

## A checklist of asexual fungi from Costa Rica

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**ABSTRACT**—A checklist of recorded asexual fungi from Costa Rica is presented. This study compiles information obtained during 1927–2018 from scientific papers, theses, reviews of hyphomycetous and coelomycetous fungi, dermatophyte clinical studies, clinical samples from phytopathological laboratory services, and specimens collected during the 2012 expedition to Costa Rica conducted in collaboration with the International Society for Fungal Conservation. The taxa included in this checklist represent 682 species and 301 genera. Half have been reported as fungal pathogens, while the remaining are saprobes, endophytes, or associated with insect, human, and other fungal hosts. Forty-six taxa are reported for the first time from Costa Rica.

**KEY WORDS**—anamorphic fungi, Central America, plant pathology

### Introduction

Information about asexual fungi of Costa Rica has been published in various sources, including doctoral dissertations and graduate degree theses (Hua 1992, Hodge 1998, Abbott 2000, Bischoff 2004, Granados-Montero 2004), reports of mycological expeditions (Sydow 1927, Stevens 1927) and synthesis of crop and forestry diseases (Villalobos & al. 2009). Some other reports are the result of bioprospecting surveys carried out by the National Biodiversity Institute (INBio) along with the pharmaceutical company Merck in the early 90's in an attempt to find useful metabolites in pharmacology (Bills & Polishook 1994a, b, Mercado-Sierra & al. 1997a, b). Others were made due to problems caused by the plant disease “Fusarium wilt”, known before as “Panama Disease”, caused by *Fusarium oxysporum* f.sp. *cubense* (E.F. Sm.) W.C. Snyder & H.N. Hansen in banana plantations during the mid 20<sup>th</sup> century in order to survey the mycobiota rhizosphere of the crop (Farrow 1954, Goos 1960).

The purpose of this checklist was to summarize the diversity of hyphomycetes and coelomycetes in Costa Rica and to provide a useful tool for phytopathologist, biologist and medical mycologist in their daily activities, facilitating the search of local information about these fungi.

### Materials & methods

A comprehensive literature review was conducted using both online and printed resources. The Electronic Library for Mycology ([www.cybertruffle.org.uk](http://www.cybertruffle.org.uk)) allowed to access to a wealth of information. Scientific names containing genus and species were verified through searches on the Index Fungorum ([www.indexfungorum.org](http://www.indexfungorum.org)) and MycoBank ([www.mycobank.org](http://www.mycobank.org)) databases. Those records identified only at genus level were not taken into consideration. An asterisk (\*) before the scientific name indicates the taxon is recorded for the first time from Costa Rica. Likewise, host names of plant, animal or other fungi were verified in specialized online databases such as [www.catalogueoflife.org](http://www.catalogueoflife.org) and [www.tropicos.org](http://www.tropicos.org), and current or valid names were selected for this paper. Specimens collected during the expedition of the International Society for Fungal Conservation were processed according to the methodology reported in Castañeda-Ruiz & al. (2016). Additionally, each specimen received a voucher number for identification but an accident in the laboratory prevented the deposition of specimens in the Herbarium.

**SUMMARY: MYCOTAXON 133: 365—REGIONAL MYCOBIOTA NEW TO WWW.MYCOTAXON.COM**

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## Results & discussion

682 species belonging to 301 genera are listed. More than 200 genera include only one or two species, while the genus *Cercospora* reported 46 species. Some taxa have more than 10 species, such as *Aspergillus* (11), *Phomopsis* (13), *Ascochyta* and *Pseudocercospora* (15), *Curvularia* (16), *Alternaria* and *Septoria* (17), *Colletotrichum* (20) and *Phyllosticta* (29). Ten taxa refer to Costa Rica in their etymology, seven of them in their specific epithet e.g. *Acarella costaricensis*, *Gangliostilbe costaricensis*, *Leptographium costarricense*, *Phoma costaricensis*, *Pseudospiropes costaricensis*, *Stigmopeltella costaricana* and *Tuberculina costaricana*. Other refer to provinces e.g. *Penicillium guanacastense* and two include the term “Tico”, an indigenous expression for Costa Rican people e.g. *Ticogloea guttulata* and *Ticosynnema carranzae*.

The following list compiled fungi from diverse habitats but fungal pathogens were predominant. They represent about half of the number of species in the checklist. Another important group was those saprobic on plant debris and litter with approximately 20% of specimens cited. The rest of the fungi were soil and rhizosphere inhabitants, endophytes, dermatophytes, ‘ambrosia’ fungi and biological control agents like antagonists *Clonostachys* and *Trichoderma* spp., entomopathogens or those related with insects such as *Aschersonia* spp., *Hirsutella* spp., *Paecilomyces* spp., *Penicillium* spp., *Purpureocillium* sp. and *Raffaelea scolytodis*, including also fungi associated with nematodes as *Hohenbuehelia leptospora*.

In this checklist 46 taxa are reported for the first time from Costa Rica, 44 of them as saprobes and two as plant pathogens, *Pestalotiopsis coffeae* and *Sarcopodium vanillae*. Both of them cause necrotic leaves spots and are often confused with antracnose by *Colletotrichum gloesporioides*. This fungus, like *Athelia rolfsii*, is capable of causing disease in about 100 plants belonging to different families, such as *Acanthaceae*, *Agavaceae*, *Alliaceae*, *Anacardiaceae*, *Araceae*, *Araliaceae*, *Asteraceae*, *Apiaceae*, *Balsaminaceae*, *Begoniaceae*, *Brassicaceae*, *Caricaceae*, *Caryophyllaceae*, *Chenopodiaceae*, *Convolvulaceae*, *Cucurbitaceae*, *Dracaenaceae*, *Euphorbiaceae*, *Fabaceae*, *Heliconiaceae*, *Hydrangeaceae*, *Iridaceae*, *Liliaceae*, *Malvaceae*, *Moraceae*, *Musaceae*, *Myrtaceae*, *Nyctaginaceae*, *Orchidaceae*, *Passifloraceae*, *Pedaliaceae*, *Piperaceae*, *Plumbaginaceae*, *Polypodiaceae*, *Rosaceae*, *Rubiaceae* and *Solanaceae* among others.

All these reports confirm the high diversity of microfungi found in Costa Rica. This information allows for continuing the search, documentation and description of new species, in order to better know and understand the dynamics and interactions that occur in our ecosystems and agro-ecosystems. As well as, the chances of finding fungi that may have potential as biocontrol agents, for example *Tuberculina costaricana* and *Volutella uredinophila*, both recovered from “rust” fungi from 1927; but until now there are not studies about the potential effect in crop disease.

## Checklist of species

### *Acarella costaricensis* Syd.

On leaves of *Cinnamomum costaricanum* (Mez & Pittier) Kosterm. (Sydow 1927).

### *Acremonium polychromum* (J.F.H. Beyma) W. Gams

On dead herbaceous stems (Mercado-Sierra & al. 1997a).

### *Acremonium vitis* Catt.

Isolated from soil (Farrow 1954).

### *Acrodontium crateriforme* (J.F.H. Beyma) de Hoog

On litter of primary forest (Bills & Polishook, 1994a).

### *Acrosporium piperis* (Uppal, Kamat & Patel) Subram.

On leaves of *Piper amplum* Kunth (as *Oidium piperis* Uppal & al.) (Villalobos & al. 2009).

### *Acrostalagmus albus* Preuss.

Isolated from soil (Farrow 1954).

### *Actinodochium concinnum* Syd.

On leaves of *Cinnamomum costaricanum* (Mez & Pittier) Kosterm. and *Roupala veraguensis* Klotzsch ex Meissn. (Sydow 1927).

### \**Actinocladium rhodosporum* Ehrenb.

SPECIMEN EXAMINED—on rotten twig, Tapantí, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/46-1).

### *Actinostilbe flocculenta* (Henn. & E. Nyman) Rossman, Samuels & Seifert

On leaves of *Heliconia mariae* Hook. f. (as *Kutilakesopsis macalpinei* Agnihotr. & G.C.S. Barua) (Bills & Polishook 1994b).

### *Albonectria rigidiuscula* (Berk. & Broome) Rossman & Samuels

On *Theobroma cacao* L. (as *Fusarium decemcellulare* Brick) (Hansen 1963); SPECIMEN EXAMINED—overgrowing pustules of *Puccinia psidii* G. Winter on fruits and leaves of *Psidium friedrichsthalianum* (O. Berg) Nied., M. Granados-Montero, 15 Mar. 2017.

### *Albosynnema elegans* E. F. Morris

On living twig of *Poulsenia armata* (Miq.) Standl. (Bills & al. 1994).

### *Allophoma piperis* (Tassi) Q. Chen & L. Cai

On leaves of *Piper amplum* L. (as *Phyllosticta piperis* Tassi) (Villalobos & al. 2009).

### *Alternaria alternata* (Fr.) Keissl.

Endophytic in roots of *Prosthechea fragrans* (Sw.) W.E. Higgins and *Stelis* sp. (Richardson & Currah 1995); on fruits of *Arachis hypogaea* L., *Brassica oleracea* var. *capitata* L., *Hedera helix* L., *Nicotiana tabacum* L., ornamentals palms, *Petunia* spp., *Psidium guajava* L., *Raphanus sativus* L., *Vigna unguiculata* (L.) Walp., *Yucca elephantipes* Regel ex Trel., *Zea mays* L., on fruits and leaves of *Solanum lycopersicum* L., on leaves of *Allium cepa* L., *Brassica oleracea* var. *botrytis* L., *Brassica oleracea* var. *gemmifera* DC., *Brassica oleracea* var. *italica* Plenck, *Calathea* sp., *Capsicum annuum* L., *Fragaria* sp., *Gladiolus* spp., *Gossypium hirsutum* L., *Phaseolus vulgaris* L., *Sesamum indicum* L., *Solanum melongena* L. and rhizome of *Zingiber officinale* Roscoe (Villalobos & al. 2009).

### *Alternaria brassicae* (Berk.) Sacc.

On leaves of *Brassica campestris* L., *Brassica oleracea* var. *botrytis* L., *Brassica oleracea* var. *capitata* L., *Brassica oleracea* var. *gemmifera* DC., *Brassica oleracea* var. *italica* Plenck (Villalobos & al. 2009).

### *Alternaria brassicicola* (Schwein.) Wiltshire

On leaves of *Brassica oleracea* var. *botrytis* L., *Brassica oleracea* var. *capitata* L., *Brassica oleracea* var. *gemmifera* DC., *Brassica oleracea* var. *italica* Plenck (Villalobos & al. 2009).

### *Alternaria citri* Ellis & N. Pierce

On leaves and fruits of *Citrus* spp. (Villalobos & al. 2009).

- Alternaria dauci*** (J.G. Kühn) J.W. Groves & Skolko  
On flowers of *Gerbera jamesonii* Bolus, on leaves of *Coriandrum sativum* L., *Daucus carota* L. and *Petroselinum crispum* (Mill.) Fuss (Villalobos & al. 2009).
- Alternaria dianthi*** J.V. Almeida & Sousa da Câmara  
On leaves and stem of *Dianthus caryophyllus* L. (Villalobos & al. 2009).
- Alternaria longipes*** (Ellis & Everh.) E.W. Mason  
On leaves of *Nicotiana tabacum* L. (Villalobos & al. 2009).
- Alternaria mali*** Roberts  
On leaves of *Malus sylvestris* Mill. (Villalobos & al. 2009).
- Alternaria panax*** Whetzel  
On leaves of *Brassica* spp. and *Polyscias* spp. (Villalobos & al. 2009).
- Alternaria passiflorae*** J.H. Simmonds  
On fruits of *Passiflora ligularis* A. Juss., and leaves of *Passiflora edulis* Sims. (Villalobos & al. 2009).
- Alternaria porri*** (Ellis) Cif.  
On leaves of *Allium cepa* L., *A. obliquum* L. and *A. sativum* L. (Villalobos & al. 2009).
- Alternaria radicina*** Meier, Drechsler & E.D. Eddy  
On sclerotia of *Stromatinia cepivora* (Berk.) Whetzel (as *Sclerotium cepivorum* Berk.) (Granados-Montero 2004); on leaves of *Daucus carota* L. (Villalobos & al. 2009).
- Alternaria ricini*** (Yoshii) Hansf.  
On leaves of *Ricinus communis* L. (Villalobos & al. 2009).
- Alternaria sesami*** (E. Kawam.) Mohanty & Behera  
On leaves of *Sesamum indicum* L. (Villalobos & al. 2009).
- Alternaria solani*** Sorauer  
On fruits and leaves of *Capsicum annum* L., *Solanum lycopersicum* L., *Solanum melongena* L. and *S. tuberosum* L. (Villalobos & al. 2009).
- Alternaria sonchi*** Davis  
On leaves of *Lactuca sativa* L. (Villalobos & al. 2009).
- Alternaria tomato*** (Cooke) L.R. Jones  
On fruits and leaves of *Solanum lycopersicum* L. (Villalobos & al. 2009).
- Annellophora solani*** (Syd.) S. Hughes  
On *Solanaceae* (as *Chaetotrichum solani* Syd.) (Sydow 1927).
- \**Anungitopsis triseptata*** (Matsush.) R.F. Castañeda & W.B. Kendr.  
SPECIMEN EXAMINED—on decaying leaves of *Eucalyptus* sp., Orosi, Cartago Province, M. Granados-Montero, 22 Jul. 2012 (INIFAT C12/50).
- Apiospora camptospora*** Penz. & Sacc.  
On stems of *Bambusa vulgaris* Schrad. [as *Papularia vinosa* (Berk. & M.A. Curtis) E.W. Mason] (Villalobos & al. 2009).
- \**Arachnophora polyradiata*** (Mercado & R.F. Castañeda) R.F. Castañeda & W. Gams  
SPECIMEN EXAMINED—on dead woody branch, Río Macho, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/57).
- Arthriniium phaeospermum*** (Corda) M. B. Ellis  
On dead culms of *Bambusa* sp. (Mercado-Sierra & al. 1997a).
- Arxiella terrestris*** Papendorf  
On litter of primary forest (Bills & Polishook 1994a).
- Aschersonia aleyrodis*** Webber  
On substrate not indicated (Liu & al. 2006).
- Aschersonia basicystis*** Berk. & M.A. Curtis  
On leaves of *Cinnamomum tonduzii* (Mez) Kosterm. (Sydow 1927); on substrate not indicated (Liu & al. 2005).
- Aschersonia cubensis*** Berk. & M.A. Curtis  
On substrate not indicated (Liu & al. 2006).

***Aschersonia incrassata*** Mains

On leaves of *Annonaceae*, *Piper holdridgeanum* Burger, *Piper multiplinervium* C. DC. and *Synechanthus warscewiczianus* H. Wendl.; on larvae of *Aleyrodidae* on leaves of *Doliocarpus dentatus* (Aublet) Standl. (Liu & Hodge 2005).

***Aschersonia goldiana*** Sacc. & Ellis

On substrate not indicated (Liu & al. 2005).

***Aschersonia placenta*** Berk.

On substrate not indicated (Liu & al. 2006).

***Ascochyta abelmoschi*** Harter

On leaves of *Abelmoschus esculentus* (L.) Moench (Villalobos & al. 2009).

***Ascochyta asparagina*** (Petr.) P.K. Buchanan

On leaves of *Asparagus* spp. and *A. officinalis* L. (Villalobos & al. 2009).

***Ascochyta boltshauseri*** Sacc.

On leaves and pods of *Phaseolus vulgaris* L. (Villalobos & al. 2009).

***Ascochyta caricae*** Rabenh.

On leaves of *Ficus* sp. and *F. carica* L. (Villalobos & al. 2009).

***Ascochyta carthagenensis*** Sacc.

On leaves of *Manihot esculenta* Crantz (Villalobos & al. 2009).

***Ascochyta dianthi*** Lib.

On leaves of *Dianthus caryophyllus* L. (Villalobos & al. 2009).

***Ascochyta gerberae*** Maffei

On leaves of *Gerbera jamesonii* Bolus (Villalobos & al. 2009).

***Ascochyta gladioli*** Traverso & Spessa

On leaves of *Gladiolus* spp. (Villalobos & al. 2009).

***Ascochyta mali*** Ellis & Everh.

On leaves of *Malus sylvestris* Mill. (Villalobos & al. 2009).

***Ascochyta maydis*** G. L. Stout

On leaves of *Zea mays* L. (Villalobos & al. 2009).

***Ascochyta petuniae*** Speg.

On leaves of *Petunia* spp. (Villalobos & al. 2009).

***Ascochyta sesami*** Miura

On leaves of *Sesamum indicum* L. (Villalobos & al. 2009).

***Ascochyta sojae*** Miura

On leaves of *Glycine max* (L.) Merr. (Villalobos & al. 2009).

***Ascochyta sorghi*** Sacc.

On leaves of *Sorghum bicolor* (L.) Moench (Villalobos & al. 2009).

***Ascochyta statices*** Nagorny

On leaves of *Limonium sinuatum* (L.) Mill. (Villalobos & al. 2009).

***Aspergillus aculeatus*** Iizuka

On peduncles of the *Ananas comosus* (L.) Merr. (Castro-Chinchilla & Umaña-Rojas 2015).

***Aspergillus awamori*** Nakaz.

Isolated from banana rhizosphere soil (as *Aspergillus luchuensis* Inui). (Goos 1960).

***Aspergillus candidus*** Link

Isolated from soil (Farrow 1954).

***Aspergillus clavatus*** Desm.

Isolated from banana rhizosphere soil (Goos 1960).

***Aspergillus conicus*** Blochwitz

Isolated from banana rhizosphere soil (Goos 1960).

***Aspergillus flavus*** Link

On cobs of *Zea mays* L., on grains of *Gossypium hirsutum* L., on roots of *Manihot esculenta* Crantz, on seeds of *Arachis hypogaea* L. and rhizomes of *Zingiber officinale* Roscoe (Villalobos & al. 2009).

***Aspergillus fumigatus*** Fresen.

Isolated from soil (Farrow 1954).

***Aspergillus janus*** Raper & Thom

Isolated from virgin forest soil (Goos 1960).

***Aspergillus niger*** Tiegh.

Isolated from soil (Farrow 1954) and banana rhizosphere soil (Goos 1960); on bulbs of *Allium cepa* L., *A. obliquum* L. and *A. sativum* L., on cobs of *Zea mays* L., on fruits of *Citrullus lanatus* (Thunb.) Matsumura & Nakai, *Cucumis melo* L., *C. sativus* L., *Cucurbita pepo* L. and *Vitis vinifera* L., on rhizome of *Zingiber officinale* Roscoe, on roots of *Manihot esculenta* Crantz, on seeds of *Arachis hypogaea* L., on stems of *Cordyline* sp., *Dracaena* sp., *Ficus* sp., *F. carica* L. and *Sansevieria trifasciata* Prain (Villalobos & al. 2009).

***Aspergillus sclerotiorum*** G. A. Huber

On rotten fruits (Mercado-Sierra & al. 1997a).

***Aspergillus terreus*** Thom

Isolated from virgin forest soil (Goos 1960).

***Aspergillus versicolor*** (Vuill.) Tirab.

On humans with onychomycosis (Sequeira-Oviedo & al. 2016).

***Aspergillus violaceofuscus*** Gasperini

Isolated from soil sample (Farrow 1954).

***Asperisporium caricae*** (Speg.) Maubl.

On leaves of *Carica papaya* L. (as *Pucciniopsis caricae* Earle) (Stevens 1927); on fruits and leaves of *Carica papaya* L. [as *Fusicladium caricae* (Speg.)] (Villalobos & al. 2009).

***Asteromella brassicae*** (Chevall.) Boerema & Kesteren

On leaves of *B. oleracea* var. *botrytis* L., *B. oleracea* var. *capitata* L., *B. oleracea* var. *gemmifera* DC., *Brassica oleracea* var. *italica* Plenck and *Raphanus sativus* L. (as *Phyllosticta brassicicola* McAlpine) (Villalobos & al. 2009).

***Athelia rolfsii*** (Curzi) C.C. Tu & Kimbr.

On fruits of *Cucumis sativus* L., *Cucurbita pepo* L., *Elaeis guineensis* Jacq. and *Luffa cylindrica* M. Roem., on fruits and roots of *Citrullus lanatus* (Thunb.) Matsumura & Nakai, on roots of *Allium cepa* L., *A. obliquum* L., *A. sativum* L., *Angraecoides* spp., *Aphelandra squarrosa* Nees, *Apium graveolens* L., *Araceae*, *Arachis hypogaea* L., *Bambusa vulgaris* Schrad, *Begonia* spp., *Beta vulgaris* L., *Bougainvillea* spp., *Brassica* spp., *Brassica oleracea* var. *botrytis* L., *Brassica oleracea* var. *capitata* L., *Brassica oleracea* var. *gemmifera* DC., *Brassica oleracea* var. *italica* Plenck, *Cajanus cajan* (L.) Huth, *Capsicum annuum* L., *Carapichea ipecacuanha* (Brot.) L. Andersson, *Carica papaya* L., *Cattleya* spp., *Chrysanthemum morifolium* Ramat., *Codiaeum variegatum* (L.) Rumph. ex A. Juss., *Colocasia esculenta* (L.) Schott, *Cordyline* spp., *Cucumis melo* L., *Cucumis sativus* L., *Cucurbita pepo* L., *Cymbidium* spp., *Daucus carota* L., *Dendrobium* spp., *Dianthus caryophyllus* L., *Dioscorea alata* L., *Dracaena* spp., *Epipremnum aureum* (Linden & André) G.S. Bunting, *Ficus* spp., *Fragaria* sp., *Gerbera jamesonii* Bolus, *Gladiolus* spp., *Glycine max* (L.) Merr., *Gossypium hirsutum* L., *Hedera helix* L., *Hydrangea macrophylla* (Thunb.) Seringe, *Impatiens* spp., *Ipomoea batatas* (L.) Lam., *Lactuca sativa* L., *Lilium* spp., *Limonium sinuatum* (L.) Mill., *Malus sylvestris* Mill., *Mangifera indica* L., *Manihot esculenta* Crantz, *Miltonia* spp., *Monstera deliciosa* Liebm, *Musa acuminata* Colla, *M. balbisiana* Colla, *Nasturtium officinale* W. T. Aiton, *Nicotiana tabacum* L., *Odontoglossum* spp., *Oncidium* spp., *Oryza sativa* L., *Paphiopedilum* spp., *Passiflora edulis* Sims., *Passiflora ligularis* A. Juss., *Peperomia* spp., *Persea americana* Mill., *Petroselinum crispum* (Mill.) Fuss, *Petunia* spp., *Phalaenopsis* spp., *Phaseolus vulgaris* L., *Piper ampulum* Kunth, *Pisum sativum* L., *Polypodiaceae*, *Pyrus communis* L., *Rosa* spp., *Rubus* spp., *Saccharum officinarum* L., *Sansevieria trifasciata* Prain, *Sechium edule* (Jacq.) Sw., *Sesamum indicum* L., *Solanum lycopersicum* L., *Solanum melongena* L., *Sorghum bicolor* (L.) Moench, *Spathiphyllum* spp., *Spinacia oleracea* L., *Vanda* spp., *Vigna unguiculata* (L.) Walp., *Xanthosoma* spp., *Yucca elephantipes* Regel ex Trel., *Zea mays* L. and *Zingiber officinale* Roscoe, on roots and stems of

*Aglaoonema* spp. and *Vanilla planifolia* Jacks. ex Andrews (as *Sclerotium rolfsii* Sacc.) (Villalobos & al. 2009).

\****Bactrodesmium longisporum*** M.B. Ellis

SPECIMEN EXAMINED—on dead wood, Tapantí, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/53).

***Bahusutrabeija angularis*** V. Rao & de Hoog

On indeterminate dead leaves (Rambelli & Ciccarone 2008).

\****Belemnospora navicularis*** R. F. Castañeda & Heredia

SPECIMEN EXAMINED—on dead woody branch, Tapantí, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/52).

***Beltrania maxima*** Rambelli

On dead leaves of *Clusia* sp. (Rambelli & Ciccarone 2008).

***Beltrania querna*** Harkn.

On indeterminate dead leaves (Rambelli & Ciccarone 2008).

***Beltraniella portoricensis*** (F. Stevens) Piroz. & S.D. Patil

On dead leaves (Mercado-Sierra & al. 1997a); SPECIMEN EXAMINED— on dead fallen leaf, Río Macho, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/54).

***Beltraniopsis asperisetifer*** Matsush

On indeterminate dead leaves (Rambelli & Ciccarone 2008).

***Berkleasmiium tropicale*** E.F. Morris

On dead tree (Morris 1972).

***Bionectria byssicola*** (Berk. & Broome) Schroers & Samuels

On flowers, immature pods and isolated from rhizosphere of cocoa (as *Clonostachys byssicola* Schroers) (Hoopen & al. 2010).

***Bipolaris cooki*** (Sacc.) Shoemaker

On leaves of *Sorghum bicolor* (L.) Moench (as *Drechslera sorghicola* (Lefebvre & Sherwin) M.J. Richardson & E.M. Fraser) (Villalobos & al. 2009).

***Bipolaris cynodontis*** (Marignoni) Shoemaker

On dead leaves of *Clusia* sp. (Rambelli & Ciccarone 2008).

***Bipolaris maydis*** (Y. Nisik. & C. Miyake) Shoemaker

On leaves of *Zea mays* L. [as *Drechslera maydis* (Y. Nisik. & C. Miyake) Subram. & B.L. Jain] (Villalobos & al. 2009).

***Bipolaris oryzae*** (Breda de Haan) Shoemaker

On leaves of *Oryza sativa* L. [as *Drechslera oryzae* (Breda de Haan) Subram. & B.L. Jain] (Villalobos & al. 2009).

***Bipolaris sacchari*** (E.J. Butler) Shoemaker

On dead leaves of orchid (Rambelli & Ciccarone 2008); on leaves of *Saccharum officinarum* L. [as *Drechslera sacchari* (E.J. Butler) Subram. & B.L. Jain] (Villalobos & al. 2009).

***Bipolaris zeicola*** (G.L. Stout) Shoemaker

On leaves of *Zea mays* L. [as *Drechslera zeicola* (G.L. Stout) Subram. & B.L. Jain] (Villalobos & al. 2009).

***Boeremia exigua*** (Desm.) Aveskamp, Gruyter & Verkley

On fruits and leaves of *Citrullus lanatus* (Thunb.) Matsumura & Nakai, *Cucumis melo* L., *C. sativus* L., *Cucurbita pepo* L., *Sechium edule* (Jacq.) Sw., *Sechium tacaco* (Pitt.) C. Jeffrey and on leaves of *Nicotiana tabacum* L. (as *Ascochyta nicotianae* Pass. and *Ascochyta phaseolorum* Sacc.); on leaves of *Hydrangea macrophylla* (Thunb.) Seringe (as *Phyllosticta hydrangeae* Ellis & Everh.) (Villalobos & al. 2009).

***Boeremia lycopersici*** (Cooke) Aveskamp, Gruyter & Verkley

On fruits and leaves of *Fragaria* sp. and leaves of *Rubus* spp. (as *Phoma lycopersici* Cooke) (Villalobos & al. 2009).

- Botryodiplodia circinans*** (Berk. & Broome) Petr.  
On leaves of *Yucca elephantipes* Regel ex Trel. (as *Diplodia circinans* Berk. & Broome) (Villalobos & al. 2009).
- Botryodiplodia palmarum*** (Cooke) Petr. & Syd.  
On stem of *Cocos nucifera* L. (as *Sphaeropsis palmarum* Cooke) (Villalobos & al. 2009).
- Botryodiplodia pandani*** (Lév.) Petr. & Syd.  
On *Pandanus* sp. (as *Macrophoma pandani* (Lév.) Berl. & Voglino) (Stevens 1927).
- Botryosphaeria stevensii*** Shoemaker  
On fruits and stems of *Malus sylvestris* Mill. and *Pyrus communis* L. (as *Sphaeropsis malorum* (Berk.) Berk.) (Villalobos & al. 2009).
- Botrytis allii*** Munn  
On bulbs of *Allium sativum* L. (Villalobos & al. 2009).
- Botrytis cinerea*** Pers.  
On *Rosa* sp. (Stevens 1927).
- Botryotinia squamosa*** Vienn.-Bourg.  
On bulbs of *Allium cepa* L., *A. obliquum* L. and *A. sativum* L. (as *Botrytis squamosa* J.C. Walker) (Villalobos & al. 2009).
- Brachydesmiella biseptata*** G. Arnaud ex S. Hughes  
On dead woody branches (Morris 1972).
- Brachysporiella gayana*** Bat.  
On dead petiole of an undetermined palm tree and dead branches of *Smilax* sp. (Mercado-Sierra & al. 1997b).
- \**Brachysporiella pulchra*** (Subram.) S. Hughes  
SPECIMEN EXAMINED—on dead wood, Tapantí, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/47).
- Cacumisporium capitulatum*** (Corda) S. Hughes  
On dead bark (Morris 1972).
- \**Cacumisporium pleuroconidiophorum*** (Davydkina & Melnik) R. F. Castañeda, Heredia & Iturr.  
SPECIMEN EXAMINED—on dead wood, Río Macho, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/63).
- Calonectria ilicicola*** Boedijn & Reitsma  
On capsules, leaves and stems of *Arachis hypogaea* L. (as *Cylindrocladium crotalariae* (Loos) D.K. Bell & Sobers) (Villalobos & al. 2009).
- Calonectria kyotensis*** Terash.  
On roots of *Malus sylvestris* Mill. and *Pyrus communis* L. (as *Cylindrocladium floridanum* Sobers & C. P. Szym.) (Villalobos & al. 2009).
- Calonectria morgani*** Crous, Alfenas & M.J. Wingf.  
Endophytic in roots of *Campylocentrum micranthum* (Lindl.) Rolfé (Richardson & Currah 1995); on fruits of *Persea americana* Mill., on leaves of *Elaeis guineensis* Jacq., *Eucalyptus* spp., *Gliricidia sepium* (Jacq.) Walp., *Macadamia integrifolia* Maiden & Betche and *Oryza sativa* L., stems of *Rosa* spp., on roots of *Dianthus caryophyllus* L. and *Anacardium occidentale* L. (as *Cylindrocladium scoparium* Morgan) (Villalobos & al. 2009).
- Calonectria spathiphylli*** El-Gholl  
On leaves and roots of *Spathiphyllum* spp. (as *Cylindrocladium spathiphylli* Schoult., El-Gholl & Alfieri) (Villalobos & al. 2009).
- \**Camposporidium hughesii*** R.F. Castañeda & Guarro  
SPECIMEN EXAMINED—on dead wood, Río Macho, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/63-2).
- Camptomeris calliandrae*** Syd.  
On living leaflets of *Calliandra similis* Sprague & L. Riley (Bessey 1953).

**\**Canalisporium pallidum*** Goh

SPECIMEN EXAMINED—on dead wood, Río Macho, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/57).

**\**Canalisporium pulchrum*** (Hol.-Jech. & Mercado) Nawawi & Kuthub.

SPECIMEN EXAMINED—on dead wood, Río Macho, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/29-4).

***Cephalosporium carpogenum*** Ruehle

On fruits of *Malus sylvestris* Mill. (Villalobos & al. 2009).

***Cephalosporium cinnamomeum*** Linn

On leaves of *Aglaonema* spp., *Araceae*, *Dieffenbachia* spp., *Philodendron* sp. and *Syngonium* spp. (Villalobos & al. 2009).

***Ceratocystis paradoxa*** (Dade) C. Moreau

On fruits of *Musa acuminata* Colla and *M. balbisiana* Colla, on fruits, roots and stems of *Ananas comosus* (L.) Merr., on roots of *Sabal palmetto* (Walter) Lodd. ex Schult. & Schult. f., on roots and stems of *Araceae*, *Bactris gasipaes* Kunth, *Cocos nucifera* L., *Colocasia esculenta* (L.) Schott, *Elaeis guineensis* Jacq., *Philodendron* spp., *Saccharum officinarum* L., *Xanthosoma* spp. and *Zea mays* L. and trunk of *Mangifera indica* L. and *Theobroma cacao* L. (as *Thielaviopsis paradoxa* (De Seynes) Höhn.) (Villalobos & al. 2009).

***Ceratosporella deviata*** Subram

On dead branches (Mercado-Sierra & al. 1997b).

***Cercospora alabamensis*** G.F. Atk.

On *Ipomoea pes-caprae* (L.) R. Br. (Stevens 1927).

***Cercospora anacardii*** A.S. Mull. & Chupp

On leaves of *Anacardium occidentale* L. (Villalobos & al. 2009).

***Cercospora apii*** Fresen.

On leaves of *Apium graveolens* L. (Villalobos & al. 2009).

***Cercospora arachidicola*** Hori

On leaves of *Arachis hypogaea* L. (Villalobos & al. 2009).

***Cercospora asparagi*** Sacc.

On leaves of *Asparagus* spp. and *A. officinalis* L. (Villalobos & al. 2009).

***Cercospora begoniae*** Hori

On leaves of *Begonia* spp. (Villalobos & al. 2009).

***Cercospora beticola*** Sacc.

On leaves of *Beta vulgaris* L. and *Spinacia oleracea* L. (Villalobos & al. 2009).

***Cercospora brassicicola*** Henn.

On leaves of *Brassica oleracea* var. *botrytis* L., *Brassica oleracea* var. *capitata* L., *Brassica oleracea* var. *gemmifera* DC. and *Brassica oleracea* var. *italica* Plenck (Villalobos & al. 2009).

***Cercospora canescens*** Ellis & G. Martin

On leaves of *Cajanus cajan* (L.) Huth and *Vigna unguiculata* (L.) Walp. (Villalobos & al. 2009).

***Cercospora capsici*** Heald & F.A. Wolf

On leaves of *Capsicum annuum* L. (Villalobos & al. 2009).

***Cercospora carotae*** (Pass.) Kazn. & Siemaszko

On leaves of *Daucus carota* L. (Villalobos & al. 2009).

***Cercospora chrysanthemi*** Heald & F.A. Wolf

On leaves of *Chrysanthemum morifolium* Ramat. (Villalobos & al. 2009).

***Cercospora cruciferarum*** Ellis & Everh.

On leaves of *Raphanus sativus* L. (Villalobos & al. 2009).

***Cercospora elaeidis*** Steyaert

On leaves of *Elaeis guineensis* Jacq. (Villalobos & al. 2009).

- Cercospora epipactidis*** C. Massal.  
On leaves of *Angraecoides* spp., *Cattleya* spp., *Cymbidium* spp., *Dendrobium* spp., *Miltonia* spp., *Odontoglossum* spp., *Oncidium* spp., *Paphiopedilum* spp., *Phalaenopsis* spp. and *Vanda* spp. (Villalobos & al. 2009).
- Cercospora erechtiitis*** G.F. Atk.  
On *Erechtites* sp. (Stevens 1927).
- Cercospora fragariae*** Lobik  
On leaves of *Fragaria* sp. (Villalobos & al. 2009).
- Cercospora fukushiana*** (Matsuura) W. Yamam.  
On leaves of *Impatiens* spp. (Villalobos & al. 2009).
- Cercospora gerberae*** Chupp & Viégas  
On leaves of *Gerbera jamesonii* Bolus (Villalobos & al. 2009).
- Cercospora gigantea*** F.E. Fisher  
On leaves of *Citrus* spp. (Villalobos & al. 2009).
- Cercospora hayi*** Calp.  
On leaves of *Musa acuminata* Colla and *M. balbisiana* Colla (Villalobos & al. 2009).
- Cercospora hederae*** Togashi & Katsuki  
On leaves of *Hedera helix* L. (Villalobos & al. 2009).
- Cercospora heliconiae*** Chowdhry, D. Gupta & Padhi  
On leaves of *Heliconia* spp. (Villalobos & al. 2009).
- Cercospora hydrangeae*** Ellis & Everh.  
On leaves of *Hydrangea macrophylla* (Thunb.) Seringe (Villalobos & al. 2009).
- Cercospora insulana*** (Sacc.) Sacc.  
On leaves of *Limonium sinuatum* (L.) Mill. (Villalobos & al. 2009).
- Cercospora kikuchii*** (Tak. Matsumoto & Tomoy.) M.W. Gardner  
On grains and leaves of *Glycine max* (L.) Merr. (Villalobos & al. 2009).
- Cercospora longipes*** E.J. Butler  
On leaves of *Saccharum officinarum* L. (Villalobos & al. 2009).
- Cercospora longissima*** Cooke & Ellis  
On leaves of *Lactuca sativa* L. (Villalobos & al. 2009).
- Cercospora medicaginis*** Ellis & Everh.  
On leaves of *Medicago sativa* L. (Villalobos & al. 2009).
- Cercospora melongenae*** Welles  
On leaves of *Solanum melongena* L. (Villalobos & al. 2009).
- Cercospora nicotianae*** Ellis & Everh.  
On leaves of *Nicotiana tabacum* L. (Villalobos & al. 2009).
- Cercospora papayae*** Hansf.  
On leaves of *Carica papaya* L. (Villalobos & al. 2009).
- Cercospora passiflorae*** A.S. Mull. & Chupp  
On leaves of *Passiflora edulis* Sims. and *P. ligularis* A. Juss. (Villalobos & al. 2009).
- Cercospora petroselini*** Sacc.  
On leaves of *Petroselinum crispum* (Mill.) Fuss (Villalobos & al. 2009).
- Cercospora petuniae*** A.S. Mull. & Chupp  
On leaves of *Petunia* spp. (Villalobos & al. 2009).
- Cercospora porophylli*** F. Stevens & Moore bis  
On *Porophyllum ruderale* (Jacq.) Cass. (Stevens 1927).
- Cercospora pulcherrima*** Tharp  
On leaves of *Euphorbia pulcherrima* Willd. ex Klotzsch (Villalobos & al. 2009).
- Cercospora ricinella*** Sacc. & Berl.  
On leaves of *Ricinus communis* L. (Villalobos & al. 2009).

- Cercospora sambuci*** F. Stevens & C.J. King  
On *Sambucus canadensis* L. (Stevens 1927).
- Cercospora sechii*** J.A. Stev.  
On leaves of *Sechium edule* (Jacq.) Sw. (Villalobos & al. 2009).
- Cercospora sesami*** Zimm.  
On leaves of *Sesamum indicum* L. (Villalobos & al. 2009).
- Cercospora sojina*** Hara  
On leaves of *Glycine max* (L.) Merr. (Villalobos & al. 2009).
- Cercospora sorghi*** Ellis & Everh.  
On leaves of *Sorghum bicolor* (L.) Moench and *Zea mays* L. (Villalobos & al. 2009).
- Cercospora tosenis*** Henn.  
On leaves of *Solanum* sp. (Sydow 1927).
- Cercospora zingibericola*** A.K. Kar & M. Mandal  
On leaves of *Zingiber officinale* Roscoe (Villalobos & al. 2009).
- Cercospora zonata*** G. Winter  
On leaves of *Vicia faba* L. (as *Cercospora fabae* Fautrey) (Villalobos & al. 2009).
- Cercosporiella elvirae*** Syd.  
On leaves of *Delilia biflora* (L.) Kuntze (Sydow 1927).
- Cercosporiella rubi*** (G. Winter) Plakidas  
On fruits and leaves of *Rubus* spp. (Villalobos & al. 2009).
- Cercosporidium bougainvilleae*** (Munt.-Cvetk.) Sobers & C.P. Seym.  
On leaves of *Bougainvillea* spp. (Villalobos & al. 2009).
- Chaetomium longicolleum*** Krzemien. & Badura  
Isolated from banana rhizosphere soil and virgin forest soil (as *Chaetocerotostoma longirostre* Farrow) (Goos 1960).
- Chaetoseptoria wellmanii*** J.A. Stev.  
On leaves of *Cajanus cajan* (L.) Huth, *Phaseolus vulgaris* L. and *Vigna unguiculata* (L.) Walp. (Villalobos & al. 2009).
- Chaetosphaeria chloroconia*** W. Gams & Hol.-Jech.  
On decayed wood (as *Gonytrichum chlamydosporium* G.L. Barron & G.C. Bhatt) (Mercado-Sierra & al. 1997b).
- Chaetosphaeria innumera*** Berk. & Broome ex Tul. & C. Tul.  
On litter (as *Chloridium botryoideum* (Corda) S. Hughes) (Mercado-Sierra & al. 1997a).
- Chaetosticta perforata*** (Ellis & Everh.) Petr. & Syd.  
Endophytic in roots of *Bromeliaceae*, *Trichosalpinx orbicularis* (Lindl.) Luer and *Trigonidium egertonianum* Bateman ex Lindl. (as *Chaetosticta* cf. *perforata* (Ellis & Everh.) Petr. & Syd.) (Richardson & Currah 1995).
- Chalara brachyspora*** Sacc.  
On unidentified wood (Mercado-Sierra & al. 1997b).
- Chloridium phaeosporum*** W. Gams & Hol.-Jech.  
On leaves of *Heliconia mariae* Hook. f. (as *Chloridium phaeosporum* var. *cubense* Hol.-Jech.) (Bills & Polishook 1994b).
- Chloridium virescens*** (Pers.) W. Gams & Hol.-Jech.  
On rotten log (as *Helicosporium virescens* (Pers.) Sivan.) (Mercado-Sierra & al. 1997b).
- Cicinnobella consimilis*** Syd.  
On leaf of *Tabernaemontana sananho* Ruiz & Pav, parasitic in mycelium of *Irene escharoides* Syd. and *Neostomella tabernaemontanae* Syd. (Sydow 1927).
- Cirrenalia palmicola*** Matsush.  
On unidentified wood (Mercado-Sierra & al. 1997a).
- Cladosporium allii-cepae*** (Ranoj.) M.B. Ellis  
On leaves of *Allium cepa* L., *A. obliquum* L. and *A. sativum* L. (Villalobos & al. 2009).

- Cladosporium cladosporioides*** (Fresen.) G.A. de Vries  
Endophytic in roots of *Specklinia simmleriana* (Rendle) Luer (Richardson & Currah 1995).
- Cladosporium colocasiae*** Sawada  
On leaves of *Colocasia esculenta* (L.) Schott and *Xanthosoma* spp. (Villalobos & al. 2009).
- Cladosporium cucumerinum*** Ellis & Arthur  
On fruits, leaves and stems of *Citrullus lanatus* (Thunb.) Matsumura & Nakai, *Cucumis melo* L., *C. sativus* L., *Cucurbita pepo* L. and *Sechium edule* (Jacq.) Sw. (Villalobos & al. 2009).
- Cladosporium herbarum*** (Pers.) Link  
Isolated from banana rhizosphere soil and virgin forest soil (Goos 1960); on leaves of *Asparagus* spp., *A. officinalis* L., *Arachis hypogaea* L. and *Gladiolus* spp., on leaves and cobs of *Sorghum bicolor* (L.) Moench and *Zea mays* L., on leaves and fruits of *Passiflora edulis* Sims. and *P. ligularis* A. Juss., on leaves and glumes of *Oryza sativa* L., on leaves and pods of *Pisum sativum* L., on seeds of *Phaseolus vulgaris* L. (Villalobos & al. 2009).
- Cladosporium vignae*** M.W. Gardner  
On leaves of *Vigna unguiculata* (L.) Walp. (Villalobos & al. 2009).
- Clonostachys cylindrospora*** Höhn.  
On dead woody branch (Morris 1972).
- Clonostachys rosea*** (Link) Schroers, Samuels, Seifert & W. Gams  
Isolated from soil (as *Gliocladium roseum* Bainier) (Farrow 1954); on leaves of *Heliconia mariae* Hook. f. (as *Gliocladium roseum* Bainier) (Bills & Polishook 1994b); endophytic in roots of *Camaridium neglectum* (Schltr.) M.A. Blanco, *Epidendrum octomerioides* Schltr., *Scaphyglottis prolifera* (R. Br.) Cogn. and *Stelis* sp. (as *Gliocladium roseum* Bainier) (Richardson & Currah 1995).
- Cochliobolus geniculatus*** R.R. Nelson  
On leaves of *Brassica oleracea* var. *botrytis* L., *Brassica oleracea* var. *capitata* L., *Brassica oleracea* var. *gemmifera* DC. and *Brassica oleracea* var. *italica* Plenck (as *Curvularia geniculata* (Tracy & Earle) Boedijn) (Villalobos & al. 2009).
- Cochliobolus setariae*** (S. Ito & Kurib.) Drechsler ex Dastur  
On leaves of *Calathea* sp., *Cocos nucifera* L. and *Maranta leuconeura* E. Morren (as *Drechslera setariae* (Shoemaker) Subram. & B.L. Jain) (Villalobos & al. 2009); on leaves of *Bactris gasipaes* Kunth (Arroyo-Oquendo & al. 2004).
- Codinaea delicata*** R.F. Castañeda, M.M. Granados & O. Castro  
On decaying leaves of unidentified plant (Granados-Montero & al. 2014).
- Colletotrichum anthurii*** Delacr.  
On leaves of *Anthurium* spp. (Villalobos & al. 2009).
- Colletotrichum capsici*** (Syd. & P. Syd.) E.J. Butler & Bisby  
On leaves of *Curcuma longa* L. (Villalobos & al. 2009).
- Colletotrichum caricae*** F. Stevens & J.G. Hall  
On leaves of *Ficus* sp. and *F. carica* L. (Villalobos & al. 2009).
- Colletotrichum circinans*** (Berk.) Voglino  
On bulbs of *Allium cepa* L., *A. obliquum* L. and *A. sativum* L. (Villalobos & al. 2009).
- Colletotrichum coffeanum*** F. Noack  
On branches and fruits of *Coffea arabica* L. (Villalobos & al. 2009).
- Colletotrichum coccodes*** (Wallr.) S. Hughes  
On fruits of *Psidium friedrichsthalianum* (O. Berg) Nied. and on leaves of *P. guajava* L. (as *Gloeosporium psidii* Delacr.) (Villalobos & al. 2009).
- Colletotrichum crassipes*** (Speg.) Arx  
Endophytic in roots of *Camaridium neglectum* (Schltr.) M. A. Blanco, *Campylocentrum micranthum* (Lindl.) Rolfe, *Dichaea acrolephara* Schrad, *Jacquiella globosa* (Jacq.) Schltr., *Maxillaria* sp., *Myoxanthus scandens* (Ames) Luer, *Oncidium lineoligerum* Rchb. f. & Warsz, *Prosthechea fragrans* (Sw.) W. E. Higgins, *Rodriguezia compacta* Schltr., *Stelis* sp., *Trichosalpinx orbicularis* (Lindl.) Luer and *Trigonidium riopalenquense* Dodson (Richardson & Currah 1995).

***Colletotrichum dematium*** (Pers.) Grove

On *Pteromischum* sp. (Ren & al. 2008); on leaves of *Beta vulgaris* L. and *Spinacia oleracea* L. (as *Colletotrichum spinaciae* Ellis & Halst.) (Villalobos & al. 2009).

***Colletotrichum elasticae*** Tassi

On leaves of *Ficus* sp. and *F. carica* L. (Villalobos & al. 2009).

***Colletotrichum falcatum*** Went

On leaves of *Saccharum officinarum* L. (Villalobos & al. 2009).

***Colletotrichum fragariae*** A.N. Brooks

On flowers and fruits of *Fragaria* sp. (Villalobos & al. 2009).

***Colletotrichum gloeosporioides*** (Penz.) Penz. & Sacc.

On *Iresine calea* (Ibáñez) Standl. as *Colletotrichum iresines* F. Stevens (Stevens 1927); on leaves of *Heliconia mariae* Hook. f. (Bills & Polishook 1994b); endophytic in roots of *Araceae*, *Camaridium neglectum* (Schltr.) M.A. Blanco, *Catasetum maculatum* Kunth, *Prosthechea fragrans* (Sw.) W.E. Higgins and *Sobralia* sp. (Richardson & Currah 1995); on branches and fruits of *Coffea arabica* L., on branches, flowers, fruits, leaves and stems of *Annona* spp. and *A. muricata* L., on branches and leaves of *Bixa orellana* L., on capsules of *Arachis hypogaea* L., on capsules, flowers, leaves and stems of *Vanilla planifolia* Jacks. ex Andrews, on corns of *Gossypium hirsutum* L., on flowers, leaves and stems of *Strelitzia reginae* Banks, on fruits of *Carica papaya* L., *Malus sylvestris* Mill., *Passiflora edulis* Sims, *Passiflora ligularis* A. Juss., *Prunus* spp., *P. persica* (L.) Stokes, *Pyrus communis* L., *Rubus* spp., *Sechium tacaco* (Pitt.) C. Jeffrey, *Solanum lycopersicum* L. and *S. melongena* L., on leaves of *Abelmoschus esculentus* (L.) Moench, *Aglaonema* spp., *Anacardium occidentale* L., *Ananas comosus* (L.) Merr., *Angraecoides* spp., *Aphelandra squarrosa* Nees, *Araceae*, *Arachis hypogaea* L., *Arecaceae*, *Bactris gasipaes* Kunth, *Begonia* spp., *Brassica* spp., *Bromeliaceae*, *Calathea* spp., *Capsicum annuum* L., *Carapichea ipecacuanha* (Brot.) L. Andersson, *Cattleya* spp., *Citrus* spp., *Cocos nucifera* L., *Codiaeum variegatum* (L.) Rumph. ex A. Juss., *Colocasia esculenta* (L.) Schott, *Cordyline* spp., *Coriandrum sativum* L., *Cymbidium* spp., *Dendrobium* spp., *Dianthus caryophyllus* L., *Dieffenbachia* spp., *Dioscorea alata* L., *Dracaena* spp., *Elaeis guineensis* Jacq., *Epipremnum aureum* (Linden & André) G.S. Bunting, *Euphorbia pulcherrima* Willd. ex Klotzsch, *Ficus* sp., *F. carica* L., *Fragaria* sp., *Glycine max* (L.) Merr., *Hedera helix* L., *Hydrangea macrophylla* (Thunb.) Seringe, *Impatiens* spp., *Ipomoea batatas* (L.) Lam., *Kalanchoe* spp., *Limonium sinuatum* (L.) Mill., *Macadamia integrifolia* Maiden & Betche, *Malus sylvestris* Mill., *Mangifera indica* L., *Manihot esculenta* Crantz, *Maranta leuconeura* E. Morren, *Miltonia* spp., *Monstera deliciosa* Liebm., *Musa acuminata* Colla, *M. balbisiana* Colla, *Nicotiana tabacum* L., *Odontoglossum* spp., *Oncidium* spp., *Paphiopedilum* spp., *Passiflora edulis* Sims, *P. ligularis* A. Juss., *Persea americana* Mill., *Phalaenopsis* spp., *Philodendron* spp., *Piper amplum* Kunth, *Polyscias* spp., *Prunus* spp., *P. persica* (L.) Stokes, *Psidium friedrichsthalianum* (O. Berg) Nied., *P. guajava* L., *Pyrus communis* L., *Rosa* spp., *Sansevieria trifasciata* Prain, *Solanum lycopersicum* L., *S. melongena* L., *Syngonium* spp., *Theobroma cacao* L., *Vanda* spp., *Vitis vinifera* L., *Xanthosoma* spp., *Yucca elephantipes* Regel ex Trel., *Zingiber officinale* Roscoe, on leaves and stems of *Capsicum annuum* L., on leaves, stems and pods of *Pisum sativum* L., on leaves and pods of *Cajanus cajan* (L.) Huth, on leaves of *Cordyline* spp. and *Dracaena* spp. (as *Colletotrichum dracaenae* Allesch.) (Villalobos & al. 2009); on fruits of *Averrhoa carambola* L., *Carica papaya* L. and *Mangifera indica* L. (Barquero & al. 2013).

***Colletotrichum graminicola*** (Ces.) G.W. Wilson

On leaves of *Sorghum bicolor* (L.) Moench and *Zea mays* L. (Villalobos & al. 2009).

***Colletotrichum higginsianum*** Sacc.

On leaves of *Brassica oleracea* var. *botrytis* L., *Brassica oleracea* var. *capitata* L., *Brassica oleracea* var. *gemmifera* DC. and *Brassica oleracea* var. *italica* Plenck (Villalobos & al. 2009).

***Colletotrichum lindemuthianum*** (Sacc. & Magnus) Briosi & Cavara

On leaves and pods of *Phaseolus vulgaris* L. (Villalobos & al. 2009).

***Colletotrichum magnum*** (Jenkins & Winstead) Rossman & W.C. Allen

On fruits of *Carica papaya* L. (Molina-Chaves & al. 2017).

***Colletotrichum manihotis*** Henn.

On leaves of *Manihot esculenta* Crantz (Villalobos & al. 2009).

- Colletotrichum musae*** (Berk. & M.A. Curtis) Arx  
On leaves of *Heliconia* spp, *Musa acuminata* Colla and *M. balbisiana* Colla (Villalobos & al. 2009).
- Colletotrichum trifolii*** Bain  
On leaves of *Medicago sativa* L. (Villalobos & al. 2009).
- Colletotrichum truncatum*** (Schwein.) Andrus & W.D. Moore  
On leaves of *Glycine max* (L.) Merr., on leaves and pods of *Vicia faba* L. (Villalobos & al. 2009).
- Colletotrichum zingiberis*** (Sundar.) E.J. Butler & Bisby  
On leaves of *Zingiber officinale* Roscoe (Villalobos & al. 2009).
- \**Condylospora flexuosa*** Nawawi & Kuthub.  
SPECIMEN EXAMINED—on decaying bark, Río Macho, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/30-2).
- Coniothyrium concentricum*** (Desm.) Sacc.  
On leaves of *Yucca elephantipes* Regel ex Trel. (Villalobos & al. 2009).
- Coniothyrium olivaceum*** Bonord.  
Endophytic in roots of *Cyclanthaceae* (as *Microsphaeropsis olivacea* (Bonord.) Höhn. (Richardson & Currah 1995).
- Corallomycetella repens*** (Berk. & Broome) Rossman & Samuels  
Isolated from virgin forest soil (as *Sphaerostilbe repens* Berk. & Broome) (Goos 1960).
- Cordana abramovii*** Seman & Davydkina  
On dead branches (Mercado-Sierra & al. 1997b); SPECIMEN EXAMINED—on rotten twig, Tapantí, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/44).
- \**Cordana crassa*** Tóth  
SPECIMEN EXAMINED—on decaying bark, Río Macho, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/53-1).
- Corynespora cassiicola*** (Berk. & M.A. Curtis) C.T. Wei  
On fruits of *Carica papaya* L., on leaves of *Aphelandra squarrosa* Nees, *Begonia* spp., *Capsicum annum* L., *Carica papaya* L., *Citrullus lanatus* (Thunb.) Matsumura & Nakai, *Colocasia esculenta* (L.) Schott, *Coriandrum sativum* L., *Cucumis melo* L., *C. sativus* L., *Cucurbita pepo* L., *Glycine max* (L.) Merr., *Gossypium hirsutum* L., *Hydrangea macrophylla* (Thunb.) Seringe, *Luffa cylindrica* M. Roem., *Sesamum indicum* L., *Sechium edule* (Jacq.) Sw., *Solanum lycopersicum* L., *S. melongena* L., *Passiflora edulis* Sims, *P. ligularis* A. Juss., *Petunia* spp., *Psidium guajava* L., *Pyrus communis* L., *Vigna unguiculata* (L.) Walp. and *Xanthosoma* spp. (Villalobos & al. 2009); SPECIMEN EXAMINED—on nursery plants of *Gmelina arborea* Roxb. ex Sm., M. Granados-Montero, 9 Jan 2017 (LF-3786-16).
- Corynespora inornata*** (S.C. Jong & E.F. Morris) Deighton  
On dead woody branches (as *Phaeoisariopsis inornata* S.C. Jong & E.F. Morris) (Morris 1972).
- Corynespora torulosa*** (Syd.) Crous  
On fruits and leaves of *Musa acuminata* Colla and *M. balbisiana* Colla (as *Deightoniella torulosa* (Syd.) M.B. Ellis) (Villalobos & al. 2009).
- Corynesporopsis isabelicae*** Hol.-Jech.  
On rachides of an undetermined palm tree mixed with *Meliolineae* and microthyriaceous fungi (Mercado-Sierra & al. 1997b).
- Coryneum microstictum*** Berk. & Broome  
On leaves of *Malus sylvestris* Mill. and *Pyrus communis* L. (Villalobos & al. 2009).
- \**Craspedodidymum cubense*** J. Mena & Mercado  
SPECIMEN EXAMINED—on decayed bark, Río Macho, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/35).
- Craspedodidymum proliferans*** V. Rao & de Hoog  
On dead branches (Mercado-Sierra & al. 1997a).

**\*Cryptophiale udagawae** Piroz. & Ichinoe

SPECIMEN EXAMINED—on decayed twig, Río Macho, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/61-1).

**Curvularia affinis** Boedijn

On dead leaves of indeterminate plant (Rambelli & Ciccarone 2008).

**Curvularia brachyspora** Boedijn

On dead leaves of *Clusia* sp. (Rambelli & Ciccarone 2008).

**Curvularia clavata** B.L. Jain

On dead leaves of indeterminate plant (Rambelli & Ciccarone 2008).

**Curvularia crepinii** (Westend.) Boedijn

On dead leaves of orchid (Rambelli & Ciccarone 2008).

**Curvularia cymbopogonis** (C.W. Dodge) J.W. Groves & Skolko

Endophytic in roots of *Stelis argentata* Lindl. (Richardson & Currah 1995).

**Curvularia eragrostidis** (Henn.) J.A. Mey.

On dead leaves of indeterminate plant (Rambelli & Ciccarone 2008); on leaves of *Ananas comosus* (L.) Merr. and *Elaeis guineensis* Jacq. (Villalobos & al. 2009).

**Curvularia lunata** (Wakker) Boedijn

Isolated from banana rhizosphere soil (Goos 1960); on grains of *Oryza sativa* L., on leaves of *Angraecoides* spp., *Cattleya* spp., *Cymbidium* spp., *Dendrobium* spp., *Gladiolus* spp., *Miltonia* spp., *Odontoglossum* spp., *Oncidium* spp., *Paphiopedilum* spp., *Phalaenopsis* spp., *Sabal palmetto* (Walter) Lodd. ex Schult. & Schult. f., *Sorghum bicolor* (L.) Moench, *Vanda* spp., and *Zea mays* L., on seeds of *Capsicum annuum* L., *Solanum lycopersicum* L. and *S. melongena* L. (Villalobos & al. 2009).

**Curvularia oryzae** Bugnic.

On dead leaves of indeterminate plant (Rambelli & Ciccarone 2008).

**Curvularia pallescens** Boedijn

On dead culms of *Bambusa* sp. (Mercado-Sierra & al. 1997b); on dead leaves of orchid (Rambelli & Ciccarone 2008); on leaves of *Zea mays* L. (Villalobos & al. 2009).

**Curvularia ravenelii** (M.A. Curtis ex Berk.) Manamgoda

On *Sporobolus* sp. and *S. indicus* (L.) R. Br. (as *Helminthosporium ravenelii* M.A. Curtis ex Berk.) (Stevens 1927).

**Curvularia senegalensis** (Speg.) Subram.

On dead leaves of indeterminate plant (Rambelli & Ciccarone 2008).

**Curvularia spicifera** (Bainier) Boedijn

On leaves of *Zingiber officinale* Roscoe [as *Drechslera spicifera* (Bainier) Arx] (Villalobos & al. 2009).

**Curvularia trifolii** (Kauffman) Boedijn

On seeds of *Cucumis melo* L. and leaves of *C. sativus* L. (Villalobos & al. 2009).

**Curvularia tsudae** (Tsuda & Ueyama) H. Deng, Y.P. Tan & R.G. Shivas

Endophytic in roots of *Camaridium neglectum* (Schltr.) M.A. Blanco, *Polypodiaceae* and *Specklinia guanacastensis* (Ames & C. Schweinf.) Pridgeon & M.W. Chase (as *Drechslera australiensis* Bugnic. ex M. B. Ellis) (Richardson & Currah 1995).

**Cylindrosporium angustifoliae** Ellis & Kellerm.

On leaves of *Yucca elephantipes* Regel ex Trel. (Villalobos & al. 2009).

**Cylindrosporium bambusae** I. Miyake & Hara

On stems of *Bambusa vulgaris* Schrad. (Villalobos & al. 2009).

**Cylindrotrichum oligospermum** (Corda) Bonord.

On fruits of *Macadamia integrifolia* Maiden & Betche (Villalobos & al. 2009).

**Cytospora sacchari** E.J. Butler

On pods of *Saccharum officinarum* L. (Villalobos & al. 2009).

**Dactylaria chrysosperma** (Sacc.) G.C. Bhatt & W.B. Kendr.

On dead leaves of indeterminate plant (Rambelli & Ciccarone 2008).

- \**Dactylaria curvispora*** (Matsush.) de Hoog & Arx  
SPECIMEN EXAMINED—on decayed twig, Río Macho, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/33).
- \**Dactylaria fusiformis*** (Matsush.) de Hoog & Arx  
SPECIMEN EXAMINED—on rotten twig, Tapantí, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/32).
- Dactylaria humicola*** G.C. Bhatt & W.B. Kendr.  
On leaves of *Araceae* and *Philodendron* sp. (Villalobos & al. 2009).
- \**Dactylaria obscuriseptata*** Goh & K.D. Hyde  
SPECIMEN EXAMINED—on decayed bark, Río Macho, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/36).
- Daldinia eschscholtzii*** (Ehrenb.) Rehm  
On peduncles of the *Ananas comosus* (L.) Merr. (Castro-Chinchilla & Umaña-Rojas 2015).
- Dendrodochium gouaniae*** Syd.  
On leaves of *Gouania polygama* (Jacq.) Urb. (Sydow 1927).
- \**Dendrosporium lobatum*** Plakidas & Edgerton ex J.L. Crane  
SPECIMEN EXAMINED—on decaying bark, Río Macho, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/30-1).
- Dendryphiella vinosa*** (Berk. & M.A. Curtis) Reisinger  
On dead woody branch [as *Dendryphion vinosum* (Berk. & M.A. Curtis) S. Hughes] (Morris 1972).
- Dendryphion comosum*** Wallr.  
On dead herbaceous stems (Morris 1972); on indeterminate dead leaves (Rambelli & Ciccarone 2008).
- Dendryphion nodosum*** Rambelli  
On indeterminate dead leaves (Rambelli & Ciccarone 2008).
- Denticularia mangiferae*** (Bitanc. & Jenkins) Alcorn  
On leaves of *Mangifera indica* L. (as *Sphaceloma mangiferae* Bitanc. & Jenkins) (Villalobos & al. 2009).
- Diaporthe amygdali*** (Delacr.) Udayanga, Crous & K.D. Hyde  
On branches of *Prunus* spp. and *P. persica* (L.) Stokes (as *Fusicoccum amygdali* Delacr.) (Villalobos & al. 2009).
- \**Dicranidion fragile*** Harkn.  
SPECIMEN EXAMINED—on rotten twig, Tapantí, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/46).
- Dictyoachaeta parva*** (S. Hughes & W. B. Kendr.) Hol.-Jech.  
Endophytic in roots of *Catasetum maculatum* Kunth. (as *Codinæa parva* S. Hughes & W.B. Kendr.) (Richardson & Currah 1995).
- Dictyosporium heptasporum*** (Garov.) Damon  
On bark (Morris 1972).
- Dictyosporium prolificum*** Damon  
On dead woody branch (Morris 1972).
- Dictyosporium subramanianii*** B. Sutton  
On dead stems of a *Gramineae* (Mercado-Sierra & al. 1997b).
- Didymella bryoniae*** (Fuckel) Rehm  
On fruits of *Citrullus lanatus* (Thunb.) Matsumura & Nakai, *Cucumis melo* L. and *C. sativus* L., on leaves of *Cucurbita pepo* L. and *Sechium edule* (Jacq.) Sw. (as *Ascochyta cucumis* Fautrey & Roum.) (Villalobos & al. 2009).
- Didymella fabae*** G.J. Jellis & Punith.  
On leaves of *Vicia faba* L. (as *Ascochyta fabae* Speg.) (Villalobos & al. 2009).
- Didymella pinodella*** (L.K. Jones) Q. Chen & L. Cai  
On leaves, roots and stems of *Pisum sativum* L. [as *Phoma medicaginis* var. *pinodella* (L.K. Jones) Boerema] (Villalobos & al. 2009).

- Didymella pisi*** Chilvers, J.D. Rogers & Peever  
On leaves and pods of *Pisum sativum* L. and *Vicia faba* L. (as *Ascochyta pisi* Lib.) (Villalobos & al. 2009).
- Elachopeltis phoebes*** Syd.  
On leaves of *Cinnamomum costaricanum* (Mez & Pittier) Kosterm. (Sydow 1927).
- \**Ellisembia bambusicola*** (M.B. Ellis) J. Mena & G. Delgado  
SPECIMEN EXAMINED—on dead twig, Tapanti, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/48).
- Elsinoe ampelina*** Shear  
On leaves of *Vitis vinifera* L. (as *Sphaceloma ampelinum* de Bary) (Villalobos & al. 2009).
- Elsinoe fawcettii*** Bitanc. & Jenkins  
On fruits and leaves of *Citrus* spp. (as *Sphaceloma fawcettii* Jenkins) (Villalobos & al. 2009).
- \**Endophragmiella angustispora*** S. Hughes  
SPECIMEN EXAMINED—on decayed bark, Río Macho, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/63-1).
- Endophragmiella biseptata*** (Peck) S. Hughes  
On dead wood (Mercado-Sierra & al. 1997a).
- \**Endophragmiella pallescens*** B. Sutton  
SPECIMEN EXAMINED—on decayed bark and decayed leaf, Río Macho, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/53-2).
- Entyloma petuniae*** Speg.  
On leaves of *Phaseolus vulgaris* L. (Araya & Hernández 2006).
- Entylomella chrysanthemi*** (Ellis & Dearn.) Höhn. ex Cif.  
On leaves of *Chrysanthemum morifolium* Ramat. (as *Cylindrosporium chrysanthemi* Ellis & Dearn.) (Villalobos & al. 2009).
- Epicoccum andropogonis*** (Ces.) Schol-Schwarz  
Endophytic in roots of *Acianthera verecunda* (Schltr.) Pridgeon & M.W. Chase, *Catasetum maculatum* Kunth, *Dimerandra emarginata* (G. Mey.), *Epidendrum nocturnum* Jacq., *Gongora unicolor* Schltr., *Nidema boothii* (Lindl.) Schltr., *Prosthechea fragrans* (Sw.) W.E. Higgins, *Rodriguezia compacta* Schltr., *Stelis* sp. and *Trigonidium egertonianum* Bateman ex Lindl. (Richardson & Currah 1995).
- Epicoccum nigrum*** Link  
Endophytic in roots of *Maxillaria xylobiiflora* Schltr. and *Sobralia* sp. (Richardson & Currah 1995); on grains of *Oryza sativa* L. and leaves of *Cocos nucifera* L. (as *Epicoccum purpurascens* Ehrenb.) (Villalobos & al. 2009).
- Epicoccum sorghinum*** (Sacc.) Aveskamp  
On leaves of *Saccharum officinarum* L. (as *Phyllosticta sacchari* Speg.) and on leaves of *Sorghum bicolor* (L.) Moench as (*Phyllosticta sorghina* Sacc.) (Villalobos & al. 2009).
- Epidermophyton floccosum*** (Harz) Langeron & Miloch  
On humans with dermatophytosis (Montero-Gei & Perera 1992); on humans with onychomycosis (Salas-Campos & Chaves-Madrigal 2004).
- Eriomyopsis tenuis*** Syd.  
On leaves of *Inga marginata* Willd. and parasitic on mycelium of *Parodiopsis stevensii* G. Arnaud (Sydow 1927).
- Erysiphe necator*** Schwein.  
On leaves of *Vitis vinifera* L. (as *Oidium tuckeri* Berk.) (Villalobos & al. 2009).
- Euoidium chrysanthemi*** (Rabenh.) U. Braun & R.T.A. Cook  
On leaves of *Chrysanthemum morifolium* Ramat. (as *Oidium chrysanthemi* Rabenh.) (Villalobos & al. 2009).
- Euoidium lycopersici*** (Cooke & Masee) U. Braun & R.T.A. Cook  
On leaves of *Solanum lycopersicum* L. (as *Oidium lycopersici* Cooke & Masee) (Villalobos & al. 2009).

***Exophiala calicioides*** (Fr.) G. Okada & Seifert

On dead branches (as *Graphium calicioides* (Fr.) Cooke & Masee) (Mercado-Sierra & al. 1997b).

***Exserohilum rostratum*** (Drechsler) K.J. Leonard & Suggs

On leaves of *Arecaceae* and *Bromeliaceae* [as *Drechslera rostrata* (Drechsler) M.J. Richardson & E.M. Fraser] and on leaves of *Elaeis guineensis* Jacq. (as *Drechslea halodes* var. *elaicola* Kovachich) (Villalobos & al. 2009).

***Exserohilum turcicum*** (Pass.) K.J. Leonard & Suggs

On leaves of *Sorghum bicolor* (L.) Moench and *Zea mays* L. (Villalobos & al. 2009).

***Exserticlava vasiformis*** (Matsush.) S. Hughes

On dead branches of *Bambusa* sp. (Mercado-Sierra & al. 1997a).

***Fibroidium tingitaninum*** (J.C. Carter) U. Braun & R.T.A. Cook

On leaves of *Citrus* spp. (as *Oidium tingitaninum* J.C. Carter). (Villalobos & al. 2009).

***Fonsecaea pedrosoi*** (Brumpt) Negróni

On female patient 39 years old and masculine patient 62 years old with chromoblastomycosis (Díaz & al. 1992).

***Fumago vagans*** Pers.

On leaves of *Prunus* spp. (Villalobos & al. 2009).

***Fusarium concentricum*** Nirenberg & O'Donnell

On *Musa paradisiaca* L. (as *Musa sapientum* L.) (Nirenberg & O'Donnell 1998); on roots and stem of *Piper nigrum* L. (Chinchilla & al. 2017).

***Fusarium fujikuroi*** Nirenberg

On leaves of *Dracaena reflexa* var. *angustifolia* Baker as *Dracaena marginata* Lam. (as *Fusarium moniliforme* J. Sheld.) (Acuña & al. 1999); on cobs of *Zea mays* L. (Villalobos & al. 2009).

***Fusarium oxysporum*** Schltdl.

Endophytic in roots of *Epidendrum stangeanum* Rehb. f. (Richardson & Currah 1995); on bulbs of *Angraecoides* spp., *Cattleya* spp., *Cymbidium* spp., *Dendrobium* spp., *Miltonia* spp., *Odontoglossum* spp., *Oncidium* spp., *Paphiopedilum* spp., *Phalaenopsis* spp. and *Vanda* spp., on roots of *Aglaonema* spp., *Allium cepa* L., *A. sativum* L., *A. obliquum* L., *Apium graveolens* L., *Arachis hypogaea* L., *Brassica oleracea* var. *botrytis* L., *Brassica oleracea* var. *capitata* L., *Brassica oleracea* var. *gemmifera* DC., *Brassica oleracea* var. *italica* Plenck, *Calathea* spp., *Capsicum annuum* L., *Cereus* spp., *Chrysanthemum morifolium* Ramat., *Coffea arabica* L., *Cucumis melo* L., *C. sativus* L., *Cucurbita pepo* L., *Cycas* spp., *Dianthus caryophyllus* L., *Dracaena* spp., *Fragaria* sp., *Gerbera jamesonii* Bolus, *Gladiolus* spp., *Gliricidia sepium* (Jacq.) Walp., *Heliconia* spp., *Ipomoea batatas* (L.) Lam, *Limonium sinuatum* (L.) Mill., *Maranta leuconeura* E. Morren, *Musa acuminata* Colla, *M. balbisiana* Colla, *Nicotiana tabacum* L., *Passiflora edulis* Sims, *P. ligularis* A. Juss., *Phaseolus vulgaris* L., *Piper amplum* Kunth, *Pisum sativum* L., *Rosa* spp., *Schizolobium parahyba* (Vell.) S.F. Blake, *Sechium edule* (Jacq.) Sw., *Sesamum indicum* L., *Solanum tuberosum* L., *S. lycopersicum* L., *S. melongena* L., *Tectona grandis* L. f., *Vanilla planifolia* Jacks. ex Andrews, *Vicia faba* L., *Vigna unguiculata* (L.) Walp. and *Zingiber officinale* Roscoe, on stems of *Aglaonema* spp. (Villalobos & al. 2009); on roots and stem of *Piper nigrum* L. (Chinchilla & al. 2017).

***Fusarium proliferatum*** (Matsush.) Nirenberg ex Gerlach & Nirenberg

On seeds of *Oryza sativa* L. (Campos 2013); on peduncles of the *Ananas comosus* (L.) Merr. (Castro-Chinchilla & Umaña-Rojas 2015).

***Fusarium solani*** (Mart.) Appel & Wollenw.

Isolated from soil (Farrow 1954); isolated from banana rhizosphere soil (Goos 1960); on leaves of *Heliconia mariae* Hook. f. (Bills & Polishook 1994b); endophytic in roots of *Camaridium neglectum* (Schltr.) M.A. Blanco, *Echinosepala uncinata* (Fawc.) Pridgeon & M.W. Chase, *Epidendrum schlechterianum* Ames, *Pleurothallis phyllocardioides* Schltr., *Sobralia* sp., *Stelis argentata* Lindl. and *Trigonidium riopalenquense* Dodson (Richardson & Currah 1995); on branches of *Citrus* spp. and *Malus sylvestris* Mill., on leaves of *Colocasia esculenta* (L.) Schott and *Xanthosoma* spp., on roots of *Arachis hypogaea* L., *Arecaceae*, *Capsicum annuum* L., *Cocos nucifera* L., *Coffea arabica* L., *Cucumis sativus* L., *Cucurbita pepo* L., *Eryngium foetidum* L., *Euphorbia pulcherrima* Willd. ex Klotzsch, *Gerbera jamesonii* Bolus, *Glycine max* (L.) Merr., *Manihot esculenta* Crantz, *Musa acuminata* Colla, *M. balbisiana* Colla, *Phaseolus vulgaris* L., *Piper amplum* Kunth, *Pisum sativum*

L., *Saintpaulia ionantha* H. Wendl., *Vicia faba* L. and *Vigna unguiculata* (L.) Walp., on roots and stems of *Aglaonema* spp., *Allium sativum* L., *Brassica* spp., *Dracaena* spp., *Polyscias* spp., on stems of *Chrysanthemum morifolium* Ramat. and *Vanilla planifolia* Jacks. ex Andrews, on tubers of *Solanum tuberosum* L. (Villalobos & al. 2009); SPECIMEN EXAMINED—on coffee living leaves, Tarrazú, San José, M. Granados-Montero, 30 Mar. 2012; on humans with onychomycosis (Sequeira-Oviedo & al. 2016); on roots and stem of *Piper nigrum* L. (Chinchilla & al. 2017).

\****Fusichalara dimorphospora*** S. Hughes & Nag Raj

SPECIMEN EXAMINED—on decayed bark and decayed leaf, Rio Macho, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/53-1A).

***Fusisporella vexans*** Syd.

On leaves of *Roupala montana* Aubl. and parasitic on stroma of *Phyllachora roupalina* (Mont.) Sacc. (Sydow 1927).

***Gangliostilbe costaricensis*** Mercado, Gené & Guarro

On rotten tree (Mercado-Sierra & al. 1997a).

***Geosmithia eupagioceri*** M. Kolařík

Isolated in a gallery of *Eupagiocerus dentipes* Blandford in the pith of a woody vine *Paullinia breneisii* T.B. Croat (Kolarik & Kirkendall 2010).

***Geosmithia microcorthyli*** M. Kolařík

Isolated in a gallery of *Microcorthylyus* sp. (Kolarik & Kirkendall 2010).

***Geosmithia rufescens*** M. Kolařík

Isolated in a gallery of *Cnesinus lecontei* Blandford feeding on *Croton draco* Schldl. (Kolarik & Kirkendall 2010).

***Gibberella baccata*** (Wallr.) Sacc.

On branches of *Coffea arabica* L. (Villalobos & al. 2009). [As *Fusarium lateritium* Nees]

***Gibberella fujikuroi*** (Sawada) Wollenw.

Isolated from banana rhizosphere soil (as *Fusarium moniliforme* J. Sheld.) (Goos 1960); on cobs of *Zea mays* L., on ears of *Sorghum bicolor* (L.) Moench, on fruits of *Ananas comosus* (L.) Merr., on grains and roots of *Oryza sativa* L., on leaves of *Saccharum officinarum* L. and *Sansevieria trifasciata* Prain, on leaves and pseudostems of *Musa acuminata* Colla and *M. balbisiana* Colla, on leaves and stems of *Arecaceae*, *Bactris gasipaes* Kunth, *Cocos nucifera* L., *Cordyline* spp., *Dracaena* spp., *Ficus* spp., *Gossypium hirsutum* L., *Hedera helix* L. and *Sabal palmetto* (Walter) Lodd. ex Schult. & Schult. f., on roots of *Sechium tacaco* (Pittier) C. Jeffrey and stems of *Coffea arabica* L. (as *Fusarium moniliforme* J. Sheld.) (Villalobos & al. 2009).

***Gibberella pulicaris*** (Kunze) Sacc.

Isolated from banana rhizosphere soil (Goos 1960); on sclerotia of *Stromatinia cepivora* (Berk.) Whetzel (as *Sclerotium cepivorum* Berk.) (Granados-Montero 2004); on fruits of *Musa acuminata* Colla and *M. balbisiana* Colla, on leaves of *Platymiscium pinnatum* (Jacq.) Dugand and roots of *Philodendron* spp. (as *Fusarium roseum* Link) (Villalobos & al. 2009).

***Gibberella zeae*** (Schwein.) Petch

On ears of *Sorghum bicolor* (L.) Moench, on glumes, grains and stems of *Oryza sativa* L. and stems of *Zea mays* L. (as *Fusarium graminearum* Schwabe) (Villalobos & al. 2009).

***Gloeocercospora sorghi*** D.C. Bain & Edgerton ex Deighton

On leaves of *Saccharum officinarum* L., *Sorghum bicolor* (L.) Moench and *Zea mays* L. (Villalobos & al. 2009).

***Gloeosporium orbiculare*** (Berk.) Berk.

On fruits, leaves and stems of *Citrullus lanatus* (Thunb.) Matsumura & Nakai [as *Colletotrichum orbiculare* (Berk.) Arx] (Villalobos & al. 2009).

***Glomerella acutata*** Guerber & J.C. Correll

Endophytic in roots of *Trigonidium riopalenquense* Dodson (Richardson & Currah 1995); on flowers of *Citrus aurantium* L. (Arce 2003); on fruits and leaves of *Fragaria* sp., on leaves of *Capsicum annum* L. (Villalobos & al. 2009); on fruits of *Averrhoa carambola* L., leaves of *Citrus aurantifolia* (Christm.) Swingle and *Rumohra adiantiformis* (G. Forst.) Ching (Barquero & al. 2013). [As *Colletotrichum acutatum* J.H. Simmonds]

**\*Goidanichiella barronii** W. Gams

SPECIMEN EXAMINED—on rotten twig, Tapantí, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/41).

**Graphium eumorphum** (Sacc.) Sacc.

On roots of epiphytic orchid *Prosthechea fragrans* (Sw.) W.E. Higgins growing on *Naucleopsis naga* Pittier and roots of orchid *Sobralia mucronata* Ames & C. Schweinf. (Abbott 2000).

**Gyrothrix flagella** (Cooke & Ellis) Piroz.

On dead leaves of *Senna spectabilis* (DC.) H.S. Irwin & Barneby (Rambelli & Ciccarone 2008).

**Gyrothrix flexuosa** Rambelli

On indeterminate dead leaves (Rambelli & Ciccarone 2008).

**Gyrothrix microsperma** (Höhn.) Piroz.

On dead leaves of *Senna spectabilis* (DC.) H.S. Irwin & Barneby (Rambelli & Ciccarone 2008).

**Gyrothrix pupulinii** Rambelli & Ciccarone

On indeterminate dead leaves (Rambelli & Ciccarone 2008).

**Hamigera avellanea** Stolk & Samson

Isolated from banana rhizosphere soil (as *Penicillium avellaneum* Thom & Turesson) (Goos 1960).

**Hansfordiellopsis maggiæ** Rambelli & Ciccarone

On dead leaves of indeterminate plant (Rambelli & Ciccarone 2008).

**Haplobasidium musæ** M.B. Ellis

On leaves of *Musa acuminata* Colla and *M. balbisina* Colla (Villalobos & al. 2009).

**Haplotrichum parmastoi** G. Langer

On decayed wood (Langer & Langer 1998).

**\*Helicoma fumosum** (P. Karst.) G.Z. Zhao

SPECIMEN EXAMINED—on decayed twig, Río Macho, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/27-2).

**\*Helicoma recurvum** (Petch) Linder

SPECIMEN EXAMINED—on decayed twig, Río Macho, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/60).

**Helicomycetes roseus** Link

On dead branches and dead wood (Mercado-Sierra & al. 1997b); SPECIMEN EXAMINED—on dead branches, Tapantí, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/34-1).

**Helicosporium griseum** Berk. & M.A. Curtis

On dead branches (Mercado-Sierra & al. 1997b).

**Helicosporium pannosum** (Berk. & M.A. Curtis) R.T. Moore

On dead branches of an unidentified tree (as *Drepanospora pannosa* Berk. & M.A. Curtis) (Mercado-Sierra & al. 1997b).

**Helminthosporium glabroides** F. Stevens

On leaves of *Roupala veraguensis* Klotzsch ex Meissn. and parasitic in mycelium of *Asterinae* and *Meliolae* (Sydow 1927).

**Helminthosporium gossypii** Tucker

On leaves of *Gossypium hirsutum* L. (Villalobos & al. 2009).

**Helminthosporium mayaguezense** Miles

On *Paspalum conjugatum* P.J. Bergius (Stevens 1927).

**Helminthosporium sechiicola** J.A. Stev.

On leaves of *Sechium edule* (Jacq.) Sw. (Villalobos & al. 2009).

**Helminthosporium solani** Durieu & Mont.

On tubers of *Solanum tuberosum* L. (Villalobos & al. 2009).

***Helminthosporium velutinum*** Link

On dead woody branches (Morris 1972); SPECIMEN EXAMINED—on decayed bark, Río Macho, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/35-1 and INIFAT C12/62).

***Hemibeltrania ovalispora*** Rambelli

On indeterminate dead leaves (Rambelli & Ciccarone 2008).

**\**Hermatomyces tucumanensis*** Speg.

SPECIMEN EXAMINED—on rotten twig, Tapantí, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/42).

***Heteroseptata bacillospora*** E.F. Morris

On dead tree (Morris 1972).

***Hirsutella jonesii*** (Speare) H.C. Evans & Samson

On a large leaf-hopper (as *Synnematium jonesii* Speare) (Petch 1937).

***Hirsutella nodulosa*** Petch

Not specified. Possibly on spider mites (Hodge 1998).

***Hohenbuehelia leptospora*** (Drechsler) Thorn

On dead hanging vines, aerial soil and mosses, in hollow rotting logs, under dense shrubs, decaying bark, leaf litter and from infected nematodes (as *Nematoctonus leptosporus* Drechsler) (Koziak & al. 2007).

***Hohenbuehelia tylospora*** (Drechsler) Thorn

In rich, organic soil and rotted wood, mossy soil and leaf litter (as *Nematoctonus tylosporus* Drechsler) (Koziak & al. 2007).

***Hormodendrum nectandrae*** Syd.

On leaves of *Nectandra reticulata* (Ruiz & Pav.) Mez (Sydow 1927).

***Humicola brevis*** (J.C. Gilman & E.V. Abbott) J.C. Gilman

Isolated from soil sample (as *Monotospora brevis* (J.C. Gilman & E.V. Abbott) E.W. Mason) (Farrow 1954).

***Hypocrella andropogonis*** (Henn.) Petch

On leaves (as *Aschersonia andropogonis* Henn.) (Liu & al. 2006).

***Hypocrella turbinata*** (Berk.) Seaver

On substrate not indicated (as *Aschersonia turbinata* Berk.) (Liu & al. 2006).

***Hypocrella viridans*** (Berk. & M. A. Curtis) Petch

On substrate not indicated [as *Aschersonia viridans* (Berk. & M.A. Curtis) Pat.] (Liu & al. 2006).

**\**Idriella angustispora*** Morgan-Jones

SPECIMEN EXAMINED—on decayed leaves, Tapantí, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/37).

**\**Idriella mycophila*** R. F. Castañeda, Guarro & Cano

SPECIMEN EXAMINED—overgrowing *Cryptophiale udagawae* Piroz. & Ichinoe on decayed twig, Río Macho, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/61).

***Ilyonectria destructans*** (Zinssm.) Rossman

On leaves of *Heliconia mariae* Hook. f. (as *Cylindrocarpon destructans* (Zinssm.) Scholten) (Bills & Polishook 1994b); endophytic in roots of *Stelis* sp. (Richardson & Currah 1995).

***Ilyonectria radiccicola*** (Gerlach & L. Nilsson) P. Chaverri & Salgado

On roots of *Saintpaulia ionantha* H. Wendl. (as *Cylindrocarpon radiccicola* Wollenw.) (Villalobos & al. 2009).

***Kendrickiella phycomyces*** (Auersw.) K. Jacobs & M.J. Wingf.

On dead wood [as *Phialocephala phycomyces* (Auersw.) W.B. Kendr.] (Morris 1972).

***Knoxdaviesia cecropiae*** (M. Kolařík) Z.W. de Beer & M.J. Wingf.

On adult of *Scolytodes unipunctatus* Wood & Bright in sapwood of *Cecropia angustifolia* Trec. (as *Custingophora cecropiae* M. Kolařík). (Kolarik & Hulcr 2009).

***Korunomyces prostratus*** Seixas & R. W. Barreto

On biotype highland of *Miconia calvescens* DC. (Seixas & al. 2007).

***Lasiodiplodia theobromae*** (Pat.) Griffon & Maubl.

Endophytic in roots of *Arecaceae*, *Bromeliaceae*, *Campylocentrum micranthum* (Lindl.) Rolfe, *Epidendrum difforme* Jacq., *E. octomerioides* Schltr., *Nidema boothii* (Lindl.) Schltr., *Pleurothallis phyllocardioides* Schltr., *Prosthechea fragrans* (Sw.) W.E. Higgins, *Sobralia* sp., *S. mucronata* Ames & C. Schweinf., *Specklinia guanacastensis* (Ames & C. Schweinf.) Pridgeon & M.W. Chase and *Trichosalpinx blaisdellii* (S. Watson) Luer (Richardson & Currah 1995); on branches of *Anacardium occidentale* L., *Annona* sp., *A. muricata* L., *Brassaia* sp., *Citrus* sp., *Colocasia esculenta* (L.) Schott, *Mangifera indica* L., *Prunus* sp., *P. persica* (L.) Stokes, *Psidium guajava* L., *Theobroma cacao* L., *Rosa* spp., *Spondias purpurea* L. and *Xanthosoma* sp., on bulbs of *Allium cepa* L., *A. obliquum* L. and *A. sativum* L. as *Botryodiplodia theobromae* Pat., on fruits of *Anacardium occidentale* L., *Annona* spp., *A. muricata* L., *Carica papaya* L., *Colocasia esculenta* (L.) Schott, *Mangifera indica* L., *Musa acuminata* Colla, *M. balbisiana* Colla, *Spondias purpurea* L., *Xanthosoma* spp. and on fruits of *Citrus* spp. as *Diplodia natalensis* Pole-Evans, on leaves of *Ananas comosus* (L.) Merr., *Arecaceae*, *Bactris gasipaes* Kunth, *Cereus* spp., *Cocos nucifera* L. and *Elaeis guineensis* Jacq., on roots of *Ananas comosus* (L.) Merr., *Annona* sp., *A. muricata* L., *Gossypium hirsutum* L. and *Zingiber officinale* Roscoe, on stems of *Annona* sp., *A. muricata* L., *Araceae*, *Arachis hypogaea* L., *Cajanus cajan* (L.) Huth, *Cereus* spp., *Citrullus lanatus* (Thunb.) Matsumura & Nakai, *Codiaeum variegatum* (L.) Rumph. ex A.Juss., *Cucumis melo* L., *C. sativus* L., *Cucurbita pepo* L., *Dioscorea alata* L., *Euphorbia pulcherrima* Willd. ex Klotzsch, *Kalanchoe* sp., *Macadamia integrifolia* Maiden & Betche, *Manihot esculenta* Crantz, *Passiflora edulis* Sims, *Passiflora ligularis* A. Juss., *Persea americana* Mill., *Philodendron* sp., *Sechium edule* (Jacq.) Sw., *Ricinus communis* L. and *Zea mays* L. and on tubers of *Ipomoea batatas* (L.) Lam. (Villalobos & al. 2009).

***Leptographium costaricense*** G. Weber

Isolated from rhizoplane of *Magnolia sambuensis* (Pittier) Govaerts (Weber & al. 1996).

***Leptosphaeria maculans*** (Tul. & C. Tul.) Ces. & De Not

On stems of *B. oleracea* var. *botrytis* L., *B. oleracea* var. *capitata* L., *B. oleracea* var. *gemmifera* DC., *Brassica oleracea* var. *italica* Plenck and *Raphanus sativus* L. (as *Phoma lingam* (Tode) Desm.) (Villalobos & al. 2009).

***Leveillula taurica*** (Lév.) G. Arnaud

On leaves of *Capsicum annuum* L., *Daucus carota* L., *Sechium edule* (Jacq.) Sw., *Sesamum indicum* L., *Solanum lycopersicum* L. and *S. melongena* L. (as *Oidiopsis taurica* (Lév.) E.S. Salmon) (Villalobos & al. 2009).

***Macrophoma mangiferae*** Hing. & O. P. Sharma

On leaves of *Mangifera indica* L. (Villalobos & al. 2009).

***Macrophoma sacchari*** (Cooke) Berl. & Voglino

On leaves of *Saccharum officinarum* L. (Villalobos & al. 2009).

***Macrophoma zae*** Tehon & E.Y. Daniels

On leaves of *Zea mays* L. (Villalobos & al. 2009).

***Macrophomina phaseolina*** (Tassi) Goid.

On cobs of *Zea mays* L., on fruits of *Citrullus lanatus* (Thunb.) Matsumura & Nakai, *Cucumis melo* L., *C. sativus* L., *Cucurbita pepo* L., *Psidium guajava* L. and *Sechium edule* (Jacq.) Sw., on leaves of *Begonia* spp., and *Bixa orellana* L. and on leaves of *Fragaria* sp. as *Botryodiplodia phaseoli* (Maubl.) Thirum., on roots of *Arachis hypogaea* L., *Citrus* spp., *Fragaria* sp., *Glycine max* (L.) Merr., *Phaseolus vulgaris* L., *Pisum sativum* L., *Prunus* spp., *P. persica* (L.) Stokes, *Sorghum bicolor* (L.) Moench and *Vigna unguiculata* (L.) Walp., on stems of *Abelmoschus esculentus* (L.) Moench, *Capsicum annuum* L., *Gossypium hirsutum* L., *Nicotiana tabacum* L., *Sesamum indicum* L., *Solanum tuberosum* L., *S. lycopersicum* L., *S. melongena* L., *Sorghum bicolor* (L.) Moench, *Zea mays* L. and *Zingiber officinale* Roscoe, on tubers of *Ipomoea batatas* (L.) Lam. (Villalobos & al. 2009).

**\**Mariannaea elegans*** (Corda) Samson

SPECIMEN EXAMINED—on decayed twig, Río Macho, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/27-1).

- Melanocephala triseptata*** (Shearer, J.L. Crane & M.A. Mill.) S. Hughes  
On dead rachides of an undetermined palm (Mercado-Sierra & al. 1997b); SPECIMEN EXAMINED—on decayed bark, Río Macho, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/36-1).
- Melanospora brevirostris*** (Fuckel) Höhn.  
Isolated from soil sample (Farrow 1954).
- Menisporopsis novae-zelandiae*** S. Hughes & W.B. Kendr.  
On dead fallen leaves (Mercado-Sierra & al. 1997a).
- Merismella concinna*** Syd.  
On leaves of *Casearia sylvestris* Sw. (Sydow 1927).
- Merismella gracilenta*** Syd.  
On leaves of *Cinnamomum tonduzii* (Mez) Kosterm. (Sydow 1927).
- Merismella oligomera*** Syd.  
On leaves of *Casearia sylvestris* Sw. (Sydow 1927).
- Merismella proxima*** Syd.  
On leaves of *Cinnamomum costaricanum* (Mez & Pittier) Kosterm. (Sydow 1927).
- Metarhizium marquandii*** (Masse) Kepler, S.A. Rehner & Humber  
Isolated from soil sample (as *Spicaria violacea* E.V. Abbott) (Farrow 1954).
- Metulocladosporiella musae*** (E.W. Mason) Crous, Schroers, J.Z. Groenew  
On leaves of *Musa acuminata* Colla and *M. balbisiana* Colla (as *Cladosporium musae* E.W. Mason) (Villalobos & al. 2009).
- Meyerozyma guilliermondii*** (Wick.) Kurtzman & M. Suzuki  
Isolated from soil (Palma-Jiménez & al. 2018)
- Microascus brevicaulis*** S.P. Abbott  
On humans with onychomycosis (as *Scopulariopsis brevicaulis* Bainier) (Salas-Campos & Chaves-Madrigal 2004).
- Microdochium albescens*** (Thüm.) M. Hern.-Restr. & Crous  
On leaves of *Oryza sativa* L. (as *Rhynchosporium oryzae* Hashioka & Yokogi) (Villalobos & al. 2009).
- Microsphaeropsis arundinis*** (S. Ahmad) B. Sutton  
On peduncles of the *Ananas comosus* (L.) Merr. (Castro-Chinchilla & Umaña-Rojas 2015).
- Microsporium gypseum*** (E. Bodin) Guiart & Grigoraki  
On humans with onychomycosis (Salas-Campos & Chaves-Madrigal 2004).
- \****Minimelanolocus rousseleanus*** (Mont.) R.F. Castañeda & Heredia  
SPECIMEN EXAMINED—on dead branches, Tapantí, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/42-2).
- \****Minimelanolocus subulifer*** (Corda) R.F. Castañeda & Heredia  
SPECIMEN EXAMINED—on dead branches, Tapantí, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/34).
- Miyoshiella triseptata*** (Shoemaker & G.P. White) Réblová.  
On dead branches (as *Sporidesmium adscendens* Berk.) (Mercado-Sierra & al. 1997b); SPECIMEN EXAMINED—on dead wood, Tapantí, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/64).
- Monilinia fructigena*** Honey  
On fruits of *Prunus* spp., *P. persica* (L.) Stokes, *Malus sylvestris* Mill. and *Pyrus communis* L. [as *Monilia fructigena* (Pers.) Pers.] (Villalobos & al. 2009).
- Monodictys paradoxa*** (Corda) S. Hughes.  
On rotten wood (Mercado-Sierra & al. 1997b).
- Monodictys putredinis*** (Wallr.) S. Hughes.  
On a dead rachis of an unidentified palm tree (Mercado-Sierra & al. 1997b).
- Monotosporella setosa*** (Berk. & M.A. Curtis) S. Hughes  
On bark [as *Brachysporiella setosa* (Berk. & M.A. Curtis) M.B. Ellis] (Morris 1972).

***Musicillium theobromae*** (Turconi) Zare & W. Gams

On *Musa paradisiaca* L. [as *Verticillium theobromae* (Turconi) E.W. Mason & S. Hughes] (Morris 1972); on leaves of *Heliconia mariae* Hook. f. (Bills & Polishook 1994b); on fruits of *Musa acuminata* Colla and *M. balbisiana* Colla (Villalobos & al. 2009).

***Mycosphaerella berkeleyi*** W.A. Jenkins

On leaves of *Arachis hypogaea* L. [as *Cercosporidium personatum* (Berk. & M.A. Curtis)] (Villalobos & al. 2009).

***Mycosphaerella cerasella*** Aderh

On leaves of *Prunus* spp. and *P. persica* (L.) Stokes (as *Cercospora circumscissa* Sacc.) (Villalobos & al. 2009).

***Mycosphaerella coffeicola*** (Cooke) J.A. Stev. & Wellman

On leaves of *Coffea arabica* L. (as *Cercospora coffeicola* Berk. & Cooke) (Stevens 1927, Villalobos & al. 2009).

***Mycosphaerella cruenta*** Latham

On leaves of *Phaseolus vulgaris* L. and *Vigna unguiculata* (L.) Fawc. and on leaves of *Phaseolus vulgaris* L. [as *Cercospora cruenta* Sacc. and as *Pseudocercospora cruenta* (Sacc.) Deighton] (Villalobos & al. 2009).

***Mycosphaerella deightonii*** M. Morelet

On leaves of *Yucca elephantipes* Regel ex Trel. (as *Cercospora concentrica* Cooke & Ellis) (Villalobos & al. 2009).

***Mycosphaerella dianthi*** (C.C. Burt) Jørst.

On leaves of *Dianthus caryophyllus* L. [as *Cladosporium echinulatum* (Berk.) G.A. de Vries] (Villalobos & al. 2009).

***Mycosphaerella gossypina*** (G.F. Atk.) Earle

On leaves of *Gossypium hirsutum* L. (as *Cercospora gossypina* Cooke) (Villalobos & al. 2009).

***Mycosphaerella henningsii*** Sivan.

On leaves of *Manihot esculenta* Crantz [as *Cercosporidium henningsii* (Allesch.) Deighton] (Villalobos & al. 2009).

***Mycosphaerella musicola*** R. Leach ex J. L. Mulder

On leaves of *Musa acuminata* Colla and *M. balbisiana* Colla [as *Pseudocercospora musae* (Zimm.) Deighton] (Villalobos & al. 2009).

***Mycosphaerella pyri*** (Auersw.) Boerema

On leaves of *Malus sylvestris* Mill. and *Pyrus communis* L. (as *Septoria pyricola* Desm.) (Villalobos & al. 2009).

***Mycosphaerella rosicola*** (Pass.) B.H. Davis

On leaves of *Rosa* spp. leaves (as *Cercospora rosicola* Pass.) (Villalobos & al. 2009).

***Mycovellosiella cucurbiticola*** (Speg.) Deighton

On fruits of *Sechium edule* (Jacq.) Sw. and *S. tacaco* (Pitt.) C. Jeffrey (Villalobos & al. 2009).

***Mycovellosiella phaseoli*** (O. A. Drumm.) Deighton

On leaves of *Phaseolus vulgaris* L. (Villalobos & al. 2009).

***Myrmecridium schulzeri*** (Sacc.) Arzanlou

On litter [as *Ramichloridium schulzeri* (Sacc.) de Hoog] (Mercado-Sierra & al. 1997a).

***Myrothecium cinctum*** (Corda) Sacc.

From decomposing leaves of *Heliconia mariae* Hook. f. (Bills & Polishook 1994b).

***Myrothecium roridum*** Tode

Isolated from banana rhizosphere soil and isolated from virgin forest soil (Goos 1960); on leaves of *Aglaonema* spp., *Aphelandra squarrosa* Nees, *Coffea arabica* L., *Dieffenbachia* spp., *Peperomia* spp., *Spathiphyllum* spp. and *Theobroma cacao* L., on roots of *Araceae* and on stems of *Aglaonema* spp. and *Dieffenbachia* spp. (Villalobos & al. 2009).

***Nakataea oryzae*** (Catt.) J. Luo & N. Zhang

On stems of *Oryza sativa* L. [as *Nakataea sigmoidea* (Cavara) Hara] (Villalobos & al. 2009).

- Nalanthamala vermoesenii*** (Biourge) Schroers  
On stem of *Arecaceae* [as *Gliocladium vermoesenii* (Biourge) Thom] (Villalobos & al. 2009).
- \* ***Nemania serpens*** (Pers.) Gray  
SPECIMEN EXAMINED—on decayed wood, Río Macho, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/43).
- Nematoctonus angustatus*** Thorn & G.L. Barron  
From *Hohenbuehelia angustata* (Berk.) Singer (Koziak & al. 2007).
- Nematoctonus geogenius*** Thorn & G.L. Barron  
On fallen trees with white rot, on buttress of brownrotted huge fallen tree from *Hohenbuehelia petaloides* (Bull.) Schulzer (Koziak & al. 2007).
- Nematoctonus pachysporus*** Drechsler  
In rich, organic soils, leaf litter or rotting wood, in terrestrial or epiphytic mosses (Koziak & al. 2007).
- Nematoctonus robustus*** F.R. Jones  
In organic litter, rotting logs and wood, rich organic debris, mosses, on fallen branches, and hanging vines (Koziak & al. 2007).
- Neocordana musae*** (Zimm.) M. Hern.-Rest. & Crous  
On leaves of *Musa acuminata* Colla and *M. balbisiana* Colla [as *Cordana musae* (Zimm.) Höhn.] (Villalobos & al. 2009).
- Neocosmospora lichenicola*** (C. Massal.) Sandoval-Denis & Crous  
On immunosuppressed patient with onychomycosis [as *Cylindrocarpon lichenicola* (C. Massal.) D. Hawksw.] (Lizano-Calvo & al. 2013).
- Neomunkia sydowii*** Petr.  
On culm of *Chusquea* sp. (Bischoff 2004).
- Neonectria galligena*** (Bres.) Rossman & Samuels  
On branches of *Malus sylvestris* Mill. and *Pyrus communis* L. [as *Cylindrocarpon mali* (Allesch.) Wollenw.] (Villalobos & al. 2009).
- \* ***Neopenidiella nectandrae*** (Crous, U. Braun & R.F. Castañeda) Quaedvl. & Crous  
SPECIMEN EXAMINED—on rotten leaf, Río Macho, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/55).
- Neoplaconema napelli*** (Maire & Sacc.) B. Sutton  
Endophytic in roots of *Stelis* sp. (Richardson & Currah 1995).
- Neoscytalidium dimidiatum*** (Penz.) Crous & Slippers  
On stem of *Hylocereus* spp. (Retana-Sánchez & al. 2015); on humans with onychomycosis (Sequeira-Oviedo & al. 2016).
- Nigrospora oryzae*** (Berk. & Broome) Petch  
Isolated from banana rhizosphere soil (Goos 1960); endophytic in roots of *Oncidium lineoligerum* Rchb.f. & Warsz. (Richardson & Currah 1995); on dead leaves of *Gramineae* (Mercado-Sierra & al. 1997a); on dead leaves of indeterminate plant and isolated from soil (as *Nigrospora sphaerica* (Sacc.) E.W. Mason) (Rambelli & Ciccarone 2008); on cobs of *Zea mays* L., on ears of *Sorghum bicolor* (L.) Moench, on fruits of *Musa acuminata* Colla and *M. balbisiana* Colla and on stems of *Oryza sativa* L. (Villalobos & al. 2009).
- Nigrospora sacchari*** (Speg.) E.W. Mason  
On leaves of *Saccharum officinarum* L. (Villalobos & al. 2009).
- Nothophoma arachidis-hypogaeae*** (V.G. Rao) Q. Chen & L. Cai  
On leaves of *Arachis hypogaea* L. (as *Phyllosticta arachidis-hypogaeae* V.G. Rao) (Villalobos & al. 2009).
- Nyctalospora compacta*** E.F. Morris  
On dead tree (Morris 1972).
- Oidium anacardii*** F. Noack  
On leaves of *Anacardium occidentale* L. (Villalobos & al. 2009).
- Oidium bixae*** Viégas  
On leaves of *Bixa orellana* L. (Villalobos & al. 2009).

- Oidium caricae*** F. Noack  
On leaves of *Carica papaya* L. (Sydow 1927).
- Oidium caricae-papayae*** J.M. Yen  
On leaves of *Carica papaya* L. (Villalobos & al. 2009).
- Oidium cococarpum*** F. Stevens & A.S. Peirce  
On leaves of *Cocos nucifera* L. (Villalobos & al. 2009).
- Oidium dianthi*** Jacz.  
On leaves of *Dianthus caryophyllus* L. (Villalobos & al. 2009).
- Oidium hortensiae*** Jørst.  
On leaves of *Hydrangea macrophylla* (Thunb.) Seringe (Villalobos & al. 2009).
- Oidium mangiferae*** Berthet  
On leaves and fruits of *Mangifera indica* L. (Villalobos & al. 2009).
- Oidium manihotis*** Henn.  
On leaves of *Manihot esculenta* Crantz (Villalobos & al. 2009).
- Ovulariopsis farinosa*** Syd.  
On *Zanthoxylum rhoifolium* Lam. (Sydow 1927).
- Paecilomyces divaricatus*** (Thom) Samson  
Isolated from rhizosphere soil of *Musa* sp. (as *Paecilomyces variotii* Bainier) (Goos 1960).
- Parabeltrania persianiae*** Rambelli & Ciccarone  
On indeterminate dead leaves (Rambelli & Ciccarone 2008).
- Paraconiothyrium fuckelii*** (Sacc.) Verkley & Gruyter  
On branches and fruits of *Malus sylvestris* Mill. and branches of *Rosa* spp. (as *Coniothyrium fuckelii* Sacc.) (Villalobos & al. 2009).
- Paranectriella juruana*** (Henn.) Höhn.  
On leaves of *Miconia beurlingii* Triana and parasitic on stroma of *Coccodiella peribebuyensis* (Speg.) I. Hino & Katum. as *Dothidina fiebrigii* (Henn.) Theiss. & Syd. (as *Araneomyces acarifer* Höhn. (Sydow 1927).
- \**Parasymptodiella laxa*** (Subram. & Vittal) Ponnappa  
SPECIMEN EXAMINED—on dead leaf, Tapantí, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/59).
- Passalora bambusae*** (Cooke) Kamal  
On stems of *Bambusa vulgaris* Schrad. (Villalobos & al. 2009).
- Passalora colocasiae*** (Höhn.) U. Braun  
On leaves of *Colocasia esculenta* (L.) Schott and *Xanthosoma* spp. [as *Cercospora colocasiae* (Höhn.) Chupp] (Villalobos & al. 2009).
- Passalora diffusa*** (Ellis & Everh.) U. Braun & Crous  
On *Solanum nigrum* L. (as *Cercospora diffusa* Ellis & Everh.) (Stevens 1927).
- Passalora fulva*** (Cooke) U. Braun & Crous  
On *Solanum lycopersicum* L. (as *Cladosporium fulvum* Cooke) (Stevens 1927); on fruits and leaves of *Capsicum annum* L., *Solanum lycopersicum* L. and *S. melongena* L. (as *Fulvia fulva* (Cooke) Cif.) (Villalobos & al. 2009).
- Passalora koepkei*** (W. Krüger) U. Braun & Crous  
On leaves of *Saccharum officinarum* L. (as *Cercospora koepkei* W. Krüger) (Villalobos & al. 2009).
- Passalora manihotis*** (F. Stevens & Solheim) U. Braun & Crous  
On leaves of *Manihot esculenta* Crantz [as *Phaeoramularia manihotis* (F. Stevens & Solheim) M.B. Ellis] (Villalobos & al. 2009).
- Peltistroma disciforme*** (Syd.) Inácio & P. F. Cannon  
On leaves of *Damburneya coriacea* (Sw.) Trofimov & Rohwer (as *Pycnostemma disciforme* Syd.) (Sydow 1927).

***Penicillium citrinum*** Thom

Isolated from soil sample (Farrow 1954); isolated from soil (as *Penicillium steckii* K.M. Zaleski) (Palma-Jiménez & al. 2018).

***Penicillium daleae*** K. W. Zaleski

On peduncles of the *Ananas comosus* (L.) Merr. (Castro-Chinchilla & Umaña-Rojas 2015).

***Penicillium digitatum*** (Pers.) Sacc.

On fruits of *Citrus* spp., *Citrullus lanatus* (Thunb.) Matsumura & Nakai, *Cucumis melo* L., *C. sativus* L., *Cucurbita pepo* L. and *Pisum sativum* L. (Villalobos & al. 2009).

***Penicillium expansum*** Link

On fruits of *Persea americana* Mill. (Villalobos & al. 2009).

***Penicillium gladioli*** Machacek

Isolated from soil (as *Penicillium asperum* (Shear) Raper & Thom) (Farrow 1954); in banana rhizosphere soil (Goos 1960); on bulbs of *Gladiolus* spp. (Villalobos & al. 2009).

***Penicillium guanacastense*** K.G. Rivera

On two unidentified caterpillars of *Noontidae* family (Rivera 2009).

***Penicillium italicum*** Wehmer

On fruits of *Citrus* spp. (Villalobos & al. 2009).

***Penicillium mallochii*** K.G. Rivera

From the intestinal tracts of leaf-eating caterpillars *Citheronia lobesis* Rothschild and *Rothschildia lebeau* Guérin-Meneville (Rivera 2009).

***Penicillium paxilli*** Bainier

Isolated from soil (Farrow 1954).

***Penicillium rubens*** Biourge

Isolated from soil (Palma-Jiménez & al. 2018)

***Penicillium vinaceum*** J.C. Gilman & E.V. Abbott

Isolated from soil (Farrow 1954).

***Periconia atra*** Corda

On decaying banana leaves (Morris 1972).

***Periconia cookei*** E.W. Mason & M.B. Ellis

On dead herbaceous stems (Morris 1972).

***Periconia maculans*** (Cooke) E.W. Mason & M.B. Ellis

On leaves of *Yucca elephantipes* Regel ex Trel. (as *Torula maculans* Cooke) (Villalobos & al. 2009).

***Periconiella musae*** Stahel ex M.B. Ellis

On leaves of *Musa acuminata* Colla and *M. balbisiana* Colla (Villalobos & al. 2009).

***Perizomella inquinans*** Syd.

On leaves of *Cinnamomum costaricanum* (Mez & Pittier) Kosterm. and parasitic on stroma of *Phyllachorae* (Sydow 1927).

***Pestalotia gossypii*** Hori

On fiber of *Gossypium hirsutum* L. (Villalobos & al. 2009).

***Pestalotia longisetula*** Guba

On leaves of *Fragaria* sp. (Villalobos & al. 2009).

***Pestalotia theobromae*** Petch

On leaves of *Theobroma cacao* L. (Villalobos & al. 2009).

***Pestalotiopsis batatas*** (Ellis & Everh.) G.C. Zhao & N. Li

On leaves of *Ipomoea batatas* (L.) Lam. (Villalobos & al. 2009).

**\**Pestalotiopsis coffeae*** (Zimm.) Y.X. Chen

SPECIMEN EXAMINED—on coffee living leaves, Tarrazú, San José, M. Granados-Montero, 30 mar. 2012.

***Pestalotiopsis gracilis*** (Kleb.) Steyaert

Endophytic in roots of *Ornithidium nicaraguense* (Hamer & Garay) M.A. Blanco & Ojeda (Richardson & Currah 1995).

- Pestalotiopsis guepinii*** (Desm.) Steyaert  
On leaves of *Heliconia mariae* Hook. f. (Bills & Polishook 1994b).
- Pestalotiopsis mangiferae*** (Henn.) Steyaert  
On leaves and fruits of *Mangifera indica* L. (Villalobos & al. 2009).
- Pestalotiopsis palmarum*** (Cooke) Steyaert  
On leaves of *Arecaceae*, *Bactris gasipaes* Kunth, *Cocos nucifera* L., *Elaeis guineensis* Jacq., *Musa acuminata* Colla, *M. balbisiana* Colla and *Sabal palmetto* (Walter) Lodd. ex Schult. & Schult. f. (Villalobos & al. 2009).
- Pestalotiopsis papposa*** Steyaert  
Endophytic in roots of *Gongora unicolor* Schltr., *Epidendrum octomerioides* Schltr., *E. schlechterianum* Ames, *Haemodoraceae*, *Maxillaria endresii* Rchb. f., *Nidema boothii* (Lindl.) Schltr. and *Specklinia corniculata* (Sw.) Steud. (Richardson & Currah 1995).
- Pestalotiopsis psidii*** (Pat.) Mordue  
On leaves of *Psidium guajava* L. (Villalobos & al. 2009).
- Peyronellaea arachidicola*** (Khokhr.) Aveskamp, Gruyter & Verkley  
On leaves of *Arachis hypogaea* L. (as *Ascochyta arachidis* Woron.) (Villalobos & al. 2009).
- Peyronellaea maydis*** (Amy & R.R. Nelson) Crous  
On leaves of *Zea mays* L. (as *Phyllosticta maydis* Amy & R.R. Nelson) (Villalobos & al. 2009).
- Peyronellaea obtusa*** (Fuckel) Aveskamp  
On fruits and stems of *Malus sylvestris* Mill. and *Pyrus communis* L. [as *Botryosphaeria obtusa* (Schwein.) Shoemaker] (Villalobos & al. 2009).
- Peyronellaea pomorum*** (Thüm.) Aveskamp  
On fruits and leaves of *Pyrus communis* L. [as *Coniothyrium pyrinum* (Sacc.) J. Sheld.] (Villalobos & al. 2009).
- Phacellula gouaniae*** Syd.  
On leaves of *Gouania polygama* (Jacq.) Urb. and *G. lupuloides* (L.) Urb. (Sydow 1927).
- Phaeoacremonium parasiticum*** (Ajello, Georg & C.J.K. Wang) W. Gams  
On dead leaves of *Nectandra* sp. (as *Phialophora parasitica* Ajello, Georg & C.J.K. Wang) (Hua 1992).
- \**Phaeocandelabrum callisporum*** Gusmão, A.C. Cruz & R.F. Castañeda  
SPECIMEN EXAMINED—on dead leaf, Tapantí, Oroquieta, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/51).
- Phaeoisaria bambusae*** Höhn.  
On bark of dead tree, on woody branch and dead branches of *Theobroma cacao* L. (Morris 1972).
- \**Phaeoisaria clematidis*** (Fuckel) S. Hughes  
SPECIMEN EXAMINED—on rotten twig, Río Macho, Oroquieta, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/25).
- \**Phaeostalagmus altissimus*** C.J.K. Wang & B. Sutton  
SPECIMEN EXAMINED—on rotten twig, coffee plantation Tarrazú, San José, M. Granados-Montero, 28 Mar. 2012 (INIFAT C12/56)
- Phaeostalagmus cyclosporus*** (Grove) W. Gams  
On dead herbaceous stems (Mercado-Sierra & al. 1997a).
- Phoma caricae-papayae*** (Tarr) Punith.  
On fruits of *Carica papaya* L. (as *Ascochyta caricae-papayae* Tarr) (Villalobos & al. 2009).
- Phoma costaricensis*** Echanti  
On leaves, stems and fruits of *Coffea arabica* L. (Echanti 1957).
- Phoma destructiva*** Plowr.  
On leaves and fruits of *Capsicum annuum* L., *Solanum lycopersicum* L. and *S. melongena* L. (Villalobos & al. 2009).
- Phoma draconis*** (Berk. ex Cooke) Boerema  
On leaves of *Cordyline* spp. and *Dracaena* spp. (as *Phyllosticta draconis* Berk.) (Villalobos & al. 2009).

***Phoma gossypicola*** Gruyter

On leaves of *Gossypium hirsutum* L. (as *Ascochyta gossypii* Woron.) (Villalobos & al. 2009).

***Phoma herbarum*** Westend.

On peduncles of the *Ananas comosus* (L.) Merr. (Castro-Chinchilla & Umaña-Rojas 2015).

***Phoma psidii*** Henn.

On fruits of *Psidium guajava* L. (Villalobos & al. 2009).

***Phomopsis anacardii*** Early & Punith.

On leaves of *Anacardium occidentale* L. (Villalobos & al. 2009).

***Phomopsis annonacearum*** Bond.-Mont

On leaves of *Annona* spp. and *A. muricata* L. (Villalobos & al. 2009).

***Phomopsis asparagi*** (Sacc.) Grove

On leaves of *Asparagus* spp. and *A. officinalis* L. (as *Phoma asparagi* Sacc.) (Villalobos & al. 2009).

***Phomopsis caricae-papayae*** Petr. & Cif.

On fruits of *Carica papaya* L. (Villalobos & al. 2009).

***Phomopsis citri*** H.S. Fawc.

On stems of *Citrus* spp. (Villalobos & al. 2009).

***Phomopsis mangiferae*** S. Ahmad

On leaves of *Mangifera indica* L. (Villalobos & al. 2009).

***Phomopsis obscurans*** (Ellis & Everh.) B. Sutton

On leaves of *Fragaria* sp. [as *Dendrophoma obscurans* (Ellis & Everh.) H.W. Anderson] (Villalobos & al. 2009).

***Phomopsis orchidophila*** E.K. Cash & A.M.J. Watson

Endophytic in roots of *Bromeliaceae*, *Camaridium neglectum* (Schltr.) M.A. Blanco, *Campylocentrum micranthum* (Lindl.) Rolfe, *Dichaea acrolephara* Schltr., *Epidendrum octomerioides* Schltr., *Nidema boothii* (Lindl.) Schltr., *Piperaceae*, *Polypodiaceae* and *Stelis argentata* Lindl. (as *Phomopsis* cf. *orchidophila* E.K. Cash & A.M.J. Watson) (Richardson & Currah 1995).

***Phomopsis oryzae-sativae*** Punith.

On stem of *Oryza sativa* L. (as *Ascochyta oryzae* Catt.) (Villalobos & al. 2009).

***Phomopsis ricini*** Grove

On stems of *Ricinus communis* L. (Villalobos & al. 2009).

***Phomopsis rubiseda*** Fairm.

On leaves and stems of *Rubus* spp. (Villalobos & al. 2009).

***Phomopsis vexans*** (Sacc. & P. Syd.) Harter

On fruits of *Capsicum annum* L., *Solanum lycopersicum* L. and *S. melongena* L. (Villalobos & al. 2009).

***Phomopsis viticola*** (Sacc.) Sacc.

On leaves of *Vitis vinifera* L. (Villalobos & al. 2009).

***Phragmopeltis blechni*** Syd.

On living and decomposing leaves of *Blechnum* sp. (Sydow 1927).

***Phragmopeltis callista*** Syd.

On leaves of *Ocotea insularis* (Meisn.) Mez (Sydow 1927).

***Phragmopeltis phoebe*** Syd.

On *Cinnamomum costaricanum* (Mez & Pittier) Kosterm. (Sydow 1927).

***Phyllosticta apii*** Halst.

On leaves of *Apium graveolens* L. (Villalobos & al. 2009).

***Phyllosticta batatas*** (Thüm.) Sacc.

On leaves of *Ipomoea batatas* (L.) Lam. (Villalobos & al. 2009).

***Phyllosticta begoniae*** Brunaud

On leaves of *Begonia* spp. (Villalobos & al. 2009).

- Phyllosticta begoniicola*** F. Stevens & Baechler  
On *Begonia* sp. (Stevens 1927).
- Phyllosticta bixina*** E. Young  
On leaves of *Bixa orellana* L. (Villalobos & al. 2009).
- Phyllosticta cajani*** Rangel  
On leaves and pods of *Cajanus cajan* (L.) Huth (Villalobos & al. 2009).
- Phyllosticta capitalensis*** Henn.  
On capsules and leaves of *Vanilla planifolia* Jacks. ex Andrews, on *Angraecoides* spp., *Cattleya* spp., *Cymbidium* spp., *Dendrobium* spp., *Miltonia* spp., *Odontoglossum* spp., *Oncidium* spp., *Paphiopedilum* spp., *Phalaenopsis* spp. and *Vanda* spp. as *Phyllostictina pyriformis* E.K. Cash & A.M.J. Watson (Villalobos & al. 2009).
- Phyllosticta chelonanthi*** F. Stevens  
On *Chelonanthus alatus* Standl. (Stevens 1927).
- Phyllosticta chrysanthemi*** Ellis & Dearn.  
On leaves of *Chrysanthemum morifolium* Ramat. (Villalobos & al. 2009).
- Phyllosticta citricarpa*** (McAlpine) Aa  
On leaves of *Citrus* sp. (Villalobos & al. 2009).
- Phyllosticta coffeicola*** Speg.  
On cultivated coffee (Stevens 1927).
- Phyllosticta concentrica*** Sacc.  
On leaves of *Hedera helix* L. (Villalobos & al. 2009).
- Phyllosticta fragariicola*** Roberge ex Desm.  
On leaves of *Fragaria* sp. (Villalobos & al. 2009).
- Phyllosticta gladioli*** Ellis & Everh.  
On leaves of *Gladiolus* spp. (Villalobos & al. 2009).
- Phyllosticta gossypina*** Ellis & G. Martin  
On leaves of *Gossypium hirsutum* L. (Villalobos & al. 2009).
- Phyllosticta hibiscina*** Ellis & Everh.  
On leaves of *Abelmoschus esculentus* (L.) Moench (Villalobos & al. 2009).
- Phyllosticta manihoticola*** Syd. & P. Syd.  
On leaves of *Manihot esculenta* Crantz (Villalobos & al. 2009).
- Phyllosticta marantaceae*** Henn.  
On leaves of *Maranta leuconeura* E. Morren (Villalobos & al. 2009).
- Phyllosticta musarum*** (Cooke) Aa  
On fruits and leaves of *Musa acuminata* Colla and *M. balbisiana* Colla (Villalobos & al. 2009).
- Phyllosticta nicotianae*** Ellis & Everh.  
On leaves of *Nicotiana tabacum* L. (Villalobos & al. 2009).
- Phyllosticta oncidii-sphacelati*** (Tassi) Allesch.  
On *Angraecoides* spp., *Cattleya* spp., *Cymbidium* spp., *Dendrobium* spp., *Miltonia* spp., *Odontoglossum* spp., *Oncidium* spp., *Paphiopedilum* spp., *Phalaenopsis* spp. and *Vanda* spp. (as *Phoma oncidii-sphacelati* Tassi) (Villalobos & al. 2009).
- Phyllosticta oryzina*** Padwick  
On leaves of *Oryza sativa* L. (Villalobos & al. 2009).
- Phyllosticta petroselini*** Rothers  
On leaves of *Petroselinum crispum* (Mill.) Fuss (Villalobos & al. 2009).
- Phyllosticta petuniae*** Speg.  
On leaves of *Petunia* spp. (Villalobos & al. 2009).
- Phyllosticta phaseolina*** Sacc.  
On leaves of *Vigna unguiculata* (L.) Walp. and leaves and pods of *Phaseolus vulgaris* L. (Villalobos & al. 2009).

***Phyllosticta rosae*** Desm.

On leaves of *Rosa* spp. (Villalobos & al. 2009).

***Phyllosticta solani*** Ellis & G. Martin

On leaves of *Solanum melongena* L. (Villalobos & al. 2009).

***Phyllosticta statices*** Petr.

On leaves of *Limonium sinuatum* (L.) Mill. (Villalobos & al. 2009).

***Phyllosticta zingiberis*** F. Stevens & R.W. Ryan

On leaves of *Curcuma longa* L. and *Zingiber officinale* Roscoe (Villalobos & al. 2009).

***Pithomyces cupaniae*** (Syd.) M.B. Ellis

On leaves of *Serjania caracasana* (Jacq.) Willd. (as *Dicoccum cupaniae* Syd.) (Sydow 1927).

***Piricauda longispora*** Mercado

On dead petioles of an unidentified tree palm (Mercado-Sierra & al. 1997b).

***Plectopeltis egenula*** Syd.

On leaves of *Cinnamomum costaricanum* (Mez & Pittier) Kosterm. (Sydow 1927).

***Plenotrichum mirabile*** Syd.

On leaves of *Cinnamomum costaricanum* (Mez & Pittier) Kosterm. (Sydow 1927).

***Pleospora bjoerlingii*** Byford

On leaves and roots of *Beta vulgaris* L. and *Spinacia oleracea* L. (as *Phoma betae* A.B. Frank), on leaves of *Beta vulgaris* L. and *Spinacia oleracea* L. (as *Phyllosticta spinaciae* H. Zimm.) (Villalobos & al. 2009).

**\**Pleurotheciopsis bramleyi*** B. Sutton

SPECIMEN EXAMINED—on decayed twig, Tapantí, Orosí, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/48-1).

**\**Pleurotheciopsis sylvestris*** R.F. Castañeda & Iturr.

SPECIMEN EXAMINED—on decayed twig, Tapantí, Orosí, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/25-1).

**\**Pleurothecium recurvatum*** (Morgan) Höhn.

SPECIMEN EXAMINED—on dead wood, Río Macho, Orosí, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/57-2).

***Podosphaera fuliginea*** (Schltld.) U. Braun & S. Takam.

On leaves and stems of *Sechium edule* (Jacq.) Sw. (as *Oidium erysiphoides* Fr.) (Villalobos & al. 2009).

***Podosphaera leucotricha*** (Ellis & Everh.) E.S. Salmon

On leaves of *Malus sylvestris* Mill. and *Pyrus communis* L. (as *Oidium farinosum* Cooke) (Villalobos & al. 2009).

***Polycephalomyces tomentosus*** (Schrad.) Seifert

On *Hemitrichia calyculata* (Speg.) M.L. Farr (as *Stilbella tomentosa* (Schrad.) Bres.) (Morris 1972).

***Poroisariopsis armillata*** (S.C. Jong & E.F. Morris) M. Morelet

On dead woody branches (as *Phaeoisariopsis armillata* S.C. Jong & E.F. Morris) (Morris 1972).

***Proxipyricularia zingiberis*** (Y. Nisik.) Klaubauf

On leaves of *Curcuma longa* L. and *Zingiber officinale* Roscoe (as *Pyricularia zingiberis* Y. Nisik.) (Villalobos & al. 2009).

***Pseudocercospora abelmoschi*** (Ellis & Everh.) Deighton

On leaves of *Abelmoschus esculentus* (L.) Moench (as *Cercospora abelmoschi* Ellis & Everh.) (Villalobos & al. 2009).

***Pseudocercospora bixae*** (Allesch. & F. Noack) Crous

On leaves of *Bixa orellana* L. (as *Cercospora bixae* Allesch. & F. Noack) (Villalobos & al. 2009).

***Pseudocercospora dendrobii*** Goh & W.H. Hsieh

On *Angraecoides* spp., *Cattleya* spp., *Cymbidium* spp., *Dendrobium* spp., *Miltonia* spp., *Odontoglossum* spp., *Oncidium* spp., *Paphiopedilum* spp., *Phalaenopsis* spp. and *Vanda* spp. (Villalobos & al. 2009).

- Pseudocercospora fici*** (Heald & F.A. Wolf) X.J. Liu & Y.L. Guo  
On leaves of *Ficus* spp. and *F. carica* L. (as *Cercospora fici* Heald & F. A. Wolf) (Villalobos & al. 2009).
- Pseudocercospora fijiensis*** (M. Morelet) Deighton  
On *Musa acuminata* Colla and *M. balbisiana* Colla (Villalobos & al. 2009).
- Pseudocercospora fuligena*** (Roldan) Deighton  
On leaves of *Solanum lycopersicum* L. (Villalobos & al. 2009).
- Pseudocercospora griseola*** (Sacc.) Crous & U. Braun  
On leaves of *Phaseolus vulgaris* L. (as *Phaeoisariopsis griseola* (Sacc.) Ferraris) (Araya & Hernández 2006); on leaves of *Glycine max* (L.) Merr. and *Phaseolus vulgaris* L. (Villalobos & al. 2009).
- Pseudocercospora mali*** (Ellis & Everh.) Deighton  
On leaves of *Malus sylvestris* Mill. and *Pyrus communis* L. (Villalobos & al. 2009).
- Pseudocercospora modesta*** (Syd.) Deighton  
On leaves of *Solanum* sp. (as *Cercospora modesta* Syd.) (Sydow 1927).
- Pseudocercospora odontoglossi*** (Prill. & Delacr.) U. Braun  
On leaves of *Angraecoides* spp., *Cattleya* spp., *Cymbidium* spp., *Dendrobium* spp., *Miltonia* spp., *Odontoglossum* spp., *Oncidium* spp., *Paphiopedilum* spp., *Phalaenopsis* spp. and *Vanda* spp. (as *Cercospora odontoglossi* Prill. & Delacr.) (Villalobos & al. 2009).
- Pseudocercospora piperis*** (Pat.) Deighton  
On leaves of *Piper amplum* Kunth (as *Cercospora piperis* Pat.) (Villalobos & al. 2009).
- Pseudocercospora psidii*** (Rangel) R.F. Castañeda & U. Braun  
On leaves of *Psidium guajava* L. (as *Cercospora psidii* Rangel) (Villalobos & al. 2009).
- Pseudocercospora purpurea*** (Cooke) Deighton  
On leaves of *Persea americana* Mill. (as *Cercospora purpurea* Cooke) (Villalobos & al. 2009).
- Pseudocercospora ranjita*** (S. Chowdhury) Deighton  
On leaves of *Gmelina arborea* Roxb. ex Sm. and *Tectona grandis* L. f. (as *Cercospora ranjita* S. Chowdhury) (Villalobos & al. 2009).
- Pseudocercospora sesami*** (Hansf.) Deighton  
On leaves of *Sesamum indicum* L. (as *Cylindrosporium sesami* Hansf.) (Villalobos & al. 2009).
- Pseudocercospora vitis*** (Lév.) Speg.  
On leaves of *Vitis vinifera* L. (as *Cercospora vitis* Sacc.) (Villalobos & al. 2009).
- Pseudoepicoccum tectonae*** J.K. Sharma  
On leaves of *Tectona grandis* L. f. (Villalobos & al. 2009).
- Pseudopithomyces chartarum*** (Berk. & M.A. Curtis) J.F. Li, Ariyawansa & K.D. Hyde  
On indeterminate dead leaves [as *Pithomyces chartarum* (Berk. & M.A. Curtis) M.B. Ellis] (Rambelli & Ciccarone 2008).
- Pseudopithomyces maydicus*** (Sacc.) J.F. Li, Ariyawansa & K.D. Hyde  
Endophytic in roots of *Araceae*, *Cyclanthaceae*, *Epidendrum difforme* Jacq., *E. stangeanum* Rchb. f., *Pleurothallis guanacastensis* (Ames & C. Schweinf.) Pridgeon & M.W. Chase, *P. uncinata* Fawc. and *Stelis* sp. [as *Pithomyces maydicus* (Sacc.) M.B. Ellis] (Richardson & Currah 1995); on indeterminate dead leaves (Rambelli & Ciccarone 2008).
- Pseudospiropes costaricensis*** (E.F. Morris) de Hoog & Arx  
On the dead tree (as *Pleurophragmium costaricensis* E.F. Morris) (Morris 1972).
- Purpureocillium lilacinum*** (Thom) Luangsa-ard, Houbraken, Hywel-Jones & Samson  
Isolated from banana rhizosphere soil and from virgen forest soil (as *Penicillium lilacinum* Thom) (Goos 1960).
- Purpureocillium takamizusanense*** (Kobayasi) S. Ban  
On dead insect (as *Isaria takamizusanensis* Kobayasi) (Morris 1972).
- Pyrenochaeta rubi-idaei*** Cavara  
Endophytic in roots of *Pleurothallis* sp. (Richardson & Currah 1995).

***Pyrenopeziza brassicae*** B. Sutton & Rawl.

On leaves of *Brassica oleracea* var. *botrytis* L., *Brassica oleracea* var. *capitata* L., *Brassica oleracea* var. *gemmifera* DC. and *Brassica oleracea* var. *italica* Plenck as *Cylindrosporium concentricum* Grev.) (Villalobos & al. 2009).

***Pyricularia grisea*** Sacc.

On ears, grains and leaves of *Oryza sativa* L., on ears and leaves of *Zea mays* L. and on fruits of *Musa acuminata* Colla and *M. balbisiana* Colla (Villalobos & al. 2009).

***Pyricularia oryzae*** Cavara

On leaf, culm, and panicle lesion of rice and other gramineous host (Laterrel & al. 1960).

***Radulidium subulatum*** (de Hoog) Arzanlou, W. Gams & Crous

Endophytic in roots of *Pleurothallis* sp. (as *Ramichloridium subulatum* de Hoog) (Richardson & Currah 1995); on dead leaves of *Maxillaria* sp. (Rambelli & Ciccarone 2008).

***Raffaelea scolytoidis*** M. Kolařík

On adult of *Scolytodes unipunctatus* Wood & Bright in sapwood of *Cecropia angustifolia* Trec. (Kolarik & Hulcr 2009).

***Ramichloridium musae*** (Stahel ex M.B. Ellis) de Hoog

On leaves of *Heliconia mariae* Hook. f. (Bills & Polishook 1994b).

***Ramularia grevilleana*** (Oudem.) Jørst.

On leaves of *Fragaria* sp. (as *Ramularia tulasnei* Sacc.) (Villalobos & al. 2009).

***Ramularia necator*** Massee

On leaves of *Cocos nucifera* L. (Villalobos & al. 2009).

***Ramularia taraxaci*** P. Karst.

On *Taraxacum* sp. (Stevens 1927).

***Ramulispora sorghi*** (Ellis & Everh.) L.S. Olive & Lefebvre

On leaves of *Sorghum bicolor* (L.) Moench (Villalobos & al. 2009).

***Repetophragma cambrense*** (M.B. Ellis) McKenzie

On dead twigs as *Sporidesmium cambrense* M.B. Ellis (Morris 1972); on indeterminate dead leaves (Rambelli & Ciccarone 2008).

**\**Repetophragma filiferum*** (Piroz.) R. F. Castañeda

SPECIMEN EXAMINED—on decayed twig, Tapantí, Orosí, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/58-1).

***Rhinocladiella cristaspora*** Matsush.

On litter primary forest [as *Ardhachandra cristaspora* (Matsush.) Subram. & Sudha] (Bills & Polishook 1994a).

***Rosellinia bunodes*** (Berk. & Broome) Sacc.

On stems of *Coffea arabica* L. (Bianchini 1955); on roots of *Alnus acuminata* Kunth (Bermúdez & Carranza 1990).

***Rosellinia pepo*** Pat.

On roots of *Rosa* sp. (Bermúdez & Carranza-Morse 1992).

***Sarcinella milleriae*** Syd.

On leaves of *Milleria quinqueflora* L. (Sydow 1927).

**\**Sarcopodium vanillae*** (Petch) B. Sutton

SPECIMEN EXAMINED—on living vanilla leaves, San José, Province, O. Castro, 22 Jul. 2012 (INIFAT C12/38).

***Sarocladium oryzae*** (Sawada) W. Gams & D. Hawksw.

On leaves of *Oryza sativa* L. (Villalobos & al. 2009).

***Sarocladium terricola*** (J.H. Mill., Giddens & A.A. Foster) Giraldo, Gené & Guarro

On leaves of *Heliconia mariae* Hook. f. [as *Acremonium terricola* (J.H. Mill., Giddens & A.A. Foster) W. Gams] (Bills & Polishook 1994b).

***Sclerotium coffeicola*** Stahel

On leaves of *Coffea arabica* L. (Villalobos & al. 2009).

- Scolecobasidium constrictum*** E.V. Abbott  
On leaves of *Heliconia mariae* Hook. f. (Bills & Polishook 1994b).
- Scolecobasidium tropicum*** Matsush.  
On indeterminate dead leaves (Rambelli & Ciccarone 2008).
- Scolecostigmia mangiferae*** (Koord.) U. Braun & Mouch.  
On leaves of *Mangifera indica* L. (as *Cercospora mangiferae* Koord.) (Villalobos & al. 2009).
- Scytalidium lignicola*** Pesante  
Endophytic in roots of *Polypodiaceae* (Richardson & Currah 1995).
- Selenosporella curvispora*** G. Arnaud ex MacGarvie  
On decayed leaves (Mercado-Sierra & al. 1997a).
- Septoria anthurii*** Kotthoff  
On leaves of *Anthurium* spp. (Villalobos & al. 2009).
- Septoria apiicola*** Speg.  
On leaves of *Apium graveolens* L. (Villalobos & al. 2009).
- Septoria bataticola*** Taubenh.  
On leaves of *Ipomoea batatas* (L.) Lam. (Villalobos & al. 2009).
- Septoria betae*** Westend.  
On leaves of *Beta vulgaris* L. and *Spinacia oleracea* L. (Villalobos & al. 2009).
- Septoria cavendishiae*** F. Stevens  
On *Cavendishia* sp. (Stevens 1927).
- Septoria chrysanthemella*** Sacc.  
On leaves of *Chrysanthemum morifolium* Ramat. (Villalobos & al. 2009).
- Septoria cucurbitacearum*** Sacc.  
On leaves of *Citrullus lanatus* (Thunb.) Matsumura & Nakai, *Cucumis melo* L., *C. sativus* L. and *Cucurbita pepo* L. (Villalobos & al. 2009).
- Septoria dianthi*** Desm.  
On leaves of *Dianthus caryophyllus* L. (Villalobos & al. 2009).
- Septoria erigerontis*** Peck  
On *Erigeron* sp. (Stevens 1927).
- Septoria expansa*** Niessl  
On leaves of *Pelargonium* spp. (Villalobos & al. 2009).
- Septoria fragariae*** Desm.  
On leaves of *Fragaria* sp. (Villalobos & al. 2009).
- Septoria gossypina*** Cooke  
On leaves of *Gossypium hirsutum* L. (Villalobos & al. 2009).
- Septoria lactucae*** Pass.  
On leaves of *Lactuca sativa* L. (Villalobos & al. 2009).
- Septoria passiflorae*** Syd.  
On leaves of *Passiflora edulis* Sims (Villalobos & al. 2009).
- Septoria pisi*** Berk.  
On leaves of *Pisum sativum* L. (Villalobos & al. 2009).
- Septoria selenophomoides*** E.K. Cash & A.M.J. Watson  
On leaves of *Angraecoides* spp., *Cattleya* spp., *Cymbidium* spp., *Dendrobium* spp., *Miltonia* spp., *Odontoglossum* spp., *Oncidium* spp., *Paphiopedilum* spp., *Phalaenopsis* spp. and *Vanda* spp. (Villalobos & al. 2009).
- Septoria yuccae*** Thüm.  
On leaves of *Yucca elephantipes* Regel ex Trel. (Villalobos & al. 2009).
- Setophoma terrestris*** (H.N. Hansen) Gruyter, Aveskamp & Verkley  
On roots of *Allium cepa* L., *A. obliquum* L. and *A. sativum* L. [as *Pyrenochaeta terrestris* (H.N. Hansen) Gorenz, J.C. Walker & Larson] (Villalobos & al. 2009).

- Solheimia costispora*** E.F. Morris  
Isolated from mixed leaf litter of primary forest from decomposing leaves of *Heliconia mariae* Hook. f. (Bills & al. 1994, Bills & Polishook 1994b).
- Sphaceloma anacardii*** Wani & Thirum.  
On *Anacardium occidentale* L. (Villalobos & al. 2009).
- Sphaceloma arachidis*** Bitanc. & Jenkins  
On leaves of *Arachis hypogaea* L. (Villalobos & al. 2009).
- Sphaceloma perseae*** Jenkins  
On fruits of *Persea americana* Mill. (Villalobos & al. 2009).
- Sphaceloma poinsettiae*** Jenkins & Ruehle  
On leaves of *Euphorbia pulcherrima* Willd. ex Klotzsch (Villalobos & al. 2009).
- Sphaceloma psidii*** Bitanc. & Jenkins  
On fruits of *Psidium friedrichsthalianum* (O. Berg) Nied. and on leaves of *P. guajava* L. (Villalobos & al. 2009).
- Sphaerellopsis filum*** (Biv.) B. Sutton  
On *Puccinia* sp. and *Zea mays* L. [as *Darluca filum* (Biv.) Castagne] (Stevens 1927).
- Sphaeropsis begoniicola*** Ellis & Everh.  
On leaves of *Begonia* spp. (Villalobos & al. 2009).
- Sphaeropsis tumefaciens*** Hedges  
On branches and stems of *Citrus* spp. (Villalobos & al. 2009).
- Sphaerostilbella penicillioides*** (Corda) Rossman  
Isolated from soil (as *Gliocladium penicillioides* Corda) (Farrow 1954); endophytic in roots of *Epidendrum schlechterianum* Ames (Richardson & Currah 1995).
- Sphaerulina oryzina*** Hara  
On leaves of *Oryza sativa* L. (as *Cercospora oryzae* I. Miyake) (Villalobos & al. 2009).
- Sphaerulina westendorpii*** (Westend.) Verkley, Quaedvl. & Crous  
On leaves of *Rubus* spp. (as *Septoria rubi* Westend.) (Villalobos & al. 2009).
- Spilodocheium vernoniae*** Syd.  
On leaves of *Vernonia canescens* Kunth (Sydow 1927).
- Spiropes melanoplaca*** (Berk. & M.A. Curtis) M.B. Ellis  
Lower Montane rainforest above Palmar Norte. (New York Botanical Garden's Virtual Herbarium 2018).
- \**Sporidesmiella hyalosperma*** (Corda) P. M. Kirk  
SPECIMEN EXAMINED—on decayed leaves, Río Macho, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/31).
- Sporidesmium deightonii*** M.B. Ellis  
On woody branches (Morris 1972).
- Sporidesmium uvaricola*** M.B. Ellis  
On woody branches (Morris 1972).
- Sporoschisma nigroseptatum*** D. Rao & P.Rag. Rao  
On woody branches (Morris 1972).
- Sporothrix schenckii*** Hektoen & C.F. Perkins  
Clinical humans isolates (Ishizaki & al. 1996).
- Stachybotrys chartarum*** (Ehrenb.) S. Hughes  
On *Periconia atra* Corda and on dead petioles of *Hibiscus* sp. (Morris 1972).
- Stachybotrys cylindrospora*** C.N. Jensen  
Isolated from soil (Farrow 1954).
- Stachybotrys echinata*** (Rivolta) G. Sm.  
On dead leaves of *Carludovica* sp. and on dead stem of bamboo [as *Memnoniella echinata* (Rivolta) Galloway] (Morris 1972).

- Stachybotrys nephrospora*** Hansf.  
On decayed leaves of *Cecropia peltata* L. (Mercado-Sierra & al. 1997a).
- Stachylidium bicolor*** Link  
On dead leaves of *Hibiscus* sp. (Morris 1972).
- Stagonosporopsis chrysanthemi*** (F. Stevens) Crous  
On leaves of *Chrysanthemum* Ramat. (as *Ascochyta chrysanthemi* F. Stevens) (Villalobos & al. 2009).
- Stagonosporopsis crystalliniformis*** (Loer., R. Navarro, M. Lôbo & Turkenst.) Aveskamp, Gruyter & Verkley  
On leaves of *Solanum tuberosum* L. (as *Phoma andina* Sacc., Syd. & P. Syd.) (Villalobos & al. 2009).
- Stagonosporopsis cucurbitacearum*** (Fr.) Aveskamp, Gruyter & Verkley  
On leaves and stems of *Sechium edule* (Jacq.) Sw. (as *Phoma cucurbitacearum* (Fr.) Sacc.) (Villalobos & al. 2009).
- Staphylotrichum coccosporum*** J.A. Mey. & Nicot  
Isolated from virgin forest soil (Goos 1960).
- Stemphylium bolickii*** Sobers & C.P. Seym.  
On leaves of *Kalanchoe* spp. (Villalobos & al. 2009).
- Stemphylium botryosum*** Wallr.  
Isolated from soil sample (Farrow 1954); on bulbs and leaves of *Allium cepa* L., *A. obliquum* L., *A. sativum* L., on leaves of *Asparagus* spp., *A. officinalis* L., *Brassica oleracea* var. *botrytis* L., *Brassica oleracea* var. *capitata* L.; *Brassica oleracea* var. *gemmifera* DC., *Brassica oleracea* var. *italica* Plenck, *Gladiolus* spp., *Impatiens* spp., *Lactuca sativa* L. and *Raphanus sativus* L., on seeds of *Beta vulgaris* L. and *Spinacia oleracea* L., on stems of *Solanum lycopersicum* L., *S. melongena* L. and *Petunia* spp. (Villalobos & al. 2009).
- Stemphylium congestum*** G.A. Newton  
On leaves of *Malus sylvestris* Mill. (Villalobos & al. 2009).
- Stemphylium cucurbitacearum*** Osner  
On leaves of *Citrullus lanatus* (Thunb.) Matsumura & Nakai, *Cucumis melo* L., *C. sativus*, *Cucurbita pepo* L. and *Sechium edule* (Jacq.) Sw. (Villalobos & al. 2009).
- Stemphylium lycopersici*** (Enjoji) W. Yamam.  
On flowers and leaves of *Chrysanthemum morifolium* Ramat. and *Dianthus caryophyllus* L. (as *Stemphylium floridanum* C.I. Hannon & G.F. Weber), and on leaves of *Solanum lycopersicum* L. (Villalobos & al. 2009).
- Stemphylium solani*** G.F. Weber  
On fruits and leaves of *Capsicum annum* L., *Solanum lycopersicum* L. and *S. melongena* L. (Villalobos & al. 2009).
- Stemphylium sphaericum*** Sacc.  
On dead branches [as *Hermatomyces sphaericus* (Sacc.) S. Hughes] (Mercado-Sierra & al. 1997b).
- Stenocarpella maydis*** (Berk.) B. Sutton  
On cobs and leaves of *Zea mays* L. [as *Diplodia maydis* (Berk.) Sacc.] (Villalobos & al. 2009).
- Stigmina carpophila*** (Lév.) M.B. Ellis  
On leaves of *Prunus* spp. and *P. persica* (L.) Stokes [as *Coryneum carpophilum* (Lév.) Jauch] (Villalobos & al. 2009).
- Stigmopeltella costaricana*** Syd.  
On leaves of *Casearia sylvestris* Sw. and *Roupala montana* Aubl. (Sydow 1927).
- Stigmopeltis phoebe*** Syd.  
On leaves of *Cinnamomum costaricanum* (Mez & Pittier) Kosterm. (Sydow 1927).
- Stigmopeltis roupalae*** Syd.  
On leaves of *Roupala montana* Aubl. (Sydow 1927).
- Stilbella aciculosa*** (Ellis & Everh.) Seifert  
Endophytic in roots of *Bromeliaceae* (Richardson & Currah 1995).

- Stilbella minutissima*** (Speg.) Seifert  
On dead leaf of *Agave* sp. (Mercado-Sierra & al. 1997a).
- Stilbella proliferans*** F. Stevens  
On *Theobroma cacao* L. (Stevens 1927); on dead branches of *Hibiscus* sp. (Morris 1972).
- Stromatinia cepivora*** (Berk.) Whetzel  
On bulbs and roots of *Allium cepa* L., *A. obliquum* L. and *A. sativum* L. (as *Sclerotium cepivorum* Berk.) (Villalobos & al. 2009).
- Stromatographium stromaticum*** (Berk.) Höhn.  
On wood (Morris 1972).
- Strossmayeria bakeriana*** (Henn.) Iturr.  
On dead wood (as *Pseudospiropes simplex* (Kunze) M.B. Ellis) (Mercado-Sierra & al. 1997a).
- Subulispora spinosa*** Rambelli & C. Ciccar.  
On indeterminate dead leaves (Rambelli & Ciccarone 2008).
- Talaromyces calidicanus*** (J.L. Chen) Samson, N. Yilmaz & Frisvad  
On peduncles of the *Ananas comosus* (L.) Merr. (Castro-Chinchilla & Umaña-Rojas 2015).
- Talaromyces diversus*** (Raper & Fennell) Samson, N. Yilmaz & Frisvad  
On peduncles of the *Ananas comosus* (L.) Merr. (as *Penicillium diversum* Raper & Fennell) (Castro-Chinchilla & Umaña-Rojas 2015).
- Talaromyces funiculosus*** (Thom) Samson  
Isolated from banana rhizosphere soil (as *Penicillium funiculosum* Thom) (Goos 1960); on bulbs of *Gladiolus* spp. (Villalobos & al. 2009).
- Talaromyces purpureogenus*** Samson, N. Yilmaz, Houbraken, Spierenb., Seifert, Peterson, Varga & Frisvad  
On peduncles of the *Ananas comosus* (L.) Merr. (as *Penicillium purpureogenum* Stoll) (Castro-Chinchilla & Umaña-Rojas 2015).
- Teretispora leucanthemi*** (Nelen) E.G. Simmons  
On leaves of *Chrysanthemum morifolium* Ramat. (as *Alternaria chrysanthemi* Crosier & Heit.) (Villalobos & al. 2009).
- Tetracosporium paxianum*** Szabó  
On indeterminate dead leaves (Rambelli & Ciccarone 2008).
- Tetraploa aristata*** Berk. & Broome  
On cane stems (Morris 1972).
- Thielaviopsis basicola*** (Berk. & Broome) Ferraris  
On roots of *Arachis hypogaea* L., *Cordyline* spp., *Dracaena* spp., *Ficus* spp., *F. carica* L., *Gossypium hirsutum* L., *Nicotiana tabacum* L., *Pelargonium* spp., *Phaseolus vulgaris* L., *Pisum sativum* L., *Plectranthus scutellarioides* (L.) R. Br., *Ricinus communis* L., *Solanum lycopersicum* and *Vicia faba* L., on roots and stems of *Begonia* spp., *Cereus* spp., *Euphorbia pulcherrima* Willd. ex Klotzsch and *Ipomoea batatas* (L.) Lam. and stems of *Yucca elephantipes* Regel ex Trel. (Villalobos & al. 2009).
- Ticogloea guttulata*** G. Weber  
On roots of *Ticodendron incognitum* Gomez-Laur. & L.D. Gomez (Weber & al. 1994).
- Ticosynnema carranzae*** R.F. Castañeda, Granados & Mardones  
On twig of an unidentified plant (Castañeda-Ruiz & al. 2012).
- Titaea maxilliformis*** Rostr.  
Endophytic in roots of *Epidendrum difforme* Jacq., *E. schlechterianum* Ames and *Nidema boothii* (Lindl.) Schltr. (as *Tetracladium maxilliforme* (Rostr.) Ingold) (Richardson & Currah 1995).
- Trichocladium macrosporium*** P.M. Kirk  
On rotten wood (Mercado-Sierra & al. 1997a).
- Trichoconiella padwickii*** (Ganguly) B.L. Jain  
On grains and leaves of *Oryza sativa* L. [as *Alternaria padwickii* (Ganguly) M.B. Ellis] (Villalobos & al. 2009).

***Trichoderma harzianum*** Rifai

On roots of *Manihot esculenta* Crantz (Villalobos & al. 2009).

***Trichoderma koningii*** Oudem.

Isolated from soil (Farrow 1954).

***Trichoderma viride*** Pers.

Isolated from soil as *Trichoderma lignorum* (Tode) Harz (Farrow 1954); isolated from banana rhizosphere soil and from virgin forest soil (Goos 1960); on bulbs of *Allium sativum* L., on fruits of *Citrus* spp., on seeds of *Arachis hypogaea* L. and *Zea mays* L. (Villalobos & al. 2009).

***Trichodochium disseminatum*** Syd.

On *Myrsine pellucidopunctata* Oerst. (Sydow 1927).

***Trichophyton mentagrophytes*** (C.P. Robin) Sabour.

On humans with dermatophytosis (Montero-Gei & Perera 1992); on humans with onychomycosis (Salas-Campos & Gross-Martínez 2012).

***Trichophyton rubrum*** (Castell.) Sabour.

On humans with dermatophytosis (Montero-Gei & Perera 1992); on humans with onychomycosis (Salas-Campos & al. 2009).

***Trichophyton tonsurans*** Malmsten

On humans with onychomycosis (Salas-Campos & Gross-Martínez 2012).

***Trichothecium crotocinigenum*** (Schol-Schwarz) Summerb.

On leaves of *Aglonema* sp., *Araceae*, *Dieffenbachia* spp., *Philodendron* spp. and *Syngonium* spp. [as *Acremonium crotocinigenum* (Schol-Schwarz) W. Gams] (Villalobos & al. 2009).

***Trichothecium roseum*** (Pers.) Link

On roots of *Cucurbita pepo* L. and seeds of *Apium graveolens* L. (Villalobos & al. 2009).

***Trimmatostroma cordae*** N.D. Sharma & S.R. Singh

On dead wood of undetermined tree (Mercado-Sierra & al. 1997a).

***Triposporium cambrense*** S. Hughes

On woody branch (Morris 1972).

***Tuberculina costaricana*** Syd.

On leaves of *Peteravenia schultzii* (Schnittsp.) R.M. King & H. Rob. and *Salvia tiliifolia* Vahl and parasitic on uredosoris of *Puccinia hodgsoniana* F. Kern (Sydow 1927).

***Tubercularia lateritia*** (Berk.) Seifert

On balsa fruit, on woody branches and on bark of *Citrus* sp. [as *Stilbella cinnabarina* (Mont.) Wollenw.] (Morris 1972).

***Ulocladium cucurbitae*** (Letendre & Roum.) E.G. Simmons

On leaves of *Citrullus lanatus* (Thunb.) Matsumura & Nakai, *Cucumis melo* L., *C. sativus* L., *Cucurbita pepo* L. and *Sechium edule* (Jacq.) Sw. [as *Alternaria cucumerina* (Ellis & Everh.) J.A. Elliott] (Villalobos & al. 2009).

***Venturia carpophila*** E.E. Fisher

On leaves of *Prunus* spp. and *P. persica* (L.) Stokes (as *Cladosporium carpophilum* Thüm.) (Villalobos & al. 2009).

***Venturia inaequalis*** (Cooke) G. Winter

On leaves of *Malus sylvestris* Mill. (as *Spilocaea pomi* Fr.) (Villalobos & al. 2009).

***Veronaea musae*** M.B. Ellis

On leaves of *Musa acuminata* Colla and *M. balbisiana* Colla (as *Chloridium musae* Stahel) (Villalobos & al. 2009).

***Verticillium albo-atrum*** Reinke & Berthold

Endophytic in roots of *Bromeliaceae* (Richardson & Currah 1995); on roots of *Citrullus lanatus* (Thunb.) Matsumura & Nakai, *Cucumis melo* L., *C. sativus* L., *Cucurbita pepo* L. and *Elettaria cardamomum* (L.) Maton, on tubers of *Solanum tuberosum* L. (Villalobos & al. 2009).

***Viridispora alata*** (Samuels) Samuels & Rossman

Endophytic in roots of *Dichaea acrolephara* Schltr., *Stelis* sp. and *Trichosalpinx blaisdellii* (S. Watson) Luer. (as *Penicillifer bipapillatus* Samuels) (Richardson & Currah 1995).

***Virgatospora echinofibrosa*** Finley

On bamboo (Morris 1972) and from living twigs of *Inga goldmanii* Pittier (Bills & al. 1994).

***Volutella uredinophila*** Syd.

On leaves of *Senna bacillaris* (L. f.) H. S. Irwin & Barneby and parasitic in soris of *Uredo ramonensis* Syd. (as '*Uredinis ramonensis*') (Sydow 1927).

***Volutellonectria consors*** (Ellis & Everh.) J. Luo

On leaves of *Heliconia mariae* Hook. f. (as *Volutella minima* Höhn.) (Bills & Polishook 1994b).

***Vrikshopama swetasakha*** D. Rao & P. Rag. Rao

On wood (Morris 1972).

**\**Wiesneriomyces laurinus*** (Tassi) P.M. Kirk

SPECIMEN EXAMINED—on decayed leaf, Río Macho, Orosi, Cartago Province, M. Granados-Montero, V. Vargas, G. Arroyo & I. Castro, 12 Jul. 2012 (INIFAT C12/45).

***Xenosporium berkeleyi*** (M.A. Curtis) Piroz.

On stems of *Erythrina* sp. (Goos 1990); on a dead herbaceous stems (Mercado-Sierra & al. 1997b).

***Xylaria hypoxylon*** (L.) Grev.

On peduncles of *Ananas comosus* (L.) Merr. (Castro-Chinchilla & Umaña-Rojas 2015).

***Zasmidium citri*** (Whiteside) Crous

On leaves of *Citrus* spp. (as *Mycosphaerella citri* Whiteside) (Hidalgo & al. 1998).

***Zasmidium citrigriseum*** (F.E. Fisher) U. Braun & Crous

On leaves of *Citrus* spp. [as *Stenella citrigrisea* (F.E. Fisher) Sivan.] (Villalobos & al. 2009).

***Zygosporium echinosporum*** Bunting & E.W. Mason

On dead fallen leaves (Mercado-Sierra & al. 1997a).

***Zygosporium oscheoides*** Mont.

On dead leaves of *Musa* sp. and on dead petiole of an unknown palm tree (Mercado-Sierra & al. 1997b).

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**Literature cited**

- Abbott SP. 2000. Holomorph studies of the *Microascaceae*. Ph.D. Thesis. University of Alberta, 196p.
- Acuña B, Jiménez A, Franco J, Murillo G, Ramírez J, Gamboa J, Fernández A. 1999. Técnicas para la producción de *Dracaena marginata* en Costa Rica. San José, Costa Rica, EUNED, 88p.
- Araya CM, Hernández JC. 2006. Guía para la identificación de las enfermedades del frijol más comunes en Costa Rica. San José, MAG, 44p.
- Arce E. 2003. Efecto de la caída prematura de los frutos de los cítricos causada por el hongo *Colletotrichum acutatum* en la producción de naranja en la Región Huetar Norte de Costa Rica. M. Sc. Thesis, Universidad de Costa Rica, 63p.
- Arroyo-Oquendo C, Arauz LF, Mora J. 2004. Incidencia de enfermedades en pejíbaya (*Bactris gasipaes* Kunth) para palmito. *Agronomía Mesoamericana* 15(1): 61–68. <https://doi.org/10.15517/am.v15i1.11930>
- Barquero M, Peres N, Arauz F. 2013. Presencia de *Colletotrichum acutatum* y *Colletotrichum gloeosporioides* en helecho hoja de cuero, limón criollo, papaya, carambola y mango en Costa Rica y Florida (Estados Unidos). *Agronomía Costarricense* 37(1): 23–38.
- Bermúdez M, Carranza J. 1990. Patogenicidad de *Rosellinia bunodes* en el jaul (*Alnus acuminata*). *Agronomía Costarricense* 14(2): 181–188.
- Bermúdez M, Carranza J. 1992. Estado anamórfico de *Rosellinia bunodes* (Berk. & Br.) Sacc. y *Rosellinia pepo* Pat. (*Ascomycotina: Xylariaceae*). *Revista de Biología Tropical* 40(1): 43–46.
- Bessey EA. 1953. Notes of the genus *Camptomeris*, fungi imperfecti. *Mycologia* 45(3): 364–390.
- Bianchini C. 1955. Las llagas del café en Costa Rica. *Revista de Biología Tropical* 3(2): 230–235.
- Bills GF, Polishook JD. 1994a. Abundance and diversity of microfungi in leaf litter of a lowland rain forest in Costa Rica. *Mycologia* 86 (2): 187–198. <https://doi.org/10.2307/3760635>
- Bills GF, Polishook JD. 1994b. Microfungi from decaying leaves of *Heliconia mariae* Hook.f. (*Heliconiaceae*). *Brenesia* 41–42: 27–43.

- Bills GF, Rossman AY, Polishook JD. 1994. Rediscovery of *Albosynnema elegans* and *Solheimia costaspora*. *Sydowia* 46(1): 1–11.
- Bischoff JF. 2004. Clavicipitalean systematics: an evaluation of anamorphic states and their utility in determining subfamilial monophyletic groups. Ph.D. Thesis. The State University of New Jersey. 172p.
- Campos V. 2013. Patogenicidad de *Fusarium proliferatum* y la utilización de fungicidas en el tratamiento de semillas como control preventivo en la fase inicial de desarrollo del arroz (*Oryza sativa*). Tesis de Licenciatura, Universidad de Costa Rica, 60p.
- Castañeda-Ruiz RF, Granados MM, Mardones M, Stadler M, Minter DW, Hernández-Restrepo M, Gené J, Guarro J. 2012. A microfungus from Costa Rica: *Ticosynnema* gen. nov. *Mycotaxon* 122: 255–259. <https://doi.org/10.5248/122.255>
- Castañeda-Ruiz RF, Heredia G, Gusmão LFP, Li DW. 2016. Fungal diversity of Central and South America. 197–217. In: DW Li (ed.). *Biology of Microfungi*, Springer International Publishing. [http://dx.doi.org/10.1007/978-3-319-29137-6\\_9](http://dx.doi.org/10.1007/978-3-319-29137-6_9)
- Castro-Chinchilla J, Umaña-Rojas G. 2015. Poblaciones e identificación de los hongos causantes de mohos poscosecha en el pedúnculo de la piña, en dos zonas de Costa Rica. *Agronomía Costarricense* 39(3): 61–77.
- Chinchilla G, Castro O, Granados-Montero M, Blanco M. 2017. Molecular and morphological identification of the species of *Fusarium* associated with black pepper (*Piper nigrum* L.) in Sarapiquí. In: 56<sup>th</sup> Annual APS Caribbean Division Meeting, San José Costa Rica. <https://doi.org/10.1094/phyto-107-7-s4.7>
- Diaz M, Negroni R, Montero-Gei F, Castro LGM, Sebastiao A, Sampaio P, Borelli D, Restrepo A, Franco L, Bran JL, Arathoon EG, Stevens DA. 1992. A Pan-american 5-year study of fluconazole therapy for deep mycoses in the immunocompetent host. *Clinical infectious diseases* 14, Supplement 1. Focus on fungal infections: An update on diagnosis and treatment S68–S76. [https://doi.org/10.1093/clinids/14.supplement\\_1.s68](https://doi.org/10.1093/clinids/14.supplement_1.s68)
- Echandi E. 1957. La quema de los cafetos causada por *Phoma costarricensis* n. sp. *Revista de Biología Tropical* 5(1):81–102.
- Farrow WM. 1954. Tropical soil fungi. *Mycologia* 46 (5): 632–646.
- Goos RD. 1960. Soil fungi from Costa Rica and Panama. *Mycologia* 52 (6): 877–883. <https://doi.org/10.2307/3755849>
- Goos RD. 1990. Review of the anamorph genus *Xenosporium*. *Mycologia* 82 (6): 742–752. <https://doi.org/10.2307/3760161>
- Granados-Montero M. 2004. Aislamiento, identificación y evaluación del efecto antagonista de hongos asociados a esclerocios de *Sclerotium cepivorum* Berk. causante de la pudrición blanca de la cebolla, en la zona alta de Cartago, Costa Rica. M.Sc. Thesis. Universidad de Costa Rica, 92p.
- Granados-Montero M, Castañeda-Ruiz RF, Castro O, Minter DW, Kendrick B. 2014. Microfungi from Costa Rica. A new species and a new combination in *Codinaea*. *Mycotaxon* 127: 115–120. <https://doi.org/10.5248/127.115>
- Hansen AJ. 1963. The role of *Fusarium decemcellulare* and *Fusarium roseum* in the greenpoint cashew gall complex of cacao. *Turrialba (IICA)* 13(2): 80–87.
- Hidalgo H, Sutton TB, Arauz LF. 1998. *Mycosphaerella citri* resistance to benomyl in Costa Rican citrus plantations. *Agronomía Mesoamericana* 9 (1): 86–89. <https://doi.org/10.15517/am.v9i1.24649>
- Hodge KT. 1998. Revisionary studies in *Hirsutella* (anamorphic *Hypocreales: Clavicipitaceae*). Ph.D. Thesis, Cornell University, 263p.
- Hoopen GM, George A, Martinez A, Stirrup T, Flood J, Krauss U. 2010. Compatibility between *Clonostachys* isolates with a view to mixed inocula for biocontrol. *Mycologia* 102 (5): 1204–1215. <https://doi.org/10.3852/08-095>
- Hua YZ. 1992. Taxonomic assessment of *Phialophora* species (dematiaceous hyphomycetes) using molecular characters. Ph.D. Thesis. State University of New York. 115p.
- Ishizaki H, Kawasaki M, Aoki M, Miyaji M, Nishimura K, Garcia-Fernandez JA. 1996. Mitochondrial DNA analysis of *Sporothrix schenckii* in Costa Rica. *Journal of Medical and Veterinary Mycology* 34(1): 71–3. <https://doi.org/10.1080/02681219680000111>
- Kolarik M, Hulcr J. 2009. Mycobiota associated with the ambrosia beetle *Scolytodes unipunctatus* (Coleoptera: Curculionidae, Scolytinae). *Mycological Research* 113: 44–60. <https://doi.org/10.1016/j.mycres.2008.08.003>
- Kolarik M, Kirkendall LR. 2010. Evidence for a new lineage of primary ambrosia fungi in *Geosmithia* Pitt (Ascomycota: *Hypocreales*). *Fungal Biology* 114: 676–689. <https://doi.org/10.1016/j.funbio.2010.06.005>
- Koziak ATE, Chavarria-Diaz F, Diaz J, Garcia M, Janzen DH, Thorn RG. 2007. Costa Rican species of *Nematoctonus* (anamorphic *Pleurotaceae*). *Canadian Journal of Botany* 85: 749–761. <https://doi.org/10.1139/b07-049>
- Langer G, Langer E. 1998. *Haplotrichum parmastii* sp. nov. collected in Costa Rica. *Folia Cryptogamica Estonica* 33 (1–4): 63–69.
- Latterel FM, Tullis EC, Collier JW. 1960. Physiologic races of *Piricularia oryzae* Cav. *Plant Disease Reporter* 4(9):679–683.
- Liu M, Hodge K. 2005. *Hypocrella zhongdongii* sp. nov., the teleomorph of *Aschersonia incrassata*. *Mycological Research* 109 (7): 818–824. <https://doi.org/10.1017/s095375620500290x>
- Liu M, Rombach M, Humber RA, Hodge KT. 2005. What's in a name? *Aschersonia insperata*: A new pleoanamorphic fungus with characteristics of *Aschersonia* and *Hirsutella*. *Mycologia* 97 (1): 246–253. <https://doi.org/10.1080/15572536.2006.11832858>

- Liu M, Chaverri P, Hodge K. 2006. A taxonomic revision of the insect biocontrol fungus *Aschersonia aleyrodis*, its allies with white stromata and their *Hypocrella* sexual states. *Mycological Research* 110: 537–554. <https://doi.org/10.1016/j.mycres.2006.01.013>
- Lizano-Calvo M, Brenes-Angulo A, Gómez-Alpízar L. 2013. Primer caso de onicomiosis causada por *Cylindrocarpon lichenicola*, en un paciente inmunosuprimido en Costa Rica. *Acta Médica Costarricense* 55(4): 199–204.
- Mercado-Sierra A, Gené J, Guarro J. 1997a. Some Costa Rican hyphomycetes I. *Nova Hedwigia* 64(3–4): 455–465.
- Mercado-Sierra A, Gené J, Guarro J. 1997b. Some Costa Rican hyphomycetes II. *Mycotaxon* 64: 7–15. <https://doi.org/10.1080/15572536.2006.11832858>
- Molina-Chaves A, Gómez-Alpízar L, Umaña-Rojas G. 2017. Identificación de especies del género *Colletotrichum* asociadas a la antracnosis en papaya (*Carica papaya* L.) en Costa Rica. *Agronomía Costarricense* 41(1): 69–80. <https://doi.org/10.15517/rac.v41i1.29752>
- Montero-Gei F, Perera A. 1992. Therapy with fluconazole for *Tinea corporis*, *Tinea cruris*, and *Tinea pedis*. *Clinical infectious diseases* 14 Supplement 1. Focus on fungal infections: An update on diagnosis and treatment S77–S81. [https://doi.org/10.1093/clinids/14.supplement\\_1.s77](https://doi.org/10.1093/clinids/14.supplement_1.s77)
- Morris E. 1972. Costa Rican Hyphomycetes. *Mycologia* 64(4): 887–896. <https://doi.org/10.2307/3757943>
- New York Botanical Garden's Virtual Herbarium. [continuously updated]. Anamorphic fungi *Spiropes melanoplaca* (Berk. & M.A.Curtis) M.B.Ellis [http://sweetgum.nybg.org/science/vh/specimen\\_list.php?SummaryData+=Spiropes+melanoplaca](http://sweetgum.nybg.org/science/vh/specimen_list.php?SummaryData+=Spiropes+melanoplaca) [Accessed August 2018].
- Nirenberg HI, O'Donnell K. 1998. New *Fusarium* species and combination within the *Giberella fujikuroi* species complex. *Mycologia* 90(3): 434–458.
- Palma-Jiménez M, Blanco-Meneses M, Vega-Baudrit JR. 2018. Study of microorganisms associated with the chemical compounds in a tropical soil. *International Journal of Plant & Soil Science* 21(2): 1–13. <https://doi.org/10.9734/ijpss/2018/39052>
- Petch, T. 1937. Notes on entomogenous fungi. *Transactions of the British Mycological Society* 21: 34–67. [https://doi.org/10.1016/s0007-1536\(37\)80005-4](https://doi.org/10.1016/s0007-1536(37)80005-4)
- Rambelli A, Cicarrone C. 2008. New and interesting dematiaceous hyphomycetes from Costa Rica forest litters. *Quaderni di Botanica e Ambientale Applicata* 19: 125–152.
- Ren Y, Strobel GA, Graff JC, Jutila M, Park SG, Gosh S, Teplow D, Condrón M, Pang E, Hess WM, Moore E. 2008. Colutellin A, an immunosuppressive peptide from *Colletotrichum dematium*. *Microbiology* 154: 1973–1979. <https://doi.org/10.1099/mic.0.2008/017954-0>
- Retana-Sánchez K, Castro-Zúñiga O, Blanco-Meneses M. 2015. Identificación morfológica y molecular del hongo *Neoscytalidium dimidiatum*, agente causal del cáncer del tallo en *Hylocereus* spp. en Costa Rica. *Fitosanidad* 19(2): 112.
- Richardson KA, Currah RS. 1995. The fungal community associated with the roots of some rainforest epiphytes of Costa Rica. *Selbyana* 16 (1): 49–73.
- Rivera KG. 2009. Taxonomy, systematics and DNA barcoding of selected *Penicillium* groups. M.Sc. Thesis, Ottawa University. 344p. <http://dx.doi.org/10.20381/ruor-12438>
- Salas-Campos I, Chaves-Madriral O. 2004. Agentes de onicomiosis en Costa Rica. *Revista Costarricense de Ciencias Médicas* 5 (3–4).
- Salas-Campos I, Gross-Martínez NT, Carrillo-Dover PJ. 2009. Onicomiosis por hongos fuliginosos. *Acta Médica Costarricense* 51(4): 241–244.
- Salas-Campos I, Gross-Martínez NT. 2012. Agentes etiológicos de onicomiosis diagnosticadas en el laboratorio de micología médica de la Universidad de Costa Rica. *Acta Médica Costarricense* 54(2): 114–118.
- Seixas CDS, Barreto RW, Killgore E. 2007. Fungal pathogens of *Miconia calvescens* (*Melastomataceae*) from Brazil, with reference to classical biological control. *Mycologia* 99 (1): 99–111. <https://doi.org/10.1080/15572536.2007.11832605>
- Sequeira-Oviedo PM, Villalobos-Vargas M, Ramírez-Hernández V, Lozada-Alvarado S, Salas-Campos I, Jaikel-Viquez D. 2016. Antimicrobial susceptibility of isolates of *Aspergillus versicolor*, *Fusarium solani* and *Neoscytalidium dimidiatum* from onychomycosis. *Revista del Colegio de Microbiólogos y Químicos Clínicos de Costa Rica* 22(4): 134.
- Stevens FL. 1927. Fungi from Costa Rica and Panama. *Illinois Biological Monographs* 11 (2): 1–103. <https://doi.org/10.5962/bhl.title.50174>
- Sydow H. 1927. Fungi in itinere costaricensi collection. *Annales Mycologici*. 25:1–160. <http://www.cybertruffle.org.uk/cyberliber/index.htm> [accessed June 2016].
- Villalobos JL, Cárdenas FA, Cordero JM. 2009. Lista de enfermedades de los cultivos agrícolas y forestales de Costa Rica. Ministerio de agricultura y ganadería. Servicio fitosanitario del estado. Diagnóstico Fitosanitario. 118 p.
- Weber G, Spaaij F, Gams W. 1994. *Ticogloea*, a new genus of hyphomycetes from roots of *Ticodendron incognitum* from Costa Rica. *Mycological Research* 98 (6): 660–664. [https://doi.org/10.1016/S0953-7562\(09\)80413-9](https://doi.org/10.1016/S0953-7562(09)80413-9)
- Weber G, Spaaij M, Wingfield J. 1996. *Leptographium costaricense* sp. nov., a new species from roots of *Talauma sambuensis* from Costa Rica. *Mycological Research* 100(6): 732–736. [https://doi.org/10.1016/S0953-7562\(96\)80206-1](https://doi.org/10.1016/S0953-7562(96)80206-1)