

PUENTE BIOLÓGICO

Revista Científica de la Universidad Autónoma de Chiriquí en Panamá



Polyporus sp. at the Quetzales trail in the Volcán Barú National Park, Panamá

Volume 1 / 2006

Checklist of Fungi in Panama

elaborated in the context of the University Partnership
of the UNIVERSIDAD AUTÓNOMA DE CHIRIQUÍ and
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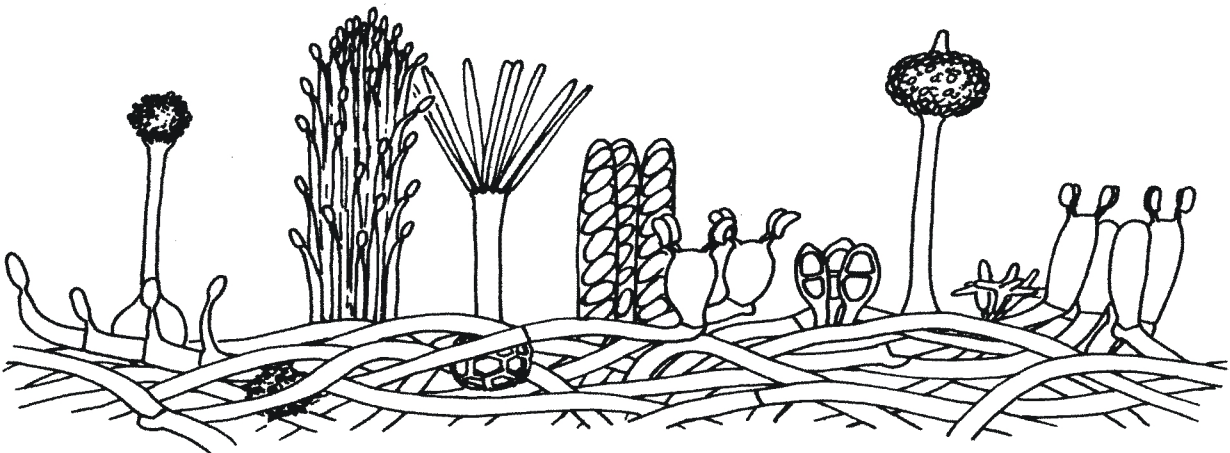
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Checklist of Fungi in Panama Preliminary Version

Meike Piepenbring



Editorial

La Revista Natura fue fundada con el objetivo de dar a conocer las actividades de investigación de la Facultad de Ciencias Naturales y Exactas de la Universidad Autónoma de Chiriquí (UNACHI), pero paulatinamente ha ampliado su ámbito geográfico, de allí que el Comité Editorial ha acordado cambiar el nombre de la revista al nuevo título: **PUENTE BIOLÓGICO**, para señalar así el inicio de una nueva serie que conserva el énfasis en temas científicos, que trascienden al ámbito internacional.

Puente Biológico se presenta a la comunidad científica internacional con este número especial, que brinda los resultados significativos de la ejecución del Convenio de Cooperación e Intercambio Académico firmado el 3 de mayo de 2002 entre la Universidad Autónoma de Chiriquí y la Universidad de Frankfurt, el cual a partir de enero de 2003 ha recibido el apoyo financiero del Servicio Alemán de Intercambio Académico (DAAD).

En este número se presenta el primer listado de verificación de los hongos de Panamá, los cuales incluyen actualmente unas 1,800 especies y sugieren que nos encontramos en etapas iniciales en cuanto al conocimiento de nuestra riqueza fúngica.

El éxito del convenio se puede apreciar en las actividades del período 2003-2006. Se efectuaron 44 viajes de docencia e investigación, en los que participaron 34 personas diferentes, alemanes y panameños, tanto estudiantes como profesores. Se organizaron dos talleres internacionales, uno sobre plantas superiores (2004) y otro de micología (2005).

Docentes alemanes dictaron tres seminarios y nueve cursos de postgrado. Esos cursos contribuyeron a la realización de la Maestría en Biología que ofrece la UNACHI.

Otro aspecto importante de los viajes fue la recolección y análisis de datos para tesis a nivel de licenciatura, maestría y doctorado e investigación posdoctoral, principalmente en las áreas de micología, botánica de plantas vasculares, briología, dermatología, ecofisiología, fitopatología, ecología y herpetología.

Gracias al convenio se ha logrado que docentes de esta Facultad participen en los programas doctorales en la Universidad de Frankfurt. De igual manera docentes alemanes han participado como tutores en las tesis de maestría del programa de Biología de la UNACHI.

De allí que es evidente la contribución de este convenio en el desarrollo académico de la Facultad de Ciencias Naturales y Exactas, sobre todo a través del estímulo a la investigación científica.

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Checklist of Fungi in Panama

Preliminary Version

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ABSTRACT

For the first time, a checklist of fungi reported for Panama in literature is presented. It is based on approximately 300 publications containing approximately 3,330 records for this country. These records correspond to approximately 1,810 species and subspecific taxa in 646 genera. For each species, data on its ecology, substrates, distribution within Panama, and references to literature are cited. Publications focusing on ecological and applied aspects of fungi in Panama are also cited. 45 species and genera known for Panama are illustrated by color photographs taken in this country. The species cited in the list represent only a small part of the fungal diversity existing in Panama, where mycological investigation is still in the pioneer phase. The list and the literature references are offered as a starting point for mycological fieldwork, identification, and taxonomical revision of the taxa by students and professionals.

RESUMEN

El listado de verificación de hongos en Panamá basado en datos de literatura se presenta aquí por primera vez. Contiene datos de aproximadamente 300 publicaciones en las cuales se encuentran aproximadamente 3,330 reportes para el país. Estos reportes corresponden a aproximadamente 1,810 especies y taxones subespecíficos en 646 géneros. Para cada especie se presentan datos sobre su ecología, sustratos, distribución en Panamá y referencias de literatura. Publicaciones sobre aspectos ecológicos y aplicados de hongos en Panamá también se citan. Están ilustrados por fotos tomadas en este país 45 especies y géneros conocidos para Panamá. Las especies citadas en el listado representan solamente una pequeña parte de la diversidad fúngica existente en Panamá, donde la investigación micológica todavía se encuentra en la fase pionera. El listado y las referencias a literatura se ofrecen como un punto de partida para trabajo micológico de campo, identificación y revisión taxonómica por estudiantes y profesionales.

KEY WORDS

Ascomycota, Basidiomycota, collecting activities in Panama, diversity of fungi, mycology

Checklist of Fungi in Panama
Preliminary Version

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INTRODUCTION

Panama, a tropical country of approximately 75,000 km² in the Southern part of the Central American isthmus, harbors numerous species of vascular plants of which approximately 9,500 have been reported (Correa et al. 2004). Our knowledge of fungi in Panama is much more limited. Bermúdez & Sánchez (2000) consider that some information scattered in literature does exist for fungi only for one ecoregion in Panama, for lichens for two. This situation is due to several facts. Although fungi are important for ecosystem services and directly to human beings as parasites of cultivated plants and animals, as agents of human diseases and for food as well as drug production, American people generally do not appreciate fungi. During the history of scientific mycology in Panama, mostly foreign mycologists worked in the field, carried the specimens out of the country, and published in foreign journals. This situation is similar to that of most other Latin American countries (Nishida 1989).

In order to improve the knowledge of fungi in Panama, an annotated list of approximately 1,810 species and subspecific taxa is offered with references to approximately 300 publications which include about 3,330 records of fungi in Panama. Although much effort has been made to present this list as complete as possible, further records in literature will be found in future. Most groups are not taxonomically revised, therefore the given names are preliminary.

A detailed analysis of the data in the checklist (Piepenbring 2006) and recent mycological fieldwork in Panama show that the fungal species in the list correspond only to a small part of the fungi existing in Panama. We are still in the pioneer phase of mycological investigation in this country.

In general, the species richness of fungi for a given area is estimated to be several times as high as the one of vascular plants. Applying the factor 5.3 proposed by (Hawksworth 1998: 11), more than 50,000 species (5.3 x 9,500) exist in Panama. Based on these data, only about 3 % of the fungi in Panama are in the checklist. According to W. Gams (pers. com.), our knowledge of fungi worldwide is somewhat more complete due to large areas of distribution of numerous fungi. Nevertheless, our knowledge is still very fragmentary. Numerous unknown fungi are supposed to live in primary forests. As these are reduced at an alarming rate, a great need for basic mycological investigation is evident.

METHODS

Records of fungi in Panama have been sought in databases, the internet, indices of journals, by citations found in literature, and with the help of numerous colleagues until the end of 2005. Only data published in international journals and officially published books have been included. All species have been checked in the Index Fungorum (CABI-CBS FUNINDEX, www.indexfungorum.org) for synonymy.

Species and subspecific taxa are cited in the order corresponding to their systematic position, mostly according to the Index Fungorum. Divisions are cited as shown in Contents, all other groups according to the alphabet. To find genera and higher taxa have a look at the index.

The modern systematic classification often does not correspond to the classical groups based on macromorphology of fruiting-bodies and hymenophores. Therefore, in Table 1 the modern systematic groups are cited in the classical categories.

Table 1. Modern systematic groups cited in the checklist in the morphological classification. Names of morphological groups which do not correspond to systematic groups (exception: rusts) are written in bold.

ASCOMYCOTA
<p>DISCOMYCETES (fungi with apothecia) <u>Leotiomyces</u> Helotiales, Rhytismatales <u>Pezizomyces</u> Pezizales subclass: <i>Incertae sedis</i>: Ostropales; order: <i>incertae sedis</i>: Orbiliaceae</p>
<p>PLECTOMYCETES (fungi with cleistothecia) <u>Erysiphomyces</u> Erysiphales <u>Eurotiomyces</u> Eurotiales, Onygenales</p>
<p>PYRENOMYCETES (fungi with perithecia) <u>Dothideomyces</u>: Capnodiales, Dothideales, Microthyriales, Mycosphaerellales, Myriangiales, Pleosporales, order: <i>incertae sedis</i>: Asterinaceae, Micropeltidaceae, Parodiopsidaceae, Pseudoperisporiaceae <u>Meliolomyces</u>: Meliolales <u>Sordariomyces</u>: Boliniales, Diaporthales, Halosphaeriales, Hypocreales, Microascales, Phyllachorales, Sordariales, Xylariales subclass: <i>incertae sedis</i>: Laboulbeniales</p>
BASIDIOMYCOTA
<p>RUSTS <u>Urediniomyces</u> p.p.: Uredinales</p>
<p>SMUTS <u>Urediniomyces</u> p.p.: Microbotryales <u>Ustilaginomyces</u> p.p.: Entylomatales, Georgefischeriales, Tilletiales, Urocystales, Ustilaginales <u>Hymenomyces</u>:</p>
<p>AGARICALES in the old sense (fungi with agaricoid fruiting bodies) <u>Agaricomycetes</u>: Agaricales p.p., Boletales p.p., Phallales p.p., Polyporales p.p., Russulales p.p.</p>
<p>BOLETALES in the old sense (fungi with boletoid fruiting bodies) <u>Agaricomycetes</u>: Agaricales p.p., Boletales p.p.</p>
<p>fungi with odontoid fruiting bodies <u>Agaricomycetes</u>: Polyporales p.p., Russulales p.p.</p>
<p>GASTEROMYCETES (fungi with gastroid fruiting bodies) <u>Agaricomycetes</u>: Agaricales p.p., Boletales p.p., Phallales</p>
<p>POLYPORALES in the old sense (fungi with polyporoid fruiting bodies, Aphylophorales) <u>Agaricomycetes</u>: Agaricales p.p., Hymenochaetales p.p., Polyporales p.p., Russulales p.p.</p>
<p>further APHYLLOPHORALES <u>Urediniomyces</u>: Platyglloeales, Septobasidiales <u>Tremellomyces</u>: Tremellales <u>Hymenomyces</u>: Auriculariales, Ceratobasidiales, Dacrymycetales, Tulasnellales <u>Agaricomycetes</u>: Agaricales p.p., Hymenochaetales p.p., Polyporales p.p., Russulales p.p.</p>

In addition to the systematic position, for each species the growth form, ecology, and known distribution in Panama (as far as evident by data in literature), as well as literature references are given.

The term “Canal Zone” is used although this area is called “Reverted Areas” (“areas revertidas”) since 2000. Barro Colorado is an island in the canal forming part of the former Canal Zone, Panamá Province. Coiba, a large island in the Pacific, belongs to the Veraguas Province. Both localities are cited as separate localities because numerous collections have been reported from them.

Table 2. Abbreviations for localities in Panama used in the checklist:

BCI	Barro Colorado Island
BO	Bocas del Toro Province
CA	Canal Zone (not BCI)
CC	Coclé Province
CH	Chiriquí Province
CN	Colón Province
COI	Coiba
DA	Darién Province
HE	Herrera Province
KY	Kuna Yala Reservation
LS	Los Santos Province
NB	Ngöbe Buglé Reservation
PA	Panamá Province (not CA or BCI)
VR	Veraguas Province (not COI)

Anamorph-teleomorph connections

Many species of Ascomycota and some of the Basidiomycota can be observed as fungi with meiosporangia (asci or basidia), i.e. as sexual developmental stage or teleomorph, or as Fungi Imperfecti or anamorph, forming conidia, i.e. asexual mitospores. The asexual stages are cited as **anamorphic stages (AN)** of the respective teleomorphic stage, if this is cited for Panama. Otherwise, they are considered Fungi Imperfecti.

COLLECTING ACTIVITIES IN PANAMA

In Tables 3 and 4, mycologists and some botanists who collected fungi in Panama are presented in chronological order. Those who made the first collections and those who contributed numerous or important specimens have been selected. Data concerning the year or period of time of the collecting activity, the groups of fungi collected, the localities visited, and important publications based on these collections are included. Finally, the acronyms of herbaria and some culture collections in which Panamanian fungi have been deposited according to literature are cited.

With very few exceptions, foreign mycologists collected fungi in Panama, mostly in few locations, mostly during short term visits. Only since about 15 years, some specimens are deposited in the National Herbarium of Panama (PMA). These are important facts to explain our limited knowledge of fungi in Panama.

The checklist is preliminary in many aspects. You are welcome to improve it!

Table 3. Important mycological collecting activities in Panama until 1950. For abbreviations of herbaria see <http://sciweb.nybg.org/science2/IndexHerbariorum.asp>.

Collectors	When?	Which fungi?	Where?	Important publications	Herbaria
B. Seemann	1847-1871 (exact time not known)	lichens and <i>Endococcus hymeniicola</i> , a lichenicolous ascomycete	Panama, VR, and "Central America", probably Panama	Berkeley & Broome 1852, Seemann 1852-1857, Hawksworth 2005	BM, K
N.G. Lagerheim	Oct 1889, Sept 1890, Dec 1892	Uredinales	"Colombia, Panama" CN	Dietel 1894, Jackson 1918, Jørstad 1957, Cummins 1978	NY, PUR, S
W.R. Maxon & H. Pittier	1911	Auriculariales	CA CH CN	Lowy 1971	BPI
A.S. Hitchcock	Sept-Oct 1911	Ustilaginales	CH	Zundel 1939	BPI
F.L. Stevens	1913, 1923, 1924, 1927	plant parasitic microfungi	BCI CA DA	Stevens 1927a, b, c, 1928, 1930	BPI, F, FH, ILL, NY, PUR
E.W.D. Holway	Dec 1915	Uredinales		Arthur 1918b, Hennen & McCain 1993	PUR
E.P. Killip	1917-1918, Nov 1948	plant parasitic microfungi	CH PA	Dearness & House 1925, Guba 1961	B, NY
M.A. Charleton	1920, 1921	Uredinales	BO	Ramachar & Cummins 1965, Buriticá & Hennen 1980, Buriticá 1999a	PUR
J.R. Johnston	1920, 1926	Phyllachorales, Uredinales	BO	Arthur & Cummins 1933, Cummins 1978, Cannon 1991	BPI, PUR
P.C. Standley	1923, 1924	Meliolales, capnodiaceous fungi, Tremellales, Uredinales	BCI CA	Standley 1927, 1933	BPI, PUR
C.W. Dodge et al.	1925, 1934/1935	Myxomycota, Asco- and Basidiomycota, <i>Septobasidium</i>	BCI BO	Standley 1927, Welden 1954a, Reid 1965, Denison 1967, Guzman 1970	BPI, FH, MO, NCU, UPS
W.H. Weston	1928, 1929, 1945	Fungi Imperfecti, Asco- and Basidiomycota, <i>Septobasidium</i>	BCI	Standley 1933, Weston 1933, Raper & Fennell 1948, Raper et al. 1949, Reid 1965	FH
J. Zetek	1934, 1937	lichens, <i>Septobasidium</i>	CA PA	Couch 1938, Santesson 1952	BPI
G.W. Martin	1935, 1937, 1939, 1940, 1945, 1946	Myxo-, Asco-, Basidiomycota, Fungi Imperfecti	CA CH	Martin 1936, 1937, 1938a, b, 1939a, b, 1940, 1942, 1944, 1948, 1957	BPI, FH, IA, NY
S.L. Meyer	1944-1945	Xylariales	CA	Meyer 1949, Bodman 1952	TENN
B. Lowy	1950	Tremellales	BCI	Lowy 1971	LSUM

Table 4. Important mycological collecting activities in Panama after 1950.

Collectors	When?	Which fungi?	Where?	Important publications	Herbaria
G.W. Martin & A.L. Welden	1952/1953	Myxomycota, macrofungi, soil and wood for isolation of microfungi	BCI CH	Martin 1954, Welden 1954a, 1954b, 1960, Farrow 1954, Morris & Finley 1956	UC, IA, NO, F
R.D. Goos	1958, 1973	Fungi Imperfecti	BCI CH PA	Goos 1960, Goos & Pirozynski 1975, Goos 1997	ATCC, BPI, CBS, DAOM, NY
E.F. Morris & J.W. Strain	July-Aug 1964	Fungi Imperfecti	BCI, PA	Morris & Finley 1965, Morris 1967, Finley 1967	BPI, IA, ILL
M.E. Hale et al.	1973, 1974, 1975	Lichenes	BCI CA CC CH CN DA PA VR	Hale 1974, 1978, Tibell 1996	US
K.P. Dumont, S.E. Carpenter & S.A. Mori	1975, 1978	Ostropales, Rhytismatales, Macrofungi	CC CH KY PA VR	Dumont 1980, Samuels & Dumont 1982, Haines & Dumont 1984	LSUM, NY
N. Salazar	1976, 1977	Lichenes	CH	Ahti 2000	H
S.T. Miller	1978	Fungi Imperfecti	BCI	Samson et al. 1989	CBS, IMI
W.C. Culberson	1983	Lichenes	CH	Ahti 2000	DUKE
G.S. Gilbert et al.	1992, Jul 1995	plant parasitic fungi, Polyporales	BCI CA	Gilbert & De Steven 1996, Gilbert & Sousa 2002	PMA, UC
B. Büdel et al.	1993	Lichenes	CH	Büdel et al. 2000	STRI
L. Persmark et al.	before 1995	Fungi Imperfecti	CH	Persmark et al. 1995	
M. Piepenbring	1994-1998, short term visits	Ustilaginales and other smut fungi	CA CC CH CN HE LS PA	Piepenbring 2001, 2003	PMA, USJ
M.P. Núñez	Nov 1996	Aphylophorales	COI	Núñez 1997	
F. Pando	Nov 1996	Myxomycota	COI	Pando 1997	MA, PMA
J. Etayo	1996, 1997, 2001	Lichenes and lichenicolous fungi	CH COI	Etayo 1997, 1999, Etayo & Lücking 1999, Etayo & Aptroot 2003	PMA, MA
S.A. Mangan et al.	1996, 1998, 1999	arbuscular mycorrhizal fungi	CA CH	Mangan & Adler 1999, 2000, Mangan et al. 2004	
C.L. Ovrebo	1997, 2000	Gasteromyce-tes, Agaricales	BCI	Guzmán & Ovrebo 2000, Guzmán-Dávalos & Ovrebo 2001, Mata et al. 2001, Buyck & Ovrebo 2002, Akers & Ovrebo 2005	CSU, PMA, IBUG, PC
R. Halling et al.	1999	Agaricales	CH	Mata et al. 2004	NY

CHECKLIST OF FUNGI IN PANAMA

MYXOMYCOTA**Ceratiomyxales*****Ceratiomyxa fruticulosa* (O.F. Müll.) T. Macbr. Fig. 1**

Ecology: on rotten wood
 Province/Locality: BCI, CA, CC, CH
 Reference: Weston 1933: 395, 398; Standley 1933: 17; Martin 1936: 278; Welden 1954a: 96; Dennis 1970: 448; Farr 1976: 18.

Ceratiomyxa morchella* A.L. Welden Fig. 2*a new species from Panama**

Ecology: on rotten wood
 Province/Locality: BCI, CH
 Reference: Welden 1954a: 94; Dennis 1970: 448; Farr 1976: 19.

***Ceratiomyxa sphaerosperma* Boedijn**

Ecology: on rotten wood, on *Apeiba* fruit
 Province/Locality: BCI, COI
 Reference: Welden 1954a: 95; Dennis 1970: 448; Farr 1976: 20; Pando 1997: 194.

Echinosteliales***Clastoderma debaryanum* A. Blytt**

Ecology: on bark or debris
 Province/Locality: BCI, CA, CC, CH, COI
 Reference: Martin 1936: 279; Martin 1938b: 350; Dennis 1970: 456; Farr 1976: 104; Pando 1997: 194.

***Echinostelium minutum* de Bary**

Ecology: on bark or dung
 Province/Locality: CH
 Reference: Martin 1936: 279; Dennis 1970: 454; Farr 1976: 103.

Liceales***Cribraria argillacea* (Pers.) Pers.**

Ecology: on dead wood
 Province/Locality: CH
 Reference: Martin 1936: 279; Dennis 1970: 451; Farr 1976: 46.

***Cribraria aurantiaca* Schrad.**

Ecology: on dead wood
 Province/Locality: COI
 Reference: Pando 1997: 195.

Cribraria cancellata* (Batsch) Nann.-Bremek. var. *cancellata

Ecology: on dead wood
 Province/Locality: BCI, CH
 Reference: Standley 1933: 16; Martin 1936: 279; Welden 1954a: 96; Dennis 1970: 452; Farr 1976: 42; all as *Dictydium cancellatum* (Batsch) T. Macbr.

***Cribraria intricata* Schrad.**

Ecology: on dead wood
 Province/Locality: BCI, CA, COI
 Reference: Martin 1936: 279, as *Cribraria dictydioides* Cooke & Balfour, a synonym acc. to Farr 1976: 47; Martin 1938b: 350, as *C. dictydioides*; Welden 1954a: 96; Dennis 1970: 451; Pando 1997: 195; Farr 1976: 47.

***Cribraria languescens* Rex**

Ecology: on dead wood
 Province/Locality: CC, COI
 Reference: Martin 1936: 279; Dennis 1970: 451; Farr 1976: 48; Pando 1997: 195.

***Cribraria microcarpa* (Schrad.) Pers.**

Ecology: on dead wood
 Province/Locality: CH, COI
 Reference: Martin 1936: 279; Dennis 1970: 451; Farr 1976: 50; Pando 1997: 195.

***Cribraria pachydictyon* Nann.-Bremek.**

Ecology: on dead wood
Province/Locality: COI
Reference: Pando 1997: 195.

***Cribraria piriformis* Schrad.**

Ecology: on dead wood
Province/Locality: CH
Reference: Welden 1954a: 96; Dennis 1970: 451; Farr 1976: 51.

***Cribraria tenella* Schrad.**

Ecology: on dead wood
Province/Locality: COI
Reference: Pando 1997: 196.

***Cribraria violacea* Rex**

Ecology: on dead wood
Province/Locality: CA, CH, COI
Reference: Martin 1936: 279; Martin 1938b: 350; Dennis 1970: 451; Farr 1976: 54; Pando 1997: 196.

***Dictydiaethalium plumbeum* (Schumach.) Rostaf. ex Lister**

Ecology: on dead wood
Province/Locality: CA, CC
Reference: Martin 1936: 280; Dennis 1970: 450; Farr 1976: 33.

***Enteridium lycoperdon* (Bull.) M.L. Farr**

Ecology: on dead wood
Province/Locality: CH
Reference: Martin 1936: 280; Dennis 1970: 451; Farr 1976: 38; all as *Reticularia lycoperdon* Bull.

***Enteridium splendens* (Morgan) T. Macbr.**

Ecology: on dead wood
Province/Locality: CH
Reference: Martin 1936: 279, as *Enteridium rozeanum* (Rost.) Wingate, a synonym acc. to Farr 1976: 40; Dennis 1970: 451, as *E.*

rozeanum; Farr 1976: 40, as *Reticularia splendens* Morgan.

***Licea minima* Fr.**

Ecology: on dead wood
Province/Locality: CH
Reference: Martin 1938b: 349; Farr 1976: 24.

***Licea operculata* (Wingate) G.W. Martin**

Ecology: on bark
Province/Locality: CH
Reference: Martin 1936: 279, as *Orcadella operculata* Wingate; Farr 1976: 25.

***Licea pedicellata* (H.C. Gilbert) H.C. Gilbert**

Ecology: on bark
Province/Locality: COI
Reference: Pando 1997: 199.

***Licea pusilla* Schrad.**

Ecology: on dead wood or bark
Province/Locality: BCI
Reference: Welden 1954a: 96; Farr 1976: 26.

***Licea tuberculata* G.W. Martin
a new species from Panama**

Ecology: on bark or wood in moist chambers
Province/Locality: BCI
Reference: Martin 1957: 439; Dennis 1970: 449; Farr 1976: 27.

***Lycogala conicum* Pers.**

Ecology: on dead wood
Province/Locality: BCI
Reference: Martin 1938b: 349; Dennis 1970: 450; Farr 1976: 34.

***Lycogala epidendrum* (J.C. Buxb. ex L.) Fr. Fig. 3**

Ecology: on dead wood
Province/Locality: BCI, CH
Reference: Weston 1933: 395, 397; Standley 1933: 17; Martin 1936: 280; Dennis 1970: 450; Farr 1976: 35.

***Lycogala exiguum* Morgan**

Ecology: on dead wood
 Province/Locality: BCI
 Reference: Welden 1954a: 96; Dennis 1970: 450; Farr 1976: 37.

Lycogala flavofuscum* (Ehrenb.)*Rostaf.**

Ecology: on dead wood
 Province/Locality: CH
 Reference: Martin 1936: 280; Dennis 1970: 450; Farr 1976: 37.

Tubifera ferruginosa* (Batsch) J.F.*Gmel.**

Ecology: on wood or leaves
 Province/Locality: CH
 Reference: Martin 1936: 279; Dennis 1970: 449; Farr 1976: 30.

***Tubifera microsperma* (Berk. & M.A. Curtis) G.W. Martin**

Ecology: on dead wood
 Province/Locality: BCI, CC
 Reference: Martin 1936: 279, as *Tubifera stipitata* (Berk. & Rav.) T. Macbr., a synonym acc. to Farr 1976: 32; Welden 1954a: 96; Dennis 1970: 449; Farr 1976: 32.

Physarales***Badhamia affinis* Rostaf.**

Ecology: on bark of living or dead trees
 Province/Locality: CH
 Reference: Martin 1938b: 348, as *Badhamia orbiculata* Rex, a synonym acc. to Farr 1976: 182; Martin 1938b: 348; Dennis 1970: 458; Farr 1976: 182.

***Badhamia gracilis* (T. Macbr.) T. Macbr.**

Ecology: on bark etc.
 Province/Locality: CH
 Reference: Martin 1936: 278; Dennis 1970: 458; Farr 1976: 185.

Craterium leucocephalum* (Pers.)*Ditmar**

Ecology: on dead leaves or twigs
 Province/Locality: CA
 Reference: Martin 1936: 279; Dennis 1970: 458; Farr 1976: 176.

***Craterium paraguariense* (Speg.) Sacc. & Trotter**

Ecology: on dead leaves
 Province/Locality: BCI
 Reference: Martin 1936: 278; Dennis 1970: 458; Farr 1976: 179.

***Diderma effusum* (Schwein.) Morgan**

Ecology: on dead leaves or stems of herbs
 Province/Locality: CA, CH, COI
 Reference: Martin 1936: 279; Farr 1976: 201; Pando 1997: 196.

Diderma hemisphaericum* (Bull.)*Hornem.**

Ecology: on leaves or litter
 Province/Locality: CH
 Reference: Martin 1936: 279; Farr 1976: 205.

***Diderma rugosum* (Rex) T. Macbr.**

Ecology: on dead leaves or mosses
 Province/Locality: COI
 Reference: Pando 1997: 196.

***Diderma spumarioides* (Fr.) Fr.**

Ecology: on dead leaves
 Reference: Dennis 1970: 461; Farr 1976: 212.

***Didymium aff. clavus* (Alb. & Schwein.) Rabenh.**

Ecology: on dead wood
 Province/Locality: COI
 Reference: Pando 1997: 196.

***Didymium intermedium* J. Schröt.**

Ecology: on leaves, stems, or mossy logs
 Province/Locality: CA

Reference: Martin 1938b: 348; Dennis 1970: 462; Farr 1976: 225.

***Didymium iridis* Fr.**

Ecology: on dead leaves, twigs, wood, or soil
Province/Locality: CH
Reference: Farrow 1954: 640; Dennis 1970: 462; Farr 1976: 226.

***Didymium nigripes* (Link) Fr.**

Ecology: on dead leaves
Province/Locality: CA, CH
Reference: Martin 1936: 279; Dennis 1970: 462; Farr 1976: 230.

***Didymium squamulosum* (Alb. & Schwein.) Fr.**

Ecology: on leaves, dung, etc.
Province/Locality: BCI, CA, CH
Reference: Weston 1933: 396; Standley 1933: 16; Martin 1936: 279; Welden 1954a: 98; Dennis 1970: 462; Farr 1976: 232.

***Didymium verrucosporum* A.L. Welden
a new species from Panama**

Ecology: on dead leaves
Province/Locality: CA
Reference: Welden 1954a: 98; Dennis 1970: 462; Farr 1976: 234.

***Fuligo septica* (L.) F.H. Wigg. Fig. 4**

Ecology: on soil, rotten wood, living plants, or litter
Province/Locality: BCI, CA, CH
Reference: Standley 1933: 16; Martin 1938b: 350; Welden 1954a: 97; Dennis 1970: 457; Farr 1976: 110.

***Physarella oblonga* (Berk. & M.A. Curtis) Morgan**

Ecology: on wood or leaves
Province/Locality: CA, COI
Reference: Martin 1936: 279; Dennis 1970: 458; Farr 1976: 192; Pando 1997: 199.

***Physarum auriscalpium* Cooke**

Ecology: on dead wood, leaves etc.
Reference: Martin & Alexopoulos 1969 in Farr 1976: 122; Farr 1976: 122.

***Physarum bivalve* Pers.**

Ecology: on leaves or debris
Province/Locality: CH
Reference: Martin 1936: 278; Dennis 1970: 459; Farr 1976: 125.

***Physarum bogoriense* Racib.**

Ecology: on leaves or litter
Province/Locality: BCI, CA, CH
Reference: Martin 1936: 278; Martin 1938b: 350; Welden 1954a: 98; Dennis 1970: 459; Farr 1976: 126.

***Physarum cinereum* (Batsch) Pers.**

Ecology: on soil, dead leaves, or living plants
Province/Locality: CH
Reference: Martin 1936: 278; Dennis 1970: 459; Farr 1976: 128.

***Physarum compressum* Alb. & Schwein. Fig. 5**

Ecology: on dead leaves or debris
Province/Locality: BCI, CH
Reference: Martin 1936: 278; Welden 1954a: 98; Dennis 1970: 461; Farr 1976: 130.

***Physarum didermoides* (Ach. ex Pers.) Rostaf.**

Ecology: on wood, bark, or debris
Province/Locality: COI
Reference: Dennis 1970: 460; Pando 1997: 199.

***Physarum echinosporum* Lister**

Ecology: on leaves or bark
Province/Locality: CH
Reference: Welden 1954a: 97; Dennis 1970: 459; Farr 1976: 136.

***Physarum fulgens* Pat.**

Ecology: on rotten wood, bark, or dead leaves
 Province/Locality: CC
 Reference: Martin 1936: 278, as *Physarum lateritium* (Berk. & Rav.) Morgan, a wrong identification acc. to Farr 1976: 144; Dennis 1970: 459, as *P. lateritium*; Farr 1974: 37; Farr 1976: 139.

***Physarum globuliferum* (Bull.) Pers.**

Ecology: on dead wood
 Province/Locality: COI
 Reference: Farr 1976: 140; Pando 1997: 199.

***Physarum leucopus* Link**

Ecology: on wood or leaves
 Province/Locality: CH
 Reference: Martin 1936: 278; Dennis 1970: 460; Farr 1976: 145.

***Physarum melleum* Masee**

Ecology: on dead wood or leaves
 Province/Locality: CA, CH
 Reference: Martin 1936: 278; Dennis 1970: 460; Farr 1976: 146.

***Physarum nutans* Pers.**

Ecology: on wood or old fungi
 Province/Locality: BCI, CH, COI
 Reference: Martin 1936: 278; Welden 1954a: 98; Dennis 1970: 459; Farr 1976: 151; Pando 1997: 199.

***Physarum oblatum* T. Macbr.**

Ecology: on dead leaves, herbaceous stems, or wood
 Province/Locality: COI
 Reference: Pando 1997: 200.

***Physarum penetrale* Rex**

Ecology: on dead wood or bark
 Province/Locality: BCI, COI
 Reference: Welden 1954a: 98; Farr 1976: 153; Pando 1997: 200.

***Physarum psittacinum* Ditmar**

Ecology: on dead wood or leaves
 Province/Locality: COI
 Reference: Pando 1997: 200.

***Physarum pulcherripes* Peck**

Ecology: on dead wood
 Province/Locality: CH
 Reference: Martin 1936: 278; Dennis 1970: 460; Farr 1976: 158.

***Physarum pusillum* (Berk. & M.A. Curtis) G. Lister**

Ecology: on bark, dead leaves, or herbaceous litter
 Province/Locality: COI
 Reference: Pando 1997: 200.

***Physarum serpula* Morgan**

Ecology: on wood, bark, leaves, or old fungi
 Province/Locality: CA
 Reference: Martin 1936: 278; Dennis 1970: 459; Farr 1976: 162.

***Physarum stellatum* (Masee) G.W. Martin**

Ecology: on wood or bark
 Province/Locality: BCI, CA, CC, CH, COI
 Reference: Martin 1936: 278, as *Physarum wingatense* T. Macbr., a synonym acc. to Farr 1976: 162; Martin 1938b: 350, as *P. wingatense*; Dennis 1970: 460; Farr 1976: 162; Pando 1997: 200.

***Physarum tenerum* Rex**

Ecology: on dead wood, living or dead leaves, or twigs
 Province/Locality: BCI, CA, CH, COI
 Reference: Martin 1936: 278; Martin 1938b: 350; Welden 1954a: 98; Dennis 1970: 460; Farr 1976: 166; Pando 1997: 201.

***Physarum viride* (Bull.) Pers.**

Ecology: on wood, bark, or old fungi
Province/Locality: CH, COI
Reference: Martin 1936: 278; Dennis 1970:
459; Farr 1976: 170; Pando 1997: 201.

***Willkommlangea reticulata* (Alb. & Schw.) Kuntze**

Ecology: on dead wood
Province/Locality: CA
Reference: Martin 1936: 279; Dennis 1970:
458; Farr 1976: 191; all as *Cienkowskia*
reticulata (Alb. & Schwein.) Rostaf.

Stemonitales

***Brefeldia maxima* (Fr.) Rostaf.**

Ecology: on dead wood or litter
Province/Locality: BCI
Reference: Weston 1933: 396 probably as
Brefeldia sp.; Standley 1933: 16; Farr 1976:
245.

***Collaria arcyronema* (Rostk.) Nann.-Bremek.**

Ecology: on leaves or wood
Province/Locality: BCI, CA, CC, COI, PA
Reference: Weston 1933: 396,; Standley 1933:
17; Martin 1936: 279; Dennis 1970: 457; Farr
1976: 249; Pando 1997: 198; all as
Lamproderma arcyronema Rostk.

***Comatricha afroalpina* Rammeloo**

Ecology: on dead wood
Province/Locality: COI
Reference: Pando 1997: 194.

***Comatricha laxa* Rostaf.**

Ecology: on wood or bark
Province/Locality: CC
Reference: Martin 1936: 279; Dennis 1970:
456; Farr 1976: 259.

***Comatricha nigra* (Pers.) J. Schroet.**

Ecology: on wood
Province/Locality: CA, CH
Reference: Martin 1936: 279; Dennis 1970:
456; Farr 1976: 261.

***Comatricha pulchella* (C. Bab.) Rostaf.**

Ecology: on wood or leaves
Province/Locality: BCI
Reference: Welden 1954a: 97; Dennis 1970:
456; Farr 1976: 262.

***Diachea bulbilosa* (Berk. & Broome) Lister**

Ecology: on litter or dead leaves
Province/Locality: BCI, CA
Reference: Martin 1936: 279; Dennis 1970:
455; Farr 1976: 238.

***Diachea leucopoda* (Bull.) Rostaf.**

Ecology: on fallen sticks, leaves, or living
plants
Province/Locality: CH
Reference: Martin 1936: 279; Dennis 1970:
455; Farr 1976: 239.

***Diachea radiata* Lister & Petch**

Ecology: on dead leaves
Province/Locality: BCI, CA
Reference: Martin 1936: 279; Welden 1954a:
97; Dennis 1970: 455; Farr 1976: 240.

***Lamproderma scintillans* (Berk. & Broome) Morgan**

Ecology: on leaves or moss
Reference: Martin & Alexopoulos 1969 in
Farr 1976: 251; Dennis 1970: 457; Farr 1976:
251.

***Stemonitis axifera* (Bull.) T. Macbr. var. *axifera* genus: Figs. 6-7**

Ecology: on dead wood
Province/Locality: BCI, CA, CH
Reference: Martin 1936: 279; Welden 1954a:
97; Dennis 1970: 455; Farr 1976: 269.

***Stemonitis axifera* (Bull.) T. Macbr. var. *smithii* (T. Macbr.) Hagelst.**

Ecology: on dead wood
 Province/Locality: BCI, CC, COI
 Reference: Martin 1936: 279; Welden 1954a: 97; Dennis 1970: 456; Pando 1997: 202; all as *Stemonitis smithii* T. Macbr. Farr 1976: 270.

***Stemonitis flavogenita* E. Jahn.**

Ecology: on wood or debris
 Province/Locality: CH
 Reference: Martin 1936: 279; Dennis 1970: 456; Farr 1976: 271.

***Stemonitis fusca* Roth**

Ecology: on dead wood
 Province/Locality: BCI, CA, CH, COI
 Reference: Welden 1954a: 97; Dennis 1970: 455; Farr 1976: 271; Pando 1997: 201.

***Stemonitis nigrescens* Rex**

Ecology: on wood or bark
 Province/Locality: BCI, CH, COI
 Reference: Martin 1936: 279; Welden 1954a: 97; Dennis 1970: 455; Farr 1976: 275; Pando 1997: 202.

***Stemonitis pallida* Wingate**

Ecology: on dead wood
 Province/Locality: CA, CH, COI
 Reference: Martin 1936: 279, as *Stemonitis carolinensis* T. Macbr., a synonym acc. to Farr 1976: 276; Dennis 1970: 456, as *S. carolinensis*; Farr 1976: 276; Pando 1997: 202.

***Stemonitis splendens* Rost.**

Ecology: on dead wood or bark
 Province/Locality: CA, CH, PA
 Reference: Martin 1936: 279; Welden 1954a: 97; Welden 1954a: 97, as *Stemonitis webberi* Rex, a synonym acc. to Farr 1976: 276; Dennis 1970: 455, as *S. webberi*; Farr 1976: 276.

***Stemonitis virginiensis* Rex**

Ecology: on dead wood
 Province/Locality: COI
 Reference: Pando 1997: 202.

***Stemonitopsis aequalis* (Peck) Y. Yamam.**

Ecology: on wood
 Reference: Dennis 1970: 456, as *Comatricha aequalis* Peck.

***Stemonitopsis hyperopta* (Meyl.) Nann.-Bremek.**

Ecology: on dead wood
 Province/Locality: COI
 Reference: Pando 1997: 201, as *Stemonitis hyperopta* Meyl.

***Stemonitopsis typhina* (F.H. Wigg.) Nann.-Bremek.**

Ecology: on wood or leaves
 Province/Locality: BCI, CA, CH, COI
 Reference: Martin 1936: 279; Welden 1954a: 97; Dennis 1970: 456; Farr 1976: 265; all as *Comatricha typhoides* (Bull.) Rostaf., a synonym acc. to Index Fungorum. Pando 1997: 202.

***Symphytocarpus longus* (Peck) Nann.-Bremek.**

Ecology: on wood
 Province/Locality: COI
 Reference: Martin & Alexopoulos 1969 in Farr 1976: 260; Dennis 1970: 456; Farr 1976: 259; Pando 1997: 194; all as *Comatricha longa* Peck.

Trichiales***Arcyria cinerea* (Bull.) Pers.**

Ecology: on dead wood
 Province/Locality: BCI, CA, CH, COI
 Reference: Standley 1927: 6; Standley 1933: 16; Martin 1936: 280; Welden 1954a: 97;

Dennis 1970: 453; Farr 1976: 69; Pando 1997: 192.

***Arcyria denudata* (L.) Wettst. Fig. 8**

Ecology: on dead wood or bark
Province/Locality: BCI, CA, CC, CH, COI
Reference: Weston 1933: 396; Standley 1933: 16; Martin 1936: 280; Welden 1954a: 97; Dennis 1970: 453; Farr 1976: 71; Pando 1997: 193.

***Arcyria insignis* Kalchbr. & Cooke**

Ecology: on dead wood or herbaceous stems
Province/Locality: BCI, CA
Reference: Martin 1936: 280; Welden 1954a: 97; Farr 1976: 75; Dennis 1970: 453.

***Arcyria leiocarpa* (Cooke) G.W. Martin & Alexop.**

Ecology: on wood, leaves etc.
Province/Locality: PA
Reference: Martin 1938b: 349, as *Hemitrichia leiocarpa* (Cooke) A. Lister; Dennis 1970: 454, as *H. leiocarpa*; Farr 1976: 76.

***Arcyria magna* Rex**

Ecology: on dead wood
Province/Locality: CH
Reference: Welden 1954a: 96; Dennis 1970: 453; Farr 1976: 76.

***Arcyria minuta* Butchert in Pat.**

Ecology: on dead wood
Province/Locality: COI
Reference: Pando 1997: 194.

***Arcyria nutans* (Bull.) Grev.**

Ecology: on dead wood
Reference: Farr 1976: 77.

***Arcyria oerstedtii* Rostaf.**

Ecology: on rotten wood
Province/Locality: CH, COI
Reference: Martin 1936: 280; Dennis 1970: 453; Farr 1976: 78; Pando 1997: 194.

***Arcyria pomiformis* (Leers) Rostaf.**

Ecology: on dead wood
Reference: Farr 1976: 79.

***Hemitrichia calyculata* (Speg.) M.L. Farr**

Ecology: on dead wood
Province/Locality: BCI, CA, CC, CH, COI
Reference: Martin 1936: 280; Martin 1938b: 350; Welden 1954a: 97; Dennis 1970: 454; all as *Hemitrichia stipitata* (Masse) T. Macbr., a synonym acc. to Farr 1976: 96. Farr 1976: 96; Pando 1997: 196.

***Hemitrichia clavata* (Pers.) Rostaf.**

Ecology: on dead wood
Province/Locality: BCI, COI
Reference: Weston 1933: 396; Standley 1933: 16; Farr 1976: 97; Pando 1997: 198.

***Hemitrichia minor* G. Lister**

Ecology: on litter, bark of living trees, or dung of herbivorous animals
Reference: Martin & Alexopoulos 1969 in Farr 1976: 65, as *Perichaena minor* (G. Lister) Hagelst.; Farr 1976: 65, as *P. minor*.

***Hemitrichia serpula* (Scop.) Rostaf. Fig. 9**

Ecology: on wood, litter, or leaves
Province/Locality: BCI, CA, CH, COI
Reference: Weston 1933: 396, 399; Standley 1933: 16; Martin 1936: 280; Martin 1938b: 350; Dennis 1970: 454; Farr 1976: 100; Pando 1997: 198.

***Metatrichia vesparium* (Batsch) Nann.-Bremek.**

Ecology: on dead, usually rotten wood or bark
Province/Locality: CA, CH
Reference: Martin 1936: 280; Martin 1938b: 350; Dennis 1970: 454; all as *Hemitrichia vesparium* (Batsch) T. Macbr. Farr 1976: 83.

Perichaena chrysosperma* (Curr.)*Lister**

Ecology: on wood or bark

Province/Locality: BCI, CA, CH

Reference: Martin 1936: 280, as *Ophiotheca chrysosperma* Currey; Martin 1938b: 350, as *O. chrysosperma*; Dennis 1970: 452; Farr 1976: 61.***Perichaena corticalis* (Batsch) Rostaf.**

Ecology: on wood or bark

Province/Locality: CH

Reference: Martin 1936: 280; Dennis 1970: 453; Farr 1976: 62.

***Perichaena depressa* Lib.**

Ecology: on dead bark or wood

Province/Locality: BCI, CA, CH, COI

Reference: Martin 1936: 280, also as *Perichaena quadrata* T. Macbr., a synonym (?) acc. to Farr 1976: 63; Farr 1976: 63; Pando 1997: 199.***Perichaena vermicularis* (Schwein.)****Rostaf.**

Ecology: on dead wood

Province/Locality: CH

Reference: Martin 1936: 280, as *Ophiotheca vermicularis* (Schw.) Masee; Farr 1976: 65.***Trichia favoginea* (Batsch) Pers.**

Ecology: on dead wood or bark

Province/Locality: BCI, CA, CC, CH, COI

Reference: Martin 1936: 280, as *Trichia affinis* de Bary, a synonym acc. to Farr 1976: 89; Martin 1936: 280, as *Trichia persimilis* (Batsch) Pers., a synonym acc. to Farr 1976: 89; Welden 1954a: 97, as *T. affinis*; Dennis 1970: 453, as *T. affinis*; Dennis 1970: 453, as *T. persimilis*; Farr 1976: 89; Pando 1997: 202.**DICTYOSTELIOMYCETES****Dictyosteliales*****Dictyostelium mucoroides* Bref.**

Ecology: cultivated from soil

Province/Locality: BCI, CA, CH

Reference: Farrow 1954: 640; Dennis 1970: 464.

OOMYCOTA**Peronosporales*****Albugo blytii* (Biv.) Kuntze**Ecology: plant parasitic, on *Alternanthera ficoidea*, Amaranthaceae

Province/Locality: CA

Reference: Stevens 1930: 281.

***Albugo candida* (Pers.) Kuntze**Ecology: plant parasitic, on *Brassica* sp., *Raphanus sativus*, Brassicaceae

Province/Locality: CA

Reference: Stevens 1930: 281; McGuire & Crandall 1967: 138.

***Albugo ipomoeae-panduratae* (Schwein.) Swingle**Ecology: plant parasitic, on *Ipomoea batatas*, Convolvulaceae

Province/Locality: CA

Reference: Stevens 1927a: 12; Stevens 1930: 281; McGuire & Crandall 1967: 144; Dennis 1970: 440.

***Albugo platensis* (Speg.) Swingle**Ecology: plant parasitic, on *Boerhaavia caribaea*, *B. erecta*, Nyctaginaceae

Province/Locality: CA

Reference: Stevens 1927a: 12; Stevens 1930: 281; Dennis 1970: 440.

***Bremia lactucae* Regel**

Ecology: plant parasitic, on *Lactuca sativa*, Asteraceae
Reference: McGuire & Crandall 1967: 144.

***Peronospora destructor* (Berk.) Casp. ex Berk.**

Ecology: plant parasitic, on *Allium cepa*, Alliaceae
Reference: Toler et al. 1959: 1203; McGuire & Crandall 1967: 140, also as *Peronospora schleideni* Unger, a synonym acc. to Index Fungorum.

***Peronospora parasitica* (Pers.) de Bary**

Ecology: plant parasitic, on *Brassica oleracea*, Brassicaceae
Reference: Toler et al. 1959: 1202; McGuire & Crandall 1967: 138.

***Pseudoperonospora cubensis* (Berk. & M.A. Curtis) Rostovzev**

Ecology: plant parasitic, on *Citrullus vulgaris*, *Cucumis melo*, *C. sativus*, *Cucurbita maxima*, *Sechium edule*, Cucurbitaceae
Reference: Toler et al. 1959: 1202, 1203; McGuire & Crandall 1967: 142.

Pythiales

***Myzocyttium* sp.**

Ecology: endoparasitic in nematodes
Province/Locality: CH
Reference: Persmark et al. 1995: 119.

***Phytophthora cinnamomi* Rands**

Ecology: plant parasitic, on *Persea americana*, Lauraceae
Reference: McGuire & Crandall 1967: 131.

***Phytophthora citriphthora* (R.E. & E.H. Sm.) Leonian**

Ecology: plant parasitic, on *Citrus* sp., Rutaceae
Reference: McGuire & Crandall 1967: 135.

***Phytophthora infestans* (Mont.) de Bary**

Ecology: plant parasitic, on *Capsicum frutescens*, *Lycopersicon esculentum*, *Solanum tuberosum*, Solanaceae
Reference: Toler et al. 1959: 1203; McGuire & Crandall 1967: 125, 136, 139.

***Phytophthora nicotianae* Breda de Haan**

Ecology: plant parasitic, on *Ananas comosus*, Bromeliaceae; on *Citrus sinensis*, *C. sp.*, Rutaceae
Reference: Toler et al. 1959: 1202, as *Phytophthora parasitica* Dastur, a synonym acc. to Index Fungorum; McGuire & Crandall 1967: 133, 135, as *P. parasitica*.

Phytophthora nicotianae* Breda de Haan var. *nicotianae

Ecology: plant parasitic, on *Nicotiana tabacum*, Solanaceae
Reference: Toler et al. 1959: 1203, as *Phytophthora parasitica* var. *nicotianae*.

***Phytophthora palmivora* (E.J. Butler) E.J. Butler**

Ecology: plant parasitic, on *Cocos nucifera*, Arecaceae; on *Carica papaya*, Caricaceae; on *Theobroma cacao*, Malvaceae
Reference: Toler et al. 1959: 1202; McGuire & Crandall 1967: 129, 132, 149.

***Phytophthora phaseoli* Thaxt.**

Ecology: plant parasitic, on *Phaseolus vulgaris*, Fabaceae
Reference: McGuire & Crandall 1967: 121.

***Phytophthora* sp.**

Ecology: plant parasitic, on *Manihot esculenta*, Euphorbiaceae; on *Coffea arabica*, Rubiaceae
Reference: Toler et al. 1959: 1202; McGuire & Crandall 1967: 143, 146.

***Pythium aphanidermatum* (Edson) Fitzp.**

Ecology: plant parasitic, on *Carica papaya*, Caricaceae; on *Cucumis sativus*, Cucurbitaceae; on *Phaseolus vulgaris*, Fabaceae; on *Capsicum frutescens*, *Lycopersicon esculentum*, Solanaceae
Reference: McGuire & Crandall 1967: 121, 129, 137, 139, 142.

***Pythium* sp.**

Ecology: plant parasitic, on *Allium cepa*, Alliaceae; on *Lactuca sativa*, Asteraceae; on *Brassica oleracea*, Brassicaceae; on *Cucumis sativus*, Cucurbitaceae; on *Phaseolus vulgaris*, Fabaceae; on *Gossypium hirsutum*, Malvaceae; on *Lycopersicon esculentum*, *Nicotiana tabacum*, Solanaceae
Reference: Toler et al. 1959: 1202, 1203; McGuire & Crandall 1967: 138, 140, 144, 147.

***Pythium* sp.**

Ecology: cultivated from soil
Province/Locality: BCI
Reference: Farrow 1954: 641.

Sclerosporales***Peronosclerospora sacchari* (T. Miyake) Shirai & Hara**

Ecology: plant parasitic, on *Saccharum officinarum*, Poaceae
Reference: McGuire & Crandall 1967: 128, as *Sclerospora sacchari* T. Miyake.

***Sclerospora graminicola* (Sacc.) J. Schröt.**

Ecology: plant parasitic, on *Sorghum vulgare*, Poaceae
Reference: Toler et al. 1959: 1203.

FUNGI**CHYTRIDIOMYCOTA****Blastocladales*****Allomyces arbusculus* E.J. Butler**

Ecology: saprobic, cultivated from soil along creek or along shore, on dead insects in water
Province/Locality: BCI
Reference: Dennis 1970: 435.

***Catenaria anguillulae* Sorokin**

Ecology: endoparasitic in nematodes
Province/Locality: CH
Reference: Persmark et al. 1995: 119.

***Physoderma maydis* (Miyabe) Miyabe**

Ecology: plant parasitic, on *Zea mays*, Poaceae
Reference: Toler et al. 1959: 1202; McGuire & Crandall 1967: 119.

Chytridiales***Batrachochytrium dendrobatidis* Longcore, Pessier & D.K. Nichols**

Ecology: parasitic on frogs, causing Chytridiomycosis
Province/Locality: CH
Reference: Berger et al. 1998: 9031, as species of Chytridiomycota; Lips 1999: 117, as disease; Lips et al. 2003: 215.

***Synchytrium decipiens* Farl.**

Ecology: plant parasitic, on *Vigna vexillata*, Fabaceae
Reference: Lenné 1990: 146.

Monoblepharidales***Monoblepharella taylori* (Sparrow) Sparrow**

Ecology: saprobic, on soil
Reference: Dennis 1970: 435.

ZYGOMYCOTA

Choanephorales

***Choanephora cucurbitarum* (Berk. & Ravenel) Thaxt.**

Ecology: plant parasitic, on *Ipomoea batatas*, Convolvulaceae
Reference: McGuire & Crandall 1967: 144.

***Choanephora* sp.**

Ecology: saprobic, on flower of *Hibiscus* sp., Malvaceae
Province/Locality: BCI
Reference: Weston 1933: 395; Standley 1933: 17.

Entomophthorales

***Conidiobolus coronatus* (Constantin) A. Batko**

Ecology: saprobic, cultivated from soil of banana farm
Province/Locality: CH
Reference: Goos 1960: 879, as *Delacroixia coronata* (Constantin) Sacc. & P. Syd.

Mucorales

***Absidia blakesleeana* Lendn.**

Ecology: saprobic, cultivated from soil
Reference: Dennis 1970: 442.

***Absidia cylindrospora* Hagem**

Ecology: saprobic, cultivated from soil
Reference: Dennis 1970: 442.

***Absidia glauca* Hagem**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI, CA, CH
Reference: Farrow 1954: 639; Dennis 1970: 442.

***Absidia scabra* Cocc.**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI, CA
Reference: Farrow 1954: 639; Dennis 1970: 442.

***Absidia spinosa* Lendn.**

Ecology: saprobic, cultivated from soil
Reference: Dennis 1970: 442.

***Blakeslea trispora* Thaxt.**

Ecology: saprobic, cultivated from soil
Province/Locality: CA, CH
Reference: Farrow 1954: 639; Dennis 1970: 443.

***Coemansia reversa* Tiegh. & G. Le Monn.**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI
Reference: Farrow 1954: 639; Dennis 1970: 444.

***Cunninghamella echinulata* (Thaxt.) Thaxt.**

Ecology: saprobic, cultivated from soil; deteriorating fibres of *Gossypium hirsutum*, Malvaceae
Province/Locality: BCI, CA, CH
Reference: Farrow 1954: 640; Goos 1960: 879; McGuire & Crandall 1967: 146; Dennis 1970: 444.

***Cunninghamella elegans* Lendn.**

Ecology: saprobic, cultivated from soil of banana farm
Province/Locality: CH
Reference: Goos 1960: 879.

***Gongronella butleri* (Lendn.) Peyronel & Dal Vesco**

Ecology: saprobic, cultivated from soil
Reference: Dennis 1970: 442, as *Absidia butleri* Lendn.

“Lymania” sp.

Ecology: saprobic, on bat droppings
 Province/Locality: BCI
 Reference: Weston 1933: 395; Standley 1933: 17. This genus apparently has never been validly published.

***Mucor circinelloides* Tiegh.**

Ecology: saprobic, cultivated from soil
 Province/Locality: CH
 Reference: Farrow 1954: 640; Dennis 1970: 442.

***Mucor hiemalis* Wehmer**

Ecology: saprobic, cultivated from soil of banana farm
 Province/Locality: CH
 Reference: Goos 1960: 879.

***Mucor plumbeus* Bonord.**

Ecology: saprobic, cultivated from soil
 Province/Locality: BCI, CH
 Reference: Farrow 1954: 640; Dennis 1970: 442.

***Mucor* sp.**

Ecology: saprobic
 Province/Locality: BCI
 Reference: Weston 1933: 395; Standley 1933: 17.

***Phycomyces* sp.**

Ecology: saprobic, on cat dung
 Province/Locality: BCI
 Reference: Weston 1933: 395; Standley 1933: 17.

***Pilobolus* sp.**

Ecology: saprobic, on tapir dung
 Province/Locality: BCI
 Reference: Weston 1933: 395; Standley 1933: 17.

***Rhizopus oryzae* Went & Prins. Geerl.**

Ecology: saprobic, cultivated from soil
 Reference: Farrow 1954: 641, as *Rhizopus arrhizus* A. Fisch., a synonym acc. to Index Fungorum; Dennis 1970: 443, as *R. arrhizus*.

***Rhizopus* sp.**

Ecology: saprobic
 Province/Locality: BCI
 Reference: Weston 1933: 395; Standley 1933: 17.

***Rhizopus stolonifer* (Ehrenb.) Vuill.**

Ecology: saprobic, cultivated from soil; on seeds of *Zea mays*, Poaceae
 Province/Locality: BCI
 Reference: Farrow 1954: 641, as *Rhizopus nigricans* Ehrenb., a synonym acc. to Index Fungorum; McGuire & Crandall 1967: 119, as *R. nigricans*; Dennis 1970: 443.

***Saksenaea vasiformis* S.B. Saksena**

Ecology: saprobic, cultivated from soil
 Province/Locality: BCI, CA
 Reference: Farrow 1954: 641; Zycha & Siepmann 1969: 110; Dennis 1970: 441.

***Syncephalastrum racemosum* Cohn ex J. Schröt.**

Ecology: saprobic, cultivated from soil
 Province/Locality: BCI
 Reference: Farrow 1954: 641; Dennis 1970: 444.

Zoopagales***Acaulopage pectospora* Drechsler**

Ecology: nematode trapping
 Province/Locality: CH
 Reference: Persmark et al. 1995: 119.

***Stylopage* sp.**

Ecology: nematode trapping
 Province/Locality: CH
 Reference: Persmark et al. 1995: 119.

GLOMEROMYCOTA

Diversisporales

***Acaulospora foveata* Trappe & Janos**

Ecology: arbuscular mycorrhizal
Province/Locality: BCI, CA
Reference: Mangan et al. 2004: 698.

***Acaulospora mellea* Spain & N.C. Schenk**

Ecology: arbuscular mycorrhizal
Province/Locality: BCI, CA
Reference: Mangan et al. 2004: 698.

***Acaulospora morrowiae* Spain & N.C. Schenk**

Ecology: arbuscular mycorrhizal
Province/Locality: BCI, CA
Reference: Mangan et al. 2004: 698.

***Acaulospora rehmi* Sieverd. & S. Toro**

Ecology: arbuscular mycorrhizal
Province/Locality: BCI, CA
Reference: Mangan et al. 2004: 698.

***Acaulospora scrobiculata* Trappe**

Ecology: arbuscular mycorrhizal
Province/Locality: BCI, CA
Reference: Mangan et al. 2004: 698.

***Acaulospora* sp.**

Ecology: arbuscular mycorrhizal, based on DNA isolated from roots
Province/Locality: BCI
Reference: Husband et al. 2002: 2672.

***Acaulospora tuberculata* Janos & Trappe**

Ecology: arbuscular mycorrhizal
Province/Locality: BCI, CA
Reference: Mangan et al. 2004: 698.

***Scutellospora calospora* (T.H. Nicolson & Gerd.) C. Walker & F.E. Sanders**

Ecology: arbuscular mycorrhizal
Province/Locality: BCI, CA
Reference: Mangan et al. 2004: 698.

***Scutellospora* sp.**

Ecology: arbuscular mycorrhizal, based on DNA isolated from roots
Province/Locality: BCI
Reference: Husband et al. 2002: 2672.

Glomerales

***Glomus clarum* T.H. Nicolson & N.C. Schenk**

Ecology: arbuscular mycorrhizal
Province/Locality: BCI
Reference: Mangan et al. 2004: 698.

***Glomus clavisporum* (Trappe) R.T. Almeida & N.C. Schenk**

Ecology: arbuscular mycorrhizal
Province/Locality: BCI, CA
Reference: Mangan et al. 2004: 698.

***Glomus coremioides* (Berk. & Broome) D. Redecker & J.B. Morton**

Ecology: arbuscular mycorrhizal
Province/Locality: BCI, CA, CH
Reference: Mangan & Adler 1999: 784; Mangan & Adler 2000: 563; Mangan et al. 2004: 698; all as *Sclerocystis coremioides* Berk. & Broome.

***Glomus fasciculatum* (Thaxt.) Gerd. & Trappe**

Ecology: arbuscular mycorrhizal
Province/Locality: CH
Reference: Mangan & Adler 2000: 563.

***Glomus geosporum* (T.H. Nicolson & Gerd.) C. Walker**

Ecology: arbuscular mycorrhizal
Province/Locality: BCI, CA, CH
Reference: Mangan & Adler 2000: 563; Mangan et al. 2004: 698.

Glomus rubiforme* (Gerd. & Trappe)*R.T. Almeida & N.C. Schenck**

Ecology: arbuscular mycorrhizal

Province/Locality: BCI, CH

Reference: Mangan & Adler 2000: 563;

Mangan et al. 2004: 698.

***Glomus sinuosum* (Gerd. & B.K. Bakshi) R.T. Almeida & N.C. Schenck**

Ecology: arbuscular mycorrhizal

Province/Locality: BCI

Reference: Mangan et al. 2004: 698.

***Glomus* sp.**

Ecology: arbuscular mycorrhizal, based on DNA isolated from roots

Province/Locality: BCI

Reference: Husband et al. 2002: 2672.

ASCOMYCOTA***Dothideomycetidae*****Capnodiales*****Capnocrinum capsuliferum* (Rehm) Bat. & Cif.**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Cornutia pyramidata*, Verbenaceae

Province/Locality: CA

Reference: Batista & Ciferri 1963: 34.

***Capnodium citri* Penz.**

Growth form: pyrenomycetoid

Ecology: foliicolous, on *Citrus* sp., Rutaceae

Reference: Toler et al. 1959: 1202; McGuire & Crandall 1967: 133.

***Capnodium coffeae* Pat.**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Coffea arabica*, Rubiaceae

Reference: McGuire & Crandall 1967: 145.

***Capnodium* sp.**

Growth form: pyrenomycetoid

Ecology: foliicolous, on *Mangifera indica*, Anacardiaceae; on *Coffea arabica*, Rubiaceae

Reference: Toler et al. 1959: 1202; McGuire & Crandall 1967: 131.

***Capnodium usteri* Rehm**

Growth form: pyrenomycetoid

Ecology: foliicolous

Province/Locality: BCI

Reference: Standley 1933: 18.

***Trichomerium grandisporum* (Ellis & G. Martin) Bat. & Cif.**

Growth form: pyrenomycetoid

Ecology: saprobic, foliicolous, on *Mangifera indica*, Anacardiaceae; on *Annona marcgravii*, Annonaceae; on *Cassia fistula*, Fabaceae; on *Syzygium* sp., Myrtaceae; on *Psychotria* sp., Rubiaceae

Province/Locality: CA, CH, CN, PA

Reference: Reynolds 1982: 209, 211.

Dothideales***Achorella attaleae* F. Stevens a new species from Panama**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Attalea cohune*, *Elaeis melanococca*, Arecaceae

Province/Locality: CA, CN

Reference: Stevens 1927a: 29; Stevens 1930: 281.

***Botryosphaeria dothidea* (Moug.) Ces. & De Not.**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Tetragastis panamensis*, Burseraceae

Province/Locality: BCI

Reference: Gilbert & De Steven 1996: 684.

***Botryosphaeria rhodina* (Berk. & M.A. Curtis) Arx**

AN: *Diplodia gossypina* Cooke or *D. natalensis* P. Evans

Growth form: pyrenomycetoid; AN: coelomycetous

Ecology: plant parasitic, on *Citrullus vulgaris*, Cucurbitaceae; on *Gossypium hirsutum*, Malvaceae

Reference: McGuire & Crandall 1967: 142, as *Physalospora rhodina* Berk. & M.A. Curtis, 146, 147.

***Dothiorella* sp.**

Growth form: pyrenomycetoid

Ecology: saprobic, cultivated from soil

Province/Locality: CH

Reference: Goos 1960: 879.

***Endococcus hymeniicola* (Berk. & Broome) D. Hawksw.**

a new species probably from Panama

Growth form: lichenicolous

Ecology: on *Lobaria* sp., Lichenes

Reference: Berkeley & Broome 1852: 385, as *Dothidea hymenicola* Berk. & Broome; Hawksworth 2005: 18.

***Guignardia pleurothallis* Dearn. & House**

a new species from Panama

Growth form: pyrenomycetoid

Ecology: plant parasitic, on languishing leaves of *Pleurothallis ruscifolia*, Orchidaceae

Province/Locality: CH

Reference: Dearness & House 1925: 72.

***Keratosphaera batistae* H.B.P. Upadhyay**

Growth form: pyrenomycetoid

Ecology: lichenicolous, on *Mazosia* spp., Lichenes

Province/Locality: COI

Reference: Etayo 1997: 213.

***Phaeopeltosphaeria panamensis* F. Stevens & C.J. King**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Chaetochloa vulpiseta*, Poaceae

Province/Locality: CA

Reference: Stevens 1927a: 50.

Jahnulales

***Aliquandostipite crystallinus* Raja, Ferrer & Shearer**

Growth form: pyrenomycetoid

Ecology: saprobic, in fresh water habitat

Reference: Raja et al. 2005: 207.

Microthyriales

***Scolecopeltidium bakeri* (Syd. & P. Syd.) F. Stevens & Manter**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Cymbidium* sp., *Epidendrum* sp., *Lycaste* sp., *Maxillaria* sp., *Odontoglossum* sp., *Oncidium sphacelatum*, Orchidaceae

Reference: Cash & Watson 1955: 731, as *Micropeltis bakeri* Syd. & P. Syd.; Batista 1959: 171.

***Scolecopeltidium mayteni* Bat. & I.H. Lima**

Fig. 10

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Trichilia tuberculata*, Meliaceae

Province/Locality: BCI

Reference: Gilbert et al. 1997: 2159.

Mycosphaerellales

***Microcyclus ulei* (Henn.) Arx**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Hevea brasiliensis*, *H. spruceana*, Euphorbiaceae

Reference: Spaulding 1961: 92, as *Dothidella ulei* Henn.; McGuire & Crandall 1967: 150, as *D. ulei*.

Mycosphaerella brassicicola* (Duby)*Lindau**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Brassica oleracea* var. *oleracea*, Brassicaceae

Reference: McGuire & Crandall 1967: 138.

Mycosphaerella cattleyae* E.K. Cash & A.M.J. Watson*a new species from Panama**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Cattleya* sp.,

Orchidaceae Province/Locality: CA

Reference: Cash & Watson 1955: 732; Dennis 1970: 216.

Mycosphaerella erythrinae* F. Stevens*a new species from Panama**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Erythrina* sp.,

Fabaceae Province/Locality: PA

Ref.: Stevens 1930: 285; Dennis 1970: 214.

Mycosphaerella fijiensis* M. Morelet*AN: *Pseudocercospora fijiensis* (M.****Morelet) Deighton**

Growth form: pyrenomycetoid; AN:

hyphomycetous

Ecology: plant parasitic, on *Musa* sp.,

Musaceae, causing Black Sigatoka

Reference: Crous & Braun 2003: 185.

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

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Gossypium**hirsutum*, Malvaceae

Reference: McGuire & Crandall 1967: 147.

***Mycosphaerella horii* Hara**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Citrus* sp.,

Rutaceae

Reference: McGuire & Crandall 1967: 135.

Mycosphaerella maydina* (Pass.)*Lindau**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Digitaria decumbens*, Poaceae

Reference: McGuire & Crandall 1967: 152.

Mycosphaerella musae* (Speg.) Syd. & P. Syd.*AN: *Pseudocercospora musae* (Zimm.)****Deighton**

Growth form: pyrenomycetoid; AN:

hyphomycetous

Ecology: plant parasitic, on *Musa* sp.,

Musaceae, causing Yellow Sigatoka

Reference: Toler et al. 1959: 1202, as

Cercospora musae Zimm.; Crous & Braun

2003: 286.

***Mycosphaerella musicola* R. Leach**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Musa* sp.,

Musaceae

Reference: McGuire & Crandall 1967: 130.

Myriangiales***Elsinoë fawcettii* Bitanc. & Jenkins**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Citrus sinensis*, C.

sp., Rutaceae

Reference: Toler et al. 1959: 1202, as

Sphaceloma fawcettii Jenkins; McGuire &

Crandall 1967: 134.

***Elsinoë mangiferae* Bitanc. & Jenkins**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Mangifera indica*,

Anacardiaceae

Reference: McGuire & Crandall 1967: 131.

Elsinoë rhynchosiae* Jenkins & A.M.J.*Watson****a new species from Panama**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Rhynchosia calycosa*, Fabaceae

Province/Locality: PA

Reference: Jenkins & Watson 1962: 582; Dennis 1970: 325; Lenné 1990: 116.

Pleosporales

***Delitschia marchalii* Berl. & Voglino**

Growth form: pyrenomycetoid

Ecology: saprobic, on dung

Reference: Dennis 1970: 211.

***Didymella bryoniae* (Fuckel) Rehm**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Citrullus vulgaris*, Cucurbitaceae

Reference: McGuire & Crandall 1967: 142, as *Mycosphaerella citrullina* (C.O. Sm.)

Grossenb., a synonym acc. to Index Fungorum.

***Didymosphaeria trachodes* (Mont.)**

Sacc.

Growth form: pyrenomycetoid

Ecology: plant parasitic, on swamp palm, Arecaceae

Province/Locality: CN

Ref.: Stevens 1930: 285; Dennis 1970: 208.

***Leptosphaeria sacchari* Breda de Haan**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Saccharum officinarum*, Poaceae

Province/Locality: CA

Reference: Chardón 1930b: 268; Toler et al. 1959: 1203; McGuire & Crandall 1967: 128; Dennis 1970: 210.

***Leptosphaeria salvinii* Catt.**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Oryza sativa*, Poaceae

Reference: Toler et al. 1959: 1203; McGuire & Crandall 1967: 124.

***Parodiella hedysari* (Schwein.) S.**

Hughes

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Stylosanthes* sp., Fabaceae

Ref.: Stevenson 1927 in Lenné 1990: 139.

indet. species of **Phaeosphaeriaceae**

Growth form: pyrenomycetoid

Ecology: parasitic on eggs of red-eyed treefrog

Province/Locality: PA

Reference: Warkentin et al. 2001: 2860.

***Pleospora panamensis* (F. Stevens & C.J. King) Petr.**

a new species from Panama

Growth form: pyrenomycetoid

Ecology: mycoparasitic, on *Phyllachora chaetochloe*, Phyllachorales

Reference: Dennis 1970: 210.

***Podonectria coccicola* (Ellis & Everh.) Petch**

Growth form: pyrenomycetoid

Ecology: parasitic on scale insects, Coccidae (Homoptera), on *Citrus* sp., Rutaceae

Reference: McGuire & Crandall 1967: 135.

***Sporomiella minima* (Auersw.) S.I. Ahmed & Cain**

Growth form: pyrenomycetoid

Ecology: saprobic, cultivated from soil

Province/Locality: BCI, CA, CH

Ref.: Farrow 1954: 641, as *Sporormia minima* Auersw.; Dennis 1970: 212, as *S. minima*.

***Sporormia herculea* Ellis & Everh.**

Growth form: pyrenomycetoid

Ecology: saprobic

Reference: Dennis 1970: 212.

***Tubeufia paludosa* (P. Crouan & H. Crouan) Rossman**

Growth form: pyrenomycetoid

Ecology: saprobic/mycoparasitic, on dematiaceous fungi on decorticated wood
Province/Locality: CH
Reference: Rossman 1977: 383.

order: Incertae sedis

Asterinaceae

***Asterina killipii* Dearness & House a new species from Panama**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Erythrodes killipii*, Orchidaceae
Province/Locality: CH
Reference: Dearness & House 1925: 68.

***Yamamotoa carludovicae* (Bat.) Arx & E. Müll.**

a new species from Panama
Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Carludovica palmata*, Cyclanthaceae
Reference: Batista 1960, as *Peresiopsis carludovicae* Bat., cited by Sivanesan 1984: 324; Sivanesan 1984: 324.

Micropeltidaceae

***Chaetothyriopsis panamensis* F. Stevens & Dorman a new species from Panama**

Growth form: pyrenomycetoid
Ecology: epiphyllic or plant parasitic, on *Oncoba laurina*, Flacourtiaceae
Province/Locality: DA
Reference: Stevens 1927c: 237; Dennis 1970: 232.

Parmulariaceae

***Kiehlia bambusina* (Speg.) Farr var. *bambusarum* (Shanor) Farr
AN: *Shanoria bambusacearum* (Sacc. & Syd.) Cicc.**

Growth form: pyrenomycetoid; AN: coelomycetous
Ecology: plant parasitic, on *Arthrostylidium racemiflorum*, Poaceae
Province/Locality: CA
Reference: Shanor 1946: 337, as *Lateropeltis bambusarum* Shanor; Spaulding 1961: 61, as *Ciliochorella bambusarum* Shanor, a synonym of the anamorph; Dennis 1970: 359, as *C. bambusarum*.

Parodiopsidaceae

***Dimeriella olyrae* F. Stevens**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Olyra latifolia*, Poaceae
Province/Locality: CA
Ref.: Stevens 1927a: 16; Stevens 1930: 281.

***Dysrhyndis oligotricha* (Mont.) Arx**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Olyra latifolia*, Poaceae
Reference: Farr 1966: 234; Dennis 1970: 197.

***Parodiopsis ingarum* (Henn.) G. Arnaud**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Inga* sp., Fabaceae
Province/Locality: CA
Reference: Stevens 1927a: 19.

Pseudoperisporiaceae

***Epibryon hepaticicola* (Racov.) Döbbeler s. lat.**

Growth form: pyrenomycetoid
Ecology: parasitic on mosses, on *Radula flaccida*, Hepaticae
Province/Locality: BCI
Reference: Döbbeler 1998: 346.

Erysiphomycetidae

Erysiphales

***Erysiphe betae* (Vanha) Jacz.**

Growth form: plectomycetoid
Ecology: plant parasitic, on *Phaseolus vulgaris*, *Vigna sinensis*, Fabaceae
Reference: Toler et al. 1959: 1202, as *Erysiphe polygona* DC., a synonym acc. to Index Fungorum; McGuire & Crandall 1967: 120, as *E. polygona*.

***Erysiphe cichoracearum* Jacz.**

Growth form: plectomycetoid
Ecology: plant parasitic, on *Citrullus vulgaris*, *Cucumis melo*, *C. sativus*, *Cucurbita maxima*, *Sechium edule*, Cucurbitaceae
Reference: Toler et al. 1959: 1202, 1203; McGuire & Crandall 1967: 141.

***Erysiphe* sp.**

Growth form: plectomycetoid
Ecology: plant parasitic, on *Citrus* sp., Rutaceae
Reference: Amano 1986: 306.

Eurotiomycetidae

Eurotiales

***Emericella varicolor* Berk. & Broome a new species from Panama**

Ecology: saprobic, cultivated from soil
Reference: Peterson 2000b: 330.

***Talaromyces flavus* (Klöcker) Stolk & Samson**

AN: *Penicillium vermiculatum* P.A. Dang.

Growth form: plectomycetoid; AN: hyphomycetous
Ecology: saprobic, cultivated from soil of banana farm, from weathering cotton fabric
Province/Locality: CH

Reference: Raper et al. 1949: 580; Goos 1960: 879; Pitt 1979: 472.

***Talaromyces rotundus* (Raper & Fennell) C.R. Benj.**

**AN: *Penicillium sphaerum* Pitt
a new species from Panama**
Ecology: saprobic, cultivated from wood
Province/Locality: CH
Reference: Raper & Fennell 1948: 518; Baker 1968: 197; Dennis 1970: 383; Raper et al. 1949: 591; all as *Penicillium rotundum* Raper & Fennell, a synonym acc. to Index Fungorum. Pitt 1979: 494; Heredia et al. 2001: 535.

***Trichocoma paradoxa* Jungh.**

Growth form: plectomycetoid
Ecology: saprobic, on a fallen log
Province/Locality: CH
Reference: Martin 1938a: 431; Dennis 1970: 321.

Onygenales

***Arthroderma curreyi* Berk.**

Growth form: plectomycetoid
Ecology: saprobic, on feathers
Reference: Benjamin 1956: 307; Dennis 1970: 322.

***Ctenomyces serratus* Eidam**

Growth form: plectomycetoid
Ecology: saprobic, on feathers
Reference: Benjamin 1956: 311; Dennis 1970: 322.

Leotiomycetidae

Helotiales

***Ascocoryne sarcoides* (Jacq.) J.W. Groves & D.E. Wilson**

Growth form: discomycetoid
Ecology: saprobic, on wood

Province/Locality: CH
Reference: Cash 1937: 214, as *Coryne sarcoides* (Jacq.) Tul. & C. Tul.

***Belonopsis aciculispora* E.K. Cash
a new species from Panama**

Growth form: discomycetoid
Ecology: saprobic, on twigs
Province/Locality: CH
Reference: Cash 1937: 214; Dennis 1954: 293; Dennis 1970: 353.

***Bulgaria inquinans* (Pers.) Fr.**

Growth form: discomycetoid
Ecology: saprobic, on wood
Province/Locality: CH
Reference: Cash 1937: 214.

***Chlorencoelia versiformis* (Pers.) J.R. Dixon**

Growth form: discomycetoid
Ecology: saprobic, on wood
Province/Locality: CH
Reference: Cash 1937: 216, as *Chlorosplenium versiforme* (Pers.) P. Karst.

***Chlorociboria aeruginascens* (Nyl.) Kanouse
genus: Fig. 11**

Growth form: discomycetoid
Ecology: saprobic, on wood
Province/Locality: CH
Reference: Cash 1937: 216, as *Chlorosplenium aeruginascens* (Nyl.) P. Karst.

Dasyscyphus varians* Rehm var. *varians

Growth form: discomycetoid
Ecology: saprobic, on rachis of ferns
Province/Locality: PA
Reference: Haines 1980: 203.

***Dasyscyphus varians* Rehm var. *pteridophyllus* (Rodw.) Haines**

Growth form: discomycetoid

Ecology: saprobic, on ferns
Province/Locality: CC, PA
Reference: Haines 1980: 209.

***Davincia helios* Penz. & Sacc.**

Growth form: discomycetoid
Ecology: saprobic, on wood
Province/Locality: CH
Reference: Cash 1937: 218; Dennis 1970: 348.

***Dicephalospora rufocornea* (Berk. & Broome) Spooner**

Growth form: discomycetoid
Ecology: saprobic, on leaves, twigs or branches
Province/Locality: CC, PA, VR
Reference: Dumont 1980: 256, as *Helotium rufocorneum* Berk. & Broome.

***Erinella longispora* (P. Karst.) Sacc.**

Growth form: discomycetoid
Ecology: saprobic, on twigs
Province/Locality: CH? (question mark by Cash)
Reference: Cash 1937: 218.

***Godronia splendida* Speg.**

Growth form: discomycetoid
Ecology: saprobic, on twigs
Province/Locality: CH
Reference: Cash 1937: 213.

***Helotium episphaericum* Peck**

Ecology: mycoparasitic, on *Xylaria scruposa*, Xylariales, Ascomycota
Province/Locality: BCI
Reference: Martin 1948: 112.

***Helotium pezizoideum* Cooke & W. Phillips**

Ecology: saprobic, on wood
Province/Locality: CH
Reference: Cash 1937: 218.

***Lachnum abnorme* (Mont.) J.H. Haines & Dumont**

Growth form: discomycetoid
Ecology: saprobic, on wood or bark of trees
Province/Locality: CH
Reference: Haines & Dumont 1984: 10.

***Lachnum brasiliense* (Mont.) J.H. Haines & Dumont**

Growth form: discomycetoid
Ecology: saprobic, on twigs, wood, or bark of trees
Province/Locality: CH, PA
Reference: Cash 1937: 218, as *Erinella similis* Bres., a synonym acc. to Haines & Dumont 1984: 23; Haines & Dumont 1984: 23.

***Lachnum chusqueae* (Pat.) J.H. Haines & Dumont**

Growth form: discomycetoid
Ecology: saprobic, on bamboo culms
Province/Locality: CH
Reference: Cash 1937: 217, as *Dasyscyphella appressa* Cash, a synonym acc. to Haines & Dumont 1984: 4; Dennis 1954: 301, as *Dasyscyphus bambusinus* (Bres.) Dennis, a synonym acc. to Haines & Dumont 1984: 4; Dennis 1970: 349, as *D. bambusinus*.

***Lachnum cyphelloides* (Pat.) J.H. Haines & Dumont**

Growth form: discomycetoid
Ecology: saprobic, on twigs or woody stems
Province/Locality: CH
Reference: Cash 1937: 216, as *Dasyscyphella acutipila* E.K. Cash, a synonym acc. to Haines & Dumont 1984: 30; Dennis 1954: 303, as *Dasyscyphus martinii* Dennis, a synonym acc. to Haines & Dumont 1984: 30; Dennis 1970: 349, as *D. martinii*; Haines & Dumont 1984: 30.

***Lachnum lagerheimii* J.H. Haines & Dumont**

Growth form: discomycetoid

Ecology: saprobic, on bark of dead stems
Province/Locality: CH
Reference: Haines & Dumont 1984: 31.

***Lachnum patena* (Lév.) J.H. Haines & Dumont**

Growth form: discomycetoid
Ecology: saprobic, mostly on dead woody stems
Province/Locality: CH
Reference: Haines & Dumont 1984: 33.

***Lachnum sclerotii* (A.L. Sm.) J.H. Haines & Dumont**

Growth form: discomycetoid
Ecology: saprobic, on wood or bark of trees
Province/Locality: CC
Reference: Haines & Dumont 1984: 17.

***Martinia panamaensis* (Whetzel) Dumont & Korf**

a new species from Panama

Growth form: discomycetoid
Ecology: saprobic/mycoparasitic, on bark, wood of rotten logs, or branches
Province/Locality: CA
Reference: Whetzel 1942: 586, as *Martinia panamaensis* Whetzel, acc. to Dumont & Korf 1970: 608; Martin 1948: 113, as *M. panamaensis*; Dennis 1970: 342, as *M. panamaensis*; Dumont & Korf 1970: 608.

***Mollisia cinerea* (Batsch) P. Karst.**

Growth form: discomycetoid
Ecology: saprobic, on wood or bark
Province/Locality: CH
Reference: Dennis 1970: 354.

***Patinellaria cubensis* (Berk. & M.A. Curtis) Dennis**

Growth form: discomycetoid
Ecology: mycoparasitic, on stromata of Xylariaceae
Reference: Dennis 1970: 347.

***Proliferodiscus inspersus* (Berk. & M.A. Curtis) J.H. Haines & Dumont**

Growth form: discomycetoid
 Ecology: saprobic, on wood
 Province/Locality: CH
 Reference: Cash 1937: 216, cited as *Dasyscyphus congregata* Henn., a synonym acc. to Haines & Dumont 1983: 539; Haines & Dumont 1983: 538.

***Sclerotinia sclerotiorum* (Lib.) de Bary**

Growth form: discomycetoid
 Ecology: plant parasitic, on *Brassica oleracea*, Brassicaceae; on *Phaseolus vulgaris*, Fabaceae
 Reference: Toler et al. 1959: 1202; McGuire & Crandall 1967: 121, 138.

***Strossmayeria notabilis* Iturr. a new species from Panama**

Growth form: discomycetoid
 Ecology: saprobic, on fallen palm trunk
 Province/Locality: BCI, CH
 Reference: Iturriaga & Korf 1990: 440.

***Strossmayeria sordida* (E.K. Cash) Iturr.**

a new species from Panama
 Growth form: discomycetoid
 Ecology: saprobic, on decorticated wood
 Province/Locality: CC
 Reference: Cash 1937: 215, as *Belonium sordidum* E.K. Cash; Dennis 1954: 317, as *Pseudohelotium sordidum* (E.K. Cash) Dennis; Dennis 1970: 348, as *P. sordidum*; Iturriaga & Korf 1990: 444.

***Trichoglossum hirsutum* (Pers.) Boud. genus: Fig. 12**

Growth form: spathulate
 Ecology: saprobic, on soil
 Province/Locality: BCI
 Reference: Cash 1937: 221; probably corresponding to *T. variabile* (see below).

***Trichoglossum rasum* Pat.**

Growth form: spathulate
 Ecology: saprobic, on soil
 Reference: Mains 1954: 629; Baker 1968: 197.

***Trichoglossum variabile* (E.J. Durand) Nannf.**

Growth form: spathulate
 Ecology: saprobic, on soil
 Province/Locality: CA
 Reference: Mains 1954: 627; Mains probably refers to the same collection as Cash 1937 who calls it *T. hirsutum* (see above).

Rhytismatales***Cerion leucophaeum* (Speg.) Dennis**

Growth form: discomycetoid
 Ecology: saprobic, on decaying twigs or bark
 Province/Locality: CC, CH
 Reference: Sherwood 1980: 107.

***Coccomyces dentatus* (J.C. Schmidt & Kunze) Sacc. Figs. 13-14**

Growth form: discomycetoid
 Ecology: saprobic, on dead leaves, mainly of Fagaceae or Ericaceae
 Province/Locality: CH
 Reference: Sherwood 1980: 46.

***Coccomyces leptosporus* Speg.**

Growth form: discomycetoid
 Ecology: saprobic, on dead leaves
 Province/Locality: PA
 Reference: Sherwood 1980: 66.

***Coccomyces limitatus* (Berk. & M.A. Curtis) Sacc.**

Growth form: discomycetoid
 Ecology: saprobic, on dead leaves
 Province/Locality: PA
 Reference: Sherwood 1980: 68.

***Coccomyces palmicola* Sherwood
a new species from Panama**

Growth form: discomycetoid
Ecology: saprobic, on dead leaf of palm,
Arecaceae
Province/Locality: PA
Reference: Sherwood 1980: 72.

***Propolis quadrifida* (Lév.) Mont.**

Growth form: discomycetoid
Ecology: saprobic, on dead leaf of *Clusia* sp.
Province/Locality: CC, PA
Reference: Sherwood 1977b: 325.

Meliolomycetidae

Meliolales

***Amazonia corozalensis* Bat. & Nascim.
in Batista & Maia**

a new species from Panama
Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Spondias*
purpurea, Anacardiaceae
Province/Locality: CA
Reference: Batista & Maia 1957: 445;
Katamoto & Hosagoudar 1989: 616.

***Appendiculella arecibensis* (F.
Stevens) Toro**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Acalypha*
diversifolia, Euphorbiaceae
Reference: Hansford 1961: 204; Dennis 1970:
246.

***Appendiculella larviformis* (Henn.)
Höhn.**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Acalypha*
diversifolia, Euphorbiaceae
Province/Locality: CA
Reference: Stevens 1927b: 425, as *Irene*
larviformis (Henn.) F. Stevens.

***Appendiculella larviformis* (Henn.)
Höhn. var. *major* Hansf.**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Acalypha* sp.,
Euphorbiaceae
Reference: Hansford 1955: 30.

***Appendiculella sororcula* (Speg.)
Hansf.**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Rhabdadenia*
paludosa, Apocynaceae; on *Eupatorium* sp.,
Calea pittieri, Asteraceae
Province/Locality: CA, PA
Reference: Stevens 1927b: 423, as *Irene*
sororcula (Speg.) F. Stevens; Hansford 1961:
615; Dennis 1970: 244; Rodríguez & Minter
1999a.

***Appendiculella tonkinensis* (P. Karst. &
Roum.) Toro var. *cecropiae* (F.
Stevens) Hansf.**

a new variety from Panama
Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Cecropia*
arachnoidea, *C. longifera*, Cecropiaceae
Province/Locality: CA, CN
Reference: Stevens 1927b: 427, as *Irene*
tonkinensis (Karsten & Roumeguère) F.
Stevens var. *cecropiae* F. Stevens; Hansford
1961: 321; Dennis 1970: 251.

***Appendiculella vernoniae* (F. Stevens)
Hansf.**

a new species from Panama
Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Vernonia* sp.,
Asteraceae
Province/Locality: CA, PA
Reference: Stevens 1927b: 424, as *Irene*
sororcula (Speg.) F. Stevens var. *vernoniae* F.
Stevens; Hansford 1955: 31; Hansford 1961:
617; Dennis 1970: 244.

***Asteridiella anguriae* (F. Stevens)
Hansf.**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on Cucurbitaceae
Province/Locality: CA
Reference: Stevens 1927b: 464, as *Irenina anguriae* F. Stevens; Hansford 1961: 123; Dennis 1970: 245.

***Asteridiella bomplandii* (Speg.) Hansf.**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Sapindus saponaria*, Sapindaceae
Province/Locality: CA
Reference: Stevens 1927b: 450, as *Irenina bomplandi* (Speg.) F. Stevens; Hansford 1961: 426.

***Asteridiella colubrinae* (F. Stevens)
Hansf.**

a new species from Panama
Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Colubrina rufa*, Rhamnaceae
Province/Locality: CA
Reference: Stevens 1927b: 451, as *Irenina colubrinae* F. Stevens; Hansford 1961: 364; Dennis 1970: 253.

***Asteridiella combreti* (F. Stevens)
Hansf.**

a new species from Panama
Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Combretum farinosum*, Combretaceae
Province/Locality: CA
Reference: Stevens 1927b: 465, as *Irenina combreti* F. Stevens; Hansford 1961: 159; Dennis 1970: 244.

***Asteridiella costi* (F. Stevens) Hansf.
a new species from Panama**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Costus* sp., Costaceae

Province/Locality: CN
Reference: Stevens 1927b: 458, as *Irenina costi* F. Stevens; Hansford 1961: 704; Dennis 1970: 258; Bussaban et al. 2002: 170, as *I. costi*.

***Asteridiella doliocarp* (Hansf.) Hansf.
a new species from Panama**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Doliocarpus* sp., Dilleniaceae
Province/Locality: CA
Reference: Hansford 1955: 29, as *Appendiculella doliocarp* Hansf.; Hansford 1961: 100; Dennis 1970: 245.

***Asteridiella glabra* (Berk. & M.A. Curtis)
Hansf. var. *isertiae* (F. Stevens) Hansf.
a new variety from Panama**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Isertia haenkiana*, *Psychotria* sp., Rubiaceae
Province/Locality: CA, PA
Reference: Stevens 1927b: 460, as *Irenina isertiae* F. Stevens; Hansford 1961: 579; Dennis 1970: 254.

***Asteridiella glabroides* (F. Stevens)
Hansf.**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Piper breve*, *P. smilacifolium*, *P. persubulatum*?, *P. villiramulum*, Piperaceae
Province/Locality: CA, CN, PA
Reference: Stevens 1927b: 463, as *Irenina glabroides* (F. Stevens) F. Stevens; Hansford 1961: 71; Dennis 1970: 253.

***Asteridiella lagunculariae* (Earle)
Hansf.**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Laguncularia racemosa*, Combretaceae
Province/Locality: CA

Reference: Stevens 1927b: 458, as *Irenina lagunculariae* (Earle) F. Stevens; Hansford 1961: 160; Dennis 1970: 244.

***Asteridiella longipedicellata* (F. Stevens) Hansf. var. *major* Hansf.**

a new variety from Panama

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Doliocarpus* sp., Dilleniaceae

Reference: Hansford 1957a: 56; Hansford 1961: 102; Dennis 1970: 245, as *Asteridiella longipedicellata*.

***Asteridiella longipoda* (Gaillard) Hansf.**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Cordia heterophylla*, Boraginaceae

Province/Locality: CA

Reference: Stevens 1927b: 459, as *Irenina longipoda* (Gaillard) F. Stevens.

***Asteridiella meibomia* (F. Stevens) Hansf.**

a new species from Panama

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Meibomia cana*, Fabaceae

Province/Locality: CA

Reference: Stevens 1927b: 454, as *Irenina meibomia* F. Stevens; Baker & Dale 1951: 14, as *I. meibomia*; Hansford 1961: 272; Dennis 1970: 250.

***Asteridiella melastomatacearum* (Speg.) Hansf.**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Clidemia neglecta*, *Miconia lacera*, Melastomataceae

Province/Locality: CA

Reference: Stevens 1927b: 459, as *Irenina melastomatacearum* (Speg.) F. Stevens; Hansford 1961: 154; Dennis 1970: 251.

***Asteridiella obscura* (F. Stevens) Hansf.**

a new species from Panama

Growth form: pyrenomycetoid

Ecology: plant parasitic, on Dilleniaceae

Province/Locality: CA

Reference: Stevens 1927b: 454, as *Irenina obscura* F. Stevens; Hansford 1961: 103; Dennis 1970: 246.

***Asteridiella olmediae* Hansf.**

a new species from Panama

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Olmedia aspera*, Moraceae

Province/Locality: CA

Reference: Stevens 1927b: 463, as *Irenina glabroides* (F. Stevens) F. Stevens p.p., acc. to Hansford 1957c: 48; Hansford 1957c: 48; Hansford 1961: 324; Dennis 1970: 251.

***Asteridiella papillifera* (Syd.) Hansf.**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Doliocarpus* sp., Dilleniaceae; Province/Locality: CA

Reference: Stevens 1927b: 428, as *Irene papillifera* Syd.

***Asteridiella peruviana* (Syd. & P. Syd.) Hansf.**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Arrabidaea pachycalyx*, Bignoniaceae

Province/Locality: CA

Reference: Stevens 1928: 255, as *Meliola peruviana* Syd. & P. Syd.

***Asteridiella tremae* (Speg.) Hansf.**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Trema* sp., Ulmaceae

Province/Locality: CA

Reference: Stevens 1927b: 457, as *Irenina tremae* (Speg.) F. Stevens p.p.; Hansford 1961: 316; Dennis 1970: 257.

***Asteridiella usteriana* (Syd.) Hansf.**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Cordia heterophylla*, Boraginaceae
 Reference: Hansford 1961: 630; Dennis 1970: 243.

***Asteridiella vilis* (Syd. & P. Syd.) Hansf. var. *caracasensis* Hansf.**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Citharexylum caudatum*, Verbenaceae
 Province/Locality: CA
 Reference: Stevens 1927b: 463, as *Irenina glabroides* (F. Stevens) F. Stevens p.p., acc. to Hansford 1961: 686; Hansford 1961: 686; Dennis 1970: 258.

***Asteridiella villebruneae* (Hansf.) Hansf.**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Myriocarpa longipes*, Urticaceae
 Province/Locality: CA
 Reference: Stevens 1927b: 457, as *Irenina tremae* (Speg.) F. Stevens p.p., acc. to Hansford 1961: 332; Hansford 1961: 332; Dennis 1970: 257.

***Irenopsis aciculosa* (G. Winter) F. Stevens**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Sida* sp., Malvaceae
 Reference: Hansford 1961: 186.

***Irenopsis brasiliensis* (Speg.) Hansf.**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on Bignoniaceae
 Province/Locality: CA, PA
 Reference: Stevens 1927b: 442, as *Irenopsis bignoniacearum* F. Stevens, a synonym acc. to Hansford 1961: 660; Stevens 1928: 243, as *Meliola shropshiriana* F. Stevens, a synonym acc. to Hansford 1961: 660; Baker & Dale

1951: 16, as *I. bignoniacearum*; Hansford 1961: 660.

***Irenopsis conostegiae* F. Stevens a new species from Panama**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Conostegia xalapensis*, Melastomataceae
 Province/Locality: CA
 Reference: Stevens 1927b: 439; Hansford 1961: 152; Dennis 1970: 251.

***Irenopsis cornuta* (Rehm) Hansf.**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Lygodium polymorphum*, Pteridophyta
 Reference: Hansford 1961: 753.

***Irenopsis hurae* (Syd.) Hansf.**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Hura crepitans*, Euphorbiaceae
 Province/Locality: CA
 Reference: Stevens 1927b: 441, as *Irenopsis crotonis* (F. Stevens & Tehon) F. Stevens, a wrong identification acc. to Hansford 1961: 208; Hansford 1961: 207; Dennis 1970: 246.

***Irenopsis molleriana* (G. Winter) F. Stevens**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Hibiscus tiliaceus*, *Malache sessiliflora*, *M. ovata*, *Sida* sp., Malvaceae
 Province/Locality: CA
 Reference: Stevens 1927b: 437; Hansford 1961: 184; Dennis 1970: 250.

***Irenopsis pteridicola* (F. Stevens) Hansf.**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Adiantum petiolatum*, *Aneimia* sp., *Lygodium polymorphum*, *L. radiatum*, Pteridophyta
 Province/Locality: CA, PA

Reference: Stevens 1928: 252, as *Meliola pteridicola* F. Stevens; Hansford 1961: 752; Dennis 1970: 259; Rodríguez & Minter 1999b.

***Irenopsis shropshiriana* (F. Stevens) Hansf.**

a new species from Panama

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Miconia argentea*, Melastomataceae

Province/Locality: BCI, CA

Reference: Stevens 1927b: 452, as *Irenina shropshiriana* F. Stevens; Standley 1927: 6, as *I. shropshiriana*; Standley 1933: 17, as *I. shropshiriana*; Hansford 1961: 152; Dennis 1970: 251.

***Irenopsis tortuosa* (G. Winter) F. Stevens**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Piper peltatum*, *P. sanjoseanum*, Piperaceae

Province/Locality: CA, PA

Reference: Stevens 1927b: 439; Hansford 1961: 69.

***Irenopsis toruloidea* (F. Stevens) F. Stevens**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Cassia pilifera*, Fabaceae

Province/Locality: CA, PA

Reference: Stevens 1927b: 441; Hansford 1961: 244; Dennis 1970: 248.

***Irenopsis triumfettae* (F. Stevens) Hansf. & Deighton**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Helicteres guazumaefolia*, *Hibiscus tiliaceus*, *Luhea speciosa*, *Malache ovata*, *M. sessiliflora*, Malvaceae

Province/Locality: CA, Loma Bracho

Reference: Stevens 1927b: 435, as *Irenopsis coronata* (Speg.) F. Stevens var. *triumfettae* (F. Stevens) F. Stevens; Hansford 1961: 170, 178; Dennis 1970: 257.

***Meliola alibertiae* F. Stevens
a new species from Panama**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Alibertia edulis*, Rubiaceae

Province/Locality: CA

Reference: Stevens 1928: 258; Hansford 1961: 591; Dennis 1970: 254.

***Meliola ambigua* Pat. & Gaillard**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Lantana* sp., Verbenaceae

Province/Locality: CA

Reference: Stevens 1928: 254; Hansford 1961: 692; Dennis 1970: 258.

***Meliola amerimni* (F. Stevens) Hansf.
a new species from Panama**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Merimnon brownei* (*Amerimnum brownii*), Fabaceae

Province/Locality: CA

Reference: Stevens 1928: 189, as *Meliola bicornis* Winter var. *amerimni* F. Stevens; Hansford 1961: 273; Dennis 1970: 249.

***Meliola amphigena* F. Stevens & Tehon**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Borreria* sp., *Hamelia patens*, *Isertia* sp., Rubiaceae

Province/Locality: CN

Reference: Stevens 1928: 247; Hansford 1961: 601; Dennis 1970: 254.

***Meliola andirae* Earle**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Andira inermis*, Fabaceae

Province/Locality: CA

Reference: Stevens 1928: 230; Hansford 1961: 294; Dennis 1970: 249.

***Meliola angustispora* F. Stevens
a new species from Panama**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Baccharis rhexioides*, Asteraceae

Province/Locality: PA

Reference: Stevens 1928: 264; Hansford 1961: 621; Dennis 1970: 244.

***Meliola annonae* F. Stevens
a new species from Panama**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Annona purpurea*, Annonaceae

Province/Locality: PA

Reference: Stevens 1928: 278; Hansford 1961: 38; Dennis 1970: 241.

***Meliola aristolochiicola* F. Stevens
a new species from Panama**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Aristolochia maxima*, Aristolochiaceae

Province/Locality: PA

Reference: Stevens 1928: 240; Baker & Dale 1951: 10; Hansford 1961: 67; Dennis 1970: 242.

***Meliola arrabidaeae* Hansf.
a new species from Panama**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Arrabidaea* sp., Bignoniaceae

Reference: Hansford 1957b: 99; Hansford 1961: 673; Dennis 1970: 243.

***Meliola arrabidaeae* Hansf. var.
irregularis (F. Stevens) Hansf.**

a new variety from Panama

Growth form: pyrenomycetoid

Ecology: plant parasitic, on Bignoniaceae

Province/Locality: BCI

Reference: Standley 1927: 6; Stevens 1928: 256; Standley 1933: 17; all as *Meliola peruviana* Syd. & P. Syd. var. *irregularis* F. Stevens. Hansford 1961: 674; Dennis 1970: 243.

***Meliola banarae* F. Stevens
a new species from Panama**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Banara guianensis*, Flacourtiaceae

Province/Locality: CN

Reference: Stevens 1928: 249; Hansford 1961: 118; Dennis 1970: 255.

***Meliola bicornis* G. Winter**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Desmodium canum* (*Meibomia cana*), Fabaceae

Province/Locality: CA

Reference: Stevens 1928: 188; Hansford 1961: 280; Dennis 1970: 249.

***Meliola bignoniacearum* F. Stevens
a new species from Panama**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Arrabidaea* sp., Bignoniaceae

Province/Locality: CA, DA, PA

Reference: Stevens 1928: 196; Hansford 1961: 664; Dennis 1970: 243.

***Meliola bignoniacearum* F. Stevens var.
major Hansf.**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Phryganocydia corymbosa*, Bignoniaceae

Province/Locality: CA

Reference: Stevens 1928: 196; Hansford 1961: 669; Dennis 1970: 243.

***Meliola burseracearum* F. Stevens
a new species from Panama**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Tetragastis panamensis*, Burseraceae
Province/Locality: CA
Reference: Stevens 1928: 199; Hansford 1961: 399; Dennis 1970: 244.

***Meliola byrsonimae* F. Stevens var. *minor* Hansf.**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Byrsonima crassifolia*, Malpighiaceae
Province/Locality: CA
Reference: Stevens 1928: 264, as *Meliola byrsonimae* F. Stevens; Hansford 1957a: 66; Hansford 1961: 198; Dennis 1970: 250.

***Meliola chagres* F. Stevens
a new species from Panama**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Inga* sp., Fabaceae
Province/Locality: CA
Reference: Stevens 1928: 178; Hansford 1961: 259; Dennis 1970: 248.

***Meliola cissi-rhombifoliae* Hansf.
a new species from Panama**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Cissus rhombifolia*, Vitaceae
Province/Locality: CA
Reference: Stevens 1928: 250, as *Meliola rizalensis* Syd. & P. Syd. var. *panamensis* F. Stevens, a synonym acc. to Hansford 1957b: 104; Hansford 1957b: 104; Hansford 1961: 375; Dennis 1970: 258.

***Meliola clavulata* G. Winter**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Ipomoea* sp., Convolvulaceae
Province/Locality: CA
Reference: Stevens 1928: 241; Hansford 1961: 650; Dennis 1970: 245.

***Meliola clavulata* G. Winter var. *batatae* F. Stevens**

a new variety from Panama
Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Ipomoea* sp., Convolvulaceae
Province/Locality: CA
Reference: Stevens 1928: 241; Hansford 1961: 651; Dennis 1970: 245.

***Meliola connari* H.S. Yates var. *panamensis* Hansf.**

a new variety from Panama
Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Connarus panamensis*, Connaraceae
Reference: Hansford 1957b: 105; Hansford 1961: 476; Dennis 1970: 245.

***Meliola cookeana* Speg.**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Bradburia angustifolia*, Asteraceae; on *Solanum* sp., Solanaceae
Province/Locality: PA
Reference: Dearness & House 1925: 67.

***Meliola crenata* G. Winter var. *bunchosiae* Hansf.**

a new variety from Panama
Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Bunchosia cornifolia*, Malpighiaceae
Province/Locality: Loma Bracha
Reference: Stevens 1928: 190, as *Meliola crenata*; Hansford 1957b: 105; Hansford 1961: 195; Dennis 1970: 250.

***Meliola crenatissima* Syd.**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Erythrina rubrinervis*, Fabaceae
Province/Locality: PA
Reference: Stevens 1928: 193; Hansford 1961: 276; Dennis 1970: 249.

Meliola cristata* Syd.*a new species from Panama**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Calopogonium coeruleum*, Fabaceae

Province/Locality: PA

Reference: Stevens 1928: 193; Stevens 1928: 255, as *Meliola calopogonii* F. Stevens, a synonym acc. to Hansford 1961: 275; Hansford 1961: 275; Dennis 1970: 249.***Meliola crucifera* Starbäck**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Sapindus saponaria*, Sapindaceae

Reference: Hansford 1961: 428; Dennis 1970: 255; Rodríguez & Minter 1999c.

Meliola culebrensis* Hansf.*a new species from Panama**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on Acanthaceae

Province/Locality: CA

Reference: Hansford 1957b: 106; Hansford 1961: 682; Dennis 1970: 241.

Meliola cydistae* F. Stevens*a new species from Panama**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Cydistia* sp., Bignoniaceae

Province/Locality: PA

Reference: Stevens 1928: 193; Hansford 1961: 668; Dennis 1970: 243.

***Meliola dieffenbachiae* F. Stevens**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Dieffenbachia longispatha*, Araceae

Province/Locality: CA

Reference: Stevens 1927b: 458, as *Irenina aracearum* F. Stevens, a synonym acc. to Hansford 1961: 715; Hansford 1961: 715; Dennis 1970: 242.***Meliola diphysae* F. Stevens****a new species from Panama**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Diphysa robinoides*, Fabaceae

Province/Locality: CA

Reference: Stevens 1928: 195; Hansford 1961: 290; Dennis 1970: 249.

Meliola duggenae* F. Stevens*a new species from Panama**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Duggena (Gonzalagunia)* sp., Rubiaceae

Province/Locality: CA

Reference: Stevens 1928: 198; Hansford 1961: 584; Dennis 1970: 253.

Meliola duggenae* F. Stevens var.**panamensis* F. Stevens****a new variety from Panama**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Duggena (Gonzalagunia) panamensis*, *D. rudis*, Rubiaceae

Province/Locality: PA

Reference: Stevens 1928: 198; Hansford 1961: 586; Dennis 1970: 254.

Meliola elaeis* F. Stevens*a new species from Panama**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on Arecaceae

Province/Locality: CA

Reference: Stevens 1928: 181; Hansford 1961: 723; Dennis 1970: 252.

***Meliola furcata* Lév.**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Cissus sicyoides*, *C. rhombifolia*, Vitaceae

Province/Locality: CA, PA

Reference: Stevens 1928: 181, as *Meliola merrillii* Syd. & P. Syd., a synonym acc. to

Hansford 1961: 372; Hansford 1961: 372;
Dennis 1970: 258.

***Meliola heliconiae* F. Stevens**
a new species from Panama

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Heliconia* sp.,
Heliconiaceae
Province/Locality: BCI
Reference: Standley 1927: 6; Stevens 1928:
210; Standley 1933: 17; Hansford 1961: 702;
Dennis 1970: 251.

***Meliola hippomaneae* F. Stevens**
a new species from Panama

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Hippomane*
mancinella, Euphorbiaceae
Province/Locality: PA
Reference: Stevens 1928: 284; Hansford 1961:
230; Dennis 1970: 246; Poonyth et al. 2000:
110; Schmitt & Shearer 2003: 443.

***Meliola inconspicua* Hansf.**
a new species from Panama

Growth form: pyrenomycetoid
Ecology: plant parasitic, on Melastomataceae
Province/Locality: CA
Reference: Hansford 1957b: 110; Hansford
1961: 158; Dennis 1970: 251.

***Meliola lonchocarpicola* F. Stevens**
a new species from Panama

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Lonchocarpus* sp.,
Fabaceae
Province/Locality: CA, CN
Reference: Stevens 1928: 207; Hansford 1961:
290; Dennis 1970: 249.

***Meliola longistipitata* F. Stevens**
a new species from Panama

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Costus spicatus*,
Dimerocostus uniflorus, Costaceae

Province/Locality: CA
Reference: Stevens 1928: 191; Baker & Dale
1951: 18; Hansford 1961: 705; Dennis 1970:
258.

***Meliola macropoda* Syd.**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Zanthoxylum* sp.,
Rutaceae
Reference: Hansford 1961: 392; Dennis 1970:
254.

***Meliola malacotricha* Speg.**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Ipomoea* sp.,
Jacquemontia pentantha, Convolvulaceae
Province/Locality: CA
Reference: Stevens 1928: 227; Hansford 1961:
647; Dennis 1970: 245.

***Meliola malanae* F. Stevens & Tehon**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on Rubiaceae
Province/Locality: CA
Reference: Stevens 1928: 247.

***Meliola mandevillae* F. Stevens**
a new species from Panama

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Mandevilla* sp.,
Apocynaceae
Province/Locality: CA
Reference: Stevens 1928: 245; Hansford 1961:
562.

***Meliola mandingensis* Hansf.**
a new species from Panama

Growth form: pyrenomycetoid
Ecology: plant parasitic, on Bignoniaceae
Province/Locality: CN
Reference: Hansford 1957b: 112; Hansford
1961: 666; Dennis 1970: 243.

Meliola mangiferae Earle Fig. 15

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Anacardium occidentale*, *Mangifera indica*, Anacardiaceae
 Province/Locality: CA, PA
 Reference: Stevens 1928: 208; Toro 1930: 238; Hansford 1961: 464; McGuire & Crandall 1967: 131; Rodríguez & Minter 1998a.

Meliola mayaguesiana F. Stevens

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on Rubiaceae
 Reference: Hansford 1961: 588; Dennis 1970: 253.

**Meliola melanococcae F. Stevens
a new species from Panama**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Elaeis melanococca*, Arecaceae
 Province/Locality: DA, PA
 Reference: Stevens 1928: 183; Hansford 1961: 725; Dennis 1970: 252.

**Meliola morowii F. Stevens
a new species from Panama**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on Arecaceae
 Province/Locality: VR
 Reference: Stevens 1928: 183; Hansford 1961: 724; Dennis 1970: 252.

Meliola musae (Kunze) Mont.

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Heliconia latispatha*, Heliconiaceae
 Province/Locality: BCI, CA, CN
 Reference: Standley 1927: 6; Stevens 1928: 215; Standley 1933: 17; Hansford 1961: 703; McGuire & Crandall 1967: 130; Dennis 1970: 251.

Meliola mussaendae-arcuatae Hansf.

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on Rubiaceae

Reference: Hansford 1957c: 57.

Meliola palmicola G. Winter

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on Arecaceae
 Province/Locality: BCI
 Reference: Standley 1927: 6; Stevens 1928: 210; Standley 1933: 17; Hansford 1961: 724.

**Meliola panamensis F. Stevens
a new species from Panama**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Coccoloba* sp., Polygonaceae
 Province/Locality: CA
 Reference: Stevens 1928: 212; Hansford 1961: 86; Dennis 1970: 253.

**Meliola panici Earle var. lasiacidis
(Toro) Hansf.**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Lasiacis oaxacoensis*, *L. procerrima*, *L. rudifolia*, *L. ruscifolia*, *L. sorghoidea*, Poaceae
 Ref.: Hansford 1961: 746; Dennis 1970: 247.

Meliola panici Earle var. olyrae Hansf.

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Olyra latifolia*, Poaceae
 Reference: Hansford 1961: 747; Rodríguez & Minter 1999d.

Meliola panici Earle var. panici

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Andropogon bicornis*, *Olyra latifolia*, *Panicum megiston*, *Homolepis aturensis*, *Lasiacis oaxacensis*, *L. procerrima*, *L. rudifolia*, *L. ruscifolia*, *L. sorghoidea*, *Chusquea pittieri*, Poaceae
 Province/Locality: BCI, CA, PA
 Reference: Standley 1927: 6; Stevens 1928: 261; Standley 1933: 17; Hansford 1961: 745; Dennis 1970: 247.

***Meliola paullinae* F. Stevens var.
dentata F. Stevens**

a new variety from Panama

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Paullinia cururu*,
Serjania triquetra, Sapindaceae

Province/Locality: CA

Reference: Stevens 1928: 197; Hansford 1961:
432, 450; Dennis 1970: 255.

***Meliola paullinae* F. Stevens**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Paullinia cururu*,
Sapindaceae

Reference: Stevens 1928: 274; Hansford 1961:
450; Dennis 1970: 255.

***Meliola pilocarp* F. Stevens**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Zanthoxylum?*,
Rutaceae

Province/Locality: BCI

Reference: Standley 1927: 6; Standley 1933:
17.

***Meliola protii* F. Stevens**

a new species from Panama

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Protium*
panamense, Burseraceae

Province/Locality: CA

Reference: Stevens 1928: 199; Hansford 1961:
398; Dennis 1970: 244.

***Meliola psychotri* Earle**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on Acanthaceae
Province/Locality: CA

Reference: Stevens 1928: 246.

***Meliola psychotri* Earle**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Hamelia erecta*,
Rubiaceae

Province/Locality: PA

Reference: Stevens 1928: 246.

***Meliola randiae-aculeatae* Hansf.**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Rondeletia*
amoena, Rubiaceae

Reference: Hansford 1961: 603; Dennis 1970:
254.

***Meliola sapindacearum* Speg.**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Sapindus*
saponaria, Sapindaceae

Province/Locality: CA

Reference: Stevens 1928: 190.

***Meliola sapindi* F. Stevens**

a new species from Panama

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Sapindus*
saponaria, Sapindaceae

Province/Locality: CA

Reference: Stevens 1928: 199; Hansford 1961:
431; Dennis 1970: 255.

***Meliola serjaniae* F. Stevens var.**

***dentata* F. Stevens**

a new variety from Panama

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Serjania triquetra*,
Sapindaceae

Province/Locality: CA

Reference: Stevens 1928: 280.

***Meliola solani* F. Stevens**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Solanum* sp.,
Solanaceae

Province/Locality: PA

Reference: Stevens 1927b: 439, as *Irenopsis*
solani (F. Stevens) F. Stevens; Hansford 1961:
643; Dennis 1970: 256.

***Meliola spigeliae* Hansf.**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Strychnos taxifera*,
 Loganiaceae
 Reference: Hansford 1961: 527; Dennis 1970:
 250.

***Meliola strychnicola* Gaillard**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Strychnos taxifera*,
 Loganiaceae
 Province/Locality: CA
 Reference: Stevens 1928: 251.

***Meliola tabernaemontanae* Speg.**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Tabernaemontana*
grandifolia, Apocynaceae
 Province/Locality: CA, PA
 Reference: Stevens 1928: 253; Hansford 1961:
 553; Dennis 1970: 242.

***Meliola tounateae* F. Stevens
a new species from Panama**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Tounatea* sp.,
 Fabaceae
 Province/Locality: VR
 Reference: Stevens 1928: 204; Hansford 1961:
 248; Dennis 1970: 248.

***Meliola trichostroma* (Kunze) Toro**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Psidium guajaba*,
 Myrtaceae
 Province/Locality: CA
 Reference: Stevens 1928: 271, as *Meliola*
psidii Fr., a synonym acc. to Hansford 1961:
 146; Hansford 1961: 146; Rodríguez & Minter
 1998b.

***Meliola variaseta* F. Stevens
a new species from Panama**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Cupania*
seemannii, Sapindaceae
 Province/Locality: CA
 Reference: Stevens 1928: 204; Hansford 1961:
 433; Dennis 1970: 255.

***Meliola vignae-gracilis* Hansf. &
Deighton var. *panamensis* Hansf.
a new variety from Panama**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Wenderothia*
(Canavalia) lasiocalyx, *Desmodium*
(Meibomia) axillare, Fabaceae
 Province/Locality: CA
 Reference: Hansford 1955: 78; Hansford
 1957a: 95; Lenné 1990: 45; Hansford 1961:
 289.

***Meliola wardii* F. Stevens
a new species from Panama**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Malouetia*
panamensis, Apocynaceae
 Province/Locality: CA
 Reference: Stevens 1928: 213; Hansford 1961:
 545; Dennis 1970: 242.

***Meliola wardii* F. Stevens var. *minor*
Hansford**

a new variety from Panama
 Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Malouetia*
panamensis, Apocynaceae
 Reference: Hansford 1957c: 61; Hansford
 1961: 546; Dennis 1970: 242.

***Meliola xylopii* F. Stevens
a new species from Panama**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Xylopia*
grandiflora, *X. frutescens*, Annonaceae
 Province/Locality: CA
 Reference: Stevens 1928: 257; Baker & Dale
 1951: 10; Hansford 1961: 34.

***Meliola xylosmae* F. Stevens**

a new species from Panama

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Myroxylon*

intermedium, Flacourtiaceae

Province/Locality: CA

Reference: Stevens 1928: 256; Hansford 1961: 112; Dennis 1970: 246.

***Meliola zetekii* F. Stevens**

a new species from Panama

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Piper*

paulownifolium, Piperaceae

Province/Locality: BCI

Reference: Stevens 1928: 192; Standley 1933: 18; Hansford 1961: 73; Dennis 1970: 253.

Pezizomycetidae

Pezizales

***Aleuria cestricea* (Ellis & Everh.) Seaver**

Growth form: discomycetoid

Ecology: saprobic, on plant debris on soil

Province/Locality: CH

Reference: Cash 1937: 219.

***Aleurina stipitata* E.K. Cash**

a new species from Panama

Growth form: discomycetoid

Ecology: saprobic, on soil

Province/Locality: CH

Reference: Cash 1937: 219.

***Ascobolus immersus* Pers.**

Growth form: discomycetoid

Ecology: saprobic, on dung

Reference: Dennis 1970: 337.

***Ascodesmis microscopica* (P. Crouan & H. Crouan) Le Gal**

Growth form: discomycetoid

Ecology: saprobic, on dung or soil

Reference: Dennis 1970: 337.

***Ascodesmis porcina* Seaver**

Growth form: discomycetoid

Ecology: saprobic, on dung or soil

Reference: Dennis 1970: 337.

***Cookeina speciosa* (Fr.) Dennis Fig. 16**

Growth form: discomycetoid

Ecology: saprobic, on dead wood

Province/Locality: BCI, CC

Reference: Standley 1927: 6; Weston 1933: 393, 396; Standley 1933: 17; Cash 1937: 220; Denison 1967: 312; Dennis 1970: 339; all as *Cookeina sulcipes* (Berk.) Kuntze, a synonym acc. to Weinstein et al. 2002: 673.

***Cookeina tricholoma* (Mont.) Kuntze**

Fig. 17

Growth form: discomycetoid

Ecology: saprobic, on dead wood

Province/Locality: BCI, CA, CC, PA

Reference: Standley 1927: 6; Weston 1933: 393; Standley 1933: 17; Cash 1937: 220; Denison 1967: 310.

***Cookeina venezuelae* (Berk. & M.A. Curtis) Le Gal**

Growth form: discomycetoid

Ecology: saprobic, on dead wood

Province/Locality: CH

Reference: Cash 1937: 220, as *Cookeina colensoi* (Berk.) Seaver, probably a wrong identification; Denison 1967: 314.

***Coprobia granulata* (Bull.) Boud.**

Growth form: discomycetoid

Ecology: saprobic, on cow dung

Reference: Dennis 1970: 335.

***Coprotus argenteus* (Curr.) Waraitch**

Growth form: discomycetoid

Ecology: saprobic, on dung

Reference: Dennis 1970: 338, as *Ascophanus argenteus* (Curr.) Boud.

***Humaria cf. orinocensis* Pat. & Gaillard**

Growth form: discomycetoid
 Ecology: saprobic, on wood, on soil
 Province/Locality: CH
 Reference: Cash 1937: 220.

***Iodophanus carneus* (Pers.) Korf**

Growth form: discomycetoid
 Ecology: saprobic, on dung, rotting plants, or textiles
 Reference: Dennis 1970: 338, as *Ascophanus carneus* Pers.

***Morchella esculenta* (L.) Pers. Fig. 18**

Growth form: discomycetoid, stipitate
 Ecology: saprobic, on soil
 Province/Locality: CH
 Reference: Cash 1937: 221.

***Peziza trachycarpa* Curr.**

Growth form: discomycetoid
 Ecology: saprobic, on soil
 Province/Locality: CH
 Reference: Cash 1937: 220, as *Lamprospora trachycarpa* (Curr.) Seaver.

***Phillipsia chardoniana* Seaver**

Growth form: discomycetoid
 Ecology: saprobic, on dead wood with mosses
 Province/Locality: CC
 Reference: Cash 1937: 221.

***Phillipsia domingensis* (Berk.) Berk.**

Growth form: discomycetoid
 Ecology: saprobic, on logs
 Province/Locality: BCI
 Reference: Weston 1933: 401; Standley 1933: 18; Dennis 1970: 339.

***Pulvinula convexella* (P. Karst.) Pfister**

Growth form: discomycetoid
 Ecology: saprobic, on soil
 Province/Locality: CC

Reference: Cash 1937: 220, as *Lamprospora constellatio* (Berk. & Broome) Seaver, a synonym acc. to Index Fungorum.

***Saccobolus glaber* (Pers.) Lambotte**

Growth form: discomycetoid
 Ecology: saprobic, on dung
 Reference: Dennis 1970: 337, as *Saccobolus kervernii* (H. Crouan & P. Crouan) Boud., a synonym acc. to Index Fungorum.

***Scutellinia asperrima* (Ellis & Everh.)
Le Gal genus: Fig. 19**

Growth form: discomycetoid
 Ecology: saprobic, on logs or dead *Musa* stems
 Reference: Dennis 1970: 333.

***Scutellinia cubensis* (Berk. & M.A. Curtis) Gamundi**

Growth form: discomycetoid
 Ecology: saprobic, on wood
 Province/Locality: CH
 Reference: Cash 1937: 220, as *Lachnea cubensis* (Berk. & M.A. Curtis) Sacc.

***Scutellinia setosa* (Nees) Kuntze**

Growth form: discomycetoid
 Ecology: saprobic, on wood
 Province/Locality: CA
 Reference: Cash 1937: 220, as *Lachnea setosa* (Nees) Cooke; Dennis 1970: 333.

Saccharomycetidae***Saccharomycetales******Pichia cf. stipitis* Pignat**

Growth form: yeast
 Ecology: symbiotic in gut of *Verres sternbergianus*, Passalidae (Coleoptera)
 Province/Locality: BCI
 Reference: Suh et al. 2003: 3137.

Sordariomycetidae

Boliniales

***Catabotrys deciduum* (Berk. & Broome) Seaver & Waterston**

Growth form: pyrenomycetoid
Ecology: saprobic, on a fallen trunk
Province/Locality: CA
Reference: Martin 1948: 111.

Diaporthales

***Diaporthe citri* F.A. Wolf**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Citrus* sp.,
Rutaceae
Reference: Toler et al. 1959: 1202; McGuire
& Crandall 1967: 134.

***Diaporthe vexans* Gratz AN: *Phomopsis vexans* (Sacc. & P. Syd.) Harter**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Solanum
melongena*, Solanaceae
Reference: Toler et al. 1959: 1203.

***Diatractium cordianum* (Ellis & Kelsey) Syd.**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Cordia
collococca*, *C. glabra*, Boraginaceae
Province/Locality: PA
Reference: Chardón 1930b: 270, as
Diatractium cordiae (F. Stevens) Syd. & P.
Syd., a synonym acc. to Index Fungorum;
Dennis 1970: 268.

***Diatractium ingae* (Rehm) Syd.**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Inga* sp., Fabaceae
Province/Locality: CA
Reference: Stevens 1930: 281.

***Pseudothis coccodes* (Lév.) Theiss. & Syd.**

Growth form: pyrenomycetoid
Ecology: plant parasitic
Reference: Dennis 1970: 268.

***Pseudothis pulchella* (Speg.) Theiss.**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Dalbergia
brownii*, Fabaceae
Province/Locality: CA
Reference: Stevens 1930: 285.

***Pseudovalsa tropicalis* Wehm. in G.W. Martin**

a new species from Panama
Growth form: pyrenomycetoid
Ecology: saprobic, on bark of prostrate trunk
Province/Locality: CH
Ref.: Martin 1944: 67; Dennis 1970: 270.

***Valsella pedicellata* E.K. Cash & A.M.J. Watson**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Oncidium
ampliatum*, Orchidaceae
Province/Locality: CA
Reference: Cash & Watson 1955: 736.

Halosphaeriales

***Antennospora quadricornuta* (Cribb & J.W. Cribb) T.W. Johnson**

Growth form: pyrenomycetoid
Ecology: saprobic, marin, on dead wood,
fruits, or palm petioles
Reference: Schmitt & Shearer 2003: 431.

Hypocreales

Bionectriaceae

***Bionectria aureofulva* (Cooke & Ellis) Schroers & Samuels**

Growth form: pyrenomycetoid
Ecology: saprobic, on branch

Province/Locality: VR

Reference: Samuels & Dumont 1982: 403, as *Nectria aureofulva* Cooke & Ellis.

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

Growth form: pyrenomycetoid

Ecology: saprobic, on branches, herbaceous stems, bark, twigs

Province/Locality: CA, CC, PA, VR

Reference: Samuels & Dumont 1982: 404, as *Nectria byssicola* Berk. & Broome.

***Bioectria ochroleuca* (Schwein.) Schroers & Samuels**

Growth form: pyrenomycetoid

Ecology: saprobic, on log, herbaceous stem, frond of palm, or fruit stalk of *Carludowica* sp., Cyclanthaceae

Province/Locality: BCI, CA, CC, CH, PA

Reference: Samuels & Dumont 1982: 402, as *Nectria ochroleuca* (Schwein.) Berk.

***Bionectria pityrodes* (Mont.) Schroers**

Growth form: pyrenomycetoid

Ecology: saprobic, on bark

Province/Locality: PA

Reference: Samuels & Dumont 1982: 407, as *Nectria pityrodes* (Mont.) Mont.

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

Growth form: pyrenomycetoid

Ecology: saprobic, on branch

Province/Locality: CC

Reference: Samuels & Dumont 1982: 405, as *Nectria subquaternata* Berk. & Broome.

***Hydropisphaera arenuloides* (Samuels) Rossman & Samuels**

Growth form: pyrenomycetoid

Ecology: saprobic, on herbaceous stem or leaf

Province/Locality: PA

Reference: Samuels & Dumont 1982: 418, as *Nectria arenuloides* Samuels.

***Hydropisphaera suffulta* (Berk. & M.A. Curtis) Rossman & Samuels**

Growth form: pyrenomycetoid

Ecology: saprobic, on burned banana stalk, palm petiole, monocot stem, herbaceous stem

Province/Locality: CA, CH, PA, VR

Reference: Samuels & Dumont 1982: 408, as *Nectria suffulta* Berk. & M.A. Curtis.

***Nectriopsis mindoensis* (Petr.) Samuels**

Growth form: pyrenomycetoid

Ecology: saprobic, on rachis of ferns

Province/Locality: VR

Reference: Samuels 1998: 28.

***Peristomialis berkeleyi* Boud.**

Growth form: pyrenomycetoid

Ecology: saprobic, on *Heliconia* sp.

Province/Locality: KY

Reference: Samuels & Dumont 1982: 415, as *Nectria peristomialis* (Berk. & Broome) Samuels, a synonym acc. to Index Fungorum.

Ceratostomataceae

***Melanospora brevirostris* (Fuckel)**

Höhn.

Growth form: pyrenomycetoid

Ecology: saprobic, cultivated from soil

Province/Locality: CH

Ref.: Farrow 1954: 640; Dennis 1970: 259.

***Melanospora lagenaria* (Pers.) Fuckel**

Growth form: pyrenomycetoid

Ecology: saprobic, cultivated from soil

Province/Locality: BCI

Ref.: Farrow 1954: 640; Dennis 1970: 259.

Clavicipitaceae

***Ascopolyporus philodendrus* J.F. Bischoff**

a new species from Panama

Growth form: pyrenomycetoid

Ecology: probably parasitic on scale insects, Coccidae (Homoptera), on *Philodendron* sp., Araceae

Province/Locality: BCI

Reference: Bischoff et al. 2005: 711.

***Ascopolyporus polychrous* A. Møller**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Chusquea scandens*, Poaceae

Province/Locality: BCI

Ref.: Heim 1954: 418; Dennis 1970: 262.

***Ascopolyporus villosus* A. Møller**

Growth form: pyrenomycetoid

Ecology: probably parasitic on scale insects, Coccidae (Homoptera)

Province/Locality: BCI

Reference: Bischoff et al. 2005: 711.

***Balansia strangulans* (Henn.) Diehl**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Panicum haenkeanum*, Poaceae

Reference: Lenné 1990: 90.

***Balansia strangulans* (Mont.) Diehl f. *discoidea* (Henn.) Diehl**

Growth form: pyrenomycetoid

Ecology: plant parasitic, on *Panicum boliviense*, Poaceae

Reference: Diehl 1950: 33; Dennis 1970: 263.

***Cordyceps lloydii* H.S. Fawc.**

genus: Fig. 20

Growth form: pyrenomycetoid

Ecology: parasitic on ants, Formicidae (Hymenoptera)

Reference: Dennis 1970: 266.

***Cordyceps polyarthra* A. Møller**

Growth form: pyrenomycetoid

Ecology: parasitic on moths, Pyralidae (Lepidoptera)

Reference: Dennis 1970: 265.

***Cordyceps salebrosa* Mains**

a new species from Panama

Growth form: pyrenomycetoid

Ecology: parasitic on Elateridae (Coleoptera)

Province/Locality: BCI

Reference: Mains 1947: 541; Dennis 1970: 266.

***Cordyceps* sp.**

Growth form: pyrenomycetoid

Ecology: parasitic on *Camponotus atriceps*, Formicidae (Hymenoptera)

Province/Locality: CA

Reference: Hughes et al. 2004: 48.

***Cordyceps* sp.**

Growth form: pyrenomycetoid

Ecology: parasitic on beetles (Coleoptera)

Province/Locality: BCI

Reference: Standley 1933: 18.

***Cordyceps tuberculata* (Lebert) Maire**

Growth form: pyrenomycetoid

Ecology: parasitic on moths, Pyralidae (Lepidoptera)

Reference: Dennis 1970: 265.

***Torrubiella piperis* J.F. Bischoff & J.F. White**

a new species from Panama

Growth form: pyrenomycetoid

Ecology: parasitic on scale insects, Coccidae (Homoptera)

Province/Locality: BCI

Reference: Bischoff & White 2004: 91.

Hypocreaceae

***Hypomyces tegillum* Berk. & M.A. Curtis**

Growth form: pyrenomycetoid

Ecology: saprobic, on logs

Province/Locality: CH

Reference: Rogerson & Samuels 1993: 269; Pöldmaa & Samuels 1999: 194.

Nectriaceae

***Calonectria kyotensis* Terash.**

Growth form: pyrenomycetoid
 Ecology: saprobic, on fruit or other substrates
 Province/Locality: BCI, CA
 Reference: Samuels & Dumont 1982: 390;
 Crous 2002: 101.

***Calonectria rumohrae* El-Gholl & Alfenas**

a new species from Panama

AN: *Cylindrocladium rumohrae* El-Gholl & Alfenas

Growth form: pyrenomycetoid; AN: hyphomycetous
 Ecology: saprobic/plant parasitic, on *Rumohra adiantiformis*, Pteridophyta
 Province/Locality: CH
 Reference: El-Gholl & Alfenas 1997: 478;
 Crous 2002: 155.

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

AN: *Fusarium moniliforme* J. Sheld.

Growth form: pyrenomycetoid; AN: hyphomycetous
 Ecology: plant parasitic, on *Sorghum vulgare*, *Zea mays*, Poaceae
 Reference: McGuire & Crandall 1967: 118, 122. According to the Index Fungorum, the teleomorph of *F. moniliforme* is *Gibberella moniliformis* Wineland.

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

AN: *Fusarium graminearum* Schwabe

Growth form: pyrenomycetoid; AN: hyphomycetous
 Ecology: plant parasitic, on *Zea mays*, Poaceae
 Reference: McGuire & Crandall 1967: 118.

***Lanatonectria flavolanata* (Berk. & Broome) Samuels & Rossman**

Growth form: pyrenomycetoid
 Ecology: saprobic, on twigs

Province/Locality: CC, CH

Reference: Samuels & Dumont 1982: 392, as *Nectria flavolanata* Berk. & Broome.

***Lanatonectria flocculenta* (Henn. & E. Nyman) Samuels & Rossman**

Growth form: pyrenomycetoid
 Ecology: saprobic, on *Acacia costaricensis*, Fabaceae
 Reference: Samuels & Brayford 1994: 97, as *Nectria flocculenta* (Henn. & E. Nyman) Höhn.

***Lanatonectria mammiformis* (Chardón) Samuels & Rossman**

Growth form: pyrenomycetoid
 Ecology: saprobic, on bark
 Province/Locality: BCI
 Reference: Samuels & Dumont 1982: 393, as *Nectria mammiformis* (Chardón) Samuels.

***Nectria brassicae* Ellis & Sacc.**

Growth form: pyrenomycetoid
 Ecology: saprobic, cultivated from soil
 Province/Locality: BCI, CH
 Reference: Farrow 1954: 640, as *Dialonectria brassicae* (Ellis & Sacc.) Cooke; Dennis 1970: 315.

***Nectria calami* (Henn. & E. Nyman) Rossman**

Growth form: pyrenomycetoid
 Ecology: saprobic, on rachis of fern, petiole of leaf, herbaceous stem, peduncle of palm fruit, or burned banana stalk
 Province/Locality: KY, PA, VR
 Reference: Samuels & Dumont 1982: 419.

***Nectria coccophila* (Tul. & C. Tul.) Wollenw. & Reinking**

AN: *Fusarium coccophilum* (Desm.) Wollenw. & Reinking

Growth form: pyrenomycetoid; AN: hyphomycetous

Ecology: parasitic on insects, on *Citrus* sp.,
Rutaceae
Reference: McGuire & Crandall 1967: 135, as
Sphaerostilbe aurantiicola (Berk. & Broome)
Petch, a synonym acc. to Index Fungorum.

***Nectria consors* (Ellis & Everh.) Seaver**

Growth form: pyrenomycetoid
Ecology: saprobic, on twigs or branch
Province/Locality: CC, CH
Reference: Samuels & Dumont 1982: 385.

***Nectria coronata* Penz. & Sacc.**

Growth form: pyrenomycetoid
Ecology: saprobic, on leaf
Province/Locality: CC, CH
Reference: Samuels & Dumont 1982: 388.

***Nectria discophora* Mont.**

Growth form: pyrenomycetoid
Ecology: saprobic, on twigs
Province/Locality: CC
Reference: Samuels & Dumont 1982: 396.

***Nectria episphaeria* (Tode) Fr.**

Growth form: pyrenomycetoid
Ecology: mycoparasitic, on *Xylaria* sp.,
Xylariales
Province/Locality: BCI
Reference: Standley 1933: 18.

***Nectria flavoviridis* (Fuckel) Wollenw.**

Growth form: pyrenomycetoid
Ecology: mycoparasitic, on ? Xylariaceae
Province/Locality: VR
Reference: Samuels & Dumont 1982: 386.

***Nectria foliicola* Berk. & M.A. Curtis**

Growth form: pyrenomycetoid
Ecology: saprobic, on peduncle of fruit
Province/Locality: PA
Reference: Samuels & Dumont 1982: 413.

***Nectria galligena* Bres.**

Growth form: pyrenomycetoid
Ecology: saprobic, cultivated from soil
Province/Locality: BCI, CA
Reference: Farrow 1954: 640, as *Dialonectria*
galligena (Bres.) Petch ex E.W. Mason &
Grainger.

***Nectria gigantospora* Zimm.**

Growth form: pyrenomycetoid
Ecology: saprobic, on leaf or fruit of
Didymopanax morototoni, Araliaceae
Province/Locality: CA, CC, PA
Reference: Martin 1948: 111; Samuels &
Dumont 1982: 391.

***Nectria haematococca* Berk. & Broome**

Growth form: pyrenomycetoid
Ecology: saprobic, on root, fruit of palm, fruit,
petiole of leaf, herbaceous stem, twigs,
branches, or wood
Province/Locality: BCI, CA, CC, CH, KY, VR
Reference: Samuels & Dumont 1982: 397.

***Nectria illudens* Berk.**

Growth form: pyrenomycetoid
Ecology: saprobic, on wood or bark
Province/Locality: CH
Reference: Samuels & Dumont 1982: 400.

***Nectria jatrophae* (A. Møller) Wollenw.**

Growth form: pyrenomycetoid
Ecology: saprobic, on wood
Province/Locality: BCI, CA, PA
Reference: Weston 1933: 394 probably as
Corallomyces sp. or *Nectria* sp.; Standley
1933: 18, as *Corallomyces jatrophae* A.
Møller; Samuels & Dumont 1982: 395.

***Nectria macrostoma* Berk. & M.A.
Curtis**

Growth form: pyrenomycetoid
Ecology: saprobic, on logs
Province/Locality: PA
Reference: Samuels & Dumont 1982: 416.

***Nectria myxomyceticola* Samuels**

Growth form: pyrenomycetoid
 Ecology: mycoparasitic, on myxomycete on log or on myxomycete on polypore
 Province/Locality: CC
 Reference: Samuels & Dumont 1982: 417.

***Nectria pertusa* Pat.**

Growth form: pyrenomycetoid
 Ecology: saprobic, on bamboo
 Province/Locality: CH
 Reference: Samuels & Dumont 1982: 412.

***Nectria pseudotrichia* (Schwein.) Berk. & M.A. Curtis**

Growth form: pyrenomycetoid
 Ecology: saprobic, on branch, stump, stem, or log
 Province/Locality: CC, KY, PA
 Reference: Samuels & Dumont 1982: 420, as *Thyronectria pseudotrichia* (Schwein.) Seeler.

***Nectria radicolica* Gerlach & L. Nilsson**

Growth form: pyrenomycetoid
 Ecology: saprobic, on fruit or wood
 Province/Locality: KY, VR
 Reference: Samuels & Dumont 1982: 387.

***Nectria rigidiuscula* Berk. & Broome
 AN: *Fusarium rigidiusculum* W.C. Snyder & H.N. Hansen**

Growth form: pyrenomycetoid; AN: hyphomycetous
 Ecology: saprobic/plant parasitic, on bark, branches, or pods of *Theobroma cacao*, Malvaceae
 Province/Locality: BCI, CC, CH, VR
 Reference: Standley 1933: 18, as *Calonectria rigidiuscula* (Berk. & Broome) Sacc.; McGuire & Crandall 1967: 148, as *Fusarium decemcellulare* Brick, a synonym acc. to Index Fungorum; Samuels & Dumont 1982: 400.

***Nectria spirostriata* Rossman
 AN: *Virgatospora echinofibrosa* Finley
 a new species from Panama**

Growth form: pyrenomycetoid; AN: hyphomycetous
 Ecology: saprobic, on bark, rotten wood, or dead twigs
 Province/Locality: BCI, PA
 Reference: Finley 1967: 538; Ellis 1971: 558; Seifert 1990: 147; Samuels et al. 1990: 76; Bills et al. 1994: 7; Heredia et al. 1997: 216.

***Nectria subfalcata* Henn.**

Growth form: pyrenomycetoid
 Ecology: saprobic, on banana trunk, monocot leaf, or herbaceous stem
 Province/Locality: CC, PA, VR
 Reference: Samuels & Dumont 1982: 410.

***Nectria sylvana* Mouton**

Growth form: pyrenomycetoid
 Ecology: saprobic, on fern, herbaceous stem, or leaf
 Province/Locality: CH, PA, VR
 Reference: Samuels & Dumont 1982: 414.

***Nectria venusta* Syd.**

Growth form: pyrenomycetoid
 Ecology: saprobic, mostly on recently dead coriaceous leaves of dicots
 Province/Locality: BCI, CA
 Reference: Samuels & Dumont 1982: 389.

***Nectria vilior* Starbäck**

Growth form: pyrenomycetoid
 Ecology: mycoparasitic, on Xylariaceae
 Province/Locality: CC
 Reference: Samuels & Dumont 1982: 384.

***Rubrinectria olivacea* (Seaver)
Rossman & Samuels**

Growth form: pyrenomycetoid
Ecology: saprobic, on bark
Province/Locality: CC, CH
Reference: Samuels & Dumont 1982: 406, as
Nectria olivacea (Seaver) Samuels.

Microascales

***Ceratocystis fimbriata* Ellis & Halst.**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Ipomoea batatas*,
Convolvulaceae; on *Coffea arabica*,
Rubiaceae
Reference: McGuire & Crandall 1967: 144,
145.

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

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Saccharum
officinarum*, Poaceae
Reference: McGuire & Crandall 1967: 127.

Phyllachorales

***Apiosphaeria guaranitica* (Speg.)
Höhn.**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Tabebuia
pentaphylla*, Bignoniaceae
Province/Locality: BCI
Reference: Stevens 1930: 281; Dennis 1970:
275.

***Catacauma zanthoxyli* F. Stevens
a new species from Panama**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Zanthoxylum* sp.,
Rutaceae
Province/Locality: CA
Reference: Stevens 1927a: 32; Dennis 1970:
287.

***Cocodiella melastomatis* (Lév.) I. Hino
& Katum.**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Miconia
macrophylla*, Melastomataceae
Province/Locality: BCI
Reference: Chardón 1930a: 246, as *Dothidina
scabrosa* Syd., a synonym acc. to Index
Fungorum; Standley 1933: 18, as *D. scabrosa*;
Dennis 1970: 284, as *Coccostroma
melastomatis* (Lév.) Arx & E. Müll.

***Cocodiella peribebuyensis* (Speg.) I.
Hino & Katum.**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Miconia argentea*,
Melastomataceae
Province/Locality: BCI, CA, DA
Reference: Stevens 1927a: 6; Standley 1927:
6; Stevens 1930: 281; Standley 1933: 17;
Spaulding 1961: 34; all as *Bagnisiopsis
peribebuyensis* (Speg.) Theiss. & Syd. Dennis
1970: 284, as *Coccostroma peribebuyense*
(Speg.) Arx & E. Müll.

***Erikssonia protii* Cash ex J.A. Stev.**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Trattinnickia
aspera*, Burseraceae
Reference: Spaulding 1961: 97.

***Ophiodothella panamensis* F. Stevens
a new species from Panama**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Cordia
heterophylla*, Boraginaceae
Province/Locality: CA, PA
Reference: Stevens 1927a: 44; Stevens 1930:
284, as *Cryptospora panamensis* (F. Stevens)
Syd.; Hanlin et al. 1992: 117; Cannon 1996:
47.

***Phyllachora acaciae* Henn. subsp. *acaciae* var. *acaciae* genus: Fig. 21**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Acacia* sp.,
 Fabaceae
 Reference: Esquivel Rios 1982, cited by
 Cannon 1991: 51.

***Phyllachora acaciae* Henn. subsp. *acaciae* var. *enterolobii* (Speg.) P. Cannon**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Enterolobium* sp.,
 Fabaceae
 Reference: Esquivel Rios 1982, cited by
 Cannon 1991: 58.

***Phyllachora acutispora* Speg.**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Paspalum*
virgatum, Poaceae
 Province/Locality: CA
 Reference: Chardón 1930a: 253, as
Phyllachora cornispora-necrotica Chardón, a
 synonym acc. to Index Fungorum.

***Phyllachora canafistulae* F. Stevens & Dalbey**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Cassia fistula*, *C.*
grandis, Fabaceae
 Province/Locality: BO, CA
 Reference: Cannon 1991: 79.

***Phyllachora cassiae* Henn.**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Cassia* sp.,
 Fabaceae
 Reference: Lenné 1990: 25.

***Phyllachora cecropiae* (Rehm) Arx & E. Müll.**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Cecropia peltata*,
 Cecropiaceae

Province/Locality: CA
 Reference: Stevens 1930: 285, as
Anthostomella cecropiae (Rehm) Höhn.;
 Dennis 1970: 285.

***Phyllachora chusqueae* Henn. & Lindau**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Chusquea pittieri*,
 Poaceae
 Province/Locality: PA
 Ref.: Stevens 1927a: 34; Dennis 1970: 279.

***Phyllachora concentrica* Rossman
a new species from Panama**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Simaba* cf.
quianensis, Simaroubaceae
 Province/Locality: KY
 Reference: Rossman 1985: 263.

***Phyllachora conica* (Chardón) Petr.**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Machaerium* sp.,
 Fabaceae
 Province/Locality: PA
 Reference: Chardón 1930a: 249, as
Trabutiella diazii Chardón, a synonym acc. to
 Index Fungorum; Dennis 1970: 282, as *T.*
diazii; Cannon 1991: 85.

***Phyllachora copeyensis* Henn.**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Brownea* sp.,
 Fabaceae
 Province/Locality: PA
 Reference: Cannon 1991: 92.

***Phyllachora davillae* F. Stevens
a new species from Panama**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Davilla rugosa*,
 Dilleniaceae
 Province/Locality: CA
 Ref.: Stevens 1930: 282; Dennis 1970: 277.

***Phyllachora diocleicola* Chardón**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Dioclea guianensis*, Fabaceae
Province/Locality: PA
Reference: Cannon 1991: 99.

***Phyllachora guazumae* Henn.**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Guazuma ulmifolia*, Malvaceae
Province/Locality: CA, PA
Reference: Stevens 1930: 282; Dennis 1970: 288.

***Phyllachora juruensis* Henn.**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Brownea* sp., Fabaceae
Reference: Cannon 1991: 117.

***Phyllachora juruensis* Henn. var. *minima* F. Stevens**

a new variety from Panama
Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Brownea* sp., Fabaceae
Province/Locality: PA
Reference: Stevens 1927a: 35; Dennis 1970: 283.

***Phyllachora lactea* (Henn.) Theiss. & Syd.**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Cassia* sp., Fabaceae
Reference: Lenné 1990: 25.

***Phyllachora leptochloae* Chardón**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Leptochloa* sp., Poaceae
Reference: Dennis 1970: 279.

***Phyllachora litseae* Koord.**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Nectandra glabrescens*, Lauraceae
Province/Locality: PA
Reference: Stevens 1927a: 36; Dennis 1970: 282.

***Phyllachora maydis* Maubl.**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Zea mays*, Poaceae
Province/Locality: CA
Reference: Stevens 1927a: 36; Toler et al. 1959: 1202; McGuire & Crandall 1967: 119; Dennis 1970: 281; Liu 1973: 211.

***Phyllachora microspora* Chardón**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Paspalum paniculatum*, Poaceae
Province/Locality: CA
Reference: Chardón 1930a: 253.

***Phyllachora minutissima* (Welw. & Curr.) A.L. Sm.**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Chaetochloa vulpiseta* (*C. multisetata*), *Panicum glutinosum*, *Paspalum fasciculatum*, *P. virgatum*, *Pennisetum distachyum*, Poaceae
Province/Locality: CA, PA
Reference: Stevens 1927a: 34, as *Phyllachora chaetochloae* F. Stevens, a synonym acc. to Index Fungorum; Stevens 1930: 282, as *P. chaetochloae*; Dennis 1970: 279, 280, as *Phyllachora cornispora* G.F. Atk., a synonym acc. to Index Fungorum; Lenné 1990: 103, 109, as *P. chaetochloae*.

***Phyllachora nitens* (Lév.) Cooke subsp. *diocleae* (Henn.) P.F. Cannon**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Dioclea reflexa*,
 Fabaceae
 Reference: Lenné 1990: 58, as *Phyllachora diocleae* Henn.

***Phyllachora panamensis* F. Stevens
a new species from Panama**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Rourea glabra*,
 Connaraceae
 Province/Locality: CA
 Reference: Stevens 1927a: 37; Dennis 1970:
 276, 283.

***Phyllachora panici* (Schwein.) Sacc.**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Paspalum plicatum*,
 Poaceae
 Province/Locality: CA
 Reference: Stevens 1930: 283, as *Phyllachora guianensis* F. Stevens, a synonym acc. to
 Index Fungorum; Dennis 1970: 280, as *P. guianensis*.

***Phyllachora paspalicola* Henn.**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Paspalum conjugatum*,
 Poaceae
 Province/Locality: BCI
 Reference: Chardón 1930a: 254; Standley
 1933: 18; Dennis 1970: 280.

***Phyllachora roupalina* (Mont.) Sacc.**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Roupala montana*,
 Annonaceae
 Province/Locality: PA
 Reference: Chardón 1930a: 251, as
Catacauma rhopalinum (Mont.) Theiss. &
 Syd.; Dennis 1970: 274.

***Phyllachora scleriae* Rehm**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Scleria* sp.,
 Cyperaceae
 Province/Locality: PA
 Reference: Chardón 1930a: 258; Dennis 1970:
 277.

***Phyllachora serjaniicola* Chardón
a new species from Panama**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Serjania mexi-*
cana, Sapindaceae
 Province/Locality: CA
 Reference: Stevens 1927a: 39; Stevens 1930:
 283; Dennis 1970: 287; all as *Phyllachora sapindacearum* F. Stevens, a synonym acc. to
 Index Fungorum.

***Phyllachora setariicola* Speg.**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Paspalum* sp.,
 Poaceae
 Reference: Dennis 1970: 280, as *Phyllachora congruens* Rehm, a synonym acc. to
 Index Fungorum.

***Phyllachora sphaerosperma* G. Winter**

Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Cenchrus brownii*,
C. viridis, Poaceae
 Province/Locality: CA
 Reference: Stevens 1927a: 43, as
Sphaerodothis sphaerosperma (G. Winter) F.
 Stevens & W.D. Moore; Stevens 1930: 283, as
S. sphaerosperma; Dennis 1970: 278; Lenné
 1990: 26.

***Phyllachora stevensii* Syd. ex F.
Stevens**

a new species from Panama
 Growth form: pyrenomycetoid
 Ecology: plant parasitic, on *Dioclea guianensis*,
Meibomia sp., Fabaceae
 Province/Locality: CA

Reference: Stevens 1927a: 39; Stevens 1930: 283; Dennis 1970: 282; Cannon 1991: 174.

***Phyllachora tragiae* (Berk. & M.A. Curtis) Sacc.**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Croton glandulosus*, *C. tragioides*, Euphorbiaceae
Province/Locality: CA, PA
Reference: Stevens 1927a: 40; Stevens 1930: 283; Dennis 1970: 278.

***Phyllachora ulei* G. Winter**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Dioscorea* sp., Dioscoreaceae
Province/Locality: CA, PA
Reference: Stevens 1927a: 41; Stevens 1930: 283; McGuire & Crandall 1967: 149; Dennis 1970: 277.

***Phyllachora verbesinae* (Pat. & Gaillard) Petr.**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Verbesina* sp., Asteraceae
Province/Locality: KY
Reference: Stevens 1930: 285, as *Laestadia verbesinae* Pat. & Gaillard.

***Phyllachora vismiae* F. Stevens**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Vismia ferruginea*, Hypericaceae
Province/Locality: CN
Reference: Stevens 1930: 284; Dennis 1970: 281.

***Phyllachora weirii* (Chardón) P.F. Cannon**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Bauhinia* sp., Fabaceae
Province/Locality: PA

Reference: Chardón 1930a: 251, as *Catacauma panamaensis* Chardón, a synonym acc. to Cannon 1991: 186; Jimenez & Hanlin 1992: 226, as *C. panamensis*; Dennis 1970: 283, as *C. panamaensis*; Cannon 1991: 186.

***Polystigma pusillum* Syd. & P. Syd.**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Andira* sp., Fabaceae
Province/Locality: CA, PA
Reference: Stevens 1930: 285, as *Physalospora andirae* F. Stevens, a synonym acc. to Index Fungorum; Chardón 1930b: 268, as *P. andirae*; Dennis 1970: 282.

***Telimenella bicincta* (Bomm. & Rouss.) P.F. Cannon**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Picramnia quaternaria*, Picramniaceae
Reference: Dennis 1970: 288, as *Telimena bicincta* (Bomm. & Rouss.) Theiss. & Syd.

***Trabutia xylosmae* F. Stevens**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Myroxylon intermedium*, Flacourtiaceae
Province/Locality: CA
Reference: Stevens 1930: 281.

Sordariales

***Bombardia arachnoidea* (Niessl) Cain**

Growth form: pyrenomycetoid
Ecology: saprobic
Reference: Dennis 1970: 294.

***Chaetomium bostrychodes* Zopf**

Growth form: pyrenomycetoid
Ecology: saprobic, cultivated from soil
Province/Locality: CH
Reference: Farrow 1954: 639; Dennis 1970: 260.

***Chaetomium caprinum* Bainier**

Growth form: pyrenomycetoid
 Ecology: saprobic, cultivated from soil
 Province/Locality: BCI, CA, CH
 Reference: Farrow 1954: 639; Dennis 1970: 260.

***Chaetomium choliodes* Palliser**

Growth form: pyrenomycetoid
 Ecology: saprobic
 Reference: Dennis 1970: 260.

***Chaetomium cristatum* L.M. Ames**

Growth form: pyrenomycetoid
 Ecology: saprobic, cultivated from soil
 Province/Locality: BCI, CH
 Reference: Farrow 1954: 639; Dennis 1970: 260.

***Chaetomium cupreum* L.M. Ames
a new species from Panama**

Growth form: pyrenomycetoid
 Ecology: saprobic, cultivated from deteriorating cellulosic material
 Province/Locality: CA
 Reference: Ames 1949: 642; Ames 1961: 21.

***Chaetomium funicola* Cooke**

Growth form: pyrenomycetoid
 Ecology: saprobic, cultivated from soil
 Province/Locality: BCI
 Reference: Farrow 1954: 639; Dennis 1970: 260.

***Chaetomium globosum* Kunze**

Growth form: pyrenomycetoid
 Ecology: saprobic, cultivated from soil
 Province/Locality: BCI, CH
 Reference: Farrow 1954: 639; Dennis 1970: 260.

***Chaetomium longicolleum* Krzemien. & Badura**

a new species from Panama
 Growth form: pyrenomycetoid

Ecology: saprobic, cultivated from soil
 Province/Locality: BCI, CA, CH
 Reference: Farrow 1955: 418, as *Chaetocerotostoma longirostre* Farrow, a synonym acc. to Index Fungorum; Ames 1961: 29, as *Chaetomium longirostre* (Farrow) L.M. Ames, a synonym acc. to Index Fungorum; Baker 1968: 196, as *C. longirostre*; Dennis 1970: 260, as *Chaetocerotostoma longirostre*.

***Chaetomium murorum* Corda**

Growth form: pyrenomycetoid
 Ecology: saprobic, cultivated from soil
 Province/Locality: CH
 Reference: Farrow 1954: 639; Dennis 1970: 260.

***Chaetomium spirochaete* Palliser**

Growth form: pyrenomycetoid
 Ecology: saprobic
 Reference: Dennis 1970: 260.

***Chaetosphaeria chlorotunicata* F.A. Fernández & S.M. Huhndorf**

Growth form: pyrenomycetoid
 Ecology: saprobic, on branch
 Province/Locality: BCI
 Reference: Fernández & Huhndorf 2005: 18.

***Chaetosphaeria minuta* F.A. Fernández & S.M. Huhndorf**

a new species from Panama
 Growth form: pyrenomycetoid
 Ecology: saprobic, on branch
 Province/Locality: BCI
 Reference: Fernández & Huhndorf 2005: 34.

***Chaetosphaeria panamensis* S.M. Huhndorf & F.A. Fernández**

a new species from Panama
 Growth form: pyrenomycetoid
 Ecology: on decorticated wood
 Province/Locality: BCI
 Reference: Huhndorf & Fernández 2005: 33.

***Chaetosphaeria raciborskii* (Penz. & Sacc.) F.A. Fernández & S.M. Huhndorf**

Growth form: pyrenomycetoid
Ecology: on decorticated wood, rotting stems, palms, or bamboo
Province/Locality: BCI
Reference: Huhndorf & Fernández 2005: 35.

***Podospora appendiculata* (Auersw. ex Niessl) Niessl**

Growth form: pyrenomycetoid
Ecology: saprobic, on dung
Reference: Dennis 1970: 293.

***Podospora communis* (Speg.) Niessl**

Growth form: pyrenomycetoid
Ecology: saprobic
Reference: Dennis 1970: 293, as *Podospora vestita* (Zopf) G. Winter, a synonym acc. to Index Fungorum.

***Podospora decipiens* (G. Winter ex Fuckel) Niessl**

Growth form: pyrenomycetoid
Ecology: saprobic
Reference: Dennis 1970: 293.

***Porosphaerella borinquensis* F.A. Fernández & S.M. Huhndorf
AN: *Pseudobotrytis terrestris* (Timonin) Subram.**

Growth form: pyrenomycetoid; AN: hyphomycetous
Ecology: saprobic, on palm sheath or decayed wood
Province/Locality: BCI, CA
Reference: Morris 1955: 603, as *Umbellula terrestris* (Timonin) E.F. Morris; Dennis 1970: 394, as *U. terrestris*; Goos & Pirozynski 1975: 2930; Fernández & Huhndorf 2004: 12.

***Sordaria fimicola* (Roberge ex Desm.) Ces. & de Not.**

Growth form: pyrenomycetoid
Ecology: saprobic, cultivated from soil

Province/Locality: BCI, CA, CH
Reference: Farrow 1954: 641, as *Schizothecium fimicola* (Roberge ex Desm.) Griff. & Seaver; Dennis 1970: 293.

***Thielavia terricola* (J.C. Gilman & E.V. Abbott) C.W. Emmons**

Growth form: pyrenomycetoid
Ecology: saprobic, cultivated from soil
Province/Locality: BCI, CH
Ref.: Farrow 1954: 641; Dennis 1970: 320.

Xylariales

***Anthostomella keissleri* E.K. Cash & A.M.J. Watson**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Brassavola nodosa*, Orchidaceae
Province/Locality: CA
Reference: Cash & Watson 1955: 730.

***Biscogniauxia bulliardii* (Tul. & C. Tul.) Kuntze**

Growth form: pyrenomycetoid
Ecology: saprobic, on dead wood
Province/Locality: BCI
Reference: Chardón 1930b: 274, as *Nummularia bulliardii* Tul. & C. Tul.; Weston 1933: 394, as *Nummularia* sp.; Standley 1933: 18, as *N. bulliardii*.

***Biscogniauxia kalchbrenneri* (Sacc.) Y.-M. Ju & J.D. Rogers**

Growth form: pyrenomycetoid
Ecology: saprobic
Province/Locality: BCI
Reference: Standley 1933: 19, as *Hypoxylon kalchbrenneri* Sacc.

***Camillea bilabiata* Speg.**

genus: Fig. 22

Growth form: pyrenomycetoid
Ecology: saprobic, erumpent through bark
Reference: Laessøe et al. 1989: 127.

***Camillea broomeiana* (Berk. & M.A. Curtis) Laessøe, J.D. Rogers & Whalley**

Growth form: pyrenomycetoid
Ecology: saprobic, erumpent through bark
Province/Locality: BCI

Reference: Weston 1933: 397, as *Hypoxylon broomeianum* Berk. & M.A. Curtis; Standley 1933: 18, as *H. broomeianum*; Dennis 1970: 299, as *H. broomeianum*; Laessøe et al. 1989: 149.

***Camillea cyclisca* (Mont.) Laessøe, J.D. Rogers & Whalley**

Growth form: pyrenomycetoid
Ecology: saprobic, on wood
Reference: Dennis 1970: 299, as *Hypoxylon cycliscum* Mont.

***Camillea cyclops* (Mont.) Mont.**

Growth form: pyrenomycetoid
Ecology: saprobic, on wood
Province/Locality: BCI
Reference: Standley 1927: 6; Standley 1933: 17.

***Camillea leprieurii* Mont.**

Growth form: pyrenomycetoid
Ecology: saprobic, erumpent through bark
Province/Locality: BCI
Reference: Standley 1933: 19, as *Hypoxylon melanaspis* (Mont.) Mont., a synonym acc. to Laessøe et al. 1989: 136; Laessøe et al. 1989: 136.

***Camillea mucronata* Mont.**

Growth form: pyrenomycetoid
Ecology: saprobic, erumpent through bark
Province/Locality: BCI
Reference: Weston 1933: 397; Standley 1933: 18; Dennis 1970: 296; Laessøe et al. 1989: 140.

***Camillea punctulata* (Berk. & Ravenel) Laessøe, J.D. Rogers & Whalley**

Growth form: pyrenomycetoid

Ecology: saprobic, on wood
Province/Locality: BCI
Reference: Standley 1933: 19, as *Hypoxylon punctulatum* (Berk. & Ravenel) Cooke.

***Daldinia* sp. Fig. 23**

Growth form: pyrenomycetoid
Ecology: saprobic
Province/Locality: BCI
Reference: Standley 1933: 19, as *Daldinia concentrica* (Bolt.) C. & de N. var. *microspora* Starb. This species does not occur in Panama (pers. com. M. Stadler).

***Entonaema pallida* G.W. Martin
a new species from Panama**

Growth form: pyrenomycetoid
Ecology: saprobic, on wood
Province/Locality: BCI
Reference: Weston 1933: 401, as *Entonaema mesenterica* A. Moeller, a synonym acc. to Rogers 1981: 52; Standley 1933: 18, as *E. mesenterica*; Martin 1938a: 431; Dennis 1970: 300; Rogers 1981: 52.

***Hypoxylon archeri* Berk.**

Growth form: pyrenomycetoid
Ecology: saprobic, on wood
Province/Locality: BCI
Reference: Standley 1933: 18.

***Hypoxylon dieckmannii* Theiss.**

Growth form: pyrenomycetoid
Ecology: saprobic, on wood
Reference: Dennis 1970: 297.

***Hypoxylon fuscum* (Pers.) Fr.**

Growth form: pyrenomycetoid
Ecology: saprobic, on wood
Province/Locality: BCI
Reference: Standley 1933: 18, probably as *Xylaria fusca* Mont. (pers. com. M. Stadler).

***Hypoxylon glycyrrhiza* Berk. & M.A. Curtis**

Growth form: pyrenomycetoid
Ecology: saprobic, erumpent through bark
Reference: Laessøe et al. 1989: 132.

***Hypoxylon haematostroma* Mont.**

Growth form: pyrenomycetoid
Ecology: saprobic, on wood
Province/Locality: BCI
Reference: Standley 1933: 19.

***Hypoxylon hypomiltum* Mont.**

Growth form: pyrenomycetoid
Ecology: saprobic, on wood
Province/Locality: BCI
Reference: Standley 1933: 19.

***Hypoxylon monticulosum* Mont.**

Growth form: pyrenomycetoid
Ecology: saprobic, on logs
Province/Locality: BCI
Reference: Weston 1933: 396, as *Hypoxylon merrillii* Syd. & P. Syd., a synonym acc. to Index Fungorum; Standley 1933: 19, as *H. merrillii*; Standley 1933: 19, as *Hypoxylon glomeratum* Cooke, a synonym acc. to Index Fungorum.

***Hypoxylon pouceanum* Berk. & Cooke**

Growth form: pyrenomycetoid
Ecology: saprobic, on wood
Province/Locality: BCI
Reference: Standley 1933: 19.

***Hypoxylon rubiginosum* (Pers.) Fr.**

Growth form: pyrenomycetoid
Ecology: saprobic, on wood
Province/Locality: BCI
Reference: Standley 1933: 19.

***Hypoxylon thouarsianum* (Lév.) Lloyd**

Growth form: pyrenomycetoid
Ecology: saprobic, on wood
Reference: Dennis 1970: 298.

***Kretzschmaria clavus* (Fr.) Sacc.**

Growth form: pyrenomycetoid
Ecology: saprobic
Province/Locality: BCI
Reference: Standley 1933: 19.

***Penzigia cretacea* (Berk. & Broome) Sacc. & Paol.**

Growth form: pyrenomycetoid
Ecology: saprobic, on wood
Province/Locality: BCI
Reference: Standley 1933: 19.

***Phylacia poculiformis* (Mont.) Mont.**

Fig. 24

Growth form: pyrenomycetoid
Ecology: saprobic, on logs
Province/Locality: BCI
Reference: Standley 1933: 19.

***Phylacia sagraeana* (Mont.) Mont.**

Growth form: pyrenomycetoid
Ecology: saprobic, on wood
Province/Locality: BCI
Reference: Standley 1927: 6; Standley 1933: 17, as *Camillea sagraeana* (Mont.) Berk. & M.A. Curtis; Dennis 1970: 324.

***Rosellinia* sp.**

Ecology: plant parasitic, on *Theobroma cacao*, Malvaceae
Reference: McGuire & Crandall 1967: 149.

***Xylaria appendiculata* Ferd. & Winge
genus: Fig. 25**

Growth form: pyrenomycetoid
Ecology: saprobic, on dead leaves
Province/Locality: CA
Reference: Martin 1948: 112; Dennis 1956: 409; Dennis 1970: 304, as *Xylosphaera appendiculata* (Ferd. & Winge) Dennis.

***Xylaria arbuscula* Sacc.**

Growth form: pyrenomycetoid
Ecology: saprobic, on wood

Province/Locality: BCI
Reference: Standley 1933: 18.

***Xylaria axifera* Mont.**

Growth form: pyrenomycetoid
Ecology: saprobic, on wood
Province/Locality: BCI
Reference: Standley 1927: 7; Standley 1933: 17; Dennis 1970: 303, as *Xylosphaera axifera* (Mont.) Dennis.

***Xylaria berkeleyi* Mont. in Cooke**

Growth form: pyrenomycetoid
Ecology: saprobic, on wood
Province/Locality: BCI
Reference: Standley 1933: 18.

***Xylaria comosa* Mont.**

Growth form: pyrenomycetoid
Ecology: saprobic, on wood
Province/Locality: BCI, CA
Reference: Weston 1933: 396; Standley 1933: 18; Meyer 1949: 92; Dennis 1970: 303, as *Xylosphaera comosa* (Mont.) Dennis.

***Xylaria consociata* Starbäck**

Growth form: pyrenomycetoid
Ecology: saprobic, on wood
Province/Locality: BCI
Ref.: Weston 1933: 406; Standley 1933: 18.

***Xylaria cubensis* (Mont.) Fr.**

Growth form: pyrenomycetoid
Ecology: saprobic, on wood
Province/Locality: BCI, CA
Reference: Standley 1927: 7; Standley 1933: 17; Meyer 1949: 92.

***Xylaria grammica* (Mont.) Mont.**

Growth form: pyrenomycetoid
Ecology: saprobic, on wood
Province/Locality: BCI, CA
Reference: Weston 1933: 396; Standley 1933: 18; Meyer 1949: 92; Dennis 1970: 303, as *Xylosphaera grammica* (Mont.) Dennis.

***Xylaria guianensis* (Mont.) Fr.**

Growth form: pyrenomycetoid
Ecology: saprobic, on wood
Province/Locality: CA
Reference: Meyer 1949: 92.

***Xylaria heliscus* (Mont.) J.D. Rogers & Y.M. Ju**

Growth form: pyrenomycetoid
Ecology: saprobic, on hard decorticated wood
Province/Locality: BCI
Reference: Standley 1933: 19, as *Kretzschmaria gomphoidea* Penz. & Sacc., a synonym acc. to M. Stadler (pers. com.).

***Xylaria janthinovelutina* Mont.**

Growth form: pyrenomycetoid
Ecology: saprobic, on fallen legume fruits or *Apeiba aspera* fruits
Province/Locality: BCI
Reference: Weston 1933: 401, 407; Standley 1933: 18; Dennis 1970: 304, as *Xylosphaera ianthino-velutina* (Mont.) Dennis.

***Xylaria multiplex* (Kunze) Berk. & M.A. Curtis**

Growth form: pyrenomycetoid
Ecology: saprobic, on logs
Province/Locality: BCI, CA
Reference: Meyer 1949: 92.

***Xylaria muscula* Lloyd**

Growth form: pyrenomycetoid
Ecology: saprobic, on wood
Province/Locality: BCI
Reference: Standley 1933: 18.

***Xylaria rhizomorpha* Mont.**

Growth form: pyrenomycetoid
Ecology: saprobic, on wood
Province/Locality: CA
Reference: Meyer 1949: 92.

***Xylaria scopiformis* Mont. ex Berk. & Broome**

Growth form: pyrenomycetoid
Ecology: saprobic, on wood
Province/Locality: CA
Reference: Meyer 1949: 92.

***Xylaria scruposa* (Fr.) Berk.**

Growth form: pyrenomycetoid
Ecology: saprobic, on wood
Province/Locality: BCI, CA
Reference: Meyer 1949: 92.

***Xylosphaera papyrifera* (Fr.) Dennis
subsp. *cubensis* (Mont.) Dennis**

Growth form: pyrenomycetoid
Ecology: saprobic
Reference: Dennis 1970: 302.

order: Incertae sedis

Apiosporaceae

***Apiospora montagnei* Sacc.**

Growth form: pyrenomycetoid
Ecology: saprobic, on dead stems of large
grasses, Poaceae
Reference: Dennis 1970: 290.

***Apiospora striola* (Pass.) Sacc.**

Growth form: pyrenomycetoid
Ecology: plant parasitic, on *Chusquea pittieri*?, Poaceae
Province/Locality: PA
Reference: Stevens 1927a: 32.

Glomerellaceae

***Glomerella cingulata* (Stoneman)
Spauld. & H. Schrenk**

**AN: *Gloeosporium cingulatum* G.F.
Atk.**

Growth form: pyrenomycetoid; AN:
coelomycetous
Ecology: saprobic, on dead leaves of
Camaridium grandiflorum, Orchidaceae; plant

parasitic, on *Mangifera indica*, Anacardiaceae;
on *Citrus sinensis*, C. sp., Rutaceae; on dying
leaves of *Furcraea cabuya*, Agavaceae
Province/Locality: CH, PA
Reference: Dearness & House 1925: 72;
McGuire & Crandall 1967: 131, 134.

subclass: Incertae sedis

Laboulbeniales

Herpomycetaceae

***Herpomyces periplanetae* Thaxt.**

Growth form: pyrenomycetoid
Ecology: insect associated, probably parasitic,
on *Periplaneta* sp., Blattidae (Dictyoptera)
Reference: Thaxter 1908: 285.

***Herpomyces tricuspoidatus* Thaxt.**

Growth form: pyrenomycetoid
Ecology: insect associated, probably parasitic,
on *Blabera* sp. or *Epilampra* sp., Blaberidae
(Dictyoptera)
Reference: Thaxter 1931: 87; Dennis 1970:
329.

Laboulbeniaceae

***Dichomyces aulacophorae* Thaxt.**

Growth form: pyrenomycetoid
Ecology: insect associated, probably parasitic
Reference: Dennis 1970: 328.

***Eucantharomyces euprocti* Thaxt.
a new species from Panama**

Growth form: pyrenomycetoid
Ecology: insect associated, probably parasitic,
on "*Euproctus*" *quadrinus*, the genus is
erroneous for being Salamandridae
Province/Locality: CH
Reference: Thaxter 1900: 417; Thaxter 1908:
277; Dennis 1970: 329.

***Hesperomyces coccinelloides* Thaxt.**

Growth form: pyrenomycetoid
 Ecology: insect associated, probably parasitic,
 on *Scymnus tardus*, Coccinellidae
 (Coleoptera)
 Province/Locality: BCI
 Reference: Thaxter 1931: 110; Dennis 1970:
 329.

***Histeridomyces acriti* Thaxt.**

a new species from Panama
 Growth form: pyrenomycetoid
 Ecology: insect associated, probably parasitic,
 on *Acritus* sp., Histeridae (Coleoptera)
 Province/Locality: BCI
 Reference: Thaxter 1931: 183; Dennis 1970:
 329.

***Ilytheomyces elegans* Thaxt.**

Growth form: pyrenomycetoid
 Ecology: insect associated, probably parasitic,
 on *Ilythea* sp., Ephydriidae (Diptera)
 Province/Locality: BO
 Reference: Thaxter 1917: 707; Thaxter 1931:
 233; Dennis 1970: 329.

***Ilytheomyces lingulatus* Thaxt.**

Growth form: pyrenomycetoid
 Ecology: insect associated, probably parasitic,
 on *Ilythea* sp., Ephydriidae (Diptera)
 Province/Locality: BO
 Reference: Thaxter 1917: 712; Thaxter 1931:
 238; Dennis 1970: 329.

***Ilytheomyces major* Thaxt.**

a new species from Panama
 Growth form: pyrenomycetoid
 Ecology: insect associated, probably parasitic,
 on *Ilythea* sp., Ephydriidae (Diptera)
 Province/Locality: BO
 Reference: Thaxter 1917: 713; Thaxter 1931:
 238; Dennis 1970: 329.

***Ilytheomyces manubriolatus* Thaxt.**

Growth form: pyrenomycetoid
 Ecology: insect associated, probably parasitic,
 on *Ilythea* sp., Ephydriidae (Diptera)
 Province/Locality: BO
 Reference: Thaxter 1917: 708; Thaxter 1931:
 235; Dennis 1970: 329.

***Ilytheomyces panamensis* Thaxt.**

a new species from Panama
 Growth form: pyrenomycetoid
 Ecology: insect associated, probably parasitic,
 on *Ilythea* sp., Ephydriidae (Diptera)
 Province/Locality: BO
 Reference: Thaxter 1917: 710; Thaxter 1931:
 236; Dennis 1970: 329.

***Kleidiomyces furcillatus* (Thaxt.) Thaxt.**

a new species from Panama
 Growth form: pyrenomycetoid
 Ecology: insect associated, probably parasitic,
 on *Aleochara repetita*, Staphylinidae (Coleop-
 tera)
 Reference: Thaxter 1901: 24, as
Monoicomyces furcillatus Thaxter; Thaxter
 1931: 32; Dennis 1970: 329.

***Laboulbenia anchonoderi* Thaxt.**

a new species from Panama
 Growth form: pyrenomycetoid
 Ecology: insect associated, probably parasitic,
 on *Anchonoderus suboeneus*, Carabidae
 (Coleoptera)
 Province/Locality: NB
 Reference: Thaxter 1899: 156; Thaxter 1908:
 347; Dennis 1970: 329.

***Laboulbenia casnoniae* Thaxt.**

Growth form: pyrenomycetoid
 Ecology: insect associated, probably parasitic,
 on *Bradycellus circumdatus*, Carabidae
 (Coleoptera)
 Province/Locality: CH
 Reference: Thaxter 1908: 341.

***Laboulbenia catascopi* Thaxt.**

Growth form: pyrenomycetoid
Ecology: insect associated, probably parasitic,
on *Callida quadrispora*, *Catascopus fascialis*,
Carabidae (Coleoptera)
Province/Locality: CH
Reference: Thaxter 1908: 382; Dennis 1970:
329.

***Laboulbenia chiriquensis* Thaxt.**

a new species from Panama
Growth form: pyrenomycetoid
Ecology: insect associated, probably parasitic,
on *Calleida scintillans*, Carabidae
(Coleoptera)
Province/Locality: CH
Reference: Thaxter 1899: 164; Thaxter 1908:
356; Dennis 1970: 329.

***Laboulbenia colpodis* Thaxt.**

a new species from Panama
Growth form: pyrenomycetoid
Ecology: insect associated, probably parasitic,
on *Colpodes chiriquinus*, Carabidae
(Coleoptera)
Province/Locality: CH
Reference: Thaxter 1899: 166; Thaxter 1908:
398; Dennis 1970: 329.

***Laboulbenia coptoderae* Thaxt.**

a new species from Panama
Growth form: pyrenomycetoid
Ecology: insect associated, probably parasitic,
on *Coptodera championi*, Carabidae (Coleop-
tera)
Reference: Thaxter 1893: 168; Thaxter 1895:
340; Dennis 1970: 329.

***Laboulbenia crispata* Thaxt.**

a new species from Panama
Growth form: pyrenomycetoid
Ecology: insect associated, probably parasitic,
on *Hippelates* sp., Chloropidae (Diptera);
Poederus luridiventris, Staphylinidae
(Coleoptera)

Province/Locality: BO, CH
Reference: Thaxter 1908: 354; Thaxter 1917:
719.

***Laboulbenia drepanalis* Thaxt.**

a new species from Panama
Growth form: pyrenomycetoid
Ecology: insect associated, probably parasitic,
on *Gyretes acutangulus*, Gyridae (Coleop-
tera)
Province/Locality: CH
Reference: Thaxter 1899: 173; Thaxter 1908:
416.

***Laboulbenia fallax* Thaxt.**

a new species from Panama
Growth form: pyrenomycetoid
Ecology: insect associated, probably parasitic,
on *Gyretes acutangulus*, Gyridae
(Coleoptera)
Province/Locality: CH
Reference: Thaxter 1899: 176; Thaxter 1908:
418; Dennis 1970: 329.

***Laboulbenia flagellata* Peyr.**

Growth form: pyrenomycetoid
Ecology: insect associated, probably parasitic,
on *Coptodera championi*, Carabidae
(Coleoptera)
Province/Locality: CH
Reference: Thaxter 1908: 344; Dennis 1970:
329.

***Laboulbenia guerinii* Mont. & C.P.**

Robin
Growth form: pyrenomycetoid
Ecology: insect associated, probably parasitic,
on *Gyretes acutangulus*, Gyridae
(Coleoptera)
Province/Locality: CH
Reference: Thaxter 1908: 416; Dennis 1970:
329.

***Laboulbenia mexicana* Thaxt.**

Growth form: pyrenomycetoid
 Ecology: insect associated, probably parasitic,
 on *Galerita americana*, Carabidae
 (Coleoptera)
 Province/Locality: CH
 Reference: Thaxter 1908: 386; Dennis 1970:
 330.

***Laboulbenia minima* Thaxt.**

a new species from Panama
 Growth form: pyrenomycetoid
 Ecology: insect associated, probably parasitic,
 on *Calleida pallidipennis*, Carabidae
 (Coleoptera)
 Reference: Thaxter 1893: 175; Thaxter 1895:
 347; Dennis 1970: 330.

***Laboulbenia polyphaga* Thaxt.**

Growth form: pyrenomycetoid
 Ecology: insect associated, probably parasitic,
 on *Bradycellus circumdatus*, Carabidae
 (Coleoptera)
 Province/Locality: CH
 Reference: Thaxter 1908: 342; Dennis 1970:
 330.

***Mimeomyces atropurpureus* (Thaxt.)
Thaxt.**

a new species from Panama
 Growth form: pyrenomycetoid
 Ecology: insect associated, probably parasitic,
 on *Quedius basiventris*, *Q. graciliventris*,
 Staphylinidae (Coleoptera)
 Province/Locality: CH
 Reference: Thaxter 1900: 441, as
Sphaleromyces atropurpureus Thaxter;
 Thaxter 1908: 324, as *S. atropurpureus*;
 Dennis 1970: 330.

***Mimeomyces chiriquensis* (Thaxt.)
Thaxt.**

a new species from Panama
 Growth form: pyrenomycetoid
 Ecology: insect associated, probably parasitic,
 on *Quedius flavicaudus*, Staphylinidae
 (Coleoptera)
 Province/Locality: CH
 Reference: Thaxter 1901: 40, as
Sphaleromyces chiriquensis Thaxter; Thaxter
 1908: 325, as *S. chiriquensis*; Dennis 1970:
 330.

***Peyritsiella lampropygi* Thaxt.**

a new species from Panama
 Growth form: pyrenomycetoid
 Ecology: insect associated, probably parasitic,
 on *Lampropygius analis*, Staphylinidae
 Province/Locality: CH
 Reference: Thaxter 1931: 18; Dennis 1970:
 330.

***Peyritsiella vulgata* (Thaxt.) I.I. Tav.**

Growth form: pyrenomycetoid
 Ecology: insect associated, probably parasitic,
 on *Philonthus flavolimbatus*, Staphylinidae
 (Coleoptera)
 Reference: Thaxter 1900: 424; Thaxter 1908:
 251; Dennis 1970: 328; all as *Dichomyces*
vulgatus Thaxt.

***Rickia nutans* Thaxt.**

Growth form: pyrenomycetoid
 Ecology: insect associated, probably parasitic,
 on Passalidae (Coleoptera)
 Reference: Thaxter 1926: 487.

***Stemmatomyces panamensis* Thaxt.**

a new species from Panama
 Growth form: pyrenomycetoid
 Ecology: insect associated, probably parasitic,
 on *Aeolus* sp., Elateridae (Coleoptera)
 Province/Locality: BCI
 Reference: Thaxter 1931: 108; Dennis 1970:
 330.

***Stigmatomyces caribbeus* Thaxt.**

a new species from Panama

Growth form: pyrenomycetoid

Ecology: insect associated, probably parasitic, on *Discocerina* sp., Ephydriidae (Diptera)

Province/Locality: BO

Reference: Thaxter 1917: 688; Thaxter 1931: 140; Dennis 1970: 330.

***Stigmatomyces constrictus* Thaxt.**

Growth form: pyrenomycetoid

Ecology: insect associated, probably parasitic, on *Siphonella* sp., *Oscinis* sp., Chloropidae (Diptera)

Province/Locality: BO

Reference: Thaxter 1917: 697.

***Stigmatomyces drapetis* Thaxt.**

Growth form: pyrenomycetoid

Ecology: insect associated, probably parasitic, on *Drapetis rectinerva*, Empididae (Diptera)

Province/Locality: BO

Reference: Thaxter 1917: 657; Thaxter 1931: 137; Dennis 1970: 330.

***Stigmatomyces otheroideae* Thaxt.**

Growth form: pyrenomycetoid

Ecology: insect associated, probably parasitic

Reference: Dennis 1970: 331.

***Stigmatomyces recurvatus* Thaxt.**

Growth form: pyrenomycetoid

Ecology: insect associated, probably parasitic

Reference: Dennis 1970: 331.

Ostropales

***Propoliopsis arengae* Rehm**

Growth form: discomycetoid

Ecology: saprobic, on palm leaves or herbaceous debris

Province/Locality: KY

Reference: Sherwood 1977a: 78.

***Stictis bella* Kalchbr. & Cooke**

Growth form: discomycetoid

Ecology: saprobic

Province/Locality: BCI

Reference: Standley 1933: 18.

***Stictis dennisii* Sherwood**

Growth form: discomycetoid

Ecology: saprobic, on small twigs or herbaceous stems

Province/Locality: KY, PA

Reference: Sherwood 1977a: 171.

Stictis radiata* (L.) Pers. subsp. *radiata

Growth form: discomycetoid

Ecology: saprobic

Province/Locality: CH

Reference: Sherwood 1977a: 234.

***Stictis stellata* Wallr.**

Growth form: discomycetoid

Ecology: saprobic, on herbaceous stems

Province/Locality: CH, PA, VR

Reference: Sherwood 1977a: 251.

order: Incertae sedis

Acrospermaceae

***Oomyces monocarpus* A. Møller**

Ecology: parasitic on mites, on mites on grass

Province/Locality: BCI

Reference: Standley 1933: 18.

Myxotrichaceae

***Pseudogymnoascus roseus* Raillo**

Growth form: plectomycetoid

Ecology: saprobic, cultivated from soil

Province/Locality: BCI, CH

Reference: Farrow 1954: 641, as

Pseudogymnoascus vinaceus Raillo, a synonym acc. to Index Fungorum; Dennis 1970: 322, as *P. vinaceus*.

Orbiliaceae***Orbilia brasiliensis* (Speg.) Sacc.**

Growth form: discomycetoid

Ecology: saprobic

Province/Locality: BCI

Reference: Standley 1933: 18, probably also cited as *Ohlevia brasiliensis* (Speg.) Sacc.***Orbilia epipora* (Nyl.) P. Karst.**

Growth form: discomycetoid

Ecology: saprobic, on wood, bark, or polypores

Province/Locality: CC

Reference: Cash 1937: 214; Dennis 1954: 296; Dennis 1970: 352.

***Orbilia epipora* (Nyl.) P. Karst. var. *major* Speg.**

Growth form: discomycetoid

Ecology: saprobic, on wood

Province/Locality: BCI, CA, CH

Reference: Cash 1937: 214.

***Orbilia juruensis* Henn.**

Growth form: discomycetoid

Ecology: saprobic, on wood

Province/Locality: CC

Reference: Cash 1937: 214; Dennis 1954: 297; Dennis 1970: 352.

family: Incertae sedis**Indet.**

Ecology: from the deep sea

Province/Locality: Golf of Panamá

Reference: Kohlmeyer 1977: 198.

FUNGI IMPERFECTI***Coelomyces******Antennariella californica* Bat. & Cif.**Ecology: plant parasitic, on *Cinnamomum zeylanicum*, Lauraceae

Province/Locality: CA

Reference: Batista & Ciferri 1963: 25.

***Antennariella perseae* Bat., Nascim. & Cif.**Ecology: plant parasitic, on *Mangifera indica*, Anacardiaceae; on *Psychotria* sp., Rubiaceae

Province/Locality: CA

Reference: Batista & Ciferri 1963: 29, 30.

***Antennariella* sp.**Ecology: plant parasitic, on *Cornutia pyramidata*, Verbenaceae

Province/Locality: CA

Reference: Batista & Ciferri 1963: 34.

***Asbolisia ficina* Bat., Nascim. & Cif. a new species from Panama**Ecology: plant parasitic, on *Mangifera indica*, Anacardiaceae; on *Ficus hemsleyana*, Moraceae; on *Chrysophyllum cainito*, Sapotaceae

Province/Locality: CA

Reference: Batista & Ciferri 1963: 41.

***Aschersonia aleyrodis* Webber**Ecology: parasitic on scale insects or white fly larvae on *Citrus* sp., Rutaceae

Reference: McGuire & Crandall 1967: 133.

***Camarosporium orchidicola* E.K. Cash & A.M.J. Watson**Ecology: plant parasitic, on *Brassavola nodosa*, Orchidaceae

Province/Locality: CA

Reference: Cash & Watson 1955: 742; Dennis 1970: 369.

***Ciliospora gelatinosa* Zimm.**

Ecology: saprobic, cultivated from a fallen leaf

Province/Locality: CA

Reference: Martin 1948: 121.

***Colletotrichum circinans* (Berk.)**

Voglino

Ecology: plant parasitic, on *Allium cepa*, Alliaceae; on *Ipomoea batatas*,

Convolvulaceae

Ref.: McGuire & Crandall 1967: 139, 144.

***Colletotrichum coccodes* (Wallr.) S.**

Hughes

Ecology: plant parasitic, on *Capsicum frutescens*, Solanaceae

Reference: McGuire & Crandall 1967: 139, as *Gloeosporium piperatum* Ellis & Everh., a synonym acc. to Index Fungorum

***Colletotrichum coffeanum* F. Noack**

Ecology: plant parasitic, on *Coffea arabica*, Rubiaceae

Province/Locality: NB

Reference: Toler et al. 1959: 1202; McGuire & Crandall 1967: 145.

***Colletotrichum falcatum* Went**

Ecology: plant parasitic, on *Saccharum officinarum*, *Sorghum vulgare*, Poaceae

Reference: Toler et al. 1959: 1203; McGuire & Crandall 1967: 122, 127.

***Colletotrichum gloeosporioides* (Penz.)**

Penz. & Sacc.

Ecology: plant parasitic, on *Carica papaya*, Caricaceae; on *Ipomoea batatas*, Convolvulaceae; on *Aeschynomene americana*, *A. brasiliana*, *A. histrix*, *Stylosanthes guianensis*, *S. hamata*, *S. humilis*, *S. sympodialis*, *Zornia glochidiata*, Fabaceae; on *Persea americana*, Lauraceae; on *Gossypium hirsutum*, *Theobroma cacao*, Malvaceae; on *Citrus* sp., Rutaceae

Reference: Toler et al. 1959: 1202; McGuire & Crandall 1967: 129, 131, 144, 147, 148; Dennis 1970: 374; Lenné 1990: 1, 137, 138, 139, 147.

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

Ecology: plant parasitic, on *Sorghum halepense*, *S. vulgare*, *Zea mays*, Poaceae

Reference: McGuire & Crandall 1967: 118, 122.

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

Ecology: plant parasitic, on *Phaseolus vulgaris*, Fabaceae

Reference: Toler et al. 1959: 1202; McGuire & Crandall 1967: 120.

***Colletotrichum nigrum* Ellis & Halst.**

Ecology: plant parasitic, on *Capsicum frutescens*, Solanaceae

Reference: McGuire & Crandall 1967: 138.

***Colletotrichum orbiculare* (Berk. & Mont.) Arx**

Ecology: plant parasitic, on *Citrullus vulgaris*, *Cucumis melo*, *C. sativus*, *Cucurbita maxima*, *Sechium edule*, Cucurbitaceae

Reference: Toler et al. 1959: 1202, 1203, as *Colletotrichum lagenaria* (Pass.) Ellis & Halst., a synonym acc. to Index Fungorum; McGuire & Crandall 1967: 141, as *C. lagenaria*.

***Colletotrichum peregrinum* Pass.**

Ecology: plant parasitic, on *Polyscias quilfoylei*, Araliaceae

Province/Locality: PA

Reference: Stevens 1927a: 55.

***Colletotrichum* sp.**

Ecology: plant parasitic, on *Ananas comosus*, Bromeliaceae

Reference: McGuire & Crandall 1967: 133.

***Colletotrichum truncatum* (Schwein.)
Andrus & W.D. Moore**

Ecology: plant parasitic, on *Aeschynomene paniculata*, Fabaceae

Reference: Lenné 1990: 2.

***Diplodia cacaoicola* Henn.**

Ecology: plant parasitic, on *Theobroma cacao*, Malvaceae

Province/Locality: BCI

Reference: Standley 1933: 21.

***Diplodia cococarpa* Sacc.**

Ecology: saprobic/plant parasitic, on husks of *Cocos nucifera*, Arecaceae

Reference: McGuire & Crandall 1967: 132.

***Eudarlucia caricis* (Biv.) O.E. Erikss.**

Ecology: mycoparasitic, on *Puccinia sorghi*, *Puccinia thaliae*, *Uredo dioscoreae*,

Uredinales, Basidiomycota

Province/Locality: CA

Reference: Stevens 1930: 286, as *Darlucia filum* (Biv.) Castagne, a synonym acc. to Index Fungorum; McGuire & Crandall 1967: 118, as *D. filum*.

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

Ecology: plant parasitic, on *Annona* sp., Annonaceae; on *Cocos nucifera*, Arecaceae; on *Dioscorea alata*, Dioscoreaceae; on *Theobroma cacao*, Malvaceae; on *Musa* sp., Musaceae

Reference: Toler et al. 1959: 1202, 1203, as *Diplodia theobromae* (Pat.) W. Nowell; McGuire & Crandall 1967: 130, 132, 148, 149, as *D. theobromae*.

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

Ecology: saprobic, cultivated from soil
Province/Locality: BCI, CA

Reference: Farrow 1954: 639, as *Botryodiplodia theobromae* Pat.; Dennis 1970: 367, as *B. theobromae*.

***Leptostromella andropogonis* Dearn. &
House**

a new species from Panama

Ecology: plant parasitic, on *Andropogon hirtiflorus*, Poaceae

Province/Locality: CH

Reference: Dearness & House 1925: 91.

***Leptostromella septorioides* Sacc. &
Roum.**

Ecology: plant parasitic, on *Panicum* sp., Poaceae

Province/Locality: CH

Reference: Dearness & House 1925: 91.

***Linochora polyadelpha* Syd. in
Chardón & Toro**

a new species from Panama

Ecology: plant parasitic, on *Coccoloba* ? sp., Polygonaceae

Province/Locality: PA

Reference: Chardón & Toro 1930: 276; Dennis 1970: 361.

***Macrophoma pernettyae* Dearn. &
House**

a new species from Panama

Ecology: plant parasitic, on *Pernettya coriacea*, Ericaceae

Province/Locality: CH

Reference: Dearness & House 1925: 83.

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

Ecology: plant parasitic, on *Ipomoea batatas*, Convolvulaceae; *Phaseolus vulgaris*, *Vigna sinensis*, Fabaceae

Reference: Toler et al. 1959: 1202, as *Macrophomina phaseoli* (Maubl.) S.F. Ashby, a synonym acc. to Index Fungorum; McGuire & Crandall 1967: 120, 144, as *M. phaseoli*.

***Mattirolella crustosa* S.R. Khan & Kimbr.**

Ecology: parasitic on *Nasutitermes* spp.,
Termitidae (Isoptera)
Province/Locality: CA
Reference: Khan & Kimbrough 1974: 398;
Sutton 1980: 493; Kimbrough & Thorne 1982:
201.

***Myrothecium roridum* Tode**

Ecology: saprobic, cultivated from palm leaf,
soil from banana farm, or decaying bamboo
Province/Locality: BCI, CH
Reference: Morris & Finley 1956: 732; Dennis
1970: 426; Goos 1960: 879; Goos 1997: 378.

***Pestalotia gaultheriae* Dearn. & House
a new species from Panama**

Ecology: plant parasitic, on *Gaultheria* sp.,
Ericaceae
Province/Locality: CH
Reference: Dearness & House 1925: 94; Guba
1961: 177; Dennis 1970: 376; Nag Ray 1993:
587.

***Pestalotiopsis disseminata* (Thümen)
Steyaert**

Ecology: saprobic, cultivated from palm leaf
Province/Locality: CA
Reference: Morris & Finley 1956: 733, as
Pestalotia disseminata Thümen.

***Pestalotiopsis microspora* (Speg.) G.C.
Zhao & N. Li**

Ecology: plant parasitic, cultivated from palm
leaf, Arecaceae
Province/Locality: BCI
Reference: Morris & Finley 1956: 733, as
Pestalotia dichchaeta Speg., a synonym acc. to
Index Fungorum; Dennis 1970: 376, as
Pestalotia microspora Speg.

***Pestalotiopsis palmarum* (Cooke)
Steyaert**

Ecology: plant parasitic, on *Cocos nucifera*,
Arecaceae
Reference: Toler et al. 1959: 1202, as
Pestalotia palmarum Cooke; McGuire &
Crandall 1967: 132, as *P. palmarum*.

***Pestalotiopsis* sp.**

Ecology: saprobic, cultivated from litter
Province/Locality: BCI
Reference: Cornejo et al. 1994: 187.

***Phoma destructiva* Plowr.**

Ecology: plant parasitic, on *Capsicum*
annuum, *C. frutescens*, *Lycopersicon esculen-*
tum, Solanaceae
Reference: Toler et al. 1959: 1203; McGuire
& Crandall 1967: 136, 139.

***Phoma exigua* Desm.**

Ecology: plant parasitic, on *Phaseolus*
vulgaris, Fabaceae
Reference: McGuire & Crandall 1967: 120, as
Ascochyta phaseolorum Sacc., a synonym acc.
to Index Fungorum.

***Phoma lingam* (Tode) Desm.**

Ecology: plant parasitic, on *Brassica oleracea*,
Brassicaceae
Reference: Toler et al. 1959: 1202; McGuire
& Crandall 1967: 138.

***Phoma* sp.**

Ecology: saprobic, cultivated from soil of
banana farm
Province/Locality: CH
Reference: Goos 1960: 879.

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

Ecology: plant parasitic, on *Catasetum*
viridiflavum, Orchidaceae
Province/Locality: CA
Reference: Cash & Watson 1955: 739.

***Phomopsis* sp.**

Ecology: saprobic, cultivated from soil of banana farm

Province/Locality: CH

Reference: Goos 1960: 879.

***Phyllosticta batatas* (Thüm.) Cooke**

Ecology: plant parasitic, on *Ipomoea batatas*, Convolvulaceae

Reference: McGuire & Crandall 1967: 144.

***Phyllosticta cajani* Rangel**

Ecology: plant parasitic, on *Cajanus cajan*, Fabaceae

Reference: Lenné 1990: 19.

***Phyllosticta capitalensis* Henn.**

Ecology: plant parasitic, on *Jacquiiniella* sp., *Oncidium* sp., Orchidaceae

Province/Locality: CA

Reference: Cash & Watson 1955: 737, as *Phyllostictina pyriformis* E.K. Cash & A.M.J. Watson, a synonym acc. to Index Fungorum; Dennis 1970: 362, as *P. pyriformis*.

***Phyllosticta coffeicola* Delacr.**

Ecology: plant parasitic, on *Coffea arabica*, Rubiaceae

Reference: McGuire & Crandall 1967: 146.

***Phyllosticta cucurbitacearum* Sacc.**

Ecology: plant parasitic, on *Cucumis sativus*, Cucurbitaceae

Reference: McGuire & Crandall 1967: 142.

***Phyllosticta sechii* P.A. Young**

Ecology: plant parasitic, on *Sechium edule*, Cucurbitaceae

Reference: McGuire & Crandall 1967: 142.

***Phyllosticta* sp.**

Ecology: plant parasitic, on *Coffea arabica*, Rubiaceae

Reference: Toler et al. 1959: 1202; McGuire & Crandall 1967: 146.

***Phyllosticta oryzina* Padwick**

Ecology: plant parasitic, on *Oryza sativa*, Poaceae

Reference: McGuire & Crandall 1967: 124.

***Podoxyphium yuccae* Bat. & Nascim.**

Ecology: plant parasitic, on *Cordia* sp., Boraginaceae

Province/Locality: CA

Reference: Batista & Ciferri 1963: 176.

***Pyrenochaeta* sp.**

Ecology: saprobic, cultivated from soil of banana farm

Province/Locality: CH

Reference: Goos 1960: 879.

***Scenomyces perplexans* F. Stevens
a new species from Panama**

Ecology: plant parasitic, on dicot

Province/Locality: PA

Reference: Stevens 1927a: 61.

***Schizotrichella lunata* E.F. Morris
a new species from Panama**

Ecology: saprobic, cultivated from *Cantharellus odoratus*, Cantharellales, Basidiomycota

Province/Locality: CH

Reference: Morris & Finley 1956: 735; Dennis 1970: 426.

***Septoria citri* Pass.**

Ecology: plant parasitic, on *Citrus* sp., Rutaceae

Reference: McGuire & Crandall 1967: 135.

***Septoria lactucae* Pass.**

Ecology: plant parasitic, on *Lactuca sativa*, Asteraceae

Reference: McGuire & Crandall 1967: 144.

***Septoria lycopersici* Speg.**

Ecology: plant parasitic, on *Lycopersicon esculentum*, Solanaceae
Reference: McGuire & Crandall 1967: 144.

***Sphaceloma perseae* Jenkins**

Ecology: plant parasitic, on *Persea americana*, Lauraceae
Reference: McGuire & Crandall 1967: 132.

***Stagonospora sacchari* T.T. Lo & L. Ling**

Ecology: plant parasitic, on *Saccharum officinarum*, Poaceae
Reference: Toler et al. 1959: 1203; McGuire & Crandall 1967: 128.

***Stenocarpella macrospora* (Earle) B. Sutton**

Ecology: plant parasitic, on *Zea mays*, Poaceae
Reference: Toler et al. 1959: 1202, as *Diplodia macrospora* Earle; McGuire & Crandall 1967: 118, as *D. macrospora*.

***Stenocarpella maydis* (Berk.) B. Sutton**

Ecology: plant parasitic, on *Zea mays*, Poaceae
Reference: Toler et al. 1959: 1202, as *Diplodia maydis* (Berk.) Sacc.; McGuire & Crandall 1967: 118, as *D. maydis*.

***Vouauxiella pithospora* (Cavalc. & Maia) B. Sutton**

Ecology: lichenicolous, on *Porina* gr. *epiphylla*, Lichenes
Province/Locality: COI
Reference: Etayo 1997: 219.

Hyphomycetes

***Acremonium* sp.**

Ecology: saprobic, cultivated from litter
Province/Locality: BCI
Reference: Cornejo et al. 1994: 187.

***Acremonium vitis* Catt.**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI, CA, CH
Reference: Farrow 1954: 639; Dennis 1970: 385.

***Acremonium zonatum* (Sawada) W. Gams**

Ecology: plant parasitic, on *Eichhornia azurea*, *E. crassipes*, Pontederiaceae
Province/Locality: CA
Reference: Rintz 1974: G4, as *Cephalosporium zonatum* Sawada.

***Acrostalagmus albus* Preuss**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI, CA, CH
Reference: Farrow 1954: 639; Dennis 1970: 384.

***Albosynnema elegans* E.F. Morris
a new species from Panama**

Ecology: saprobic, on bark of dead angiosperm branch
Province/Locality: PA
Reference: Morris 1967: 179; Bills et al. 1994: 2.

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

Ecology: plant parasitic, on *Xanthosoma violaceum*, Araceae
Reference: McGuire & Crandall 1967: 143, as *Alternaria tenuis* Nees, a synonym acc. to Index Fungorum.

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

Ecology: plant parasitic, on *Brassica oleracea* var. *capitata*, Brassicaceae
Reference: McGuire & Crandall 1967: 138; Crous & Braun 2003: 88.

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

Ecology: plant parasitic, on *Brassica oleracea* var. *capitata*, Brassicaceae

Reference: McGuire & Crandall 1967: 138, as *Alternaria oleracea* Milbrath, a synonym acc. to Index Fungorum.

***Alternaria dauci* (J.G. Kühn) J.W. Groves & Skolko**

Ecology: plant parasitic, on *Daucus carota*, Apiaceae
Reference: McGuire & Crandall 1967: 137.

***Alternaria humicola* Oudem.**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI, CH
Reference: Farrow 1954: 639; Dennis 1970: 419.

***Alternaria longipes* (Ellis & Everh.) E.W. Mason**

Ecology: plant parasitic, on *Nicotiana tabacum*, Solanaceae
Reference: Toler et al. 1959: 1203.

***Alternaria porri* (Ellis) Cif.**

Ecology: plant parasitic, on *Allium cepa*, Alliaceae; on *Ipomoea batatas*, Convolvulaceae
Reference: McGuire & Crandall 1967: 139, 144.

***Alternaria solani* Sorauer**

Ecology: plant parasitic, on *Lycopersicon esculentum*, *Solanum tuberosum*, Solanaceae
Province/Locality: NB
Reference: Toler et al. 1959: 1203; McGuire & Crandall 1967: 125, 136.

***Alternaria sonchi* Davis**

Ecology: plant parasitic, on *Lactuca sativa*, Asteraceae
Reference: McGuire & Crandall 1967: 144.

***Alternaria* sp.**

Ecology: plant parasitic, on *Capsicum frutescens*, Solanaceae
Reference: McGuire & Crandall 1967: 138.

***Alternaria tomato* (Cooke) L.R. Jones**

Ecology: plant parasitic, on *Lycopersicon esculentum*, Solanaceae
Reference: McGuire & Crandall 1967: 136.

***Ampullifera amoeboides* (Bat. & Cavalc.) D. Hawksw.**

Ecology: lichenicolous, on *Mazosia pilosa*, Lichenes
Province/Locality: COI
Reference: Etayo 1997: 207.

***Ampullifera foliicola* Deighton**

Ecology: lichenicolous, on *Mazosia* sp., *Sporopodium* sp., or others, Lichenes
Province/Locality: COI
Reference: Etayo 1997: 207.

***Arthrobotrys conoides* Drechsler**

Ecology: nematode trapping
Province/Locality: CH
Reference: Persmark et al. 1995: 119.

***Arthrobotrys kirghizica* Soprunov ex Soprunov**

Ecology: nematode trapping
Province/Locality: CH
Reference: Persmark et al. 1995: 119.

***Arthrobotrys musiformis* Drechsler**

Ecology: nematode trapping
Province/Locality: CH
Reference: Persmark et al. 1995: 119.

***Arthrobotrys oligospora* Fresen.**

Ecology: nematode trapping
Province/Locality: CH
Reference: Persmark et al. 1995: 119.

***Arthrobotrys oviformis* Soprunov**

Ecology: nematode trapping
Province/Locality: CH
Reference: Persmark et al. 1995: 119.

***Arthrotrrys superba* Corda**

Ecology: saprobic, deteriorating fibres of
Gossypium hirsutum, Malvaceae
Reference: McGuire & Crandall 1967: 146.

***Arthrosporium chrysocephalum* Penz.
& Sacc.**

Province/Locality: CH
Reference: Martin 1942: 163.

***Aspergillus candidus* Link ex Fr.**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI, CA, CH
Reference: Farrow 1954: 639; Dennis 1970:
382.

***Aspergillus chevalieri* Thom & Church**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI
Reference: Farrow 1954: 639; Dennis 1970:
382.

***Aspergillus clavatus* Desm.**

Ecology: saprobic
Province/Locality: BCI
Reference: Standley 1933: 21.

***Aspergillus flavipes* (Bainier & R.
Sartory) Thom & Church**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI, CH
Reference: Farrow 1954: 639.

***Aspergillus flavus* Link ex Fr.**

Ecology: saprobic, cultivated from soil or
from dump pile of leaf-cutting ants
Province/Locality: BCI, CH
Reference: Farrow 1954: 639; Dennis 1970:
382; Hughes et al. 2004: 48.

***Aspergillus fonsecaeus* Thom & Raper**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI
Reference: Farrow 1954: 639; Dennis 1970:
382.

***Aspergillus giganteus* Wehmer**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI
Reference: Farrow 1954: 639; Dennis 1970:
382; Peterson 2000b: 331.

***Aspergillus janus* Raper & Thom
a new species from Panama**

Ecology: saprobic, cultivated from soil
Reference: Raper & Thom 1944: 556; Dennis
1970: 382.

***Aspergillus japonicus* Saito**

Ecology: saprobic, cultivated from soil
Reference: Peterson 2000b: 324.

***Aspergillus luchuensis* Inui**

Ecology: saprobic, cultivated from soil of
banana farm
Province/Locality: CH
Reference: Goos 1960: 879.

***Aspergillus nidulans* (Eidam) G. Winter
var. *echinulatus* Fennell & Raper**

Ecology: saprobic, cultivated from soil
Reference: Dennis 1970: 382.

***Aspergillus niger* Tiegh.**

Ecology: saprobic, cultivated from soil; on
Allium cepa, Alliaceae
Province/Locality: BCI, CA, CH
Reference: Farrow 1954: 639; Dennis 1970:
382; McGuire & Crandall 1967: 139.

***Aspergillus niger* Tiegh. var. *phoenicis*
(Corda) Al-Musallam**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI, CH
Reference: Farrow 1954: 639, as *Aspergillus*
phoenicis (Corda) Thom & Currie; Dennis
1970: 382, as *A. phoenicis*.

***Aspergillus ochraceus* G. Wilh.**

Ecology: saprobic, cultivated from soil
Province/Locality: CH
Reference: Farrow 1954: 639; Dennis 1970: 382.

Aspergillus panamaensis* Raper & Thom*a new species from Panama**

Ecology: saprobic, cultivated from soil
Reference: Raper & Thom 1944: 568; Dennis 1970: 382; Peterson 2000b: 331.

***Aspergillus pseudodeflectus* Samson & Mouchacca**

Ecology: saprobic, cultivated from soil
Reference: Peterson 2000b: 330.

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

Ecology: saprobic, cultivated from soil of banana farm
Province/Locality: CH
Reference: Goos 1960: 879.

***Aspergillus* sp.**

Ecology: plant parasitic, on *Allium cepa*, Alliaceae
Reference: Toler et al. 1959: 1203.

***Aspergillus* sp.**

Ecology: plant parasitic, on *Oryza sativa*, *Sorghum vulgare*, *Zea mays*, Poaceae
Reference: Toler et al. 1959: 1202, 1203.

***Aspergillus* sp.**

Ecology: plant parasitic, on *Citrus* sp., Rutaceae
Reference: Toler et al. 1959: 1202.

***Aspergillus* sp.**

Ecology: saprobic, cultivated from litter
Province/Locality: BCI
Reference: Cornejo et al. 1994: 187.

***Aspergillus sulphureus* (Fresen.) Thom & Church**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI
Reference: Farrow 1954: 639; Dennis 1970: 382.

***Aspergillus sydowii* (Bainier & Sartory) Thom & Church**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI, CA, CH
Reference: Farrow 1954: 639; Dennis 1970: 382.

***Aspergillus terreus* Thom**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI, CH
Reference: Farrow 1954: 639; Dennis 1970: 382; Peterson 2000b: 326.

***Aspergillus unguis* (Weill & L. Gaudin) Thom & Raper**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI
Reference: Farrow 1954: 639; Dennis 1970: 382.

***Aspergillus ustus* (Bainier) Thom & Church**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI, CA, CH
Reference: Farrow 1954: 639; Dennis 1970: 382; Peterson 2000b: 330.

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

Ecology: saprobic, cultivated from soil
Province/Locality: BCI, CA, CH
Reference: Farrow 1954: 639; Dennis 1970: 382.

***Aspergillus violaceofuscus* Gasperini**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI, CH
Reference: Farrow 1954: 639; Dennis 1970: 382.

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

Ecology: plant parasitic, on *Carica papaya*,
Caricaceae
Province/Locality: CA
Reference: Stevens 1927a: 60, as *Pucciniopsis caricae* Earle, a synonym acc. to Index Fungorum; McGuire & Crandall 1967: 129; Dennis 1970: 396; Crous & Braun 2003: 105.

***Attamyces bromatificus* Kreisel**

Ecology: symbiotic with leaf-cutting ants, cultivated from *Atta colombica*, Formicidae, Hymenoptera
Reference: Hervey et al. 1977: 235.

***Bactridium clavatum* Berk. & Broome**

Ecology: saprobic, on wood or bark
Reference: Seifert 1990: 120.

***Beauveria bassiana* (Bals.-Criv.) Vuill.**

Ecology: saprobic, cultivated from soil
Province/Locality: CA
Reference: Hughes et al. 2004: 48.

***Beltrania rhombica* Penz.**

Ecology: saprobic, on decaying palm petiole
Province/Locality: BCI
Reference: Goos & Pirozynski 1975: 2927.

***Bipolaris heveae* (Petch) B.A.**

Khasanov

Ecology: plant parasitic, on *Hevea brasiliensis*, Euphorbiaceae
Reference: McGuire & Crandall 1967: 150, as *Helminthosporium heveae* Petch.

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

Ecology: plant parasitic, on *Saccharum officinarum*, Poaceae
Reference: McGuire & Crandall 1967: 127, as *Cercospora sacchari* Breda de Haan, a synonym acc. to Index Fungorum; p. 128, as *Helminthosporium sacchari* E.J. Butler.

***Bipolaris turcica* (Pass.) Shoemaker**

Ecology: plant parasitic, on *Sorghum vulgare*,
Zea mays, Poaceae
Reference: Toler et al. 1959: 1203, as *Helminthosporium turcicum* Pass.; McGuire & Crandall 1967: 118, 122, as *H. turcicum*.

***Botryomonilia scheelea* Goos & Piroz. a new species from Panama**

Ecology: saprobic, on rotten fruits of *Scheelea zonensis*, Arecaceae
Province/Locality: BCI
Reference: Goos & Pirozynski 1975: 2928.

***Botrytis allii* Munn**

Ecology: plant parasitic, on *Allium cepa*,
Alliaceae
Reference: Toler et al. 1959: 1203; McGuire & Crandall 1967: 139.

***Botrytis cinerea* Pers.**

Ecology: plant parasitic, on *Capsicum frutescens*, Solanaceae
Reference: McGuire & Crandall 1967: 138.

***Botrytis* sp.**

Ecology: plant parasitic, on *Manihot esculenta*, Euphorbiaceae
Reference: Toler et al. 1959: 1202.

***Botrytis* sp.**

Ecology: saprobic, cultivated from soil
Province/Locality: CA, CH
Reference: Farrow 1954: 639.

***Caldariomyces fumago* Woron.**

Ecology: saprobic, on fallen fruit of *Gustavia superba*, Lecythidaceae
Province/Locality: BCI
Reference: Goos & Pirozynski 1975: 2929.

***Calostilbella calostilbe* Höhn.**

Ecology: saprobic, on dead trunk of palm
Province/Locality: BCI
Reference: Morris 1967: 184.

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

Ecology: saprobic, in fresh water habitat
Reference: Ferrer & Shearer 2005: 179.

***Canalisporium elegans* Nawawi & Kuthub.**

Ecology: saprobic, in fresh water habitat
Reference: Ferrer & Shearer 2005: 179.

***Canalisporium kenyense* Goh, W.H. Ho & K.D. Hyde**

Ecology: saprobic, in fresh water habitat
Reference: Ferrer & Shearer 2005: 179.

Canalisporium panamense* Ferrer & Shearer*a new species from Panama**

Ecology: saprobic, in fresh water habitat
Reference: Ferrer & Shearer 2005: 179.

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

Ecology: saprobic, in fresh water habitat
Reference: Ferrer & Shearer 2005: 179.

***Cephalophora tropica* Thaxt.**

Province/Locality: BCI
Reference: Standley 1933: 21.

***Cephalosporium curtipes* Sacc.**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI
Reference: Farrow 1954: 639; Dennis 1970: 384.

***Cephalosporium* sp.**

Ecology: saprobic, cultivated from soil of banana farm
Province/Locality: CH
Reference: Goos 1960: 879.

***Cercophora striata* (Ellis & Everh.) N. Lundq.**

Ecology: saprobic, on hardwood branches or herbaceous stems
Province/Locality: BCI
Reference: Miller & Huhndorf 2001: 220.

***Cercospora amaryllidis* Ellis & Everh.**

Ecology: plant parasitic, on Amaryllidaceae
Reference: Crous & Braun 2003: 55.

***Cercospora apii* Fresen. s. lat.**

Ecology: plant parasitic, on Amaranthaceae; on Apiaceae; on *Helianthus* sp., Asteraceae; on Bignoniaceae; on *Carica papaya*, Caricaceae; on *Beta vulgaris*, Chenopodiaceae; on Convolvulaceae; on *Citrullus vulgaris*, *Sechium edule*, Cucurbitaceae; on *Centrosema acutifolium*, *Codariocalyx gyroides*, *Vigna unguiculata*, Fabaceae; on *Coleus* sp., Lamiaceae; on Malvaceae; on Meliaceae; on *Musa* sp., Musaceae; on Papaveraceae; on *Sesamum indicum*, Pedaliaceae; on *Plantago* sp., Plantaginaceae; on *Rheum* sp., Polygonaceae; on *Capsicum annuum*, *C. frutescens*, Solanaceae
Reference: Toler et al. 1959: 1202, as *Cercospora sechii* J.A. Stev., a synonym acc. to Crous & Braun 2003: 125, p. 1203, as *Cercospora papayae* Hansf., a synonym acc. to Crous & Braun 2003: 307, as *Cercospora sesami* Zim., a synonym acc. to Crous & Braun 2003: 375, as *Cercospora capsici* Heald & F.A. Wolf and as *Cercospora nicotianae* Ellis & Everh., both synonyms acc. to Crous & Braun 2003: 322; McGuire & Crandall 1967: 129, as *C. papayae*, p. 138, as *C. capsici*, p. 141, as *C. sechii*, p. 143, as *Cercospora beticola* Sacc. and *C. citrullina* Cooke, synonyms acc. to Crous & Braun 2003: 79; Crous & Braun 2003: 66, 79, 86, 99, 122, 125, 131, 212, 213, 228, 237, 264, 269, 271, 306, 307, 322, 327, 351, 375, 398; Lenné 1990: 27, 35, as *Cercospora canescens* Ellis & G.W. Martin, a synonym acc. to Crous & Braun 2003: 99.

***Cercospora bidentis* Tharp**

Ecology: plant parasitic, on Asteraceae

Reference: Crous & Braun 2003: 80.

***Cercospora bignoniicola* Speg.**

Ecology: plant parasitic, on *Bignonia* sp.,
Bignoniaceae

Reference: Crous & Braun 2003: 80.

***Cercospora calathea* Viégas & Chupp**

Ecology: plant parasitic, on *Calathea* sp.,
Marantaceae

Reference: Crous & Braun 2003: 94.

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

Ecology: plant parasitic, on *Daucus carota*
var. *sativa*, Apiaceae

Reference: Toler et al. 1959: 1202; McGuire
& Crandall 1967: 137; Crous & Braun 2003:
106.

***Cercospora ceibae* Chupp & Viégas**

Ecology: plant parasitic, on *Ceiba pentandra*,
Malvaceae

Reference: Crous & Braun 2003: 113.

***Cercospora celosiae* Syd.**

Ecology: plant parasitic, on *Celosia* sp.,
Amaranthaceae

Reference: Crous & Braun 2003: 113.

***Cercospora coffeicola* Berk. & M.A.
Curtis**

Ecology: plant parasitic, on *Coffea arabica*,
Rubiaceae

Reference: Toler et al. 1959: 1202; McGuire
& Crandall 1967: 145; Crous & Braun 2003:
130.

***Cercospora echinocloae* Davis**

Ecology: plant parasitic, on Cyperaceae or
Poaceae

Reference: Crous & Braun 2003: 169.

***Cercospora euphorbiae* Kellerm. &
Swingle**

Ecology: plant parasitic, on Euphorbiaceae

Reference: Crous & Braun 2003: 180.

***Cercospora jatrophiicola* (Speg.) Chupp**

Ecology: plant parasitic, on Euphorbiaceae

Reference: Crous & Braun 2003: 232.

***Cercospora lactucae-sativae* Sawada**

Ecology: plant parasitic, on *Lactuca sativa*,
Asteraceae

Reference: McGuire & Crandall 1967: 144, as
Cercospora longissima Trav., a synonym acc.
to Crous & Braun 2003: 255.

***Cercospora longipes* E.J. Butler**

Ecology: plant parasitic, on *Saccharum*
officinarum, Poaceae

Reference: Toler et al. 1959: 1203; Crous &
Braun 2003: 255.

***Cercospora nasturtii* Pass.**

Ecology: plant parasitic, on Brassicaceae

Reference: Crous & Braun 2003: 289.

***Cercospora nicandrae* Chupp**

Ecology: plant parasitic, on *Nicandra*
physaloides, Solanaceae

Reference: Crous & Braun 2003: 290.

***Cercospora pulcherrima* Tharp**

Ecology: plant parasitic, on *Euphorbia* sp.,
Euphorbiaceae

Reference: Crous & Braun 2003: 342.

***Cercospora ricinella* Sacc. & Berl.**

Ecology: plant parasitic, on *Ricinus communis*,
Euphorbiaceae

Reference: Crous & Braun 2003: 355.

***Cercospora sapindicola* Obreg.-Bot.**

Ecology: plant parasitic, on *Sapindus*
saponaria, Sapindaceae

Reference: Crous & Braun 2003: 366.

***Cercospora setariae* G.F. Atk.**

Ecology: plant parasitic, on Poaceae
Reference: Crous & Braun 2003: 375.

***Cercospora sidicola* Ellis & Everh.**

Ecology: plant parasitic, on *Sida* sp.,
Malvaceae
Reference: Crous & Braun 2003: 377.

***Cercospora sorghi* Ellis & Everh.**

Ecology: plant parasitic, on *Sorghum*
halepense, *S. vulgare*, Poaceae
Province/Locality: PA
Reference: Chupp 1930: 293; McGuire &
Crandall 1967: 122; Dennis 1970: 403; Crous
& Braun 2003: 382.

***Cercospora violae* Sacc.**

Ecology: plant parasitic, on *Viola* sp.,
Violaceae
Reference: Crous & Braun 2003: 423.

***Cercospora zae-maydis* Tehon & E.Y. Daniels**

Ecology: plant parasitic, on *Zea mays*,
Poaceae
Reference: Toler et al. 1959: 1202; McGuire
& Crandall 1967: 118; Crous & Braun 2003:
433.

***Cercospora zebrina* Pass.**

Ecology: plant parasitic, on Fabaceae
Reference: Crous & Braun 2003: 433.

***Cercospora zonata* G. Winter**

Ecology: plant parasitic, on Fabaceae
Reference: Crous & Braun 2003: 435.

***Cerebella andropogonis* Ces.**

Ecology: saprobic/plant parasitic, on *Panicum*
maximum, Poaceae
Reference: McGuire & Crandall 1967: 152.

***Chrysonilia crassa* (Shear & B.O. Dodge) Arx**

Ecology: saprobic, deteriorating fibres of
Gossypium hirsutum, Malvaceae
Reference: McGuire & Crandall 1967: 147, as
Monilia crassa Shear & B.O. Dodge.

Chrysonilia sitophila* (Mont.) Arx*Fig. 26**

Ecology: saprobic, on stump, base of palm, or
clump of grass, after burning
Province/Locality: BCI
Reference: Weston 1933: 397, 400, as *Monilia*
crassa Shear & Dodge (evident by the
description); Standley 1933: 21, as *M. crassa*;
McGuire & Crandall 1967: 147, as *Monilia*
sitophila (Mont.) Sacc.

***Cladobotryum sphaerocephalum* (Berk.) Rogerson & Samuels**

Ecology: saprobic, cultivated from decaying
palm petiole
Province/Locality: BCI
Reference: Goos 1997: 376.

***Cladosporium citri* Masee**

Ecology: plant parasitic, on *Citrus* sp.,
Rutaceae
Reference: Toler et al. 1959: 1202.

***Cladosporium cladosporioides* (Fresen.) G.A. de Vries**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI, CH
Reference: Farrow 1954: 640, as
Hormodendrum cladosporioides (Fresen.)
Sacc.; Dennis 1970: 395.

***Cladosporium cucumerinum* Ellis & Arthur**

Ecology: plant parasitic, on *Cucumis melo*, *C.*
sativus, *Sechium edule*, Cucurbitaceae
Reference: Toler et al. 1959: 1202; McGuire
& Crandall 1967: 141.

***Cladosporium herbarum* (Pers.) Link**

Ecology: plant parasitic, on *Zea mays*,
Poaceae
Reference: Toler et al. 1959: 1202; McGuire
& Crandall 1967: 118.

***Cladosporium herbarum* (Pers.) Link**

Ecology: saprobic, cultivated from soil,
cultivated from palm leaf
Province/Locality: BCI, CA, CH
Reference: Farrow 1954: 639; Morris & Finley
1956: 730; Goos 1960: 879; Dennis 1970:
395.

***Cladotrichum* sp.**

Ecology: saprobic, cultivated from angiosperm
wood
Province/Locality: BCI
Reference: Morris & Finley 1956: 730.

***Clonostachys rosea* (Link) Schroers,
Samuels, Seifert & W. Gams**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI
Reference: Farrow 1954: 640, as *Gliocladium*
roseum Bainier, a synonym acc. to Index
Fungorum; Dennis 1970: 383, as *G. roseum*.

***Clonostachys rosea* (Link) Schroers,
Samuels, Seifert & W. Gams f. *catenu-*
lata (J.C. Gilman & E.V. Abbott)
Schroers**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI, CH
Reference: Farrow 1954: 640, as *Gliocladium*
catenulatum J.C. Gilman & E.V. Abbott;
Dennis 1970: 383, as *G. catenulatum*.

***Coccosporium* sp.**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI, CA, CH
Reference: Farrow 1954: 639.

***Conioscypha varia* Shearer**

Ecology: saprobic, cultivated from fruit of
Scheelea zonensis, Areaceae
Province/Locality: BCI
Reference: Goos & Pirozynski 1975: 2930.

***Cordana musae* (Zimm.) Höhn.**

Ecology: plant parasitic, on *Musa* sp.,
Musaceae
Reference: McGuire & Crandall 1967: 130.

***Cordana pauciseptata* Preuss**

Ecology: saprobic, cultivated from angiosperm
wood
Province/Locality: BCI
Reference: Morris & Finley 1956: 730; Dennis
1970: 395.

***Corynespora elaeidicola* M.B. Ellis var.
cercosporioides Farr
a new variety from Panama**

Ecology: saprobic/plant parasitic, on
Heliconia curtispatha, Heliconiaceae
Province/Locality: CA
Reference: Farr 1961: 358.

***Cryptophiale kakombensis* Piroz.**

Ecology: saprobic, on decaying palm leaf
Province/Locality: BCI
Reference: Goos & Pirozynski 1975: 2930.

***Curvularia geniculata* (Tracy & Earle)
Boedijn**

Ecology: saprobic/plant parasitic, cultivated
from soil or from palm leaf
Province/Locality: BCI, CH
Reference: Farrow 1954: 640; Morris & Finley
1956: 730; Dennis 1970: 417.

***Curvularia lunata* (Wakker) Boedijn**

Ecology: saprobic/plant parasitic, cultivated
from palm leaf or from soil, on fibres of
Gossypium hirsutum, Malvaceae; on *Oryza*
sativa, *Zea mays*, Poaceae; on *Capsicum*
frutescens, Solanaceae

Province/Locality: BCI, CH

Reference: Farrow 1954: 640; Morris & Finley 1956: 731; McGuire & Crandall 1967: 118, 123, 139, 146; Dennis 1970: 417.

***Curvularia* sp.**

Ecology: saprobic, cultivated from litter

Province/Locality: BCI

Reference: Cornejo et al. 1994: 187.

***Cylindrocarpon musae* C. Booth & R.H. Stover**

Ecology: plant parasitic, on *Musa* sp.,
Musaceae

Reference: Brayford 1987: 127.

***Dactylella candida* (Nees) de Hoog & Oorschot**

Ecology: saprophytic

Province/Locality: CH

Reference: Persmark et al. 1995: 119, as
Monacrosporium candidum (Nees) Xing-Z.
Liu & K.-Q. Zhang.

***Dactylellina haptotyla* (Drechsler) M. Scholler, Hagedorn & A. Rubner**

Ecology: nematode trapping

Province/Locality: CH

Reference: Persmark et al. 1995: 119, as
Monacrosporium haptotylum (Drechsler) Xing
Z. Liu & K.Q. Zhang.

***Delortia palmicola* Pat. & Gaillard**

Ecology: saprobic, on decaying palm petiole

Province/Locality: BCI

Reference: Goos & Pirozynski 1975: 2930.

***Dictyocatenuata alba* Finley & E.F. Morris**

Ecology: saprobic/plant parasitic, on bark,
often on living trees

Reference: Seifert et al. 1987: 459.

***Diplosporium album* Bonord.**

Ecology: saprobic, cultivated from
angiospermous wood

Province/Locality: BCI

Reference: Morris & Finley 1956: 729; Dennis
1970: 386.

***Domingoella pycnopeltarum* Bat.**

Ecology: on *Spondias purpurea*,
Anacardiaceae

Province/Locality: CA

Reference: Batista & Maia 1957: 447.

***Drechmeria coniospora* (Drechsler) W. Gams & H.-B. Jansson**

Ecology: endoparasitic in nematodes

Province/Locality: CH

Reference: Persmark et al. 1995: 119.

***Drechslera gigantea* (Heald & F.A. Wolf) S. Ito**

Ecology: plant parasitic, on *Triticum aestivum*,
Poaceae

Reference: McGuire & Crandall 1967: 151, as
Helminthosporium giganteum Heald & F.A.
Wolf.

***Drechslera maydis* (Y. Nisik. & C. Miyake) Subram. & B.L. Jain**

Ecology: plant parasitic, on *Zea mays*,
Poaceae

Reference: Toler et al. 1959: 1202, as
Helminthosporium maydis Y. Nisik. & C.
Miyake; McGuire & Crandall 1967: 118, as *H.*
maydis.

***Drechslera oryzae* (Breda de Haan) Subram. & B.L. Jain**

Ecology: plant parasitic, on *Oryza sativa*,
Poaceae

Reference: Toler et al. 1959: 1203, as
Helminthosporium oryzae Breda de Haan;
McGuire & Crandall 1967: 123, as *H. oryzae*.

***Drechslera ravenelii* (M.A. Curtis ex Berk.) Subram. & B.L. Jain**

Ecology: plant parasitic, on *Sporobolus* sp., Poaceae

Province/Locality: CA

Reference: Stevens 1927a: 57, as *Helminthosporium ravenelii* M.A. Curtis ex Berk.; Dennis 1970: 418, as *H. ravenelii*.

***Drechslera* sp.**

Ecology: plant parasitic, on *Andropogon gayanus*, Poaceae

Reference: Lenné 1990: 4.

***Escovopsis* sp.**

Ecology: parasitic on fungi cultivated by leaf-cutting ants

Province/Locality: BCI, CA

Reference: Currie 2001: 99.

***Fusariella concinna* (Syd.) S. Hughes**

Ecology: saprobic, cultivated from dead leaf

Province/Locality: BCI

Reference: Goos 1997: 377.

Fusarium acuminatum* Ellis & Everh. subsp. *acuminatum

Ecology: plant parasitic, on *Musa* sp., Musaceae

Reference: Altomare et al. 1997: 1676.

***Fusarium graminearum* Schwabe**

Ecology: plant parasitic, on *Paspalum virgatum*, Poaceae

Province/Locality: CA

Reference: Stevens 1927a: 60; Lenné 1990: 107.

***Fusarium lateritium* Nees var. *longum* Wollenw.**

Ecology: saprobic, cultivated from soil

Reference: McGuire & Crandall 1967: 134, 145.

***Fusarium malli* Taubenh.**

Ecology: plant parasitic, on *Allium cepa*, Alliaceae

Reference: McGuire & Crandall 1967: 139.

***Fusarium musarum* Logrieco & Marasas**

a new species from Panama

Ecology: plant parasitic, on *Musa* sp., Musaceae

Reference: Marasas et al. 1998: 510.

***Fusarium neoceras* Wollenw. & Reinking**

Ecology: saprobic, cultivated from soil

Province/Locality: BCI, CH

Reference: Farrow 1954: 640; Dennis 1970: 428.

***Fusarium oxysporum* Schltdl.**

Ecology: saprobic, cultivated from angiosperm wood; plant parasitic, on *Allium cepa*, Alliaceae; on *Dioscorea* sp., Dioscoreaceae; on *Solanum tuberosum*, Solanaceae

Province/Locality: CH

Reference: Morris & Finley 1956: 733; McGuire & Crandall 1967: 125, 139, 149; Dennis 1970: 428.

***Fusarium oxysporum* Schltdl. f.sp. *conglutinans* W.C. Snyder & H.N. Hansen**

Ecology: plant parasitic, on *Brassica oleracea* var. *capitata*, Brassicaceae

Reference: McGuire & Crandall 1967: 138, as *F. oxysporum* f. *conglutinans* (Wollenw.) W.C. Snyder & H.N. Hansen.

***Fusarium oxysporum* Schltdl. f.sp. *cubense* W.C. Snyder & H.N. Hansen**

Ecology: plant parasitic, on *Musa* sp., Musaceae

Reference: Toler et al. 1959: 1202, as *Fusarium cubense* E.F. Sm.; Dennis 1970: 428.

***Fusarium oxysporum* Schldl. f.sp. lycopersici (Sacc.) W.C. Snyder & H.N. Hansen**

Ecology: plant parasitic, on *Lycopersicon esculentum*, Solanaceae

Reference: McGuire & Crandall 1967: 136.

***Fusarium oxysporum* Schldl. f.sp. niveum W.C. Snyder & H.N. Hansen**

Ecology: plant parasitic, on *Citrullus vulgaris*, Cucurbitaceae

Reference: McGuire & Crandall 1967: 141, as *F. oxysporum* f. *niveum* (E.F. Sm.) W.C. Snyder & H.N. Hansen.

***Fusarium oxysporum* Schldl. f.sp. phaseoli J.B. Kendr. & W.C. Snyder**

Ecology: plant parasitic, on *Phaseolus vulgaris*, Fabaceae

Reference: McGuire & Crandall 1967: 120.

***Fusarium pseudocircinatum* O'Donnell & Nirenberg**

Ecology: saprobic, cultivated from textile or dead leaves

Province/Locality: BCI

Reference: Nirenberg & O'Donnell 1998: 448.

***Fusarium roseum* Link**

Ecology: saprobic, cultivated from soil of banana farm

Province/Locality: CH

Reference: Goos 1960: 879.

***Fusarium solani* (Mart.) Sacc.**

Ecology: saprobic, cultivated from soil

Province/Locality: BCI, CA, CH

Reference: Farrow 1954: 640; Goos 1960: 879; Dennis 1970: 428.

***Fusarium* sp.**

Ecology: plant parasitic, on *Allium cepa*, Alliaceae; on *Lactuca sativa*, Asteraceae; on *Sorghum vulgare*, *Zea mays*, Poaceae; on

Coffea arabica, Rubiaceae; on *Capsicum frutescens*, Solanaceae

Reference: Toler et al. 1959: 1202, 1203; McGuire & Crandall 1967: 139, 144, 145.

***Fusarium* sp.**

Ecology: saprobic, cultivated from litter

Province/Locality: BCI

Reference: Cornejo et al. 1994: 187.

***Gibellula* sp.**

Ecology: parasitic on spiders, on *Eriophora fuliginea*, Araneidae

Province/Locality: CA

Reference: Nentwig 1985: 272.

***Gliocladium penicillioides* Corda**

Ecology: saprobic, cultivated from soil, cultivated from old termite nest

Province/Locality: BCI, CA, CH

Reference: Farrow 1954: 640; Morris & Finley 1956: 728; Dennis 1970: 383.

***Gliocladium* sp.**

Ecology: saprobic, cultivated from litter

Province/Locality: BCI

Reference: Cornejo et al. 1994: 187.

Gliomastix murorum* (Corda) S. Hughes var. *murorum

Ecology: saprobic, cultivated from soil

Province/Locality: BCI, CH

Reference: Farrow 1954: 640, as *Gliomastix convoluta* (Harz) E.W. Mason, a synonym acc. to Index Fungorum; Dennis 1970: 384, as *G. convoluta*.

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

Ecology: plant parasitic, on *Sorghum*

halepense, *S. vulgare*, *Zea mays*, Poaceae

Reference: Toler et al. 1959: 1203; McGuire & Crandall 1967: 118, 122.

***Gloeosporium* sp.**

Ecology: plant parasitic, on *Manihot esculenta*, Euphorbiaceae
Reference: Toler et al. 1959: 1202; McGuire & Crandall 1967: 143.

***Gonytrichum macrocladum* (Sacc.) S. Hughes**

Ecology: saprobic, cultivated from soil, cultivated from palm leaf or angiosperm wood
Province/Locality: BCI
Reference: Farrow 1954: 640; Morris & Finley 1956: 730; Dennis 1970: 392.

***Graphium bulbicola* Henn.**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI
Reference: Farrow 1954: 640; Dennis 1970: 423.

***Graphium penicillioides* Corda**

Ecology: saprobic, cultivated from decaying breadfruit leaf
Province/Locality: BCI
Reference: Goos 1997: 377.

***Graphium rigidum* (Pers.) Sacc.**

Ecology: saprobic, cultivated from *Apeiba* fruit and palm leaf
Province/Locality: BCI
Reference: Morris & Finley 1956: 732; Dennis 1970: 423.

***Hansfordiellopsis lichenicola* (Bat. & Maia) Deighton**

Ecology: lichenicolous, on Gomphillaceae, Lichenes
Province/Locality: COI
Reference: Etayo 1997: 212.

***Hansfordiellopsis minuta* D. Hawksw.**

Ecology: lichenicolous, on lichen
Province/Locality: COI
Reference: Etayo 1997: 213.

***Haptocillium balanoides* (Drechsler) Zare & W. Gams**

Ecology: endoparasitic in nematodes
Province/Locality: CH
Reference: Persmark et al. 1995: 119, as *Verticillium balanoides* (Drechsler) Dowsett, J. Reid & Hopkin.

***Harpoglyphium fasciculatum* Sacc.**

Ecology: saprobic, on dead bamboo branch
Province/Locality: BCI
Reference: Goos 1997: 377.

***Harposporium anguillulae* Lohde**

Ecology: endoparasitic in nematodes
Province/Locality: CH
Reference: Persmark et al. 1995: 119.

***Helicoma chlamydosporum* Shearer a new species from Panama**

Ecology: saprobic, cultivated from submerged twig
Province/Locality: BCI
Reference: Shearer 1987: 468.

***Helicomycetes torquatus* L.C. Lane & Shearer**

a new species from Panama
Ecology: saprobic, cultivated from submerged twig
Province/Locality: BCI
Reference: Lane & Shearer 1984: 291.

***Helicosporium lumbricopsis* Linder**

Ecology: saprobic, on wood or fallen twigs
Reference: Dennis 1970: 379.

***Helminthosporium carposaprum* Pollack**

Ecology: plant parasitic, on *Lycopersicon esculentum*, Solanaceae
Reference: McGuire & Crandall 1967: 136.

Helminthosporium mayaguezense**Miles**

Ecology: plant parasitic, on *Paspalum conjugatum*, Poaceae

Province/Locality: CA

Reference: Stevens 1927a: 56; Lenné 1990: 101.

***Helminthosporium sigmoideum* Cavara**

Ecology: plant parasitic, on *Oryza sativa*, Poaceae

Reference: McGuire & Crandall 1967: 124.

Helminthosporium torulosum* (Syd.)*S.F. Ashby**

Ecology: plant parasitic, on *Musa* sp., Musaceae

Reference: McGuire & Crandall 1967: 130.

***Heterocephalum taiense* Persiani & Maggi**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI

Reference: Farrow 1954: 640, as *Heterocephalum aurantiacum* Thaxter, probably a wrong identification acc. to Yaguchi et al. 1996: 160; Dennis 1970: 422, as *H. aurantiacum*; Yaguchi et al. 1996: 160.

***Hirsutella rhossiliensis* Minter & B.L. Brady**

Ecology: endoparasitic in nematodes
Province/Locality: CH

Reference: Persmark et al. 1995: 119.

***Hirsutella saussurei* (Cooke) Speare**

Ecology: parasitic on Hymenoptera
Reference: Dennis 1970: 424.

***Hobsonia mirabilis* (Peck) Linder**

Ecology: saprobic, on bamboo, wood, or palm debris

Reference: Dennis 1970: 379.

***Hormisciella atra* Bat.**

Ecology: plant parasitic, on *Cornutia pyramidata*, Verbenaceae

Province/Locality: CA

Reference: Batista & Ciferri 1963: 34.

***Humarina* sp.**

Ecology: saprobic, cultivated from soil

Province/Locality: CA, CH

Reference: Farrow 1954: 640.

***Humicola fuscoatra* Traaen**

Ecology: saprobic, cultivated from soil

Province/Locality: BCI, CH

Reference: Farrow 1954: 640; Dennis 1970: 392.

***Humicola grisea* Traaen**

Ecology: saprobic, cultivated from soil

Reference: Dennis 1970: 392.

***Hymenostilbe dipterigena* Petch**

Ecology: parasitic on Diptera

Reference: Petch 1932: 212; Mains 1950: 581; Dennis 1970: 423.

***Hymenostilbe formicarum* Petch**

Ecology: parasitic on ants, Formicidae (Hymenoptera)

Reference: Charles 1941 in Mains 1950: 583; Dennis 1970: 424.

***Isaria* sp.**

Ecology: parasitic on bugs (Hemiptera)

Province/Locality: BCI

Reference: Weston 1933: 403.

***Isaria tenuipes* Peck**

Ecology: saprobic/parasitic on insects, on dead cocoons

Province/Locality: BCI

Reference: Morris 1967: 184.

***Khuskia oryzae* H.J. Huds.**

Ecology: plant parasitic, on *Oryza sativa*,
Saccharum officinarum, *Zea mays*, Poaceae
Reference: Toler et al. 1959: 1203, as
Nigrospora oryzae (H.J. Huds.) Arx; McGuire
& Crandall 1967: 118, 124, 128, as *N. oryzae*.

***Masoniella grisea* (Smith) Smith**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI, CH
Reference: Farrow 1954: 640; Dennis 1970:
391.

***Melanographium* sp.**

Ecology: saprobic
Reference: Morris 1963b: 84.

***Memnoniella echinata* (Rivolta)
Galloway**

Ecology: saprobic, cultivated from soil of
banana farm
Province/Locality: CH
Reference: Farrow 1954: 640; Goos 1960:
879; Dennis 1970: 391.

***Metarhizium anisopliae* (Metschn.)
Sorokin var. *anisopliae***

Ecology: saprobic and parasitic on insects,
cultivated from soil and on leaf-cutting ants,
cockroach, or Diptera
Province/Locality: BCI, CA
Reference: Weston 1933: 403 as *Metarhizium*
sp.; Standley 1933: 21; Hughes et al. 2004: 48.

***Microxyphium columnatum* Bat., Cif. &
Nascim.**

Ecology: foliicolous, on *Annona marcgravii*,
Annonaceae; on *Cinnamomum zeylanicum*,
Lauraceae
Province/Locality: CA
Reference: Batista & Ciferri 1963: 123, 124.

***Microxyphium* sp.**

Ecology: foliicolous, on *Psychotria* sp.,
Rubiaceae; on *Cornutia pyramidata*,
Verbenaceae
Province/Locality: CA
Reference: Batista & Ciferri 1963: 30, 34.

***Monacrosporium elliposporum*
(Preuss) R. C. Cooke & C. H.
Dickenson**

Ecology: nematode trapping
Province/Locality: CH
Reference: Persmark et al. 1995: 119.

***Monacrosporium eudermatum*
(Drechsler) Subram.**

Ecology: nematode trapping
Province/Locality: CH
Reference: Persmark et al. 1995: 119.

***Monacrosporium leptosporum*
(Drechsler) A. Rubner**

Ecology: nematode trapping
Province/Locality: CH
Reference: Persmark et al. 1995: 119, as
Dactylella leptospora Drechsler.

***Moniliophthora roreri* (Cif.) H.C. Evans,
Stalpers, Samson & Benny**

Ecology: plant parasitic, on *Theobroma cacao*,
Malvaceae
Reference: Toler et al. 1959: 1202, as *Monilia*
roreri Cif.; McGuire & Crandall 1967: 148, as
M. roreri.

***Monosporium acuminatum* Bonord.
var. *terrestre* Sacc.**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI
Reference: Farrow 1954: 640; Dennis 1970:
384.

***Monotospora brevis* (J.C. Gilman & E.V. Abbott) E.W. Mason**

Ecology: saprobic, cultivated from soil
 Province/Locality: BCI, CA
 Reference: Farrow 1954: 640; Dennis 1970: 393.

***Mycogone nigra* (Morgan) C.N. Jensen**

Ecology: saprobic, cultivated from soil
 Province/Locality: BCI
 Reference: Farrow 1954: 640.

***Negeriella panamensis* E.F. Morris
a new species from Panama**

Ecology: saprobic, on decaying angiosperm wood
 Province/Locality: BCI
 Reference: Morris 1967: 182.

***Neottiosporella radicata* E.F. Morris**

Ecology: saprobic, cultivated from bark
 Province/Locality: BCI
 Reference: Morris & Finley 1956: 735; Dennis 1970: 426.

***Nigrospora sphaerica* (Sacc.) E.W. Mason**

Ecology: saprobic, cultivated from soil; seed or fibre mold of *Gossypium hirsutum*, Malvaceae
 Province/Locality: BCI
 Reference: Farrow 1954: 640; McGuire & Crandall 1967: 147; Dennis 1970: 393.

***Nomuraea cf. atypicola* (Yasuda) Samson**

Ecology: parasitic on *Argiope argentata*, *A. savignyi*, *Nephila clavipes*, Araneidae
 Province/Locality: CA
 Reference: Nentwig 1985: 272.

***Oidium caricae-papayae* W.Y. Yen**

Ecology: plant parasitic, on *Carica papaya*, Caricaceae

Reference: Toler et al. 1959: 1203, as *Oidium caricae* F. Noack, a synonym acc. to Index Fungorum; McGuire & Crandall 1967: 129, as *O. caricae*.

***Oidium* sp.**

Ecology: plant parasitic, on *Citrullus vulgaris*, *Cucumis melo*, *C. sativus*, *Cucurbita maxima*, *C. pepo*, *Sechium edule*, Cucurbitaceae; on *Diospyros kaki*, Ebenaceae; on *Persea americana*, Lauraceae; on *Eugenia aromatica*, *E. jambos*, *E. uniflora*, Myrtaceae
 Province/Locality: BCI
 Reference: Standley 1933: 21; Amano 1986: 337, 338, 339, 340, 341, 344, 347, 373.

***Oidium tingitaninum* J.C. Carter**

Ecology: plant parasitic, on *Citrus* sp., Rutaceae
 Reference: Toler et al. 1959: 1202; McGuire & Crandall 1967: 135.

***Pachytrichum guazumae* Syd.**

Ecology: plant parasitic, on *Guazuma ulmifolia*, Malvaceae
 Province/Locality: CA
 Reference: Stevens 1930: 286.

***Paecilomyces marquandii* (Masse) S. Hughes**

Ecology: saprobic, cultivated from soil
 Province/Locality: BCI
 Reference: Farrow 1954: 641, as *Spicaria violacea* E.V. Abbott, a synonym acc. to Index Fungorum; Dennis 1970: 383.

***Paecilomyces varioti* Bainier**

Ecology: saprobic, cultivated from soil and palm leaf
 Province/Locality: BCI, CH
 Reference: Farrow 1954: 640; Morris & Finley 1956: 728; Dennis 1970: 383; Goos 1960: 879.

***Passalora arachidicola* (Hori) U. Braun**

Ecology: plant parasitic, on *Arachis hypogaea*,
Fabaceae

Reference: Toler et al. 1959: 1203, as
Cercospora arachidicola Hori; Crous &
Braun 2003: 62.

***Passalora bataticola* (Cif. & Bruner) U.
Braun & Crous**

Ecology: plant parasitic, on *Ipomoea* sp.,
Convolvulaceae

Reference: Crous & Braun 2003: 77.

***Passalora cajani* (Henn.) U. Braun &
Crous var. *trichophila* (Curci) Deighton**

Ecology: plant parasitic, on *Cajanus* sp.,
Fabaceae

Reference: Crous & Braun 2003: 93.

***Passalora caladii* (F. Stevens) U. Braun
& A. Sivapalan**

Ecology: plant parasitic, on Araceae

Reference: Crous & Braun 2003: 93.

***Passalora capsicicola* (Vassiljevsky) U.
Braun & F.O. Freire**

Ecology: plant parasitic, on *Capsicum* sp.,
Solanaceae

Reference: McGuire & Crandall 1967: 138, as
Cercospora unamunoi Castell., a synonym
acc. to Crous & Braun 2003: 415; Crous &
Braun 2003: 103.

***Passalora cayaponiae* (F. Stevens &
Solheim) U. Braun & Crous**

Ecology: plant parasitic, on Cucurbitaceae

Reference: Crous & Braun 2003: 112.

***Passalora davillae* (A.S. Mull. & Chupp)
U. Braun, J.C. David & F.O. Freire**

Ecology: plant parasitic, on *Davilla* sp.,
Dilleniaceae

Reference: Braun et al. 1999: 96; Crous &
Braun 2003: 154.

***Passalora dioscoreae* (Ellis & G.W.
Martin) U. Braun & Crous**

Ecology: plant parasitic, on *Dioscorea* sp.,
Dioscoreaceae

Reference: Crous & Braun 2003: 162.

***Passalora fulva* (Cooke) U. Braun &
Crous**

Ecology: plant parasitic, on *Lycopersicon
esculentum*, Solanaceae

Reference: Toler et al. 1959: 1203, as
Cladosporium fulvum Cooke; McGuire &
Crandall 1967: 136, as *C. fulvum*.

***Passalora fusimaculans* (G.F. Atk.) U.
Braun & Crous**

Ecology: plant parasitic, on *Panicum
maximum*, Poaceae

Reference: McGuire & Crandall 1967: 152, as
Cercospora fusimaculans G.F. Atk.; Lenné
1990: 92, as *C. fusimaculans*; Crous & Braun
2003: 192.

***Passalora henningsii* (Allesch.)
R.F. Castañeda & U. Braun**

Ecology: plant parasitic, on *Manihot esculenta*
(*M. manihot*, *M. utilissima*), Euphorbiaceae
Province/Locality: CA, PA

Reference: Chupp 1930: 285, as *Cercospora
cearae* Petch, a synonym acc. to Crous &
Braun 2003: 113; Solheim & Stevens 1931:
371, as *Cercospora manihotis* Henn. and p.
381 as *Cercospora cassavae* Ellis & Everh.,
both synonyms acc. to Crous & Braun 2003:
215; Chupp 1953: 220, as *C. henningsii*;
McGuire & Crandall 1967: 143, as *Cerco-
spora henningsii* Allesch.; Dennis 1970: 402,
as *C. henningsii*; Crous & Braun 2003: 215.

***Passalora janseana* (Racib.) U. Braun**

Ecology: plant parasitic, on *Oryza sativa*,
Poaceae

Reference: Toler et al. 1959: 1203, as
Cercospora oryzae T. Miyake, a synonym acc.
to Crous & Braun 2003: 299; McGuire &

Crandall 1967: 123, as *C. oryzae*; Crous & Braun 2003: 231.

***Passalora koepkei* (W. Krüger) U. Braun & Crous**

Ecology: plant parasitic, on *Saccharum officinarum*, Poaceae
Reference: McGuire & Crandall 1967: 127, as *Cercospora koepkei* W. Krüger; Crous & Braun 2003: 238.

***Passalora lantanae* (Chupp) U. Braun & Crous**

Ecology: plant parasitic, on *Lantana* sp., Verbenaceae
Reference: Crous & Braun 2003: 242.

***Passalora manihotis* (Solheim & F.L. Stevens) U. Braun & Crous**

Ecology: plant parasitic, on *Manihot esculenta* (*M. utilissima*), Euphorbiaceae
Province/Locality: CA
Reference: Solheim & Stevens 1931: 404, as *Ragnhildiana manihotis* Solheim & F.L. Stevens; Toler et al. 1959: 1202, as *Cercospora caribaea* Cif., a synonym acc. to Crous & Braun 2003: 104; McGuire & Crandall 1967: 143, as *C. caribaea*; Crous & Braun 2003: 266.

***Passalora mimosae* (F. Stevens & Dalbey) U. Braun**

Ecology: plant parasitic, on *Mimosa pudica*, Fabaceae
Reference: Crous & Braun 2003: 275.

***Passalora mucunae* (Syd. & P. Syd.) U. Braun & Mouch.**

Ecology: plant parasitic, on Fabaceae
Reference: Crous & Braun 2003: 284.

***Passalora occidentalis* (Cooke) U. Braun**

Ecology: plant parasitic, on Fabaceae
Reference: Crous & Braun 2003: 294.

***Passalora personata* (Berk. & M.A. Curtis) S.A. Kahn & M. Kamal**

Ecology: plant parasitic, on *Arachis hypogaea*, Fabaceae
Reference: Toler et al. 1959: 1203, as *Cercospora personata* (Berk. & M.A. Curtis) Ellis & Everh.; Crous & Braun 2003: 317.

***Passalora pyrostegiae* (Viégas) U. Braun & Crous**

Ecology: plant parasitic, on *Pyrostegia* sp., Bignoniaceae
Reference: Crous & Braun 2003: 346.

***Passalora rauvolfiae* (Deighton) U. Braun & Crous**

Ecology: plant parasitic, on *Rauvolfia* sp., Apocynaceae
Reference: Crous & Braun 2003: 349.

***Passalora rosicola* (Pass.) U. Braun**

Ecology: plant parasitic, on *Rosa* sp., Rosaceae
Reference: Crous & Braun 2003: 357.

***Passalora stylosanthis* (Speg.) U. Braun**

Ecology: plant parasitic, on *Stylosanthes* sp., Fabaceae
Reference: Crous & Braun 2003: 391.

***Passalora vaginae* (W. Krüger) U. Braun & Crous**

Ecology: plant parasitic, on *Saccharum officinarum*, Poaceae
Reference: McGuire & Crandall 1967: 127, as *Cercospora vaginae* W. Krüger; Crous & Braun 2003: 417.

***Patouillardiella* sp.**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI
Reference: Farrow 1954: 640.

***Penicillium avellaneum* Thom & Turesson**

Ecology: saprobic

Reference: Raper et al. 1949: 597.

***Penicillium brevicompactum* Dierckx**

Ecology: saprobic, cultivated from soil

Province/Locality: CH

Reference: Farrow 1954: 641, as *Penicillium stoloniferum* Thom, a synonym acc. to Index Fungorum; Dennis 1970: 383, as *P. stoloniferum*.

***Penicillium canescens* Sopp**

Ecology: saprobic, cultivated from soil

Province/Locality: CH

Reference: Farrow 1954: 641, as *Penicillium kapuscinskii* K.M. Zalesky, a synonym acc. to Index Fungorum; Dennis 1970: 383, as *P. kapuscinskii*.

***Penicillium capsulatum* Raper & Fennell**

a new species from Panama

Ecology: saprobic, cultivated from a camera lens

Province/Locality: CA

Reference: Raper & Fennell 1948: 528; Dennis 1970: 383; Raper et al. 1949: 242; Pitt 1979: 214; Peterson 2000a: 165.

***Penicillium citrinum* Thom**

Ecology: saprobic, cultivated from soil and from exposed textile

Province/Locality: BCI, CA, CH

Reference: Farrow 1954: 640 and 641, as *Penicillium steckii* K.M. Zalesky, a synonym acc. to Index Fungorum; Raper et al. 1949: 350, as *P. steckii*; Dennis 1970: 383 also as *P. steckii*; Pitt 1979: 291.

***Penicillium decumbens* Thom**

Ecology: saprobic, cultivated from soil

Province/Locality: CH

Ref.: Farrow 1954: 640; Dennis 1970: 383.

***Penicillium dierckxii* Biourge**

Ecology: saprobic, cultivated from soil and deteriorating tentage

Province/Locality: BCI

Reference: Farrow 1954: 641, as *Penicillium fellutanum* Biourge, a synonym acc. to Index Fungorum; Dennis 1970: 383, as *P. fellutanum*; Raper et al. 1949: 212, as *P. fellutatium*.

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

Ecology: plant parasitic, on *Citrus* sp., Rutaceae

Reference: McGuire & Crandall 1967: 135.

***Penicillium funiculosum* Thom**

Ecology: saprobic, cultivated from soil

Province/Locality: BCI, CA, CH

Reference: Farrow 1954: 641; Dennis 1970: 383.

***Penicillium glabrum* (Wehmer) Westling**

Ecology: saprobic, cultivated from soil

Province/Locality: BCI, CH

Reference: Farrow 1954: 641, as *Penicillium terlikowskii* K.M. Zalesky, a synonym acc. to Index Fungorum; Dennis 1970: 383, as *P. terlikowskii*.

***Penicillium gladioli* Machacek**

Ecology: saprobic, cultivated from soil

Province/Locality: BCI, CH

Reference: Farrow 1954: 640; Dennis 1970: 383; Goos 1960: 879; all as *Penicillium asperum* (Shear) Raper & Thom, a synonym acc. to Index Fungorum.

***Penicillium humuli* J.F.H. Beyma**

Ecology: saprobic, cultivated from soil

Province/Locality: BCI

Reference: Farrow 1954: 641; Dennis 1970: 383.

***Penicillium indonesiae* Pitt**

Ecology: saprobic, cultivated from soil

Province/Locality: CH

Reference: Farrow 1954: 641, as *Penicillium javanicum* J.F.H. Beyma, a synonym acc. to Index Fungorum; Dennis 1970: 383, as *P. javanicum*.

***Penicillium kloeckeri* Pitt**

Ecology: saprobic, cultivated from soil

Province/Locality: BCI, CA, CH

Reference: Farrow 1954: 641; Dennis 1970: 383; Raper et al. 1949: 583; all as *Penicillium wortmannii* Klöcker, a synonym acc. to Index Fungorum

***Penicillium lanosum* Westling**

Ecology: saprobic, cultivated from soil

Province/Locality: BCI, CH

Reference: Farrow 1954: 641; Dennis 1970: 383.

***Penicillium lilacinum* Thom**

Ecology: saprobic, cultivated from soil of banana farm

Province/Locality: CH

Reference: Goos 1960: 879.

***Penicillium oxalicum* Currie & Thom**

Ecology: saprobic, cultivated from soil of banana farm

Province/Locality: CH

Reference: Goos 1960: 879.

***Penicillium panamense* Samson, Stolk & Frisvad**

a new species from Panama

Ecology: saprobic, cultivated from soil

Province/Locality: BCI

Reference: Samson et al. 1989: 136.

***Penicillium paxilli* Bainier**

Ecology: saprobic, cultivated from soil and photographic film

Province/Locality: BCI, CH

Reference: Farrow 1954: 641; Dennis 1970: 383; Raper et al. 1949: 414; Pitt 1979: 306; Peterson 2000a: 166.

***Penicillium raistrickii* G. Sm.**

Ecology: saprobic, cultivated from soil

Province/Locality: BCI

Reference: Farrow 1954: 641; Dennis 1970: 383.

***Penicillium rubrum* Sopp**

Ecology: saprobic, cultivated from soil

Province/Locality: BCI

Reference: Farrow 1954: 641; Dennis 1970: 383.

***Penicillium simplicissimum* (Oudem.) Thom**

Ecology: saprobic, cultivated from soil

Province/Locality: BCI, CA, CH

Reference: Farrow 1954: 641 also as *Penicillium janthinellum* Biourge, a synonym acc. to Index Fungorum; Goos 1960: 879; Dennis 1970: 383 also as *P. janthinellum*.

***Penicillium* sp.**

Ecology: plant parasitic, on *Allium cepa*, Alliaceae; on *Oryza sativa*, *Sorghum vulgare*, *Zea mays*, Poaceae; on *Citrus* sp., Rutaceae
Reference: Toler et al. 1959: 1202, 1203; McGuire & Crandall 1967: 140.

***Penicillium* sp.**

Ecology: saprobic, cultivated from litter
Province/Locality: BCI
Reference: Cornejo et al. 1994: 187.

***Penicillium sublateritium* Biourge**

Ecology: saprobic, cultivated from deteriorating military equipment
Province/Locality: BCI

Reference: Raper et al. 1949: 203.

***Penicillium thomii* Maire**

Ecology: saprobic, cultivated from soil
Province/Locality: CH
Reference: Farrow 1954: 641; Dennis 1970: 383.

***Penicillium vanbeymae* Pitt**

Ecology: saprobic, cultivated from soil
Province/Locality: CA
Reference: Farrow 1954: 640, as *Penicillium baarnense* J.F.H. Beyma, a synonym acc. to Index Fungorum; Dennis 1970: 383, as *P. baarnense*.

***Penicillium variabile* Sopp**

Ecology: saprobic, cultivated from weathering canvas
Reference: Pitt 1979: 451.

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

Ecology: saprobic, cultivated from soil
Province/Locality: BCI, CA, CH
Reference: Farrow 1954: 641; Dennis 1970: 383.

***Periconia byssoides* Pers.**

Ecology: saprobic, on *Manihot esculenta*, Euphorbiaceae; on dead spots caused by *Cercospora manihoticola*
Province/Locality: CA
Reference: Stevens 1930: 286, as *Periconia pycnospora* Fresen., a synonym acc. to Index Fungorum; McGuire & Crandall 1967: 143, as *P. pycnospora*.

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

Ecology: saprobic, cultivated from palm leaf
Province/Locality: BCI
Reference: Morris & Finley 1956: 729; Dennis 1970: 393.

***Phaeoisaria clematidis* (Fuckel) S. Hughes**

Ecology: saprobic, on decaying bamboo stem
Province/Locality: BCI
Reference: Goos 1997: 379.

***Phaeoisariopsis cercosporoides* (M.L. Farr) M.B. Ellis**

a new species from Panama
Ecology: plant parasitic, on *Heliconia* sp., Heliconiaceae
Province/Locality: CA
Reference: Ellis 1976: 236.

***Phaeoisariopsis griseola* (Sacc.) Ferraris**

Ecology: plant parasitic, on *Macroptilium atropurpureum*, *Phaseolus vulgaris*, Fabaceae
Reference: McGuire & Crandall 1967: 120, as *Isariopsis griseola* Sacc.; Lenné 1990: 84; Crous & Braun 2003: 205.

***Phialophora verrucosa* Medlar**

Ecology: saprobic, cultivated from palm leaf
Province/Locality: BCI
Reference: Morris & Finley 1956: 730; Dennis 1970: 391.

***Pithomyces chartarum* (Berk. & M.A. Curtis) M.B. Ellis**

Ecology: saprobic, on palm leaf
Reference: Dennis 1970: 421.

***Placonema bambusae* (Bat.) Nag Raj**

Ecology: plant parasitic, on *Chusquea pittieri*, Poaceae
Reference: Nag Ray 1993: 702.

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

Ecology: plant parasitic, on *Dioscorea* sp., Dioscoreaceae; on *Hibiscus* sp., Malvaceae
Reference: McGuire & Crandall 1967: 149, as *Cercospora abelmoschi* Ellis & Everh.; Crous & Braun 2003: 37.

***Pseudocercospora aleuritis* (I. Miyake)
Deighton**

Ecology: plant parasitic, on *Aleurites* sp.,
Euphorbiaceae
Reference: Crous & Braun 2003: 50.

***Pseudocercospora anacardii* E.
Castell. & Casulli**

Ecology: plant parasitic, on *Anacardium* sp.,
Anacardiaceae
Reference: Crous & Braun 2003: 56.

***Pseudocercospora annonae* U. Braun
& Crous**

Ecology: plant parasitic, on *Annona* sp.,
Annonaceae
Reference: Crous & Braun 2003: 59.

***Pseudocercospora annonae-
squamosae* U. Braun & R. F.
Castañeda**

Ecology: plant parasitic, on *Annona* sp.,
Annonaceae
Reference: Crous & Braun 2003: 59.

***Pseudocercospora atromarginalis* (G.
F. Atk.) Deighton**

Ecology: plant parasitic, on Solanaceae
Reference: Crous & Braun 2003: 71.

***Pseudocercospora bixae* (Allesch. & F.
Noack) Crous, Alfenas & R.W. Barreto**

Ecology: plant parasitic, on *Bixa* sp., Bixaceae
Reference: Crous & Braun 2003: 81.

***Pseudocercospora blechi* U. Braun,
Crous & N. Pons**

Ecology: plant parasitic, on *Blechnum* sp.,
Acanthaceae
Reference: Crous & Braun 2003: 82.

***Pseudocercospora byrsonimatis*
(Maubl.) U. Braun & Mouch.**

Ecology: plant parasitic, on Malpighiaceae
Reference: Crous & Braun 2003: 92.

***Pseudocercospora carbonacea* (Miles)
N. Pons & B. Sutton**

Ecology: plant parasitic, on *Dioscorea alata*,
Dioscoreaceae
Reference: Toler et al. 1959: 1203, as
Cercospora carbonacea L.E. Miles; McGuire
& Crandall 1967: 149, as *C. carbonacea*;
Crous & Braun 2003: 104.

***Pseudocercospora catappae* (Henn.)
Y.L. Guo & X.J. Liu**

Ecology: plant parasitic, on *Terminalia* sp.,
Combretaceae
Reference: Crous & Braun 2003: 111.

***Pseudocercospora chirguensis* U.
Braun, Crous & N. Pons**

Ecology: plant parasitic, on *Curatella
americana*, Dilleniaceae
Reference: Crous & Braun 2003: 120.

***Pseudocercospora clitoriae* (G. F. Atk.)
Deighton**

Ecology: plant parasitic, on Fabaceae
Reference: Crous & Braun 2003: 129.

***Pseudocercospora costi* (F. Stevens)
U. Braun & Crous
a new species from Panama**

Ecology: plant parasitic, on *Costus* sp.,
Costaceae
Province/Locality: CA
Reference: Stevens 1927a: 57; Solheim &
Stevens 1931: 374; Chupp 1953: 607; Dennis
1970: 414; Bussaban et al. 2002: 171; all as
Cercospora costi F. Stevens. Crous & Braun
2003: 140.

***Pseudocercospora cruenta* (Sacc.)
Deighton**

Ecology: plant parasitic, on Fabaceae
Reference: Crous & Braun 2003: 145.

***Pseudocercospora cydoniae* (Ellis & Everh.) Y.L. Guo & X.J. Liu**

Ecology: plant parasitic, on *Chaenomeles* sp.,
Rosaceae

Reference: Crous & Braun 2003: 149.

***Pseudocercospora guazumae* (Syd.) Deighton**

Ecology: plant parasitic, on *Guazuma* sp.,
Malvaceae

Reference: Crous & Braun 2003: 207.

***Pseudocercospora heveae* (Vincens) Deighton**

Ecology: plant parasitic, on *Hevea brasiliensis*,
Euphorbiaceae

Reference: Dennis 1970: 402, as *Cercospora heveae* Vincens; Crous & Braun 2003: 217.

***Pseudocercospora hurae* (F. Stevens) Deighton**

Ecology: plant parasitic, on *Hura crepitans*,
Euphorbiaceae

Reference: Crous & Braun 2003: 221.

***Pseudocercospora jahnii* (Syd.) U. Braun & Crous**

Ecology: plant parasitic, on *Tabebuia* sp.,
Bignoniaceae

Reference: Crous & Braun 2003: 230.

***Pseudocercospora lythracearum* (Heald & F.A. Wolf) X.J. Liu & Y.L. Guo**

Ecology: plant parasitic, on Lythraceae

Reference: Crous & Braun 2003: 259.

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

Ecology: plant parasitic, on Rosaceae

Reference: Crous & Braun 2003: 264.

***Pseudocercospora mombin* (Petr. & Cif.) Deighton**

Ecology: plant parasitic, on *Spondias* sp.,
Anacardiaceae

Reference: Braun et al. 1999: 102; Crous & Braun 2003: 279.

***Pseudocercospora neriella* (Sacc.) Deighton**

Ecology: plant parasitic, on Apocynaceae

Reference: Crous & Braun 2003: 290.

***Pseudocercospora nymphaeacea* (Cooke & Ellis) Deighton**

Ecology: plant parasitic, on *Nelumbo* sp.,
Nelumbonaceae; on *Nymphaea* sp.,
Nymphaeaceae

Province/Locality: CA

Reference: Chupp 1930: 290, as *Cercospora nymphaeacea* Cooke & Ellis; Dennis 1970: 408, as *C. nymphaeacea*; Crous & Braun 2003: 293.

***Pseudocercospora piperis* (Pat.) Deighton**

Ecology: plant parasitic, on *Piper* sp.,
Pothomorphe peltata, Piperaceae

Province/Locality: CA

Reference: Dennis 1970: 410, as *Cercospora piperis* Pat.; Chupp 1930: 291, as *Cercospora portoricensis* Earle, a synonym acc. to Crous & Braun 2003: 334.

***Pseudocercospora psidii* (Rangel) R.F. Castañeda & U. Braun**

Ecology: plant parasitic, on *Psidium* sp.,
Myrtaceae

Reference: Crous & Braun 2003: 338.

***Pseudocercospora puerariae* (Syd. & P. Syd.) Deighton**

Ecology: plant parasitic, on *Pueraria phaseoloides*,
Fabaceae

Reference: Lenné 1990: 116; Crous & Braun 2003: 341.

Pseudocercospora punicae* (Henn.)*Deighton**

Ecology: plant parasitic, on *Punica granatum*,
Punicaceae

Reference: Crous & Braun 2003: 344.

Pseudocercospora purpurea* (Cooke)*Deighton**

Ecology: plant parasitic, on *Persea americana*,
P. gratissima, Lauraceae

Province/Locality: CA

Reference: Stevens 1927a: 58; Solheim &
Stevens 1931: 372; Dennis 1970: 404; all as
Cercospora purpurea Cooke. Crous & Braun
2003: 345.

Pseudocercospora rubi* (Sacc.)*Deighton**

Ecology: plant parasitic, on Rosaceae

Reference: Crous & Braun 2003: 358.

***Pseudocercospora sawadae* (W.
Yamam.) Goh & W.H. Hsieh**

Ecology: plant parasitic, on Myrtaceae

Reference: Crous & Braun 2003: 367.

***Pseudocercospora sphaerellae-
eugeniae* (Rangel) Crous, Alfenas &
R.W. Barreto**

Ecology: plant parasitic, on Myrtaceae

Reference: Crous & Braun 2003: 383.

***Pseudocercospora stevensii* (E.
Young) U. Braun & Crous**

Ecology: plant parasitic, on *Andira inermis*,
Fabaceae

Province/Locality: PA

Reference: Chupp 1930: 294, as *Cercospora
stevensii* E. Young; Dennis 1970: 404, as *C.
stevensii*.

***Pseudocercospora stizolobii* (Syd. & P.
Syd.) Deighton**

Ecology: plant parasitic, on *Stizolobium
deeringianum*, Fabaceae

Province/Locality: PA

Reference: Chupp 1930: 294, as *Cercospora
stizolobii* Syd. & P. Syd.; Dennis 1970: 406,
as *C. stizolobii*; Crous & Braun 2003: 389.

Pseudocercospora timorensis* (Cooke)*Deighton**

Ecology: plant parasitic, on Convolvulaceae

Reference: Crous & Braun 2003: 404.

***Pseudocercospora trichophila* (F.
Stevens) Deighton**

Ecology: plant parasitic, on *Solanum torvum*,
Solanaceae

Province/Locality: CA

Reference: Ellis 1976: 179, as *Helicospira
trichophila* (F. Stevens) M.B. Ellis; Deighton
1976: 106; Crous & Braun 2003: 409.

Pseudocercospora ubi* (Racib.)*Deighton**

Ecology: plant parasitic, on *Dioscorea* sp.,
Dioscoreaceae

Reference: McGuire & Crandall 1967: 149, as
Cercospora ubi Racib.; Crous & Braun 2003:
414.

***Pseudocercospora urenae* (Viégas &
Chupp) A. Hern.-Gut. & Dianese**

Ecology: plant parasitic, on *Urena* sp.,
Malvaceae

Reference: Crous & Braun 2003: 416.

Pseudocercospora vismiicola* (Chupp.)*U. Braun & Crous**

Ecology: plant parasitic, on Guttiferae

Reference: Crous & Braun 2003: 426.

***Pseudocercospora vitis* (Lév.) Speg.**

Ecology: plant parasitic, on Vitaceae

Reference: Crous & Braun 2003: 427.

***Pseudocercospora wedeliae* (A.K. Kar & M. Mandal) Deighton**

Ecology: plant parasitic, on Asteraceae
Reference: Crous & Braun 2003: 429.

***Pyricularia grisea* (Cooke) Sacc.**

Ecology: plant parasitic, on *Cynodon dactylon*,
Digitaria decumbens, Poaceae
Reference: McGuire & Crandall 1967: 151,
152.

***Pyricularia oryzae* Cavara**

Ecology: plant parasitic, on *Oryza sativa*,
Poaceae
Reference: Toler et al. 1959: 1203; McGuire
& Crandall 1967: 124.

***Rhynchosporium oryzae* Hashioka & Yokogi**

Ecology: plant parasitic, on *Oryza sativa*,
Poaceae
Reference: McGuire & Crandall 1967: 124.

***Scolecostigmina mangiferae* (Koord.)
U. Braun & Mouch.**

Growth form: cercosporoid
Ecology: plant parasitic, on *Mangifera* sp.,
Anacardiaceae
Reference: McGuire & Crandall 1967: 131, as
Cercospora mangiferae Koord.; Crous &
Braun 2003: 265.

***Septonema intercalare* E.K. Cash &
A.M.J. Watson**

Ecology: plant parasitic, on *Cattleya*
bowringiana, Orchidaceae
Province/Locality: CA
Reference: Cash & Watson 1955: 744.

***Septonema smilacinum* Speg.**

Ecology: plant parasitic, on *Psychotria* sp.,
Rubiaceae
Province/Locality: CA
Reference: Batista & Ciferri 1963: 30.

***Septonema toruloides* (Berl.) var.
taurinense Ferr. & Tonelli**

Ecology: plant parasitic, on *Cornutia*
pyramidata, Verbenaceae
Province/Locality: CA
Reference: Batista & Ciferri 1963: 34.

***Shropshiria chusqueae* F. Stevens
a new species from Panama**

Ecology: plant parasitic, on *Chusquea*
simpliciflora, Poaceae
Province/Locality: CA
Reference: Stevens 1927c: 231.

***Solheimia costispora* E.F. Morris
a new species from Panama**

Ecology: saprobic, cultivated from palm leaf
Province/Locality: BCI
Reference: Morris 1967: 181; Bills et al. 1994:
4.

***Sorocybe resinae* (Fr.) Fr.**

Ecology: saprobic, cultivated from soil
Province/Locality: CH
Reference: Farrow 1954: 641, as
Pycnostysanus resinae J. Lindau, a synonym
acc. to Dugan et al. 2004: 78; Dennis 1970:
423, as *P. resinae*.

***Spadicoides obovata* (Cooke & Ellis) S.
Hughes**

Ecology: saprobic, on angiosperm wood
Province/Locality: BCI
Reference: Morris & Finley 1956: 731, as
Spondylocladium obovatum (Cooke & Ellis)
S. Hughes; Dennis 1970: 416, as *S. obovatum*.

***Spadicoides xylogena* (A.L. Smith) S.
Hughes**

Ecology: saprobic, on angiosperm wood
Province/Locality: BCI
Reference: Morris & Finley 1956: 731, as
Spondylocladium xylogenum A.L. Smith;
Dennis 1970: 416, as *S. xylogenum*.

***Spiculostilbella dendritica* E.F. Morris
a new species from Panama**

Ecology: saprobic, cultivated from palm leaf
Province/Locality: BCI
Reference: Morris 1963a: 101; Morris 1963b:
118.

***Sporidesmium bakeri* Syd. & P. Syd.**

Ecology: saprobic, cultivated from palm leaf
Province/Locality: BCI
Reference: Morris & Finley 1956: 732.

***Sporidesmium nodipes* (Penz. & Sacc.)
S. Hughes**

Ecology: saprobic, on decaying palm rachis
Province/Locality: BCI
Reference: Goos 1997: 379.

***Stachybotrys atra* Corda**

Ecology: saprobic, cultivated from palm leaf,
soil, and fibre of *Gossypium hirsutum*,
Malvaceae
Province/Locality: BCI, CA, CH
Reference: Farrow 1954: 641, as *Stachybotrys*
lobulata Berk., a synonym acc. to Index
Fungorum; Morris & Finley 1956: 730; Goos
1960: 879; McGuire & Crandall 1967: 147;
Goos & Pirozynski 1975: 2930.

***Stachybotrys cylindrospora* C.N.
Jensen**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI
Reference: Farrow 1954: 641.

***Stachybotrys kampalensis* Hansf.**

Ecology: saprobic, on decaying breadfruit
leaves
Province/Locality: BCI
Reference: Goos & Pirozynski 1975: 2930.

***Stenella canavaliae* (Syd. & P. Syd.)
Deighton**

Growth form: cercosporoid

Ecology: plant parasitic, on *Canavalia* sp.,
Fabaceae

Reference: Crous & Braun 2003: 98.

***Stenella praelonga* (Syd.) U. Braun &
Crous**

Growth form: cercosporoid
Ecology: plant parasitic, on Cucurbitaceae
Reference: Crous & Braun 2003: 334.

***Stenella psychotriae* (Chupp & Viégas)
Crous & U. Braun**

Growth form: cercosporoid
Ecology: plant parasitic, on *Psychotria* sp.,
Rubiaceae
Reference: Crous & Braun 2003: 339.

***Stevensomyces palmae* (F. Stevens &
S.J. King) E.F. Morris & Finley
a new species from Panama**

Growth form: stilboid
Ecology: on palm inflorescence, Arecaceae
Province/Locality: BCI, CA
Reference: Stevens 1927a: 59, as *Isaria*
palmae F. Stevens & King; Morris 1965: 484;
Dennis 1970: 422, as *I. palmae*.

***Stilbella* sp.**

Ecology: saprobic, cultivated from palm leaf
Province/Locality: BCI
Reference: Standley 1933: 21; Morris &
Finley 1956: 732.

***Stromatographium stromaticum* (Berk.)
Höhn.**

Ecology: saprobic, on wood
Province/Locality: BCI
Reference: Morris 1967: 184.

***Stysanus medius* Sacc.**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI
Reference: Farrow 1954: 641; Dennis 1970:
423, as *Pycnostysanus medius* (Sacc.) Bat. &
Peres.

***Tetracoccusporium paxianum* Szabó**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI
Reference: Farrow 1954: 641; Dennis 1970: 420.

***Tharoopama trina* Subram.**

Ecology: saprobic, on wood
Province/Locality: BCI, CA
Reference: Morris 1963a: 100; Morris 1963b: 130.

***Thielaviopsis basicola* (Berk. & Broome) Ferraris**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI, CH
Reference: Farrow 1954: 641; Dennis 1970: 391.

***Tompetchia webberi* (H.S. Fawc.) Subram.**

Ecology: parasitic on *Aleyrodes citri*,
Aleyrodidae (Hemiptera)
Province/Locality: PA
Reference: Chardón & Toro 1930: 296, as
Aegerita webberi H.S. Fawc.; Dennis 1970: 429, as *A. webberi*.

***Torula herbarum* (Pers.) Link**

Ecology: saprobic, cultivated from palm leaf
and herbaceous debris
Province/Locality: BCI
Reference: Morris & Finley 1956: 730; Dennis 1970: 390.

***Torula* sp.**

Ecology: saprobic, cultivated from soil of
banana farm
Province/Locality: CH
Reference: Goos 1960: 879.

***Tretophragmia nilgirensis* (Subram.) Subram. & Natarajan**

Ecology: saprobic, on decaying bamboo stem
Province/Locality: BCI, CC

Reference: Goos 1997: 379, as *Podosporium nilgirensis* (Subram.) M.B. Ellis.

***Trichocladium asperum* Harz**

Ecology: saprobic, cultivated from soil
Province/Locality: CH
Reference: Farrow 1954: 641; Dennis 1970: 395.

***Trichoderma hamatum* (Bonord.) Bainier**

Ecology: saprobic, cultivated from soil
Reference: Kindermann et al. 1998: 302.

***Trichoderma koningii* Oudem.**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI, CA, CH
Reference: Farrow 1954: 641; Dennis 1970: 384.

***Trichoderma viride* Pers.**

Ecology: saprobic, cultivated from soil, on
rotting stems or branches
Province/Locality: BCI, CH
Reference: Farrow 1954: 641, as *Trichoderma lignorum* (Tode) Harz, a synonym acc. to
Index Fungorum; Weston 1933: 397, as *T. lignorum*; Goos 1960: 879.

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

Ecology: human pathogenic, causing Dhobie
itch, eruptions of skin
Reference: Weston 1933: 400 as "Dhobie itch"
= *Tinea cruris*.

***Trichosphaeria* sp.**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI
Reference: Farrow 1954: 641.

***Trichosporium* sp.**

Ecology: saprobic, cultivated from soil
Province/Locality: BCI, CA, CH
Reference: Farrow 1954: 641.

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

Ecology: saprobic, cultivated from palm leaf and angiospermous wood
 Province/Locality: BCI
 Reference: Morris & Finley 1956: 729; Dennis 1970: 386.

***Tripospermum juglandis* (Thüm.) S. Hughes**

Ecology: plant parasitic, on *Cornutia pyramidata*, Verbenaceae
 Province/Locality: CA
 Reference: Batista & Ciferri 1963: 34.

***Tripospermum myrti* (Lind) S. Hughes**

Ecology: plant parasitic, on *Psychotria* sp., Rubiaceae
 Province/Locality: CA
 Reference: Batista & Ciferri 1963: 30.

***Ulocladium consortiale* (Thüm.) E.G. Simmons**

Ecology: saprobic, cultivated from palm leaf
 Province/Locality: BCI
 Reference: Morris & Finley 1956: 732, as *Stemphylium consortiale* (Thüm.) J.W. Groves & Skolko; Dennis 1970: 420, as *S. consortiale*.

***Ustilaginoidea virens* (Cooke) Takah.**

Ecology: saprobic, on *Oryza sativa*, *Zea mays*, Poaceae
 Reference: Toler et al. 1959: 1202, 1203; McGuire & Crandall 1967: 119, 124.

***Uvarispora lignicola* Goos & Piroz. a new species from Panama**

Ecology: saprobic, on decaying wood
 Province/Locality: BCI
 Reference: Goos & Pirozynski 1975: 2930.

***Verticillium fuliginosum* Petch**

Ecology: parasitic on leaf hoppers, Cicadellidae (Homoptera)
 Reference: Dennis 1970: 383.

***Verticillium lateritium* (Ehrenb. ex Fr.) Rabenh.**

Ecology: saprobic, cultivated from soil
 Reference: Dennis 1970: 384.

***Verticillium luteoalbum* (Link) Subram.**

Ecology: saprobic, cultivated from soil
 Province/Locality: CH
 Reference: Farrow 1954: 639, as *Acrostalagmus cinnabarinus* Corda, a synonym acc. to Index Fungorum.

***Verticillium* sp.**

Ecology: saprobic, cultivated from litter
 Province/Locality: BCI
 Reference: Cornejo et al. 1994: 187.

***Verticillium terrestre* (Pers.) Sacc.**

Ecology: saprobic, cultivated from soil
 Province/Locality: CA
 Reference: Farrow 1954: 641; Dennis 1970: 384.

***Verticillium theobromae* (Turconi) E.W. Mason & S. Hughes**

Ecology: plant parasitic, on *Musa* sp., Musaceae
 Reference: McGuire & Crandall 1967: 130, as *Stachylidium theobromae* Turconi.

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

Ecology: saprobic, on dead branches
 Province/Locality: PA
 Reference: Morris 1967: 184.

***Westerdykella* sp.**

Ecology: saprobic, cultivated from litter
 Province/Locality: BCI
 Reference: Cornejo et al. 1994: 187.

***Wiesneriomyces javanicus* Koord.**

Ecology: saprobic, on decaying fruit of *Scheelea zonensis*, Areaceae
 Province/Locality: BCI, CA

Reference: Maniotis & Strain 1968: 204; Goos & Pirozynski 1975: 2932; Goos 1978: 34.

Zygosporium oscheoides Mont.

Ecology: saprobic, on decaying leaves of breadfruit and on unknown monocot

Province/Locality: BCI, CA

Reference: Stevens 1930: 286; Goos & Pirozynski 1975: 2932.

Mycelia Sterilia

Rhizoctonia grisea (J.A. Stev.) Matz

Ecology: plant parasitic, on *Oryza sativa*, Poaceae

Reference: McGuire & Crandall 1967: 124.

Rhizoctonia solani J.G. Kühn

Ecology: plant parasitic, on *Beta vulgaris*, Chenopodiaceae; on *Brassica oleracea*, Brassicaceae; on *Cucumis sativus*, Cucurbitaceae; on *Manihot esculenta*, Euphorbiaceae; on *Centrosema brasilianum*, *Medicago sativa*, *Neonotonia wightii*, *Phaseolus vulgaris*, *Stylosanthes guianensis*, *Vigna sinensis*, Fabaceae; on *Eichhornia azurea*, *E. crassipes*, Pontederiaceae; on *Citrus* sp., Rutaceae; on *Lycopersicon esculentum*, *Nicotiana tabacum*, *Solanum melongena*, *S. tuberosum*, Solanaceae
Province/Locality: CA

Reference: Toler et al. 1959: 1202, 1203; McGuire & Crandall 1967: 121, 126, 135, 137, 138, 142, 143, 151; Freeman & Zettler 1974: C3; Lenné 1990: 28, 87, 137.

Rhizoctonia microsclerotia Matz

Ecology: plant parasitic, on *Phaseolus vulgaris*, Fabaceae

Reference: McGuire & Crandall 1967: 121.

Rhizoctonia oryzae Ryker & Gooch

Ecology: plant parasitic, on *Oryza sativa*, Poaceae

Reference: McGuire & Crandall 1967: 124.

Rhizoctonia sp.

Ecology: plant parasitic, on *Allium cepa*, Alliaceae; on *Lactuca sativa*, Asteraceae; on *Persea americana*, Lauraceae; on *Gossypium hirsutum*, *Theobroma cacao*, Malvaceae; on *Sesamum indicum*, Pedaliaceae; on *Oryza sativa*, *Zea mays*, Poaceae; on *Coffea arabica*, Rubiaceae

Reference: Toler et al. 1959: 1202, 1203; McGuire & Crandall 1967: 124, 131, 140, 144, 147, 149.

Nom. Dub.

Rhinotrichum curtisii Berk.

Ecology: saprobic, on wood

Province/Locality: BCI

Reference: Weston 1933: 397, as *Rhinotrichum* sp.; Standley 1933: 21.

Rhizomorpha corynephora Kunze

Ecology: saprobic, on twigs or in forest litter
Province/Locality: BCI

Reference: Standley 1933: 21, as *Rhizomorpha coryneocarpos*, probably an error; Dennis 1970: 430.

Indet.

Ecology: from the deep sea

Province/Locality: Golf of Panamá

Reference: Kohlmeyer 1977: 203.

ASCOLICHENES

Ecology: symbiotic with algae

Arthoniomycetidae**Arthoniales*****Arthonia accolens* Stirt**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 207.

***Arthonia aciniformis* Stirt**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 207.

***Arthonia cyanea* Müll. Arg.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 207.

***Arthonia leptosperma* (Müll. Arg.) R. Sant.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 207.

***Arthonia mira* R. Sant.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 208.

***Arthonia palmulacea* (Müll. Arg.) R. Sant.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 208.

***Arthonia santessonii* Matzer**

Ecology: lichenicolous, on *Porina rugosa*,
Lichenes
Province/Locality: COI
Reference: Etayo 1997: 208.

***Arthonia trilocularis* Müll. Arg.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 208.

***Cryptothecia* sp.**

Ecology: on twigs
Province/Locality: CH
Reference: Büdel et al. 2000: 542.

***Dichosporidium nigrocinctum* (Ehrenb.) G. Thor**

Ecology: on twigs
Province/Locality: CH
Reference: Büdel et al. 2000: 543.

***Eremothecella calamicola* Syd. & P. Syd.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 212.

***Mazosia dispersa* (Hedrick) R. Sant.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 213.

***Mazosia melanophthalma* (Müll. Arg.) R. Sant.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 213.

***Mazosia paupercula* (Müll. Arg.) R. Sant.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 213.

***Mazosia phyllosema* (Nyl.) Zahlbr.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 213.

***Mazosia pilosa* Kalb & Vezda**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 213.

***Mazosia praemorsa* (Stirt.) R. Sant.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 213.

***Mazosia pseudobambusae* Kalb & Vezda**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 213.

***Mazosia rotula* (Mont.) A. Massal.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 213.

***Opegrapha serusiauxii* Lücking**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 214, as *Opegrapha* cf. *lambinonii* Sérus., acc. to R. Lücking (pers. com.).

Microthyriales

***Leptopeltis filicina* (Mont.) Höhn.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 214, as *Opegrapha filicina* Mont.

Pyrenulales

***Anisomeridium foliicola* R. Sant. & Tibell**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 207.

***Anisomeridium musaesporoides* Etayo & Lücking**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo & Lücking 1999: 145.

***Lyromma nectandrae* Bat. & H. Maia**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 213.

***Pyrenula cryptothelia* (Müll. Arg.) Aptroot & Etayo**

Ecology: epiphyllous
Province/Locality: VR
Reference: Etayo & Aptroot 2003: 235.

***Pyrenula hirsuta* Etayo
a new species from Panama**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1999: 405.

***Pyrenula luteopruinosa* Etayo & Aptroot
a new species from Panama**

Ecology: epiphyllous
Province/Locality: VR
Reference: Etayo & Aptroot 2003: 233.

order: incertae sedis

Microtheliopsidaceae

***Microtheliopsis uleana* Müll. Arg.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 213.

Phyllobatheliaceae

***Phyllobathelium firmum* (Stirt.) Vezda**

Ecology: epiphyllous
Province/Locality: BCI, COI
Reference: Santesson 1952: 290, as *Phyllobathelium epiphyllum* (Müll. Arg.)

Müll. Arg., acc. to R. Lücking (pers. com.);
Etayo 1997: 214, as *P. epiphyllum*.

Strigulaceae

***Strigula antillarum* (Fée) R. Sant.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 216.

***Strigula macrocarpa* Vain.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 216.

***Strigula microspora* Lücking**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 216.

***Strigula nematophora* Mont.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 216.

***Strigula obducta* (Müll. Arg.) R.C.**

Harris

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 216.

***Strigula orbicularis* Fr.**

Ecology: epiphyllous on *Persea americana*,
Lauraceae
Province/Locality: CA
Reference: Santesson 1952: 190, as *Strigula
complanata* (Fée) Mont., a synonym acc. to
Santesson ibidem.

***Strigula phyllogena* (Müll. Arg.) R.C.**

Harris

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 216.

***Strigula platypoda* (Müll. Arg.) R.C.**

Harris

Ecology: epiphyllous
Province/Locality: BCI, COI
Reference: Santesson 1952: 214, as *Porina
platypoda* Müll. Arg.; Etayo 1997: 216.

***Strigula prasina* Müll. Arg.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 215, as *Raciborskiella
prasina* (Müll. Arg.) R. Sant.

***Strigula schizospora* R. Sant.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 216.

***Strigula smaragdula* Fr.**

Ecology: epiphyllous on *Persea americana*,
Lauraceae
Province/Locality: CA, COI
Reference: Santesson 1952: 160, as *Strigula
elegans* (Fée) Müll. Arg., a synonym acc. to
Etayo, ibidem; Etayo 1997: 216.

Strigula smaragdula* Fr. var. *stellata

Nyl. & Cromb. ex A.M. Ward

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 216.

***Strigula subelegans* Vain.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 216.

***Strigula subtilissima* (Fée) Müll. Arg.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 216.

family: incertae sedis

***Flavobathelium epiphyllum* Lücking,
Aptroot & G. Thor**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 212.

Lecanoromycetidae

Gyalectales

***Coenogonium dilucidum* (Kremp.) Kalb
& Lücking**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 211, as *Dimeriella
dilucida* (Kremp.) R. Sant.

***Coenogonium flavicans* (Vezda &
Farkas) Kalb & Lücking**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 211, as *Dimeriella* cf.
flavicans Vezda & Farkas.

***Coenogonium hypophyllum* (Vezda)
Kalb & Lücking**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 211, as *Dimeriella
hypophylla* Vezda.

***Coenogonium interplexum* Nyl.**

Ecology: on stems
Province/Locality: CH
Reference: Büdel et al. 2000: 542.

***Coenogonium leprieurii* (Mont.) Nyl.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 210.

***Coenogonium linkii* Ehrenb.**

Ecology: on twigs
Province/Locality: CH
Reference: Büdel et al. 2000: 542.

***Coenogonium minimum* (Müll. Arg.)
Lücking**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997; 211, as *Dimeriella
minima* (Müll. Arg.) R. Sant.

***Coenogonium subluteum* (Rehm) Kalb
& Lücking**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 211, as *Dimeriella
epiphylla* (Müll. Arg.) Malme, acc. to R.
Lücking (pers. com.).

Lecanorales

***Bacidina apiahica* (Müll. Arg.) Vezda**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 208.

***Bacidina pallidocarnea* (Müll. Arg.)
Vezda**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 208.

***Bacidina scutellifera* (Vezda) Vezda**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 208.

***Badimia dimidiata* (Bab. ex Leight.)
Vezda**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 209.

***Badimia pallidula* (Kremp.) Vezda**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997: 209.

***Byssolecania fumosonigricans* (Müll. Arg.) R. Sant.**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997: 209.

***Byssoloma aurantiacum* Kalb & Vezda**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997: 209.

***Byssoloma fadenii* Vezda**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997: 209.

***Byssoloma leucoblepharum* (Nyl.) Vain. em. R. Sant.**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997: 209.

***Byssoloma minutissimum* Kalb & Vezda**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997: 209.

***Byssoloma subdiscordans* (Nyl.) P. James**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997: 209.

***Byssoloma tricholomum* (Mont.) Zahlbr.**

Ecology: epiphyllous
 Province/Locality: BCI, COI
 Reference: Santesson 1952: 480; Etayo 1997: 209.

***Byssoloma wettsteinii* (Zahlbr.) Zahlbr.**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997: 209.

***Calopadia fusca* (Müll. Arg.) Vezda**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997: 210.

***Calopadia phyllogena* (Müll. Arg.) Vezda**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997: 210.

***Calopadia puiggarii* (Müll. Arg.) Vezda**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997: 210.

***Catillaria usneicola* Etayo
a new species from Panama**

Ecology: lichenicolous, on *Usnea* sp. on
Quercus sp., Fagaceae
 Province/Locality: CH
 Reference: Etayo 2000: 155.

***Cladia aggregata* (Sw.) Nyl.**

Ecology: on soil or wood
 Province/Locality: CH, PA
 Reference: Ahti 2000: 32; Büdel et al. 2000: 542.

Cladina confusa* (R. Sant.) Follmann & Ahti f. *confusa

Ecology: on soil or logs
 Province/Locality: CH
 Reference: Ahti 2000: 58.

***Cladonia andesita* Vain.**

Ecology: on soil or in wet bogs
 Province/Locality: CH
 Reference: Ahti 2000: 91; Büdel et al. 2000: 542.

***Cladonia calycantha* Delise ex Nyl. var. *exilior* des Abbayes**

Ecology: on soil
Province/Locality: CH
Reference: des Abbayes 1949: 94.

***Cladonia cartilaginea* Müll. Arg.**

Ecology: on road banks, termite hills, or mineral soil
Province/Locality: CH
Reference: Ahti 2000: 238.

***Cladonia chlorophaea* (Flörke ex Sommerf.) Spreng.**

Ecology: on soil or wood
Province/Locality: CH
Reference: Ahti 2000: 98.

***Cladonia corymbites* Nyl.**

Ecology: on road banks, rocks, or sand
Province/Locality: CH
Reference: Ahti 2000: 245.

***Cladonia dactylota* Tuck.**

Ecology: on soil, road sides, or termite hills
Province/Locality: CH
Reference: Ahti 2000: 110.

***Cladonia didyma* (Fée) Vain.**

Ecology: on soil, wood, or tree bases
Province/Locality: CH
Reference: Ahti 2000: 193.

Cladonia furcata* (Huds.) Schrad. subsp. *furcata

Ecology: on soil, road sides, or rocks
Province/Locality: CH
Reference: Ahti 2000: 167.

***Cladonia isabellina* Vain.**

Ecology: on soil
Province/Locality: CH
Reference: Ahti 2000: 124.

***Cladonia macilenta* Hoffm.**

Ecology: on sand, road banks, or rocks, sometimes on stumps
Province/Locality: CH
Reference: Ahti 2000: 208.

***Cladonia nana* Vain.**

Ecology: on mineral soil or road banks
Province/Locality: PA
Reference: Ahti 2000: 253.

***Cladonia pertriosa* Kremp.**

Ecology: on twig in canopy
Province/Locality: CH
Reference: Büdel et al. 2000: 542, as *Cladonia peltastica* (Nyl.) Müll. Arg., a synonym acc. to Index Fungorum.

Cladonia praetermissa* A.W. Archer var. *praetermissa

Ecology: on liana, soil, or decomposing log
Province/Locality: CH, PA
Reference: Ahti 2000: 240, as *Cladonia ceratophylla* (Sw.) Spreng., a synonym acc. to Index Fungorum; Büdel et al. 2000: 542, as *C. ceratophylla*.

***Cladonia ramulosa* (With.) J.R. Laundon**

Ecology: on rocks
Province/Locality: CH
Reference: Büdel et al. 2000: 542.

***Cladonia rappii* A. Evans**

Ecology: on road banks, rocks, or sand
Province/Locality: CH
Reference: Ahti 2000: 152.

***Cladonia scholanderi* Abbayes a new species from Panama**

Ecology: on logs, soil, or rock outcrops
Province/Locality: CH
Reference: des Abbayes 1949: 92; Ahti 2000: 303.

***Cladonia squamosa* (Scop.) Hoffm.**

Ecology: on rotten wood or humous soil
 Province/Locality: CH
 Reference: Ahti 2000: 308.

***Cladonia subradiata* (Vain.) Sandst.**

Ecology: on rotten wood, soil, or rocks
 Province/Locality: CH, PA
 Reference: Ahti 2000: 155.

***Cladonia subsquamosa* Kremp.**

Ecology: on rotten wood or soil
 Province/Locality: CH
 Reference: Ahti 2000: 160.

***Coccocarpia domingensis* Vain.**

Ecology: on leaves
 Province/Locality: CH
 Reference: Büdel et al. 2000: 542.

***Coccocarpia erythroxyli* (Spreng.) Swinscow & Krog**

Ecology: on stems, epiphyllous
 Province/Locality: CH, COI
 Reference: Arvidsson 1982: 57; Etayo 1997: 210; Büdel et al. 2000: 542.

***Coccocarpia palmicola* (Spreng.) Arv. & D.J. Galloway**

Ecology: on stems or tree logs
 Province/Locality: CH
 Reference: Arvidsson 1982: 72; Büdel et al. 2000: 542.

***Collema* sp.**

Ecology: on stems
 Province/Locality: CH
 Reference: Büdel et al. 2000: 542.

***Erioderma wrightii* Tuck.**

Ecology: on stems
 Province/Locality: CH
 Reference: Büdel et al. 2000: 543.

***Fellhanera dominicana* (Vain.) Vezda**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997: 212.

***Fellhanera fuscatula* (Müll. Arg.) Vezda**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997.

***Fellhanera* cf. *lisowskii* (Vezda) Vezda**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997: 212.

***Fellhanera rhapsidophylli* (Rehm.) Vezda**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997: 212.

***Fellhanera stanhopiae* (Müll. Arg.) Lücking, Lumbsch & Elix**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997: 212.

***Fellhanera subternella* (Nyl.) Vezda**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997: 212.

***Fellhanera verrucifera* Lücking**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997: 212.

***Heterodermia barbifera* (Nyl.) W.A. Weber**

Ecology: on stems
 Province/Locality: CH
 Reference: Büdel et al. 2000: 543.

***Heterodermia cf. casarettiana* (A. Massal.) Trevis.**

Ecology: on stems
Province/Locality: CH
Reference: Büdel et al. 2000: 543.

***Heterodermia flabellata* (Fée) D.D. Awasthi**

Ecology: on rocks
Province/Locality: CH
Reference: Büdel et al. 2000: 543.

***Heterodermia isidiophora* (Vain.) D.D. Awasthi**

Ecology: on rocks
Province/Locality: CH
Reference: Büdel et al. 2000: 543.

***Heterodermia japonica* (Satô) Swinscow & Krog**

Ecology: on decomposing log
Province/Locality: CH
Reference: Büdel et al. 2000: 543.

***Heterodermia leucomela* (Fée) Swinscow & Krog**

Ecology: on tree or on stems
Province/Locality: CH
Reference: Büdel et al. 2000: 543, as *Heterodermia leucomelos* (L.) Poelt, a synonym acc. to Index Fungorum.

***Hypotrachyna costaricensis* (Nyl.) Hale**

Ecology: on decomposing log or stems
Province/Locality: CH
Reference: Büdel et al. 2000: 543.

***Hypotrachyna exsplendens* (Hale) Hale**

Ecology: on decomposing log
Province/Locality: CH
Reference: Büdel et al. 2000: 543.

***Hypotrachyna imbricatula* (Zahlbr.) Hale**

Ecology: on decomposing log

Province/Locality: CH
Reference: Büdel et al. 2000: 543.

***Hypotrachyna osseoalba* (Vain.) Y.S. Park & Hale**

Ecology: on decomposing log
Province/Locality: CH
Reference: Büdel et al. 2000: 543.

***Hypotrachyna rhabdiformis* (Kurok.) Hale**

Ecology: on trees
Province/Locality: CH
Reference: Büdel et al. 2000: 543.

***Lasioloma arachnoideum* (Kremp.) R. Sant.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 213.

***Leptogium azureum* (Sw. ex Ach.) Mont.**

Ecology: on stems or twigs
Province/Locality: BCI, CH
Reference: Standley 1927: 7; Büdel et al. 2000: 544.

***Leptogium burgessii* (L.) Mont.**

Ecology: on rocks
Province/Locality: CH
Reference: Büdel et al. 2000: 544.

***Leptogium coralloideum* (Meyen & Flot.) Vain.**

Ecology: on trees
Province/Locality: CH
Reference: Büdel et al. 2000: 544.

***Leptogium cyanescens* (Pers.) Körb.**

Ecology: on stems or branches
Province/Locality: CH
Reference: Büdel et al. 2000: 544.

***Leptogium foveolatum* Nyl.**

Ecology: on trees or rocks
 Province/Locality: CH
 Reference: Büdel et al. 2000: 544.

***Leptogium laceroides* de Lesd.**

Ecology: on stems
 Province/Locality: CH
 Reference: Büdel et al. 2000: 544.

***Leptogium cf. mandonii* P.M. Jørg.**

Ecology: on trees
 Province/Locality: CH
 Reference: Büdel et al. 2000: 544.

***Leptogium marginellum* (Sw.) Gray**

Ecology: on rocks
 Province/Locality: CH
 Reference: Büdel et al. 2000: 544.

***Leptogium phyllocarpum* (Pers.) Mont.**

Ecology: on stems, twigs, or decomposing logs
 Province/Locality: CH
 Reference: Büdel et al. 2000: 544.

***Leptogium vesiculosum* (Sw.) Malme**

Ecology: on twigs
 Province/Locality: CH
 Reference: Büdel et al. 2000: 544.

***Loflammia flammea* (Müll. Arg.) Vezda**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997: 213.

***Melagospora* sp.**

Ecology: on stems
 Province/Locality: CH
 Reference: Büdel et al. 2000: 545.

***Oropogon loxensis* (Fée) Zúkal**

Ecology: on trees
 Province/Locality: CH
 Reference: Büdel et al. 2000: 545.

***Pannaria rubiginosa* (Thunb.) Delise**

Ecology: on stems
 Province/Locality: CH
 Reference: Büdel et al. 2000: 545.

***Parmeliella pannosa* (Sw.) Müll. Arg.**

Ecology: on stems or decomposing log
 Province/Locality: CH
 Reference: Büdel et al. 2000: 545.

***Parmotrema cf. abnuens* (Nyl.) Hale**

Ecology: on twigs
 Province/Locality: CH
 Reference: Büdel et al. 2000: 545.

***Parmotrema mellissii* (C.W. Dodge) Hale**

Ecology: on decomposing log
 Province/Locality: CH
 Reference: Büdel et al. 2000: 545.

***Parmotrema tinctorum* (Despr. ex Nyl.) Hale**

Ecology: on rocks
 Province/Locality: CH
 Reference: Büdel et al. 2000: 545.

***Phyllopsora buettneri* (Müll. Arg.) Zahlbr. var. *glauca* (de Lesd.) Brako**

Ecology: mostly corticolous
 Province/Locality: PA
 Reference: Brako 1991: 30.

***Phyllopsora confusa* Swinscow & Krog**

Ecology: mostly corticolous
 Province/Locality: PA
 Reference: Brako 1991: 35.

***Phyllopsora corallina* (Eschw.) Müll. Arg. var. *ochroxantha* (Nyl.) Brako**

Ecology: mostly corticolous
 Province/Locality: BO, CC, DA, PA
 Reference: Brako 1991: 39.

***Phyllopsora furfuracea* Zahlbr.**

Ecology: mostly corticolous
Province/Locality: CN
Reference: Brako 1991: 46.

***Phyllopsora parvifolia* (Pers.) Müll. Arg.
var. *parvifolia***

Ecology: mostly corticolous
Province/Locality: PA
Reference: Brako 1991: 53.

***Relicina abstrusa* (Vain.) Hale**

Ecology: on stems
Province/Locality: CH
Reference: Büdel et al. 2000: 546.

***Sphaerophorus melanocarpus* (Sw.)
DC.**

Ecology: on big branch in canopy
Province/Locality: CH
Reference: Büdel et al. 2000: 546.

***Sporopodium leprieurii* Mont.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 215.

***Sporopodium xantholeucum* (Müll.
Arg.) Zahlbr.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 215.

***Stereocaulon virgatum* Ach.**

Ecology: on ground
Province/Locality: CH
Reference: Büdel et al. 2000: 546.

***Tapellaria bilimbioides* R. Sant.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 216.

***Tapellaria epiphylla* (Müll. Arg.) R.
Sant.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 216.

***Tylophoron protrudens* Nyl.**

Ecology: on bark of trees
Province/Locality: CH
Reference: Tibell 1996: 71.

***Umbilicaria polyrrhiza* (L.) Fr.**

Ecology: on stems
Province/Locality: CH
Reference: Arvidsson 1982: 76, as
Coccocarpia pellita (Arch.) Müll. Arg., a
synonym acc. to Index Fungorum; Büdel et al.
2000: 542, as *C. pellita*.

***Usnea* sp.**

Ecology: on trees
Province/Locality: CH
Reference: Büdel et al. 2000: 547.

***Woessia pseudohyphophorifera*
Lücking & Sérus.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 219.

Peltigerales

***Lobaria crenulata* (Hook. f.) Trevis**

Ecology: on stems
Province/Locality: CH
Reference: Büdel et al. 2000: 545.

***Lobaria deplanata* (Nyl.) Yoshim.**

Ecology: on trees
Province/Locality: CH
Reference: Büdel et al. 2000: 545.

***Lobaria dissecta* (Sw.) Raesch.**

Ecology: on stems
Province/Locality: CH
Reference: Büdel et al. 2000: 545.

***Lobaria pallida* (Hook. f.) Trevis**

Ecology: on trees

Province/Locality: CH

Reference: Büdel et al. 2000: 545.

***Lobaria peltigera* (Delile) Vain. s. lat.**

Ecology: on trees

Province/Locality: CH, VR

Reference: Seemann 1852-57: 48, 246-248, as *Sticta peltigera* Delile, acc. to Hawksworth 2005: 19; Büdel et al. 2000: 545.***Lobaria pulmonaria* (L.) Hoffm.**

Ecology: on trees

Province/Locality: CH

Reference: Büdel et al. 2000: 545.

***Lobaria ravenelii* (Tuck.) Yoshim.**

Ecology: on shrub

Province/Locality: CH

Reference: Büdel et al. 2000: 545.

***Peltigera laciniata* (G. Merr.) Gyeln.**

Ecology: on rocks or soil

Province/Locality: CH

Reference: Büdel et al. 2000: 545.

***Pseudocyphellaria aurata* (Ach.) Vain.**

Ecology: on stems, branches, or decomposing logs

Province/Locality: CH

Reference: Büdel et al. 2000: 546.

***Pseudocyphellaria intricata* (Delise) Vain.**

Ecology: on stems

Province/Locality: CH

Reference: Büdel et al. 2000: 546.

***Sticta ambavillaria* (Bory) Ach.**

Ecology: on trees

Province/Locality: CH

Reference: Büdel et al. 2000: 546.

***Sticta dichotoma* Bory**

Ecology: on trees

Province/Locality: CH

Reference: Büdel et al. 2000: 546.

***Sticta ferax* Müll. Arg.**

Ecology: on trees

Province/Locality: CH

Reference: Büdel et al. 2000: 546.

***Sticta fuliginosa* (Dicks.) Ach.**

Ecology: on stems

Province/Locality: CH

Reference: Büdel et al. 2000: 546.

***Sticta kunthii* Hook. f.**

Ecology: on stems

Province/Locality: CH

Reference: Büdel et al. 2000: 546.

***Sticta macrophylla* Bory ex Delise**

Ecology: on stems

Province/Locality: CH

Reference: Büdel et al. 2000: 546.

***Sticta sublimbata* (J. Steiner) Swinscow & Krog**

Ecology: on stems

Province/Locality: CH

Reference: Büdel et al. 2000: 547.

***Sticta tomentosa* (Sw.) Ach.**

Ecology: on stems or decomposing logs

Province/Locality: CH

Reference: Büdel et al. 2000: 547.

***Sticta weigellii* Isert**

Ecology: on stems, branches, or decomposing logs

Province/Locality: CH

Reference: Büdel et al. 2000: 547.

***Sticta weigellii* Isert var. *xanthotropa* Hue**

Ecology: on stems

Province/Locality: CH

Reference: Büdel et al. 2000: 547.

Pertusariales

***Pertusaria* sp.**

Ecology: on stems
Province/Locality: CH
Reference: Büdel et al. 2000: 545.

subclass: *incertae sedis*

Ostropales

***Chroodiscus alborosellus* (Nyl.) Kalb**

Ecology: corticolous
Province/Locality: CC, VR
Reference: Hale 1978: 12, as *Ocellularia alborosella* (Nyl.) R. Sant.

***Chroodiscus australiensis* Vezda & Lumbsch**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 210.

***Chroodiscus coccineus* (Leight.) Müll. Arg.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 210.

***Chroodiscus neotropicus* Kalb & Vezda**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 210.

***Leptotrema lepadodes* (Tuck.) Zahlbr.**

Ecology: corticolous
Province/Locality: BCI, VR
Reference: Hale 1978: 52.

***Myriotrema bahianum* (Ach.) Hale**

Ecology: corticolous
Province/Locality: BCI, CA, CH, VR
Reference: Hale 1978: 50, as *Leptotrema bahianum* (Ach.) Müll. Arg.

***Myriotrema barroensis* (Hale) Hale a new species from Panama**

Ecology: corticolous
Province/Locality: BCI
Reference: Hale 1978: 14, as *Ocellularia barroensis* Hale.

***Myriotrema calvescens* (Fée) Hale**

Ecology: corticolous
Province/Locality: BCI, CH, PA
Reference: Hale 1978: 15, as *Ocellularia calvescens* (Fée) Müll. Arg.

***Myriotrema concretum* (Fée) Hale**

Ecology: corticolous
Province/Locality: CC, CH
Reference: Hale 1978: 41, as *Thelotrema concretum* Fée.

***Myriotrema congestum* (Hale) Hale a new species from Panama**

Ecology: corticolous
Province/Locality: CC, PA
Reference: Hale 1978: 17, as *Ocellularia congesta* Hale.

***Myriotrema dactyliferum* (Hale) Hale a new species from Panama**

Ecology: corticolous
Province/Locality: CN
Reference: Hale 1978: 19, as *Ocellularia dactylifera* Hale.

***Myriotrema deceptum* (Hale) Hale**

Ecology: corticolous
Province/Locality: CN
Reference: Hale 1978: 50, as *Leptotrema deceptum* Hale.

***Myriotrema glaucophaenum* (Kremp.) Hale**

Ecology: corticolous
Province/Locality: BCI, CA, CC
Reference: Hale 1978: 21, as *Ocellularia glaucophaena* (Kremp.) Zahlbr.

***Myriotrema glauculum* (Nyl.) Hale**

Ecology: corticolous
 Province/Locality: BCI, CA, CH, PA
 Reference: Hale 1978: 23, as *Ocellularia glaucula* (Nyl.) Zahlbr.

***Myriotrema laeviusculum* (Nyl.) Hale**

Ecology: corticolous
 Province/Locality: BCI
 Reference: Hale 1978: 52, as *Leptotrema laeviusculum* (Nyl.) Zahlbr.

***Myriotrema maximum* (Hale) Hale
a new species from Panama**

Ecology: corticolous
 Province/Locality: CC
 Reference: Hale 1978: 45, as *Thelotrema maximum* Hale.

***Myriotrema microporellum* (Nyl.) Hale**

Ecology: corticolous
 Province/Locality: CC, PA, VR
 Reference: Hale 1978: 24, as *Ocellularia microporella* (Nyl.) Zahlbr.

***Myriotrema minutulum* (Hale) Hale
a new species from Panama**

Ecology: corticolous
 Province/Locality: BCI, CA, CN, VR
 Reference: Hale 1978: 24, as *Ocellularia minutula* Hale.

***Myriotrema myriocarpum* (Fée) Hale**

Ecology: corticolous
 Province/Locality: CN
 Reference: Hale 1978: 45, as *Thelotrema myriocarpum* Fée.

***Myriotrema myrioporoides* (Müll. Arg.)
Hale**

Ecology: corticolous
 Province/Locality: CA, CN, PA, VR
 Reference: Hale 1978: 45, as *Thelotrema myrioporoides* Müll. Arg.

***Myriotrema myriotremoides* (Nyl.) Hale**

Ecology: corticolous
 Province/Locality: PA, VR
 Reference: Hale 1978: 25, as *Ocellularia myriotremoides* (Nyl.) Zahlbr.

***Myriotrema norsticticum* (Hale) Hale**

Ecology: corticolous
 Province/Locality: CC
 Reference: Hale 1978: 47, as *Thelotrema norsticticum* Hale.

***Myriotrema olivaceum* Fée**

Ecology: corticolous
 Province/Locality: BCI, CC, PA
 Reference: Hale 1978: 26, as *Ocellularia olivacea* (Fée) Müll. Arg.

***Myriotrema pachystomum* (Nyl.) Hale**

Ecology: corticolous
 Province/Locality: DA
 Reference: Hale 1978: 26, as *Ocellularia pachystoma* (Nyl.) Hale.

***Myriotrema protocetraricum* (Hale)
Hale**

a new species from Panama
 Ecology: corticolous
 Province/Locality: DA, VR
 Reference: Hale 1978: 28, as *Ocellularia protocetrarica* Hale.

***Myriotrema pulverulentum* (Hale) Hale
a new species from Panama**

Ecology: corticolous
 Province/Locality: BCI, CA
 Reference: Hale 1978: 29, as *Ocellularia pulverulenta* Hale.

***Myriotrema pycnoporellum* (Nyl.) Hale**

Ecology: corticolous
 Province/Locality: PA, VR
 Reference: Hale 1978: 47, as *Thelotrema pycnoporellum* Nyl.

***Myriotrema reclusum* (Kremp.) Hale**

Ecology: corticolous
Province/Locality: BCI
Reference: Hale 1978: 54, as *Leptotrema reclusum* (Kremp.) Zahlbr.

***Myriotrema subwrightii* (Hale) Hale
a new species from Panama**

Ecology: corticolous
Province/Locality: BCI, CN, DA, PA, VR
Reference: Hale 1978: 32, as *Ocellularia subwrightii* Hale.

***Myriotrema terebratulum* (Nyl.) Hale**

Ecology: corticolous
Province/Locality: BCI, CC, CN, PA
Reference: Hale 1978: 33, as *Ocellularia terebratula* (Nyl.) Müll. Arg.

***Myriotrema trypaneoides* (Nyl.) Hale**

Ecology: corticolous
Province/Locality: BCI, VR
Reference: Hale 1978: 54, as *Leptotrema trypaneoides* (Nyl.) Riddle.

***Myriotrema uniseptatum* (Hale) Hale
a new species from Panama**

Ecology: corticolous
Province/Locality: BCI
Reference: Hale 1978: 33, as *Ocellularia uniseptata* Hale.

***Myriotrema urceolare* (Ach.) Hale**

Ecology: corticolous
Province/Locality: BCI, CH
Reference: Hale 1978: 55, as *Leptotrema urceolare* (Ach.) Müll. Arg.

***Myriotrema vulcani* (Hale) Hale
a new species from Panama**

Ecology: corticolous
Province/Locality: CC, VR
Reference: Hale 1978: 37, as *Phaeotrema vulcani* Hale.

***Myriotrema wightii* (Taylor) Hale**

Ecology: corticolous
Province/Locality: BCI
Reference: Hale 1978: 55, as *Leptotrema wightii* (Taylor) Müll. Arg.

***Myriotrema wrightii* (Tuck.) Hale**

Ecology: corticolous
Province/Locality: PA, VR
Reference: Hale 1978: 49, as *Thelotrema wrightii* Tuck.

***Ocellularia actinota* (Tuck.) Müll. Arg.**

Ecology: corticolous
Province/Locality: DA
Reference: Hale 1978: 12.

***Ocellularia alba* (Fée) Müll. Arg.**

Ecology: corticolous
Province/Locality: PA
Reference: Hale 1978: 12.

***Ocellularia antillensis* Hale**

Ecology: corticolous
Province/Locality: BCI, CC
Reference: Hale 1978: 14.

***Ocellularia auberiana* (Mont.) Hale**

Ecology: corticolous
Province/Locality: BCI, CA, CN, PA, VR
Reference: Hale 1978: 35, as *Phaeotrema auberianum* (Mont.) Müll. Arg.

***Ocellularia aurata* (Tuck.) Hale**

Ecology: corticolous
Province/Locality: CC
Reference: Hale 1978: 41, as *Thelotrema auratum* Tuck.

***Ocellularia aurulenta* Hale
a new species from Panama**

Ecology: corticolous
Province/Locality: CN, PA
Reference: Hale 1974: 490; Hale 1978: 14.

***Ocellularia bullata* Hale
a new species from Panama**

Ecology: corticolous

Province/Locality: PA

Reference: Hale 1978: 15.

***Ocellularia cavata* (Ach.) Müll. Arg.**

Ecology: corticolous

Province/Locality: CH, DA, PA

Reference: Hale 1978: 15.

***Ocellularia chionostoma* (Nyl.) Riddle**

Ecology: corticolous

Province/Locality: CA, PA

Reference: Hale 1978: 16.

***Ocellularia chiriquiensis* (Hale) Hale
a new species from Panama**

Ecology: corticolous

Province/Locality: CH

Reference: Hale 1978: 50, as *Leptotrema chiriquiense* Hale.

***Ocellularia comparabilis* (Kremp.) Müll.
Arg.**

Ecology: corticolous

Province/Locality: BCI, CH

Reference: Hale 1978: 16.

***Ocellularia concolor* Meyen & Flot.**

Ecology: corticolous

Province/Locality: BCI, CA, CC, CN, PA, VR

Reference: Hale 1978: 17.

***Ocellularia conformis* (Fée) Hale**

Ecology: corticolous

Province/Locality: PA, VR

Reference: Hale 1978: 42, as *Thelotrema conforme* Fée.

***Ocellularia conglomerata* Hale**

Ecology: corticolous

Province/Locality: VR

Reference: Hale 1978: 17.

***Ocellularia crocea* (Kremp.) Overeem &
D. Overeem**

Ecology: corticolous

Province/Locality: CC

Reference: Hale 1978: 17.

***Ocellularia cryptotrema* (Nyl.) Kalb**

Ecology: corticolous

Province/Locality: BCI, CN

Reference: Hale 1978: 43, as *Thelotrema cryptotrema* Nyl.

***Ocellularia dactyliza* Hale
a new species from Panama**

Ecology: corticolous

Province/Locality: CN

Reference: Hale 1978: 19.

***Ocellularia decolorata* Hale
a new species from Panama**

Ecology: corticolous

Province/Locality: CC

Reference: Hale 1978: 19.

***Ocellularia domingensis* (Fée) Müll.
Arg.**

Ecology: corticolous

Province/Locality: CH

Reference: Hale 1978: 20.

***Ocellularia erumpens* (H. Magn.) Hale**

Ecology: corticolous

Province/Locality: CH

Reference: Hale 1978: 43, as *Thelotrema erumpens* H. Magn.

***Ocellularia exanthismocarpa* (Leight.)
Zahlbr.**

Ecology: corticolous

Province/Locality: CC

Reference: Hale 1978: 21.

***Ocellularia fecunda* (Vain.) Hale**

Ecology: corticolous
Province/Locality: DA, PA
Reference: Hale 1978: 21.

***Ocellularia glyphica* (Nyl.) Hale**

Ecology: corticolous
Province/Locality: CH, PA
Reference: Hale 1978: 36, as *Phaeotrema glyphicum* (Nyl.) Zahlbr.

***Ocellularia isidiifera* Hale
a new species from Panama**

Ecology: corticolous
Province/Locality: CH
Reference: Hale 1974: 492; Hale 1978: 23.

***Ocellularia landronii* Hale
a new species from Panama**

Ecology: corticolous
Province/Locality: CN
Reference: Hale 1978: 23.

***Ocellularia latilabra* (Tuck.) Müll. Arg.**

Ecology: corticolous
Province/Locality: BCI, CN, DA, PA, VR
Reference: Hale 1978: 24.

***Ocellularia leiostoma* (Tuck.) R.C.
Harris**

Ecology: corticolous
Province/Locality: PA
Reference: Hale 1978: 36, as *Phaeotrema leiostomum* Zahlbr., a synonym acc. to Index Fungorum.

***Ocellularia leucomelaena* (Nyl.) Hale**

Ecology: corticolous
Province/Locality: CH
Reference: Hale 1978: 44, as *Thelotrema leucomelaenum* Nyl.

***Ocellularia meiosperma* (Nyl.) Hale**

Ecology: corticolous
Province/Locality: VR

Reference: Hale 1978: 36, as *Phaeotrema meiospermum* (Nyl.) Müll. Arg.

***Ocellularia metaphorica* (Nyl.) Hale**

Ecology: corticolous
Province/Locality: CH
Reference: Hale 1978: 53, as *Leptotrema metaphoricum* (Nyl.) Zahlbr.

***Ocellularia microspora* (Zahlbr.) Hale**

Ecology: corticolous
Province/Locality: BCI, CH
Reference: Hale 1978: 53, as *Leptotrema microsporum* Zahlbr.

***Ocellularia mordenii* Hale**

Ecology: corticolous
Province/Locality: CA, CN
Reference: Hale 1978: 25.

***Ocellularia panamensis* (Hale) Hale
a new species from Panama**

Ecology: corticolous
Province/Locality: CC, PA, VR
Reference: Hale 1978: 54, as *Leptotrema panamense* Hale.

***Ocellularia papillata* (Leight.) Zahlbr.**

Ecology: corticolous
Province/Locality: BCI, CA, CN, PA, VR
Reference: Hale 1978: 26.

***Ocellularia perforata* (Leight.) Müll.
Arg.**

Ecology: corticolous
Province/Locality: BCI, CC, CH, CN, PA, VR
Reference: Hale 1978: 26.

***Ocellularia praestans* (Müll. Arg.) Hale**

Ecology: corticolous
Province/Locality: CN, DA, PA, VR
Reference: Hale 1978: 47, as *Thelotrema praestans* Müll. Arg.

***Ocellularia recondita* (Stirt.) Zahlbr.**

Ecology: corticolous
 Province/Locality: BCI, CA, CN
 Reference: Hale 1978: 29.

***Ocellularia rhabdospora* (Nyl.) Redinger**

Ecology: corticolous
 Province/Locality: DA
 Reference: Hale 1978: 29.

***Ocellularia rhodostroma* (Mont.) Zahlbr.**

Ecology: corticolous
 Province/Locality: CC, CN, PA, VR
 Reference: Hale 1978: 30.

***Ocellularia ripleyi* Hale
a new species from Panama**

Ecology: corticolous
 Province/Locality: BCI, CA
 Reference: Hale 1974: 493; Hale 1978: 30.

***Ocellularia subcavata* (Nyl.) Zahlbr.**

Ecology: corticolous
 Province/Locality: CC, PA, VR
 Reference: Hale 1978: 31.

***Ocellularia subemersa* Müll. Arg.**

Ecology: corticolous
 Province/Locality: CC, PA, VR
 Reference: Hale 1978: 31.

***Ocellularia subilacina* (Ellis & Everh.) Zahlbr.**

Ecology: corticolous
 Province/Locality: BCI, CA, PA, VR
 Reference: Hale 1978: 31.

***Ocellularia subpraestans* (Hale) Hale
a new species from Panama**

Ecology: corticolous
 Province/Locality: BCI, PA

Reference: Hale 1974: 497, as *Thelotrema subpraestans* Hale; Hale 1978: 48, as *T. subpraestans*.

***Ocellularia tenuis* (Hale) Hale**

Ecology: corticolous
 Province/Locality: CH
 Reference: Hale 1978: 48, as *Thelotrema tenue* Hale.

***Ocellularia turgidula* Müll. Arg.**

Ecology: corticolous
 Province/Locality: VR
 Reference: Hale 1978: 33.

***Ocellularia verrucosa* (Fée) Hale**

Ecology: corticolous
 Province/Locality: BCI, CA, PA
 Reference: Hale 1978: 33.

***Ocellularia viridis* Hale
a new species from Panama**

Ecology: corticolous
 Province/Locality: CN, PA
 Reference: Hale 1978: 34.

***Ocellularia xanthostroma* (Nyl.) Zahlbr.**

Ecology: corticolous
 Province/Locality: BCI
 Reference: Hale 1978: 34.

***Teloschistes flavicans* (Sw.) Norman**

Ecology: on stems
 Province/Locality: CH
 Reference: Büdel et al. 2000: 547.

***Thelotrema adjectum* Nyl.**

Ecology: corticolous
 Province/Locality: BCI
 Reference: Hale 1978: 39.

***Thelotrema berkleyanum* (Mont.) Brusse**

Ecology: corticolous
 Province/Locality: BCI, PA

Reference: Hale 1978: 14, as *Ocellularia berkeleyana* (Mont.) Zahlbr.

***Thelotrema clandestinum* Fée**

Ecology: corticolous
Province/Locality: CC, CH
Reference: Hale 1978: 41.

***Thelotrema conveniens* Nyl.**

Ecology: corticolous
Province/Locality: CH
Reference: Hale 1978: 42.

***Thelotrema dilatatum* (Müll. Arg.) Hale**

Ecology: corticolous
Province/Locality: BCI, PA
Reference: Hale 1978: 19, as *Ocellularia dilatata* Müll. Arg.

***Thelotrema dissutum* (Hale) Hale**

a new species from Panama
Ecology: corticolous
Province/Locality: CN, PA
Reference: Hale 1978: 20, as *Ocellularia dissuta* Hale.

***Thelotrema esslingeri* (Hale) Hale**

a new species from Panama
Ecology: corticolous
Province/Locality: VR
Reference: Hale 1978: 20, as *Ocellularia esslingeri* Hale.

***Thelotrema glaucopallens* Nyl.**

Ecology: corticolous
Province/Locality: BCI, CA, CN, PA
Reference: Hale 1978: 43.

***Thelotrema hiatum* Hale**

a new species from Panama
Ecology: corticolous
Province/Locality: CA
Reference: Hale 1978: 44.

***Thelotrema hypoprotocetraricum* (Hale) Hale**

a new species from Panama
Ecology: corticolous
Province/Locality: DA
Reference: Hale 1978: 52, as *Leptotrema hypoprotocetraricum* Hale.

***Thelotrema lepadinum* (Ach.) Ach.**

Ecology: corticolous
Province/Locality: CH
Reference: Hale 1978: 44.

***Thelotrema neei* (Hale) Hale**

a new species from Panama
Ecology: corticolous
Province/Locality: CA
Reference: Hale 1978: 25, as *Ocellularia neei* Hale.

***Thelotrema occlusum* Nyl.**

Ecology: corticolous
Province/Locality: CH
Reference: Hale 1978: 47.

***Thelotrema pseudoschizostomum* (Hale) Hale**

a new species from Panama
Ecology: corticolous
Province/Locality: PA
Reference: Hale 1978: 28, as *Ocellularia pseudoschizostoma* Hale.

***Thelotrema refertum* (Hale) Hale**

a new species from Panama
Ecology: corticolous
Province/Locality: CC
Reference: Hale 1978: 29, as *Ocellularia referta* Hale.

***Thelotrema stellatum* (Hale) Hale**

a new species from Panama
Ecology: corticolous
Province/Locality: VR

Reference: Hale 1978: 54, as *Leptotrema stellatum* Hale.

***Thelotrema stylothecium* Vain.**

Ecology: corticolous

Province/Locality: CH

Reference: Hale 1978: 48.

Trichotheliales

***Porina alba* (R. Sant.) Lücking**

Ecology: epiphyllous

Province/Locality: BCI, COI

Reference: Santesson 1952: 557, as *Phyllophiale alba* R. Sant.; Etayo 1997: 214, as *P. alba*.

***Porina atriceps* (Vain.) Vain.**

Ecology: epiphyllous

Province/Locality: COI

Reference: Etayo 1997: 214, as *Porina epiphylla* var. *atriceps* Vain.

***Porina epiphylla* Fée**

Ecology: epiphyllous

Province/Locality: BCI, COI

Reference: Santesson 1952: 234; Etayo 1997: 214.

***Porina fusca* Lücking**

Ecology: epiphyllous

Province/Locality: COI

Reference: Etayo 1997: 214, as *Phyllophiale fusca* R. Sant.

***Porina imitatrix* Müll. Arg.**

Ecology: epiphyllous

Province/Locality: COI

Reference: Etayo 1997: 214.

***Porina limbulata* (Kremp.) Vain.**

Ecology: epiphyllous

Province/Locality: BCI, COI

Reference: Santesson 1952: 252; Etayo 1997: 215.

***Porina lucida* R. Sant.**

Ecology: epiphyllous

Province/Locality: COI

Reference: Etayo 1997: 215.

***Porina nitidula* Müll. Arg.**

Ecology: epiphyllous

Province/Locality: COI

Reference: Etayo 1997: 215.

***Porina octomera* (Müll. Arg.) F. Schill.**

Ecology: epiphyllous

Province/Locality: COI

Reference: Etayo 1997: 215.

***Porina rubentior* (Stirt.) Müll. Arg.**

Ecology: epiphyllous

Province/Locality: COI

Reference: Etayo 1997: 215.

***Porina rubescens* (Lücking) Hafellner & Kalb**

Ecology: epiphyllous

Province/Locality: COI

Reference: Etayo 1997: 218, as *Trichothelium rubescens* Lücking.

***Porina rufula* (Kremp.) Vain.**

Ecology: epiphyllous

Province/Locality: COI

Reference: Etayo 1997: 215.

***Porina rugosa* Kalb & Vezda**

Ecology: epiphyllous

Province/Locality: COI

Reference: Etayo 1997: 215.

***Porina tetramera* (Malme) R. Sant.**

Ecology: epiphyllous

Province/Locality: COI

Reference: Etayo 1997: 215.

***Trichothelium alboatrum* Vain.**

Ecology: epiphyllous

Province/Locality: COI

Reference: Etayo 1997: 218.

***Trichothelium annulatum* (P. Karst.) R. Sant.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 218.

***Trichothelium bipindense* F. Schill.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 218.

***Trichothelium epiphyllum* Müll. Arg.**

Ecology: epiphyllous
Province/Locality: BCI, COI
Reference: Santesson 1952: 273; Etayo 1997: 218.

***Trichothelium minus* Vain.**

Ecology: epiphyllous
Province/Locality: BCI, COI
Reference: Santesson 1952: 270; Etayo 1997: 218.

***Trichothelium montanum* Lücking**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 218.

***Trichothelium* cf. *sipmanii* Lücking**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 218.

***Trichothelium* cf. *triseptatum* Vezda**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 219.

order: incertae sedis

Aspidotheliaceae

***Aspidothelium fugiens* (Müll. Arg.) R. Sant.**

Ecology: epiphyllous
Province/Locality: BCI, COI
Reference: Santesson 1952: 282; Etayo 1997: 208.

***Aspidothelium geminiparum* (Malme) R. Sant.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 208.

***Musaespora kalbii* Lücking & Sérus.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 213.

Gomphillaceae

***Actinoplaca strigulacea* Müll. Arg.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 207.

***Actinoplaca vulgaris* (Müll. Arg.) Vezda & Poelt**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 207.

***Aderkomyces couepiae* Bat.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 217, as *Tricharia couepiae* (Bat.) Lücking & Sérus.

***Aulaxina dictyospora* R. Sant.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 208.

***Aulaxina minuta* R. Sant.**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997: 208.

***Aulaxina opegraphina* Fée**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997: 208.

***Aulaxina quadrangula* (Stirt.) R. Sant.**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997: 208.

***Calenia cf. conspersa* (Stirt.) R. Sant.**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997: 209.

***Calenia graphidea* Vain.**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997: 210.

***Calenia phyllogena* (Müll. Arg.) Vezda**

Ecology: epiphyllous
 Province/Locality: BCI, COI
 Ref.: Santesson 1952: 349; Etayo 1997: 210.

***Echinoplaca bispora* Kalb & Vezda**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997: 211.

***Echinoplaca campanulata* Kalb & Vezda**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997: 211.

***Echinoplaca cf. handelii* (Zahlbr.) Lücking**

Ecology: epiphyllous
 Province/Locality: COI

Reference: Etayo 1997: 211.

***Echinoplaca leucotrichoides* (Vain.) R. Sant.**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997: 211.

***Echinoplaca pellicula* (Müll. Arg.) R. Sant.**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997: 211.

***Echinoplaca tricharioides* Kalb & Vezda**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997: 211.

***Echinoplaca verrucifera* Lücking**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997: 211.

***Gyalectidium filicinum* Müll. Arg.**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997: 212.

***Paratricharia paradoxa* (Lücking) Lücking**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997: 214.

***Tricharia albostrigosa* R. Sant.**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997: 216.

***Tricharia heterella* (Stirt.) Lücking**

Ecology: epiphyllous
 Province/Locality: COI
 Reference: Etayo 1997: 217.

***Tricharia longispora* Kalb & Vezda**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 217.

***Tricharia microcarpa* Etayo & Lücking
a new species from Panama**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 217.

***Tricharia pseudosantessonii* Lücking**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 217.

***Tricharia santessonii* D. Hawksw.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 217.

***Tricharia subhelminthospora* Lücking**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 217.

***Tricharia urceolata* (Müll. Arg.) R. Sant.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 218.

***Tricharia vainioi* R. Sant.**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 218.

BASIDIOLICHENES

Ecology: symbiotic with algae

Agaricomycetidae

Agaricales

***Multiclavula mucida* (Pers.) R.H.
Peterson**

Growth form: clavarioid
Ecology: saprobic, on soil
Province/Locality: CH
Reference: Martin 1940: 191, as *Clavaria
mucida* Pers.; Martin 1944: 78, as *C. mucida*.

Polyporales

***Dictyonema glabratum* (Spreng.) D.
Hawksw. Fig. 27**

Ecology: on stems or twigs, on ground
Province/Locality: CH
Reference: Büdel et al. 2000: 543.

***Dictyonema interruptum* (Carmich. ex
Hook.) Parmasto**

Ecology: epiphyllous
Province/Locality: COI
Reference: Etayo 1997: 210.

***Dictyonema thelephora* (Spreng.)
Zahlbr.**

Ecology: on lianas, twigs, or stems
Province/Locality: CH
Reference: Büdel et al. 2000: 543, as
Dictyonema sericeum (Sw.) Berk., a synonym
acc. to Index Fungorum.

Basidiomycota***Hymenomyces******Agaricomycetidae*****Agaricales****Agaricaceae*****Lepiota cf. abruptibulba* Murrill**

Growth form: agaricoid
 Ecology: saprobic
 Province/Locality: central Panama
 Reference: Mueller et al. 1998: 2036.

***Lepiota cf. phaeosticta* Morgan**

Growth form: agaricoid
 Ecology: saprobic
 Province/Locality: central Panama
 Reference: Mueller et al. 1998: 2036.

***Lepiota cf. subclypeolaria* (Berk. & M.A. Curtis) Sacc.**

Growth form: agaricoid
 Ecology: saprobic
 Province/Locality: central Panama
 Reference: Mueller et al. 1998: 2036.

***Lepiota cf. zamurensis* Pat. & Gaillard**

Growth form: agaricoid
 Ecology: saprobic
 Province/Locality: central Panama
 Reference: Mueller et al. 1998: 2036, as *Leucocoprinus cf. zamurensis*, a combination which could not be found.

***Leucoagaricus bivelatus* B.P. Akers & Ovrebo**

a new species from Panama
 Growth form: agaricoid
 Ecology: saprobic, on soil
 Province/Locality: BCI
 Reference: Akers & Ovrebo 2005: 304.

***Leucocoprinus cf. brebissonii* (Godey) Locq.**

Growth form: agaricoid
 Ecology: saprobic
 Province/Locality: central Panama
 Reference: Mueller et al. 1998: 2036.

***Leucocoprinus cf. fragilissimus* (Berk. & M.A. Curtis) Pat.**

Growth form: agaricoid
 Ecology: saprobic
 Province/Locality: central Panama
 Reference: Mueller et al. 1998: 2036.

***Leucocoprinus* sp.**

Growth form: agaricoid
 Ecology: symbiotic with leaf-cutting ants, cultivated from *Cyphomyrmex costatus*, Formicidae (Hymenoptera)
 Reference: Hervey et al. 1977: 234.

Clavariaceae***Clavulinopsis aurantiocinnabarina* (Schwein.) Corner**

Growth form: clavarioid
 Ecology: saprobic, on forest soil
 Province/Locality: BCI
 Reference: Martin 1940: 195, as *Clavaria aurantio-cinnabarina* Schwein.; Martin 1944: 78, as *C. aurantio-cinnabarina*; Dennis 1970: 95.

Cortinariaceae***Crepidotus martinii* Singer**
a new species from Panama

Growth form: agaricoid
 Ecology: saprobic, on woody litter or rotten wood
 Province/Locality: BCI
 Reference: Singer 1955: 775; Singer 1973: 409; Dennis 1970: 75.

***Gymnopilus robustus* Guzm.-Dáv.**

Growth form: agaricoid
Ecology: saprobic, on adventitious roots of palms
Province/Locality: BCI
Reference: Guzmán-Dávalos & Ovrebo 2001: 400.

***Simocybe panamensis* Singer
a new species from Panama**

Growth form: agaricoid
Ecology: saprobic, on woody frustules, fruits, or leaves
Province/Locality: VR
Reference: Singer 1989: 121.

Entolomataceae

***Claudopus variabilis* (Pers.) Fr.**

Growth form: agaricoid
Ecology: saprobic, on cloth (gray duck)
Province/Locality: CA
Reference: Zuck 1946: 677.

Lycoperdaceae

***Bovista dermoxantha* (Vittad.) de Toni**

Growth form: gasteroid
Ecology: saprobic
Province/Locality: BCI
Reference: Garner 1956: 758, as *Lycoperdon ericetorum* Pers., a synonym acc. to Index Fungorum.

***Calvatia candida* (Rostk.) Hollós**

Growth form: gasteroid
Ecology: saprobic
Province/Locality: CA
Reference: Garner 1956: 757; Dennis 1970: 10.

***Calvatia cyathiformis* (Bosc) Morgan**

Growth form: gasteroid
Ecology: saprobic
Province/Locality: CA

Reference: Garner 1956: 757; Dennis 1970: 10.

***Lycogalopsis solmsii* E. Fisch.**

Growth form: gasteroid
Ecology: saprobic, on woody debris including dead bamboo
Province/Locality: BCI, CA
Reference: Martin 1939b: 72; Garner 1956: 760; Dennis 1970: 9; Reid 1976/1977: 679.

***Lycoperdon curtisii* Berk.**

Growth form: gasteroid
Ecology: saprobic
Province/Locality: CC, CH
Reference: Garner 1956: 758; Dennis 1970: 11.

***Lycoperdon molle* Pers.**

Growth form: gasteroid
Ecology: saprobic
Province/Locality: CH
Reference: Garner 1956: 758; Dennis 1970: 12.

***Lycoperdon perlatum* Pers.**

Growth form: gasteroid
Ecology: saprobic
Province/Locality: CH
Reference: Garner 1956: 758; Dennis 1970: 12.

***Lycoperdon spadiceum* Schaeff.**

Growth form: gasteroid
Ecology: saprobic
Province/Locality: BCI
Reference: Garner 1956: 758; Dennis 1970: 12.

***Lycoperdon subincarnatum* Peck**

Growth form: gasteroid
Ecology: saprobic, on decaying wood
Province/Locality: BCI, CA
Reference: Garner 1956: 757.

***Morganella fuliginea* (Berk. & M.A. Curtis) Kreisel & Dring**

Growth form: gasteroid

Ecology: saprobic

Reference: Dennis 1970: 11.

***Morganella mexicana* Zeller**

Growth form: gasteroid

Ecology: saprobic

Province/Locality: CA, CC, PA

Reference: Garner 1956: 760.

Marasmiaceae***Armillaria tabescens* (Scop.) Emel**

Growth form: agaricoid

Ecology: plant parasitic, on *Citrus* sp.,

Rutaceae

Reference: McGuire & Crandall 1967: 133, as *Clitocybe tabescens* (Scop.) Bres.***Chaetocalathus eurysporus* Singer
a new species from Panama**

Growth form: agaricoid

Ecology: saprobic, on bark of dead branch

Province/Locality: PA

Reference: Singer 1989: 67.

***Chaetocalathus columellifer* (Berk.)
Singer**

Growth form: agaricoid

Ecology: saprobic, on bark or palm leaves

Province/Locality: BCI

Reference: Singer 1976: 53; Dennis 1970: 38.

***Dactylosporina steffanii* (Rick) Dörfelt**

Growth form: agaricoid

Ecology: saprobic

Province/Locality: KY

Reference: Halling & Mueller 1999: 108, as *Xerula steffanii* (Rick) Boekhout & Bas.***Favolaschia auriscalpium* (Mont.)
Henn. genus: Fig. 28**

Growth form: poroid

Ecology: saprobic, on dead palm fronds

Province/Locality: BCI

Reference: Standley 1927: 6; Weston 1933: 391; Standley 1933: 20; all as *Laschia auriscalpium* Mont.***Favolaschia dealbata* Singer
a new species from Panama**

Growth form: poroid

Ecology: saprobic, on bamboo

Province/Locality: CH

Reference: Singer 1955: 763; Dennis 1970: 45.

***Favolaschia pezizoidea* (Berk. & M.A. Curtis) Pat.**

Growth form: poroid

Ecology: saprobic

Province/Locality: BCI

Reference: Standley 1927: 6; Weston 1933: 391; Standley 1933: 20; all as *Laschia pezizoidea* Berk. & M.A. Curtis.***Lentinula boryana* (Berk. & Mont.)
Pegler**

Growth form: agaricoid

Ecology: saprobic

Province/Locality: BCI

Reference: Mata et al. 2001: 1103.

***Marasmiellus dealbatus* (Berk. & M.A. Curtis) Singer**

Growth form: agaricoid

Ecology: saprobic, on dead leaves, culms, or roots of Poaceae

Province/Locality: BCI

Reference: Singer 1973: 34.

***Marasmiellus devenulatus* Singer**

Growth form: agaricoid

Ecology: saprobic, on dicotyledonous branches

Province/Locality: BCI

Reference: Singer 1973: 292.

***Marasmiellus eburneus* (Theiss.)**

Singer

Growth form: agaricoid

Ecology: saprobic, on fallen leaves, culms, or twigs

Province/Locality: VR

Reference: Singer 1973: 109.

***Marasmiellus echinocephalus* Singer**

a new species from Panama

Growth form: agaricoid

Ecology: saprobic, on palm petioles

Province/Locality: BCI

Reference: Singer 1955: 773; Singer 1973: 79; Dennis 1970: 31.

***Marasmiellus juniperinus* Murrill var.**

juniperinus

Growth form: agaricoid

Ecology: saprobic, on woody sticks

Reference: Singer 1973: 268.

***Marasmiellus oblongisporus* Singer**

Growth form: agaricoid

Ecology: saprobic, on dicotyledonous branches

Province/Locality: BCI

Reference: Singer 1973: 254.

***Marasmiellus panamensis* Singer**

a new species from Panama

Growth form: agaricoid

Ecology: saprobic, on dicotyledonous branches

Province/Locality: BCI

Reference: Singer 1973: 251, 329.

***Marasmius beniensis* Singer**

Growth form: agaricoid

Ecology: saprobic, on small sticks

Province/Locality: CA

Reference: Singer 1976: 184.

***Marasmius cladophyllus* Berk. Fig. 29**

Growth form: agaricoid

Ecology: saprobic, on debris

Province/Locality: BCI, CA

Reference: Singer 1958: 103; Singer 1964: 320; Singer 1976: 197; Dennis 1970: 36.

***Marasmius euosmus* Singer**

a new species from Panama

Growth form: agaricoid

Ecology: saprobic, on logs

Province/Locality: BCI

Reference: Singer 1958: 69; Singer 1964: 137; Singer 1976: 88.

***Marasmius haematocephalus* (Mont.)**

Fr. var. *pseudotageticolor* Singer

a new variety from Panama

Growth form: agaricoid

Ecology: saprobic, on fallen dicot leaves

Province/Locality: CA

Reference: Singer 1958: 120; Singer 1964: 298; Dennis 1970: 37.

***Marasmius panamensis* Singer**

a new species from Panama

Growth form: agaricoid

Ecology: saprobic, on wood

Province/Locality: BCI

Reference: Singer 1976: 96.

***Marasmius polycladoides* Singer**

a new species from Panama

Growth form: agaricoid

Ecology: saprobic, on fern leaves

Province/Locality: KY

Reference: Singer 1989: 52.

***Marasmius pseudominutus* Singer**

a new species from Panama

Growth form: agaricoid

Ecology: saprobic, on leaves of *Cecropia* sp., Cecropiaceae

Province/Locality: PA

Reference: Singer 1989: 56.

***Marasmius rotuloides* Dennis**

Growth form: agaricoid
 Ecology: saprobic, on debris
 Province/Locality: BCI
 Reference: Singer 1958: 126; Singer 1964: 152; Dennis 1970: 35.

***Marasmius sessiliaffinis* Singer
a new species from Panama**

Growth form: agaricoid
 Ecology: saprobic, on stems, twigs, or branches
 Province/Locality: BCI
 Reference: Singer 1958: 81; Singer 1964: 210, as *Marasmius spaniophyllus* Berk. var. *sessiliaffinis* (Singer) Singer; Dennis 1970: 35, as *M. spaniophyllus* var. *sessiliaffinis*; Singer 1976: 257.

***Marasmius setulosifolius* Singer**

Growth form: agaricoid
 Ecology: saprobic, on dicot leaves on the ground
 Province/Locality: CA
 Reference: Singer 1958: 110; Singer 1964: 312; Singer 1976: 204.

***Physalacria aggregata* G.W. Martin & A.C. Baker**

a new species from Panama
 Growth form: globose stipitate
 Ecology: saprobic, on wood
 Province/Locality: CH
 Reference: Baker 1941: 280; Singer 1976: 309.

***Rhodocollybia lignitilis* J.L. Mata & Halling in Mata et al.**

a new species from Panama
 Growth form: agaricoid
 Ecology: saprobic, on wood
 Province/Locality: CH
 Reference: Mata et al. 2004: 342.

Nidulariaceae***Cyathus poeppigii* Tul. & C. Tul.**

Growth form: gasteroid
 Ecology: saprobic, on soil or rotten wood
 Province/Locality: BCI, CA, CC, CH
 Reference: Garner 1956: 763; Dennis 1970: 3.

***Cyathus stercoreus* (Schwein.) De Toni**

Growth form: gasteroid
 Ecology: saprobic, on dung or manured soil
 Province/Locality: CA
 Reference: Garner 1956: 763; Dennis 1970: 4.

***Mycocalia reticulata* (Petch) J.T.**

Palmer
 Growth form: gasteroid
 Ecology: saprobic, on decaying stem of *Musa* sp., Musaceae
 Reference: Dennis 1970: 3, as *Nidularia reticulata* Petch.

Pleurotaceae***Hohenbuehelia nigra* (Schwein.) Singer
var. *microspora* Singer**

a new variety from Panama
 Growth form: agaricoid
 Ecology: saprobic, on dead twig or trunk
 Province/Locality: CA
 Reference: Singer 1955: 769; Dennis 1970: 48.

Pluteaceae***Pluteus glutinosus* Singer
a new species from Panama**

Growth form: agaricoid
 Ecology: saprobic, on dead trunk
 Province/Locality: PA
 Reference: Singer 1989: 94.

Schizophyllaceae

***Henningsomyces candidus* (Pers.) Kuntze**

Growth form: cyphelloid
Ecology: saprobic, on rotting coniferous or hardwood wood or on bark
Province/Locality: CA
Reference: Cooke 1961: 19, as *Solenia candida* Pers.

***Schizophyllum commune* Fr. Fig. 30**

Growth form: agaricoid
Ecology: saprobic, on dead wood
Province/Locality: BCI
Reference: Standley 1927: 7; Standley 1933: 20; Dennis 1970: 48.

Strophariaceae

Psilocybe caerulescens* Murr. var. *caerulescens

Growth form: agaricoid
Ecology: saprobic, on soil
Province/Locality: VR
Reference: Guzmán 1983: 110.

***Psilocybe dumontii* Sing. ex Guzmán**

Growth form: agaricoid
Ecology: saprobic, on rotten wood
Province/Locality: CH
Reference: Guzmán 1983: 119.

Tricholomataceae

***Calyptella campanula* (Nees) W.B. Cooke**

Growth form: cyphelloid
Ecology: saprobic, on stems
Province/Locality: CH
Reference: Cash 1937: 215, as *Belonioscypha campanula* (Nees) Rehm.

***Calyptella pulcherrima* W.B. Cooke a new species from Panama**

Growth form: cyphelloid
Ecology: saprobic, on old palm sheaths
Province/Locality: BCI
Reference: Cooke 1961: 42.

***Cellypha panamensis* W.B. Cooke a new species from Panama**

Growth form: cyphelloid
Ecology: saprobic, on dead palm sheaths
Province/Locality: CA
Reference: Cooke 1961: 56.

***Filoboletus gracilis* (Klotzsch ex Berk.) Singer**

Growth form: boletoid
Ecology: saprobic, on logs or stumps
Province/Locality: BCI
Reference: Standley 1927: 6, as *Polyporus gracilis* Klotzsch; Standley 1933: 20, as *P. gracilis*; Dennis 1970: 45.

***Filoboletus propullulans* Lib.-Barnes**

Growth form: boletoid
Ecology: saprobic, on fallen *Tachigalia versicolor* logs, branches, Fabaceae
Province/Locality: BCI
Reference: Libonati-Barnes 1979: 233.

***Hydropus brunneobasis* Singer**

Growth form: agaricoid
Ecology: saprobic, on stems or branches
Province/Locality: VR
Reference: Singer 1982: 76.

***Hydropus chiriquiensis* Singer a new species from Panama**

Growth form: agaricoid
Ecology: saprobic, on rotten log of *Quercus* (?)
Province/Locality: CH
Reference: Singer 1982: 68.

***Hydropus panamensis* (Singer) Singer
a new species from Panama**

Growth form: agaricoid

Ecology: saprobic, on dead wood

Province/Locality: CA

Reference: Singer 1955: 772, as

Pseudohiatula panamensis Singer; Singer
1982: 120.***Hygrocybe batistae* Singer**

Growth form: agaricoid

Ecology: saprobic

Province/Locality: BCI

Reference: Ovrebo & Lodge 2004: 30.

***Hygrocybe hypohaemacta* (Corner)
Pegler**

Growth form: agaricoid

Ecology: saprobic

Province/Locality: BCI

Reference: Ovrebo & Lodge 2004: 30.

***Hygrocybe chloochlora* Pegler & Fiard**

Growth form: agaricoid

Ecology: saprobic

Province/Locality: BCI

Reference: Ovrebo & Lodge 2004: 30.

***Hygrocybe* cf. *earlei* (Murrill) Pegler**

Growth form: agaricoid

Ecology: saprobic

Province/Locality: BCI

Reference: Ovrebo & Lodge 2004: 30.

***Mycena citricolor* (Berk. & M.A. Curtis)
Sacc.**

Growth form: agaricoid

Ecology: plant parasitic, on *Coffea arabica*,
Rubiaceae

Reference: Toler et al. 1959: 1202.

***Panellus pusillus* (Pers. ex Lév.) Burds.
& O.K. Mill.**

Growth form: agaricoid

Ecology: saprobic

Province/Locality: COI

Reference: Núñez 1997: 188.

***Pleurocollybia apoda* Singer
a new species from Panama**

Growth form: agaricoid

Ecology: saprobic, on very decayed wood

Province/Locality: CA

Reference: Singer 1955: 769; Singer 1970: 54;
Dennis 1970: 29.**Typhulaceae*****Typhula elegans* (Berk. & M.A. Curtis)
Corner**

Growth form: clavarioid

Ecology: saprobic

Province/Locality: BCI, CC, CH

Reference: Brasfield 1938: 155, as *Guepinia*
elegans Berk. & M.A. Curtis; Lowy 1971:
126, as *Dacryopinax elegans* (Berk. & M.A.
Curtis) G.W. Martin.**Boletales****Hygrophoropsidaceae*****Hygrophoropsis panamensis* Singer
a new species from Panama**

Growth form: agaricoid

Ecology: ectomycorrhizal, on logs

Province/Locality: CH

Reference: Singer et al. 1983: 28.

Sclerodermataceae***Caloderma petrianum* Fischer**

Growth form: gasteroid

Ecology: saprobic

Province/Locality: CA, CN

Reference: Garner 1956: 762; Dennis 1970:
13.

***Scleroderma cepa* Pers.**

Growth form: gasteroid
Ecology: saprobic
Province/Locality: CH
Reference: Garner 1956: 762; Dennis 1970: 13.

***Scleroderma echinatum* (Petri) Guzmán**

Growth form: gasteroid
Ecology: saprobic, on soil
Province/Locality: BCI, KY
Reference: Guzmán 1970: 308; Guzmán & Obrebo 2000: 176.

***Scleroderma sinnamariense* Mont.**

Growth form: gasteroid
Ecology: saprobic, on soil
Province/Locality: BCI
Reference: Martin 1954: 528, as *Scleroderma chrysastrum* G.W. Martin, a synonym acc. to Guzmán 1970: 304; Garner 1956: 762, as *S. chrysastrum*; Dennis 1970: 13, as *S. chrysastrum*; Guzmán 1970: 304; Guzmán & Obrebo 2000: 174.

***Scleroderma verrucosum* (Bull.) Pers.**

Growth form: gasteroid
Ecology: saprobic
Province/Locality: CH
Reference: Guzmán 1970: 276.

***Veligaster nitidum* (Berk.) Guzmán & Tapia**

Growth form: gasteroid
Ecology: saprobic
Province/Locality: BCI, CH
Reference: Garner 1956: 761, cited erroneously as *Scleroderma verrucosum* Pers., comp. Guzmán & Obrebo 2000: 178; Dennis 1970: 13, as *S. verrucosum*; Guzmán & Obrebo 2000: 178.

Hymenochaetales

***Aurificaria luteoumbrina* (Romell) D.A. Reid**

Growth form: poroid
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 185.

***Cyclomyces iodinus* (Mont.) Pat. genus: Fig. 31**

Growth form: with circular lamellae
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 185.

***Hymenochaete damaecornis* (Link) Lév.**

Growth form: poroid
Ecology: saprobic, on debris in forests
Province/Locality: BCI
Reference: Standley 1927: 6; Standley 1933: 20; Dennis 1970: 86.

***Hymenochaete digitata* (Rogers) Burt a new species from Panama**

Growth form: poroid
Ecology: saprobic, on bark or wood
Province/Locality: CH
Reference: Martin 1944: 72, as *Pellicularia digitata* Rogers in Martin; Dennis 1970: 87.

***Hyphodontia latitans* (Bourdot & Galzin) Ginns & M.N.L. Lefebvre**

Growth form: corticioid
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 186, as *Chaetoporellus latitans* (Bourdot & Galzin) Bondartsev & Singer.

***Inonotus corrosus* Murrill**

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: COI

Reference: Núñez 1997: 185, as *Phylloporia chrysitata* (Berk.) Ryvarden, a synonym acc. to Index Fungorum.

***Inonotus venezuelicus* Ryvarden**

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: COI
Reference: Núñez 1997: 185.

***Oxyporus latemarginatus* (Dur. & Mont.) Donk**

Growth form: poroid
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 187.

***Oxyporus pellicula* (Jungh.) Ryvarden**

Growth form: poroid
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 187.

***Phellinus adhaerens* J.E. Wright & Blumentf.**

Growth form: poroid
Ecology: saprobic/plant parasitic, on *Laguncularia racemosa*, Combretaceae
Province/Locality: CA
Reference: Gilbert & Sousa 2002: 399.

***Phellinus* cf. *allardii* (Bres.) Ryvarden**

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: COI
Reference: Núñez 1997: 185.

***Phellinus apiahynus* (Speg.) Rajchenb. & J.E. Wright**

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: COI
Reference: Núñez 1997: 185.

***Phellinus calcitratus* (Berk. & M.A. Curtis) Ryvarden**

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: COI
Reference: Núñez 1997: 185.

***Phellinus callimorphus* (Lév.) Ryvarden**

Growth form: poroid
Ecology: saprobic/plant parasitic, on *Laguncularia racemosa*, Combretaceae
Province/Locality: CA
Reference: Gilbert & Sousa 2002: 399.

***Phellinus cavicola* Kotl. & Pouzar**

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: COI
Reference: Núñez 1997: 185, as *Phellinus umbrinellus* (Bres.) sensu Ryvarden & Gilberton, acc. to Index Fungorum.

***Phellinus cinchonensis* (Murrill) Ryvarden**

Growth form: poroid
Ecology: saprobic/ plant parasitic, on wood
Reference: Dennis 1970: 115, as *Fomes cinchonensis* (Murrill) Sacc. & Trotter.

***Phellinus crocatus* (Fr.) Ryvarden**

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: BCI
Reference: Standley 1927: 6, as *Polystictus crocatus* (Fr.) Fr.; Standley 1933: 20, as *P. crocatus*.

***Phellinus fastuosus* (Lév.) Ryvarden**

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: BCI
Reference: Dennis 1970: 114, as *Fomes fastuosus* (Lév.) Cooke.

***Phellinus gilvus* (Schwein.) Pat.**

Growth form: poroid
Ecology: saprobic/plant parasitic, on *Laguncularia racemosa*, Combretaceae
Province/Locality: BCI, CA, COI
Reference: Standley 1927: 6, as *Polyporus licnoides* Mont., a synonym acc. to Index Fungorum; Standley 1933: 20, as *P. licnoides*; Dennis 1970: 111, as *P. licnoides*; Núñez 1997: 185; Gilbert & Sousa 2002: 399.

***Phellinus inermis* (Ellis & Everh.) G. Cunn.**

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: COI
Reference: Núñez 1997: 185.

***Phellinus linteus* (Berk. & M.A. Curtis) Teng**

Growth form: poroid
Ecology: saprobic, on dead hardwood
Province/Locality: BCI
Reference: Dennis 1970: 114, as *Fomes linteus* (Berk. & M.A. Curtis) Cooke.

***Phellinus melleoporus* (Murrill) Ryvarden**

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: COI
Reference: Núñez 1997: 185.

***Phellinus membranaceus* J.E. Wright & Blummenf.**

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: COI
Reference: Núñez 1997: 185.

***Phellinus pectinatus* (Klotzsch) Quél.**

Growth form: poroid
Ecology: saprobic/plant parasitic, on wood
Reference: Dennis 1970: 114, as *Fomes pectinatus* (Klotzsch) Gillet.

***Phellinus punctatiformis* (Murrill) Ryvarden**

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: COI
Reference: Núñez 1997: 185.

***Phellinus cf. punctatus* (Fr.) Pilát**

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: COI
Reference: Núñez 1997: 185, as *Phellinus maxonii* (Murrill) D.A. Reid, a synonym acc. to Index Fungorum.

***Phellinus rhabarbarinus* (Berk.) G. Cunn.**

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: COI
Reference: Núñez 1997: 185.

***Phellinus robustus* (P. Karst.) Bourdot & Galzin**

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: COI
Reference: Núñez 1997: 185.

***Phellinus sancti-georgii* (Pat.) Ryvarden**

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: COI
Reference: Núñez 1997: 185.

***Phellinus senex* (Nees & Mont.) Imazeki**

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: COI
Reference: Núñez 1997: 185.

***Phellinus* sp.**

Growth form: poroid
 Ecology: saprobic/plant parasitic, on *Rhizophora mangle*, Rhizophoraceae
 Province/Locality: CA
 Reference: Gilbert & Sousa 2002: 399.

***Phellinus swieteniae* (Murrill) S. Herrera & Bondartseva**

Growth form: poroid
 Ecology: saprobic/plant parasitic, on *Avicennia germinans*, Avicenniaceae
 Province/Locality: CA
 Reference: Gilbert & Sousa 2002: 399.

***Phylloporia fruticum* (Berk. & M.A. Curtis) Ryvarden**

Growth form: poroid
 Ecology: saprobic
 Province/Locality: COI
 Reference: Núñez 1997: 186.

***Phylloporia spathulata* (Hook.) Ryvarden**

Growth form: poroid
 Ecology: saprobic, on soil
 Province/Locality: COI
 Reference: Dennis 1970: 108, as *Polystictus spathulatus* (Hook.) Berk.; Núñez 1997: 186.

***Polystictus arenicolor* (Berk. & M.A. Curtis) Cooke**

Growth form: poroid
 Ecology: saprobic
 Province/Locality: BCI
 Reference: Standley 1927: 6; Standley 1933: 20.

***Polystictus steinheilianus* Berk. & Lév.**

Growth form: poroid
 Ecology: saprobic
 Province/Locality: BCI
 Reference: Standley 1927: 7; Standley 1933: 20.

***Schizopora flavipora* (Berk. & M.A. Curtis ex Cooke) Ryvarden**

Growth form: poroid
 Ecology: saprobic
 Province/Locality: COI
 Reference: Núñez 1997: 184.

***Stipitochaete damicornis* (Link) Ryvarden**

Growth form: poroid
 Ecology: saprobic
 Province/Locality: COI
 Reference: Núñez 1997: 186.

Phallales**Geastraceae*****Geaster mirabilis* Mont.**

Growth form: gasteroid
 Ecology: saprobic, on decaying stump
 Province/Locality: BCI
 Reference: Weston 1933: 392; Standley 1933: 21. This species probably corresponds to a species of *Geastrum*.

***Geastrum rufescens* Pers.**

Growth form: gasteroid
 Ecology: saprobic
 Province/Locality: CA
 Reference: Garner 1956: 761; Dennis 1970: 9.

***Geastrum saccatum* Fr. Fig. 32**

Growth form: gasteroid
 Ecology: saprobic
 Province/Locality: BCI
 Reference: Garner 1956: 761.

***Geastrum schweinitzii* (Berk. & M.A. Curtis) Zeller**

Growth form: gasteroid
 Ecology: saprobic
 Province/Locality: BCI, CA
 Reference: Garner 1956: 761; Dennis 1970: 9.

***Geastrum triplex* Jungh.**

Growth form: gasteroid
Ecology: saprobic
Province/Locality: BCI
Reference: Garner 1956: 761.

***Geastrum velutinum* Morgan**

Growth form: gasteroid
Ecology: saprobic
Province/Locality: BCI
Reference: Garner 1956: 760; Dennis 1970: 9.

Gomphaceae

***Beenakia informis* (Rick) Maas Geest.**

Growth form: hydroid
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 185.

***Beenakia subglobospora* Núñez & Ryvarden**

Growth form: hydroid
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 185.

Phallaceae

***Clathrus* sp.**

Growth form: gasteroid
Ecology: saprobic
Province/Locality: BCI
Reference: Weston 1933: 387.

***Phallus duplicatus* Bosc Fig. 33**

Growth form: gasteroid
Ecology: saprobic, under rotten wood trash of old log
Province/Locality: BCI
Reference: Weston 1933: 395, as *Dictyophora duplicata* (Bosc) Ed. Fischer; Standley 1933: 21, *D. duplicata*.

***Staheliomyces cinctus* E. Fisch.**

Growth form: gasteroid
Ecology: saprobic, on soil
Province/Locality: CA
Reference: Stevens 1930: 286; Dennis 1970: 5.

Ramariaceae

***Ramaria cyanocephala* (Berk. & M.A. Curtis) Corner**

Growth form: clavarioid
Ecology: saprobic, on forest soil
Reference: Dennis 1970: 93.

Polyporales

Atheliaceae

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

Growth form: corticioid
Ecology: plant parasitic, on *Carica papaya*, Caricaceae; on *Ipomoea batatas*, Convolvulaceae; on *Citrullus vulgaris*, *Cucumis melo*, *C. sativus*, *Cucurbita maxima*, *Sechium edule*, Cucurbitaceae; on *Arachis hypogaea*, *Phaseolus vulgaris*, *Stylosanthes capitata*, Fabaceae; on *Gossypium hirsutum*, Malvaceae; on *Musa* sp., Musaceae; on *Oryza sativa*, *Saccharum officinarum*, *Zea mays*, Poaceae; on *Citrus* sp., Rutaceae; on *Capsicum annuum*, *C. frutescens*, *Lycopersicon esculentum*, *Nicotiana tabacum*, *Solanum melongena*, *S. tuberosum*, Solanaceae
Reference: Toler et al. 1959: 1202, 1203, as *Sclerotium rolfsii* Sacc., a synonym acc. to Index Fungorum; McGuire & Crandall 1967: 119, 121, 124, 126, 128, 129, 130, 135, 137, 139, 142, 144, 147, as *S. rolfsii* or *S.* sp; Lenné 1990: 136, as *Corticium rolfsii* Curzi.

***Athelopsis galzinii* (Bres.) Hjortstam**

Growth form: corticioid
Ecology: saprobic, on wood
Province/Locality: CH

Reference: Martin 1942: 158, as *Sebacina galzinii* Bres.; Wells 1959: 546, as *Bourdotia galzinii* (Bres.) Trotter; Dennis 1970: 125, as *B. galzinii*; Lowy 1971: 57, as *B. galzinii*.

Boreostereaceae

***Mycobonia flava* (Sw.) Fr.**

Growth form: poroid
Ecology: saprobic, on logs
Province/Locality: CH
Reference: Martin 1939a: 247; Dennis 1970: 101.

Corticaceae

***Corticium koleroga* (Cooke) Höhn.**

Growth form: corticioid
Ecology: plant parasitic, on *Theobroma cacao*, Malvaceae; on *Coffea arabica*, Rubiaceae
Reference: Toler et al. 1959: 1202, as *Pellicularia koleroga* Cooke; McGuire & Crandall 1967: 149, as *P. koleroga*.

***Corticium salmonicolor* Berk. & Broome**

Growth form: corticioid
Ecology: plant parasitic, on *Theobroma cacao*, Malvaceae; on *Coffea arabica*, Rubiaceae; on *Citrus* sp., Rutaceae
Reference: Toler et al. 1959: 1202; McGuire & Crandall 1967: 134, 145, 148.

***Cytidia habgallae* (Berk. & Broome)**

G.W. Martin

Growth form: corticioid
Ecology: saprobic, on dead wood
Province/Locality: CH
Reference: Martin 1942: 160; Dennis 1970: 98.

***Cytidia pezizoides* (Pat.) Pat.**

Growth form: corticioid
Ecology: saprobic, on wood
Province/Locality: BCI

Reference: Martin 1942: 162; Dennis 1970: 98.

Fomitopsidaceae

***Fomitopsis dochmia* (Berk. & Broome) Ryvarden**

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: BCI, COI
Reference: Standley 1927: 6, as *Fomes ferreus* Berk. ex Cooke, a synonym acc. to Index Fungorum; Standley 1933: 19, as *F. ferreus*; Dennis 1970: 115, as *Fomes dochmius* (Berk. & Broome) Cooke; Núñez 1997: 186.

***Fomitopsis feei* (Fr.) Kreisel**

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: COI
Reference: Núñez 1997: 186.

***Fomitopsis supina* (Sw.) Murrill**

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: COI
Reference: Núñez 1997: 186, as *Fomitella supina* (Sw.) Murrill.

***Wolfiporia* "spec. nov."**

Growth form: poroid
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 188.

Ganodermataceae

***Amauroderma camerarium* (Berk.) J.S. Furtado** **genus: Fig. 34**

Growth form: poroid
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 185.

***Amauroderma exile* (Berk.) Torrend**

Growth form: poroid
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 185.

***Amauroderma praetervisum* (Pat.)
Torrend**

Growth form: poroid
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 185.

***Amauroderma rugosum* (Blume & T.
Nees) Torrend**

Growth form: poroid
Ecology: saprobic
Province/Locality: BCI
Reference: Standley 1933: 21, as *Polyporus rugosus* Blume & T. Nees.

***Amauroderma schomburgkii* (Mont. &
Berk.) Torrend**

Growth form: poroid
Ecology: saprobic, on dead wood
Province/Locality: BCI, COI
Reference: Standley 1933: 21, probably as
Amauroderma sp.; Dennis 1970: 117, as
Amauroderma ocellatum (Berk.) Lloyd ex
Wakef., a synonym acc. to Index Fungorum;
Núñez 1997: 185.

***Ganoderma adpersum* (Schulzer)
Donk**

Growth form: poroid
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 185, as *Ganoderma australe* (Fr.) Pat., a synonym acc. to Index Fungorum.

***Ganoderma applanatum* (Pers.) Pat.**

Growth form: poroid
Ecology: saprobic/plant parasitic
Reference: Dennis 1970: 116.

***Ganoderma chalceum* (Cooke) Steyaert**

Growth form: poroid
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 185.

***Ganoderma lucidum* (Curtis) P. Karst.
s.l.**

Growth form: poroid
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 185.

***Haddowia neurospora* (J.S. Furtado)
Teixeira**

Growth form: poroid
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 185.

Grammotheleaceae

***Porogramme albocincta* (Cooke &
Masse) J. Lowe**

Growth form: poroid
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 184.

Hapalopilaceae

***Ceriporia alachuana* (Murrill) Hallenb.**

Growth form: poroid
Ecology: saprobic/plant parasitic, on
Avicennia germinans, Avicenniaceae
Province/Locality: PA
Reference: Gilbert & Sousa 2002: 399.

***Ceriporia ferruginicincta* (Murrill)
Ryvarden**

Growth form: poroid
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 186.

***Ceriporia viridans* (Berk. & Broome)
Donk**

Growth form: poroid
 Ecology: saprobic
 Province/Locality: COI
 Reference: Núñez 1997: 186.

***Ceriporiopsis aneirina* (Sommerf.)
Domanski**

Growth form: poroid
 Ecology: saprobic/plant parasitic, on
Rhizophora mangle, Rhizophoraceae
 Province/Locality: PA
 Reference: Gilbert & Sousa 2002: 399.

***Ceriporiopsis mucida* (Pers.) Gilb. &
Ryvarden**

Growth form: poroid
 Ecology: saprobic
 Province/Locality: COI
 Reference: Núñez 1997: 186.

Meripilaceae***Antrodia* cf. *crassa* (P. Karst.)
Ryvarden**

Growth form: poroid
 Ecology: saprobic
 Province/Locality: COI
 Reference: Núñez 1997: 186.

***Hydnopolyporus* cf. *fimbriatus* (Fr.)
D.A. Reid**

Growth form: poroid
 Ecology: saprobic
 Province/Locality: COI
 Reference: Núñez 1997: 186.

***Rigidoporus crocatus* (Pat.) Ryvarden**

Growth form: poroid
 Ecology: saprobic
 Province/Locality: COI
 Reference: Núñez 1997: 187.

***Rigidoporus lineatus* (Pers.) Ryvarden**

Growth form: poroid
 Ecology: saprobic
 Province/Locality: COI
 Reference: Núñez 1997: 187.

***Rigidoporus microporus* (Sw.)
Overeem**

Growth form: poroid
 Ecology: saprobic, on wood
 Province/Locality: BCI, COI
 Reference: Standley 1927: 6, as *Fomes
auberianus* (Mont.) Murrill and as *Polyporus
lignosus* Klotzsch, both synonyms acc. to Index
Fungorum; Standley 1933: 19, 20, as *F.
auberianus* and *P. lignosus*; Dennis 1970:
110, 115, as *F. auberianus* and *P. lignosus*;
Núñez 1997: 187.

***Rigidoporus vinctus* (Berk.) Ryvarden**

Growth form: poroid
 Ecology: saprobic
 Province/Locality: BCI, COI
 Reference: Standley 1927: 7, as *Poria vincta*
(Berk.) Cooke; Standley 1933: 20, as *P.
vincta*; Dennis 1970: 119, as *P. vincta*; Núñez
1997: 187.

Meruliaceae***Gloeoporus thelephoroides* (Hook.) G.
Cunn.**

Growth form: poroid
 Ecology: saprobic, on logs
 Province/Locality: BCI, COI
 Reference: Standley 1927: 6, as *Gloeoporus
conchoides* Mont., a synonym acc. to Index
Fungorum; Standley 1933: 20, as *G.
conchoides*; Dennis 1970: 110, as *Polyporus
conchoides* (Mont.) Lloyd; Núñez 1997: 184.

Phanerochaetaceae***Lopharia papyrina* (Mont.) Boidin**

Growth form: stereoid

Ecology: saprobic
Province/Locality: BCI, COI
Reference: Standley 1927: 7, as *Stereum papyrinum* Mont.; Standley 1933: 20, as *S. papyrinum*; Dennis 1970: 101, as *S. papyrinum*; Núñez 1997: 188, as *Porostereum papyrinum* (Mont.) Hjortstam & Ryvar den.

***Phanerochaete flava* (Burt) Nakasone, Burds. & Lodge**

Growth form: corticioid
Ecology: saprobic, on decorticated wood
Province/Locality: CH
Reference: Nakasone et al. 1998: 133.

Podoscyphaceae

***Aquascypha hydrophora* (Berk.) D.A. Reid**

Growth form: stereoid stipitae
Ecology: saprobic, on stumps or logs
Province/Locality: BCI
Reference: Martin 1944: 77, as *Stereum hydrophorum* Berk.; Reid 1965: 52; Dennis 1970: 89.

***Caripia montagnei* (Berk.) Kuntze** Fig. 35

Growth form: stereoid stipitae
Ecology: saprobic, on sticks or dead wood above the ground
Province/Locality: BCI, CA, COI
Reference: Weston 1933: 391; Standley 1933: 21; Martin 1938a: 438; Martin 1948: 113; all as *Hypolyssus montagnei* Berk. Dennis 1970: 94; Núñez 1997: 184.

***Cotylidia aurantiaca* (Pers.) A.L. Welden**

Growth form: stereoid stipitae
Ecology: saprobic, on woody substrates, also terrestrial
Province/Locality: BCI
Reference: Standley 1933: 21, as *Stereum aurantiacum* (Pers.) Lloyd and as *Stereum*

decolorans (Berk. & M.A. Curtis) Lloyd, synonyms acc. to Reid 1965: 59; Welden 1954b: 426, as *S. aurantiacum*; Welden 1958: 40; Reid 1965: 59.

***Cymatoderma caperatum* (Berk. & Mont.) D.A. Reid**

Growth form: stereoid stipitae
Ecology: saprobic, on dead wood
Reference: Welden 1960: 865; Reid 1965: 103.

***Cymatoderma dendriticum* (Pers.) D.A. Reid**

Growth form: stereoid stipitae
Ecology: saprobic, on dead wood
Reference: Welden 1960: 868; Reid 1965: 109.

***Cymatoderma sclerotioides* (Lloyd) D.A. Reid**

Growth form: stereoid stipitae
Ecology: saprobic, on soil, but probably on buried wood
Reference: Welden 1960: 871.

***Cyphellostereum pusiolum* (Berk. & M.A. Curtis) Reid**

Growth form: stereoid stipitae
Ecology: saprobic, on soil
Province/Locality: BCI, CH
Reference: Martin 1944: 76, as *Stereum cyphelloides* Berk. & M.A. Curtis, a synonym acc. to Reid 1965: 342; Welden 1954b: 431, as *Stereum pusiolum* Berk. & M.A. Curtis.

***Podoscypha elegans* (G. Mey.) Pat.**

Growth form: stereoid stipitae
Ecology: saprobic
Province/Locality: BCI
Reference: Welden 1954b: 437, as *Stereum elegans* (G. Mey.) Fr.; Reid 1965: 283.

***Podoscypha fulvonitens* (Berk.) D.A. Reid**

Growth form: stereoid stipitae
 Ecology: saprobic, on fallen branches, dead wood
 Province/Locality: BCI
 Reference: Reid 1965: 176; Dennis 1970: 90.

***Podoscypha glabrescens* (Berk. & M.A. Curtis) Boidin**

Growth form: stereoid stipitae
 Ecology: saprobic, on wood
 Province/Locality: BCI
 Reference: Standley 1927: 7, as *Stereum glabrescens* Berk.; Standley 1933: 20, as *S. glabrescens*; Reid 1965: 180; Dennis 1970: 90.

Podoscypha nitidula* (Berk.) Pat. var. *nitidula

Growth form: stereoid stipitae
 Ecology: saprobic
 Province/Locality: BCI, CA
 Reference: Martin 1944: 74, as *Stereum surinamense* Lév., a synonym acc. to Reid 1965: 211; Welden 1954b: 435, as *S. surinamense*.

***Podoscypha ravenelii* (Berk. & M.A. Curtis) Pat.**

Growth form: stereoid stipitae
 Ecology: saprobic, on soil
 Province/Locality: BCI, CH
 Reference: Martin 1944: 74, as *Stereum ravenelii* Berk. & M.A. Curtis; Welden 1954b: 436, as *S. ravenelii*; Reid 1965: 243; Dennis 1980: 90.

Podoscypha venustula* (Speg.) D.A. Reid subsp. *venustula

Growth form: stereoid stipitae
 Ecology: saprobic, on fallen branches, dead wood
 Province/Locality: BCI, COI

Reference: Standley 1927: 7, as *Stereum flabellatum* Pat., a synonym acc. to Reid 1965: 260; Standley 1933: 20, as *S. flabellatum*; Martin 1939a: 246, as *S. flabellatum*; Reid 1965: 260; Dennis 1970: 90; Núñez 1997: 188.

***Stereopsis hiscens* (Berk. & Ravenel) D.A. Reid**

Growth form: stereoid stipitae
 Ecology: saprobic, probably arising from buried wood or roots
 Province/Locality: BCI
 Reference: Standley 1927: 7, as *Thelephora pusiola* Pat., a synonym acc. to Reid 1965: 299; Standley 1933: 20, as *T. pusiola*; Reid 1965: 298.

***Stereopsis radicans* (Berk.) D.A. Reid**

Growth form: stereoid stipitae
 Ecology: saprobic, on the ground arising from dead wood or roots or on wood
 Province/Locality: BCI, PA
 Reference: Martin 1944: 77, as *Stereum radicans* (Berk.) Burt.; Welden 1954b: 432, as *S. radicans*; Reid 1965: 314.

Polyporaceae***Coriopsis brunneoleuca* (Berk.)****Ryvarden**

Growth form: poroid
 Ecology: saprobic
 Province/Locality: COI
 Reference: Núñez 1997: 186.

***Coriopsis byrsina* (Mont.) Ryvarden**

Growth form: poroid
 Ecology: saprobic
 Province/Locality: COI
 Reference: Núñez 1997: 186.

***Coriopsis caperata* (Berk.) Murrill**

Growth form: poroid
 Ecology: saprobic, on Combretaceae

Province/Locality: BCI, COI, PA
Reference: Standley 1927: 7, as *Trametes caperatus* Berk.; Standley 1933: 20, as *T. caperatus*; Dennis 1970: 111, as *Polyporus caperatus* Berk.; Núñez 1997: 186; Gilbert & Sousa 2002: 399, as *Datronia caperata* (Berk.) Ryvarden.

***Coriolopsis floccosa* (Jungh.)**

Ryvarden

Growth form: poroid
Ecology: saprobic
Province/Locality: BCI, COI
Reference: Standley 1927: 7, as *Trametes rigida* Berk. & Mont., a synonym acc. to Index Fungorum; Standley 1933: 20, as *T. rigida*; Dennis 1970: 111, as *T. rigida*; Núñez 1997: 186, as *Coriolopsis rigida* (Berk. & Mont.) Murrill.

***Coriolopsis occidentalis* (Klotzsch)**

Murrill

Growth form: poroid
Ecology: saprobic
Province/Locality: BCI
Reference: Standley 1927: 6, as *Polystictus occidentalis* (Klotzsch) Fr.; Standley 1933: 20, as *P. occidentalis*; Dennis 1970: 112, as *Polyporus occidentalis* Klotzsch.

***Coriolopsis polyzona* (Pers.) Ryvarden**

Growth form: poroid
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 186.

***Coriolopsis cf. strumosa* (Fr.)**

Ryvarden

Growth form: poroid
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 186.

***Dichomitus leucoplacus* (Berk.)**

Ryvarden

Growth form: poroid
Ecology: saprobic
Reference: Dennis 1970: 119, as *Poria leucoplaca* (Berk.) Sacc.

***Earliella scabrosa* (Pers.) Gilb. &**

Ryvarden

Fig. 36

Growth form: poroid
Ecology: saprobic, on logs or stumps
Province/Locality: BCI, COI
Reference: Dennis 1970: 109, as *Trametes corrugata* (Pers.) Bres., a synonym acc. to Index Fungorum; Núñez 1997: 186.

***Favolus tenuiculus* P. Beauv.**

Growth form: poroid
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 187, as *Polyporus tenuiculus* (P. Beauv.) Fr.

***Fomes extensus* (Lév.) Cooke**

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: COI
Reference: Núñez 1997: 185, as *Phellinus troyanus* (Murrill) Bondartseva & S. Herrera, a synonym acc. to Index Fungorum.

***Fomes fasciatus* (Sw.) Cooke**

Growth form: poroid
Ecology: saprobic/plant parasitic, on wood
Reference: Dennis 1970: 114, as *Fomes sclerodermeus* (Lév.) Cooke, a synonym acc. to Index Fungorum.

***Fomes marmoratus* (Berk. & M.A. Curtis) Cooke**

Growth form: poroid
Ecology: saprobic, on dead hardwood
Province/Locality: BCI
Reference: Standley 1927: 6; Standley 1933: 19.

***Fomes portoricensis* Overh.**

Growth form: poroid
 Ecology: saprobic/plant parasitic, on wood
 Reference: Dennis 1970: 114.

***Fomes pseudosenex* (Murrill) Sacc. & Trotter**

Growth form: poroid
 Ecology: saprobic/plant parasitic, on wood
 Reference: Dennis 1970: 114.

***Hexagonia hydroides* (Sw.) M. Fidalgo**

Growth form: poroid
 Ecology: saprobic, on posts, stumps, or logs
 Province/Locality: BCI, COI
 Reference: Standley 1927: 7, as *Trametes hydroides* (Sw.) Fr.; Standley 1933: 20, as *T. hydroides*; Dennis 1970: 110, as *Polyporus hydroides* Sw.; Núñez 1997: 186.

***Hexagonia tenuis* J.M. Hook Fig. 37**

Growth form: poroid
 Ecology: saprobic, on wood
 Province/Locality: BCI, COI
 Reference: Standley 1927: 6; Weston 1933: 391; Standley 1933: 20; Dennis 1970: 118; Núñez 1997: 186.

***Hexagonia variegata* Berk.**

Growth form: poroid
 Ecology: saprobic, on wood
 Province/Locality: BCI
 Reference: Standley 1927: 6; Weston 1933: 391; Standley 1933: 20; Dennis 1970: 118; Núñez 1997: 184, as *Hexagonia papyracea* Berk., a synonym acc. to Index Fungorum.

Hirschioporus versatilis* (Berk.)*Imazeki**

Growth form: poroid
 Ecology: saprobic, on wood
 Province/Locality: BCI
 Reference: Standley 1927: 7, as *Polystictus versatilis* (Berk.) Cooke; Standley 1933: 20, as

P. versatilis; Dennis 1970: 109, as *Trametes versatilis* Berk.

***Lentinus crinitus* (L.: Fr.) Fr. Fig. 38**

Growth form: agaricoid
 Ecology: saprobic, on wood
 Province/Locality: COI
 Reference: Núñez 1997: 186. Based on molecular data, this species is called *Polyporus phyllostipes* D. Krüger in Krüger & Gargas 2004: 542.

***Lentinus* cf. *nigro-osseus* Pilát**

Growth form: agaricoid
 Ecology: saprobic
 Province/Locality: COI
 Reference: Núñez 1997: 187.

***Lentinus strigellus* Berk.**

Growth form: agaricoid
 Ecology: saprobic
 Province/Locality: BCI
 Reference: Standley 1927: 6; Standley 1933: 20.

***Lentinus swartzii* Berk.**

Growth form: agaricoid
 Ecology: saprobic
 Province/Locality: BCI
 Reference: Standley 1933: 21, as *Lentinus nicaraguensis* Berk. & M.A. Curtis, a synonym acc. to Index Fungorum.

***Lentinus velutinus* Fr.**

Growth form: agaricoid
 Ecology: saprobic, on wood buried in the soil
 Province/Locality: BCI
 Reference: Standley 1927: 6; Weston 1933: 403, 407; Standley 1933: 20; Dennis 1970: 46.

***Lenzites elegans* (Spreng.) Pat.**

Growth form: poroid
 Ecology: saprobic
 Province/Locality: BCI

Reference: Núñez 1997: 184, as *Trametes elegans* (Spreng.) Fr.

***Lenzites repanda* (Mont.) Fr.**

Growth form: agaricoid poroid
Ecology: saprobic
Reference: Dennis 1970: 120.

***Loweporus roseoalbus* (Jungh.)**

Ryvarden

Growth form: poroid
Ecology: saprobic, on wood
Reference: Dennis 1970: 115, as *Fomes subflexibilis* (Berk. & M.A. Curtis) Cooke, a synonym acc. to Index Fungorum.

***Loweporus tephroporus* (Mont.)**

Ryvarden

Growth form: poroid
Ecology: saprobic
Province/Locality: BCI
Reference: Núñez 1997: 184, as *Perenniporia tephropora* (Mont.) Ryvarden.

***Megasporoporia cavernulosa* (Berk.)**

Ryvarden

Growth form: poroid
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 187.

***Microporellus obovatus* (Jungh.)**

Ryvarden

Growth form: poroid
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 187.

***Nigrofomes melanoporus* (Mont.)**

Murrill

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: COI
Reference: Dennis 1970: 114, as *Fomes melanoporus* (Mont.) Sacc.; Núñez 1997: 187.

***Nigroporus durus* (Jungh.) Murrill**

Growth form: poroid
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 187, as *Trichaptum durum* (Jungh.) Corner.

***Nigroporus vinosus* (Berk.) Murrill**

Growth form: poroid
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 187.

***Pachykytospora alabamiae* (Berk. & Cooke) Ryvarden**

Growth form: poroid
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 187.

***Perenniporia detritus* (Berk.) Ryvarden**

Growth form: poroid
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 187.

***Perenniporia stipitata* Ryvarden**

Growth form: poroid
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 187.

***Polyporus dictyopus* Mont.**

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: BCI, COI
Reference: Standley 1927: 6, as *Polyporus infernalis* Berk., a synonym acc. to Index Fungorum; Standley 1933: 20, as *P. infernalis*; Núñez 1997: 187.

***Polyporus grammocephalus* Berk.**

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: BCI

Reference: Núñez 1997: 184.

***Polyporus guianensis* Mont.**

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: COI
Reference: Núñez 1997: 187.

***Polyporus leprieurii* Mont.**

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: BCI, COI
Reference: Standley 1927: 6, as *Polyporus subelegans* Murrill, a synonym acc. to Index Fungorum; Standley 1933: 20, as *P. subelegans*; Núñez 1997: 187.

***Polyporus rugulosus* Lév.**

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: COI
Reference: Núñez 1997: 186, as *Coriolopsis sanguinaria* (Klotzsch) Teng, a synonym acc. to Index Fungorum.

***Polyporus tricholoma* Mont.**

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: BCI, COI
Reference: Standley 1933: 21; Núñez 1997: 187.

***Polyporus trichomallus* Berk. & Mont.**

Growth form: poroid
Ecology: saprobic/plant parasitic
Reference: Dennis 1970: 110.

***Polyporus virgatus* Berk. & M.A. Curtis**

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: BCI
Reference: Standley 1927: 6; Standley 1933: 20.

***Poria lindbladii* (Berk.) Cooke**

Growth form: poroid
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 186, as *Diplomitoporus lindbladii* (Berk.) Gilb. & Ryvardeen.

***Poria phlebiaeformis* Berk. ex Cooke**

Growth form: poroid
Ecology: saprobic/plant parasitic
Reference: Dennis 1970: 119.

***Pycnoporus sanguineus* (L.) Murrill**

Fig. 39

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: BCI, COI
Reference: Standley 1927: 6, as *Polystictus sanguineus* (L.) Fr.; Standley 1933: 20, as *P. sanguineus*; Núñez 1997: 187.

***Skeletocutis alutacea* (J. Lowe) Jean Keller**

Growth form: poroid
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 187.

***Skeletocutis lenis* (P. Karst.) Niemelä**

Growth form: poroid
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 187.

***Skeletocutis* cf. *subincarnata* (Peck) Jean Keller**

Growth form: poroid
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 187.

***Tinctoporellus epimiltinus* (Berk. & Broome) Ryvarden**

Growth form: poroid
Ecology: saprobic
Province/Locality: COI
Reference: Dennis 1970: 119, as *Poria borbonica* Pat., a synonym acc. to Index Fungorum; Núñez 1997: 187.

***Trametes cingulata* Berk.**

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: COI
Reference: Núñez 1997: 187.

***Trametes cubensis* (Mont.) Sacc.**

Growth form: poroid
Ecology: saprobic, on logs
Province/Locality: BCI
Reference: Standley 1927: 7; Standley 1933: 20; Dennis 1970: 109, as *Polyporus cubensis* Mont.

***Trametes hirsuta* (Wulfen) Pilát**

Growth form: poroid
Ecology: saprobic, on wood
Reference: Dennis 1970: 112, as *Polyporus hirsutus* Pers., a synonym acc. to Index Fungorum.

***Trametes marianna* (Pers.) Ryvarden**

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: BCI
Reference: Standley 1927: 6, as *Polyporus brachypus* Lév., a synonym acc. to Index Fungorum; Standley 1933: 20, as *P. brachypus*.

***Trametes maxima* (Mont.) A. David & Rajchenb.**

Growth form: poroid
Ecology: saprobic, on logs
Reference: Dennis 1970: 105, 112, as *Coriolus maximus* (Mont.) Murrill and as *Irpex maximus* Mont.

***Trametes membranacea* (Sw.) Kreisel**

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: COI
Reference: Núñez 1997: 187.

***Trametes modesta* (Kunze ex Fr.) Ryvarden**

Growth form: poroid
Ecology: saprobic, on logs
Province/Locality: BCI, COI
Reference: Dennis 1970: 109, as *Polyporus modestus* Kunze ex Fr.; Núñez 1997: 187.

***Trametes versicolor* (L.) Lloyd**

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: BCI
Reference: Standley 1927: 7; Standley 1933: 20; Dennis 1970: 112; all as *Polystictus versicolor* (L.) Fr.

***Trametes villosa* (Sw.) Kreisel**

Growth form: poroid
Ecology: saprobic, on wood
Province/Locality: COI
Reference: Núñez 1997: 187.

***Trichaptum bifforme* (Fr.) Ryvarden**

Growth form: poroid
Ecology: saprobic/plant parasitic, on *Rhizophora mangle*, Rhizophoraceae
Province/Locality: BCI, PA
Reference: Núñez 1997: 184; Gilbert & Sousa 2002: 399.

Trichaptum byssogenum* (Jungh.)*Ryvarden**

Growth form: poroid

Ecology: saprobic

Province/Locality: COI

Reference: Núñez 1997: 187.

***Trichaptum perrottetii* (Lév.) Ryvarden**

Growth form: poroid

Ecology: saprobic, on decaying wood

Province/Locality: COI

Reference: Núñez 1997: 187.

***Trichaptum sector* (Ehrenb.) Kreisel**

Growth form: poroid

Ecology: saprobic

Province/Locality: COI

Reference: Núñez 1997: 188.

***Tyromyces duracinus* (Pat.) Murrill**

Growth form: poroid

Ecology: saprobic

Reference: Lindblad & Ryvarden 1999: 336, as *Antrodiella duracina* (Pat.) I. Lindblad & Ryvarden.**Sistotremataceae*****Sistotrema brinkmannii* (Bres.) J.****Erikss.**

Growth form: corticioid

Ecology: saprobic, on wood

Reference: Rogers 1944: 88, as *Trechispora brinkmannii* (Bres.) D.P. Rogers & H.S.Jacks.; Dennis 1970: 98, as *T. brinkmannii*.***Sistotrema diademiferum* (Bourdot & Galzin) Donk**

Growth form: corticioid

Ecology: saprobic, on wood

Reference: Rogers 1944: 85, as *Trechispora diademifera* (Bourdot & Galzin) D.P. Rogers;Dennis 1970: 98, as *T. diademifera*.***Trechispora regularis* (Murrill) Liberta**

Growth form: corticioid

Ecology: saprobic

Province/Locality: COI

Reference: Núñez 1997: 184.

Steccherinaceae***Antrodiella versicutis* (Berk. & M.A.****Curtis) Gilb. & Ryvarden**

Growth form: poroid

Ecology: saprobic

Reference: Dennis 1970: 113, as *Polyporus versicutis* Berk. & M.A. Curtis.***Flaviporus hydrophilus* (Berk. & M.A.****Curtis) Ginns**

Growth form: poroid

Ecology: saprobic

Province/Locality: COI

Reference: Núñez 1997: 186, as *Antrodiella hydrophila* (Berk. & M.A. Curtis) Ryvarden.***Flaviporus liebmannii* (Fr.) Ginns**

Growth form: poroid

Ecology: saprobic

Province/Locality: COI

Reference: Núñez 1997: 186, as *Antrodiella liebmannii* (Fr.) Ryvarden.***Flaviporus stramineus* (Bres.) Ginns**

Growth form: poroid

Ecology: saprobic

Province/Locality: COI

Reference: Núñez 1997: 186, as *Antrodiella straminea* (Bres.) Ryvarden & I. Johans.***Flavodon flavus* (Klotzsch) Ryvarden**

Growth form: poroid, irpicoid

Ecology: saprobic

Province/Locality: COI

Reference: Núñez 1997: 184.

***Odontia* sp.**

Growth form: hydroid

Ecology: saprobic
Province/Locality: BCI
Reference: Standley 1933: 21.

Xenasmataceae

***Phlebiella grisella* (Bourdot) K.H. Larss. & Hjortstam**

Growth form: corticioid
Ecology: saprobic, on wood or bark
Province/Locality: CH
Reference: Liberta 1960: 911, as *Xenasma grisellum* (Bourdot) Liberta; Dennis 1970: 97, as *Corticium grisellum* Bourdot.

***Xenasma macrosporum* Liberta a new species from Panama**

Growth form: corticioid
Ecology: saprobic, on decayed wood
Province/Locality: CH
Reference: Liberta 1960: 899; Dennis 1970: 99.

Russulales

***Lachnocladium manaosense* Henn.**

Growth form: clavarioid
Ecology: saprobic
Province/Locality: BCI
Reference: Standley 1933: 21.

***Russula auucarum* Singer genus: Fig. 40**

Growth form: agaricoid
Ecology: ectomycorrhizal, on the ground
Province/Locality: BCI
Reference: Buyck & Ovrebo 2002: 889.

***Russula panamae* Buyck & Ovrebo a new species from Panama**

Growth form: agaricoid
Ecology: ectomycorrhizal, on the ground
Province/Locality: BCI
Reference: Buyck & Ovrebo 2002: 892.

***Russula puiggarii* (Speg.) Singer**

Growth form: agaricoid
Ecology: ectomycorrhizal, on the ground
Province/Locality: BCI
Reference: Buyck & Ovrebo 2002: 894.

***Russula venezueliana* Singer**

Growth form: agaricoid
Ecology: ectomycorrhizal, on the ground
Province/Locality: BCI
Reference: Buyck & Ovrebo 2002: 898.

***Stecchericium seriatum* (Lloyd) Maas Geest.**

Growth form: hydroid
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 185.

***Stereum cf. complicatum* (Fr.) Fr.**

Growth form: stereoid
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 188.

***Stereum gausapatum* (Fr.) Fr.**

Growth form: stereoid
Ecology: saprobic
Province/Locality: COI
Reference: Núñez 1997: 188.

***Stereum hartmannii* (Mont.) Lloyd**

Growth form: stereoid
Ecology: saprobic
Province/Locality: CA
Reference: Martin 1944: 78.

***Vararia phyllophila* (Masse) D.P. Rogers & H.S. Jacks.**

Growth form: corticioid
Ecology: saprobic, on fallen leaves or branches
Reference: Dennis 1970: 99.

***Wrightoporia africana* I. Johans. & Ryvarden**

Growth form: poroid
 Ecology: saprobic
 Province/Locality: COI
 Reference: Núñez 1997: 188.

***Wrightoporia avellanea* (Bres.) Pouzar**

Growth form: poroid
 Ecology: saprobic
 Province/Locality: COI
 Reference: Núñez 1997: 188.

***Wrightoporia tropicalis* (Cooke) Ryvarden**

Growth form: poroid
 Ecology: saprobic
 Province/Locality: COI
 Reference: Núñez 1997: 188.

Hymenomycetidae**Auriculariales*****Aporpium caryae* (Schwein.) Teixeira & D.P. Rogers**

Growth form: aphylloroid
 Ecology: saprobic
 Province/Locality: COI
 Reference: Núñez 1997: 184, as *Protomerulius caryae* (Schwein.) Ryvarden.

***Auricularia delicata* (Fr.) Henn.**

Growth form: pileate
 Ecology: saprobic
 Province/Locality: BCI, CH, PA
 Reference: Standley 1927: 6, as *Hirneola delicata* (Fr.) Bres.; Standley 1933: 20, as *H. delicata*; Dennis 1970: 131; Lowy 1971: 20.

***Auricularia fuscusuccinea* (Mont.) Henn.**

Growth form: pileate
 Ecology: saprobic, on logs or dead wood
 Province/Locality: BCI, CA, CC

Reference: Standley 1933: 21, as *A. fuscusuccinea* (Schwein.) Farlow; Dennis 1970: 132; Lowy 1971: 22.

***Auricularia mesenterica* (Dicks.) Pers. Fig. 41**

Growth form: resupinate, pileate
 Ecology: saprobic
 Province/Locality: BCI, CA, CH
 Reference: Standley 1927: 6; Weston 1933: 402, 404; Standley 1933: 19; Lowy 1971: 24.

***Auricularia peltata* Lloyd**

Growth form: pulvinate
 Ecology: saprobic, on dead wood
 Province/Locality: BCI
 Reference: Dennis 1970: 131; Lowy 1971: 25.

***Auricularia polytricha* (Mont.) Sacc.**

Growth form: pileate
 Ecology: saprobic
 Province/Locality: BCI, CA, CH, CN
 Reference: Standley 1927: 6, as *Hirneola polytricha* Mont.; Weston 1933: 391; Standley 1933: 20, as *H. polytricha*, p. 21, as *Auricularia hispidula* (Berk.) Farl., a synonym acc. to Lowy 1971: 25; Dennis 1970: 131; Lowy 1971: 25.

***Basidiodendron cinereum* (Bres.) Luck-Allen**

Growth form: resupinate
 Ecology: saprobic, on wood
 Province/Locality: BCI, CH
 Reference: Martin 1942: 158, as *Sebacina cinerea* Bres.; Wells 1959: 552, as *Bourdodia cinerea* (Bres.) Bourdot & Galzin; Dennis 1970: 126, as *B. cinerea*; Lowy 1971: 55, as *B. cinerea*.

***Basidiodendron eyrei* (Wakef.) Luck-Allen**

Growth form: resupinate
 Ecology: saprobic, on decaying, usually decorticated wood

Province/Locality: BCI, CA, CH
Reference: Martin 1942: 158, as *Sebacina deminuta* Bourd., a synonym acc. to Wells 1959: 555; Wells 1959: 555, as *Bourdotia eyrei* (Wakef.) Bourdot & Galzin; Lowy 1971: 57, as *B. eyrei*.

***Bourdotia burtii* (Bres.) K. Wells**

Growth form: resupinate
Ecology: saprobic, on dead, often corticated wood
Province/Locality: CA
Reference: Wells 1959: 549; Dennis 1970: 126; Lowy 1971: 55.

***Bourdotia obscura* (G.W. Martin) K. Wells**

a new species from Panama
Growth form: resupinate
Ecology: saprobic, on dead leaf-stalk of the date palm
Province/Locality: BCI, CA
Reference: Martin 1944: 70, as *Sebacina obscura* G.W. Martin; Wells 1959: 559; Dennis 1970: 126; Lowy 1971: 58.

***Bourdotia petiolata* (D.P. Rogers) K. Wells**

Growth form: resupinate
Ecology: saprobic
Province/Locality: BCI
Reference: Lowy 1971: 58.

***Ductifera aurea* Lowy**

a new species from Panama
Growth form: effuse
Ecology: saprobic, on unidentified wood
Province/Locality: CH
Reference: Lowy 1976: 1106; Lowy 1980: 2.

***Ductifera pululahuana* (Pat.) Donk**

Growth form: convolute to cerebriform
Ecology: saprobic
Province/Locality: CH
Reference: Lowy 1971: 60.

***Ductifera sucina* (A. Møller) K. Wells**

Growth form: effuse
Ecology: saprobic
Province/Locality: CH
Reference: Lowy 1971: 62.

***Exidia lutea* Lowy**

Growth form: aphyllorphoroid
Ecology: saprobic
Province/Locality: CH
Reference: Lowy 1980: 12.

***Exidia nucleata* (Schwein.) Burt**

Growth form: pustulate
Ecology: saprobic, on dead wood
Province/Locality: CH
Reference: Dennis 1970: 128; Lowy 1971: 70.

***Exidia panamensis* Lowy**

a new species from Panama
Growth form: effuse
Ecology: saprobic, on wood
Province/Locality: CH
Reference: Lowy 1976: 1105; Lowy 1980: 3.

***Exidia tucumanensis* Lowy**

Growth form: aphyllorphoroid
Ecology: saprobic
Province/Locality: PA
Reference: Lowy 1980: 12.

***Exidiopsis candida* (L.S. Olive) K. Wells**

Growth form: resupinate
Ecology: saprobic
Province/Locality: CH
Reference: Dennis 1970: 126; Lowy 1971: 72.

***Exidiopsis mucedinea* (Pat.) K. Wells**

Growth form: effuse
Ecology: saprobic, on dead branches or cane of bamboo
Province/Locality: BCI, CA

Reference: Martin 1944: 68, as *Sebacina mucedinea* Pat.; Dennis 1970: 127; Lowy 1971: 74.

***Exidiopsis podlachica* (Bres.) Ervin**

Growth form: resupinate
Ecology: saprobic
Province/Locality: CA, CH
Reference: Lowy 1971: 75.

***Heterochaete albida* Pat.**

Growth form: resupinate
Ecology: saprobic
Province/Locality: CC
Reference: Bodman 1952: 207; Dennis 1970: 128; Lowy 1971: 76.

***Heterochaete gelatinosa* (Berk. & M.A. Curtis) Pat.**

Growth form: resupinate
Ecology: saprobic
Province/Locality: CA, CH
Reference: Bodman 1952: 216; Dennis 1970: 127; Lowy 1971: 78.

***Heterochaete minuta* Pat.**

Growth form: resupinate
Ecology: saprobic
Province/Locality: CH
Reference: Bodman 1952: 220; Dennis 1970: 127; Lowy 1971: 79.

***Heterochaete shearii* (Burt) Burt**

Growth form: resupinate
Ecology: saprobic
Province/Locality: CH
Reference: Bodman 1952: 226; Dennis 1970: 127; Lowy 1971: 80.

***Heterochaete subgelatinosa* Bodman
a new species from Panama**

Growth form: resupinate
Ecology: saprobic
Province/Locality: CH

Reference: Bodman 1952: 228; Dennis 1970: 127; Lowy 1971: 82.

***Heterochaete verruculosa* (F.H. Møller)
Bodman**

Growth form: resupinate
Ecology: saprobic
Reference: Bodman 1952: 229; Dennis 1970: 127; Lowy 1971: 82.

***Patouillardina cinerea* Bres. ex Rick**

Growth form: effuse
Ecology: saprobic
Province/Locality: BCI, CA
Reference: Lowy 1971: 87.

***Protohydnum cartilagineum* A. Møller**

Growth form: resupinate
Ecology: saprobic
Province/Locality: CA
Reference: Lowy 1971: 89.

***Pseudohydnum gelatinosum* (Scop.) P.
Karst.**

Growth form: pileate hydroid
Ecology: saprobic, on frondose wood
Province/Locality: CH
Reference: Martin 1948: 117; Lowy 1971: 91.

***Stypella dubia* (Bourdot & Galzin) P.
Roberts**

Growth form: resupinate
Ecology: saprobic
Province/Locality: CH
Reference: Lowy 1971: 85, as *Heterochaetella dubia* (Bourdot & Galzin) Bourdot & Galzin.

***Stypella minor* A. Møller**

Growth form: pustulate
Ecology: saprobic, on wood
Province/Locality: BCI, CH
Reference: Dennis 1970: 125; Lowy 1971: 93.

Ceratobasidiales

***Ceratobasidium atratum* (Bres.) D.P. Rogers**

Growth form: corticioid
Ecology: saprobic, on logs
Province/Locality: CA
Reference: Dennis 1970: 129, as
Ceratobasidium plumbeum Martin, a synonym
acc. to Lowy 1971: 116; Lowy 1971: 116.

Dacrymycetales

***Arrhytidia involuta* (Schwein.) Coker**

Growth form: resupinate
Ecology: saprobic
Province/Locality: BCI
Reference: Lowy 1971: 119.

***Arrhytidia pulchra* Lowy**

Growth form: resupinate
Ecology: saprobic
Reference: Lowy 1980: 8.

***Calocera cornea* (Batsch ex Fr.) Fr.**

Growth form: clavarioid
Ecology: saprobic
Province/Locality: BCI, CH
Reference: Brasfield 1938: 156; Lowy 1971:
120.

***Calocera glossoides* (Pers.) Sacc.**

Growth form: clavarioid
Ecology: saprobic
Province/Locality: CH
Reference: Brasfield 1938: 157, as
Dacryomitra glossoides (Pers.) Bref.; Lowy
1980: 14.

***Calocera macrospora* Bras.**

Growth form: clavarioid
Ecology: saprobic, on wood
Province/Locality: CH
Reference: Brasfield 1938: 156; Dennis 1970:
123; Lowy 1971: 121.

***Dacrymyces capitatus* Schwein.**

Growth form: cerebriform
Ecology: saprobic, on angiosperm wood, less
commonly on gymnosperm wood
Province/Locality: CH
Reference: Brasfield 1938: 155, as
Dacrymyces ellisii Coker, a synonym acc. to
Lowy 1971: 122; Brasfield 1938: 157, as
Dacryomitra cystidiata Brasfield, a synonym
acc. to Lowy 1971: 122; Kennedy 1958: 911,
as *Dacrymyces deliquescens* (Bull.) Duby var.
ellisii (Coker) L.L. Kenn., a synonym acc. to
Index Fungorum; Lowy 1971: 122, as *D.*
deliquescens var. *ellisii*.

Dacrymyces deliquescens* (Bull.) Duby var. *deliquescens

Growth form: pustulate
Ecology: saprobic, on gymnosperm wood, less
commonly on angiosperm wood
Province/Locality: CH
Reference: Brasfield 1938: 155; Brasfield
1938: 153, as *Arrhytidia pustulata* Brasfield, a
synonym acc. to Lowy 1971: 123; Kennedy
1958: 910; Dennis 1970: 124; Lowy 1971:
123.

***Dacrymyces enatus* (Berk. & M.A. Curtis) Masee var. *macrosporus* Kennedy**

a new variety from Panama
Growth form: pustulate
Ecology: saprobic, on angiosperm wood
Province/Locality: BCI
Reference: Kennedy 1958: 902; Dennis 1970:
124; Lowy 1971: 123.

***Dacrymyces falcatus* Brasf.**

a new species from Panama
Growth form: pulvinate
Ecology: saprobic, on angiosperm wood
Province/Locality: CH
Reference: Brasfield 1938: 154; Kennedy
1958: 906; Dennis 1970: 124; Lowy 1971:
124.

***Dacrymyces minor* Peck**

Growth form: pustulate
 Ecology: saprobic
 Province/Locality: CH
 Reference: Brasfield 1938: 155.

***Dacryopinax fissus* G.W. Martin**

Growth form: pustulate
 Ecology: saprobic
 Reference: Martin 1948: 117.

***Dacryopinax spathularia* (Schwein.)
G.W. Martin Fig. 42**

Growth form: spathulate
 Ecology: saprobic, on wood
 Province/Locality: BCI, BO, CA, CC, CH
 Reference: Brasfield 1938: 155, as *Guepinia spathularia* (Schwein.) Fr., a synonym acc. to Lowy 1971: 129; Dennis 1970: 123; Lowy 1971: 129.

***Ditiola radicata* (Alb. & Schwein.) Fr.**

Growth form: pustulate
 Ecology: saprobic
 Province/Locality: CH, CN, PA
 Reference: Brasfield 1938: 160, as *Dacryomitra stipitata* (Peck) Burt, a synonym acc. to Lowy 1971: 132; Lowy 1971: 132.

Tulasnellales***Tulasnella eichleriana* Bres.**

Growth form: effuse
 Ecology: saprobic
 Province/Locality: CA
 Reference: Lowy 1971: 114, as *Tulasnella lactea* Bourdot & Galzin, a synonym acc. to Index Fungorum.

***Tulasnella sphaerospora* G.W. Martin
a new species from Panama**

Growth form: effuse
 Ecology: saprobic, on bark, mosses, or lichens
 Province/Locality: CH

Reference: Martin 1939a: 242; Dennis 1970: 130; Lowy 1971: 114.

Tremellomycetidae**Tremellales*****Syzygospora alba* G.W. Martin
a new species from Panama**

Growth form: tremelloid
 Ecology: mycoparasitic, on trunks or stumps
 Province/Locality: CH
 Reference: Martin 1937: 112; Dennis 1970: 132; Oberwinkler & Lowy 1981: 1109.

***Tremella brasiliensis* (A. Møller) Lloyd
genus: Fig. 43**

Growth form: tremelloid
 Ecology: saprobic/mycoparasitic, erumpent from dead branches
 Province/Locality: CH
 Ref.: Bandoni 1958: 138; Lowy 1971: 96.

***Tremella fibulifera* A. Møller**

Growth form: tremelloid
 Ecology: saprobic/mycoparasitic, on wood or litter
 Province/Locality: CH
 Ref.: Bandoni 1958: 142; Lowy 1971: 100.

***Tremella foliacea* Pers.**

Growth form: tremelloid
 Ecology: saprobic/mycoparasitic
 Province/Locality: CH
 Reference: Lowy 1980: 13, as *Tremella fimbriata* Pers., a synonym acc. to Index Fungorum.

***Tremella fuciformis* Berk.**

Growth form: tremelloid
 Ecology: saprobic/mycoparasitic
 Reference: Bandoni 1958: 144.

***Tremella mesenterica* Retz.**

Growth form: tremelloid
Ecology: saprobic/mycoparasitic
Province/Locality: BCI, CH
Reference: Lowy 1971: 104, as *Tremella lutescens* Fr., a synonym acc. to Index Fungorum.

***Tremella subrubiginosa* Lowy
a new species from Panama**

Growth form: tremelloid
Ecology: saprobic, on unidentified wood
Province/Locality: VR
Reference: Lowy 1976: 1106; Lowy 1980: 7.

***Tremella wrightii* Berk. & M.A. Curtis**

Growth form: tremelloid
Ecology: saprobic/mycoparasitic
Province/Locality: CH
Reference: Bandoni 1958: 150; Lowy 1971: 106.

Urediniomycetes

Atractiellales

***Helicogloea aurea* G.E. Baker
a new species from Panama**

Growth form: effuse
Ecology: saprobic, on decaying wood
Province/Locality: CH
Reference: Baker 1946: 635; Dennis 1970: 132; Lowy 1971: 30.

***Helicogloea intermedia* (Linder) G.E. Baker**

Growth form: effuse
Ecology: saprobic
Province/Locality: CH
Reference: Lowy 1971: 31.

***Helicogloea lagerheimii* Pat.**

Growth form: effuse
Ecology: saprobic

Province/Locality: BCI, CH
Reference: Lowy 1971: 31.

***Phleogena faginea* (Fr.) Link**

Growth form: stilboid
Ecology: saprobic
Province/Locality: CH
Reference: Lowy 1971: 46.

Microbotryales

***Aurantiosporium subnitens* (J. Schröt. & Henn.) M. Piepenbr., Vánky & Oberw.**

Growth form: smut
Ecology: plant parasitic, on *Scleria melaleuca*, Cyperaceae
Province/Locality: PA
Reference: Piepenbring 2001: 424; Piepenbring 2003: 259.

***Sphacelotheca* cf. *koordersiana* (Bref.) Zundel**

Growth form: smut
Ecology: plant parasitic, on *Polygonum punctatum*, Polygonaceae
Province/Locality: CH
Ref.: Piepenbring 2001: 424, as *Sphacelotheca* cf. *hydropiperis* (Schumach.) de Bary, a wrong identification; Piepenbring 2003: 255.

Septobasidiales

***Septobasidium bogoriense* Pat.**

Growth form: corticioid
Ecology: symbiotic with Coccidae (Homoptera), on *Citrus sinensis*, Rutaceae
Province/Locality: PA
Ref.: Couch 1938: 213; Dennis 1970: 134.

***Septobasidium pseudopedicellatum* Burt**

Growth form: corticioid
Ecology: symbiotic with Coccidae (Homoptera), on *Citrus* sp., Rutaceae
Reference: McGuire & Crandall 1967: 135.

***Septobasidium rhabarbarinum* (Mont.) Bres.**

Growth form: corticioid
 Ecology: symbiotic with Coccidae (Homoptera), on trunks or branches
 Reference: Couch 1938: 122; Dennis 1970: 134.

***Septobasidium westoni* Couch
 a new species from Panama**

Growth form: corticioid
 Ecology: symbiotic with Coccidae (Homoptera), on *Ananas magdalenae*, Bromeliaceae
 Province/Locality: BCI
 Reference: Weston 1933: 403 as *Septobasidium* sp.; Couch 1938: 120; Dennis 1970: 134.

Uredinales***Aecidium farameae* Arthur**

Growth form: anamorphic rust
 Ecology: plant parasitic, on *Faramea occidentalis*, Rubiaceae
 Province/Locality: BCI
 Ref.: Travers, Gilbert & Perry 1998: 439.

***Aecidium jacquemontiae* Ellis & Everh.**

Growth form: anamorphic rust
 Ecology: plant parasitic, on *Jacquemontia* sp., Convolvulaceae
 Reference: Dennis 1970: 153.

***Aecidium tournefortiae* Henn.**

Growth form: anamorphic rust
 Ecology: plant parasitic, on *Tournefortia* sp., Boraginaceae
 Reference: Kern 1938: 541.

***Alveolaria cordiae* Lagerh.**

Growth form: rust
 Ecology: plant parasitic, on *Cordia corymbosa*, *C. ferruginea*, Boraginaceae
 Province/Locality: BO, PA

Reference: Buriticá & Hennen 1980: 23.

***Atelocauda incrustans* Arthur & Cummins
 a new species from Panama**

Growth form: rust
 Ecology: plant parasitic, on *Lonchocarpus* sp., Fabaceae
 Province/Locality: BO
 Reference: Arthur & Cummins 1933: 41; Cummins 1978: 264, as *Pileolaria incrustans* (Arthur & Cummins) Thirum. & F. Kern.

***Batistospora pistila* Buriticá & Hennen**

Growth form: rust
 Ecology: plant parasitic, on *Annona* sp., Annonaceae
 Province/Locality: PA
 Reference: Buriticá 1999a: 272.

***Cerotelium ficicola* Buriticá & Hennen**

Growth form: rust
 Ecology: plant parasitic, on *Ficus ibapoby*, Moraceae
 Province/Locality: CA
 Reference: Buriticá 1999b: 417.

***Chaconia ingae* (Syd.) Cummins**

Growth form: rust
 Ecology: plant parasitic, on *Inga ruiziana*, *I. vera*, Fabaceae
 Reference: Ono & Hennen 1983: 385.

***Cionothrix praelonga* (G. Winter) Arthur**

Growth form: rust
 Ecology: plant parasitic, on *Eupatorium odoratum*, Asteraceae
 Province/Locality: PA
 Reference: Kern & Chardón 1927: 270; Cummins 1978: 392; Buriticá & Hennen 1980: 21.

***Coleosporium domingensis* (Berk.)**

Arthur

Growth form: rust

Ecology: plant parasitic, on *Plumeria* sp.,
Apocynaceae

Reference: Kern & Chardón 1927: 269.

***Dasyscypha gregaria* (Kunze) Henn.**

Growth form: rust

Ecology: plant parasitic, on *Xylopia*
grandiflora, Annonaceae

Reference: Jørstad 1957: 448; Spaulding
1961: 86.

***Dicheirinia binata* (Berk.) Arthur**

Growth form: rust

Ecology: plant parasitic, on *Erythrina fusca*,
Fabaceae

Reference: Cummins 1978: 345; Spaulding
1961: 87.

***Dietelia portoricensis* (Whetzel & L.S.
Olive) Buriticá & J.F. Hennen**

Growth form: rust

Ecology: plant parasitic, on *Mikania scandens*,
Asteraceae

Reference: Cummins 1978: 395, as
Endophyllum portoricensis Whetzel & L.S.
Olive; Buriticá & Hennen 1980: 15.

***Endophyllum circumscriptum*
(Schwein.) Whetzel & Olive var.
*circumscriptum***

Growth form: rust

Ecology: plant parasitic, on *Cissus sicyoides*,
Vitaceae

Province/Locality: CN

Reference: Buriticá & Hennen 1980: 13.

***Endophyllum pumilio* (Kunze) Syd.**

Growth form: rust

Ecology: plant parasitic, on *Clibadium*
surinamensis, *Wedelia trilobata*, Asteraceae

Province/Locality: CN

Reference: Jørstad 1957: 466; Cummins 1978:
394; Buriticá & Hennen 1980: 11, as
Endophyllum decoloratum Whetzel & Olive, a
synonym acc. to Cummins 1978: 394.

***Endophyllum stachytarphetae* (Henn.)
Whetzel & Olive**

Growth form: rust

Ecology: plant parasitic, on *Stachytarpheta*
jamaicensis, Verbenaceae

Province/Locality: BO

Reference: Buriticá & Hennen 1980: 13.

***Olivea fimbriata* (Mains) Cummins & Y.
Hirats.**

Growth form: rust

Ecology: plant parasitic, on *Vitex* sp.,
Verbenaceae

Province/Locality: CA

Reference: Ono & Hennen 1983: 391.

***Olivea viticis* Y. Ono & J.F. Hennen**

Growth form: rust

Ecology: plant parasitic, on *Vitex* sp.,
Verbenaceae

Province/Locality: CA

Reference: Ono & Hennen 1983: 393.

***Phakopsora arthuriana* Buriticá & J.F.
Hennen**

Growth form: rust

Ecology: plant parasitic, on *Jatropha*
gossypifolia, Euphorbiaceae

Province/Locality: LS

Reference: Buriticá 1999a: 289.

***Phakopsora compressa* (Arthur &
Holw.) Buriticá & J.F. Hennen**

Growth form: rust

Ecology: plant parasitic, on *Paspalum*
conjugatum, Poaceae

Province/Locality: BO

Reference: Cummins 1941: 467, as *Angiop-*
sora compressa (Arthur & Holw.) Mains;
Buriticá 1999a: 279.

***Phragmidiella bignoniacearum* (Dale)
Buriticá & J.F. Hennen**

Growth form: rust

Ecology: plant parasitic, on *Cydista aequinoctialis*, Bignoniaceae

Province/Locality: CA

Reference: Buriticá 1999b: 425.

***Physopella compressa* (Mains)
Cummins & Ramachar**

Growth form: rust

Ecology: plant parasitic, on *Axonopus compressus*, *Paspalum conjugatum*, *P. plicatulum*, Poaceae

Reference: Lenné 1990: 10, 101, 105.

***Physopella zae* (Mains) Cummins &
Ramachar**

Growth form: rust

Ecology: plant parasitic, on *Zea mays*, PoaceaeReference: McGuire & Crandall 1967: 118, 119, as *Angiopsora zae* Mains.***Puccinia antioquiensis* Mayor**

Growth form: rust

Ecology: plant parasitic, on *Cyperus diffusus*, Cyperaceae

Reference: Kern 1919: 139.

***Puccinia arachidis* Speg.**

Growth form: rust

Ecology: plant parasitic, on *Arachis hypogaea*, Fabaceae

Reference: Toler et al. 1959: 1203.

***Puccinia boutelouae* (H.S. Jenn.) Holw.**

Growth form: rust

Ecology: plant parasitic, on *Bouteloua* sp., Poaceae

Reference: Hennen & Cummins 1956: 144; Dennis 1970: 158.

***Puccinia cannae* Henn.**

Growth form: rust

Ecology: plant parasitic, on *Calathea* sp., Marantaceae

Reference: Kern 1938: 544.

***Puccinia chaetochloae* Arthur**

Growth form: rust

Ecology: plant parasitic, on *Paspalum fasciculatum*, Poaceae

Reference: Lenné 1990: 103.

***Puccinia claviformis* Lagerh.**

Growth form: rust

Ecology: plant parasitic, on *Solanum* spp., Solanaceae

Ref.: Jørstad 1963: 88; Dennis 1970: 176.

***Puccinia cynodontis* Delacr. ex Desm.**

Growth form: rust

Ecology: plant parasitic, on *Cynodon dactylon*, Poaceae

Reference: McGuire & Crandall 1967: 151.

***Puccinia dolosa* Arthur & Fromme var.
*dolosa***

Growth form: rust

Ecology: plant parasitic, on *Paspalum paniculatum*, *P. plicatulum*, Poaceae

Reference: Ramachar & Cummins 1965: 12; Lenné 1990: 105.

***Puccinia dolosa* Arthur & Fromme var.
circumdata (Mains) Ramachar &
Cummins**

Growth form: rust

Ecology: plant parasitic, on *Paspalum (Panicum) fasciculatum*, Poaceae

Reference: Ramachar & Cummins 1965: 13; Lenné 1990: 103.

***Puccinia emiliae* Henn.**

Growth form: rust

Ecology: plant parasitic, on *Neurolaena lobata*, Asteraceae

Province/Locality: BCI

Reference: Standley 1927: 7; Standley 1933: 19.

***Puccinia fimbristylidis* Arthur**

Growth form: rust

Ecology: plant parasitic, on *Fimbristylis* sp.,
Cyperaceae

Reference: Jørstad 1957: 483.

***Puccinia gouaniae* Holw.**

Growth form: rust

Ecology: plant parasitic, on *Gouania* sp.,
Rhamnaceae

Reference: Arthur 1918a: 131.

***Puccinia graminis* Pers.**

Growth form: rust

Ecology: plant parasitic, on *Triticum aestivum*,
Poaceae

Reference: McGuire & Crandall 1967: 127, as
Puccinia graminis f.sp. *tritici* Erikss. & Henn.,
a synonym acc. to Index Fungorum.

***Puccinia heliconiae* (Dietel) Arthur**

Growth form: rust

Ecology: plant parasitic, on *Heliconia*
latispatha, Heliconiaceae

Province/Locality: CA

Reference: Arthur 1918b: 144; McGuire &
Crandall 1967: 130.

***Puccinia invelata* H.S. Jacks. var.
echinulata (J. Parm.) Cumm.**

Growth form: rust

Ecology: plant parasitic, on *Verbesina* sp.

Reference: Cummins 1978: 78.

***Puccinia melampodii* Dietel & Holw.**

Growth form: rust

Ecology: plant parasitic, on Asteraceae

Reference: Jackson 1922: 116.

***Puccinia mogiphanis* Arthur**

Growth form: rust

Ecology: plant parasitic, on *Alternanthera* sp.,
Amaranthaceae

Reference: Arthur 1918b: 155, as *Uredo*
panamensis, a synonym acc. to Hennen &
McCain 1993: 977; Hennen & McCain 1993:
977.

***Puccinia oahuensis* Ellis & Everh.**

Growth form: rust

Ecology: plant parasitic, on *Digitaria*
sanguinalis, Poaceae

Reference: Ramachar & Cummins 1965: 16.

***Puccinia polysora* Underw.**

Growth form: rust

Ecology: plant parasitic, on *Zea mays*,
Poaceae

Reference: Toler et al. 1959: 1202; McGuire
& Crandall 1967: 119.

***Puccinia purpurea* Cooke**

Growth form: rust

Ecology: plant parasitic, on *Sorghum*
halepense, *S. vulgare*, Poaceae

Reference: Toler et al. 1959: 1203; McGuire
& Crandall 1967: 122.

***Puccinia rotundata* Dietel**

Growth form: rust

Ecology: plant parasitic, on *Vernonia* sp.,
Asteraceae

Reference: Jackson 1918: 307.

***Puccinia scleriae* (Pazschke) Arthur**

Growth form: rust

Ecology: plant parasitic, on *Scleria* sp.,
Cyperaceae

Reference: Jackson 1926: 144.

***Puccinia sorghi* Schwein.**

Growth form: rust

Ecology: plant parasitic, on *Sorghum vulgare*,
Zea mays, Poaceae

Reference: Toler et al. 1959: 1202; McGuire
& Crandall 1967: 119, 122.

***Puccinia spegazzinii* De Toni**

Growth form: rust
 Ecology: plant parasitic, on *Mikania scandens*,
 Asteraceae
 Reference: Cummins et al. 1969: 942.

***Puccinia subcoronata* Henn.**

Growth form: rust
 Ecology: plant parasitic, on *Cyperus diffusus*,
 Cyperaceae
 Reference: Jackson 1926: 142; Kern &
 Thurston 1943: 442.

***Puccinia subtilipes* Speg.**

Growth form: rust
 Ecology: plant parasitic, on *Leptochloa* sp.,
 Poaceae
 Reference: Hennen & Cummins 1956: 148.

***Puccinia synedrellae* Henn.**

Growth form: rust
 Ecology: plant parasitic, on *Neurolaena lo-*
bata, Asteraceae
 Reference: Arthur 1916: 25.

***Puccinosira pallidula* (Speg.) Lagerh.**

Growth form: rust
 Ecology: plant parasitic, on *Triumfetta* sp.,
 Tiliaceae
 Province/Locality: "Panama. Caracas", might
 refer to Macaracas, LS
 Reference: Buriticá & Hennen 1980: 30.

***Ravenelia entadae* Lagerh. & Dietel in
Dietel****a new species from Panama**

Growth form: rust
 Ecology: plant parasitic, on *Entada*
polystachya, Fabaceae
 Reference: Dietel 1894: 36, 62; Cummins
 1978: 274.

Sphaerophragmium pulchrum* M.*Piepenbr.****a new species from Panama****Fig. 44**

Growth form: rust

Ecology: plant parasitic, on *Albizia*
adinocephala, Fabaceae

Province/Locality: CH

Reference: Piepenbring 2005: 162.

***Sphenospora pallida* (G. Winter) Dietel**

Growth form: rust

Ecology: plant parasitic, on *Dioscorea* sp.,
Dioscoreaceae

Reference: McGuire & Crandall 1967: 149.

***Uraecium guanacastensis* Berndt**

Growth form: rust

Ecology: plant parasitic, on *Pithecellobium*
longifolium, Fabaceae

Province/Locality: CH

Reference: Berndt 2002: 425.

***Uredo dioscoreae* Henn.**

Growth form: anamorphic rust

Ecology: plant parasitic, on *Dioscorea*
urophylla, Dioscoreaceae

Province/Locality: BCI

Ref.: Standley 1927: 7; Standley 1933: 19.

***Uredo garcilassae* Henn.**

Growth form: anamorphic rust

Ecology: plant parasitic, on *Garcilassa*
rivularis, Asteraceae

Reference: Cummins 1978: 398.

Uredo panamensis* Arthur*a new species from Panama**

Growth form: anamorphic rust

Ecology: plant parasitic, on *Phytolacca*
decandra, Phytolaccaceae

Reference: Arthur 1918b: 155.

Uredo tuitei* J.F. Hennen & J.W. McCain*a new species from Panama**

Growth form: anamorphic rust

Ecology: plant parasitic, on *Odontocarya*
tamoides var. *canescens*, Menispermaceae

Province/Locality: CA

Reference: Hennen & McCain 1993: 981.

***Uromyces appendiculatus* (Pers.) Link**

Growth form: rust

Ecology: plant parasitic, on *Macroptilium atropurpureum*, *Phaseolus vulgaris*, Fabaceae
Reference: McGuire & Crandall 1967: 121, as *Uromyces phaseoli* G. Winter var. *typica* Arthur, a synonym acc. to Index Fungorum; Lenné 1990: 85.

***Uromyces cucullatus* Syd. & P. Syd.**

Growth form: rust

Ecology: plant parasitic, on Asteraceae
Reference: Cummins 1978: 192.

***Uromyces indigoferae* Dietel & Holw.**

Growth form: rust

Ecology: plant parasitic, on *Indigofera* sp., Fabaceae
Reference: Cummins 1978: 217.

***Uromyces janiphae* (G. Winter) Arthur**

Growth form: rust

Ecology: plant parasitic, on *Manihot esculenta*, Euphorbiaceae
Reference: McGuire & Crandall 1967: 143.

***Uromyces neurocarpi* Dietel & Holw.**

Growth form: rust

Ecology: plant parasitic, on *Clitoria* sp., Fabaceae
Reference: Cummins 1978: 213.

***Uromyces setariae-italicae* Yoshino**

Growth form: rust

Ecology: plant parasitic, on *Panicum purpurascens*, Poaceae
Reference: McGuire & Crandall 1967: 152, as *Uromyces leptodermus* Syd. & P. Syd., a synonym acc. to Index Fungorum.

***Uromyces striatus* J. Schröt.**

Growth form: rust

Ecology: plant parasitic, on *Medicago sativa*, Fabaceae
Reference: McGuire & Crandall 1967: 151.

***Uromyces yurimaguasensis* Henn.**

Growth form: rust

Ecology: plant parasitic, on *Clitoria arborescens*, Fabaceae
Ref.: Cummins 1978: 211; Lenné 1990: 34.

Ustilaginomycetes

Entylomatales

***Entyloma bidentis* Henn.**

Growth form: smut

Ecology: plant parasitic, on *Bidens pilosa*, Asteraceae
Province/Locality: CH
Reference: Piepenbring 2001: 421; Piepenbring 2003: 200.

***Entyloma compositarum* Far.**

Growth form: smut

Ecology: plant parasitic, on *Viguiera* sp., Asteraceae
Province/Locality: CH
Reference: Piepenbring 2001: 421; Piepenbring 2003: 204.

***Entyloma dahliae* Syd. & P. Syd.**

Growth form: smut

Ecology: plant parasitic, on *Dahlia* sp., Asteraceae
Province/Locality: CH
Reference: Piepenbring 2001: 422; Piepenbring 2003: 205.

***Entyloma spilanthis* Speg.**

Growth form: smut

Ecology: plant parasitic, on *Acmella papposa* var. *macrophylla*, Asteraceae

Province/Locality: CH
Reference: Piepenbring 2001: 422;
Piepenbring 2003: 213.

Georgiefischeriales

***Eballistra oryzae* (Syd. & P. Syd.) R. Bauer, Begerow, A. Nagler & Oberw.**

Growth form: smut
Ecology: plant parasitic, on *Oryza sativa*,
Poaceae
Reference: Toler et al. 1959: 1203, as
Entyloma oryzae Syd. & P. Syd.; McGuire &
Crandall 1967: 123, as *E. oryzae*; Piepenbring
2001: 421; Piepenbring 2003: 217.

Platyglloeales

***Jola hookeriarum* A. Møller**

Growth form: effuse
Ecology: parasitic on mosses, on capsules of
Raphidorrhynchium sp., Bryophyta
Province/Locality: CH
Reference: Martin 1939a: 243, as *Jola*
javensis Pat., a synonym acc. to Lowy 1971:
33; Dennis 1970: 131, as *J. javensis*; Lowy
1971: 33.

***Platyglloea decipiens* G.W. Martin a new species from Panama**

Growth form: effuse
Ecology: plant parasitic, on fallen trunk
Province/Locality: CH
Reference: Martin 1948: 119; Dennis 1970:
133; Lowy 1971: 41.

Tilletiales

***Tilletia ayresii* Berk. in Masee**

Growth form: smut
Ecology: plant parasitic, on *Panicum*
maximum, *Setaria paniculifera*, Poaceae
Province/Locality: CC, CH, CN, HE, LS, PA
Reference: Lenné 1990: 93; Piepenbring 2001:
420; Piepenbring 2003: 232.

***Tilletia horrida* Takah.**

Growth form: smut
Ecology: plant parasitic, on *Oryza sativa*,
Poaceae
Reference: Toler et al. 1959: 1203, as
Neovossia barclayana Bref., a wrong
identification; McGuire & Crandall 1967: 124,
as *Neovossia horrida* (Takah.) Padwick &
Khan and *N. barclayana*; Piepenbring 2001:
421, as *Tilletia barclayana* (Bref.) Sacc. &
Syd.; Piepenbring 2003: 240.

Urocystales

***Doassansiopsis limnocharidis* (Cif.) Vánky**

Growth form: smut
Ecology: plant parasitic, on *Limnocharis*
flava, Limnocharitaceae
Province/Locality: BO
Reference: Piepenbring 2001: 420;
Piepenbring 2003: 17.

Ustilaginales

***Cintractia axicola* (Berk.) Cornu**

Growth form: smut
Ecology: plant parasitic, on *Fimbristylis*
dichotoma (*F. annua*, *F. diphylla*), Cyperaceae
Province/Locality: CC, CN, PA
Reference: Jackson 1930: 299; Zundel 1953:
20, on *Scirpus brizoides*, a doubtful host;
Dennis 1970: 136; Piepenbring 2001: 412;
Piepenbring 2003: 51.

***Cintractia fimbristylicola* Pavgi & Mundk.**

Growth form: smut
Ecology: plant parasitic, on *Fimbristylis*
spadicea, Cyperaceae
Province/Locality: HE
Reference: Piepenbring 2001: 413;
Piepenbring 2003: 54.

***Cintractia limitata* G.P. Clinton**

Growth form: smut
Ecology: plant parasitic, on *Cyperus ligularis*,
C. rotundus, Cyperaceae
Province/Locality: LS
Reference: Piepenbring 2001: 413;
Piepenbring 2003: 55.

***Farysia chardoniana* Zundel**

Growth form: smut
Ecology: plant parasitic, on *Carex*
polystachya, Cyperaceae
Province/Locality: CH
Reference: Piepenbring 2001: 413;
Piepenbring 2003: 60.

***Leucocintractia scleriae* (DC.) M.
Piepenbr., Bergerow & Oberw.**

Growth form: smut
Ecology: plant parasitic, on *Rhynchospora*
corymbosa (*R. aurea*), Cyperaceae
Province/Locality: CN
Reference: Zundel 1953: 31, as *Cintractia*
leucoderma (Berk.) Henn., a wrong
identification acc. to Piepenbring 2000: 320;
Dennis 1970: 136, as *C. leucoderma*;
Piepenbring 2001: 414; Piepenbring 2003: 73.

***Mycosyrinx cissi* (DC.) Beck**

Growth form: smut
Ecology: plant parasitic, on *Cissus sicyoides*,
Vitaceae
Province/Locality: CN, DA
Ref.: Standley 1933: 19; Zundel 1953: 48;
Piepenbring 2001: 419; Piepenbring 2003: 39.

***Sporisorium holwayi* (G.P. Clinton &
Zundel) Vánky**

Growth form: smut
Ecology: plant parasitic, on *Andropogon*
bicornis, Poaceae
Province/Locality: CC, CH, CN, PA
Reference: Piepenbring 2001: 414;
Piepenbring 2003: 108.

***Sporisorium ovarium* (Griffiths) Vánky**

Growth form: smut
Ecology: plant parasitic, on *Urochloa*
fasciculata, Poaceae
Province/Locality: HE
Reference: Piepenbring 2001: 415;
Piepenbring 2003: 118.

***Sporisorium panamense* (Zundel &
Dunlap in Zundel) M. Piepenbr.
a new species from Panama**

Growth form: smut
Ecology: plant parasitic, on *Cymbopogon* sp.,
Poaceae
Province/Locality: CH
Reference: Zundel 1939: 995, as
Sphacelotheca panamensis Zundel & Dunlap;
Zundel 1953: 103, as *S. panamensis*; Dennis
1970: 136, as *S. panamensis*; Piepenbring
2001: 414, 427; Piepenbring 2003: 120.

***Sporisorium scitamineum* (Syd.) M.
Piepenbr., M. Stoll & Oberw.**

Growth form: smut
Ecology: plant parasitic, on *Saccharum* sp.,
Poaceae
Province/Locality: CH
Reference: Piepenbring 2001: 419, as *Ustilago*
scitaminea Syd.; Piepenbring 2003: 127.

***Sporisorium sorghi* Ehrenb. ex Link**

Growth form: smut
Ecology: plant parasitic, on *Sorghum vulgare*,
Poaceae
Reference: McGuire & Crandall 1967: 123, as
Sphacelotheca sorghi (Ehrenb. ex Link) G.P.
Clinton.

***Thecaphora solani* Barrus**

Growth form: smut
Ecology: plant parasitic, on *Solanum*
tuberosum, Solanaceae
Reference: McGuire & Crandall 1967: 126,
identified by symptoms.

Tranzscheliella hypodytes* (Schltdl.)*Vánky & McKenzie**

Growth form: smut

Ecology: plant parasitic, on *Stipa mucronata* (*S. setigera*), PoaceaeReference: Zundel 1953: 169; Piepenbring 2001: 418; Piepenbring 2003: 172; all as *Ustilago hypodytes* (Schltdl.) Fr.***Trichocintractia utriculicola* (Henn.) M.****Piepenbr.**

Growth form: smut

Ecology: plant parasitic, on *Rhynchospora corymbosa*, Cyperaceae

Province/Locality: BO, CN

Reference: Piepenbring 2001: 418;

Piepenbring 2003: 138.

***Ustilago maydis* (DC.) Corda**

Growth form: smut

Ecology: plant parasitic, on *Zea mays*, Poaceae

Province/Locality: CC

Reference: Toler et al. 1959: 1202; McGuire & Crandall 1967: 119; Piepenbring 2001: 418; Piepenbring 2003: 173.

***Ustilago schroeteriana* Henn. Fig. 45**

Growth form: smut

Ecology: plant parasitic, on *Paspalum paniculatum*, *P. virgatum*, Poaceae

Province/Locality: CH, DA

Reference: Zundel 1953: 198; Piepenbring 2001: 418; Piepenbring 2003: 182.

class: incertae sedis**order: incertae sedis*****Dictyochora paspali* F. Stevens
a new species from Panama**Ecology: plant parasitic, on *Paspalum saccharoides*, Poaceae

Province/Locality: CA

Reference: Stevens 1930: 283.

PUBLICATIONS ON ECOLOGY OF FUNGI IN PANAMA

Focusing on fungi in different habitats (not on living plants or animals):

- fungi as decomposers of forest litter (Cornejo et al. 1994);
- diversity of soil fungi (Farrow 1954; Goos 1960);
- diversity of macrolichens in mountain rain forests (Büdel et al. 2000);
- fungi from the deep sea (Kohlmeyer 1977).

Focusing on fungi associated with plants:

- fungi as parasites of plants (Gilbert et al. 1994, Gilbert & De Steven 1996, Travers et al. 1998);
- diversity of fungi as endophytes (Arnold et al. 2001; Gilbert et al. 2002b; Arnold & Herre 2003; Arnold et al. 2003);
- epiphyllous fungi (Gilbert et al. 1997);
- diversity of macrofungi on different trees (Gilbert et al. 2002a; Gilbert & Sousa 2002; Ferrer & Gilbert 2003);
- diversity and ecology of arbuscular mycorrhizal fungi (Kiers et al. 2000, Husband et al. 2002; Mangan et al. 2004).

Focusing on interactions fungi – animals:

- beetles eat slime mold plasmodia (Wheeler 1980);
- flies eat epiphyllous fungi (Broadhead 1984);
- small mammals eat arbuscular mycorrhizal fungi (Mangan & Adler 1999; Mangan & Adler 2000);
- fungi kill eggs of frogs (Warkentin et al. 2001);
- fungi related to fungus-growing ants (Hervey et al. 1977; Mueller et al. 1998; Currie 2001; Green et al. 2002; Hughes et al. 2004; Wirth et al. 2003);
- parasites on termites (Khan & Kimbrough 1974; Kimbrough & Thorne 1982);
- parasites on spiders (Nentwig 1985);

- parasite on frogs causing chytridiomycosis (Berger et al. 1998; Lips 1999; Lips et al. 2003);
- fungi associated with beetles (Roubik & Skelley 2001);
- yeasts as symbionts in the gut (Suh et al. 2003).

PUBLICATIONS ON APPLIED ASPECTS OF FUNGI IN PANAMA

The following studies on applied aspects of fungi have been carried out in Panama and published in international journals or books:

- fungi destroying cellulose of military equipment (Zuck 1946; Zuck & Diehl 1946; Ames 1949);
- diseases of cultivated plants (Toler et al. 1959; McGuire & Crandall 1967);
- fungi for biological control of aquatic weeds (Gangstad 1974; Freeman & Zettler 1974; Rintz 1974);
- nematophagous fungi from agricultural soil (Persmark et al. 1995).

- C.C. Soper from the Eastman Kodak Co. supervised experiments on the effect of fungi on cameras, lenses, films, and photographic paper on BCI (Heckadon-Moreno 1998: 146; pers. com. S. Heckadon-Moreno).

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