Overlooked competing asexual and sexually typified generic names of Ascomycota with recommendations for their use or protection

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Abstract: With the change to one scientific name for fungal species, numerous papers have been published with recommendations for use or protection of competing generic names in major groups of ascomycetes. Although genera in each group of fungi were carefully considered, some competing generic names were overlooked. This paper makes recommendations for additional competing genera not considered in previous papers. Chairs of relevant Working Groups of the ICTF were consulted in the development of these recommendations. A number of generic names need protection, specifically Amarenographium over Amarenomyces, Amniculicola over Anguillospora, Balansia over Ephelis, Claviceps over Sphacelia, Drepanopeziza over Gloeosporidella and Gloeosporium, Golovinomyces over Eudidiomycetes, Holwaya over Crinum, Hypocrella over Aschersonia, Labridella over Griphosphaeriomata, Metacapnodium over Antennularia, and Neoerectia over Cylindrocarpon and Heliscus. The following new combinations are made: Amniculicola longissima, Atlichia maunauluana, Diaporthe columnaris, D. liquidambaris, D. longiparaphysata, D. palmicola, D. tersa, Elsinoë buicidae, E.caricae, E. choisyae, E. paeoniae, E. psidi, E. zorniae, Eupelte shoemakeri, Godronia myrtilli, G. raduloides, Sarciella mirabilis, S. pulchra, Schizothyrium jamaicense, and Trichotheallus niger. Finally, one new species name, Diaporthe azadirachtea, is introduced to validate an earlier name, and the conservation of Discula with a new type, D. destructiva, is recommended.

Key words: Diaporthales
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INTRODUCTION

With the change to one scientific name for fungi (McNeill et al. 2012), a number of papers have been published with recommendations for use or protection of competing generic names of ascomycetes. These papers address genera in the major groups of Sordariomycetes such as Diaporthales (Rossman et al. 2015a), Hypocreales...
(Rossman et al. 2013, Quandt et al. 2014), Magnaporthales (Zhang et al. 2016), Microcales and Ophiostomatales (de Beer et al. 2013), Xylariaceae (Stadler et al. 2013) and remaining Sordariomycetes (Réblová et al. 2016) as well as Dothideomycetes (Rossman et al. 2015b), Eurotiales (Samson et al. 2014, Visagie et al. 2014), Leotiomycetes including Erysiphales (Braun 2013, Johnston et al. 2014), and yeast fungi (Daniel et al. 2014). A paper on competing genera of Pezizomycetes is concluded in this issue (Healy et al. 2016) and one on competing genera of Basidiomycetes is in preparation (J A Stalpers, pers. comm.). Thus competing generic names in most groups of pleomorphic fungi will then have been considered with recommendations made for use or protection of one generic name. Each of these papers was developed and recommendations approved by a Working Group of the International Committee on the Taxonomy of Fungi (ICTF). Although genera in each group of fungi were carefully considered, some competing generic names were overlooked. This paper makes recommendations for additional competing generic names not considered in previous papers. Table 1 is synopsis of the competing genera discussed in this paper with need for action noted, if necessary. If priority of sexually typified generic names is eliminated as has been proposed (Hawksworth 2015), asexually typified generic names that have priority need not be approved by the Nomenclature Committee on Fungi (NCF) as required now by the ICN. This is noted in Table 1 as required action similar to that required for generic names that do not have priority. Chairs of relevant Working Groups of the ICTF were consulted in the development of these recommendations as reflected in the authorship. Within each previously published paper necessary new combinations were made to place species in the recommended genera, however, additional required new combinations and nomenclatural issues have been discovered and are completed here.

In the following notes, (A) = a name typified by an asexual morph, and (S) = a name typified by a sexual morph.

**EUROTIALES**

The most commonly encountered members of Eurotiales, namely Aspergillus and Penicillium, have been reviewed with one scientific name recommended for each pleomorphic genus and species (Samson et al. 2014, Visagie et al. 2014). However, three additional sets of competing generic names within Eurotiales are considered here.

**Use Monascus Tiegh. 1884 (S) rather than Basipetospora G.T. Cole & W.B. Kendr. 1968 (A) and Backusia Thirum. et al. 1964 (S)**

The asexual morph of the type species of Monascus, *M. ruber*, was described as Basipetospora rubra, type species of Basipetospora, by Cole & Kendrick (1968), and later regarded as *B. vesicarum* (Stalpers 1984), thus these generic names are synonyms. These authors also considered the monotypic genus Backusia based on *B. terricola* to be a synonym of Monascus. Stchigel et al. (2004) provided an account of Monascus recognizing Basipetospora for the asexual morph and placed it in Aspergillaceae. Monascus includes a number of species that are important in food science for which the name Monascus is used exclusively. Monascus includes 30 species, with four names currently accepted in Basipetospora of which the two species described by Matsushima (1975) belong to different orders (Seifert & Gams, unpubl.). Given its priority, the greater number of species, a recent monograph, and its economic importance, the use of Monascus is recommended.

**Use Paecilomyces Bainier 1907 (A) rather than Byssochlamys Westling 1909 (S)**

The type species of Paecilomyces, *P. variotii*, and the type species of Byssochlamys, *B. nivea*, were shown to be congeneric through molecular sequence analyses (Luangsa-ard et al. 2004, Samson et al. 2009), although the relationship between these genera had been known for some time (Stolk & Samson 1971). These fungi are thermotolerant and thus are important in the food and beverage industry as spoilage organisms (Samson et al. 2000). The concept of Paecilomyces had been confused due to the reduced morphology of the asexual reproductive structures, however, many species that are not monophyletic with the type species have now been placed in other genera. These include fungi used in biological control, *Purpureocillium lilicinum* (syn. Paecilomyces lilicinum) and insect pathogens such as *Isaria farinosa* (syn. Paecilomyces farinosus) and *I. fumosoroseus* (syn. Paecilomyces fumosoroseum; Luangsa-ard et al. 2004, 2005). The use of Paecilomyces in the strict sense of those involved in food spoilage is widespread; in a recent Food Mycology workshop held in Freising, Germany, the group discussed these competing generic names and decided to recommend use of the generic name that has priority, namely Paecilomyces (Samson pers. comm.). Although several valid and accepted species of Paecilomyces sensu Stolk & Samson (1971) remain to be renamed, we support the community opinion to maintain the use of Paecilomyces over Byssochlamys.

**Use Xeromyces L.R. Fraser 1954 (S) rather than Fraseriella Cif. & A.M. Corte 1957 (A)**

The type of the monotypic genus Xeromyces, *X. bisporus*, is an extreme xerophilic fungus that can grow in sugary substances and is thus important in food mycology (Dallyn & Everton 1969). The asexual morph of *X. bisporus* was described as Fraseriella bispora, type of the monotypic genus Fraseriella, thus these generic names are synonyms and compete for use. Although an early study suggested that Xeromyces bisporus belonged in Monascus (Stchigel et al. 2004), a more extensive account has shown that Xeromyces is a distinct genus within Eurotiales (Pettersson et al. 2011). Xeromyces has priority and is used more extensively than Fraseriella, thus we recommend the use of Xeromyces.
SORDARIOMYCETES

AMPHISPHAERIALES

Protect Labridella Brenckle 1929 (S) over Griphosphaerioma Höhn. 1918 (A)
The sexual morph of the type species of Labridella, L. comu-cervae, was determined to be Griphosphaerioma kansensis based on Cryptospora kansensis, an earlier name for G. symphoricarpi, by Shoemaker (1963). At present Griphosphaerioma includes one other species, G. zelkovicola, which has an asexual morph referred to as Sarcostroma zelkovicola (Ono & Kobayashi 2003). The generic name Sarcostroma is now regarded as Seimatosporium, thus it seems unlikely that G. zelkovicola is congeneric with the type of Griphosphaerioma. No molecular data exist for any of these species. The name Labridella comu-cervae has been used in two major references (Nag Raj 1993, Sutton 1980) and Labridella is cited more frequently than Griphosphaerioma, thus we recommend Labridella for protection and use.

DIAPORTHALES

Five new combinations and one name validated in Diaporthe
The name Diaporthe has priority over Phomopsis and was recommended for use based on discussions within the Diaporthales Working Group (Rossman et al. 2015a). New combinations in Diaporthe of commonly encountered species were made in that paper. Some names of Phomopsis have been synonymized under older Diaporthe species names redefined using molecular data (Rossman et al. 2014, Udayanga et al. 2014a,b). A number of economically important species of Phomopsis have been sequenced and appear to be unique species within Diaporthe. Based on these sequences and the use of the generic name Diaporthe, we propose a new species to validate a name previously described in Phomopsis and the following five new combinations.

Diaporthe azadirachtae Udayanga & Castl., sp. nov. MycoBank MB819047
Description: Original description as “Phomopsis azadirachtae” in Sateesh et al., Mycotaxon 65: 517 (1997).
Type: India: Karnataka, on dry twigs of Azadirachta indica; 1996, M.K Sateesh (HCIO 42119-holotype; University of Mysore, Manasagangotri, MUBH 983-isotype).
Diaporthe azadirachtae (as “Phomopsis azadirachtae”) causes a serious twig blight disease on Azadirachta indica (Meliaceae), neem, and has been reported in phytopathological literature (Sateesh et al. 1997, Falthima et al. 2004, Girish & Shankara Bhat 2008, Prasad et al. 2009, 2010). This new name replaces “Phomopsis azadirachtae”, which was described with two specimens designated as type and so was not validly published (Art. 40.3). In addition this taxon is now placed in the correct genus, Diaporthe.

Diaporthe columnaris (Farr & Castl.) Udayanga & Castl., comb. nov. MycoBank MB819020.
Basionym: Phomopsis columnaris D.F. Farr & Castl., Mycol. Res. 106: 747 (2002).

Diaporthe liquidambaris (C.Q. Chang et al.) Udayanga & Castl., comb. nov.
MycoBank MB819021.
Basionym: Phomopsis liquidambaris C.Q. Chang et al., Mycosistema 24: 9 (2005).

Diaporthe longiparaphysata (Uecker & K.C. Kuo) Udayanga & Castl., comb. nov.
MycoBank MB819022
Basionym: Phomopsis longiparaphysata Uecker & K.C. Kuo, Mycotaxon 44: 426 (1992).

Diaporthe palmicola (G. Winter) Udayanga & Castl., comb. nov.
MycoBank MB819023
Basionym: Phoma palmicola G. Winter, Grevillea 15: 92 (1887).
Synonym: Phomopsis palmicola (G. Winter) Sacc., Syll. Fung. 25: 132 (1915).

Diaporthe tersa (Sacc.) Udayanga & Castl., comb. nov.
MycoBank MB819024
Basionym: Phoma tersa Sacc., Bolm Soc. broteriana, Coimbra, sér. 1, 11: 16 (1893).
Synonym: Phomopsis tersa (Sacc.) B. Sutton, The Coelomycetes: 573 (1980).

Use Discula Sacc. 1884 based on D. destructiva Redlin 1991
In reviewing the generic names competing for use in Diaporthales, Rossman et al. (2015a) suggested that the generic name Discula based on D. platani, which is now regarded as D. nervisequa but erroneously stated as D. quercina, should be considered a synonym of Apiognomonia. Discula nervisequa is, however, now regarded as Apiognomonia veneta while the sexual morph of D. quercina could not be determined (Sogonov et al. 2007). Most species of Discula are now recognized in Apiognomonia. One widely used species of Discula is not congeneric with the type species and is not synonymous with Apiognomonia, namely Discula destructiva, cause of dogwood anthracnose (Redlin 1991). This species has been shown to fall outside of Apiognomonia but still within Gnomoniaceae, and is not allied with any known genus (Castlebury et al. 2002, Mejia et al. 2012). In order to continue the use of Discula destructiva for the cause of dogwood anthracnose and to eliminate the need for a new generic name and name change, a conservation proposal has been published to conserve Discula with a new type species, D. destructiva (Allen et al. 2016).
Table 1. Recommended generic names that compete for use not considered in previous papers. The recommended accepted generic name is in bold; see text for rationale for these decisions. For each generic name this list provides the authors, its date and place of publication, the type species of the genus, its basionym, their dates of publication, and the currently accepted name, if different. The action required is indicated in the last column such as protection of name that is recommended for use but does not have priority. NCF = Nomenclature Committee for Fungi.

| Recommended generic name | Synonymous alternate morph generic name | Action required |
|--------------------------|----------------------------------------|-----------------|
| **EUROTIALES**           |                                        |                 |
| *Monascus* Tiegh. in Bull. Soc. Bot. France 31: 226. 1884. Type: *M. ruber* Tiegh. 1884. | *Basipetospora* G.T. Cole & W.B. Kendr. in Canad. J. Bot. 46: 991. 1968. Type: *B. rubra* G.T. Cole & W.B. Kendr. 1968, now regarded as *Monascus ruber* Tiegh 1884. *Backusia* Thirum. *et al.* in Mycologia 56: 813. 1965. Type: *B. terricola* Thirum. *et al.* 1965, now regarded as *Monascus ruber* Tiegh 1884. | None. |
| *Paecilomyces* Bainier in Bull. Soc. Mycol. France 23: 26. 1907. Type: *P. variotii* Bainier 1907. | *Byssochlamys* Westling in Svensk Bot. Tidskr. 3: 134. 1909. Type: *B. nivea* Westling 1909, now regarded as *Paecilomyces niveus* Stolk & Samson 1971. | Asexual type. Protection needed by NCF if proposal to change this not accepted. |
| *Xeromyces* L.R. Fraser in Proc. Linn. Soc. New South Wales 78: 245. 1954. [1953]. Type: *X. bisporus* L.R. Fraser 1954. | *Fraseriella* Cif. & A.M. Corte in Atti Ist. Bot. Lab. Crittog. Univ. Pavia, ser. 4 14: 109. 1957. Type: *F. bispora* Cif. & A.M. Corte 1957, now regarded as *Xeromyces bisporus* L.R. Fraser 1954. | None. |
| **AMPHISPHAERIALES**     |                                        |                 |
| *Labridella* Brenckle in Fungi Dakotenses: no. 663. 1929. Type: *L. cornu-cervae* Brenckle 1929. | *Griphosphaerioma* Höhn. in Ber. Deutsch. Bot. Ges. 36: 312. 1918. Type: *G. symphoricarpi* Höhn. 1918, now regarded as *Labridella cornu-cervae* Brenckle 1929. | Protection needed by NCF. |
| **HYPOCREALES**          |                                        |                 |
| *Balansia* Speg. in Anales Soc. Ci. Argent. 19: 45. 1885. Type: *B. claviceps* Speg. 1885. | *Ephelis* Fr., Summa Veg. Scand. 2: 370. 1849. Type: *E. mexicana* Fr. 1849, now regarded as *Balansia claviceps* Speg. 1885. | Protection needed by NCF if proposal to remove sexual type priority is accepted. |
| *Calonectria* De Not. in Comment. Soc. Crittog. Ital. 2: 477. 1867. Type: *C. dalдинiana* De Not. 1867, now regarded as *C. pyrochroa* (Desm.) Sacc. 1878. | *Cylindrocladium* Morgan in Bot. Gaz. 17: 191. 1892. Type: *C. scoparium* Morgan 1892, now regarded as *Calonectria cylindrospora* (Ellis & Everh.) Rossman *et al.* 2015. *Candelospora* Rea & Hawley in Proc. Roy Irish Acad., sect. B, Biol. Sci. 13: 11. 1912. Type: *C. liciicola* Hawley 1912, now regarded as *Calonectria pyrochroa* (Desm.) Sacc. 1878. | None. |
| *Calostilbe* Sacc. & P. Syd., Syll. Fung. 16: 591. 1902. Type: *Calostilbe longiasca* (Möller) Sacc. & P. Syd. 1902, basionym: *Sphaerostilbe longiasca* Möller 1901, now regarded as *Calostilbe striispora* (Ellis & Everh.) Seaver 1928. | *Calostilbellina* Höhn. in Ber. Deutsch. Bot. Ges. 37: 160. 1919. Type: *C. calostilbe* Höhn. 1919, now regarded as *Calostilbe striispora* (Ellis & Everh.) Seaver 1928. *Xenostilbum* Petr. in Sydowia 13: 105. 1959. Type: *X. sydowii* Petr. 1959, now regarded as *Calostilbe striispora* (Ellis & Everh.) Seaver 1928. | None. |
| *Chaetopsina* Rambelli in Atti Accad. Sci. Ist. Bologna, Cl. Sci. Fis. Rendiconti 3: 5. 1956. Type: *C. fulva* Rambelli 1956. | *Chaetopsinectria* J. Luo & W.Y. Zhuang in Mycologia 102: 979. 2010. Type: *C. chaetopsinae* (Samuels) J. Luo & W.Y. Zhuang 2010, basionym: *Nectria chaetopsinae* Samuels 1985, now regarded as *Chaetopsina fulva* Rambelli 1956. | Asexual type. Protection needed by NCF if proposal to change this not accepted. |
Table 1. (Continued).

| Recommended generic name | Synonymous alternate morph generic name | Action required |
|--------------------------|----------------------------------------|-----------------|
| **Claviceps** Tul. in Ann. Sci. Nat., Bot., sér. 3 **20**: 43. 1853. Type: *C. purpurea* (Fr.) Tul. 1853, basionym: *Sphaeria purpurea* Fr. 1823. | *Sphaeléa Lév.* in Mém. Soc. Linn. Paris **5**: 578. 1827. Type: *Sphaeléa segetum* Lév. 1827, now regarded as *Claviceps purpurea* (Fr.) Tul. 1853. | Protection needed by NCF if proposal to remove sexual type priority is accepted. |
| **Rhizostilbella** Wolk in Mycol. Centraabl. **4**: 237. 1914. Type: *R. rubra* Wolk 1914, now regarded as *Corallomycectella repens* (Berk. & M.A. Curtis) Rossman & Samuels 1999. | None. | None. |
| **Neonectria** Wollenw. in Ann. Mycol. **15**: 52. 1917. Type: *N. ramulariae* Wollenw. 1917, now regarded as *Neonectria candidum* (Ehrenb.) Rosman et al. 2015. | *Heliscus* Sacc., in Michelia **2**: 35. 1880. Type: *H. lugdunensis* Sacc. & Therry 1880, now regarded as *Neonectria lugdunensis* (Sacc. & Therry) L. Lombard & Crous 2014. | Protection needed by NCF if proposal to remove sexual type priority is accepted. |
| **Antipodium** Piroz. in Canad. J. Bot. **52**: 1143. 1974. Type: *A. spectabile* Piroz. 1974, now regarded as *Ophionectria trichospora* (Berk. & Broome) Sacc. 1878. | *Viridispora* Samuels & Rossman in Stud. Mycol. **42**: 166. 1999. Type: *V. penicilliferi* (Samuels) Samuels & Rossman 1999, basionym: *Nectria penicilliferi* Samuels 1989, now regarded as *Penicillifer macrosporus* Samuels 1989. | Asexual type. Protection needed by NCF if proposal to change this not accepted. |
| **Corallomycectella** Henn. in Hedwigia **43**: 245. 1904. Type: *C. heinsenii* Henn. 1904, now regarded as *Corallomycectella repens* (Berk. & M.A. Curtis) Rossman & Samuels 1999. | *Rhizostilbella* Wolk in Mycol. Centraabl. **4**: 237. 1914. Type: *R. rubra* Wolk 1914, now regarded as *Corallomycectella repens* (Berk. & M.A. Curtis) Rossman & Samuels 1999. | None. |
| **Neonectria** Wollenw. in Ann. Mycol. **15**: 52. 1917. Type: *N. ramulariae* Wollenw. 1917, now regarded as *Neonectria candidum* (Ehrenb.) Rosman et al. 2015. | *Heliscus* Sacc., in Michelia **2**: 35. 1880. Type: *H. lugdunensis* Sacc. & Therry 1880, now regarded as *Neonectria lugdunensis* (Sacc. & Therry) L. Lombard & Crous 2014. | Protection needed by NCF if proposal to remove sexual type priority is accepted. |
| **Neonectria** Wollenw. in Ann. Mycol. **15**: 52. 1917. Type: *N. ramulariae* Wollenw. 1917, now regarded as *Neonectria candidum* (Ehrenb.) Rosman et al. 2015. | *Heliscus* Sacc., in Michelia **2**: 35. 1880. Type: *H. lugdunensis* Sacc. & Therry 1880, now regarded as *Neonectria lugdunensis* (Sacc. & Therry) L. Lombard & Crous 2014. | Protection needed by NCF if proposal to remove sexual type priority is accepted. |
| **Penicillifer** Emden in Acta Bot. Neerl. **17**: 54. 1968. Type: *P. pulcher* Emden 1968. | None. | None. |
| **Sarcopodium** Ehrenb., Sylv. Mycol. Berol.: **12**: 23. 1818. Type: *S. cincinatum* Ehrenb. 1818. | *Lanatonectria* Samuels & Rossman in Stud. Mycol. **42**: 137. 1999. Type: *L. flocculenta* (Henn. & E. Nyman) Samuels & Rossman 1999, basionym: *Nectria flocculenta* Henn. & E. Nyman 1900, now regarded as *Sarcopodium macalpinei* (Agnihotr. & G.C.S. Barua) B. Sutton 1981. | Asexual type. Protection needed by NCF if proposal to change this not accepted. |
| Recommended generic name | Synonymous alternate morph generic name | Action required |
|--------------------------|----------------------------------------|-----------------|
| **Ustilaginoidea** Bref., Unters. Gesammtgeb. Mykol. 12: 194. 1895. | Type: *U. oryzae* (Pat.) Bref. 1895, basionym: *Tilletia oryzae* Pat. 1887, now regarded as *Ustilaginoidea virens* (Cooke) Takah. 1896. | Protection needed by NCF if proposal to change this not accepted. |
| | Type: *V. virens* (M. Sakurai ex Nakata) E. Tanaka & C. Tanaka 2008, basionym: *Claviceps virens* M. Sakurai ex Nakata 1934, now regarded as *Ustilaginoidea virens* (Cooke) Takah. 1896. | Protection needed by NCF if proposal to change this not accepted. |
| **Volutella** Fr., Syst. Mycol. 3: 458. 1832, nom. cons. | Type: *V. ciliata* (Alb. & Schwein.) Fr. 1832, basionym: *Tubercularia ciliata* Alb. & Schwein. 1805, typ. cons. | Protection needed by NCF if proposal to change this not accepted. |
| | Type: *V. consors* (Ellis & Everh.) J. Luo et al. 2012, basionym: *Dialonectria consors* Ellis & Everh. 1888, now regarded as *Volutella consors* (Ellis & Everh.) Seifert et al. 2011. | Protection needed by NCF if proposal to change this not accepted. |
| **Xenocylindrocladium** Decock et al. in Mycol. Res. 101: 788. 1997. | Type: *X. serpens* Decock et al. 1997. | Protection needed by NCF if proposal to change this not accepted. |
| | Type: *X. consors* Decock et al. in Mycol. Res. 101: 788. 1997. | Protection needed by NCF if proposal to change this not accepted. |
| **SORDARIOMYCETES INSERTAE SEDIS** | *Batistia* Cif. in Ist. Bot. Reale Univ. Reale Lab. Crittog. Pavia Atti, ser. 4 15: 166. 1958. | None. |
| | Type: *B. annulipes* (Mont.) Cif. 1958, basionym: *Thamnomyces annulipes* Mont. 1834. | None. |
| **LEOTIOMYCETES** | *Drepanopeziza* (Klep.) Höhn. in Ann. Mycol. 15: 332. 1917, basionym: *Pseudopeziza* sect. *Drepanopeziza* Kleb. in Z. Pflanzenkrankh. 16: 82. 1906. | Protection needed by NCF if proposal to remove sexual type priority is accepted. |
| | Type: *D. ribis* (Klep.) Höhn. 1917, basionym: *Pseudopeziza ribis* Kleb. 1906. | Protection needed by NCF if proposal to remove sexual type priority is accepted. |
| | Type: *G. castagnei* Desm. & Mont. 1849, now regarded as *Drepanopeziza populii-albae* (Klep.) Nannf. 1932, nom. cons. prop. | Protection needed by NCF if proposal to remove sexual type priority is accepted. |
| | Type: *G. ribis* (Lib.) Petr., (1921), basionym: *Leptothyrium ribis* Lib. 1834, now regarded as *Drepanopeziza ribis* (Klep.) Höhn. 1917. | Protection needed by NCF if proposal to remove sexual type priority is accepted. |
| **Golovinomyces** (U. Braun) Heluta in Biol. Žum. Armen. 41: 357. 1968, basionym: *Erysiphe* sect. *Golovinomyces* U. Braun in Feddes Repert. 88: 659. 1978. | *Euoidium* Y.L. Paul & J.N. Kapoor in Indian Phytopathol. 38: 761. 1985. | Protection needed by NCF if proposal to remove sexual type priority is accepted. |
| | Type: *G. cichoracearum* (DC.) Heluta, 1888, basionym: *Erysiphe cichoracearum* DC. 1805. | Protection needed by NCF if proposal to remove sexual type priority is accepted. |
| **Holwaya** Sacc., Syll. Fung. 8: 646. 1889. | *Crinum* Fr., Novit. Fl. Suec 5: 79. 1819. | Protection needed by NCF. |
| | Type: *H. ophiobolus* (Ellis) Sacc. 1889, basionym: *Bulgaria ophiobolus* Ellis 1883, now regarded as *Holwaya mucida* (Schulzer) Korf & Abawi 1971. | Protection needed by NCF. |
| **Abrothallus** De Not., Abrothallus: 1. 1845. | via. *Vouauxiomycys* Dyko & D. Hawksw. in Lichenologist 11: 57. 1979. | None. |
| | Type: *A. bertianus* De Not. 1849 | None. |
### Table 1. (Continued).

| Recommended generic name | Synonymous alternate morph generic name | Action required |
|--------------------------|-----------------------------------------|-----------------|
| **Acroconidiellina** M.B. Ellis in Mycol. Pap. **125**: 22. 1971. Type: A. loudetiae M.B. Ellis 1971. | Zeuctomorpha Sivan. et al., Bitunicate Ascomyc. & Anam.: 572. 1984. Type: Z. arecae Sivan., P.M. Kirk & Govindu 1984, now regarded as *Acroconidiellina arecae* (Berk. & Broome) M.B. Ellis 1976. | Asexual type. Protection needed by NCF if proposal to change this not accepted. |
| **Amarenographium** O.E. Erikss. in Mycotaxon **15**: 199. 1982. Type: A. metableticum (Trail) O.E. Erikss. 1982, basionym: Camarosporium metableticum Trail 1886. | Amarenomyces O.E. Erikss. in Opera Bot. **25**: 401. 1942 ["1941"]. Type: A. longissima (Sacc. & P. Syd.) Ingold 1942, basionym: Fusarium longissimum Sacc. & P. Syd. 1899, now recognized as *Amniculicola longissima* (Sacc. & P. Syd.) Nadeeshan & K.D. Hyde 2016. | Asexual type. Protection needed by NCF if proposal to conserve *Anguillospora* with new type is accepted. |
| **Amarenicola** Y. Zhang ter & K.D. Hyde in Mycol. Res. **112**: 1189. 2008. Type: A. lignicola Y. Zhang ter & K.D. Hyde 2008. | | None. |
| **Anguillospora** Ingold in Trans. Brit. Mycol. Soc. **25**: 401. 1942 ["1941"]. Type: A. longissima (Sacc. & P. Syd.) Ingold 1942, basionym: Fusarium longissimum Sacc. & P. Syd. 1899, now recognized as *Amniculicola longissima* (Sacc. & P. Syd.) Nadeeshan & K.D. Hyde 2016. | | None. |
| **Atichia** Flot. in Linnaea **23**: 149. 1850. Type: A. mosigii Flot. 1850, now regarded as *Atichia glomerulosa* (Ach.) Stein 1850, basionym: Collema glomerulosum Ach. 1810. | | None. |
| **Atichia** Flot. in Linnaea **23**: 149. 1850. Type: A. mosigii Flot. 1850, now regarded as *Atichia glomerulosa* (Ach.) Stein 1850, basionym: Collema glomerulosum Ach. 1810. | | None. |
| **Blassdalea** Sacc. & P. Syd., Syll. Fung. **16**: 634. 1902. Type: B. disciformis (Rehm) Sacc. & P. Syd. (1902), basionym: Vizella disciformis Rehm 1900. | | None. |
| **Dilophospora** Desm. in Ann. Sci. Nat., Bot., sér. 3 **11**: 233. 1849. Type: C. salinicum Mont. 1849. | | None. |
| **Eupelte** Syd. in Ann. Mycol. **22**: 426. 1924. Type: E. amicta Syd. 1924. | Maurodothina G. Arnaud ex Piroz. & Shoemaker in Canad. J. Bot. **48**: 1326. 1970. Type: M. dothideoides (Ellis & Everh.) Piroz. & Shoemaker 1970, basionym: Asteridium dothideoides Ellis & Everh. 1895, now regarded as *Eupelte dothideoides* (Ellis & Everh.) Arx & E. Müll. 1975. | None. |
| Recommended generic name | Synonymous alternate morph generic name | Action required |
|---------------------------|----------------------------------------|-----------------|
| **Koordersiella** Höhn. in Sitzungsber. Kaiserl. Akad. Wiss., Math.-naturw. Cl., Abt. 1 118: 833. 1909. Type: K. javanica Höhn. 1909. | *Hansfordiellopsis* Deighton in Mycol. Pap. 78: 33. 1960. Type: *H. aburiensis* Deighton 1960, now regarded as *Koordersiella insectivora* (Hansf.) D. Hawksw. & O.E. Erikss. 1987. | None. |
| **Metacapnodium** Speg. in Physis (Buenos Aires 4: 288. 1918. Type: *M. juniperi* (W. Phillips & Plowr.) Speg. 1918, basionym: *Capnodium juniperi* W. Phillips & Plowr. 1885. | *Antennularia* Rchb., Consp. Regni Veget.: 5. 1828. Type: *A. ericophila* (Link) Höhn. 1909, basionym: *Sphaeria ericophila* Link 1809, now regarded as *Metacapnodium ericophilum* (Link) D. Hawksw. & S. Hughes 2013. | Protection needed by NCF if proposal to remove sexual type priority is accepted. |
| **Microxiphium** (Harv. ex Berk. & Desm.) Thüm., Mycoth. Univ. 14: no. 1352. 1879, basionym: *Capnodium* subgen. *Microxiphium* Harv. ex Berk. & Desm. in J. Hort. Soc. 4: 253. 1849. Type: *M. footii* (Harv. ex Berk. & Desm.) Thüm. 1879, basionym: *Capnodium footii* Harv. ex Berk. & Desm. 1849, now regarded as *Microxiphium fagi* (Pers.) S. Hughes 1976. | *Dennisbiella* Bat. & Cif. in Beih. Sydowia 3: 37. 1962. Type: *D. babingtonii* (Berk.) Bat. & Cif. 1962, basionym: *Strigula babingtonii* Berk. (1849), now regarded as *Microxiphium fagi* (Pers.) S. Hughes 1976. | Asexual type. Protection needed by NCF if proposal to change this not accepted. |
| **Mirandina** G. Arnaud ex Matsush., Icon. microfung. Matsush.: 96. 1975. Type: *M. corticola* G. Arnaud ex Matsush. 1975. | *Chaetonecrtioides* Matsush., Matsush. Mycol. Mem. 9: 5. 1996. Type: *C. malayisiana* Matsush. 1996, now regarded as *Mirandina flagelliformis* Matsush. 1987. | Asexual type. Protection needed by NCF if proposal to change this not accepted. |
| **Protoventuria** Berl. & Sacc. in Atti Soc. Veneto-Trentino Sci. Nat. Padova 10: 174. 1887. Type: *P. rosae* (De Not.) Berl. & Sacc. 1887, basionym: *Venturia rosae* De Not. 1855. | *Ramalia* Bat. in Revista Biol.(Lisboa) 1: 110. 1957. Type: *R. veronica* Bat. 1957, now regarded as *Protoventuria parahebicola* B. Sutton & Pascoe 1988. | None. |
## Table 1. (Continued).

| Recommended generic name | Synonymous alternate morph generic name | Action required |
|--------------------------|-----------------------------------------|-----------------|
| **Sarcinella** Sacc. in Michelia 2: 31. 1880. Type: *S. heterospora* Sacc. 1877, now regarded as *S. pulchra* (Sacc.) Seifert 2016. | *Schiffnerula* Höhn. in Sitzungsber. Kaiserl. Akad. Wiss., Math.-naturw. Cl., Abt. 1 118: 867. 1909. Type: *S. mirabilis* Höhn. 1909, now regarded as *Sarcinella mirabilis* (Hohn.) Seifert 2016. | Asexual type. Protection needed by NCF if proposal to change this not accepted. |
| **Trichothallus** F. Stevens in Bernice P. Bishop Mus. Bull. 19: 85. 1925. Type: *T. hawaiiensis* F. Stevens 1925. | *Plokamidomyces* Bat. et al. in Ist. Bot. Reale Univ. Reale Lab. Crittog. Pavia, ser. 5 15: 47. 1958. Type: *P. colensoi* Bat. et al. 1958, now regarded as *Trichothallus niger* (Jennings) Seifert 2016. *Trichopeltheca* Bat. et al. in Ist. Bot. Reale Univ. Reale Lab. Crittog. Pavia, ser. 5 15: 44. 1958. Type: *T. asiatica* Bat. et al. 1958, now regarded as *Trichothallus niger* (Jennings) Seifert 2016. | Asexual type. Protection needed by NCF if proposal to change this not accepted. |
| **Xenodium** Syd. in Ann. Mycol. 33: 95. 1935. Type: *X. petrakii* Syd. 1935. | *Xenidiella* Syd. in Ann. Mycol. 33: 98. 1935. Type: *X. petrakii* Syd. 1935, now regarded as *Xenodium petrakii* Syd. 1935. | None. |
| **Yoshinagaia** Henn. in Hedwigia 43: 143. 1904. Type: *Y. quercus* Henn. 1904. | *Japonia* Höhn. in Sitzungsber. Kaiserl. Akad. Wiss., Math.-naturw. Cl., Abt. 1 118: 879. 1909. Type: *J. quercus* Höhn. 1909, now regarded as *Yoshinagaia quercus* Henn. 1904. *Yoshinagamyces* Hara in Bot. Mag. (Tokyo) 26: 143. 1912. Type: *Y. quercus* Hara 1912, now regarded as *Yoshinagaia quercus* Henn. 1904. *Monoloculia* Hara, Diseases Trees: 171. 1927. Type: *M. quercus* (Henn.) Hara 1927, now regarded as *Yoshinagaia quercus* Henn. 1904. | Asexual type. Protection needed by NCF if proposal to change this not accepted. |

## HYPOCREALES

When the paper on recommendations for competing generic names in the non-clavicipitaceous *Hypocreales* was published based on deliberations of the *Hypocreales* Working Group (Rossman et al. 2013), only those generic names needing protection due to lack of priority or having asexual types were included. Since then the philosophy has changed with the Working Group reports including all competing generic names in their papers, for completeness, thus additional competing generic names in the non-clavicipitaceous *Hypocreales* are presented here. The generic names recommended for use in *Nectriaceae* are in agreement with the comprehensive overview of this family presented by Lombard et al. (2015). Among the clavicipitaceous *Hypocreales*, Quandt et al. (2014) published a paper on *Ophiocordycipitaceae* and a second major paper on *Cordycipitaceae* is planned to be published soon (R Kepler, pers. comm.). Several important generic pairs in *Clavicipitaceae* are considered here.

The genus *Balansia* is typified by *B. claviceps* and was monographed by Diehl (1950) with 13 species. A phylogeny of *Balansia* within *Clavicipitaceae* was provided by Reddy et al. (1998), who determined that six species of *Balansia* including the type form a monophyletic group. *Balansia claviceps* causes a disease referred to as false smut or flower blight that infects living inflorescences in tropical regions (Reddy et al. 1998). This and other species of *Balansia* produce alkaloids that provide protection to grasses that harbour this fungus as an endophyte (White 1997). The generic name *Ephelis*, based on *E. mexicana*, has been used for the asexual morphs of species of *Balansia* but includes many fewer names. *Ephelis mexicana* is considered the asexual morph of *B. claviceps* as confirmed by Diehl (1950) and later authors (Bacon & White 1994, White 1997), thus these generic names are synonyms. *Balansia* is here proposed for protection over *Ephelis* and only *Balansia* is included in Kirk et al. (2013).
Use *Calonectria* De Not. 1867 (S) rather than *Cylindrocladium* Morgan 1892 (A) and *Candelospora* Rea & Hawley 1912 (A)  

The relationship and restricted definition of *Calonectria* based on *C. pyrochroa* and its asexual morph in *Cylindrocladium* typified by *C. scoparium* was first recognized by Rossman (1979) and confirmed by Lombard *et al.* (2010, 2015). The type of *Candelospora*, *C. ilicicola*, has most recently been recognized as a synonym of *Calonectria pyrochroa* (Lombard *et al.* 2015). Both *Calonectria* and *Cylindrocladium* are used about equally, thus we recommend following the principle of priority and using the name *Calonectria*. A number of important plant pathogenic fungi are placed in this genus including *Calonectria pseudonaviculata*, cause of boxwood blight, and *C. ilicicola*, cause of black rot of peanut.

Use *Calostilbe* Sacc. & P. Syd. 1902 (S) rather than *Calostilbella* Höhn. 1919 (A) or *Xenostilbum* Petr. 1959 (A)  

The relationships of the type species of *Calostilbe*, *C. striispora*, type of the monotypic *Calostilbella*, was first recognized by Samuels (1973, as "Nectria striispora") and later confirmed as a genus distinct from *Nectria* in Rossman *et al.* (1999) and Lombard *et al.* (2015). The synonymy of *Xenostilbum* sydowii, type of the monotypic *Xenostilbum*, with *Calostilbella calostilbe* was first recognized by von Arx (1981) and accepted by later authors. Given that the generic name *Calostilbe* has priority and is most widely used, *Calostilbe* is recommended for use.

Use *Chaetopsina* Rambelli 1956 (A) rather than *Chaetopsinectria* J. Luo & W.Y. Zhuang 2010 (S)  

Four species of *Nectria* s. lat. having *Chaetopsina* asexual morphs were described by Samuels (1985). These species were later placed in a separate genus *Chaetopsinectria* typified by *N. chaetopsinae* by Luo & Zhuang (2010). The asexual morph of *N. chaetopsinae* is *Chaetopsina fulva*, type of the generic name *Chaetopsina* (Samuels 1985), thus these generic names are synonyms. One of the four nectria-like species described by Samuels (1985) and placed in *Chaetopsinectria* has since been placed in *Mariannaea*, *M. catenulatae*, thus only three names remain in *Chaetopsinectria* all of which have names in *Chaetopsina*. *Chaetopsina* includes 18 names. Given its priority, widespread use, and greater number of names, the generic name *Chaetopsina* is recommended for use.

Protect *Claviceps* Tul. 1853 (S) over *Sphacelia* Lév. 1827 (A) and rather than *Ustilagopsis* Spec. 1880 (A)  

The genus *Claviceps*, typified by *C. purpurea*, is well known as the cause of ergot and human diseases associated with infected cereals (Bove 1970) while the asexual morph producing a honey dew has been placed in *Sphacelia*. The type of *Sphacelia*, *S. segetum*, has long been regarded as the asexual morph of *C. purpurea* (Tulasne 1853). This species was recently determined to consist of three species with *S. segetum* recognized as a synonym of *C. purpurea* sensu stricto (Pažoutová *et al.* 2015), thus there is no question that *Claviceps* and *Sphacelia* are synonyms. Another younger generic name, *Ustilagopsis* based on *U. deliquescentes*, competes with *Claviceps*. This type is a synonym of *Claviceps paspali* as suggested by Wolf & Wolf (1947) and Langdon (1954), thus *Ustilagopsis* is a further synonym of *Claviceps*. In addition to ergot caused by *C. purpurea*, there are a number of important diseases caused by *Clavicipes* such as sorghum ergot, *C. africana* (Tooley *et al.* 2006), and horse’s tooth of corn, *C. giganteum* (Fuentes *et al.* 1964). These fungi produce a number of industrially important alkaloids (Hulvová *et al.* 2013). Although *Sphacelia* includes 33 species names, the generic name *Claviceps* includes 88 names, many of which have been thoroughly studied (White *et al.* 2003), is much more widely used, and should be protected for use.

Use *Corallomycetella* Henn. 1904 (S) rather than *Rhizostilbella* Wolk 1914 (A)  

The type species of *Corallomycetella*, *C. heinsenii*, was confirmed as a synonym of *C. repens* by Rossman *et al.* (1999), a common tropical fungus that is known to cause diseases such as violet root rot of cacao, *Theobroma cacao*, and other root rot diseases on woody plants (Booth & Holliday 1973, as "*Sphaerostilbe repens*”). Seifert (1985) recognized the synonymy of the type species of *Rhizostilbella*, *R. rubra*, with *Stilbum hibisci*, then considered the asexual morph of *Nectria mauritiicola*, now *C. repens* (Rossman *et al.* 1999). *Corallomycetella* was recently monographed by Herrera *et al.* (2013) in which *Corallomycetella* was accepted over *Rhizostilbella* as was also the case in Lombard *et al.* (2015). Given its priority and widespread use, we recommend the use of *Corallomycetella*.

Use *Epichloë* (Fr.) Tul. & C. Tul. 1865 (S) rather than *Neotyphodium* Glenn *et al.* 1996 (A)  

The relationship of *Epichloë* and *Neotyphodium* has already been addressed with all names resolved by Leuchtmann *et al.* (2014). They clearly demonstrated that these generic names are synonyms and agreed with priority thus recommending the use of *Epichloë*.

Protect *Hypocrella* Sacc. 1878 (S) over *Aschersonia* Mont. 1848 (A)  

The genus *Hypocrella* based on *H. discoidea* has been defined to include the type and four additional species while most species previously regarded as *Hypocrella* are now placed in the genera *Moelleriella* and *Samuelsia* (Chaverri *et al.* 2008). The type species of *Aschersonia*, *A. tahitensis*, was said to be closely related to the type of *Hypocrella* (Chaverri *et al.* 2008), although *H. discoidea* was considered to have an asexual morph referred to as *A. samoensis* by Hywel-Jones *et al.* (1993). Nevertheless the generic names *Hypocrella* and *Aschersonia* are synonyms. Both names have been used extensively in the literature and include many names but with the narrow concept of *Hypocrella*, relatively few species remain in that genus but even fewer remain in *Aschersonia*. Given its widespread use and the greater number of names, we recommend the generic name *Hypocrella* for protection and use.
As part of discussions by the Hypocreales Working Group, it was decided to protect Neonectria over Cylindrocarpon (Rossman et al. 2013). Since then Lombard et al. (2014) demonstrated that the type species of Heliscus, H. lугдунensis, belongs in Neonectria. This species is an aquatic hyphomycete with unusual helicoid conidia. Heliscus includes only a few species while over 50 species have been described in Neonectria including a number of important plant pathogens such as N. coccinea, cause of beech bark disease in Europe, and N. galligena, cause of canker disease of apple, birch and other hardwood trees in temperate regions. Given that Neonectria is already proposed for protection over Cylindrocarpon and that Heliscus is a relatively unknown genus with few species, it is recommended that Neonectria also be protected over Heliscus.

The type of the generic name Ophionectria, O. trichospora, is a relatively common and distinctive species occurring on rotting wood in tropical regions (Rossman 1977). The asexual morph of O. trichospora was described as the equally distinctive Antipodium spectabile in the monotypic genus Antipodium (Pirozynski 1974), thus these generic names are synonyms. Given its priority and widespread use, the name Ophionectria is recommended for use.

Two species of Nectria s. lat. were determined to have asexual morphs belonging to the genus Penicillifer by Samuels (1989). Rossman et al. (1999) recognized these species with two others as the distinct genus Viridospora, typified by V. penicilliferi. Lombard et al. (2015) demonstrated that the type species of Viridospora and the type species of Penicillifer, P. pulcher, were congeneric thus these generic names are synonyms. About eight names are included in Penicillifer with only four names in Viridospora, all of which also have names in Penicillifer. Given its priority, widespread use and greater number of names, we recommend the use of Penicillifer.

A clade with the type species of Sarcopodium, S. circumatum, was shown to include the type species of Lanataneectria, L. flocculenta (as S. macalpinei), and the type species of Actinostilbe, A. vanilae (as S. vanilla) by Lombard et al. (2015), thus these three generic names are synonyms. Actinostilbe had previously been shown to be a synonym of Sarcopodium by Sutton (1981). About thirty names are included in Sarcopodium, a generic name that is widely used. Only five names have been placed in Lanataneectria. Given its priority, widespread use and greater number of names, we recommend the use of Sarcopodium.

The type species of Ustilaginoidea, U. oryzae, now recognized as U. virens, causes a disease called false smut of rice that occurs throughout the rice-growing regions of the world (Mulder & Holliday 1971). A monotypic generic name for the sexual morph of this fungus, Villosiclava based on V. virens, was published by Tanaka et al. (2009) in which the relationship between these two names as the same species was confirmed. Thus there is no question that these generic names are synonyms. Ustilaginoidea has been used widely for this disease while the sexual morph name is relatively recent and has not been used to any extent. Given its widespread use and priority, Ustilaginoidea is recommended for use.

Volutella based on V. ciliata is a well known genus of ubiquitous, sporodochial, saprobic fungi. This generic name has been conserved over the plant name Volutella Forsk. 1775 (Lauraceae) (Hawksworth & Tulloch 1972). The link with the nectria-like sexual morph Nectria consors was determined by Samuels (1977). This species, as Volutellonectria consors, served as the type of the generic name Volutellonectria with three species. Gräfenhan et al. (2011) and Lombard et al. (2015) demonstrated that Volutella ciliata and V. consors are congeneric and should be regarded as a distinct genus in Nectriaceae. Given the numerous species, its priority, and widespread use, it is recommended that Volutella be used for this genus.

The type species of Xenocylinodrocladium, X. serpens, was described as the asexual morph of Nectria serpens (Decock et al. 1997), a name that was later transferred to the monotypic Xenocalonectria (Schoch et al. 2000), thus these generic names are synonyms. Given the three names in that genus and its priority, we recommend the use of Xenocylinodrocladium.

The monotypic genus Batistia is based on B. annulipes with which an asexual morph, Acrostroma annellosynemmatum, was linked using cultural methods by Samuels & Rodriguez (1989). No sequence data have been published for this species and the only known cultures are lost (S Huhndorf, in litt. to K A Seifert). The generic name Acrostroma, typified by A. annulipes, was described by Seifert (1987) with two species added since then (Verma et al. 2008) that are probably misclassified (Seifert et al. 2011). Batistia annulipes is a relatively common and distinctive tropical fungus, thus this genus is more widely known than Acrostroma. Based on its greater use in the literature and priority, we recommend the use of Batistia.
LEOTIOMYCETES

In reviewing generic names in *Leotiomyces*, Johnston et al. (2014) listed competing generic names and proposed a single generic name for protection or use. However, the following three sets of generic names were not included in that paper. In addition two new combinations are made in genera reviewed previously and the protection of a generic name of a powdery mildew (*Leotiomyces, Erysiphales*) omitted in Braun (2013) is proposed.

Protect *Drepanopeziza* (Kleb.) Jaap 1914 (S) over *Gloeosporidiella* Desm. & Mont. 1848 (A) and rather than *Gloeosporidiella* Petr. 1921 (A) *Drepanopeziza ribis*, type species of *Drepanopeziza*, is commonly encountered causing a leaf spot disease of current or gooseberry anthracnose (Booth & Walker 1979). The name *Drepanopeziza* was recognized at the generic rank for the first time by Jaap (1914) based on *Pseudopeziza* subgenus *Drepanopeziza* described by Klebahn (1906) who based this subgenus on *P. ribis*, the only species mentioned in this description; *Index Fungorum* erroneously gives *P. campestris* as the type of *Drepanopeziza*. Although Jaap (1914) recognized *D. campestris* based on *P. campestris*, he attributed the generic name to Klebahn’s name *Pseudopeziza* subgenus *Drepanopeziza*, which was described with only one species, *P. ribis* (Klebahn 1906). This name automatically becomes the type. *Drepanopeziza* was not included in Johnston et al. (2014) because this name was considered to represent a good genus with no competing synonyms. Since then, it has been discovered that the type species of *Gloeosporium*, *G. castagnei*, is the asexual morph of *D. ribis*. Similarly *G. variabile* is the asexual morph of *D. variabilis* (Rimpau 1961). Thus *Gloeosporium* and *Gloeosporidiella* are congeneric with *Drepanopeziza*. Von Arx (1957) provided an account of the over 800 names described in a very broadly circumscribed *Gloeosporium*, which are used for asexual morphs of species in genera throughout the ascomycetes. *Gloeosporidiella* is a smaller genus with only 18 species some of which were included in von Arx (1957) and Sutton (1980). Based on its widespread use, the ill-defined, historical concept of *Gloeosporium*, and the relative obscurity of *Gloeosporidiella*, *Drepanopeziza* is recommended for protection and use over these two competing generic names.

NEW COMBINATIONS IN LEOTIOMYCETES

In reviewing generic names in *Leotiomyces*, Johnston et al. (2014) recommended the use of *Godronia* rather than *Topospora*. Since then it has been determined that two names in *Topospora* should be placed in *Godronia* so these new combinations are proposed here:

**NEW COMBINATIONS IN LEOTIOMYCETES**

- **Protect** *Golovinomyces* (U. Braun) Heluta 1988 (S) over *Euoidium* Y.L. Paul & J.N. Kapoor 1985 (A)
  - Braun (2012) discussed the relevance of asexual and sexual morph-typified names in powdery mildews (*Erysiphales*) and proposed to give general preference to names based on sexual morphs. This approach to solve corresponding nomenclatural problems in powdery mildews was implemented by Braun (2013) who proposed to conserve the sexual morph-typified name *Blumeria* against the asexual morph-typified name *Oidium* and twenty-two sexual morph-typified species names against competing asexual morph-typified names. One case at the generic level was omitted. Braun (1978) introduced *Erysiphe* sect. *Golovinomyces* for powdery mildews characterized by having ascomata with mycelioid appendages, 2-spored asci, and a characteristic asexual morph: i.e. appressoria indistinct to nipple-shaped, conidia cateneshot, without fibrosin bodies. Heluta (1988) raised this section to generic rank by introducing the new combination *Golovinomyces*. The asexual morph-typified name *Euoidium* was proposed by Paul & Kapoor (1985) with *Oidium erysiphoideae* as type species. This generic name was previously used in the broad sense for all kinds of asexual powdery mildews with conidia formed in chains. *Oidium erysiphoideae* is also a dubious name, i.e. used in a very wide sense for all kinds of asexual powdery mildews. Type material of *O. erysiphoideae* is not preserved. In order to clarify the application of *Oidium erysiphoideae* and thereby *Euoidium*, Braun & Cook (2012) neotypified this species name with asexual morph material of *Golovinomyces biocellatus* making *Euoidium* a heterotypic synonym of *Golovinomyces*. The name *Euoidium* dates from 1985 while *Golovinomyces* was introduced at the generic rank in 1988. Following the proposal to give general preference to sexual morph-typified names in powdery mildews, its wide recognition, and phylogenetically proven distinction, *Golovinomyces* is proposed for protection over *Euoidium*.

- **Protect** *Holwaya* Sacc. 1889 over the additional synonym *Crinium* Fr. 1819 (A)
  - Although the generic name *Holwaya* has been proposed for protection over *Crinula* in Johnston et al. (2014), since then it has been determined that *Holwaya* must also be protected against *Crinium* based on the type, *Acrospermum caliciforme*. In the protologue for *Crinula* Fries (1819) mentioned only this species with reference to its place of publication. Later Fries (1821) placed *A. caliciforme* in the genus *Crinula*. The name *Crinium* has not been used since then, thus *Holwaya* is proposed for protection over *Crinium*.

- **Use** *Pseudeurotium* J.F.H. Beyma 1937 (S) rather than *Teberdinia* Sogonov et al. 2005 (A)
  - The genus *Pseudeurotium* based on *P. zonatum* includes 19 names and belongs in *Pseudeurotiaceae*. Sogonov et al. (2005) described the monotypic genus *Teberdinia*, based on *T. hygrophila*, including three unnamed asexual morphs of species of *Pseudeurotium*. In determining the phylogenetic position of the fungus causing white-nose syndrome of bats now known as *Pseudogymnoascus destructans*, Minnis & Lindner (2013) demonstrated that *Pseudeurotium* and *Teberdinia* were synonyms and placed *T. hygrophila* in *Pseudeurotium*. While *Teberdinia* is monotypic and relatively obscure, *Pseudeurotium* has priority, includes a number species, and is well known, thus we recommend the use of *Pseudeurotium*. 

**NEW COMBINATIONS IN LEOTIOMYCETES**

In reviewing generic names in *Leotiomyces*, Johnston et al. (2014) recommended the use of *Godronia* rather than *Topospora*. Since then it has been determined that two names in *Topospora* should be placed in *Godronia* so these new combinations are proposed here:
Godronia myrtilli (Feltgen) J.K. Stone, comb. nov.
MycoBank MB819026
Basionym: Dothiopsis myrtilli Feltgen, Vorstud. Pilzfl. Luxemb., Nachtr. III: 286 (1903).
Synonym: Topospora myrtilli (Feltgen) Boerema, Gewasbescherming 1(4): 66 (1970).

In studying Sirococcus, Konrad et al. (2007) used Godronia (syn. Topospora) as an outgroup and showed that two isolates of T. myrtilli grouped with G. cassandrae, thus confirming that T. myrtilli belongs in Godronia.

Godronia raduloides (Sacc. & Scalia) J.K. Stone, comb. nov.
MycoBank MB819027
Basionym: Rhynchophoma raduloides Sacc. & Scalia, Harriman Alaska Expedition 5: 20 (1904).
Synonym: Topospora raduloides (Sacc. & Scalia) Verkley, Nova Hedwigia 75: 444 (2002).

In placing this species in Topospora, Verkley (2002) noted that on the type material there was a note “...accompanied by apothecia of a species of Godronia”, and he suggested that Godronia was the sexual morph of T. raduloides.

DOTHIDEOMYCETES

Although a list has been published of recommendations for competing genera in the Dothideomycetes (Rossman et al. 2015b) based on Wijayawardene et al. (2014), a number of additional competing generic names have been noted since then and are listed here with recommendations for the generic name to use.

Use Abrothallus De Not 1845 (S) rather than Vouauxiomycies Dyko & D. Hawksw. 1979 (A)
The generic name Abrothallus, typified by A. bertianus, represents a relatively well-known group of lichenicolous fungi including about 60 names, while Vouauxiomycies based on V. truncatus (Hawksworth & Dyko 1979), the asexual morph of A. microsporum. The connection between these generic names was confirmed using electrophoretic methods by Pérez-Ortega et al. (2011), who cited numerous papers in which this relationship was noted. In addition two recent accounts of Abrothallus have been published in which the phylogeny and species of this genus are elaborated (Pérez-Ortega et al. 2014, Suija et al. 2015). Given the greater number of species, widespread use, and priority, use of Abrothallus is recommended.

Use Acroconidiellina M.B. Ellis 1971 (A) rather than Zeuctomorpha Sivan. et al. 1984 (S)
The monotypic genus Zeuctomorpha, based on Z. arecae, was described as the sexual morph of Acroconidiellina arecae. No molecular work exists to confirm that A. arecae is congeneric with the type species of Acroconidiellina, A. loudetiae, but this seems likely. Assuming that these type species belong in the same genus, it follows that Acroconidiellina and Zeuctomorpha are congeneric. Acroconidiellina includes four species, is more commonly used, has priority, and was accepted by Hernández-Restrepo et al. (2016), thus we recommend the use of Acroconidiellina.

Protect Amarenographium O.E. Erikss. 1982 (A) over Amarenomyces O.E. Erikss. 1981 (S)
The type species of Amarenomyces, A. ammophila, was determined to be the sexual morph of Amarenographium metableticum, type of Amarenographium (Eriksson 1982, Phoocksamsak et al. 2014), thus these generic names are synonyms. Although Amarenomyces ammophila is widely reported as an aquatic fungus, it remains the only name placed in this genus while four species have been included in Amarenographium (Nag Raj 1989). Both generic names have been cited about equally. Rather than make three name changes, we recommend protecting the name Amarenographium for which no name changes are required.

Protect Amniculicola Y. Zhang ter & K.D. Hyde 2008 (S) over Anguillospora Ingold 1942 (A)
Both Zhang et al. (2009) and Shearer et al. (2009) showed that the type species of Anguillospora, A. longissima, groups with three species of Amniculicola including the type, A. lignicola, within Pleosporales, thus Anguillospora and Amniculicola are synonyms. Although more species of Anguillospora have been described, these aquatic hyphomycetous fungi tend to be morphologically convergent with most sequenced species belonging in the Leotiomycetes (Belliveau & Barlocher 2005, Baschien et al. 2006, Duarte et al. 2013). Although 18 species have been described in Anguillospora, five are known to belong in the Leotiomycetes, another in the Orbiliomycetes, and one in the Dothideales but not related to Amniculicola. Only the type species of Anguillospora, A. longissima, is monophyletic with the three species of Amniculicola. Thus, if Amniculicola is protected over Anguillospora, only one new combination is required. The use of Anguillospora with a new type species belonging to the Leotiomycetes will be proposed. This will conserve Anguillospora in the sense in which it has been most commonly used.

One new combination is necessary:

Amniculicola longissima (Sacc. & P. Syd.) Nadeeshan & K.D. Hyde, comb. nov.
MycoBank MB819029
Basionym: Fusarium longissimum Sacc. & P. Syd., Syll. Fung. 14: 1128 (1899).

Use Atichia Fiot. 1850 (A) rather than Seuratia Pat. 1904 (S)
Atichia glomerulosa, the older name for A. mosigii, type species of Atichia, is commonly reported as a lichen-like, superficial, gelatinous, black fungus on evergreen leaves in warm temperate and tropical regions (Meeker 1975, Gillis & Glawe 2008). Its sexual morph was described as Seuratia coffeicola, later referred to as S. millardettii, type species of Seuratia (Meeker 1975). Three names have been placed in Seuratia, two of which have names in Atichia. Although Atichia includes 20 names, many of these appear to be synonyms. These fungi are most commonly reported as Atichia and that

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generic name has priority, thus *Atichia* is recommended for use.

The following new combination is required:

**Atichia maunauluana** (Meeker) Rossman, **comb. nov.**

*Mycobank* MB819030

*Basionym*: *Seuratia maunauluana* Meeker, *Can. J. Bot.* **53**: 2490 (1975).

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**Use** *Blasdalea* Sacc. & P. Syd. **1902** (S) rather than *Chrysogloeum* Petr. **1959** (A) or *Singerella* Petr. **1959** (S)

Petrak (1959) established the monotypic genus *Chrysogloeum* based on *C. peruvianum* to accommodate the asexual morph of *Singeriella peruvianum*, monotype of *Singerella*. According to Kirk et al. (2008), *Singeriella* is a synonym of the monotypic *Blasdalea* based on *B. disciformis*. Hence, these three monotypic generic names are all based on the same species. Swart (1971) established the family *Vizellaceae* for the genera *Blasdalea* and *Vizella*. Neither *Chrysogloeum* nor *Singeriella* have been considered by any but the original author. *Blasdalea* has priority, thus this generic name is recommended for use.

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**Use** *Capnodium* Mont. **1849** (S) rather than the additional synonym *Fumagospora* G. Arnaud **1911** (A)

Following Hughes (1976), Crous et al. (2007) demonstrated that the sexual morph of *Fumagospora*, *F. capnodioides*, is *Capnodium salicinum*, type of *Capnodium*, thus *Fumagospora* is an additional synonym of *Capnodium*, which was recommended for protection over *Polychaeton* 1846 by the *Dothideomycetes* Working Group (Rossman et al. 2015b).

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**Use** *Dilophospora* Desm. **1840** (A) rather than *Lidophia* J. Walker & B. Sutton **1974** (S)

Twist disease caused by *Dilophospora alopecuri* occurs on the leaves, stems and glumes of cereals and grasses in temperate regions throughout the world (Gibson & Sutton 1976, Riley 1996). The generic name *Dilophospora* is based on the type species, *D. graminis*, a synonym of *D. alopecuri* (Walker & Sutton 1974). The generic name *Lidophia* was established by Walker & Sutton (1974) for the later homonym *Dilophia* Sacc. 1883 non *Dilophia* Thomason 1853 (*Brassicaeae*). The type species of *Lidophia* is *L. graminis* based on *Dilophia graminis*, the sexual morph of *Dilophospora alopecuri* (Walker & Sutton 1974), thus *Dilophospora* and *Lidophia* are synonyms. *Lidophia* is a monotypic genus while *Dilophospora* now includes two species, is widely used, and has priority, thus we recommend the use of *Dilophospora*.

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Six new combinations in *Elsinoë*:

Based on deliberations of the *Dothideomycetes* Working Group (Rossman et al. 2015b), it was recommended that the generic name *Elsinoë* should be protected over *Sphaceloma*. Six names in *Sphaceloma* of importance to plant quarantine officials in the United States are herein transferred to *Elsinoë*.

**Elsinoë bucidae** (A.M.J. Watson & Jenkins) Romberg & W.C. Allen, **comb. nov.**

*Mycobank* MB819031

*Basionym*: *Sphaceloma bucidae* A.M.J. Watson & Jenkins, *Mycologia* **61**: 276 (1969).

**Elsinoë caricae** (Ikata & Katsuki) Romberg & W.C. Allen, **comb. nov.**

*Mycobank* MB819032

*Basionym*: *Sphaceloma caricae* Ikata & Katsuki, *Ann. phytopath. Soc. Japan* **21**: 14 (1956).

**Elsinoë choisyae** (A.M.J. Watson & Jenkins) Romberg & W.C. Allen, **comb. nov.**

*Mycobank* MB819033

*Basionym*: *Sphaceloma choisyae* A.M.J. Watson & Jenkins, *Mycologia* **61**: 276 (1969).

**Elsinoë paeoniae** (Kuros.) Romberg & W.C. Allen, **comb. nov.**

*Mycobank* MB819034

*Basionym*: *Sphaceloma paeoniae* Kuros., *Ann. phytopath. Soc. Japan* **9**: 131 (1939).

**Elsinoë psidii** (Bitanc. & Jenkins) Romberg & W.C. Allen, **comb. nov.**

*Mycobank* MB819035

*Basionym*: *Sphaceloma psidii* Bitanc. & Jenkins, *Archos Inst. biol.*, *S. Paulo* **19**: 105 (1949) [*’1949-50’*].

**Elsinoë zorniae** (Bitanc. & Jenkins) Romberg & W.C. Allen, **comb. nov.**

*Mycobank* MB819036

*Basionym*: *Sphaceloma zorniae* Bitanc. & Jenkins, *Aq. Inst. Biol. São Paulo* **11**: 47 (1940).

In addition, *Sphaceloma fawcettii* var. *scabiosa*, differentiated from *Elsinoë fawcettii* on the basis of morphological and cultural characteristics, should be considered synonymous with *E. fawcettii* based on molecular analyses (Tan et al. 1996, Hyun et al. 2009).

**Use** *Eupelte* Syd. **1924** (S) rather than *Maurodothina* G. Arnaud ex Piroz. & Shoemaker **1970** (S) or *Piroynskia* Subram. **1972** (A)

The genus *Eupelte*, based on *E. amicta*, was considered by von Arx & Müller (1975) to include the type species of two other genera, namely *E. dothideoides*, type of *Maurodotina*, and *E. fariae*, the sexual morph of the type of *Piroynskia*, *P. fariae*, thus these three generic names are synonyms. *Eupelte fariae* causes a black mildew on *Abies* in north temperate regions (Piroynski & Shoemaker 1970). Among the four names included in these three genera, all but one have been included in *Eupelte*, thus use of the oldest generic name is recommended.

**Eupelte shoemakeri** (Subram.) Rossman, **comb. nov.**

*Mycobank* MB819037

*Basionym*: *Piroynskia shoemakeri* Subram., *Curr. Sci.* **41**: 711 (1972).
Use Koordersiella Höhn. 1909 (S) rather than Hansfordiellopsis Deighton 1960 (A) and Ascohansfordiellopsis D. Hawksw. 1979 (S)

The synonymy of these three lichenicolous generic names was presented by Hawksworth (2016). Based on morphology, he considered the type species of Koordersiella, K. javanica, and the type species of Hansfordiellopsis, H. aburiensis (now regarded as a synonym of K. insectivora), to be congeneric. Although Hansfordiellopsis includes eight species names while Koordersiella has only five, he accepted priority because all of these fungi are relatively obscure and thus used Koordersiella, and we concur.

Protect Metacapnodium Speg. 1918 (S) over Antennularia Rchb. 1838 (S) and rather than Torulopsiella Bender 1932 (A), Capnocybe S. Hughes 1966 (A), Capnophialophora S. Hughes 1966 (A), Capnobotrys S. Hughes 1970 (A), and Capnosporium S. Hughes 1976 (S)

The genus Metacapnodium is typified by M. juniperi (Hughes 1972). This genus was recently considered to be congeneric with Antennularia based on A. ericophilum, which was placed in Metacapnodium as M. ericophilum (Hyde et al. 2013). In addition they considered Capnocybe typified by C. fraserae to be an asexual morph of Metacapnodium fraserae (Hughes 1976). Hughes (1972, 1981) also listed Capnobotrys, Capnophialophora and Torulopsiella as names for the synanamorphs of Metacapnodium. Thus these six generic names compete for use. Four of these names, Capnocybe with three species, Capnophialophora with three species, monotypic Capnosporium, and Torulopsiella with two species, are rarely used. Although Antennularia includes 17 names and Capnobotrys includes ten, Metacapnodium with 14 names is widely used and should be protected as suggested in Hyde et al. (2013).

Use Microxiphium (Harv. ex Berk. & Desm.) Thüm. 1879 (A) rather than Dennisiella Bat. & Cif. 1962 (S)

The generic name Microxiphium (previously often spelled "Microxyphium") is typified by M. footi while the type of Dennisiella is D. babingtonii. The types of these generic names are considered the same species (Dennis & Ellis 1952, Hughes 1976, Sivanesan 1984). Little molecular study has been conducted on these fungi, nevertheless, Microxiphium fagi, the earliest name for this species (Hughes 1976), is reported commonly in the literature. At present Microxiphium includes 33 names while Rocha et al. (2010) provided a key to the nine species of Dennisiella. Based on priority, the greater number of names, and widespread use, Microxiphium is recommended for use.

Use Mirandina G. Arnaud ex Matsush. 1975 (A) rather than Chaetonectrioides Matsush. 1996 (S)

The type of Mirandina, M. corticola, is a relatively common fresh-water hyphomycete that is known from Europe and Asia (Czezcuta et al. 2007, Kobayashi 2007). The sexual morph of the congeneric species, M. flagelliformis, was described as Chaetonectrioides malaysiana, in the monotypic genus Chaetonectrioides, thus these generic names are synonyms. About 10 species have been included in Mirandina with two species described recently (Ma et al. 2015, Fiuza et al. 2016). No DNA sequences exist for any of these species. Given the greater number of species and priority, use of Mirandina is recommended.

Use Protoventuria Berl. & Sacc. 1887 (S) rather than Ramalia Bat. 1957 (A)

The genus Protoventuria is typified by P. rosea based on Venturia rosea and includes 46 names. Zhang et al. (2012) demonstrated that this species groups with Protoventuria alpina to form a distinct lineage of Dothideomycetes that should be regarded as Protoventuria. The type species of Ramalia, R. veronicae, was placed in the genus Fuscidium as F. veronicae by Sutton & Pascoe (1988). They also described Protoventuria paraheticola for the sexual morph of this species, which causes leaf spots on Parahaede (Scrophulariaceae), thus Protoventuria and Ramalia are synonyms. Although one additional name, R. bysonimatis was described in Ramalia (Braun & Mouchacca 2000), that name has remained obscure. Protoventuria includes over 40 names, is widely used, and has priority over Ramalia, thus Protoventuria is recommended for use.

Use Sarcinella Sacc. 1880 (A) rather than Schiffnerula Höhn. 1909 (S) and Questieriella S. Hughes 1983 (A)

When Hughes (1983) described the genus Questieriella based on Q. pulchra, he stated that the sexual morph was Schiffnerula pulchra and that Sarcinella heterospora, type of Sarcinella, represented a second asexual morph of the same species. Thus the generic names Sarcinella and Questieriella are synonyms. Earlier Hughes (1952) had distinguished the asexual morph of Schiffnerula mirabilis, type of the genus Schiffnerula, from S. pulchra. Hughes (1952) and Hosagoudar (2003) considered S. mirabilis and S. pulchra to be congeneric, thus Schiffnerula is also congeneric with Questieriella and Sarcinella. A second species of Schiffnerula, S. corni, was described from Quebec having Questieriella and Sarcinella synsexual morphs (Hughes 1990), again suggesting this generic synonymy. None of these species have been sequenced. Sarcinella provides the oldest generic name for these fungi, is used about equally with Schiffnerula, and has about the same number of names, thus the principle of priority is followed and Sarcinella is recommended for use.

The following new combinations are required:

Sarcinella mirabilis (Höhn.) Seifert, comb. nov. MycoBank MB819038 Basionym: Schiffnerula mirabilis Höhn., Sber. Akad. Wiss. Wien, Math.-naturw. Kl., Abt. 1 no. 118: 868 (1909).

Sarcinella pulchra (Sacc.) Seifert, comb. nov. MycoBank MB819044 Basionym: Apiosporium pulchrum Sacc., Myth. Univ. cent. 1: no. 52 (1875). Synonyms: Dimerosporium pulchrum (Sacc.) Sacc., Syll. Fung. 1: 52 (1882).
Schizothallus pulchra (Sacc.) Petr., Ann. mycol. 26: 397 (1928).  
Sarcinella heterospora Sacc., Fungi italic. autogr. del. 1–4: tab. 126 (1877).  
Questeriella pulchra S. Hughes, Can. J. Bot. 61: 1730. 1983.

**An additional new combination in Schizothyrium**

Previously the generic name *Schizothyrium* was recommended for use rather than *Zygodia* and most names have been placed in *Schizothyrium,* however, one name was overlooked.

*Schizothyrium jamaicense* (E.W. Mason) Rossman, comb. nov.  
MycoBank MB819039  
Basionym: Zygodia jamaicense E.W. Mason, Mycol. Pap. 13: 5 (1945).

**Use Trichothallus D. Stevens 1925 (A) rather than Plokomidomyces Bat. et al. 1957 (A) or Trichopeltheca Bat. et al. 1958 (S)**

Hughes (1965) monographed *Trichopeltheca* and accepted two species including the type species *T. asiatica* and listing the type species of *Plokomidomyces, P. colensoi,* as a synonym. He also accepted a second species, *T. stevensii,* with the type species of *Trichothallus, T. hawaiensis,* as a synonym, thus these three generic names are synonyms. These sooty moulds develop from a distinctive one-cell thick stroma growing over living plant tissue, with setae, conidia and perithecia developing from the same stromata. Although there are no cultures or DNA sequence data, there is little doubt that these two species are congeneric and that the constitutive morphs are part of the same fungus. None of the three generic names is frequently cited in the literature. Adopting either the older asexual morph name *Trichothallus* or the sexual morph name *Trichopeltheca* would require making a new combination. We opt to respect priority in this case and recommend the adoption of the oldest generic name *Trichothallus.*

*Trichothallus niger* (Jennings) Seifert, comb. nov.  
MycoBank MB819047  
Basionym: Phycocetis nigra Jennings, Proc. R. Irish Acad. 3: 758 (1896).  
Type: New Zealand: Rotorua, on Nesodaphne tawa (sic, = Beilschmiedia tawa), A.V. Jennings (DBN-lectotype designated here, MBT-isotype).  
Synonyms: Plokomidomyces colensoi Bat. et al., Atti Ist. bot. Univ. Lab. crittog. Pavia, ser. 5, 15: 47 (1957). Trichopeltheca asiatica Bat. et al., Publicações Inst. Micol. Recife 90: 13 (1958) [‘1957’].

Notes: On the basis of the protologue of *Phycocetis nigra,* Santesson (1944) concluded that the type material was mixed and that the name should be considered a nomen confusum, as was common practice at the time and permitted under the Code then in force. Hughes (1965) examined co-type (i.e. syntypes) specimens in DBN and MBT and recognized that *P. nigra* was identical with *T. asiatica,* arguing that the ‘type form’ described in the protologue corresponded with the *Trichopeltheca* component. He did not make the new combination, presumably because the species had originally been described as an alga. The lectotype proposed above is selected based on Hughes’ observations.

**Use Xenodium Syd. 1935 (S) rather than Xenodiella Syd. 1935 (A)**

The generic names *Xenodium* typified by *P. petrakii* and *Xenodiella* typified by *P. petrakii* were published in the same article as sexual and asexual morphs of the same species (Sydow 1935), thus these generic names are synonyms. Both generic names are monotypic, however, *Xenodium* has been used in the literature more than *Xenodiella,* thus *Xenodium* is recommended for use.

**Use Yoshinagaia Henn. 1904 (A) rather than Japonia Höhn. 1909 (S), Yoshinagamyces Hara 1912 (A) or Monoloculia Hara 1927 (A)**

The type species of each of these four monotypic generic names, *Yoshinagaia, Japonia, Yoshinagamyces* and *Monoloculia,* are the same species as explained by Sivanesan & Hsieh (1995). All of the names are relatively obscure but *Yoshinagaia* is used more frequently than the others. In addition, *Japonia* is also used as the name for an insect, thus we recommend use of the name that has priority, namely *Yoshinagaia.*

The nomenclator for the type species of these four generic names is:

**Yoshinagaia quercus** Henn., *Hedwigia* 43: 143 (1904).  
**Synonyms: Monoloculia quercus** (Henn.) Hara, *Diseases of Trees:* 171 (1927).  
**Japonia quercus** Höhn., *Sber. Akad. Wiss. Wien, Math.-naturw. Kl.,* Abt. 1, 118: 879. (1909).  
**Yoshinagamyces quercus** Hara, *Bot. Mag.,* (Tokyo) 26: 143 (1912).

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