

**A detailed account on the statistics of the Fungi and  
fungus-like taxa of Iran**

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## SUMMARY

This review paper provides the first attempt at compiling a classification of all taxa in the kingdom *Fungi* and fungus-like taxa, reported from Iran until the end of 2021. The list of all fungal genera reported from Iran and their placement at the higher-level classification (phyla, classes, orders and families) is presented. The number of described species per genus is also given. The country harbors 4500 species under 1194 genera, 366 families, 116 orders, 38 classes and 13 phyla. Of these, 4271 species distributed in 1150 genera, 353 families, 107 orders, 34 classes and 10 phyla belong to the kingdom *Fungi*. The remaining taxa belong to two fungus-like kingdoms: *Chromista* (191 species, 23 genera, four families, four orders, two classes and one phylum) and *Protozoa* (38 species, 21 genera, nine families, five orders, two classes and two phyla). *Ascomycota* (2278 species, 656 genera, 184 families, 55 orders and 11 classes) and *Basidiomycota* (1857 species, 441 genera, 139 families, 39 orders and 11 classes) predominate other groups.

**Key words:** Biodiversity, higher-level classification, mycology, statistics of fungi, taxonomy.

## INTRODUCTION

Fungi and fungus-like taxa are fascinating groups of organisms both in terms of taxonomic richness and functional diversity (McLaughlin & Spatafora 2014, Hawksworth & Lücking 2017, Pölme et al. 2020). Fungi play key roles in all natural ecosystems as decomposers, mutualists and pathogens (Piepenbring 2015). Certain guilds of fungi are the most important organisms for the degradation of organic material, contributing to the recycling process, especially in carbon and nitrogen cycles (McLaughlin & Spatafora 2014, Piepenbring 2015, Grossart et al. 2019, Pölme et al. 2020). Some groups of fungi prevent and reduce soil erosion by producing hypha that cling to soil particles and secrete gelatinous substances (Piepenbring 2015, Costa et al. 2018). Under certain conditions, fungi typically grow as lichens, living in mutualistic symbiosis with algae and/or cyanobacteria for energy sources to enable colonisation of unwelcoming dry, saline, cold or hot habitats such as nutrient-poor polar and desert soils (Piepenbring 2015, Pölme et al. 2020). Probably more than 80% of the terrestrial plants live in association with mycorrhizal fungi promoting their health and nutrition by providing water and nutrients from soil and protection against pathogens, herbivores, and several abiotic stresses (Smith & Read 2008, Piepenbring 2015). Thanks to their capacity to produce antibiotics, toxins and various secondary metabolites, fungi have incredible biotechnological potential in agriculture, bioremediation, chemical, and the food industry (Pavlova & Sokornova 2018, Hyde et al. 2019, Levchenko et al. 2020, Meyer et al. 2020). Besides these unique functions, certain fungi and fungus-like groups may inhabit plant tissues as endophytes (Arnold 2007) and pathogens (Marin-Felix et al. 2019a, b, Chen et al. 2022, Crous et al. 2022). Fungi and fungus-like pathogens are among the most harmful pathogens in forestry and agriculture and are regarded as a worldwide threat to food security (Hyde et al. 2018, Lucas 2020, Chen et al. 2022).

The recent realistic estimate of the number of fungal species(taking into account cryptic species, the rates and patterns at which new species are being described, plant:fungus ratio, unexplored or little-explored niches and DNA based species from environmental sequencing techniques) was between 2.2 and 3.8 million (Hawksworth & Lücking 2017) of which only 3–8% have so far been described (Hyde et al. 2020). Over the past decades, rapid progress and affordability of molecular tools have tremendously resulted in unprecedented insights into fungal diversity and taxonomic composition in all types of ecosystems and habitats, including soil, water, living plant tissues etc. (Nilsson et al. 2018, Hyde et al. 2020, Větrovský et al. 2020). In addition, classification of the kingdom *Fungi* has been updated continuously in recent years, owing to the frequent inclusion of DNA sequence data (Jaklitsch et al. 2016, He et al. 2019, Tedersoo et al. 2018, Wijayawardene et al. 2020, 2021). Novel classifications for the kingdom *Fungi* based on phylogenies and the divergence time of particular taxa have accepted 19 phyla of fungi including *Aphelidiomycota*, *Ascomycota*, *Basidiobolomycota*, *Basidiomycota*, *Blastocladiomycota*, *Calcarisporiellomycota*, *Caulochytriomycota*, *Chytridiomycota*, *Cryptomycota*, *Entomophthoromycota*, *Entorrhizomycota*, *Glomeromycota*, *Kickxellomycota*, *Monoblepharomycota*, *Mortierellomycota*, *Mucoromycota*, *Neocallimastigomycota*, *Olpidiomycota* and *Zoopagomycota* (Tedersoo et al. 2018, Wijayawardene et al. 2020, 2021). Since fungi are one of the most

diverse groups of organisms and represent an essential functional component of diverse ecosystems, awareness of the statistics of fungi in each country and their protection is of the utmost importance.

The mainland of Iran covers various climatic regions, diverse natural habitats and ecosystems with a great biodiversity of different organisms including fungi. The history of mycology in Iran was divided into five periods by Ershad & Zare (2014). In the first period (until 1860) there is no sign of Iranian fungi in scientific literature. During the second period (1860–1941) only foreign mycologists studied the fungi of Iran and published their results in the European literature. The first available report on fungi found in Iran, was published by Boissier & Buhse in 1860 where 33 fungal species, mostly cap fungi, were named. During the period between 1941–1963 (third period) the study of Iranian fungi was initiated by a first generation of Iranian mycologists and also the study of fungal plant pathology was started in Iran. Esfandiar Esfandiari is the first Iranian mycologist who published the result of his studies in collaboration with famous Austrian mycologist Franz Petrak (Petrak & Esfandiari 1941). During the fourth period (1963–2000) a second generation of Iranian mycologists used pure culture technique and mycology started to be considered separately from botany and/or plant pathology at universities. A third generation of Iranian mycologists applied molecular techniques to study Iranian fungi in the fifth period (from 2000) (Ershad & Zare 2014). All fungi and fungal analogues (except fungi found on animals and human) reported from various parts of Iran were assembled by Ershad (1977, 1995, 2009, 2022). Despite all the efforts already made to compile a complete checklist of Iranian fungi by Ershad (2022), the book lacks an analysis of statistics on distribution of the published species across higher taxa. Therefore, the current study is aimed to prepare a higher-level classification of all taxa in the kingdom *Fungi* and fungus-like taxa, reported from Iran until the end of 2021. Furthermore, as taxonomy is an ever-developing science particularly with the advent of modern technologies and their extensive application in mycology, it is attempted here to present an updated account of the names according to the latest synonyms based on Mycobank (<http://www.mycobank.org>) (Crous et al. 2004, Robert et al. 2005, 2013) and Index Fungorum (2021). The study of fungi in Iran during several decades was mostly focused on agriculturally important species (Ershad & Zare 2014) and therefore the account presents mostly species associated with agriculture and fungal plant pathogens rather than saprotrophic, aquatic, epiphytic, coprophilic, entomopathogenic and other species. Therefore, a great quantity of Funga of Iran are still waiting to be explored and published. This article presents an analysis of the information largely contained in the latest version of the Fungi and fungal analogues of Iran (Ershad 2022) which is almost the only reference book of its kind on Iranian fungi. As the paper is predominantly based on the above reference, we therefore do not pretend to have included every single fungal species of Iran that may have been published elsewhere.

## MATERIALS AND METHODS

### Data sources

The primary source of our data is the recently published book “Fungi and fungal analogues of Iran” which compiles the list of fungal species (with their matrices and localities) reported from Iran until the end of 2021 (Ershad 2022). Apart from this primary source, we came across ~180 species which were not listed in Ershad (2022). The statistical analysis presented here also comprises these additional taxa. All species were checked in Mycobank (<http://http://www.mycobank.org>) and their currently accepted names were extracted (Crous et al. 2004, Robert et al. 2005, 2013). Taxa with different current names from those in Ershad (2022) are listed in Table 3. The higher taxonomic ranks of the taxa were drawn from the Wijayawardene et al. (2020, 2021), Index Fungorum (2021) and MycoBank.

### List of fungi and statistical analysis

The list of phyla, classes, orders, families and genera in each kingdom is organized alphabetically. The number of species in each genus is indicated in brackets after the genus name. The number and percentage of different taxonomic ranks are presented for each group of fungi. The pie charts are generated by Microsoft Excel 2016. In addition, checklist of the species that are not mentioned in Ershad (2022) along with their relevant literature is presented.

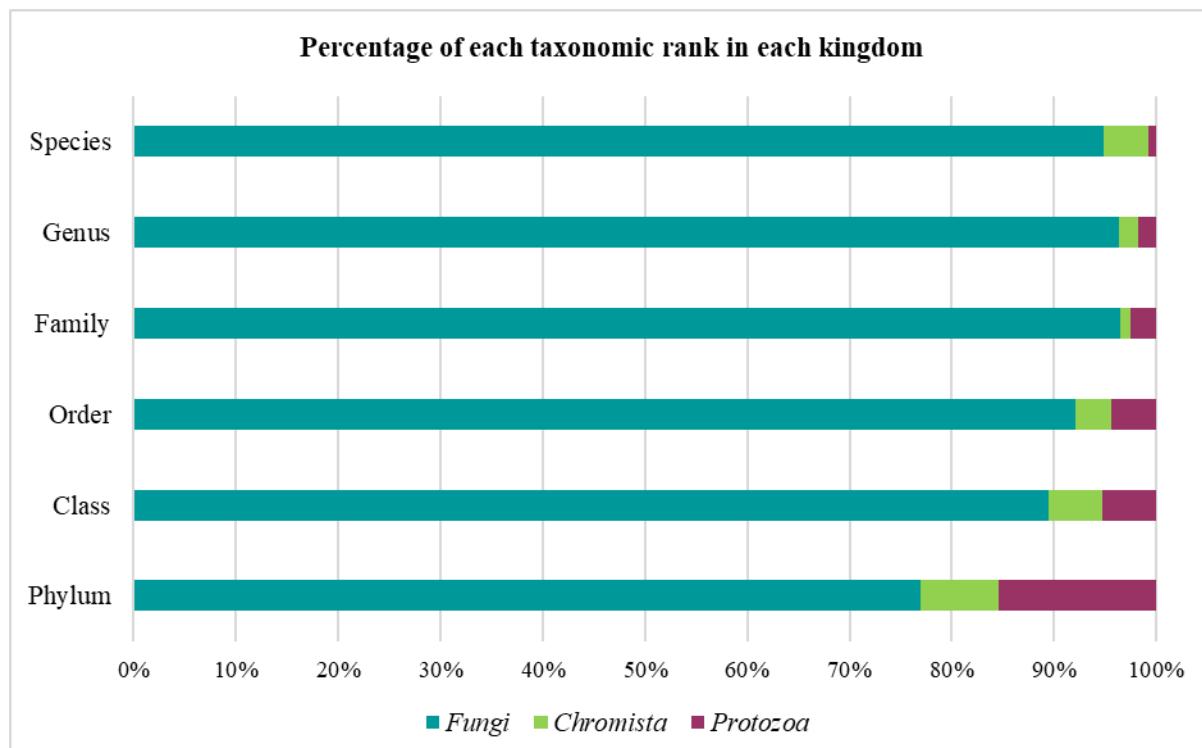
## RESULTS AND DISCUSSION

### Overall statistics of the Fungi and fungus-like taxa reported from Iran

The total number of three kingdoms, 13 phyla, 38 classes, 116 orders, 366 families, 1194 genera and 4500 species of Fungi and fungus-like taxa have been reported from Iran until the end of 2021. Details are shown in Table 1 and Fig. 1.

**Table 1.** The number of phyla, classes, orders, families, genera and species of fungi in each kingdom.

Kingdom	No. of phyla	No. of classes	No. of orders	No. of families	No. of genera	No. of species
<i>Fungi</i>	10	34	107	353	1150	4271
<i>Chromista</i>	1	2	4	4	23	191
<i>Protozoa</i>	2	2	5	9	21	38
Total	13	38	116	366	1194	4500



**Fig. 1.** Percentage of different taxonomic ranks (phylum, class, order, family, genus and species) reported from Iran in different kingdoms.

## **List of higher taxonomic ranks of kingdom *Fungi* reported from Iran**

Until the end of 2021, 10 phyla, 34 classes, 107 orders, 353 families, 1150 genera and 4271 species of kingdom *Fungi* have been reported from Iran (Table 1).

### **Phylum *Ascomycota***

Until the end of 2021, 11 classes, 55 orders, 184 families, 656 genera and 2278 species of phylum *Ascomycota* have been reported from Iran (Table 2) as follows.

***Arthoniomycetes*** O.E. Erikss. & Winka (one order, one family, three genera, three species)

***Arthoniales*** Henssen ex D. Hawksw. & O.E. Erikss. (one family, three genera, three species)

***Arthoniaceae*** Reichenb. ex Reichenb.

*Arthonia* Ach. (1)

*Mycarthonia* Reinke (1)

*Naevia* Fr. (1)

***Dothideomycetes*** sensu O.E. Erikss & Winka (18 orders, 52 families, 227 genera, 977 species)

***Asterinales*** M.E. Barr ex D. Hawksw. & O.E. Erikss. (one family, one genus, one species)

***Asterinaceae*** Hansf.

*Asterina* Lév. (1)

***Botryosphaerales*** C.L. Schoch, Crous & Shoemaker (one family, 21 genera, 66 species)

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

*Barriopsis* A.J.L. Phillips, A. Alves & Crous (1)

*Botryosphaeria* Ces. & De Not. (6)

*Copriniforma* Doilom, J.K. Liu & K.D. Hyde (1)

*Diplodia* Fr. (13)

*Discochora* Höhn. (1)

*Dothiorella* Sacc. (9)

*Lasiodiplodia* Ellis & Everh. (7)

*Leptothiorella* Höhn. (1)

*Macrophoma* (Sacc.) Berl. & Voglino (2)

*Macrophomina* Petr. (2)

*Macrophylllosticta* Sousa da Câmara (1)

*Microdiplodia* Allesch. (6)

*Neofusicoccum* Crous, Slippers & A.J.L. Phillips (4)

*Neoscytalidium* Crous & Slippers (1)

*Neosphaeropsis* Petr. (1)

*Pampolysporium* Magnus (1)

*Phaeobotryon* Theiss. & Syd. (1)

*Polysporidium* Syd. & P. Syd. (1)

*Sphaeropsis* Sacc. (5)

***Botryosphaerales*** genera incertae sedis

*Hendersonula* Speg. (1)

*Spencermartinsia* A.J.L. Phillips, A. Alves & Crous (1)

***Capnodiales*** Woron. (four families, 14 genera, 19 species)

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

*Aithaloderma* Syd. & P. Syd. (1)

*Capnodium* Mont. (1)

*Chaetocapnodium* Hongsanan & K.D. Hyde (2)

- Conidiocarpus* Woron. (2)  
*Echinothecium* Zopf (1)  
*Leptoxiphium* Speg. (2)  
*Phragmocapnias* Theiss. & Syd. (1)  
*Phragmoxyphium* Bat. & Cif. (1)  
*Polychaeton* (Pers.) Lév. (2)  
*Tripospermum* Speg. (1)
- Davidiellaceae*** C.L. Schoch  
*Heterosporium* Klotzsch ex Cooke (1)
- Neoantennariellaceae*** Abdollahz. & Crous  
*Fumiglobus* D.R. Reynolds & G.S. Gilbert (2)
- Readerielliopsidaceae*** Abdollahz. & Crous  
*Scorias* Fr. (1)
- Capnodiales*** genera incertae sedis  
*Pseudotaeniolina* J.L. Crane & Schokn. (1)
- Cladosporiales*** Abdollahz. & Crous (one family, one genus, 31 species)
- Cladosporiaceae*** Chalm. & R.G. Archibald  
*Cladosporium* Link (31)
- Coniosporiales*** Crous, Spatafora, Haridas & I.V. Grig. (one family, one genus, one species)
- Coniosporiaceae*** Crous, Spatafora, Haridas & I.V. Grig.  
*Coniosporium* Link (1)
- Dothideales*** Lindau (three families, 14 genera, 27 species)
- Dothideaceae*** Chevall.  
*Dothidea* Fr. (2)  
*Endoconidioma* Tsuneda (1)  
*Omphalospora* Theiss. & Syd. (1)  
*Scirrhia* Nitschke ex Fuckel (1)
- Dothioraceae*** Theiss. & P. Syd.  
*Colletotrichella* Höhn. (1)  
*Discosphaerina* Höhn. (2)  
*Dothiora* Fr. (2)  
*Neopatella* Sacc. (1)  
*Selenophoma* Maire (4)
- Saccotheciaceae*** Bonord.  
*Aureobasidium* Viala & G. Boyer (6)  
*Pseudoseptoria* Speg. (1)  
*Saccothecium* Fr. (1)
- Dothideales*** genera incertae sedis  
*Mycothyridium* Petr. (3)  
*Polysporidiella* Petr. (1)
- Dyfrolomycetales*** K.L. Pang, K.D. Hyde & E.B.G. Jones (one family, one genus, one species)
- Pleurotremataceae*** Walt. Watson  
*Melomastia* Nitschke ex Sacc. (1)
- Eremithallales*** Lücking & Lumbsch (one family, one genus, one species)
- Melaspileaceae*** W. Watson  
*Melaspilea* Nyl. (1)
- Hysteriales*** Lindau (one family, two genera, two species)
- Hysteriaceae*** Chevall.  
*Graphyllum* Clem. (1)  
*Rhytidhysteron* Speg. (1)
- Kirschsteiniotheliales*** Hern.-Restr., R.F. Castañeda, Gené & Crous (one family, one genus, two species)
- Kirschsteiniotheliaceae*** Boonmee & K.D. Hyde  
*Kirschsteiniothelia* D. Hawksw. (2)
- Microthyriales*** G. Arnaud (one family, three genera, three species)
- Microthyriaceae*** Sacc.

*Microthyrium* Desm. (1)

*Seynesiella* G. Arnaud (1)

*Trichothyrium* Speg. (1)

**Mycosphaerellales** (Nannf.) P.F. Cannon (three families, 43 genera, 311 species)

**Mycosphaerellaceae** Lindau

*Caryophylloseptoria* Verkley, Quaedvli. & Crous (1)

*Cercoseptoria* Petr. (2)

*Cercospora* Fresen. ex Fuckel (57)

*Cercospora* Sacc. (2)

*Cercosporidium* Earle (1)

*Cercosporina* Speg. (1)

*Clypeosphaerella* Guatim., R.W. Barreto & Crous (1)

*Didymellina* Höhn. (1)

*Discella* Berk. & Broome (1)

*Fulvia* Cif. (1)

*Fusicladiella* Höhn. (1)

*Graminopassalora* U. Braun, C. Nakash., Videira & Crous (1)

*Microcyclosporella* J. Frank, Schroers & Crous (1)

*Mycosphaerella* Johanson (9)

*Neocercospora* Bakhshi, Arzanlou, Babai-ahari & Crous (1)

*Neocercosporidium* Videira & Crous (1)

*Neophloeospora* U. Braun, C. Nakash., Videira & Crous (1)

*Nothopassalora* U. Braun, C. Nakash., Videira & Crous (1)

*Ovularia* Sacc. (1)

*Paracercosporidium* Videira & Crous (1)

*Passalora* Fr. (18)

*Phloeospora* Wallr. (1)

*Polythrincium* Kunze (1)

*Prathigada* Subram. (1)

*Prathigadoides* M. Bakhshi, Zare & U. Braun (1)

*Pruniphilomyces* Crous & Bulgakov (1)

*Pseudocercospora* Speg. (34)

*Ramularia* Unger (45)

*Ramulariopsis* Speg. (1)

*Rosisphaerella* Videira & Crous (1)

*Scolecostigmmina* U. Braun (2)

*Septoria* Sacc. (90)

*Sirosporium* Bubák & Serebrian. (2)

*Sphaerella* (Fr.) Rabenh. (2)

*Sphaerulina* Sacc. (8)

*Stigmina* Sacc. (2)

*Stromatoseptoria* Quaedvli., Verkley & Crous (1)

*Sultanomyces* Videira & Crous (1)

*Zasmidium* Fr. (1)

*Zymoseptoria* Quaedvli. & Crous (7)

**Schizothyriaceae** Höhn. ex Trotter, Sacc., D. Sacc. & Traverso

*Schizothyrium* Desm. (2)

**Teratosphaeriaceae** Crous & U. Braun

*Acrodontium* de Hoog (1)

*Teratosphaeria* Syd. & P. Syd. (2)

**Myriangiales** Starbäck (one family, two genera, three species)

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

*Elsinoe* Racib. (2)

*Sphaceloma* de Bary (1)

**Mytilinidiales** E. Boehm, C.L. Schoch & Spatafora (one family, one genus, one species)

**Mytilinidiaceae** Kirschst.

*Taeniolella* S. Hughes *sensu lato* (1)

**Patellariales** D. Hawksw. & O.E. Erikss. (one family, two genera, two species)

**Patellariaceae** Corda

*Lecanidion* Endl. (1)

*Tryblidaria* (Sacc.) Rehm (1)

**Pleosporales** Luttrell ex M.E. Barr (25 families, 103 genera, 471 species)

**Camarosporiaceae** Wanas., Wijayaw., K.D. Hyde & Crous

*Camarosporium* Schulzer (15)

**Corynesporascaceae** Sivan.

*Corynespora* Güssow (2)

**Cryptocoryneaceae** A. Hashim. & Kaz. Tanaka

*Cryptocoryneum* Fuckel (1)

**Cucurbitariaceae** G. Winter

*Cucurbitaria* Gray (5)

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

*Clathrospora* Rabenh. (1)

**Dictyosporiaceae** Boonmee & K.D. Hyde

*Dictyosporium* Corda (1)

*Pseudodictyosporium* Matsush. (1)

**Didymellaceae** Gruyter, Aveskamp & Verkley

*Allophoma* Q. Chen & L. Cai (2)

*Ascochyta* Lib. (18)

*Ascochytella* Tassi (1)

*Boeremia* Aveskamp, Gruyter & Verkley (3)

*Calophoma* Q. Chen & L. Cai (1)

*Chaetasbolisia* Speg. (1)

*Chaetopyrena* Pass. (1)

*Didymella* Sacc. ex D. Sacc. (14)

*Ectophoma* Valenz.-Lopez, Cano, Crous, Guarro & Stchigel (3)

*Epicoccum* Link (6)

*Heteropoma* Q. Chen & L. Cai (1)

*Juxtipoma* Valenzuela-Lopez, Cano, Crous, Guarro & Stchigel (1)

*Leptosphaerulina* McAlpine (2)

*Neodidymelliopsis* Q. Chen & L. Cai (1)

*Neomicrosphaeropsis* Thambug., Camporesi & K.D. Hyde (1)

*Nothopoma* Q. Chen & L. Cai (2)

*Phoma* Sacc. (11)

*Platychora* Petr. (1)

*Similiphoma* Valenz.-Lopez, Cano, Crous, Guarro & Stchigel (1)

*Stagonosporopsis* Died. (2)

*Xenodidymella* Q. Chen & L. Cai (1)

**Didymosphaeriaceae** Munk

*Dendrothyrium* Verkley, Göker & Stielow (1)

*Deniquelata* Ariyaw. & K.D. Hyde (1)

*Didymosphaeria* Fuckel (3)

*Montagnula* Berl. (1)

*Paraconiothyrium* Verkley (1)

*Paraphaeosphaeria* O.E. Erikss. (1)

*Pseudocamarosporium* Wijayaw. & K.D. Hyde (1)

*Pseudopithomyces* Ariyaw. & K.D. Hyde (1)

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

*Thyrostroma* Höhn. (6)

*Wilsonomyces* Adask., J.M. Ogawa & E.E. Butler (1)

**Latoruaceae** Crous

*Polyschema* H.P. Upadhyay (1)

**Leptosphaeriaceae** M.E. Barr

- Alternariaster* E.G. Simmons (1)  
*Coniothyrium* Corda (14)  
*Leptosphaeria* Ces. & De Not. (14)  
*Longiseptatispora* L.W. Hou & Crous (1)  
*Plenodomus* Preuss (8)  
*Sphaerellopsis* Cooke (1)
- Lophiostomataceae** Sacc.
- Cilioplea* Munk (1)
  - Lophiostoma* Ces. & De Not. (6)
  - Platystomum* Trevis. (1)
- Massarinaceae** Munk
- Helminthosporium* Link (4)
  - Massarina* Sacc. (1)
  - Stagonospora* (Sacc.) Sacc. (6)
- Melanommataceae** G. Winter
- Melanomma* Nitschke ex Fuckel (1)
  - Pleotrichocladium* Hern.-Restr., R.F. Castañeda & Gené (1)
  - Praetumpfia* Jaklitsch & Voglmayr (1)
  - Uzbekistanica* Wanás. (2)
- Microsphaeropsidaceae** Qian Chen, L. Cai & Crous
- Microsphaeropsis* Höhn. (2)
- Neocamarosporiaceae** Wanás., Wijayaw., Crous & K.D. Hyde
- Neocamarosporium* Crous & M.J. Wingf. (7)
- Periconiaceae** Nann.
- Periconia* Tode (6)
- Phaeosphaeriaceae** M.E. Barr
- Ampelomyces* Ces. ex Schltld. (1)
  - Chaetosphaeronema* Moesz (2)
  - Eudarluca* Speg. (1)
  - Hendersonia* Sacc. (16)
  - Neosetophoma* Gruyter, Aveskamp & Verkley (4)
  - Ophiobolus* Riess (4)
  - Paraophiobolus* Phook., Wanás. & K.D. Hyde (1)
  - Paraphoma* Morgan-Jones & J.F. White (2)
  - Parastagonospora* Quaedvyl., Verkley & Crous (2)
  - Parastagonosporella* M. Bakhshi, Arzanlou & Crous (1)
  - Phaeoseptoria* Speg. (1)
  - Phaeosphaeria* O.E. Erikss. (3)
  - Sclerostagonospora* Höhn. (1)
  - Septoriella* Oudem. (1)
  - Setophoma* Gruyter, Aveskamp & Verkley (1)
- Pleosporaceae** Nitschke
- Alternaria* Nees (76)
  - Bipolaris* Shoemaker (15)
  - Cochliobolus* Drechsler (4)
  - Comoclathris* Clem. (1)
  - Curvularia* Boedijn (41)
  - Dichotomophthora* Mehrl. & Fitzp. ex P.N. Rao (1)
  - Drechslera* S. It (1)
  - Embellisia* E.G. Simmons (1)
  - Exserohilum* K.J. Leonard & Suggs (5)
  - Lewia* M.E. Barr & E.G. Simmons (1)
  - Macrosporium* Fr. (3)
  - Pleospora* Rabenh. ex Ces. & De Not. (29)
  - Pseudocochliobolus* Tsuda, Ueyama & Nishih. (1)
  - Pyrenophora* Fr. (12)

- Stemphylium* Wallr. (12)  
*Ulocladium* Preuss (2)
- Pyrenophaetopsidaceae** Valenz.-Lopez, Crous, J.F. Cano, Guarro & Stchigel  
*Pyrenophaetopsis* Gruyter, Aveskamp & Verkley (1)  
*Xenopyrenophaetopsis* Valenz.-Lopez, Crous, Stchigel, Guarro & J.F. Cano (1)
- Sporomiaceae** Munk  
*Preussia* Fuckel (4)  
*Sporomella* Ellis & Everh. (3)  
*Xenomonodictys* Hern.-Restr., Karimi, Alizadeh & T. Ghanbari (1)
- Teichosporaceae** M.E. Barr  
*Teichospora* Fuckel (9)
- Torulaceae** Corda  
*Dendryphion* Wallr. (1)  
*Torula* Pers. (2)
- Trematosphaeriaceae** K.D. Hyde, Y. Zhang ter, Suetrong & E.B.G. Jones  
*Trematosphaeria* Fuckel (2)
- Zopfiaceae** G. Arnaud ex D. Hawksw.  
*Rechingeriella* Petr. (1)
- Pleosporales** genera incertae sedis  
*Berkleasmium* Zobel (1)  
*Leptothyrium* Kunze (1)  
*Ochrocladosporium* Crous & U. Braun (1)  
*Remotididymella* Valenz.-Lopez, Crous, Cano, Guarro & Stchigel (1)
- Tubeufiales** Boonmee & K.D. Hyde (one family, two genera, four species)
- Tubeufiaceae** M.E. Barr  
*Helicomyces* Link (3)  
*Helicosporium* Nees (1)
- Venturiiales** Y. Zhang ter, C.L. Schoch & K.D. Hyde (two families, eight genera, 20 species)
- Sympoventuriaceae** Y. Zhang ter, C.L. Schoch & K.D. Hyde  
*Scolecobasidium* E.V. Abbott (3)
- Venturiaceae** E. Müll. & Arx ex M.E. Barr  
*Antennaria* Link (1)  
*Fusicladium* Bonord. (1)  
*Phaeosphaerella* P. Karst. (1)  
*Piggotia* Berk. & Broome (2)  
*Pseudocladosporium* U. Braun (1)  
*Spilosticta* Syd. (1)  
*Venturia* Sacc. (10)
- Dothideomycetes** family incertae sedis
- Englerulaceae** P. Henn.  
*Questieriella* G. Arnaud ex S. Hughes (1)
- Polystomellaceae** Theiss. & H. Syd.  
*Dothidella* Speg. (2)
- Dothideomycetes** genera incertae sedis  
*Asteromella* Pass. & Thüm. (4)  
*Bactrodesmium* Cooke (1)  
*Dilophospora* Desm. (1)  
*Monodictys* S. Hughes (2)
- Eurotiomycetes** Tehler ex O.E. Eriksson & K. Winka (four orders, 15 families, 25 genera, 138 species)
- Chaetothyriales** M.E. Barr (five families, six genera, nine species)
- Chaetothyriaceae** Hansf. ex M.E. Barr  
*Phaeosaccardinula* P. Henn. (1)
- Coccodiniaceae** Höhn. ex O.E. Erikss.  
*Microxiphium* (Harv. ex Berk. & Desm.) Thüm. (1)
- Cyphellophoraceae** Réblová & Unter.

- Cyphellophora*** G.A. de Vries (1)
- Herpotrichiellaceae*** Munk  
*Exophiala* J.W. Carmich. (4)  
*Phialophora* Medlar (1)
- Trichomeriaceae*** Chomnunti & K.D. Hyde  
*Trichomerium* Speg. (1)
- Eurotiales*** G.W. Martin ex Benny & Kimbr. (four families, 11 genera, 121 species)
- Aspergillaceae*** Link  
*Aspergillus* P. Micheli ex Haller (59)  
*Eurotium* Link (4)  
*Monascus* Tiegh. (1)  
*Penicillium* Link (36)
- Penicillaginaceae*** Houbraken, Frisvad & Samson  
*Penicillago* M. Guevara-Suarez, J. Gené & D. García (1)
- Thermoascaceae*** Apinis  
*Paecilomyces* Bainier (5)
- Trichocomaceae*** E. Fisch.  
*Byssochlamys* Westling (1)  
*Emericella* Berk. (1)  
*Neosartorya* Malloch & Cain (1)  
*Talaromyces* C.R. Benj. (10)  
*Thermomyces* Tsikl. (2)
- Onygenales*** Cif. ex Benny & Kimbr. (three families, five genera, five species)
- Arthrodermataceae*** Currah  
*Arthroderma* Curr. & Berk. (1)
- Malbrancheaceae*** Kandemir & de Hoog  
*Malbranchea* Sacc. (1)
- Onygenaceae*** Berk.  
*Aphanoascus* Zukal (1)  
*Auxarthron* G.F. Orr & Kuehn (1)  
*Chrysosporium* Corda (1)
- Phaeomoniellales*** K.H. Chen, A.E. Arnold, Gueidan & Lutzoni (one family, one genus, one species)
- Celotheliaceae*** Lücking, Aptroot & Sipman  
*Phaeomoniella* Crous & W. Gams (1)
- Eurotiomycetes*** family *incertae sedis*
- Ascosphaeraceae*** L.S. Olive & Spiltoir  
*Ascospaera* L.S. Olive & Spiltoir (1)
- Monascaceae*** J. Schröt.  
*Basipetospora* G.T. Cole & W.B. Kendr. (1)
- Lecanoromycetes*** O.E. Erikss. & Winka (three orders, four families, four genera, four species)
- Gyalectales*** Henssen ex D. Hawksw. & O.E. Erikss. (one family, one genus, one species)
- Gyalectaceae*** (A. Massal.) Stizenb.  
*Volvaria* DC. (1)
- Lecanorales*** Nannf. (one family, one genus, one species)
- Lecanoraceae*** Körb.  
*Traponora* Aptroot (1)
- Ramalinaceae*** C. Agardh  
*Lecania* A. Massal. (1)
- Ostropales*** Nannf. (one family, one genus, one species)
- Stictidaceae*** Fr.  
*Stictis* Pers. (1)
- Leotiomycetes*** O.E. Erikss. & Winka (five orders, 22 families, 76 genera, 277 species)
- Chaetomellales*** Crous & Denman (one family, two genera, two species)
- Chaetomellaceae*** Baral, P.R. Johnst. & Rossman  
*Hainesia* Ellis & Sacc. (1)

- Pilidium* Kunze (1)
- Helotiales** Nannf. ex Korf & Lizon (18 families, 65 genera, 261 species)
- Arachnopezizaceae** Hosoya, J.G. Han & Baral
- Arachnopeziza* Fuckel (1)
- Bulgariaceae** Fr.
- Bulgaria* Fr. (1)
- Cenangiaceae** Rehm
- Chlorencoelia* J.R. Dixon (1)
- Chlorociboriaceae** Baral & P.R. Johnst.
- Chlorociboria* Seaver ex C.S. Ramamurthy, Korf & L.R. Batra (2)
- Chlorospleniaceae** Ekanayaka & Hyde
- Chlorosplenium* Fr. (1)
- Dermateaceae** Fr.
- Dermea* Fr. (1)
- Excipula* (Fr.) Fr. (1)
- Gloeosporium* Desm. & Mont. (3)
- Marssonia* J.C. Fisch. (1)
- Marssonina* J.C. Fisch. (5)
- Phlyctaena* Desm. (1)
- Pirottaea* Sacc. (1)
- Drepanopezizaceae** Baral
- Diplocarpon* F.A. Wolf (1)
- Drepanopeziza* (Kleb.) Hohn. (3)
- Leptotrichila* P. Karst. (3)
- Pseudopeziza* Fuckel (2)
- Thedgonia* B. Sutton (1)
- Erysiphaceae** Tul. & C. Tul.
- Arthrocladiella* Vassilkov (1)
- Blumeria* Golovin ex Speer (1)
- Erysiphe* DC. (63)
- Golovinomyces* (U. Braun) Heluta (17)
- Leveillula* G. Arnaud (41)
- Neoerysiphe* U. Braun (3)
- Oidium* Link (4)
- Phyllactinia* Lev. (15)
- Podosphaera* Kunze (22)
- Pseudoidium* Y.S. Paul & J.N. Kapoor (1)
- Sawadaea* Miyabe (3)
- Helotiaceae** Rehm
- Ascocoryne* J.W. Groves & D.E. Wilson (2)
- Bispora* Sacc. (1)
- Cyathicula* De Not. (1)
- Durella* Tul. & C. Tul. (1)
- Hymenoscyphus* Gray (1)
- Neobulgaria* Petr. (1)
- Patella* (Fr.) Sacc. (1)
- Pseudospiropes* M.B. Ellis (2)
- Sporonema* Desm. (1)
- Strossmayeria* Schulzer (1)
- Heterosphaeriaceae** Rehm
- Heteropatella* Fuckel (1)
- Hyaloscrophaceae** Nannf.
- Lachnum* Retz. (2)
- Leotiaceae** Corda
- Leotia* Pers. (1)
- Microglossum* Gillet (1)

**Mollisiaceae** Rehm

- Cheirospora* Moug. & Fr. (1)  
*Cystodendron* Bubak (1)

**Myxotrichaceae** Currah

- Oidiodendron* Robak (1)

**Pezizellaceae** Velen.

- Calycina* Nees ex Gray (1)  
*Chalara* (Corda) Rabenh. (1)

**Ploettnerulaceae** Kirschst.

- Cadophora* Lagerb. & Melin (3)  
*Cylindrosporium* Grev. (1)  
*Oculimacula* Crous & W. Gams (1)  
*Pyrenopeziza* Fuckel (1)  
*Rhynchosporium* Heinsen ex A.B. Frank (2)

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

- Lanzia* Sacc. (1)

**Sclerotiniaceae** Whetzel ex Whetzel

- Amerosporium* Speg. (1)  
*Botryotinia* Whetzel (4)  
*Botrytis* P. Micheli ex Pers. (10)  
*Monilinia* Honey (2)  
*Sclerotinia* Fuckel (3)  
*Verrucobotrys* Hennebert (1)

**Helotiales** genera incertae sedis

- Coniothecium* Corda (3)  
*Dactylaria* Sacc. (2)  
*Monostichella* Höhn. (1)  
*Pseudotryblidium* Rehm (1)  
*Scytalidium* Pesante (2)

**Leotiales** Korf & Lizoň (one family, four genera, four species)

**Tympanidaceae** Baral & Quijada

- Collophorina* Damm & Crous (1)  
*Dendrostilbella* Höhn. (1)  
*Pallidophorina* S. Bien & Damm (1)  
*Ramoconidiophora* S. Bien & Damm (1)

**Phacidiales** C.E. Bessey (one family, one genus, one species)

**Phaciidaeae** Fr.

- Ceuthospora* Grev. (1)

**Rhytismatales** M.E. Barr ex Minter (one family, four genera, nine species)

**Rhytismataceae** Chevall.

- Lophodermium* Chevall. (2)  
*Melasmia* Lév. (3)  
*Rhytisma* Fr. (3)

**Rhytismatales** genera incertae sedis

- Apiodiscus* Petr. (1)

**Orbiliomycetes** O.E. Erikss. & Baral (one order, one family, two genera, five species)

**Orbiliales** Baral, O.E. Erikss., G. Marson & E. Weber (one family, two genera, five species)

**Orbiliaceae** Nannf.

- Arthrobotrys* Corda (4)  
*Dactylella* Grove (1)

**Pezizomycetes** O.E. Erikss. & Winka (one order, 10 families, 28 genera, 62 species)

**Pezizales** J. Schröt. (nine families, 27 genera, 61 species)

**Ascobolaceae** Boud. ex Sacc.

- Saccobolus* Boud. (1)

**Discinaceae** Benedix

*Gyromitra* Fr. (2)

***Helvellaceae* Fr.**

*Dissingia* K. Hansen (1)

*Helvella* L. (9)

*Picoa* Vittad. (1)

***Morchellaceae* H.G.L. Reichenbach**

*Mitrophora* Schulzer (1)

*Morchella* Dill. ex Pers. (8)

*Verpa* Sw. (1)

***Pezizaceae* Dumort.**

*Chromelosporium* Corda (2)

*Daleomyces* Setch. (1)

*Peziza* Fr. (7)

*Sarcosphaera* Auersw. (1)

*Tirmania* Chatin (1)

***Pyronemataceae* Corda**

*Aleuria* Fuckel (1)

*Anthracobia* Boud. (1)

*Geopora* Harkn. (3)

*Humaria* Fuckel (1)

*Melastiza* Boud. (1)

*Otidea* (Pers.) Bonord. (2)

*Pyronema* Carus (1)

*Scutellinia* (Cooke) Lambotte (3)

***Sarcoscyphaceae* LeGal ex Eckblad**

*Sarcoscypha* (Fr.) Boud. (1)

***Terfeziaceae* E. Fisch.**

*Terfezia* (Tul. & C. Tul.) Tul. & C. Tul. (6)

***Tuberaceae* F. Berchtold, J. S. Presl**

*Choiromyces* Vittad. (1)

*Tuber* P. Micheli ex F.H. Wigg. (1)

***Pezizales* genera incertae sedis**

*Cephaliophora* Thaxt. (2)

*Oedocephalum* Preuss (1)

***Pezizomycetes* family incertae sedis**

***Tarzettaceae* Ekanayaka, K.D. Hyde, Q. Zhao & E.B.G. Jones**

*Tarzetta* (Cooke) Lambotte (1)

***Saccharomycetes* O.E. Erikss. & Winka (one order, nine families, 21 genera, 43 species)**

***Saccharomycetales* Kudryavtsev (nine families, 21 genera, 43 species)**

***Debaryomycetaceae* Kurtzman & M. Suzuki**

*Debaryomyces* Lodder & Kreger-van Rij (3)

*Meyerozyma* Kurtzman & M. Suzuki (2)

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

*Geotrichum* Link (2)

*Trichosporon* Behrend (2)

***Eremotheciaceae* Kurtzman**

*Eremothecium* Borzi (3)

***Metschnikowiaceae* T. Kamienski**

*Clavispora* Rodr. Mir. (1)

*Metschnikowia* T. Kamienski (1)

***Saccharomycetaceae* G. Winter**

*Kazachstania* Zubcova (1)

*Kluyveromyces* Van der Walt (1)

*Pichia* E.C. Hansen (5)

*Starmerella* Rosa & Lachance (2)

- Torulaspora* Lindner (1)  
*Yamadazyma* Billon-Grand (1)
- Saccharomycodaceae*** Kudryavtsev  
*Hanseniaspora* Zikes (5)
- Saccharomycopsidaceae*** Arx & Van der Walt  
*Saccharomyopsis* Schiønning (1)
- Trichomonascaceae*** Kurtzman & Robnett  
*Blastobotrys* Klopotek (1)  
*Zygoascus* M.T. Sm. (1)
- Wickerhamomycetaceae*** Kurtzman  
*Wickerhamomyces* Kurtzman, Robnett & Basehoar-Powers (2)
- Saccharomycetales*** genera *incertae sedis*  
*Candida* Berkhout (6)  
*Cyberlindnera* Minter (1)  
*Diutina* Khunnamwong, Lertwattanasakul, Jindam., Limtong & Lachance (1)
- Sareomycetes*** Beimforde, A.R. Schmidt, Rikkinen & J.K. Mitch. (one order, one family, one genus, one species)
- Sareales*** Beimforde, A.R. Schmidt, Rikkinen & J.K. Mitch. (one family, one genus, one species)
- Zythiaceae*** Clem.  
*Zythia* Fr. (1)
- Sordariomycetes*** O.E. Erikss. & Winka (19 orders, 67 families, 232 genera, 720 species)
- Amphisphaerales*** D. Hawksw. & O.E. Erikss. (three families, 13 genera, 40 species)
- Amphisphaeriaceae*** G. Winter  
*Amphisphaeria* Ces. & De Not. (2)  
*Massariella* Speg. (1)  
*Pestalotia* De Not. (3)
- Pestalotiopsidaceae*** Maharachch. & K.D. Hyde  
*Neopestalotiopsis* Maharachch., K.D. Hyde & Crous (3)
- Sporocadaceae*** Corda  
*Allelochaeta* Petr. (1)  
*Bartalinia* Tassi (1)  
*Immersidiscosia* Kaz. Tanaka, Okane & Hosoya (1)  
*Monochaetia* (Sacc.) Allesch. (3)  
*Seimatosprium* Corda (5)  
*Sporocadus* Corda (6)  
*Truncatella* Steyaert (1)
- Calosphaerales*** M.E. Barr (two families, three genera, four species)
- Calosphaeriaceae*** Munk  
*Calosphaeria* Tul. & C. Tul. (1)  
*Jattaea* Berl (1)
- Pleurostomataceae*** Rébllová, L. Mostert, W. Gams & Crous  
*Pleurostoma* Tul. & C. Tul. (2)
- Chaetosphaerales*** Huhndorf, A.N. Mill. & F.A. Fernández (one family, three genera, six species)
- Chaetosphaeriaceae*** Rébllová, M.E. Barr & Samuels  
*Chloridium* Link (3)  
*Codinaea* Maire (1)  
*Dendrophoma* Sacc. (1)  
*Zignoella* Sacc. (2)
- Coniochaetales*** Huhndorf, A.N. Mill. & F.A. Fernández (one family, two genera, seven species)
- Coniochaetaceae*** Malloch & Cain  
*Coniochaeta* (Sacc.) Cooke (6)  
*Lecythophora* Nannf. (1)
- Diaporthales*** Nannf. (15 families, 29 genera, 91 species)
- Asterosporiaceae*** Senan., Maharachch. & K.D. Hyde

- Asterosporium* Kunze (1)
- Coryneaceae** Corda  
*Coryneum* Nees (2)
- Cryphonectriaceae** Gryzenh. & M.J. Wingf.  
*Microthia* Gryzenh. & M.J. Wingf. (1)
- Cytosporaceae** Fr.  
*Cytospora* Ehrenb. (38)
- Diaporthaceae** Höhn. ex Wehm.  
*Diaporthe* Nitschke (11)  
*Haplophoma* Riedl & Ershad (1)  
*Phomopsis* Sacc. & Roum. (5)  
*Stenocarpella* Syd. & P. Syd. (1)
- Erythrogloeaceae** Senan., Maharachch. & K.D. Hyde  
*Dendrostoma* X.L. Fan & C.M. Tian (1)
- Gnomoniaceae** G. Winter  
*Asteroma* DC. (1)  
*Depazea* Fr. (2)  
*Diplodina* Westend. (2)  
*Gnomonia* Ces. & De Not. (1)  
*Gnomoniopsis* Berl. (1)  
*Ligniella* Naumov (1)  
*Ophiognomonia* (Sacc.) Sacc. (1)  
*Plagiostoma* Fuckel (2)
- Juglanconidaceae** Voglmayr & Jaklitsch  
*Juglanconis* Voglmayr & Jaklitsch (2)
- Melanconidaceae** G. Winter  
*Melanconium* Link (1)
- Melanconiellaceae** Senan., Maharachch. & K.D. Hyde  
*Melanconiella* Sacc. (1)
- Schizopharmaceae** Rossman  
*Coniella* Höhn. (1)
- Stilbosporaceae** Link  
*Stilbospora* Pers. (1)
- Sydowiellaceae** Lar.N. Vassiljeva  
*Caudospora* Starbäck (2)
- Tubakiaceae** U. Braun, J.Z. Groenew. & Crous  
*Tubakia* B. Sutton (1)
- Valsaceae** Tul. & C. Tul.  
*Cryphonectria* (Sacc.) Sacc. & D. Sacc. (1)  
*Leucostoma* (Nitschke) Höhn. (1)  
*Mamianiella* Höhn. (1)  
*Valsa* Fr. (5)
- Diaporthales** genera incertae sedis  
*Botryodiplodia* (2)
- Glomerellales** Chadef. ex Réblová, W. Gams & Seifert (two families, six genera, 43 species)
- Glomerellaceae** Locq. ex Seifert & W. Gams  
*Colletotrichum* Corda (33)
- Plectosphaerellaceae** W. Gams, Summerb. & Zare  
*Furcasterigmum* Giraldo López & Crous (1)  
*Gibellulopsis* Bat. & H. Maia (2)  
*Musicillium* Zare & W Gams (2)  
*Plectosphaerella* Kleb. (1)  
*Verticillium* Nees (4)
- Hypocreales** Lindau (10 families, 62 genera, 248 species)
- Bionectriaceae** Samuels & Rossman  
*Clonostachys* Corda (1)

*Geosmithia* J. Pitt (1)  
*Gliomastix* Guég. (1)  
*Stephanonectria* Schroers & Samuels (1)  
*Stilbocrea* Pat. (1)

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

*Claviceps* Tul. (2)  
*Epichloe* (Fr.) Tul. & C. Tul. (1)  
*Marquandomyces* Samson, Houbraken & Luangsa-ard (1)  
*Metacordyceps* G.H. Sung, J.M. Sung, Hywel-Jones & Spatafora (1)  
*Metarhizium* Sorokín (3)  
*Neotyphodium* Glenn, C.W. Bacon & Hanlin (3)

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

*Akanthomyces* Lebert (2)  
*Beauveria* Vuill. (3)  
*Cordyceps* (Fr.) Link (5)  
*Gamszarea* Z.F. Zhang & L. Cai (1)  
*Gibellula* Cavara (1)  
*Lecanicillium* W. Gams & Zare (4)  
*Leptobacillum* Zare & W. Gams (1)  
*Simplicillium* W. Gams & Zare (2)

***Hypocreaceae* De Not.**

*Acrostalagmus* Corda (1)  
*Cladobotryum* Nees (5)  
*Hypocrea* Fr. (1)  
*Hypomyces* (Fr.) Tul. & C. Tul. (4)  
*Sepedonium* Link (2)  
*Sibirina* G.R.W. Arnold (1)  
*Trichoderma* Pers. (31)

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

*Albonectria* Rossman & Samuels (1)  
*Aquanectria* L. Lombard & Crous (1)  
*Calonectria* De Not. (2)  
*Cosmospora* Rabenh. (3)  
*Cylindrocarpon* Wollenw. (3)  
*Cylindrocladium* Morgan (1)  
*Dactylolectria* L. Lombard & Crous (1)  
*Dialonectria* (Sacc.) Cooke (1)  
*Fusarium* Link (82)  
*Fusicolla* Bonord (3)  
*Gibberella* Sacc. (5)  
*Ilyonectria* P. Chaverri & C. Salgado (2)  
*Microcera* Desm. (4)  
*Nectria* (Fr.) Fr. (2)  
*Neocosmospora* E.F. Sm. (12)  
*Neonectria* Wollenw. (3)  
*Pseudonectria* Seaver (2)  
*Thelonectria* P. Chaverri & C.G. Salgado (2)  
*Thyronectria* Sacc. (1)  
*Tubercularia* Tode (1)  
*Xenoacremonium* Lombard & Crous (1)

***Niessliaceae* Kirschst.**

*Niesslia* Auersw. (1)

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

*Hirsutella* Pat. (1)  
*Purpureocillium* Luangsa-ard, Hywel-Jones, Houbraken & Samson (2)

***Sarocladiaceae* L. Lombard**

*Sarocladium* W. Gams & D. Hawksw. (4)

***Stachybotryaceae*** L. Lombard & Crous

*Albifimbria* L. Lombard & Crous (1)

*Paramyrothecium* L. Lombard & Crous (3)

*Stachybotrys* Corda (3)

*Striaticonidium* L. Lombard & Crous (1)

***Tilachlidiaeae*** Lombard & Crous

*Tilachlidium* Preuss (1)

***Hypocreales*** genera incertae sedis

*Acremonium* Link (10)

*Cephalosporium* Corda (2)

*Emericellopsis* J.F.H. Beym (2)

*Fusariella* Sacc. (1)

*Stilbella* Lindau (2)

*Trichothecium* Link (1)

***Magnaportheales*** Thongk., Vijaykr. & K.D. Hyde (two families, eight genera, 15 species)

***Magnaporthaceae*** P.F. Cannon

*Clasterosporium* Schwein (1)

*Gaeumannomyces* Arx & D.L. Olivier (1)

*Magnaporthe* R.A. Krause & R.K. Webster (1)

*Magnaporthiopsis* J. Luo & N. Zhang (1)

*Nakataea* Hara (1)

***Pyriculariaceae*** Klaubauf, E.G. LeBrun & Crous

*Pseudopyricularia* Klaubauf, M.-H. Lebrun & Crous (7)

*Pyricularia* Sacc. (2)

*Utrechtiana* Crous & Quaedvli. (1)

***Melanosporales*** N. Zhang & M. Blackw. (one family, five genera, six species)

***Ceratostomataceae*** G. Winter

*Harzia* Costantin (2)

*Melanospora* Corda (1)

*Microthecium* Corda (1)

*Papulaspora* Preuss (1)

*Thielavia* Zopf (1)

***Microascales*** Luttr. ex Benny & Kimbr. (two families, 11 genera, 15 species)

***Ceratocystidaceae*** Locq. ex Réblová, W. Gams & Seifert

*Berkeleyomyces* W.J. Nel, Z.W. de Beer, T.A. Duong & M.J. Wingf. (1)

*Catunica* C. Mayers & T.C. Harr. (1)

*Ceratocystis* Ellis & Halst. (1)

*Thielaviopsis* Went. (2)

***Microascaceae*** Luttr. ex Malloch

*Cephalotrichum* Link (2)

*Graphium* Corda (1)

*Microascus* Zukal (1)

*Petriella* Curzi (2)

*Pithoascus* Arx (1)

*Scedosporium* Sacc. ex Castell. & Chalm. (1)

*Scopulariopsis* Bainier (1)

***Myrmecridiales*** Crous (one family, one genus, one species)

***Myrmecridiaceae*** Crous

*Myrmecridium* Arzanlou, W. Gams & Crous (1)

***Ophiostomatales*** Benny & Kimbr. (one family, one genus, two species)

***Ophiostomataceae*** Nannf.

*Ophiostoma* Syd. & P. Syd. (2)

***Phomatosporales*** Senan., Maharachch. & K.D. Hyde (one family, one genus, one species)

***Phomatosporaceae*** Senan. & K.D. Hyde

*Phomatospora* Sacc. (1)

**Phyllachorales** M.E. Barr (one family, seven genera, 27 species)

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

*Diachora* Müll. Arg. (1)

*Phyllachora* Nitschke ex Fuckel (5)

*Polystigma* DC. (3)

*Polystigmella* Sacc. (1)

*Stigmatula* (Sacc.) Syd. & P. Syd. (1)

*Telimenella* Petr. (2)

**Phyllostictaceae** Fr.

*Phyllosticta* Pers. (14)

**Pleurotheciales** Rébllová & Seifert (one family, two genera, two species)

**Pleurotheciaceae** Rébllová & Seifert

*Phaeoisaria* Höhn. (1)

*Pleurothecium* Höhn. (1)

**Sordariales** Chad. ex D. Hawksw. & O.E. Erikss. (six families, 22 genera, 53 species)

**Bombardiaceae** S.K. Huang & K.D. Hyde

*Bombardia* (Fr.) P. Karst. (1)

**Chaetomiaceae** G. Winter

*Achaetomium* J.N. Rai, Tewari & Mukerji (1)

*Allocanariomyces* Mehrabi, Asgari & Zare (1)

*Amesia* X. Wei Wang, Samson & Crous (4)

*Botryotrichum* Sacc. & Marchal (1)

*Canariomyces* Arx (1)

*Chaetomium* Kunze (18)

*Collariella* X. Wei Wang, Samson & Crous (1)

*Corynascus* Arx (1)

*Dichotomopilus* X. Wei Wang, Samson & Crous (1)

*Melanocarpus* Arx (1)

*Mycothermus* D.O. Natvig, J.W. Taylor, A. Tsang, M.I. Hutch. & A.J. Powell ex X. Wei Wang, Houbraken & D.O. Natvig (1)

*Parachaetomium* Mehrabi, Asgari & Zare (4)

*Parathielavia* X. Wei Wang & Houbraken (1)

*Trichocladium* Harz (5)

**Cortinariaceae** R. Heim ex Pouzar

*Phlegmacium* (Fr.) Wünsche (2)

*Thaxterogaster* Singer (3)

**Lasiosphaeriaceae** Nannf.

*Naemospora* Roth ex Kuntze (1)

**Podosporaceae** X. Wei Wang & Houbraken

*Triangularia* Boedijn (1)

**Sordariaceae** G. Winter

*Asordaria* Arx, Guarro & Aa (2)

*Neurospora* Shear & B.O. Dodge (1)

*Sordaria* Ces. & De Not. (1)

**Sporidesmiales** Crous (one family, one genus, six species)

**Sporidesmiaceae** Fr.

*Sporidesmium* Link (6)

**Togniniiales** Senan., Maharanachch. & K.D. Hyde (one family, two genera, 20 species)

**Togniniaceae** Rébllová, L. Mostert, W. Gams & Cro

*Phaeoacremonium* W. Gams, Crous & M.J. Wingf. (17)

*Togninia* Berl. (3)

**Xylariales** Nannf. (13 families, 47 genera, 125 species)

**Apiosporaceae** K.D. Hyde, J. Fröhl., Joanne E. Taylor & M.E. Barr

*Apiospora* Sacc. (4)

- Arthrinium* Kunze (3)  
*Nigrospora* Zimm. (2)
- Beltraniaceae*** Nann.  
*Beltrania* Penz. (1)
- Cainiaceae*** J.C. Krug  
*Cainia* Arx & E. Müll. (1)
- Coniocessiaceae*** Asgari & Zare  
*Coniocessia* Dania García, Stchigel, D. Hawksw. & Guarro (4)
- Diatrypaceae*** Nitschke  
*Allocryptovalsa* Senwanna, Phook. & K.D. Hyde (1)  
*Cryptosphaeria* Ces & De Not. (1)  
*Cryptovalsa* Ces. & De Not. ex Fuckel (1)  
*Diatrype* Fr. (4)  
*Diatrypella* (Ces. & De Not.) De Not. (3)  
*Eutypa* Tul. & C. Tul. (2)  
*Eutypella* (Nitschke) Sacc. (3)  
*Libertella* Desm. (2)  
*Monosporascus* Pollack & Uecker (2)  
*Paraeutypella* L.S. Dissan., J.C. Kang, Wijayaw. & K.D. Hyde (2)  
*Peroneutypa* Berl. (2)
- Graphostromataceae*** M.E. Barr, J.D. Rogers & Y.M. Ju  
*Biscogniauxia* Kuntze (6)  
*Obolarina* Pouzar (1)
- Hansfordiaceae*** Crous  
*Hansfordia* S. Hughes (1)
- Hyponectriaceae*** Petr.  
*Charonectria* Sacc. (1)  
*Physalospora* Niessl (2)
- Hypoxylaceae*** DC.  
*Annulohypoxylon* Y.M. Ju, J.D. Rogers & H.M. Hsieh (6)  
*Daldinia* Ces. & De Not. (8)  
*Entonaema* Möller (1)  
*Hypoxylon* Bull. (12)  
*Jackrogersella* L. Wendt, Kuhnert & M. Stadler (3)
- Lopadostomataceae*** Daranag. & K.D. Hyde  
*Creosphaeria* Theiss. (1)  
*Jumillera* J.D. Rogers, Y.M. Ju & F. San Martín (1)  
*Lopadostoma* (Nitschke) Traverso (3)
- Microdochiaeae*** Hern.-Restr., Crous & J.Z. Groenew.  
*Microdochium* Syd. (2)
- Xylariaceae*** Tul. & C. Tul.  
*Amphisphaerella* Henn. (1)  
*Anthostomella* Sacc. (1)  
*Ascotricha* Berk. (3)  
*Conioliella* Dania García, Stchigel & Guarro (3)  
*Dematophora* R. Hartig (1)  
*Kretzschmaria* Fr. (4)  
*Nemania* Gray (2)  
*Nodulisporium* Preuss (1)  
*Rosellinia* De Not. (2)  
*Sphaeria* Tode (5)  
*Xylaria* Hill ex Schrank (10)
- Zygosporiaceae*** J.F. Li, Phook. & K.D. Hyde  
*Zygosporium* Mont. (2)
- Xylariales*** genera incertae sedis  
*Gyrothrix* (Corda) Corda (1)

*Hadrotrichum* Fuckel (1)

*Polyscytalum* Riess (1)

**Sordariomycetes** family *incertae sedis*

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

*Thyridium* Nitschke (2)

**Sordariomycetes** genera *incertae sedis*

*Esfandiariomyces* Ershad (1)

*Iraniella* Petr. (1)

*Pleosphaeria* Speg. (2)

*Scharifia* Petr. (1)

*Strickeria* Körb. (1)

**Taphrinomycetes** O.E. Erikss. & Winka (one order, two families, two genera, five species)

**Taphrinales** Gäum. & C.W. Dodge (two families, two genera, five species)

**Protomycetaceae** Gray

*Protomyces* Unger (1)

**Taphrinaceae** Gäum.

*Taphrina* Fr. (4)

**Ascomycota** genera *incertae sedis*

*Amerosporiopsis* Petr. (1)

*Arthrobotryum* Ces. (1)

*Catenuloxypodium* Bat., Nascim. & Cif. (1)

*Chlamydomyces* Bainier (1)

*Cyanopatella* Petr. (1)

*Cylindrogloeum* Petr. (1)

*Cylindroxyphium* Bat. & Cif. (1)

*Cytosporella* Sacc. (1)

*Cytosporium* Sacc. (1)

*Endoplacodium* Petr. (1)

*Foveostroma* DiCosmo (1)

*Gilmaniella* G.L. Barron (1)

*Hirudinaria* Ces. (2)

*Hymenula* Fr. (1)

*Knufia* L.J. Hutchison & Unter. (1)

*Mauginiella* Cavara (1)

*Myriellina* Höhn. (1)

*Neovularia* U. Braun (2)

*Neoramularia* U. Braun (2)

*Oncopodiella* G. Arnaud ex Rifai (1)

*Perispodium* Fr. (1)

*Phragmocephala* E.W. Mason & S. Hughes (1)

*Pirostoma* (Fr.) Fuckel (1)

*Pseudodiplodia* (P. Karst.) Sacc. (4)

*Radulidium* Arzanlou, W. Gams & Crous (1)

*Schroeteria* G. Winter (1)

*Schwarzmannia* Pisareva (1)

*Scirrhophoma* Petr. (1)

*Sclerozythia* Petch (1)

*Septogloeum* Sacc. (1)

*Siroplacodium* Petr. (1)

*Stachyliodium* Link (1)

*Stigmella* Lév. (1)

*Teratosperma* Syd. & P. Syd. (1)

*Xylosphaeria* G.H. Otth (2)

**Phylum Basidiomycota**

Until the end of 2021, 11 classes, 39 orders, 139 families, 441 genera and 1857 species of phylum *Basidiomycota* have been reported from Iran (Table 2) as follows.

**Agaricomycetes** Doweld (16 orders, 94 families, 362 genera, 1160 species)

**Agaricales** Underw. (34 families, 158 genera, 652 species)

**Agaricaceae** Chevall.

- Abstoma* G. Cunn. (1)
- Agaricus* L. (60)
- Battarrea* Pers. (1)
- Calvatia* C.H. Chow (1)
- Chlorophyllum* Massee (3)
- Coprinus* Pers. (3)
- Crucibulum* Tul. & C. Tul. (1)
- Cyathus* Haller (3)
- Cystolepiota* Singer (1)
- Disciseda* Czern. (2)
- Gyrophragmium* Mont. (1)
- Langemannia* Rostk. (1)
- Lepiota* (Pers.) Gray (12)
- Leucoagaricus* Locq. ex Singer (8)
- Leucocoprinus* Pat. (8)
- Macrolepiota* Singer (4)
- Montagnea* Fr. (3)
- Mycenastrum* Desv. (1)
- Phaeolepiota* Maire ex Konrad & Maubl. (1)
- Podaxis* Desv. (1)
- Schizostoma* Ehrenb. ex Lév. (1)
- Tulostoma* Pers. (5)

**Amanitaceae** E.-J. Gilbert

- Amanita* Pers. (18)
- Limacelopsis* Zhu L. Yang, Q. Cai & Y.Y. Cui (1)
- Saproamanita* Redhead, Vizzini, Drehmel & Contu (1)
- Zhuliangomyces* Redhead (1)

**Amylocorticiaceae** Jülich

- Amyloxyxenasma* (Oberw.) Hjortstam & Ryvarden (2)
- Ceraceomyces* Jülich (1)

**Bolbitiaceae** Singer

- Alnicola* Kühner (1)
- Bolbitius* Fr. (2)
- Conocybe* Fayod (14)
- Pholiotina* Fayod (2)

**Callistosporiaceae** Vizzini, Consiglio, M. Marchetti & P. Alvarado

- Macrocybe* Pegler & Lodge (1)

**Clavariaceae**

- Camarophyllopsis* Herink (1)
- Clavaria* Vaill. ex L. (1)
- Clavulinopsis* Overeem (5)
- Mucronella* Fr. (1)
- Ramariopsis* (Donk) Corner (1)

**Cortinariaceae** R. Heim ex Pouzar

- Calonarius* Niskanen & Liimat. (1)
- Cortinarius* (Pers.) Gray (28)

**Crepidotaceae** (S. Imai) Singer

- Crepidotus* (Fr.) Staude (10)
- Simocybe* P. Karst. (1)

**Cypellaceae** Lotsy

- Baeospora* Singer (1)

**Cystostereaceae** Jülich

*Cystostereum* Pouzar (3)

**Entolomataceae** Kotl. & Pouzar

*Clitopilus* (Fr. ex Rabenh.) P. Kumm. (5)

*Entoloma* P. Kumm. (15)

*Rhodophyllus* Quél. (1)

**Fistulinaceae** Lotsy

*Fistulina* Bull. (1)

**Hydnangiaceae** Gäum. & C.W. Dodge

*Laccaria* Berk. & Broome (4)

**Hypogphoraceae** Lotsy

*Ampulloclitocybe* Redhead, Lutzoni, Moncalvo & Vilgalys (1)

*Cuphophyllus* (Donk) Bon (2)

*Gliophorus* Herink (2)

*Spodocybe* Z.M. He & Zhu L. Yang (1)

**Inocybaceae** Jülich

*Inocybe* (Fr.) Fr. (26)

*Inosperma* (Kühner) Matheny & Esteve-Rav. (6)

*Mallocybe* (Kuyper) Matheny, Vizzini & Esteve-Rav. (1)

*Pseudosperma* Matheny & Esteve-Rav. (1)

**Lycoperdaceae** Chevall.

*Bovista* Pers. (3)

*Calvatia* Fr. (5)

*Lycoperdon* Pers. (8)

**Lyophyllaceae** Jülich

*Asterophora* Ditmar (1)

*Calocybe* Kühner ex Donk (6)

*Hypsizygus* Singer (1)

*Lyophyllum* P. Karst. (3)

*Ossicaulis* Redhead & Ginnns (2)

**Marasmiaceae** Roze ex Kühner

*Atheniella* Redhead, Moncalvo, Vilgalys, Desjardin & B.A. Perry (1)

*Clitocybula* (Singer) Singer ex Métrod (1)

*Crinipellis* Pat. (1)

*Cyphelopsis* Donk (1)

*Hydropus* Kühner ex Singer (1)

*Marasmius* Fr. (11)

*Megacollybia* Kotl. & Pouzar (1)

*Micromphale* Gray (1)

*Rhizomorpha* Roth (1)

**Mycenaceae** Overeem

*Mycena* (Pers.) Roussel (20)

*Panellus* P. Karst. (2)

**Omphalotaceae** Bresinsky

*Collybiopsis* (J. Schröt.) Earle (3)

*Gymnopus* (Pers.) Gray (10)

*Marasmiellus* Murrill (1)

*Mycetinis* Earle (2)

*Omphalotus* Fayod (1)

*Paragymnopus* J.S. Oliveira (1)

*Rhodocollybia* Singer (3)

**Phyllotopsidaceae** Locquin ex Olariaga, Huhtinen, Læssøe, J.H. Petersen & K. Hansen

*Macrotyphula* R.H. Petersen (1)

*Phyllotopsis* E.-J. Gilbert & Donk ex Singer (1)

**Physalacriaceae** Corner

*Armillaria* (Fr.) Staude (5)

*Cylindrobasidium* Jülich (1)

*Flammulina* P. Karst. (2)

*Hymenopellis* R.H. Petersen (1)

*Rhodotus* Maire (1)

*Strobilurus* Singer (2)

*Xerula* Maire (3)

**Pleurotaceae** Kühner

*Hohenbuehelia* Schulzer (3)

*Pleurotus* (Fr.) P. Kumm. (11)

**Pluteaceae** Kotl. & Pouzar

*Pluteus* Fr. (16)

*Volvariella* Speg. (6)

*Volvopluteus* Vizzini, Contu & Justo (1)

**Porothelaceae** Murrill

*Phloeomana* Redhead (1)

*Porothelium* Fr. (1)

**Psathyrellaceae** Vilgalys, Moncalvo & Redhead

*Britzelmayria* D. Wächt. & A. Melzer (1)

*Candolleomyces* D. Wächt. & A. Melzer (2)

*Coprinellus* P. Karst. (8)

*Coprinopsis* P. Karst. (19)

*Lacrymaria* Pat. (1)

*Narcissea* D. Wächt. & A. Melzer (1)

*Panaeolus* (Fr.) Quél. (12)

*Parasola* Redhead, Vilgalys & Hopple (6)

*Psathyrella* (Fr.) Quél. (17)

*Tulosesus* D. Wächt. & A. Melzer (3)

**Pseudoclitocybaceae** Vizzini, Consiglio, P.-A. Moreau & P. Alvarado

*Clitopaxillus* G. Moreno, Vizzini, Consiglio & P. Alvarado (1)

*Pseudoclitocybe* (Singer) Singer (1)

**Radulomycetaceae** Leal-Dutra, Dentinger & G.W. Griff.

*Radulomyces* M.P. Christ. (3)

**Schizophyllaceae** Quél.

*Auriculariopsis* Maire (1)

*Chondrostereum* Pouzar (1)

*Henningssomyces* Kuntze (1)

*Schizophyllum* Fr. (1)

**Squamanitaceae** Jülich

*Cystoderma* Fayod (1)

**Stephanosporaceae** Oberw. & E. Horak

*Cristinia* Parmasto (1)

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

*Agrocybe* Fayod (9)

*Cyclocybe* Velen. (2)

*Deconica* (W.G. Sm.) P. Karst. (1)

*Flammula* (Fr.) P. Kumm. (1)

*Galerina* Earle (7)

*Gymnopilus* P. Karst. (4)

*Hebeloma* (Fr.) P. Kumm. (7)

*Hypholoma* (Fr.) P. Kumm. (6)

*Naucoria* (Fr.) P. Kumm. (1)

*Phaeonematoloma* (Singer) Bon (1)

*Pholiota* (Fr.) P. Kumm. (10)

*Psilocybe* (Fr.) P. Kumm. (3)

*Pyrrhulomyces* E.J. Tian & Matheny (1)

*Stropharia* (Fr.) Quél. (3)

**Tricholomataceae** R. Heim ex Pouzar

- Clitocybe* (Fr.) Staude (12)
- Collybia* (Fr.) Staude (3)
- Delicatula* Fayod (1)
- Dermoloma* J.E. Lange ex Herink (1)
- Hemimycena* Singer (1)
- Infundibulicybe* Harmaja (2)
- Lepista* (Fr.) W.G. Sm. (5)
- Leucopaxillus* Boursier (3)
- Melanoleuca* Pat. (6)
- Mycenella* (J.E. Lange) Singer (1)
- Myxomphalia* Hora (1)
- Omphalia* (Fr.) Staude (1)
- Omphaliaster* Lamoure (1)
- Omphalina* Quél. (1)
- Pogonoloma* (Singer) Sánchez-García (1)
- Resupinatus* Nees ex Gray (2)
- Tricholoma* (Fr.) Staude (17)
- Tricholomopsis* Singer (1)

**Tubariaceae** Vizzini

- Flammulaster* Earle (4)
- Phaeomarasmius* Scherff. (1)
- Tubaria* (W.G. Sm.) Gillet (5)

**Agaricales** genera incertae sedis

- Arrhenia* Fr. (1)
- Hygrocybe* (Fr.) P. Kumm. (3)
- Hygrophorus* Fr. (5)
- Leratiomyces* Bresinsky & Manfr. Binder ex Bridge, Spooner, Beever & D.C. Park (2)
- Leucocybe* Vizzini, P. Alvarado, G. Moreno & Consiglio (2)

**Atheliales** Jülich (one family, two genera, six species)

**Atheliaceae** Jülich

- Athelia* Pers. (5)
- Hypochniciellum* Hjortstam & Ryvarden (1)

**Auriculariales** J. Schröt. (three families, 12 genera, 21 species)

**Auriculariaceae** Fr.

- Auricularia* Bull. (2)

**Auriscalpiaceae** Maas Geest.

- Lentinellus* P. Karst. (3)

**Exidiaceae** R.T. Moore

- Basidiiodendron* Rick (3)
- Bourdotia* (Bres.) Bres. & Torrend (1)
- Eichleriella* Bres. (1)
- Exidia* Fr. (2)
- Exidiopsis* (Bref.) Möller (1)
- Guepinia* Fr. (1)
- Myxarium* Wallr. (2)
- Protomerulius* Möller (1)
- Sebacina* Tul. & C. Tul. (2)

**Auriculariales** genera incertae sedis

- Heteroradulum* Lloyd ex Spirin & Malysheva (2)

**Boletales** E.-J. Gilbert (nine families, 25 genera, 46 species)

**Boletaceae** Chevall.

- Aureoboletus* Pouzar (1)
- Boletus* L. (6)
- Butyriboletus* Arora & J.L. Frank (2)
- Chalciporus* Bataille (1)

- Cyanoboletus* Gelardi, Vizzini & Simonini (1)  
*Lanmaoa* G. Wu & Zhu L. Yang (1)  
*Leccinellum* Bresinsky & Manfr. Binder (2)  
*Leccinum* Gray (2)  
*Neoboletus* Gelardi, Simonini & Vizzini (1)  
*Strobilomyces* Berk. (1)  
*Suillellus* Murrill (3)  
*Tylopilus* P. Karst. (1)  
*Xerocomellus* Šutara (2)  
*Xerocomus* Quél. (3)
- Coniophoraceae*** Ulbr.  
*Coniophora* DC. (1)
- Diplocystaceae*** Kreisel  
*Astraeus* Morgan (1)
- Gyroporaceae*** (Singer) Manfr. Binder & Bresinsky  
*Gyroporus* Quél. (1)
- Hygrophoropsidaceae*** Kühner  
*Hygrophoropsis* (J. Schröt.) Maire ex Martin-Sans (1)
- Paxillaceae*** Lotsy  
*Gyrodon* Opat. (1)  
*Paxillus* Fr. (1)
- Rhizopogonaceae*** Gäum. & C.W. Dodge  
*Rhizopogon* Fr. (3)
- Sclerodermataceae*** Corda  
*Pisolithus* Alb. & Schwein. (1)  
*Scleroderma* Pers. (5)
- Suillaceae*** Besl & Bresinsky  
*Suillus* Gray (3)
- Boletales*** genera incertae sedis  
*Rubroboletus* Kuan Zhao & Zhu L. Yang (1)
- Cantharellales*** Gäum. (six families, 15 genera, 51 species)
- Botryobasidiaceae*** Jülich  
*Botryobasidium* Donk (11)  
*Botryohypochnus* Donk (1)  
*Haplotrichum* Link (2)
- Cantharellaceae*** J. Schröt.  
*Craterellus* Pers. (3)
- Ceratobasidiaceae*** G.W. Martin  
*Ceratobasidium* D.P. Rogers (1)  
*Ceratorhiza* R.T. Moore (5)  
*Rhizoctonia* DC. (5)  
*Waitea* Warcup & P.H.B. Talbot (2)
- Hydnaceae*** Chevall.  
*Cantharellus* Adans.ex Fr. (4)  
*Clavulina* J. Schröt. (2)  
*Hydnus* L. (1)  
*Multiclavula* R.H. Petersen (1)  
*Sistotrema* Fr. (9)
- Oliveoniaceae*** P. Roberts  
*Oliveonia* Donk (1)
- Tulasnellaceae*** Juel  
*Tulasnella* J. Schröt. (3)
- Corticiales*** K.H. Larss. (one family, eight genera, 13 species)
- Corticiaceae*** Herter  
*Corticium* Pers. (1)  
*Dendrothele* Höhn. & Litsch. (1)

*Erythricium* J. Erikss. & Hjortstam (1)

*Galzinia* Bourdot (1)

*Kurtia* Karasiński (1)

*Laetisaria* Burds. (4)

*Mycobernardia* Ghob.-Nejh. (1)

*Vuilleminia* Maire (3)

**Geastrales** K. Hosaka & Castellano (one family, four genera, 13 species)

**Geastraceae** Corda

*Geaster* P. Micheli (2)

*Geastrum* Pers. (9)

*Myriostoma* Desv. (1)

*Trichaster* Czern. (1)

**Gloeophyllales** Thorn (one family, two genera, five species)

**Gloeophyllaceae** Jülich

*Gloeophyllum* P. Karst. (2)

*Neolentinus* Redhead & Ginns (3)

**Gomphales** Jülich (one family, four genera, eight species)

**Gomphaceae** Donk

*Clavariadelphus* Donk (1)

*Corallium* G. Hahn (1)

*Phaeoclavulina* Brinkmann (1)

*Ramaria* Fr. ex Bonord. (5)

**Hymenochaetales** Oberw. (eight families, 24 genera, 69 species)

**Chaetoporellaceae** Jülich

*Kneiffiella* P. Karst. (1)

**Hymenochaetaceae** Donk

*Fomitiporella* Murrill (1)

*Fomitiporia* Murrill (4)

*Fulvifomes* Murrill (1)

*Fuscoporia* Murrill (4)

*Hydnoporia* Murrill (2)

*Hymenochaete* Lév. (2)

*Inonotus* P. Karst. (10)

*Mensularia* Lázaro Ibiza (2)

*Phellinus* Quél. (8)

*Phylloporia* Murrill (2)

*Porodaedalea* Murrill (1)

*Pseudoinonotus* T. Wagner & M. Fisch. (1)

*Sanghuangporus* Sheng H. Wu, L.W. Zhou & Y.C. Dai (3)

**Hypodermataceae** Jülich

*Hypoderma* Fr. (6)

**Hypodontiaceae** Xue W. Wang & L.W. Zhou

*Hypodontia* J. Erikss. (2)

**Oxyporaceae** Zmitr. & V. Malysheva

*Oxyporus* (Bourdot & Galzin) Donk (1)

**Rickenellaceae** Vizzini

*Odonticium* Parmasto (1)

*Peniophorella* P. Karst. (3)

*Sidera* Miettinen & K.H. Larss. (2)

**Schizophoraceae** Jülich

*Lyomyces* P. Karst. (3)

*Xylodon* (Pers.) Gray (6)

**Tubulicrinaceae** Jülich

*Tubulicrinis* Donk (2)

**Hymenochaetales** genera incertae sedis

*Fribicum* J. Erikss. (1)

**Phallales** E. Fisch. (two families, three genera, six species)

**Clathraceae** Chevall.

*Clathrus* P. Micheli ex L. (2)

**Phallaceae** Corda

*Mutinus* Fr. (2)

*Phallus* Junius ex L. (2)

**Polyporales** Gäm. (14 families, 70 genera, 130 species)

**Adustoporiaceae** Audet

*Rhodonia* Niemelä (1)

**Cerrenaceae** Miettinen, Justo & Hibbett

*Cerrena* Gray (1)

*Irpiciporus* Murrill (1)

**Dacryobolaceae** Jülich

*Dacryobolus* Fr. (1)

*Gloeocystidium* P. Karst. (1)

*Postia* Fr. (1)

**Fomitopsidaceae** Jülich

*Antrodia* P. Karst. (2)

*Cystidiopostia* B.K. Cui, L.L. Shen & Y.C. Dai (1)

*Daedalea* Pers. (1)

*Fomitopsis* P. Karst. (2)

*Laetiporus* Murrill (1)

*Melanoporia* Murrill (1)

**Ganodermataceae** Donk

*Ganoderma* P. Karst. (9)

*Tomophagus* Murrill (1)

**Grifolaceae** Jülich

*Grifola* Gray (1)

**Incrustoporiaceae** Jülich

*Skeletocutis* Kotl. & Pouzar (1)

*Tyromyces* P. Karst. (2)

**Irpicaceae** Spirin & Zmitr.

*Byssomerulius* Parmasto (1)

*Ceriporia* Donk (5)

*Crystallicutis* El-Gharabawy, Leal-Dutra & G.W. Griff. (1)

*Cytidiella* Pouzar (1)

*Efibula* Sheng H. Wu (1)

*Irpex* Fr. (2)

*Raduliporus* Spirin & Zmitr. (1)

*Trametopsis* Tomšovský (1)

**Meripilaceae** Jülich

*Meripilus* P. Karst. (1)

*Physisporinus* P. Karst. (1)

*Rigidoporus* Murrill (1)

**Meruliaceae** Rea

*Abortiporus* Murrill (2)

*Donkia* Pilát (1)

*Gelatoporia* Niemelä (1)

*Gyrophanopsis* Jülich (1)

*Hydnophlebia* Parmasto (1)

*Hypochnicium* J. Erikss. (1)

*Merulius* Fr. (1)

*Metuloidea* G. Cunn. (1)

*Mutatoderma* (Parmasto) C.E. Gómez (1)

*Mycoacia* Donk (4)

*Mycoaciella* J. Erikss. & Ryvarden (1)

*Phlebia* Fr. (9)

*Sarcodontia* Schulzer (1)

*Scopuloides* (Massee) Höhn. & Litsch. (1)

*Vitreoporus* Zmitr. (1)

**Panaceae** Miettinen, Justo & Hibbett

*Panus* Fr. (2)

**Phanerochaetaceae** Jülich

*Bjerkandera* P. Karst. (2)

*Hapalopilus* P. Karst. (1)

*Hyphodermella* J. Erikss. & Ryvarden (2)

*Phanerochaete* P. Karst. (7)

*Porostereum* P. Karst. (1)

*Terana* Adans. (1)

**Polyporaceae** Fr. ex Corda

*Bresadolia* Speg. (1)

*Cinereomyces* Jülich (1)

*Coriolopsis* Murrill (3)

*Daedaleopsis* J. Schröt. (2)

*Dichomitus* D.A. Reid (1)

*Diplomitoporus* Domański (1)

*Fomes* (Fr.) Fr. (1)

*Lentinus* Fr. (3)

*Lenzites* Fr. (2)

*Neofavolus* Sotome & T. Hatt. (1)

*Perenniporia* Murrill (4)

*Podofomes* Pouzar (1)

*Polyporus* P. Micheli ex Adans. (6)

*Pycnoporus* P. Karst. (1)

*Pyrofomes* Kotl. & Pouzar (1)

*Trametes* Fr. (7)

*Trichaptum* Murrill (2)

**Steccherinaceae** Parmasto

*Junghuhnia* Corda (1)

*Steccherinum* Gray (3)

**Polyporales** genera incertae sedis

*Phaeophlebiopsis* D. Floudas & Hibbett (1)

**Russulales** Kreisel ex P. M. Kirk, P. F. Cannon & J. C. David (eight families, 20 genera, 104 species)

**Amylostereaceae** Boidin

*Artomyces* Jülich (1)

**Bondarzewiaceae** Kotl. & Pouzar

*Amylosporus* Ryvarden (1)

*Heterobasidion* Bref. (1)

**Gloeocystidiellaceae** Jülich

*Gloeocystidiellum* Donk (1)

**Hericiaceae** Donk

*Hericium* Pers. (3)

*Laxitextum* Lentz (1)

**Lachnocladiaceae** D.A. Reid

*Scytonostroma* Donk (1)

*Vararia* P. Karst. (1)

**Peniophoraceae** Lotsy

*Baltazarria* Leal-Dutra, Dentinger & G.W. Griff. (1)

*Duportella* Pat. (1)

*Gloiothele* Bres. (1)

*Peniophora* Cooke (15)

**Russulaceae** Lotsy

*Lactarius* Pers. (12)

*Lactifluus* (Pers.) Roussel (4)

*Russula* Pers. (49)

**Stereaceae** Pilát

*Aleurodiscus* Rabenh. ex J. Schröt. (1)

*Conferticum* Hallenb. (1)

*Gloeodontia* Boidin (1)

*Stereum* Hill ex Pers. (6)

*Xylobolus* P. Karst. (2)

**Thelephorales** Corner ex Oberw. (three families, seven genera, 19 species)

**Bankeraceae** Donk

*Hydnellum* P. Karst. (1)

**Thelephoraceae** Chevall.

*Amaurodon* J. Schröt (1)

*Thelephora* Ehrh. ex Willd. (3)

*Tomentella* Pers. ex Pat. (7)

**Typhulaceae** Jülich

*Pistillaria* Fr. (1)

*Sclerotium* Tode (4)

*Typhula* (Pers.) Fr. (2)

**Trechisporales** K.H. Larss. (one family, six genera, 11 species)

**Hydnodontaceae** Jülich

*Brevicellicium* K. H. Larss. & Hjortstam (1)

*Fibrodontia* Parmasto (1)

*Sistotremastrum* J. Erikss. (1)

*Subulicystidium* Parmasto (1)

*Trechispora* P. Karst. (6)

**Trechisporales** genera incertae sedis

*Sertulicium* Spirin, Volobuev & K.H. Larss. (1)

**Xenasmatales** Jülich (one family, two genera, six species)

**Xenasmataceae** Oberw.

*Xenasma* Donk (3)

*Xenasmatella* Oberw. (3)

**Atractiellomycetes** R. Bauer, Begerow, J. P. Samp., M. Weiss & Oberw. (one order, one family, three genera, three species)

**Atractiellales** Oberw. & Bandoni (one family, three genera, three species)

**Phleogenaceae** Gäum.

*Helicogloea* Pat. (1)

*Phleogena* Link (1)

*Saccosoma* Spirin (1)

**Cystobasidiomycetes** R. Bauer, Begerow, J. P. Samp., M. Weiss & Oberw. (one order, one family, one genus, four species)

**Cystobasidiales** R. Bauer, Begerow, J.P. Samp., M. Weiss & Oberw. (one family, one genus, four species)

**Cystobasidiaceae** Gäum.

*Cystobasidium* (Lagerh.) Neuhoff (4)

**Dacrymycetes** Doweld (one order, one family, three genera, three species)

**Dacrymycetales** Henn. (one family, three genera, three species)

**Dacrymycetaceae** J. Schröt.

*Calocera* (Fr.) Fr. (1)

*Dacrymyces* Nees (1)

*Guepinopsis* Pat. (1)

**Exobasidiomycetes** Begerow, M. Stoll & R. Bauer (six orders, seven families, 10 genera, 31 species)

**Doassaniiales** R. Bauer & Oberw. (one family, one genus, one species)

**Doassansiaceae** R.T. Moore ex P.M. Kirk, P.F. Cannon & J.C. David

- Tracya* Syd. & P. Syd. (1)
- Entylomatales** R. Bauer & Oberw. (one family, one genus, 10 species)
- Entylomataceae** R. Bauer & Oberw.
- Entyloma* de Bary (10)
- Exobasidiales** Henn. (one family, one genus, two species)
- Graphiolaceae** Clem. & Shear
- Graphiola* Poit. (2)
- Georgefischeriales** R. Bauer, Begerow & Oberw. (one family, one genus, one species)
- Georgefischeriaceae** R. Bauer, Begerow & Oberw.
- Jamesdicksonia* Thirum., Pavgi & Payak (1)
- Microstromatales** R. Bauer & Oberw. (two families, five genera, six species)
- Microstromataceae** Jülich
- Helostroma* Pat. (1)
  - Microstoma* Niessl (1)
  - Pseudomicrostoma* T. Kij. & Aime (1)
- Quambalariaceae** Z.W. de Beer, Begerow & R. Bauer
- Quambalaria* J.A. Simpson (2)
- Microstromatales** genera *incertae sedis*
- Jaminaea* Sipiczki & Kajdacsy ex T. Kij. & Aime (1)
- Tilletiales** Kreisel ex R. Bauer & Oberw. (one family, one genus, 11 species)
- Tilletiaceae** J. Schröt.
- Tilletia* Tul. & C. Tul. (11)
- Microbotryomycetes** R. Bauer, Begerow, J.P. Samp., M. Weiss & Oberw. (two orders, two families, four genera, 13 species)
- Microbotryales** R. Bauer & Oberw. (one family, two genera, six species)
- Microbotryaceae** R.T. Moore
- Microbotryum* Lév. (3)
  - Sphacelotheca* de Bary (3)
- Sporidiobolales** Doweld (one family, two genera, seven species)
- Sporidiobolaceae** R.T. Moore
- Rhodotorula* F.C. Harrison (6)
  - Sporobolomyces* Kluyver & C.B. Niel (1)
- Pucciniomycetes** R. Bauer, Begerow, J.P. Samp., M. Weiss & Oberw. (three orders, 13 families, 27 genera, 536 species)
- Helicobasidiales** R. Bauer, Begerow, J.P. Samp., M. Weiss & Oberw. (one family, two genera, five species)
- Helicobasidiaceae** P.M. Kirk
- Helicobasidium* Pat. (1)
  - Tuberculina* Tode ex Sacc. (4)
- Pucciniales** Clem. & Shear (11 families, 24 genera, 530 species)
- Coleosporiaceae** Dietel
- Coleosporium* Lév. (6)
  - Quasipucciniastrum* X.H. Qi, P. Zhao & L. Cai (1)
- Gymnosporangiaceae** P. Zhao & L. Cai
- Gymnosporangium* R. Hedw. ex DC. (9)
- Melampsoraceae** Dietel
- Melampsora* Castagne (27)
- Ochropsoraceae** Aime & McTaggart
- Ochropsora* Dietel (1)
- Phakopsoraceae** Cummins & Hirats. f.
- Cerotelium* Arthur (1)
  - Phakopsora* Dietel (1)
- Phragmidiaceae** Corda
- Kuehneola* Magnus (2)
  - Phragmidium* Link (21)
  - Trachyspora* Fuckel (2)

**Pileolariaceae** Cummins & Y. Hirats.

*Pileolaria* Castagne (1)

**Pucciniaceae** Chevall.

*Allodus* Arthur (1)

*Caeoma* Link (3)

*Micropuccinia* Rostr. (1)

*Peristemma* Syd. (1)

*Puccinia* Pers. (285)

*Uredo* Pers. (11)

*Uromyces* (Link) Unger (112)

**Pucciniastraceae** Gäum. ex Leppik

*Hyalopsora* Magnus (2)

*Pucciniastrum* G.H. Otth (2)

**Raveneliaceae** Leppik

*Ravenelia* Berk. (1)

**Tranzscheliaceae** Aime & McTaggart

*Leucotelioides* Tranzschel (1)

*Tranzschelia* Arthur (6)

**Pucciniales** genera incertae sedis

*Aecidium* Pers. (32)

**Septobasidiales** Couch ex Donk (one family, one genus, one species)

**Septobasidiaceae** Racib.

*Septobasidium* Pat. (1)

**Tremellomycetes** Doweld (five orders, 11 families, 12 genera, 25 species)

**Cystofilobasidiales** Fell, Roeijmans & Boekhout (one family, one genus, one species)

**Mrakiaceae** X.Z. Liu, F.Y. Bai, M. Groenew. & Boekhout

*Tausonia* Babeva (1)

**Filobasidiales** Jülich (two families, three genera, 12 species)

**Filobasidiaceae** L.S. Olive

*Filobasidium* L.S. Olive (2)

*Naganishia* S. Goto (8)

**Piskurozymaceae** X.Z. Liu, F.Y. Bai, M. Groenew. & Boekhout

*Solicoccozyma* X.Z. Liu, F.Y. Bai, M. Groenew. & Boekhout (2)

**Holtermanniales** Libkind, Wuczowski, Turchetti & Boekhout (one family, one genus, two species)

**Holtermanniaceae** Redhead

*Holtermanniella* Libkind, Wuczko., Turchetti & Boekhout (2)

**Tremellales** Fr. (six families, six genera, nine species)

**Bulleribasidiaceae** X. Z. Liu, F.Y. Bai, M. Groenew. & Boekhout

*Vishniacozyma* X.Z. Liu, F.Y. Bai, M. Groenew. & Boekhout (2)

**Cryptococcaceae** Kütz. ex Castell. & Chalm.

*Cryptococcus* Vuill. (1)

**Rhynchogastremataceae** Oberw. & B. Metzler

*Papiliotrema* J.P. Samp., M. Weiss & R. Bauer (2)

**Sirobasidiaceae** Lindau

*Fibulobasidium* Bandoni (1)

**Tremellaceae** Fr.

*Tremella* Pers. (2)

**Trimorphomycetaceae** X. Z. Liu, F.Y. Bai, M. Groenew. & Boekhout

*Saitozyma* X.Z. Liu, F.Y. Bai, M. Groenew. & Boekhout (1)

**Trichosporonales** Boekhout & Fell (one family, one genus, one species)

**Trichosporonaceae** Nann.

*Vanrija* R. T. Moore (1)

**Tritirachiomyctetes** Aime & Schell (one order, one family, one genus, one species)

**Tritirachiales** Aime & Schell (one family, one genus, one species)

**Tritirachiaceae** Aime & Schell

*Tritirachium* Limber (1)

***Ustilaginomycetes*** R. Bauer, Oberw. & Vánky (two orders, six families, 17 genera, 80 species)

***Urocystidales*** R. Bauer & Oberw. (three families, five genera, 28 species)

***Fereydouniaceae*** S. Nasr, Soudi, H.D.T. Nguyen, M. Lutz & Piętek

*Fereydounia* S. Nasr, M.R. Soudi, H.D.T. Nguyen, M. Lutz & Piętek (1)

***Floromycetaceae*** S. Nasr, Soudi, H.D.T. Nguyen, M. Lutz & Piętek

*Antherospora* R. Bauer, M. Lutz, Begerow, Piętek & Vánky (2)

***Urocystidaceae*** Begerow, R. Bauer & Oberw.

*Tuburcinia* Woronin (3)

*Urocystis* Rabenh. ex Fuckel (20)

*Vankya* Ershad (2)

***Ustilaginales*** G. Winter (three families, 11 genera, 52 species)

***Anthracoideaceae*** Denchev

*Anthracoidea* Bref. (9)

*Farysia* Racib. (1)

*Schizonella* J. Schröt. (1)

***Glomosporiaceae*** Cif.

*Sorosporium* F. Rudolphi (2)

*Thecaphora* Fingerh. (1)

***Ustilaginaceae*** Tul. & C. Tul.

*Anthracocystis* Bref. (3)

*Macalpinomyces* Langdon & Full. (1)

*Moesziomyces* Vánky (1)

*Sporisorium* Ehrenb. ex Link (9)

*Tranzscheliella* Lavrov (2)

*Ustilago* (Pers.) Roussel (22)

***Wallemiomycetes*** Zalar, de Hoog & Schroers (one order, one family, one genus, one species)

***Geminibasidiales*** H.D.T. Nguyen, N.L. Nick. & Seifert (one family, one genus, one species)

***Geminibasidiaceae*** H.D.T. Nguyen, N.L. Nick. & Seifert

*Basidioascus* Matsush. (1)

#### **Phylum Blastocladiomycota**

Until the end of 2021, 2 classes, 2 orders, 3 families, 5 genera and 8 species of phylum *Blastocladiomycota* have been reported from Iran (Table 2) as follows.

***Blastocladiomycetes*** Doweld (one order, two families, two genera, three species)

***Blastocladiales*** H.E. Petersen (two families, two genera, three species)

***Catenariaceae*** Couch

*Catenaria* Sorokin (2)

***Coelomomycetaceae*** Couch

*Coelomomyces* Keilin (1)

***Physodermatomycetes*** Tedersoo, Sanchez-Ramirez, Köljalg, Bahram, M. Döring, Schigel, T.W. May, M.

Ryberg & Abarenkov (one order, one family, three genera, five species)

***Physodermatales*** Caval.-Sm. (one family, three genera, five species)

***Physodermataceae*** Sparrow

*Oedomyces* Sacc. ex Trab. (1)

*Physoderma* Wallr. (3)

*Urophlyctis* J. Schröt. (1)

#### **Phylum Chytridiomycota**

Until the end of 2021, one class, one order, one family, one genus and one species of phylum *Chytridiomycota* have been reported from Iran (Table 2) as follows.

***Synchytriomycetes*** Tedersoo, Sanchez-Ramirez, Köljalg, Bahram, M. Döring, Schigel, T.W. May, M. Ryberg & Abarenkov (one order, one family, one genus, one species)

***Synchytriales*** Doweld (one family, one genus, one species)

**Synchytriaceae** J. Schröt.

*Synchytrium* de Bary & Woronin (1)

**Phylum Entomophthoromycota**

Until the end of 2021, one class, one order, two families, eight genera and 14 species of phylum *Entomophthoromycota* have been reported from Iran (Table 2) as follows.

**Entomophthoromycetes** Humber (one order, two families, eight genera, 14 species)

**Entomophthorales** G. Winter (two families, nine genera, 14 species)

**Entomophthoraceae** Nowak.

- Batkoia* Humber (2)
- Empusa* Cohn (1)
- Entomophaga* A. Batko (2)
- Entomophthora* Fresen. (4)
- Erynia* (Nowak. ex A. Batko) Remaud. & Hennebert (1)
- Pandora* Humber (1)
- Zoophthora* A. Batko (1)

**Neozygitaceae** Ben Ze'ev, R.G. Kenneth & Uziel

- Neozygites* Witlaczil (2)

**Phylum Glomeromycota**

Until the end of 2021, three classes, four orders, 11 families, 21 genera and 72 species of phylum *Glomeromycota* have been reported from Iran (Table 2) as follows.

**Archaeosporomycetes** Sieverd., G.A. Silva, B.T. Goto & Oehl (one order, one family, one genus, one species)

**Archaeosporales** C. Walker & A. Schüssler (one family, one genus, one species)

**Archaeosporaceae** J.B. Morton & D. Redecker

- Archaeospora* J.B. Morton & D. Redecker (1)

**Glomeromycetes** Caval.-Sm. emend. Oehl, G.A. Silva, B.T. Goto & Sieverd. (two orders, nine families, 19 genera, 69 species)

**Diversisporales** C. Walker & A. Schüssler emend. Oehl, G.A. Silva & Sieverd. (seven families, 10 genera, 29 species)

**Acaulosporaceae** J.B. Morton & Benny

- Acaulospora* Gerd. & Trappe (11)

**Diversisporaceae** C. Walker & A. Schüssler

- Diversispora* C. Walker & A. Schüssler (3)
- Redeckera* C. Walker & A. Schüssler (1)
- Sieverdingia* Błaszk., Niezgoda & B.T. Goto (1)

**Entrophosporaceae** Oehl & Sieverd.

- Entrophospora* R.N. Ames & R.W. Schneid. (1)

**Gigasporaceae** J.B. Morton & Benny

- Gigaspora* Gerd. & Trappe (5)

**Scutellosporaceae** Sieverd., F.A. Souza & Oehl

- Scutellospora* C. Walker & F.E. Sanders (3)

**Pacisporaceae** C. Walker, Błaszk., A. Schüssler & Schwarzott

- Pacispora* Sieverd. & Oehl (1)

**Racocetaceae** Oehl, Sieverd. & F.A. Souza

- Cetraspora* Oehl, F. A. Souza & Sieverd. (1)

- Racocetra* Oehl, F.A. Souza & Sieverd. (2)

**Glomerales** J.B. Morton & Benny emend. Oehl, G.A. Silva, B.T. Goto & Sieverd. (two families, nine genera, 40 species)

**Claroideoglomeraceae** C. Walker & A. Schüßler

- Claroideoglomus* C. Walker & A. Schüssler (4)

**Glomeraceae** Piroz. & Dalpé emend. Oehl, G.A. Silva & Sieverd.

- Dominikia* Błaszk., Chwat & Kovács (1)

- Funneliformis* C. Walker & A. Schüssler emend. Oehl, G.A. Silva & Sieverd. (6)

- Glomus* Tul. & C. Tul. emend. Oehl, G.A. Silva & Sieverd. (15)

*Oehlia* Błaszk., Kozłowska, Niezgoda, B.T. Goto & Dalpé (1)

*Rhizoglomus* Sieverd., G.A. Silva & Oehl (5)

*Rhizophagus* P.A. Dang. (4)

*Sclerocystis* Berk. & Broome (1)

*Septoglomus* Sieverd., G.A. Silva & Oehl (3)

**Paraglomeromycetes** Oehl, G.A. Silva, B.T. Goto & Sieverd. (one order, one family, one genus, two species)

**Paraglomerales** C. Walker & A. Schüssler (one family, one genus, two species)

**Paraglomeraceae** J.B. Morton & D. Redecker

*Paraglomus* J.B. Morton & D. Redecker (2)

#### **Phylum Mortierellomycota**

Until the end of 2021, one class, one order, one family, one genus and one species of phylum *Mortierellomycota* have been reported from Iran (Table 2) as follows.

**Mortierellomycetes** Doweld (one order, one family, one genus, one species)

**Mortierellales** Caval.-Sm. (one family, one genus, one species)

**Mortierellaceae** A. Fisch.

*Mortierella* Coem. (1)

#### **Phylum Mucoromycota**

Until the end of 2021, two classes, two orders, 10 families, 13 genera and 36 species of phylum *Mucoromycota* have been reported from Iran (Table 2) as follows.

**Endogonomycetes** Doweld (one order, one family, one genus, one species)

**Endogonales** Jacz. & P.A. Jacz. (one family, one genus, one species)

**Endogonaceae** Paol.

*Endogone* Link (1)

**Mucoromycetes** Doweld (one order, nine families, 12 genera, 35 species)

**Mucorales** Fr. (nine families, 12 genera, 35 species)

**Choanephoraceae** J. Schröt.

*Choanephora* Curr. (1)

**Cunninghamellaceae** Naumov ex R.K. Benj.

*Absidia* Tiegh. (4)

*Cunninghamella* Matr. (5)

**Gilbertellaceae** Benny

*Gilbertella* Hesselt. (1)

**Lichtheimiaceae** Kerst. Hoffm., Walther & K. Voigt

*Lichtheimia* Vuill. (2)

**Mucoraceae** Dumort.

*Actinomucor* Schostak. (1)

*Ascophora* Tode (1)

*Mucor* Fresen. (13)

**Phycomycetaceae** Arx

*Phycomyces* Kunze (1)

**Rhizopodaceae** K. Schum.

*Rhizopus* Ehrenb. (4)

**Syncephalastraceae** Naumov ex R.K. Benj.

*Syncephalastrum* J. Schröt. (1)

**Thamnididiaceae** Ch. Ya. Gobi

*Thamnidium* Link (1)

#### **Phylum Olpidiomycota**

Until the end of 2021, one class, one order, one family, one genus and one species of phylum *Olpidiomycota* have been reported from Iran (Table 2) as follows.

**Olpidiomycetes** Doweld (one order, one family, one genus, one species)

**Olpidiales** Caval.-Sm. (one family, one genus, one species)

**Olpidiaceae** J. Schröt.

*Olpidium* (A. Braun) J. Schröt. (1)

**Phylum Zoopagomycota**

Until the end of 2021, one class, one order, one family, one genus and one species of phylum *Zoopagomycota* have been reported from Iran (Table 2) as follows.

**Zoopagomycetes** Doweld (one order, one family, one genus, one species)

**Zoopagales** Bessey ex R.K. Benj. (one family, one genus, one species)

**Helicocephalidaceae** Boedijn

*Helicocephalum* Thaxt. (1)

**Fungi** genera incertae sedis

*Pseudopatella* Sacc. (1)

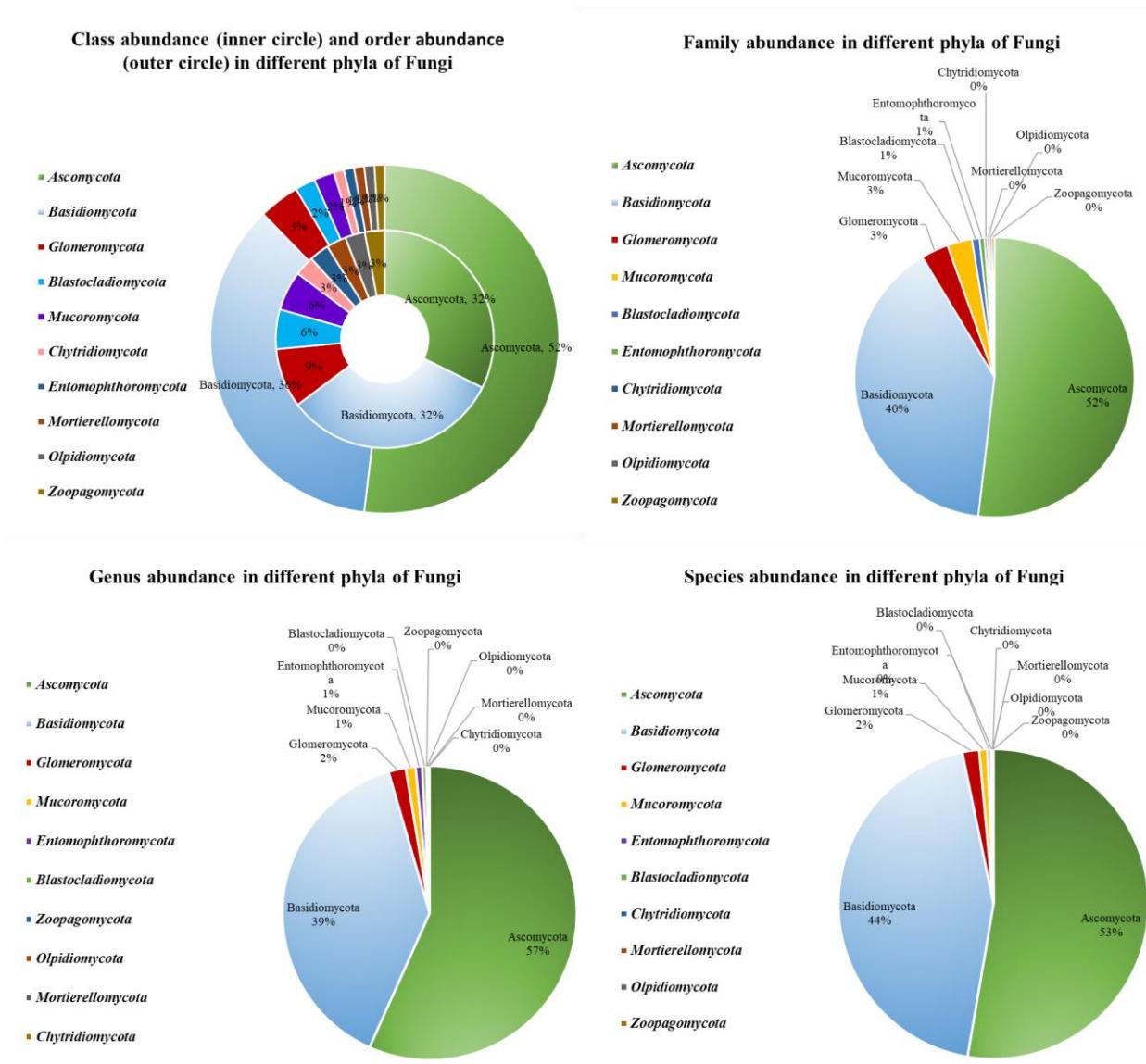
*Sporodesmium* Link (1)

**Table 2:** The number of classes, orders, families, genera and species of fungi in each phylum in the kingdom *Fungi*.

Phylum	No. of classes	No. of orders	No. of families	No. of genera	No. of species
<b>Ascomycota</b>	11	55	184	656	2278
<b>Basidiomycota</b>	11	39	139	441	1857
<b>Blastocladiomycota</b>	2	2	3	5	8
<b>Chytridiomycota</b>	1	1	1	1	1
<b>Entomophthoromycota</b>	1	1	2	8	14
<b>Glomeromycota</b>	3	4	11	21	72
<b>Mortierellomycota</b>	1	1	1	1	1
<b>Mucoromycota</b>	2	2	10	13	36
<b>Olpidiomycota</b>	1	1	1	1	1
<b>Zoopagomycota</b>	1	1	1	1	1
<b>Fungi</b> genera incertae sedis				2	2
<b>Total</b>	<b>34</b>	<b>107</b>	<b>353</b>	<b>1150</b>	<b>4271</b>

#### Abundance of different taxonomic ranks in different phyla of the kingdom *Fungi*

Analyses of number and percentage of classes, orders, families, genera and species of fungi in different phyla of the kingdom *Fungi* reported from Iran revealed that the phylum *Ascomycota* with 11 classes (32% of the total 34 classes of *Fungi*), 55 orders (52% of the total 107 orders), 184 families (52% of the total 353 families), 656 genera (57% of the total 1150 genera) and 2278 species (53% of the total 4271 species) was the most abundant phylum in all taxonomic ranks, followed by *Basidiomycota* with 11 classes (32%), 39 orders (36%), 139 families (40%), 441 genera (39%) and 1857 species (44%) and *Glomeromycota* with three classes (9%), four orders (4%), 11 families (3%), 21 genera (2%) and 72 species (2%) (Fig. 2). Four phyla including *Chytridiomycota*, *Mortierellomycota*, *Olpidiomycota*, *Zoopagomycota* each with only one class (3%), one order (1%), one family (0.3%), one genus (0.09%) and one species (0.02%) were the less abundant phyla in all taxonomic ranks (Fig. 2).

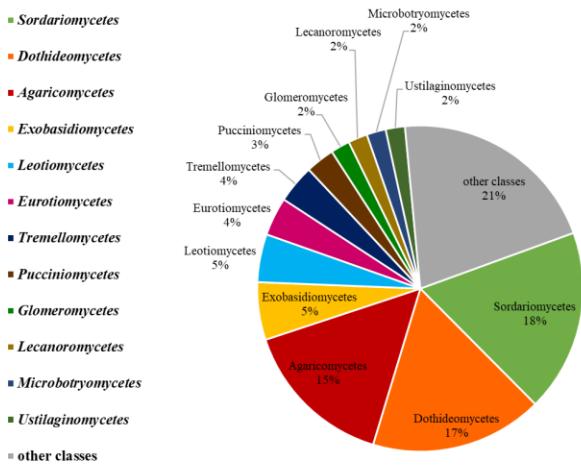


**Fig. 2.** Abundance of the different taxonomic ranks reported from Iran in different phyla of kingdom *Fungi*.

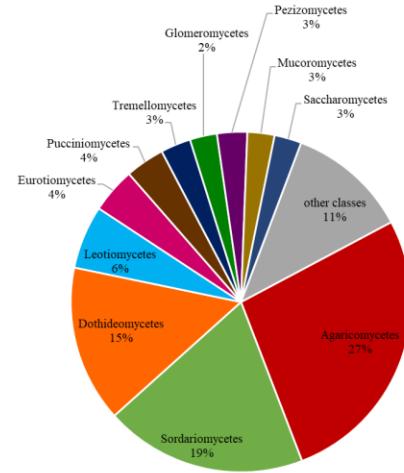
#### Abundance of different taxonomic ranks in different classes of the kingdom *Fungi*

Analyses of number and percentage of orders, families, genera and species of fungi in different classes of kingdom *Fungi* reported from Iran revealed that the most abundant classes were *Agaricomycetes* (Basidiomycota) with 16 orders (15% of the total 107 orders), 94 families (27% of the total 353 families), 362 genera (32% of the total 1150 genera) and 1160 species (27% of the total 4271 species), *Dothideomycetes* (Ascomycota) with 18 orders (17%), 52 families (15%), 227 genera (20%) and 977 species (23%) and, *Sordariomycetes* (Ascomycota) with 19 orders (18%), 67 families (19%), 232 genera (20%) and 720 species (17%) (Fig. 3).

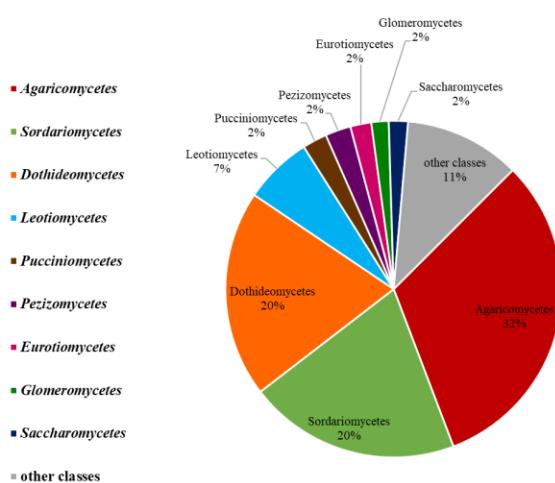
Order abundance in different classes of Fungi



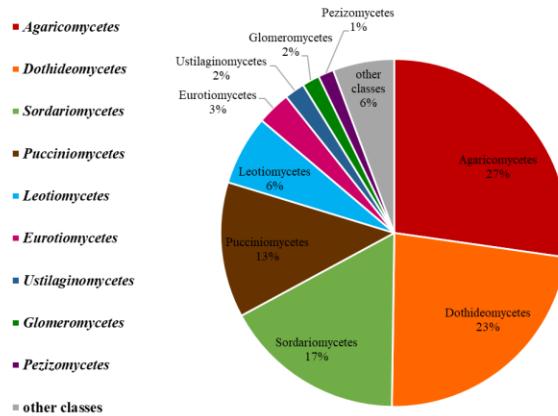
Family abundance in different classes of Fungi



Genus abundance in different classes of Fungi



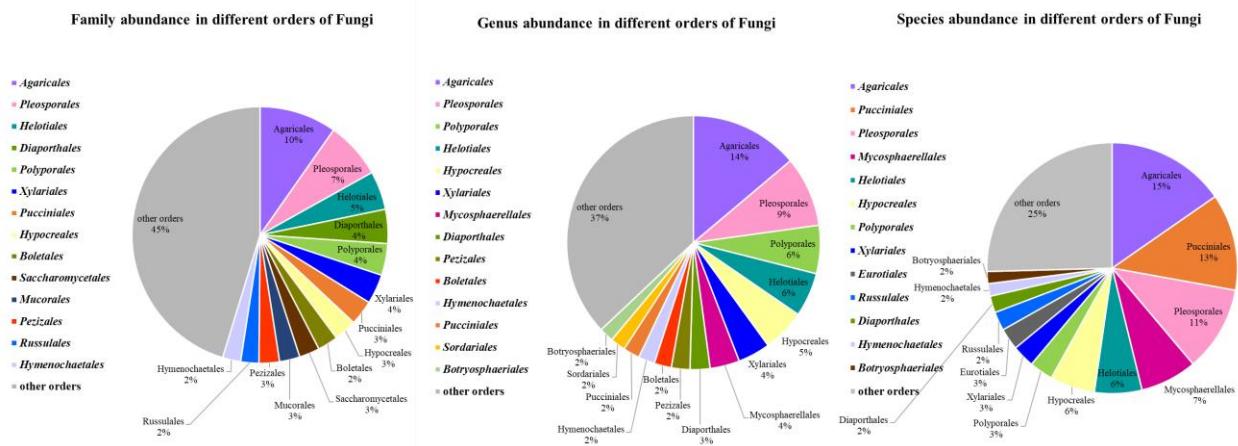
Species abundance in different classes of Fungi



**Fig. 3.** Abundance of different taxonomic ranks reported from Iran in different classes of kingdom *Fungi*.

#### Abundance of different taxonomic ranks in different orders of the kingdom *Fungi*

Within the kingdom *Fungi*, analysis of number and percentage of families, genera and species of fungi in different orders revealed that the order ***Agaricales*** (*Agaricomycetes*, *Basidiomycota*) with 34 families (10% of the total 353 families of *Fungi*), 158 genera (14% of the total 1150 genera) and 652 species (15% of the total 4271 species) was the most abundant order in all taxonomic ranks, followed by ***Pleosporales*** (*Dothideomycetes*, *Ascomycota*) (7%) and ***Helotiales*** (*Leotiomycetes*, *Ascomycota*) (5%) at the family rank, ***Pleosporales*** (9%) and ***Polyporales*** (6%) (*Agaricomycetes*, *Basidiomycota*) at the genus rank and ***Pucciniales*** (*Pucciniomycetes*, *Basidiomycota*) (13%) and ***Pleosporales*** (11%) at the species rank (Fig. 4) respectively.



**Fig. 4.** Abundance of different taxonomic ranks (family, genus and species) reported from Iran in different orders of kingdom *Fungi*.

#### List of higher taxonomic ranks of fungus-like taxa reported from Iran

##### Kingdom Chromista

Until the end of 2021, one phylum (*Oomycota*), two classes, four orders, four families, 23 genera and 191 species of Kingdom Chromista have been reported from Iran.

##### Phylum Oomycota

**Oomycetes** G. Winter (three orders, three families, 19 genera, 174 species)

**Peronosporales** A. Fisch. (one family, nine genera, 73 species)

**Peronosporaceae** de Bary

*Bremia* Regel (3)

*Hyaloperonospora* Constant (2)

*Peronosclerospora* (S. Ito) Hara (1)

*Peronospora* Corda (34)

*Phytophthora* de Bary (24)

*Plasmopara* J. Schröt. (5)

*Pseudoperonospora* Rostovzev (2)

*Sclerotophthora* Thirum., C.G. Shaw & Naras. (1)

*Sclerospora* J. Schröt. (1)

**Pythiales** M.W. Dick (one family, four genera, 83 species)

**Pythiaceae** J. Schröt.

*Globisporangium* Uzuhashi, Tojo & Kakish. (12)

*Phytopythium* Abad, de Cock, Bala, Robideau, A.M. Lodhi & Lévesque (12)

*Pythium* Pringsh. (58)

*Trachysphaera* Tabor & Bunting (1)

**Saprolegniales** E. Fisch. (one family, six genera, 18 species)

**Saprolegniaceae** Kütz. ex Warm.

*Achlya* Nees (2)

*Brevilegnia* Coker & Couch (1)

*Dictyuchus* Leitg. (1)

*Gelegnia* Coker (1)

*Newbya* M.W. Dick & Mark A. Spencer (1)

*Saprolegnia* Nees (12)

**Peronosporomycetes** Locq. (one order, one family, four genera, 17 species)

**Albuginales** Thines (one family, four genera, 17 species)

**Albuginaceae** J. Schröt.

*Albugo* (Pers.) Roussel (7)

*Cystopus* Lév. (3)

*Pustula* Thines (4)

**Kingdom Protozoa**

Until the end of 2021, two phyla (*Myxomycota* and *Plasmodiophoromycota*), two classes, five orders, nine families, 21 genera and 38 species of kingdom *Protozoa* have been reported from Iran.

**Phylum Myxomycota** (one class, four orders, eight families, 19 genera, 35 species)

**Protosteliomycetes** Alexop. & Mims (one order, one family, one genus, one species)

**Protosteliales** L.S. Olive (one family, one genus, one species)

**Ceratiomyxaceae** J. Schröt.

*Ceratiomyxa* J. Schröt. (1)

**Myxomycota** order *incertae sedis*

**Liceales** E. Jahn (one family, four genera, five species)

**Reticulariaceae** Chevall.

*Lycogala* Adans. (2)

*Reticularia* Bull. (1)

*Tubifera* J.F. Gmel. (1)

*Tubulifera* O.F. Müll. (1)

**Physarales** T. Macbr. (two families, five genera, nine species)

**Didymiaceae** Rostaf. ex Cooke

*Didymium* Schrad. (1)

*Mucilago* P. Micheli ex Adans. (1)

**Physaraceae** Chevall.

*Badhamia* Berk. (2)

*Fuligo* Haller (1)

*Physarum* Pers. (4)

**Trichiales** T. Macbr. (three families, five genera, 14 species)

**Arcyriaceae** Rostaf. ex Cooke

*Arcyria* Hill ex F.H. Wigg. (3)

**Dictydiaethaliateae** C. Luerssen

*Dictydiaethalium* Rostaf. (1)

**Trichiaceae** Chevall.

*Hemitrichia* Rostaf. (4)

*Metatrchia* Ing (1)

*Trchia* Haller (5)

**Myxomycota** family *incertae sedis*

**Stemonitidaceae** Fr.

*Collaria* Nann.-Bremek. (1)

*Diachea* Fr. (1)

*Stemonitis* Gled. (3)

*Stemonitopsis* (Nann.-Bremek.) Nann.-Bremek. (1)

**Phylum Plasmodiophoromycota** (one class, one order, one family, two genera, three species)

**Plasmodiophoromycetes** Engl. (one order, one family, two genera, three species)

**Plasmodiophorales** F. Stevens (one family, two genera, three species)

**Plasmodiophoraceae** Zopf ex Berl.

*Polomyxa* Ledingham (2)

*Spongospora* Brunch. (1)

**Checklist of the species that are not included in Ershad (2022)**

*Acremonium persicum* (Nicot) W. Gams (Mohammadian et al. 2017)

*Aleurodiscus persicus* Ghob.-Nejh. (Ghobad-Nejhad & Langer 2018)

*Alternaria arbusti* E.G. Simmons (Poursafar et al. 2017)

*Alternaria caricicola* Ahmadp. (Ahmadpour 2019)

*Alternaria cypericola* Ahmadpour, Poursafar & Ghosta (Ahmadpour et al. 2021a)

*Alternaria ethzedia* E.G. Simmons (Poursafar et al. 2017)

*Alternaria hedjaroudei* Y. Ghosta, Hashemlou, Poursafar & R. Azizi (Hashemlou et al. 2020)

- Alternaria heyranica* Ahmadpour, Poursafar & Ghosta (Ahmadpour et al. 2021a)
- Alternaria incomplexa* E.G. Simmons (Poursafar et al. 2017)
- Alternaria junci-acuti* Ahmadpour, Poursafar & Ghosta (Ahmadpour et al. 2021a)
- Alternaria perangusta* E.G. Simmons (Rahimloo & Ghosta 2015)
- Alternaria preussii* Gannibal & D.P. Lawr. (as *Ulocladium dauci* E.G. Simmons; Abbasi & Zafari 2021)
- Alternaria rosae* E.G. Simmons & C.F. Hill (Bagherabadi et al. 2015)
- Alternaria triticimaculans* E.G. Simmons & Perelló (Poursafar et al. 2017)
- Alternaria vaccinii* E.G. Simmons (Rahimloo & Ghosta 2015)
- Arthonia lecaniicola* van den Boom & Moniri (van den Boom & Moniri 2018)
- Arthrocladiella mougeotii* (Lév.) Vassilkov (Khodaparast et al. 2021)
- Ascotricha funiculosa* (Guarro & Calvo) D.W. Li & G.H. Zhao (Jamali 2021)
- Aureobasidium iranianum* Arzanlou & Khodaei (Arzanlou & Khodaei 2012a)
- Aureobasidium mangrovei* S. Nasr (Nasr et al. 2018b)
- Auxarthron alboluteum* Sigler, Hambl. & Flis (Karimpour et al. 2021)
- Bartalinia pondoensis* Marinc., Gryzenh. & M.J. Wingf. (Arzanlou et al. 2012b)
- Basidioascus persicus* S. Nasr, Soudi & H.D.T. Nguyen (Nasr et al. 2014a)
- Blastobotrys persicus* H. Nouri, S. Nasr & Moghimi (Nouri et al. 2018)
- Botryobasidium robustius* Pouzar & Hol.-Jech. (Ghobad-Nejhad & Langer 2017)
- Calosphaeria pulchella* (Pers.) J. Schröt. (Arzanlou & Dokhanchi 2013)
- Candida parapsilososis* (Ashford) Langeron & Talice (Abbasi & Zafari 2021)
- Cephalotrichum asperulum* (J.E. Wright & S. Marchand) Sandoval-Dennis, Guarro & Gené (Ghosta et al. 2020)
- Cephalotrichum nanum* (Ehrenb.) S. Hughes (Ghosta et al. 2020)
- Chaetopyrena penicillata* (Fuckel) Höhn. (Arzanlou & Khodaei 2012b)
- Chlorophyllum molybdites* (G. Mey.) Massee (Asef & Muradov 2012)
- Choиromyces venosus* (Fr.) Th. Fr. (Sepahvand et al. 2021)
- Chromelosporium fulvum* (Fr.) McGinty, Hennebert & Korf (Jamali & Banihashemi 2011)
- Cladosporium colocasiae* Sawada (Amanelah-Baharvandi & Zafari 2015)
- Coniochaeta endophytica* A.H. Harr. & A.E. Arnold (Ebrahimi et al. 2021)
- Coniochaeta euphorbiae* S. Nasr, S. Bien & Damm (Nasr et al. 2018a)
- Coniochaeta iranica* S. Nasr, S. Bien & Damm (Nasr et al. 2018a)
- Coprinopsis insignis* (Peck) Redhead, Vilgalys & Moncalvo (Seidmohammadi et al. 2018)
- Coprinopsis semitalis* (P.D. Orton) Redhead, Vilgalys & Moncalvo (Seidmohammadi et al. 2018)
- Coprinus pinetorum* G. Moreno, Carlavilla, Heykoop & Manjón (Seidmohammadi et al. 2018)
- Corticium erikssonii* Jülich (Ghobad-Nejhad & Langer 2017)
- Corticium lombardiae* (M.J. Larsen & Gilb.) Boidin & Lanq. (Ghobad-Nejhad & Langer 2017)
- Corticium meridioroseum* Boidin & Lanq. (Ghobad-Nejhad & Langer 2017)
- Cortinarius parvannulatus* Kühner (Bahram et al. 2013)
- Curvularia coatesiae* Y.P. Tan & R.G. Shivas (Heidarian et al. 2020)
- Curvularia eragrostidicola* Y.P. Tan & R.G. Shivas (Heidarian et al. 2020)
- Curvularia geniculata* (Tracy & Earle) Boedijn (Heidarian et al. 2020)
- Curvularia hominis* Da Cunha (Ebrahimi et al. 2021)
- Curvularia mebaldsii* Y.P. Tan & R.G. Shivas (Heidarian et al. 2020)
- Curvularia nicotiae* (Mouch.) Y.P. Tan & R.G. Shivas (Heidarian et al. 2020)
- Curvularia subpapendorfii* (Mouch.) Manamgoda, Rossman & K.D. Hyde (Heidarian et al. 2020)
- Cyphellophora fusariooides* (B. Sutton & C.K. Campb.) Decock (Ebrahimi & Fotouhifar 2016)
- Cystobasidium lysinophilum* (Nagah., Hamam., Nakase & Horikoshi) Yurkov, Kachalkin, H.M. Daniel, M. Groenew., Libkind, V. de Garcia, Zalar, Gouliam., Boekhout & Begerow (Mokhtarnejad et al. 2016)
- Cystobasidium minutum* (Saito) Yurkov, Kachalkin, H.M. Daniel, M. Groenew., Libkind, V. de Garcia, Zalar, Gouliam., Boekhout & Begerow (Mokhtarnejad et al. 2016)
- Cystolepiota seminuda* (Lasch) Bon (Asef & Muradov 2012)
- Diaporthe foeniculina* (Sacc.) Udayanga & Castl. (Esmaeilzadeh et al. 2020)
- Diatrype whitmanensis* J.D. Rogers & Glawe (Hashemi & Mohammadi 2016)
- Dictyuchus monosporus* Leitg. (Roohvarzi et al. 2021)
- Didymella aquatica* Q. Chen, Crous & L. Cai (Ahmadpour et al. 2021b)
- Didymella segeticola* (Q. Chen) Q. Chen, Crous & L. Cai (Ahmadpour et al. 2021b)
- Diplodina coloradensis* Ellis & Everh. (Khodaei et al. 2020)

- Duportella kuehneroides** Boidin, Lanq. & Gilles (Mahroo et al. 2018)
- Ectophoma multirostrata** (P.N. Mathur, S.K. Menon & Thirum.) Valenz.-Lopez, J.F. Cano, Crous, Guarro & Stchigel (Ahmadpour et al. 2021b)
- Eichleriella leucophaea** Bres. (Ghobad-Nejhad & Langer 2017)
- Elsinoe punicae** (Bitanc. & Jenkins) Rossman & W.C. Allen (Rabbaninasab et al. 2018)
- Emericellopsis persica** Papizadeh, Wijayaw, Soudi & K.D. Hyde (Hyde et al. 2016)
- Entoloma phaeocyathus** Noordel. (Seidmohammadi et al. 2021)
- Entoloma silvae-frondosae** Dima, O.V. Morozova, Noordel., Brandrud & Krisai (Crous et al. 2018)
- Entoloma undulatosporum** Arnolds & Noordel. (Seidmohammadi et al. 2021)
- Epicoccum dendrobii** Q. Chen, Crous & L. Cai (Ahmadpour et al. 2021b)
- Epicoccum tobaicum** (Szilvinyi) L.W. Hou, L. Cai & Crous (Ahmadpour et al. 2021b)
- Erysiphe howeana** U. Braun (Davari et al. 2015)
- Erysiphe ligustri** (Homma) U. Braun & S. Takam. (Darvishnia & Vafaei 2018)
- Erysiphe neolycopersici** (L. Kiss) H.Y. Hsiao & Y.M. Shen (as *Pseudoidium neolycopersici* (L. Kiss) L. Kiss; Davari et al. 2015)
- Exophiala equina** (Pollacci) de Hoog, Vicente, Najafzadeh, Harrak, Badali & Seyedmousavi (Karimpour et al. 2021)
- Fereydounia khargensis** S. Nasr, M.R. Soudi, H.D.T. Nguyen, M. Lutz & M. Piątek (Nasr et al. 2014b)
- Fusarium ershadii** Papizadeh, van Diepeningen & Zamanizadeh (Papizadeh et al. 2018a)
- Fusarium napiforme** Marasas, P.E. Nelson & Rabie (Chehri et al. 2010)
- Globisporangium abappressorium** (Paulitz & M. Mazzola) Uzuhashi, Tojo & Kakish. (as *Pythium abappressorium* Paulitz & M. Mazzola; Bouket et al. 2016)
- Globisporangium iranense** (Badali, Abrinbana & Abdollahz.) H.D.T. Nguyen & C.F.J. Spies (as *Pythium iranense* Badali, Abrinbana & Abdollahz.; Badali et al. 2020)
- Globisporangium monoclinum** (Abrinbana, Abdollahz. & Badali) H.D.T. Nguyen & C.F.J. Spies (as *Pythium monoclinum* Abrinbana, Abdollahz. & Badali; Badali et al. 2020)
- Globisporangium viniferum** (B. Paul) H.D.T. Nguyen & C.F.J. Spies (as *Pythium viniferum* B. Paul; Bouket et al. 2017)
- Graphiola fimbriata** S. Nasr, M. Lutz, D. Stien & A. Yurkov (Nasr et al. 2019)
- Gyromitra infula** (Schaeff.) Quél. (Asef 2021)
- Holtermanniella takashimae** Wuczk., Passoth, A.-C. Andersson, Turchetti, Prillinger, Boekhout & Libkind (Mokhtarnejad et al. 2016)
- Hyphodermella rosae** (Bres.) Nakasone (Sayari et al. 2012)
- Inocybe amethystina** Kuyper (Bahram et al. 2013)
- Inonotus krawtzewii** (Pilát) Pilát (Ghobad-Nejhad 2016)
- Jaminaea pallidolutea** S. Nasr & Yurkov (Nasr et al. 2017)
- Laetisaria endoxylon** (Duhem & H. Michel) Ghob.-Nejh. (as *Corticium endoxylon* Duhem & H. Michel; Ghobad-Nejhad & Langer 2017)
- Lecania triseptatoides** van den Boom & Moniri (van den Boom & Moniri 2018)
- Lepiota clypeolarioloides** Rea (Asef & Muradov 2012)
- Leucocoprinus ianthinus** (Sacc.) P. Mohr (Asef & Muradov 2012)
- Microascus cirrosus** Curzi (Mirzaee et al. 2010)
- Neocamarosporium calvescens** (Fr. ex Desm.) Ariyaw. & K.D. Hyde (Khodaei et al. 2020)
- Neocamarosporium chichastianum** Papizadeh, Crous, Shahzadeh Fazeli & Amoozegar (Crous et al. 2014)
- Neocamarosporium jordanensis** Papizadeh, Wijayaw., Amoozegar, Fazeli & K.D. Hyde (Papizadeh et al. 2018b)
- Neocamarosporium persepolisi** Papizadeh, Wijayaw., Amoozegar, Fazeli & K.D. Hyde (Papizadeh et al. 2018b)
- Neocamarosporium solicola** Papizadeh, Wijayaw., Amoozegar, Fazeli & K.D. Hyde (Papizadeh et al. 2018b)
- Neocosmospora vasinfecta** E.F. Sm. (Saeedi & Jamali 2018)
- Neomicrosphaeropsis juglandis** D. Pem, Selcuk, R. Jeewon & K.D. Hyde (Ahmadpour et al. 2021b)
- Neopestalotiopsis asiatica** (Maharachch. & K.D. Hyde) Maharachch., K.D. Hyde & Crous (Ayoubi & Soleimani 2016a)
- Neopestalotiopsis iranensis** Ayoubi & Soleimani (Ayoubi & Soleimani 2016b)
- Neopestalotiopsis mesopotamica** Maharachch., K.D. Hyde & Crous (Ayoubi & Soleimani 2016c)
- Neosetophoma iranianum** Papizadeh, Amoozegar, Wijayaw., Shahz. Faz. & K.D. Hyde (Karunaratna et al. 2017)
- Neosetophoma poaceicola** Goonas., Thambug. & K.D. Hyde (Ebrahimi & Fotouhifar 2021)
- Neosetophoma ulmi** Ahmadi, Arzanlou & Narmani (Ahmadi et al. 2021)

- Neurospora tetrasperma* Shear & B.O. Dodge (as *Chrysonilia tetrasperma* (Shear & B.O. Dodge) Arx; Aghapour et al. 2010)
- Newbya recurva* (Cornu) M.W. Dick & Mark A. Spencer (Roohvarzi et al. 2021)
- Oidiodendron cereale* (Thüm.) G.L. Barron (Karimpour et al. 2021)
- Paecilomyces dactylethromorphus* Bat. & H. Maia (Ghasemi-Sardareh & Mohammadi 2020)
- Panaeolus guttulatus* Bres. (Seidmohammadi et al. 2019)
- Paraeutypella vitis* (Schwein.) L.S. Dissan., J.C. Kang & K.D. Hyde (as *Eutypella vitis* (Schwein.) Ellis & Everh.; Jabbari et al. 2015)
- Paramyrotheicum foliicola* L. Lombard & Crous (Azizi et al. 2020)
- Paraphoma fimetii* (Brunaud) Gruyter, Aveskamp & Verkley (Jam Ashkezari & Fotouhifar 2017)
- Penicillium simplicissimum* (Oudem.) Thom (Mohammadian et al. 2017)
- Peniophora metuloidea* Ghobad-Nejhad & Yurchenko (Ghobad-Nejhad & Yurchenko 2012)
- Peniophora pilatiana* Pouzar & Svrcek (Mahroo et al. 2018)
- Peniophora polygonia* (Pers.) Bourdot & Galzin (Mahroo et al. 2018)
- Periconia macrospinosa* Lefebvre & Aar.G. Johnson (Karimpour et al. 2021)
- Peronospora saturejae-hortensis* Osipian (Khateri et al. 2021)
- Phialophora americana* (Nannf.) S. Hughes (Dolatabadi et al. 2019)
- Phlebia bresadolae* Parmasto (Ghobad-Nejhad & Langer 2017)
- Phomopsis archeri* B. Sutton (Jam Ashkezari & Fotouhifar 2017)
- Phycomyces nitens* (C. Agardh) Kunze (Asef et al. 2021)
- Phytophthora heterospora* Scanu, Cacciola, Linal. & T. Jung (Scanu et al. 2021)
- Phytopythium babaiaharii* Rezaei, Abrinbana & Ghosta (Rezaei et al. 2021)
- Phytopythium boreale* (R.L. Duan) Abad, de Cock, Bala, Robideau, Lodhi & Lévesque (Rezaei et al. 2021)
- Phytopythium carbonicum* (B. Paul) Abad, de Cock, Bala, Robideau, Lodhi & Lévesque (Rezaei et al. 2021)
- Phytopythium longitubum* Rezaei, Abrinbana & Ghosta (Rezaei et al. 2021)
- Plenodomus chrysanthemi* (Zachos, Constantinou & Panag.) Gruyter, Aveskamp & Verkley (Khodaei et al. 2020)
- Pleotrichocladium opacum* (Corda) Hern.-Restr., R.F. Castañeda & Gené (Karimpour et al. 2021)
- Podosphaera erigerontis-canadensis* (Lév.) U. Braun & T.Z. Liu (Sharifi et al. 2014)
- Polyschema sclerotigenum* Wiederh., Deanna A. Sutton, Sand.-Den. & Guarro (Habibi et al. 2020)
- Pseudopyricularia cyperi* Klaubauf, M.-H. Lebrun & Crous (Pordel et al. 2019)
- Puccinia taeniatheri* M. Abbasi & Hedjar. (Abbasi 2021)
- Purpureocillium sodanum* Papizadeh, Soudi, Wijayaw., Shahz.-Faz. & K.D. Hyde (Hyde et al. 2016)
- Pyrenopeziza tabarestanensis* M. Papizadeh, Soudi, Amini, Wijayaw. & K.D. Hyde (Papizadeh et al. 2017)
- Pythium glomeratum* B. Paul (Bouket et al. 2016)
- Pythium spinosum* Sawada (Bouket et al. 2016)
- Ramoconidiophora euphorbiae* (S. Nasr, S. Bien & Damm) S. Bien & Damm (as *Collophorina euphorbiae* S. Nasr, S. Bien & Damm; Nasr et al. 2018a)
- Ramularia armoraciae* Fuckel (Behrooz et al. 2017)
- Ramularia carletonii* (Ellis & Kellerm.) U. Braun (Pirnia & Braun 2018)
- Ramularia cupulariae* Pass. (Behrooz et al. 2017)
- Ramularia epilobiana* (Sacc. & Fautrey) B. Sutton & Piroz. (Behrooz et al. 2017)
- Ramularia macrospora* Fres. (Pirnia 2019)
- Ramularia nagornyi* Karak. (Pirnia & Braun 2018)
- Ramularia ranunculicola* Pirnia & U. Braun (Pirnia & Braun 2018)
- Ramularia veronicae* Fuckel (Behrooz et al. 2015)
- Ramularia winteri* Thüm. (Behrooz et al. 2015)
- Saccharomyopsis oxydans* S. Nasr & A. Yurkov (Hajihosseinali et al. 2020)
- Sanghuangporus ligneus* Ghobad-Nejhad (Ghobad-Nejhad 2015)
- Sanghuangporus lonicerus* (Bondartsev) Sheng H. Wu, L.W. Zhou & Y.C. Dai (Ghobad-Nejhad & Langer 2017)
- Saprolegnia hypogyna* (Pringsh.) de Bary (Shahbazian et al. 2010)
- Saprolegnia lapponica* Gäum. (Masigol et al. 2021)
- Saprolegnia monilifera* de Bary (Mousavi et al. 2009)
- Scedosporium minutisporum* (Gilgado, Gené, Cano & Guarro) Lackner & de Hoog (Mehrabioon Mohammadi et al. 2021)
- Sclerostagonospora cycadis* Crous & G. Okada (Jam Ashkezari & Fotouhifar 2017)

*Similiphoma crystallifera* (Gruyter, Noordel. & Boerema) Valenz.-Lopez, Crous, J.F. Cano, Guarro & Stchigel (as *Phoma crystallifera* Gruyter, Noordel. & Boerema; Razaghi & Zafari 2017)  
*Stagonosporopsis citrulli* M.T. Brewer & J.E. Stewart (Shams et al. 2021)  
*Starmerella orientalis* Alimad., Soudi, F.Y. Bai, S.A. Wang & Q.M. Wang (Alimadadi et al. 2016)  
*Stemphylium beticola* Woudenb. & Hanse (Karimzadeh & Fotouhifar 2021)  
*Stemphylium symphyti* E.G. Simmons (Karimzadeh & Fotouhifar 2021)  
*Thecaphora schwarzmaniana* Byzova (Vasighzadeh et al. 2014)  
*Thelonectria olida* (Wollenw.) P. Chaverri & C. Salgado (as *Cylindrocarpon olidum* (Wollenw.) Wollenw.; Abbasi & Zafari 2021)  
*Traponora varians* (Ach.) J. Kalb & Kalb (van den Boom & Moniri 2018)  
*Trichocladium arxi* (Benny) X. Wei Wang & Houbraken (as *Chaetomidium arxii* Benny; Arzanlou et al. 2012a)  
*Trichoderma simmonsii* P. Chaverri, F.B. Rocha, Samuels, Degenkolb & Jaklitsch (Rokni et al. 2021)  
*Tuber aestivum* (Wulfen) Pers. (Jamali 2017)  
*Uromyces arasbaranensis* M. Abbasi (Abbasi 2020)  
*Uromyces kaviriae* M. Abbasi (Abbasi 2020)  
*Uromyces matinae* M. Abbasi (Abbasi 2020)  
*Uromyces talesensis* M. Abbasi (Abbasi 2020)  
*Utrechtiana arundinacea* (Corda) Crous, Quaedvli. & Y. Marín (as *Deightoniella arundinacea* (Corda) S. Hughes; Ghosta & Abrinbana 2016)  
*Uzbekistanica vitis-viniferae* Crous & Akulov (Bagherabadi & Zafari 2021)  
*Uzbekistanica yakutkhanika* Wanas., Gafforov & K.D. Hyde (Bagherabadi & Zafari 2021)  
*Vanrija albida* (C. Ramírez) M. Weiß (Mokhtarnejad et al. 2016)  
*Wickerhamomyces orientalis* Sipiczki, S. Nasr, H.D.T. Nguyen & Soudi (Nasr et al. 2016)  
*Wilsoniana amaranthi* (Schwein.) Y.J. Choi, Thines & H.D. Shin (Mirzaee et al. 2021)  
*Xenopyrenochaetopsis pratorum* (P.R. Johnst. & Boerema) Valenz.-Lopez, Crous, Stchigel, Guarro & J.F. Cano (as *Phoma pratorum* P.R. Johnst. & Boerema; Jam Ashkezari & Fotouhifar 2017)

**Table 3.** List of fungal species in Ershad (2022) (second column) with their current names (first column).

Current name based on Mycobank	Synonym(s) in Ershad (2022)
<i>Acaulospora colombiana</i> (Spain & N.C. Schenck) Kaanongbua, J.B. Morton & Bever	<i>Entrophospora colombiana</i> Spain & N.C. Schenck
<i>Acremonium inflatum</i> (C.H. Dickinson) W. Gams	<i>Gliomastix inflata</i> Dickinson
<i>Aecidium cyparissiae</i> DC.	<i>Aecidium euphorbiae</i> Pers. ex J.F. Gmel.
<i>Aecidium falcariae</i> var. <i>bupleuri-falcati</i> DC.	<i>Puccinia bupleuri-falcati</i> (DC.) Wint.
<i>Aecidium holboellii</i> Hornem.	<i>Puccinia holboelli</i> (Hotnem.) Rostr.
<i>Aecidium prenanthis</i> Pers.	<i>Puccinia chondrillae</i> Corda
<i>Aecidium ranunculacearum</i> DC.	<i>Aecidium ranunculi-acris</i> Pers.
<i>Aecidium reticulatum</i> Thüm.	<i>Uromyces reticulatus</i> Liro
<i>Aecidium rhagadioli</i> Pass.	<i>Puccinia rhagadioli</i> (Pass.) Syd.
<i>Agaricus anthomyces</i> Berk. & Broome	<i>Lepiota anthomyces</i> (Berk. & Broome) Sacc.
<i>Agaricus atrobrunneus</i> Lasch	<i>Psilocybe atrobrunnea</i> (Lasch) Gillet

**Table 3 (Continued)**

<i>Agaricus chioneus</i> Pers.	<i>Pleurotellus chioneus</i> (Pers.) Kühner
<i>Agaricus confertis</i> Bolton	<i>Galera conferta</i> (Bolton) P. Kummer
<i>Agaricus elaeodes</i> Fr.	<i>Hypholoma elaeodes</i> (Fr.) Gillet
<i>Agaricus ephippium</i> Fr.	<i>Oudemansiella ephippium</i> (Fr.) M.M. Moser
<i>Agaricus goossensiae</i> var. <i>pseudolutosus</i> G. Moreno, Esteve-Rav., Illana & Heykoop	<i>Agaricus pseudolutosus</i> (G. Moreno, Esteve-Rav., Illana & Heykoop) G. Moreno, L.A. Parra, Esteve-Rav. & Heykoop
<i>Agaricus hydrophilus</i> Bull.	<i>Psathyrella hydrophila</i> (Bull.) Maire
<i>Agaricus lepricus</i> Berk. & Broome	<i>Lepiota leprica</i> (Berk. & Broome) Sacc.
<i>Agaricus micropholis</i> Berk. & Broome	<i>Lepiota micropholis</i> (Berk. & Broome) Sacc.
<i>Agaricus nebrodensis</i> Inzenga	<i>Pleurotus nebrodensis</i> (Inz.) Quél.
<i>Agaricus ocellatus</i> Fr.	<i>Collybia ocellata</i> (Fr.) P. Kumm.
<i>Agaricus prominens</i> Fr.	<i>Macrolepiota prominens</i> (Fr.) M.M. Moser
<i>Agaricus radiosus</i> Pall.	<i>Montagnites radiosus</i> (Pall.) Hollos.
<i>Agaricus thelephorus</i> Cooke & Massee	<i>Collybia thelephora</i> (Cooke & Massee) Sacc.
<i>Agaricus torpens</i> Fr.	<i>Psathyrella torpens</i> (Fr.) Konrad & Maubl.
<i>Agaricus xylophilus</i> Weinm.	<i>Collybia xylophila</i> (Weinm.) Sacc.
<i>Akanthomyces lecanii</i> (Zimm.) Spatafora, Kepler & B. Shrestha	<i>Cephalosporium lecanii</i> Zimmerm. <i>Lecanicillium lecanii</i> (Zimmerm.) Zare & W. Gams <i>Verticillium lecanii</i> (Zimmerm.) Viégas
<i>Akanthomyces muscarius</i> (Petch) Spatafora, Kepler & B. Shrestha	<i>Lecanicillium muscarium</i> (Petch) Zare & W. Gams
<i>Albifimbria verrucaria</i> (Alb. & Schwein.) L. Lombard & Crous	<i>Myrothecium verrucaria</i> (Alb. & Schwein.) Ditmar
<i>Albonectria rigidiuscula</i> (Berk. & Broome) Rossman & Samuels	<i>Fusarium decemcellulare</i> Brick
<i>Albugo occidentalis</i> G.W. Wilson	<i>Wilsoniana occidentalis</i> (G.W. Wilson) Abdul Haq & Shahzad
<i>Allelochaeta fusispora</i> (H.J. Swart & D.A. Griffiths) Crous	<i>Seimatosporium fusisporium</i> H.J. Swart & D.A. Griffiths
<i>Allocryptotarsa rabenhorstii</i> (Nitschke) Senwanna	<i>Cryptotarsa rabenhorstii</i> (Nitschke) Sacc.

**Table 3 (Continued)**

<i>Alternaria alternariae</i> (Cooke) Woudenb. & Crous	<i>Ulocladium alternariae</i> (Cooke) E.G. Simmons
<i>Alternaria botrytis</i> (Preuss) Woudenb. & Crous	<i>Ulocladium botrytis</i> Preuss
<i>Alternaria brassicae f. nigrescens</i>	<i>Alternaria nigrescens</i> (Peglion) Neerg.
<i>Alternaria chartarum</i> Preuss	<i>Ulocladium chartarum</i> (Preuss) E.G. Simmons
<i>Alternaria chlamydosporigena</i> Woudenb. & Crous	<i>Embellisia chlamydospora</i> (Hoes, G.W. Bruehl & C.G. Shaw.) E.G. Simmons
<i>Alternaria linariae</i> (Neerg.) E.G. Simmons	<i>Alternaria tomatophila</i> E.G. Simmons
<i>Alternaria malorum</i> (Rühle) U. Braun, Crous & Dugan	<i>Cladosporium malorum</i> Rühle
<i>Alternaria padwickii</i> (Ganguly) M.B. Ellis	<i>Trichoconiella padwickii</i> (Ganguly) L. Jain <i>Trichoconis padwickii</i> Ganguly
<i>Alternaria phragmospora</i> Emden	<i>Embellisia phragmospora</i> (Emden) E.G. Simmons
<i>Alternaria scrophulariae</i> (Desm.) Rossman & W.C. Allen	<i>Pleospora scrophulariae</i> (Desm.) Höhn. <i>Lewia scrophulariae</i> (Desm.) M.E. Barr & E.G. Simmons
<i>Alternaria tellustris</i> (E.G. Simmons) Woudenb. & Crous	<i>Embellisia tellustris</i> E.G. Simmons
<i>Alternaria terricola</i> Woudenb. & Crous	<i>Ulocladium tuberculatum</i> E.G. Simmons
<i>Alternaria thunbergiae</i> E.G. Simmons & Alcorn	<i>Alternaria iranica</i> E.G. Simmons & Y. Ghosta
<i>Amaurodon viridis</i> (Alb. & Schwein.) J. Schröt.	<i>Tomentella chlorina</i> (Mass.) Cunn.
<i>Amesia atrobrunnea</i> (L.M. Ames) X. Wei Wang & Samson	<i>Chaetomium atrobrunneum</i> Udagawa & Takada
<i>Amesia nigricolor</i> (L.M. Ames) X. Wei Wang & Samson	<i>Chaetomium nigricolor</i> L.N. Ames
<i>Amphisphaerella alpigena</i> (Fuckel) Lar.N. Vassiljeva	<i>Anthostoma alpigenum</i> (Fuckel) Sacc.
<i>Amphisphaeria elaeagni</i> Rehm	<i>Otthia elaeagni</i> (Rehm.) Petr.
<i>Amyloxenasma allantosporum</i> (Oberw.) Hjortstam & Ryvarden	<i>Xenasmatella allantospora</i> Oberw.
<i>Amyloxenasma grisellum</i> (Bourd.) Hjortstam & Ryvarden	<i>Xenasmatella grisella</i> (Bourd.) Oberw.
<i>Annulohypoxylon bovei</i> (Speg.) Y.M. Ju, J.D. Rogers & H.M. Hsieh	<i>Hypoxylon bovei</i> Speng.

**Table 3 (Continued)**

<i>Annulohypoxylon stygium</i> (Lév.) Y.M. Ju, J.D. Rogers & H.M. Hsieh	<i>Hypoxylon stygium</i> (Lév.) Sacc. var. <i>stygium</i>
<i>Anthracobystis destruens</i> (Schltdl.) Bref.	<i>Sporisorium destruens</i> (Schltdl.) Vánky
<i>Anthracobystis ehrenbergii</i> (J.G. Kühn) McTaggart & R.G. Shivas	<i>Sporisorium ehrenbergii</i> (Kühn) Vánky <i>Tolyposporium ehrenbergii</i> (Kühn) Pat.
<i>Anthracobystis penniseti</i> (Rabenh.) McTaggart & R.G. Shivas	<i>Sporisorium penniseti</i> (Rabenh.) Ershad <i>Sphacelotheca penniseti</i> (Rabenh.) Reichert
<i>Apiospora arundinis</i> (Corda) Pintos & P. Alvarado	<i>Arthrinium arundinis</i> (Corda) Dyko & B. Sutton
<i>Apiospora sacchari</i> (Speg.) Pintos & P. Alvarado	<i>Arthrinium sacchari</i> (Speg.) M.B. Ellis
<i>Apiospora saccharicola</i> (F. Stevens) Pintos & P. Alvarado	<i>Arthrinium saccharicola</i> F. Stevens
<i>Armillaria lutea</i> Gillet	<i>Armillaria gallica</i> Marxm. & Romagn.
<i>Arthrobotrys macrooides</i> (Drechsler) Mekht	<i>Arthrobotrys cladodes</i> var. <i>macrooides</i> Drechsler
<i>Artomyces pyxidatus</i> (Pers.) Jülich	<i>Clavicorona pyxidata</i> (Fr.) Doty
<i>Ascochyta pisi</i> Lib.	<i>Didymella pisi</i> Chilvers, J.D. Rogers & Peever
<i>Ascochyta rabiei</i> (Pass.) Labr.	<i>Phoma rabiei</i> (Pass.) Khune ex Gryter <i>Didymella rabiei</i> (Kovach.) v. Arx
<i>Ascochyta rhachidicola</i> (Bubák) Bondartsev & Bond.-Mont.	<i>Diplodina rhachidicola</i> Bub.
<i>Ascochyttella pycnocyclae</i> Petr.	<i>Pseudodiplodia pycnocyclae</i> (Petr.) Petr.
<i>Ascocoryne sarcoides</i> (Jacq.) J.W. Groves & D.E. Wilson	<i>Coryne sarcoides</i> (Jacq.) Tul. var. <i>cylindrum</i> (Tul.) Rehm.
<i>Ascophora disciflora</i> Tode	<i>Phragmidium disciflorum</i> (Tode) James
<i>Asordaria arctica</i> (Cain) Arx & Guarro	<i>Sordaria arctica</i> Cain
<i>Asordaria sibutii</i> (Cailleux) Arx & Guarro	<i>Sordaria sibutii</i> (Cailleux) Arx & Guarro
<i>Aspergillus amstelodami</i> (L. Mangin) Thom & Church	<i>Eurotium amstelodami</i> Mangin
<i>Aspergillus aurantiobrunneus</i> (G.A. Atkins, Hindson & A.B. Russell) Raper & Fennell	<i>Emericella nidulans</i> var. <i>echinulata</i> (Fennell & Raper) Godeas
<i>Aspergillus flavus</i> var. <i>oryzae</i> (Ahlb.) Kurtzman	<i>Aspergillus oryzae</i> (Ahlb.) E. Cohn
<i>Aspergillus melleus</i> Yukawa	<i>Aspergillus quercinus</i> (Bainier) Thom & Church var. <i>petrakii</i>

**Table 3 (Continued)**

<i>Aspergillus niger</i> Tiegh.	<i>Aspergillus luchuensis</i> Inui
<i>Aspergillus ochraceus</i> K. Wilh.	<i>Aspergillus alutaceus</i> Berk. & M.A. Curtis
<i>Aspergillus spinulosporus</i> Hubka, S.W. Peterson, M. Kolařík	<i>Aspergillus nidulans</i> var. <i>echinulatus</i> Fennell & Raper <i>Emericella echinulata</i> (Fennell & Raper) Y. Horie
<i>Aspergillus subsessilis</i> Raper & Fennell	<i>Aspergillus kassunensis</i> Baghd.
<i>Asterina anomala</i> Cooke & Harkn.	<i>Limacinula-anomala</i> (Cooke & Harkn.) D.R. Reynolds
<i>Asteromella fritillariae</i> (Bonar & W.B. Cooke) Vanev & Aa	<i>Phyllosticta fritillariae</i> Bonar & Cooke
<i>Aureobasidium caulinorum</i> (Kirchn.) W.B. Cooke	<i>Kabatiella caulinora</i> (Kirchn.) Karak
<i>Aureobasidium pullulans</i> var. <i>namibiae</i> Zalar, de Hoog & Gunde-Cim	<i>Aureobasidium numibiae namibiae</i> (Zalar, de Hoog & Gunde-Cim.) Zalar, Gostincar, Gunde-Cim.
<i>Aureobasidium pullulans</i> var. <i>pullulans</i>	<i>Hormiscium oleae</i> (Castagne) Sacc.
<i>Auricularia auricula-judae</i> (Bull.) Quél.	<i>Auricularia auricula</i> (L.) Underw.
<i>Baltazarria galactina</i> (Fr.) Leal-Dutra, Dentinger & G.W. Griff.	<i>Scytinostroma galactinum</i> (Fr.) Donk
<i>Batkoia apiculata</i> (Thaxt.) Humber	<i>Entomophthora apiculata</i> (Thaxt.) M.A. Gust.
<i>Batkoia obscura</i> (I.M. Hall & P.H. Dunn) Gryganskyi	<i>Conidiobolus obscurus</i> (Hall & Dunn) Remaud & Kell.
<i>Berkeleyomyces basicola</i> (Berk. & Broome) W.J. Nel, Z.W. de Beer, T.A. Duong & M.J. Wingf.	<i>Thielaviopsis basicola</i> (Berk. & Broome) Ferraris
<i>Bipolaris cookei</i> (Sacc.) Shoemaker	<i>Bipolaris sorghicola</i> (Lefebvre & Sherwin) Alcorn
<i>Bipolaris gigantea</i> (S. Ito) B. Lane, Stricker, M.E. Sm., S.L. Flory & Harmon	<i>Drechslera gigantea</i> (Heald & F.A. Wolf) S. Ito
<i>Bisporella citrina</i> (Batsch) Korf & S.E. Carp.	<i>Calycella citrina</i> (Batsch) Baud.
<i>Boeremia hedericola</i> (Durieu & Mont.) Aveskamp, Gruyter & Verkley	<i>Phyllosticta hedericola</i> Durieu & Mont.
<i>Bolbitius titubans</i> (Bull.) Fr.	<i>Bolbitius vitellinus</i> (Pers.) Fr.
<i>Boletus pseudoregius</i> (Hubert) Estadès	<i>Butyriboletus pseudoregius</i> (Heinr. Huber) D. Arora & J.L. Frank
<i>Botryobasidium vagum</i> (Berk. & M.A. Curtis) D.P. Rogers	<i>Botryobasidium botryosum</i> (Bres.) J. Erikss.

**Table 3 (Continued)**

<i>Botryodiplodia malorum</i> (Berk.) Petr. & Syd.	<i>Sphaeropsis malorum</i> (Berk.) Berk.
<i>Botryosphaeria aesculi</i> (Peck) M.E. Barr	<i>Guignardia aesculi</i> (Peck) Steward
<i>Botryosphaeria dothidea</i> (Moug.) Ces. & De Not.	<i>Fusicoccum aesculi</i> Corda
<i>Botryotrichum murorum</i> (Corda) X. Wei Wang & Samson	<i>Chaetomium murorum</i> Corda
<i>Botrytis cinerea</i> Pers.	<i>Botryotinia fuckeliana</i> (de Bary) Whetzel
<i>Bresadolia uda</i> (Jungh.) Audet	<i>Polyporus uodus</i> Jungh
<i>Britzelmayria multipedata</i> (Peck) D. Wächt. & A. Melzer	<i>Psathyrella multipedata</i> (Peck) A.H. Sm.
<i>Caeoma aristolochiatum</i> Link	<i>Aecidium aristolochiae</i> Rabenh.
<i>Caeoma carpini</i> Nees	<i>Melampsoridium carpini</i> (Nees) Dietel
<i>Caeoma silenes</i> Schltdl.	<i>Uromyces silenes</i> (Schltdl.) Fuckel
<i>Cainia desmazieri</i> C. Moreau & E. Müll. ex Krug	<i>Didymosphaeria incarcerata</i> (Desm.) Sacc.
<i>Calonarius hildegardiae</i> (Schmidt-Stohn, Brandrud & Dima) Niskanen & Liimat	<i>Cortinarius hildegardiae</i> Schmidt-Stohn, Brandrud & Dima
<i>Calonectria pseudonaviculata</i> (Crous, J.Z. Groenew. & C.F. Hill) L. Lombard, M.J. Wingf. & Crous	<i>Cylindrocladium buxicola</i> Henricot
<i>Calvatiella lioui</i> C.H. Chow	<i>Bovistella utriformis</i> var. <i>lioui</i>
<i>Calycina citrina</i> (Hedw.) Gray	<i>Helotium citrinum</i> (Hedw.) Fr.
<i>Candolleomyces bivelatus</i> (Contu) D. Wächt. & A. Melzer	<i>Psathyrella bivelata</i> Contu
<i>Candolleomyces candolleanus</i> (Fr.) D. Wächt. & A. Melzer	<i>Psathyrella candolleana</i> (Fr.) Maire
<i>Capnodium salicinum</i> (Alb. & Schw.) Mont.	<i>Fumagospora capnodiooides</i> G. Arnaud
<i>Cephalotrichum gorgonifer</i> (Bainier) Sand.-Den., Gené & Guarro	<i>Trichurus spiralis</i> Hasselbr.
<i>Ceratobasidium cornigerum</i> (Bourd.) D.P. Rogers	<i>Ceratobasidium cereale</i> D.I. Murray & Burpee
<i>Ceratorhiza cerealis</i> (E.P. Hoeven) R.T. Moore	<i>Rhizoctonia cerealis</i> van der Hoeven
<i>Ceratorhiza fragariae</i> (S.S. Husain & W.E. McKeen) R.T. Moore	<i>Rhizoctonia fragariae</i> S.S. Husain & W.E. McKeen
<i>Ceratorhiza hydrophila</i> (Sacc.) Z.H. Xu, T.C. Harr., M.L. Gleason & Batzer	<i>Sclerotium hydrophilum</i> Sacc. <i>Rhizoctonia oryzae-sativae</i> (Sawada) Mordue

**Table 3 (Continued)**

<i>Ceratorhiza oryzae-sativae</i> (Sawada) R.T. Moore	<i>Rhizoctonia fumigata</i> (N. Nakata ex Hara) P.S. Gunnell & R.K. Webster
<i>Ceratorhiza ramicola</i> (W.A. Weber & D.A. Roberts) R.T. Moore	<i>Rhizoctonia ramicola</i> W.A. Weber & D.A. Roberts
<i>Cercospora beticola</i> Sacc.	<i>Cercospora longissima</i> Cugini ex Sacc.
<i>Cercospora chenopodii</i> Fresen.	<i>Passalora dubia</i> (Riess) U. Braun
<i>Cercosporidium chaetomium</i> (Cooke) Deighton	<i>Passalora chaetomium</i> (Cooke) Arx
<i>Cercosporina danaicola</i> Vienn.-Bourg.	<i>Pseudocercospora danaicola</i> (Vienn.-bourg.) Pirnia & Zare
<i>Cetrasporella pellucida</i> (T.H. Nicolson & N.C. Schenck) Oehl, F.A. Souza & Sieverd.	<i>Scutellospora pellucida</i> (T.H. Nicolon & N.C. Schenck) C. Walker & F.E. Sanders
<i>Ceuthospora astragalina</i> Gonz. Frag.	<i>Phoma astragalina</i> (Gonz. Frag.) Boerema & Kesteren <i>Plenodomus astragalinus</i> (Gonz. Frag.) Petr.
<i>Chaetocapnodium microglobulosum</i> (Bat. & Cif.) S.A. Khodaparast	<i>Chaetasbolisia microglobulosa</i> Bat. & Cif.
<i>Chaetomium elongatum</i> P.Rama Rao & Ram Reddy	<i>Chaetomium osmaniae</i> Ramo Rao & Ram Reddy
<i>Chaetomium madrasense</i> Natarajan	<i>Chaetomium ascotrichoides</i> Calviello
<i>Chaetomium neoglobosporum</i> X. Wei Wang & Houbraken	<i>Chaetomium globosporum</i> Rikhy & Mukerji
<i>Charonectria pedicularis</i> Tracy & Earle	<i>Nectria pedicularis</i> (Tr. & Earle) Petr.
<i>Chlamydomyces palmarum</i> (Cooke) E.W. Mason	<i>Harzia palmara</i> (Cooke) D.W. Li & N.P. Schultes
<i>Chlorociboria aeruginosa</i> (Oeder) Seaver ex C.S. Ramamurthi, Korf & L.R. Batra	<i>Chlorosplenium aeruginosum</i> (Fries) de Not.
<i>Cinereomyces lindbladii</i> (Berk.) Jülich	<i>Antrodia lindbladii</i> (Berk.) Ryvarden
<i>Cladosporium allicinum</i> (Fr.) Bensch, U. Braun & Crous	<i>Mycosphaerella allicina</i> (Fr.) v. Arx <i>Mycosphaerella allicina</i> (Fr.) Vestergr. <i>Sphaeria allicina</i> Fr.
<i>Cladosporium echinulatum</i> (Berk.) de Viries	<i>Davidiella dianthi</i> (C.C. Bura) Crous & U. Braun
<i>Cladosporium herbarum</i> (Pers.) Link	<i>Mycosphaerella tassiana</i> (de Not.) Joh.
<i>Cladosporium iridis</i> (Fautr. & Roum.) de Vries	<i>Davidiella macrospora</i> (Kleb.) Crous & U. Braun
<i>Cladosporium macrocarpum</i> Preuss	<i>Heterosporium hordei</i> Bubak.

**Table 3 (Continued)**

<i>Clasterosporium roupalae</i> Syd.	<i>Tripospermum roupalae</i> (Syd.) S. Hughes
<i>Claviceps purpurea</i> (Fr.) Tul.	<i>Claviceps microcephala</i> (Wallr.) Wint.
<i>Clavulinopsis umbrinella</i> (Sacc.) Corner	<i>Clavulinopsis cinereoides</i> (Atk.) Corner
<i>Clitocybe metachroa</i> (Fr.) P. Kumm.	<i>Clitocybe dicolor</i> (Pers.) J.E. Lange
<i>Clitocybe rosella</i> M.M. Moser	<i>Contumyces rosellus</i> (M.M. Moser) Redhead, Moncalvo, Vilgalys & Lutzoni <i>Omphalina rosella</i> (M.M. Moser) M.M. Moser
<i>Clitopilus mutilus</i> (Fr.) Thines	<i>Omphalina mutila</i> (Fr.) P.D. Orton
<i>Clonostachys rosea</i> (Link) Schroers, Samuels, Seifert & W. Gams f. <i>rosea</i>	<i>Gliocladium roseum</i> Bainier
<i>Clypeosphaerella calotropidis</i> (Ellis & Everh.) Videira & Crous	<i>Cercospora calotropidis</i> Ellis & Everh. <i>Cercospora patouillardii</i> Sacc. <i>Passalora calotropidis</i> (Ellis & Everh.) U. Braun
<i>Codinaea gonytrichoides</i> Shearer & J.L. Crane	<i>Codinaeopsis gonytrichoides</i> (Shearer & Crane) Morgan
<i>Colletotrichella persica</i> Petr.	<i>Kabatia persica</i> (Petr.) B. Sutton
<i>Colletotrichum adustum</i> (Ellis & G. Martin) Ellis	<i>Phyllosticta adusta</i> Ellis & Mart.
<i>Colletotrichum gloeosporioides</i> (Penz.) Sacc.	<i>Glomerella cingulata</i> (Stoneman) Spauld. & H. Schrenk
<i>Colletotrichum hederae</i> (Pass.) Died.	<i>Colletotrichum gloeosporioides</i> var. <i>hederae</i> Pass.
<i>Colletotrichum queenslandicum</i> B.S. Weir & P.R. Johnst.	<i>Colletotrichum gloeosporioides</i> var. <i>minus</i> J.H. Simmonds
<i>Collybia baeosperma</i> Romagn.	<i>Tephrocybe baeosperma</i> (Romagn.) M.M. Moser
<i>Collybia radicata</i> var. <i>furfuracea</i> Peck	<i>Xerula furfuracea</i> (Peck) Redhead & Ginns, Shoemaker
<i>Collybiopsis ramealis</i> (Bull.) Millsp.	<i>Marasmiellus ramealis</i> (Bull.) Singer <i>Marasmius ramealis</i> (Bull.) Fr.
<i>Comoclathris depressa</i> (Peck) Shoemaker & C.E. Babcock	<i>Pyrenophora depressa</i> Peck f. <i>stachydis</i> Gonz. Frag.
<i>Coniella granati</i> (Sacc.) Petr. & Syd.	<i>Pilidiella granati</i> (Sacc.) Aa
<i>Coniochaeta ershadii</i> Zare, Asgari & W. Gams	<i>Coniolariella ershadii</i> (Zare, Asgari & W. Gams) Zare, Asgari & W. Gams

**Table 3 (Continued)**

<i>Coniolariella gamsii</i> (Asgari & Zare) Dana García	<i>Coniolariella limoniispora</i> var. <i>gamsii</i> (Asgari & Zare) Checa, Arenal & J.D. Rogers
<i>Coniothecium questieri</i> Desm.	<i>Sarcinella questieri</i> (Desm.) Höhn.
<i>Coniothyrium fuckelii</i> Sacc.	<i>Paraconiothyrium fuckelii</i> (Sacc.) Verkley & Gruyter
<i>Coniothyrium rude</i> Bubák	<i>Ascochytella rufa</i> (Bubák) Petr. & Syd. <i>Pseudodiplodia rufa</i> (Bubák) Petr.
<i>Conocybe aporos</i> Kits van Wav.	<i>Pholiota aporos</i> (Kits van Waveren) Clémencen
<i>Conocybe siliginea</i> f. <i>rickenii</i> (Jul. Schäff.) Arnolds	<i>Conocybe rickenii</i> (Schäff.) Kühner
<i>Copriniforma tumefaciens</i> (Hedges) F. Liu, Crous & L. Cai	<i>Sphaeropsis tumefaciens</i> Hedges
<i>Coprinopsis extinctoria</i> (Bull.) Redhead, Vilgalys & Moncalvo	<i>Coprinus extinctorius</i> Fr.
<i>Coprinopsis marcescibilis</i> (Britzelm.) Örstadius & E. Larss.	<i>Psathyrella marcescibilis</i> (Britzelm.) Singer
<i>Corallium formosum</i> (Pers.) G. Hahn	<i>Clavaria formosa</i> Pers.
<i>Cordyceps farinosa</i> (Holmsk.) Kepler, B. Shrestha & Spatafora	<i>Isaria farinosa</i> (Holmsk.) Fr. <i>Paecilomyces farinosus</i> (Holmsk.) Brown & Smith
<i>Cordyceps fumosorosea</i> (Wize) Kepler, B. Shrestha & Spatafora	<i>Paecilomyces fumosoroseus</i> (Wize) Brown & Smith
<i>Cordyceps tenuipes</i> (Peck) Kepler, B. Shrestha & Spatafora	<i>Paecilomyces tenuipes</i> (Peck) Samson
<i>Cosmospora flammea</i> (Tul. & C. Tul.) Rossman & Samuels	<i>Nectria flammea</i> (Tul.) Dingley
<i>Cosmospora kurdica</i> (Petr.) Rossman & Samuels	<i>Botryocrea sclerotoides</i> (v. Höhn.) Petr.
<i>Creosphaeria sassafras</i> (Schwein.) Y.M. Ju, F. San Martín & J.D. Rogers	<i>Hypoxyylon sassafras</i> (Schwein.) Berk
<i>Crepidotus caspari</i> Velen.	<i>Crepidotus amygdalosporus</i> Kühn. <i>Crepidotus lundellii</i> Pilát
<i>Crucibulum crucibuliforme</i> (Scop.) V.S. White	<i>Crucibulum laeve</i> (Huds.) Kamby
<i>Crystallicutis serpens</i> (Tode) El-Gharabawy, Leal-Dutra & G.W. Griff.	<i>Ceraceomerulius serpens</i> (Tode) J. Erikss. & Ryvarden <i>Ceraceomyces serpens</i> (Tode) Ginns

**Table 3 (Continued)**

<i>Cunninghamella clavata</i> R.Y. Zheng & G.Q. Chen	<i>Cunninghamella echinulata</i> var. <i>indica</i> Baijal & B.S. Mehrotra
<i>Cunninghamella echinulata</i> (Thaxt.) Thaxt. ex Blakeslee	<i>Cunninghamella echinulata</i> var. <i>verticillata</i> (F.S. Paine) R.Y. Zheng & G.Q. Chen
<i>Cuphophyllum pratensis</i> (Schaeff.) Bon	<i>Agaricus pratensis</i> Schaeff. <i>Psalliota pratensis</i> (Schaeff.) Quél.
<i>Curvularia australiensis</i> (Bugnic. ex M.B. Ellis) Manamgoda, L. Cai & K.D. Hyde	<i>Drechslera australiensis</i> M.B. Ellis
<i>Curvularia coicis</i> E. Castell.	<i>Bipolaris coicis</i> (Y.Nisik) Shoemaker <i>Cochliobolus nisikadoi</i> (Tsuda, Ueyama & Nishihi) Alcorn
<i>Curvularia hawaiiensis</i> (Bugnic. ex M.B. Ellis) Manamgoda, L. Cai & K.D. Hyde	<i>Bipolaris hawaiiensis</i> (M.B. Ellis) J.Y. Uchida & Aragaki <i>Cochliobolus hawaiiensis</i> Alcorn
<i>Curvularia heteropogonicola</i> (Sivan.) Alcorn	<i>Exserohilum heteropogonicola</i> Sivan.
<i>Curvularia micropus</i> (Drechsler) Hern.-Restr., Y.P. Tan & Crous	<i>Bipolaris micropus</i> (Drechsler) Shoemaker
<i>Curvularia neergaardii</i> (Danquah) Y.P. Tan & R.G. Shivas	<i>Bipolaris neergaardii</i> (Danquah) Alcorn <i>Cochliobolus neergaardii</i> Alcorn
<i>Curvularia papendorfii</i> Aa	<i>Bipolaris papendorfii</i> (Aa) Alcorn
<i>Curvularia ryleyi</i> Y.P. Tan & R.G. Shivas	<i>Bipolaris cylindrica</i> Alcon
<i>Curvularia spicifera</i> (Bainier) Boedijn	<i>Drechslera spicifera</i> (Bainier) v. Arx <i>Bipolaris tetramera</i> (McKinney) Shoemaker
<i>Cyclocybe aegerita</i> (V. Brig.) Vizzini	<i>Pholiota aegerita</i> (Brig) Quél.
<i>Cystidiopostia hibernica</i> (Berk. & Broome) B.K. Cui, L.L. Shen & Y.C. Dai	<i>Tyromyces hibernicus</i> (Berk. & Broome) Ryvarden <i>Postia hibernica</i> (Berk. & Broome) Jülich
<i>Cystobasidium laryngis</i> (Reiersöl) Yurkov, Kachalkin, H.M. Daniel, M. Groenew., Libkind, V. de Garcia, Zalar, Gouliam., Boekhout & Begerow	<i>Rhodotorula laryngis</i> Reierso
<i>Cystobasidium minutum</i> (Saito) Yurkov, Kachalkin, H.M. Daniel, M. Groenew., Libkind, V. de Garcia, Zalar, Gouliam., Boekhout & Begerow	<i>Rhodotorula minuta</i> (Saito) F.C. Harrison
<i>Cystopus resedae</i> Jacz.	<i>Albugo resedae</i> (Jacz.) Cif. & Biga

**Table 3 (Continued)**

<i>Cytidiella albida</i> (H. Post) C.C. Chen & Sheng H. Wu	<i>Phlebia albida</i> H Post
<i>Cytospora ceratosperma</i> (Tode) G.C. Adams & Rossman	<i>Valsa ceratosperma</i> (Tode) Maire
<i>Cytospora leucosperma</i> (Pers.) Fr.	<i>Cytospora ambiens</i> (Nitschke) Sacc.
<i>Cytospora leucostoma</i> (Pers.) Sacc.	<i>Leucostoma persoonii</i> (Nitschke) Höhn
<i>Cytospora schulzeri</i> Sacc. & P. Syd.	<i>Valsa malicola</i> Z. Urb.
<i>Dactylonectria macrodidyma</i> (Halleen, Schroers & Crous) L. Lombard & Crous	<i>Cylindrocarpon macrodidymum</i> Schroers, Halleen & Crous
<i>Daldinia concentrica</i> (Bolton) Ces. & De Not.	<i>Sphaeria concentrica</i> Bolton  <i>Hypoxylon concentricum</i> (Bolt.) Grev.
<i>Daleomyces petersii</i> (Berk.) Van Vooren	<i>Peziza petersii</i> Berk. & Curt.
<i>Dematophora necatrix</i> R. Hartig	<i>Rosellinia necatrix</i> (Hartig) Berl.
<i>Dendrostoma leiphaemia</i> (Fr.) Senan. & K.D. Hyde	<i>Discula quercina</i> (West.) v. Arx  <i>Gloeosporium quercinum</i> West.
<i>Dendrothyrium variisporum</i> Verkley, Göker & Stielow	<i>Kalmusia variispora</i> (Verkley, Göker & Stielow) Ariyaw. & K.D. Hyde
<i>Depazea candida</i> Fuckel	<i>Septoria candida</i> (Fuckel) Sacc.
<i>Depazea vagans</i> var. <i>atriplicis</i> J. Kickx f.	<i>Stagonospora atriplicis</i> (West.) Lind.
<i>Diachora onobrychidis</i> (DC.) Jul. Müll.	<i>Diachorella onobrychidis</i> (DC.) v.Höhn.
<i>Dialonectria episphaeria</i> (Tode) Cooke	<i>Nectria episphaeria</i> (Tode ex Sprengel) Fr.
<i>Diaporthe ampelina</i> (Berk. & M.A. Curtis) R.R. Gomes, Glienke & Crous	<i>Phomopsis viticola</i> Sacc.
<i>Diaporthe cinerascens</i> Sacc.	<i>Phomopsis cinerascens</i> (Sacc.) Bubák
<i>Diaporthe subordinaria</i> (Desm.) R.R. Gomes, Glienke & Crous	<i>Phomopsis subordinaria</i> (Desm.) Trav.
<i>Diaporthe vexans</i> (Sacc. & P. Syd.) Gratz	<i>Phomopsis vexans</i> (Sacc. & Syd.) Hart.
<i>Diatrypella verruciformis</i> (Ehrh.) Nitschke	<i>Sphaeria verrucaeformis</i> Ehrh.
<i>Dichotomopilus funicola</i> (Cooke) X. Wei Wang & Samson	<i>Chaetomium funicolum funicola</i> Cooke
<i>Dictydiaethalium plumbeum</i> (Schumach.) Rostaf.	<i>Reticularia plumbea</i> (Schum.) Fr.

**Table 3 (Continued)**

<i>Didymella curtisii</i> (Berk.) Qian Chen & L. Cai	<i>Stagonospora curtisii</i> (Berk) Sacc. <i>Stagonosporopsis curtisii</i> (Berk.) Boerema
<i>Didymella glomerata</i> (Corda) Qian Chen & L. Cai	<i>Phoma glomerata</i> (Corda) Wollenw. & Hochapf.
<i>Didymella negriana</i> (Thüm.) Qian Chen & L. Cai	<i>Phoma negriana</i> Thüm.
<i>Didymella pinodella</i> (L.K. Jones) Qian Chen & L. Cai	<i>Ascochyta pinodella</i> L.K. Jones <i>Phoma pinodella</i> (L.K. Jones) Morgan-Jones & K.B. Burch <i>Peyronellaea pinodella</i> (L.K. Jones) Aveskamp, Gruyter & Verkley <i>Phoma medicaginis</i> var. <i>pinodela</i> (Jones) Boerema
<i>Didymella pomorum</i> (Thüm.) Qian Chen & L. Cai	<i>Phoma pomorum</i> Thüm. var. <i>pomorum</i>
<i>Didymella rabiei</i> Kovatsch. ex Arx	<i>Mycosphaerella rabiei</i> Kovach. ex Gruyter
<i>Diplocarpon mespili</i> (Sorauer) B. Sutton	<i>Entomosporium maculatum</i> Lév. <i>Fabraea maculata</i> G.F. Atk.
<i>Diplodia helichrysi</i> Pass.	<i>Microdiplodia helichrysi</i> (Pass.) Gonz. Frag.
<i>Diplodia mangiferae</i> Koord.	<i>Botryodiplodia mangiferae</i> (Koord.) Petr.
<i>Diplodia pyrenophora</i> (Sacc.) Crous & M.E. Palm	<i>Dothiorella pyrenophora</i> Berk. ex Sacc.
<i>Diplodia sphaerospora</i> (Petr.) J.A. Stev.	<i>Plenodomus sphaerosporus</i> Petr.
<i>Diplodia subtecta</i> Fr.	<i>Diplodia acerina</i> (Pass.) B. Sutton
<i>Disciseda candida</i> var. <i>calva</i> Z. Moravec	<i>Disciseda calva</i> (Moravec) Moravec
<i>Dissingia leucomelaena</i> (Pers.) K. Hansen & X.H. Wang	<i>Helvella leucomelaena</i> (Pers.) Nannf.
<i>Diutina catenulata</i> (Diddens & Lodder) Khunnamw., Jindam., Limtong & Lachance	<i>Candida catenulata</i> Diddens & Lodder
<i>Diversispora versiformis</i> (P. Karst.) Oehl, G.A. Silva & Sieverd.	<i>Glomus versiforme</i> (P. Karst.) S.M. Berch
<i>Dominikia iranica</i> (Błaszk., Kovács & Balázs) Błaszk., Chwat & Kovács	<i>Glomus iranicum</i> Błaszk., Kovács & Balázs <i>Rhizophagus iranicus</i> (Błaszk., Kovács & Balázs) C. Walker & A. Schüßler
<i>Donkia pulcherrima</i> (Berk. & M.A. Curtis) Pilát	<i>Climacodon pulcherrimus</i> (Berk. & M.A. Curtis) Nikol.

**Table 3 (Continued)**

<i>Dothidea tragacanthae</i> Lév.	<i>Omphalospora tragacanthae</i> (Lév.) Petr. <i>Phyllachora tragacanthae</i> (Lév.) Sacc.
<i>Dothidella ulmi</i> (C.-J. Duval) G. Winter	<i>Systremma ulmi</i> (C.-J. Duval) Theiss. & Syd.
<i>Dothiora oleae</i> (DC.) Crous	<i>Coleophoma oleae</i> (DC.) Syd.
<i>Dothiorella mangifericola</i> Tao Yang & Crous	<i>Spencermartinsia mangiferae</i> Abdollahzadeh, Javadi & A.J.L. Phillips
<i>Dothiorella sarmentorum</i> (Fr.) A.J.L. Phillips, Alves & Luque	<i>Botryosphaeria sarmentorum</i> A.J.L. Phillips, Luque & Alves
<i>Drechslera ellisi</i> Danquah	<i>Bipolaris ellisi</i> (Danquah) Alcon
<i>Drepanopeziza castagnei</i> (Desm. & Mont.) Rossman & W.C. Allen	<i>Marssonina castagnei</i> (Desm. & Mont.) Magnus
<i>Drepanopeziza ribis</i> (Kleb.) Höhn.	<i>Gloeosporidiella ribis</i> (Lib.) Petr.
<i>Ectophoma insulana</i> (Mont.) L.W. Hou, L. Cai & Crous	<i>Phoma insulana</i> (Mont.) Boerema & Malathr.
<i>Efibula tuberculata</i> (P. Karst.) Zmitr. & Spirin	<i>Phanerochaete tuberculata</i> (P. Karst.) Parm.
<i>Elsinoe ampelina</i> (de Bary) Shear	<i>Gloeosporium ampelophagum</i> (Pass.) Sacc.
<i>Empusa fresenii</i> Nowak.	<i>Neozygites fresenii</i> (Nowak.) Remaud. & S. Keller
<i>Entomophthora dipterigena</i> (Thaxt.) Sacc. & Traverso	<i>Pandora dipterigena</i> (Thaxt.) Humber <i>Erynia dipterigena</i> (That.) Remaud. & Hennebert
<i>Entyloma eburneum</i> (J. Schröt.) J. Kruse, M. Lutz, Piątek & Thines	<i>Entyloma ranunculi-repentis</i> Sternon
<i>Epicoccum nigrum</i> Link	<i>Epicoccum neglectum</i> Desm. <i>Epicoccum purpurascens</i> Link ex Schlecht
<i>Eremothecium coryli</i> (Peglion) Kurtzman	<i>Nematospora coryli</i> Peglion
<i>Erynia bullata</i> Thaxt. & D.M. MacLeod	<i>Pandora bullata</i> (Thaxt. & D.M. MacLeod) Humber
<i>Erysiphe alhagi</i> Bremer, Ismen, Karel, Özkan & M. Özkan	<i>Erysiphe bremeri</i> U. Braun <i>Microsphaera alhagi</i> (Golovin) U. Braun
<i>Erysiphe arcuata</i> U. Braun, V.P. Heluta & S. Takam.	<i>Oidium carpini</i> Foitzik
<i>Erysiphe bivonae</i> U. Braun & Minnis	<i>Uncinula clandestina</i> (Biv.) J. Schröt. <i>Erysiphe clandestina</i> Biv.

**Table 3 (Continued)**

<i>Erysiphe buhrii</i> U. Braun	<i>Oidium dianthi</i> Jacz.
<i>Erysiphe ehrenbergii</i> (Lév.) U. Braun, M. Bradshaw & S. Takam	<i>Erysiphe lonicerae</i> var. <i>ehrenbergii</i> (Lév.) U. Braun
<i>Erysiphe erodii</i> Durieu & Mont.	<i>Podosphaera erodii</i> (Durieu & Mont.) U. Braun & S. Takam.
<i>Erysiphe euonymicola</i> U. Braun	<i>Oidium euonymi-japonici</i> (Arc.) Sacc.
<i>Erysiphe lamprocarpa</i> var. <i>plantaginis</i> Link	<i>Erysiphe plantaginis</i> (Link) Sawada
<i>Erysiphe pisi</i> DC.	<i>Erysiphe martii</i> Lév.
<i>Erysiphe quercicola</i> S. Takam. & U. Braun	<i>Microsphaera alni</i> (Wall.) G. Winter var. <i>quercina</i> Neger-Bisheh  <i>Oidium mangiferae</i> Berthet
<i>Erysiphe salicis</i> DC.	<i>Uncinula salicis</i> (DC.) Wint.
<i>Erysiphe sanguisorbae</i> DC.	<i>Sphaerotheca sanguisorbae</i> (DC.) S. Blumer
<i>Erysiphe trifoliorum</i> (Wallr.) U. Braun	<i>Microsphaera trifolii</i> (Grev.) U. Braun  <i>Erysiphe trifolii</i> Grev.
<i>Eurotium medium</i> R. Meissn.	<i>Eurotium medium</i> C.F.W. Meissn
<i>Eurotium rubrum</i> Jos. König et al.	<i>Eurotium rubrum</i> König
<i>Eurotium umbrosum</i> (Bainier & Sartory) Malloch & Cain	<i>Aspergillus umbrosus</i> Bainier & Sartory
<i>Eutypella quaternata</i> (Pers.) Rappaz	<i>Quaternaria quaternata</i> (Pers.) J. Schröt.
<i>Excipula caricum</i> Lib. ex Cooke	<i>Amerosporium caricum</i> (Lib.) Sacc.
<i>Exserohilum rostratum</i> (Drechsler) K.J. Leonard & Suggs	<i>Exserohilum gedarefense</i> (El Shfie) Alcorn
<i>Fibricium subceraceum</i> (Hallenb.) Bernicchia	<i>Fibrodontia subceracea</i> Hallenb.
<i>Fibrodontia fimbriata</i> (Rick) Baltazar & Rajchenb.	<i>Fibrodontia gossypina</i> Parm.
<i>Filobasidium magnum</i> (Lodder & Kreger-van Rij) Xin Zhan Liu, F.Y. Bai, M. Groenew. & Boekhout	<i>Cryptococcus magnus</i> (Lodder & Kreger-van Rij) Baptist & Kurtzman
<i>Filobasidium oeireNSE</i> (Á. Fonseca, Scorzetti & Fell) Xin Zhan Liu, F.Y. Bai, M. Groenew. & Boekhout	<i>Cryptococcus oeirensis</i> A. Fonseca, Scorzetti & Fell
<i>Flammulina velutipes</i> (Curtis) Singer	<i>Collybia velutipes</i> (Curtis) Singer var. <i>lactea</i> (Quél.) Rea
<i>Fomitiporella inermis</i> (Ellis & Everh.) Murrill	<i>Phellinus inermis</i> (Ellis & Everh.) G. Cunn

**Table 3 (Continued)**

<i>Fomitiporia robusta</i> (P. Karst.) Fiasson & Niemelä	<i>Phellinus robustus</i> (P. Karst.) Bourdot & Galzin
<i>Fomitiporia rosmarini</i> (Bernicchia) Ghobad-Nejhad & Y.C. Dai	<i>Phellinus rosmarini</i> Bernicchia
<i>Fomitopsis betulina</i> (Bull.) B.K. Cui, M.L. Han & Y.C. Dai	<i>Ungulina betulina</i> Pat. <i>Piptoporus betulinus</i> (Bull.) P. Karst.
<i>Fulvia fulva</i> (Cooke) Cif.	<i>Cladosporium fulvum</i> Cooke <i>Passalora fulva</i> (Cooke) U. Braun & Crous
<i>Fulvifomes merrillii</i> (Murrill) Baltazar & Gibertoni	<i>Phellinus merrillii</i> (Murrill) Ryvarden
<i>Furcasterigmium furcatum</i> (Gams) Giraldo López & Crous	<i>Acremonium furcatum</i> (Moreau & V. Moreau) ex W. Gams
<i>Fusarium acuminatum</i> Ellis & Everh.	<i>Gibberella acuminata</i> Wollenw.
<i>Fusarium avenaceum</i> (Fr.) Sacc.	<i>Gibberella avenacea</i> R.J. Cooke
<i>Fusarium cerealis</i> (Cooke) Sacc.	<i>Fusarium crookwellense</i> Burgess, Nelson & Toussoun
<i>Fusarium chlamydosporum</i> Wollenw. & Reinking	<i>Fusarium sporotrichioides</i> Sherb. <i>Fusarium sporotrichioides</i> Shherb. var. <i>minus</i> Wollenw.
<i>Fusarium concolor</i> Reinking	<i>Fusarium polyphtalicidum</i> Marasas, P.E. Nelson, Toussoun & P.S. van Wyk
<i>Fusarium equiseti</i> (Corda) Sacc.	<i>Gibberella intricans</i> Wollenw.
<i>Fusarium fujikuroi</i> Nirenberg	<i>Gibberella fujikuroi</i> (Sawada) Ito
<i>Fusarium graminearum</i> Schwabe	<i>Gibberella zeae</i> (Schwein.) Petch
<i>Fusarium heterosporum</i> Nees & T. Nees	<i>Gibberella cyanea</i> (Sollm.) Wollenw.
<i>Fusarium incarnatum</i> (Roberge ex Desm.) Sacc.	<i>Fusarium semitectum</i> Ber. & Rav. var. <i>majus</i> Wollenw. <i>Fusarium pallidoroseum</i> (Cooke) Sacc. <i>Fusarium semitectum</i> Ber. & Rav.
<i>Fusarium lateritium</i> Nees	<i>Fusarium urticae</i> (Corda) Sacc. <i>Fusarium lateritium</i> f. <i>mori</i> (Desm.) Matuo & Sato <i>Gibberella baccata</i> (Wallr.) Sacc.
<i>Fusarium miniatum</i> Sacc.	<i>Fusarium detonianum</i> Sacc.

**Table 3 (Continued)**

<i>Fusarium orthoceras</i> var. <i>ciceris</i> Padwick	<i>Fusarium lateritium</i> f. <i>ciceris</i> (Padwick) Erwin
<i>Fusarium oxysporum</i> Schltdl.	<i>Fusarium oxysporum</i> Schltdl. f.sp. <i>betae</i> (Stewart) W.C. Snyder & H.N. Hansen  <i>Fusarium oxysporum</i> Schltdl. f.sp. <i>callistephi</i> (Beach) W.C. Snyder & H.N. Hansen  <i>Fusarium oxysporum</i> Schltdl. f.sp. <i>lini</i> (Bolley) W.C. Snyder & H.N. Hansen  <i>Fusarium oxysporum</i> Schltdl. f.sp. <i>lycopersici</i> (Sacc.) W.C. Snyder & H.N. Hansen  <i>Fusarium oxysporum</i> Schltdl. f.sp. <i>niveum</i> (E.F. Sm.) W.C. Snyder & H.N. Hansen  <i>Fusarium oxysporum</i> Schltdl. f.sp. <i>perniciosum</i> (Hept.) Toole  <i>Fusarium oxysporum</i> Schltdl. f.sp. <i>vasinfectum</i> (G.F. Atk.) W.C. Snyder & H.N. Hansen  <i>Fusarium oxysporum</i> Schltdl. f.sp. <i>dianthi</i> (Prill. & Del.) W.C. Snyder & H.N. Hansen
<i>Fusarium proliferatum</i> (Matsush.) Nirenberg ex Gerlach & Nirenberg	<i>Fusarium proliferatum</i> var. <i>minus</i> Nirenberg
<i>Fusarium reticulatum</i> Mont.	<i>Fusarium reticulatum</i> var. <i>negundinis</i> (Sherb.) Wollenw.
<i>Fusarium sambucinum</i> Fuckel	<i>Fusarium sambucinum</i> Fuckel f. 6 Wollenw.  <i>Fusarium sulphureum</i> Schltdl.  <i>Fusarium trichothecioides</i> Wollenw.
<i>Fusarium sublunatum</i> Reinking	<i>Fusarium sublunatum</i> var. <i>elongatum</i> (Reinking) Reinking
<i>Fusarium udum</i> (Berk.) Wollenw.	<i>Gibberella indica</i> B. Rai & R.S. Upadhyay
<i>Fusarium verticilloides</i> (Sacc.) Nirenberg	<i>Gibberella moniliformis</i> Wineland
<i>Fusarium xylarioides</i> Steyaert	<i>Gibberella xylarioides</i> R. Heim & Saccas
<i>Fuscoporia ferruginosa</i> (Schrad.) Murrill	<i>Phellinus ferruginosus</i> (Schrad.) Pat.
<i>Fuscoporia senex</i> (Nees & Mont.) Ghobad-Nejhad	<i>Phellinus senex</i> (Nees & Mont.) Imazeki
<i>Fusicolla aqueductuum</i> (Radlk. & Rabenh.) Gräfenhan, Seifert & Schroers	<i>Fusarium aqueductuum</i> (radlk. & Rabenh.) Lagerh. var. <i>medium</i> Wollenw.

**Table 3 (Continued)**

<i>Fusicolla merismoides</i> (Corda) Gräfenhan, Seifert & Schroers	<i>Fusarium merismoides</i> Corda <i>Fusarium merismoides</i> var. <i>chlamydosporale</i> Wollenw. <i>Fusarium udum</i> (Berk.) Wollenw.
<i>Gaeumannomyces tritici</i> (Arx & D.L. Olivier) (J. Walker) Hern.-Restr. & Crous	<i>Gaeumannomyces graminis</i> (Sacc.) v. Arx & Olivier var. <i>tritici</i> J. Walker
<i>Gamszarea wallacei</i> (H.C. Evans) Z.F. Zhang & L. Cai	<i>Lecanicillium wallacei</i> (H.C. Evans) H.C. Evans & Zare
<i>Geastrum coronatum</i> Pers.	<i>Geastrum multifidum</i> DC.
<i>Gelatoporia pannocincta</i> (Romell) Niemelä	<i>Gloeoporus pannocinctus</i> (Rom.) J. Erikss.
<i>Gibberella pulicaris</i> (Fr.) Sacc.	<i>Gibberella cyanogena</i> (Desm.) Sacc.
<i>Gliomastix murorum</i> (Corda) S. Hughes	<i>Torula convolvulus</i> Esfand.
<i>Gliophorus irrigatus</i> (Pers.) A.M. Ainsw. & P.M. Kirk	<i>Hygrocybe irrigata</i> (Pers.) Bon <i>Hygrocybe unguinosa</i> (Fr.) P. Karst.
<i>Gliophorus laetus</i> (Pers.) Herink	<i>Hygrocybe laeta</i> (Pers.) P. Kumm.
<i>Globisporangium attrantheridium</i> (Allain-Boulé & Lévesque) Uzuhashi, Tojo & Kakish	<i>Pythium attrantheridium</i> Allain-Boulé & Lévesque
<i>Globisporangium ershadii</i> (Badali, Abrinbana & Abdollahz.) H.D.T. Nguyen & C.F.J. Spies	<i>Pythium ershadii</i> Badali, Abrinbana & Abdollahz.
<i>Globisporangium irregulare</i> (Buisman) Uzuhashi, Tojo & Kakish.	<i>Pythium irregulare</i> Buisman
<i>Globisporangium kandovanense</i> H.D.T. Nguyen & C.F.J. Spies	<i>Pythium kandovanense</i> Chenari Bouket, Arzanlou, Tojo & Babai-Ahari
<i>Globisporangium pyrioosporum</i> (Abdollahz., Badali & Abrinbana) H.D.T. Nguyen & C.F.J. Spies	<i>Pythium pyrioosporum</i> Abdollahz., Badali & Abrinbana
<i>Globisporangium stipitatum</i> (G. Karaca & B. Paul) H.D.T. Nguyen & C.F.J. Spies	<i>Pythium stipitatum</i> G. Karaca & B. Paul
<i>Globisporangium ultimum</i> (Trow) Uzuhashi, Tojo & Kakish.	<i>Pythium ultimum</i> Trow <i>Pythium ultimum</i> var. <i>sporangiferum</i> Drechsler
<i>Globisporangium urmianum</i> (Abrinbana, Badali & Abdollahz.) H.D.T. Nguyen & C.F.J. Spies	<i>Pythium urmianum</i> Abrinbana, Badali & Abdollahz.
<i>Gloeocystidium insidiosum</i> Bourdot & Galzin	<i>Conferticium insidiosum</i> (Bourd. & Galz.) Hallenb.
<i>Gloeosporium lebbek</i> Syd. & P. Syd.	<i>Colletotrichum lebbek</i> (Syd.) Petr.

**Table 3 (Continued)**

<i>Gloeosporium orbiculare</i> (Berk.) Berk.	<i>Colletotrichum lagenarium</i> (Pass.) Ellis & Halst.
<i>Gloiothele lactescens</i> (Berk.) Hjortstam	<i>Gloeocystidiellum porosum</i> (Berk. & Curt.) Donk
<i>Glomus magnicaule</i> I.R. Hall	<i>Glomus magnicaulis</i> I.R. Hall.
<i>Gnomonia fimbriata</i> (Pers.) Auersw.	<i>Mamiania fimbriata</i> (Pers.) Ces. & de Not.
<i>Golovinomyces ambrosiae</i> (Schwein.) U. Braun & R.T.A. Cook	<i>Golovinomyces spadiceus</i> (Berk. & M.A. Curtis) U. Braun
<i>Golovinomyces artemisiae</i> (Grev.) V.P. Heluta	<i>Erysiphe artemisiae</i> Grev.
<i>Golovinomyces asperifoliorum</i> (Grev.) U. Braun & H.D. Shin	<i>Erysiphe asperifoliorum</i> Grev.
<i>Golovinomyces biocellatus</i> (Ehrenb.) V.P. Heluta	<i>Oidium erysiphoides</i> Fr.
<i>Golovinomyces chrysanthemi</i> (Rabenh.) M. Bradshaw, U. Braun, J. Meeboon & S. Takam.	<i>Oidium chrysanthemi</i> Rabenh.
<i>Golovinomyces cynoglossi</i> (Wallr.) V.P. Heluta	<i>Erysiphe horridula</i> (Wall.) Rabenh.
<i>Golovinomyces orontii</i> (Castagne) V.P. Heluta	<i>Erysiphe orontii</i> Castagne <i>Erysiphe polyphaga</i> Hammarl <i>Oidium violae</i> Pass.
<i>Golovinomyces salviae</i> (Jacz.) M. Scholler, U. Braun & Anke Schmidt	<i>Erysiphe salviae</i> (Jacz.) S. Blumer
<i>Graminopassalora graminis</i> (Fuckel) U. Braun, C. Nakash., Videira & Crous	<i>Passalora graminis</i> (Fuckel) v. Höhn.
<i>Guepinia helvelloides</i> (DC.) Fr.	<i>Tremiscus helvelloides</i> (DC.) Donk
<i>Gymnopus acervatus</i> (Fr.) Murrill	<i>Collybia acervata</i> (Fr.) P. Kumm.
<i>Gyromitra leucoxantha</i> (Bres.) Harmaja	<i>Discina leucoxantha</i> Bres.
<i>Gyrophanopsis polonensis</i> (Bres.) Stalpers & P.K. Buchanan	<i>Hypochnicium polonenese</i> (Bres.) Strid
<i>Hapalopilus rutilans</i> (Pers.) Murrill	<i>Hapalopilus nidulans</i> (Fr.) P. Karst.
<i>Helicobasidium purpureum</i> (Tul.) Pat.	<i>Tuberculina persicina</i> (Dimar) Sacc.
<i>Helvella acetabulum</i> (L.) Quél.	<i>Paxina acetabulum</i> (L.) Kuntze
<i>Helvella elastica</i> Bull.	<i>Leptopodia elastica</i> (Bulliard ex St.-Amans) Boudier
<i>Helvella levis</i> Bergeret	<i>Helvella latispora</i> Boud.

**Table 3 (Continued)**

<i>Helvella sublicia</i> Holmsk.	<i>Helvella ephippium</i> Lév. <i>Leptopodia ephippium</i> (Léveille) Boudier
<i>Hendersonia dolosa</i> Sacc. & Roum.	<i>Stagonospora dolosa</i> Sacc. & Roum.
<i>Heterophoma novae-verbascicola</i> (Aveskamp, Gruyter & Verkley) Qian Chen & L. Cai	<i>Heterophoma verbasci-densiflori</i> L.W. Hou, L. Cai & Crous
<i>Heteroradulum deglubens</i> (Berk. & Broome) Spirin & Malysheva	<i>Eichleriella deglubens</i> (Berk. & Broome) D.A. Reid
<i>Heteroradulum spinulosum</i> (Berk. & M.A. Curtis) Spirin & Malysheva	<i>Eichleriella spinulosa</i> (Berk. & M.A. Curtis) Burt
<i>Holtermanniella wattica</i> (Guffogg, Thomas-Hall, P. Holloway & Watson) Libkind, Wuczkowski, Turchetti & Boekhout	<i>Cryptococcus watticus</i> Guffogg, Thomas-Hall, Holloway & Watson
<i>Hydnophlebia alachuana</i> (Murrill) C.C. Chen & Sheng H. Wu	<i>Ceriporia alachuana</i> (Murr.) Hallenb.
<i>Hydnoporia corrugata</i> (Fr.) K.H. Larss. & Spirin	<i>Hymenochaete corrugata</i> (Fr.) Lév.
<i>Hydnoporia tabacina</i> (Sowerby) Spirin, Miettinen & K.H. Larss.	<i>Hymenochaete tabacina</i> (Fr.) Lév.
<i>Hygrophorus glutinifer</i> Fr.	<i>Hygrophorus persoonii</i> Arnolds
<i>Hygrophorus parvulus</i> Peck	<i>Hygrocybe parvula</i> (Peck) Pegler
<i>Hypomyces perniciosus</i> Magnus	<i>Mycogone perniciosa</i> Magnus
<i>Hypomyces rosellus</i> (Alb. & Schwein.) Tul. & C. Tul.	<i>Cladobotryum dendroiodes</i> (Bull.) W. Gams & Hooz.
<i>Hypoxyton fragiforme</i> (Pers.) J. Kickx f.	<i>Hypoxyton coccineum</i> Bull.
<i>Hypoxyton illitum</i> (Schwein.) M.A. Curtis	<i>Nemania illita</i> (Schwein.) Pouzar
<i>Ilyonectria destructans</i> (Zinssm.) Rossman, L. Lombard & Crous	<i>Cylindrocarpon destructans</i> (Zinssm.) Scholten <i>Nectria radicicola</i> Gerlach & Nilsson
<i>Ilyonectria lirioidendri</i> (Halleen, Rego & Crous) Chaverri & C. Salgado	<i>Neonectria lirioidendri</i> Halleen, Rego & Crous
<i>Infundibulicybe gibba</i> (Pers.) Harmaja	<i>Clitocybe gibba</i> (Pers.) P. Kumm.
<i>Inocybe erubescens</i> A. Blytt	<i>Inocybe patouillardii</i> Bres.
<i>Inocybe oblectabilis</i> f. <i>decemgibbosa</i> Kühner	<i>Inocybe decemgibbosa</i> (Kühner) Vauras
<i>Inosperma erubescens</i> (A. Blytt) Matheny & Esteve-Rav.	<i>Inocybe erubescens</i> A. Blytt

**Table 3 (Continued)**

<i>Inosperma rhodiolum</i> (Bres.) Matheny & Esteve-Rav.	<i>Inocybe jurana</i> (Pat) Sacc.
<i>Irpex latemarginatus</i> (Durieu & Mont.) C.C. Chen & Sheng H. Wu	<i>Poria latemarginata</i> (Dur. & Mont.) Cooke <i>Oxyporus latemarginatus</i> (Dur. & Mont.) Donk
<i>Irpiciporus pachyodon</i> (Pers.) Kotl. & Pouza	<i>Spongipellis pachyodon</i> (Pers.) Kotl. & Pouzar
<i>Jackrogersella cohaerens</i> (Pers.) L. Wendt, Kuhnert & M. Stadler	<i>Hypoxylon cohaerens</i> (Pers.) Fr.
<i>Jackrogersella minutella</i> (Syd. & P. Syd.) L. Wendt, Kuhnert & M. Stadler	<i>Annulohypoxylon minutellum</i> (Syd. & P. Syd.) Y.M. Ju, J.D. Rogers & H.M. Hsich
<i>Jackrogersella multififormis</i> (Fr.) L. Wendt, Kuhnert & M. Stadler	<i>Hypoxylon multifforme</i> Fr.
<i>Juglanconis pterocaryae</i> (Kuschke) Voglmayr & Jaklitsch	<i>Melanconium pterocaryae</i> Kuschke
<i>Kazachstania servazzii</i> (Capr.) Kurtzman	<i>Saccharomyces servazzii</i> Cappriotti
<i>Kirschsteiniothelia aethiops</i> (Sacc.) D. Hawksw	<i>Dendryphiopsis atra</i> (Corda) Hughes
<i>Kneiffiella subalutacea</i> (P. Karst.) Jülich & Stalpers	<i>Hyphodontia subalutacea</i> (P. Karst.) J. Erikss.
<i>Kurtia argillacea</i> (Bres.) Karasiński	<i>Hyphoderma argillaceum</i> (Bres.) Donk
<i>Langermannia pachyderma</i> (Peck) Kreisel	<i>Calvatia pachyderma</i> (Peck) Morgan emend. Lloyd <i>Calvatia rubro-flava</i> (Cragin) Lloyd
<i>Lanmaoa fragrans</i> (Vittad.) Vizzini, Gelardi	<i>Boletus fragrans</i> Vittad.
<i>Lanzia helotiooides</i> Rehm	<i>Calloria helotiooides</i> (Rehm) Seaver
<i>Lasiodiplodia theobromae</i> (Pat.) Griffon & Maubl.	<i>Botryosphaeria rhodina</i> (Berk. & M.A. Curtis) Arx
<i>Lecanicillium fungicola</i> (Preuss) Zare & W. Gams	<i>Verticillium fungicola</i> (Preuss) Hassebr.
<i>Lentinus brumalis</i> (Pers.) Zmitr.	<i>Polyporus brumalis</i> (Pers.) Fr.
<i>Lepista flaccida</i> (Sowerby) Pat.	<i>Clitocybe flaccida</i> (Sowerby) P. Kumm. <i>Clitocybe infundibuliformis</i> (Schaeff.) Quéel. <i>Paralepista flaccida</i> (Sowerby) Vizzini
<i>Leptobacillium leptobactrum</i> (W. Gams) Zare & Gams	<i>Verticillium leptobactrum</i> W. Gams
<i>Leptotrichila campanulae</i> (DC.) Rossman	<i>Sporonema campanulae</i> (DC.) v. Höhn.
<i>Leptotrichila medicaginis</i> (Fuckel) Schüepp	<i>Sporonema phacidiooides</i> Desm.
<i>Leptotrichila repanda</i> (Fr.) P. Karst.	<i>Pseudopeziza repanda</i> (Fr.) P. Karst.

**Table 3 (Continued)**

<i>Leptoxypium fumago</i> (Woron.) Crous	<i>Fumago vagans</i> Pers.
<i>Leratiomyces magnivelaris</i> (Peck) Bridge & Spooner	<i>Stropharia magnivelaris</i> Peck
<i>Leucoagaricus leucothites</i> (Vittad.) Wasser	<i>Lepiota naucina</i> (Fr.) P. Kumm.
	<i>Leucoagaricus carneifolius</i> (Gillet.) Wasser
<i>Leucocoprinus holospilotus</i> (Berk. & Broome) D.A. Reid	<i>Lepiota holospilota</i> (Berk. & Broome) Sacc.
<i>Leveillula braunii</i> Simonyan & V.P. Heluta	<i>Leveillula umbelliferarum</i> Golov.
	<i>Leveillula umbelliferarum</i> Golov. f. <i>anethi</i> Golov.
<i>Leveillula catalpae</i> U. Braun	<i>Leveillula bignoniacearum</i> Golov. f. <i>catalpae</i> Teich
<i>Leveillula chrozophorae</i> U. Braun	<i>Leveillula lanata</i> (Magnus) Golov. f. <i>chrozophoreae</i> Jacz.
<i>Leveillula contractirostris</i> V.P. Heluta & Simonyan	<i>Leveillula malvacearum</i> Golov. f. <i>althaeae</i> Jacz.
<i>Leveillula duriiae</i> (Lév.) U. Braun	<i>Leveillula taurica</i> (Lév.) G. Arnaud f. <i>salviae</i> (Jacz.) Golov.
<i>Leveillula elaeagni</i> (Jacz.) Simonyan & V.P. Heluta	<i>Leveillula elaeagnacearum</i> Golov.
<i>Leveillula golovinii</i> Simonyan & V.P. Heluta	<i>Leveillula plumbaginacearum</i> Golov.
<i>Leveillula jacewskii</i> U. Braun	<i>Leveillula scrophulariacearum</i> Golov.
<i>Leveillula lappae</i> (Castagne) U. Braun	<i>Leveillula compositarum</i> Golov. f. <i>carthami</i> Jacz.
<i>Leveillula papilionacearum</i> (Kom.) U. Braun	<i>Leveillula leguminosarum</i> Golov.
	<i>Leveillula leguminosarum</i> Golov. f. <i>ciceris</i> Jacz.
	<i>Leveillula leguminosarum</i> Golov. f. <i>glycyrrhizae</i> Jacz.
	<i>Leveillula taurica</i> (Lév.) G. Arnaud f. <i>medicaginis</i> Jacz.
<i>Leveillula picridis</i> (Castagne) Durrieu & Rostam	<i>Leveillula compositarum</i> Golov. f. <i>centaureae</i> Jacz.
<i>Leveillula rutae</i> (Jacz.) U. Braun	<i>Leveillula rutacearum</i> Golov.
<i>Leveillula taurica</i> (Lév.) G. Arnaud	<i>Oidiopsis sicula</i> Scalia
<i>Leveillula thevenotiae</i> (Jacz.) Golovin	<i>Leveillula simonianii</i> U. Braun
<i>Lichtheimia corymbifera</i> (Cohn) Vuill.	<i>Mycocladus corymbifer</i> (Cohn) Válová
<i>Limacellopsis guttata</i> (Pers.) Zhu L. Yang, Q. Cai & Y.Y. Cui	<i>Agaricus guttatus</i> Schaeff

**Table 3 (Continued)**

<i>Longiseptatispora meliloti</i> (Lasch ex Rabenh.) L.W. Hou & Crous	<i>Stagonospora meliloti</i> (Lasch.) Petr.
<i>Lophiostoma compressum</i> (Pers.) Ces. & De Not.	<i>Platystomum compressum</i> (Pers.) Trev.
<i>Lycoperdon aurantium</i> L.	<i>Scleroderma aurantium</i> (L.) Pers.
<i>Lycoperdon pratense</i> Pers.	<i>Vascellum pratense</i> (Pers. em. Quél.) Kreisel
<i>Lycoperdon pyriforme</i> Schaeff.	<i>Lycoperdon pyriforme</i> Schaeff. var. <i>excipuliforme</i> Desm.
<i>Lyomyces crustosus</i> (Pers.) P. Karst.	<i>Hypodontia crustosa</i> (Fr.) J. Erikss.
<i>Lyomyces juniperi</i> (Bourdotted & Galzin) Riebesehl & E. Langer	<i>Hypodontia juniperi</i> (Bourdotted & Galzin) J. Erikss. & Hjortstam
<i>Lyomyces sambuci</i> (Pers.) P. Karst.	<i>Hyphoderma sambuci</i> (Pers.) Jülich <i>Hypodontia sambuci</i> (Pers.) J. Erikss.
<i>Macrolepiota mastoidea</i> (Fr.) Singer	<i>Macrolepiota permixta</i> (Barla) Pacioni
<i>Macrosporium camelliae</i> Cooke & Massee	<i>Alternaria camelliae</i> (Cooke & Mass.) P. Joly
<i>Macrotyphula phacorrhiza</i> (Reichardt) Olariaga, Huhtinen, Læssøe, J.H. Petersen & K. Hansen	<i>Typhula phacorrhiza</i> (Reichardt) Fr.
<i>Magnaporthiopsis maydis</i> (Samra, Sabet & Hing.) Klaubauf, M.-H. Lebrun & Crous	<i>Cephalosporium maydis</i> Samra, Sabet & Hing. <i>Harpophora maydis</i> (Samra, Sabet & Hing.) W. Gams
<i>Marasmius nummularius</i> var. <i>rubroflavus</i> Theiss.	<i>Marasmius rubroflavus</i> (Theiss.) Singer
<i>Marquandomyces marquandii</i> (Massee) Samson, Houbraken & Luangsa-ard	<i>Paecilomyces marquandii</i> (Massee) S. Hughes
<i>Marssonia delastrei</i> (Lacroix) Sacc.	<i>Diplosporonema delastrei</i> (de Lacr.) Petr.
<i>Massariella palmarum</i> Maffei	<i>Amphisphaeria palmarum</i> (Maffei) El-Buni & S.S. Rattan
<i>Melampsora euphorbiae-helioscopiae</i> (Pers.) Nannf.	<i>Melampsora euphorbiae</i> (Ficinus & C. Schub.) Castagne <i>Melampsora helioscopiae</i> (Pers.) G. Winter
<i>Melampsora farinosa</i> (Pers.) J. Schröt.	<i>Melampsora caprearum</i> Thüm.
<i>Melampsora lini</i> (Ehrenb.) Lév.	<i>Leptostroma maculare</i> Wallr. <i>Melampsora liniperda</i> (Koern.) Palm.

**Table 3 (Continued)**

<i>Melampsora populina</i> (Pers.) Tul.	<i>Melampsora larici-populina</i> Kleb. <i>Melampsora populnea</i> (Pers.) P. Karst.
<i>Melampsora vitellinae</i> (DC.) Thüm.	<i>Melampsora allii-salicis-albae</i> Kleb. <i>Melampsora salicis-albae</i> Kleb.
<i>Melanoleuca friesii</i> (Bres.) Bon	<i>Melanoleuca subpulverulenta</i> (Pers.) Métrod
<i>Melanoporia nigra</i> (Berk.) Murrill	<i>Nigroporus niger</i> (Berk.) Ryvarden
<i>Mensularia hastifera</i> (Pouzar) T. Wagner & M. Fisch.	<i>Inonotus hastifer</i> Pouzar
<i>Mensularia radiata</i> (Sowerby) Lázaro Ibiza	<i>Inonotus radiatus</i> (Sowerby) P. Karst.
<i>Merulius infundibuliformis</i> Scop.	<i>Cantharellus infundibuliformis</i> (Scop.) Fr.
<i>Metacordyceps chlamydosporia</i> (H.C. Evans) G.H. Sung, J.M. Sung, Hywel-Jones & Spatafora	<i>Pochonia chlamydosporia</i> (Goddard) Zare & Gams var. <i>chlamydosporia</i> <i>Verticillium chlamydosporium</i> Goddard
<i>Metarhizium rileyi</i> (Farl.) Kepler, S.A. Rehner & Humber	<i>Nomuraea rileyi</i> (Farl.) Samson
<i>Metarhizium viride</i> (Segretain, Fromentin, Destombes, Brygoo & Dodin ex Samson) Kepler, S.A. Rehner & Humber	<i>Chamaeleomyces viridis</i> (Segretain, Fromentin, Destombes, Brygoo & Dodin ex Samson) Sigler <i>Paecilomyces viridis</i> Segretain, Fromentin, Destombes, Brygoo & Dodin ex Samson
<i>Metuloidea fragrans</i> (A. David & Tortic) Miettinen	<i>Antrodiella fragrans</i> (A. David & Tortić) A. David & Tortić
<i>Microcera coccophila</i> Desm.	<i>Fusarium coccophilum</i> (Desm.) Wollenw. & Reinking
<i>Microcera diploa</i> (Berk. & M.A. Curtis) Gräfenhan & Seifert	<i>Calonectria diploa</i> (Berk. & M.A. Curtis) Wollenw. <i>Fusarium coccidicola</i> P. Henn. <i>Fusarium juruanum</i> P. Henn.
<i>Microcera larvarum</i> (Fuckel) Gräfenhan, Seifert & Schroers	<i>Fusarium larvarum</i> var. <i>rubrum</i> Gerlach
<i>Microdochium panattonianum</i> (Berl.) B. Sutton, Galea & T.V. Price	<i>Marssonina panattoniana</i> (Berl.) Magnus
<i>Micropuccinia leveillei</i> (Mont.) Arthur & H.S. Jacks.	<i>Puccinia leveillei</i> Mont.
<i>Microsphaeropsis olivacea</i> (Bonord.) Höhn.	<i>Coniothyrium olivaceum</i> Bonord

**Table 3 (Continued)**

<i>Microsphaeropsis tanaceti</i> R.G. Shivas, S.J. Pethybridge & S.J. Jones	<i>Didymella tanaceti</i> (R.G. Shivas, S.J. Pethybr. & S.J. Jones) T.L. Pearce, J.B. Scott, Crous, S.J. Pethybr. & F.S. Hay
<i>Microthecium zobelii</i> Corda	<i>Melanospora zobelii</i> (Corda) Fuckel
<i>Microthyrium smilacis</i> De Not.	<i>Muyocopron smilacis</i> (de Not.) Sacc.
<i>Microxiphium artocarpi</i> Bat., Nascim. & Cif.	<i>Polychaeton artocarpi</i> (Bat., Nase & Cif.) Khodaparast
<i>Monascus ruber</i> Tiegh.	<i>Monascus pilosus</i> R. Sato ex D. Hawksw. & Pitt
<i>Monostichella salicis</i> (Westend.) Arx	<i>Gloeosporidium salicis</i> (Wint.) v. Höhn.
<i>Montagnea candollei</i> (Fr.) Fr.	<i>Montagnites arenarius</i> (DC.) Morse
<i>Morchella esculenta</i> var. <i>rotunda</i> (Pers.) Pers.	<i>Morchella rotunda</i> (Pers.) Boud.
<i>Mucor circinelloides</i> Tiegh.	<i>Mucor circinelloides</i> Tiegh. f. <i>circinelloides</i>
<i>Mucor heterogamus</i> Vuill.	<i>Zygorhynchus heterogamus</i> (Vuill.) Vuill.
<i>Mucor lusitanicus</i> Bruderl.	<i>Mucor circinelloides</i> Tiegh. f. <i>lusitanicus</i> (Bruderl.) Schipper
<i>Mucor luteus</i> Linnem. ex Wrzosek	<i>Mucor hiemalis</i> Wehmer f. <i>luteus</i> (Linnem.) Schipper
<i>Mutatoderma mutatum</i> (Peck) C.E. Gómez	<i>Hyphoderma mutatum</i> (Peck) Donk
<i>Mycoacia gilvescens</i> (Bres.) Zmitr.	<i>Ceriporiopsis gilvescens</i> (Bres.) Domański <i>Tyromyces gilvescens</i> (Bres.) Ryvarden
<i>Mycoacia livida</i> (Pers.) Zmitr.	<i>Phlebia livida</i> (Fr.) Bres.
<i>Mycobernardia incrustans</i> (Parmasto) Ghob.-Nejh.	<i>Galzinia incrustans</i> (v. Höhn. & Litsch.) Parm.
<i>Mycothermus thermophilus</i> (Cooney & R. Emers.) X. Wei Wang, Houbraken & D.O. Natvig	<i>Scytalidium thermophilum</i> (Cooney & R. Emers.) Austwick
<i>Myrmecridium schulzeri</i> (Sacc.) Arzanlou, W. Gams & Crous	<i>Pleurophragmium acutum</i> (Grove) Ellis
<i>Myxarium grilletii</i> (Boud.) D.A. Reid	<i>Stypella grilletii</i> (Boudier) P. Roberts
<i>Naevia dispersa</i> (Schrad.) Thiyagaraja, Lücking & K.D. Hyde	<i>Arthonia dispersa</i> (Schrad.) Nyl.
<i>Naganishia albida</i> (Saito) Xin Zhan Liu, F.Y. Bai, M. Groenew. & Boekhout	<i>Cryptococcus albidus</i> (Saito) C.E. Skinner <i>Cryptococcus albidus</i> (Saito) C.E. Skinner
<i>Naganishia albidosimilis</i> (Vishniac & Kurtzman) Xin Zhan Liu, F.Y. Bai, M. Groenew. & Boekhout	<i>Cryptococcus albidosimilis</i> Vishniac & Kurtzman

**Table 3 (Continued)**

<i>Naganishia bhutanensis</i> (Goto & Sugiy.) Xin Zhan Liu, F.Y. Bai, M. Groenew. & Boekhout	<i>Cryptococcus bhutanensis</i> Goto & Sugiyama
<i>Naganishia diffluens</i> (Zach) Xin Zhan Liu, F.Y. Bai, M. Groenew. & Boekhout	<i>Cryptococcus diffluens</i> Lodder
<i>Naganishia friedmannii</i> (Vishniac) Xin Zhan Liu, F.Y. Bai, M. Groenew. & Boekhout	<i>Cryptococcus friedmannii</i> Vishniac
<i>Naganishia globosa</i> Goto	<i>Cryptococcus saitoi</i> A. Fonseca, Scorzetti & Fell
<i>Naganishia uzbekistanensis</i> (Á. Fonseca, Scorzetti & Fell) Xin Zhan Liu, F.Y. Bai, M. Groenew. & Boekhout	<i>Cryptococcus uzbekistanensis</i> A. Fonseca, Scorzetti & Fell
<i>Narcissea patouillardii</i> (Quél.) D. Wächt. & A. Melzer	<i>Coprinopsis patouillardii</i> (Quél.) Gminder
<i>Naucoria pellucida</i> (Bull.) Henn.	<i>Tubaria pellucida</i> (Bull. & Vent.) Fr.
<i>Nectria macrostoma</i> Berk. & M.A. Curtis	<i>Stilbocrea macrostoma</i> (Berk. & M.A. Curtis) Höhn <i>Hypocreopsis macrostoma</i> (Berk. & M.A. Curtis) E. Müll
<i>Nemania caries</i> (Schwein.) Y.M. Ju & J.D. Rogers	<i>Hypoxyton caries</i> (Schw.) Sacc.
<i>Nemania serpens</i> (Pers.) Gray	<i>Geniculosporium serpens</i> Chesters & Greenh. <i>Hypoxyton serpens</i> (Pers.) Kickx
<i>Neocercosporidium smilacis</i> (Thüm.) U. Braun, C. Nakash., Videira & Crous	<i>Cercospora smilacina</i> Sacc. <i>Cercospora smilacis</i> Thüm. <i>Passalora smilacis</i> (Thüm.) U. Braun
<i>Neocosmospora brevicona</i> (Wollenw.) Sand.-Den. & Crous	<i>Nectria haematococca</i> var. <i>brevicona</i> (Wollenw.) Gerlach
<i>Neocosmospora cucurbitae</i> Sand.-Den., L. Lombard & Crous	<i>Fusarium solani</i> (Mart.) Sacc. f.sp. <i>cucurbitae</i> W.C. Snyder & H.N. Hansen
<i>Neocosmospora falciformis</i> (Carrión) L. Lombard & Crous	<i>Acremonium falciforme</i> (Corrion) W. Gams <i>Fusarium falciforme</i> (Carrión) Summerbell & Schroers
<i>Neocosmospora haematococca</i> (Berk. & Broome) Samuels, Nalim & Geiser	<i>Nectria haematococca</i> (Berk. & Broome) Wollenw. <i>Haematonectria haematococca</i> (Berk. & Broome) Samuels & Nirenberg
<i>Neocosmospora ipomoeae</i> (Halst.) L. Lombard & Crous	<i>Nectria ipomoeae</i> Halsted
<i>Neocosmospora keratoplastica</i> (D. Geiser, O'Donnell, Short & Ning Zhang) Sand.-Den. & Crous	<i>Fusarium keratoplasticum</i> D. Geiser, O' Donnel, Short & Zhang

**Table 3 (Continued)**

<i>Neocosmospora petroliphila</i> (Q.T. Chen & X.H. Fu) Sand.-Den. & Crous	<i>Fusarium petroliphilum</i> (Q.T. Chen & X.H. Fu) D. Geiser, O' Donnel, Short & Zhang
<i>Neocosmospora phaseoli</i> (Burkh.) L. Lombard & Crous	<i>Fusarium solani</i> (Mart.) Sacc. f.sp. <i>phaseoli</i> (Burkh.) W.C. Snyder & H.N. Hansen
<i>Neocosmospora pseudensiformis</i> Samuels, Nalim & Geiser	<i>Fusarium pseudensiforme</i> Samuels, Nalim & Geiser
<i>Neocosmospora solani</i> (Mart.) L. Lombard & Crous	<i>Fusarium eumartii</i> C.W. Carp. <i>Fusarium solani</i> (Mart.) Sacc.
<i>Neofusicoccum mangiferae</i> (Syd. & P. Syd.) Crous, Slippers & A.J.L. Phillips	<i>Nattrassia mangiferae</i> (Syd. & P. Syd.) Sutton & Dyko
<i>Neofusicoccum parvum</i> (Pennycook & Samuels) Crous, Slippers & A.J.L. Phillips	<i>Botryosphaeria parva</i> Pennycook & Samuels
<i>Neofusicoccum ribis</i> (Slippers, Crous & M.J. Wingf.) Crous, Slippers & A.J.L. Phillips	<i>Botryosphaeria ribis</i> Grossenbach & Duggar
<i>Neonectria ditissima</i> (Tul. & C. Tul.) Samuels & Rossman	<i>Nectria galligena</i> Bress.
<i>Neonectria obtusispora</i> (Cooke & Harkness) Rossman, L. Lombard & Crous	<i>Cylindrocarpon obtusisporum</i> (Cooke & Harkn.)
<i>Neopatella straussiana</i> Sacc.	<i>Selenophoma straussiana</i> (Sacc.) Petr.
<i>Neophloeospora maculans</i> (Bérenger) Videira & Crous	<i>Cylindrosporium mori</i> (Lév.) Berl. <i>Phloeospora maculans</i> (Sandri) Allesch. <i>Mycosphaerella mori</i> (Fuckel) Wolf. <i>Septoria mori</i> Lév.
<i>Neosartorya spinosa</i> (Raper & Fennell) Kozak.	<i>Aspergillus fischeri</i> var. <i>spinosus</i> Raper & Fennell
<i>Neoscytalidium dimidiatum</i> (Penz.) Crous & Slippers	<i>Neoscytalidium hyalinum</i> (C.K. Campb. & Mulder) A.J.L. Phillips, M. Groenew & Crous  <i>Neoscytalidium novaehollandiae</i> Pavlic, T.I. Burgess & M.J. Wingf.
<i>Niesslia ligustica</i> (Girlanda & Luppi Mosca) W. Gams & Stielow	<i>Monocillium ligisticum</i> Girland & Luppi Mosca
<i>Nigrospora oryzae</i> (Berk. & Broome) Petch	<i>Khuskia oryzae</i> Hudson

**Table 3 (Continued)**

<i>Nothopassalora personata</i> (Berk. & M.A. Curtis) U. Braun, C. Nakash., Videira & Crous	<i>Cercospora personata</i> (Berk. & Curt.) Ellis & Everh. <i>Cercosporidium personatum</i> (Berk & Curt.) Deighton <i>Mycosphaerella berkeleyi</i> W.A. Jenkins <i>Passalora personata</i> (Berk. & Curt.) S.A. Khan & M. Kamal
<i>Ochrocladosporium elatum</i> (Harz) Crous & U. Braun	<i>Cladosporium elatum</i> (Harz) Nannfeldt
<i>Ochropsora anemones</i> (Pers.) Ferd. & C.A. Jørg.	<i>Ochropsora ariae</i> (Fuckel) Ramsb.
<i>Odonticium septocystidiatum</i> (Burt) Zmitr. & Spirin	<i>Phanerochaete septocystidia</i> (Burt) J. Erikss. & Ryvarden
<i>Oedomyces leproides</i> Trab. & Sacc.	<i>Urophlyctis leproides</i> (Trab. & Sacc.) Magnus
<i>Oehlia diaphana</i> (J.B. Morton & C. Walker) Błaszk., Kozłowska, Niezgoda, B.T. Goto & Dalpé	<i>Glomus diaphanum</i> J.B. Morton & C. Walker
<i>Omphaliaster asterosporus</i> (J.E. Lange) Lamoure	<i>Hygroaster asterosporus</i> (J.E. Lange) Singer
<i>Ophiognomonia leptostyla</i> (Fr.) Sogonov	<i>Marssonia juglandis</i> (Lib.) Sacc. <i>Marssonella juglandis</i> (Lib.) v. Höhn.
<i>Ovulariopsis gossypii</i> Wakef.	<i>Oidiopsis gossypii</i> (Wakef.) Raich.
<i>Paecilomyces formosus</i> Sakag., May. Inoue & Tada ex Houbraken & Samson	<i>Paecilomyces maximus</i> C. Ram
<i>Pallidophorina paarla</i> (Damm & Crous) S. Bien & Damm	<i>Collophora paarla</i> Damm & Crous
<i>Panus lecomtei</i> (Fr.) Corner	<i>Agaricus macrosporus</i> Mont.
<i>Papiliotrema flavescens</i> (Saito) Xin Zhan Liu, F.Y. Bai, M. Groenew. & Boekhout	<i>Cryptococcus flavescens</i> (Saito) C.E. Skinner
<i>Paracercosporidium microsorum</i> (Sacc.) U. Braun, C. Nakash., Videira & Crous	<i>Cercospora microsora</i> Sacc.
<i>Parachaetomium carinthiacum</i> (Sörgel) Mehrabi, Asgari & Zare	<i>Chaetomium carinthiacum</i> Sörge
<i>Parachaetomium hispanicum</i> (Guarro & Arx) X. Wei Wang & Houbraken	<i>Chaetomium hispanicum</i> Guarro & v. Arx
<i>Parachaetomium perlucidum</i> (Sergeeva) X. Wei Wang & Houbraken	<i>Chaetomium iranianum</i> Asgari & Zare <i>Parachaetomium iranianum</i> (Asgari & Zare) Mehrabi, Asgari & Zare

**Table 3 (Continued)**

<i>Paraeutypella citricola</i> (Speg.) L.S. Dissan., Wijayaw., J.C. Kang & K.D. Hyde	<i>Eutypella citricola</i> Speg.
<i>Paramyrothecium roridum</i> (Tode) L. Lombard & Crous	<i>Myrothecium roridum</i> Tode
<i>Paraphaeosphaeria minitans</i> (W.A. Campb.) Verkley, Göker & Stielow	<i>Coniothyrium minitans</i> W.A. Campbell
<i>Parasola auricoma</i> (Pat.) Redhead, Vilgalys & Hopple	<i>Coriolus hirsutus</i> (Wulfen) Quél.
<i>Parasola plicatilis</i> (Curtis) Redhead, Vilgalys & Hopple	<i>Coprinus plicatilis</i> (Curtis) Fr. var. <i>microsporus</i> Kühner & Joss.
<i>Parastagonospora nodorum</i> (Berk.) Quaedvly., Verkley & Crous	<i>Phaeosphaeria nodorum</i> (E. Müller) Hedjar. <i>Septoria nodorum</i> (Berk.) Berk. <i>Stagonospora nodorum</i> (Berk.) Castellani & E.G. Germano
<i>Passalora condensata</i> (Ellis & Kellerm.) U. Braun	<i>Prathigada condensata</i> (Ellis & Kellerm.) U. Braun
<i>Passalora heterospora</i> (Höhn.) Höhn.	<i>Fusicladium heterosporum</i> v. Höhn.
<i>Passalora puncta</i> (Lacroix) Petzoldt	<i>Passalora punctum</i> (Delacr.) S. Petzoldt
<i>Penicillium crustosum</i> Thom	<i>Penicillium solitum</i> var. <i>crustosum</i> (Thom) Bridge, D. Hawksw., Kozak., Onions, R.R.M. Paterson & Sackin
<i>Penicillium pallidum</i> G. Sm.	<i>Geosmithia pallida</i> (G. Sm.) M. Kolařík, Kubátová & Pazoutová
<i>Penicillium vulpinum</i> (Cooke & Massee) Seifert & Samson	<i>Penicillium claviforme</i> Bainier
<i>Peniophora albobadia</i> (Schwein.) Boidin	<i>Lopharia heterospora</i> (Burt) Reid
<i>Peniophorella echinocystis</i> (J. Erikss. & Å. Strid) K.H. Larss.	<i>Hyphoderma echinocystis</i> Erikss. & Strid
<i>Peniophorella praetermissa</i> (P. Karst.) K.H. Larss.	<i>Hyphoderma praetermissum</i> (P. Karst.) Erikss. & Strid
<i>Peniophorella pubera</i> (Fr.) P. Karst.	<i>Hyphoderma puberum</i> (Fr.) Waller.
<i>Periconia byssoides</i> Pers.	<i>Periconia pycnospora</i> Fres.
<i>Peristemma sonchicola</i> M. Abbasi	<i>Miyagia pseudosphaeria</i> (Mont.) Jørest. <i>Puccinia sonchi</i> Rob. <i>Peristemma pseudosphaeria</i> (Mont.) Jørst.

**Table 3 (Continued)**

<i>Peronospora cheiranthi</i> Gäum.	<i>Hyaloperonospora cheiranthi</i> (Gäum.) Göker, Voglmayr, Riethm., M. Weiss. & Oberw.  <i>Hyaloperonospora parasitica</i> (Pers.) Constant.
<i>Peronospora farinosa</i> (Fr.) Fr.	<i>Peronospora minor</i> (Casp.) Gaeum.  <i>Peronospora spinaciae</i> Laubert
<i>Peronospora thlaspeos-perfoliati</i> Gäum.	<i>Hyaloperonospora thlaspeos-perfoliati</i> (Gäum.) Göker, Voglmayr, Riethm., M. Weiss. & Oberw.
<i>Peronospora umbelliferarum</i> var. <i>chaerophylli</i> Casp.	<i>Plasmopara chaerophylli</i> (Casp.) Trotter
<i>Pestalotia longiseta</i> Speg.	<i>Pestalotiopsis longiseta</i> (Speg.) Dai & Kobayashi
<i>Pestalotia longisetula</i> Guba	<i>Pestalotiopsis longisetula</i> (Guba) X.A. Sun & Q.X. Ge
<i>Pestalotia uvicola</i> Speg.	<i>Pestalotiopsis uvicola</i> (Speg.) Bissett
<i>Peziza crassa</i> Santi	<i>Sarcosphaera crassa</i> (Santi) Pouzar
<i>Peziza occidentalis</i> Schwein.	<i>Sarcoscypha occidentalis</i> (Schwein.) Cooke
<i>Phaeoacremonium minimum</i> (Tul. & C. Tul.) Gramaje, L. Mostert & Crous	<i>Phaeoacremonium aleophilum</i> W. Gams, Crous, M.J. Wingf & L. Mugnai  <i>Togninia minima</i> (Tul. & C. Tul.) Berl.
<i>Phaeoclavulina flaccida</i> (Fr.) Giachini	<i>Ramaria flaccida</i> (Fr.) Bourdot
<i>Phaeophlebiopsis ravenelii</i> (Cooke) Zmitr.	<i>Phlebia roumeguerei</i> (Bres.) Donk  <i>Phlebiopsis roumeguerei</i> (Bres.) Jülich & Stalpers  <i>Phlebiopsis ravenelii</i> (Cooke) Hjortstam
<i>Phaeoseptoria caricicola</i> (Sacc.) R. Sprague	<i>Septoria caricicola</i> Sacc.
<i>Phaeosphaeria herpotrichoides</i> (De Not.) L. Holm	<i>Leptosphaeria herpotrichoides</i> de Not.
<i>Phaeosphaeria sparsa</i> (Fuckel) Shoemaker & C.E. Babc.	<i>Leptosphaeria sparsa</i> (Fuckel) Sacc.
<i>Phanerochaete cumulodentata</i> (Nikol.) Parmasto	<i>Phanerochaete raduloides</i> J. Erikss. & Ryvarden
<i>Phellinus igniarius</i> var. <i>trivialis</i> (Bres. ex Killerm.) Niemelä	<i>Phellinus trivialis</i> (Bres.) Kreisel
<i>Phlebia ochraceofulva</i> (Bourdot & Galzin) Donk	<i>Phlebia subochracea</i> (Bres.) J. Erikss. & Ryvarden
<i>Phlebia tremelloidea</i> (Bres.) Parmasto	<i>Phlebia lindtneri</i> (Pil.) Parm.
<i>Phlebia tremellosa</i> (Schrad.) Nakasone & Burds.	<i>Merulius tremellosus</i> Schrad.

**Table 3 (Continued)**

<i>Phlegmacium caesiocortinatum</i> (Jul. Schäff.) Niskanen & Liimat.	<i>Cortinarius caesiocortinatus</i> Jul. Schäf.
<i>Phlegmacium paracephalixum</i> (Bohus) Niskanen	<i>Cortinarius paracephalixus</i> Bohus
<i>Phloeoospora ulmi</i> (Fr.) Wallr.	<i>Septogloeum ulmi</i> (Fr.) Died.
<i>Pholiota carbonaria</i> (Fr.) Singer	<i>Pholiota highlandensis</i> (Peck.) Smith & Hesler
<i>Phoma cucumeris</i> Bedlan	<i>Phyllosticta cucurbitacearum</i> Sacc.
<i>Phoma drabae</i> Fuckel	<i>Selenophoma drabae</i> (Fuckel) Petr.
<i>Phragmidium fragariastri</i> (DC.) J. Schröt.	<i>Phragmidium fragariae</i> (Rabenh.) Ces. <i>Phragmidium granulatum</i> Fuckel <i>Phragmidium fragariae</i> (Rabenh.) Ces.
<i>Phragmidium kamtschatkae</i> (H.W. Anderson) Arthur & Cummins	<i>Puccinia rosae</i> Barcl.
<i>Phragmocapnia penzigi</i> (Woron.) Chomnunti & K.D. Hyde	<i>Conidiocarpus penzigi</i> Woron.
<i>Phragmocephala elliptica</i> (Berk. & Broome) S. Hughes	<i>Endophragmia elliptica</i> (Berk. & Broome) M.B. Ellis
<i>Phragmoxyphium paraguayense</i> (Speg.) Bat. & Cif.	<i>Capnodium paraguayense</i> Speg.
<i>Phyllachora heraclei</i> (Fr.) Fuckel	<i>Mycosphaerella heraclei</i> Fr.
<i>Phyllachora punctiformis</i> (Fuckel) Fuckel	<i>Sporonema punctiforme</i> (Fuckel) Petr.
<i>Phyllactinia alnicola</i> U. Braun	<i>Microsphaera alni</i> (Wallr.) G.Winter
<i>Phyllosticta capitalensis</i> Henn.	<i>Phyllosticta theacearum</i> Aa
<i>Phyllosticta philoprina</i> (Berk. & M.A. Curtis) Wikee	<i>Guignardia philoprina</i> (Berk. & Curt.) Aa
<i>Phyllosticta sorghina</i> Sacc.	<i>Phoma sorghina</i> (Sacc.) Boerema, Doreenb. & Lessteren
<i>Physalospora euganea</i> Sacc.	<i>Discosphaerina euganea</i> (Sacc.) Petr.
<i>Physisporinus crocatus</i> (Pat.) F. Wu, Jia J. Chen & Y.C. Dai	<i>Rigidoporus nigrescens</i> (Bres.) Donk <i>Rigidoporus crocatus</i> (Pat.) Ryvarden
<i>Phytophytium helicoides</i> (Drechsler) Abad, de Cock, Bala, Robideau, Lodhi & Lévesque	<i>Pythium helicoides</i> Drechsler
<i>Phytophytium ostracodes</i> (Drechsler) Abad, de Cock, Bala, Robideau, Lodhi & Lévesque	<i>Pythium ostracodes</i> Drechsler

**Table 3 (Continued)**

<i>Phytopythium vexans</i> (de Bary) Abad, de Cock, Bala, Robideau, Lodhi & Lévesque	<i>Pythium vexans</i> de Bary
<i>Pilidium lythri</i> (Desm.) Rossman	<i>Pilidium concavum</i> (Desm.) v. Höhn.
<i>Pistillaria ramealis</i> Lib. ex Cooke	<i>Typhula ramealis</i> (Lib.) Speg.
<i>Platystomum concinnum</i> (Petr.) Doilom & K.D. Hyde	<i>Thyridium concinnum</i> Petr. <i>Xylosphaeria concinna</i> Petr. <i>Mycothyridium concinnum</i> (Petr.) Petr.
<i>Plenodomus biglobosus</i> (Shoemaker & H. Brun) Gruyter	<i>Leptosphaeria biglobosa</i> Shoemaker & H. Brun
<i>Plenodomus lingam</i> (Tode) Höhn	<i>Leptosphaeria maculans</i> (Desm.) Ces. & de Not. <i>Phoma lingam</i> (Tode) Desm. <i>Phyllosticta brassicae</i> Brun.
<i>Plenodomus visci</i> (Sacc.) Gruyter, Aveskamp & Verkley	<i>Plectophomella visci</i> Moesz.
<i>Pleospora vitalbae</i> (De Not.) Berl.	<i>Pleospora clematidis</i> Fuckel
<i>Pluteus cervinus</i> (Schaeff.) P. Kumm.	<i>Pluteus cervinus</i> (Schaeff.) P. Kumm. var. <i>cervinus</i>
<i>Podofomes stereoides</i> (Fr.) Gorjón	<i>Datronia stereoides</i> (Fr.) Ryvarden
<i>Podosphaera fuliginea</i> (Schltdl.) U. Braun & S. Takam.	<i>Sphaerotheca fuliginea</i> auct. p. p.
<i>Podosphaera xanthii</i> (Castagne) U. Braun & Shishkoff	<i>Podosphaera phaseoli</i> (Z.Y. Zhao) U. Braun & S. Takam.
<i>Polycystis colchici</i> var. <i>muscaridis</i>	<i>Urocystis muscaridis</i> (G. von Niessl) G. Moesz
<i>Porodaedalea chrysoloma</i> (Fr.) Fiasson & Niemelä	<i>Phellinus chrysoloma</i> (Fr.) Donk
<i>Porostereum spadiceum</i> (Pers.) Hjortstam & Ryvarden	<i>Lopharia spadicea</i> (Fr.) Boid.
<i>Porothelium fimbriatum</i> (Pers.) Fr.	<i>Stromatoscypha fimbriata</i> (Pers.) Donk
<i>Postia tephroleuca</i> (Fr.) Jülich	<i>Leptoporus lacteus</i> (Fr.) Quél. <i>Tyromyces lacteus</i> (Fr.) Murr.
<i>Praetumpfia obducens</i> (Schumach. : Fr.) Jaklitsch & Voglmayr	<i>Strickeria obducens</i> (Fr.) G. Winter <i>Cucurbitaria obducens</i> (Schumach.) Petr. <i>Sphaeria obducens</i> Fr.

**Table 3 (Continued)**

<i>Protomerulius dubius</i> (Bourdot & Galzin) Spirin & Malysheva	<i>Heterochaetella dubia</i> (Bourd. & Galz.) Bourd. & Galz. <i>Stypella dubia</i> (Bourd. & Galz.) P. Roberts
<i>Psathyrella spadiceogrisea</i> (Schaeff.) Maire	<i>Psathyrella groegeri</i> G. Hirsch
<i>Pseudocercospora eumusae</i> Crous & Mour.	<i>Septoria eumusae</i> Carlier, M.-F. Zapater, Lapeyre, D.R. Jones & Mour.
<i>Pseudocercospora kakiigena</i> U. Braun	<i>Cylindrosporium kaki</i> Syd.
<i>Pseudocercospora phyllitidis</i> (H.H. Hume) U. Braun & Crous	<i>Cercospora physalidis</i> Ellis
<i>Pseudocercospora platanigena</i> Videira & Crous	<i>Stigmina platani</i> (Fuckel) Sacc.
<i>Pseudocochliobolus verruculosus</i> Tsuda & Ueyama	<i>Cochliobolus verruculosus</i> (Tsuda & Ueyama) Sivanesan
<i>Pseudoidium hortensiae</i> (Jørst.) U. Braun & R.T.A. Cook	<i>Oidium hortensiae</i> Jørst.
<i>Pseudoinonotus dryadeus</i> (Pers.) T. Wagner & M. Fisch.	<i>Inonotus dryadeus</i> (Pers.) Murrill. <i>Polyporus dryadeus</i> (Pers.) Fr.
<i>Pseudomicrostroma juglandis</i> (Berenger) T. Kij. & Aime	<i>Microstroma juglandis</i> (Bereng.) Sacc.
<i>Pseudopatella lecanidium</i> Speg.	<i>Botryodiplodia lecanidium</i> (Speg.) Petr. & Syd.
<i>Pseudopithomyces chartarum</i> (Berk. & M.A. Curtis) Jun F. Li, Ariyaw. & K.D. Hyde	<i>Pithomyces chartarum</i> (Berk. & Curt.) M.B. Ellis
<i>Pseudopyricularia higginsii</i> (Luttr.) Klaubauf, M.-H. Lebrun & Crous	<i>Dactylaria higginsii</i> (Luttr.) M.B. Ellis
<i>Pseudoseptoria donacis</i> (Pass.) B. Sutton	<i>Selenophoma donacis</i> (Pass.) Sprag. & Johns.
<i>Puccinia brachypodii</i> var. <i>arrhenatheri</i> (Kleb.) Cummins & H.C. Greene	<i>Puccinia arrhenatheri</i> (Kleb.) Eriks
<i>Puccinia carthami</i> var. <i>oxyacanthae</i> S. Ahmad	<i>Puccinia oxyacanthae</i> (S. Ahmad) Savile
<i>Puccinia conglomerata</i> (F. Strauss) Röhl.	<i>Puccinia syngenesiarum</i> Link
<i>Puccinia dioicae</i> var. <i>silvatica</i> (J. Schröt.) D.M. Hend.	<i>Puccinia silvatica</i> J. Schröt.
<i>Puccinia epilobi-tetragoni</i> (DC.) G. Winter	<i>Puccinia pulverulenta</i> Grev.
<i>Puccinia graminis</i> Pers.	<i>Aecidium berberidis</i> Pers. ex J.F. Gmel.
<i>Puccinia inquinans</i> f. <i>bardanae</i> Wallr.	<i>Puccinia bardanae</i> (Wallr.) Corda

**Table 3 (Continued)**

<i>Puccinia mertensiae</i> Peck	<i>Puccinia hydrophylli</i> subsp. <i>mertensiae</i> (Peck) Hennen
<i>Puccinia moliniae</i> Tul. & C. Tul.	<i>Puccinia nemoralis</i> Otth
<i>Puccinia nerviphila</i> Grognot	<i>Uromyces nerviphilus</i> (Grogn.) Host.
<i>Puccinia pseudomeniae</i> G. Cunn.	<i>Puccinia menthae</i> var. <i>pseudomeniae</i> (G. Cunn.) J.W. Baxter
<i>Puccinia retifera</i> Lindr.	<i>Puccinia chaerophylli</i> var. <i>retifera</i> (Lindr.) U. Braun
<i>Puccinia scorzonerae</i> (Schumach.) Juel	<i>Puccinia jackyana</i> Gäum. & Jørst.
<i>Puccinia suaveolens</i> (Pers.) Rostr.	<i>Uredo suaveolens</i> Pers.
<i>Pucciniastrum guttatum</i> (J. Schröt.) Hyl., Jørst. & Nannf.	<i>Thekopsora guttata</i> (J. Schröt.) P. Syd. & Syd.
<i>Purpureocillium lilacinum</i> (Thom) Luangsa-ard, Houbraken, Hywel-Jones & Samson	<i>Paecilomyces lilacinus</i> (Thom) Samson
<i>Pyrenophora biseptata</i> (Sacc. & Roum.) Crous	<i>Drechslera biseptata</i> (Sacc. & Roum.) Richardson & Fraser
<i>Pyrenophora dictyoides</i> A.R. Paul & Parbery	<i>Drechslera dictyoides</i> (Drechsler) Shoemaker
<i>Pyrenophora poae</i> (Baudyš) Y. Marín & Crous	<i>Drechslera poae</i> (Baudys) Shoemaker
<i>Pyrenophora teres</i> Drechsler	<i>Drechslera graminea</i> (Rabenh. ex Schltl.) Shoemaker <i>Drechslera teres</i> (Sacc.) Shoemaker <i>Helminthosporium gramineum</i> Rabenh. ex Schltl. <i>Helminthosporium teres</i> Sacc. <i>Pyrenophora graminea</i> Ito & Kurabayashi
<i>Pyrenophora triseptata</i> (Drechsler) Rossman & K.D. Hyde	<i>Drechslera triseptata</i> (Drechsler) Subram. & B.L. Jain
<i>Pyrenophora tritici-repentis</i> (Died.) Drechsler	<i>Drechslera tritici-repentis</i> (Died.) Shoemaker
<i>Pyrrhulomyces astragalinus</i> (Fr.) E.J. Tian & Matheny	<i>Pholiota astragalina</i> (Fr.) Singer
<i>Quambalaria cyanescens</i> (de Hoog & G.A. de Vries) Z.W. de Beer, Begerow & R. Bauer	<i>Sporothrix cyanescens</i> de Hoog & de Vries
<i>Quasipucciniastrum ochraceum</i> (Bonord.) M. Scholler & U. Braun	<i>Pucciniastrum agrimoniae</i> (Dietel) Tranzschel
<i>Racocetra coralloidea</i> (Trappe, Gerd. & I. Ho) Oehl, F.A. Souza & Sieverd.	<i>Scutellospora coralloidea</i> (Trappe, Gerd. & I. Ho) C. Walker & F.E. Sanders

**Table 3 (Continued)**

<i>Racocetra fulgida</i> (Koske & C. Walker) Oehl, F.A. Souza & Sieverd.	<i>Scutellospora fulgida</i> Koske & C. Walker
<i>Raduliporus aneirinus</i> (Sommerf.) Spirin & Zmitr.	<i>Tyromyces aneirinus</i> (Sommerf.) Bond. & Singer
<i>Ramaria spinulosa</i> (Pers.) Quél.	<i>Clavaria spinulosa</i> Pers.
<i>Ramularia digitalis</i> (Fuckel) U. Braun	<i>Ramularia variabilis</i> Fuckel
<i>Ramularia inaequalis</i> (Preuss) U. Braun	<i>Ramularia picridis</i> Fautrey & Roum.
<i>Redeckera fulvum</i> (Berk. & Broome) C. Walker & A. Schüßler	<i>Glomus fulvum</i> (Berk. & Broome) Trappe & Gerd.
<i>Remotidymella destructiva</i> (Plowr.) Valenz.-Lopez, Cano, Crous, Guarro & Stchigel	<i>Phoma destructiva</i> Plowr.
<i>Reticularia hortensis</i> Bull.	<i>Spumaria alba</i> (Bull.) DC.
<i>Rhizoctonia fusispora</i> (J. Schröt.) Oberw., R. Bauer, Garnica & R. Kirschner	<i>Uthatobasidium fusisporum</i> (Schroet.) Donk
<i>Rhizoctonia orobanches</i> Mérat	<i>Urocystis orobanches</i> (Mérat) F. von Waldh.
<i>Rhizoglonus aggregatum</i> (N.C. Schenck & G.S. Sm.) Sieverd., G.A. Silva & Oehl	<i>Glomus aggregatum</i> N.C. Schenck & G.S. Sm.
<i>Rhizoglonus clarum</i> (T.H. Nicolson & N.C. Schenck) Sieverd., G.A. Silva & Oehl	<i>Rhizophagus clatus</i> (T.H. Nicolson & N.C. Schenck) C. Walker & A. Schüßler
<i>Rhizoglonus invermaium</i> (I.R. Hall) Sieverd., G.A. Silva & Oehl	<i>Glomus invermaium</i> I.R. Hall
<i>Rhizoglonus manihotis</i> (R.H. Howeler, Sieverd. & N.C. Schenck) Sieverd., G.A. Silva & Oehl	<i>Rhizophagus manihotis</i> (R.H. Howeler, Sieverding & N.C. Schenck.) C. Walker & A. Schüßler
<i>Rhizoglonus microaggregatum</i> (Koske, Gemma & P.D. Olexia) Sieverd., G.A. Silva & Oehl	<i>Glomus microaggregatum</i> Koske, Gemma & P.D. Olexia
<i>Rhizopus arrhizus</i> A. Fisch.	<i>Rhizopus oryzae</i> Went & Prins. Geerl.
<i>Rhodonia placenta</i> (Fr.) Niemelä, K.H. Larss. & Schigel	<i>Tyromyces placenta</i> (Fr.) Ryvarden
<i>Rhodophyllus griseoluridus</i> Kühner	<i>Entoloma griseoluridum</i> (Kühner) M. M. Moser
<i>Rhodotorula babjevae</i> (Golubev) Q.M. Wang, F.Y. Bai, M. Groenew. & Boekhout	<i>Rhodosporidium babjevae</i> Golubev
<i>Rhodotorula diobovata</i> (S.Y. Newell & I.L. Hunter) Q.M. Wang, F.Y. Bai, M. Groenew. & Boekhout	<i>Rhodosporidium diobovatum</i> Newll & I.I. Hunter

**Table 3 (Continued)**

<i>Rigidoporus ulmarius</i> (Sowerby) Imazeki	<i>Fomes cytisinus</i> (Berk.) Gillek. <i>Fomitopsis cytisina</i> (Berk.) Bond. & Singer
<i>Rosisphaerella rosicola</i> (Pass.) U. Braun, C. Nakash., Videira & Crous	<i>Cercospora rosicola</i> Pass. <i>Passalora rosicola</i> (Pass.) U. Braun <i>Mycosphaerella rosicola</i> B.H. Divis ex Deighton
<i>Russula cyanoxantha</i> (Schaeff.) Fr.	<i>Russula cyanoxantha</i> (Schaeff.) Fr.
<i>Russula cyanoxantha</i> var. <i>variata</i> (Banning) Singer	<i>Russula variata</i> Banning
<i>Russula integra</i> (L.) Fr.	<i>Russula polychroma</i> Singer ex Hora.
<i>Russula ochracea</i> Fr.	<i>Agaricus salignus</i> var. <i>ochraceus</i> (Pers.) Pers.
<i>Russula rosea</i> Pers.	<i>Russula lepida</i> Fr.
<i>Russula virescens</i> (Schaeff.) Fr.	<i>Russula aeruginosa</i> Pers.
<i>Saccobolus glaber</i> (Pers.) Lambotte	<i>Ascobolus glaber</i> Pers.
<i>Saccosoma sphaerosporum</i> (Möller) Spirin	<i>Saccoblastia sphaerospora</i> Möller
<i>Saccothecium sepincola</i> (Fr.) Fr.	<i>Metasphaeria sepincola</i> (Berk. & Broome) Sacc.
<i>Saitozyma podzolica</i> (Babeva & Reshetova) Xin Zhan Liu, F.Y. Bai, M. Groenew. & Boekhout	<i>Cryptococcus pozolicus</i> (Bab'eva & Reshetova) W. Golubev
<i>Sanghuangporus baumii</i> (Pilát) L.W. Zhou & Y.C. Dai	<i>Phellinus baumii</i> Pilát
<i>Sarcodontia uda</i> (Fr.) Nikol.	<i>Mycoacia uda</i> (Fr.) Donk
<i>Sarocladium kiliense</i> (Grütz) Summerbell	<i>Acremonium kiliense</i> Grütz
<i>Sarocladium strictum</i> (W. Gams) Summerbell	<i>Acremonium strictum</i> W. Gams
<i>Schizothyrium jamaicense</i> (E.W. Mason) Rossman	<i>Zygophiala jamaicensis</i> E.W. Mason
<i>Scirrhia rimosa</i> (Alb. & Schwein.) Fuckel	<i>Hadrotrichum phragmitis</i> Fuckel
<i>Scleroderma herculaneum</i> Pers.	<i>Phellorinia herculeana</i> (Pers.) Kreisel
<i>Sclerotium oryzae</i> Catt.	<i>Nakataea oryzae</i> (Catt.) J. Luo & N. Zhang
<i>Scolecobasidium ferulae</i> (Z. Tazik & K. Rahnama) T.P. Wei & Y.L. Jiang	<i>Ochroconis ferulica</i> Z. Tazik & K. Rahnama
<i>Scolecostigmina palmivora</i> (Sacc.) Kamal	<i>Stigmina palmivora</i> (Sacc.) S. Hughes
<i>Scutellospora erythropus</i> (Koske & C. Walker) C. Walker & F.E. Sanders	<i>Scutellospora erythropus</i> (Koske & C. Walker) C. Walker & F.E. Sanders

**Table 3 (Continued)**

<i>Septobasidium rameale</i> (Berk.) Bres.	<i>Stereum rameale</i> (Berk.) Massee
<i>Septoglomus viscosum</i> (T.H. Nicolson) C. Walker, D. Redecker, Stiller & A. Schüßler	<i>Glomus viscosum</i> T.H. Nicolson <i>Viscospora visciosa</i> (T.H. Nicolson) Sieverding, Oehl & F.A. Souza
<i>Septoria astragali</i> Desm.	<i>Phaeoseptoria astragali</i> (Desm.) Vasyag.
<i>Septoria badhamii</i> var. <i>fraxini</i> Auersw.	<i>Septoria fraxini</i> Desm.
<i>Septoria calystegiae</i> Westend.	<i>Stagonospora calystegiae</i> (Westend.) Grove
<i>Septoria euphorbiae</i> Guépin	<i>Septoria guepini</i> Oudem.
<i>Septoria hedericola</i> (Fr.) Jørst.	<i>Septoria hederae</i> Desm.
<i>Septoria pistaciae</i> Desm.	<i>Cylindrosporium pistaciae</i> (Allesc.) Rieuf
<i>Septoriella hirta</i> (Sacc.) M. Hern.-Restr. & Crous	<i>Wojnowicia graminis</i> (Mc Alp) Sacc. & D. Sacc.
<i>Setophoma terrestris</i> (H.N. Hansen) Gruyter, Aveskamp & Verkley	<i>Pyrenophaeta terrestris</i> (Hansen) Gorenz, Walker & Larson
<i>Sibirina purpurea</i> Morgan-Jones	<i>Cladobotryum purpureum</i> (Morgan-jones) Helfer
<i>Sidera lenis</i> (P. Karst.) Miettinen	<i>Antrodia lenis</i> (P. Karst.) Ryvarden <i>Poria lenis</i> (P. Karst.) Sacc.
<i>Sidera vulgaris</i> (Fr.) Miettinen	<i>Cinereomyces vulgaris</i> (Fr.) Spirin
<i>Sieverdingia tortuosa</i> (N.C. Schenck & G.S. Sm.) Blaszk., Niezgoda & B.T. Goto	<i>Corymbiglomus tortuosum</i> (N.C. Schenck & G.S. Sm.) Blaszk. & Chwat <i>Glomus tortuosum</i> N.C. Schenck & G.S. Sm.
<i>Solicocozyma aeria</i> (Saito) Yurkov	<i>Cryptococcus aerius</i> (Saito) NannCom fatta R. Accad Fisiocrit
<i>Solicocozyma terrea</i> (Di Menna) Yurkov	<i>Cryptococcus terreus</i> di Menna
<i>Sorosporium corsicum</i> Mayor & Terrier	<i>Urocystis corsica</i> (Mayor & Terrier) Vánky
<i>Sorosporium desertorum</i> Thüm.	<i>Sporisorium desertorum</i> (Thüm.) Vánky
<i>Sphaceloma rosarum</i> (Pass.) Jenkins	<i>Phyllosticta rosarum</i> Pass.
<i>Sphacelotheca andropogonis</i> (Opiz) Bubák	<i>Ustilago ischaemi</i> Fuckel <i>Sporisorium andropogonis</i> (Opiz) Vánky
<i>Sphacelotheca foveolati</i> Maire	<i>Sporisorium foveolati</i> (Maire) Vánky
<i>Sphacelotheca schweinfurthiana</i> (Thüm.) Sacc.	<i>Sporisorium schweinfurthianum</i> (Thüm.) Vánky

**Table 3 (Continued)**

<i>Sphaerella spinarum</i> Auersw.	<i>Mycosphaerella spinarum</i> (Auersw.) Petr.
<i>Sphaerellopsis filum</i> (Biv.) B. Sutton	<i>Ascochyta graminicola</i> Sacc.
<i>Sphaeria coronillae</i> Fr.	<i>Cucurbitaria coronillae</i> (Fr.) Sacc.
<i>Sphaeria culmicola</i> Fr.	<i>Leptosphaeria culmicola</i> (Fr.) Auersw.
<i>Sphaeria jasminicola</i> Desm.	<i>Phyllosticta jasminicola</i> (Desm.) Sacc.
<i>Sphaeria lactucarum</i> Schwein.	<i>Rhabdospora lactucarum</i> (Schw.) Starb.
<i>Sphaeria lonicerae</i> Fr.	<i>Lasiobotrys lonicerae</i> (Fr.) Kunze
<i>Sphaeropsis ephedrae</i> Auersw.	<i>Coleoseptoria ephedrae</i> (Auersw.) Petr.
<i>Sphaeropsis evonymella</i> Traverso & Migliardi	<i>Botryodiplodia euonymella</i> (Trav. & Migl.) Petr.
<i>Sphaeropsis gallae</i> (Schwein.) W.A. Archer	<i>Diplodia gallae</i> (Schwein.) Crous
<i>Sphaerulina aceris</i> (Lib.) Verkley, Quaedvli. & Crous	<i>Didymosporina aceris</i> (Lib.) v. Höhn. <i>Phloeospora aceris</i> (Lib.) Sacc. <i>Septoria aceris</i> (Lib.) Berk. & Broome
<i>Sphaerulina berberidis</i> (Niessl) Quaedvli., Verkley & Crous	<i>Mycosphaerella berberidis</i> (Auersw.) Lindau
<i>Sphaerulina oxyacanthae</i> (Kunze & J.C. Schmidt) Quaedvli., Verkley & Crous	<i>Septoria oxyacanthae</i> J.C. Schmidt ex Kunze <i>Phloeospora oxyacanthae</i> (J.C. Schmidt ex Kunze) Wallr.
<i>Sporisorium scitamineum</i> (Syd.) M. Piepenbr., M. Stoll & Oberw.	<i>Ustilago scitaminea</i> Syd.
<i>Sporocadus lichenicola</i> Corda	<i>Seimatosporium lichenicola</i> (Corda) Shoemaker & E. Müll.
<i>Sporormiella australis</i> (Speg.) S.I. Ahmed & Cain	<i>Preussia australis</i> (Speg.) Arx
<i>Stachybotrys microsporus</i> (B.L. Mathur & Sankhla) S.C. Jong & E.E. Davis	<i>Stachybotrys microspora</i> (B.L. Mathur & Sankhla) S.C. Jong & E.E. Davis
<i>Stagonospora tussilaginis</i> Died.	<i>Hendersonia tussilaginis</i> (Fuckel) Petr.
<i>Steccherinum fimbriatum</i> (Pers.) J. Erikss.	<i>Steccherinum fimbriatum</i> (Fr.) Erkiss.
<i>Steccherinum laeticolor</i> (Berk. & M.A. Curtis) Banker	<i>Steccherinum robustius</i> (J. Erikss. & Lundell) J. Erikss.
<i>Stemonitis axifera</i> (Bull.) T. Macbr.	<i>Stemonitis smithii</i> T. Macbr.
<i>Stemonitis fusca</i> Roth	<i>Stemonitis nigrescens</i> Rex

**Table 3 (Continued)**

<i>Stemphylium vesicarium</i> (Wallr.) E.G. Simmons	<i>Pleospora herbarum</i> (Pers.) Rabenh. <i>Pleospora salsolae</i> Fuckel
<i>Stigmina carpophila</i> (Lév.) M.B. Ellis	<i>Wilsonomyces carpophilus</i> (Lév.) Adask., J.M. Ogawa & E.E. Butler
<i>Stilbella aciculosa</i> (Ellis & Everh.) Seifert	<i>Volutella citrinella</i> (Cooke & Massee) Seifert
<i>Striaticonidium brachysporum</i> (Nicot) L. Lombard & Crous	<i>Myrothecium brachysporum</i> Nicot
<i>Suillellus queletii</i> (Schulzer) Vizzini	<i>Boletus queletii</i> Schulzer
<i>Talaromyces minioluteus</i> (Dierckx) Samson, Yilmaz, Frisvad & Seifert	<i>Penicillium minioluteum</i> Dierckx
<i>Talaromyces pinophilus</i> (Hedg.) Samson, Yilmaz, Frisvad & Seifert	<i>Penicillium polonicum</i> K.W. Zaleski
<i>Talaromyces variabilis</i> (Sopp) Samson, Yilmaz, Frisvad & Seifert	<i>Penicillium variable</i> Sopp
<i>Taphrina alni</i> (Berk. & Broome) Gjaerum	<i>Taphrina alni-incanae</i> (Kühn) Sadeb. <i>Taphrina amentorum</i> (Sadeb.) Rostrup
<i>Tausonia pullulans</i> (Lindner) Xin Zhan Liu, F.Y. Bai, M. Groenew. & Boekhout	<i>Trichosporon pullulans</i> Diddens & Lodder
<i>Teratosphaeria epicoccoides</i> (Cooke & Massee) Rossman & W.C. Allen	<i>Kirramyces epicoccoides</i> (Cooke & Massee) J. Walker, B. Sutton & Pascoe
<i>Terfezia arenaria</i> (Moris) Trappe	<i>Terfezia leonis</i> (Tul.) Tul.
<i>Terfezia pinoyi</i> Maire	<i>Tirmania pinoyi</i> (Maire) Malençon
<i>Thaxterogaster causticus</i> (Fr.) Niskanen & Liimat.	<i>Cortinarius causticus</i> Fr.
<i>Thaxterogaster vespertinus</i> (Fr.) Niskanen & Liimat.	<i>Cortinarius vespertinus</i> (Fr.) Fr.
<i>Thaxterogaster vibratilis</i> (Fr.) Niskanen & Liimat.	<i>Cortinarius vibratilis</i> (Fr.) Fr.
<i>Thelephora ellisii</i> (Sacc.) Zmitr.	<i>Tomentella ochracea</i> (Sacc.) M.J. Larsen
<i>Thelonectria lucida</i> (Höhn.) P. Chaverri & C. Salgado	<i>Cylindrocarpon lucidum</i> C. Booth <i>Neonectria lucida</i> (Höhn.) Samuels & Brayford
<i>Thielaviopsis paradoxa</i> (De Seynes) Höhn.	<i>Ceratocystis paradoxa</i> (Dade) C. Moreau
<i>Thielaviopsis radicicola</i> (Bliss) Z.W. de Beer & W.C. Allen	<i>Ceratocystis radicicola</i> (D.E. Bliss) C. Moreau

**Table 3 (Continued)**

<i>Thyridium desertorum</i> Petr.	<i>Mycothyridium desertorum</i> (Petr.) Petr.
<i>Thyridium fusicporum</i> Petr.	<i>Xylosphaeria fusicpora</i> Petr. <i>Mycothyridium fusicporum</i> (Petr.) Petr.
<i>Tilachlidium larvarum</i> Petch	<i>Acremonium larvarum</i> (Petch) W. Gams
<i>Tilletia caries</i> (DC.) Tul. & C. Tul.	<i>Tilletia foetida</i> (Wallr.) Liro
<i>Tilletia indica</i> Mitra	<i>Neovossia indica</i> (M. Mitra) B.B. Mundkur
<i>Tomentella fusca</i> (Pers.) J. Schröt.	<i>Tomentella ferruginea</i> (Pers.) Pat.
<i>Tomentella lilacinogrisea</i> Wakef.	<i>Tomentella neobourdotii</i> M.J. Larsen
<i>Tomophagus colossus</i> (Fr.) Murrill	<i>Ganoderma colossus</i> (Fr.) C.F. Baker
<i>Torulaspora delbrueckii</i> (Lindner) Lindner	<i>Saccharomyces fermentati</i> (Saito) Lodder & Kreger-van Rij <i>Saccharomyces rosei</i> (Guillierm.) Lodder & Kreger <i>Torulaspora rosei</i> Guilliermond
<i>Trametes versicolor</i> (L.) Lloyd	<i>Polyporus nigriscans</i> Lasch
<i>Trametopsis cervina</i> (Schwein.) Tomsovský	<i>Antrodia cervina</i> (Schwein.) Kotl. & Pouzar <i>Trametes cervina</i> (Schwein.) Bres.
<i>Tremella sparassoidea</i> Lloyd	<i>Tremella mesenterica</i> (Schaeff.) Retz. <i>Tremella reticulata</i> (Berk.) Farl.
<i>Triangularia pauciseta</i> (Ces.) X. Wei Wang & Houbreken	<i>Podospora pauciseta</i> (Ces.) Traverso.
<i>Trichia typhoides</i> Bull.	<i>Stemonitis typhoides</i> (Bull.) DC.
<i>Trichocladium acropullum</i> (X. Wei Wang) X. Wei Wang & Houbreken	<i>Chaetomium acropullum</i> X. Wei Wang
<i>Trichocladium crispatum</i> (Fuckel) X. Wei Wang & Houbreken	<i>Chaetomium crispatum</i> (Fuckel) Fuckel
<i>Trichocladium griseum</i> (Traaen) X. Wei Wang & Houbreken	<i>Humicola grisea</i> Traaen
<i>Trichoderma andinense</i> (Samuels & Petrini) Samuels	<i>Hypocrea andinensis</i> Samuel & O. Petrini
<i>Trichoderma deliquescens</i> (Sopp) Jaklitsch	<i>Gliocladium deliquescens</i> Sopp.
<i>Trichoderma ghanense</i> Yoshim. Doi, Y. Abe & Sugiy	<i>Trichoderma parceramosum</i> Bissett

**Table 3 (Continued)**

<i>Trichoderma viride</i> Pers.	<i>Hypocrea rufa</i> (Pers.) Fr.
<i>Tricholoma equestre</i> (L.) P. Kumm.	<i>Tricholoma flavovirens</i> (Pers.) S. Lundell
<i>Trichothecium roseum</i> (Pers.) Link	<i>Trichoderma roseum</i> (Pers.) Link
<i>Tuburcinia behboudii</i> Esfand.	<i>Urocystis behboudii</i> (Esfand.) Vánky
<i>Tulosesus angulatus</i> (Peck) D. Wächt. & A. Melzer	<i>Coprinellus angulatus</i> (Peck) Redhead, Vilgalys & Moncalvo <i>Coprinus angulatus</i> Peck
<i>Tulosesus impatiens</i> (Fr.) D. Wächt. & A. Melzer	<i>Coprinus impatiens</i> (Fr.) Quél. <i>Coprinellus impatiens</i> (Fr.) J.E. Lange
<i>Tulosesus subimpatiens</i> (M. Lange & A.H. Sm.) D. Wächt. & A. Melzer	<i>Coprinellus subimpatiens</i> (M. Lange & A.H. Sm.) Redhead, Vilgalys & Moncalvo <i>Coprinus subimpatiens</i> M. Lange & A.H. Sm.
<i>Uredo aristolochiae</i> Schleich. ex DC.	<i>Puccinia aristolochiae</i> (DC.) Wint.
<i>Uredo balsamitae</i> F. Strauss	<i>Puccinia balsamitae</i> (F. Strauss) Rabenh.
<i>Uredo cichorii</i> DC.	<i>Puccinia cichorii</i> (DC.) Bellynck
<i>Uredo hysterium</i> F. Strauss	<i>Puccinia hysterium</i> Röhl.
<i>Uredo imperatae</i> Magnus	<i>Puccinia imperatae</i> (Magnus) Poirault
<i>Uredo isiacae</i> Thüm.	<i>Puccinia isiacae</i> (Thüm.) G.Winter
<i>Uredo magnusiana</i> (G.H. Wagner) Arthur	<i>Melampsora magnusiana</i> G. Wagner
<i>Uromyces betae</i> (Pers.) J. Kickx f.	<i>Uromyces beticola</i> (Bellynck) Boerema, Loer. & Hamers
<i>Uromyces caryophyllinus</i> (Schrank) G. Winter	<i>Uromyces dianthi</i> (Pers.) Niessl.
<i>Uromyces chenopodii-fruticosi</i> (DC.) M. Abbasi & Aime	<i>Uromyces chenopodii</i> J. Schröt.
<i>Uromyces pisi-sativi</i> (Pers.) Liro	<i>Uromyces onobrychidis</i> Bubák
<i>Uromyces poae</i> Rabenh.	<i>Uromyces dactylidis</i> var. <i>poae</i> (Rabenh.) Grov
<i>Uromyces striatus</i> var. <i>loti</i> (A. Blytt) Arthur	<i>Uromyces loti</i> Blytt
<i>Uromyces viciae-fabae</i> var. <i>orobi</i> (Schumach.) Jørst.	<i>Uromyces orobi</i> (Pers.) Lév.
<i>Ustilago bullata</i> Berk.	<i>Ustilago bromivora</i> (Tul. & C. Tul.) A.A. Fisch. Waldh.

**Table 3 (Continued)**

<i>Ustilago hypodytes</i> (Schltdl.) Fr.	<i>Tranzscheliella hypodytes</i> (Schltdl.) Vánky
<i>Ustilago salweyi</i> Berk. & Broome	<i>Ustilago salveii</i> Berk. & Broome <i>Ustilago striiformis</i> (Westend.) Niessl
<i>Ustilago tricholaenae</i> Henn.	<i>Sporisorium tricholaenae</i> (P. Henn.) Vánky
<i>Valsa mori</i> Nitschke	<i>Cryptovalsa mori</i> (Nitschke) Lar.N. Vassiljeva
<i>Vankya ornithogali</i> (J.C. Schmidt & Kunze) Ershad	<i>Uromyces ornithogali</i> (Wallr.) Niessl
<i>Venturia carpophila</i> E.E. Fisher	<i>Cladosporium carpophilum</i> (Lév.) Aderh. <i>Fusicladium carpophilum</i> (Thüm.) Oudem.
<i>Venturia inaequalis</i> (Cooke) G. Winter	<i>Fusicladium dendriticum</i> (Wallr.) Fuckel <i>Fusicladium eriobotryae</i> Cav. <i>Fusicladium pomi</i> (Fr.) Lind <i>Fusicladium pyracanthae</i> (Thüm.) O. Roser <i>Spilocaea eriobotryae</i> (Cav.) Hughes <i>Spilocaea pomi</i> Fr.
<i>Venturia juncaginearum</i> (Lasch) M.E. Barr	<i>Asteroma juncaginearum</i> Rabh.
<i>Venturia maculiformis</i> (Desm.) G. Winter	<i>Spilosticta maculaformis</i> (Desm.) Petr.
<i>Venturia oleaginea</i> (Castagne) Rossman & Crous	<i>Cycloconium oleagineum</i> Castagne <i>Fusicladium oleagineum</i> (Castagne) Ritscel & U. Braun <i>Spilocaea oleaginea</i> (Castagne) Hughes
<i>Venturia pyrina</i> Aderh.	<i>Fusicladium virescens</i> Bon. <i>Megacladosporium pyrorum</i> (Lib.) Vienn.-Bourg.
<i>Vitreoporus dichrous</i> (Fr.) Zmitr.	<i>Leptoporus dichrous</i> (Fr.) Quél. ; <i>Gloeoporus dichrous</i> (Fr.) Bres.
<i>Volvaria iranica</i> Fallahyan	<i>Volvariella iranica</i> (Fallahyan) M.Z. Szczechka
<i>Waitea ziae</i> (Voorhees) J.A. Crouch & Cubeta	<i>Rhizoctonia ziae</i> Voorhees
<i>Wilsonomyces carpophilus</i> (Lév.) Adask., J.M. Ogawa & E.E. Butler	<i>Coryneum carpophilum</i> (Lév.) Jauch; <i>Coryneum beyerinckii</i> Oud. <i>Thyrostroma carpophilum</i> (Lév.) B. Sutton <i>Clasterosporium carpophilum</i> (Lév.) Aderh.

**Table 3 (Continued)**

<i>Xenasma tulasnelloideum</i> (Höhn. & Litsch.) Donk	<i>Xenasmatella tulasnelloidea</i> (v. Höhn. & Litsch.) Oberw. ex Jülich
<i>Xenasmatella alnicola</i> (Bourd. & Galzin) K.H. Larss. & Ryvarden	<i>Trechispora alnicola</i> (Bourd. & Galzin) Libert
<i>Xenasmatella fibrillosa</i> (Hallenberg) Stalpers	<i>Trechispora fibrillosa</i> Hallenberg
<i>Xenasmatella vaga</i> (Fr.) Stalpers	<i>Trechispora vaga</i> (Fr.) Libert
<i>Xenoacremonium recifei</i> (Leão & Lôbo) L. Lombard & Crous	<i>Acremonium recifei</i> (Leão & Lôbo) W. Gams
<i>Xerula longipes</i> (Quél.) Maire	<i>Oudemansiella badia</i> (Lucand) M.M. Moser
<i>Xylodon flaviporus</i> (Berk. & M.A. Curtis ex Cooke) Riebesehl & E. Langer	<i>Poria pseudoobducens</i> Pil. ex Pil. <i>Schizopora carneo-lutea</i> (Rodw. & Clel.) Kotl. & Pouz. <i>Schizopora phellinoides</i> (Pil.) Dom. <i>Schizopora subiculoides</i> (Lloyd) Ryvarden
<i>Xylodon nesporii</i> (Bres.) Hjortstam & Ryvarden	<i>Hyphodontia nespori</i> (Bres.) J.Erikss. & Hjortstam
<i>Xylodon paradoxus</i> (Schrad.) Chevall.	<i>Hyphodontia paradoxa</i> (Schrad.) Langer & Vesterh <i>Schizopora paradoxa</i> (Schrad) Donk
<i>Xylodon quercinus</i> (Pers.) Gray	<i>Hyphodontia quercina</i> (Fr.) J. Erikss.
<i>Xylodon spathulatus</i> (Schrad.) Kuntze	<i>Hyphodontia spathulata</i> (Fr.) Parm.
<i>Xylodon subtropicus</i> (C.C. Chen & Sheng H. Wu) C.C. Chen & Sheng H. Wu	<i>Hyphodontia radula</i> (Pers.) Langer & Vesterh. <i>Schizopora radula</i> (Pers.) Hallenberg <i>Xylodon raduloides</i> Riebesehl & Langer

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## بررسی تفصیلی آمار قارچ‌ها و شبه قارچ‌های ایران

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**چکیده:** مقاله مژده حاضر برای اولین بار، به بررسی تفصیلی آمار قارچ‌ها و شبه قارچ‌های ایران و رده‌بندی تمامی آرایه‌هایی که تا انتهای سال ۲۰۲۱ میلادی از کشور گزارش شده‌اند، می‌پردازد. فهرست تمامی سطوح بالای رده‌بندی شامل شاخه‌ها، رده‌ها، راسته‌ها، تیره‌ها و جنس‌های گزارش شده از ایران ارائه شده است. تعداد گونه‌های گزارش شده از هر جنس نیز آورده شده است. در حال حاضر ۴۵۰۰ گونه از ۱۱۹۴ جنس، ۳۶۶ تیره، ۱۱۶ راسته، ۳۸ رده و ۱۳ شاخه از قارچ‌ها و شبه قارچ‌ها از ایران گزارش شده است. از این تعداد، ۴۲۷۱ گونه از ۱۱۵۰ جنس، ۳۵۳ تیره، ۱۰۷ راسته، ۳۴ رده و ۱۰ شاخه، متعلق به سلسله قارچ‌های حقیقی می‌باشند. آرایه‌های باقیمانده به دو سلسله شبه قارچی کرومیستا (۱۹۱ گونه از ۲۳ جنس، چهار تیره، چهار راسته، دو رده و یک شاخه) و پرتوزوا (۳۸ گونه از ۲۱ جنس، نه تیره، پنج راسته، دو رده و دو شاخه) تعلق دارند. شاخه آسکومیکوتا با دربرداشتن ۲۲۷۸ گونه، ۶۵۶ جنس، ۱۸۴ تیره، ۵۵ راسته و ۱۱ رده، و شاخه بازیدیومایکوتا با دربرداشتن ۱۸۵۷ گونه، ۴۴۱ جنس، ۱۳۹ تیره، ۳۹ راسته و ۱۱ رده، فراوان‌ترین گروه‌های قارچی در کشور هستند.

**کلمات کلیدی:** آرایه‌بندی، آمار قارچ‌ها، تنوع زیستی، رده‌بندی سطوح بالا، قارچ شناسی.