

Lists of names in *Aspergillus* and teleomorphs as proposed by Pitt and Taylor, *Mycologia*, 106: 1051-1062, 2014 (doi: 10.3852/14-060), based on retypification of *Aspergillus* with *A. niger* as type species

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Preamble

The lists below set out the nomenclature of *Aspergillus* and its teleomorphs as they would become on acceptance of a proposal published by Pitt and Taylor (2014) to change the type species of *Aspergillus* from *A. glaucus* to *A. niger*.

The central points of the proposal by Pitt and Taylor (2014) are that retypification of *Aspergillus* on *A. niger* will make the classification of fungi with *Aspergillus* anamorphs: i) reflect the great phenotypic diversity in sexual morphology, physiology and ecology of the clades whose species have *Aspergillus* anamorphs; ii) respect the phylogenetic relationship of these clades to each other and to *Penicillium*; and iii) preserve the name *Aspergillus* for the clade that contains the greatest number of economically important species.

Specifically, of the 11 teleomorph genera associated with *Aspergillus* anamorphs, the proposal of Pitt and Taylor (2014) maintains the three major teleomorph genera – *Eurotium*, *Neosartorya* and *Emericella* – together with *Chaetosartorya*, *Hemicarpensteles*, *Sclerocleista* and *Warcupiella*. *Aspergillus* is maintained for the important species used industrially and for manufacture of fermented foods, together with all species producing major mycotoxins. The teleomorph genera *Fennellia*, *Petromyces*, *Neocarpensteles* and *Neopetromyces* are synonymised with *Aspergillus*.

The lists below are based on the List of “Names in Current Use” developed by Pitt and Samson (1993) and those listed in MycoBank (www.MycoBank.org), plus extensive scrutiny of papers publishing new species of *Aspergillus* and associated teleomorph genera as collected in Index of Fungi (1992-2104).

The list given here is in four sections, as follows:

- * A complete list of accepted species maintained in *Aspergillus* (117 species);
- * *Aspergillus* species already validly placed in the teleomorph genera accepted here (124 names);
- * New combinations necessary to maintain accurate phylogenetic bases for the accepted teleomorph genera (107 species);
- * A complete list of accepted names in the teleomorph genera (199 species).

Placement of asexual *Aspergillus* species into sexual genera has been based primarily on phylogenetic trees developed by Peterson (2000, 2008), Samson *et al.* (2007, 2011) and Varga *et al.* (2000, 2007, 2011), together with other sources listed in the bibliography below, and many original papers. Based on those sources, almost all recognised *Aspergillus* species were placed unequivocally in the teleomorph genera accepted by Pitt and Taylor (2014).

It should be noted that the new combinations proposed here become valid only when the proposed retypification of the genus *Aspergillus* with *A. niger* as type has been accepted by the relevant committees under the International Botanical Congress.

Although the lists have been prepared with care, errors are possible. Comments on errors or omissions are welcomed. Please forward them to John Pitt at John.Pitt@csiro.au. Thank you!

Section 1. Accepted species retained in *Aspergillus* in this classification

Aspergillus P. Micheli ex Link, Mag. Gesell. Naturf. Freunde, Berlin 3: 16, 1809

Aspergillus acidus Kozak., Mycol. Pap. 161: 110, 1989. Holotype: IMI 104688. MycoBank No. 127765.

Aspergillus aculeatinus Noonim *et al.*, Int. J. Syst. Evol. Microbiol. 58: 1733, 2008. Holotype: CBS 121060. MycoBank No. 505075.

Aspergillus aculeatus Iizuka, J. Agric. Chem. Soc. Japan 27: 806, 1953. Neotype (Pitt & Taylor, this publication): CBS 172.66. MycoBank No. 292831.

Aspergillus affinis Davolos *et al.* in Davolos *et al.*, Int. J. Syst. Evol. Microbiol. 62: 1014, 2012. Holotype: ATCC MYA-4773. MycoBank No. 517245.

Aspergillus alabamensis Balajee *et al.*, Eukaryotic Cell 8: 720, 2009. Holotype: UAB 20. MycoBank No. 543648.

Aspergillus albertensis J. P. Tewari, Mycologia 77: 114, 1985 = *Petromyces albertensis* J. P. Tewari *ibid.*, 77: 114, 1985. Holotype: UAMH 2976. MycoBank No. 105069.

Aspergillus allahabadii B.S. Mehrotra & Agnihotri, Mycologia 54: 400, 1963. Neotype (Samson & Gams, 1985): CBS 164.63. MycoBank No. 326609.

Aspergillus alliaceus Thom & Church, Aspergilli: 163, 1926 = *Petromyces alliaceus* Malloch & Cain, Can. J. Botan. 50: 2623, 1973. Neotype (Malloch and Cain, 1972): TRTC 46232. MycoBank No. 256402.

Aspergillus amazonensis (Henn.) Samson & Seifert in Samson & Pitt (eds), Adv. *Penicillium Aspergillus* Syst.: 418, 1985. = *Stilbothamnium amazonense* Henn. Hedwigia 43: 396, 1904. Holotype: Herb. Hennings (S), on seeds of *Lecythis*, leg. R. Ule, Rio Juruá, Amazonia, Brazil, 1907. MycoBank No. 114696.

Aspergillus ambiguus Sappa, Allionia 2: 254, 1955. Neotype (Samson & Gams, 1985): CBS 117.58. MycoBank No. 292834.

Aspergillus arachidicola Pildain *et al.* in Pildain *et al.*, Int. J. Syst. Evol. Microbiol. 58: 730, 2008. Holotype: CBS 117610. MycoBank No. 505189.

Aspergillus aureofulgens Luppi Mosca, Allionia 19: 33, 1973. Neotype (Pitt & Taylor, this publication): CBS 653.74. MycoBank No. 309211.

Aspergillus aureoterreus Samson *et al.*, Stud. Mycol. 69: 45, 2011 = *Aspergillus terreus* var. *aureus* Thom & Raper, Man. Aspergilli 198, 1945. Neotype (Pitt & Taylor, this publication): CBS 503.65. MycoBank No. 560392. See Note 1.

Aspergillus auricomus (Guég.) Saito, J. Ferment. Technol. 17: 3, 1939 = *Sterigmatocystis auricoma* Guég., Bull. Soc. mycol. Fr. 15: 171, 1899. Neotype (Samson & Gams, 1985): CBS 467.65. MycoBank No. 119950.

Aspergillus avenaceus G. Sm., Trans. Br. Mycol. Soc. 26: 24, 1943. Neotype (Samson & Gams, 1985): CBS 109.46. MycoBank No. 284296.

Aspergillus awamorii Nakaz., Rep. Gov. Res. Inst. Formosa 1907: 1, 1907. Neotype (Al-Musallam, 1980): CBS 557.65. MycoBank No. 119955.

Aspergillus beijingensis D.M. Li *et al.*, Mycoscience 39: 299, 1998. Holotype: CBM FD 285. MycoBank No. 446575. *See Note 2.*

Aspergillus bertholletius Taniwaki *et al.* in Taniwaki *et al.*, PloS ONE 7(8) e4280: 6, 2012. Holotype: CCT 7615. MycoBank No. 800125.

Aspergillus bombycis S.W. Peterson *et al.*, Mycologia 93: 691, 2001. Holotype: BPI 745225. MycoBank No. 474687.

Aspergillus brasiliensis Varga *et al.*, Int. J. Syst. Evol. Microbiol. 57: 57, 2007. Holotype: CBS 101740. MycoBank No. 510581

Aspergillus brevijanus S.W. Peterson, Mycologia 100: 217, 2008 = *Aspergillus janus* var. *brevis* Raper & Thom, Mycologia 36: 561, 1944. Neotype: NRRL 1935. MycoBank No. 506751.

Aspergillus bridgeri M. Chr., Mycologia 74: 210, 1982. Holotype: NY JB 26-1-2. MycoBank No. 110494.

Aspergillus bruneoviolaceus Bat. & H. Maia, Anais Soc. Biol. Pernambuco 13: 91, 1955. Neotype: not designated. MycoBank No. 292838.

Aspergillus caelatus B.W. Horn, Mycotaxon 61: 186, 1997. Holotype: BPI 737601. MycoBank No. 436955.

Aspergillus campestris M. Chr., Mycologia 74: 212, 1982. Holotype: NY ST 2-3-1. MycoBank No. 110495.

Aspergillus candidus Link, Ges. Naturf. Freunde Berlin Mag. Neuesten Entdeck. Gesammten Naturk. 3: 16, 1809. Neotype (Samson & Gams, 1985): CBS 567.65. MycoBank No. 204868.

Aspergillus carbonarius (Bainier) Thom, J. Agric. Res. 7: 12, 1916 = *Sterigmatocystis carbonaria* Bainier, Bull. Soc. bot. Fr. 27: 27, 1880. Neotype (Al-Musallam, 1980): CBS 556.65. MycoBank No. 100545.

Aspergillus carneus (Tiegh.) Blochwitz, Ann. Mycol. 31: 81, 1933 = *Sterigmatocystis carnea* Tiegh., Bull. soc. mycol. Fr. 24: 103, 19887. Neotype (Samson & Gams, 1985): IMI 135818. MycoBank No. 259903.

Aspergillus clavatoflavus Raper & Fennell, Gen. *Aspergillus*: 378, 1965. Neotype (Samson & Gams, 1985): IMI 124937. MycoBank No. 326619. *See Note 3.*

Aspergillus coremiiformis Bartoli & Maggi, Trans. Br. Mycol. Soc. 71: 386, 1979. Holotype: RO 102 S. MycoBank No. 309214.

Aspergillus costaricaensis Samson & Frisvad in Samson *et al.*, Stud. Mycol. 50: 52, 2004. Holotype: CBS H-13437. MycoBank No. 500007.

- Aspergillus cretensis* Frisvad & Samson in Frisvad *et al.*, Stud. Mycol. 50: 33, 2004. Holotype: CBS H-13446. MycoBank No. 500002.
- Aspergillus elegans* Gasperini, Atti Soc. Tosc. Sci. Nat. Pisa, Processi Verballi 8: 328, 1887. Neotype (Samson & Gams, 1985): CBS 102.14. MycoBank No. 212852.
- Aspergillus ellipticus* Raper & Fennell, Gen. *Aspergillus*: 319, 1965. Neotype (Al-Musallam, 1980): CBS 707.79. MycoBank No. 326628.
- Aspergillus eucalypticola* Varga *et al.* in Varga *et al.*, Stud. Mycol. 69: 9, 2011. Holotype: CBS H-20627. MycoBank No. 560387.
- Aspergillus fijiensis* Varga *et al.*, in Varga *et al.*, Stud. Mycol. 69: 9, 2011. Holotype: CBS H-20628. MycoBank No. 560388. *See Note 4.*
- Aspergillus flavipes* (Bainier & Sartory) Thom & Church, Aspergilli: 155, 1926 = *Sterigmatocystis flavipes* Bainier & Sartory, Bull. Soc. Mycol. Fr. 27: 90, 1911 = *Fennellia flavipes* B.J. Wiley & E.G. Simmons, Mycologia 65: 937, 1973. Neotype (Samson & Gams, 1985): IMI 171885. MycoBank No. 265045.
- Aspergillus flavus* Link: Fr, Ges. Naturf. Freunde Berlin Mag. Neuesten Entdeck. Gesamnten Naturk. 3: 16, 1809 = *Petromyces flavus* B.W. Horn *et al.*, Mycologia 101: 424, 2009. Neotype: (Kozakiewicz, 1982): IMI 124930. MycoBank No. 209842.
- Aspergillus floccosus* Samson *et al.*, Stud. Mycol. 69: 45, 2011 = *Aspergillus terreus* var. *floccosus* Y.K. Shih, Lignan Sci. J. 15: 372, 1936. Neotype (Pitt & Taylor, this publication): CBS 116.37. MycoBank No. 560393. *See Note 1.*
- Aspergillus flocculosus* Frisvad & Samson in Frisvad *et al.*, Stud. Mycol. 50: 33, 2004. Holotype: CBS H-13435. MycoBank No. 500003.
- Aspergillus floridensis* Ž. Jurjević *et al.* in Ž. Jurjević *et al.*, IMA Fungus 3: 169, 2012. Holotype: BPI 883907. MycoBank No. 802363.
- Aspergillus foetidus* Thom & Raper, Man. Aspergilli: 219, 1945. Neotype (Samson & Gams, 1985): CBS 121.28. MycoBank No. 284300.
- Aspergillus fresenii* Subram., Hyphomycetes (New Delhi): 552, 1971 = *Sterigmatocystis sulphurea* Fresen., Beitr. Mykol.; 83, 1863 (nom. nov., non *Aspergillus sulphureus* Desm.). Neotype (Pitt & Taylor, this publication): CBS 560.65. MycoBank No. 309222. *See Note 5.*
- Aspergillus helicothrix* Al-Musallam, Antonie van Leeuwenhoek 46: 407, 1980. Holotype: CBS 677.79. MycoBank No. 112747.
- Aspergillus heteromorphus* Bat. & H. Maia, Anais Soc. Biol. Pernambuco 15: 200, 1957. Neotype (Samson & Gams, 1985): IMI 172288. MycoBank No. 292846.
- Aspergillus homomorphus* Steiman *et al.* ex Samson & Frisvad in Samson *et al.*, Stud. Mycol. 50: 58, 2004. Holotype: CBS H-13440. MycoBank No. 500011.
- Aspergillus hortai* (Langeron) C.W. Dodge, Med. Mycol.: 628, 1935 = *Sterigmatocystis hortai* Langeron, Bull. soc. pathol. exot. 15: 383, 1922. Neotype (Pitt & Taylor, this publication): CBS 124230. MycoBank No. 252153.

- Aspergillus ibericus* R. Serra *et al.* in Serra *et al.*, Mycologia 98: 298, 2006. Holotype: MUM-H 03.49. MycoBank No. 501326.
- Aspergillus iizukae* Sugiy., J. Fac. Sci. Tokyo University, Sect. 3, 9: 390, 1967. Neotype (Pitt & Taylor, this publication): CBS 541.69. MycoBank No. 326636.
- Aspergillus indologenus* Frisvad *et al.* in Varga *et al.*, Stud. Mycol. 69: 9, 2011. Holotype: CBS H-20629. MycoBank No. 560389.
- Aspergillus insulicola* Montem. & A. R. Santiago, Mycopathologia 55: 130, 1975. Neotype (Samson & Gams, 1985): CBS 382.75. MycoBank No. 309225.
- Aspergillus janus* Raper & Thom, Mycologia 36: 556, 1944. Neotype (Samson & Gams, 1985): IMI 16065. MycoBank No. 284303.
- Aspergillus japonicus* Saito, Bot. Mag. (Tokyo) 20: 61, 1906. Neotype (Samson & Gams, 1985): CBS 114.51. MycoBank No. 160656.
- Aspergillus lacticoffeatus* Frisvad & Samson in Samson *et al.*, Stud. Mycol. 50: 52, 2004. Holotype: CBS H-13436. MycoBank No. 500008. *See Note 6.*
- Aspergillus lanosus* Kamal & Bhargava, Trans. Br. Mycol. Soc. 52: 336, 1969. Neotype (Samson & Gams, 1985): IMI 130727. MycoBank No. 326640.
- Aspergillus leporis* States & M. Chr., Mycologia 58: 738, 1966. Holotype: NY RMF 99. MycoBank No. 326641.
- Aspergillus melleus* Yukawa, J. Coll. Agric. Imp. Univ. Tokyo 1: 358, 1911. Neotype (Samson & Gams, 1985): CBS 546.65. MycoBank No. 164593.
- Aspergillus microcysticus* Sappa, Allionia 2: 251, 1955. Neotype (Samson & Gams, 1985): IMI 139275. MycoBank No. 292848.
- Aspergillus minisclerotigenes* Vaamonde *et al.* in Pildain *et al.*, Int. J. Syst. Evol. Microbiol. 58: 733, 2008. Holotype: CBS 117635. MycoBank No. 505188.
- Aspergillus monodii* (Locq.-Lin.) Varga *et al.* in Samson *et al.*, Stud. Mycol. 69: 91, 2011 = *Fennellia monodii* Locq.-Lin., Mycotaxon 39: 10, 1990. Holotype: PC 89-3570. MycoBank No. 560402.
- Aspergillus mottae* C. Soares *et al.* in Soares *et al.*, Mycologia 104: 692, 2012. Holotype: UM H 10.231. MycoBank No. 561841.
- Aspergillus muricatus* Udagawa *et al.*, Mycotaxon 52: 210, 1994 = *Petromyces muricatus* Udagawa *et al.*, *ibid.*, 52: 210, 1994 = *Neopetromyces muricatus* (Udagawa *et al.*) Frisvad & Samson, Stud. Mycol. 45: 204, 2004. Holotype: CBM BF-42515. MycoBank No. 362530.
- Aspergillus neoaffricanus* Samson *et al.*, Stud. Mycol. 69: 53, 2011 = *Aspergillus terreus* var. *affricanus* Fennell & Raper, Mycologia 47: 86, 1955. Neotype (Pitt & Taylor, this publication): CBS 130.55. MycoBank No. 560391. *See Note 1.*
- Aspergillus neobridgeri* Frisvad & Samson in Frisvad *et al.*, Stud. Mycol. 50: 35, 2004. Holotype: CBS 559.82. MycoBank No. 500004.

Aspergillus neoindicus Samson *et al.*, Stud. Mycol. 69: 53, 2011 = *Aspergillus niveus* var. *indicus* Lal & A.K. Sarbhoy, Indian Phytopath. 25: 309, 1973. Neotype (Pitt & Taylor, this publication): CBS 444.75. MycoBank No. 560394. See Note 1.

Aspergillus neoniger Varga *et al.* in Varga *et al.*, Stud. Mycol. 69: 16, 2011. Holotype: CBS H-20630. MycoBank No. 560390.

Aspergillus niger Tiegh., Ann. Sci. Nat., Bot., ser. 5, 8: 240, 1867, nom. cons. (Kozakiewicz *et al.*, 1992). Neotype (Al-Musallam, 1980): CBS 554.65. MycoBank No. 284309.

Aspergillus neoniveus Samson *et al.*, Stud. Mycol. 69: 53, 2011 = *Fennellia nivea* (B.J. Wiley & E.G. Simmons) Samson, Stud. Mycol. 18: 5, 1979 = *Emericella nivea* B. J. Wiley & E. G. Simmons, Mycologia 65: 934, 1973. Non *Aspergillus niveus* Blochwitz, Ann. Mycol. 27: 205, 1929 (Peterson, 2008). Holotype: QM 8942. MycoBank No. 560395.

Aspergillus niveus Blochwitz, Ann. Mycol. 27: 205, 1929. Neotype (Samson & Gams, 1985): IMI 171878. MycoBank No. 272402.

Aspergillus nomius Kurtzman *et al.*, Antonie van Leeuwenhoek 53: 151, 1987 = *Petromyces nomius* B.W. Horn *et al.* in Horn *et al.*, Mycologia 103: 176, 2011. Holotype: BPI NRRL 13137. MycoBank No. 133392.

Aspergillus ochraceopetaliformis Bat. & Maia, Anais Soc. Biol. Pernambuco 15: 213, 1957). Neotype (Pitt & Taylor, this publication): CBS 123.55. MycoBank No. 292851.

Aspergillus ochraceoroseus Bartoli & Maggi, Trans. Br. Mycol. Soc. 71: 393, 1979. Holotype: RO 104 S. MycoBank No. 309233.

Aspergillus ochraceus K. Wilh., Beitr. Kenntn. *Aspergillus*: 66, 1877. Neotype (Pitt and Samson, 1993): IMI 16247iv. MycoBank No. 190223.

Aspergillus oryzae (Ahlb.) Cohn, Jahresber. Schles. Ges. Vaterl. Cult. 61: 226, 1884 = *Eurotium oryzae* Ahlb. in Dingler's Polytech. J. 230: 330, 1878 (*fide* Raper and Fennell, Gen. *Aspergillus*: 370, 1965). Neotype (Samson & Gams, 1985): IMI 16266. MycoBank No. 184394.

Aspergillus ostianus Wehmer, Bot. Centralbl. 80: 461, 1899. Neotype (Samson & Gams, 1985): Herb. IMI 15960. MycoBank No. 179393.

Aspergillus parasiticus Speare, Bull. Div. Pathol. Physiol., Hawaiian Sugar Planters' Assoc. Exp. Sta. 12: 38, 1912 = *Petromyces parasiticus* B.W. Horn *et al.* in Horn *et al.*, Mycologia 101: 276, 2009. Neotype (Kozakiewicz, 1982): Herb. IMI 15957ix. MycoBank No. 191085.

Aspergillus parvisclerotigenus (Mich. Saito & Tsuruta) Frisvad & Samson, System. Appl. Microbiol. 28: 450, 2005 = *Aspergillus flavus* var. *parvisclerotigenus* Mich. Saito & Tsuruta, Proc. Jap. Assoc. Mycotox. 37: 32, 1993. Holotype: NFRI 1538. MycoBank No. 500166.

Aspergillus penicilliformis Kamyschko, Bot. Mater. Otd. Sporov. Rast. 16: 91, 1963. Holotype: VKM Kamyschko 2029/5. MycoBank No. 326649. See Note 7.

Aspergillus persii A.M. Corte & Zotti, in Zotti & Montemartini Corte, Mycotaxon 83: 276, 2002. Holotype: MUCL 41970. MycoBank No. 374215.

Aspergillus petrakii Vörös, Sydowia, ser. 2, Beih., 1: 62, 1957. Neotype (Samson & Gams, 1985): IMI 172291. MycoBank No. 292854.

- Aspergillus piperis* Samson & Frisvad, in Samson *et al.*, Stud. Mycol. 50: 57, 2004. Holotype: CBS H-13434. MycoBank No. 500009.
- Aspergillus pseudocaelatus* Varga *et al.*, Stud. Mycol. 69: 63, 2011. Holotype: CBS H-20632. MycoBank No. 560397.
- Aspergillus pseudoelegans* Frisvad & Samson in Frisvad *et al.*, Stud. Mycol. 50: 35, 2004. Holotype: CBS H-13439. MycoBank No. 500005.
- Aspergillus pseudonomius* Varga *et al.*, Stud. Mycol. 69: 67, 2011. Holotype: CBS H-20633. MycoBank No. 560398.
- Aspergillus pseudotamaris* Yoko Ito *et al.*, Mycol. Res. 105: 237, 2001. Holotype: BPI 746098. MycoBank No. 466527.
- Aspergillus pseudoterreus* S.W. Peterson *et al.* in Samson *et al.*, Stud. Mycol. 69: 53, 2011. Holotype: CBS H-20631. MycoBank No. 560396.
- Aspergillus pulverulentus* (McAlpine) Wehmer, Centralbl. Bakteriol., 2. Abth., 18: 394, 1907 = *Sterigmatocystis pulverulenta* McAlpine, Agric. Gaz. NSW 7: 3023, 1897. Holotype: VPRI, on *Phaseolus vulgaris* from Burnley Bot. Garden, Burnley, Vic., Australia, McAlpine. MycoBank No. 121243.
- Aspergillus qizutongii* D.M. Li *et al.*, Mycoscience 39: 301, 1998. Holotype: CBM FD 284. MycoBank No. 446576. See Note 2.
- Aspergillus rambellii* Frisvad & Samson, in Frisvad *et al.*, Syst. Appl. Microbiol. 28: 449, 2005. Holotype: CBS 101887. MycoBank No. 501209.
- Aspergillus robustus* M. Chr. & Raper, Mycologia 70: 200, 1978. Holotype: NY WB 5286. MycoBank No. 309241.
- Aspergillus roseoglobosus* Frisvad & Samson in Frisvad *et al.*, Stud. Mycol. 50: 30, 2004. Holotype: CBS H-13438. MycoBank No. 500001.
- Aspergillus saccharolyticus* Sørensen *et al.* in Sørensen *et al.*, Int. J. Syst. Evol. Microbiol. 61: 3081, 2011. Holotype: CBS 127449. MycoBank No. 518659.
- Aspergillus salviicola* Udagawa *et al.*, Mycoscience 35: 245, 1994. Holotype: CBM NCI 2090. MycoBank No. 362927.
- Aspergillus scleroticarbonarius* Noonim *et al.*, Int. J. Syst. Evol. Microbiol. 58: 1733, 2008. Holotype: CBS 121057. MycoBank No. 504407.
- Aspergillus sclerotioniger* Samson & Frisvad in Samson *et al.*, Stud. Mycol. 50: 57, 2004. Holotype: CBS H-13433. MycoBank No. 500010.
- Aspergillus sclerotiorum* G.A. Huber, Phytopathology 23: 306, 1933. Neotype (Samson & Gams, 1985): Herb. IMI 56673. MycoBank No. 277707.
- Aspergillus sergii* P. Rodrigues *et al.* in Soares *et al.*, Mycologia 104: 693, 2012. Holotype: MUM-H 10.219. MycoBank No. 561842.
- Aspergillus sojae* Sakag. & K. Yamada ex Murak., Rep. Res. Inst. Brewing 143: 8, 1971. Neotype (Pitt and Samson, 1993): IMI 191300. MycoBank No. 292860.

- Aspergillus steynii* Frisvad & Samson in Frisvad *et al.*, Stud. Mycol. 50: 39, 2004. Holotype: CBS H-13445. MycoBank No. 500006.
- Aspergillus subolivaceus* Raper & Fennell, Gen. *Aspergillus*: 385, 1965. Neotype (Samson & Gams, 1985): IMI 44882. MycoBank No. 326661.
- Aspergillus taichungensis* Yaguchi *et al.*, Mycoscience 36: 421, 1995. Holotype: CBM PF-1167. MycoBank No. 434473.
- Aspergillus tamarii* Kita, Centralbl. Bakteriolog. 2. Abth. 37: 433, 1913. Neotype (Samson & Gams, 1985): CBS 104.13. MycoBank No. 191425.
- Aspergillus terreus* Thom, Am. J. Bot. 5: 85, 1918. Neotype (Samson & Gams, 1985): IMI 17294. MycoBank No. 191719.
- Aspergillus togoensis* (Henn.) Samson & Seifert in Samson & Pitt (eds), Adv. *Penicillium Aspergillus* Syst.: 419, 1985 = *Stilbothamnium togoense* Henn., Bot. Jahrb. Syst. 23: 542, 1897. Neotype (Samson and Seifert, 1985): BR B 1009. MycoBank No. 114720.
- Aspergillus transmontanensis* P. Rodrigues *et al.* in Soares *et al.*, Mycologia 104: 694, 2012. Holotype: MUM-H 10.214. MycoBank No. 561843.
- Aspergillus trinidadensis* Ž. Jurjević *et al.* in Ž. Jurjević *et al.*, IMA Fungus 3: 170, 2012. Holotype: BPI 883908. MycoBank No. 802364.
- Aspergillus tritici* B.S. Mehrotra & M. Basu [as 'triticius'], Nova Hedwigia 27: 599, 1976. Neotype (Pitt & Taylor, this publication): CBS 266.81. MycoBank No. 309248.
- Aspergillus tubingensis* Mosseray, Cellule 43: 245, 1934. Neotype (Pitt & Taylor, this publication): IMI 172296. MycoBank No. 255209.
- Aspergillus uvarum* G. Perrone *et al.*, Int. J. Syst. Evol. Microbiol. 58: 1036, 2008. Holotype: IMI 388523. MycoBank No. 510962.
- Aspergillus vadensis* de Vries *et al.*, Appl. Environ. Microbiol. 70: 3594, 2004. Holotype: CBS 113365. MycoBank No. 490583. See Note 8.
- Aspergillus vitellinus* (Ridl.) Samson & Seifert in Samson & Pitt (eds), Adv. *Penicillium Aspergillus* Syst.: 417, 1985 = *Sterigmatocystis vitellina* Ridl., J. Bot. 34: 152, 1896. Holotype: K, Singapore, 1894, Ridley 2970. MycoBank No. 114721.
- Aspergillus violaceofuscus* Gasperini, Atti Soc. Tosc. Sci. Nat. Pisa, Processi Verbalii 8: 326, 1887. Neotype (Samson & Gams, 1985): CBS 123.27. MycoBank No. 172512.
- Aspergillus wangduanlii* D.M. Li *et al.*, Mycoscience 39: 302, 1998. Holotype: CBM FD 283. MycoBank No. 447107. See Note 2.
- Aspergillus westerdijkiae* Frisvad & Samson in Frisvad *et al.*, Stud. Mycol. 50: 30, 2004. Holotype: CBS H-13444. MycoBank No. 500000.
- Aspergillus zhaoqingensis* Z.T. Qi & Z.M. Sun in Sun & Qi, Acta Mycol. Sin. 10: 22, 1991 = *Aspergillus nomius* Kurtzman *et al.*, Antonie van Leeuwenhoek 53: 151, 1987 (Frisvad *et al.*, 2005).

Aspergillus zonatus Kwon & Fennell in Raper and Fennell, Gen. *Aspergillus*: 377, 1965. Neotype (Samson & Gams, 1985): CBS 506.65. MycoBank No. 326666. See Note 9.

Section 2. *Aspergillus* species previously validly described in accepted teleomorph genera

Aspergillus appendiculatus Blaser, Sydowia 28: 38, 1975 = *Eurotium appendiculatum* Blaser, *ibid* 28: 38, 1975.

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Aspergillus violaceus Fennell & Raper, Mycologia 47: 75, 1955 (nom. holomorph.) = ***Emericella violacea*** (Fennell & Raper) Malloch & Cain., Can. J. Bot. 50: 62, 1972 = *Aspergillus violaceobrunneus* Samson & W. Gams in Samson & Pitt (eds), Adv. *Penicillium Aspergillus* Syst.: 53, 1985.

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Section 3. *Aspergillus* species recombined into teleomorph genera by Pitt and Taylor (2013)

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Aspergillus aeneus Sappa, Allionia 2: 84, 1954 = ***Emericella aenea*** (Sappa) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): CBS 128.58.

Aspergillus austroafricanus Ž. Jurjević *et al.*, IMA Fungus 3: 67, 2012 = ***Emericella austroafricanus*** (Ž. Jurjević *et al.*) Pitt & J. Taylor comb. nov. Holotype: BPI 880914.

Aspergillus amazonicus D. Mares in Mares *et al.*, Curr. Microbiol. 57: 228, 2008 = ***Emericella amazonicus*** (D. Mares) Pitt & J. Taylor comb. nov. Neotype (Pitt & Taylor, this publication): CBS 124228.

Aspergillus amylovorus Panas. ex Samson, Stud. Mycol. 18: 28, 1979 = ***Emericella amylovora*** (Panas. ex Samson) Pitt & J. Taylor comb. nov. Holotype: CBS 600.67.

Aspergillus anthodesmis Bartoli & Maggi, Trans. Br. Mycol. Soc. 71: 386, 1979 = ***Emericella anthodesmis*** (Bartoli & Maggi) Pitt & J. Taylor comb. nov. Holotype: RO 103 S.

Aspergillus arenarius Raper & Fennell, Gen. *Aspergillus*: 475, 1965 = ***Emericella arenaria*** (Raper & Fennell) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 55632.

Aspergillus asperescens Stolk, Antonie van Leeuwenhoek 20: 303, 1954 = ***Emericella asperescens*** (Stolk) Pitt & J. Taylor comb. nov. Neotype (Pitt & Samson, 1993): IMI 46813.

Aspergillus aureolatus Munt. Cvetk. & Bata, Bull. Inst. Jard. Bot. Univ. Beograd, Ser. 2, 1: 196, 1964 = ***Emericella aureolata*** (Munt. Cvetk. & Bata) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): CBS 190.65.

Aspergillus baeticus A. Novakova & Hubka, Int. J. Syst. Evol. Microbiol. 62: 2783, 2012 = ***Emericella baetica*** (A. Novakova & Hubka) Pitt & J. Taylor comb. nov. Holotype: CMF ISB 2153.

Aspergillus biplanus Raper & Fennell, Gen. *Aspergillus*: 434, 1965 = ***Emericella biplana*** (Raper & Fennell) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 235602.

Aspergillus bisporus Kwon-Chung & Fennell, Mycologia 63: 479, 1971 = ***Emericella bispora*** (Kwon-Chung & Fennell) Pitt & J. Taylor comb. nov. Holotype: BPI NRRL 3693.

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Aspergillus brunneouniseriatus Suj. Singh & B. K. Bakshi, Trans. Br. Mycol. Soc. 44: 160, 1961 = ***Chaetosartorya brunneouniseriata*** (Suj. Singh & B. K. Bakshi) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 227677.

Aspergillus caesiellus Saito, J. Coll. Sci. Imp. Univ. Tokyo 18: 49, 1904 = ***Eurotium caesiellum*** (Saito) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 172278.

Aspergillus caespitosus Raper & Thom, Mycologia 36: 563, 1944 = ***Emericella caespitosa*** (Raper & Thom) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 16034ii.

Aspergillus calidoustus Varga *et al.*, Eukaryotic Cell 7: 636, 2008 = ***Emericella calidousta*** (Varga *et al.*) Pitt & J. Taylor comb. nov. Holotype: CBS 121601.

Aspergillus californicus Frisvad *et al.* in Samson *et al.*, Stud. Mycol. 69: 91, 2011 = ***Emericella californica*** (Frisvad *et al.*) Pitt & J. Taylor comb. nov. Holotype: CBS H-20635.

Aspergillus carlsbadensis Frisvad *et al.* in Samson *et al.*, Stud. Mycol. 69: 88, 2011 = ***Emericella carlsbadensis*** (Frisvad *et al.*) Pitt & J. Taylor comb. nov. Holotype: H-30634.

Aspergillus cervinus Masee, Bull. Misc. Inform. Kew 1914: 158, 1914 = ***Neosartorya cervina*** (Masee) Pitt & J. Taylor comb. nov. Holotype: WIS WISC WT 540.

Aspergillus cibarius S.B. Hong and Samson, J. Microbiol. 50: 713, 2012 = ***Eurotium cibarium*** (S.B. Hong & Samson) Pitt & J. Taylor comb. nov. Holotype: KACC 46346.

Aspergillus clavatonanicus Bat. *et al.*, Anais Fac. Med. Univ. Recife 15: 197, 1955 = ***Neosartorya clavatonanicus*** (Bat. *et al.*) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 235352.

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- Aspergillus conicus* Blochwitz, Ann. Mycol. 12: 38, 1914 = ***Eurotium conicum*** (Blochwitz) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 172281.
- Aspergillus conjunctus* Kwon & Fennell in Raper & Fennell, Gen. *Aspergillus*: 552, 1965 = ***Emericella conjuncta*** (Kwon & Fennell) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 135421.
- Aspergillus creber* Ž. Jurjević *et al.*, IMA Fungus 3: 69, 2012 = ***Emericella creber*** (Ž. Jurjević *et al.*) Pitt & J. Taylor comb. nov. Holotype: BPI 800912.
- Aspergillus crustosus* Raper & Fennell, Gen. *Aspergillus*: 532, 1965 = ***Emericella crustosa*** (Raper & Fennell) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 135819.
- Aspergillus curviformis* H.J. Chowdhery & J.N. Rai, Nova Hedwigia 32: 231, 1980 = ***Neosartorya curviforma*** (H.J. Chowdhery & J.N. Rai) Pitt & J. Taylor comb. nov. Holotype: LWG, dried culture from soil, Kagh Islands, India.
- Aspergillus crystallinus* Kwon & Fennell in Raper & Fennell, Gen. *Aspergillus*: 471, 1965 = ***Hemicarpenales crystallinus*** (Kwon & Fennell) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 139270.
- Aspergillus cvjetkovicii* Ž. Jurjević *et al.*, IMA Fungus 3: 69, 2012 = ***Emericella cvjetkovicii*** (Ž. Jurjević *et al.*) Pitt & J. Taylor comb. nov. Holotype: BPI 880909.
- Aspergillus deflectus* Fennell & Raper, Mycologia 47: 83, 1955 = ***Emericella deflecta*** (Fennell & Raper) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 61448.
- Aspergillus dimorphicus* B. S. Mehrotra & Prasad, Trans. Br. Mycol. Soc. 52: 331, 1969 = ***Chaetosartorya dimorphica*** Pitt & J. Taylor comb. nov. Neotype (Kozakiewicz, 1989): IMI 131553.
- Aspergillus diversus* Raper & Fennell, Gen. *Aspergillus*: 437, 1965 = ***Emericella diversa*** (Raper & Fennell) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 232882.
- Aspergillus duricaulis* Raper & Fennell, Gen. *Aspergillus*: 249, 1965 = ***Neosartorya duricaula*** (Raper & Fennell) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 172282.
- Aspergillus eburneocremeus* Sappa, Allionia 2: 87, 1954 = ***Emericella eburneocrema*** (Sappa) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 69856.
- Aspergillus egyptiacus* Moub. & Mustafa, Egypt. J. Bot. 15: 153, 1972 = ***Emericella egyptiaca*** (Moub. & Mustafa) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 141415.
- Aspergillus elongatus* J.N. Rai & S.C. Agarwal, Can. J. Bot. 48: 791, 1970 = ***Emericella elongata*** (J.N. Rai & S.C. Agarwal) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): CBS 387.75.
- Aspergillus flaschentraegeri* Stolk, Trans. Br. Mycol. Soc. 47: 123, 1964 = ***Chaetosartorya flaschentraegeri*** (Stolk) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): CBS 108.63. MycoBank No. 326629.
- Aspergillus floriformis* Samson & Mouch., Antonie van Leeuwenhoek 40: 343, 1975 = ***Emericella floriformis*** (Samson & Mouch.) Pitt & J. Taylor comb. nov. Holotype: CBS 937.73.
- Aspergillus fructus* Ž. Jurjević *et al.*, IMA Fungus 3: 70, 2012 = ***Emericella fructus*** (Ž. Jurjević *et al.*) Pitt & J. Taylor comb. nov. Holotype: BPI 880915.

Aspergillus fumigatiaffinis S.B. Hong *et al.* in Hong *et al.*, Mycologia 97: 1326, 2006 [2005] = ***Neosartorya fumigatiaffinis*** (S.B. Hong *et al.*) Pitt & J. Taylor comb. nov. Holotype: CBS 117186.

Aspergillus fumisynnematus Y. Horie *et al.*, Trans. Mycol. Soc. Japan 34: 3, 1993 = ***Neosartorya fumisynnemata*** (Y. Horie *et al.*) Pitt & J. Taylor comb. nov. Holotype: CBM FD 0001.

Aspergillus funiculosus G. Sm., Trans. Br. Mycol. Soc. 39: 111, 1956 = ***Emericella funiculosa*** (G. Sm.) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 44397.

Aspergillus germanicus Varga *et al.* in Samson *et al.*, Stud. Mycol. 69: 91, 2011 = ***Emericella germanica*** (Varga *et al.*) Pitt & J. Taylor comb. nov. Holotype: CBS H-20636.

Aspergillus giganteus Wehmer, Mem. Soc. Phys. Genève 33: 85, 1901 = ***Neosartorya giganteus*** (Wehmer) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 227678.

Aspergillus globosus H.J. Chowdhery & J.N. Rai, Nova Hedwigia 32: 233, 1980 = ***Neosartorya globosa*** (H.J. Chowdhery & J.N. Rai) Pitt & J. Taylor comb. nov. Holotype: LWG, dried culture from soil from Kagh Is., India.

Aspergillus gorakhpurensis Kamal & Bhargava, Trans. Br. Mycol. Soc. 52: 338, 1969 = ***Chaetosartorya gorakhpurensis*** (Kamal & Bhargava) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 130728.

Aspergillus gracilis Bainier, Bull. Soc. Mycol. France 23: 90, 1907 = ***Eurotium gracilis*** (Bainier) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 211393.

Aspergillus granulosis Raper & Thom, Mycologia 36: 565, 1944 = ***Emericella granulosa*** (Raper & Thom) Pitt & J. Taylor comb. nov. Neotype (Kozakiewicz, 1989): IMI 17278ii.

Aspergillus haitiensis Varga *et al.*, IMA Fungus 1: 194, 2010 = ***Emericella haitiensis*** (Varga *et al.*) Pitt & J. Taylor comb. nov. Holotype: CBS H-20503.

Aspergillus heyangensis Z.T. Qi *et al.*, in Sun & Qi, Acta Mycol. Sin. 13: 81, 1994 = ***Emericella heyangensis*** (Z.T. Qi *et al.*) Pitt & J. Taylor comb. nov. Holotype: HMAS 58982.

Aspergillus implicatus Persiani & Maggi, in Maggi & Persiani, Mycol. Res. 98: 871, 1994 = ***Emericella implicata*** (Persiani & Maggi) Pitt & J. Taylor comb. nov. Holotype: ROHB 110 S.

Aspergillus insuetus (Bainier) Thom & Church, Aspergilli: 153, 1929 = *Sterigmatocystis insueta* (Bainier), Bull. Soc. Mycol. Fr. 24: 85, 1908 = ***Emericella insueta*** (Bainier) Pitt & J. Taylor comb. nov. Neotype (Pitt & Taylor, this publication): CBS 107.25.

Aspergillus itaconicus Kinosh., Bot. Mag. (Tokyo) 45: 60, 1931 = ***Chaetosartorya itaconica*** (Kinosh.) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 16119.

Aspergillus ivoriensis Bartoli & Maggi, Trans. Br. Mycol. Soc. 71: 383, 1979 = ***Emericella ivoriensis*** (Bartoli & Maggi) Pitt & J. Taylor comb. nov. Holotype: RO 101 S.

Aspergillus jensenii Ž. Jurjević *et al.*, IMA Fungus 3: 70, 2012 = ***Emericella jensenii*** (Ž. Jurjević *et al.*) Pitt & J. Taylor comb. nov. Holotype: BPI 880910.

Aspergillus kanagawaensis Nehira, J. Jap. Bot. 26: 109, 1951 = ***Neosartorya kanagawaensis*** (Nehira) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 126690.

Aspergillus karnatakaensis Varga *et al.*, IMA Fungus 1: 203, 2010 = ***Emericella karnatakaensis*** (Varga *et al.*) Pitt & J. Taylor comb. nov. Holotype: CBS H-20502.

Aspergillus kassunensis Baghd., Novosti Sist. Nizš. Rast. 1968: 113, 1968 = ***Emericella kassunensis*** (Baghd.) Pitt & J. Taylor comb. nov. Neotype (Pitt & Taylor, this publication): CBS 419.69.

Aspergillus keveii Varga *et al.* in Houbraken *et al.*, Stud. Mycol. 59: 120, 2007 = ***Emericella keveii*** (Varga *et al.*) Pitt & J. Taylor comb. nov. Holotype: CBS 209.92.

Aspergillus lentulus Balajee & K.A. Marr, in Balajee *et al.*, Eukaryotic Cell 4: 631, 2005 = ***Neosartorya lentula*** (Balajee & K.A. Marr) Pitt & J. Taylor comb. nov. Holotype: BPI 863540.

Aspergillus longivesica L.H. Huang & Raper, Mycologia 63: 53, 1971 = ***Neosartorya longivesica*** (L.H. Huang & Raper) Pitt & J. Taylor comb. nov. Holotype: WIS NI 179.

Aspergillus lucknowensis J.N. Rai *et al.*, Can. J. Bot. 46: 1483, 1968 = ***Emericella lucknowensis*** (J.N. Rai *et al.*) Pitt & J. Taylor comb. nov. Neotype (Pitt & Samson, 1993): CBS 449.75.

Aspergillus malodoratus Kwon & Fennell in Raper & Fennell, Gen. *Aspergillus*: 468, 1965 = ***Hemicarpenites malodoratus*** (Kwon & Fennell) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 172289.

Aspergillus marvanovae Hubka *et al.* in Hubka *et al.*, Int. J. System. Evol. Micro. 63: 787, 2013 = ***Neosartorya marvanovae*** (Hubka *et al.*) Pitt & J. Taylor comb. nov. Holotype: PRM 860539.

Aspergillus multicolor Sappa, Allionia 2: 87, 1954 = ***Emericella multicolor*** (Sappa) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 69875.

Aspergillus novofumigatus S.B. Hong *et al.* in Hong *et al.*, Mycologia 97: 1368, 2006 [2005] = ***Neosartorya novofumigata*** (S.B. Hong *et al.*) Pitt & J. Taylor comb. nov. Holotype: CBS 117520.

Aspergillus nutans McLennan & Ducker in McLennan *et al.*, Aust. J. Bot. 2: 355, 1954 = ***Neosartorya nutans*** (McLennan & Ducker) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 62874ii.

Aspergillus panamensis Raper & Thom, Mycologia 36: 568, 1944 = ***Emericella panamensis*** (Raper & Thom) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 19393iii.

Aspergillus parvulus G. Sm., Trans. Br. Mycol. Soc. 44: 45, 1961 = ***Neosartorya parvula*** (G. Sm.) Pitt & J. Taylor comb. nov. Holotype: IMI 86558.

Aspergillus penicillioides Speg., Revista Fac. Agron. Univ. Nac. La Plata 2: 246, 1896 = ***Eurotium penicillioides*** (Speg.) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 211342.

Aspergillus peyronelii Sappa, Allionia 2: 248, 1955 = ***Emericella peyronelii*** (Sappa) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 139271.

Aspergillus proliferans G. Sm., Trans. Brit. Mycol. Soc. 26: 26, 1943 = ***Eurotium proliferans*** (G. Sm.) Pitt & J. Taylor comb. nov. Holotype: IMI 16105iii.

Aspergillus protuberus Munt. Cvetk., Mikrobiologija 5: 119, 1968 = ***Emericella protuberus*** (Munt. Cvetk.) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): CBS 602.74.

- Aspergillus pseudodeflectus* Samson & Mouch., *Antonie van Leeuwenhoek* 40: 345, 1975 = ***Emericella pseudodeflecta*** (Samson & Mouch.) Pitt & J. Taylor comb. nov. Holotype: CBS 756.74.
- Aspergillus pseudoustus* Frisvad *et al.* in Samson *et al.*, *Stud. Mycol.* 69: 91, 2011 = ***Emericella pseudousta*** (Frisvad *et al.*) Pitt & J. Taylor comb. nov. Holotype: CBS H-20637.
- Aspergillus pulvinus* Kwon & Fennell in Raper & Fennell, *Gen. Aspergillus*: 455, 1965 = ***Chaetosartorya pulvina*** (Kwon & Fennell) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 139628.
- Aspergillus puniceus* Kwon & Fennell in Raper & Fennell, *Gen. Aspergillus*: 547, 1965 = ***Emericella punicea*** (Kwon & Fennell) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 126692.
- Aspergillus puulaauensis* Ž. Jurjević *et al.*, *IMA Fungus* 3: 71, 2012 = ***Emericella puulaauensis*** (Ž. Jurjević *et al.*) Pitt & J. Taylor comb. nov. Holotype: BPI 880911.
- Aspergillus raperi* Stolk, *Trans. Br. Mycol. Soc.* 40: 190, 1957 = ***Emericella raperi*** (Stolk) Pitt & J. Taylor comb. nov. Holotype: K, dried culture from soil from Yangambi, Zaire, Meyer.
- Aspergillus recurvatus* Raper & Fennell, *Gen. Aspergillus*: 529, 1965 = ***Emericella recurvata*** (Raper & Fennell) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 36528.
- Aspergillus restrictus* G. Sm., *J. Textile Inst.* 22: 115, 1931 = ***Eurotium restrictum*** (G. Sm.) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 16267.
- Aspergillus rhizopodus* J.N. Rai *et al.*, *Trans. Br. mycol. Soc.* 64: 515, 1975 = ***Neosartorya rhizopodus*** (J.N. Rai *et al.*) Pitt & J. Taylor comb. nov. Holotype: LWG, dried culture from alkaline soil, India.
- Aspergillus sepultus* Tuthill & M. Chr., *Mycologia* 78: 475, 1986 = ***Chaetosartorya sepulta*** (Tuthill & M. Chr.) Pitt & J. Taylor comb. nov. Holotype: NY RMF 7602.
- Aspergillus silvaticus* Fennell & Raper, *Mycologia* 47: 83, 1955 = ***Emericella silvatica*** (Fennell & Raper) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 61456.
- Aspergillus sparsus* Raper & Thom, *Mycologia* 36: 572, 1944 = ***Emericella sparsa*** (Raper & Thom) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 19394.
- Aspergillus speluneus* Raper & Fennell, *Gen. Aspergillus*: 457, 1965 = ***Emericella spelunea*** (Raper & Fennell) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 211389.
- Aspergillus subsessilis* Raper & Fennell, *Gen. Aspergillus*: 530, 1965 = ***Emericella subsessilis*** (Raper & Fennell) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 135820.
- Aspergillus subversicolor* Ž. Jurjević *et al.*, *IMA Fungus* 3: 72, 2012 = ***Emericella subversicolor*** (Ž. Jurjević *et al.*) Pitt & J. Taylor comb. nov. Holotype: BPI 880918.
- Aspergillus sydowii* (Bainier & Sartory) Thom & Church, *Aspergilli*: 147, 1926 = *Sterigmatocystis sydowii* Bainier & Sartory, *Ann. Mycol.* 11: 25, 1913 = ***Emericella sydowii*** (Bainier & Sartory) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 211384.
- Aspergillus tabacinus* Nakaz. *et al.* in Takeda *et al.*, *J. Agr. Chem. Soc. Japan* 10: 177, 1934 = ***Emericella tabacina*** (Nakaz. *et al.*) Pitt & J. Taylor comb. nov. Neotype (Pitt & Taylor, this publication): CBS 122718.
- Aspergillus tardus* Bissett & Widden, *Can. J. Bot.* 62: 2521, 1984 = ***Emericella tarda*** (Bissett & Widden) Pitt & J. Taylor comb. nov. Holotype: DAOM 183872.

- Aspergillus tennesseensis* Ž. Jurjević *et al.*, IMA Fungus 3: 73, 2012 = *Emericella tennesseensis* (Ž. Jurjević *et al.*) Pitt & J. Taylor comb. nov. Holotype: BPI 880917.
- Aspergillus thesauricus* Hubka & A. Novakova, Int. J. Syst. Evol. Microbiol. 62: 2784, 2012 = *Emericella thesaurica* (Hubka & A. Novakova) Pitt & J. Taylor comb. nov. Holotype: CMF ISB 2155.
- Aspergillus turcosus* S.B. Hong *et al.*, Antonie van Leeuwenhoek 93: 97, 2008 = *Neosartorya turcosa* (S.B. Hong *et al.*) Pitt & J. Taylor comb. nov. Holotype: KACC 42091.
- Aspergillus turkensis* Varga *et al.* in Samson *et al.*, Stud. Mycol. 69: 91, 2011 = *Emericella turkensis* (Varga *et al.*) Pitt & J. Taylor comb. nov. Holotype: CBS H-20638.
- Aspergillus unilateralis* Thrower in McLennan *et al.*, Aust. J. Bot. 2: 358, 1954 = *Neosartorya unilateralis* (Thrower) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 62876.
- Aspergillus ustus* (Bainier) Thom & Church, Aspergilli: 152, 1926 = *Sterigmatocystis usta* Bainier, Bull. Soc. Bot. Fr. 28: 78, 1881 = *Emericella usta* (Bainier) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 211805.
- Aspergillus varians* Wehmer, Bot. Centralbl. 80: 460, 1899 = *Emericella varians* (Wehmer) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 172297.
- Aspergillus venenatus* Ž. Jurjević *et al.*, IMA Fungus 3: 73, 2012 = *Emericella venenata* (Ž. Jurjević *et al.*) Pitt & J. Taylor comb. nov. Holotype: BPI 880916.
- Aspergillus versicolor* (Vuill.) Tirab., Ann. Bot. (Roma) 7: 9, 1908 = *Sterigmatocystis versicolor* Vuill. in Mirsky, Causes Err. Dêt. Aspergill.: 15, 1903 = *Emericella versicolor* (Vuill.) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): CBS 538.65.
- Aspergillus vinosobubalinus* Udagawa *et al.*, Trans. Mycol. Soc. Japan 34: 255, 1993 = *Neosartorya vinosobubalina* (Udagawa *et al.*) Pitt & J. Taylor comb. nov. Holotype: BF 33501.
- Aspergillus viridinitans* Ducker & Thrower in McLennan *et al.*, Aust. J. Bot. 2: 357, 1954 = *Neosartorya viridinitans* (Ducker & Thrower) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 62875.
- Aspergillus vitricola* Ohtsuki, Bot. Mag. (Tokyo) 75: 436, 1962 = *Eurotium vitricola* (Ohtsuki) Pitt & J. Taylor comb. nov. Holotype: IFO 8155.
- Aspergillus waksmanii* Hubka *et al.* in Hubka *et al.*, Int. J. System. Evol. Micro. 63: 786, 2013 = *Neosartorya waksmanii* (Hubka *et al.*) Pitt & J. Taylor comb. nov. Holotype: PRM 860537.
- Aspergillus wentii* Wehmer, Centralbl. Bakteriol., 2. Abth., 2: 149, 1896 = *Chaetosartorya wentii* (Wehmer) Pitt & J. Taylor comb. nov. Neotype (Samson & Gams, 1985): IMI 17295.

Section 4. List of species in teleomorph genera, both preexisting and new combinations

***Chaetosartorya* Subram., Curr. Sci. 41: 761, 1972**

Chaetosartorya arxii (Fort & Guarro) Pitt & J. Taylor comb. nov. = *Cristaspora arxii* Fort & Guarro, Mycologia 76: 1115, 1984. Holotype: CBS 525.83.

Chaetosartorya brunneouniseriata (Suj. Singh & B. K. Bakshi) Pitt & J. Taylor comb. nov. = *Aspergillus brunneouniseriatus* Suj. Singh & B. K. Bakshi, Trans. Br. Mycol. Soc. 44: 160, 1961. Neotype (Samson & Gams, 1985): IMI 227677.

Chaetosartorya chrysellia (Kwon & Fennell) Subram., Curr. Sci. 41: 761, 1972 = *Aspergillus chrysellus* Kwon & Fennell in Raper & Fennell, Gen. *Aspergillus*: 424, 1965 (nom. holomorph.) = *Aspergillus chryseides* Samson & W. Gams in Samson & Pitt (eds), Adv. *Penicillium Aspergillus* Syst.: 36, 1985. Neotype (Samson & Gams, 1985): IMI 238612. MycoBank No. 310954.

Chaetosartorya cremea (Kwon & Fennell) Subram., Curr. Sci. 41: 761, 1972 = *Aspergillus cremeus* Kwon & Fennell in Raper & Fennell, Gen. *Aspergillus*: 418, 1965 (nom. holomorph.) = *Aspergillus cremeoflavus* Samson & W. Gams in Samson & Pitt, Adv. *Penicillium Aspergillus* Syst.: 37, 1985. Neotype (Samson & Gams, 1985): IMI 123749ii. MycoBank No. 310955.

Chaetosartorya dimorphica Pitt & J. Taylor comb. nov. = *Aspergillus dimorphicus* B. S. Mehrotra & Prasad, Trans. Br. Mycol. Soc. 52: 331, 1969. Neotype (Kozakiewicz, 1989): IMI 131553.

Chaetosartorya flaschentraegeri (Stolk) Pitt & J. Taylor comb. nov. = *Aspergillus flaschentraegeri* Stolk, Trans. Br. Mycol. Soc. 47: 123, 1964 (Frisvad & Samson, 2000). Neotype (Samson & Gams, 1985): K CBS 108.63.

Chaetosartorya gorakhpurensis (Kamal & Bhargava) Pitt & J. Taylor comb. nov. = *Aspergillus gorakhpurensis* Kamal & Bhargava, Trans. Br. Mycol. Soc. 52: 338, 1969. Neotype (Samson & Gams, 1985): IMI 130728.

Chaetosartorya itaconica (Kinosh.) Pitt & J. Taylor comb. nov. = *Aspergillus itaconicus* Kinosh., Bot. Mag. (Tokyo) 45: 60, 1931. Neotype (Samson & Gams, 1985): IMI 16119.

Chaetosartorya pulvina (Kwon & Fennell) Pitt & J. Taylor comb. nov. = *Aspergillus pulvinus* Kwon & Fennell in Raper & Fennell, Gen. *Aspergillus*: 455, 1965. Neotype (Samson & Gams, 1985): IMI 139628.

Chaetosartorya sepulta (Tuthill & M. Chr.) Pitt & J. Taylor comb. nov. = *Aspergillus sepultus* Tuthill & M. Chr., Mycologia 78: 475, 1986. [MB130306]. Holotype: NY RMF 7602.

Chaetosartorya stromatoides B.J. Wiley & E.G. Simmons, Mycologia 65: 935, 1973 = *Aspergillus stromatoides* Raper & Fennell, Gen. *Aspergillus*: 421, 1965 (nom. holomorph.). Holotype: QM 8944. MycoBank No. 310956.

Chaetosartorya wentii (Wehmer) Pitt & J. Taylor comb. nov. = *Aspergillus wentii* Wehmer, Centralbl. Bakteriol., 2. Abth., 2: 149, 1896. Neotype (Samson & Gams, 1985): IMI 17295.

***Cristaspora* Fort & Guarro, Mycologia 76: 1115, 1984**

= *Chaetosartorya* Subram., Curr. Sci. 41: 761, 1972 (Houbraken & Samson, 2011).

Cristaspora arxii Fort & Guarro, Mycologia 76: 1115, 1984 = *Chaetosartorya arxii* (Fort & Guarro) Pitt & J. Taylor comb. nov. Holotype: CBS 525.83.

***Emericella* Berk., Int. Crypt. Bot.: 340, 1857**

Emericella acristata (Fennell & Raper) Y. Horie, Trans. Mycol. Soc. Japan 21: 491, 1980 = *Aspergillus nidulans* var. *acristatus* Fennell & Raper, Mycologia 47: 79, 1955 (nom. holomorph.) = ***Emericella quadrilineata*** (Thom & Raper) C.R. Benj., Mycologia 47: 680, 1955 (Peterson 2008).

Emericella aenea (Sappa) Pitt & J. Taylor comb. nov. = *Aspergillus aeneus* Sappa, Allionia 2: 84, 1954. Neotype (Samson & Gams, 1985): CBS 128.58.

Emericella austroafricanus (Ž. Jurjević *et al.*) Pitt & J. Taylor comb. nov. = *Aspergillus austroafricanus* Ž. Jurjević *et al.*, IMA Fungus 3: 67, 2012. Holotype: BPI 880914.

Emericella amazonicus (D. Mares) Pitt & J. Taylor comb. nov. = *Aspergillus amazonicus* D. Mares in Mares *et al.*, Curr. Microbiol. 57: 228, 2008. Neotype (Pitt & Taylor, this publication): CBS 124228.

Emericella amylovora (Panas. ex Samson) Pitt & J. Taylor comb. nov. = *Aspergillus amylovorus* Panas. ex Samson, Stud. Mycol. 18: 28, 1979. Holotype: CBS 600.67.

Emericella anthodesmis (Bartoli & Maggi) Pitt & J. Taylor comb. nov. = *Aspergillus anthodesmis* Bartoli & Maggi, Trans. Br. Mycol. Soc. 71: 386, 1979. Holotype: RO 103 S.

Emericella appendiculata Y. Horie & D.M. Li, in Horie *et al.*, Mycoscience 39: 161, 1998. Holotype: Herb. CBM FA-865. MycoBank No. 444860.

Emericella arenaria (Raper & Fennell) Pitt & J. Taylor comb. nov. = *Aspergillus arenarius* Raper & Fennell, Gen. *Aspergillus*: 475, 1965. Neotype (Samson & Gams, 1985): IMI 55632.

Emericella asperescens (Stolk) Pitt & J. Taylor comb. nov. = *Aspergillus asperescens* Stolk, Antonie van Leeuwenhoek 20: 303, 1954. Neotype (Pitt & Samson, 1993): IMI 46813.

Emericella astellata (Fennell & Raper) Y. Horie, Trans. Mycol. Soc. Japan 21: 491, 1980 = *Aspergillus varicolor* var. *astellatus* Fennell & Raper, Mycologia 47: 81, 1955 (nom. holomorph.) = *Aspergillus stellatus* var. *astellatus* (Fennell & Raper) Subram., Curr. Sci. 41: 759, 1972. Neotype (Samson & Gams, 1985): IMI 61455. MycoBank No. 110628.

Emericella aurantiobrunnea (G.A. Atkins *et al.*) Malloch & Cain, Can. J. Bot. 50: 61, 1972 = *Emericella nidulans* var. *aurantio-brunnea* G. A. Atkins *et al.*, Trans. Br. Mycol. Soc. 41: 504, 1958 = *Aspergillus aurantiobrunneus* (G.A. Atkins *et al.*) Raper & Fennell, Gen. *Aspergillus*: 511, 1965. Holotype: IMI 74897. MycoBank No. 313499.

Emericella aureolata (Munt. Cvetk. & Bata) Pitt & J. Taylor comb. nov. = *Aspergillus aureolatus* Munt. Cvetk. & Bata, Bull. Inst. Jard. Bot. Univ. Beograd, Ser. 2, 1: 196, 1964. Neotype (Samson & Gams, 1985): CBS 190.65.

Emericella baetica (A. Novakova & Hubka) Pitt & J. Taylor comb. nov. = *Aspergillus baeticus* A. Novakova & Hubka, Int. J. Syst. Evol. Microbiol. 62: 2783, 2012. Holotype: CMF ISB 2153.

Emericella bicolor M. Chr. & States, Mycologia 70: 337, 1978 = *Aspergillus bicolor* M. Chr. & States, *ibid* 70: 337, 1978. Holotype: NY RMF 2058. MycoBank No. 313500.

Emericella biplana (Raper & Fennell) Pitt & J. Taylor comb. nov. = *Aspergillus biplanus* Raper & Fennell, Gen. *Aspergillus*: 434, 1965. Neotype (Samson & Gams, 1985): IMI 235602.

- Emericella bispora* (Kwon-Chung & Fennell) Pitt & J. Taylor comb. nov. = *Aspergillus bisporus* Kwon-Chung & Fennell, Mycologia 63: 479, 1971. Holotype: BPI NRRL 3693.
- Emericella caespitosa* (Raper & Thom) Pitt & J. Taylor comb. nov. = *Aspergillus caespitosus* Raper & Thom, Mycologia 36: 563, 1944. Neotype (Samson & Gams, 1985): IMI 16034ii.
- Emericella calidousta* (Varga *et al.*) Pitt & J. Taylor comb. nov. = *Aspergillus calidoustus* Varga *et al.*, Eukaryotic Cell 7: 636, 2008. Holotype: CBS 121601.
- Emericella californica* (Frisvad *et al.*) Pitt & J. Taylor comb. nov. = *Aspergillus californicus* Frisvad *et al.* in Samson *et al.*, Stud. Mycol. 69: 91, 2011. Holotype: CBS H-20635.
- Emericella carlsbadensis* (Frisvad *et al.*) Pitt & J. Taylor comb. nov. = *Aspergillus carlsbadensis* Frisvad *et al.* in Samson *et al.*, Stud. Mycol. 69: 88, 2011. Holotype: H-30634.
- Emericella conjuncta* (Kwon & Fennell) Pitt & J. Taylor comb. nov. = *Aspergillus conjunctus* Kwon & Fennell in Raper & Fennell, Gen. *Aspergillus*: 552, 1965. Neotype (Samson & Gams, 1985): IMI 135421.
- Emericella corrugata* Udagawa & Y. Horie, Mycotaxon 4: 535, 1976 = *Aspergillus corrugatus* Udagawa & Y. Horie, *ibid* 4: 535, 1976. Holotype: NHL 2763. MycoBank No. 313501.
- Emericella creber* (Ž. Jurjević *et al.*) Pitt & J. Taylor comb. nov. = *Aspergillus creber* Ž. Jurjević *et al.*, IMA Fungus 3: 69, 2012. Holotype: BPI 800912.
- Emericella crustosa* (Raper & Fennell) Pitt & J. Taylor comb. nov. = *Aspergillus crustosus* Raper & Fennell, Gen. *Aspergillus*: 532, 1965. Neotype (Samson & Gams, 1985): IMI 135819.
- Emericella cvjetkovicii* (Ž. Jurjević *et al.*) Pitt & J. Taylor comb. nov. = *Aspergillus cvjetkovicii* Ž. Jurjević *et al.*, IMA Fungus 3: 69, 2012. Holotype: BPI 880909.
- Emericella deflecta* (Fennell & Raper) Pitt & J. Taylor comb. nov. = *Aspergillus deflectus* Fennell & Raper, Mycologia 47: 83, 1955. Neotype (Samson & Gams, 1985): IMI 61448.
- Emericella dentata* (D.K. Sandhu & R.S. Sandhu) Y. Horie, Trans. Mycol. Soc. Japan 21: 491, 1980 = *Aspergillus nidulans* var. *dentatus* D. K. Sandhu & R. S. Sandhu = *Emericella nidulans* (Eidam) Vuill., C. r. hebd. Séanc. Acad. Sci., Paris 184: 137, 1927. Neotype (Samson & Gams, 1985): IMI 126693.
- Emericella desertorum* Samson & Mouch., Antonie van Leeuwenhoek 40: 121, 1974. Holotype: CBS H-7045. MycoBank No. 313502.
- Emericella discophora* Samson *et al.* in Zalar *et al.*, Mycologia 100: 787, 2008 = *Aspergillus discophorus* Samson *et al.* in Zalar *et al.*, *ibid* 100: 787, 2008. Holotype: CBS H-19889. MycoBank No. 507356.
- Emericella diversa* (Raper & Fennell) Pitt & J. Taylor comb. nov. = *Aspergillus diversus* Raper & Fennell, Gen. *Aspergillus*: 437, 1965. Neotype (Samson & Gams, 1985): IMI 232882.
- Emericella eburneocremaea* (Sappa) Pitt & J. Taylor comb. nov. = *Aspergillus eburneocremaeus* Sappa, Allionia 2: 87, 1954. Neotype (Samson & Gams, 1985): IMI 69856.
- Emericella egyptiaca* (Moub. & Mustafa) Pitt & J. Taylor comb. nov. = *Aspergillus egyptiacus* Moub. & Mustafa, Egypt. J. Bot. 15: 153, 1972. Neotype (Samson & Gams, 1985): IMI 141415.
- Emericella elongata* (J.N. Rai & S.C. Agarwal) Pitt & J. Taylor comb. nov. = *Aspergillus elongatus* J.N. Rai & S.C. Agarwal, Can. J. Botan. 48: 791, 1970. Neotype (Samson & Gams, 1985): CBS 387.75.

Emericella falconensis Y. Horie *et al.*, Trans. Mycol. Soc. Japan 30: 257, 1989 = *Aspergillus falconensis* Y. Horie, *ibid* 30: 257, 1989. Holotype: CBM NMIC 10001. MycoBank No. 127892.

Emericella filifera Zalar *et al.* in Zalar *et al.*, Mycologia 100: 787, 2008 = *Aspergillus filifer* Zalar *et al.* in Zalar *et al.*, *ibid* 100: 787, 2008. Holotype: CBS H-19886. MycoBank No. 507357.

Emericella floriformis (Samson & Mouch.) Pitt & J. Taylor comb. nov. = *Aspergillus floriformis* Samson & Mouch., Antonie van Leeuwenhoek 40: 343, 1975. Holotype: CBS 937.73.

Emericella foeniculicola Udagawa, Trans. Mycol. Soc. Japan 20: 13, 1979 = *Aspergillus foeniculicola* Udagawa, *ibid* 20: 13, 1979. Holotype: NHL 2777. MycoBank No. 313503.

Emericella foveolata Y. Horie, Trans. Mycol. Soc. Japan 19: 313, 1978 = *Aspergillus foveolatus* Y. Horie, *ibid* 19: 313, 1978. Holotype: IFM 4547. MycoBank No. 313504.

Emericella fructus (Ž. Jurjević *et al.*) Pitt & J. Taylor comb. nov. = *Aspergillus fructus* Ž. Jurjević *et al.*, IMA Fungus 3: 70, 2012. Holotype: BPI 880915.

Emericella fruticulosa (Raper & Fennell) Malloch & Cain, Can. J. Bot. 50: 61, 1972 = *Aspergillus fruticulosus* Raper & Fennell, Gen. *Aspergillus*: 506, 1965 (nom. holomorph.) = *Aspergillus fruticans* Samson & W. Gams in Samson & Pitt (eds), Adv. *Penicillium Aspergillus* Syst.: 40, 1985. Neotype (Samson & Gams, 1985): IMI 139279. MycoBank No. 313505.

Emericella funiculososa (G. Sm.) Pitt & J. Taylor comb. nov. = *Aspergillus funiculosus* G. Sm., Trans. Br. Mycol. Soc. 39: 111, 1956. Neotype (Samson & Gams, 1985): IMI 44397.

Emericella germanica (Varga *et al.*) Pitt & J. Taylor comb. nov. = *Aspergillus germanicus* Varga *et al.* in Samson *et al.*, Stud. Mycol. 69: 91, 2011. Holotype: CBS H-20636.

Emericella granulosa (Raper & Thom) Pitt & J. Taylor comb. nov. = *Aspergillus granulosis* Raper & Thom, Mycologia 36: 565, 1944. Neotype (Kozakiewicz, 1989): IMI 17278ii.

Emericella heterothallica (Kwon *et al.*) Malloch & Cain, Can. J. Bot. 50: 62, 1972 = *Aspergillus heterothallicus* Kwon *et al.* in Raper & Fennell, Gen. *Aspergillus*: 502, 1965 (nom. holomorph.) = *Aspergillus compatibilis* Samson & W. Gams in Samson & Pitt (eds), Adv. *Penicillium Aspergillus* Syst.: 42, 1985. Holotype: WB 5097. MycoBank No. 313506.

Emericella haitiensis (Varga *et al.*) Pitt & J. Taylor comb. nov. = *Aspergillus haitiensis* Varga *et al.*, IMA Fungus 1: 194, 2010. Holotype: CBS H-20503.

Emericella heyangensis (Z.T. Qi *et al.*) Pitt & J. Taylor comb. nov. = *Aspergillus heyangensis* Z.T. Qi *et al.* in Sun & Qi, Acta Mycol. Sin. 13: 81, 1994. Holotype: HMAS 58982.

Emericella implicata (Persiani & Maggi) Pitt & J. Taylor comb. nov. = *Aspergillus implicatus* Persiani & Maggi in Maggi & Persiani, Mycol. Res. 98: 871, 1994. Holotype: ROHB 110 S.

Emericella indica Stchigel & Guarro, Mycol. Res. 103: 1059, 1999. Holotype: IMI 378525. MycoBank No. 460081.

Emericella insueta (Bainier) Pitt & J. Taylor comb. nov. = *Aspergillus insuetus* (Bainier) Thom & Church, Aspergilli: 153, 1929 = *Sterigmatocystis insueta* (Bainier), Bull. Soc. Mycol. Fr. 24: 85, 1908. Neotype (Pitt & Taylor, this publication): CBS 107.25.

- Emericella ivoriensis* (Bartoli & Maggi) Pitt & J. Taylor comb. nov. = *Aspergillus ivoriensis* Bartoli & Maggi, Trans. Br. Mycol. Soc. 71: 383, 1979. Holotype: RO 101 S.
- Emericella jensenii* (Ž. Jurjević *et al.*) Pitt & J. Taylor comb. nov. = *Aspergillus jensenii* Ž. Jurjević *et al.*, IMA Fungus 3: 70, 2012. Holotype: BPI 880910.
- Emericella karnatakaensis* (Varga *et al.*) Pitt & J. Taylor comb. nov. = *Aspergillus karnatakaensis* Varga *et al.*, IMA Fungus 1: 203, 2010. Holotype: CBS H-20502.
- Emericella kassunensis* (Baghd.) Pitt & J. Taylor comb. nov. = *Aspergillus kassunensis* Baghd., Novosti Sist. Nizš. Rast., 1968: 113, 1968. Neotype (Pitt and Taylor, 2013): CBS 419.69.
- Emericella keveii* (Varga *et al.*) Pitt & J. Taylor comb. nov. = *Aspergillus keveii* Varga *et al.* in Houbraken *et al.*, Stud. Mycol. 59: 120, 2007. Holotype: CBS 209.92.
- Emericella lucknowensis* (J.N. Rai *et al.*) Pitt & J. Taylor comb. nov. = *Aspergillus lucknowensis* J.N. Rai *et al.*, Can. J. Bot. 46: 1483, 1968. Neotype (Pitt & Samson, 1993): CBS 449.75.
- Emericella miyajii* Y. Horie in Horie *et al.*, Mycoscience 37: 323, 1997 [1996] = *Aspergillus miyajii* Y. Horie, *ibid* 37: 323, 1997. Holotype: CBM FA-0716.
- Emericella montenegroi* Y. Horie *et al.* in Horie *et al.*, Mycoscience 37: 137, 1996 = *Aspergillus montenegroi* Y. Horie *et al.*, *ibid* 37: 137, 1996. Holotype: CBM FA-0669. MycoBank No. 416013.
- Emericella multicolor* (Sappa) Pitt & J. Taylor comb. nov. = *Aspergillus multicolor* Sappa, Allionia 2: 87, 1954. Neotype (Samson & Gams, 1985): IMI 69875.
- Emericella navahoensis* M. Chr. & States, Mycologia 74: 226, 1982 = *Aspergillus navahoensis* M. Chr. & States, *ibid* 74: 226, 1982. Holotype: NY SD-5. MycoBank No. 110631.
- Emericella nidulans* (Eidam) Vuill., C. r. hebd. Séanc. Acad. Sci., Paris 184: 137, 1927 = *Sterigmatocystis nidulans* Eidam, Beitr. Biol. Pflanzen 3: 393, 1883 (nom. holomorph.) = *Aspergillus nidulans* (Eidam) G. Winter, Rabenh. Krypt.-Fl., ed 2, 1: 62, 1884 (nom. cons.; Kozakiewicz *et al.*, 1992) = *Aspergillus nidulellis* Samson & W. Gams in Samson & Pitt (eds), Adv. *Penicillium Aspergillus* Syst.: 44, 1985 (nom. rejic.). Neotype (Samson & Gams, 1985): IMI 86806. MycoBank No. 356806.
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Neosartorya assulata S.B. Hong *et al.* in Hong *et al.*, Antonie van Leeuwenhoek 93: 95, 2008. Holotype: KACC 41691. MycoBank No. 506376.

Neosartorya aurata (Warcup *et al.*) Malloch & Cain, Can. J. Bot. 50: 2620, 1973 [1972] = *Aspergillus auratus* Warcup *et al.* in Raper & Fennell, Gen. *Aspergillus*: 263, 1965 (nom. holomorph.) = *Aspergillus igneus* Kozak., Mycol. Pap. 161: 52, 1989. Neotype (Kozakiewicz, 1989): IMI 075886. MycoBank No. 318626.

Neosartorya aureola (Fennell & Raper) Malloch & Cain, Can. J. Bot. 50: 2620, 1973 [1972] = *Aspergillus aureolus* Fennell & Raper, Mycologia 47: 71, 1955 (nom. holomorph.) = *Aspergillus aureoluteus* Samson & W. Gams in Samson & Pitt (eds), Adv. *Penicillium Aspergillus* Syst.: 34, 1985. Neotype (Samson & Gams, 1985): CBS 105.55. MycoBank No. 318627.

Neosartorya australensis Samson *et al.*, Stud. Mycol. 59: 174, 2007. Holotype: CBS 112.55. MycoBank No. 492203.

Neosartorya botucatensis Y. Horie *et al.* in Horie *et al.*, Mycoscience 36: 159, 1995 = *Aspergillus botucatensis* Y. Horie *et al.* in Horie *et al.*, *ibid* 36: 159, 1995 = *Neosartorya spinosa* (Raper & Fennell) Kozak, Mycol. Pap. 161: 58, 1989 (Hong *et al.* 2006).

Neosartorya brevipes (G. Sm.) Pitt & J. Taylor comb. nov. = *Aspergillus brevipes* G. Sm., Trans. Br. Mycol. Soc. 35: 241, 1952. Holotype: K, dried culture from soil, Mt Kosciuszko, NSW, Australia, G. Smith.

Neosartorya cervina (Masse) Pitt & J. Taylor comb. nov. = *Aspergillus cervinus* Masee, Bull. Misc. Inform. Kew 1914: 158, 1914. Holotype: WIS WISC WT 540.

Neosartorya clavatonanicus (Bat. *et al.*) Pitt & J. Taylor comb. nov. = *Aspergillus clavatonanicus* Bat. *et al.*, Anais Fac. Med. Univ. Recife 15: 197, 1955. Neotype (Samson & Gams, 1985): IMI 235352.

Neosartorya clavatus (Desm.) Pitt & J. Taylor comb. nov. = *Aspergillus clavatus* Desm., Ann. Sci. Nat., Bot., Ser. 2, 2: 71, 1834. Neotype (Samson & Gams, 1985): IMI 15949.

Neosartorya coreana S.B. Hong *et al.*, Int. J. Syst. Evol. Microbiol. 56: 485, 2006 = *Aspergillus coreanus* S.B. Hong *et al.*, *ibid* 56: 485, 2006. Holotype: CBS 117059.

Neosartorya curviforma. (H.J. Chowdhery & J.N. Rai) Pitt & J. Taylor comb. nov. = *Aspergillus curviformis* H.J. Chowdhery & J.N. Rai, Nova Hedwigia 32: 231, 1980. Type: LWG, dried culture from soil, Kagh Islands, India.

Neosartorya delicata H.Z. Kong, Mycotaxon 62: 429, 1997 = *Aspergillus delicatus* H.Z. Kong, *ibid* 62: 429, 1997 = *Neosartorya tatenoi* Y. Horie *et al.*, Trans. Mycol. Soc. Japan 33: 395, 1992 (Samson *et al.*, 2007).

Neosartorya denticulata Samson *et al.* in Hong *et al.*, Antonie van Leeuwenhoek 93: 95, 2008. Holotype: CBS 652.73. MycoBank No. 506375.

Neosartorya duricaula (Raper & Fennell) Pitt & J. Taylor comb. nov. = *Aspergillus duricaulis* Raper & Fennell, Gen. *Aspergillus*: 249, 1965. Neotype (Samson & Gams, 1985): IMI 172282.

Neosartorya fennelliae Kwon-Chung & S.J. Kim, Mycologia 66: 629, 1974 = *Aspergillus fennelliae* Kwon-Chung & S. J. Kim, *ibid* 66: 629, 1974. Neotype (Kozakiewicz, 1989): IMI 278382. MycoBank No. 318629.

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Neosartorya fischeri (Wehmer) Malloch & Cain, Can. J. Bot. 50: 2620, 1973 = *Aspergillus fischeri* Wehmer, Centralbl. Bakteriol. Abt 2, 18: 390, 1907 (nom. holomorph.) = *Aspergillus fischerianus* Samson & W. Gams, in Samson & Pitt (eds), Adv. *Penicillium Aspergillus* Syst.: 39, 1985. Neotype (Samson & Gams, 1985): IMI 21139ii. MycoBank No. 318630.

Neosartorya fumigata O'Gorman *et al.*, Nature, Lond. 457(no. 7228): 473, 2009 = *Aspergillus fumigatus* Fresen., Beitr. Mykol.: 81, 1863. Holotype: Herb. K(M) 159484. MycoBank No. 512563.

Neosartorya fumigatiaffinis (S.B. Hong *et al.*) Pitt & J. Taylor comb. nov. = *Aspergillus fumigatiaffinis* S.B. Hong *et al.* in Hong *et al.*, Mycologia 97: 1326, 2006 [2005]. Holotype: CBS 117186.

Neosartorya fumisynnemata (Y. Horie *et al.*) Pitt & J. Taylor comb. nov. = *Aspergillus fumisynnematus* Y. Horie *et al.*, Trans. Mycol. Soc. Japan 34: 3, 1993. Holotype: CBM FD 0001.

Neosartorya galapagensis Frisvad *et al.*, Antonie van Leeuwenhoek 93: 96, 2008. Holotype: CBS 117522. MycoBank No. 506377.

Neosartorya glabra (Fennell & Raper) Kozak., Mycol. Pap. 161: 56, 1989 = *Neosartorya fischeri* var. *glabra* (Fennell & Raper) Malloch & Cain, Can. J. Bot. 50: 2621, 1973 = *Aspergillus neoglaber* (Fennell & Raper) Kozak., *ibid* 161: 56, 1989 = *Aspergillus fischeri* var. *glabra* Fennell & Raper, Mycologia 47: 74, 1955 (nom. holomorph.). Neotype (Samson & Gams, 1985): IMI 061447. MycoBank No. 127754.

Neosartorya gigantea (Wehmer) Pitt & J. Taylor comb. nov. = *Aspergillus giganteus* Wehmer, Mem. Soc. Phys. Genève 33: 85, 1901. Neotype (Samson & Gams, 1985): IMI 227678.

Neosartorya globosa (H.J. Chowdhery & J.N. Rai) Pitt & J. Taylor comb. nov. = *Aspergillus globosus* H.J. Chowdhery & J.N. Rai, Nova Hedwigia 32: 233, 1980. Holotype: LWG, dried culture from soil from Kagh Is., India.

Neosartorya hiratsukae Udagawa *et al.*, Trans. Mycol. Soc. Japan 32: 23, 1991 = *Aspergillus hiratsukae* Udagawa *et al.*, *ibid* 32: 23, 1991. Holotype: CBM NHL 3008. MycoBank No. 354907.

Neosartorya indohii Y. Horie, in Horie *et al.*, Mycoscience 44: 398, 2003 = *Aspergillus indohii* Y. Horie, in Horie *et al.*, *ibid* 44: 398, 2003. Holotype: CBM FA-934. MycoBank No. 489533. See Note 12.

Neosartorya kanagawaensis (Nehira) Pitt & J. Taylor comb. nov. = *Aspergillus kanagawaensis* Nehira, J. Jap. Bot. 26: 109, 1951. Neotype (Samson & Gams, 1985): IMI 126690.

Neosartorya laciniosa S.B. Hong *et al.*, Int. J. Syst. Evol. Microbiol. 56: 484, 2006 = *Aspergillus lacinosus* S.B. Hong *et al.*, *ibid* 56: 484, 2006. Holotype: CBS 117721. MycoBank No. 500233.

Neosartorya lentula (Balajee & K.A. Marr) Pitt & J. Taylor comb. nov. = *Aspergillus lentulus* Balajee & K.A. Marr in Balajee *et al.*, Eukaryotic Cell 4: 631, 2005. Holotype: BPI 863540.

Neosartorya longivesica (L.H. Huang & Raper) Pitt & J. Taylor comb. nov. = *Aspergillus longivesica* L.H. Huang & Raper, Mycologia 63: 53, 1971. Holotype: WIS NI 179.

Neosartorya maritima J.N. Rai & H.J. Chowdhery, Kavaka 3: 73, 1973 = *Aspergillus maritimus* Samson & W. Gams in Samson & Pitt (eds), Adv. *Penicillium Aspergillus* Syst.: 43, 1985. Holotype: Herb. LWG, dried culture from soil, Kagh Islands, India. MycoBank No. 114709.

Neosartorya marvanovae (Hubka *et al.*) Pitt & J. Taylor comb. nov. = *Aspergillus marvanovae* Hubka *et al.* in Hubka *et al.*, Int. J. System. Evol. Micro. 63: 787, 2013. Holotype PRM 860539. MycoBank No. 801064.

Neosartorya multiplicata Yaguchi *et al.*, Mycoscience 35: 309, 1994 = *Aspergillus multiplicatus* Yaguchi *et al.*, *ibid* 35: 309, 1994. Holotype: CBM PF-1154. MycoBank No. 413571.

Neosartorya nishimurae Takada *et al.*, Mycoscience 42: 361, 2001. Holotype: CBM FA-919. MycoBank No. 474711. *See* Note 12.

Neosartorya novofumigata (S.B. Hong *et al.*) Pitt & J. Taylor comb. nov. = *Aspergillus novofumigatus* S.B. Hong *et al.* in Hong *et al.*, Mycologia 97: 1368, 2006 [2005]. Holotype: CBS 117520.

Neosartorya nutans (McLennan & Ducker) Pitt & J. Taylor comb. nov. = *Aspergillus nutans* McLennan & Ducker in McLennan *et al.*, Aust. J. Bot. 2: 355, 1954. Neotype (Samson & Gams, 1985): IMI 62874ii.

Neosartorya otanii Takada *et al.*, Mycoscience 42: 364, 2001 = *Neosartorya fennelliae* Kwon-Chung & S. J. Kim (Samson *et al.*, 2007).

Neosartorya papuensis Samson *et al.*, Stud. Mycol. 59: 190, 2007. Holotype: CBS H-6277. MycoBank No. 505571.

Neosartorya parvula (G. Sm.) Pitt & J. Taylor comb. nov. = *Aspergillus parvulus* G. Sm., Trans. Br. Mycol. Soc. 44: 45, 1961. Holotype: IMI 86558.

Neosartorya paulistensis Y. Horie *et al.* in Horie *et al.*, Mycoscience 36: 163, 1995 = *Aspergillus paulistensis* Y. Horie *et al.*, *ibid* 36: 163, 1995 = *Neosartorya spinosa* (Raper & Fennell) Kozak., Mycol. Pap. 161: 58, 1989 (Samson *et al.*, 2007).

Neosartorya primulina Udagawa *et al.*, Mycotaxon 47: 360, 1993 = *Aspergillus primulinus* Udagawa *et al.*, *ibid* 47: 360, 1993 = *Neosartorya quadricincta* (J.L. Yuill) Malloch & Cain, Can. J. Bot. 50: 2621, 1973 (Samson *et al.*, 2007).

Neosartorya pseudofischeri S.W. Peterson, Mycol. Res. 96: 549, 1992 = *Aspergillus thermomutatus* (Paden) S.W. Peterson, *ibid* 96: 549, 1992 = *Aspergillus fischeri* var. *thermomutatus* Paden, Mycopathol. Mycol. Appl. 36: 161, 1968. Holotype: BPI 1108305. MycoBank No. 358402.

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Neosartorya rhizopodus (J.N. Rai *et al.*) Pitt & J. Taylor comb. nov. = *Aspergillus rhizopodus* J.N. Rai *et al.*, Trans. Br. mycol. Soc. 64: 515, 1975. Holotype: LWG, dried culture from alkaline soil, India.

Neosartorya shendawei Yaguchi *et al.*, Mycoscience 51: 260, 2010. Holotype: CBM FA-0958. MycoBank No. 513151.

Neosartorya spathulata Takada & Udagawa, Mycotaxon 24: 396, 1985 = *Aspergillus spathulatus* Takada & Udagawa, *ibid* 24: 396, 1985. Holotype: CBM NHL 2947. MycoBank No. 104558.

Neosartorya spinosa (Raper & Fennell) Kozak., Mycol. Pap. 161: 58, 1989 = *Aspergillus spinosus* Kozak., *ibid* 161: 58, 1989 = *Aspergillus fischeri* var. *spinosus* Raper & Fennell, Gen. *Aspergillus*: 256, 1965 (nom. holomorph.). Neotype (Samson & Gams, 1985): IMI 211390. MycoBank No. 127755.

Neosartorya stramenia (R.O. Novak & Raper) Malloch & Cain, Can. J. Bot. 50: 2622, 1973 = *Aspergillus stramenius* R. Novak & Raper in Raper & Fennell, Gen. *Aspergillus*: 260, 1965 (nom. holomorph.) =

Aspergillus paleaceus Samson & W. Gams in Samson & Pitt (eds), Adv. *Penicillium Aspergillus* Syst.: 50, 1985. Neotype (Samson & Gams, 1985): IMI 172293. MycoBank No. 318633.

Neosartorya sublevispora Someya *et al.*, Mycoscience 40: 405, 1999 = *Aspergillus sublevisporus* Someya *et al.*, *ibid* 40: 405, 1999. Holotype: CBM PF-1207. MycoBank No. 459821. See Note 12.

Neosartorya takakii Y. Horie *et al.* in Horie *et al.*, Mycoscience 42: 91, 2001 = *Aspergillus takakii* Y. Horie *et al.*, *ibid* 42: 91, 2001. Holotype: CBM FA-884. MycoBank No. 467817. See Note 12.

Neosartorya tatenoi Y. Horie *et al.*, Trans. Mycol. Soc. Japan 33: 395, 1992 = *Aspergillus tatenoi* Horie *et al.*, *ibid* 33: 395, 1992. Holotype: CBM FA-0022. MycoBank No. 358432.

Neosartorya tsunodae Yaguchi *et al.*, Mycoscience 51: 261, 2010. Holotype: CBM FA-0950. MycoBank No. 513152.

Neosartorya tsurutae Y. Horie in Horie *et al.*, Mycoscience 44: 399, 2003 = *Aspergillus tsurutae* Y. Horie, *ibid* 44: 399, 2003. Holotype: CBM FA-933. MycoBank No. 489535. See Note 12.

Neosartorya turcosa (S.B. Hong *et al.*) Pitt & J. Taylor comb. nov. = *Aspergillus turcosus* S.B. Hong *et al.*, Antonie van Leeuwenhoek 93: 97, 2008. Holotype: KACC 42091.

Neosartorya udagawae Y. Horie *et al.* in Horie *et al.*, Mycoscience 36: 199, 1995 = *Aspergillus udagawae* Y. Horie *et al.*, *ibid* 36: 199, 1995. Holotype: CBM FA-0711. MycoBank No. 413573.

Neosartorya unilateralis (Thrower) Pitt & J. Taylor comb. nov. = *Aspergillus unilateralis* Thrower in McLennan *et al.*, Aust. J. Bot. 2: 358, 1954. Neotype (Samson & Gams, 1985): IMI 62876.

Neosartorya vinosobubalina (Udagawa *et al.*) Pitt & J. Taylor comb. nov. = *Aspergillus vinosobubalinus* Udagawa *et al.*, Trans. Mycol. Soc. Japan 34: 255, 1993. Holotype: BF 33501.

Neosartorya viridinitans (Ducker & Thrower) Pitt & J. Taylor comb. nov. = *Aspergillus viridinitans* Ducker & Thrower in McLennan *et al.*, Aust. J. Bot. 2: 357, 1954. Neotype (Samson & Gams, 1985): IMI 62875.

Neosartorya warcupii Peterson *et al.*, Stud. Mycol. 59: 201, 2007. Holotype: NRRL 35723. MycoBank No. 505572.

Neosartorya waksmanii (Hubka *et al.*) Pitt & J. Taylor comb. nov. = *Aspergillus waksmanii* Hubka *et al.* in Hubka *et al.*, Int. J. System. Evol. Micro. 63: 786, 2013. Holotype PRM 860537.

***Penicilliopsis* Solms, Ann. Jardin Bot. Buitenzorg 6: 53, 1887**

Penicilliopsis dybowskii Pat., Bull. Soc. mycol. Fr. 8: 54, 1892 = *Aspergillus dybowskii* (Pat.) Samson & Seifert in Samson & Pitt (eds), Adv. *Penicillium Aspergillus* Syst.: 422, 1985. Holotype: Herb. S, Bresadola, Congo, Jan 1894, Dybowski.

***Petromyces* Malloch & Cain, Can. J. Bot. 50: 2623, 1973**

= *Aspergillus* P. Micheli ex Link, Mag. Gesell. Naturf. Freunde, Berlin 3: 16, 1809 (Pitt & Taylor, 2014).

***Sclerocleista* Subram., Curr. Sci. 41: 757, 1972**

Sclerocleista ornata (Raper *et al.*) Subram., Curr. Sci. 41: 757, 1972 ≡ *Hemicarpeneteles ornatus* (Raper *et al.*) Arx [as 'ornata'], Gen. Fungi Sporul. Cult., Edn 2 (Vaduz): 94, 1974 ≡ *Aspergillus ornatus* Raper *et al.*, Mycologia 45: 678, 1953 (nom. holomorph.) ≡ *Aspergillus ornatulus* Samson & W. Gams in Samson & Pitt (eds), Adv. *Penicillium Aspergillus* Syst.: 45, 1985. Neotype (Samson & Gams, 1985): IMI 55295. MycoBank No. 323241.

Sclerocleista thaxteri Subram., Curr. Sci. 41: 757, 1972 ≡ *Hemicarpeneteles thaxteri* (Subram.) Arx, Gen. Fungi Sporul. Cult., Edn 2 (Vaduz): 94, 1974 ≡ *Aspergillus citrisporus* Höhn., Sitzungsber. Laiser. Akad. Wiss., Math. Naturwiss. Cl., Abt 1, 111: 1036, 1902. [MB323242]. Holotype: FH, ex caterpillar dung, Kittery Point, R. Thaxter.

***Warcupiella* Subram., Curr. Sci. 41: 757, 1972**

Warcupiella spinulosa (Warcup) Subram., Curr. Sci. 41: 757, 1972 ≡ *Aspergillus spinulosus* Warcup in Raper & Fennell, Gen. *Aspergillus*: 204, 1965 ≡ *Aspergillus warcupii* Samson & W. Gams in Samson & Pitt (eds), Adv. *Penicillium Aspergillus* Syst.: 50, 1985 ≡ *Raperia spinulosa* (Warcup) Subram. & Rajendran, Kavaka 3: 133, 1976 [1975]. Neotype (Samson & Gams, 1985): IMI 75885. MycoBank No. 325542.

Notes

Note 1. Several species described by Samson *et al.*, Stud. Mycol. 69: 39-55, 2011, were not validly typified. These species, *A. aureoterreus*, *A. floccosus*, *A. hortai*, *A. neoafricanus* and *A. neoindicus* are neotypified in this publication.

Note 2. *Aspergillus beijingsensis*, *A. qizutongii*, and *A. wangduanlii* published by D.M. Li *et al.*, Mycoscience 39: 299-305, 1998 are not recognisable from the descriptions and no cultures are available. As “causal agents of aspergillosis” and from illustrations, they are likely to belong in *Neosartorya*, but olive to olive yellow conidia in Czapek yeast extract agar make that less likely. These three species may well belong to a single taxon.

Note 3. *Aspergillus clavatoflavus* appears to be a phylogenetic outlier: loosely aligned with *Hamigera* (Pitt and Taylor, 2013, Fig. 1) or *Monascus* and *Xeromyces* (Peterson, 2008; Houbraken and Samson, 2011). As this species is recognisable microscopically as an *Aspergillus*, it is retained in that genus here. The type isolate came from rainforest in North Queensland, so it is likely to be a uniquely Australian species.

Note 4. *Aspergillus fijiensis* Varga *et al.* was considered to be a synonym of *A. brunneoviolaceus* Bat. & H. Maia by Jurjević *et al.* (2012).

Note 5. *Aspergillus sulphureus* (Fresen.) Wehmer, Mem. Soc. Phys. Genève 33: 113, 1901 and *Aspergillus sulphureus* (Fresen.) Thom & Church, Aspergilli: 195, 1926 are homonyms of *Aspergillus sulphureus* Desm. (see Index of Fungi 4: 156, 1973). As *A. sulphureus* Desm. cannot be recognised to species, it is considered a *nomen dubium* and *A. fresenii* accepted here as the legitimate species.

Note 6. *Aspergillus lacticoffeatus* was considered to be a synonym of *A. niger* by Varga *et al.*, Stud. Mycol. 69: 4, 2011.

Note 7. *Aspergillus penicilliformis* is aligned phylogenetically with *Hamigera* (Pitt and Taylor, 2013, Fig 1; Houbraken and Samson, 2011) and may be conspecific with *H. avellanea*. However, it is maintained in *Aspergillus* here pending more detailed study.

Note 8. *Aspergillus vadensis* is listed as “de Vries *et al.* in Applied and Environmental Microbiology, 70: 3954, 2004” by MycoBank but this species was not formally described until the following year, with the citation listed here.

Note 9. *Aspergillus zonatus* is aligned phylogenetically with *Penicillioptis* (Pitt and Taylor, 2013; Fig 1; Peterson, 2008; Houbraken and Samson, 2011). As it is recognisable microscopically as an *Aspergillus*, it is retained in that genus here.

Note 10. The original protocol for *Eurotium amstelodami* (L. Mangin, Ann. Sci. Nat. Bot., Ser. 9, 10: 360, 1909) differs significantly from that established by Thom and Raper (Misc. Pub. U.S. Dept Agric. 426: 22, 1941) (Pitt, 1985; Hubka *et al.*, 2012). However, the name *sensu* Thom and Raper was used by Raper and Thom (Man. Aspergilli: 122, 1945), Raper and Fennell (Gen. *Aspergillus*: 166, 1965), was neotypified by Samson and Gams (1985) and accepted by Pitt and Samson (1993). The name *sensu* Thom and Raper has been in universal use for a very common spoilage fungus for 70 years, and so should be conserved rather than replaced by a newer name.

Note 11. Although validly described, this species was considered an invalid name by Hubka *et al.* (2013) because the holotype specimen included “probably *A. cristatus* [for] which morphology is in conflict with the protologue.” No culture is available.

Note 12. Sequence data for this species indicates correct placement in *Neosartorya*, but in the absence of living material, it was considered to be a doubtful species by Samson *et al.* (2007).

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