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Check-list for scientific names of common parasitic fungi

Series 1b: Fungi on trees and shrubs; additions

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Abstract

This list is a continuation of Series 1a (Neth. J. Pl. Path. 78, Suppl. 1, 1972), an account of the nomenclature of common parasitic fungi on trees and shrubs as used in official publications of the Netherlands Society of Plant Pathology and the Netherlands Ministry of Agriculture and Fisheries.

Introduction

In Series 1a of this check-list (Neth. J. Pl. Path. **78**, Suppl. 1, 1972) an account is given of the nomenclature of 170 common parasitic fungi on trees and shrubs. In the present publication, series 1b, the nomenclature of another 35 common fungi on trees and shrubs is documented. The species are again selected in agreement with the Committee for Dutch Names of Plant Diseases ('Commissie voor Nederlandse Namen van Planteziekten'). The senior author is a member of this committee of the Netherlands Society of Plant Pathology. The recognized scientific names should be used in the official publications of the Netherlands Society of Plant Pathology[1] and the Netherlands Ministry of Agriculture and Fisheries.

For explanations of the various symbols and abbreviations used we refer to the preceding paper. References in that paper to Articles of the 'Edingburgh Code' may also be read as references to the same Articles of the recently published 'Seattle Code' (Regnum veg. **82**. 1972), sanctioned by the eleventh International Botanical Congress, Seattle, August 1969.

[1] See, for instance, the recently published lists of Dutch names of diseases of cultivated trees and shrubs (Gewasbescherming **3** (1), 1972) and fruit crops (Gewasbescherming **4** (2), 1973).

BOTRYOSPHAERIA QUERCUUM (Schw.) Sacc.

Botryosphaeria quercuum (Schw.) Saccardo *in* Sylloge Fung. **1**: 456, 457. 1882.

≡ *Sphaeria quercuum* Schweinitz *in* Schr. naturf. Ges. Leipzig **1**: 40. 1822 [= Synopsis Fung. Car. sup.].

= *Physalospora cydoniae* G. Arnaud *in* Annls Éc. natn. Agric. Montpellier **12**: 9. 1912.

= *Physalospora obtusa* (Schw.) Cooke *in* Grevillea **20**: 86. 1892.

≡ *Sphaeria obtusa* Schweinitz *in* Trans. Am. phil. Soc. II, **4**: 220. 1832 ["1834"] [= Synopsis Fung. Am. bor.].

= *Physalospora malorum* Shear, N. E. Stevens & M. S. Wilcox *in* J. agric. Res. **28**: 596. 1924; *in* Mycologia **17**: 100. 1925.

stat. con. *BOTRYODIPLODIA JUGLANDICOLA* (Schw.) Sacc.

Botryodiplodia juglandicola (Schw.) Saccardo *in* Sylloge Fung. **3**: 377. 1884.

≡ *Sphaeria juglandicola* Schweinitz *in* Schr. naturf. Ges. Leipzig **1**: 37. 1822 [= Synopsis Fung. Car. sup.]; Fries, Syst. mycol. **2** [Sect. 2]: 385. 1823.

= *Botryodiplodia malorum* (Berk.) Petrak & H. Sydow *in* Beih. Repert. Spec. nov. Regni veg. **42** [Bogen 10]: 148. 1926 [= Gatt. Pyrenomyz. Sphaerops. Melancon. I].

≡ *Sphaeria malorum* Berkeley *in* [Sm.] Engl. Flora **5** (2): 257. 1836.

≡ *Spaeropsis malorum* (Berk.) Berkeley, Outl. Br. Fungol. 316. 1860.

Note: There has been much confusion about the nomenclature and species concept of this fungus, see the discussions by Petrak & H. Sydow (l.c.) (conidial state) and van Zinderen Bakker, Investig. Morph. Phys. Physalospora cydoniae 1935 [Diss. Amsterdam] (perfect and conidial state). In this paper the species is treated in agreement with the concept of von Arx & Müller *in* Beitr. KryptogFlora Schweiz **11** (1): 31–36. 1954. These authors list more than a hundred synonyms for the perfect state. For descriptions and synonyms of the conidial state see Petrak & H. Sydow (l.c.) and Zambettakis *in* Bull. Soc. mycol. Fr. **70**: 310. 1954. For cultural characters see van Zinderen Bakker (l.c.).

CHALAROPSIS THIELAVIOIDES Peyron.

Chalaropsis thielavioides Peyronel *in* Staz. sper. agr. ital. **49**: 585–586. 1916.

Note: For description and hosts see Ellis, Dematiac. Hyphom. 63. 1971. For literature and pathogenicity see Brooks, Pl. Dis. 380. 1953 and Boerema *in* Versl. Meded. plziektenk. Dienst Wageningen **134** (Jaarb. 1959): 158–161. 1960.

CRYPTOSPORELLA VITICOLA Shear

Cryptosporella viticola Shear *in* Phytopathology **1**: 119. 1911 [as comb. nov. of the conidial name *Fusicoccum viticolum* Reddick, see below].

stat. con. *PHOMOPSIS VITICOLA* (Sacc.) Sacc.

Phomopsis viticola (Sacc.) Saccardo *in* Annls mycol. **13**: 118. 1915 [as '*P. v.* Sacc.', but to be considered as new combination, see Trotter *in* Sylloge Fung. **25**: 138. 1931].

≡ *Phoma viticola* Saccardo *in* Michelia **2** (1): 92. 1880.

H = *Phomopsis viticola* (Reddick) Goidànich *in* Atti R. Accad. naz. Lincei Rc. VI, **26**: 110. 1937.

≡ *Fusicoccum viticolum* Reddick *in* Bull. Cornell Univ. agric. Exp. Stn **263**: 331. 1909.

Note: For description and nomenclature of the conidial state see Pine *in* Phytopathology **48**: 192–196. 1958. For disease symptoms and biology see Bolay, Semecnik & Ducrot *in* Agric. romande **7**: 45–50. 1968, and Gärtel *in* Weinberg Keller **19**: 13–79. 1972. The perfect state has not yet been found in Europe.

DIAPORTHE ERES Nitschke

Diaporthe eres Nitschke, Pyrenom. Germ. Lief. **1**: 245. 1867.

= *Diaporthe controversa* (Desm.) Nitschke ex Fuckel *in* Jb. nassau. Ver. Naturk. **25–26**: 319. 1871 [= Symb. mycol. Nachtr. I].

≡ *Sphaeria controversa* Desmazières *in* Annls Sci. nat. (Bot.) II, **17**: 102–103. 1842 [antedates *Diaporthe eres* Nitschke, see note].

= *Diaporthe conorum* (Desm.) Niessl *in* Hedwigia 15: 2. 1876.

≡ *Sphaeria conorum* Desmazières *in* Annls Sci. nat. (Bot.) III, **5**: 76. 1846 [antedates *Diaporthe eres* Nitschke, see note].

= *Diaporthe occulta* (Fuck.) Nitschke, Pyrenom. Germ. Lief. **1**: 266. 1867.

≡ *Valsa occulta* Fuckel *in* Fungi rhen. (Fasc. 1) No. 622. 1863 [antedates *Diaporthe eres* Nitschke, see note].

= *Diaporthe scobina* Nitschke, Pyrenom. Germ. Lief. **1**: 293. 1867.

= *Diaporthe perniciosa* Marchal *in* Bull. Soc. r. Bot. Belg. **54**: 117. 1921.

stat. con. *PHOMOPSIS* sp.

= *Phomopsis oblonga* (Desm.) von Höhnel *in* Sber. Akad. Wiss. Wien (Math.-naturw. Kl., Abt. I) **115**: 680. May 1906.

≡ *Phoma oblonga* Desmazières *in* Annls Sci. nat. (Bot.) III, **20**: 218. 1853 (as '*P. oblongum*').

H ≡ *Phomopsis oblonga* (Desm.) Traverso *in* Flora ital. cryptog. **1** (2): 248. 1906.

= *Phomopsis conorum* (Sacc.) Diedicke *in* Annls mycol. **9**: 22. 1911.

≡ *Phoma conorum* Saccardo *in* Michelia **2** (3): 615. 1882; *in* Sylloge Fung. **3**: 150. 1884.

= *Phomopsis controversa* (Sacc.) Traverso *in* Flora ital. cryptog. **1** (2): 273. 1906.

≡ *Phoma controversa* Saccardo *in* Michelia **2** (3): 616. 1882; *in* Sylloge Fung. **3**: 81. 1884 [with ref. to the *Diaporthe* state with the same epithet, ascribed to Nitschke, see above].

= *Phomopsis occulta* Traverso *in* Flora ital. cryptog. **1** (2): 221. 1906 [as new combination of *Phoma occulta* Sacc., but to be treated as new according to the 'Seattle Code' Art. 72].

H ≡ *Phoma occulta* Saccardo *in* Sylloge Fung. **3**: 150. 1884 [not *P. occulta* Desmazières *in* Annls Sci. nat. (Bot.) III, **11**: 283–284. 1849].

= *Phomopsis scobina* (Cooke) von Höhnel *in* Sber. Akad. Wiss. Wien (Math.-naturw. Kl., Abt. I) **115**: 681. 1906.

≡ *Phoma scobina* Cooke *in* Grevillea **13**: 92. 1885.

= *Phomopsis mali* Roberts *in* Phytopathology **2**: 264. 1912.

H = *Phomposis mali* (Schulzer & Sacc.) Diedicke *in* Krypt.-Fl. Mark Brandenb., Pilze **7**: 261. 1915.

≡ *Phoma mali* Schulzer & Saccardo *in* Hedwigia **23**: 91. 1884; *in* Sylloge Fung. **3**: 75. 1884.

= *Phomopsis perniciosa* Grove, Br. Coelomycetes **1**: 214. 1935.

Note: This species is listed here in accordance with the wide concept of Wehmeyer *in* Univ. Mich. Stud. scient. Ser. **9**: 63–100. 1933 [= Genus Diaporthe & segr.]. This species concept embraces many 'host forms' on all kinds of trees and shrubs which were earlier described as separate taxa (perfect as well as imperfect states). When this wide species concept is followed, the name *D. eres* for the perfect state is not based on the oldest epithet available. It is at present inopportune, however, to determine a correct combination since much more information is needed on the delimiting and differentiating criteria of the species. For the same reason no name for the conidial state is suggested here. For further descriptions of both states see also Müller & von Arx *in* Beitr. KryptogFlora Schweiz **11** (2): 761–762. 1962.

ELSINOE AMPELINA Shear

Elsinoe ampelina Shear *in* Phytopathology **19**: 677. 1929 [as comb. nov. of the conidial name *Sphaceloma ampelinum* de Bary].

stat. con. *SPHACELOMA AMPELINUM* de Bary

Spaceloma ampelinum de Bary *in* Annln Oenolog. **4**: 165–167. 1874.

= *Gloeosporium ampelophagum* (Pass.) Saccardo *in* Riv. Vitic. Enol. ital. **1877**: 494. 1877; *in* Michelia **1** (2): 217. 1878.

≡ *Ramularia ampelophaga* Passerini *in* Boll. Com. agr. Parmense **9** (8): 122–126. 1876.

Note: For descriptions and disease symptoms see Butler & Jones, Pl. Path. 842–845. 1949 and Anderson, Dis. Fruit Crops 377–382. 1956.

FISTULINA HEPATICA (Schaeff.) ex Fr.

rn Fistulina hepatica (Schaeff.) ex Fries, Syst. mycol. **1**: 396. 1821 [with ref. to 'Huds.-Schaeff. t. 116–120'].

dn ≡ *Boletus hepaticus* Schaeffer, Fung. Bav. Icon. **2**: t. 116–120. 1763.

Note: For descriptions see Donk *in* Meded. bot. Mus. [Lab.] Herb. Rijks-Univ. Utrecht **9**: 260–261. 1933 [= Rev. niederl. Homob.-Aphyll. 2] and Zycha *in* Handb. PflKrankh. **3**, ed. 6, Lief. 4: 648–649. 1962. For cultural characters see Rothberg *in* Proc. R. Soc. Vict. II, **1**: 157–169. 1938 and Davidson & al. *in* Tech. Bull. U.S. Dep. Agric. **785**: 17. 1942.

FOMES FOMENTARIUS (L. ex Fr.) Fr.

Fomes fomentarius (L. ex Fr.) Fries, Summa veg. Scand. **2**: 319 [footnote in which Fries has validly published the generic name *Fomes*, see note], 321 ['*P.* (seu) *F. fomentarius* (L.)']. 1849.

rn ≡ *Polyporus fomentarius* (L.) ex Fries, Syst. mycol. **1**: 374. 1821.

dn ≡ *Boletus fomentarius* Linnaeus, Sp. Pl. 1176. 1753.

Note: The author citation of *Fomes fomentarius* varies in the literature [e.g. '(L. ex Fr.) Gillet', '(L. ex Fr.) Kickx']. Donk *in* Persoonia **1**: 215–217. 1960 has shown that Fries in 1849 (l.c.), by accepting the genus *Fomes*, had already introduced valid combinations with *Fomes* for the Swedish species listed, including *Fomes fomentarius*. For description see Donk *in* Meded. bot. Mus [Lab.] Herb. Rijks-Univ. Utrecht **9**: 206–207. 1933 [= Rev. niederl. Homob.-Aphyll. 2]. See also Jahn *in* Westf. Pilzbriefe **4**: 50–54. 1963 and Bondartsev, Polyp. europ. USSR Cauc. 278. 1971 [= translation Bondartsev, Grib. S.S.S.R. 1953]. For distribution of the fungus in the Netherlands see v. d. Laan *in* Coolia **15**: 156–158. 1972. For cultural characters see Nobles *in* Can. J. Res. **C26**: 322–323. 1948.

GANODERMA APPLANATUM (Pers. ex S. F. Gray) Pat.

Ganoderma applanatum (Pers. ex S. F. Gray) Patouillard *in* Bull. Soc. mycol. Fr. **5**: 67. 1889.

≡ *Boletus applanatus* Pers. ex S. F. Gray, Nat. Arr. Br. Pl. **1**: 642. 1821.

≡ *Boletus applanatus* Persoon, Observationes mycol. **2**: 2. 1799; Synop. method. Fung. 536–537. 1801.

Note: For a discussion of the taxonomy of this species see Donk *in* Proc. K. ned. Akad. Wet., Ser. C, **72**: 273–276. 1969. For description and other synonyms see Donk *in* Meded. bot. Mus. [Lab.] Herb. Rijks-Univ. Utrecht **9**: 231–233. 1933 [= Rev. niederl. Homob.-Aphyll. 2]. See also Jahn *in* Westf. Pilzbriefe **4**: 89–91. 1963 and Bondartsev, Polyp. europ. USSR Cauc. 416. 1971 [= translation Bondartsev, Grib. S.S.S.R. 1953].

For cultural characters see Nobles *in* Can. J. Res. **C26**: 335–336. 1948.

GIBBERELLA BACCATA (Wallr.) Sacc.

Gibberella baccata (Wallr.) Saccardo *in* Sylloge Fung. **2**: 553. 1883.

≡ *Sphaeria baccata* Wallroth, Fl. crypt. Germ. **2**: 838. 1833.

stat. con. *FUSARIUM LATERITIUM* Nees ex Link

rn *Fusarium lateritium* Nees ex Link in C. Linn. Sp. Pl. [Ed. Willd.], ed. 4, **6** (2): 106. 1825.

: Fries, Syst. mycol. **3** [Sect. 2]: 470. 1832.

dn ≡ *Fusarium lateritium* Nees, Syst. Pilze Schw. 31. 1816 [the illustrated copies are dated 1817, but "nuperrime" published in April 1816, see Martius, Fl. crypt. Erlang, xxi, xxvii. 1817].

Note: For description of both states see Booth *in* C.M.I. Descr. pathog. Fungi Bact. 310. 1971 and Booth, Fusarium 108–110. 1971. Much variation exists in pathogenicity of strains from different hosts (formae speciales). The pathogenic form causing canker and die-back of mulberry can be designated as:

f. sp. *MORICOLA* [(Ces. & DNot.) comb. nov.]

≡ *Botryosphaeria moricola* Cesati & de Notaris *in* Comment. Soc. crittogam. ital. **1** (4): 212. 1863 [= Schema Sfer.].

≡ *Gibberella baccata* var. *moricola* (Ces. & DNot.) Wollenweber *in Z.* ParasitKde **3**: 377. 1931 [as '*G. b.* v. *m.* (Not.) Wr.' with reference to '*Sphaeria moricola* Cesati in herb. cf. De Notaris' ≡ *Sphaeria moricola* Ces. ex Ces. & DNot. *in* Comment. Soc. crittogam. ital. **1** (4): 212. 1863, pro syn.].

Note: The conidial state of this pathogen of mulberry must be indicated as *Fusarium lateritium* f. sp. *mori* (Desm.) Matuo & Sato [*in* Trans. mycol. Soc. Japan **3**: 120–126. 1962] ≡ *F. lateritium* var. *mori* Desm. [*in* Annls Sci. nat. (Bot.) II, **8**: 10. 1837], see Booth, Fusarium 111. 1971.

GLOEODES POMIGENA (Schw.) Colby

Gloeodes pomigena (Schw.) Colby *in* Trans. Ill. St. Acad. Sci. **13**: 158. 1920.

≡ *Dothidea pomigena* Schweinitz *in* Trans. Am. phil. Soc. II, **4**: 232. 1832 ["1834"].

Note: Mature pycnidia have not yet been found in Europe (cf. Bondoux *in* Annls Phytopath. **1**: 342. 1969). The fungus can spread by fragmentation of thick-walled hyphal fragments (chlamydospore-like cells). For hosts, pathogenicity and cultural characters see Baines & Gardner *in* Phytopathology **22**: 937–952. 1932. See also Anderson, Dis. Fruit Crops 144–148. 1956.

INONOTUS HISPIDUS (Bull. ex Fr.) P. Karst.

Inonotus hispidus (Bull. ex Fr.) P. Karsten *in* Meddn Soc. Fauna Flora fenn. **5**: 39. 1879.

rn ≡ *Polyporus hispidus* (Bull.) ex Fries, Syst. mycol. **1**: 362. 1821.

dn ≡ *Boletus hispidus* Bulliard, Herb. France t. 210. 1784, t. 493. 1790.

Note: For description and data on disease symptoms, distribution and transmission see Pegler & Waterston *in* C. M. I. Descr. pathog. Fungi Bact. 193. 1968. See also Jahn *in* Westf. Pilzbriefe **4**: 109. 1963 and Bondartsev, Polyp. europ. USSR Cauc. 331. 1971 [= translation Bondartsev, Grib. S.S.S.R. 1953]. For cultural characters see Davidson & al. *in* Tech. Bull. U.S. Dep. Agric. **785**: 34. 1942.

KUEHNEOLA UREDINIS (Link) Arth.

Kuehneola uredinis (Link) Arthur *in* Int. bot. Congr. **2** [Vienna, 1905]: 342. 1906.

≡ *Oidium uredinis* Link *in* C. Linn. Sp. Pl. [Ed. Willd.], ed. 4, **6** (1): 123. 1824.

= *Kuehneola albida* (Kühn) Magnus *in* Bot. Cbl. [Zbl.] **74**: 169. 1898.

≡ *Chrysomyxa albida* Kühn *in* Bot. Cbl. [Zbl.] **16**: 154. 1883.

Note: For descriptions and hosts see Gäumann *in* Beitr. KryptogFlora Schweiz **12**: 197–199. 1959 and Laundon & Rainbow *in* C.M.I. Descr. pathog. Fungi Bact. 202. 1969. See also Wilson & Henderson, Br. Rust Fungi 108–109. 1966.

LAETIPORUS SULPHUREUS (Bull. ex Fr.) Murrill

Laetiporus sulphureus (Bull. ex Fr.) Murrill *in* Mycologia **12**: 11. 1920.

rn ≡ *Polyporus sulphureus* (Bull.) ex Fries, Syst. mycol. **1**: 357. 1821.

dn ≡ *Boletus sulphureus* Bulliard, Herb. France t. 429. 1788.

≡ *Tyromyces sulphureus* (Bull. ex Fr.) Donk *in* Meded. bot. Mus. [Lab.] Herb. Rijks-Univ. Utrecht **9**: 145. 1933 [= Rev. niederl. Homob.-Aphyll. 2].

≡ *Grifola sulphurea* (Bull. ex Fr.) Cunningham *in* Bull. N. Z. Dep. scient. ind. Res. **164**: 91. 1965.

Note: For descriptions see Donk (l.c.) and Cunningham (l.c.). See also Jahn *in* Westf. Pilzbriefe **4**: 39–40. 1963 and Bondartsev. Polyp. europ. USSR Cauc. 182. 1971 [=

translation Bondartsev, Grib. S.S.S.R. 1953]. For cultural characters see Nobles *in* Can. J. Res. **C26**: 380. 1948.

MELAMPSORA RIBESII-VIMINALIS Kleb.

Melampsora ribesii-viminalis Klebahn *in* Jb. wiss. Bot. **34** (3): 363. 1900.

Note: For description and hosts see Gäumann *in* Beitr. KryptogFlora Schweiz **12**: 166–167. 1959. See also Wilson & Henderson, Br. Rust Fungi 80. 1966.

MYCOSPHAERELLA MORI (Fuck.) ex Wolf

Δ *Mycosphaerella mori* (Fuck.) ex Wolf *in* J. Elisha Mitchell scient. Soc. **51**: 165. 1935.

O ≡ *Sphaerella mori* Fuckel *in* Jb. nassau. Ver. Naturk. **23–24**: 106. 1870 ["1869"; = Symb. mycol.].

O ≡ *Mycosphaerella mori* (Fuck.) Lindau *in* [Sorauer] Handb. PflKrankh. **2**, ed. 3: 239. 1908 [sometimes erroneously cited as '*M. morifolia* (Fuck.) Lindau'; not to be confused with *M. morifolia* (Pass.) Auct. ≡ *Sphaerella morifolia* Pass., see Seymour, Host Index Fungi N. Am. 281. 1929].

stat. con. *PHLOEOSPORELLA MACULANS* (Béreng.) Höhn.

Phloeosporella maculans (Béreng.) von Höhnel *in* Mitt. bot. Inst. tech. Hochsch. Wien **4**: 77. 1927 [basionym erroneously attributed to Sandri *in* Memorie Accad. Agric. (Sci.) Commerc. Art. Verona **20**: 271–285. 1842, who gives the first record of the fungus, however, without providing a name; see note].

≡ *Fusarium maculans* de Bérenger *in* Atti Congr. Milano **1844**: 474. 1844; de Bérenger, Secc. Gelso 1–10. 1847 [additional description].

≡ *Phleospora maculans* (Béreng.) Allescher *in* Rabenh. Krypt. Fl. [ed. 2], Pilze **6** [Lief. 73]: 935. 1900 [vol. dated "1901"].

≡ *Cercosporella maculans* (Béreng.) Wolf *in* J. Elisha Mitchell scient. Soc. **51**: 165. 1935.

= *Septogloeum mori* (Lév.) Briosi & Cavara *in* Funghi parass. (Fasc. 1) No. 21. 1888.

≡ *Septoria mori* Léveillé *in* Annls Sci. nat. (Bot.) III, **5**: 279. 1846.

≡ *Phleospora mori* (Lév.) Saccardo *in* Michelia **1** (2): 175. 1878; *in* Sylloge Fung. **3**: 577. 1884.

≡ *Cylindrosporium mori* (Lév.) Berlese *in* Riv. Patol. veg., Padova **5**: 205. 1896.

Note: A historical polemic between the Italians Sandri and de Bérenger on the priority of the discovery of the fungal agent of the mulberry disease concerned [see e.g. Berlese *in* Riv. Patol. veg., Padova **5**: 100–101. 1896] explains why in the past the binomial *Fusarium maculans* introduced by de Bérenger is often ascribed erroneously to Sandri. Contrary to Berlese's opinion, de Bérenger's concise diagnosis of *F. maculans* in 1844 can be accepted as a valid publication and therefore antedates *Septoria mori*. The perdect state apparently does not play an important role in the life cycle of the fungus: hibernation is by thick-walled 'autumn conidia' see Stewart *in* J. R. Soc. West. Aust. **34** ("1947–1948"): 87–104. 1950. For description of the conidial state, cultural

characters, pathogenicity and disease symptoms see Stewart (l.c.) and Smith & Stewart *in* J. Dep. Agric. West. Aust. II, **24**: 69–74. 1947. For other synonyms of the conidial state see Stewart (l.c.) and von Höhnel (l.c.).

NECTRIA FUCKELIANA Booth

Nectria fuckeliana Booth *in* Mycol. Pap. **73**: 56. 1959.

H ≡ *Nectria cucurbitula* Fuckel *in* Jb. nassau. Ver. Naturk. **23–24**: 180. 1870 ["1869"; = Symb. mycol.] [not *N. cucurbitula* (Tode ex Fr.) Fries, Summa veg. Scand. **2**: 388. 1849].

stat. con. *CYLINDROCARPON CYLINDROIDES* var. TENUE Wollenw.

Cylindrocarpon cylindroides var. *tenue* Wollenweber *in* Z. ParasitKde **1**: 153. 1928.

Note: For description of both states see Booth (l.c.) and Booth *in* Mycol. Pap. **104**: 5–6. 1966. This species produces abundant microconidia (in fact a distinct second conidial state: *Acremonium* sp.) see Roll-Hansen *in* Meddr norske SkogsforsVes. **17**: 293–312. 1962 and Gams, Cephalops. Schimmelpilze 114–117. 1971.

PESTALOTIA GUEPINII Desm.

V Pestalotia guepinii Desmazières *in* Annls Sci. nat. (Bot.) II, **13**: 182–184. 1840; *in* Mém. Soc. Sci. Agric. Lille **1840**: 35–37. 1841 ['*guepini*'].

V ≡ *Pestalotiopsis guepinii* (Desm.) Steyaert *in* Bull. Jard. bot. État Brux. **19**: 312. 1949 ['*guepini*'].

Note: There exists some confusion about the species concept and synonymy of this fungus, compare Guba, Monochaetia & Pestalotia 108–113. 1961 and Sutton *in* Mycol. Pap. **80**: 8–14. 1961. For description, cultural characters, hosts and notes on pathogenicity see Mordue *in* C.M.I. Descr. pathog. Fungi Bact. 320. 1971 (under *Pestalotiopsis*).

PEZICULA ALBA Guthrie

Pezicula alba Guthrie *in* Trans. Br. mycol. Soc. **42**: 504. 1959.

stat. con. *PHLYCTAENA VAGABUNDA* Desm.

Phlyctaena vagabunda Desmazières *in* Annls Sci. nat. (Bot.) III, **8**: 16, 17. 1847; *in* Pl. cryptog. N. France [ed. 1] Fasc. 33, No. 1624. 1847.

= *Gloeosporium album* Osterwalder *in* Centbl. Bakt. ParasitKde Abt. II, **18**: 826. 1907.

= *Trichoseptoria fructigena* Maublanc *in* Bull. Soc. mycol. Fr. **21**: 97. 1905.

Note: For description, hosts and distribution see von Arx *in* Phytopath. Z. **33**: 110–113. 1958. For other synonyms described as *Gloeosporium* see von Arx *in* Biblthca mycol. **24**: 35–37. 1970 [= Revis. Gloeosporium, ed. 2]. For the occurrence of the fungus on apple leaves see Tan & Burchill *in* Ann. appl. Biol. **70**: 199–206. 1972.

PHAEOLUS SCHWEINITZII (Fr.) Pat.

Phaeolus schweinitzii (Fr.) Patouillard, Essai taxon. 86. 1900.

≡ *Polyporus schweinitzii* Fries, Syst. mycol. **1**: 351. 1821.

≡ *Hapalopilus schweinitzii* (Fr.) Donk *in* Meded. bot. Mus. [Lab.] Herb. Rijks-Univ. Utrecht **9**: 173. 1933 [= Rev. niederl. Homob.-Aphyll. 2].

Note: For description see Donk (l.c.), Jahn *in* Westf. Pilzbriefe **4**: 92–93. 1963 and Bondartsev, Polyp. europ. USSR Cauc. 308. 1971 [= translation Bondartsev, Grib. S.S.S.R. 1953]. For cultural characters see Nobles *in* Can. J. Res. **C26**: 377–378. 1948.

PHELLINUS IGNIARIUS (L. ex Fr.) Quél.

Phellinus igniarius (L. ex Fr.) Quélet, Enchiridion 172. 1886.

rn ≡ *Polyporus igniarius* (L.) ex Fries, Syst. mycol. **1**: 375. 1821.

dn ≡ *Boletus igniarius* Linnaeus, Fl. suec. 1256. 1745.

≡ *Fomes igniarius* (L. ex Fr.) Kickx, Fl. crypt. Flandres **2**: 237. 1867.

≡ *Ochroporus igniarius* (L. ex Fr.) Schroeter *in* Cohn, Krypt.-Fl. Schles. **3** (1): 487. 1888.

Note: For description and data on disease symptoms, distribution and transmission see Pegler & Waterston *in* C.M.I. Descr. pathog. Fungi Bact. 194. 1968. For description see also Donk *in* Meded. bot. Mus. [Lab.] Herb. Rijks-Univ. Utrecht **9**: 249–250. 1933 [= Rev. niederl. Homob.-Aphyll. 2], Jahn *in* Westf. Pilzbriefe **4**: 96–98. 1963 and Bondartsev, Polyp. europ. USSR Cauc. 341. 1971 [= translation Bondartsev, Grib. S.S.S.R. 1953]. For cultural characters see Nobles *in* Can. J. Res. **C26**: 325–326. 1948.

PHELLINUS RIBIS (Schum. ex Fr.) P. Karst.

Phellinus ribis (Schum. ex Fr.) P. Karsten *in* Bidr. Känn. Finl. Nat. Folk **48**: 335. 1889 [= Krit. Öfvers. Finl. Basidsv.] [with ref. to 'Quél. Ench. p. 173' = *P. pectinatus* var. *ribis*, see below].

rn ≡ *Polyporus ribis* Schum. ex Fries, Syst. mycol. **1**: 375. 1821.

dn ≡ *Boletus ribis* Schumacher, Enum. Pl. Saell. **2**: 386. 1803.

≡ *Fomes ribis* (Schum. ex Fr.) Gillet, Champ. France, Hym. 685. 1878.

≡ *Ochroporus ribis* (Schum. ex Fr.) Schroeter *in* Cohn, Krypt.-Fl. Schles. **3** (1): 486. 1888.

≡ *Phellinus pectinatus* var. *ribis* (Schum. ex Fr.) Quélet, Enchiridion 173. 1886.

Note: The correct author citation of this species has been pointed out by Donk in his 'Checklist of European polypores' [*in* Verh. K. ned. Akad. Wet. (Afd. Natuurk.) 1973 – in press]. For description see Donk *in* Meded. bot. Mus. [Lab.] Herb. Rijks-Univ. Utrecht **9**: 253. 1933 [= Rev. niederl. Homob.-Aphyll. 2] (under *Ochroporus ribis*). See also Jahn *in* Westf. Pilzbriefe **4**: 95. 1963 and Bondartsev, Polyp. europ. USSR Cauc. 382. 1971 [= translation Bondartsev, Grib. S.S.S.R. 1953]. Within the species various host forms with slight morphological differences are distinguished, see Pilát, Atlas Champign. Europ. III, Polyporaceae **1**: 529–530. 1942. For cultural characters see Bakshi, Sen & Singh *in* Indian Forest Rec. II, **2** (10): 262. 1971.

PHELLINUS ROBUSTUS (P. Karst.) Bourd. & Galz.

Phellinus robustus (P. Karst.) Bourdot & Galzin *in* Bull. Soc. mycol. Fr. **41**: 188. 1925.

≡ *Fomes robustus* P. Karsten *in* Bidr. Känn. Finl. Nat. Folk **48**: 467. 1889 [= Krit. Öfvers. Finl. Basidsv.].

Note: For description and data on disease symptoms, distribution and transmission see Pegler & Waterston *in* C.M.I. Descr. pathog. Fungi Bact. 197. 1968. See for description also Donk *in* Meded. bot. Mus. [Lab.] Herb. Rijks-Univ. Utrecht **9**: 248–249.

1933 [= Rev. niederl. Homob.-Aphyll. 2], Jahn *in* Westf. Pilzbriefe **4**: 102–103. 1963 and Bondartsev, Polyp. europ. USSR Cauc. 352. 1971 [= translation Bondartsev, Grib. S.S.S.R. 1953]. For cultural characters see Bakshi, Sen & Singh *in* Indian Forest Rec. II, **2** (10): 263. 1971.

PHOLIOTA SQUARROSA (Pers. ex Fr.) Kumm.

Pholiota squarrosa (Pers. ex Fr.) Kummer, Führ. Pilzk. 84. 1871.

rn ≡ *Agaricus squarrosus* Pers. ex Fries, Syst. mycol. **1**: 243. 1821 [with ref. to Fries, Observationes mycol. **2**: 19. 1818 where the species is cited as '*Agar. squarrosus.* Pers. Syn. p. 268 (ut suspicor, exclus. var. syn.)'].

dn ≡ *Agaricus squarrosus* Persoon, Synop. method. Fung. 268. 1801.

Note: For descriptions see Lange, Fl. ag. dan. **3**: 56 (pl. 110). 1936, Wakefield & Dennis, Common Br. Fungi 144. 1950 and Smith & Hesler, N. Amer. spec. Pholiota 189. 1968. See also Zycha *in* Handb. PflKrankh. **3**, ed. 6, Lief. 4: 672. 1962.

PHOMA MACROSTOMA Mont. [var. *MACROSTOMA*]

V Phoma macrostoma Montagne *in* Annls Sci. nat. (Bot.) III, **11**: 52. 1849 [as '*P. macrostomum*'].

= *Phoma pomi* Schulzer & Saccardo *in* Hedwigia **23**: 109. 1884.

H = *Phyllosticta mali* Prillieux & Delacroix *in* Bull. Soc. mycol. Fr. **6**: 181. 1890 [not *Phyllosticta mali* Briard, Fl. cryptog. Aube & Suppl. Cat. Troyes 79. 1888].

= *Phoma limitata* (Peck) Boerema apud Boerema & Dorenbosch *in* Versl. Meded. plziektenk. Dienst **142** (Jaarb. 1964): 138. 1965.

≡ *Phyllosticta limitata* Peck *in* Rep. N. Y. St. Mus. nat. Hist. **50**: 115. 1897.

= *Polyopeus purpureus* var. *verus* Horne *in* J. Bot., Lond. **58**: 240. 1920.

Note: For description and other synonyms of this ubiquitous wound- or weak-parasitic fungus on woody plants see Boerema & Dorenbosch *in* Persoonia **6**: 49–55. 1970.

PHOMA MACROSTOMA var. *INCOLORATA* (Horne) Boerema & Dorenb.

V Phoma macrostoma var. *incolorata* (Horne) Boerema & Dorenbosch *in* Persoonia **6**: 55. 1970 [as '*P. macrostomum* var. *incolorata*'].

≡ *Polyopeus purpureus* var. *incoloratus* Horne *in* J. Bot., Lond. **58**: 240. 1920.

Note: For description and other synonyms see Boerema & Dorenbosch (l.c.).

PHOMA POMORUM Thüm.

Phoma pomorum von Thümen, Fungi pomicoli 105. 1879.

H = *Phoma prunicola* (Opiz) Wollenweber & Hochapfel *in* Z. ParasitKde **8**: 595. 1936 [not *Phoma prunicola* Schweinitz *in* Trans. Am. phil. Soc. II, **4**: 249. 1832 ("1834") = Synopsis Fung. Am. bor.].

≡ *Depazea prunicola* Opiz *in* Malá Encyclop. Nauk. Náklad. česk. Mus. **10**: 120. 1852.

≡ *Peyronellaea prunicola* (Opiz) Goidànich *in* Atti Accad. naz.

Lincei Rc. VIII, **1**: 455. 1946 [not validly published according Arts 32 and 43 of the 'Seattle Code'].

≡ *Phyllosticta prunicola* (Opiz) Saccardo *in* Michelia **1** (2): 157. 1878.

= *Phyllosticta pruni-avium* Allescher *in* Ber. bot. Ver. Landshut **12**: 15. 1892.

= *Phyllosticta pyrina* Saccardo *in* Michelia **1** (2): 134. 1878 [*in* Sylloge Fung. **3**: 7. 1884 listed as '*P. pirina*'].

= *Phyllosticta cydoniicola* Allescher *in* Hedwigia **36**: 158. 1897.

= *Phoma pruni-japonicae* P. Sydow *in* Beibl. Hedwigia **38**: 136. 1899.

= *Phyllosticta tirolensis* Bubák apud Bubák & Kabát *in* Öst. bot. Z. **54**: 181. 1904.

= *Phoma bismarckii* Kidd & Beaumont *in* Trans. Br. mycol. Soc. **10**: 104–105. 1924.

Note: For description and other synonyms of this plurivorous wound- or weak-parasitic fungus see Boerema, Dorenbosch & van Kesteren *in* Persoonia **4**: 59–63. 1965, Persoonia **5**: 202–203. 1968 and Persoonia **6**: 172–174. 1971. See also Morgan-Jones *in* C.M.I. Descr. pathog. Fungi Bact. 135. 1967 (*Phoma prunicola*).

PLASMOPARA VITICOLA (Berk. & Curt. ex de Bary) Berl. & de Toni

Plasmopara viticola (Berk. & Curt. ex de Bary) Berlese & de Toni apud Saccardo *in* Sylloge Fung. **7**: 239. 1888.

≡ *Peronospora viticola* (Berk. & Curt.) ex de Bary *in* Annls Sci. nat. (Bot.) IV, **20**: 125. 1863.

Θ ≡ *Botrytis viticola* Berkeley & Curtis apud Berkeley *in* Jl [R.] hort. Soc. **6**: 289. 1851; *in* Fungi carol. exs. [Ed. Ravenel] Fasc. 5, No. 90 [i.e. No. 490 of the whole series]. 1860 [erroneously in literature on this fungus mostly dated "1848"].

Θ ≡ *Peronospora viticola* (Berk. & Curt.) Caspary *in* Ber. Verh. K. preuss. Akad. Wiss. Berl. **1855**: 331. 1855.

Note: For description, disease symptoms and infection biology see Butler & Jones, Pl. Path. 833–839. 1949.

PLEUROTUS OSTREATUS (Jacq. ex Fr.) Kumm.

Pleurotus ostreatus (Jacq. ex Fr.) Kummer, Führ. Pilzk. 105. 1871.

rn ≡ *Agaricus ostreatus* Jacquin ex Fries, Syst. mycol. **1**: 182. 1821.

dn ≡ *Agaricus ostreatus* Jacquin, Fl. Austriac. **3**: t. 288. 1775.

Note: For descriptions see Lange, Fl. ag. dan. **2**: 68 (pl. 63). 1936. Wakefield & Dennis, Common Br. Fungi 100–101. 1950 and Romagnesi, Nouv. Atlas Champ. **2**: pl. 108. 1958. See also Zycha *in* Handb. PflKrankh. **3**, ed. 6, Lief. 4: 673–674. 1962. For cultural characters see Nobles *in* Can. J. Res. **C26**: 347–348. 1948.

POLYPORUS SQUAMOSUS (Huds.) ex Fr.

Polyporus squamosus (Huds.) ex Fries, Syst. mycol. **1**: 343. 1821.

≡ *Boletus squamosus* Hudson, Fl. Angl. ed. 2, 626. 1778.

Note: For description see Donk *in* Meded. bot. Mus. [Lab.] Herb. Rijks-Univ. Utrecht **9**: 130–131. 1933 [= Rev. niederl. Homob.-Aphyll. 2]. See also Jahn *in*

Schweiz. Z. Pilzk. **47**: 218–227. 1969 and Bondartsev, Polyp. europ. USSR Cauc. 427. 1971 [= translation Bondartsev, Grib. S.S.S.R. 1953]. For cultural characters see Nobles *in* Can. J. Res. **C26**: 378–379. 1948.

SCHIZOTHYRIUM POMI (Mont.) v. Arx

Schizothyrium pomi (Mont.) von Arx *in* Proc. K. ned. Akad. Wet., Ser. C, **62**: 336. 1959 [as '*S. p.* (Mont. ex Fr.) v. Arx']

≡ *Labrella pomi* Montagne *in* Annls Sci. nat. (Bot.) II, **1**: 347. 1834 [as '*L. p.* Montag. mss (Fr. in litt.)']

≡ *Leptothyrium pomi* (Mont.) Saccardo *in* Michelia **2** (1): 113. 1880.

Note: For description, synonyms and hosts see von Arx (l.c.).

STIGMINA HARTIGIANA (Sacc.) M. B. Ellis

Stigmina hartigiana (Sacc.) M. B. Ellis *in* Mycol. Pap. **72**: 45. 1959.

≡ *Septogloeum hartigianum* Saccardo *apud* Hartig *in* Forstl.-naturw. Z. **1**: 290. 1892.

≡ *Sciniatosporium hartigianum* (Sacc.) Morgan-Jones *in* Can. J. Bot. **49**: 997. 1971.

= *Coryneum vogelianum* Saccardo *in* Annls mycol. **32**: 430. 1934.

Note: For description and other synonyms of this pathogen of *Acer campestre* L. see Ellis (l.c.). For discussion of the generic name *Sciniatosporium* see Sutton *in* Trans. Br. mycol. Soc. **58**: 164–167. 1972.

SYDOWIA POLYSPORA (Bref. & v. Tav.) E. Müll.

Sydowia polyspora (Bref. & v. Tav.) E. Müller *in* Sydowia **7**: 342. 1953.

≡ *Dothidea polyspora* Brefeld & von Tavel in Brefeld, Untersuch. Gesammtgeb. Mykol. **10**: 296. 1891.

stat. con. *DOTHICHIZA PYTHIOPHILA* (Corda) Petr.

V *Dothichiza pythiophila* (Corda) Petrak *in* Annls mycol. **21**: 267. 1923 [as '*D. pityophila*'].

V ≡ *Sphaeronaema pythiophilum* Corda, Icon. Fung. **4**: 40. 1840 [as '*Sphaeronema p.*'].

V ≡ *Sclerophoma pythiophila* (Corda) von Höhnel *in* Sber. Akad. Wiss. Wien (Math.-naturw. Kl., Abt. I) **118**: 1234. 1909 [as '*S. pithyophila*'].

= *Hormonema dematioides* Lagerberg & Melin apud Lagerberg, Lundberg & Melin *in* Svenska SkogsvFör. Tidskr. **25**: 219. 1927.

Note: For descriptions and synonyms of the perfect state see Müller (l.c.) and Butin *in* Sydowia **17**: 114–118. 1964. For descriptions and synonyms of the conidial state see Sutton & Waterston *in* C.M.I. Descr. pathog. Fungi Bact. 228. 1970 (*Sclerophoma pythiophila*). Good figures of the pycnidia are given by Müller (l.c.) and von Arx, Genera Fungi 137. 1970. In culture the fungus produces a dark mycelium with blastospores, hardly distinguishable from *Aureobasidium pullulans* (de Bary) G. Arn., see Butin *in* Phytopath. Z. **48**: 298–305. 1963, Sutton & Waterston (l.c.) and von Arx (l.c.). For hosts and data on pathogenicity and disease symptoms see Sutton & Waterston (l.c.).

THIELAVIOPSIS BASICOLA (Berk. & Br.) Ferraris

Thielaviopsis basicola (Berk. & Br.) Ferraris *in* Flora ital. cryptog. **1** (6): 233–234. 1912.

≡ *Torula basicola* Berkeley & Broome *in* Ann. Mag. nat. Hist. II, **5**: 461. 1850 [= Not. Br. Fungi].

Note: The ascomycete *Thielavia basicola* Zopf *in* Verh. bot. Ver. Prov. Brandenb. **18**: 101. 1876 was formerly regarded as the perfect state of *Thielaviopsis basicola*. By cultural experiments, however, it has been established that there exists no genetical connection between *Thielavia* and *Thielaviopsis*, see Lucas *in* Phytopathology **38**: 16. 1948 and Härri *in* Phytopath. Z. **36**: 27–66. 1959. For description of *Thielaviopsis basicola* see Ellis, Dematiac. Hyphom. 31–32. 1971. For hosts see Johnson *in* J. agric. Res. **7**: 289–300. 1916 (under '*Thielavia basicola*') and in J. agric. Res. **58**: 856–858. 1939. The cultural characters are described by Rawlings *in* Ann. Mo. bot. Gdn **27**: 561–598. 1940. Also see Subramanian *in* C.M.I. Descr. pathog. Fungi Bact. 170. 1968.

UNCINULA NECATOR (Schw.) Burr.

Uncinula necator (Schw.) Burrill in Ellis & Everhart, N. Am. Pyrenomyc. 15. 1892.

≡ *Erysiphe necator* Schweinitz *in* Trans. Am. phil. Soc. II, **4**: 270. 1832 ["1834"].

Note: For synonyms, descriptions and hosts see Blumer, Echte Mehltaupilze 276–282. 1967 and Kapoor *in* C.M.I. Descr. pathog. Fungi Bact. 160. 1967.

VALSA SORDIDA Nitschke

Valsa sordida Nitschke, Pyrenom. Germ. Lief. **1**: 203. 1867

stat. con. *CYTOSPORA CHRYSOSPERMA* (Pers.) ex Fr.

rn *Cytospora chrysosperma* (Pers.) ex Fries, Syst. mycol. **2** [Sect. 2]: 542. 1823.

dn ≡ *Naemaspora chrysosperma* Persoon, Observationes mycol. **1**: 80. 1796; Synop. method. Fung. 108. 1801.

Note: For description and synonyms of the perfect state see Urban *in* Rozpr. čsl. Akad. Věd, Řada MPV **68** (12): 39–40. 1958. For description of the conidial state see Urban (l.c.) and Butin *in* Mitt. biol. BundAnst. Ld- u. Forstw. **91**: 48. 1957. For a discussion of pathogenicity and disease symptoms see Peace, Path. Trees Shrubs 439–441. 1962.

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