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Myconet Volume 14

Part One. Outine of Ascomycota – 2009

Part Two. Notes on ascomycete systematics. Nos. 4751 – 5113.

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**Abstract**

Part One presents the current classification that includes all accepted genera and higher taxa above the generic level in the phylum Ascomycota. It is based on the changes listed in Myconet notes 4751 – 5113. In the current outline, three subphyla (Pezizomycotina, Saccharomycotina, Taphrinomycotina) are accepted. Taphrinomycotina includes four classes Neolectomycetes, Pneumocystidomycetes, Saccharomycetes, Taphrinomycetes). Saccharomycotina consists of one class and Pezizomycotina includes eleven classes (Arthoniomycetes, Dothideomycetes, Eurotiomycetes, Geoglossomycetes, Laboulbeniomycetes, Lecanoromycetes, Leotiomycetes, Lichinomycetes, Orbiliomycetes, Pezizomycetes, Sordariomycetes). Part Two presents 363 notes on the taxonomy and nomenclature of ascomycetes (Ascomycota) at the generic and higher levels. Numerous changes at higher-level phylogeny resulted from multi-authored papers stemming from the AFTOL and Deep Hyphae projects, especially a publication on a revised fungal classification spearheaded by David Hibbett in 2007 and a 2009 volume of Studies in Mycology edited by Conrad Schoch and others and dedicated to work on the Dothideomycetes. The new name *Alectoria gowardii* Lumbsch is proposed for *Gowardia arctica* P. Halonen, L. Myllys, S. Velmala & H. Hyvärinen (non *Alectoria arctica* Elenkin & Savicz).

**Key words** ascomycetes, classification, taxonomy

## Part One. Outline of *Ascomycota* - 2009

### Introduction

The present classification is based in part on earlier versions published in Systema Ascomycetum and Myconet (see http://www.fieldmuseum.org/myconet/) and reflects the numerous changes listed in Myconet Notes Nos. 4751-5113 (Part Two). It includes all accepted genera and higher taxa of Ascomycota. New synonymous generic names are

included in the outline. In future outlines attempts will be made to incorporate all synonymous generic names (for a list of synonymous generic names, see Eriksson & Hawksworth 1998). A question mark (?) indicates that the position of the taxon is uncertain.

In the current outline, three subphyla (Pezizomycotina, Saccharomycotina, Taphrinomycotina) are accepted. Taphrinomycotina includes four classes, Neolectomycetes, Pneumocystidomycetes, Saccharomycetes, Taphrinomycetes, three of them with one order and one family and one, with one order and two families. Saccharomycotina consists of one class and includes one order with 12 families and nine unclassified genera. Pezizomycotina includes eleven classes (Arthoniomycetes, Dothideomycetes, Eurotiomycetes, Geoglossomycetes, Laboulbeniomycetes, Lecanoromycetes, Leotiomycetes, Lichinomycetes, Orbiliomycetes, Pezizomycetes, Sordariomycetes). Arthoniomycetes, Geoglossomycetes, Lichinomycetes, Orbiliomycetes, and Pezizales each consist of one order. Dothideomycetes includes two subclasses and eleven orders and numerous unclassified families. Eurotiomycetes includes two subclasses and six families. Laboulbeniomycetes has two orders, while Lecanoromycetes consists of three subclasses and ten orders and includes numerous unclassified families and genera. Leotiomycetes includes five orders. The large class Sordariomycetes is divided into three subclasses and includes 18 orders and various unclassified families and genera. Two orders (Medeolariales, Triblidiales) are currently not placed in any class, but placed in Pezizomycotina inc. sed. Twenty families are not placed in any class and 116 genera have an unclarified placement in Ascomycota.

**Literature Cited**

Eriksson OE, Hawksworth DL. 1998. Outline of the ascomycetes - 1998. Systema Ascomycetum 16: 83-296.

**Index to Ascomycota**

Subphylum Taphrinomycotina

- Class Neolectomycetes
- Class Pneumocystidomycetes
- Class Schizosaccharomycetes
- Class Taphrinomycetes

Subphylum Saccharomycotina

- Class Saccharomycetes

Subphylum Pezizomycotina

- Class Arthoniomycetes
- Class Dothideomycetes
  - Subclass Dothideomycetidae
  - Subclass Pleosporomycetidae
  - Dothideomycetes incertae sedis: orders, families, genera
- Class Eurotiomycetes
  - Subclass Chaetothyriomycetidae
  - Subclass Eurotiomycetidae
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  - Subclass Sordariomycetidae

Subclass Xylariomycetidae

Sordariomycetes incertae sedis: orders, families, genera

Pezizomycotina incertae sedis: orders, families

**Phylum ASCOMYCOTA** Caval.-Sm. 1998

**Subphylum TAPHRINOMYCOTINA** O.E. Erikss. & Winka 1997

**Class Neolectomycetes** O.E. Erikss. & Winka 1997

**Neolectales** Landvik, O.E. Erikss., Gargas & P. Gustafsson 1993

**Neolectaceae** Redhead 1977

*Neolecta* Speg.

**Class Pneumocystidomycetes** O.E. Erikss. & Winka 1997

**Pneumocystidales** O.E. Erikss. 1994

**Pneumocystidaceae** O.E. Erikss. 1994

*Pneumocystis* P. Delanoë & Delanoë

**Class Schizosaccharomycetes** O.E. Erikss. & Winka 1997

**Schizosaccharomycetales** O.E. Erikss., Svedskog & Landvik 1993

**Schizosaccharomycetaceae** Beij. ex Klöcker 1905

*Schizosaccharomyces* Lindner

**Class Taphrinomycetes** O.E. Erikss. & Winka 1997

**Taphrinales** Gäum. & C.W. Dodge 1928

**Protomycetaceae** Gray 1821

*Burenia* M.S. Reddy & C.L. Kramer

*Protomyces* Unger

*Protomycopsis* Magnus

*Taphridium* Lagerh. & Juel ex Juel

*Volkartia* Maire

**Taphrinaceae** Gäum. in Gäum. & C.W. Dodge 1928

*Taphrina* Fr.

**Taphrinomycetes,** genera incertae sedis

*Saitoëlla* S. Goto, J. Sugiyama, M. Hamamoto & K. Komagata

**Subphylum SACCHAROMYCOTINA** O.E. Erikss. & Winka 1997

**Class Saccharomycetes** O.E. Erikss. & Winka 1997

syn. Hemiascomycetes

**Saccharomycetales** Kudrjanzev 1960

**Ascoideaceae** J. Schröter 1894

*Ascoidea* Bref.

**Cephaloascaceae** L.R. Batra 1973

*Cephaloascus* Hanawa

**Dipodascaceae** Engl. & E. Gilg 1924

*Dipodascus* Lagerh.

*Galactomyces* Redhead & Malloch

?*Sporopachydermia* Rodr. Mir.

?*Yarrowia* Van der Walt & Arx

**Endomycetaceae** J. Schröt. 1893

*Ascocephalophora* K. Matsush. & Matsush.

*Endomyces* Reess

?*Phialoascus* Redhead & Malloch

**Eremotheciaceae** Kurtzman 1995

*Eremothecium* Borzí

?*Coccidiascus* Chatton

**Lipomycetaceae** E.K. Novák & Zsolt 1961

*Dipodascopsis* L.R. Batra & Millner

*Babjevia* van der Walt & M.Th. Smith

*Lipomyces* Lodder & Kreger

=*Kawasakia* Y. Yamada & Nogawa

=*Smithiozyma* Van der Walt, J.L.F. Koch & Y. Yamada

=*Waltomyces* Y. Yamada & Nakase

=*Zygozyma* Van der Walt & Arx

**Metschnikowiaceae** T. Kamienski 1899

*Clavispora* Rodr.Mir.

*Metschnikowia* T. Kamienski

**Pichiaceae** Zender 1925

*Dekkera* Van der Walt

*Kregervanrija* Kurtzman

*Komagataella* Y. Yamada, M Matsuda, K. Maeda & Mikata

*Phaffomyces* Y. Yamada, Higashi, S. Ando & Mikata

*Pichia* E.C. Hansen

=*Issatchenkia* Kudrjanzev

*Saturnispora* Z.W. Liu & Kurtzman

**Saccharomycetaceae** G. Winter 1881

?*Citeromyces* Santa Maria

?*Cyniclomyces* Van der Walt & D.B. Scott

?*Debaryomyces* Lodder & Kreger ex Kreger

*Kazachstania* Zubcova

=*Arxiozyma* Van der Walt & Yarrow

*Kluyveromyces* Van der Walt

*Kuraishia* Y. Yamada, K. Maeda & Mikata

*Kurtzmaniella* M.A. Lachance & W.T. Starmer

*Lachancea* Kurtzman

?*Lodderomyces* Van der Walt

*Nakaseomyces* Kurtzman

*Naumovozyma* Kurtzman

=*Naumovia* Kurtzman

?*Ogataea* Y. Yamada, K. Maeda & Mikata

?*Pachysolen* Boidin & Adzet

*Saccharomyces* Meyen

*Spathaspora* Nguyen, S.O. Suh & M. Blackw.

*Tetrapisispora* Ueda-Nishimura & K. Mikata

*Vanderwaltozyma* Kurtzman

*Torulaspora* Lindner

?*Williopsis* Zender

=*Lindnera* Kurtzman, Robnett & Basehoar-Powers

*Zygosaccharomyces* Barker

*Zygotorulaspora* Kurtzman

**Saccharomycodaceae** Kudrjanzev 1960

?*Hanseniaspora* Zikes

?*Nadsonia* Syd.

*Saccharomycodes* E.C. Hansen

?*Wickerhamia* Soneda

**Saccharomycopsidaceae** Arx & Van der Walt 1987

?*Ambrosiozyma* Van der Walt

*Arthroascus* Arx

*Saccharomycopsis* Schiønn.

**Trichomonascaceae** Kurtzman & Robnett 2007

*Sugiyamaella* Kurtzman & Robnett

*Trichomonascus* H.S. Jackson

*Stephanoascus* M.T. Sm., Van der Walt & Johannsen

*Wickerhamiella* Van der Walt

*Zygoascus* M.T. Sm.

**Saccharomycetales,** genera incertae sedis

*Ascobotryozyma* J. Kerrigan, M.T. Sm. & J.D. Rogers

*Barnettozyma* Kurtzman, Robnett & Basehoar-Powers

*Hyphopichia* von Arx & van der Walt

*Kodamaea* Y. Yamada, T. Suzuki, Matsuda & Mikata

*Nakazawaea* Y. Yamada, Maeda & Mikata

*Starmera* Y. Yamada, Higashi, S. Ando & Mikata

*Starmerella* Rosa & Lachance

*Wickerhamomyces* Kurtzman, Robnett & Basehoar-Powers

*Yamadazyma* Billon-Grand

**Subphylum PEZIZOMYCOTINA** O.E. Erikss. & Winka 1997

**Class Arthoniomycetes** O.E. Erikss. & Winka 1997

**Arthoniales** Henssen ex D. Hawksw. & O.E. Erikss. 1986

**Arthoniaceae** Reichenb. ex Reichenb. 1841

*Amazonomyces* Bat.

*Arthonia* Ach.

*Arthothelium* A. Massal.

*Coniarthonia* - Grube

*Cryptothecia* Stirt.

*Eremothecella* Syd. & P. Syd.

?*Gymnographoidea* Fink

*Herpothallon* Tobler

*Paradoxomyces* Matzer

*Sagenidiopsis* R.W. Rogers & Hafellner

*Sporostigma* Grube

*Stirtonia* A.L. Sm.

*Synarthothelium* Sparrius

*Tylophoron* Nyl. ex Stizenb.

**Chrysotrichaceae** Zahlbr. 1905

*Byssocaulon* Mont.

*Chrysothrix* Mont.

?**Melaspileaceae** W. Watson 1929

?*Encephalographa* A. Massal.

*Melaspilea* Nyl.

**Roccellaceae** Chevall. 1826

*Ancistrosporella* G. Thor

*Angiactis* Aptroot & Sparrius

*Bactrospora* A. Massal.

*Chiodecton* Ach.

*Combea* De Not.

*Cresponea* Egea & Torrente

*Darbishirella* Zahlbr. ex Darb.

*Dendrographa* Darb.

*Dichosporidium* Pat.

*Diplogramma* Müll. Arg.

*Dirina* Fr.

*Dirinastrum* Müll. Arg.

*Dolichocarpus* R. Sant.

*Enterodictyon* Müll. Arg.

*Enterographa* Fée

*Erythrodecton* G. Thor

*Feigeana* Mies, Lumbsch & Tehler

*Follmanniella* Peine & Werner

*Gorgadesia* Tav.

*Graphidastra* (Redinger) G. Thor

?*Halographis* Kohlm. & Volkm.-Kohlm.

*Haplodina* Zahlbr.

*Hubbsia* W.A. Weber

=*Reinkella* Darb.

*Ingaderia* Darb.

*Lecanactis* Körb.

*Lecanographa* Egea & Torrente

*Mazosia* A. Massal.

*Minksia* Müll. Arg.

*Opegrapha* Ach.

=*Dictyographa* Müll. Arg.

*Pentagenella* Darb.

=*Camanchaca* Follm.& Peine

*Peterjamesia* D. Hawksw.

*Phacographa* Hafellner

*Phacothecium* Trevis.

*Phoebus* R.C. Harris & Ladd

*Plectocarpon* Fée

*Protoroccella* L.M. Sánchez-Pinto & M. Schulz

?*Pseudolecanactis* Zahlbr.

*Roccella* DC.

=*Roccellodea* Darb.

*Roccellina* Darb.

=*Roccellaria* Darb.

*Roccellographa* J. Steiner

*Sagenidium* Stirt.

*Schismatomma* Flot. & Körb. ex A. Massal.

*Schizopelte* Th. Fr.

*Sclerophyton* Eschw.

*Sigridea* Tehler

*Simonyella* J. Steiner

*Streimannia* G. Thor

*Syncesia* Taylor

**Arthoniales,** genera incertae sedis

*Arthophacopsis* Hafellner

*Catarraphia* A. Massal.

?*Hormosphaeria* Lév.

*Llimonaea* Egea & Torrente

*Nipholepis* Syd.

*Perigrapha* Hafellner

*Pulvinodecton* Henssen & G. Thor

*Sipmania* Egea & Torrente

*Synarthonia* Müll. Arg.

*Tania* Egea, Torrente & Sipman

?*Tarbertia* Dennis

*Trichophyma* Rehm

*Tylophorella* Vain.

*Wegea* Aptroot & Tibell

**Class Dothideomycetes** sensu O.E. Erikss & Winka 1997

**Subclass Dothideomycetidae** P.M. Kirk, P.F. Cannon, J.C, David & J.A. Stalpers ex Schoch, Spatafora, Crous & Shoemaker 2007

**Capnodiales** Woron. 1925

**Antennulariellaceae** Woron. 1925

*Achaetobotrys* Bat. & Cif.

*Antennulariella* Woron.

**Capnodiaceae** (Sacc.) Höhn. ex Theiss. 1916

?*Aithaloderma* Syd. & P. Syd.

?*Anopeltis* Bat. & Peres

?*Callebaea* Bat.

*Capnodaria* (Sacc.) Theiss. & Syd.

*Capnodium* Mont.

?*Capnophaeum* Speg.

?*Ceramoclasteropsis* Bat. & Cavalc.

?*Echinothecium* Zopf

?*Hyaloscolecostroma* Bat. & J. Oliviera

*Phragmocapnias* Theiss. & Syd.

?*Polychaeton* (Pers.) Lév.

?*Scoriadopsis* Mend.

*Scorias* Fr.

**Coccodiniaceae** Höhn. ex O.E. Erikss. 1981

*Coccodinium* A. Massal.

*Dennisiella* Bat. & Cif.

*Limacinula* Höhn.

**Davidiellaceae** Schoch, Spatafora, Crous & Shoemaker 2007

*Davidiella* Crous & U. Braun

**Metacapnodiaceae** Hughes & Corlett 1972

*Metacapnodium* Speg.

**Mycosphaerellaceae** Lindau 1897

*Achorodothis* Syd.

*Brunneosphaerella* Crous

*Cymadothea* F.A. Wolf

*Euryachora* Fuckel

*Gillotia* Sacc. & Trotter

*Melanodothis* R. Arnold

*Mycosphaerella* Johanson

?*Placocrea* Syd.

*Polysporella* Woron.

*Pseudostigmidium* Etayo

*Sphaerellothecium* Zopf

*Sphaerulina* Sacc.

*Stigmidium* Trevis.

*Wernerella* Nav.-Ros., Roux & Giralt

**Piedraiaceae** Viégas ex Cif., Bat. & Campos 1956

*Piedraia* Fons. & Leao

**Dothideales** Lindau 1897

**Dothideaceae** Chevall. 1826

?*Auerswaldia* Sacc.

?*Bagnisiella* Speg.

?*Coccostromella* Petr.

*Dictyodothis* Theiss. & Syd.

*Dothidea* Fr.

*Lucidascocarpa* A. Ferrer, Raja & Shearer

*Mycoporis* Clem.

*Omphalospora* Theiss. & Syd.

*Pachysacca* Syd.

?*Phyllachorella* Syd.

*Scirrhia* Nitschke ex Fuckel

*Stylodothis* Arx & E. Müll.

?*Vestergrenia* Rehm

**Dothioraceae** Theiss. & H. Syd. 1917

?*Botryochora* Torrend

*Delphinella* (Sacc.) Kuntze

*Dothiora* Fr.

*Endodothiora* Petr.

?*Jaffuela* Speg.

?*Phaeocryptopus* Naumov

*Plowrightia* Sacc.

*Saccothecium* Fr.

*Sydowia* Bres.

*Yoshinagaia* P. Henn.

**Teratosphaeriaceae** Crous & U. Braun 2007

?*Teratosphaeria* Syd. & P. Syd.

**Myriangiales** Starbäck 1899

**Elsinoaceae** Höhn. ex Sacc. & Trotter 1913

*Beelia* F. Stevens & R.W. Ryan ex F. Stevens

*Butleria* Sacc.

*Elsinoë* Racib.

*Hemimyriangium* J. Reid & Piroz.

*Hyalotheles* Speg.

*Micularia* Boedijn

*Molleriella* G. Winter

*Saccardinula* Speg.

*Stephanotheca* Syd. & P. Syd.

*Xenodium* Syd.

**Myriangiaceae** Nyl. 1854

?*Anhellia* Racib.

*Diplotheca* Starb.

?*Eurytheca* De Seynes

*Myriangium* Mont. & Berk.

**Subclass Pleosporomycetidae** Schoch, Spatafora, Crous & Shoemaker 2007

**Pleosporales** Luttrell ex M.E. Barr 1987

syn. Melanommatales

**Aigialaceae** Suetrong, Sakayaroj, E.B.G. Jones, Kohlm., Volkm.-Kohlm. & C.L. Schoch 2009

*Aigialus* S. Schatz & Kohlm.

*Ascocratera* Kohlm.

*Rimora* Kohlm., Volkm.-Kohlm., Suetrong, Sakayaroj & E.B.G. Jones

**Amniculicolaceae** Yin. Zhang, C.L. Schoch, J. Fourn., Crous & K.D. Hyde 2009

*Amniculicola* Y. Zhang & K.D. Hyde

*Murispora* Yin. Zhang, C.L. Schoch, J. Fourn., Crous & K.D. Hyde

*Neomassariosphaeria* Yin. Zhang, J. Fourn. & K.D. Hyde

**Cucurbitariaceae** G. Winter 1885

*Cucurbitaria* Gray

*Curreya* Sacc.

?*Rhytidiella* Zalasky

*Syncarpella* Theiss. & Syd.

**Delitschiaceae** M.E. Barr 2000

*Delitschia* Auersw.

*Ohleriella* Earle

*Semidelitschia* Cain & Luck-Allen

**Diademaceae** Shoemaker & C.E. Babc. 1992

*Clathrospora* Rabenh.

*Comoclathris* Clem.

*Diadema* Shoemaker & C.E. Babc.

*Diademosa* Shoemaker & C.E. Babc.

*Graphyllium* Clem.

**Didymellaceae** Gruyter, Aveskamp & Verkley 2009

*Didymella* Sacc. ex D. Sacc.

*Leptosphaerulina* McAlpine

*Macroventuria* Aa

*Monascostroma* Höhn.

*Platychora* Petr.

**Didymosphaeriaceae** Munk 1953

*Appendispora* K.D. Hyde

*Didymosphaeria* Fuckel

*Phaeodothis* Syd. & P. Syd.

*Roussoëlla* Sacc.

*Verruculina* Kohlm. & Volkm.-Kohlm.

**Dothidotthiaceae** Crous & A.J.L. Phillips 2008

*Dothidotthia* Höhn.

**Hypsostromataceae** Huhndorf 1994

*Hypsostroma* Huhndorf

**Lentitheciaceae** Yin. Zhang, C.L. Schoch, J. Fourn., Crous & K.D. Hyde 2009

*Katumotoa* Kaz. Tanaka & Y. Harada

*Keissleriella* Höhn.

*Lentithecium* K.D. Hyde, J. Fourn. & Yin. Zhang

**Leptosphaeriaceae** M.E. Barr 1987

*Leptosphaeria* Ces. & De Not.

*Neophaeosphaeria* Câmara, M.E. Palm & A.W. Ramaley

**Lindgomycetaceae** K. Hiray., Kaz. Tanaka & Shearer 2009

*Lindgomyces* K. Hiray., Kaz. Tanaka & Shearer

**Lophiostomataceae** Sacc. 1883

*Byssolophis* Clem.

*Cilioplea* Munk

*Epiphegia* Nitschke ex G.H. Otth

*Lophiella* Sacc.

*Lophionema* Sacc.

*Lophiostoma* Ces. & De Not.

*Lophiotrema* Sacc.

*Massariosphaeria* (E. Müll.) Crivelli

*Misturatosphaeria* Mugambi & Huhndorf

*Muroia* I. Hino & Katum.

*Quintaria* Kohlm. & Volkm.-Kohlm.

**Massariaceae** Nitschke 1869

*Decaisnella* Fabre

*Dothivalsaria* Petr.

=*Cryptovalsaria* Lar.N. Vassiljeva & S.L. Stephenson

?*Dubitatio* Speg.

*Massaria* De Not.

*Navicella* Fabre

**Massarinaceae** Munk 1956

?*Byssothecium* Fuckel

*Massarina* Sacc.

*Saccharicola* D. Hawksw. & O.E. Erikss.

**Melanommataceae** G. Winter 1885

*Acrocordiopsis* Borse & K.D. Hyde

?*Anomalemma* Sivan.

*Asymmetricospora* J. Fröhl. & K.D. Hyde

*Bertiella* (Sacc.) Sacc. & P. Syd.

*Bicrouania* Kohlm. & Volkm.-Kohlm.

*Byssosphaeria* Cooke

*Calyptronectria* Speg.

?*Caryosporella* Kohlm.

*Herpotrichia* Fuckel

*Javaria* Boise

?*Mamillisphaeria* K.D. Hyde, S.W. Wong & E.B.G. Jones

*Melanomma* Nitschke ex Fuckel

*Ohleria* Fuckel

*Pseudotrichia* Kirschst.

**Montagnulaceae** M.E. Barr 2001

*Bimuria* D. Hawksw., Chea & Sheridan

*Didymocrea* Kowalsky

*Didymosphaerella* Cooke

?*Kalmusia* Niessl

*Karstenula* Speg.

?*Letendraea* Sacc.

*Montagnula* Berl.

*Paraphaeosphaeria* O.E. Erikss.

**Morosphaeriaceae** Suetrong, Sakayaroj, E.B.G. Jones & C.L. Schoch 2009

*Helicascus* Kohlm.

*Morosphaeria* Suetrong, Sakayaroj, E.B.G. Jones & C.L. Schoch

**Phaeosphaeriaceae** M.E. Barr 1979

*Barria* Z.Q. Yuan

*Bricookea* M.E. Barr

*Carinispora* K.D. Hyde

?*Chaetoplea* (Sacc.) Clem.

*Entodesmium* Riess

?*Eudarluca* Speg.

*Hadrospora* Boise

*Isthmosporella* Shearer & Crane

?*Lautitia* S. Schatz

*Metameris* Theiss. & Syd.

*Mixtura* O.E. Erikss. & J.Z. Yue

*Nodulosphaeria* Rabenh.

*Ocala* Raja & Shearer

*Ophiobolus* Riess

*Ophiosphaerella* Speg.

*Phaeosphaeria* I. Miyake

=*Amarenomyces* O.E. Erikss.

*Phaeosphaeriopsis* Câmara, M.E. Palm & A.W. Ramaley

*Pleoseptum* A.W. Ramaley & M.E. Barr

*Setomelanomma* M. Morelet

*Wilmia* Dianese, Inácio & Dornelo-Silva

**Phaeotrichaceae** Cain 1956

*Echinoascotheca* Matsush.

*Phaeotrichum* Cain & M.E. Barr

*Trichodelitschia* Munk

**Pleomassariaceae** M.E. Barr 1979

*Asteromassaria* Höhn.

*Lichenopyrenis* Calatayud, Sanz & Aptroot

*Peridiothelia* D. Hawksw.

*Splanchnonema* Corda

*Pleomassaria* Speg.

**Pleosporaceae** Nitschke 1869

*Cochliobolus* Drechsler

*Crivellia* Shoemaker & Inderbitzin

*Decorospora* Inderbitzin, Kohlm. & Volkm.-Kohlm.

*Extrawettsteinina* M.E. Barr

*Kriegeriella* Höhn.

*Lewia* M.E. Barr & E.G. Simmons

*Macrospora* Fuckel

*Platysporoides* (Wehm.) Shoemaker & C.E. Babc.

*Pleospora* Rabenh. ex Ces. & De Not.

*Pseudoyuconia* Lar. N. Vasiljeva

*Pyrenophora* Fr.

*Setosphaeria* K.J. Leonard & Suggs

*Zeuctomorpha* Sivan., P.M. Kirk & Govindu

**Sporormiaceae** Munk 1957

*Chaetopreussia* Locq.-Lin.

*Pleophragmia* Fuckel

*Preussia* Fuckel

*Sporormia* De Not.

*Sporormiella* Ellis & Everh.

*Sporormin*ula Arx & Aa

*Westerdykella* Stolk

= *Eremodothis* Arx

= *Pycnidiophora* Clum

**Teichosporaceae** M.E. Barr 2002

*Chaetomastia* (Sacc.) Berl

*Immothia* M.E. Barr

*Loculohypoxylon* M.E. Barr

*Sinodidymella* J.Z. Yue & O.E. Erikss.

*Teichospora* Fuckel

**Testudinaceae** Arx 1971

*Lepidosphaeria* Parg.-Leduc

*Neotestudina* Segretain & Destombes

*Testudina* Bizz.

*Ulospora* D. Hawksw., Malloch & Sivan.

**Tetraplosphaeriaceae** Kaz. Tanaka & K. Hiray 2009

*Polyplosphaeria* Kaz. Tanaka & K. Hiray

*Tetraplosphaeria* Kaz. Tanaka & K. Hiray

*Triplosphaeria* Kaz. Tanaka & K. Hiray

**Trematosphaeriaceae** nomen nudum (Hyde, in prep.)

*Falciformispora* K.D. Hyde

*Halomassarina* Suetrong, Sakayaroj, E.B.G. Jones, Kohlm., Volkm.-Kohlm. & C.L. Schoch

*Trematosphaeria* Fuckel

**Venturiaceae** E. Müll. & Arx ex M.E. Barr 1979

*Acantharia* Theiss. & Syd.

*Antennularia* Reichenb.

*Apiosporina* Höhn.

*Arkoola* J. Walker & Stovold

*Atopospora* Petr.

*Botryostroma* Höhn.

*Caproventuria* U. Braun

*Coleroa* (Fr.) Rabenh.

*Crotone* Theiss. & Syd.

*Dibotryon* Theiss. & Syd.

*Gibbera* Fr.

*Lasiobotrys* Kunze

?*Lineostroma* H.J. Swart

*Metacoleroa* Petr.

*Phaeocryptopus* Naumov

*Phragmogibbera* Samuels & Rogerson

?*Polyrhizon* Theiss. & Syd.

*Pseudoparodiella* F. Stevens

*Pyrenobotrys* Theiss. & Syd.

*Rhizogene* Syd. & P. Syd.

*Rosenscheldiella* Theiss. & Syd.

*Sivanesaniella* Gawande & Agarwal

*Trichodothella* Petr.

*Trichodothis* Theiss. & Syd.

*Uleodothis* Theiss. & Syd.

*Venturia* Sacc.

*Xenomeris* Syd.

**Zopfiaceae** G. Arnaud ex D. Hawksw. 1992

*Caryospora* De Not.

*Celtidia* J.M. Janse

?*Coronopapilla* Kohlm. & Volkm.-Kohlm.

?*Halotthia* Kohlm.

*Pontoporeia* Kohlm.

?*Rechingeriella* Petr.

*Richonia* Boud.

*Zopfia* Rabenh.

*Zopfiofoveola* D. Hawksw.

**Pleosporales,** genera incertae sedis

*Anteaglonium* Mugambi & Huhndorf

*Ascorhombispora* L. Cai & K.D. Hyde

*Astrosphaeriella* Syd. & P. Syd.

*Atradidymella* Davey & Currah

*Ostropella* (Sacc.) Höhn.

*Platystomum* Trevis.

*Shiraia* P. Henn.

*Tingoldiago* K. Hiray. & Kaz. Tanaka

*Xenolophium* Syd.

**Pleosporomycetidae,** genera incertae sedis

*Farlowiella* Sacc.

*Hysterographium* Corda

**Dothideomycetes**, orders incertae sedis

**Acrospermales** Minter, Peredo & A.T. Watson 2007

**Acrospermaceae** Fuckel 1870

*Acrospermum* Tode

*Oomyces* Berk. & Broome

**Botryosphaeriales** Schoch, Crous & Shoemaker 2007

**Botryosphaeriaceae** Theiss. & H. Syd. 1918

*Auerswaldiella* Theiss. & Syd.

*Barriopsis* A.J.L. Phillips & Crous

*Botryosphaeria* Ces. & De Not.

*Guignardia* Viala & Ravaz

*Leptoguignardia* E. Müll.

*Neodeightonia* C. Booth

*Phaeobotryon* Theiss. & Syd.

*Phaeobotryosphaeria* Speg.

*Saccharata* Denman & Crous

*Sivanesania* W.H. Hsieh & C.Y. Chen

*Spencermartinsia* A.J.L. Phillips, A. Alves & Crous

**Hysteriales** Lindau 1897

**Hysteriaceae** Chevall. 1826

*Actidiographium* Lar. N. Vasiljeva

*Gloniella* Sacc.

*Gloniopsis* De Not.

*Hysterium* Pers.

*Hysterobrevium* E.W.A. Boehm & C.L Schoch

*Hysterocarina* Zogg

?*Hysteroglonium* Rehm ex Lindau

?*Hysteropatella* Rehm

*Oedohysterium* E.W.A. Boehm & C.L Schoch

*Ostreichnion* Duby

?*Pseudoscypha* J. Reid & Piroz.

*Psiloglonium* Höhn.

**Jahnulales** Pang, Abdel-Wahab, El-Sharouney, E.B.G. Jones & Sivichai 2002

**Aliquandostipitaceae** Inderbitzin 2001

*Aliquandostipite* Inderbitzin

*Jahnula* Kirschst.

?*Megalohypha* A. Ferrer & Shearer

*Patescopora* Abdel-Wahab & El-Sharouney

**Jahnulales**, genera incertae sedis

*Manglicola* Kohlm.

**Mytilinidiales** Boehm, Schoch & Spatafora 2009

**Gloniaceae** (Corda) Boehm, Schoch & Spatafora 2009

*Glonium* Mühl.

**Mytilinidiaceae** Kirschst. 1924

*Actidium* Fr.

*Lophium* Fr.

*Mytilinidion* Duby

*Ostreola* Darker

*Quasiconcha* M.E. Barr & M. Blackw.

*Zoggium* Lar. N. Vasiljeva

**Patellariales** D. Hawksw. & O.E. Erikss. 1986

**Patellariaceae** Corda 1838

*Baggea* Auersw.

*Banhegyia* Zeller & Tóth

?*Endotryblidium* Petr.

*Holmiella* Petrini, Samuels & E. Müll.

*Lecanidiella* Sherwood

*Lirellodisca* Aptroot

*Murangium* Seaver

*Patellaria* Fr.

*Poetschia* Körb.

*Pseudoparodia* Theiss. & Syd.

*Rhizodiscina* Hafellner

*Rhytidhysteron* Speg.

*Schrakia* Hafellner

*Stratisporella* Hafellner

*Tryblidaria* (Sacc.) Sacc.

**Trypetheliales** Lücking, Aptroot & Sipman 2008

**Trypetheliaceae** Zenker 1827

*Aptrootia* Lücking & Sipman

*Architrypethelium* Aptroot

*Astrothelium* Eschw.

*Campylothelium* Müll. Arg.

*Exiliseptum* R.C. Harris

*Laurera* Reichenb.

?*Mycomicrothelia* Keissl.

*Polymeridium* (Müll. Arg.) R.C. Harris

?*Pseudopyrenula* Müll. Arg.

?*Trypetheliopsis* Asah.

=*Musaespora* Aptroot & Sipman

*Trypethelium* Sprengel

**Dothideomycetes**, families incertae sedis

**Argynnaceae** Shearer & J.L. Crane 1980

*Argynna* Morgan

*Lepidopterella* Shearer & J.L. Crane

**Arthopyreniaceae** W. Watson 1929

*Arthopyrenia* A. Massal.

*Athrismidium* Trevis.

**Ascoporiaceae** Kutorga & D. Hawksw. 1997

*Pseudosolidum* Lloyd

**Asterinaceae** Hansf. 1946

*Allothyrium* Syd.

*Anariste* Syd.

*Aphanopeltis* Syd.

*Asterina* Lév.

*Asterodothis* Theiss.

*Asterolibertia* G. Arnaud

*Asterotexis* Arx

?*Aulographina* Arx & E. Müll.

*Batistinula* Arx

*Cirsosia* G. Arnaud

*Dothidasteromella* Höhn.

*Echidnodella* Theiss. & Syd.

*Echidnodes* Theiss. & Syd.

*Eupelte* Syd.

*Halbania* Racib.

*Ischwaramyces* V.B. Hosagoudar

*Lembosia* Lév.

?*Lembosina* Theiss.

?*Lembosiopsis* Theiss.

*Leveillella* Theiss. & Syd.

*Macowaniella* Doidge

*Meliolaster* Höhn.

?*Morenoina* Theiss.

*Neostomella* Syd.

*Parasterinella* Speg.

*Parasterinopsis* Bat.

?*Petrakina* Cif.

*Placoasterella* (Sacc.) Theiss. & Syd.

?*Placoasterina* Toro

*Placosoma* Syd.

*Prillieuxina* G. Arnaud

*Symphaster* Theiss. & Syd.

*Thyriopsis* Theiss. & Syd.

*Trichamelia* Bat.

*Trichasterina* G. Arnaud

*Uleothyrium* Petr.

*Viegasia* Bat.

*Yamamotoa* Bat.

**Aulographaceae** Luttr. ex P.M. Kirk, P.F. Cannon & J.C. David 2001

*Aulographum* Lib.

*Polyclypeolina* Bat. & I.H. Lima ex Bat.

**Coccoideaceae** P. Henn. ex Sacc. & D. Sacc. 1905

*Coccoidea* P. Henn.

?*Coccoidella* Höhn.

**Cookellaceae** Höhn. ex Sacc. & Trotter 1913

*Cookella* Sacc.

*Pycnoderma* Syd.

*Uleomyces* P. Henn.

**Corynesporascaceae** Sivan. 1996

*Corynesporasca* Sivan.

**Dacampiaceae** Körb. 1855

?*Aaosphaeria* Aptroot

*Clypeococcum* D. Hawksw.

?*Cocciscia* Norman

*Dacampia* A. Massal.

*Eopyrenula* R.C. Harris

*Kalaallia* Alstrup & D.Hawksw.

*Leptocucurthis* Aptroot

*Munkovalsaria* Aptroot

*Polycoccum* Sauter ex Körb.

*Pyrenidium* Nyl.

*Weddellomyces* D. Hawksw.

**Englerulaceae** P. Henn. 1904

*Englerula* P. Henn.

*Goosia* B. Song

*Parenglerula* Höhn.

*Rhizotexis* Theiss. & Syd.

*Rhytidenglerula* Höhn.

*Schiffnerula* Höhn.

*Thrauste* Theiss.

**Eremomycetaceae** Malloch & Cain 1971

*Eremomyces* Malloch & Cain

*Rhexothecium* Samson & Mouch.

**Euantennariaceae** Hughes & Corlett 1972

*Euantennaria* Speg.

*Rasutoria* M.E. Barr

*Strigopodia* Bat.

*Trichopeltheca* Bat., C.A.A. Costa & Cif.

**Fenestellaceae** M.E. Barr 1979

*Fenestella* Tul. & C. Tul.

*Lojkania* Rehm

**Leptopeltidaceae** Höhn. ex Trotter 1928

*Dothiopeltis* E. Müll.

*Leptopeltis* Höhn.

?*Nannfeldtia* Petr.

?*Phacidina* Höhn.

*Ronnigeria* Petr.

*Staibia* Bat. & Peres

**Lichenotheliaceae** Henssen 1986

*Lichenostigma* Hafellner

*Lichenothelia* D. Hawksw.

**Meliolinaceae** S. Hughes 1993

*Meliolina* Syd. & P. Syd.

**Mesnieraceae** Arx & E. Müll. 1975

*Bondiella* Piroz.

?*Helochora* Sherwood

*Mesniera* Sacc. & P. Syd.

*Stegasphaeria* Syd. & P. Syd.

**Micropeltidaceae** Clem. & Shear 1931

?*Armata* W. Yamam.

*Bonaria* Bat.

*Chaetothyrina* Theiss.

*Clypeolina* Theiss.

*Cyclopeltis* Petr.

*Dictyopeltella* Bat. & I.H. Lima ex Bat.

*Dictyopeltis* Theiss.

*Dictyostomiopelta* Viégas

*Dictyothyriella* Speg. (non Rehm)

*Dictyothyrina* Theiss.

*Dictyothyrium* Theiss.

*Hansfordiopsis* Bat.

*Haplopeltheca* Bat., J.L. Bezerra & Cavalc.

*Mendoziopeltis* Bat.

*Micropeltis* Mont.

?*Mitopeltis* Speg.

*Muricopeltis* Viégas

*Polypedia* Bat. & Peres

*Stigmatodothis* Syd. & P. Syd.

*Stigmatophragmia* Tehon & G.L. Stout

*Stomiopeltis* Theiss.

*Stomiopeltopsis* Bat. & Cavalc.

*Stomiotheca* Bat.

*Thyriodictyella* Cif.

**Microtheliopsidaceae** O.E. Erikss. 1981

*Microtheliopsis* Müll. Arg.

**Microthyriaceae** Sacc. 1883

*Actinomyxa* Syd. & P. Syd.

*Actinopeltis* Höhn.

*Arnaudiella* Petr.

*Asterinella* Theiss.

*Asterinema* Bat. & Gayao

?*Asteritea* Bat. & R. Garnier

*Asteronia* (Sacc.) P. Henn.

*Byssopeltis* Bat., J.L. Bezerra & T. Barros

*Calothyriopsis* Höhn.

*Caribaeomyces* Cif.

*Caudella* Syd. & P. Syd.

?*Cirsosina* Bat. & J.L. Bezerra

*Cirsosiopsis* Butin & Speer

*Cyclotheca* Theiss.

*Dictyoasterina* Hansf.

*Govindua* Bat. & H. Maia

?*Helminthopeltis* Sousa da Câmara

?*Hidakaea* I. Hino & Katum.

?*Hugueninia* J.L. Bezerra & T. Barros (1970, non Reichenb. 1832)

?*Lembosiella* Sacc.

*Lichenopeltella* Höhn.

*Macrographa* Etayo

*Maublancia* G. Arnaud

*Microthyrium* Desm.

*Muyocopron* Speg.

*Pachythyrium* G. Arnaud ex Spooner & P.M. Kirk

*Palawania* Syd. & P. Syd.

?*Petrakiopeltis* Bat., A.F. Vital & Cif.

*Phaeothyriolum* Syd.

?*Phragmaspidium* Bat.

*Platypeltella* Petr.

*Polycyclinopsis* Bat., A.F. Vital & I.H. Lima

?*Polystomellina* Bat. & A.F. Vital

?*Resendea* Bat.

?*Sapucchaka* Ramakr.

?*Scolecopeltidium* F. Stevens & Manter

*Seynesiella* G. Arnaud

*Seynesiopeltis* F. Stevens & R.W. Ryan

?*Stegothyrium* Höhn.

?*Tothia* Bat.

?*Trichopeltella* Höhn.

?*Trichopeltina* Theiss.

?*Trichopeltospora* Bat. & Cif.

?*Trichopeltum* Bat., Cif. & C.A.A. Costa

*Trichothyriella* Theiss.

*Trichothyrinula* Petr.

*Trichothyriomyces* Bat. & H. Maia

*Trichothyriopsis* Theiss.

*Trichothyrium* Speg.

*Xenostomella* Syd.

**Moriolaceae** Zahlbr. 1903

*Moriola* Norman

**Mycoporaceae** Zahlbr. 1903

*Mycoporum* Flot. ex Nyl. (non G. Mey.)

**Naetrocymbaceae** Höhnel ex R.C. Harris 1995

*Jarxia* D. Hawksw.

*Leptorhaphis* Körb.

*Naetrocymbe* Körb.

?*Tomasellia* A. Massal.

**Parmulariaceae** E. Müll. & Arx ex M.E. Barr 1979

*Aldona* Racib.

*Aldonata* Sivan. & A.R.P. Sinha

*Aulacostroma* Syd. & P. Syd.

*Campoa* Speg.

*Coccodothis* Theiss. & Syd.

*Cocconia* Sacc.

*Cycloschizon* P. Henn.

*Cyclostomella* Pat.

*Dictyocyclus* Sivan., W.H. Hsieh & Chi Y. Chen

*Dothidasteroma* Höhn.

*Englerodothis* Theiss. & Syd.

*Ferrarisia* Sacc.

?*Hemigrapha* (Müll. Arg.) D. Hawksw.

*Hysterostomella* Speg.

*Inocyclus* Theiss. & Syd.

*Kentingia* Sivan. & W.H. Hsieh

*Kiehlia* Viégas

*Mintera* Inácio & P.F. Cannon

*Pachypatella* Theiss. & Syd.

*Palawaniella* Doidge

*Parmularia* Lév.

*Parmulariopsella* Sivan.

*Parmulariopsis* Petr.

*Parmulina* Theiss. & Syd.

*Perischizon* P. Syd.

*Polycyclina* Theiss. & Syd.

*Polycyclus* Höhn.

*Protothyrium* G. Arnaud

*Pseudolembosia* Theiss.

*Rhagadolobium* P. Henn. & Lindau

*Rhipidocarpon* (Theiss.) Theiss. & Syd.

*Symphaeophyma* Speg.

*Thallomyces* H.J. Swart

*Viegasiella* Inácio & P.F. Cannon

**Parodiellaceae** Theiss. & H. Syd. ex M.E. Barr 1987

*Parodiella* Speg.

**Parodiopsidaceae** (G. Arnaud) ex Toro 1952

*Alina* Racib.

*Balladyna* Racib.

*Balladynocallia* Bat.

*Balladynopsis* Theiss. & Syd.

*Chevalieropsis* G. Arnaud

*Cleistosphaera* Syd. & P. Syd.

*Dimeriella* Speg.

*Dimerium* Syd. & P. Syd.

*Dysrhynchis* Clem.

?*Hyalomeliolina* F. Stevens

*Leptomeliola* Höhn.

*Neoparodia* Petr. & Cif.

*Ophiomeliola* Starb.

*Ophioparodia* Petr. & Cif.

*Parodiellina* P. Henn. ex G. Arnaud

*Perisporiopsis* P. Henn.

*Pilgeriella* P. Henn.

*Scolionema* Theiss. & Syd.

*Stomatogene* Theiss.

**Planistromellaceae** M.E. Barr 1996

*Comminutispora* A.W. Ramaley

*Eruptio* M.E. Barr

*Loratospora* Kohlm. & Volkm.-Kohlm.

*Microcyclus* Sacc. ex Syd. & P. Syd.

*Mycosphaerellopsis* Höhn. (n)

*Planistroma* A.W. Ramaley

*Planistromella* A.W. Ramaley

**Polystomellaceae** Theiss. & H. Syd. 1915

*Dothidella* Speg.

*Munkiella* Speg.

?*Parastigmatea* Doidge

**Protoscyphaceae** Kutorga & D. Hawksw. 1997

*Protoscypha* Syd.

**Pseudoperisporiaceae** Toro 1926

?*Aphanostigme* Syd.

?*Bryochiton* Döbbeler & Poelt

?*Bryomyces* Döbbeler

?*Epibryon* Döbbeler

*Episphaerella* Petr.

*Eudimeriolum* Speg.

*Eumela* Syd.

*Keratosphaera* H.P. Upadhyay

*Lasiostemma* Theiss.

*Lizonia* (Ces. & De Not.) De Not.

*Myxophora* Döbbeler & Poelt

*Nematostigma* Syd. & P. Syd.

*Nematostoma* Syd. & P. Syd.

?*Nematothecium* Syd. & P. Syd.

*Neocoleroa* Petr.

*Ophiciliomyces* Bat. IH.Lima

*Phaeodimeriella* Speg.

*Phaeostigme* Syd. & P. Syd.

*Phragmeriella* Hansf.

?*Pododimeria* E. Müll.

*Raciborskiomyces* Siemaszko

*Toroa* Syd.

**Pyrenotrichaceae** Zahlbr. 1926

?*Cyanoporina* Groenh.

*Pyrenothrix* Riddle

**Schizothyriaceae** Höhn. ex Trotter et al. 1928

*Amazonotheca* Bat. & H. Maia

?*Chaetoplaca* Syd. & P. Syd.

*Henningsiella* Rehm

*Hexagonella* F. Stevens & Guba ex F. Stevens

*Kerniomyces* Toro

*Lecideopsella* Höhn.

*Linopeltis* I. Hino & Katum.

*Mendogia* Racib.

*Metathyriella* Syd.

*Mycerema* Bat., J.L. Bezerra & Cavalc.

?*Myriangiella* Zimm.

?*Neopeltella* Petr.

?*Orthobellus* Silva & Cavalc.

*Plochmopeltis* Theiss.

*Schizothyrium* Desm.

**Tubeufiaceae** M.E. Barr 1979

*Acanthostigma* De Not.

*Acanthophiobolus* Berl.

*Acanthostigmella* Höhn.

*Allonecte* Syd.

?*Amphinectria* Speg.

*Boerlagiomyces* Butzin

*Byssocallis* Syd.

*Chaetocrea* Syd.

*Chaetosphaerulina* I. Hino

*Glaxoa* P. Cannon

*Letendraeopsis* K.F. Rodriguez & Samuels

*Malacaria* Syd.

*Melioliphila* Speg.

*Paranectriella* (P. Henn. & Sacc.) Höhn.

*Podonectria* Petch

*Puttemansia* P. Henn.

*Rebentischia* P. Karst.

*Taphrophila* Scheuer

*Thaxteriella* Petr.

?*Thaxteriellopsis* Sivan., Panwar & S.J. Kaur

*Thaxterina* Sivan., Rajak & R.C. Gupta

*Tubeufia* Penz. & Sacc.

*Uredinophila* Rossman

**Vizellaceae** H.J. Swart 1971

*Blasdalea* Sacc. & P. Syd.

*Vizella* Sacc.

**Dothideomycetes**, genera incertae sedis

?*Achorella* Theiss. & Syd.

*Acrogenotheca* Cif. & Bat.

*Allosoma* Syd.

*Amylirosa* Speg.

*Anthracostroma* Petr.

*Ascocoronospora* Matsush.

*Ascominuta* Ranghoo & K.D. Hyde

?*Ascostratum* Syd. & P. Syd.

*Belizeana* Kohlm. & Volkm.

*Biatriospora* K.D. Hyde & Borse

*Biciliopsis* Diederich

*Bifrontia* Norman

*Botryohypoxylon* Samuels & J.D. Rogers

*Brefeldiella* Speg.

*Brooksia* Hansf.

*Bryopelta* Döbbeler & Poelt

*Bryorella* Döbbeler

*Bryosphaeria* Döbbeler

*Bryostroma* Döbbeler

*Bryothele* Döbbeler

*Buelliella* Fink

*Byssogene* Syd.

*Calyptra* Theiss. & Syd.

*Capillataspora* K.D. Hyde

*Capnodinula* Bat. & Cif.

*Catinella* Boud.

*Catulus* Malloch & Rogerson

*Ceratocarpia* Rolland

*Cercidospora* Körb.

*Cerodothis* Muthappa

*Chaetoscutula* E. Müll.

*Coccochora* Höhn.

?*Coccochorina* Hara

*Colensoniella* Hafellner

?*Comesella* Speg.

*Crauatamyces* Viégas

?*Cyrtidium* Vain.

*Cyrtidula* Minks

*Cyrtopsis* Vain.

*Cystocoleus* Thwaites

*Dangeardiella* Sacc. & P. Syd.

*Dawsomyces* Döbbeler

*Dawsophila* Döbbeler

*Dermatodothella* Viégas

*Dermatodothis* Racib. ex Theiss. & Syd.

*Dianesea* Inácio & P.F. Cannon

*Didymocyrtidium* Vain.

?*Didymocyrtis* Vain.

*Didymopleella* Munk

*Diplochorina* Gutner

*Dolabra* C. Booth & W.P. Ting

*Dothideopsella* Höhn.

*Elmerinula* Syd.

?*Endococcus* Nyl.

*Epiphora* Nyl.

*Extrusothecium* Matsush.

*Flavobathelium* Lücking, Aptroot & Thor

*Gibberidea* Fuckel

*Gilletiella* Sacc. & P. Syd.

*Globoa* Bat. & H. Maia

*Globulina* Speg.

?*Gloeodiscus* Dennis

*Grandigallia* M.E. Barr, Hanlin, Cedeño, Parra & R. Hern.

?*Griggsia* F. Stevens & Dalbey

*Harknesiella* Sacc.

*Hassea* Zahlbr.

*Heleiosa* Kohlm., Volkm.-Kohlm. & O.E. Erikss.

*Heptameria* Rehm & Thuem.

*Heterosphaeriopsis* Hafellner

*Homostegia* Fuckel

*Hyalocrea* Syd. & P. Syd.

*Hyalosphaera* F. Stevens

*Hypobryon* Döbbeler

*Hysteropeltella* Petr.

*Hysteropsis* Rehm

*Karschia* Körb.

*Kirschsteiniothelia* D. Hawksw.

*Koordersiella* Höhn.

*Kullhemia* P. Karst.

*Kusanobotrys* P. Henn.

*Lanatosphaera* Matzer

*Lazarenkoa* Zerova

*Lembosiopeltis* Bat. & J.L. Bezerra

*Leptospora* Rabenh.

?*Leveillina* Theiss. & Syd.

?*Licopolia* Sacc., Syd. & P. Syd.

*Lidophia* J. Walker & B. Sutton

*Limaciniopsis* Mend.

*Lineolata* Kohlm. & Volkm.-Kohlm.

?*Lophiosphaerella* Hara

*Lopholeptosphaeria* Sousa da Câmara

*Macrovalsaria* Petr.

*Maireella* Syd. & Maire

*Massariola* Füisting

*Microcyclella* Theiss.

*Microdothella* Syd. & P. Syd.

*Monoblastiopsis* R.C. Harris & C.A. Morse

*Montagnella* Speg.

*Moriolomyces* Cif. & Tomas.

*Muellerites* L. Holm

*Mycocryptospora* J. Reid & C. Booth

*Mycodidymella* C.Z. Wei, Y. Haradfa & K. Katumoto

*Mycoglaena* Höhn.

*Mycopepon* Boise

*Mycoporopsis* Müll. Arg.

*Mycothyridium* Petr.

*Myriangiopsis* P. Henn.

*Myriostigmella* G. Arnaud

*Mytilostoma* P. Karst.

*Neopeckia* Sacc.

*Neoventuria* Syd. & P. Syd.

*Otthia* Nitschke ex Fuckel

*Paraliomyces* Kohlm.

*Parmulariella* P. Henn.

*Paropodia* Cif. & Bat.

*Passeriniella* Berl.

*Passerinula* Sacc.

*Peroschaeta* Bat. & A.F. Vital

?*Phaeocyrtidula* Vain.

*Phaeoglaena* Clem.

*Phaeopeltosphaeria* Berl. & Peglion

?*Phaeosperma* Nitschke ex Fuckel

*Phaeotomasellia* Katum.

*Philobryon* Döbbeler

*Philonectria* Hara

*Phragmoscutella* Woron. & Abramov ex Woron.

*Phragmosperma* Theiss. & Syd.

*Phycorella* Döbbeler

?*Physalosporopsis* Bat. & H. Maia

?*Placodothis* Syd.

*Placostromella* Petr.

*Plagiostromella* Höhn.

*Pleiostomellina* Bat., J.L. Bezerra & H. Maia

*Plejobolus* (E. Bommer, M. Rousseau & Sacc.) O.E. Erikss.

?*Pleosphaerellula* Naumov & Czer.

*Pleostigma* Kirschst.

*Pleotrichiella* Sivan.

*Polysporidiella* Petr.

*Polystomellopsis* F. Stevens

?*Propolina* Sacc.

*Pseudodidymella* C.Z. Wei, Y. Harada & Katumoto

*Pseudomorfea* Punith.

*Pseudonitschkia* Coppins & Kondratyuk

*Pseudopleospora* Petr.

*Pteridiospora* Penz. & Sacc.

*Punctillum* Petr. & Syd.

*Pycnocarpon* Theiss.

?*Pyrenochium* Link

*Pyrenocyclus* Petr.

*Pyrenostigme* Syd.

*Racodium* Pers.

*Racovitziella* Döbbeler & Poelt (non De Wildeman)

*Rhopographus* Nitschke ex Fuckel

?*Robillardiella* Takim.

*Rosellinula* R. Sant.

*Rosenscheldia* Speg.

*Roumegueria* (Sacc.) P. Henn.

*Roussoëllopsis* I. Hino & Katum.

?*Salsuginea* K.D. Hyde

*Scolecobonaria* Bat.

*Semifissispora* H.J. Swart

*Semisphaeria* K. Holm & L. Holm

*Stuartella* Fabre

*Sympoventuria* Crous & Seifert

?*Syrropeltis* Bat., J.L. Bezerra & Matta

*Teichosporella* (Sacc.) Sacc.

?*Teratoschaeta* Bat. & Fons.

*Thalassoascus* Ollivier

?*Thelenidia* Nyl.

*Thryptospora* Petr.

?*Thyridaria* Sacc.

*Thyrospora* Kirschst.

*Tilakiella* Srinivas.

*Tirisporella* E.B.G. Jones, K.D. Hyde & Alias

*Tomeoa* I. Hino

*Trematei*a Kohlm., Volkm.-Kohlm. & O.E. Erikss.

*Trematosphaeriopsis* Elenkin

*Tyrannosorus* Untereiner & Malloch

*Valsaria* Ces. & De Not.

*Vizellopsis* Bat., J.L. Bezerra & T. Barros

*Westea* H.J. Swart

*Wettsteinina* Höhn.

?*Xylopezia* Höhn.

*Yoshinagella* Höhn.

**Class Eurotiomycetes** (Tehler, 1988) ex O.E. Eriksson & K. Winka, 1997

**Subclass Chaetothyriomycetidae** Doweld 2001

**Chaetothyriales** M.E. Barr 1987

**Chaetothyriaceae** Hansf. ex M.E. Barr 1979

*Actinocymbe* Höhn.

*Ceramothyrium* Bat. & H. Maia

*Chaetothyriomyces* Pereira-Carvalho, Inacio & Dianese

*Chaetothyrium* Speg.

*Euceramia* Bat. & Cif.

*Microcallis* Syd.

*Phaeosaccardinula* P. Henn.

*Treubiomyces* Höhn.

*Yatesula* Syd. & P. Syd.

**Herpotrichiellaceae** Munk 1953

*Capronia* Sacc.

?*Pleomelogramma* Speg.

**Pyrenulales** Fink ex D. Hawksw. & O.E. Erikss. 1986

**Celotheliaceae** Lücking, Aptroot & Sipman 2008

*Celothelium* A. Massal.

?**Monoblastiaceae** W. Watson 1929

*Acrocordia* A. Massal.

*Anisomeridium* (Müll. Arg.) M. Choisy

*Caprettia* Bat. & H. Maia

=*Porinella* R. Sant.

=*Porinula* Vèzda

*Monoblastia* Riddle

**Pyrenulaceae** Rabenh. 1870

*Acrocordiella* O.E. Erikss.

*Anthracothecium* Hampe ex A. Massal.

*Clypeopyrenis* Aptroot

*Distopyrenis* Aptroot

*Granulopyrenis* Aptroot

?*Lacrymospora* Aptroot

*Lithothelium* Müll. Arg.

*Mazaediothecium* Aptroot

*Parapyrenis* Aptroot

*Polypyrenula* D. Hawksw.

*Pyrenographa* Aptroot

*Pyrenowilmsia* R.C. Harris & Aptroot

*Pyrenula* Ach. (1814)

*Pyrgillus* Nyl.

*Sulcopyrenula* H. Harada

**Requienellaceae** Boise 1986

*Mauritiana* Poonyth, K.D. Hyde, Aptroot & Peerally

*Requienella* Fabre

**Pyrenulales,** genera incertae sedis

*Asteroporum* Müll. Arg.

?*Blastodesmia* A. Massal.

*Heufleridium* Müll. Arg.

*Micromma* A. Massal.

*Mycoporum* G. Mey. (non Flot. ex Nyl.)

?*Porodothion* Fr.

?*Porothelium* Eschw.

*Rhaphidicyrtis* Vain.

?*Stromatothelium* Trevis. pp

*Xenus* Kohlm. & Volkm.-Kohlm.

**Verrucariales** Mattick ex D. Hawksw. & O.E. Erikss. 1986.

**Adelococcaceae** Triebel 1993

*Adelococcus* Theiss. & Syd.

*Sagediopsis* (Sacc.) Vain.

**Verrucariaceae** Zenker 1827

*Agonimia* Zahlbr.

*Anthracocarpon* Breuss

*Atla* S. Savic & Tibell

*Awasthiella* Kr.P. Singh

*Bagliettoa* A. Massal.

*Bellemerella* Nav.-Ros. & Cl. Roux

?*Bogoriella* Zahlbr.

*Catapyrenium* Flot.

*Clauzadella* Nav.-Ros. & Roux

*Clavascidium* Breuss

*Dermatocarpella* H. Harada

*Dermatocarpon* Eschw.

*Diederimyces* Etayo

*Endocarpon* Hedw.

*Flakea* O.E. Erikss.

?*Glomerilla* Norman

?*Haleomyces* D. Hawksw. & Essl.

*Henrica* de Lesd.

*Heterocarpon* Müll. Arg.

*Heteroplacidium* Breuss

*Hydropunctaria* Keller, Gueidan & Thüs

*Involucropyrenium* Breuss

*Lauderlindsaya* J.C. David & D. Hawksw.

*Leucocarpia* Vèzda

*Merismatium* Zopf

*Muellerella* Hepp

*Mycophycias* Kohlm. & Volkm.-Kohlm.

*Neocatapyrenium* H. Harada

*Norrlinia* Theiss. & Syd.

*Parabagliettoa* Gueidan & Cl. Roux

?*Phaeospora* Hepp ex Stein

*Phylloblastia* Vain.

=*Pocsia* Vèzda

*Placidiopsis* Beltr.

*Placidium* A. Massal.

*Placocarpus* Trevis.

*Placopyrenium* Breuss

*Placothelium* Müll. Arg.

?*Plurisperma* Sivan.

*Polyblastia* A. Massal.

*Psoroglaena* Müll. Arg.

*Rhabdopsora* Müll. Arg.

*Scleropyrenium* H. Harada

*Servitia* M.S. Christ. & Alstrup

?*Spheconisca* (Norman) Norman

*Sporodictyon* A. Massal.

*Staurothele* Norman

*Telogalla* Nik. Hoffm. & Hafellner

*Thelidiopsis* Vain.

*Thelidium* A. Massal.

*Trimmatothele* Norman ex Zahlbr.

?*Trimmatothelopsis* Zschacke

*Verrucaria* Schrad.

=*Trimmatothele* Norman ex Zahlbr.

*Verrucula* J. Steiner

*Verruculopsis* Gueidan, C. Roux & Navarro-Rosines

*Wahlenbergiella* Gueidan & Thüs

**Verrucariales,** genera incertae sedis

?*Kalbiana* Henssen

*Gemmaspora* D. Hawksw. & Halici

**Chaetothyriomycetidae,** families incertae sedis

**Rhynchostomataceae** Winka & O.E. Erikss. 2000

*Rhynchostoma* P. Karst.

?*Rhynchomeliola* Speg.

**Strigulaceae** Zahlbr. 1898

?*Oletheriostrigula* Huhndorf & R.C. Harris

*Strigula* Fr.

**Chaetothyriomycetidae,** genera incertae sedis

*Glyphium* Nitschke ex F. Lehm

*Moristroma* A.I. Romero & Samuels

**Subclass Eurotiomycetidae** Geiser & Lutzoni

**Coryneliales** Seaver & Chardon 1926

**Coryneliaceae** Sacc. ex Berl. & Voglino 1886

*Bicornispora* Checa, Barrasa, M.N. Blanco & A.T. Martínez

*Caliciopsis* Peck

*Corynelia* Ach.

?*Coryneliopsis* Butin

*Coryneliospora* Fitzp.

*Fitzpatrickella* Benny, Samuelson & Kimbr.

*Lagenulopsis* Fitzp.

*Tripospora* Sacc. ex Berl. & Vogl.

**Eremascaceae** Engl. & E. Gilg 1924

*Eremascus* Eidam

**Eurotiales** G.W. Martin ex Benny & Kimbr. 1980

**Elaphomycetaceae** Tul. ex Paol. 1889

*Elaphomyces* Nees

*Pseudotulostoma* O.K. Miller & T. Henkel

**Monascaceae** J. Schröt. 1894

*Monascus* Tiegh.

?*Xeromyces* Fraser

**Trichocomaceae** E. Fisch. 1897

*Byssochlamys* Westling

*Chaetosartorya* Subram.

?*Chaetotheca* Zukal

*Chromocleista* Yaguchi & Udagawa

*Cristaspora* Fort. & Guarro

*Dactylomyces* Sopp

*Dendrosphaera* Pat.

*Dichlaena* Durieu & Mont.

*Dichotomomyces* Saito ex D.B. Scott

*Edyuillia* Subram.

*Emericella* Berk. & Broome

*Erythrogymnotheca* T. Yaguchi, A. Someya & Udagawa

*Eupenicillium* F. Ludw.

*Eurotium* Link

*Fennellia* B.J. Wiley & E.G. Simmons

*Hemicarpenteles* Sarbhoy & Elphick

*Neocarpenteles* Udagawa & Uchiyama

*Neopetromyces* Frisvad & Samson

*Neosartorya* Malloch & Cain

*Penicilliopsis* Solms

*Petromyces* Malloch & Cain

*Sagenoma* Stolk & G.F. Orr

*Talaromyces* C.R. Benj.

*Thermoascus* Miehe

*Trichocoma* Jungh.

*Warcupiella* Subram.

**Onygenales** Cif. ex Benny & Kimbr. 1980

syn. Arachnomycetales Gibas, Sigler & Currah 2002

syn. Ascosphaerales Gäum. ex Skou 1982

**Ajellomycetaceae** Untereiner, J.A. Scott & Sigler 2004

*Ajellomyces* McDonough & A.L. Lewis

**Arachnomycetaceae** Gibas, Sigler & Currah 2002

*Arachnomyces* Massee & E.S. Salmon

**Arthrodermataceae** Currah 1985

*Arthroderma* Curr. & Berk.

*Ctenomyces* Eidam

*Shanorella* R.K. Benj.

**Ascosphaeraceae** L.S. Olive & Spiltoir 1955

*Arrhenosphaera* Stejskal

*Ascosphaera* L.S. Olive & Spiltoir

*Bettsia* Skou

**Gymnoascaceae** Baran. 1872

*Acitheca* Currah

*Arachniotus* J. Schröt.

*Gymnascella* Peck

*Gymnoascoideus* G.F. Orr, K. Roy & G.R. Ghosh

*Gymnoascus* Baran.

*Kraurogymnocarpa* Udagawa & Uchiyama

*Mallochia* Arx & Samson

*Narasimhella* Thirum. & P.N. Mathur

*Orromyces* Sur & G.R. Ghosh

**Onygenaceae** Berk. 1857

*Amauroascus* J. Schröt.

*Aphanoascus* Zukal

*Apinisia* La Touche

*Arachnotheca* Arx

*Ascocalvatia* Malloch & Cain

*Auxarthron* G.F. Orr & Kuehn

*Bifidocarpus* Cano, Guarro & R.F. Castañeda

*Byssoonygena* Guarro, Punsola & Cano

*Chlamydosauromyces* Sigler, Hambleton & Par

*Kuehniella* G.F. Orr

*Leucothecium* Arx & Samson

*Monascella* Guarro & Arx

*Nannizziopsis* Currah

*Neoarachnotheca* Ulfig, Cano & Guarro

*Neogymnomyces* G.F. Orr

*Onygena* Pers.

*Pectinotrichum* Varsavsky & G.F. Orr

*Polytolypa* J.A. Scott & Malloch

?*Pseudoamauroascus* Cano, Solé & Guarro

*Renispora* Sigler & J.W. Carmich.

*Spiromastix* Kuehn & G.F. Orr

*Testudomyces* Solé, Cano & Guarro

*Uncinocarpus* Sigler, G.F. Orr & Carm.

*Xanthothecium* Arx & Samson

**Eurotiomycetidae,** genera incertae sedis

*Amaurascopsis* Guarro, Gené & De Vroey

*Azureothecium* Matsush.

*Calyptrozyma* Boekhout & Spaay

*Leiothecium* Samson & Mouch.

*Paratalaromyces* Matsush.

?*Pisomyxa* Corda

?*Samarospora* Rostr.

*Veronaia* Benedek

**Subclass Mycocaliciomycetidae** Tibell 2007

**Mycocaliciales** Tibell & Wedin 2000

**Mycocaliciaceae** A.F.W. Schmidt 1970

*Chaenothecopsis* Vain.

*Mycocalicium* Vain. ex Reinke

*Phaeocalicium* A.F.W. Schmidt

*Stenocybe* (Nyl.) Körb.

**Sphinctrinaceae** M. Choisy 1950

*Pyrgidium* Nyl.

*Sphinctrina* Fr.

**Class Geoglossomycetes** Zheng Wang, C.L. Schoch & Spatafora 2009

**Geoglossales** Zheng Wang, C.L. Schoch & Spatafora 2009

**Geoglossaceae** Corda 1838

*Geoglossum* Pers.

*Sarcoleotia* Ito & S. Imai

*Trichoglossum* Boud.

**Class Laboulbeniomycetes** Engler 1898

**Laboulbeniales** Engler 1898

**Ceratomycetaceae** S. Colla 1934

*Autoicomyces* Thaxt.

*Ceratomyces* Thaxt.

*Drepanomyces* Thaxt.

*Eusynaptomyces* Thaxt.

*Helodiomyces* F. Picard

*Phurmomyces* Thaxt.

*Plectomyces* Thaxt.

*Rhynchophoromyces* Thaxt.

*Synaptomyces* Thaxt.

*Tettigomyces* Thaxt.

*Thaumasiomyces* Thaxt.

*Thripomyces* Speg.

**Euceratomycetaceae** I.I. Tav. 1980

*Cochliomyces* Speg.

*Colonomyces* R.K. Benj.

*Euceratomyces* Thaxt.

*Euzodiomyces* Thaxt.

*Pseudoecteinomyces* W. Rossi

**Herpomycetaceae** I.I. Tav. 1981

*Herpomyces* Thaxt.

**Laboulbeniaceae** G. Winter 1886

*Acallomyces* Thaxt.

*Acompsomyces* Thaxt.

*Acrogynomyces* Thaxt.

*Amorphomyces* Thaxt.

*Amphimyces* Thaxt.

*Apatelomyces* Thaxt.

*Apatomyces* Thaxt.

*Aphanandromyces* W. Rossi

*Aporomyces* Thaxt.

*Arthrorhynchus* Kolen.

*Asaphomyces* Thaxt.

*Autophagomyces* Thaxt.

*Balazusia* R.K. Benj.

*Benjaminiomyces* I.I. Tav.

*Blasticomyces* I.I. Tav.

*Botryandromyces* I.I. Tav. & T. Majewski

*Camptomyces* Thaxt.

*Cantharomyces* Thaxt.

*Capillistichus* Santam.

*Carpophoromyces* Thaxt.

*Cesariella* W. Rossi & Santam.

*Chaetarthriomyces* Thaxt.

*Chaetomyces* Thaxt.

*Chitonomyces* Peyronel

*Clematomyces* Thaxt.

*Clonophoromyces* Thaxt.

*Columnomyces* R.K. Benj.

*Compsomyces* Thaxt.

*Coreomyces* Thaxt.

*Corethromyces* Thaxt.

*Corylophomyces* R.K. Benj.

*Cryptandromyces* Thaxt.

*Cucujomyces* Speg.

*Cupulomyces* R.K. Benj.

*Dermapteromyces* Thaxt.

*Diandromyces* Thaxt.

*Diaphoromyces* Thaxt.

*Diclonomyces* Thaxt.

*Dimeromyces* Thaxt.

*Dimorphomyces* Thaxt.

*Dioicomyces* Thaxt.

*Diphymyces* I.I. Tav.

?*Diplomyces* Thaxt.

*Diplopodomyces* W. Rossi & Balazuc

*Dipodomyces* Thaxt.

*Distolomyces* Thaxt.

*Dixomyces* I.I. Tav.

*Ecteinomyces* Thaxt.

*Enarthromyces* Thaxt.

*Eucantharomyces* Thaxt.

*Euhaplomyces* Thaxt.

*Eumisgomyces* Speg.

*Eumonoicomyces* Thaxt.

*Euphoriomyces* Thaxt.

*Fanniomyces* Maj.

*Filariomyces* Shanor

*Gloeandromyces* Thaxt.

*Haplomyces* Thaxt.

*Hesperomyces* Thaxt.

*Histeridomyces* Thaxt.

*Homaromyces* R.K. Benj.

*Hydraeomyces* Thaxt.

*Hydrophilomyces* Thaxt.

*Idiomyces* Thaxt.

*Ilyomyces* F. Picard

*Ilytheomyces* Thaxt.

*Kainomyces* Thaxt.

*Kleidiomyces* Thaxt.

*Kruphaiomyces* Thaxt.

*Kyphomyces* I.I. Tav.

*Laboulbenia* Mont. & C.P. Robin

*Limnaiomyces* Thaxt.

*Majewskia* Y.-B. Lee & Sugiyama

*Meionomyces* Thaxt.

*Microsomyces* Thaxt.

*Mimeomyces* Thaxt.

*Misgomyces* Thaxt.

*Monandromyces* R.K. Benj.

*Monoicomyces* Thaxt.

*Nanomyces* Thaxt.

*Neohaplomyces* R.K. Benj.

*Nycteromyces* Thaxt.

*Ormomyces* I.I. Tav.

*Osoriomyces* Terada

*Parvomyces* Santam.

*Peyerimhoffiella* Maire

*Peyritschiella* Thaxt.

*Phalacrichomyces* R.K. Benjamin

*Phaulomyces* Thaxt.

*Picardella* I.I. Tav.

*Polyandromyces* Thaxt.

*Polyascomyces* Thaxt.

*Porophoromyces* Thaxt.

*Prolixandromyces* R.K. Benj.

*Pselaphidomyces* Speg.

*Rhachomyces* Thaxt.

*Rhipidiomyces* Thaxt.

*Rhizomyces* Thaxt.

*Rhizopodomyces* Thaxt.

*Rickia* Cavara

*Rossiomyces* R.K. Benj.

*Sandersoniomyces* R.K. Benj.

*Scalenomyces* I.I. Tav.

*Scaphidiomyces* Thaxt.

*Scelophoromyces* Thaxt.

*Scepastocarpus* Santam.

*Siemaszkoa* I.I. Tav. & Maj.

*Smeringomyces* Thaxt.

*Sphaleromyces* Thaxt.

*Stemmatomyces* Thaxt.

*Stichomyces* Thaxt.

*Stigmatomyces* H. Karst.

*Sugiyamaemyces* I. Tavares & Balazuc

*Symplectromyces* Thaxt.

*Sympodomyces* R.K. Benj.

*Synandromyces* Thaxt.

*Tavaresiella* T. Majewski

*Teratomyces* Thaxt.

*Tetrandromyces* Thaxt.

*Trenomyces* Chatton & F. Picard

*Triainomyces* W. Rossi & A. Weir

*Triceromyces* T. Majewski

*Trochoideomyces* Thaxt.

*Troglomyces* S. Colla

*Zeugandromyces* Thaxt.

*Zodiomyces* Thaxt.

**Pyxidiophorales** P.F. Cannon 2001

**Pyxidiophoraceae** Arnold 1971

*Mycorhynchidium* Malloch & Cain

*Pyxidiophora* Bref. & Tavel

**Laboulbeniomycetes,** genera incertae sedis

?*Laboulbeniopsis* Thaxt.

**Class Lecanoromycetes** O.E. Erikss. & Winka 1997

**Subclass Acarosporomycetidae** Reeb, Lutzoni & Cl. Roux 2004

**Acarosporales** Reeb, Lutzoni & Cl. Roux 2004

**Acarosporaceae** Zahlbr. 1906

*Acarospora* A. Massal.

=*Polysporinopsis* Vezda

*Glypholecia* Nyl.

*Lithoglypha* Brusse

*Pleopsidium* Körb.

*Polysporina* Vèzda

*Sarcogyne* Flot.

*Thelocarpella* Nav.-Ros. & Cl. Roux

**Subclass Ostropomycetidae** Reeb, Lutzoni & Cl. Roux 2004

**Agyriales** Clem. & Shear 1931

**Agyriaceae** Corda 1838

*Agyrium* Fr.

**Baeomycetales** Lumbsch, Huhndorf & Lutzoni 2007

**Baeomycetaceae** Dumort. 1829

*Ainoa* Lumbsch & I. Schmitt

*Baeomyces* Pers.

*Phyllobaeis* Gierl & Kalb

**Anamylopsoraceae** Lumbsch & Lunke 1995

*Anamylopsora* Timdal

**Trapeliaceae** M. Choisy ex Hertel 1970

*Amylora* Rambold

*Aspiciliopsis* (Müll. Arg.) M. Choisy

*Coppinsia* Lumbsch & Heibel

*Lignoscripta* B.D. Ryan

*Lithographa* Nyl.

*Orceolina* Hertel

*Placopsis* (Nyl.) Linds.

*Placynthiella* Elenkin

*Ptychographa* Nyl.

*Rimularia* Nyl.

*Sarea* Fr.

*Trapelia* M. Choisy

*Trapeliopsis* Hertel & Gotth. Schneid.

*Xylographa* (Fr.) Fr.

**Ostropales** Nannf. 1932

syn. Gyalectales Henssen ex D. Hawksw. & O.E. Erikss. 1986

syn. Trichotheliales Hafellner & Kalb 1995

**Coenogoniaceae** (Fr. ) Stizenb. 1862

*Coenogonium* Ehrenb. ex Nees

*Dimerella* Trevis.

**Gomphillaceae** W. Watson ex Hafellner 1984

syn. Solorinellaceae Vezda & Poelt 1990

*Actinoplaca* Müll. Arg.

*Aderkomyces* Bat.

*Aplanocalenia* Lücking, Sérus. & Vezda

*Arthotheliopsis* Vain.

*Asterothyrium* Müll. Arg.

*Aulaxina* Fée

*Calenia* Müll. Arg.

*Caleniopsis* Vèzda & Poelt

*Diploschistella* Vain.

*Echinoplaca* Fée

*Ferraroa* Lücking, Sérus. & Vezda

*Gomphillus* Nyl.

*Gyalectidium* Müll. Arg.

*Gyalidea* Lettau

=*Solorinella* Anzi

*Gyalideopsis* Vèzda

*Hippocrepidea* Sérus.

*Jamesiella* Lücking, Sérus. & Vezda

*Lithogyalideopsis* Lücking, Sérus. & Vezda

*Paratricharia* Lücking

*Phyllogyalidea* Lücking & Aptroot

?*Psorotheciopsis* Rehm

*Rolueckia* Papong, Thammathaworn & Boonpragob

*Rubrotricha* Lücking, Sérus. & Vezda

?*Sagiolechia* A. Massal.

*Tricharia* Fée

**Graphidaceae** Dumort. 1822

syn. Thelotremataceae (Nyl.) Stizenb. 1862

*Acanthothecis* Clem.

*Acanthotrema* A. Frisch

*Amazonotrema* Kalb & Lücking

*Anomalographis* Kalb

*Anomomorpha* Nyl.

*Carbacanthographis* Staiger & Kalb

*Chapsa* A. Massal.

*Chroodiscus* (Müll. Arg.) Müll. Arg.

*Diaphorographis* A.W. Archer & Kalb

*Diorygma* Eschw.

*Diploschistes* Norman

*Dyplolabia* A. Massal.

*Fibrillithecis* A. Frisch

*Fissurina* Feé

*Glyphis* Ach.

*Graphis* Adans.

*Gymnographa* Müll. Arg.

*Gymnographopsis* C.W. Dodge

*Gyrotrema* A. Frisch

*Hemithecium* Trevis.

*Ingvariella* Guderley & Lumbsch

*Kalbographa* Lücking

*Leptotrema* Mont. & Bosch

*Leucodecton* A. Massal.

*Melanotopelia* Lumbsch & Mangold

*Melanotrema* A. Frisch

*Myriotrema* Fée

*Nadvornikia* Tibell

*Ocellularia* G. Mey.

=*Ampliotrema* Kalb

*Pallidogramme* Staiger, Kalb & Lücking

*Phaeographina* Müll. Arg.

*Phaeographis* Müll. Arg.

?*Phaeotrema* Müll. Arg.

*Platygramme* Fée

*Platygrapha* Berk. & Broome

*Platythecium* Staiger

*Polistroma* Clemente

*Pseudoramonia* Kantvilas & Vezda

*Redingeria* A. Frisch

*Reimnitzia* Kalb

*Sarcographa* Fée

*Schistophoron* Stirt.

*Schizotrema* Mangold & Lumbsch

*Stegobolus* Mont.

*Thalloloma* Trevis.

*Thecaria* Fée

*Thelotrema* Ach.

*Topeliopsis* Kantvilas & Vezda

*Tremotylium* Nyl.

**Gyalectaceae** (A. Massal. ) Stizenb. 1862

?*Belonia* Körb.

?*Bryophagus* Nitschke ex Arnold

*Cryptolechia* A. Massal.

*Gyalecta* Ach.

*Pachyphiale* Lönnr.

*Ramonia* Stizenb.

?*Sarcoexcipula* Etayo

*Semigyalecta* Vain.

**Myeloconidaceae** P.M McCarthy 2001

*Myeloconis* P.M McCarthy & Elix

**Odontotremataceae** D. Hawksw. & Sherwood 1982

*Bryodiscus* B. Hein, E. Müll. & Poelt

*Coccomycetella* Höhn.

*Geltingia* Alstrup & D.Hawksw.

*Odontotrema* Nyl.

*Odontura* Clem.

*Paralethariicola* Calatayud, Etayo & Diederich

*Paschelkiella* Sherwood

*Potriphila* Döbbeler

*Rogellia* Döbb.

*Stromatothecia* D.E. Shaw & D. Hawksw.

*Thamnogalla* D. Hawksw.

*Tryblis* Clem.

*Xerotrema* Sherwood & Coppins

**Phaneromycetaceae** Gamundí & Spinedi 1986

?*Phaneromyces* Speg. & Har. ex Speg.

**Phlyctidaceae** Poelt & Vezda ex J.C. David & D. Hawksw. 1991

*Phlyctis* (Wallr.) Flot.

*Psathyrophlyctis* Brusse

**Porinaceae** Reichenb. 1828

*Clathroporina* Müll. Arg.

*Polycornum* Malcolm & Vezda

*Porina* Müll. Arg.

*Segestria* Fr.

*Trichothelium* Müll. Arg.

**Stictidaceae** Fr. 1849

*Absconditella* Vèzda

*Acarosporina* Sherwood

*Biostictis* Petr.

*Carestiella* Bres.

*Conotremopsis* Vèzda

*Cryptodiscus* Corda

*Cyanodermella* O.E. Erikss.

?*Delpontia* Penz. & Sacc.

*Lillicoa* Sherwood

*Nanostictis* M.S Christ.

*Ostropa* Fr.

?*Petractis* Fr.

?*Propoliopsis* Rehm

*Robergea* Desm.

*Schizoxylon* Pers.

*Stictis* Pers.

?*Stictophacidium* Rehm

?*Thelopsis* Nyl.

?*Topelia* P.M. Jørg. & Vèzda

**Ostropales,** incertae sedis

*Amphorothecium* P.M. McCarthy, Kantvilas & Elix

?*Leucogymnospora* Fink

*Malvinia* Döbbeler

?*Phaeographopsis* Sipman

*Platygraphopsis* Müll. Arg.

?*Xyloschistes* Vain. ex Zahlbr.

**Pertusariales** M. Choisy ex D. Hawksw. & O.E. Erikss. 1986

**Coccotremataceae** Henssen ex J.C. David & D. Hawksw. 1991

*Coccotrema* Müll. Arg.

*Parasiphula* Kantvilas & Grube

**Icmadophilaceae** Triebel 1993

*Dibaeis* Clem.

*Endocena* Cromb.

*Icmadophila* Trevis.

*Pseudobaeomyces* M. Satì

*Siphula* Fr. (1831)

*Siphulella* Kantvilas, Elix & P. James

*Thamnolia* Ach. ex Schaerer

**Megasporaceae** Lumbsch, Feige & K. Schmitz 1994

*Aspicilia* A. Massal.

*Lobothallia* (Clauzade & Cl. Roux) Hafellner

*Megaspora* (Clauzade & Cl. Roux) Hafellner & V. Wirth

**Ochrolechiaceae** R.C. Harris ex Lumbsch & I. Schmitt 2006

*Ochrolechia* A. Massal.

*Varicellaria* Nyl.

**Pertusariaceae** Körb. ex Körb. 1855

*Loxosporopsis* Brodo, Henssen & Imshaug.

*Pertusaria* DC.

?*Thamnochrolechia* Aptroot & Sipman

**Ostropomycetidae**, families incertae sedis

**Arctomiaceae** Th. Fr. 1860

*Arctomia* Th. Fr.

*Gregorella* Lumbsch

*Wawea* Henssen & Kantvilas

?**Arthrorhaphidaceae** Poelt & Hafellner 1976

*Arthrorhaphis* Th. Fr.

**Hymeneliaceae** Körb. 1855

*Eiglera* Hafellner

*Hymenelia* Kremp.

*Ionaspis* Th. Fr.

?*Melanolecia* Hertel

*Tremolecia* M. Choisy

**Protothelenellaceae** Vezda, H. Mayrhofer & Poelt 1985

*Mycowinteria* Sherwood

*Protothelenella* Räsenen

*Thrombium* Wallr.

**Sarrameanaceae** Hafellner

syn. Loxosporaceae Kalb & Staiger 1995

*Loxospora* A. Massal.

*Sarrameana* Vèzda & P. James

**Schaereriaceae** Hafellner 1984

*Schaereria* Th. Fr.

**Thelenellaceae** H. Mayrhofer 1986

?*Chromatochlamys* Trevis.

*Julella* Fabre

*Thelenella* Nyl.

**Ostropomycetidae**, genera incertae sedis

*Anzina* Scheid.

?*Aspilidea* Hafellner

**Subclass Lecanoromycetidae** P.M. Kirk, P.F. Cannon, J.C. David & Stalpers ex Miadl., Lutzoni & Lumbsch 2007

**Lecanorales** Nannf. 1932

**Biatorellaceae** M. Choisy ex Hafellner & Casares-Porcel 1992

*Biatorella* De Not.

**Calycidiaceae** Elenkin 1929

*Calycidium* Stirt.

**Catillariaceae** Hafellner 1984

*Austrolecia* Hertel

*Catillaria* A. Massal.

*Halecania* M. Mayrhofer

*Placolecis* Trevis.

*Solenopsora* A. Massal.

*Sporastatia* A. Massal.

*Xanthopsorella* Kalb & Hafellner

**Cladoniaceae** Zenker 1827

syn. Heterodeaceae Filson; Cetradoniaceae J.C. Wei & Ahti 2002

*Calathaspis* I.M. Lamb & W.A. Weber

*Carassea* S. Stenroos

*Cetradonia* J.C. Wei & Ahti

*Cladia* Nyl.

*Cladonia* Hill ex P. Browne

*Gymnoderma* Nyl.

*Heterodea* Nyl.

*Heteromyces* Müll. Arg.

*Metus* D.J. Galloway & P.James

*Myelorrhiza* Verdon & Elix

*Notocladonia* S. Hammer

*Pilophorus* Th. Fr.

*Pycnothelia* Duf.

*Sphaerophoropsis* Vain.

*Squamella* S. Hammer

*Thysanothecium* Mont. & Berk.

**Crocyniaceae** M. Choisy ex Hafellner 1984

*Crocynia* A. Massal.

**Dactylosporaceae** Bellem. & Hafellner 1982

*Dactylospora* Körb.

**Gypsoplacaceae** Timdal 1990

*Gypsoplaca* Timdal

**Haematommataceae** Hafellner 1984

*Haematomma* A. Massal.

**Lecanoraceae** Körb. 1855

*Arctopeltis* Poelt

*Bryonora* Poelt

*Bryodina* Hafellner

?*Calvitimela* Hafellner

*Carbonea* (Hertel) Hertel

*Cladidium* Hafellner

?*Claurouxia* D. Hawksw.

*Clauzadeana* Cl. Roux

*Edrudia* W.P. Jordan

*Japewiella* Printzen

*Lecanora* Ach.

=*Diomedella* Hertel

=*Protoparmeliopsis* M. Choisy

*Lecidella* Körb.

*Maronina* Hafellner & R.W. Rogers

*Miriquidica* Hertel & Rambold

*Myrionora* R.C. Harris

*Psorinia* Gotth. Schneid.

*Punctonora* Aptroot

*?Pycnora* Hafellner

*Pyrrhospora* Körb.

*?Ramalinora* Lumbsch, Rambold & Elix

*Ramboldia* Kantvilas & Elix

*Rhizoplaca* Zopf

*Sagema* Poelt & Grube

*Sipmaniella* Kalb

*Traponora* Aptroot

*Tylothallia* P. James & R. Kilias

*Vainionora* Kalb

**Megalariaceae** Hafellner 1984

*Catillochroma* Kalb

*Megalaria* Hafellner

*Tasmidella* Kantvilas, Hafellner & Elix

**Miltideaceae** Hafellner 1984

*Miltidea* Stirt.

**Mycoblastaceae** Hafellner 1984

*Mycoblastus* Norman

*Tephromela* M. Choisy

**Pachyascaceae** Poelt ex P.M. Kirk, P.F. Cannon & J.C. David 2001

*Pachyascus* Poelt & Hertel

**Parmeliaceae** Zenker 1827

syn. Anziaceae M. Sato 1939

*Ahtiana* Goward

*Alectoria* Ach.

=*Gowardia* P. Halonen, L. Myllys, S. Velmala & H. Hyvärinen

*Allantoparmelia* (Vain.) Essl.

*Allocetraria* Kurok. & M.Y. Lai

=*Usneocetraria* M.L. Lai & J.C. Wei

*Anzia* Stizenb.

*Arctocetraria* Kärnefelt & Thell

*Arctoparmelia* Hale

*Asahinea* W.L. Culb. & C.F. Culb.

*Brodoa* Goward

*Bryocaulon* Kärnefelt

*Bryoria* Brodo & D. Hawksw.

*Bulborrhizina* Kurok.

*Bulbothrix* Hale

=*Bulbotrichella* V. Marcano, S. Mohali & A. Morales

*Canoparmelia* Elix & Hale

*Cavernularia* Degel.

*Cetraria* Ach.

*Cetrariastrum* Sipman

*Cetrariella* Kärnefelt & Thell

*Cetrariopsis* Kurok.

*Cetrelia* W.L. Culb. & C.F. Culb.

*Cetreliopsis* Kurok.

*Coelocaulon* Link

*Coelopogon* Brusse & Kärnefelt

*Cornicularia* (Schreb.) Ach.

*Coronoplectrum* Brusse

*Dactylina* Nyl.

*Davidgallowia* Aptroot

*Esslingeriana* Hale & M.J. Lai

*Evernia* Ach.

*Everniastrum* Hale ex Sipman

*Everniopsis* Nyl.

*Flavocetraria* Kärnefelt & Thell

*Flavocetrariella* D.D. Awasthi

*Flavoparmelia* Hale

*Flavopunctelia* Hale

*Himantormia* I.M. Lamb

=*Nimisia* Kärnefelt & Thell

*Hypogymnia* (Nyl.) Nyl.

*Hypotrachyna* (Vain.) Hale

*Imshaugia* F.C. Mey.

*Kaernefeltia* Thell & Goward

*Karoowia* Hale

*Letharia* (Th. Fr.) Zahlbr.

*Lethariella* (Motyka) Krog

*Masonhalea* Kärnefelt

*Melanelia* Essl.

*Melanelixia* O. Blanco, A. Crespo, Divakar, Essl., D. Hawksw. & Lumbsch

*Melanhalea* O. Blanco, A. Crespo, Divakar, Essl., D. Hawksw. & Lumbsch

*Menegazzia* A. Massal.

*Myelochroa* (Asahina) Elix & Hale

*Neopsoromopsis* Gyeln.

*Nephromopsis* Müll. Arg.

=*Tuckneraria* Randlane & Thell

*Nesolechia* A. Massal.

*Nodobryoria* Common & Brodo

*Omphalodiella* Henssen

*Omphalodium* Meyen & Flot.

*Omphalora* T.H. Nash & Hafellner

*Oropogon* Th. Fr.

*Pannoparmelia* (Müll. Arg.) Darb.

*Parmelaria* D.D. Awasthi

*Parmelia* Ach.

*Parmelina* Hale

*Parmelinella* Elix & Hale

*Parmelinopsis* Elix & Hale

*Parmeliopsis* (Nyl.) Nyl.

*Parmotrema* A. Massal.

*Parmotremopsis* Elix & Hale

*Phacopsis* Tul.

*Placoparmelia* Henssen

*Platismatia* W.L. Culb. & C.F. Culb.

*Pleurosticta* Petr.

*Protoparmelia* M. Choisy

*Protousnea* (Motyka) Krog

*Pseudephebe* M. Choisy

*Pseudevernia* Zopf

*Pseudoparmelia* Lynge

*Psiloparmelia* Hale

*Psoromella* Gyeln.

*Punctelia* Krog

*Relicina* (Hale & Kurok.) Hale

*Relicinopsis* Elix & Verdon

*Sulcaria* Bystr.

*Tuckermanella* Essl.

*Tuckermannopsis* Gyeln.

*Usnea* Dill. ex Adans.

=*Dolichousnea* (Y. Ohmura) Articus

=*Eumitria* Stirt.

=*Neuropogon* Nees & Flotow

*Vulpicida* Mattson & M.J. Lai

*Xanthoparmelia* (Vain.) Hale

=*Almbornia* Essl.

=*Neofuscelia* Essl.

=*Chondropsis* Nyl.

=*Namakwa* Hale

=*Paraparmelia* Elix &J. Johnst.

=*Xanthomaculina* Hale

**Pilocarpaceae** Zahlbr. 1905

*Badimia* Vèzda

*Badimiella* Malcolm & Vèzda

*Bapalmuia* Sérus.

*Barubria* Vèzda

*Biflavia* Lücking

*Brasilicia* Lücking, Kalb & Serus.

*Bryogomphus* Lücking, W.R. Buck, Sérus. & L.I. Ferraro

*Byssolecania* Vain.

*Byssoloma* Trevis.

*Calopadia* Vèzda

*Calopadiopsis* Lücking & R. Sant.

*Fellhanera* Vèzda

*Fellhaneropsis* Sérus. & Coppins

*Kantvilasia* P.M. McCarthy, Elix & Sérus.

*Lasioloma* R. Sant.

*Leimonis* R.C. Harris

*Lobaca* Vèzda -

*Loflammia* Vèzda

*Loflammiopsis* Lücking & Kalb

*Logilvia* Vèzda

?*Lopadium* Körb.

*Malcolmiella* Vezda

*Micarea* Fr. (Dec. 1825)

*Pseudocalopadia* Lücking

*Psilolechia* A. Massal.

*Scutula* Tul.

*Septotrapelia* Aptroot & Chaves

*Sporopodiopsis* Sérusiaux

*Sporopodium* Mont.

*Szczawinskia* A. Funk

=*Uluguria* Vezda

?*Tapellaria* Müll. Arg.

*Tapellariopsis* Lücking

**Psoraceae** Zahlbr. 1898

*Eremastrella* Vogel

*Glyphopeltis* Brusse

*Protoblastenia* (Zahlbr.) J. Steiner

?*Protomicarea* Hafellner

*Psora* Hoffm. (1796)

*Psorula* Gotth. Schneid.

**Ramalinaceae** C. Agardh 1821

syn. Bacidiaceae W. Watson 1929

*Aciculopsora* Aptroot & Trest

*Adelolecia* Hertel & Hafellner

*Arthrosporum* A. Massal.

*Bacidia* De Not.

*Bacidina* Vezda

*Bacidiopsora* Kalb

*Biatora* Fr.

*Catinaria* Vain.

*Cenozosia* A. Massal.

*Cliostomum* Fr.

*Compsocladium* I.M. Lamb

*Crustospathula* Aptroot

*Echidnocymbium* Brusse

*Eungeniella* Lücking, Serus. & Kalb

*Frutidella* Lalb

*Heppsora* D.D. Awasthi & K. Singh

*Herteliana* P. James

*Japewia* Tønsberg

*Jarmania* Kantvilas

*Krogia* Timdal

*Lecania* A. Massal.

*Lopezaria* Kalb & Hafellner

*Lueckingia* Aptroot & Umana

*Phyllopsora* Müll. Arg.

=*Squamacidia* Brako

=*Triclinum* Fée

*Physcidia* Tuck.

*Ramalina* Ach.

*Ramalinopsis* (Zahlbr.) Follmann & Huneck

*Rolfidium* Moberg

*Schadonia* Körb.

*Speerschneidera* Trevis.

*Stirtoniella* D.J. Galloway, Hafellner & Elix

*Thamnolecania* (Vain.) Gyeln.

*Tibellia* Vezda & Hafellner

*Toninia* A. Massal.

*Toniniopsis* Frey

*Vermilacinia* Spjut & Hale

*Waynea* Moberg

**Scoliciosporaceae** Hafellner 1984

*Scoliciosporum* A. Massal.

?*Umushamyces* Etayo

**Sphaerophoraceae** Fr. 1831

*Austropeltum* Henssen, Döring & Kantvilas

*Bunodophoron* A. Massal.

*Leifidium* Wedin

*Neophyllis* F. Wilson

*Sphaerophorus* Pers.

**Stereocaulaceae** Chevall. 1826

*Hertelidea* Printzen & Kantvilas

*Lepraria* Ach.

*Stereocaulon* Hoffm.

=*Lachnocaulon* Clem. & Shaer. nom. illeg.

=*Muhria* P.M. Jørg.

*Squamarina* Poelt

*Xyleborus* R.C. Harris & Ladd

**Lecanorales,** genera incertae sedis

*Joergensenia* Passo, Stenroos & Calvelo

*Myelochroidea* Printzen, T. Sprib. & Tønsberg

*Puttea* S. Stenroos & Huhtinen

*Ramalea* Nyl.

*Speerschneidera* Trevis.

*Strangospora* Körb.

**Peltigerales** W. Watson 1929

**Collematineae** Miadl. & Lutzoni

**Coccocarpiaceae** (Mont. ex Müll. Stuttg.) Henssen 1986

*Coccocarpia* Pers.

*Peltularia* R. Sant.

*Spilonema* Bornet

*Spilonemella* Henssen & Tønsberg

*Steinera* Zahlbr.

**Collemataceae** Zenker 1827

*Collema* F.H. Wigg.

*Homothecium* A. Massal.

*Leciophysma* Th. Fr.

*Leightoniella* Henssen

*Leptogium* (Ach.) Gray

*Physma* A. Massal.

*Ramalodium* Nyl.

*Staurolemma* Körb.

**Pannariaceae** Tuck. 1872

*Austrella* P.M. Jørg.

*Degelia* Arv. & D.J. Galloway

*Degeliella* P.M. Jørg.

*Erioderma* Feé

*Fuscoderma* (D.J. Galloway & P.M. Jørg.) P.M. Jørg. & D.J. Galloway

*Fuscopannaria* P.M. Jørg.

*Kroswia* P.M. Jørg.

*Leioderma* Nyl.

*Lepidocollema* Vain.

*Moelleropsis* Gyeln.

*Pannaria* Del. ex Bory

*Parmeliella* Müll. Arg.

*Protopannaria* (Gyeln.) P.M. Jørg. & S. Ekman

*Psoroma* Michaux

*Psoromidium* Stirt.

*Santessoniella* Henssen

*Siphulastrum* Müll. Arg.

*Vahliella* P.M. Jørg.

**Placynthiaceae** Å.E. Dahl 1950

*Hertella* Henssen

*Koerberia* A. Massal.

*Leptochidium* M. Choisy

*Placynthiopsis* Zahlbr.

*Placynthium* (Ach.) Gray

?*Polychidium* (Ach.) Gray

*Vestergrenopsis* Gyeln.

**Peltigerineae**

**Lobariaceae** Chevall. 1826

*Dendriscocaulon* Nyl.

*Lobaria* (Schreb.) Hoffm.

=*Lobariella* Yoshim.

*Pseudocyphellaria* Vain.

*Sticta* (Schreb.) Ach.

**Nephromataceae** Wetm. ex J.C. David & D. Hawksw. 1991

*Nephroma* Ach.

**Peltigeraceae** Dumort. 1822

*Peltigera* Willd.

*Solorina* Ach.

**Peltigerineae**, genera incertae sedis

*Massalongia* Körb.

**Teloschistales** D. Hawksw. & O.E. Erikss. 1986

**Letrouitiaceae** Bellem. & Hafellner 1982

*Letrouitia* Hafellner & Bellem.

**Megalosporaceae** Vezda ex Hafellner & Bellem. 1982

?*Austroblastenia* Sipman

*Megaloblastenia* Sipman

*Megalospora* Meyen

**Physciaceae** Zahlbr. 1898

syn. Caliciaceae Chevall. 1826

*Acolium* (Ach.) Grev.

*Acroscyphus* Lév.

*Amandinea* M. Choisy

*Anaptychia* Körb.

*Australiaena* Matzer, H. Mayrh. & Elix

*Buellia* De Not.

*Calicium* Pers.

*Coscinocladium* Kunze

*Cratiria* Marbach

?*Culbersonia* Essl.

*Cyphelium* Ach.

*Dermatiscum* Nyl.

*Dermiscellum* Hafellner, H. Mayrhofer & Poelt

*Dimelaena* Norman

*Diploicia* A. Massal.

*Diplotomma* Flot.

*Dirinaria* (Tuck.) Clem.

*Gassicurtia* Feé

*Hafellia* Kalb, H. Mayrhofer & Scheid.

*Heterodermia* Trevis.

*Hyperphyscia* Müll. Arg.

*Hypoflavia* Marbach

*Mischoblastia* A. Massal.

*Mobergia* H. Mayrhofer, Sheard & Matzer

*Monerolechia* Trevis.

*Phaeophyscia* Mob.

*Phaeorrhiza* H. Mayrhofer & Poelt

*Physcia* (Schreb.) Michaux

*Physciella* Essl.

*Physconia* Poelt

*Pyxine* Fr.

?*Redonia* C.W. Dodge

*Rinodina* (Ach.) Gray

*Rinodinella* H. Mayrhofer & Poelt

*Santessonia* Hale & Vobis

?*Sculptolumina* Marbach

*Stigmatochroma* Marbach

?*Sphinctrinopsis* Woron.

*Tetramelas* Norman

*Texosporium* Nádv. ex Tibell & Hofsten

*Thelomma* A. Massal.

*Tholurna* Norman

*Tornabea* Oesth.

?*Tylophoropsis* Sambo

**Teloschistaceae** Zahlbr. 1898

*Caloplaca* Th. Fr.

*Cephalophysis* (Hertel) H. Kilias

*Fulgensia* A. Massal. & De Not.

*Huea* C.W. Dodge & G.E. Baker

*Ioplaca* Poelt

*Josefpoeltia* Kondratyuk & Kärnefelt

*Seirophora* Poelt

*Teloschistes* Norman

*Xanthodactylon* P.A. Duvign.

*Xanthomendoza* Kondratyuk & Kärnefelt

*Xanthopeltis* R. Sant.

*Xanthoria* (Fr.) Th. Fr.

=*Jackelixia* S.Y. Kondratyuk, Fedorenko, S. Stenroos, Kärnefelt & A. Thell

=*Ovealmbornia* S.Y. Kondratyuk, Fedorenko, S. Stenroos, Kärnefelt, Elix & A. Thell

=*Xanthokarroa* S.Y. Kondratyuk, Fedorenko, S. Stenroos, Kärnefelt, Elix & A. Thell

**Lecanoromycetidae**, families incertae sedis

**Brigantiaeaceae** Hafellner & Bellem. 1982

?*Argopsis* Th. Fr.

*Brigantiaea* Trevis.

**Elixiaceae** Lumbsch 1997

*Elixia* Lumbsch

*Meridianelia* Kantvilas & Lumbsch

**Fuscideaceae** Hafellner 1984

*Fuscidea* V. Wirth & Vèzda

*Hueidia* Kantvilas & P.M. McCarthy

?*Lettauia* D.Hawksw. & R. Sant.

?*Maronea* A. Massal.

?*Orphniospora* Körb.

**Lecideaceae** Chevall. 1826

syn. Porpidiaceae Hertel & Hafellner 1984

*Amygdalaria* Norman

*Bahianora* Kalb

*Bellemerea* Hafellner & Cl. Roux

*Catarrhospora* Brusse

*Cecidonia* Triebel & Rambold

*Clauzadea* Hafellner & Bellem.

*Cryptodictyon* A. Massal.

*Farnoldia* Hertel

*Immersaria* Rambold & Pietschm.

*Koerberiella* Stein

*Labyrintha* Malcolm, Elix & Owe-Larsson

*Lecidea* Ach.

*Lecidoma* Gotth. Schneid. & Hertel

*Lopacidia* Kalb

*Mycobilimbia* Rehm

*Pachyphysis* R.C. Harris & Ladd

*Paraporpidia* Rambold & Pietschm.

*Poeltiaria* Hertel

*Poeltidea* Hertel & Hafellner

*Porpidia* Körb.

?*Pseudopannaria* (de Lesd.) Zahlbr.

?*Rhizolecia* Hertel

*Romjularia* Timdal

*Schizodiscus* Brusse

?*Steinia* Körb.

*Stephanocyclos* Hertel

*Xenolecia* Hertel

**Ophioparmaceae** R.W. Rogers & Hafellner 1988

syn. Rhizoplacopsidaceae J.C. Wei & Q.M. Zhou 2006

*Boreoplaca* Timdal

=*Rhizoplacopsis* J.C. Wei & Q.M. Zhou

*Ophioparma* Norman

*Hypocenomyce* M. Choisy

**Rhizocarpaceae** M. Choisy ex Hafellner 1984

?*Catolechia* Flot.

?*Epilichen* Clem.

*Poeltinula* Hafellner

*Rhizocarpon* Ramond ex DC.

**Ropalosporaceae** Hafellner 1984

*Ropalospora* A. Massal.

**Lecanoromycetes**, orders incertae sedis

**Candelariales** Miadl., Lutzoni & Lumbsch 2007

**Candelariaceae** Hakul. 1954

*Candelaria* A. Massal.

*Candelariella* Müll. Arg.

*Candelina* Poelt

*Placomaronea* Räsenen

**Umbilicariales** Lumbsch, Hestmark & Lutzoni 2007

**Umbilicariaceae** Chevall. 1826

*Lasallia* Mérat

*Umbilicaria* Hoffm.

**Lecanoromycetes**, genera incertae sedis

*Auriculora* Kalb

*Bartlettiella* D.J. Galloway & P.M. Jørg.

*Biatoridium* J. Lahm ex Körb.

*Bilimbia* De Not.

*Botryolepraria* Canals et al.

*Bouvetiella* Øvstedal

*Buelliastrum* Zahlbr.

*Collolechia* A. Massal.

?*Corticifraga* D.Hawksw. & R.Sant.

*Corticiruptor* Wedin & Hafellner

?*Eschatogonia* Trevis.

?*Haploloma* Trevis.

*Helocarpon* Fr.

*Hosseusia* Gyeln.

*Korfiomyces* Iturr. & D. Hawksw.

*Leprocaulon* Nyl.

*Maronella* M. Steiger

*Mattickiolichen* Tomas. & Cif.

*Nimisiostella* Calatayud, Barreno & O.E. Erikss.

*Notolecidea* Hertel

*Piccolia* A. Massal.

*Podotara* Malcolm & Vezda

?*Psorotichiella* Werner

?*Ravenelula* Speg.

*Roccellinastrum* Follmann

?*Stenhammarella* Hertel

*Timdalia* Hafellner

*Umbilithecium* Etayo

**Class Leotiomycetes** Eriksson & Winka 1997

**Cyttariales** Luttr. ex Gamundí 1971

**Cyttariaceae** Speg. 1887

*Cyttaria* Berk.

**Erysiphales** Gwynne-Vaughan 1922

**Erysiphaceae** Tul. & C.Tul. 1861

*Arthrocladiella* Vassilkov

*Blumeria* Golovin ex Speer

*Brasiliomyces* Viégas

*Bulbomicrosphaera* A.Q. Wang

*Bulbouncinula* R.Y. Zheng & G.Q. Chen

*Caespitotheca* S. Takam. & U. Braun

*Cystotheca* Berk. & Curtis

*Erysiphe* DC.

*Golvinomyces* Gelyuta

*Leveillula* G. Arnaud

*Medusosphaera* Golovin & Gamalizk.

*Microsphaera* Lév.

*Neoerysiphe* U. Braun

*Parauncinula* S.Takamatsu, U. Braun & S. Limkaisang

*Phyllactinia* Lév.

*Pleochaeta* Sacc. & Speg.

*Podosphaera* Kunze

*Sawadaea* Miyabe

*Setoerysiphe* Y. Nomura

*Sphaerotheca* Lév.

*Typhulochaeta* Ito & Hara

*Uncinula* Lév.

*Uncinuliella* R.Y. Zheng & G.Q. Chen

**Helotiales** Nannf. 1932

syn. Leotiales Carpenter 1988

?**Ascocorticiaceae** J. Schröt. 1893

*Ascocorticium* Bref.

**Bulgariaceae** Fr. 1849

*Bulgaria* Fr.

*Holwaya* Sacc.

**Dermateaceae** Fr. 1849

*Aivenia* Svrcek

*Angelina* Fr.

*Ascluella* DiCosmo et al.

*Atropellis* Zeller & Goodd.

*Belonopsis* (Sacc.) Sacc. & P. Syd.

*Blumeriella* Arx

*Calloria* Fr.

*Calloriella* Höhn.

*Calycellinopsis* W.Y. Zhuang

*Cashiella* Petr.

*Cejpia* Velen.

*Chaetonaevia* Arx

*Chlorosplenium* Fr.

*Coleosperma* Ingold

*Coronellaria* P. Karst.

*Crustomollisia* Svrcek

*Cryptohymenium* Samuels & L.M. Kohn

*Dennisiodiscus* Svrcek

*Dermateopsis* Nannf.

*Dermea* Fr.

*Dibeloniella* Nannf.

*Diplocarpa* Massee

*Diplocarpon* F.A. Wolf

*Diplonaevia* Sacc.

*Discocurtisia* Nannf.

*Discohainesia* Nannf.

*Drepanopeziza* (Kleb.) Höhn.

*Duebenia* Fr.

*Durandiella* Seaver

*Eupropolella* Höhn.

*Felisbertia* Viégas

*Graddonia* Dennis

*Haglundia* Nannf.

*Hysteronaevia* Nannf.

*Hysteropezizella* Höhn.

*Hysterostegiella* Höhn.

*Involucroscypha* Raitv.

*Laetinaevia* Nannf.

*Leptotrochila* P. Karst.

*Micropeziza* Fuckel

*Mollisia* (Fr.) P. Karst.

*Naevala* B. Hein

*Naeviella* (Rehm) Clem.

*Naeviopsis* B. Hein

*Neofabraea* H.S. Jacks.

*Neotapesia* E. Müll. & Hütter

*Nimbomollisia* Nannf.

*Niptera* Fr.

*Nothophacidium* J. Reid & Cain

*Obscurodiscus* Raitv.

*Obtectodiscus* E. Müll., Petrini & Samuels

*Ocellaria* (Tul. & C. Tul.) P. Karst.

*Patellariopsis* Dennis

*Patinella* Sacc.

*Pezicula* Tul. & C. Tul.

*Pezolepis* Syd.

*Phaeomollisia* T.N. Sieber & C.R. Grünig

*Phaeonaevia* L. Holm & K. Holm

*Pirottaea* Sacc.

*Pleoscutula* Vou.

*Ploettnera* P. Henn.

*Podophacidium* Niessl

*Pseudonaevia* Dennis & Spooner

*Pseudoniptera* Velen.

*Pseudopeziza* Fuckel

*Pyrenopeziza* Fuckel

*Sarconiptera* Raitv.

*Schizothyrioma* Höhn.

*Scleropezicula* Verkley

*Scutobelonium* Graddon

*Scutomollisia* Nannf.

*Sorokina* Sacc.

*Sorokinella* J. Fröhl. & K.D. Hyde

*Spilopodia* Boud.

*Spilopodiella* E. Müll.

*Trochila* Fr.

*Waltonia* Saho

**Helotiaceae** Rehm 1886

*Allophylaria* (P. Karst.) P. Karst.

*Ameghiniella* Speg.

*Aquadiscula* Shearer & J.L. Crane

*Ascocalyx* Naumov

*Ascoclavulina* Otani

*Ascocoryne* J.W. Groves & D.E. Wilson

*Ascotremella* Seaver

*Austrocenangium* Gamundí

?*Banksiamyces* G. Beaton

*Belonioscyphella* Höhn.

*Bioscypha* Syd.

*Bisporella* Sacc.

*Bryoscyphus* Spooner

*Bulgariella* P. Karst.

*Bulgariopsis* P. Henn.

?*Calloriopsis* Syd. & P. Syd.

*Capillipes* R. Sant.

*Carneopezizella* Svrcek

*Cenangiopsis* Rehm (non Velen.)

*Cenangium* Fr.

*Cenangiumella* J. Fröhl. & K.D. Hyde

*Chlorociboria* Seaver ex Ramamurthi, Korf & L.R. Batra

*Chloroscypha* Seaver

*Claussenomyces* Kirschst.

*Cordierites* Mont.

*Crocicreas* Fr.

*Crumenella* P. Karst.

*Crumenulopsis* J.W. Groves

*Cudoniella* Sacc.

*Dencoeliopsis* Korf

*Dictyonia* Syd.

*Discinella* Boud. (non P. Karst.)

*Encoeliopsis* Nannf.

*Episclerotium* L.M. Kohn & Nagas.

*Erikssonopsis* M. Morelet

*Eubelonis* Höhn. n. illeg. (non Clem.)

*Gelatinodiscus* Kanouse & A.H. Sm.

?*Gelatinopsis* Rambold & Triebel

*Gloeopeziza* Zukal

*Godronia* Moug. & Lév.

*Godroniopsis* Diehl & E.K. Cash

*Gorgoniceps* P. Karst.

*Grahamiella* Spooner

*Gremmeniella* M. Morelet

*Grimmicola* Döbbeler & Hertel

*Grovesia* Dennis

*Grovesiella* M. Morelet

*Heterosphaeria* Grev.

*Holmiodiscus* Svrcek

*Hymenoscyphus* Gray

*Jacobsonia* Boedijn

*Metapezizella* Petr.

*Micraspis* Darker

?*Micropodia* Boud.

*Mniaecia* Boud.

*Mollisinopsis* Arendh. & R. Sharma

*Mytilodiscus* Kropp & S.E. Carp.

*Neocudoniella* S. Imai

*Nipterella* Starb. ex Dennis

*Ombrophila* Fr.

?*Pachydisca* Boud.

*Parencoelia* Petr.

*Parorbiliopsis* Spooner & Dennis

*Patinellaria* H. Karst.

*Pestalopezia* Seaver

*Phaeangellina* Dennis

*Phaeofabraea* Rehm

*Phaeohelotium* Kanouse

?*Physmatomyces* Rehm

*Pocillum* De Not.

*Poculopsis* Kirschst.

*Polydiscidium* Wakef.

*Pragmopora* A. Massal.

*Pseudohelotium* Fuckel

*Pseudopezicula* Korf

*Rhizocalyx* Petr.

*Roesleria* Thüm. & Pass.

*Sageria* A. Funk

*Septopezizella* Svrcek

*Skyathea* Spooner & Dennis

*Stamnaria* Fuckel

*Strossmayeria* Schulzer

*Symphyosirinia* E.A. Ellis

*Tatraea* Svrcek

*Thindiomyces* Arendh. & R. Sharma

*Tympanis* Fr.

*Unguiculariopsis* Rehm

*Velutarina* Korf ex Korf

*Weinmannioscyphus* Svrcek

*Xeromedulla* Korf & W.Y. Zhuang

*Xylogramma* Wallr.

**Hemiphacidiaceae** Korf 1962

*Chlorencoelia* J.R. Dixon

?*Didymascella* Maire & Sacc.

*Fabrella* Kirschst.

*Heyderia* (Fr.) Link

*Korfia* J. Reid & Cain

*Rhabdocline* Syd.

*Sarcotrochila* Höhn.

**Hyaloscyphaceae** Nannf. 1932

*Albotricha* Raitv.

*Amicodisca* Svrcek

*Antinoa* Velen.

?*Arachnopeziza* Fuckel

*Asperopilum* Spooner

*Austropezia* Spooner

*Belonidium* Mont. & Dur.

*Betulina* Velen.

*Brunnipila* Baral

*Bryoglossum* Redhead

*Calycellina* Höhn.

*Calycina* Nees ex Gray

*Calyptellopsis* Svrcek

*Capitotricha* (Raitv.) Baral

*Chrysothallus* Velen.

*Ciliolarina* Svrcek

?*Ciliosculum* Kirschst.

*Cistella* Quél.

*Cistellina* Raitv.

*Chimaeroscypha* Raitv.

*Clavidisculum* Kirschst.

*Dasyscyphella* Tranzschel

*Dematioscypha* Svrcek

?*Didonia* Velen.

*Dimorphotricha* Spooner

*Echinula* Graddon

*Eriopezia* (Sacc.) Rehm

*Fuscolachnum* J.H. Haines

*Fuscoscypha* Svrcek

*Gemmina* Raitv.

*Graddonidiscus* Raitv. & R. Galán

*Hamatocanthoscypha* Svrcek

*Hegermila* Raitv.

*Hyalacrotes* (Korf & Kohn) Raitv.

*Hyalopeziza* Fuckel

*Hyaloscypha* Boud.

*Hydrocina* Scheuer

*Hyphodiscus* Kirschst.

*Incrucipulum* Baral

*Incrupila* Raitv.

*Lachnellula* P. Karst.

*Lasiobelonium* Ellis & Everh.

*Microscypha* Syd. & P. Syd.

*Mollisina* Höhn. ex Weese

*Neodasyscypha* Suková & Spooner

*Olla* Velen.

*Otwaya* G. Beaton

*Parachnopeziza* Korf

*Perrotia* Boud.

*Phaeoscypha* Spooner

*Pithyella* Boud.

*Polaroscyphus* Huhtinen

*Polydesmia* Boud.

*Proliferodiscus* J.H. Haines & Dumont

*Proprioscypha* Spooner

?*Protounguicularia* Raitv. & Galán

*Psilachnum* Höhn.

*Psilocistella* Svrcek

*Pubigera* Baral, Gminder & Svrcek

*Remleria* Raitv.

*Rodwayella* Spooner

*Roseodiscus* H.O. Baral

*Tapesina* Lambotte

*Unguicularia* Höhn.

*Unguicullariella* K.S. Thind & R. Sharma

*Unguiculella* Höhn.

*Urceolella* Boud.

*Velutaria* Fuckel

*Venturiocistella* Raitv.

**Lachnaceae** (Nannf.) Raitv. 2004

*Lachnaster* Höhn.

*Lachnum* Retz.

=*Dasyscyphus* Nees

*Solenopezia* Sacc.

*Trichopeziza* Fuckel

**Leotiaceae** Corda 1842

*Geocoryne* Korf

*Gelatinipulvinella* Hosoya & Y. Otani

*Leotia* Pers.

*Microglossum* Gillet

*Neobulgaria* Petr.

*Pezoloma* Clem.

**=*Rhizoscyphus* W.Y. Zhuang & Korf**

**Loramycetaceae** Dennis ex Digby & Goos 1988

*Loramyces* W. Weston

**Phacidiaceae** Fr. 1821

?*Ascocoma* H.J. Swart

*Lophophacidium* Lagerb.

*Phacidium* Fr.

**Rutstroemiaceae** Holst-Jensen, L.M. Kohn & T. Schumacher 1997

*Lambertella* Höhn.

*Lanzia* Sacc.

*Piceomphale* Svrcek

*Poculum* Velen.

*Rutstroemia* P. Karst.

*Scleromitrula* S. Imai

**Sclerotiniaceae** Whetzel ex Whetzel 1945

*Asterocalyx* Höhn.

*Botryotinia* Whetzel

*Ciboria* Fuckel

*Ciborinia* Whetzel

*Coprotinia* Whetzel

*Cudoniopsis* Speg.

*Dicephalospora* Spooner

*Dumontinia* L.M. Kohn

*Elliottinia* L.M. Kohn

*Encoelia* (Fr.) P. Karst.

*Grovesinia* M.N. Cline, J.L. Crane & S.D. Cline

*Kohninia* Holst-Jensen, Vrålstad & T. Schumach.

*Lambertellina* Korf & Lizoñ

*Martininia* Dumont & Korf

*Mitrula* Fr.

*Mitrulinia* Spooner

*Monilinia* Honey

?*Moserella* Pöder & Scheuer

*Myriosclerotinia* N.F. Buchw.

*Nervostroma* Y. Harada & T. Narumi

*Ovulinia* Weiss

*Phaeosclerotinia* Hori

*Poculina* Spooner

*Pseudociboria* Kanouse

*Pycnopeziza* W.L. White & Whetzel

*Redheadia* Y. Suto & Suyama

*Sclerocrana* Samuels & L.M. Kohn

*Sclerotinia* Fuckel

*Seaverinia* Whetzel

*Septotinia* Whetzel ex J.W. Groves & M.E. Elliott

*Streptotinia* Whetzel

*Stromatinia* Boud.

*Torrendiella* Boud. & Torr.

*Valdensinia* Peyronel

*Zoellneria* Velen.

**Vibrisseaceae** Korf 1991

*Chlorovibrissea* L.M. Kohn

*Leucovibrissea* (A. Sánchez) Korf

*Vibrissea* Fr.

**Helotiales,** genera incertae sedis

*Adelodiscus* Syd.

?*Algincola* Velen.

*Ambrodiscus* Carpenter

*Amylocarpus* Curr.

*Aquapoterium* Raja & Shearer

?*Ascographa* Velen.

?*Atrocybe* Velen.

?*Benguetia* Syd. & P. Syd.

?*Capricola* Velen.

?*Cenangiopsis* Velen. (non Rehm)

?*Chlorospleniella* P. Karst.

*Chondroderris* Maire

?*Ciliella* Sacc. & P. Syd.

?*Comesia* Sacc.

?*Cornuntum* Velen.

?*Criserosphaeria* Speg.

*Cryptopezia* Höhn.

*Dawsicola* Döbbeler

*Didymocoryne* Sacc. & Trotter

?*Discomycella* Höhn.

*Echinodiscus* Etayo & Diederich

*Endoscypha* Syd.

*Gloeotinia* M. Wilson, Noble & E.G. Gray

*Helotiella* Sacc.

*Hymenobolus* Durieu & Mont.

?*Hyphoscypha* Velen.

?*Iridinea* Velen.

*Lachnea* (Fr.) Gillet

*Lahmiomyces* Cif. & Tomas.

?*Laricina* Velen.

?*Lasseria* Dennis

?*Lemalis* Fr.

*Livia* Velen.

*Llimoniella* Hafellner & Nav.-Ros.

?*Lobularia* Velen.

*Loricella* Velen.

*Malotium* Velen. (non Mallotium (Ach.) Gray)

*Masseea* Sacc.

?*Melanopeziza* Velen.

?*Melanormia* Körb.

*Merodontis* Clem.

*Microdiscus* Sacc.

*Midotiopsis* P. Henn.

?*Muscia* Gizhitsk.

*Muscicola* Velen.

?*Mycomelaena* Velen.

?*Mycosphaerangium* Verkley

*Myriodiscus* Boedijn

*Naemacyclus* Fuckel

?*Obconicum* Velen.

?*Orbiliopsis* Velen. - (non (Sacc.) Syd.)

?*Orbiliopsis* (Sacc.) Syd. - (non Velen.)

?*Parthenope* Velen.

*Peltigeromyces* A. Möller

?*Pezomela* Syd.

*Phaeopyxis* Rambold & Triebel

?*Phragmiticola* Sherwood

?*Phyllopezis* Petr.

*Pleiopatella* Rehm

?*Polydiscina* Syd.

*Potridiscus* Döbbeler & Triebel

?*Pseudolachnum* Velen.

?*Pseudopeltis* L. Holm & K. Holm

?*Pseudotapesia* Velen.

*Pseudotryblidium* Rehm

?*Psilophana* Syd.

?*Psilothecium* Clem.

?*Pteromyces* E. Bommer, M. Rousseau & Sacc.

*Rhymbocarpus* Zopf

?*Riedera* Fr.

?*Rimula* Velen.

?*Robincola* Velen.

?*Roburnia* Velen.

?*Sambucina* Velen.

*Sarcomyces* Massee

?*Schnablia* Sacc. & P. Syd.

?*Scutulopsis* Velen.

*Skyttea* Sherwood, D. Hawksw. & Coppins

*Skyttella* D. Hawksw. & R. Sant.

?*Solanella* Vañha

?*Spirographa* Zahlbr.

*Starbaeckia* Rehm ex Starb.

?*Stilbopeziza* Speg.

?*Tanglella* Höhn.

?*Themisia* Velen.

*Tovariella* Syd.

*Trichangium* Kirschst.

*Trichohelotium* Killerm.

?*Tubolachnum* Velen.

*Urceola* Quél.

*Woodiella* Sacc. & P. Syd.

*Zugazaea* Korf, Iturr. & Lizoñ

**Rhytismatales** M.E. Barr ex Minter 1986

**Ascodichaenaceae** D. Hawksw. & Sherwood 1982

*Ascodichaena* Butin

*Delpinoina* Kuntze

?*Pseudophacidium* P. Karst.

**Cryptomycetaceae** Höhn. 1917 nom. inval., ad int.

*Cryptomyces* Grev.

*Macroderma* Höhn.

?*Potebniamyces* Smerlis

*Pseudorhytisma* Juel

**Cudoniaceae** P.F. Cannon 2001

*Cudonia* Fr.

*Spathularia* Pers.

**Rhytismataceae** Chevall. 1826

*Bifusella* Höhn.

*Bifusepta* Darker

*Bivallium* P.R. Johnst.

*Canavirgella* W. Merr, Wenner & Dreisbach

*Ceratophacidium* J. Reid & Piroz.

*Cerion* Massee

*Coccomyces* De Not.

*Colpoma* Wallr.

*Criella* (Sacc.) Sacc. & P. Syd.

*Davisomycella* Darker

*Discocainia* J. Reid & A. Funk

*Duplicaria* Fuckel

*Duplicariella* B. Erikss.

*Elytroderma* Darker

*Hypoderma* De Not.

*Hypodermella* Tubeuf

*Hypohelion* P.R. Johnst.

*Isthmiella* Darker

*Lirula* Darker

*Lophodermella* Höhn.

*Lophodermium* Chevall.

*Lophomerum* Quell. & Magasi

*Marthamyces* Minter

*Meloderma* Darker

*Moutoniella* Penz. & Sacc.

*Myriophacidium* Sherwood

*Nematococcomyces* C.-L. Hou, M. Piepenbr. & Oberw.

*Neococcomyces* Y.R. Lin, C.T. Xiang & Z.Z. Li

*Nothorhytisma* Minter, P.F. Cannon, A.I. Romero & Peredo

?*Nymanomyces* P. Henn.

*Parvacoccum* R.S. Hunt & A. Funk

*Ploioderma* Darker.

*Propolis* (Fr.) Fr. non (Fr.) Corda

*Pureke* P.R. Johnston

*Rhytisma* Fr.

*Soleella* Darker

*Sporomega* Corda

*Terriera* B. Erikss.

*Therrya* Sacc.

*Triblidiopsis* P. Karst.

*Virgella* Darker

*Vladracula* P.F. Cannon, Minter & Kamal

*Xyloschizon* Syd.

*Zeus* Minter & Diamandis

**Rhytismatales,** genera incertae sedis

?*Apiodiscus* Petr.

? *Bonanseja* Sacc.

*Brunaudia* (Sacc.) Kuntze

*Cavaraella* Speg.

? *Didymascus* Sacc.

*Gelineostroma* H.J. Swart

?*Haplophyse* Theiss.

*Heufleria* Auersw.

*Hypodermellina* Höhn.

?*Irydyonia* Racib.

?*Karstenia* Fr. ex Sacc.

?*Laquearia* Fr.

*Lasiostictella* Sherwood

?*Melittosporiella*

*Mellitiosporium* Corda

*Metadothis* (Sacc.) Sacc.

*Neophacidium* Petr.

*Ocotomyces* H.C. Evans & Minter

*Phaeophacidium* P. Henn. & Lindau

*Propolidium* Sacc.

?*Pseudotrochila* Höhn.

? *Tridens* Massee

**Thelebolales** P.F, Cannon 2001

**Thelebolaceae** (Brumm.) Eckblad 1968

*Antarctomyces* Stchigel & Guarro

*Ascophanus* Boud.

*Ascozonus* (Renny) E.C. Hansen

*Caccobius* Kimbr.

*Coprobolus* Cain & Kimbr.

*Coprotiella* Jeng & J.C. Krug

*Coprotus* Korf ex Korf & Kimbr.

*Dennisiopsis* Subram. & Chandras.

*Leptokalpion* Brumm.

*Mycoarctium* K. Jain & Cain

*Ochotrichobolus* Kimbr. & Korf

*Pseudascozonus* Brumm.

*Ramgea* Brumm.

*Thelebolus* Tode

*Trichobolus* (Sacc.) Kimbr. & Cain

**Leotiomycetes**, families incertae sedis

**Myxotrichaceae** Currah 1985

*Byssoascus* Arx

*Gymnostellatospora* Udag., Uchiy. & Kamiya

*Myxotrichum* Kunze

*Pseudogymnoascus* Raillo

**Thelocarpaceae** Zukal 1893

*Melanophloea* P. James & Vezda

*Sarcosagium* A. Massal.

*Thelocarpon* Nyl.

**Vezdaeaceae** Poelt & Vezda ex J.C. David & D. Hawksw. 1991

*Vezdaea* Tsch.-Woess & Poelt

**Leotiomycetes**, genera incertae sedis

?*Bagnisimitrula* S. Imai

?*Darkera* H.S. Whitney, J. Reid & Piroz.

?*Hemiglossum* Pat.

?*Leucoglossum* S. Imai

?*Maasoglossum* K.S. Thind & R. Sharma

*Nothomitra* Maas Geest.

?*Pachycudonia* S. Imai

*Phaeoglossum* Petch

*Pseudomitrula* Gamundí

**Class Lichinomycetes** Reeb, Lutzoni & Cl. Roux 2004

**Lichinales** Henssen & Büdel 1986

**Gloeoheppiaceae** Henssen 1995

*Gloeoheppia* Gyeln.

*Gudelia* Henssen

*Pseudopeltula* Henssen

**Heppiaceae** Zahlbr. 1906

*Corynecystis* Brusse

*Epiphloea* Trevis.

*Heppia* Nägeli

*Pseudoheppia* Zahlbr.

*Solorinaria* (Vain.) Gyeln.

**Lichinaceae** Nyl. 1854

*Anema* Nyl.

*Calotrichopsis* Vain.

*Cryptothele* Th. Fr.

*Digitothyrea* P. Moreno & Egea

*Edwardiella* Henssen

*Ephebe* Fr.

*Euopsis* Nyl.

*Finkia* Vain.

*Gonohymenia* J. Steiger

*Gyrocollema* Vain.

*Harpidium* Körb.

*Jenmania* W. Wächt.

*Lecidopyrenopsis* Vain.

*Lemmopsis* (Vain.) Zahlbr.

*Lempholemma* Körb.

*Leprocollema* Vain.

*Lichina* C. Agardh

*Lichinella* Nyl.

*Lichinodium* Nyl.

?*Mawsonia* C.W. Dodge

*Metamelaena* Henssen

*Paulia* Feé

*Peccania* Massal. ex Arnold

*Phloeopeccania* J. Steiner

*Phylliscidiopsis* Sambo

*Phylliscidium* Forssell

*Phyllisciella* Henssen & Büdel

*Phylliscum* Nyl.

*Porocyphus* Körb.

?*Pseudarctomia* Gyeln.

*Pseudopaulia* M. Schultz

*Psorotichia* Massal.

*Pterygiopsis* Vain.

*Pyrenocarpon* Trevis.

*Pyrenopsis* Nyl.

*Stromatella* Henssen

*Synalissa* Fr.

*Thelignya* A. Massal.

*Thermutis* Fr.

*Thermutopsis* Henssen

*Thyrea* A. Massal.

*Zahlbrucknerella* Herre

**Peltulaceae** Büdel 1986

*Neoheppia* Zahlbr.

*Peltula* Nyl.

*Phyllopeltula* Kalb

**Class Orbiliomycetes** O.E. Erikss. & Baral 2003

**Orbiliales** Baral, O.E. Erikss., G. Marson & E. Weber 2003

**Orbiliaceae** Nannf. 1932

*Hyalorbilia* Baral & G. Marson

*Orbilia* Fr.

*Pseudorbilia* Y. Zhang, Z.F. Yu, H.O. Baral & K.Q. Zhang

**Class Pezizomycetes** sensu O.E. Erikss. & Winka 1997

**Pezizales** J. Schröt. 1894

**Ascobolaceae** Boud. ex Sacc. 1884

*Ascobolus* Pers.

*Cleistoiodophanus* J.L. Bezerra & Kimbr.

*Cubonia* Sacc.

*Saccobolus* Boud.

*Thecotheus* Boud.

**Ascodesmidaceae** J. Schröt. 1893

*Ascodesmis* Tiegh.

*Eleutherascus* Arx

*Lasiobolus* Sacc.

**Caloscyphaceae** Harmaja 2002

*Caloscypha* Boud.

**Carbomycetaceae** Trappe 1971

*Carbomyces* Gilkey

**Chorioactidaceae** Pfister 2008

*Chorioactis* Kupfer ex Eckblad

*Desmazierella* Lib.

*Neournula* Paden & Tylutki

*Wolfina* Seaver ex Eckblad

**Discinaceae** Benedix 1961

*Gymnohydnotrya* B.C. Zhang & Minter

*Gyromitra* Fr.

*Hydnotrya* Berk. & Broome

*Pseudorhizina* Jacz.

**Glaziellaceae** J.L. Gibson 1986

*Glaziella* Berk.

**Helvellaceae** Fr. 1823

*Balsamia* Vittad.

*Barssia* Gilkey

?*Cidaris* Fr.

*Helvella* Fr.

*Picoa* Vittad.

**Karstenellaceae** Harmaja 1974

*Karstenella* Harmaja

**Morchellaceae** Reichenb. 1834

*Disciotis* Boud.

?*Fischerula* Matt.

*Imaia* Trappe & Kovacs

?*Leucangium* Quél.

*Morchella* Dill.

*Verpa* Sw.

**Pezizaceae** Dumort. 1829

*Amylascus* Trappe

*Boudiera* Cooke

*Cazia* Trappe

*Eremiomyces* Trappe & Kagan-Zur

*Hapsidomyces* J.C. Krug & Jeng

*Hydnobolites* Tul. & C. Tul.

*Hydnotryopsis* Gilkey

*Iodophanus* Korf

*Iodowynnea* Medel, Guzmán & Chacon

*Kalahartuber* Trappe & Kagan-Zur

*Lepidotia* Boud.

*Marcelleina* Brumm., Korf & Rifai

*Mattiroliomyces* E. Fisch.

*Mycoclelandia* Trappe & G. Beaton

*Pachyella* Boud.

*Pachyphloeus* Tul. & C. Tul.

*Peziza* Fr.

*Plicaria* Fuckel

*Rhodopeziza* Hohmeyer & Moravec

*Ruhlandiella* P. Henn.

*Sarcosphaera* Auersw.

*Scabropezia* Dissing & Pfister

*Sphaerozone* Zobel

*Terfezia* (Tul. & C. Tul.) Tul. & C. Tul.

*Tirmania* Chatin

**Pyronemataceae** Corda 1842

*Acervus* Kanouse

*Aleuria* Fuckel

*Aleurina* Massee

*Anthracobia* Boud.

*Aparaphysaria* Speg.

*Arpinia* Berthet

*Ascocalathium* Eidam ex J. Schröt.

*Ascosparassis* Kobayasi

*Boubovia* Svrcek

*Byssonectria* P. Karst.

*Boudierella* Sacc.

*Chaetothiersia* B.A. Perry & Pfister

*Chalazion* Dissing & Sivertsen

*Cheilymenia* Boud.

*Cleistothelebolus* Malloch & Cain

*Dictyocoprotus* J.C. Krug & R.S. Khan

*Eoaleurina* Korf & W.Y. Zhuang

*Galeoscypha* Svrcek & J. Moravec

*Genea* Vittad.

*Geneosperma* Rifai

*Geopora* Harkn.

*Geopyxis* (Pers.) Sacc.

*Gilkeya* M.E. Sm., Trappe & Rizzo

*Hiemsia* Svrcek

*Humaria* Fuckel

*Hydnocystis* Tul.

*Hypotarzetta* Donadini

*Jafnea* Korf

*Kotlabaea* Svrcek

*Lamprospora* De Not.

*Lasiobolidium* Malloch & Cain

*Lathraeodiscus* Dissing & Sivertsen

*Lazuardia* Rifai

*Leucoscypha* Boud.

*Luciotrichus* Galán & Raitviir

*Melastiza* Boud.

*Miladina* Svrcek

*Moravecia* Benkert, Caillet & Moyne

*Mycogalopsis* Gjurasin

*Nannfeldtiella* Eckblad

*Neottiella* (Cooke) Sacc.

*Nothojafnea* Rifai

*Octospora* Hedw.

*Octosporella* Döbbeler

?*Orbicula* Cooke

*Otidea* (Pers.) Bon.

=*Otideopsis* B. Liu & J.Z. Cao

=*Flavoscypha* Harmaja

*Oviascoma* Y.J. Yao & Spooner

*Parascutellinia* Svrcek

*Paratrichophaea* Trigaux

*Paurocotylis* Berk. ex Hook.

*Petchiomyces* E. Fisch. & Matt.

*Phaeangium* Pat.

*Pseudaleuria* Lusk

*Pseudombrophila* Boud.

*Pulvinula* Boud.

*Pyronema* Carus

*Pyropyxis* Egger

*Ramsbottomia* W.D. Buckley

*Rhizoblepharia* Rifai

*Rhodoscypha* Dissing & Sivertsen

*Rhodotarzetta* Dissing & Sivertsen

*Scutellinia* (Cooke) Lambotte

*Smardaea* Svrcek

*Smarodsia* Raitv. & Vimba

*Sowerbyella* Nannf.

*Sphaerosoma* Klotzsch

*Sphaerosporella* (Svrcek) Svrcek & Kubicka

*Spooneromyces* T.Schumach. & J. Moravec

*Stephensia* Tul. & C. Tul.

*Tazzetta* (Cooke) Lambotte

*Tricharina* Eckblad

*Trichophaea* Boud.

*Trichophaeopsis* Korf & Erb

*Warcupia* Paden & J.V. Cameron

*Wenyingia* Zheng Wang & Pfister

*Wilcoxina* Chin S. Yang & Korf

**Rhizinaceae** Bonord. 1851

*Rhizina* Fr.

**Sarcoscyphaceae** LeGal ex Eckblad 1968

*Aurophora* Rifai

*Cookeina* Kuntze

*Geodina* Denison

*Kompsoscypha* Pfister

*Microstoma* Bernstein

*Nanoscypha* Denison

*Phillipsia* Berk.

*Pithya* Fuckel

*Pseudopithyella* Seaver

*Sarcoscypha* (Fr.) Boud.

*Thindia* Korf & Waraitch

*Wynnea* Berk. & Curtis

**Sarcosomataceae** Kobayasi 1937

*Donadinia* Bellem. & Meléndez-Howell

*Galiella* Nannf. & Korf

*Korfiella* D.C. Pant & V.P. Tewari

*Plectania* Fuckel

*Pseudoplectania* Fuckel

*Sarcosoma* Casp.

*Selenaspora* R. Heim & Le Gal

?*Strobiloscypha* N.S. Weber & Denison

*Urnula* Fr.

**Tuberaceae** Dumort. 1822

*Choiromyces* Vittad.

*Dingleya* Trappe

*Labyrinthomyces* Boedijn

*Paradoxa* Mattir.

*Reddelomyces* Trappe

*Tuber* F.H. Wigg.

**Pezizales**, genera incertae sedis

*Delastria* Tul. & C. Tul.

*Discinella* P. Karst. (non Boud.)

*Filicupula* Yao & Spooner

*Loculotuber* Trappe, Parladé & I.F. Alvarez

?*Microeurotium* Ghatak

*Orcadia* G.K. Sutherl.

*Psilopezia* Berk.

*Urceolaria* Bon.

**Class Sordariomycetes** sensu O.E. Erikss. & Winka 1997

**Subclass Hypocreomycetidae** O.E. Erikss. & Winka 1997

**Coronophorales** Nannf. 1932

**Bertiaceae** Smyk 1981

*Bertia* De Not.

*Gaillardiella* Pat.

**Chaetosphaerellaceae** Huhndorf, A.N. Mill. & F.A. Fern. 2004

*Chaetosphaerella* E. Müll. & C. Booth

*Crassochaeta* Réblová

Coronophoraceae Höhn. 1907

*Coronophora* Fuckel

**Nitschkiaceae** (Fitzp.) Nannf. 1932

*Acanthonitschkea* Speg.

*Biciliosporina* Subram. & Sekar

*Botryola* Bat. & J.L. Bezerra

*Enchnoa* Fr.

*Fracchiaea* Sacc.

*Groenhiella* Jørgen Koch, E.B.G. Jones & S.T. Moss

*Janannfeldtia* Subram. & Sekar

*Lasiosphaeriopsis* D. Hawksw. & Sivan.

*Loranitschkia* Lar. N. Vasiljeva

*Nitschkia* G.H. Otth ex P. Karst.

*Rhagadostoma* Körb.

*Rhagadostomella* Etayo

**Scortechiniaceae** Huhndorf, A.N. Mill. & F.A. Fern. 2004

*Coronophorella* Höhn.

*Cryptosphaerella* Sacc.

*Euacanthe* Theiss.

*Neofracchiaea* Teng

*Scortechinia* Sacc.

*Scortechiniella* Arx & E. Müll.

*Scortechiniellopsis* Sivan.

*Tympanopsis* Starbäck

**Hypocreales** Lindau 1897

**Bionectriaceae** Samuels & Rossman 1999

*Aphanotria* Döbbeler

*Battarrina* (Sacc.) Clem. & Shear

*Bionectria* Speg.

*Bryocentria* Döbbeler

*Bryonectria* Döbbeler

*Clibanites* P. Karst.

*Dimerosporiella* Speg.

*Globonectria* Etayo

*Halonectria* E.B.G. Jones

*Heleococcum* P.M. Jørg.

*Hydropisphaera* Dumort.

*Ijuhya* Starbäck

*Kallichroma* Kohlm. & Volkm.-Kohlm.

*Lasionectria* (Sacc.) Cooke

*Mycoarachis* Malloch & Cain

*Mycocitrus* A. Möller

*Nectriella* Nitschke ex Fuckel

*Nectriopsis* Maire

*Nigrosabulum* Malloch & Cain

*Ochronectria* Rossman & Samuels

*Paranectria* Sacc.

*Pronectria* Clem.

*Protocreopsis* Yoshim. Doi

*Roumegueriella* Speg.

*Selinia* P. Karst.

*Stephanonectria* Schroers & Samuels

*Stilbocrea* Pat.

*Trichonectria* Kirschst.

*Valsonectria* Speg.

**Clavicipitaceae** (Lindau) Earle ex Rogerson 1971

*Aciculosporium* I. Miyake

*Atkinsonella* Diehl

*Balansia* Speg.

*Berkellella* (Sacc.) Sacc.

*Cavimalum* Yoshim. Doi, Dargan & K.S. Thind

*Claviceps* Tul.

*Conoideocrella* D. Johnson, G.-H. Sung, Hywel-Jones & Spatafora

*Cordycepioideus* Stifler

*Dussiella* Pat.

*Epichloë* (Fr.) Tul. & C. Tul.

*Epicrea* Petr.

*Helminthascus* Tranzschel

*Heteroepichloë* E. Tanaka, C. Tanaka, Abdul Gafur & Tsuda

*Hypocrella* Sacc.

*Konradia* Racib.

?*Loculistroma* F. Patt. & Charles

*Metacordyceps* G.H. Sung, J.M. Sung, Hywel-Jones & Spatafora

*Moelleriella* Bres.

*Mycomalus* A. Möller

*Myriogenospora* G.F. Atk.

*Neobarya* Lowen

*Neoclaviceps* J. White, G. Bills, S. Alderman & J. Spatafora

*Neocordyceps* Kobayasi

*Orbiocrella* D. Johnson, G.-H. Sung, Hywel-Jones & Spatafora

*Parepichloë* F.J. White Jr & Reddy

*Podocrella* Seaver

=*Atricordyceps* Samuels

=*Wakefieldiomyces* Kobayasi

*Regiocrella* Chaverri & K.T. Hodge

*Romanoa* Thirum.

*Samuelsia* Chaverri & K.T. Hodge

*Shimizuomyces* Kobayasi

*Sphaerocordyceps* Kobayasi

*Stereocrea* Syd. & P. Syd.

**Cordycipitaceae** Kreisel ex G.M. Sung, J,M, Sung, Hywel-Jones & Spatafora 2007

*Ascopolyporus* A. Möller

*Cordyceps* (Fr.) Link

*Hyperdermium* J. White, R. Sullivan, G. Bills & N. Hywel-Jones

*Torrubiella* Boud.

**Hypocreaceae** De Not. 1844

*Aphysiostroma* Barrasa, A.T. Martínez & G. Moreno

*Arachnocrea* Z. Moravec

*Dialhypocrea* Speg.

*Hypocrea* Fr.

=*Podostroma* P. Karst.

*Hypocreopsis* P. Karst.

*Hypomyces* (Fr.) Tul.

*Protocrea* Petch

*Pseudohypocrea* Yoshim. Doi

*Rogersonia* Samuels & Lodge

*Sarawakus* Lloyd

*Sphaerostilbella* (P. Henn.) Sacc. & D. Sacc.

*Sporophagomyces* K. Poldmaa & Samuels

?*Syspastospora* P.F. Cannon & D. Hawksw.

**Nectriaceae** Tul. & C. Tul. 1844

*Albonectria* Rossman & Samuels

*Allonectella* Petr.

*Calonectria* De Not.

*Calostilbe* Sacc. & Syd.

?*Chaetonectrioides* Matsush.

*Corallomycetella* P. Henn.

*Cosmospora* Rabenh.

*Cyanonectria* Samuels & Chaverri

*Gibberella* Sacc.

*Glionectria* Crous & C.L. Schoch

*Haematonectria* Samuels & Nirenberg

*Lanatonectria* Rossman & Samuels

*Leuconectria* Rossman, Samuels & Lowen

*Nectria* (Fr.) Fr.

*Nectricladiella* Crous & C.L. Schoch

*Neocosmospora* E.F. Sm.

*Neonectria* Wollenw.

*Ophionectria* Sacc.

?*Persiciospora* P.F. Cannon & D. Hawksw.

*Pleogibberella* Sacc.

*Pseudonectria* Seaver

*Rubrinectria* Rossman & Samuels

*Stalagmites* Theiss. & Syd.

*Viridispora* Samuels & Rossman

*Xenocalonectria* Crous & C.L. Schoch

*Xenonectriella* Weese

**Niessliaceae** Kirschst. 1939

*Atronectra* Etayo

*Circioniesslia* Samuels & M.E. Barr

*Cryptoniesslia* Scheuer

*Hyaloseta* A.W. Ramaley

*Malmeomyces* Starb.

*Melanopsamma* Niessl

*Melchioria* Penz. & Sacc.

*Miyakeomyces* Hara

*Myrmaeciella* Lindau

*Niesslia* Auersw.

*Paraniesslia* K.M. Tsui, K.D. Hyde & Hodgkiss

*Pseudonectriella* Petr.

*Pseudorhynchia* Höhn.

*Taiwanascus* Sivan & H.S. Chang

*Trichosphaerella* E. Bommer, M. Rousseau & Sacc.

*Valetoniella* Höhn.

*Valetoniellopsis* Samuels & M.E. Barr

**Ophiocordycipitaceae** G.H. Sung, J.M. Sung, Hywel-Jones & Spatafora 2007

*Elaphocordyceps* G.H. Sung & Spatafora

*Ophiocordyceps* Petch

**Hypocreales,** genera incertae sedis

*Bulbithecium* Udagawa & T. Muroi

*Emericellopsis* J.F.H. Beyma

*Eucasphaeria* Crous

?*Hapsidospora* Malloch & Cain

*Leucosphaerina* Arx

?*Metadothella* P. Henn.

*Payosphaeria* W.F. Leong

*Peethambara* Subram. & Bhat

*Peloronectria* A. Möller

*Pseudomeliola* Speg.

*Scopinella* Lév.

*Ticonectria* Döbbeler

*Tilakidium* Vaidya, C.D. Naik & Rathod

**Melanosporales** N. Zhang & M. Blackw. 2007

**Ceratostomataceae** G. Winter 1885

?*Arxiomyces* P.F. Cannon & D. Hawksw.

?*Erythrocarpon* Zukal

*Melanospora* Corda

?*Pteridiosperma* J.C. Krug & Jeng

?*Pustulipora* P.F. Cannon

?*Rhytidospora* Jeng & Cain

?*Setiferotheca* Matsush.

*Sphaerodes* Clem.

?*Vittatispora* P. Chaudhary, J. Campb., D. Hawksw. & K.N. Sastry

**Microascales** Luttr. ex Benny & Kimbr. 1980

syn. Halosphaeriales Kohlm. 1986

**Chadefaudiellaceae** Faurel & Schotter ex Benny & Kimbr. 1980

*Chadefaudiella* Faurel & Schotter

*Faurelina* Locq.-Lin.

**Halosphaeriaceae** E. Müll. & Arx ex Kohlm. 1972

*Alisea* J. Dupont & E.B.G. Jones

*Aniptodera* Shearer & M. Miller

*Anisostagma* K.R.L. Petersen & Jørgen Koch

*Antennospora* Meyers

*Appendichordella* R.G. Johnson, E.B.G. Jones & S.T. Moss

*Arenariomyces* Höhnk

*Ascosacculus* J. Campb., J.L. Anderson & Shearer

*Ascosalsum* J. Campb., J.L. Anderson & Shearer

*Bathyascus* Kohlm.

*Bovicornua* Jørgen Koch & E.B.G. Jones

*Buxetroldia* K.R.L. Petersen & Jørg. Koch.

*Carbosphaerella* I. Schmidt

*Ceriosporopsis* Linder

*Chadefaudia* Feldm.-Maz.

*Corallicola* Volkm.-Kohlm. & Kohlm.

*Corollospora* Werderm.

*Cucullosporella* K.D. Hyde & E.B.G. Jones

*Falcatispora* K.L. Pang & E.B.G. Jones

*Fluviatispora* K.D. Hyde

*Haligena* Kohlm.

*Halosarpheia* Kohlm. & E. Kohlm.

*Halosphaeria* Linder

*Halosphaeriopsis* T.W. Johnson

*Havispora* K.L. Pang & Vrijmoed

*Iwilsoniella* E.B.G. Jones

*Lanspora* K.D. Hyde & E.B.G. Jones

*Lautisporiopsis* E.B.G. Jones, Yousoff & S.T. Moss

*Lignincola* Höhnk

*Limacospora* E.B.G. Jones, Jœrgen Koch, McKeown & S.T. Moss

*Littispora* J. Campb., J.L. Anderson & Shearer

*Luttrellia* Shearer

*Magnisphaera* J. Campb., J.L. Anderson & Shearer

*Marinospora* A.R. Caval.

*Matsusphaeria* K.L. Pang & E.B.G. Jones

*Moana* Kohlm. & Volkm.-Kohlm.

*Morakotiella* Sakayaroj

*Nais* Kohlm.

*Natantispora* J. Campb., J.L. Anderson & Shearer

*Naufragella* Kohlm. & Volkm.-Kohlm.

*Nautosphaeria* E.B.G. Jones

*Neptunella* K.L. Pang & E.B.G. Jones

*Nereiospora* E.B.G. Jones, R.G. Johnson & S.T. Moss

*Nimbospora* Jørgen Koch

*Nohea* Kohlm. & Volkm.-Kohlm.

*Oceanitis* Kohlm.

*Ocostaspora* E.B.G. Jones, R.G. Johnson & S.T. Moss

*Okeanomyces* K.L. Pang & E.B.G. Jones

*Ondiniella* E.B.G. Jones, R.G. Johnson & S.T. Moss

*Ophiodeira* Kohlm. & Volkm.-Kohlm.

*Panorbis* J. Campb., J.L. Anderson & Shearer

*Phaeonectriella* Eaton & E.B.G. Jones

*Pseudolignincola* Chatmala & E.B.G. Jones

*Remispora* Linder

*Saagaromyces* K.L. Pang & E.B.G. Jones

*Sablicola* E.B.G. Jones, K.L. Pang & Vrijmoed

*Thalassogena* Kohlm. & Volkm.-Kohlm.

*Thalespora* Chatmala & E.B.G. Jones

*Tirispora* E.B.G. Jones & Vrijmoed

*Trailia* G.K. Sutherl.

*Trichomaris* Hibbits, Hughes & Sparks

*Tunicatispora* K.D. Hyde

**Microascaceae** Luttr. ex Malloch 1970

*Anekabeeja* Udaiyan & Hosag.

*Canariomyces* Arx

*Enterocarpus* Locq.-Lin.

*Kernia* Nieuwl.

*Lophotrichus* R.K. Benj.

*Microascus* Zukal

*Petriella* Curzi

*Petriellopsis* Gilgado, Cano, Guarro & Gene nom. inval. (Art. 37.1.)

*Pseudallescheria* Negroni & I. Fisch.

**Microascales**, genera incertae sedis

*Ceratocystis* Ellis & Halst.

*Cornuvesica* C.D. Viljoen, M.J. Wingf. & K. Jacobs

?*Gondwanamyces* Marais & M.J. Wingf.

*Sphaeronaemella* P. Karst.

*Viennotidia* Negru & Verona ex Rogerson

**Hypocreomycetidae**, families incertae sedis

**Glomerellaceae** Locq. ex Seifert & W. Gams 2007

*Glomerella* Spauld. & Schrenk

**Plectosphaerellaceae** W. Gams, Summerbell & Zare 2007

*Plectosphaerella* Kleb.

**Hypocreomycetidae**, genera incertae sedis

*Ascocodinaea* Samuels, Candoussau & Magni

*Etheirophora* Kohlm. & Volkm.-Kohlm.

*Flammispora* U. Pinruan, J. Sakayaroj, K.D. Hyde & E.B.G. Jones

*Juncigena* Kohlm., Volkm.-Kohlm. & O.E. Erikss.

*Porosphaerellopsis* E. Müll. & Samuels

*Swampomyces* Kohlm. & Volkm.

*Torpedospora* Meyers

**Subclass Sordariomycetidae** O.E. Erikss. & Winka 1997

**Boliniales** P.F. Cannon. 2001

**Boliniaceae** Rick 1931

*Apiocamarops* Samuels & J.D. Rogers

*Camaropella* Lar. N. Vasiljeva

*Camarops* P. Karst.

*Cornipulvina* Huhndorf, A.N. Mill., F.A. Fernández & Lodge

*Endoxyla* Fuckel

*Mollicamarops* Lar.N. Vassiljeva

**Calosphaeriales** M.E. Barr 1983

**Calosphaeriaceae** Munk 1957

*Calosphaeria* Tul. & C. Tul.

*Conidiotheca* Réblová & L. Mostert

*Jattaea* Berl.

?*Kacosphaeria* Speg.

*Phragmocalosphaeria* Petr.

?*Sulcatistroma* A.W. Ramaley

*Togniniella* Réblová, L. Mostert, W. Gams & Crous

?*Wegelina* Berl.

**Pleurostomataceae** Réblová, L. Mostert, W. Gams & Crous 2004

*Pleurostoma* Tul. & C. Tul.

**Chaetosphaeriales** Huhndorf, A.N. Mill. & F.A. Fern. 2003

**Chaetosphaeriaceae** Réblová, M.E. Barr & Samuels 1999

*Ascochalara* Réblová

*Australiasca* Sivan. & Alcorn

*Chaetosphaeria* Tul. & C. Tul.

=*Paragaeumannomyces* Matsush.

*Lecythothecium* Réblová & Winka

*Melanochaeta* E. Müll., Harr & Sulm.

*Melanopsammella* Höhn.

*Porosphaerella* E. Müll. & Samuels

*Striatosphaeria* Samuels & E. Müll.

*Tainosphaeria* F.A. Fernández & Huhndorf

*Zignoëlla* Sacc.

**Coniochaetales** Huhndorf, A.N. Mill. & F.A. Fern. 2003

**Coniochaetaceae** Malloch & Cain 1971

*Barrina* A.W. Ramaley

*Coniochaeta* (Sacc.) Cooke

=*Coniochaetidium* Malloch & Cain

=*Ephemeroascus* Emden

=*Poroconiochaeta* Udagawa & Furuya

?*Synaptospora* Cain

**Diaporthales** Nannf. 1932

**Cryphonectriaceae** Gryzenh. & M.J. Wingf. 2006

*Amphilogia* Gryzenh. & M.J. Wingf.

*Celoporthe* Nakab., Gryzenh, Jol. Roux & M.J. Wingf.

*Chrysoporthe* Gryzenhout & M.J. Wingf.

*Cryphonectria* (Sacc.) Sacc. & D. Sacc.

*Endothia* Fr.

*Holocryphia* Gryzenh. & M.J. Wingf.

*Microthia* Gryzenh. & M.J. Wingf.

*Rostraureum* Gryzenh. & M.J. Wingf.

**Diaporthaceae** Höhn. ex Wehm. 1926

*Apioporthella* Petr.

*Diaporthe* Nitschke

*Leucodiaporthe* M.E. Barr & Lar.N. Vassiljeva

*Mazzantia* Mont.

**Gnomoniaceae** G. Winter 1886

*Ambarignomonia* Sogonov

*Anisomyces* Theiss. & Syd.

*Apiognomonia* Höhn.

*Bagcheea* E. Müll. & R. Menon

*Clypeoporthe* Höhn.

*Cryptosporella* Sacc.

=*Ophiovalsa* Petr.

*Diaporthella* Petr.

*Diplacella* Syd.

*Ditopella* De Not.

*Ditopellopsis* J. Reid & C. Booth

*Gnomonia* Ces. & De Not.

*Gnomoniella* Sacc.

*Gnomoniopsis* Berl.

*Mamiania* Ces. & De Not.

*Mamianiella* Höhn.

*Ophiognomonia* (Sacc.) Sacc.

*Phragmoporthe* Petr.

*Phylloporthe* Syd.

*Plagiostoma* Fuckel

=*Cryptodiaporthe* Petr.

*Pleuroceras* Riess

=*Linospora* Fuckel

*Skottsbergiella* Petr.

*Valseutypella* Höhn.

*Xenotypa* Petr.

**Melanconidaceae** G. Winter 1886

*Botanamphora* Nograsek & Scheuer

*Ceratoporthe* Petr.

*Cytomelanconis* Naumov

*Dicarpella* Syd. & P. Syd. (n. illeg.)

*Dictyoporthe* Petr.

*Freminaevia* Nieuwl.

?*Gibellia* Sacc.

*Hypophloeda* K.D. Hyde & E.B.G. Jones

*Kensinjia* J. Reid & C. Booth

*Macrodiaporthe* Petr.

*Massariovalsa* Sacc.

*Mebarria* J. Reid & C. Booth

*Melanamphora* Lafl.

*Melanconis* Tul. & C. Tul.

*Melogramma* Fr.

*Phragmodiaporthe* Wehm.

*Plagiophiale* Petr.

*Plagiostigme* Syd.

*Prosthecium* Fresen.

*Prostratus* Sivan., W.H. Hsieh & C.Y. Chen

*Pseudovalsa* Ces. & De Not.

*Pseudovalsella* Höhn.

*Wehmeyera* J. Reid & C. Booth

*Wuestneia* Auersw. ex Fuckel

*Wuestneiopsis* J. Reid & Dowsett

**Schizoparmeaceae** Rossman 2007

*Schizoparme* Shear

**Sydowiellaceae** Lar.N. Vassiljeva 1987

*Chapeckia* M.E. Barr

*Hapalocystis* Auersw. ex Fuckel

*?Lambro* Racib.

*Rossmania* Lar. N. Vasiljeva

*Sillia* P. Karst.

*Stegophora* Syd. & P. Syd.

*Sydowiella* Petr.

*?Uleoporthe* Petr.

**Togniniaceae** Réblová, L. Mostert, W. Gams & Crous 2004

*Togninia* Berl.

=*Romellia* Berl.

**Valsaceae** Tul. & C. Tul. 1861

*Amphiporthe* Petr.

*Apioplagiostoma* M.E. Barr

*Chadefaudiomyces* Kamat, Rao, Patil & Ullasa

*Clypeoporthella* Petr.

*Cryptascoma* Ananthap.

*Ditopellina* J. Reid & C. Booth

*Durispora* K.D. Hyde

*Hypospilina* (Sacc.) Traverso

*Kapooria* J. Reid & C. Booth

*Leptosillia* Höhn.

*Leucostoma* (Nitschke) Höhn.

*Maculatipalma* J. Fröhlich & K.D. Hyde

*Paravalsa* Ananthapadm.

*Phruensis* Pinruan

*Valsa* Fr.

*Valsella* Fuckel

**Vialaeaceae** P.F. Cannon 1995

*Vialaea* Sacc.

**Diaporthales**, genera incertae sedis

*?Anisogramma* Theiss. & Syd.

*Anisomycopsis* I. Hino & Katum.

*Apiosporopsis* (Traverso) Mariani

*Caudospora* Starb.

*Chromendothia* Lar. N. Vasiljeva

*Cryptoleptosphaeria* Petr.

*Cryptonectriella* (Höhn.) Weese

*Cryptonectriopsis* (Höhn.) Weese

*Diatrypoidiella* Manohar., Kunwar & D.K. Agarwal

?*Exormatostoma* Gray

*Hercospora* Fr.

*Keinstirschia* J. Reid & C. Booth

*Lollipopaia* Inderbitzin

*Pachytrype* M.E. Barr, J.D. Rogers & Y.M. Ju

*Pedumispora* K.D. Hyde & E.B.G. Jones

*Pseudocryptosporella* J. Reid & C. Booth

*Pseudothis* Theiss. & Syd. (non Pseudotis (Boud.) Boud.)

*Savulescua* Petr.

?*Sphaerognomoniella* Naumov & Kusnezowa

*Stioclettia* Dennis

*Thailandiomyces* Pinruan, Sakay., K.D. Hyde & E.B.G. Jones

?*Trematovalsa* Jacobesco

*Vismya* V.V. Sarma & K.D. Hyde

**Magnaporthales** Thongk., Vijakr. & K.D. Hyde 2009

**Magnaporthaceae** P.F. Cannon 1994

*Buergenerula* Syd.

*Ceratosphaerella* Huhndorf, M. Greif, Mugambi & A.N. Mill.

*Ceratosphaeria* Niessl

*Clasterosphaeria* Sivan.

*Clavatisporella* K.D. Hyde

*Gaeumannomyces* Arx & D.L. Olivier

?*Herbampulla* Scheuer & Nograsek

*Magnaporthe* R.A. Krause & R.K. Webster

*Muraeriata* Huhndorf, M. Greif, Mugambi & A.N. Mill.

*Omnidemptus* P.F. Cannon & Alcorn

*Ophioceras* Sacc.

*Pseudohalonectria* Minoura & T. Muroi

**Ophiostomatales** Benny & Kimbr. 1980

**Kathistaceae** Malloch & M. Blackw. 1990

*Kathistes* Malloch & M. Blackw.

**Ophiostomataceae** Nannf. 1932

*Ceratocystiopsis* H.P. Upadhyay & W.B. Kendr.

*Fragosphaeria* Shear

*Grosmannia* Gold.

*Klasterskya* Petr.

*Ophiostoma* Syd. & P. Syd.

*Spumatoria* Massee & E.S. Salmon

*Subbaromyces* Hesselt.

**Sordariales** Chad. ex D. Hawksw. & O.E. Erikss. 1986

**Chaetomiaceae** G. Winter 1885

*Achaetomium* J.N. Rai, J.P. Tewari & Mukerji

*Bommerella* Marchal

*Boothiella* Lodhi & Mirza

*Chaetomidium* (Zopf) Sacc.

=*Aporothielavia* Malloch & Cain

*Chaetomiopsis* Mustafa & Abdul-Wahid

*Chaetomium* Kunze

*Corynascella* Arx & Hodges

*Corynascus* Arx

*Emilmuelleria* Arx

*Farrowia* D. Hawksw.

*Guanomyces* M.C. Gonzáles, Hanlin & Ulloa

*Subramaniula* Arx

*Thielavia* Zopf

**Lasiosphaeriaceae** Nannf. 1932

*Anopodium* Lundq.

*Apiosordaria* Arx & W. Gams

*Apodospora* Cain & J.H. Mirza

*Apodus* Malloch & Cain

*Arecacicola* J.E. Taylor, J. Fröhl. & K.D. Hyde

*Arniella* Jeng & J.C. Krug

*Arnium* Nitschke ex G. Winter

*Bellojisia* Réblová

*Bombardia* (Fr.) P. Karst.

*Bombardioidea* C. Moreau ex N. Lundqv.

*Camptosphaeria* Fuckel

*Cercophora* Fuckel

*Diffractella* Guarro, P. Cannon & van der Aa

*Diplogelasinospora* Cain

*Emblemospora* Jeng & J.C. Krug

*Eosphaeria* Höhn.

*Fimetariella* N. Lundq.

*Jugulospora* N. Lundq.

*Lacunospora* Cailleux

*Lasiosphaeria* Ces. & De Not.

*Lasiosphaeris* Clem.

*Periamphispora* J.C. Krug

*Podospora* Ces.

*Pseudocercophora* Subram. & Sekar

*Schizothecium* Corda

*Strattonia* Cif.

*Thaxteria* Sacc.

*Triangularia* Boedijn

*Tripterosporella* Subram. & Lodha

*Zopfiella* G. Winter

*Zygopleurage* Boedijn

*Zygospermella* Cain

**Sordariaceae** G. Winter 1885

*Cainiella* E. Müll.

*Copromyces* N. Lundq.

?*Effetia* Bartoli, Maggi & Persiani

*Gelasinospora* Dowding

?*Guilliermondia* Boud. (non Nadson & Konok.)

*Neurospora* Shear & B.O. Dodge

*Pseudoneurospora* D. García, Stchigel & Guarro

*Sordaria* Ces. & De Not.

*Stellatospora* T. Ito & A. Nakagiri

**Sordariales**, genera incertae sedis

*Acanthotheciella* Höhn.

?*Ascolacicola* Ranghoo & K.D. Hyde

*Bombardiella* Höhn.

*Coronatomyces* D. García, Stchigel & Guarro

*Corylomyces* Stchigel, Calduch & Guarro

*Cuspidatispora* A. Mill., Shearer, Bartolata & Huhndorf

*Globosphaeria* D.Hawksw.

*Immersiella* A.N. Mill. & Huhndorf

*Isia* D. Hawksw. & Manohar.

*Lockerbia* K.D. Hyde

*Melanocarpus* Arx

?*Monosporascus* Pollack & Uecker

?*Nitschkiopsis* Nannf. & R. Sant.

*Onygenopsis* P. Henn.

*Phaeosporis* Clem.

*Reconditella* Matzer & Hafellner

*Rhexosporium* Udagawa & Fur.

*Roselliniella* Vain.

*Roselliniomyces* Matzer & Hafellner

*Roselliniopsis* Matzer & Hafellner

?*Savoryella* E.B.G. Jones & Eaton

*Utriascus* Réblová

**Sordariomycetidae**, families incertae sedis

**Amplistromataceae** Huhndorf, A.N. Mill., M. Greif & Samuels 2009

*Amplistroma* Huhndorf, A.N. Mill., M. Greif & Samuels

*Wallrothiella* Sacc.

**Annulatascaceae** S.W. Wong, K.D. Hyde & E.B.G. Jones 1998

*Annulatascus* K.D. Hyde

*Annulusmagnus* J. Campb. & Shearer

*Aqualignicola* V.M. Ranghoo, K.M. Tsui & K.D. Hyde

*Aquaticola* W.H. Ho, K.M. Tsui, Hodgkiss & K.D. Hyde

*Ascitendus* J. Campb. & Shearer

*Ayria* Fryar & K.D. Hyde

*Brunneosporella* V.M. Ranghoo & K.D. Hyde

*Cataractispora* K.D. Hyde, S.W. Wong & E.B.G. Jones

*Clohiesia* K.D. Hyde

*Cyanoannulus* Raja, J. Campb. & Shearer

*Diluviocola* K.D. Hyde, S.W. Wong & E.B.G. Jones

*Fluminicola* S.W. Wong, K.D. Hyde & E.B.G. Jones

*Frondicola* K.D. Hyde

*Fusoidispora* D. Vijaykrishna, R. Jeewon & K.D. Hyde

*Pseudoproboscispora* Punith.

*Rhamphoria* Niessl

*Submersisphaeria* K.D. Hyde

*Teracosphaeria* Réblová & Seifert

*Torrentispora* K.D. Hyde, W.H. Ho, E.B.G. Jones, K.M. Tsui & S.W. Wong

*Vertexicola* K.D. Hyde, V.M. Ranghoo & S.W. Wong

**Cephalothecaceae** Höhn. 1917

*Albertiniella* Kirschst.

*Cephalotheca* Fuckel

*Cryptendoxyla* Malloch & Cain

**Helminthosphaeriaceae** Samuels, Candoussau & Magní 1997

*Echinosphaeria* A.N. Mill. & Huhndorf

*Helminthosphaeria* Fuckel

*Ruzenia* O. Hilber

*Tengiomyces* Réblová

**Jobellisiaceae** Réblová 2008

*Jobellisia* M.E. Barr

**Papulosaceae** Winka & O.E. Erikss. 2000

*Papulosa* Kohlm. & Volkm.-Kohlm.

**Sordariomycetidae,** genera incertae sedis

*Ascotaiwania* Sivan. & H.S. Chang

*Ascovaginospora* Fallah, Shearer & W. Chen

*Biconiosporella* Schaum.

*Carpoligna* F.A. Fernández & Huhndorf

*Caudatispora* J. Fröhlich & K.D. Hyde

*Ceratostomella* Sacc.

*Chaetosphaerides* Matsush.

*Conioscyphascus* Réblová & Seifert

*Erythromada* Huhndorf, A.N. Mill., F.A. Fernández & Lodge

*Garethjonesia* K.D. Hyde

*Hanliniomyces* Raja & Shaerer

*Lasiosphaeriella* Sivan.

*Lentomitella* Höhn.

*Leptosporella* Penz. & Sacc.

*Linocarpon* Syd. & P. Syd.

*Menisporopascus* Matsush.

*Merugia* Rogerson & Samuels

*Mycomedusiospora* G.C. Carroll & Munk

*Myelosperma* Syd. & P. Syd.

*Neolinocarpon* K.D. Hyde

*Nigromammilla* K.D. Hyde & J. Fröhl.

*Phaeotrichosphaeria* Sivan.

*Phragmodiscus* Hansf.

*Plagiosphaera* Petr.

*Rhodoveronaea* Arzanlou, W. Gams & Crous

*Spinulosphaeria* Sivan.

*Teracosphaeria* Réblová & Seifert

*Xylomelasma* Réblová

**Subclass Xylariomycetidae** sensu O.E. Erikss. & Winka 1997

**Xylariales** Nannf. 1932

**Amphisphaeriaceae** G. Winter 1885

*Amphisphaerella* (Sacc.) Kirschst.

*Amphisphaeria* Ces. & De Not.

*Arecophila* K.D. Hyde

*Atrotorquata* Kohlm. & Volkm.-Kohlm.

*Blogiascospora* Shoemaker, E. Müll. & Morgan-Jones

?*Broomella* Sacc.

*Cainia* Arx & E. Müll.

*Cannonia* J.E. Taylor & K.D. Hyde

?*Capsulospora* K.D. Hyde

*Ceriophora* Höhn.

?*Ceriospora* Niessl

*Chitonospora* E. Bommer, M. Rousseau & Sacc.

?*Clypeophysalospora* H.J. Swart

*Discostroma* Clem.

*Distorimula* San Martín, Lavín & Esqueda

*Dyrithiopsis* L. Cai, R. Jeewon & K.D. Hyde

?*Dyrithium* M.E. Barr

?*Ellurema* Nag Raj & W.B. Kendr.

*Flagellosphaeria* Aptroot

*Frondispora* K.D. Hyde

*Funiliomyces* Aptroot

*Griphosphaerioma* Höhn.

*Iodosphaeria* Samuels, E. Müll. & O. Petrini

*Lanceispora* Nakagiri, I. Okane, Tad. Ito & Katumoto

?*Leiosphaerella* Höhn.

?*Lepteutypa* Petr.

*Lindquistomyces* Aramb., E. Müll. & Gamundí

*Manokwaria* K.D. Hyde

*Monographella* Petr.

*Mukhakesa* Udaiyan & Hosag.

*Neobroomella* Petr.

*Neohypodiscus* J.D. Rogers, Y.M. Yu & Laessœe

*Ommatomyces* Kohlm., Volkm.-Kohlm. & O.E. Erikss.

?*Oxydothis* Penz. & Sacc.

*Paracainiella* Lar. N. Vasiljeva

?*Pemphidium* Mont.

?*Pestalosphaeria* M.E. Barr

?*Reticulosphaeria* Sivan. & Bahekar

?*Urosporella* G.F. Atk.

*Urosporellopsis* W.H. Hsieh, C.Y. Chen & Sivan.

*Xylochora* Arx & E. Müll.

**Clypeosphaeriaceae** G. Winter 1886

?*Apioclypea* K.D. Hyde

?*Apiorhynchostoma* Petr.

*Aquasphaeria* K.D. Hyde

*Brunneiapiospora* K.D. Hyde, J. Fröhlich & J.E. Taylor

*Clypeosphaeria* Fuckel

*Crassoascus* Checa, Barrasa & A.T. Martinez

*Duradens* Samuels & Rogerson

*Palmomyces* K.D. Hyde, J. Fröhlich & J.E. Taylor

*Pseudovalsaria* Spooner

**Diatrypaceae** Nitschke 1869

*Anthostoma* Nitschke

*Cryptosphaeria* Ces. & De Not. (non Grev.)

*Diatrype* Fr.

*Diatrypella* (Ces. & De Not.) De Not.

*Echinomyces* Rappaz

*Eutypa* Tul. & C. Tul.

*Eutypella* (Nitschke) Sacc.

*Leptoperidia* Rappaz

*Peroneutypa* Berl.

*Quaternaria* Tul. & C. Tul.

**Graphostromataceae** M.E. Barr, J.D. Rogers & Y.M. Ju 1993

*Graphostroma* Piroz.

**Hyponectriaceae** Petr. 1923

*Apiothyrium* Petr.

?*Arecomyces* K.D. Hyde

*Arwidssonia* B. Erikss.

*Cesatiella* Sacc.

*Chamaeascus* L.Holm, K.Holm & M.E. Barr

*Charonectria* Sacc.

*Discosphaerina* Höhn.

*Exarmidium* P. Karst.

*Hyponectria* Sacc.

*Micronectria* Speg.

*Papilionovela* Aptroot

*Pellucida* Dulym., Sivan., PF. Canon & Peerally

*Physalospora* Niessl

*Pseudomassaria* Jacz.

*Rhachidicola* K.D. Hyde & J. Fröhl.

?*Xenothecium* Höhn.

**Xylariaceae** Tul. & C. Tul. 1861

*Amphirosellinia* Y.-M. Ju, J.D. Rogers, H.-M. Hsieh & Lar. N. Vasiljeva

*Annulohypoxylon* Y.-M. Ju, J.D. Rogers & H.-M. Hsieh

*Anthostomella* Sacc.

*Appendixia* B.S. Lu & K.D. Hyde

*Areolospora* S.C. Jong & E.E. Davis

?*Ascotricha* Berk.

*Ascovirgaria* J.D. Rogers & Y.-M. Ju

*Astrocystis* Berk. & Broome

*Barrmaelia* Rappaz

*Biscogniauxia* Kuntze

*Calceomyces* Udagawa & S. Ueda

*Camillea* Fr.

*Chaenocarpus* Rebent.

*Chlorostroma* A.N. Mill., Lar. N. Vassiljeva & J.D. Rogers

*Collodiscula* I. Hino & Katum.

*Creosphaeria* Theiss.

*Cyanopulvis* J. Fröhl. & K.D. Hyde

*Daldinia* Ces. & De Not.

*Discoxylaria* J.C. Lindq. & J.E. Wright

?*Emarcea* Duong, R. Jeewon & K.D. Hyde

*Engleromyces* P. Henn.

*Entoleuca* Syd.

*Entonaema* A. Möller

*Euepixylon* Füisting

*Fasciatispora* K.D. Hyde

*Fassia* Dennis

*Gigantospora* B.S. Lu & K.D. Hyde

*Guestia* G.J.D. Sm. & K.D. Hyde

*Haloroselliniа* Whalley, E.B.G. Jones, K.D. Hyde & Læssøe

*Helicogermslita* Lodha & D. Hawksw.

*Holttumia* Lloyd

*Hypocopra* (Fr.) J. Kickx f.

*Hypoxylon* Bull.

*Induratia* Samuels, E. Müll. & O. Petrini

*Jumillera* J.D. Rogers, Y.M. Ju & San Martín

*Kretzschmaria* Fr.

*Kretzschmariella* Viégas

*Leprieuria* Laessøe, J.D. Rogers & Whalley

?*Leptomassaria* Petr.

*Lopadostoma* (Nitschke) Traverso

*Myconeesia* Kirschst.

*Nemania* Gray

*Nipicola* K.D. Hyde

*Obolarina* Pouzar

*Occultitheca* J.D. Rogers & Y.-M. Ju

*Ophiorosellinia* J.D. Rogers, A. Hidalgio, F.A. Fernández & Huhndorf

*Pandanicola* K.D. Hyde

*Paramphisphaeria* F.A. Fernández, J.D. Rogers, Y.-M. Ju, Huhndorf & L. Umana

?*Paucithecium* Lloyd

*Phylacia* Lév.

*Pidoplitchkoviella* Kiril.

*Podosordaria* Ellis & Holw.

*Poroleprieuria* M.C. Gonzáles, Hanlin, Ulloa & E. Aguirre

*Poronia* Willd.

*Pyrenomyxa* Morgan

=*Pulveria* Malloch & Rogerson

*Rhopalostroma* D. Hawksw.

*Rosellinia* De Not.

*Sabalicola* K.D. Hyde

*Sarcoxylon* Cooke

?*Sclerodermatopsis* Torrens

?*Seynesia* Sacc.

*Spirodecospora* B.S. Lu, K.D. Hyde & W.H. Ho

?*Steganopycnis* Syd. & P. Syd.

*Stereosphaeria* Kirschst.

*Stilbohypoxylon* P. Henn.

*Striatodecospora* D.Q. Zhou, K.D. Hyde & BS. Lu

*Stromatoneurospora* S.C. Jong & E.E. Davis

*Thamnomyces* Ehrenb.

*Theissenia* Maubl.

*Thuemenella* Penz. & Sacc.

*Versiomyces* Whalley & Watling

*Vivantia* J.D. Rogers, Y.M. Ju & Candoussau

*Wawelia* Namysl.

*Whalleya* J.D. Rogers, Y.M. Ju & San Martín

*Xylaria* Hill ex Schrank

*Xylotumulus* J.D. Rogers, Y.M. Ju & Hemmes

**Xylariales**, genera incertae sedis

*Adomia* S. Schatz

*Ascotrichella* Valldos. & Guarro

*Coniocessia* D. García, Stchigel, D. Hawksw. & Guarro

*Coniolariella* D. García, Stchigel & Guarro

=*Coniolaria* Seigle-Murandi et al., nom. inval.

*Diamantinia* A.N. Mill., Læssøe & Huhndorf

*Lasiobertia* Sivan.

*Palmicola* K.D. Hyde

*Pulmosphaeria* J.E. Taylor, K.D. Hyde & E.B.G. Jones

*Yuea* O.E. Erikss.

**Sordariomycetes**, orders incertae sedis

**Koralionastetales** Kohlm., Volkm.-Kohlm., J. Campb. & Inderbitzin 2009

**Koralionastetaceae** Kohlm. & Volkm-Kohlm. 1987

*Koralionastes* Kohlm. & Volkm.-Kohlm.

**Lulworthiales** Kohlm., Spatafora & Volkm.-Kohlm.. 2000

**Lulworthiaceae** Kohlm., Spatafora & Volkm.-Kohlm.. 2000

*Haloguignardia* A. Cribb & J. Cribb

*Kohlmeyeriella* E.B.G. Jones, R.G. Johnson & S.T. Moss

*Lindra* I. Wilson

*Lulwoana* Kohlm., Volkm.-Kohlm., J. Campb., Spatafora & Gräf.

*Lulwoidea* Kohlm., Volkm.-Kohlm., J. Campb., Spatafora & Gräf.

*Lulworthia* G.K. Sutherl.

*Rostrupiella* Jørg. Koch, K.L. Pang & E.B.G. Jones

**Spathulosporaceae** Kohlm. 1973

*Spathulospora* A.R. Caval. & T.W. Johnson

**Meliolales** Gäum. ex D. Hawksw. & O.E. Erikss. 1986

**Armatellaceae** Hosag. 2003

*Armatella* Theiss. & Syd.

**Meliolaceae** G.W. Martin ex Hansf. 1946

*Amazonia* Theiss.

*Appendiculella* Höhn.

*Asteridiella* McAlpine

*Basavamyces* V.B. Hosag.

*Ceratospermopsis* Bat.

*Cryptomeliola* S. Hughes & Piroz.

*Ectendomeliola* Hosag. & D.K. Agarwal

*Endomeliola* S. Hughes & Piroz.

*Haraea* Sacc. & P. Syd.

?*Hypasteridium* Speg.

*Irenopsis* F. Stevens

*Laeviomeliola* Bat.

*Leptascospora* Speg.

*Meliola* Fr.

?*Metasteridium* Speg.

*Ophiociliomyces* Bat. & I.H. Lima

*Ophioirenina* Sawada & W. Yamam.

?*Ophiomeliola* Starb.

?*Parasteridium* Speg.

*Pauahia* F. Stevens

?*Pleomeliola* (Sacc.) Sacc.

*Pleomerium* Speg.

*Prataprajella* Hosag.

*Ticomyces* Toro

*Urupe* Viégas

?*Xenostigme* Syd.

**Phyllachorales** M.E. Barr 1983

**Phaeochoraceae** K.D. Hyde, P.F. Cannon & M.E. Barr 1997

*Cocoicola* K.D. Hyde

*Phaeochora* Höhn.

*Phaeochoropsis* D. Hyde & P.F. Cannon

*Serenomyces* Petr.

**Phyllachoraceae** Theiss. & H. Syd. 1915

*Apiosphaeria* Höhn.

*Brobdingnagia* D. Hyde & P.F. Cannon

*Coccodiella* Hara

*Deshpandiella* Kamat & Ullasa

*Diachora* Müll. Arg.

*Diatractium* Syd. & P. Syd.

*Erikssonia* Penz. & Sacc.

*Fremitomyces* P.F. Cannon & H.C. Evans

?*Geminispora* Pat.

*Gibellina* Pass. ex Roum.

*Imazekia* Tak. Kobay. & Y. Kawabe

*Isothea* Fr.

*Lichenochora* Hafellner

*Lindauella* Rehm

?*Lohwagia* Petr.

*Maculatifrons* K.D. Hyde

*Malthomyces* D. Hyde & P.F. Cannon

*Marinosphaera* K.D. Hyde

*Muelleromyces* Kamat & Anahosur

*Neoflageoletia* J. Reid & C. Booth

*Ophiodothella* (P. Henn.) Höhn.

*Orphnodactylis* Malloch & Mallik

*Oxodeora* D. Hyde & P.F. Cannon

*Parberya* C.A. Pearce & K.D. Hyde

?*Petrakiella* Syd.

*Phaeochorella* Theiss. & Syd.

*Phycomelaina* Kohlm.

*Phyllachora* Nitschke ex Fuckel (1870)

*Phylleutypa* Petr.

*Phyllocrea* Höhn.

*Polystigma* DC.

*Pseudothiella* Petr.

*Pterosporidium* W.H. Ho & K.D. Hyde

*Rehmiodothis* Theiss. & Syd.

*Retroa* P.F. Cannon

*Rikatlia* P.F. Cannon

*Schizochora* Syd. & P. Syd.

*Sphaerodothella* C.A. Pearce & K.D. Hyde

*Sphaerodothis* (Sacc. & P. Syd.) Shear

*Stigmochora* Theiss. & Syd.

*Stromaster* Höhn.

*Telimena* Racib.

*Telimenella* Petr.

*Telimenochora* Sivan.

*Trabutia* Sacc. & Roum.

*Tribulatia* J.E. Taylor, K.D. Hyde & E.B.G. Jones

*Uropolystigma* Maubl.

*Vitreostroma* P.F. Cannon

*Zimmermanniella* P. Henn.

**Trichosphaeriales** M.E. Barr 1983

**Trichosphaeriaceae** G. Winter 1885

*Acanthosphaeria* Kirschst.

*Barbatosphaeria* Réblová

*Collematospora* Jeng & Cain

*Coniobrevicolla* Réblová

*Cresporhaphis* M.B. Aguirre

*Cryptadelphia* Réblová & Seifert

*Eriosphaeria* Sacc.

*Fluviostroma* Samuels & E. Müll.

*Kananascus* Nag Raj

*Miyoshiella* Kawamura

*Neorehmia* Höhn.

*Oplothecium* Syd.

*Rizalia* Syd. & P. Syd.

*Schweinitziella* Speg.

*Setocampanula* Sivan. & W.H. Hsieh

*Trichosphaeria* Fuckel

*Umbrinosphaeria* Réblová

*Unisetosphaeria* Pinnoi, E.B.G. Jones, McKenzie & K.D. Hyde

**Sordariomycetes**, families incertae sedis

**Apiosporaceae** K.D. Hyde, J. Fröhlich, J.E. Taylor & M.E. Barr 1998

*Apiospora* Sacc.

*Appendicospora* K.D. Hyde.

**Catabotrydaceae** Petrak ex M.E. Barr 1990

*Catabotrys* Theiss. & Syd.

**Obryzaceae** Körb. 1855

*Obryzum* Wallr.

**Thyridiaceae** O.E. Erikss. & J.Z. Yue 1987

*Balzania* Speg.

*Mattirolia* Berl. & Bres.

*Thyridium* Nitschke

*Thyronectroidea* Seaver

**Sordariomycetes**, genera incertae sedis

*Abyssomyces* Kohlm.

*Acerbiella* Sacc.

*Acrospermoides* Miller & G.E. Thomps.

*Ameromassaria* Hara

*Amphisphaerellula* Gucevic

*Amphisphaerina* Höhn.

*Amphorulopsis* Petr.

*Amylis* Speg.

*Anthostomaria* (Sacc.) Theiss. & Syd.

*Anthostomellina* Kantsh.

*Apharia* Bonord.

*Apodothina* Petr.

*Apogaeumannomyces* Matsush.

*Aquadulciospora* Fallah & Shearer

*Aquamarina* Kohlm., Volkm.-Kohlm. & O.E. Erikss.

*Aropsiclus* Kohlm. & Volkm.-Kohlm.

*Ascorhiza* Lecht.-Trnka

*Ascoyunnania* L. Cai & K.D. Hyde

*Assoa* Urries

*Aulospora* Speg.

*Azbukinia* Lar. N. Vasiljeva

*Bactrosphaeria* Penz. & Sacc.

*Biporispora* J.D. Rogers, Y.M. Ju & Candoussau

*Bombardiastrum* Pat.

*Brenesiella* Syd.

*Byrsomyces* Cavalc.

*Byssotheciella* Petr.

*Caleutypa* Petr.

*Calosphaeriopsis* Petr.

*Caproniella* Berl.

*Chaetoamphisphaeria* Hara

*Ciliofusospora* Bat. & J.L. Bezerra

*Clypeoceriospora* Camara

*Clypeosphaerulina* Camara

*Conidiotheca* Réblová & L. Mostert

*Cryptoascus* Petri

*Cryptomycina* Höhn.

*Cryptovalsa* Ces. & De Not. ex Fuckel

*Cucurbitopsis* Bat. & Cif.

*Curvatispora* V.V. Sarma & K.D. Hyde

*Dasysphaeria* Speg.

*Delpinoëlla* Sacc.

*Diacrochordon* Petr.

*Dontuzia* L.D. Gomez

*Dryosphaera* Jørgen Koch & E.B.G. Jones

*Endoxylina* Romell

*Esfandiariomyces* Ershad

*Frondisphaera* K.D. Hyde

*Glabrotheca* Chardón

*Heliastrum* Petr.

*Hyaloderma* Speg.

*Hydronectria* Kirschst.

*Hypotrachynicola* Etayo

*Immersisphaeria* Jaklitsch

*Iraniella* Petr.

*Khuskia* H.J. Huds.

*Konenia* Hara

*Kravtzevia* Shvartzman

*Kurssanovia* Kravtzev

*Lecythium* Zukal

*Leptosacca* Syd.

*Leptosphaerella* Speg.

*Leptosporina* Chardón

*Lyonella* Syd.

*Mangrovispora* K.D. Hyde & Nagakiri

*Melomastia* Nitschke ex Sacc.

*Microcyclephaeria* Bat.

*Mirannulata* Huhndorf, F.A. Fernández, A.N. Mill. & Lodge

*Monosporascus* Pollack & Uecker

*Nataniella* Réblová

?*Naumovela* Kravtzev

?*Neocryptospora* Petr.

*Neolamya* Theiss. & Syd.

*Neothyridaria* Petr.

*Ophiomassaria* Jacz.

*Ornatispora* K.D. Hyde, Goh, J.E. Taylor & J. Fröhl.

*Paoayensis* Cabanela, Jeewon & K.D. Hyde

*Pareutypella* Y.M. Ju & J.D. Rogers

*Phomatospora* Sacc.

*Phyllocelis* Syd.

*Pleocryptospora* J. Reid & C. Booth

*Pleosphaeria* Speg.

*Pontogeneia* Kohlm.

*Porodiscus* Lloyd

*Protocucurbitaria* Naumov

*Pulvinaria* Bon.

*Pumilus* Viala & Marsais

*Rehmiomycella* E. Müll.

*Rhamphosphaeria* Kirschst.

*Rhizophila* K.D. Hyde & E.B.G. Jones

*Rimaconus* Huhndorf, F.A. Fernández, J.E. Taylor & K.D. Hyde

*Rhopographella* (P. Henn.) Sacc. & Trotter

*Rhynchosphaeria* (Sacc.) Berl.

*Rivulicola* K.D. Hyde

*Romellina* Petr.

*Saccardoëlla* Speg.

*Sarcopyrenia* Nyl.

*Sartorya* Vuill.

*Scharifia* Petr.

*Scoliocarpon* Nyl.

*Scotiosphaeria* Sivan.

*Servaziella* J. Reid & C. Booth

*Sporoctomorpha* J.V. Almeida & Sousa da Câmara

*Stearophora* L. Mangin & Viala

*Stegophorella* Petr.

*Stellosetifera* Matsush.

*Stomatogenella* Petr.

*Strickeria* Körb.

*Sungaiicola* Fryar & K.D. Hyde

*Synsphaeria* Bon.

*Tamsiniella* S.W. Wong, K.D. Hyde, W.H. Ho & S.J. Stanley

*Tectonidula* Réblová

*Thelidiella* Fink ex J. Hedrick

*Thyridella* (Sacc.) Sacc.

*Thyrotheca* Kirschst.
*Trichospermella* Speg.
*Trichosphaeropsis* Bat. & Nasc.
*Tunstallia* Agnihothr.
*Vleugelia* J. Reid & C. Booth
*Zignoina* Cooke

**Pezizomycotina**, orders incertae sedis
**Lahmiales** O.E. Erikss. 1986
**Lahmiaceae** O.E. Erikss. 1986
*Lahmia* Körb.

**Medeolariales** Korf 1982
**Medeolariaceae** Korf 1982
*Medeolaria* Thaxt.

**Triblidiales** O.E. Erikss. 1992
**Triblidiaceae** Rehm 1888
*Huangshania* O.E. Erikss.
*Pseudographis* Nyl.
*Triblidium* Rebent.

**Pezizomycotina**, families incertae sedis
**Lyrommataceae** Lücking 2008
*Lyromma* Bat.

**Ascomycota**, families incertae sedis
Families and genera that cannot be placed in any of classes and orders accepted in the present classification with a high degree of probability are listed below.

**Amorphothecaceae** Parbery 1969

*Amorphotheca* Parbery

**Aphanopsidaceae** Printzen & Rambold 1995

*Aphanopsis* Nyl. ex Syd.

**Aspidotheliaceae** Räsenen ex J.C. David & D. Hawksw. 1991

*Aspidothelium* Vain.

**Batistiaceae** Samuels & K.F. Rodrigues 1989

*Batistia* Cif.

**Coniocybaceae** Reichenb. 1837

*Chaenotheca* (Th. Fr.) Th. Fr.

*Sclerophora* Chevall.

**Diporothecaceae** R.K. Mibey & D. Hawksw. 1995

*Diporotheca* C.C. Gordon & C.G. Shaw

**Eoterfeziaceae** G.F. Atk. 1902

*Acanthogymnomyces* Udagawa & Uchiyama

*Eoterfezia* G.F. Atk.

**Epigloeaceae** Zahlbr. 1903

*Epigloea* Zukal

**Hispidicarpomycetaceae** Nakagiri 1993

*Hispidocarpomyces* Nakagiri

**Lautosporaceae** Kohlm., Volkm.-Kohlm. &. O.E. Erikss. 1995

*Lautospora* K.D. Hyde & E.B.G. Jones

**Mastodiaceae** Zahlbr. 1907

*Mastodia* Hook.f. & Harv.

*Turgidosculum* Kohlm. & E. Kohlm.

**Microcaliciaceae** Tibell 1984

*Microcalicium* Vain.

**Mucomassariaceae** Petr. & Cif. 1932

*Mucomassaria* Petr.

**Phyllobatheliaceae** Bitter & F. Schill. 1927

*Phyllobathelium* (Müll. Arg.) Müll. Arg.

*Phyllocratera* Sérusiaux & Aptroot

**Pleurotremataceae** W. Watson 1929

*Daruvedia* Dennis

*Pleurotrema* Müll. Arg.

**Pseudeurotiaceae** Malloch & Cain 1970

*Connersia* Malloch

*Leuconeurospora* Malloch & Cain

?*Neelakesa* Udaiyan & Hosag.

*Pleuroascus* Massee & E.S. Salmon

*Pseudeurotium* J.F.H. Beyma

**Saccardiaceae** Höhn. 1909

*Angatia* Syd.

*Ascolectus* Samuels & Rogerson

*Cyanodiscus* E. Müll. & M.L. Farr

*Dictyonella* Höhn.

*Epibelonium* E. Müll.

*Johansonia* Sacc.

*Phillipsiella* Cooke

*Pseudodiscus* Arx & E. Müll.

*Rivilata* Kohlm., Volkm.-Kohlm. & O.E. Erikss.

*Saccardia* Cooke

*Schenckiella* P. Henn.

*Vonarxella* Bat., J.L. Bezerra & Peres

**Seuratiaceae** Vuill. ex M.E. Barr 1987

*Seuratia* Pat.

?*Seuratiopsis* Woron.

**Xanthopyreniaceae** Zahlbr. 1926

*Collemopsidium* Nyl.

*Didymellopsis* (Sacc.) Clem. & Shear

*Frigidopyrenia* Grube

*Pyrenocollema* Reinke

*Zwackhiomyces* Grube & Hafellner

**Ascomycota**, genera incertae sedis

*Abrothallus* De Not.

*Allophoron* Nádv.

*Antimanoa* Syd.

*Apiotypa* Petr.

*Argentinomyces* Peña & Arambarri

*Arthopyreniomyces* Cif. & Tomas.

*Ascocorticiellum* Jülich & B. de Vries

*Ascofascicula* Matsush.

*Ascomauritania* V.M. Ranghoo & K.D. Hyde

*Ascosorus* P. Henn. & Ruhland

*Ascosubramania* Rajendran

*Ascoxyta* Lib.

*Astomella* Thirum.

*Atractobolus* Tode

*Baculospora* Zukal

*Batistospora* J.L.

*Bezerra* & M.M.P. Herrera

*Berggrenia* Cooke

*Biflua* Jørgen Koch & E.B.G. Jones

*Brucea* Rikkinen

*Bresadolina* Rick

*Carnia* Bat.

*Cerastoma* Quél.

*Cladosphaera* Dumort.

*Clathroporinopsis* M. Choisy

*Clypeolum* Speg.

*Coryneliella* Har. & P. Karst.

?*Coscinocladium* Kunze

?*Crinigera* I. Schmidt

*Cyanopyrenia* Harada

*Cylindrotheca* Bon.

?*Cystodium* Fée

*Diaboliumbilicus* I. Hino & Katum.

*Diehliomyces* Gilkey

*Dipyrgis* Clem.

*Discocera* A.L. Sm. & Ramsb.

*Dryinosphaera* Dumort. Eiona Kohlm.

?*Elaeomyces* Kirchn.

*Endocolium* Syd.

?*Enduria* Norman Erispora Pat.

*Farriolla* Norman Feracia

*Frigidospora* K.D. Hyde & Goh

*Gaeumanniella* Petr.

*Gallaicolichen* Serux. & Lücking

*Gonidiomyces* Vain.

*Gyrophthorus* Hafellner & Sancho

*Haematomyxa* Sacc.

*Haplopyrenulomyces* Cif. & Tomas.

*Hapsidascus* Kohlm. & Volkm.-Kohlm.

*Harmandiana* de Lesd.

*Helicogonium* W.L. White

*Myriogonium* W.L. White

*Heterocyphelium* Vain.

*Heuflera* Bail Hyalodermella Speg.

*Hyalopyrenula* H. Harada

*Hymenobia* Nyl.

*Hypnotheca* Tommerup

*Igneocumulus* A.W. Ramaley

*Leucoconiella* Bat., H. Maia & Peres

*Leucoconis* Theiss. & Syd.

*Lichenopeziza* Zukal

*Limboria* Ach.

?*Lithopythium* Bornet & Flahault

*Lohwagiella* Petr.

*Ludwigomyces* Kirschst.

*Marisolaris* Jørgen Koch & E.B.G. Jones

*Micromastia* Speg.

*Molgosphaera* Dumort.

*Mycotodea* Kirschst.

?*Myriococcum* Fr.

*Myrmaecium* Nitschke ex Fuckel

?*Nemacola* A. Massal.

*Normandina* Nyl.

*Nyungwea* Sérus., Eb. Fischer & Killmann

*Ochrosphaera* Sawada

*Oevstedalia* Ertz & Diederich

?*Phacidiostromella* Höhn.

*Phaeodothiopsis* Theiss. & Syd.

*Phellostroma* Syd. & P. Syd.

?*Phelonitis* Chevall.

*Phialisphaera* Dumort.

*Phragmitensis* K.M. Wang, Poon & K.D. Hyde

*Phthora* d'Hérelle

*Phylloporina* C.W. Dodge (non (Müll. Arg.) Müll. Arg.)

?*Porosphaera* Dumort.

*Potamomyces* K.D. Hyde

*Protocalicium* Woron.

*Pseudohepatica* P.M. Jørg.

*Pseudoperitheca* Elenkin

*Psilosphaeria* Cooke

*Pteromycula* P. Cannon

*Pustularia* Bon.

*Pycnodermellina* Bat. & H. Maia

*Retrostium* Nakagiri & Tad. Ito

*Roeslerina* Redhead

?*Rostafinskia* Speg.

?*Sachsia* Lindner

*Scutomyces* J.L. Bezerra & Cavalc.

*Splanchnospora* Lar. N. Vasiljeva

*Stellifraga* Alstrup & Olech

*Stigmatea* Fr.

*Stigmatisphaera* Dumort.

*Stigmea* Fr.

*Symbiotaphrina* Kühlw. & Jurzitza ex W. Gams & Arx

*Syphosphaera* Dumort.

*Telioclipeum* Viégas

*Thallisphaera* Dumort.

?*Trichoplacia* A. Massal.

*Trichosphaera* Dumort.

*Tromeropsis* Sherwood

*Ulvella* (Nyl.) Trevis.

*Wadeana* Coppins & P. James

?*Wolkia* Ramsb.

*Xenomyxa* Syd.

*Xylobotryum* Pat.

*Xylogone* Arx & T. Nilsson

## Part Two. Notes on ascomycete systematics. Nos. 4751 – 5113

### Introduction

The series ”Notes on ascomycete systematics” has been published in Systema Ascomycetum (1986-1998) and in Myconet since 1999 as hard copies and since 2006 at its internet home at URL: http://www.fieldmuseum.org/myconet/. Starting with this issue, the print version of the notes outine will appear in Fieldiana every other year.
A large number of papers proposing new ascomycete taxa and concepts have been published since our previous note compilation (Lumbsch & Huhndorf 2007). Among those a paper by Hibbett et al. (2007) is especially remarkable with a revised classification of Fungi down to ordinal level. The present manuscript presents 363 notes (Notes 4751 – 5113) on the taxonomy and nomenclature of ascomycetes (Ascomycota) at the generic and higher levels. The novelties include the acceptance of ten new orders, three additional subclasses and the new class Geoglossomycetes, and numerous notes at family and generic level. Papers that increase of our knowledge of phylogenetic relationships within orders and major families of ascomycetes, include multi-gene studies on Arthoniales (Ertz et al. 2009), Clavicipitaceae (Sung et al. 2007), Dothideomycetes (Schoch et al. 2009a) Gnomoniaceae (Sogonov et al. 2008), and Hysteriaceae and related families (Boehm et al. 2009b). Gueidan et al. (2007) provided an overview and new classification of Verrucariaceae. Schoch et al. (2009b) used a six-gene and 42-species phylogeny of Ascomycota to study the origin and evolution of reproductive and ecological traits in these fungi.

### Notes

#### 4751. Acarosporales Reeb, Lutzoni & Cl. Roux

This order in Acarosporomycetidae is formally described to accommodate Acarosporaceae (Hibbett et al. 2007).

**4852. Acrospermales Minter, Peredo & A.T. Watson**

This new order is described to accommodate Acrospermaceae in Dothideomycetes (Minter et al. 2007).

**4752. Agyriaceae Corda**

The family is shown to be polyphyletic and restricted to *Agyrium* (Lumbsch et al. 2007b).

**5046. Aigialaceae Suetrong, Sakayaroj, E.B.G. Jones, Kohlm., Volkm.-Kohlm. & C.L. Schoch**This family is described to accommodate three genera, *Aigialus*, *Ascocratera* and *Rimora* (Suetrong et al. 2009). The family fits in the large Pleosporales s. lat. as recovered in a phylogeny derived from five genes, nucSSU, nucLSU rDNA, TEF1, RPB1 and RPB2 (Schoch et al. 2009a).

**4753. Ainoa Lumbsch & I. Schmitt**

This genus clustered in Baeomycetales in several phylogenetic studies and hence will be placed there in the next outline (Wedin et al. 2005, Lumbsch et al. 2007a, Lumbsch et al. 2007b).

**5047. Alisea J. Dupont & E.B.G. Jones**

This genus is described for a species found on submerged, deep sea, woody substrates in the Pacific Ocean (Dupont et al. 2009). It is placed in Halosphaeriaceae based on phylogenetic analyses using SSU and LSU rDNA data.

**5048. Amarenomyces O.E. Erikss.**

The genus *Amarenomyces* represented by the type species *A. ammophilae* was included in a phylogenetic study using five genes, nucSSU, nucLSU rDNA, TEF1, RPB1 and RPB2 (Zhang et al. 2009b). It resolved among species of *Phaeosphaeria* in the Phaeosphaeriaceae and thus is treated as a synonym of that genus.

**5019. Amazonotrema Kalb & Lücking**

This new genus is described for a new species collected in the Amazonas region. It differs from *Thelotrema* in having a split between the hymenium and the lateral paraphyses, while *Thelotrema* has a split between the thallus margin and the proper exciple (Kalb 2009b). The new genus is placed in Graphidaceae.

**4853. Ambarignomonia Sogonov**

This new genus is described in a monograph of leaf-inhabiting genera in Gnomoniaceae (Sogonov et al. 2008).

**4854. Amniculicola Y. Zhang & K.D. Hyde**

This new genus in Dothideomycetes is described for a freshwater fungus collected in the Pyrenees (Zhang et al. 2008). It was tentatively placed in Dothideomycetes inc. sed. A subsequent study including two new additional species showed that this genus together with other species may form an aquatic clade within Pleosporales (Zhang et al. 2009a).

**5049. Amniculicolaceae Yin. Zhang, C.L. Schoch, J. Fourn., Crous & K.D. Hyde**

This family is described to accommodate three genera, including *Amniculicola*, *Murispora*, *Neomassariosphaeria* (Zhang et al. 2009b). The family fits in the large Pleosporales s. lat. as recovered in a phylogeny derived from five genes, nucSSU, nucLSU rDNA, TEF1, RPB1 and RPB2 (Zhang et al. 2009b).

**5050. Amplistroma Huhndorf, A.N. Mill., M. Greif & Samuels**

This genus is described for seven species that have large stromata, small asci with eight, minute, globose ascospores and *Acrodontium*-like anamorphs (Huhndorf et al. 2009). It is placed in the newly described Amplistromataceae.

**5051. Amplistromataceae Huhndorf, A.N. Mill., M. Greif & Samuels**

This family is described to accommodate *Amplistroma* and *Wallrothiella* and phylogenetic analyses of nucLSU rDNA group these taxa in a well supported clade distinct from known orders within the Sordariomycetidae but showing unsupported

relationships with the Chaetosphaeriales and the Magnaporthaceae. The family will be placed within the Sordariomycetidae incertae sedis (Huhndorf et al. 2009).

**4855. Angiactis Aptroot & Sparrius**

This new genus of tropical crustose lichens is described in Roccellaceae(Aptroot et al. 2008). The new genus is similar to *Lecanographa*, but differs in having a thalline exciple.

**4856. Anisogramma Theiss. & Syd.**

*Anisogramma* is excluded from Gnomoniaceae in a phylogenetic study on Gnomoniaceae (Sogonov et al. 2008).

**5052. Anteaglonium Mugambi & Huhndorf**

This genus is described for species formerly in *Glonium* and *Glonium*-like species that are found to be phylogenetically distant from the type species of that genus (Mugambi & Huhndorf 2009b). It did not group within any known families so it will be placed in Pleosporales incertae sedis.

**4754. Anzina Scheid.**

This genus did not cluster with other Trapeliaceae (Wedin et al. 2005, Lumbsch et al. 2007a, Lumbsch et al. 2007b) and hence will be placed in Ostropomycetidae inc. sed. in the next outline.

**4755. Aphanotria Döbbeler**

This new genus is described for a muscicolous species with immersed, non-stromatic, unpigmented ascomata with a pronounced rostrum, thick-walled asci, transversally septate ascospores with cyanophilous warts (Döbbeler 2007). The genus is placed in Bionectriaceae.

**4857. Aquapoterium Raja & Shearer**

This new genus is described for a new freshwater fungus from Florida (Raja et al. 2008). It is placed in Helotiales but not classified in a family, since the family concept in this order needs revision.

**5020. Arctocetraria Kärnefelt & A. Thell**

The phylogeny of the cetrarioid group in Parmeliaceae was studied using a five-gene data set (Thell et al. 2009) with *Arctocetraria* supported as being monophyletic.

**4858. Arthoniales Henssen ex D. Hawksw. & O.E. Erikss.**

A phylogeny of the order using three molecular markers is provided by Ertz and colleagues (Ertz et al. 2009). Traditionally used characters to circumscribe genera in the group, such as exciple carbonization and ascomatal structures are shown to be homoplasious. The genera *Enterographa* and *Opegrapha* are shown to be polyphyletic.

**5053. Ascocratera Kohlm.**

This genus finds its placement in the Aigialaceae based on four gene phylogenetic analyses using nucSSU, nucLSU rDNA, TEF1 and RPB2 (Suetrong et al. 2009).

**4756. Ascomycota Caval.-Sm.**

Hibbett et al. (2007) proposed a comprehensive higher-level classification of the kingdom Fungi, including Ascomycota based on recent phylogenetic studies. This classification is followed in the most recent outline of Ascomycota. The authors point out that Cavalier-Smith is the authority for the name of this phylum.

A soil clone group I (SCGI) is shown to be common and widespread in soil samples from different habitats (Posada et al. 2007), which forms a currently unrecognized subphylum of Ascomycota. In a phylogeny based on ribosomal DNA sequences, SCGI forms a sister-group to Saccharomycotina + Pezizomycotina. No data on the biology of these enigmatic fungi are currently available.

**4757. Ascopolyporus A. Möller**

See note under Cordycipitaceae.

**4859. Ascorhombispora L. Cai & K.D. Hyde**

*Ascorhombispora* is characterized by superficial, dark brown to black perithecia, bitunicate asci; and dark brown, 3-septate ascospores with a wide septum band. A phylogenetic analysis of molecular data show that the monotypic genus clusters within Pleosporales(Cai & Hyde 2007).

**4758. Ascotrichella Valldos. & Guarro**

This genus was removed from Coniochaetales and placed in Xylariales by (García et al. 2006).

**4759. Aspiciliopsis (Müll. Arg.) M. Choisy**

The genus was shown to be distinct from *Placopsis* (Schmitt et al. 2003, Lumbsch et al. 2007a) and will be accepted in the next outline.

**5054. Astrosphaeriella Syd. & P. Syd.**

The genus *Astrosphaeriella* represented by the type species *A. stellata* and one additional species, was included in a phylogenetic study using SSU and LSU data (Tanaka et al. 2009). Monophyly of the genus was not supported and the type species did not resolve within any known family in the Pleosporales. It will be moved to Pleosporales incertae sedis in the next outline.

**4860. Atla S. Savic & Tibell**

This new genus is described to accommodate four crustose lichen species having perithecia lacking paraphyses, but having periphysoids at the ostiolum, and large, muriform ascospores(Savic & Tibell 2008). The genus is sister to *Sporodictyon* in Verrucariaceae in a phylogenetic analysis using ITS and nuLSU rDNA sequence data.

**4861. Atradidymella Davey & Currah**

*Atradidymella* is described for a newly discovered species that is a pathogen on bryophytes(Davey & Currah 2009). Molecular data show that it belongs to Pleosporales but the family placement remains uncertain.

**4760. Atricordyceps Samuels**

This genus was synonymized with *Podocrella* (Chaverri et al. 2005), which is followed in the next outline.

**4862. Atronectria Etayo**

The new monotypic genus is described for a lichenicolous fungus growing on *Nephroma* and *Pseudocyphellaria* spp. in Tierra del Fuego (Etayo & Sancho 2008). The genus is similar to *Pronectria* but differs in the peridium structure and pigmentation. It is tentatively placed in the family Niessliaceae.

**4761. Babjevia van der Walt & M.Th. Smith**

See note under Lipomycetaceae.

**4762. Baeomycetales Lumbsch, Huhndorf & Lutzoni**

This new order is described by Lumbsch, Huhndorf and Lutzoni (Hibbett et al. 2007) to accommodate Baeomycetaceae. This family was previously placed in Ostropomycetidae inc. sed. Its independent status is shown by Miadlikowska et al. (2006) and Lumbsch et al. (2007a).

**4863. Barbatosphaeria Réblová**

*Barbatosphaeria* is described for a perithecial ascomycete occurring on decayed wood of deciduous trees under the periderm (Réblová 2007). It produces nonstromatic perithecia with hyaline, 1-septate ascospores formed in unitunicate, nonamyloid asci. Phylogenetic analyses of DNA sequence data show that the genus is distinct from morphologically similar *Lentomitella*, tentatively placed in the Trichosphaeriales. It groups with freshwater *Aquaticola* and *Cataractispora*.

**4864. Barnettozyma Kurtzman, Robnett & Basehoar-Powers**

This new genus was described in Saccharomycetales inc. sed. based on molecular evidence (Kurtzman et al. 2008).

**4763. Barrina Ramaley**

The genus was placed in Coniochaetales by Huhndorf et al. (2004) and confirmed by (García et al. 2006).

**4865. Barriopsis A.J.L. Phillips & Crous**

This new genus is described in a study on the phylogeny of Botryosphaeriaceae and its classification (Phillips et al. 2008). It includes species with brown, aseptate ascospores without apiculi.

**4764. Basavamyces V.B. Hosag.**

This new genus in the Meliolaceae is described for a new hypophyllous fungus from India (Biju et al. 2005). It lacks phialides and the ascospores have two distal septa.

**4866. Bellojisia Réblová**

*Jobellisia rhynchostoma* was shown to be unrelated to the type species of *Jobellisia* in a phylogenetic analysis using nuLSU rDNA sequence data and is placed in the new genus *Bellojisia*. While *Jobellisia* s.str. is placed in the new family Jobellisiaceae (Sordariomycetidae inc. sed.), *Bellojisia* is classified in Lasiosphaeriaceae (Sordariales) (Réblová 2008).

**5055. Bertiella (Sacc.) Sacc. & P. Syd.**

This genus finds its placement in the Melanommataceae based on two gene phylogenetic analyses using nucLSU rDNA and TEF1 (Mugambi & Huhndorf 2009).

**4867. Biflavia Lücking**

This monotypic genus agrees with *Barubria* in conidial shape, but differs in apothecial morphology and anatomy (Lücking 2008). It is placed in Pilocarpaceae.

**4765. Boreoplaca Hafellner**

Bylin et al. (2007) showed that this genus should be placed in Ophioparmaceae, where it will be classified in the next outline.

**4868. Botryosphaeriaceae Theiss. & H. Syd.**

The phylogeny of this family is studied and *Dothidotthia* excluded as a separate family (see note 4891) (Phillips et al. 2008). The genera *Neodeightonia* and *Phaeobotryon*, and *Phaeobotryosphaeria* are resurrected. The new genera *Barriopsis* and *Spencermartinsia* are described.

**4869. Brasilicia Lücking, Kalb & Serus.**

The new genus is described to accommodate the former *Bacidia brasiliensis* and five additional species (which are not listed or combined into the genus), which are distinguished from *Bacidia* by their ascus-type, and differ from *Fellhanera* by having persistent apothecial margins, unbranched paraphyses and narrow ascospores (Lücking 2008).

**4766. Bricookea M.E. Barr**

Eriksson (2007) suggested that this genus be included in *Lophiostoma*.

**5056. Brunneosphaerella Crous**

This genus is described for *Leptosphaeria*-like species that have bitunicate asci without pseudoparaphyses, brown, three-septate ascospores, and a *Coniothyrium*-like anamorph (Crous et al. 2009). It is placed in the Mycosphaerellaceae based on two gene phylogenetic analyses using nucSSU and nucLSU rDNA (Crous et al. 2009).

**4870. Byssochlamys Westling**

The genus is revised and its phylogeny studied by Samson and colleagues (Samson et al. 2009).

**5057. Byssothecium Fuckel**

*Byssothecium* is placed in the Massarinaceae with a "?" based on an unverified strain of the type species used in phylogenetic analyses (Zhang et al. 2009b).

**5021. Calosphaeria Tul. & C. Tul.**

*Calosphaeria* is shown to be polyphyletic using nuLSU rDNA sequence data and one distinct clade is segregated as the new genus *Tectonidula* (Réblová & Stepánek 2009), see note 5039.

**4767. Calosphaeriales M.E. Barr**

This order was previously placed in Sordariomycetes inc. sed., but placed by (Hibbett et al. 2007) in Sordariomycetidae based on the work of Réblová (2004).

**4768. Camanchaca Follm.& Peine**

Tehler & Irestedt (2007) synonymized this genus under *Pentagenella* based on their phylogenetic study.

**5058. Camaropella Lar. N. Vasiljeva**

This genus was described for a species of *Camarops* with immersed ascomata (Vasilyeva 1997). Phylogenetic analyses confirm its placement in the Boliniaceae (Huhndorf & Miller 2008).

**4769. Candelaria A. Massal.**

See note under Candelariaceae.

**4770. Candelariales Miadl., Lutzoni & Lumbsch**

This new order is described by Miadlikowska, Lutzoni and Lumbsch(Hibbett et al. 2007) to accommodate Candelariaceae. Several studies demonstrated that this order is distinct from Lecanorales (Wedin et al. 2005, Miadlikowska et al. 2006, Hofstetter et al. 2007, Lumbsch et al. 2007a). It is placed in Lecanoromycetes inc. sed.

**4771. Candelariaceae Hakul.**

In a phylogenetic study based on ITS sequence data, the genus *Candelaria* was found to be polyphyletic and *Candelariella* paraphyletic with *Candelina* and *Placomaronea* nested within. However, the relationships remained largely unresolved (Westberg et al. 2007). Hence, additional studies remain necessary before any taxonomic changes can be made.

**4772. Candelariella Müll. Arg.**

See note under Candelariaceae.

**4773. Candelina Poelt**

See note under Candelariaceae.

**4774. Catinella Boud.**

Greif et al. (2007) presented evidence from ascoma ontogeny and nu ribosomal DNA data that this genus that was previously placed in Dermateaceae, belongs to Dothideomycetes. The ordinal placement could not be resolved and it is therefore placed as Dothideomycetes inc. sed.

**4871. Celotheliaceae Lücking, Aptroot & Sipman**

This new family is described (Aptroot et al. 2008) to accommodate the genus *Celothelium* that differs from its sister-group Pyrenulaceae (Del Prado et al. 2006) in their ascospore-types and interascal filaments (anastomosing in Celotheliaceae vs. unbranched to sparsely branched in Pyrenulaceae). The family is placed in Pyrenulales.

**4872. Ceratosphaerella Huhndorf, M. Greif, Mugambi & A.N. Mill.**

This new genus is described to accommodate the former *Ceratosphaeria castillensis* and one additional species that form a distinctive rhizomorphic subiculum with a synnematous *Didymobotryum*-like anamorph at the ends of the blackish threads. The genus is similar to *Ophioceras* but distinguished by ascomata with a basal stroma and shorter, fusiform ascospores. It is placed in the Magnaporthaceae based on LSU and SSU data (Huhndorf et al. 2008).

**5022. Ceratostomella Sacc.**

This genus is shown to be polyphyletic using nuLSU rDNA sequence data and one distinct species together with closely related taxa are segregated in the new genus *Nataniella* (Réblová & Stepánek 2009), see note 5030.

**4873. Cesariella W. Rossi & Santam.**

A new genus is described for a new species of a parasitic fungus on a ground beetle species collected in Greece (Rossi & Santamaria 2008). The genus is placed in Laboulbeniales.

**5023. Cetraria Ach.**

The phylogeny of the cetrarioid group in Parmeliaceae was studied using a five-gene data set (Thell et al. 2009). The genera *Arctocetraria, Cetreliopsis, Kaernefeltia* and *Tuckermanella* were monophyletic, whereas *Cetraria, Flavocetraria* and *Tuckermannopsis* were polyphyletic. The phylogeny lacked strong support in certain nodes and the authors suggest that additional data will be necessary to elucidate the phylogeny of cetrarioid lichens in more detail.

**5024. Cetreliopsis Kurok.**

*Cetreliopsis* was supported as monophyletic in a phylogeny of the cetrarioid group in Parmeliaceae using a five-gene data set (Thell et al. 2009).

**4874. Chaetomidium (Zopf) Sacc.**

The genus was re-evaluated based on LSU, beta-tubulin and *rpb2* sequence data and was found to be polyphyletic. *Chaetomidium* is restricted to two species and is maintained within the Chaetomiaceae while the remaining species are scattered throughout the Sordariales (Greif et al. 2009).

**4775. Chaetothiersia B.A. Perry & Pfister**

Molecular and morphological evidence shows that a new fungus from the Sierra Nevadas in California with stiff, superficial, brown excipular hairs, eguttulate ascospores and a thin ectal exciple requires placement in a separate genus within Pyronemataceae (Perry & Pfister 2008).

**4875. Chaetothyriomyces Pereira-Carvalho, Inacio & Dianese**

This new genus in Chaetothyriaceae is described (Pereira-Carvalho et al. 2009) for a new species with multispored asci and 2-celled ascospores.

**4776. Chaetothyriomycetidae Doweld**

Hibbett et al. (2007) showed that the authority for this subclass name is Doweld.

**4876. Chimaeroscypha Raitv.**

This genus in Hyaloscyphaceae was described for a species with spines on glassy hairs (Raitviir 2004).

**4777. Chlorostroma A.N. Mill., Lar. N. Vassiljeva & J.D. Rogers**

*Chlorostroma subcubisporum* is described as a new genus and species in Xylariaceae based on morphological and molecular data (Miller et al. 2007). Morphologically the new genus is characterized by a green stoma bearing perithecia, asci with a non-amyloid apex, and subcubical brown ascospores with a prominent germination slit.

**4877. Chorioactidaceae Pfister**

Pfister and colleagues (Pfister et al. 2008) provide molecular and morphological evidence for the distinction of this new family, in which they place four genera: *Chorioactis, Desmazierella, Neournula,* and *Wolfina.*

**4878. Chorioactis Kupfer ex Eckblad**

This genus is now placed in Chorioactidaceae (Pfister et al. 2008), see note 4877.

**4778. Conidiotheca Réblová & L. Mostert**

This new genus is described for a single polysporous pyrenomycete formerly in the Calosphaeriales (Réblová & Mostert 2007). It is placed in Sordariomycetes inc. sed. based on lack of molecular data and indistinctive morphological characteristics.

**4779. Coniocessia D. García, Stchigel, D. Hawksw. & Guarro**

This new genus in Xylariales is described with *Coniocessia nodulisporioides* as type species (García et al. 2006). The placement is based on LSU rDNA sequence data and the presence of a *Nodulosporium*-like anamorph.

**4780. Coniochaeta (Sacc.) Cooke**

The circumscription of the genus is studied by (García et al. 2006) using nu SSU and LSU rDNA sequences. The authors showed that the genera *Coniochaetidium, Ephemeroascus* and *Poroconiochaeta* are nested within the genus and consequently, reduced these three genera into synonymy with *Coniochaeta.*

**4781. Coniolaria Seigle-Murandi et al. nom. inval.**

For this invalid generic name the name *Coniolariella* is introduced (García et al. 2006).

**4782. Coniolariella D. García, Stchigel & Guarro**

This new genus in Xylariales is described with *Coniolariella gamsii* as type species (García et al. 2006). The placement is based on anamorphic and LSU rDNA sequence data. The genus replaces the invalidly published *Coniolaria*.

**4783. Coniochaetidium Malloch & Cain**

García et al. (2006) placed this genus into synonymy with *Coniochaeta.*

**4879. Conoideocrella D. Johnson, G.-H. Sung, Hywel-Jones & Spatafora**

This new genus is described for a clade of species previously included in *Torrubiella* but clustering within Clavicipitaceae (Johnson et al. 2009). The species share elongated, conical-shaped perithecia and planar stromata.

**4784. Cordyceps (Fr.) Link**

See note under Cordycipitaceae.

**4785. Cordycipitaceae Kreisel ex G.M. Sung, J,M, Sung, Hywel-Jones & Spatafora**

This family was validated for clade C of former Clavicipitaceae (Sung et al. 2007) in Hypocreales. It includes the genera *Ascopolyporus, Cordyceps* s.str., *Hyperdermium,* and *Torrubiella.*

**5059. Coronophora Fuckel**

This genus is accepted in the Coronophoraceae based on *TEF1* and *RPB2* phylogenetic analyses (Mugambi & Huhndorf 2010).

**5060. Coronophoraceae Höhn.**

This family is accepted in the Coronophorales for the genus *Coronophora* based on *TEF1* and *RPB2* phylogenetic analyses (Mugambi & Huhndorf 2010)

**5061. Coronophorella Höhn.**

This genus is accepted in the Scortechiniaceae based on LSU, *TEF1* and *RPB2* phylogenetic analyses (Mugambi & Huhndorf 2010).

**4786. Corylomyces Stchigel, Calduch & Guarro**

This new genus is described for a fungus isolated from hazelnuts (Stchigel et al. 2006). The genus is characterized by tomentose, ostiolate ascomata with long necks composed of hairs, and 1-2-celled, opaque, lunate to reniform ascospores. It is placed in Sordariales inc. sed.

**4880. Cryptodiaporthe Petr.**

The genus *Cryptodiaporthe* is reduced to synonymy with *Plagiostoma* (Sogonov et al. 2008).

**5062. Cryptosphaerella Sacc.**

This genus is accepted in the Scortechiniaceae based on LSU, *TEF1* and *RPB2* phylogenetic analyses (Mugambi & Huhndorf 2010).

**4881. Cryptosporella Sacc.**

This placement of this genus in Gnomoniaceae is supported and the generic concept is enlarged to include *Ophiovalsa* (Mejia et al. 2008).

**4787. Cryptovalsaria Lar. N. Vassiljeva & S.L. Stephenson**

This new genus is described for two species occurring on bark of alders in eastern Russia and North America (Vasilyeva & Stephenson 2007).

**4882. Cryptovalsaria Lar.N. Vassiljeva & S.L. Stephenson**

This genus is a synonym of *Dothivalsaria* (Jaklitsch, in litt, 2008) in Massariaceae.

**4883. Cyanonectria Samuels & Chaverri**

*Nectria cyanostoma* is shown to be distinct from *Nectria* using morphological and molecular evidence and a new genus is described to accommodate this taxon (Samuels et al. 2009) that is classified in Nectriaceae.

**4884. Cystocoleus Thwaites**

Molecular data suggest that this sterile, microfilamentose lichen genus is close to Mycosphaerellaceae in Dothideomycetes (Muggia et al. 2008). It will be placed in Dothideomycetes inc. sed. in the forthcoming outline.

**4885. Desmazierella Lib.**

This genus is now placed in Chorioactidaceae (Pfister et al. 2008), see note 4877.

**4886. Diaphorographis A.W. Archer & Kalb**

This genus is established to accommodate two graphidalean taxa occurring in New Caledonia and tropical Australia. The genus is characterized by conspicuous ascomata,

which are covered by a thalline margin, the lack of lateral paraphyses, a carbonized exciple and hyaline, non-amyloid ascospores (Kalb 2009b).

**4887. Diatrypoidiella Manohar., Kunwar & D.K. Agarwal**

This genus was described to accommodate two graphidalean taxa occurring in India The genus is placed in Diaporthales and is characterized by having perithecia immersed in a stroma of fungal and host tissue and polysporous asci with allantoid ascospores (Manoharachary et al. 2005).

**4888. Didymella Sacc. ex D. Sacc.**

This genus is placed in a new family Didymellaceae (see note 4889) (De Gruyter et al. 2009).

**4889. Didymellaceae Gruyter, Aveskamp & Verkley**

This new family is described to accommodate the genus *Didymella* and *Leptosphaerulina* and is placed in Pleosporales (De Gruyter et al. 2009).

**5063. Didymellaceae Gruyter, Aveskamp & Verkley**

This family received high bootstrap support in five gene phylogenetic analyses using nucSSU, nucLSU rDNA, *TEF1*, *RPB1* and *RPB2* and included were the generic types of *Didymella*, *Leptosphaerulina*, *Macroventuria*, *Monascostroma* and *Platychora* (Zhang et al. 2009b).

**5064. Dissoconiaceae Crous & de Hoog**

This family is described for taxa with *Mycosphaerella*-like teleomorphs and *Dissoconium* anamorphs and is placed in the Capnodiales based on two gene phylogenetic analyses using nucSSU and nucLSU rDNA (Crous et al. 2009).

**4890. Dothideomyceta**

This rank-less taxon is proposed as a name for the clade that includes the classes Arthoniomycetes and Dothideomycetes (Schoch et al. 2009b).

**4891. Dothidotthiaceae Crous & A.J.L. Phillips**

This new family is described to accommodate the genus *Dothidotthia* that was previously classified in Botrosphaeriaceae (Phillips et al. 2008). However, molecular data show that it does not belong there, but is a distinct clade in Pleosporales.

**4892. Ectendomeliola Hosag. & D.K. Agarwal**

This new species in Meliolaceae is described for a new Indian fungus (Hosagoudar & Agarwal 2006).

**4788. Elaphocordyceps G.H. Sung & Spatafora**

This new genus is described in Sung et al. (2007) in Ophiocordycipitaceae to accommodate former species of *Cordyceps* that parasitize *Elaphomyces* species.

**4893. Endocena Cromb.**

This genus has been overlooked in previous editions of the outline and will be included in the forthcoming one in Icmadophilaceae (Stenroos et al. 2002).

**5065. Entodesmium Reiss**

Based on phylogenetic data from five genes, *Entodesmium* is accepted in Phaeosphaeriaceae (Zhang et al. 2009b).

**4789. Ephemeroascus Emden**

García et al. (2006) placed this genus into synonymy with *Coniochaeta.*

**5066. Eremodothis Arx**

This genus resolved among species of *Westerdykella* in the Sporormiaceae and thus is treated as a synonym of that genus (Kruys & Wedin 2009).

**4790. Eucasphaeria Crous**

A new fungus on *Eucalyptus* from the Cape region is placed in this new genus (Crous et al. 2007) that is placed in Hypocreales inc. sed. It lacks a clypeus and has uitunicate asci with an apical discharge mechanism and has *Ascochyta*-like anamorphs.

**4894. Eungeniella Lücking, Serus. & Kalb**

This genus is established for several species previously included in *Bacidia* and *Byssoloma* (Lücking 2008). The genus is said to be a very natural entity, held together by their apothecial morphology and anatomy.

**4791. Eurotiomycetidae Geiser & Lutzoni**

Geiser and Lutzoni (Hibbett et al. 2007) formally described this subclass to accommodate the orders Coryneliales, Eurotiales, and Onygenales.

**5067. Falciformispora K.D. Hyde**

This genus finds its placement in the Trematosphaeriaceae based on four gene phylogenetic analyses using nucSSU, nucLSU rDNA, *TEF1* and *RPB2* (Suetrong et al. 2009).

**4895. Farlowiella Sacc.**

In a phylogenetic study of Mytilinidiaceae and Hysteriaceae evidence is provided that *Farlowiella* is not part of any of the two families (Boehm et al. 2009b). Consequently, it will be listed under Pleosporomycetidae inc. sed. in the forthcoming outline.

**4896. Flakea O.E. Erikss.**

The phylogenetic placement of *Flakea,* which was previously listed under genera of Ascomycota with uncertain relationships, has been studied using ribosomal DNA sequence data (Muggia et al. 2009). The genus is shown to belong to Verrucariaceae and to be a genus distinct from *Agonimia,* with which *Flakea* was previously synonymized (Aptroot et al. 1997).

**5025. Flavocetraria Kärnefelt & A. Thell**

*Flavocetraria* was polyphyletic in a five-gene phylogeny of the cetrarioid lichens (Thell et al. 2009).

**4792. Flavocetrariella D.D. Awasthi**

This new genus in Parmeliaceae was described to accommodate two Asian *Cetraria* species (Awasthi 2007), which differ in morphological details from that genus and *Flavocetraria*.

**4793. Fuscideaceae Hafellner**

Bylin et al. (2007) confirmed that the family does not belong to Teloschistales. In their mtSSU rDNA analysis, the family clusters with Umbilicariaceae and Ophioparmaceae, but this lacks support. *Ropalospora* did not cluster with the remaining Fuscideaceae, see note under Ropalosporaceae.

**5068. Gaillardiella Pat.**

This genus is accepted in the Bertiaceae based on LSU and *TEF1* phylogenetic analyses (Mugambi & Huhndorf 2010).

**4897. Gemmina Raitv.**

This genus in Hyaloscyphaceae was described for a species previously known as *Helotium gemmarum* (Raitviir 2004

**4898. Geoglossales Zheng Wang, C.L. Schoch & Spatafora**

This new order is described to accommodate Geoglossaceae s.str. (*Geoglossum, Trichoglossum*) and the genus *Sarcoleotia* that is currently placed in Rutstroemiaceae (Schoch et al. 2009c). Other genera currently placed in Geoglossaceae are probably not related and will be listed under Leotiomycetes inc. sed. in the forthcoming outline.

**4899. Geoglossomycetes Zheng Wang, C.L. Schoch & Spatafora**

This new class is described to accommodate Geoglossales (see note 4898) (Schoch et al. 2009c).

**4794. Glaziellaceae J.L. Gibson**

The position of the family within Pezizales is uncertain (Hansen & Pfister 2006).

**4900. Gloniaceae (Corda) Boehm, Schoch & Spatafora**

The genus *Glonium* was found to be outside of Hysteriaceae and is therefore placed in a new family Gloniaceae (Boehm et al. 2009b).

**4901. Glonium Mühl.**

In a phylogenetic study on Hysteriaceae and Mytilinidiaceae (Boehm et al. 2009b), the genus was found to be outside of Hysteriaceae and is therefore placed in a new family Gloniaceae (see note 4900).

**4902. Gnomoniaceae G. Winter**

The phylogeny of leaf-inhabiting genera in this family is studied and the taxa revised based on a new circumscription of genera (Sogonov et al. 2008). Six genera are accepted in revised circumscriptions: the type genus *Gnomonia*, and *Apiognomonia*, *Ophiognomonia, Plagiostoma*, and the genus *Gnomoniopsis*, which is resurrected. Further the new genus *Ambarignomonia* is described. The genus *Cryptodiaporthe* is reduced to synonymy with *Plagiostoma*, and *Linospora* with *Pleuroceras. Anisogramma* is excluded from Gnomoniaceae, and *Lambro*, *Stegophora*, and *Uleoporthe* are placed tentatively in Sydowiellaceae.

**4903. Gnomoniopsis Berl.**

*Gnomoniopsis* is resurrected and accepted as one of six genera iof leaf-inhabiting genera in Gnomoniaceae (Sogonov et al. 2008).

**4904. Gowardia P. Halonen, L. Myllys, S. Velmala & H. Hyvärinen**

A new genus is described for *Alectoria nigricans* and a newly described (Halonen et al. 2009), closely related taxon. Surprisingly, *Pseudevernia furfuracea* that clusters among hypogymnioid taxa in other phylogenetic studies (Miadlikowska et al. 2006, Crespo et al.

2007) clusters with *Gowardia* and forms a sister-group relationship to *Alectoria* s.str. The study was based on a POY analysis without alignment and no alignment-based analysis was done to corroborate these results. Given the insufficient sampling of this study, the possibility of errors due to the analysis performed, the stark contrast to previously published phylogenetic studies, and the absence of morphological evidence, we place *Gowardia* as a synonym of *Alectoria* in the forthcoming outline and propose the following new combination to accommodate *Gowardia arctica: Alectoria gowardii* Lumbsch, nom. nov. – Mycobank no. MB 515510; Bas.: *Gowardia arctica* P. Halonen, L. Myllys, S. Velmala & H. Hyvärinen, Bryologist 112: 143 (2009) [non *Alectoria arctica* Elenkin & Savicz, Acta Horti Petropolit. 32: 73 (1912)].

**4905. Graphidaceae Dumort.**

Phylogenetic studies using an extended taxon sampling (Mangold et al. 2008b), confirmed previous studies (Grube et al. 2004, Frisch et al. 2006, Miadlikowska et al. 2006, Staiger et al. 2006) showing that taxa previously classified in Thelotremataceae do not form a separate lineage, but are nested within Graphidaceae. Consequently, Thelotremataceae is placed into synonymy with Graphidaceae. Further, Mangold et al. (2008b) showed that the generic concept in thelotremoid species needs revision, since most of the genera were shown to be non-monophyletic.

**5026. Graphis Adans.**

The morphological diversity of the genus *Graphis* and a phylogeny based on phenotype characters was provided by Lücking (2009).

**4795. Gyalectales Henssen & Jahns ex & D.H. Hawksw. & O.E. Erikss.**

Hibbett et al. (2007) placed this order into synonymy with Ostropales.

**5069. Halomassarina Suetrong, Sakayaroj, E.B.G. Jones, Kohlm., Volkm.-Kohlm. & C.L.** Schoch

This genus is described for *Massarina thalassiae*, found on wood in marine habitats (Suetrong et al. 2009). It is placed in the Trematosphaeriaceae based on four gene

phylogenetic analyses using nucSSU, nucLSU rDNA, *TEF1* and *RPB2* (Suetrong et al. 2009).

**4796. Halosphaeriales Kohlm.**

Hibbett et al. (2007) placed this order into synonymy with the Microascales.

**4906. Hanliniomyces Raja & Shaerer**

This new freshwater genus is described based on morphological evidence (Raja & Shearer 2008). The new genus is placed in Sordariomycetidae inc. sed.

**4907. Havispora K.L. Pang & Vrijmoed**

A new arctic, marine fungus is described from Norway and placed into its own genus based on morphological evidence (Pang et al. 2008). The new genus is placed in Halosphaeriaceae.

**5070. Helicascus Kohlm.**

This genus finds its placement in the Morosphaeriaceae based on four gene phylogenetic analyses using nucSSU, nucLSU rDNA, *TEF1* and *RPB2* (Suetrong et al. 2009).

**4908. Hemithecium Trevis.**

The subgenus *Leucogramma* Staiger has previously been shown to be unrelated to the nominal subgenus (Staiger et al. 2006) and is consequently segregated as a new genus *Pallidogramme* (see note 4947) (Lücking et al. 2008).

**4909. Herpothallon Tobler**

This genus that has long been regarded as a synonym of *Cryptothecia* is reinstated for species with a loosely attached thallus with a byssoid hypothallus (Aptroot et al. 2009). Additional studies, also using molecular markers, are required to confirm the distinctiveness of this genus that is tentatively accepted in Arthoniaceae.

**5071. Herpotrichia Fuckel**

This genus finds its placement in the Melanommataceae based on two gene phylogenetic analyses using nucLSU rDNA and *TEF1* (Mugambi & Huhndorf 2009).

**4910. Hydropunctaria Keller, Gueidan & Thüs**

This new genus is accepted in Verrucariaceae for an aquatic and amphibious clade of species previously included in the highly polyphyletic genus *Verrucaria* (Gueidan et al. 2009).

**4797. Hyperdermium J. White, R. Sullivan, G. Bills & N. Hywel-Jones**

See note under Cordycipitaceae.

**4911. Hypocrella Sacc.**

The phylogeny and circumscription of this and allied genera has been studied and the genus is restricted to taxa with non-disarticulating ascospores and an *Aschersonia* s. str. anamorph with fusoid conidia (Chaverri et al. 2008).

**5072. Hypsostromataceae Huhndorf**

This family finds its placement in the Pleosporales based on two gene phylogenetic analyses using nucLSU rDNA and *TEF1* (Mugambi & Huhndorf 2009).

**4912. Hysteriaceae Chevall.**

The phylogeny of this family and Mytilinidiaceae was studied using a 4-gene data set (Boehm et al. 2009b). The two families are shown to be unrelated. Several genera in the family are shown to be polyphyletic and hence several new combinations are proposed. *Glonium* is shown to be outside of Hysteriaceae and is placed in a new family Gloniaceae (see note 4900).

**5073. Hysterobrevium E.W.A. Boehm & C.L Schoch**

This genus is described for two species formerly in *Hysterographium* and *Gloniopsis* that are found to be phylogenetically distant from the type species of these genera (Boehm et al. 2009a). It is placed in the Hysteriaceae.

**5074. Hysterographium Corda**

In a phylogenetic study of Mytilinidiaceae and Hysteriaceae evidence is provided that *Hysterographium* is not part of any of the two families (Boehm et al. 2009b). Consequently, it will be listed under Pleosporomycetidae inc. sed. in the forthcoming outline.

**4913. Imaia Trappe & Kovacs**

This new truffle genus is described for a truffle species having an Asa Gray type of distribution (Kovacs et al. 2008). Molecular data show that it is not closely related to *Terfezia*, to which it has previously been placed, but belongs to Morchellaceae.

**4798. Immersisphaeria Jaklitsch**

This new genus is proposed for *Hypocrea eichleriana* based on immersed perithecia, hyaline peridium, asci lacking a distinct apical apparatus, and brown single-celled ascospores (Jaklitsch 2007). It will be placed in the next outline in Sordariomycetes inc. sed.

**4914. Ischwaramyces V.B. Hosagoudar**

This genus in Asterinaceae was described from leaves in India and is said to differ from *Asterina* in appressorium-structure (Hosagoudar et al. 2004).

**4915. Issatchenkia Kudrjanzev**

The genus is placed into synonymy with *Pichia* (Kurtzman et al. 2008).

**5027. Jackelixia S.Y. Kondratyuk, Fedorenko, S. Stenroos, Kärnefelt & A. Thell**

This newly described genus (Fedorenko et al. 2009) is for the time being regarded as a synonym of *Xanthoria;* see note 5045.

**4916. Jobellisiaceae Réblová**

This new family is described to accommodate the genus *Jobellisia* in Sordariomycetidae incertae sedis(Réblová 2008).

**4917. Joergensenia Passo, Stenroos & Calvelo**

This new genus is described to accommodate a species formerly known as *Psoroma cephalodinum* (Passo et al. 2008). The authors show using molecular data that the species does not belong in Pannariaceae, but is closer to Collemataceae. The genus is for the time being placed in Lecanorales inc. sed.

**5028. Kaernefeltia Thell & Goward**

The phylogeny of the cetrarioid group in Parmeliaceae was studied using a five-gene data set(Thell et al. 2009). *Kaernefeltia* was monophyletic in the analysis.

**4799. Kalbographa Lücking**

This new genus is described in Graphidaceae to accommodate *Graphina caracasana* and two new species(Lücking 2007). The genus is characterized by dark-brown, thin-walled ascospores, clear hymenium, thin exciple, exposed, wide discs and a shiny thallus.

**5075. Kalmusia Neissl**

This genus is placed in the Montagnulaceae with a "?" to indicate its uncertain status (Zhang et al. 2009b).

**5076. Katumotoa Kaz. Tanaka & Y. Harada**

Based on phylogenetic data from five genes, *Katumotoa* is accepted in Lentitheciaceae (Zhang et al. 2009b).

**4800. Kawaskia Y. Yamada & Nogawa**

See note under Lipomycetaceae.

**5077. Keissleriella Höhn.**

Based on phylogenetic data from five genes, *Keissleriella* is accepted in Lentitheciaceae (Zhang et al. 2009b).

**4918. Komagataella Y. Yamada, M Matsuda, K. Maeda & Mikata**

A phylogenetic study showed that this genus is better placed in Pichiaceae than in Saccharomycetaceae (Kurtzman et al. 2008).

**4919. Koralionastetales Kohlm., Volkm.-Kohlm., J. Campb. & Inderbitzin**

This new order is described for the marine family Koralionastetaceae that is shown to be sister-group to Lulworthiales(Campbell et al. 2009). The order differs from Lulworthiales in ascospores and hamathecial centrum (Campbell et al. 2009).

**4801. Kurtzmaniella M.A. Lachance & W.T. Starmer**

Lachance & Starmer (2008) described this new genus from nitidulid beetles found in cacti flowers in Arizona (USA). It is tentatively placed in Saccharomycetaceae.

**4920. Lachnaceae (Nannf.) Raitv.**

This family is described for the tribe *Lachneae* Nannf. and includes the genera *Lachnaster, Lachnum, Solenopezia,* and *Trichopeziza* (Raitviir 2004).

**4921. Lachnaster Höhn.**

This genus is now classified in Lachnaceae (Raitviir 2004).

**4922. Lachnum Retz.**

This genus is now classified in Lachnaceae (Raitviir 2004).

**4923. Lambro Racib.**

The genus is tentatively placed in Sydowiellaceae (Sogonov et al. 2008).

**4802. Lecania A. Massal.**

The phylogeny of the genus is studied based on mtSSU, ITS and RPB2 sequence data (Reese Naesborg et al. 2007). The separation of *Thamnolecania* is supported and *Lecania* is shown to be polyphyletic.

**4803. Lecanoromycetidae P.M. Kirk, P.F. Cannon, J.C. David & Stalpers ex Miadl.,** Lutzoni & Lumbsch

Miadlikowska, Lutzoni and Lumbsch (Hibbett et al. 2007) validly published this formerly proposed subclass. It includes Lecanorales, Peltigerales, and Teloschistales.

**4924. Leimonis R.C. Harris**

This new genus is described for a species previously known as *Micarea erratica* (Harris 2009However, molecular data have shown that the taxon is unrelated to *Micarea* s.str. (Andersen & Ekman 2004, Andersen & Ekman 2005).

**5078. Lentitheciaceae Yin. Zhang, C.L. Schoch, J. Fourn., Crous & K.D. Hyde**

This family is described to accommodate three genera, *Lentithecium*, *Katumotoa* and *Keissleriella* (Zhang et al. 2009b). The family fits in the large Pleosporales *s. lat.* as recovered in a phylogeny derived from five genes, nucSSU, nucLSU rDNA, *TEF1*, *RPB1* and *RPB2* (Zhang et al. 2009b).

**5079. Lentithecium K.D. Hyde, J. Fourn. & Yin. Zhang**

This genus is described for four lignicolous, *Massarina*-like species that have lenticular ascomata, clavate asi and hyaline one-septate ascospores (Zhang et al. 2009c). It is placed in the newly described Lentitheciaceae (Zhang et al. 2009b).

**4925. Leotiomyceta**

This rank-less taxon is proposed as a name for the clade that includes all inoperculate Pezizomycotina (i.e. Pezizomycotina, excl. Orbiliomycetes and Pezizomycetes) (Schoch et al. 2009b).

**5080. Leptosphaeriaceae M.E. Barr**

This family is accepted for *Leptosphaeria* and *Neophaeosphaeria* based on five gene phylogenetic analyses using nucSSU, nucLSU rDNA, *TEF1, RPB1* and *RPB2* (Zhang et al. 2009b). The family received weak statistical support but the group was distinctly separate from the taxa in the Phaeosphaeriaceae.

**4926. Leptosphaerulina McAlpine**

This genus is placed in a new family Didymellaceae (see note 4889) (De Gruyter et al. 2009).

**5081. Letendraea Sacc.**

This genus is placed in the Montagnulaceae with a "?" to indicate its uncertain status (Zhang et al. 2009b).

**4804. Leucodiaporthe M.E. Barr & Lar.N. Vassiljeva**

This new genus is described to accommodate *Cryphonectria maackii* and three new species in Diaporthaceae (Vasilyeva et al. 2007). It is characterized by a light to brightly colored stromatic disk with blackened marginal zones and hyaline, non-appendaged ascospores.

**4927. Lindnera Kurtzman, Robnett & Basehoar-Powers**

This new genus was described in Saccharomycetales inc. sed. based on molecular evidence (Kurtzman et al. 2008), but included the type of the older generic name *Williopsis,* which therefore is accepted as the correct name for the species in the *Lindnera* clade.

**5082. Lindgomyces K. Hiray., Kaz. Tanaka & Shearer**

This genus is described for a lineage of *Massarina ingoldiana*, that includes four species found on wood in freshwater habitats (Hirayama et al. 2010). It is placed in the newly described Lindgomycetaceae.

**5083. Lindgomycetaceae K. Hiray., Kaz. Tanaka & Shearer**

This family is described for *Lindgomyces* and a sister taxon, *Massariosphaeria typhicola* (Hirayama et al. 2010). The family fits in the large Pleosporales *s. lat.* as recovered in a phylogeny derived from multiple genes (Shearer et al. 2009, Hirayama et al. 2010).

**4928. Linospora Fuckel**

*Linospora* is reduced to synomymy with *Pleuroceras* (Sogonov et al. 2008).

**4805. Lipomycetaceae E.K. Novák & Zsolt.**

Monophyly of this family was supported in a multigene phylogenetic study (Kurtzman et al. 2007). The previously separated genera *Kawaskia, Smithiozyma, Waltomyces,* and *Zygozyma* were shown to be nested within *Lipomyces* and consequently reduced to synonymy with the latter genus, which will be followed in the next outline. *Babjevia* is shown to be part of *Dipodascopsis* and hence the former reduced to synonymy with *Dipodascopsis.*

**4929. Lucidascocarpa A. Ferrer, Raja & Shearer**

This new genus is described for a new freshwater species from the Neotropics (Ferrer et al. 2008). Based on morphological evidence the genus is placed in Dothideaceae.

**4930. Lyrommataceae Lücking**

This new family is described to accommodate the genus *Lyromma,* which includes lichen-forming, foliicolous species with setose, sessile perithecia (Lücking 2008). The genus was previously listed in Ascomycota incertae sedis and the new family will be placed tentatively in Pezizomycotina incertae sedis.

**4931. Macrographa Etayo**

The new monotypic genus is described for a lichenicolous fungus growing on *Nephroma antarcticum* in Tierra del Fuego (Etayo & Sancho 2008). The genus is similar to *Hemigrapha* but differs in the ascoma structure. It is placed in the family Microthyriaceae.

**4932. Magnaporthales Thongk., Vijakr. & K.D. Hyde**

This new order is described to accommodate Magnaporthaceae (Thongkantha et al. 2009) that was previously listed under Sordariomycetes inc. sed.

**5084. Manglicola Kohlm. & E. Kohlm.**

This genus is moved to Jahnulales based on SSU and LSU phylogenetic analyses (Suetrong et al. 2010).

**4806. Massariosphaeria (E. Müll.) Crivelli**

The genus is shown to be polyphyletic (Wang et al. 2006).

**4807. Megalohypha A. Ferrer & Shearer**

This new genus is described in Jahnulales (Ferrer et al. 2007) for a tropical, aquatic fungus based on the presence of both sessile and stalked ascomata.

**5085. Melanommataceae G. Winter**

This family received high bootstrap and Bayesian support in two gene phylogenetic analyses using nucLSU rDNA and *TEF1* and included were the generic types of *Bertiella, Byssosphaeria, Herpotrichia, Melanomma* and *Pseudotrichia* (Mugambi & Huhndorf 2009).

**4808. Melanosporales N. Zhang & M. Blackw.**

This new order is described by Zhang and Blackwell (Hibbett et al. 2007) to accommodate *Melanospora* and *Sphaerodes* in the Ceratostomataceae. This is based on LSU rDNA data (Zhang & Blackwell 2002). In the current outline, the rest of the genera in the family are treated with a "?" to indicate their uncertain status.

**4809. Melanotopelia Lumbsch & Mangold**

This new genus in Thelotremataceae is described for two species previously placed in *Topeliopsis* (Mangold et al. 2008a).. In a phylogenetic study the two groups were

separated. *Melanotopelia* differs in having thin-walled ascospores and a dark pigmented proper exciple.

**5029. Meridianelia Kantvilas & Lumbsch**

For a new species collected in Tasmania this new monotypic genus was described (Kantvilas & Lumbsch 2009). Based on molecular data, the genus is placed in Elixiaceae. Although morphologically quite distinct from *Elixia,* the similarities in ascus-types support the placement of the genus.

**4810. Metacordyceps G.H. Sung, J.M. Sung, Hywel-Jones & Spatafora**

This new genus in Clavicipitaceae is described in Sung et al. (2007) including six species, often having *Metarhizium* anamorphs.

**5086. Misturatosphaeria Mugambi & Huhndorf**

This genus was described for nine species that have gregarious, papillate ascomata with lighter colored apices and plugged ostioles and that vary in ascospore morphology from 1- to 3-septate to muriform. It is placed in the Lophiostomataceae based on two gene phylogenetic analyses using nucLSU rDNA and *TEF1* (Mugambi & Huhndorf 2009).

**4933. Moelleriella Bres.**

The phylogeny of this and allied genera has been studied and the genus is circumscribed to include taxa with filiform, disarticulating ascospores and an aschersonia-like anamorph with fusoid conidia (Chaverri et al. 2008).

**4934. Monoblastiopsis R.C. Harris & C.A. Morse**

This new genus is described for two new species of pyrenocarpous lichens discovered in eastern North America. The genus is similar to *Monoblastia* but differs in having broadly cylindrical to clavate asci, biseriate ascospores, periphsoids at the ostiloum and a chlorococcoid photobiont (Harris & Morse 2008). It is placed in Dothideomycetes inc. sed.

**5087. Montagnulaceae M.E. Barr**

This family received high bootstrap support in five gene phylogenetic analyses using nucSSU, nucLSU rDNA, *TEF1*, *RPB1* and *RPB2* and included were the generic types of *Bimuria*, *Didymocrea*, *Karstenula*, and *Paraphaeosphaeria* as well as some species of *Kalmusia*, *Letendraea*, and *Montagnula* (Zhang et al. 2009b).

**5088. Morosphaeria Suetrong, Sakayaroj, E.B.G. Jones & C.L. Schoch**

This genus is described for two species of *Massarina*, found on wood in marine habitats (Suetrong et al. 2009). It is placed in the newly described Morosphaeriaceae.

**5089. Morosphaeriaceae Suetrong, Sakayaroj, E.B.G. Jones & C.L. Schoch**

This family is described to accommodate two genera, *Helicascus* and the newly described *Morosphaeria*, and a specimen of *Kirschsteiniothelia elaterascus* (Suetrong et al. 2009). The family fits in the large Pleosporales *s. lat.* based on four gene phylogenetic analyses using nucSSU, nucLSU rDNA, *TEF1* and *RPB2* (Suetrong et al. 2009) and five genes, nucSSU, nucLSU rDNA, *TEF1*, *RPB1* and *RPB2* (Schoch et al. (2009).

**4935. Muraeriata Huhndorf, M. Greif, Mugambi & A.N. Mill.**

This new genus is described for two species with superficial, long-necked ascomata with a distinctive vacuolate middle ascomal wall layer. The fusiform ascospores are similar to *Ceratosphaeria* and the newly decribed *Ceratosphaerella*. The genus is placed in the Magnaporthaceae based on LSU data (Huhndorf et al. 2008).

**5090. Murispora Yin. Zhang, C.L. Schoch, J. Fourn., Crous & K.D. Hyde**

This genus is described for *Pleospora rubicunda* and is placed in the newly described Amniculicolaceae (Zhang et al. 2009b).

**4936. Musaespora Aptroot & Sipman**

Lücking (2008) followed previous authors (Harris 1995, Lücking & Serusiaux 1997) in placing this genus in Monoblastiaceae instead of Aspidotheliaceae based on morphological similarities with the genus *Anisomeridium*, which is followed here. The

generic name, however, has been shown to be synonymous with the older name *Trypetheliopsis* that will be accepted in the next outline (Kashiwadani et al. 2009).

**4811. Mycocaliciomycetidae Tibell**

Tibell (Hibbett et al. 2007) described this subclass in Eurotiomycetes to accommodate Mycocaliciales.

**5091. Mycomicrothelia Keissl.**

This genus is placed in Trypetheliaceae with "?" to indicate its uncertain status (Nelsen et al. 2009).

**4937. Myelochroidea Printzen, T. Sprib. & Tønsberg**

A small group of four species that were previously recognized as the *Biatora/Lecidea leprosula* group is included in this new genus (Printzen et al. 2008). The genus is characterized by reddish brown apothecia with persistent margins, branched and anastomosing paraphyses with pigmented, swollen apices, asci of the *Micarea*-type and single-celled, hyaline ascospores. The genus is tentatively placed in Lecanorales inc. sed.

**4938. Mytilinidiaceae Kirchst.**

The phylogeny of this family and Hysteriaceae was studied using a 4-gene data set (Boehm et al. 2009b). The two families are shown to be unrelated and consequently, Mytilinidiaceae and the closely related Gloniaceae are placed in a new order Mytilinidiales (see note 4939).

**4939. Mytilinidiales Boehm, Schoch & Spatafora**

The phylogeny of this Mytilinidiaceae and Hysteriaceae was studied using a 4-gene data set (Boehm et al. 2009b). The two families are shown to be unrelated and consequently, Mytilinidiaceae is placed in this new order.

**5030. Nataniella Réblová**

This new genus is described in Sordariomycetes inc. sed. to accommodate species formerly included *Ceratostomella* (Réblová & Stepánek 2009), see note 5022.

**4812. Naumovia Kurtzman**

See note under *Naumovozyma.*

**4813. Naumovozyma Kurtzman**

Cletus P. Kurtzman (Peoria, Illinois USA, in litt.): The genus *Naumovia* Kurtzman was described in 2003 (FEMS Yeast Res. 4:240) and included descriptions of the two species *N. castellii* and *N. dairenensis*. It has now been recognized that *Naumovia* Kurtzman is a younger homonym of *Naumovia* Dobrozr. (1928) (Dothideomycetes), and is therefore illegitimate. For this reason, the new generic name *Naumovomozyma* was proposed (Kirk et al. 2008).

**4940. Neodeightonia C. Booth**

This new genus is resurrected in a study on the phylogeny of Botryosphaeriaceae and its classification (Phillips et al. 2008). It includes species with brown, 1-septate ascospores.

**4941. Neoerysiphe U. Braun**

The phylogeny of this genus is studied using ITS and nuLSU rDNA sequence data and its monophyly is supported (Takamatsu et al. 2008).

**5092. Neomassariosphaeria Yin. Zhang, J. Fourn. & K.D. Hyde**

This genus is described for two species of *Massariosphaeria* and is placed in the newly described Amniculicolaceae (Zhang et al. 2009b).

**4942. Neournula Paden & Tylutki**

This genus is now placed in Chorioactidaceae (Pfister et al. 2008), see note 4877.

**4814. Nervostroma Y. Harada & T. Narumi**

This new genus is described in Sclerotiniaceae with the newly described *N. depraedans* as type species (Narumi-Saito et al. 2006).

**5031. Nigrosabulum Malloch & Cain**

The anatomy and ascoma ontogeny of this genus was studied in detail (Plishka et al. 2009). The authors found characters in the centrum development that support the placement of the genus in Bionectriaceae (Hypocreales).

**4943. Ocala Raja & Shearer**

This new genus of freshwater fungi is described from Florida (Raja et al. 2009). It is placed in Phaeosphaeriaceae based on morphological evidence.

**5093. Oceanitis Kohlm.**

This genus is placed in Halosphaeriaceae based on phylogenetic analyses using SSU and LSU rDNA data (Dupont et al. 2009).

**5094. Oedohysterium E.W.A. Boehm & C.L Schoch**

This genus is described for species formerly in *Hysterium* and *Hysterographium* that are found to be phylogenetically distant from the type species of these genera (Boehm et al. 2009a). It is placed in the Hysteriaceae.

**4815. Ogataea Y. Yamada, K. Maeda & Mikata**

Limtong and coworkers (Limtong et al. 2008) are additional authors accepting the genus *Ogataea.* They further transferred some species from *Pichia,* to which the genus was believed previously to be synonymous, to *Ogataea.* Hence, *Ogataea* will be accepted in Saccharomycetaceae (with questionmark) in the next outline. The generic and family classification of Saccharomycetes requires a thorough revision.

**4816. Ophiocordyceps Petch**

This genus is emended by Sung et al. (2007) to include species of *Cordyceps* s.lat. that produce ascomata in subterminal regions of the stromata and mostly have *Hirsutella* and *Hymenostilbe* anamorphs.

**4817. Ophiocordycipitaceae G.H. Sung, J.M. Sung, Hywel-Jones & Spatafora**

This new family is described by Sung et al. (2007) to accommodate the genera *Ophiocordyceps* and *Elaphocordyceps.* This clade is shown to be distinct in a phylogenetic analysis of a five-gene analysis.

**4944. Ophiovalsa Petr.**

This genus is shown to be synonymous with *Cryptosporella* (Mejia et al. 2008).

**4945. Orbiocrella D. Johnson, G.-H. Sung, Hywel-Jones & Spatafora**

This new genus is described for four species previously included in *Torrubiella* but clustering as a distinct clade in Clavicipitaceae (Johnson et al. 2009). Morphologically, the genus is characterized by producing perithecia and reduced stromatic tissue in a ring around the perimeter of the host.

**4946. Ostreichnion Duby**

This genus is shown to belong to Hysteriaceae and not Mytilinidiaceae (Boehm et al. 2009b).

Hibbett et al. (2007) circumscribed this order in a wider sense than previously done. The order also includes taxa formerly classified in separate order, such as Gomphillales, Graphidales, Gyalectales, and Trichotheliales. Only the latter two were accepted in the previous outline.

**5095. Ostropella (Sacc.) Höhn.**

This genus was included in two gene phylogenetic analyses that sampled multiple members of the Melanommataceae (Mugambi & Huhndorf 2009). *Ostropella* did not

occur in that family and will be moved to the Pleosporales incertae sedis in the next outline.

**5032. Ovealmbornia S.Y. Kondratyuk, Fedorenko, S. Stenroos, Kärnefelt, Elix & A. Thell**

This newly described genus (Fedorenko et al. 2009) is for the time being regarded as a synonym of *Xanthoria;* see note 5045.

**5096. Pachytrype Berl. ex M.E. Barr, J.D. Rogers & Y.M. Ju**

Based on LSU phylogenetic data, *Pachytrype* is accepted in Diaporthales (Huhndorf et al. 2009).

**4947. Pallidogramme Staiger, Kalb & Lücking**

The is new genus is described to accommodate *Hemithecium* subgenus *Leucogramma* (Lücking et al. 2008) that has previously been shown to be unrelated to the nominal subgenus (Staiger et al. 2006).

**4948. Paoayensis Cabanela, Jeewon & K.D. Hyde**

This new genus of freshwater ascomycetes is described for a new species collected in the Philippines (Cabanela et al. 2007). The genus is characterized by immersed, slightly erumpent ascomata with openings that fuse into a single ostiole. Asci are unitunicate with a discoid refractive apical ring and lemoniform ascospores. Molecular data indicate a placement in Sordariomycetes inc. sed.

**4949. Parabagliettoa Gueidan & Cl. Roux**

This new genus is described in Verrucariaceae for a group of saxicolous, calcicolous species formerly included in *Verrucaria* (Gueidan et al. 2009).

**4819. Parauncinula S.Takamatsu, U. Braun & S. Limkaisang**

The new genus *Parauncinula* in Erysiphales with *U. septata* as the type species is proposed (Takamatsu et al. 2005). *Uncinula curvispora* is tentatively maintained as a separate species, which is also assigned to this genus.

**5033. Parmeliaceae Zenker**

The phylogeny of the cetrarioid group was studied (Thell et al. 2009); see note 5023.

**4820. Patellariales D. Hawksw. & O.E. Erikss.**

The position of the order is uncertain in Dothideomycetes (Schoch et al. 2006).

**4950. Pentagenella Darb.**

This genus was regarded a synonym of *Roccella* (Follmann et al. 1998but has been recently accepted as a distinct genus (Tehler & Irestedt 2007).

**4951. Petriellopsis Gilgado, Cano, Guarro & Gene nom. inval. (Art. 37.1.)**

This new genus is described for *Pseudallescheria africana* supported by morphological and molecular evidence (Gilgado et al. 2007). The monotypic genus is placed in Microascaceae.

**4821. Pezizales J. Schröt.**

Hibbett et al. (2007) showed that the correct authority of this ordinal name is J. Schröt. and not C. Bessey.

**5034. Phacographa Hafellner**

This new genus is described to accommodate three lichenicolous fungi based on the presence of unilocular, apothecioid ascomata, atra-brown ascomatal pigments and hemiamyloid asci (Hafellner 2009). The genus is placed in Roccellaceae.

**5035. Phacothecium Trevis.**

This genus is resurrected from the synonymy of *Arthonia*, resp. *Opegrapha* and is accepted in Roccellaceae for a lichenicolous fungus (Hafellner 2009).

**4953. Phaeobotryon Theiss. & H. Syd.**

This genus is reinstated in a study on the phylogeny of Botryosphaeriaceae and its classification (Phillips et al. 2008). It includes species with brown, 2-septate ascospores.

**4954. Phaeobotryosphaeria Speg.**

This genus is resurrected in a study on the phylogeny of Botryosphaeriaceae and its classification (Phillips et al. 2008). It includes species with brown, aseptate ascospores with an apiculus at either end.

**4822. Phaeocryptopus Naumov**

The type of the genus clustered within Dothioraceae in a phylogenetic study using ribosomal DNA sequences (Winton et al. 2007), while *P. gaeumannii* aligned in Mycosphaerellaceae. No taxonomic conclusions are drawn.

**4952. Phaeomollisia T.N. Sieber & C.R. Grünig**

This new genus is described for a new species of dark, septate endophytes from Switzerland (Grunig et al. 2009). The new genus is placed in Dermateaceae.

**4955. Phaffomyces Y. Yamada, Higashi, S. Ando & Mikata**

A phylogenetic study provides evidence that this genus should be placed in Pichiaceae (Kurtzman et al. 2008).

**4956. Phylloblastia Vain.**

This genus has been classified in Verrucariaceae (currently in Strigulaceae) by Lücking (2008) in an enlarged circumscription to include species previously placed in *Pocsia*.

**4957. Phyllogyalidea Lücking & Aptroot**

Foliicolous species in *Gyalidea* were shown to be morphological different from the core of the genus(Aptroot & Lücking 2003) and subsequently placed in a separate genus (Lücking 2008), which will be accepted in the forthcoming outline in Gomphillaceae.

**4958. Pichia E.C. Hansen**

The circumscription of the genus was revised based on molecular evidence with species placed in new genera and the genus *Issatchenkia* being included in the genus (Kurtzman et al. 2008).

**4959. Pichiaceae Zender**

The phylogeny of the family was studied based on molecular data with species placed in three new genera: *Barnettozyma, Lindnera,* and *Wickerhamomyces* and the genus *Issatchenkia* being included in *Pichia* (Kurtzman et al. 2008).

**4823. Placomaronea Räsänen**

See note under Candelariaceae.

**5036. Placomaronea Räsänen**

The phylogeny of this genus was studied using ITS sequences (Westberg et al. 2009). It was supported as monophyletic in Candelariaceae, but nested within *Candelaria* and *Candelariella,* which both appeared polyphyletic.

**4960. Plagiostoma Fuckel**

The genus is accepted in Gnomoniaceae and *Cryptodiaporthe* included as a synonym (Sogonov et al. 2008).

**5097. Platystomum Trevis.**

This genus was included in two gene phylogenetic analyses that sampled multiple members of the Lophiostomataceae (Mugambi & Huhndorf 2009). *Platystomum* did not occur in that family but clustered with species of *Pseudotrichia, Ostropella* and *Xenolophium* in an unresolved clade the may correspond to the family Platystomaceae. The clade received poor support and requires additional work to better understand the relationships. *Platystomum* will be moved to the Pleosporales incertae sedis in the next outline.

**4824. Plectosphaerellaceae W. Gams, Summerbell & Zare**

This new family in Hypocreomycetidae is described to accommodate *Plectosphaerella*, which was previously in Sordariomycetes inc. sed. (Zare et al. 2007). It further contains several anamorphic taxa that are placed in the anamorphic genera *Gibellulopsis* and *Musicillium.*

**5098. Pleomassaria Speg.**

This genus resolves in the Melanommataceae based on a single collection of the type species, *P. siparia*, used in various phylogenetic analyses (Mugambi & Huhndorf 2009, Zhang et al. 2008, 2009a). The identity of the collection was verified by morphological examination (Zhang et al. 2008). The species is the generic type of the family Pleomassariaceae and the family was placed in synonymy with the Melanommataceae (Zhang et al. 2009b). That judgement will be reserved until additional collections of the species are included in further analyses.

**4961. Pleuroceras Riess**

In a monograph of leaf-inhabiting genera in Gnomoniaceae this genus is accepted and *Linospora* included as a synonym (Sogonov et al. 2008).

**4962. Pocsia Vèzda**

This genus has been reduced to synonymy with *Phylloblastia* (Lücking 2008), see note 4956.

**4963. Polyblastia A. Massal.**

This genus is shown to be polyphyletic in a mutli-gene phylogenetic analysis (Savic et al. 2008).

**5099. Polyplosphaeria Kaz. Tanaka & K. Hiray**

This genus is described for taxa occurring on bamboo and having globose ascomata and *Tetraploa*-like anamorphs producing conidia with three to eight setose appendages (Tanaka et al. 2009).

**4825. Poroconiochaeta Udagawa & Furuya**

García et al. (2006). placed this genus into synonymy with *Coniochaeta.*

**4964. Protocrea Petch**

This genus is redefined based on morphological and molecular evidence (Jaklitsch et al. 2008). Several species previously placed here are transferred to other genera.

**4826. Protolichenes**

Eriksson (2005) stated that morphological and recent molecular and paleontological studies indicate that the subphylum Pezizomycotina most probably evolved from a group of lichenized ascomycetes, the hypothetical group Protolichenes (see note 4324). Hawksworth (in litt. 2007) has pointed out that the name Protolichenes was used by (Choisy 1954) to accommodate the following group of lichen taxa: Sphaerophorineae, Thamnoliineae, Roccellineae and Usneineae. Protolichenes *sensu* Eriksson was used as a trivial name for a hypothetical pre-devonian group of lichenized ascomycetes and, of course, is not in need of typification and is not to be involved in any discussions on priority.

**4965. Protoroccella L.M. Sánchez-Pinto & M. Schulz**

This previously overlooked genus has been described in Roccellaceae (Follmann 1995, 2001) where it will be included in the next outline.

**4827. Pseudorbilia Y. Zhang, Z.F. Yu, H.O. Baral & K.Q. Zhang**

This new genus in Orbiliaceae is described for a new fungus collected once on rotten wood in Yunnan (China). It has minute translucent apothecia, an ectal exciple of globose and angular cells, asci and paraphyses not embedded in gel, and short-stipitate, bilateral asci (Zhang et al. 2007).

**4966. Pseudoparodia Theiss. & Sydow**

Based on a re-examination of the type, the genus is transferred to Patellariaceae (Zhang & Hyde 2009).

**4967. Pseudostigmidium Etayo**

This new genus is described for a group of five lichenicolous fungi growing on *Nephroma* and *Pseudocyphellaria* spp. in Tierra del Fuego (Etayo & Sancho 2008). The genus differs from *Stigmidium* in having a I+ red hymenium and 3-septate ascospores. The genus is tentatively placed in Mycosphaerellaceae.

**5100. Pseudotrichia Kirschst.**

This genus was included in two gene phylogenetic analyses that sampled multiple members of the Melanommataceae (Mugambi & Huhndorf 2009). The type species, *P. mutabilis* resolved in the family but the genus is not monophyletic, with additional species occurring in unresolved clades within the Pleosporales.

**4968. Psiloglonium Höhn.**

In a phylogenetic study of Mytilinidiaceae and Hysteriaceae the independence of this genus is shown (Boehm et al. 2009b). Hence, this genus is resurrected and accepted in the forthcoming outline.

**4828. Psilopezia Berk.**

The position of this genus within Pezizales is uncertain (Hansen & Pfister 2006).

**4969. Puttea S. Stenroos & Huhtinen**

The new genus is described to accommodate an arctic-alpine, bryophilous lichen species previously known as *Lecidea margaritella* (Stenroos et al. 2009). The authors provide morphological and molecular evidence for the distinctiveness of the genus that is placed in Lecanorales inc. sed.

**5101. Pycnidiophora Clum**

This genus resolved among species of *Westerdykella* in the Sporormiaceae and thus is treated as a synonym of that genus (Kruys & Wedin 2009).

**4829. Pyronemataceae Corda**

The family as currently circumscribed is shown to be polyphyletic (Perry et al. 2007). Glaziellaceae is sister to Pyrenomataceae s.str., but this lacks support. Several genera within Pyrenomataceae appear polyphyletic. Since numerous relationships lack support, additional data will be necessary before taxonomic conclusions can be drawn.

**4969. Racodium Pers.**

Molecular data suggest that this sterile, microfilamentose lichen genus is close to Mycosphaerellaceae in Dothideomycetes (Muggia et al. 2008). It will be placed in Dothideomycetes inc. sed. in the forthcoming outline.

**4970. Reinkella Darb.**

This genus is a synonym of *Hubbsia* (Tehler et al. 1997).

**4971. Remleria Raitv.**

This genus in Hyaloscyphaceae was described including four species growing on wood and half-woody stems (Raitviir 2004).

**4972. Rhizoplacopsidaceae J.C. Wei & Q.M. Zhou**

A new family was described for a new genus and species collected in China (Zhou & Wei 2006). However, subsequent studies showed that the lichen is a synonym of *Boreoplaca ultrafrigida* (Davydov & Wei 2009). The family is thus regarded as a synonym of Ophioparmaceae in the forthcoming outline.

**4973. Rhizoplacopsis J.C. Wei & Q.M. Zhou**

This recently described genus (Zhou & Wei 2006) has been reduced to synonymy with *Boreoplaca* (Davydov & Wei 2009).

**4830. Rhizoscyphus W.Y. Zhuang & Korf**

This genus is included in *Pezoloma* by Baral & Krieglsteiner (2006).

**4974. Rhodoveronaea Arzanlou, W. Gams & Crous**

The teleomorph of this previous anamophic genus has been discovered and epitypified and hence the name is available for the holomorph(Réblová 2009). A detailed morphological description is given and molecular data suggest that it is best placed in Sordariomycetidae inc. sed.

**5102. Rimora Kohlm., Volkm.-Kohlm., Suetrong, Sakayaroj & E.B.G. Jones**

This genus is described for *Lophiostoma mangrovei*, found on bark and wood in marine habitats (Suetrong et al. 2009). It is placed in the Aigialaceae based on four gene phylogenetic analyses using nucSSU, nucLSU rDNA, *TEF1* and *RPB2* (Suetrong et al. 2009).

**4831. Roccella DC.**

The genus is shown to have its center of distribution in the northern Hemisphere (Tehler & Irestedt 2007) and southern Hemisphere taxa previously placed here are shown to belong to *Roccellina* based on a phylogenetic study using ribosomal and *RPB2* sequence data.

**4832. Roccellaria Darb.**

*Roccellaria* is shown to be nested in *Roccellina* and consequently placed in synonymy with that genus (Tehler & Irestedt 2007).

**4975. Roccellaria Darb.**

This genus is a synonym of *Roccellina* (Tehler & Irestedt 2007).

**4833. Roccellina Darb.**

The genus is enlarged to include fruticose taxa previously placed in *Roccella* and also the genus *Roccellaria* (Tehler & Irestedt 2007).

**4976. Roccellodea Darb.**

This genus is a synonym of *Roccella* (Tehler 2007).

**4979. Roesleria Thüm. & Pass.**

This genus is shown to belong to Helotiaceae using molecular evidence (Kirchmair et al. 2008).

**4977. Rolueckia Papong, Thammathaworn & Boonpragob**

This new genus is described for the *Calenia conspersa* group (Papong et al. 2008). It is characterized by unique hyphophores, which are setiform, reddish brown with a club-like apex producing bacilliform conidia.

**4834. Romellia Berl.**

This genus is reduced to synonymy with *Togninia* by (Réblová & Mostert 2007).

**4978. Romjularia Timdal**

This new genus in Porpidiaceae is described to accommodate *Lecidea lurida*, a terricolous, squamulose lichen (Nash et al. 2007).

**4835. Ropalosporaceae Hafellner**

This monotypic family has been regarded as synonymous with Fuscideaceae. However, Bylin et al. (2007) showed that *Ropalospora* is distinct from this family. They suggested to resurrecting the family, which will be accepted and placed in Lecanoromycetidae inc. sed. in the next outline.

**4836. Roseodiscus H.O. Baral**

This new genus is described by Baral to accommodate one species on Bryophyta (*R. subcarneus*) and one on *Equisetum* (*R. equisetinus*, type) in Hyaloscyphaceae (Baral & Krieglsteiner 2006).

**4980. Rostrupiella Jørg. Koch, K.L. Pang & E.B.G. Jones**

*Rostrupiella* is characterized by large ascomata that are deeply seated within the wood substrate, with long necks extending through the wood to the surface, a bell-like structure protruding into the centrum, large, melanized bladder cells present in the wood cells and formation of inhibition zones in the host tissue. Nu LSU rDNA RNA data place the genus in Lulworthiales (Koch et al. 2007).

**4981. Saccharomyceta**

This rank-less taxon is proposed as a name for the clade that includes Pezizomycotina and Saccharomycotina (Schoch et al. 2009b).

**4982. Samuelsia Chaverri & K.T. Hodge**

The new genus is described for a group of species similar to *Hypocrella*, but differing in having longer ascospores and aschersonia-like anamorphs with allantoid conidia (Chaverri et al. 2008).

**4983. Sarcoexcipula Etayo**

This is another new monotypic genus of lichenicolous fungi from Tierra del Fuego (Etayo & Sancho 2008). The species grows on *Pannaria.* The genus is characterized by a thick and multi-layered exciple, the presence of lateral paraphyses, and large, septate ascospores. The genus is not placed into a family, but based on the description it has an amyloid hymenium and is therefore tentatively placed in Gyalectaceae, although the ascus-type illustrated does not seem to fit to this family very well. Additional studies are necessary to clarify the proper placement of this genus.

**4984. Schistophoron Stirt.**

A phylogenetic study using nu LSU and mt SSU rDNA sequence data demonstrated that this calicioid genus, previously listed under Ascomycota inc. sed. belongs to Graphidaceae (Tehler et al. 2009).

**4837. Schizoparmeaceae Rossman**

This new family in Diaporthales is described to accommodate the distinctive genus *Schizoparme* and its anamorph *Pilidiella* (Rossman et al. 2007). The family is characterized by having brown or black ascomata mostly erumpent through the host epidermis.

**5037. Schizotrema Mangold & Lumbsch**

This small new genus is described to accommodate a group of thelotremoid lichens with layered ascomatal margins (Mangold et al. 2009) that occur in temperate regions of the southern Hemisphere and at high altitudes in the tropics and have previously been found to be distinct based on molecular data (Mangold et al. 2008b).

**5103. Scortechiniella Arx & E. Müll.**

This genus is accepted in the Scortechiniaceae based on LSU, *TEF1* and *RPB2* phylogenetic analyses (Mugambi & Huhndorf 2010).

**5104. Scortechiniellopsis Sivan.**

This genus is accepted in the Scortechiniaceae based on LSU, *TEF1* and *RPB2* phylogenetic analyses (Mugambi & Huhndorf 2010).

**4985. Sculptolumina Marbach**

Based on morphological evidence it is suggested that this genus be resurrected as distinct from *Rinodina* (Giralt et al. 2009). The generic concept of crustose Physciaceae is poorly understood and is in urgent need of a re-evaluation using molecular data. Ad interim we accept *Sculptolumina* in the forthcoming outline, but point out that more data are needed for a new classification at the generic level in this group.

**4986. Sipmaniella Kalb**

For the tropical species *Lecania sulfureofusca* a new monotypic genus in Lecanoraceae is described based on morphological and chemical evidence (Kalb 2009a).

**4987. Smarodsia Raitv. & Vimba**

This new genus in Pyrenemataceae was described for a new species found on soil in Latvia (Vimba & Raitviir 2006). It differs from *Cheilymenia* in ascospores with walls that do not change in boiling lactic acid, and containing lipid droplets.

**4988. Solenopezia Sacc.**

This genus is now classified in Lachnaceae (Raitviir 2004).

**5038. Solenopezia Sacc.**

Korf (2007) provides a discussion of *Solenopezia* Sacc., a genus erected for seven species including the validly published but illegitimate (ICBN Art. 58) *Peziza solenia* Peck, a later homonym of *Peziza solenia* DC (a basidiomycete). Korf provides a discussion for accepting the lectotypification of the genus by Raitvir in 1973 with *Solenopezia solenia* Sacc. as the type species, the name based on *P. solenia* Peck. He discusses the authorship of *S. solenia* as dictated by ICBN Art. 58. As stated therein, the epithet of a validly published but illegitimate species can be transferred to another genus but in the process loses its original author and the transferring author's name is substituted – not as a new combination but as a new name. In this case, *Solenopezia solenia* Sacc. is the correct authorship, not *Solenopezia solenia* (Peck) Sacc. Its type specimen is that of the original author, Peck (1873) but the name dates for priority purposes from 1889 (Saccardo 1889). Korf continues with a discussion of the application of Art. 58 which can result in the loss of ability to find a taxon's description and the location of the type specimen. Korf discusses the possible use of the connective *ex* in joining the original author with the legitimizing author. In this case, the authorship would become *Solenopezia solenia* Peck *ex* Sacc. thereby informing the reader that they should search for the type specimen and description among Peck's publications. A formal proposal to change Art. 58 would be

needed and in the interest of nomenclatural clarification, would be a worthy endeavor. *Solenopezia* will be included in the Lachnaceae (note 4988).

**4838. Solorinella Anzi**

This genus was shown to be nested within *Gyalidea* (Aptroot & Lücking 2003) and is treated as a synonym of *Gyalidea.*

**4839. Solorinellaceae Vezda & Poelt**

This family is placed into synonymy with Gomphillaceae, following some recent authors (Henssen & Lücking 2002, Aptroot & Lücking 2003).

**4989. Sordariomyceta**

This rank-less taxon is proposed as a name for the clade that includes the classes Laboulbeniomycetes, Leotiomycetes, and Sordariomycetes (Schoch et al. 2009b).

**4990. Speerschneidera Trevis.**

This genus was shown to be outside of Ramalinaceae and will be placed in Lecanorales inc. sed. in the next outline (Lumbsch et al. 2004, Nelsen et al. 2008).

**4991. Spencermartinsia A.J.L. Phillips, A. Alves & Crous**

This genus is described in a study on the phylogeny of Botryosphaeriaceae and its classification (Phillips et al. 2008). The genus includes species with brown, 1-septate ascospores with an apiculus at either end.

**4992. Sporodictyon A. Massal.**

This genus is accepted for a group previously included in *Polyblastia,* but forming a separate clade in a mutli-gene phylogenetic analysis (Savic et al. 2008).

**4993. Stegophora Syd. & P. Syd.**

*Stegophora* is placed tentatively in Sydowiellaceae (Sogonov et al. 2008).

**4994. Sydowiellaceae Lar.N. Vassiljeva**

Rossman (Rossman et al. 2007) accepted the family in a new circumscription based on the type *Sydowiella* and included the following genera: *Chapeckia*, *Haplocystis*, *Rossmania*, *Stegophora* and *Sillia* along with a few species from other genera. According to Sogonov et al. (2008) the genera *Lambro* and *Uleoporthe* may also belong in this family. The diverse biology of this group includes parasites and saprobes on herbaceous and woody plants.

**4840. Sympoventuria Crous & Seifert**

A new fungus on *Eucalyptus* from the Cape region is accommodated in this new genus (Crous et al. 2007) that is placed in Dothideomycetes inc. sed. The genus differs from *Venturia*, but differs in having hyaline ascospores and lacking a *Sympodiella* anamorph.

**4995. Synarthothelium Sparrius**

This new genus is described for two new species of corticolous, crustose lichens with synascomata with thalline margin occurring in Central America (Sparrius 2009).

**5039. Tectonidula Réblová**

This new genus is described for species previously classified in the polyphyletic genus *Calosphaeria* and a newly found species (Réblová & Stepánek 2009). The genus is placed in Sordariomycetes inc. sed.

**4996. Teloschistaceae Zahlbr.**

A phylogenetic study based on ITS sequences conforms that the generic concept in the family needs re-evaluation and that most of the genera and subgenera currently accepted are not monophyletic (Gaya et al. 2008).

**4841. Teracosphaeria Réblová & Seifert**

This new genus is described for a new species growing on decayed wood in New Zealand (Réblová & Seifert 2007). It is characterized by immersed, non-stromatic

*Ceratosphaeria*-like perithecia with hyaline, septate ascospores produced in unitunicate, non-amyloid asci. The genus is places in Sordariomycetidae inc. sed.

**4997. Teratosphaeriaceae Crous & U. Braun**

This new family is described for taxa previously classified in the highly polyphyletic Mycosphaerellaceae. The group includes several important leaf spotting and extremotolerant species. The family is placed in Capnodiales (Crous et al. 2007).

**5105. Tetraplosphaeria Kaz. Tanaka & K. Hiray**

This genus is described for taxa occurring on bamboo and having small *Massarina*-like ascomata and anamorphs belonging to *Tetraploa s. str.* (Tanaka et al. 2009). A new family, Tetraplosphaeriaceae is described for this genus and several others.

**5106. Tetraplosphaeriaceae Kaz. Tanaka & K. Hiray**

This family is described to accommodate five genera, including *Tetraplosphaeria*, *Triplosphaeria*, *Polyplosphaeria*, and the anamorphic genera, *Pseudotetraploa* and *Quadricrura* (Tanaka et al. 2009). The family fits in the large Pleosporales *s. lat.* as recovered in a phylogeny derived from five genes, nucSSU, nucLSU rDNA, *TEF1*, *RPB1* and *RPB2* (Schoch et al. (2009).

**4998. Thailandiomyces Pinruan, Sakay., K.D. Hyde & E.B.G. Jones**

This new genus in Diaporthales is described for a new species found on senescent trunks of palms in a peat swamp in Thailand (Pinruan et al. 2008). Morphological and molecular evidence for the classification of the fungus are provided. The genus will be listed under Diaporthales inc. sed. in the forthcoming outline.

**5040. Thelocarpaceae Zukal**

The phylogenetic placement of this family was studied using nuLSU and mtSSU rDNA sequences and their placement outside of Lecanoromycetes but inside of Leotiomyceta that was found previously (Reeb et al. 2004) was confirmed (Lumbsch et al. 2009b). The family will be placed in Leotiomycetes inc. sed. in the forthcoming outline.

**4999. Thelotremataceae (Nyl.) Stizenb.**

The family has been reduced to synonymy with Graphidaceae(Mangold et al. 2008b), see note 4905.

**5107. Tingoldiago K. Hiray. & Kaz. Tanaka**

This genus is described for a single lineage of *Massarina ingoldiana*, that is found on wood in freshwater habitats (Hirayama et al. 2010). It did not group with the other lineage (*Lingomyces*) and will be placed in Pleosporales incertae sedis.

**4842. Torrubiella Boud.**

See note under Cordycipitaceae.

**5000. Torrubiella Boud.**

In a mutli-gene phylogenetic study by Johnson and colleagues (Johnson et al. 2009) the genus is shown to be highly polyphyletic with species clustering in Clavicipitaceae, Cordycipitaceae, and Ophiocordycipitaceae. Two new genera are described, see notes 4879 (*Conoideocrella*) and 4945 (*Orbiocrella*).

**4843. Trapeliaceae Hertel**

This family is shown to be distinct from Agyriaceae and resurrected (Lumbsch et al. 2007b). It is placed in Baeomycetales.

**5108. Trematosphaeria Fuckel**

An epitype was designated for the type species, *T. pertusa* (Zhang et al. 2008) and this collection was used in multiple gene phylogenetic analyses where it resolved in a strongly supported clade assigned as a separate family (Suetrong et al. 2009, Zhang et al. 2009a).

**5109. Trematosphaeriaceae nomen nudum**

This family name is used for a clade recovered in four and five gene phylogenetic analyses (Suetrong et al. 2009, Zhang et al. 2009a) and includes *Trematosphaeria, Falciformispora* and *Halomassarina*. Unfortunately the family was not formally described at that time. However the strongly supported clade is accepted in the Pleosporales and the name will be treated as a nomen nudum until it can be described.

**5001. Trichopeziza Fuckel**

This genus is now classified in Lachnaceae (Raitviir 2004).

Hibbett et al. (2007) placed this order into synonymy with Ostropales.

**4845. Triclinum Fée**

Jørgensen (2003) typified the genus and pointed out that the genus is not a synonym of *Psoroma,* but an older, correct name for *Squamacidia* Brako (Ramalinaceae).

**5002. Triclinum Fée**

This genus (and its synonym *Squamacidia* Brako) is reduced to synonymy with *Phyllopsora,* which will be followed in the forthcoming outline (Timdal 2008).

**5003. Trimmatothele Norman ex Zahlbr.**

The genus is accepted in a new generic classification of Verrucariaceae (Gueidan et al. 2009).

**5110. Triplosphaeria Kaz. Tanaka & K. Hiray**

This genus is described for taxa occurring on bamboo and having *Massarina*-like ascomycetes with *Tetraploa*-like anamorphs having three setose appendages. The ascomata of *Triplosphaeria* species are hemispherical with a flattened base with have rim-like regions composed of vertically oriented hyphoid cells at the side in longitudinal section. (Tanaka et al. 2009).

**5004. Trypetheliales Lücking, Aptroot & Sipman**

This new order is described (Aptroot et al. 2008) including a family that has previously been shown to belong to Dothideomycetes(Del Prado et al. 2006) and was formerly placed in Dothideomycetes inc. sed.

**5005. Trypetheliopsis Asahina**

*Trypetheliopsis* is shown to be an older name for *Musaespora* that is consequently placed into synonymy with that genus (Kashiwadani et al. 2009).

**5041. Tuckermanella Essl.**

The phylogeny of the cetrarioid group in Parmeliaceae was studied using a five-gene data set (Thell et al. 2009). The genus *Tuckermanella* was monophyletic in this study.

**5042. Tuckermannopsis Gyeln.**

The genus *Tuckermannopsis* was polyphyletic in a phylogenetic study on cetrarioid lichens (Thell et al. 2009).

**5006. Tylophoron Nyl. ex Stizenb.**

A phylogenetic study using mt SSU rDNA sequence data showed that this calicioid genus belongs to Arthoniaceae (Lumbsch et al. 2009a).

**5111. Tympanopsis Starbäck**

This genus is accepted in the Scortechiniaceae based on LSU, *TEF1* and *RPB2* phylogenetic analyses (Mugambi & Huhndorf 2010).

**5007. Uleoporthe Petr.**

This genus is placed tentatively in Sydowiellaceae (Sogonov et al. 2008).

**4846. Umbilicariales Lumbsch, Hestmark & Lutzoni**

This new order is described by Lumbsch, Hestmark and Lutzoni (Hibbett et al. 2007) to accommodate Umbilicariaceae (Miadlikowska et al. 2006, Hofstetter et al. 2007)

demonstrated that this order is distinct from Lecanorales. It is placed in Lecanoromycetes inc. sed.

**5008. Umbilithecium Etayo**

This new monotypic genus of lichenicolous fungi from Tierra del Fuego growing on *Pseudocyphellaria* spp. is described as being close to *Corticiruptor,* but differs in having larger ascomata and differences in the exciple and hypothecium (Etayo & Sancho 2008). Additional studies are necessary to clarify the proper placement of this genus that is tentatively placed in Lecanoromycetes inc. sed.

**5009. Umushamyces Etayo**

This additional new monotypic genus of lichenicolous fungi from Tierra del Fuego grows on *Coccotrema cucurbitula* (Etayo & Sancho 2008). The genus has a reduced exciple of branched, gelatinzed hyphae, a hyaline hymenium and hypothecium, and asci of the *Biatora*-type. The genus is close to *Scoliosporum* and its distinction needs further studies. It is tentatively accepted in Scoliciosporaceae.

**4847. Usneocetraria M.L. Lai & J.C. Wei**

The new species is segregated from *Allocetraria* based on several growth morphology characters that are only briefly mentioned (Lai et al. 2007). No discussion of the characters is given. Eleven species are listed, but only two validly combined into *Usneocetraria* (for the remaining nine species no basionyms are cited). Additional data are necessary before this genus can be accepted, for the time being it will be listed as a synonym of *Allocetraria.*

**5010. Vahliella P.M. Jørg.**

Species that were previously classified as subgenus *Micropannaria* in the genus *Fuscopannaria* (Pannariaceae) have been shown to be unrelated to that genus and not belonging to the family (Ekman & Jørgensen 2002). Consequently, these species are now accommodated in a new genus *Vahliella* (Jørgensen 2008).

**4848. Verrucariaceae Zenker**

In multigene phylogenetic analyses(Gueidan et al. 2007) show the generic concept in this family requires revision. Several genera were found to be polyphyletic. Four well-supported lineages were found. Morphological characters and their evolution is discussed. Taxonomic consequences are kept to a minimum and only few species are transferred to other genera based on these results.

**5011. Verrucariaceae Zenker**

The generic classification in the family is discussed based on a phylogenetic study including recent molecular studies in the group and morphological data (Gueidan et al. 2009). A new classification is proposed with the description of three new genera: *Hydropunctaria, Parabagliettoa,* and *Wahlenbergiella.* The genus *Trimmatothele* is accepted.

**5012. Verrucula J. Steiner**

The genus is accepted in Verrucariaceae for parasitic species formerly included in *Verrucaria* (Navarro-Rosinés et al. 2007, Gueidan et al. 2009).

**5013. Verruculopsis Gueidan, C. Roux & Navarro-Rosines**

The genus is newly established in Verrucariaceae for a sister-group of *Placopyrenium* (Navarro-Rosinés et al. 2007, Gueidan et al. 2009).

**5043. Vezdaeaceae Poelt & Vezda ex J.C. David & D. Hawksw.**

The phylogenetic placement of Vezdaeaceae was studied using nuLSU and mtSSU rDNA sequences and it was found to be outside of Lecanoromycete but inside of Leotiomyceta with unclear relationships (Lumbsch et al. 2009b). The family will be placed in Leotiomyceta inc. sed. in the forthcoming outline.

**5014. Wahlenbergiella Gueidan & Thüs**

*Wahlenbergiella* is newly described in Verrucariaceae for a group of marine crusts growing mostly in the intertidal zone (Gueidan et al. 2009). The species were previously classified in the heterogeneous genus *Verrucaria*.

**4849. Wakefieldiomyces Kobayasi**

*Wakefieldiomyces* is included in *Podocrella* by (Chaverri et al. 2005).

**4850. Wallrothiella Sacc.**

García et al. (2006) placed this genus in Coniochaetales based on LSU sequence data for *Wallrothiella subiculosa*. This species is morphologically distinct from the type species *Wallrothiella congregata*, which could not be placed due to lack of molecular data. The genus will remain in the Sordariomycetidae inc. sed. for the present.

**5112. Wallrothiella Sacc.**

The genus *Wallrothiella* represented by the type species *W. congregata* and one additional species, was included in a phylogenetic study using LSU data (Huhndorf et al. 2009). Monophyly of the genus was not supported and the type species finds placement in the newly described Amplistromataceae.

**5015. Wickerhamomyces Kurtzman, Robnett & Basehoar-Powers**

This new genus was described in Saccharomycetales inc. sed. based on molecular evidence (Kurtzman et al. 2008).

**5016. Williopsis Zender**

The type species of *Williopsis* (*W. saturnus*) was included in the new genus *Lindnera* (Kurtzman et al. 2008). Thus *Lindnera* is regarded in the forthcoming outline as a synonym of *Williopsis*.

**5017. Wolfina Seaver ex Eckblad**

This genus is now placed in Chorioactidaceae (Pfister et al. 2008), see note 4877.

**5018. Xanthodactylon P.A. Duvign.**

The circumscription of this African lichen genus is revised and in the new circumscription chiefly characterized by its ascospore-type (Kondratyuk et al. 2008).

**5044. Xanthokarroa S.Y. Kondratyuk, Fedorenko, S. Stenroos, Kärnefelt, Elix & A. Thell**

This newly described genus (Fedorenko et al. 2009) is for the time being regarded as a synonym of *Xanthoria*; see note 5045.

**5045. Xanthoria (Fr.) Th. Fr.**

A new generic classification for xanthorioid genera is suggested based on a phylogenetic study using ITS and mtSSU rDNA sequence data (Fedorenko et al. 2009). For the time being we prefer not to accept these genera until additional data become available and the generic concept reaches a general consensus among researchers working on Teloschistaceae. Hence, the newly described genera *Jackelixia*, *Ovealmbornia* and *Xanthokarroa* are here regarded as synonyms of *Xanthoria*.

**5113. Xenolophium Syd.**

This genus was included in two gene phylogenetic analyses that sampled multiple members of the Melanommataceae (Mugambi & Huhndorf 2009). *Xenolophium* did not occur in that family and will be moved to the Pleosporales incertae sedis in the next outline.

**4851. Zygozyma van der Walt & Arx**

See note under Lipomycetaceae.

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