). This is a compilation of information regarding the life modes and distribution of fungi that have been recorded on Rubber trees. The overall checklist includes 788 species and 179 taxa from 57 countries identified to the genus level. The taxa included in the checklist are classified into 515 genera, 180 families, and 68 orders. These species are classified into four phyla. A total of 679 species and 161 taxa are classified into 439 genera, 138 families, and 47 orders from 54 countries belonging to the Ascomycota. A total of 97 species and 13 taxa are classified into 21 orders, 40 families, and 71 genera from 31 countries belonging to the Basidiomycota. A total of 14 species and two taxa are classified into one order, two families, and four genera from 27 countries belonging to the Oomycota.

**Keywords** – Ascomycota – Basidiomycota – Family – Genus – Oomycota

### Introduction

There are a lot of different checklists of fungi, and most of them focus on either selected hosts, selected countries, or selected fungal groups. For instance, there are checklists of fungi on cabbage (*Cordyline* spp.) and New Zealand flaxes (*Phormium* spp.) in New Zealand (McKenzie et al. 2005). Additionally, there is a checklist of fungi in Panama (Piepenbring 2006), and an annotated checklist of smut fungi (*Ustilaginomycetes*) from Thailand (Shivas et al. 2007; Whitton et al. 2012). On the other hand, there is no exhaustive checklist of fungi associated with rubber (*Hevea brasiliensis*).

The *Hevea brasiliensis* Müll. Arg., a South American tropical tree that belongs to the family Euphorbiaceae, is more commonly known as the rubber tree. It is also the only commercial source of natural rubber (Lieberei 2007). Rubber planted in plantations in the tropics and subtropics, particularly in Southeast Asia and Western Africa, superseded the rubber plant as the primary source of natural rubber in the early 20th century. It features softwood, high, spreading branches, and extensive bark. The milky liquid (latex) seeps from tree bark wounds and includes around 30 percent rubber, which may be solidified and processed into solid items such as tires. Concentrated latex can also be used to produce dipped products, such as medical gloves. Natural rubber is a secondary metabolite that cannot be easily replaced by synthetic rubber because it is composed of

cis 1,4-polyisoprene. Synthetic rubber is produced commercially (Souza et al. 2009). As a result of the commodity's high market price, rubber plantations have proliferated across tropical regions, particularly in Southeast Asia (Warren-Thomas et al. 2015). Many tropical forests and traditional agricultural systems have been replaced by monoculture plantations of rubber trees, which has led to the loss of many of these ecosystems (Meijide et al. 2018). This causes a significant reduction in biodiversity and increases the density of pathogens within the ecosystem (Nguyen et al. 2020). Plantations of rubber are another factor that contributes to climate change (Wangpimool et al. 2017). A checklist of the fungi associated with *Hevea brasiliensis* has been compiled by us and is available here.

## Materials & Methods

### Results

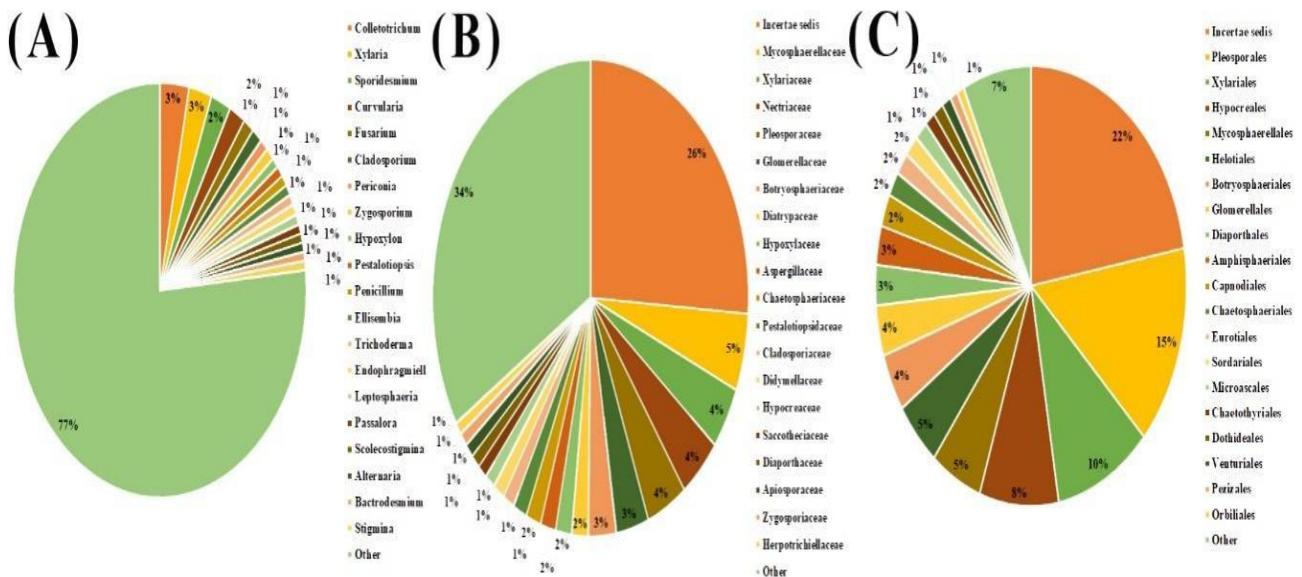
#### Taxonomy

##### Checklist of fungi associated with rubber tree

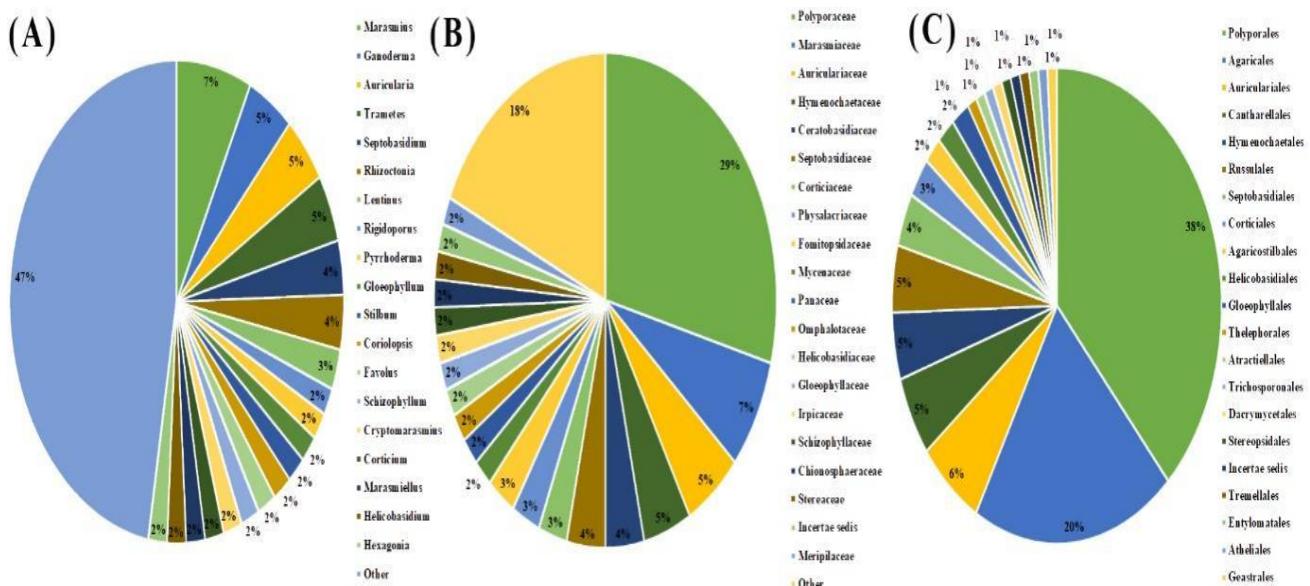
This list of fungi that are known to be associated with *Hevea brasiliensis* was compiled using information from the United States National Fungus Collections Fungus-Host Database (Farr & Rossman 2021) as well as articles that were published in books and journals. The fungal species names and information on the substrate and the location from which fungi have been recorded on the rubber tree are all included on the checklist. According to Index Fungorum (2020) (<https://www.indexfungorum.org/Names/Names.asp>) and follow classification based on Wijayawardene et al. (2020), these names are currently in use.

### Results

According to the U.S. National Fungus Collections Fungus-Host Database (Farr & Rossman 2021), together with relevant literature, the overall checklist includes 788 species and 179 taxa from 57 countries that have only been identified at the genus level. The taxa included in the checklist are classified into 515 genera, 180 families, and 68 orders. These species are classified into four phyla (Tables 1–3). A total of 679 species and 161 taxa are classified into 439 genera, 138 families, and 47 orders from 54 countries belonging to the phylum Ascomycota (Table 1). A total of 97 species and 13 taxa are classified into 21 orders, 40 families, and 71 genera from 31 countries belonging to the phylum Basidiomycota (Table 2). A total of 14 species and two taxa are classified into one order, two families, and four genera from 27 countries belong phylum Oomycota (Table 3). Ascomycota: the most reported genera were *Colletotrichum* (3%), *Xylaria* (3%), and *Sporidesmium* (2%) (Fig. 1A). The most reported families are Mycosphaerellaceae (5%), Xylariaceae (4%), and Nectriaceae (4%) (Fig. 1B). The most reported orders are Pleosporales (15%), Xylariales (10%), and Hypocreales (8%) (Fig. 1C). Basidiomycota: the most reported genera are *Marasmius* (7%), *Ganoderma* (5%), and *Auricularia* (5%) (Fig. 2A). The most reported families are Polyporaceae (29%), Marasmiaceae (7%), and Auriculariaceae (5%) (Fig. 2B). The most reported orders are Polyporales (38%), Agaricales (20%), and Auriculariales (6%) (Fig. 2C). Oomycota: the reported genera are *Phytophthora* (75%), *Pythium* (13%), *Globisporangium* (6%), and *Phytopythium* (6%) (Fig. 3A). The reported family are Peronosporaceae (75%), and Pythiaceae (25%) (Fig. 3B). Figure 4 shows the frequency percentage of species isolated from rubber plant parts. The most reported species on plant parts were branch litter (25%), leaf litter (20%), and leaf and branch litter (12%). Fig. 5 shows the distribution frequency of isolation of Ascomycota associated with rubber trees. Fig. 6 shows the distribution frequency of isolation of Basidiomycota associated with the rubber tree. Fig. 7 shows the distribution frequency of isolation of Oomycota associated with rubber trees. The largest reports were from Thailand 682, Malaysia 153, and Brazil 77 taxa.



**Fig. 1** – The percentage frequency of genera, families, and orders of Ascomycota associated with the rubber tree. Pie chart showing the frequency percentage occurrence of (A) genera, (B) families, and (C) orders.



**Fig. 2** – The percentage frequency of genera, families, and orders of Basidiomycota associated with the rubber tree. Pie chart showing the frequency percentage occurrence of (A) genera, (B) families, and (C) orders.

**Table 1** List of Ascomycota on rubber.

<b>Species</b>	<b>Family</b>	<b>Order</b>	<b>Host-substratum</b>	<b>Reference</b>	<b>Country</b>
<i>Acanthohelicospora aurea</i>	Tubeufiaceae	Tubeufiales	Leaf and branch litter	1	A1
<i>Acanthonitschkea argentinensis</i>	Nitschkiaceae	Coronophorales	Stems	2	A2
<i>Acanthonitschkea pulchella</i>	Nitschkiaceae	Coronophorales	Stems	3, 4	A2, A3
<i>Acarocybe deightonii</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1	A1
<i>Acarocybe formosa</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Acarocybe hansfordii</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Acarocybe</i> sp.	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Acremoniula brevis</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Acremonium alternatum</i>	Incertae sedis	Hypocreales	Leaf litter	1	A1
<i>Acremonium fusidioides</i>	Incertae sedis	Hypocreales	Leaf and branch litter	1, 5	A1
<i>Acremonium byssoides</i>	Incertae sedis	Hypocreales	A hyperparasite of the fungus	6	A3
<i>Acremonium murorum</i>	Incertae sedis	Hypocreales	Leaf and branch litter	1, 5	A1
<i>Acremonium polychromum</i>	Incertae sedis	Hypocreales	Bark	7	A4
<i>Acremonium</i> sp.	Incertae sedis	Hypocreales	Leaf and branch litter	1, 5	A1
<i>Acrodictys sacchari</i>	Acrodictyaceae	Diaporthales	Leaf litter	1	A1
<i>Acrodictys</i> sp.	Acrodictyaceae	Diaporthales	Branch litter	5	A1
<i>Acrophialophora fusispora</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Acrostaurus turneri</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1	A1
<i>Actinocladium rhodosporum</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Akanthomyces lecanii</i>	Cordycipitaceae	Hypocreales		8	A5
<i>Albonectria rigidiuscula</i>	Nectriaceae	Hypocreales	Die back disease and branch	4, 9, 10	A1, A3, A6
<i>Allocryptovalsa cryptovalsoidea</i>	Diatrypaceae	Xylariales	Dead twig	10	A1
<i>Allocryptovalsa polyspora</i>	Diatrypaceae	Xylariales	Branch	11	A1
<i>Alternaria alternata</i>	Pleosporaceae	Pleosporales	Leaf blight and black leaf spot	12, 13	A7, A8
<i>Alternaria heveae</i>	Pleosporaceae	Pleosporales	Black leaf spot seedling or endophytic on living leaves and sapwoods	14, 15	A9
<i>Alternaria radicina</i>	Pleosporaceae	Pleosporales	Leaf litter	1	A1
<i>Alternaria</i> sp.	Pleosporaceae	Pleosporales	Leaf Spot	16, 17, 18	A9, A10, A11
<i>Alternaria</i> spp.	Pleosporaceae	Pleosporales	Harvested seeds	19	A10
<i>Alternaria yunnanensis</i>	Pleosporaceae	Pleosporales	Leaf spots	20	A7
<i>Amerosporium</i> sp.	Sclerotiniaceae	Helotiales	Leaf litter	1	A1
<i>Ampelomyces quisqualis</i>	Phaeosphaeriaceae	Pleosporales	A hyperparasite powdery mildew	21	A12
<i>Ampullifera</i> sp.	Incertae sedis	Incertae sedis		22	A3
<i>Anellophora dendrographii</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1

**Table 1** Continued.

<b>Species</b>	<b>Family</b>	<b>Order</b>	<b>Host-substratum</b>	<b>Reference</b>	<b>Country</b>
<i>Annellophora solani</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Annulohypoxylon moriforme</i>	Hypoxylaceae	Xylariales	Bark	23	A13
<i>Annulohypoxylon sp.</i>	Hypoxylaceae	Xylariales	Endophytic living leaves	12	A8
<i>Annulohypoxylon stygium</i>	Hypoxylaceae	Xylariales		2	A2
<i>Anthina</i> sp.	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Anthostomella formosa</i>	Xylariaceae	Xylariales	Branch litter	5	A1
<i>Anthostomella heveae</i>	Xylariaceae	Xylariales	Dead branches	24	A14
<i>Apiosporium atrum</i>	Capnodiaceae	Capnodiales	Dead branches	4, 25	A3
<i>Aplopsorella heveae</i>	Aplopsorellaceae	Botryosphaeriales	Dead branches	24	A14
<i>Aposphaeria heveae</i>	Melanommataceae	Pleosporales	Roots	26	A11
<i>Aposphaeria</i> sp.	Melanommataceae	Pleosporales		8	A5
<i>Aquaticheirospora lignicola</i>	Dictyosporiaceae	Pleosporales	Leaf litter	1	A1
<i>Arthrinium muelleri</i>	Apiosporaceae	Incertae sedis	Branch litter	5	A1
<i>Arthrinium</i> sp.	Apiosporaceae	Incertae sedis	Endophytic living sapwood	12	A8
<i>Arthrobotryum atrocephalum</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Aschersonia</i> sp.	Clavicipitaceae	Hypocreales	Leaves	27, 28	A3, A15
<i>Ascochyta heveae</i>	Didymellaceae	Pleosporales	Leaf spot	9, 22, 29, 30, 31	A1, A2, A3, A6, A7, A16, A17
<i>Ascochyta heveana</i>	Didymellaceae	Pleosporales	Leaf spot	9	A6
<i>Ascochyta</i> sp.	Didymellaceae	Pleosporales	Leaves	17	A10
<i>Aspergillus niger</i>	Aspergillaceae	Eurotiales	Leaf spot	32	A17
<i>Aspergillus</i> sp.	Aspergillaceae	Eurotiales	Leaf litter transparent spots unsmoked sheet or biscuit rubber	1, 25	A1
<i>Aspergillus</i> spp.	Aspergillaceae	Eurotiales	Harvested seeds	19	A10
<i>Asteroma coryli</i>	Gnomoniaceae	Diaporthales	Branch litter	5	A1
<i>Asteromella</i> sp.	Incertae sedis	Incertae sedis		21	A12
<i>Astrophaeriella</i> sp.	Astrophaeriellaceae	Pleosporales	Branch litter	5	A1
<i>Aureobasidium</i> sp.	Saccotheciacae	Dothideales	Branch litter	5	A1
<i>Bactrodesmium betulincola</i>	Saccotheciacae	Dothideales	Leaf and branch litter	1, 5	A1
<i>Bactrodesmium longisporum</i>	Saccotheciacae	Dothideales	Leaf litter	1	A1
<i>Bactrodesmium pallidum</i>	Saccotheciacae	Dothideales	Leaf and branch litter	1, 5	A1
<i>Bactrodesmium</i> sp.	Saccotheciacae	Dothideales	Leaf and branch litter	5	A1
<i>Bactrodesmium spilomeum</i>	Saccotheciacae	Dothideales	Leaf and branch litter	1, 5	A1
<i>Bactrodesmium rahmii</i>	Saccotheciacae	Dothideales	Decaying log	1, 5	A1
<i>Bagnisiella examinans</i>	Dothideaceae	Dothideales		21	A12

**Table 1** Continued.

Species	Family	Order	Host-substratum	Reference	Country
<i>Balladyna vanderystii</i>	Balladynaceae	Incertae sedis	Leaf litter	1	A1
<i>Beltrania rhombica</i>	Beltraniaceae	Sordariales	Leaf litter	1	A1
<i>Beltrania santapaui</i>	Beltraniaceae	Sordariales	Leaf litter	1	A1
<i>Beltraniella pirozynskii</i>	Amphisphaeriaceae	Amphisphaeriales	Branch litter	5	A1
<i>Beltraniella portoricensis</i>	Amphisphaeriaceae	Amphisphaeriales	Leaf and branch litter	1	A1
<i>Berkeleyomyces basicola</i>	Ceratocystidaceae	Microascales	Leaf litter	1	A1
<i>Berkleasmium concinnum</i>	Incertae sedis	Pleosporales	Branch litter	5	A1
<i>Berkleasmium minutissimum</i>	Incertae sedis	Pleosporales	Leaf and branch litter	1, 5	A1
<i>Bidenticula cannae</i>	Nectriaceae	Hypocreales	Leaf and branch litter	1, 5	A1
<i>Bipolaris caktivora</i>	Pleosporaceae	Pleosporales	Branch litter	5	A1
<i>Bipolaris cynodontis</i>	Pleosporaceae	Pleosporales	Leaves	33	A1
<i>Bipolaris heveae</i>	Pleosporaceae	Pleosporales	Leaf spot, bird's eye leaf spot especially in young nursery plants	9, 21, 31, 34	A1, A2, A3, A4, A5, A6, A7, A9, A10, A11, A12, A13, A15, A16, A17, A19, A20, A21, A22, A23, A24, A25, A26, A27, A28
<i>Bipolaris</i> sp.	Pleosporaceae	Pleosporales	Branch litter	5	A1
<i>Biscogniauxia capnodes</i>	Graphostromataceae	Xylariales		2	A1
<i>Biscogniauxia mediterranea</i>	Graphostromataceae	Xylariales		4	A3
<i>Biscogniauxia</i> sp.	Graphostromataceae	Xylariales	Endophytic living sapwood	12	A8
<i>Bispora antennata</i>	Helotiaceae	Helotiales	Leaf and branch litter	1, 5	A1
<i>Boerlagiomyces grandisporus</i>	Tubeufiaceae	Tubeufiales	Branch litter	5	A1
<i>Botryodiplodia acerina</i>	Botryosphaeriaceae	Botryosphaeriales	Leaf litter	1	A1
<i>Botryodiplodia</i> sp.	Botryosphaeriaceae	Botryosphaeriales	Decaying rubber log and branch	5, 17, 28	A1, A10, A15
<i>Botryosphaeria plicatula</i>	Botryosphaeriaceae	Botryosphaeriales		2	A2
<i>Botryosphaeria</i> sp.	Botryosphaeriaceae	Botryosphaeriales	Branch litter	5	A1
<i>Botryotinia fuckeliana</i>	Sclerotiniaceae	Helotiales		35	A29
<i>Botryotrichum piluliferum</i>	Chaetomiaceae	Sordariales	Leaf litter	1	A1
<i>Botryotrichum</i> sp.	Chaetomiaceae	Sordariales	Leaf and branch litter	1, 5	A1
<i>Brachiosphaera tropicalis</i>	Aliquandostipitaceae	Jahnulales	Branch litter	5	A1
<i>Brachydesmiella bisepxtata</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Brachyhelicoon xylogenum</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Brachysporiella gayana</i>	Incertae sedis	Sordariales	Branch litter	5	A1
<i>Brachysporiella laxa</i>	Incertae sedis	Sordariales	Branch litter	5	A1
<i>Brachysporium britannicum</i>	Trichosphaeriaceae	Trichosphaeriales	Branch litter	5	A1

**Table 1** Continued.

<b>Species</b>	<b>Family</b>	<b>Order</b>	<b>Host-substratum</b>	<b>Reference</b>	<b>Country</b>
<i>Brachysporium</i> sp.	Trichosphaeriaceae	Trichosphaerales	Branch litter	5	A1
<i>Brachysporium dingleyae</i>	Trichosphaeriaceae	Trichosphaerales	Branch litter	5	A1
<i>Brevicollum hyalosporum</i>	Neohendersoniaceae	Pleosporales	Branches	10, 36	A1
<i>Broomella acuta</i>	Bartaliniaceae	Amphisphaerales	Leaf litter	1	A1
<i>Calonectria foliicola</i>	Nectriaceae	Hypocreales	Leaf	37	A1
<i>Calonectria kyotensis</i>	Nectriaceae	Hypocreales		38, 39	A3, A7
<i>Calonectria reteaudii</i>	Nectriaceae	Hypocreales	Leaf spot	39, 40	A3, A11
<i>Calonectria morganii</i>	Nectriaceae	Hypocreales	Leaf and branch litter	1, 5	A1
<i>Calostilbe striispora</i>	Nectriaceae	Hypocreales	Bark rot disease	9	A2, A30
<i>Camarosporidiella elongate</i>	Camarosporidiellaceae	Pleosporales	Leaf litter	1	A1
<i>Camarosporium rosae</i>	Camarosporiaceae	Pleosporales	Leaf litter	1	A1
<i>Camarosporium salicinum</i>	Camarosporiaceae	Pleosporales	Leaf litter	1	A1
<i>Camillea punctulata</i>	Graphostromataceae	Xylariales		4	A3
<i>Camposporium antennatum</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Camposporium cambrense</i>	Incertae sedis	Incertae sedis	Leaf litter	5	A1
<i>Camposporium laundonii</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Camposporium cambrense</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Camposporium</i> sp.	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Canalisporium exiguum</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Canalisporium pallidum</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Capnodium</i> sp.	Capnodiaceae	Capnodiales		41	A1
<i>Cephaliophora irregularis</i>	Incertae sedis	Pezizales	Branch litter	5	A1
<i>Cephalosporium</i> sp.	Incertae sedis	Hypocreales		17, 29	A3, A10
<i>Ceratocystis fimbriata</i>	Ceratocystidaceae	Microascales	Canker disease bark, mouldy rot tapping panels, and	9, 30, 41, 42	A1, A2, A3, A4, A9, A10, A12, A15, A16, A31
<i>Ceratophorum uncinatum</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Ceratosporella deviata</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Ceratosporella novae-zelandiae</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Ceratosporium fuscescens</i>	Amphisphaeriaceae	Amphisphaerales	Branch litter	5	A1
<i>Ceratosporium productum</i>	Amphisphaeriaceae	Amphisphaerales	Dead branches	43	A11
<i>Ceratostomella</i> sp.	Boliniaceae	Boliniales		44	A26
<i>Cercospora achyranthina</i>	Mycosphaerellaceae	Mycosphaerellales	Branch litter	5	A1
<i>Cercospora apii</i>	Mycosphaerellaceae	Mycosphaerellales	Leaf litter	1	A1
<i>Cercospora canescens</i>	Mycosphaerellaceae	Mycosphaerellales	Branch litter	5	A1

**Table 1** Continued.

<b>Species</b>	<b>Family</b>	<b>Order</b>	<b>Host-substratum</b>	<b>Reference</b>	<b>Country</b>
<i>Cercospora dioscoreae-pyrifoliae</i>	Mycosphaerellaceae	Mycosphaerellales	Leaf spots diseases	10	A1
<i>Cercospora</i> sp.	Mycosphaerellaceae	Mycosphaerellales	Leaf spot	1, 29	A1, A3
<i>Cercospora</i> spp.	Mycosphaerellaceae	Mycosphaerellales	Harvested seeds	19, 45, 46, 47	A10
<i>Ceriospora polygonacearum</i>	Mycosphaerellaceae	Mycosphaerellales	Branch litter	5	A1
<i>Chaetochalara</i> sp.	Pezizellaceae	Helotiales	Leaf litter	1	A1
<i>Chaetoconidium arachnoideum</i>	Incertae sedis	Chaetoconidium	Branch litter	5	A1
<i>Chaetomium globosum</i>	Chaetomiaceae	Sordariales	Black root disease	48	A7
<i>Chaetomium</i> sp.	Chaetomiaceae	Sordariales	Leaf and branch litter	1, 5, 48	A7
<i>Chaetomium</i> spp.	Chaetomiaceae	Sordariales	Harvested seeds	19	A10
<i>Chaetopsina</i> sp.	Nectriaceae	Hypocreales	Leaf litter	1	A1
<i>Chaetopsis grisea</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Chaetothyrina tenuissima</i>	Micropeltidaceae	Microthyriales	Shoot, leaves, stems, and fruit	9, 49	A3, A10, A17
<i>Chaetothyrium annonicola</i>	Chaetothyriaceae	Chaetothyriales		22	A3
<i>Chaetothyrium javanicum</i>	Chaetothyriaceae	Chaetothyriales		4, 29	A3
<i>Chalara cylindrosperma</i>	Pezizellaceae	Helotiales	Leaf litter	1	A1
<i>Chalara urceolata</i>	Pezizellaceae	Helotiales	Leaf and branch litter	1, 5	A1
<i>Chalara</i> sp.	Pezizellaceae	Helotiales	Branch litter	5	A1
<i>Chalaropsis</i> sp.	Ceratocystidaceae	Microascales	Branch litter	5	A1
<i>Chryseidea africana</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Chuppia sarcinifera</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Circinotrichum maculiforme</i>	Xylariaceae	Xylariales	Leaf litter	1	A1
<i>Circinotrichum poonense</i>	Xylariaceae	Xylariales	Leaf and branch litter	1, 5	A1
<i>Cirrenalia nigrospora</i>	Halosphaeriaceae	Microascales	Fallen pod and seed	50	A1
<i>Cladophialophora chaetospira</i>	Herpotrichiellaceae	Chaetothyriales	Leaf litter	1	A1
<i>Cladosporium acaciicola</i>	Cladosporiaceae	Capnodiales	Leaf litter	1	A1
<i>Cladosporium balladynae</i>	Cladosporiaceae	Capnodiales	Leaf litter	1	A1
<i>Cladosporium cladosporioides</i>	Cladosporiaceae	Capnodiales	Endophytic	12	A8
<i>Cladosporium gallicola</i>	Cladosporiaceae	Capnodiales	Leaf and branch litter	1, 5	A1
<i>Cladosporium nigrellum</i>	Cladosporiaceae	Capnodiales	Leaf litter	1	A1
<i>Cladosporium orchidacearum</i>	Cladosporiaceae	Capnodiales	Leaf litter	1	A1
<i>Cladosporium tenuissimum</i>	Cladosporiaceae	Capnodiales	Leaves and branch	1, 5	A1
<i>Cladosporium uredinicola</i>	Cladosporiaceae	Capnodiales	Leaf and branch litter	1	A1
<i>Cladosporium</i> sp.	Cladosporiaceae	Capnodiales	Leaf litter	1	A1

**Table 1** Continued.

<b>Species</b>	<b>Family</b>	<b>Order</b>	<b>Host-substratum</b>	<b>Reference</b>	<b>Country</b>
<i>Clasterosporium cocoicola</i>	Magnaporthaceae	Magnaporthales	Branch litter	5	A1
<i>Clasterosporium flagellatum</i>	Magnaporthaceae	Magnaporthales	Branch litter	5	A1
<i>Claussenomyces atrovirens</i>	Tympanidaceae	Leotiales	Branch litter	5	A1
<i>Claussenomyces prasinulus</i>	Tympanidaceae	Leotiales	Leaf litter	1	A1
<i>Clavariopsis aquatica</i>	Incertae sedis	Pleosporales	Leaf and branch litter	1	A1
<i>Clavariopsis brachycladia</i>	Incertae sedis	Pleosporales	Branch litter	5	A1
<i>Clavatispora Alica</i>	Incertae sedis	Venturiales	Dead twig	10, 55	A1
<i>Clavatospora filiformis</i>	Halosphaeriaceae	Microascales	Branch litter	5	A1
<i>Clonostachys rosea</i>	Bionectriaceae	Hypocreales		1, 51	A1, A3
<i>Cochliobolus bicolor</i>	Pleosporaceae	Pleosporales	Leaf spot	56	A7
<i>Cochliobolus heveicola</i>	Pleosporaceae	Pleosporales	Bird 's eye leaf spot	33, 57	A1
<i>Cochliobolus geniculatus</i>	Pleosporaceae	Pleosporales	Leaves	1, 29, 33	A1
<i>Cochliobolus setariae</i>	Pleosporaceae	Pleosporales	Leaf spot	58	A7
<i>Cochliobolus</i> sp.	Pleosporaceae	Pleosporales	Leaves	21, 57	A8, A12
<i>Codinaea assamica</i>	Chaetosphaeriaceae	Chaetosphaeriales	Leaf and branch litter	5	A1
<i>Codinaea</i> sp.	Chaetosphaeriaceae	Chaetosphaeriales	Leaf and branch litter	1, 5	A1
<i>Colletotrichum acutatum</i>	Glomerellaceae	Glomerellales	Leaf diseases and anthracnose	60, 61	A4, A11, A17
<i>Colletotrichum annellatum</i>	Glomerellaceae	Glomerellales	Leaves	62	A33
<i>Colletotrichum australisinense</i>	Glomerellaceae	Glomerellales	Leaf diseases	63	A7
<i>Colletotrichum bannaense</i>	Glomerellaceae	Glomerellales	Leaf diseases	63	A7
<i>Colletotrichum brachytrichum</i>	Glomerellaceae	Glomerellales		22	A3
<i>Colletotrichum citri</i>	Glomerellaceae	Glomerellales	Leaf casing anthracnose diseases	64	A11
<i>Colletotrichum coccodes</i>	Glomerellaceae	Glomerellales	Leaves of young plants, stems, and shoots	21, 29, 41, 65, 66, 67, 68	A1, A3, A7, A11, A12, A20
<i>Colletotrichum coffeanum</i>	Glomerellaceae	Glomerellales		44	A26
<i>Colletotrichum corchori</i>	Glomerellaceae	Glomerellales		4	A3
<i>Colletotrichum crassipes</i>	Glomerellaceae	Glomerellales		21, 51	A3, A12
<i>Colletotrichum dematium</i>	Glomerellaceae	Glomerellales	Leaves	1, 51	A1, A3
<i>Colletotrichum derridis</i>	Glomerellaceae	Glomerellales	Leaves	69	A3
<i>Colletotrichum falcatum</i>	Glomerellaceae	Glomerellales		70	A34
<i>Colletotrichum ficus</i>	Glomerellaceae	Glomerellales		29	A3
<i>Colletotrichum fructi</i>	Glomerellaceae	Glomerellales	Leaf litter	1	A1
<i>Colletotrichum fructicola</i>	Glomerellaceae	Glomerellales	Leaves	63	A7

**Table 1** Continued.

<b>Species</b>	<b>Family</b>	<b>Order</b>	<b>Host-substratum</b>	<b>Reference</b>	<b>Country</b>
<i>Colletotrichum gloeosporioides</i>	Glomerellaceae	Glomerellales	Leaf spot and anthracnose diseases	1, 9, 14, 17, 31, 61, 71, 72, 73, 74	A1, A3, A4, A6, A7, A8, A9, A10, A11, A12, A15, A16, A17, A21, A26, A28, A29, A31, A34, A35, A36
<i>Colletotrichum heveae</i>	Glomerellaceae	Glomerellales	Anthracnose diseases leaves	9, 29, 41, 66, 67, 75	A1, A3, A6, A7, A10, A11, A17, A19, A20
<i>Colletotrichum karsti</i>	Glomerellaceae	Glomerellales	Anthracnose diseases leaves	76	A7
<i>Colletotrichum laticiphilum</i>	Glomerellaceae	Glomerellales	Leaf diseases	64, 77, 78, 79, 80	A7, A11, A17, A33
<i>Colletotrichum ledongense</i>	Glomerellaceae	Glomerellales	Leaf diseases	63	A7
<i>Colletotrichum nymphaeae</i>	Glomerellaceae	Glomerellales	Leaf diseases	64	A11
<i>Colletotrichum siamense</i>	Glomerellaceae	Glomerellales	Leaf diseases	63	A7
<i>Colletotrichum simmondsii</i>	Glomerellaceae	Glomerellales	Leaf diseases	64	A11, A17
<i>Colletotrichum</i> sp.	Glomerellaceae	Glomerellales		8, 17, 29, 51, 70, 71, 81	A3, A5, A7, A10, A12, A19, A34, A37
<i>Colletotrichum truncatum</i>	Glomerellaceae	Glomerellales		29	A3
<i>Colletotrichum wanningense</i>	Glomerellaceae	Glomerellales	Anthracnose diseases	82	A7
<i>Colletotrichum cliviae</i>	Glomerellaceae	Glomerellales	Leaf diseases	83	A7
<i>Conioscypha</i> sp.	Conioscyphaceae	Conioscyphales	Leaf litter	1	A1
<i>Coniothyrium heveae</i>	Coniothyriaceae	Pleosporales	Leaf spot	9	A6
<i>Cookeina garethjonesii</i>	Sarcoscyphaceae	Pezizales	Twig	84	A1
<i>Cookeina sulcipes</i>	Sarcoscyphaceae	Pezizales	Branch litter	5, 84	A1
<i>Cookeina tricholoma</i>	Sarcoscyphaceae	Pezizales		84	A1
<i>Corallomycetella repens</i>	Nectriaceae	Hypocreales	Root rot disease	9, 28, 29, 70, 81, 85	A7, A6, A19, A34, A2, A17, A4, A3, A3, A15, A11
<i>Corallomycetella elegans</i>	Nectriaceae	Hypocreales		12, 51, 86	A10, A19, A38
<i>Cordana pauciseptata</i>	Cordanaceae	Cordanales	Branch litter	5	A1
<i>Cordana terrestris</i>	Cordanaceae	Cordanales	Branch litter	5	A1
<i>Cordella clarkii</i>	Cordanaceae	Cordanales	Branch litter	5	A1
<i>Corynespora cassiicola</i>	Corynesporascaceae	Pleosporales	Leaf spots and leaf fall	1, 10, 17, 87, 88, 89, 90, 91	A1, A2, A3, A4, A7, A10, A11, A15, A21, A26, A35, A39
<i>Corynespora proliferata</i>	Corynesporascaceae	Pleosporales	Branch litter	5	A1
<i>Corynespora trichiliae</i>	Corynesporascaceae	Pleosporales	Leaf litter	1	A1

**Table 1** Continued.

<b>Species</b>	<b>Family</b>	<b>Order</b>	<b>Host-substratum</b>	<b>Reference</b>	<b>Country</b>
<i>Corynespora</i> sp.	Corynesporascaceae	Pleosporales	Leaf and branch litter	1	A1
<i>Corynesporopsis quercicola</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Coryneum elevatum</i>	Coryneaceae	Diaporthales	Leaf litter	1	A1
<i>Coryneum heveanum</i>	Coryneaceae	Diaporthales	Canker disease twigs	10, 92	A1
<i>Coryneum</i> sp.	Coryneaceae	Diaporthales	Leaf litter	1	A1
<i>Cosmospora butyri</i>	Nectriaceae	Hypocreales	Leaf litter	1	A1
<i>Crassiparies octosporarum</i>	Incertae sedis	Pleosporales	Twigs	10	A1
<i>Crassiparies quadrisporus</i>	Incertae sedis	Pleosporales	Twigs	10	A1
<i>Cryptocoryneum condensatum</i>	Cryptocoryneaceae	Pleosporales	Branch litter	5	A1
<i>Cryptospora heveae</i>	Gnomoniaceae	Diaporthales	Dead branches	24	A14
<i>Cryptovalsa macrospora</i>	Diatrypaceae	Xylariales	Branch litter	4	A3
<i>Curvularia austroliensis</i>	Pleosporaceae	Pleosporales	Leaf and branch litter	1, 5	A1
<i>Curvularia affinis</i>	Pleosporaceae	Pleosporales	Branch litter	5	A1
<i>Curvularia clavata</i>	Pleosporaceae	Pleosporales	Leaves	33	A1
<i>Curvularia deightonii</i>	Pleosporaceae	Pleosporales	Leaf and branch litter	1, 5	A1
<i>Curvularia fallax</i>	Pleosporaceae	Pleosporales	Leaves	33	A1
<i>Curvularia lunata</i>	Pleosporaceae	Pleosporales	Leaves	1, 51	A3, A26
<i>Curvularia neoindica</i>	Pleosporaceae	Pleosporales	Branch litter	5	A1
<i>Curvularia pallescens</i>	Pleosporaceae	Pleosporales	Leaves	33, 57, 59	A1, A11
<i>Curvularia penniseti</i>	Pleosporaceae	Pleosporales	Leaf litter	1	A1
<i>Curvularia ravenelii</i>	Pleosporaceae	Pleosporales	Branch litter	5	A1
<i>Curvularia richardiae</i>	Pleosporaceae	Pleosporales	Leaf litter	1	A1
<i>Curvularia senegalensis</i>	Pleosporaceae	Pleosporales	Leaf litter	1	A1
<i>Curvularia uncinata</i>	Pleosporaceae	Pleosporales	Leaf litter	1	A1
<i>Curvularia</i> sp.	Pleosporaceae	Pleosporales	Branches	1, 21	A1, A12
<i>Curvularia</i> spp.	Pleosporaceae	Pleosporales	Harvested seeds	19	A10
<i>Cyathicula cyathoidea</i>	Helotiaceae	Helotiales	Branch litter	5	A1
<i>Cylindrocladium</i> sp.	Nectriaceae	Hypocreales	Leaf and branch litter	1, 5	A1
<i>Cylindrocarpon aquaticum</i>	Nectriaceae	Hypocreales	Leaf litter	1	A1
<i>Cylindrocarpon didymum</i>	Nectriaceae	Hypocreales	Leaf litter	1	A1
<i>Cylindrocladium parvum</i>	Nectriaceae	Hypocreales	Leaf litter	1	A1
<i>Cylindrotrichum oligospermum</i>	Chaetosphaeriaceae	Chaetosphaeriales	Branch litter	5	A1
<i>Cylindrotrichum</i> sp.	Chaetosphaeriaceae	Chaetosphaeriales	Branch litter	5	A1
<i>Cytospora diopuiensis</i>	Valsaceae	Diaporthales	Twig and dead branch	10	A1
<i>Cytospora heveae</i>	Valsaceae	Diaporthales	Canker disease, seedling, and stem	10	A1

**Table 1** Continued.

Species	Family	Order	Host-substratum	Reference	Country
<i>Cytospora lica</i>	Valsaceae	Diaporthales	Canker disease twig	10	A1
<i>Cytosporina</i> sp.	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Dactylaria acanthacearum</i>	Incertae sedis	Helotiales	Leaf and branch litter	1	A1
<i>Dactylaria obtriangularia</i>	Incertae sedis	Helotiales	Leaf litter	1	A1
<i>Dactylaria parvispora</i>	Incertae sedis	Helotiales	Leaf litter	1	A1
<i>Dactylaria purpurella</i>	Incertae sedis	Helotiales	Branch litter	5	A1
<i>Dactylaria</i> sp.	Incertae sedis	Helotiales	Leaf and branch litter	1, 5	A1
<i>Dactylella ellipsospora</i>	Orbiliaceae	Orbiliales	Branch litter	5	A1
<i>Dactylella</i> sp.	Orbiliaceae	Orbiliales	Branch litter	5	A1
<i>Dactylellina ellipsospora</i>	Orbiliaceae	Orbiliales	Leaf litter	1	A1
<i>Daldinia caldariorum</i>	Hypoxylaceae	Xylariales		93	A6, A39, A40, A41, A42
<i>Daldinia concentrica</i>	Hypoxylaceae	Xylariales	Mottled rot bark and wood	9	A3, A10, A11, A17
<i>Daldinia eschscholtzii</i>	Hypoxylaceae	Xylariales	Branch litter	5, 84, 93, 94	A1, A2, A43
<i>Dendrospora erecta</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Dendryphion comosum</i>	Torulaceae	Pleosporales	Branch litter	5	A1
<i>Devriesia staurophora</i>	Teratosphaeriaceae	Mycosphaerellales	Leaf litter	1	A1
<i>Diaporthe heveae</i>	Diaporthaceae	Diaporthales	Branches and leaves	30, 65, 95	A10, A11, A17, A24
<i>Diaporthe heveicola</i>	Diaporthaceae	Diaporthales	Dead branches	10	A1
<i>Diaporthe rosae</i>	Diaporthaceae	Diaporthales	Dead branches	10	A1
<i>Diatrypella heveae</i>	Diatrypaceae	Xylariales	Dead twig	11	A1
<i>Dichomera prunicola</i>	Botryosphaeriaceae	Botryosphaeriales	Leaf litter	1	A1
<i>Dictyarthrinium</i> sp.	Apiosporaceae	Incertae sedis	Branch litter	5	A1
<i>Dictyochaeta assamica</i>	Chaetosphaeriaceae	Chaetosphaeriales	Leaf litter	1	A1
<i>Dictyochaeta fertilis</i>	Chaetosphaeriaceae	Chaetosphaeriales	Leaf litter	1	A1
<i>Dictyochaeta hughesii</i>	Chaetosphaeriaceae	Chaetosphaeriales	Leaf litter	1	A1
<i>Dictyochiostriata gigantica</i>	Dictyosporiaceae	Pleosporales	Branch litter	5	A1
<i>Dictyochiostriata heptaspora</i>	Dictyosporiaceae	Pleosporales	Leaf and branch litter	1, 5	A1
<i>Dictyosporium manglietiae</i>	Dictyosporiaceae	Pleosporales	Leaf and branch litter	1, 5	A1
<i>Dictyosporium</i> sp.	Dictyosporiaceae	Pleosporales	Leaf and branch litter	1, 5	A1
<i>Dicyma biophila</i>	Xylariaceae	Xylariales	Branch litter	5	A1
<i>Dicyma nebularis</i>	Xylariaceae	Xylariales	Branch litter	5	A1
<i>Dicyma ovalispora</i>	Xylariaceae	Xylariales	Branch litter	5	A1
<i>Dicyma ovalispora</i>	Xylariaceae	Xylariales	Leaf litter	1	A1
<i>Didymella heveana</i>	Didymellaceae	Pleosporales	Leaf spot	9	A6
<i>Didymella oligospora</i>	Didymellaceae	Pleosporales	Dead branch	4, 96	A3, A43

**Table 1** Continued.

<b>Species</b>	<b>Family</b>	<b>Order</b>	<b>Host-substratum</b>	<b>Reference</b>	<b>Country</b>
<i>Didymella</i> sp.	Didymellaceae	Pleosporales	Seedling	14	A9
<i>Didymosphaeria</i> sp.	Didymosphaeriaceae	Pleosporales		22	A3
<i>Diplocladiella scalaroides</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1	A1
<i>Diplococcum asperum</i>	Mollisiaceae	Helotiales	Leaf and branch litter	1, 5	A1
<i>Diplococcum clarkii</i>	Mollisiaceae	Helotiales	Branch litter	5	A1
<i>Diplococcum lawrencei</i>	Mollisiaceae	Helotiales	Branch litter	5	A1
<i>Diplococcum</i> sp.	Mollisiaceae	Helotiales	Leaf and branch litter	1	A1
<i>Diplococcum spicatum</i>	Mollisiaceae	Helotiales	Leaf and branch litter	1, 5	A1
<i>Diplodia rapax</i>	Botryosphaeriaceae	Botryosphaerales	Living branches, roots and trunks	97, 98	A32, A43
<i>Diplodia melaena</i>	Botryosphaeriaceae	Botryosphaerales	Leaf litter	1	A1
<i>Diplodia</i> sp.	Botryosphaeriaceae	Botryosphaerales		17, 30, 31, 41	A1, A7, A9, A10
<i>Diplodia zeae</i>	Botryosphaeriaceae	Botryosphaerales	Leaf litter	1	A1
<i>Diplodia zebra</i>	Botryosphaeriaceae	Botryosphaerales	Leaf litter	1	A1
<i>Diplodina</i> sp.	Gnomoniaceae	Diaporthales	Leaf litter	1	A1
<i>Discosia artocreas</i>	Discosiacae	Amphisphaerales	Leaf and branch litter	1, 5	A1
<i>Dothidotthia</i> sp.	Dothidotthiaceae	Pleosporales	Leaf and branch litter	1, 5	A1
<i>Dothiorella</i> sp.	Botryosphaeriaceae	Botryosphaerales	Leaf and branch litter	1, 5	A1
<i>Drechslera ellisia</i>	Pleosporaceae	Pleosporales		5	A1
<i>Drechslera</i> sp.	Pleosporaceae	Pleosporales		17	A10
<i>Drepanopeziza brunnea</i>	Drepanopezizaceae	Helotiales		4	A3
<i>Dyfrolomyces sinensis</i>	Dyfrolomycetaceae	Dyfrolomycetales	Branch	10	A1
<i>Ellisembia bambusae</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Ellisembia bambusicola</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Ellisembia dioscoreae</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Ellisembia leptospora</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Ellisembia paravaginata</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Ellisembia repentioriunda</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Ellisembia vaginata</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Ellisiopsis</i> sp.	Amphisphaeriaceae	Amphisphaerales	Leaf and branch litter	1	A1
<i>Elsinoe heveae</i>	Elsinoaceae	Myriangiales	Leaves, petioles, and shoots	17, 24	A10
<i>Endomelanconiopsis endophytica</i>	Endomelanconiopsidaceae	Botryosphaerales	Endophytic	12	A8
<i>Endomelanconiopsis microspore</i>	Endomelanconiopsidaceae	Botryosphaerales	Endophytic	12	A8

**Table 1** Continued.

<b>Species</b>	<b>Family</b>	<b>Order</b>	<b>Host-substratum</b>	<b>Reference</b>	<b>Country</b>
<i>Endophragmia</i> sp.	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Endophragmiella bisbyi</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Endophragmiella boewei</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Endophragmiella cesatii</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1	A1
<i>Endophragmiella lignicola</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Endophragmiella pinicola</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Endophragmiella</i> sp.	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Endophragmiella theobromae</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Ephelis borealis</i>	Clavicipitaceae	Hypocreales	Leaf litter	1	A1
<i>Eriomyces heveae</i>	Eriomycetaceae	Incertae sedis	Dead twigs	99	A1
<i>Erysiphe necator</i>	Erysiphaceae	Helotiales	Powdery mildew diseases	100	A10
<i>Erysiphe quercicola</i>	Erysiphaceae	Helotiales	Powdery mildew diseases	101, 102, 103, 104, 105	A1, A3, A7, A10, A11, A13, A29
<i>Eupenicillium</i> sp.	Aspergillaceae	Eurotiales	Leaf and branch litter	1, 5	A1
<i>Eutypa caulincola</i>	Diatrypaceae	Xylariales	Trunk	4, 97	A3, A43
<i>Eutypa erumpens</i>	Diatrypaceae	Xylariales		106	A2
<i>Eutypa heveana</i>	Diatrypaceae	Xylariales	Dead branches	24, 107	A14, A19
<i>Eutypa ludibunda</i>	Diatrypaceae	Xylariales	Stems and branches	4, 96, 108, 109	A3, A10, A43
<i>Eutypella heveae</i>	Diatrypaceae	Xylariales	Dead branches	107, 110, 111	A19, A28
<i>Excipularia narsapurensis</i>	Incertae sedis	Incertae sedis	Branch litter	1	A1
<i>Exosporium monanthotaxis</i>	Incertae sedis	Incertae sedis	Branch litter	1	A1
<i>Exserohilum rostratum</i>	Pleosporaceae	Pleosporales	Leaf spot	112	A7
<i>Fenestella heveana</i>	Fenestellaceae	Incertae sedis	Dead branches	24	A14
<i>Fimetariella rabenhorstii</i>	Bombardiaceae	Sordariales	Endophytic	12	A8
<i>Flabellospora amphibia</i>	Incertae sedis	Incertae sedis	Branch litter	1	A1
<i>Fracchiaea heveae</i>	Nitschkiaceae	Coronophorales	Branch	10	A1
<i>Fracchiaea hystricula</i>	Nitschkiaceae	Coronophorales		2, 51	A2, A3
<i>Fraseriella</i> sp.	Monascaceae	Eurotiales	Leaf litter	1	A1
<i>Fulvia</i> sp.	Mycosphaerellaceae	Mycosphaerellales	Leaf litter	1	A1
<i>Fusariella kansensis</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Fusariella sarniensis</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Fusariella</i> sp.	Incertae sedis	Incertae sedis	Branch litter	5	A1

**Table 1** Continued.

<b>Species</b>	<b>Family</b>	<b>Order</b>	<b>Host-substratum</b>	<b>Reference</b>	<b>Country</b>
<i>Fusarium bugnicourtii</i>	Nectriaceae	Hypocreales	Borer damaged and dieback	113, 114	A3
<i>Fusarium heveae</i>	Nectriaceae	Hypocreales	Leaves	115	A10
<i>Fusarium fujikuroi</i>	Nectriaceae	Hypocreales		1	A1
<i>Fusarium incarnatum</i>	Nectriaceae	Hypocreales		1, 51, 54	A1, A3
<i>Fusarium oxysporum</i>	Nectriaceae	Hypocreales	Leaf litter and stem rot	51, 116	A3, A7
<i>Fusarium polyphialidicum</i>	Nectriaceae	Hypocreales	Endophytic	12	A8
<i>Fusarium</i> sp.	Nectriaceae	Hypocreales		1, 17, 28, 29, 31, 117, 118	A1, A3, A7, A9, A10, A15, A16
<i>Fusarium</i> spp.	Nectriaceae	Hypocreales	Harvested seeds	18, 19	A10, A11
<i>Fusarium tuaranense</i>	Nectriaceae	Hypocreales	Beetle damaged, dieback, and canker diseases	119	A3
<i>Fusarium tumidum</i>	Nectriaceae	Hypocreales		51	A3
<i>Fusarium dececcellulare</i>	Nectriaceae	Hypocreales	Leaf litter	1	A1
<i>Fusicladium orchidis</i>	Venturiaceae	Venturiales	Leaf land branch	1, 5	A1
<i>Fusicladium britannicum</i>	Venturiaceae	Venturiales	Branch litter	5	A1
<i>Fusicladium</i> sp.	Venturiaceae	Venturiales	Leaf land branch litter	1, 5	A1
<i>Fusicoccum</i> sp.	Botryosphaeriaceae	Botryosphaeriales		18, 72	A11
<i>Fusicolla aqueductuum</i>	Nectriaceae	Hypocreales	Branch litter	5	A1
<i>Gaeumannomyces graminis</i>	Magnaportheaceae	Magnaporthales	Leaf and branch litter	1, 5	A1
<i>Geniculifera cystosporia</i>	Orbiliaceae	Orbiliales	Leaf litter	1	A1
<i>Gliomastix cerealis</i>	Incertae sedis	Hypocreales	Branch litter	5	A1
<i>Gliomastix musicola</i>	Incertae sedis	Hypocreales	Branch litter	5	A1
<i>Gloeosporium heveae</i>	Drepanopezizaceae	Helotiales	Leaves seedling and dieback disease	4, 65, 75, 120	A3, A11, A19
<i>Gloeosporium</i> sp.	Drepanopezizaceae	Helotiales		70, 81, 121	A9, A19, A34
<i>Gloniopsis leucaenae</i>	Hysteriaceae	Hysteriales	Branch	10	A1
<i>Gnomonia amoena</i>	Gnomoniaceae	Diaporthales	Leaf litter	1	A1
<i>Goidanichiella</i> sp.	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Graphium rhodophaeum</i>	Microascaceae	Microascales		94	A2
<i>Guignardia heveae</i>	Phyllostictaceae	Botryosphaeriales	Leaves	12, 21, 29, 111, 122	A3, A8, A11, A12, A20, A28
<i>Guignardia heveicola</i>	Phyllostictaceae	Botryosphaeriales	Leaves	66	A20
<i>Gyrothrix circinata</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1	A1
<i>Gyrothrix podosperma</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1	A1
<i>Hansfordia pulvinata</i>	Xylariaceae	Xylariales	Leaf litter	1	A1
<i>Haplariopsis fagicola</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1

**Table 1** Continued.

<b>Species</b>	<b>Family</b>	<b>Order</b>	<b>Host-substratum</b>	<b>Reference</b>	<b>Country</b>
<i>Haplographium mangiferae</i>	Hyaloscyphaceae	Helotiales	Leaf litter	1	A1
<i>Harknessia</i> sp.	Harknessiaceae	Diaporthales	Leaf litter	1	A1
<i>Harpographium</i> sp.	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Harposporium</i> sp.	Clavicipitaceae	Hypocreales	Leaf litter	1	A1
<i>Helicomyces</i> sp.	Tubeufiaceae	Tubeufiales	Branch litter	5	A1
<i>Helicomyces roseus</i>	Tubeufiaceae	Tubeufiales	Branch litter	5	A1
<i>Helicorhoidion botryoideum</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Helminthosporium phylantheum</i>	Massarinaceae	Pleosporales	Leaf and branch litter	1	A1
<i>Helminthosporium</i> sp.	Massarinaceae	Pleosporales	Leaf litter	1, 70, 81	A1, A19, A34
<i>Helminthosporium</i> spp.	Massarinaceae	Pleosporales	Harvested seeds	19	A10
<i>Helminthosporium velutinum</i>	Massarinaceae	Pleosporales	Branch litter	5	A1
<i>Hendersonia celtifolia</i>	Phaeosphaeriaceae	Pleosporales	Leaf litter	1	A1
<i>Hendersonia heveae</i>	Phaeosphaeriaceae	Pleosporales	Stems and fruits	96, 123	A11
<i>Hendersonula</i> sp.	Incertae sedis	Botryosphaeriales	Leaf litter	1	A1
<i>Henicospora coronata</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Hermatomyces sphaericus</i>	Hermatomycetaceae	Pleosporales	Dried branch	10	A1
<i>Herpotrichia diffusa</i>	Melanommataceae	Pleosporales	Twig	2	A2
<i>Heteroconium</i> sp.	Antennulariellaceae	Amphisphaeriales	Leaf litter	1	A1
<i>Heteropatella alpina</i>	Heterosphaeriaceae	Helotiales	Leaf litter	1	A1
<i>Hirudinaria macrospora</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Hormiactis alba</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Hormiactis candida</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Hormiactis</i> sp.	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Hyalotiella</i> sp.	Bartaliniaceae	Amphisphaeriales	Leaf litter	1	A1
<i>Hymenoscyphus tetricus</i>	Helotiaceae	Helotiales	Branch litter	5	A1
<i>Hyphodiscosia jaipurensis</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Hypocreaflexa</i>	Hypocreaceae	Hypocreales	Branch litter	5	A1
<i>Hypoxyylon deustum</i>	Hypoxylaceae	Xylariales		67, 70	A7, A34
<i>Hypoxyylon lenormandii</i>	Hypoxylaceae	Xylariales	Dead branch	4	A3
<i>Hypoxyylon notatum</i>	Hypoxylaceae	Xylariales		124	A17
<i>Hypoxyylon placentiforme</i>	Hypoxylaceae	Xylariales		2	A2
<i>Hypoxyylon rubiginosum</i>	Hypoxylaceae	Xylariales		2, 8, 46, 66	A2, A5, A20, A31
<i>Hypoxyylon</i> sp.	Hypoxylaceae	Xylariales	Leaf and branch litter	1, 5	A1
<i>Hypoxyylon suborbiculare</i>	Hypoxylaceae	Xylariales		106	A2

**Table 1** Continued.

<b>Species</b>	<b>Family</b>	<b>Order</b>	<b>Host-substratum</b>	<b>Reference</b>	<b>Country</b>
<i>Hysterium heveanum</i>	Hysteriaceae	Hysteriales	Decaying branches	96, 125	A3, A43
<i>Hysterostegiella dumetii</i>	Incertae sedis	Helotiales	Branch litter	5	A1
<i>Idriella lunata</i>	Microdochiaeae	Xylariales	Leaf and branch litter	1	A1
<i>Idriella</i> sp.	Microdochiaeae	Xylariales	Leaf litter	1	A1
<i>Irenopsis vincensii</i>	Meliolaceae	Meliolales	Black mildew leaves	126, 127, 128	A8, A10
<i>Jackrogersella cohaerens</i>	Hypoxylaceae	Xylariales	Leaf litter	1	A1
<i>Kirschsteiniothelia atra</i>	Kirschsteiniotheliaceae	Pleosporales	Leaf litter	1	A1
<i>Kirschsteiniothelia</i> sp.	Kirschsteiniotheliaceae	Pleosporales	Leaves	1	A1
<i>Kramasamuha</i> sp.	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Kretzschmaria cetrariooides</i>	Xylariaceae	Xylariales		4, 106	A2, A3
<i>Kretzschmaria micropus</i>	Xylariaceae	Xylariales		106	A2
<i>Kretzschmaria zonata</i>	Xylariaceae	Xylariales		29, 41, 44, 86, 106, 121, 129	A1, A2, A3, A9, A12, A26, A35
<i>Lasiodiplodia chinensis</i>	Botryosphaeriaceae	Botryosphaerales	Branches	130	A7
<i>Lasiodiplodia</i> <i>pseudotheobromae</i>	Botryosphaeriaceae	Botryosphaerales	Canker diseases, stems, twigs, and seed cover	10, 105, 131	A1, A7
<i>Lasiodiplodia theobromae</i>	Botryosphaeriaceae	Botryosphaerales	Canker, dieback diseases stem, twigs branches, dead seedling, dried petiole, root rot diseases seedling, and endophytic	1, 5, 8, 10, 17, 22, 28, 29, 41, 44, 51, 65, 132, 133, 134, 135	A1, A2, A3, A4, A5, A6, A7, A9, A10, A11, A12, A15, A16, A17, A24, A26, A28, A34, A36
<i>Lateriramulosa uniinflata</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Lauriomyces sakaeratensis</i>	Lauriomyctaceae	Lauriomyctetales	Branch litter	5	A1
<i>Lembosia glonioidea</i>	Asterinaceae	Asterinales		4	A1
<i>Lemonniera terrestris</i>	Discinellaceae	Helotiales	Branch litter	5	A1
<i>Leptodiscella africana</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Leptosphaeria blumeri</i>	Leptosphaeriaceae	Pleosporales	Branch litter	5	A1
<i>Leptosphaeria cercocarpi</i>	Leptosphaeriaceae	Pleosporales	Branch litter	5	A1
<i>Leptosphaeria darkeri</i>	Leptosphaeriaceae	Pleosporales	Branch litter	5	A1
<i>Leptosphaeria dololum</i>	Leptosphaeriaceae	Pleosporales	Branch litter	5	A1

**Table 1** Continued.

<b>Species</b>	<b>Family</b>	<b>Order</b>	<b>Host-substratum</b>	<b>Reference</b>	<b>Country</b>
<i>Leptosphaeria heveae</i>	Leptosphaeriaceae	Pleosporales	Leaf spot	9, 24	A6
<i>Leptosphaeria millefolii</i>	Leptosphaeriaceae	Pleosporales	Branch litter	5	A1
<i>Leptosphaeria russellii</i>	Leptosphaeriaceae	Pleosporales	Branch litter	5	A1
<i>Leptosphaerulina trifolii</i>	Didymellaceae	Pleosporales		51	A3
<i>Libertella heveae</i>	Diatrypaceae	Xylariales	Crack branches	115	A11
<i>Linocarpon</i> sp.	Linocarpaceae	Chaetosphaerales	Leaf and branch litter	1, 5	A1
<i>Linodochium hyalinum</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Linospora</i> sp.	Gnomoniaceae	Diaporthales	Leaf and branch litter	1, 5	A1
<i>Lophiostoma semilibereum</i>	Lophiostomataceae	Pleosporales	Leaf litter	1	A1
<i>Lophiostoma viridarium</i>	Lophiostomataceae	Pleosporales	Leaf litter	1	A1
<i>Lophodermium</i> sp.	Rhytismataceae	Rhytismatales	Branch litter	5	A1
<i>Macgarvieomyces juncicola</i>	Pyriculariaceae	Magnaportheales	Leaf and branch litter	1	A1
<i>Macrophomina phaseolina</i>	Botryosphaeriaceae	Botryosphaerales	Root rot diseases and stems	9, 29, 136	A3, A4, A11, A17, A36
<i>Macrophomina</i> sp.	Botryosphaeriaceae	Botryosphaerales		41	A1
<i>Mariannaea elegans</i>	Nectriaceae	Hypocreales	Branch litter	5	A1
<i>Massariothea</i> sp.	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Mastigosporium rubricosum</i>	Ploettnerulaceae	Helotiales	Leaf litter	1	A1
<i>Melomastia heveae</i>	Incertae sedis	Incertae sedis	Moribund branches and trunks	24	A14
<i>Memnoniella oenanthes</i>	Stachybotryaceae	Hypocreales	Branch litter	5	A1
<i>Menispora</i> sp.	Chaetosphaeriaceae	Chaetosphaerales	Leaf litter	1	A1
<i>Menisporopsis profusa</i>	Chaetosphaeriaceae	Chaetosphaerales	Leaf litter	1	A1
<i>Menisporopsis theobromae</i>	Chaetosphaeriaceae	Chaetosphaerales	Leaf litter	1	A1
<i>Metacapnodium dennisii</i>	Metacapnodiaceae	Capnodiales	Leaves	137, 138	A3
<i>Micropeltis heveae</i>	Micropeltidaceae	Microthyriales	Leaves	23	A10
<i>Microthyrium fagi</i>	Microthyriaceae	Microthyriales	Branch litter	5	A1
<i>Miladina lecithina</i>	Pyronemataceae	Pezizales	Branch litter	5	A1
<i>Minimelanolocus hughesii</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Minimelanolocus rousselianus</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Minimelanolocus subulifer</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Monacrosporium</i> sp.	Orbiliaceae	Orbiliales	Leaf and branch litter	1, 5	A1
<i>Monilinia</i> sp.	Sclerotiniaceae	Helotiales		41	A1
<i>Monochaetia</i> sp.	Amphisphaeriaceae	Amphisphaerales	Leaf litter	1	A1
<i>Monodictys cerebriformis</i>	Incertae sedis	Incertae sedis	Dead wood	139	A7
<i>Monodictys glauca</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Monodictys nigriglobulosa</i>	Incertae sedis	Incertae sedis		140	A7

**Table 1** Continued.

<b>Species</b>	<b>Family</b>	<b>Order</b>	<b>Host-substratum</b>	<b>Reference</b>	<b>Country</b>
<i>Montagnula lica</i>	Didymosphaeriaceae	Pleosporales	Dried twig	10	A1
<i>Muscodor heveae</i>	Induratiaceae	Xylariales		141	A1
<i>Muyocpron dipterocarpi</i>	Muyocpronaceae	Muyocpronales	Twig	142	A1
<i>Muyocpron garethjonesii</i>	Muyocpronaceae	Muyocpronales	Twig	10	A1
<i>Muyocpron heveae</i>	Muyocpronaceae	Muyocpronales	Twig	142	A1
<i>Muyocpron sahnii</i>	Muyocpronaceae	Muyocpronales	Branch litter	5	A1
<i>Mycosphaerella heveana</i>	Mycosphaerellaceae	Mycosphaerellales	Leaves	96, 143	A43, A44
<i>Mycosphaerella heveicola</i>	Mycosphaerellaceae	Mycosphaerellales	Leaf spot	9	A7, A6
<i>Mystrosporiella litseae</i>	Mycosphaerellaceae	Mycosphaerellales	Leaf litter	1	A1
<i>Myxocyclus</i> sp.	Pleomassariaceae	Pleosporales	Branch litter	5	A1
<i>Nectria cinnabarinia</i>	Nectriaceae	Hypocreales	Leaf litter	1	A1
<i>Nectria diversispora</i>	Nectriaceae	Hypocreales	Dead bark	65, 86	A11, A12
<i>Nectria pseudotrichia</i>	Nectriaceae	Hypocreales	Bark	5, 132, 144, 145, 146	A1, A2, A4, A28, A34, A43
<i>Nectria</i> sp.	Nectriaceae	Hypocreales	Bark and dead branch	106	A2
<i>Neocosmospora solani</i>	Nectriaceae	Hypocreales	Root lesion, gummosis, witling, and death	1, 9, 28, 31, 51, 147, 148	A1, A3, A7, A11, A15, A17
<i>Neofusicoccum parvum</i>	Botryosphaeriaceae	Botryosphaerales	Foot canker and sudden wilt seedling	149	A7
<i>Neofusicoccum mangiferae</i>	Botryosphaeriaceae	Botryosphaerales	Leaf spot	150	A11
<i>Neofusicoccum ribis</i>	Botryosphaeriaceae	Botryosphaerales	Leaf blight	151	A3
<i>Neolinocarpon phayaoense</i>	Linocarpaceae	Chaetosphaerales	Branch	152	A1
<i>Neonectria coccinea</i>	Nectriaceae	Hypocreales		4	A3
<i>Neopestalotiopsis cubana</i>	Pestalotiopsidaceae	Amphisphaerales	Leaf fall disease	153	A1
<i>Neopestalotiopsis formicidarum</i>	Pestalotiopsidaceae	Amphisphaerales	Leaf fall disease	153	A1
<i>Neopestalotiopsis aotearoa</i>	Pestalotiopsidaceae	Amphisphaerales	Leaf fall disease	154	A7
<i>Neopseudocercospora zambiensis</i>	Mycosphaerellaceae	Mycosphaerellales	Branch litter	5	A1
<i>Neoroussella heveae</i>	Roussoellaceae	Pleosporales	Twigs	155	A1
<i>Neoroussella leucaenae</i>	Roussoellaceae	Pleosporales	Dead twigs	155	A1
<i>Neoscytalidium dimidiatum</i>	Botryosphaeriaceae	Botryosphaerales		4	A3
<i>Neottiosporella</i> sp.	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Neovaginatisporella fuckelii</i>	Lophiostomataceae	Pleosporales	Branch litter	5	A1
<i>Nigrograna fuscidula</i>	Nigrogranaceae	Pleosporales		2	A2
<i>Nigrospora oryzae</i>	Incertae sedis	Incertae sedis		1, 51	A1, A3
<i>Nitschka tetraspora</i>	Nitschkiaceae	Coronophorales		3	A2

**Table 1** Continued.

<b>Species</b>	<b>Family</b>	<b>Order</b>	<b>Host-substratum</b>	<b>Reference</b>	<b>Country</b>
<i>Nummularia anthracodes</i>	Graphostromataceae	Xylariales	Black bark	25,66, 94	A2, A20
<i>Nummularia broomeana</i>	Graphostromataceae	Xylariales		8	A5
<i>Nummularia cincta</i>	Graphostromataceae	Xylariales		66	A20
<i>Ochrocladosporium elatum</i>	Incertae sedis	Pleosporales	Leaf and branch litter	1, 5	A1
<i>Oedothea vismiae</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Oidium heveae</i>	Erysiphaceae	Helotiales	Powdery mildew	9, 17, 29, 156, 157	A1, A2, A3, A4, A6, A7, A10, A11, A12, A13, A15, A17, A31, A36, A39, A45, A46
<i>Oidium</i> sp.	Erysiphaceae	Helotiales	Leaves	81	A19
<i>Oidium tenerum</i>	Erysiphaceae	Helotiales	Leaves	94	A2
<b><i>Ophiobolus heveae</i></b>	Phaeosphaeriaceae	Pleosporales	Leaf spot	8, 9, 66, 158	A5, A10, A20, A21
<i>Ophiostoma ulmi</i>	Ceratocystidaceae	Microascales	Leaf and branch litter	1, 5	A1
<i>Orbilia</i> sp.	Orbiliaceae	Orbiliales	Branch litter	5	A1
<i>Oxydothis</i> sp.	Oxydothidaceae	Xylariales	Branch litter	5	A1
<i>Paecilomyces</i> sp.	Aspergillaceae	Eurotiales	Leaf and branch litter	1, 5	A1
<i>Panchanania jaipurensis</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Paraconiothyrium cyclothyrioides</i>	Didymosphaeriaceae	Pleosporales	Under soil	159	A11
<i>Paradendryphiella salina</i>	Pleosporaceae	Pleosporales	Leaf and branch litter	1, 5	A1
<i>Paraeutypella citricola</i>	Diatrypaceae	Xylariales	Dead branch	10	A1
<i>Paragnomonia fragariae</i>	Sydiowiellaceae	Diaporthales	Leaf litter	1	A1
<i>Paramyrothecium roridum</i>	Stachybotryaceae	Hypocreales	Leaf and branch litter	1, 5	A1
<i>Parapleurotheciopsis</i> sp.	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Parascedosporium putredinis</i>	Microascaceae	Microascales	Leaf litter	1	A1
<i>Parasymphidiella podocarpi</i>	Parasymphidiellaceae	Parasymphidiellales	Leaf and branch litter	1	A1
<i>Paratomenticola lanceolata</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Paratrichoconis chinensis</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Passalora berkheyae</i>	Mycosphaerellaceae	Mycosphaerellales	Leaf litter	1	A1
<i>Passalora marmorata</i>	Mycosphaerellaceae	Mycosphaerellales	Branch litter	5	A1
<i>Passalora oldenlandiae</i>	Mycosphaerellaceae	Mycosphaerellales	Branch litter	5	A1
<i>Passalora pithecellobii</i>	Mycosphaerellaceae	Mycosphaerellales	Leaf and branch litter	1	A1
<i>Passalora solani-torvi</i>	Mycosphaerellaceae	Mycosphaerellales	Branch litter	5	A1
<i>Passalora vaginae</i>	Mycosphaerellaceae	Mycosphaerellales	Leaf litter	1	A1
<i>Penicillifer pulcher</i>	Nectriaceae	Hypocreales	Leaf litter	1	A1

**Table 1** Continued.

<b>Species</b>	<b>Family</b>	<b>Order</b>	<b>Host-substratum</b>	<b>Reference</b>	<b>Country</b>
<i>Penicillium brevicompactum</i>	Aspergillaceae	Eurotiales	Endophytic	12	A8
<i>Penicillium chrysogenum</i>	Aspergillaceae	Eurotiales	Leaf spot	32	A17
<i>Penicillium dodgei</i>	Aspergillaceae	Eurotiales	Branch litter	5	A1
<i>Penicillium javanicum</i>	Aspergillaceae	Eurotiales	Branch litter	5	A1
<i>Penicillium paxilli</i>	Aspergillaceae	Eurotiales	Endophytic	12	A8
<i>Penicillium sclerotiorum</i>	Aspergillaceae	Eurotiales	Endophytic	12	A8
<i>Penicillium spp.</i>	Aspergillaceae	Eurotiales	Harvested seeds	19	A10
<i>Penzigomyces flagellatus</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Penzigomyces nodipes</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Penzigomyces parvus</i>	Incertae sedis	Incertae sedis	Branch litter	1	A1
<i>Periconia byssoides</i>	Incertae sedis	Pleosporales	Tips dead and seedling leaves	2, 5, 8, 38	A1, A2, A3, A5
<i>Periconia cambreensis</i>	Incertae sedis	Pleosporales	Blight diseases leaf, petiole, and twigs	5	A1
<i>Periconia lateralis</i>	Incertae sedis	Pleosporales	Branch litter, leaf spot, and	5	A1
<i>Periconia jabalpurensis</i>	Incertae sedis	Pleosporales	Branch litter	5	A1
<i>Periconia heveae</i>	Incertae sedis	Pleosporales	Leaf spot and blight seedling	9, 30, 31	A1, A7, A9, A10, A16
<i>Periconia manihotica</i>	Incertae sedis	Pleosporales		21, 160, 161, 162	A12, A17, A10, A45,
<i>Periconia sp.</i>	Incertae sedis	Pleosporales		121	A9
<i>Periconia tirupatiensis</i>	Incertae sedis	Pleosporales	Branch litter	5	A1
<i>Periconiella cyatheae</i>	Mycosphaerellaceae	Mycosphaerellales	Branch litter	5	A1
<i>Periconiella heveae</i>	Mycosphaerellaceae	Mycosphaerellales	Leaves	163	A3
<i>Periconiella sp.</i>	Mycosphaerellaceae	Mycosphaerellales		51	A3
<i>Perisporiopsis lateritia</i>	Perisporiopsidaceae	Incertae sedis	Decaying leaves	164	A8
<i>Perisporiopsis melioloides</i>	Perisporiopsidaceae	Incertae sedis	Endophytic	12	A8
<i>Peroneutypa heteracanthoides</i>	Diatrypaceae	Xylariales		4	A3
<i>Peroneutypa longiasca</i>	Diatrypaceae	Xylariales	Dead twig	11	A1
<i>Pestalosphaeria hansenii</i>	Pestalotiopsidaceae	Amphisphaerales	Branch litter	5	A1
<i>Pestalotia sp.</i>	Pestalotiopsidaceae	Amphisphaerales	Leaves	1, 17, 106, 121, 132,	A1, A2, A9, A10, A34
<i>Pestalotiopsis adusta</i>	Pestalotiopsidaceae	Amphisphaerales		51	A3
<i>Pestalotiopsis disseminata</i>	Pestalotiopsidaceae	Amphisphaerales	Leaf litter	1	A1
<i>Pestalotiopsis guepinii</i>	Pestalotiopsidaceae	Amphisphaerales		1, 70	A1, A34
<i>Pestalotiopsis microspora</i>	Pestalotiopsidaceae	Amphisphaerales	Leaf blight disease	165	A39
<i>Pestalotiopsis palmarum</i>	Pestalotiopsidaceae	Amphisphaerales	Leaf	29, 31, 166, 167	A3, A7, A8

**Table 1** Continued.

<b>Species</b>	<b>Family</b>	<b>Order</b>	<b>Host-substratum</b>	<b>Reference</b>	<b>Country</b>
<i>Pestalotiopsis</i> sp.	Pestalotiopsidaceae	Amphisphaerales	Leaves	1, 21	A1, A12
<i>Pestalotiopsis versicolor</i>	Pestalotiopsidaceae	Amphisphaerales		4	A3
<i>Peyronellaea</i> sp.	Didymellaceae	Pleosporales	Leaf litter	1	A1
<i>Phaeodactylium alpiniae</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Phaeodothis winteri</i>	Didymosphaeriaceae	Pleosporales		168	A3, A38
<i>Phaeoisaria sparsa</i>	Diatrypaceae	Xylariales	Leaf litter	1	A1
<i>Phaeoisariopsis cercosporoides</i>	Mycosphaerellaceae	Mycosphaerellales	Leaf and branch litter	1, 5	A1
<i>Phaeoisariopsis</i> sp.	Mycosphaerellaceae	Mycosphaerellales	Leaf litter	1	A1
<i>Phaeosphaeria</i> sp.	Phaeosphaeriaceae	Pleosporales	Leaf and branch litter	1, 5	A1
<i>Phaeostilbella nigra</i>	Incertae sedis	Hypocreales	Branch litter	1, 5	A1
<i>Phoma pezizoides</i>	Didymellaceae	Pleosporales	Leaf litter	1	A1
<i>Phoma</i> sp.	Didymellaceae	Pleosporales		1, 17, 28	A1, A10, A15
<i>Phomatospora heveae</i>	Phomatosporaceae	Phomatosporales	Dead branches	24	A14
<i>Phomopsis heveae</i>	Diaporthaceae	Diaporthales	Dieback young tissue	9, 21, 120, 169	A1, A3, A4, A7, A10, A11, A12, A17, A44
<i>Phomopsis heveicola</i>	Diaporthaceae	Diaporthales	Branches	170, 171	A7
<i>Phomopsis ramicola</i>	Diaporthaceae	Diaporthales	Living stems	22, 29, 65	A3, A11
<i>Phomopsis</i> sp.	Diaporthaceae	Diaporthales	Leaf litter dieback and leaf diseases	1, 17, 121, 158, 172	A1, A9, A10, A21
<i>Phragmocephala elliptica</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1	A1
<i>Phyllachora huberi</i>	Phyllachoraceae	Phyllachorales	Tar spot disease	9	A8, A10, A16
<i>Phyllosticta heveae</i>	Phyllostictaceae	Botryosphaeriales		9, 41, 66, 67, 75, 132, 173, 174, 175	A1, A3, A4, A5, A6, A7, A10, A11, A17, A19, A20, A28, A30, A34, A36, A47
<i>Phyllosticta heveana</i>	Phyllostictaceae	Botryosphaeriales		24, 51, 176	A3, A40
<i>Phyllosticta</i> sp.	Phyllostictaceae	Botryosphaeriales	Leaf litter and leaf spot	1, 17, 28, 29, 30, 71, 121	A1, A3, A9, A10, A12, A15
<i>Phyllostictina</i> sp.	Phyllostictaceae	Botryosphaeriales		25	A28
<i>Physalospora heveae</i>	Hypocreaceae	Xylariales		24	A14
<i>Piricauda pseudarthriae</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Pithomyces graminicola</i>	Astrosphaeriellaceae	Pleosporales	Leaf litter	1	A1
<i>Placophomopsis heveae</i>	Diaporthaceae	Diaporthales	Wood	177	A36
<i>Plectosphaerella cucumerina</i>	Plectosphaerellaceae	Glomerellales	Branch litter	5	A1
<i>Pleonectria heveana</i>	Incertae sedis	Incertae sedis	Decaying bark and trunk	4, 96, 110	A3, A43
<i>Pleopunctum heveae</i>	Phaeoseptaceae	Pleosporales	Dried twig	10	A1

**Table 1** Continued.

<b>Species</b>	<b>Family</b>	<b>Order</b>	<b>Host-substratum</b>	<b>Reference</b>	<b>Country</b>
<i>Pleosphaerulina heveae</i>	Saccotheciaceae	Dothideales		24	A14
<i>Pleospora</i> sp.	Pleosporaceae	Pleosporales	Branch litter	5	A1
<i>Pleurophragmium acutum</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Pleurophragmium capense</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Pleurothecopsis pusilla</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Podocrea pezizoidea</i>	Hypocreaceae	Hypocreales	Branch litter	5	A1
<i>Polymorphum</i> sp.	Ascidiachaenaceae	Rhytismatales	Branch litter	5	A1
<i>Polyschema</i> sp.	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Protostegia heveae</i>	Incertae sedis	Incertae sedis	Dead branches	25	A10
<i>Pseudobeltrania penzigi</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Pseudocercospora opuli</i>	Mycosphaerellaceae	Mycosphaerellales	Leaf litter	1	A1
<i>Pseudocercospora heveae</i>	Mycosphaerellaceae	Mycosphaerellales	Leaf spot	17, 18, 30, 31, 41, 45, 46, 47	A1, A7, A10, A16, A27, A31
<i>Pseudocercospora pterocauli</i>	Mycosphaerellaceae	Mycosphaerellales	Branch litter	1	A1
<i>Pseudocercospora ulei</i>	Mycosphaerellaceae	Mycosphaerellales	Leaf bright	9, 17, 18, 28, 31, 51, 158, 178, 179	A3, A7, A8, A9, A10, A15, A11, A16, A21, A23, A24, A25, A27, A30, A33, A39, A48, A49, A50, A51, A52
<i>Pseudodiplodia</i> sp.	Incertae sedis	Incertae sedis	Branch litter	1	A1
<i>Pseudofusicoccum adansoniae</i>	Pseudofusicoccaceae	Botryosphaerales	Endophytic and canker diseases	131, 180	A1
<i>Pseudofusicoccum ardesiacum</i>	Pseudofusicoccaceae	Botryosphaerales	Endophytic and canker diseases	131, 180	A1
<i>Pseudogliomastix</i> sp.	Incertae sedis	Coniochaetales	Leaf litter	1	A1
<i>Pseudogymnoascus pannorum</i>	Pseudeurotiaceae	Thelebolales	Leaf litter	1	A1
<i>Pseudopithomyces palmicola</i>	Didymosphaeriaceae	Pleosporales	Dried leaf	10	A1
<i>Pseudorobillarda phragmitis</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Pseudorobillarda</i> sp.	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Pseudospiropes obclavatus</i>	Incertae sedis	Helotiales	Leaf and branch litter	1, 5	A1
<i>Pteroconium intermedium</i>	Apiosporaceae	Incertae sedis	Leaf litter	1	A1
<i>Pucciniopsis</i> sp.	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Pyricularia parasitica</i>	Pyriculariaceae	Magnaportheales	Leaf litter	1	A1
<i>Pyriculariopsis parasitica</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Pyriculariopsis</i> sp.	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Quadrisporella heveae</i>	Muyocopronaceae	Muyocopronales	Dried twig	10	A1

**Table 1** Continued.

<b>Species</b>	<b>Family</b>	<b>Order</b>	<b>Host-substratum</b>	<b>Reference</b>	<b>Country</b>
<i>Ramichloridium apiculatum</i>	Mycosphaerellaceae	Mycosphaerellales	Branch litter	5	A1
<i>Ramularia aromatica</i>	Mycosphaerellaceae	Mycosphaerellales	Leaf litter	1	A1
<i>Ramularia grevilleana</i>	Mycosphaerellaceae	Mycosphaerellales	Leaf litter	1	A1
<i>Repetophragma aburiense</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Repetophragma cambrense</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Repetophragma ellisiae</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Repetophragma subulatum</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Rhabdospora</i> sp.	Mycosphaerellaceae	Mycosphaerellales		51	A3
<i>Rhexoacroditys fuliginosa</i>	Pleurotheciaeae	Pleurotheciales	Branch litter	5	A1
<i>Rhexoampullifera</i> sp.	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Rhinocladiella</i> sp.	Herpotrichiellaceae	Chaetothyriales	Leaf and branch litter	1, 5	A1
<i>Rhombostilbella rosae</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Rhytidhysteron rufulum</i>	Patellariaceae	Patellariales		94	A2
<i>Rhytidhysteron neorufulum</i>	Patellariaceae	Patellariales	Branch	10, 55	A1
<i>Rhytidhysteron tectonae</i>	Patellariaceae	Patellariales	Branch	10	A1
<i>Rosellinia africana</i>	Xylariaceae	Xylariales		24, 181	A40
<i>Rosellinia bunodes</i>	Xylariaceae	Xylariales	Black root and crown rot	9, 121	A4, A9, A10, A11
<i>Rosenscheldiella heveae</i>	Venturiaceae	Venturiales	Leaves	182	A10
<i>Sarocladium strictum</i>	Incertae sedis	Hypocreales	Leaf and branch litter	1, 5	A1
<i>Schizotrichum lobeliae</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Scolecobasidiella avellanea</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Scolecobasidiella</i> sp.	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Scolecobasidium anellii</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Scolecobasidium dendroides</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Scolecobasidium</i> sp.	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Scolecostigmina combreti</i>	Incertae sedis	Capnodiales	Leaf litter	1	A1
<i>Scolecostigmina combreticola</i>	Incertae sedis	Capnodiales	Leaf and branch litter	1, 5	A1
<i>Scolecostigmina crotonicola</i>	Incertae sedis	Capnodiales	Branch litter	5	A1
<i>Scolecostigmina kranzii</i>	Incertae sedis	Capnodiales	Leaf and branch litter	1, 5	A1
<i>Scolecostigmina mangiferae</i>	Incertae sedis	Capnodiales	Branch litter	5	A1
<i>Scolecostigmina phaeocarpa</i>	Incertae sedis	Capnodiales	Branch litter	5	A1
<i>Scolicotrichum heveae</i>	Incertae sedis	Incertae sedis	Leaf spot	9	A10
<i>Scytalidium lignicola</i>	Incertae sedis	Helotiales	Branch litter	5	A1
<i>Selenodriella fertilis</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Selenosporella</i> sp.	Incertae sedis	Incertae sedis	Leaf litter	1	A1

**Table 1** Continued.

<b>Species</b>	<b>Family</b>	<b>Order</b>	<b>Host-substratum</b>	<b>Reference</b>	<b>Country</b>
<i>Septonema fasciculare</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Septoria</i> sp.	Mycosphaerellaceae	Mycosphaerellales		70	A34
<i>Setodochium</i> sp.	Wiesneriomycetaceae	Wiesneriomycetales		28	A15
<i>Seynesiella</i> sp.	Microthyriaceae	Microthyriales	Leaf litter	1	A1
<i>Simplicillum</i> sp.	Cordycipitaceae	Hypocreales	Leaf	183	A1
<i>Sirosporium antenniforme</i>	Mycosphaerellaceae	Mycosphaerellales	Leaf litter	1	A1
<i>Sirosporium stylidii</i>	Mycosphaerellaceae	Mycosphaerellales	Branch litter	5	A1
<i>Spadicoides bina</i>	Helminthosphaeriaceae	Sordariales	Branch litter	5	A1
<i>Spadicoides obovata</i>	Helminthosphaeriaceae	Sordariales	Branch litter	5	A1
<i>Spegazzinia deightonii</i>	Apiosporaceae	Incertae sedis	Leaf litter	1	A1
<i>Spegazzinia parkeri</i>	Apiosporaceae	Incertae sedis	Branch litter	5	A1
<i>Spegazzinia sundara</i>	Apiosporaceae	Incertae sedis	Branch litter	5	A1
<i>Spegazzinia</i> sp.	Apiosporaceae	Incertae sedis	Leaf litter	1	A1
<i>Speiropsis hyalospora</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Speiropsis pedatospora</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Spermospora avenae</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Spermospora subulata</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Sphaerella heveae</i>	Mycosphaerellaceae	Mycosphaerellales	Leaves	29, 110, 184	A3, A11, A12
<i>Sphaeronema album</i>	Incertae sedis	Incertae sedis	Decaying fruit	65, 132	A11, A34
<i>Sphaeropsis eucalypticola</i>	Botryosphaeriaceae	Botryosphaerales	Twig	10	A1
<i>Sphaeropsis heveae</i>	Botryosphaeriaceae	Botryosphaerales	Leaves	96, 123	A20
<i>Sphaerulina</i> sp.	Mycosphaerellaceae	Mycosphaerellales		46	A31
<i>Spiropes effusus</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Spiropes fumosus</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Spiropes japonicus</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Spiropes penicillium</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Spiropes</i> sp.	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Spondylocladiella botrytioides</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Spondylocladiella</i> sp.	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Sporendocladia bactrospora</i>	Ceratocystidaceae	Microascales	Branch litter	5	A1
<i>Sporidesmiella hyalosperma</i>	Melanommataceae	Pleosporales	Branch litter	5	A1
<i>Sporidesmium australiense</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Sporidesmium baccharidis</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1

**Table 1** Continued.

<b>Species</b>	<b>Family</b>	<b>Order</b>	<b>Host-substratum</b>	<b>Reference</b>	<b>Country</b>
<i>Sporidesmium coronatum</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Sporidesmium ehrenbergii</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Sporidesmium faureae</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Sporidesmium ghanaense</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Sporidesmium harknessii</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Sporidesmium hormisciooides</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Sporidesmium jasminicola</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Sporidesmium longirostratum</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Sporidesmium murrayae</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Sporidesmium njalaense</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Sporidesmium penzigi</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Sporidesmium rubi</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Sporidesmium socium</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Sporidesmium sp.</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Sporidesmium tenuisporum</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Sporidesmium tropicale</i>	Incertae sedis	Incertae sedis	Twig	10	A1
<i>Sporidesmium uvariicola</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Sporoschisma uniseptatum</i>	Chaetosphaeriaceae	Chaetosphaeriales	Branch litter	5	A1
<i>Sporoschismopsis</i> sp.	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Sporothrix schenckii</i>	Ophiostomataceae	Microascales	Leaf litter	1	A1
<i>Stachybotrys parvisporus</i>	Stachybotryaceae	Hypocreales	Branch litter	5	A1
<i>Stachybotrys sansevieriae</i>	Stachybotryaceae	Hypocreales	Branch litter	5	A1
<i>Stachybotrys</i> sp.	Stachybotryaceae	Hypocreales	Leaf litter	1	A1
<i>Stanjehughesia larvata</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Staphylotrichum coccosporum</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Staphylotrichum</i> sp.	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Stigmina celata</i>	Mycosphaerellaceae	Mycosphaerellales	Branch litter	5	A1
<i>Stigmina hartigiana</i>	Mycosphaerellaceae	Mycosphaerellales	Leaf and branch litter	1, 5	A1
<i>Stigmina obtecta</i>	Mycosphaerellaceae	Mycosphaerellales	Branch litter	5	A1
<i>Stigmina rauvolfiae</i>	Mycosphaerellaceae	Mycosphaerellales	Branch litter	5	A1
<i>Stigmina</i> sp.	Mycosphaerellaceae	Mycosphaerellales	Branch litter	5	A1
<i>Stigmina sudanensis</i>	Mycosphaerellaceae	Mycosphaerellales	Branch litter	5	A1
<i>Stilbella heveae</i>	Incertae sedis	Incertae sedis		185	A4
<i>Stilbospora</i> sp.	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Strumella coryneoidea</i>	Sarcosomataceae	Pezizales	Leaf litter	1	A1

**Table 1** Continued.

<b>Species</b>	<b>Family</b>	<b>Order</b>	<b>Host-substratum</b>	<b>Reference</b>	<b>Country</b>
<i>Subulispora Britannica</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Subulispora procurvata</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Subulispora</i> sp.	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Sympodiella</i> sp.	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Taeniolella breviuscula</i>	Mytilinidiaceae	Mytilinidiales	Branch litter	5	A1
<i>Taeniolella scripta</i>	Mytilinidiaceae	Mytilinidiales	Leaf litter	1	A1
<i>Taeniolina centaurii</i>	Mytilinidiaceae	Mytilinidiales	Leaf litter	1	A1
<i>Talaromyces flavus</i>	Aspergillaceae	Eurotiales	Leaf litter	1	A1
<i>Tetraploa aristata</i>	Tetraplosphaeriaceae	Pleosporales	Leaf and branch litter	1, 5	A1
<i>Tetraploa ellisii</i>	Tetraplosphaeriaceae	Pleosporales	Branch litter	5	A1
<i>Tetraposporium asterinearum</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Tetraposporium</i> sp.	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Thyridaria heveae</i>	Thyridiaceae	Pleosporales		24	A14
<i>Thyridaria sambucina</i>	Thyridiaceae	Pleosporales	Leaf and branch litter	1, 5	A1
<i>Thyridium flavum</i>	Thyridiaceae	Incertae sedis	Dead branches	110	A11
<i>Thyrsidina</i> sp.	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Tiarosporella</i> sp.	Botryosphaeriaceae	Botryosphaeriales	Leaf litter	1	A1
<i>Torrubiella rubra</i>	Cordycipitaceae	Hypocreales		66	A20
<i>Torula fici</i>	Torulaceae	Pleosporales	Dried twig	10	A1
<i>Torula herbarum</i>	Torulaceae	Pleosporales	Leaf and branch litter	1, 5	A1
<i>Torula</i> sp.	Torulaceae	Pleosporales	Branch litter	5	A1
<i>Trematosphaeria pertusa</i>	Trematosphaeriaceae	Pleosporales	Branch litter	5	A1
<i>Tretospora</i> sp.	Parodiopsidaceae	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Triadelphia heterospora</i>	Triadelphiaceae	Microascales	Leaf litter	1	A1
<i>Triadelphia uniseptata</i>	Triadelphiaceae	Microascales	Leaf litter	1	A1
<i>Trichocladium griseum</i>	Chaetomiaceae	Sordariales	Leaf and branch litter	1, 5	A1
<i>Trichoderma amazonicum</i>	Hypocreaceae	Hypocreales	Endophytic	186	A8
<i>Trichoderma citrinoviride</i>	Hypocreaceae	Hypocreales		35	A29
<i>Trichoderma harzianum</i>	Hypocreaceae	Hypocreales	Endophytic	186	A8
<i>Trichoderma koningiopsis</i>	Hypocreaceae	Hypocreales	Endophytic	186	A8
<i>Trichoderma pezizoides</i>	Hypocreaceae	Hypocreales		84	A1
<i>Trichoderma</i> spp.	Hypocreaceae	Hypocreales	Harvested seeds	19	A10
<i>Trichoderma viride</i>	Hypocreaceae	Hypocreales	Branch litter	5	A1
<i>Trichodochium disseminatum</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Trichothecium roseum</i>	Incertae sedis	Hypocreales	Leaf litter	1, 21	A1, A12

**Table 1** Continued.

<b>Species</b>	<b>Family</b>	<b>Order</b>	<b>Host-substratum</b>	<b>Reference</b>	<b>Country</b>
<i>Tricladium angulatum</i>	Tricladiaeae	Helotiales	Leaf litter	1	A1
<i>Tricladium castaneicolra</i>	Tricladiaeae	Helotiales	Leaf litter	1	A1
<i>Tricladium fuscum</i>	Tricladiaeae	Helotiales	Leaf and branch litter	1, 5	A1
<i>Tricladium sp.</i>	Tricladiaeae	Helotiales	Branch litter	5	A1
<i>Tridentaria implicans</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Tridentaria sp.</i>	Incertae sedis	Incertae sedis	Branch litter	5	A1
<i>Trimmatostroma betulinum</i>	Mollisiaceae	Helotiales	Leaf litter	1	A1
<i>Triplospermum myrti</i>	Capnodiaceae	Capnodiales	Branch litter	5	A1
<i>Triscelophorus acuminatus</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Triscelophorus monosporus</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Triscelophorus ponapensis</i>	Incertae sedis	Incertae sedis	Leaf and branch litter	1, 5	A1
<i>Trisulcosporium acerinum</i>	Incertae sedis	Incertae sedis	Leaf litter	1	A1
<i>Truncatella sp.</i>	Bartaliniaceae	Amphisphaeriales	Leaf litter	1	A1
<i>Tryblidiella mindanaoensis</i>	Bartaliniaceae	Amphisphaeriales		144	A28
<i>Tubercularia lateritia</i>	Nectriaceae	Hypocreales		187	A4
<i>Tubeufia cerea</i>	Tubeufiaceae	Tubeufiales	Branch litter	5	A1
<i>Uniseta sp.</i>	Gnomoniaceae	Diaporthales	Branch litter	5	A1
<i>Urnula mexicana</i>	Sarcosomataceae	Pezizales	Branch litter	5	A1
<i>Ustulina deusta</i>	Xylariaceae	Xylariales		9	A2, A3, A4, A6, A7, A10, A15, A17, A34, A35, A53
<i>Uwemyces elaeidis</i>	Mycosphaerellaceae	Mycosphaerellales	Branch litter	5	A1
<i>Vaginatispora amygdali</i>	Massarinaceae	Pleosporales	Branch	10	A1
<i>Valsa sp.</i>	Valsaceae	Diaporthales		51	A3
<i>Varicosporium elodeae</i>	Discinellaceae	Helotiales	Leaf litter	1	A1
<i>Venturia crataegi</i>	Venturiaceae	Venturiales	Branch litter	5	A1
<i>Veronaea coprophila</i>	Herpotrichiellaceae	Chaetothyriales		5	A1
<i>Veronaea botryosa</i>	Herpotrichiellaceae	Chaetothyriales	Leaf and branch litter	1, 5	A1
<i>Veronaea carlinae</i>	Herpotrichiellaceae	Chaetothyriales	Leaf and branch litter	1, 5	A1
<i>Veronaea coprophila</i>	Herpotrichiellaceae	Chaetothyriales	Leaf and branch litter	1, 5	A1
<i>Veronaea sp.</i>	Herpotrichiellaceae	Chaetothyriales	Leaf litter	1	A1
<i>Verruconis heveae</i>	Sympoventuriaceae	Venturiales	Dried latex bark	10, 188	A1
<i>Verruconis phayaoensis</i>	Sympoventuriaceae	Venturiales	Dried latex bark and twig	10	A1
<i>Verticillium dahliae</i>	Plectosphaerellaceae	Glomerellales	Leaf litter	1	A1
<i>Verticillium sp.</i>	Plectosphaerellaceae	Glomerellales	Leaf litter	1	A1
<i>Wentiomyces sp.</i>	Pseudoperisporiaceae	Incertae sedis		46	A31

**Table 1** Continued.

<b>Species</b>	<b>Family</b>	<b>Order</b>	<b>Host-substratum</b>	<b>Reference</b>	<b>Country</b>
<i>Wiesneriomycetes laurinus</i>	Wiesneriomycetaceae	Wiesneriomycetales	Leaf litter and bark	1, 189	A1
<i>Xylaria allantoides</i>	Xylariaceae	Xylariales		190	A1
<i>Xylaria anisopleura</i>	Xylariaceae	Xylariales		190	A1
<i>Xylaria apiculata</i>	Xylariaceae	Xylariales		190	A1
<i>Xylaria arbuscula</i>	Xylariaceae	Xylariales		190	A1
<i>Xylaria caespitulosa</i>	Xylariaceae	Xylariales	Branch litter	5	A1
<i>Xylaria cubensis</i>	Xylariaceae	Xylariales		190	A1
<i>Xylaria cynoglossa</i>	Xylariaceae	Xylariales		4	A3
<i>Xylaria deserticola</i>	Xylariaceae	Xylariales	Root rot disease	9	A3
<i>Xylaria fastigiata</i>	Xylariaceae	Xylariales		8	A5
<i>Xylaria feejeensis</i>	Xylariaceae	Xylariales		4	A3
<i>Xylaria hypoxylon</i>	Xylariaceae	Xylariales		190	A1
<i>Xylaria hypsipoda</i>	Xylariaceae	Xylariales	Branch litter	5	A1
<i>Xylaria laevis</i>	Xylariaceae	Xylariales		190	A1
<i>Xylaria multiplex</i>	Xylariaceae	Xylariales		12	A1, A3, A5
<i>Xylaria mesenterica</i>	Xylariaceae	Xylariales	Endophytic	4, 5, 8	A8
<i>Xylaria obovata</i>	Xylariaceae	Xylariales		4	A3
<i>Xylaria scopiformis</i>	Xylariaceae	Xylariales	Dead trees	4, 96, 110	A3, A43
<i>Xylaria sp.</i>	Xylariaceae	Xylariales	Leaf and branch litter	1, 5	A1
<i>Xylaria telfairii</i>	Xylariaceae	Xylariales	Black root disease	191	A11
<i>Xylaria terricola</i>	Xylariaceae	Xylariales		84	A1
<i>Xylaria thwaitesii</i>	Xylariaceae	Xylariales	Root rot disease	9	A4, A7, A11, A17
<i>Xylona heveae</i>	Xylonaceae	Xylariales	Sapwood	192	A8
<i>Zanclospora brevispora</i>	Chaetosphaeriaceae	Chaetosphaeriales	Leaf litter	1	A1
<i>Zanclospora sp.</i>	Chaetosphaeriaceae	Chaetosphaeriales	Leaf litter	1	A1
<i>Zasmidium musigenum</i>	Mycosphaerellaceae	Mycosphaerellales	Leaf and branch litter	1, 5	A1
<i>Zukaliopsis heveae</i>	Elsinoaceae	Myriangiales	Leaves	96, 123	A11
<i>Zygosporium deightonii</i>	Zygosporiaceae	Xylariales	Leaf litter	1	A1
<i>Zygosporium echinosporum</i>	Zygosporiaceae	Xylariales	Leaf litter	1	A1
<i>Zygosporium gibbum</i>	Zygosporiaceae	Xylariales	Leaf litter	1	A1
<i>Zygosporium majus</i>	Zygosporiaceae	Xylariales	Leaf litter	1	A1
<i>Zygosporium masonii</i>	Zygosporiaceae	Xylariales	Leaf litter	1	A1
<i>Zygosporium minus</i>	Zygosporiaceae	Xylariales	Branch litter	5	A1
<i>Zygosporium oscheoides</i>	Zygosporiaceae	Xylariales	Leaf litter	1, 70, 106	A1, A2, A54
<i>Zygosporium paraense</i>	Zygosporiaceae	Xylariales	Leaf spot	66, 115	A10, A20

**References codes:** **1.** Seephueak et al. 2010, **2.** Hughes 1953, **3.** Nannfeldt 1975, **4.** Singh 1980, **5.** Seephueak et al. 2011, **6.** Gams 1975, **7.** Perdomo et al. 2011, **8.** Benjamin & Slot 1969, **9.** Spaulding 1961, **10.** Senwanna et al. 2021, **11.** Senwanna et al. 2017, **12.** Gazis & Chaverri 2010, **13.** Cai et al. 2015, **14.** Martin 1947, **15.** Cai et al. 2014, **16.** McGuire et al. 1967, **17.** Mendes et al. 1998, **18.** Jayasinghe 1999a, **19.** Theodoro & Batista 2014, **20.** Cai et al. 2019, **21.** Thaung 2008a, **22.** Turner 1971, **23.** Anonymous 1968, **24.** Anonymous 1963, **25.** Weir 1926, **26.** Petch 1917, **27.** Turner 1966, **28.** Shaw 1984, **29.** Thompson & Johnston 1953, **30.** McGuire & Crandall 1967, **31.** Zhuang 2001, **32.** Ariharan et al. 2016, **33.** Worapattamasri et al. 2009, **34.** Manamgoda et al. 2014, **35.** Kobayashi 2007, **36.** Hyde et al. 2018, **37.** Thaochan et al. 2022, **38.** Liu 1977, **39.** Crous 2002, **40.** Jayasinghe et al. 2009, **41.** Giatgong 1980, **42.** Valdetaro et al. 2015, **43.** Ellis 1971, **44.** West 1938, **45.** Chupp 1954, **46.** Peregrine & Ahmad 1982, **47.** Piepenbring 2006, **48.** Jiang et al. 2019, **49.** Willis 1906, **50.** Somrithipol et al. 2002, **51.** Williams & Liu 1976, **52.** Lopez et al. 2018, **53.** Thaung 2006, **54.** Pizetta et al. 2021, **55.** Huanraluek et al. 2020, **56.** Liang et al. 2019, **57.** Manamgoda et al. 2011, **58.** Liu et al. 2016a, **59.** Jayasinghe 2000, **60.** Brown & Soepena 1994, **61.** Saha et al. 2002, **62.** Damm et al. 2012a, **63.** Liu et al. 2018, **64.** Hunupolagama et al. 2017, **65.** Petch 1906, **66.** Ciferri 1961, **67.** Tai 1979, **68.** Liyanage 1985, **69.** Johnston 1960, **70.** Dingley et al. 1981, **71.** Litzenberger et al. 1962, **72.** Jayasinghe 1999b, **73.** Thuang 2008, **74.** Atapattu et al., 2022, **75.** Resplandy et al. 1954, **76.** Cai et al. 2016, 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**Country codes:** A1. Thailand, A2. Ghana, A3. Malaysia, A4. Indonesia, A5. Haiti, A6. Democratic Republic of the Congo, A7. China, A8. Peru, A9. Mexico, A10. Brazil, A11. Sri Lanka, A12. Myanmar, A13. Viet Nam, A14. France, A15. Papua New Guinea, A16. Costa Rica, A17. India, A18. Cambodia, A19. Cote d'Ivoire, A20. Dominican Republic, A21. United States, A22. Guinea, A23. Guatemala, A24. Honduras, A25. Nicaragua, A26. Nigeria, A27. Panama, A28. Philippines, A29. Japan, A30. The Republic of Trinidad and Tobago, A31. Brunei Darussalam, A32. Cuba, A33. Colombia, A34. Fiji, A35. Sierra Leone, A36. Uganda, A37. Australia, A38. Liberia, A39. Cameroon, A40. Central African Republic, A41. Chad, A42. Gabon, A43. Singapore, A44. Mauritius, A45. Malawi, A46. Tanzania, A47. Ethiopia, A48. Bolivia, A49. Ecuador, A50. Guyana, A51. Suriname, A52. Venezuela, A53. Seychelles, A54. Samoa

**Table 2** List of Basidiomycota on rubber.

Species	Family	Order	Host-Substratum	Reference	Country
<i>Acanthophysium oakesii</i>	Stereaceae	Russulales	Branch litter	1	A1
<i>Aleurodiscus mirabilis</i>	Stereaceae	Russulales	Branch litter	1	A1
<i>Amauroderma scopolosum</i>	Polyporaceae	Russulales	Root crown rot, seedling blight, and	2	A2
<i>Armillaria mellea</i>	Physalaciaceae	Agaricales	Branch litter	3, 4	A3, A4, A5
<i>Athelia rolfsii</i>	Atheliaceae	Atheliales		2, 4	A2
<i>Auricularia auricula-judae</i>	Auriculariaceae	Auriculariales		1, 5	A1, A6
<i>Auricularia brasiliensis</i>	Auriculariaceae	Auriculariales	Dead stems and branches	2	A2
<i>Auricularia fuscosuccinea</i>	Auriculariaceae	Auriculariales	Branch litter	1	A1
<i>Auricularia nigricans</i>	Auriculariaceae	Auriculariales	Dead trunks, branches and decaying wood	1, 6	A1, A7
<i>Auricularia</i> sp.	Auriculariaceae	Auriculariales	Branch litter	1	A1
<i>Byssomerulius corium</i>	Irpicaceae	Polyporales	Branch litter	1	A1
<i>Ceriporiopsis hypolateritia</i>	Meruliaceae	Polyporales	Root rot diseases	4	A8, A9
<i>Coriolopsis occidentalis</i>	Polyporaceae	Polyporales		2, 5	A6
<i>Coriolopsis polyzona</i>	Polyporaceae	Polyporales		7	A8
<i>Cerioporus squamosus</i>	Polyporaceae	Polyporales	Branch litter	1	A1
<i>Coriolus hirsutus</i>	Polyporaceae	Polyporales		2	A2
<i>Corticium koleroga</i>	Corticiaceae	Corticiales	Thread blight, bark lesions on branches, and leaf blight	4	A10
<i>Corticium</i> sp.	Corticiaceae	Corticiales		8	A11
<i>Cryptomarasmius micraster</i>	Physalaciaceae	Agaricales	Branch litter	1	A1
<i>Cryptomarasmius sphaerodermus</i>	Physalaciaceae	Agaricales		9	A12
<i>Cyathus poeppigii</i>	Incertae sedis	Agaricales		5	A6
<i>Cymatoderma dendriticum</i>	Panaceae	Polyporales		2, 10	A2, A7
<i>Cyphella heveae</i>	Cyphellaceae	Agaricales	Bark	11, 12	A1, A2

**Table 2** Continued.

<b>Species</b>	<b>Family</b>	<b>Order</b>	<b>Host-Substratum</b>	<b>Reference</b>	<b>Country</b>
<i>Dacryopinax spathularia</i>	Dacrymycetaceae	Dacrymycetales	Branch litter	1	A1
<i>Daedalea dochmia</i>	Fomitopsidaceae	Polyporales		2	A2
<i>Earliella scabrosa</i>	Polyporaceae	Polyporales	Branch litter and trunk rot	1, 4, 5, 7, 13, 14	A1, A2, A6, A8, A13, A14, A15
<i>Eichleriella tenuicula</i>	Auriculariaceae	Auriculariales		15	A7
<i>Entoloma repens</i>	Entolomataceae	Auriculariales	Branch litter	1	A1
<i>Erythricium salmonicolor</i>	Corticiaceae	Corticiales	Pink disease on branches and trunks	4, 8, 16, 17	A1, A2, A11, A13, A14, A16, A17, A18, A19, A20
<i>Favolus grammocephalus</i>	Polyporaceae	Polyporales	Pink disease on branches and trunks	2, 10	A2, A7
<i>Favolus spatulatus</i>	Polyporaceae	Polyporales		15	A7
<i>Fibulocoela</i> sp.	Incertae sedis	Incertae sedis	Leaf litter	18	A1
<i>Flavodon flavus</i>	Irpicaceae	Polyporales	Branch litter	1, 2	A1, A2
<i>Fomes</i> sp.	Polyporaceae	Polyporales		8, 16, 19	A11, A18
<i>Fomitopsis lignaea</i>	Fomitopsidaceae	Polyporales	Root rot disease	4	A13
<i>Fulvifomes umbrinellus</i>	Hymenochaetaceae	Hymenochaetales	Root rot disease	20	A21
<i>Fuscocerrena portoricensis</i>	Polyporaceae	Polyporales	Dead branches	21	A13
<i>Ganoderma applanatum</i>	Polyporaceae	Polyporales		2	A2
<i>Ganoderma australe</i>	Polyporaceae	Polyporales	Rot disease	4	A2, A13
<i>Ganoderma lucidum</i>	Polyporaceae	Polyporales	Heart rot and white rot disease	4, 22	A1, A2, A9, A14
<i>Ganoderma philippii</i>	Polyporaceae	Polyporales	Rot diseases	4, 11, 12, 17, 23, 24, 25, 26, 27, 28	A1, A2, A3, A8, A9, A13, A15, A20, A22, A23
<i>Ganoderma</i> sp.	Polyporaceae	Polyporales		8	A11
<i>Geastrum velutinum</i>	Geastraceae	Geastrales		5	A6
<i>Gloeophyllum concentricum</i>	Gloeophyllaceae	Gloeophyllales		16	A24
<i>Gloeophyllum striatum</i>	Gloeophyllaceae	Gloeophyllales	Brown rot	22	A1
<i>Haplotrichum croceum</i>	Botryobasidiaceae	Cantharellales		29	A6
<i>Helicobasidium longisporum</i>	Helicobasidiaceae	Helicobasidiales	Root rot disease	4, 30	A17, A19

**Table 2** Continued.

<b>Species</b>	<b>Family</b>	<b>Order</b>	<b>Host-Substratum</b>	<b>Reference</b>	<b>Country</b>
<i>Helicobasidium purpureum</i>	Helicobasidiaceae	Helicobasidiales		26, 31	A9, A19
<i>Hexagonia thwaitesii</i>	Polyporaceae	Polyporales		15	A7
<i>Hexagonia umbrinella</i>	Polyporaceae	Polyporales		32	A6
<i>Hobsonia mirabilis</i>	Phleogenaceae	Atractiellales	Leaf litter	18	A1
<i>Hyalodendron</i> sp.	Trichosporonaceae	Trichosporonales	Leaf litter	1	A1
<i>Hydnnum duriusculum</i>	Hydnaceae	Cantharellales		2	A2
<i>Hymenochaete noxia</i>	Hymenochaetaceae	Hymenochaetales		15	A7
<i>Hypochnus</i> sp.	Thelephoraceae	Thelephorales		11	A2
<i>Inonotus rickii</i>	Hymenochaetaceae	Hymenochaetales	Canker and decay trunk	33	A22
<i>Lactarius hygrophoroides</i>	Russulaceae	Russulales	Branch litter	1	A1
<i>Lentinus connatus</i>	Polyporaceae	Polyporales	Branch litter	1	A1
<i>Lentinus squarrosulus</i>	Polyporaceae	Polyporales		34	A2
<i>Lentinus velutinus</i>	Polyporaceae	Polyporales		2	A2
<i>Leiotrametes menziesii</i>	Polyporaceae	Polyporales		2	A2
<i>Lopharia cinerascens</i>	Polyporaceae	Polyporales	Dead branch	2	A2
<i>Marasmiellus candidus</i>	Omphalotaceae	Agaricales	Branch litter	1	A1
<i>Marasmiellus scandens</i>	Omphalotaceae	Agaricales	Thread blight	13, 24	A2, A20
<i>Marasmius arborescens</i>	Marasmiaceae	Agaricales	Branch litter	1	A1
<i>Marasmius cyphella</i>	Marasmiaceae	Agaricales	Leaves and branches	35, 36	A2
<i>Marasmius crinis-equi</i>	Marasmiaceae	Agaricales	Horsehair blight, white thread blight on branches, twigs, and leaves	4, 11, 13, 37	A2, A13
<i>Marasmius florideus</i>	Marasmiaceae	Agaricales	Branch litter	1	A1
<i>Marasmius palmivorus</i>	Marasmiaceae	Agaricales	White fan blight	11, 38	A2
<i>Marasmius pulcherripes</i>	Marasmiaceae	Agaricales	Branch litter	1	A1
<i>Marasmius siccus</i>	Marasmiaceae	Agaricales	Branch litter	1	A1
<i>Marasmius</i> sp.	Marasmiaceae	Agaricales	White thread blight on branched	1	A1
<i>Mycena stylobates</i>	Mycenaceae	Agaricales	Branch litter	1	A1
<i>Naucoria conicopapillata</i>	Hymenogastraceae	Agaricales	Branch litter	1	A1
<i>Navisporus floccosus</i>	Polyporaceae	Polyporales		5	A6
<i>Ozonium</i> sp.	Psathyrellaceae	Agaricales	Dead branches	15, 21	A7
<i>Panus similis</i>	Panaceae	Polyporales	Branch litter	1	A1
<i>Pilatoporus hemitephrus</i>	Fomitopsidaceae	Polyporales		39	A14
<i>Podoscypha nitidula</i>	Podoscyphaceae	Polyporales	Branch litter	1	A1
<i>Poria hypobrunnea</i>	Polyporaceae	Polyporales	Red root rot disease	4, 35	A2, A8, A9

**Table 2** Continued.

<b>Species</b>	<b>Family</b>	<b>Order</b>	<b>Host-Substratum</b>	<b>Reference</b>	<b>Country</b>
<i>Pseudofavolus tenuis</i>	Polyporaceae	Polyporales		1, 40	A1, A2
<i>Pycnoporus sanguineus</i>	Polyporaceae	Polyporales	Branch	1, 2	A1, A2
<i>Pyrrhoderma lamaoense</i>	Hymenochaetaceae	Hymenochaetales		4, 16	A2, A3, A6, A7, A8, A9, A18, A25
<i>Pyrrhoderma noxium</i>	Hymenochaetaceae	Hymenochaetales	Brown root rot	8, 11, 12, 16, 17, 24, 27, 28, 32, 41, 42,	A1, A2, A6, A11, A13, A18, A20, A23, A25
<i>Rhizoctonia anceps</i>	Ceratobasidiaceae	Cantharellales		17	A13
<i>Rhizoctonia solani</i>	Ceratobasidiaceae	Cantharellales	Blight on host stem at soil surface and dead roots	4, 8, 17, 34	A2, A9, A11, A13, A17, A26, A27, A28, A29
<i>Rhizoctonia</i> sp.	Ceratobasidiaceae	Cantharellales	Web blight on host stem at soil surface, dead roots, and	17	A13
<i>Rhizoctonia</i> spp.	Ceratobasidiaceae	Cantharellales	Harvested seeds	43	A13
<i>Rigidoporus lineatus</i>	Meripilaceae	Polyporales	Heart rot	4, 8	A11, A13
<i>Rigidoporus microporus</i>	Meripilaceae	Polyporales	White root rot disease	24, 32, 5, 11, 4, 12, 44, 45, 46, 47	A1, A2, A3, A6, A7, A8, A9, A11, A13, A15, A17, A19, A20, A22, A23, A25, A30
<i>Schizophyllum commune</i>	Schizophyllaceae	Agaricales	Decaying logs and branches	1, 5, 15, 48	A1, A2, A6, A7
<i>Schizophyllum umbrinum</i>	Schizophyllaceae	Agaricales		9, 20	A12, A21
<i>Scytinostroma duriusculum</i>	Peniophoraceae	Russulales		48	A2
<i>Septobasidium atratum</i>	Septobasidiaceae	Septobasidiales		17	A13
<i>Septobasidium bogoriense</i>	Septobasidiaceae	Septobasidiales		2	A2
<i>Septobasidium heveae</i>	Septobasidiaceae	Septobasidiales	Bark	49	A13
<i>Septobasidium</i> sp.	Septobasidiaceae	Septobasidiales		12, 13	A1, A2
<i>Stereopsis hiscens</i>	Stereopsidaceae	Stereopsidales		2	A2
<i>Stilbum heveae</i>	Chionosphaeraceae	Agaricostilbales	Dead branches	50	A15
<i>Stilbum</i> sp.	Chionosphaeraceae	Agaricostilbales		12	A1
<i>Tilletiopsis</i> sp.	Entylomataceae	Entylomatales		8	A11
<i>Tinctoporellus epimiltinus</i>	Polyporaceae	Polyporales		9, 20	A12, A21

**Table 2** Continued.

<b>Species</b>	<b>Family</b>	<b>Order</b>	<b>Host-Substratum</b>	<b>Reference</b>	<b>Country</b>
<i>Trametes aparia</i>	Polyporaceae	Polyporales	Branch litter	1	A1
<i>Trametes cingulata</i>	Polyporaceae	Polyporales	Branch litter	39	A14
<i>Trametes elegans</i>	Polyporaceae	Polyporales	Branch litter	1, 2	A1, A2
<i>Trametes hirsuta</i>	Polyporaceae	Polyporales	Branch litter	1	A1
<i>Trametes persoonii</i>	Polyporaceae	Polyporales		15	A7
<i>Tremella fuciformis</i>	Tremellaceae	Tremellales	Branch litter	1	A1
<i>Typhula ishikariensis</i>	Typhulaceae	Agaricales	Branch litter	1	A1
<i>Xeromphalina campanella</i>	Mycenaceae	Agaricales	Branch litter	1	A1

**References codes:** **1.** Seephueak et al. 2011, **2.** Singh 1980, **3.** Wiehe 1953, **4.** Spaulding 1961, **5.** Hughes 1953, **6.** Musngi et al. 2005, **7.** Sarbhoy & Agarwal 1990, **8.** Shaw 1984, **9.** Ciferri 1961, **10.** Reinking 1919, **11.** Thompson & Johnston 1953, **12.** Giatgong 1980, **13.** Turner 1971, **14.** Peregrine & Ahmad 1982, **15.** Teodoro 1937, **16.** Dingley et al. 1981, **17.** Mendes et al. 1998, **18.** Seephueak et al. 2010, **19.** Firman 1972, **20.** Benjamin & Slot 1969, **21.** Weir 1926, **22.** Cherdchim & Satansat 2016, **23.** Saccardo 1925, **24.** West 1938, **25.** Tai 1979, **26.** Jayasinghe 1999a, **27.** Thaung 2007, **28.** Ogbebor et al. 2010, **29.** Hughes 1952, **30.** McGuire & Crandall 1967, **31.** Alvarez 1976, **32.** Dade 1940, **33.** Dai et al. 2010, **34.** Liu 1977, **35.** Johnston 1960, **36.** Anonymous 1963, **37.** Turner 1966, **38.** Tey and Chan 1980, **39.** Peregrine & Ahmad 1982, **40.** Chipp 1921, **41.** Nandris et al. 1987, **42.** Holliday 1995, **43.** Theodoro & Batista 2014, **44.** Oghenekaro et al. 2014, **45.** Oghenekaro et al. 2016, **46.** Saidi et al. 2023, **47.** Mahyudin et al. 2023, **48.** Williams & Liu 1976, **49.** Gómez & Henk 2004, **50.** Saccardo 1902

**Country codes:** **A1.** Thailand, **A2.** Malaysia, **A3.** Democratic Republic of the Congo, **A4.** Malawi, **A5.** Uganda, **A6.** Ghana, **A7.** Philippines, **A8.** India, **A9.** Sri Lanka, **A10.** Argentina, **A11.** Papua New Guinea, **A12.** Dominican Republic, **A13.** Brazil, **A14.** Brunei Darussalam, **A15.** Indonesia, **A16.** Cambodia, **A17.** Costa Rica, **A18.** Fiji, **A19.** Mexico, **A20.** Nigeria, **A21.** Haiti, **A22.** China, **A23.** Myanmar, **A24.** Samoa, **A25.** Cote d'Ivoire, **A26.** Bolivia, **A27.** Colombia, **A28.** Honduras, **A29.** Peru, **A30.** Equatorial Guinea

**Table. 3** List of Oomycota on rubber.

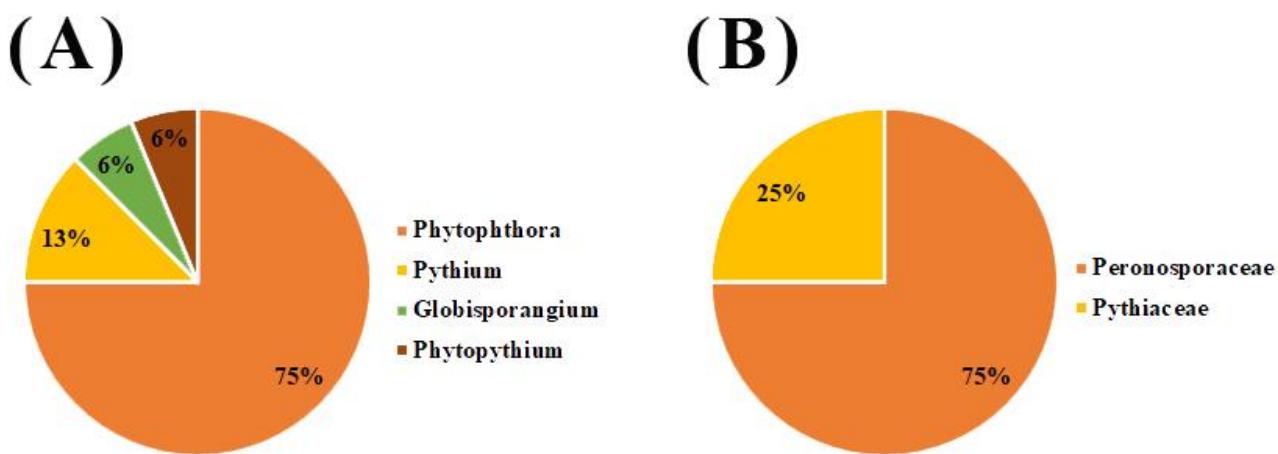
<b>Species</b>	<b>Family</b>	<b>Order</b>	<b>Host-Substratum</b>	<b>Reference</b>	<b>Country</b>
<i>Globisporangium splendens</i>	Pythiaceae	Peronosporales		1	A1
<i>Phytophthora botryosa</i>	Peronosporaceae	Peronosporales	Abnormal leaf fall disease, stripe canker on petioles, black strip, and phytophthora leaf fall	2, 3	A1, A2, A3
<i>Phytophthora cactorum</i>	Peronosporaceae	Peronosporales	Seedling blight	4, 5	A4, A5, A6, A7, A8
<i>Phytophthora capsici</i>	Peronosporaceae	Peronosporales	Black stripe and stem canker	2, 6, 7	A2, A4, A9, A10
<i>Phytophthora citricola</i>	Peronosporaceae	Peronosporales		5	A7

**Table. 3** Continued.

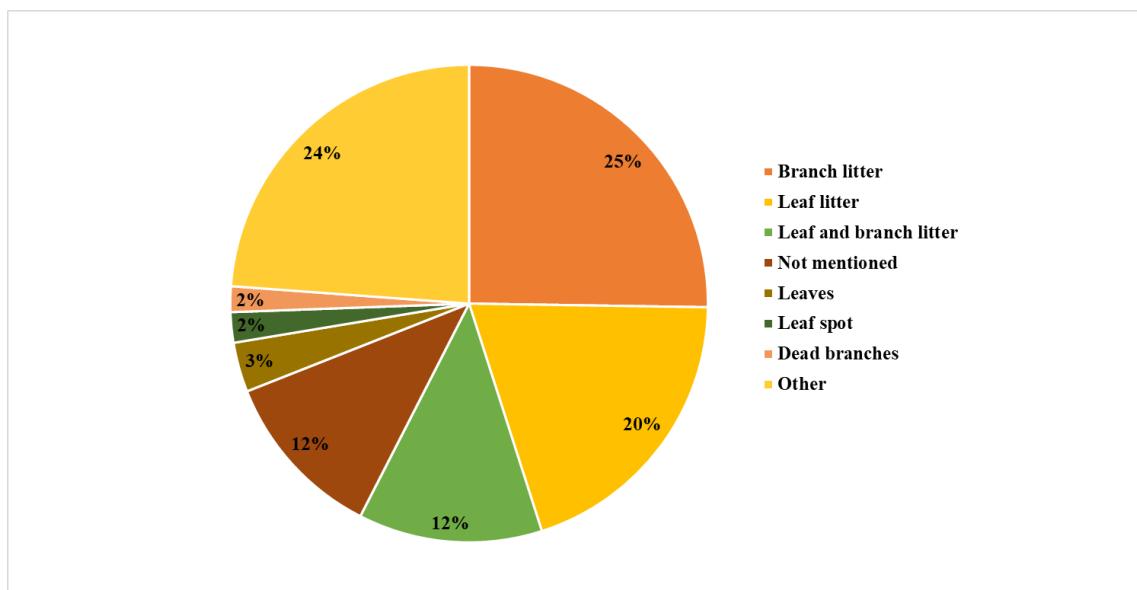
<b>Species</b>	<b>Family</b>	<b>Order</b>	<b>Host-Substratum</b>	<b>Reference</b>	<b>Country</b>
<i>Phytophthora citrophthora</i>	Peronosporaceae	Peronosporales	Abnormal leaf fall disease	5, 6, 8	A2, A4, A6, A9, A11
<i>Phytophthora colocasiae</i>	Peronosporaceae	Peronosporales	Leaf fall, stem canker, and black stripe	5	A4
<i>Phytophthora meadii</i>	Peronosporaceae	Peronosporales	Abnormal leaf fall, pod rot, stripe canker, and black stripe	2, 5, 9, 10	A1, A2, A3, A4, A5, A6, A7, A9, A10, A12, A13, A14, A15, A16, A17, A18, A19, A20, A21, A22
<i>Phytophthora nicotianae</i>	Peronosporaceae	Peronosporales	Abnormal leaf fall, pod rot, stripe canker, and black stripe	2, 5, 11, 12	A1, A2, A4, A5, A10
<i>Phytophthora palmivora</i>	Peronosporaceae	Peronosporales	Leaf fall, patch canker, stripe canker, pod rot, rot disease on bark, seedling, and fruit	2, 3, 4, 5, 9, 13, 14, 15, 16, 17, 18, 19	A1, A2, A3, A4, A5, A6, A7, A9, A10, A12, A14, A15, A16, A17, A18, A21, A23, A24, A25,
<i>Phytophthora palmivora</i> var. <i>palmivora</i>	Peronosporaceae	Peronosporales		5	A1, A2, A4, A5, A6, A7, A9, A13, A14, A15, A17, A18, A21, A24, A26, A27
<i>Phytophthora phaseoli</i>	Peronosporaceae	Peronosporales	Seedling blight	5	A21
<i>Phytophthora</i> sp.	Peronosporaceae	Peronosporales	Leaves and die-back of young bud shoots of seedling	2, 14, 20, 21, 22, 23	A1, A2, A3, A5, A11, A23
<i>Phytophytium vexans</i>	Pythiaceae	Peronosporales	Patch canker, bark, and root rot	9, 4, 24	A1, A4
<i>Pythium acanthicum</i>	Pythiaceae	Peronosporales		7	A4
<i>Pythium</i> sp.	Pythiaceae	Peronosporales		21	A11

**References codes:** **1.** Liu 1977, **2.** Drenth et al. 2004, **3.** Deechouy 2013, **4.** Spaulding 1961, **5.** Erwin & Ribeiro 1996, **6.** Mendes et al. 1998, **7.** Yu 1998, **8.** Laohasakul et al. 2017, **9.** Thompson & Johnston 1953, **10.** Tai 1979, **11.** Giatgong 1980, **12.** Latifah et al. 2017, **13.** Teodoro 1937, **14.** West 1938, **15.** Litzenberger et al. 1962, **16.** McGuire & Crandall 1967, **17.** Dingley et al. 1981, **18.** Shaw 1984, **19.** Thaung 2008b, **20.** Alvarez 1976, **21.** Nandris et al. 1987, **22.** Seephueak et al. 2010, **23.** Martin et al. 2014, **24.** Zeng et al. 2005

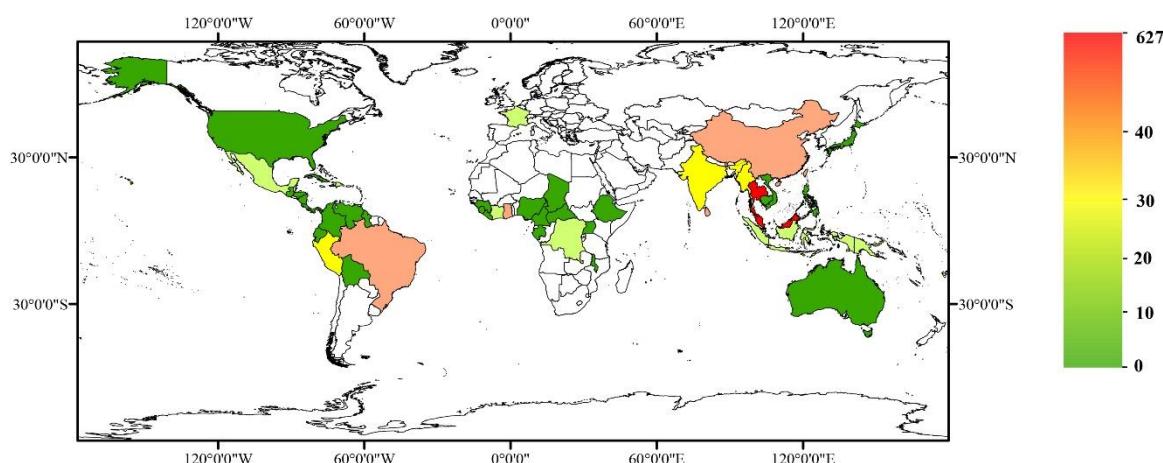
**Country codes:** **A1.** Malaysia, **A2.** Thailand, **A3.** Viet Nam, **A4.** China, **A5.** India, **A6.** Indonesia, **A7.** Sri Lanka, **A8.** Russia, **A9.** Brazil, **A10.** Nigeria, **A11.** Cote d'Ivoire, **A12.** Cambodia, **A13.** Cameroon, **A14.** Democratic Republic of the Congo, **A15.** Costa Rica, **A16.** Ghana, **A17.** Liberia, **A18.** Myanmar, **A19.** Nicaragua, **A20.** Peru, **A21.** Philippines, **A22.** Venezuela, **A23.** Mexico, **A24.** Papua New Guinea, **A25.** Samoa, **A26.** Fiji, **A27.** Uganda.



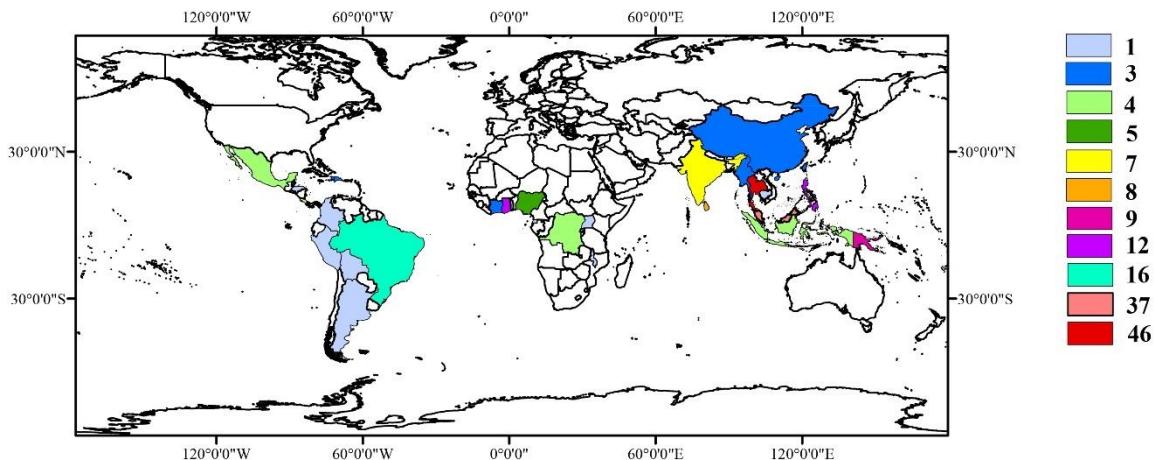
**Fig. 3** – The percentage frequency of genera, families, and orders of Oomycota associated with the rubber tree. Pie chart showing the frequency percentage occurrence of (A) genera and (B) families.



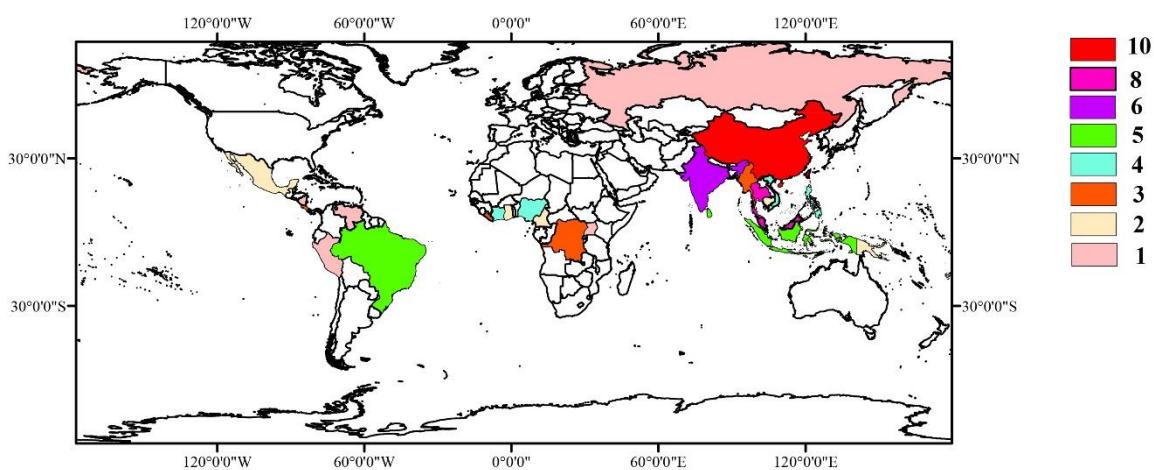
**Fig. 4** – Pie chart showing the frequency percentage of species isolated from different plant parts of the rubber tree.



**Fig. 5** – The number of species isolated belonging to Ascomycota associated with rubber trees from different countries.



**Fig. 6** – The number of species isolated belonging to Basidiomycota associated with rubber trees from different countries.



**Fig. 7** – The number of species isolated belonging to Oomycota associated with rubber trees from different world countries.

## Discussion

Our study also finds that abundant species on rubber trees are Ascomycota, Basidiomycota, followed by Oomycota. Previous studies revealed similar results (Monkai et al. 2017, Meeboon & Takamatsu 2020). More than half of taxa are isolated from leaf and branch litter. However, different species show varying abundance for different plant parts (Araújo et al. 2020). Fungi play critical roles in the decomposition of leaf litter because they can actively decompose lignin and other recalcitrant components in the leaf litter, which affects decomposition in terrestrial ecosystems. The contents of N, P, and Mg in beech leaf litter changed significantly when decomposed by Basidiomycota or Ascomycota strains (Osono & Takeda 2002). The summaries above clearly show that the taxon of fungal strains influences their potential ability to decompose litter. Meanwhile, the origins or substrata from which fungal strains were derived may impact their decomposition capabilities. Osono et al. (2011) reported that the decomposing ability of microfungi derived from warmer climates was more significant on average than that derived from cooler climates. Similarly, *Xylaria* strains isolated from woody substrata caused greater litter mass loss than those isolated from leaf litter. The resource composition, i.e., chemical, and physical composition, temperature, and aeration during the decomposition process, are all factors that influence leaf litter decomposition. These taxa on rubber trees are associated with degrading plant material or soil in plantations.

The research findings on the distribution of fungi species on various parts of the Rubber tree, specifically in Branch litter (25%), Leaf litter (20%), and Leaf and Branch litter (12%), uncover a multifaceted ecological phenomenon. The diversity and specialization of fungi in these parts emphasize their essential role in decomposition and nutrient recycling within the ecosystem, a vital process that transforms organic matter into usable nutrients. Some fungi may pose potential disease threats to the Rubber tree, and understanding their distribution could aid in disease management and mitigation (Fry 2012). If the Rubber tree is cultivated for commercial purposes like latex production, the insights into fungi distribution are pivotal for optimizing tree health and managing diseases, translating into potential economic benefits (Gazis & Chaverri 2010). Additionally, the specific preferences of fungi for different parts of the tree might offer insights into their evolutionary adaptations and the overall biodiversity and health of the ecosystem. However, these findings may be limited by factors such as geographic location, sampling methods, and seasonality, emphasizing the need for future research to explore these relationships more comprehensively (Bardgett 2005). The complex interplay between fungi and the Rubber tree illustrated in these findings has broad implications in ecology, economics, and scientific understanding, serving as a foundational piece for further targeted studies in agriculture, conservation, and beyond.

Pathogens and endophytes species were also isolated from the rubber tree. Many of the taxa are asexual, and most live on decaying plant matter (Lodge 1977). The asexual states have been isolated from plant litter more frequently (Osono 2020), as well as through isolation from tree leaf litter and decaying branch litter (Seephueak et al. 2010, Seephueak et al. 2011). Thailand was the location where most taxa were described. The nation is the most productive producer of natural rubber in the world. Since the rubber plant is not a native species to Thailand, the fungi that have established themselves on this host were most likely transferred from other host plants in the immediate area. The vast majority of other taxa that are discovered on rubber trees were originally collected in Thailand on other plants. Due to the scarcity of molecular research, the fungi associated with rubber present an intriguing research opportunity. In addition, the utilization of contemporary multigene approaches carries with it the possibility of uncovering connections between asexual and sexual morphs (Senwanna et al. 2021)

Host jumping refers to the ability of pathogens or parasites to shift from one host species to another. This can have significant implications for agriculture, ecology, and human health, especially when a pathogen that originally evolved to infect a specific species finds a new and susceptible host (Schulze-Lefert & Panstruga 2011). A small number of fungi found on rubber trees originate from South America, consisting of 6 distinct species. There is an overlap between fungi native to South America and those found on rubber plants. The rubber tree, *Hevea brasiliensis*, is native to South America, and the fungi that colonize or infect it in its native habitat have co-evolved with this plant for millennia (Lieberei 2007). Some of these fungi might be specialized, having evolved to primarily interact with rubber trees or plants within the same family. However, other fungi are generalists, capable of colonizing or infecting a wide range of plant hosts. The origin and specificity of fungi on rubber or any other plants depend on the intricate dynamics of co-evolution, ecological interactions, and environmental factors.

## Future Perspectives

Molecular sequencing technology has made it possible to use a variety of molecular methodologies to get insight into the diversity of the mycocommunities' fungi. These molecular methods support more conventional methods. They also help us comprehend the diversity of fungi not influenced by civilization. Several techniques, including condition optimization, will improve the ability to isolate and cultivate the missing uncultivable fungus. Non-sporulating cultures, typically rejected by depositories, might gain more significance and aid in preventing disease. Also, we require many collecting and deposition facilities to conserve the fungus cultures and pertinent data regarding their ecological importance.

## Acknowledgements

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