

A monograph of *Valsa* on hardwoods in North America¹

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The species of *Valsa* and *Cytospora* found on hardwoods in North America are reevaluated, based on morphological studies of type specimens, herbarium specimens, and fresh collections. Three sections are accepted in *Valsa*: sections *Valsa*, *Monostichae* Nits., and *Cypri* Urban, distinguished by the number, size, and arrangement of perithecia, the distribution of ostioles in the disc, and the size of ascospores. Four sections are accepted in *Cytospora*: sections *Cytospora*, *Torsellia* (Fr.) Gvrit., *Cytophoma* (Hoehn.) Gvrit., and *Cytosporopsis* (Hoehn.) Gvrit., based on the number and shape of the locules. Correlations between the teleomorphic and anamorphic sections *Valsa*–*Cytospora*, *Monostichae*–*Torsellia*, and *Cypri*–*Cytophoma* are reaffirmed. Six species of *Valsa* on North American hardwoods are accepted, and two new subspecies are proposed: *V. ambiens* subsp. *ambiens* and *V. ambiens* subsp. *leucostomoides* (Peck) Spielman. Six species of *Cytospora* are accepted.

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À partir des espèces types, de spécimens d'herbier et de spécimens frais l'auteur, en se basant sur la morphologie, a réévalué la taxonomie des espèces de *Valsa* et de *Cytospora* qui se retrouvent sur les espèces d'arbres feuillues de l'Amérique du Nord. Elle reconnaît trois sections chez les *Valsa* ce sont les sections *Valsa*, *Monostichae* Nits. et *Cypri* Urban qui se distinguent par le nombre, la grosseur et l'arrangement des périthèces, par la distribution des ostioles sur le disque, et par la dimension des ascospores. Pour le genre *Cytospora*, elle reconnaît quatre sections. Ce sont les sections *Cytospora*, *Torsellia* (Fr.) Gvrit., *Cytophoma* (Hoehn.) Gvrit. et *Cytosporopsis* (Hoehn.) Gvrit., qui se distinguent par le nombre et la forme des locules. Les corrélations entre les sections téléomorphes et anamorphes *Valsa*–*Cytospora*, *Monostichae*–*Torsellia*, et *Cypri*–*Cytophoma* se confirment. L'auteur accepte six espèces de *Valsa* sur des espèces feuillues de l'Amérique du Nord et propose deux nouvelles sous-espèces; *V. ambiens* subsp. *ambiens* et *V. ambiens* subsp. *leucostomoides* (Peck) Spielman. Six espèces de *Cytospora* sont reconnues.

[Traduit par le journal]

Introduction

Historical background

Valsa Fr. (Ascomycetes, Diaporthales) is a genus of pyrenomyces with anamorphs in the genus *Cytospora* Ehrenb.: Fr. Species of *Valsa* and *Cytospora* are found worldwide on numerous woody hosts, both as saprophytes and as pathogens. The task of species delimitation has been hindered by a confusing array of morphological variations and a poor understanding of host ranges. von Hoehnel (1917, 1927, 1928a, 1928b, 1928c, 1928d, 1928e) made a large contribution to the clarification of *Valsa* and *Cytospora* species, followed by Grove (1923), Gutner (1934), Défago (1942), and Hubbes (1960). Urban (1958) monographed the Czechoslovakian species of *Valsa*, *Leucostoma* (Nits.) Hoehn., and *Valsella* Fckl., and Gvritishvili (1982) monographed the genus *Cytospora* in the U.S.S.R. Although North American specimens were treated occasionally by these authors, the species concepts evolving from their work are based primarily on European material. Almost 200 species in *Valsa* and over 50 in *Cytospora* were erected for North American specimens on hardwood hosts. The treatment of *Valsa* by Gilman et al. (1957) deals only with specimens collected in Iowa. This paper reports the results of morphological studies of *Valsa* and *Cytospora* on hardwoods in North America.

Morphology and teleomorph–anamorph correlations

Teleomorphic fruiting structures consist of erumpent, pseudostromatic ascomata, each containing a group of immersed perithecia. The converging beaks of the perithecia emerge through an externally visible region of stroma termed the disc.

Internally the stromatic tissue has a loose, hyphal texture and contains host cells (Fig. 1a). In the disc and just under the bark the stroma is composed exclusively of fungal tissue and consists of densely packed, thick-walled cells (Fig. 1b). These regions are called entostroma and ectostroma, respectively (Wehmeyer 1926). The centrum is diaporthaceous (Barr 1978) and, at maturity, is aparaphysate and filled with detached asci. Each ascus contains one to eight ascospores and has a typical diaporthaceous, refractive, inamyloid, apical ring.

Anamorphic structures are found in stromata similar to those of the teleomorph. Pycnidial cavities lined with phialidic conidiophores are immersed in the ectostroma and open to the outside via one or several ostioles. The conidia are hyaline and allantoid.

Species of *Valsa* have been segregated into three sections (Urban 1958; Spielman 1983): sections *Valsa*, *Monostichae* Nits., and *Cypri* Urban. Section *Valsa* (Fig. 2a) has large asci, ascospores, and perithecia and usually less than 20 perithecia per ascoma. The perithecia lie in the wood outside the disc, often in a circular arrangement, with the beaks inserted laterally. The ectostroma is generally well developed, while the entostroma is sparse, and the perithecial beaks do not fill the disc. Members of section *Monostichae* (Fig. 3a) have small asci, ascospores, and perithecia and usually more than 15 perithecia per ascoma. The perithecia are grouped beneath the stromatic disc in a more or less upright position, and the closely packed beaks usually fill the disc. The ectostroma is sparse, and the entostroma is well developed. Section *Cypri* (Fig. 4a) is characterized by a "disc" formed of the fused perithecial beaks. Large, upright or somewhat lateral perithecia are arranged in irregular clusters of usually less than 20 per ascoma, and the asci and ascospores are also large.

Several morphological groups have also been recognized in *Cytospora*: sections *Cytospora*, *Torsellia* (Fr.) Gvrit., *Cyto-*

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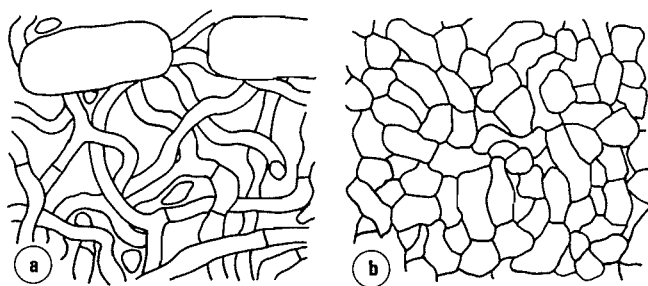


FIG. 1. Diagrams of stromatic cell types. (a) Entostroma, showing host cells and hyphal fungal cells; (b) ectostroma.

phoma (Hoehn.) Gvrit., and *Cytosporopsis* (Hoehn.) Gvrit. Section *Cytospora* (Figs. 2b, 2c) includes those species having one complex pycnidial locule per conidioma. This locule is composed of numerous interconnecting chambers arranged radially or irregularly within a continuous mass of ectostromatic tissue. Adjacent chambers are not easily separable, because they share a common wall. Section *Torsellia* (Figs. 3b, 3c) accommodates species with more than one locule per conidioma. Each locule is a baglike structure with its own wall, which joins the other locules only near the center where their confluence forms the ostiolar canal(s). Although the locules are usually surrounded by entostromatic tissue, they are easily separated from each other. Section *Cytophoma* (Figs. 4b, 4c) is characterized by a single globose locule per conidioma, with a distinctive ectostromatic collar encircling the ostiolar region just under the bark. Section *Cytosporopsis* (Figs. 5b, 5c) also has a single locule per conidioma, but in this case it is shaped like a flattened doughnut. See Urban (1958), Gvritishvili (1982), and Spielman (1983) for a more detailed discussion of infrageneric taxa in *Valsa* and *Cytospora*.

The occurrence together of hyaline, allantoid ascospores, detaching asci with refractive, inamyloid apical structures, immersed perithecia with convergent beaks, and stromatic tissues of the types described above constitutes a unique and uniform set of characters separating *Valsa* from other stromatic genera of pyrenomycetes. *Cytospora* is likewise a very uniform genus, uniquely characterized by its hyaline, allantoid conidia, slender, branched, phialidic conidiophores, and stromatic tissues similar to those of the teleomorph. Although this uniformity facilitates generic delimitations, it causes difficulty in distinguishing among species, especially those in a single section. This has been a particular problem in *Cytospora*, in which even differences in conidial dimensions are negligible among species.

The first connections between anamorphs and teleomorphs in this group of fungi were based on observations of frequent, close association between the two states on natural substrates (Tulasne and Tulasne 1863), and subsequent studies have improved on the accuracy, but not on the basic methods, of the early workers. This is because conclusive kinds of evidence, such as the development of one state in cultures derived from single spores of the other, are not available. The production of the teleomorph in culture has been rare and not repeatable (Défago 1942). The anamorph is readily produced in cultures from either conidia or ascospores, but cultural appearance is too variable and conidial dimensions are too uniform to be used as species characteristics. Furthermore, in the absence of the natural substrate and environment, stromatic fruiting structures are abnormal. For these reasons, all connections between teleo-

morphs and anamorphs reported in this monograph are based on the following criteria: (i) intimate association between teleomorph and anamorph, (ii) consistent association in collections from different localities, (iii) the occurrence of both states in the same stroma, and (iv) the presence of similar tissue types in the stomata of both states (Nag Raj 1979; Dicosmo et al. 1984). Because of the circumstantial nature of these kinds of evidence, a degree of uncertainty may exist, especially in cases in which specific anamorphic collections are to be assigned to one of several teleomorphs having very similar anamorphic states. Until other kinds of data are available that can indicate relationships more exactly, this limitation will remain.

Although correlations between individual species of *Valsa* and *Cytospora* were perceived as early as 1863 (Tulasne and Tulasne 1863), the relationships between broader morphological types in teleomorph and anamorph have been described only recently (Urban 1958; Gvritishvili 1982; Spielman 1983). With the exception of *V. melanodiscus* Otth and its anamorph, there is a one-to-one correlation between teleomorph and anamorph sections: *Valsa* pairs with *Cytospora*, *Monostichae* with *Torsellia*, and *Cypri* with *Cytophoma*. *Valsa melanodiscus* (Fig. 5a) has attributes of sections *Valsa* and *Monostichae* and has been placed in both (see discussion under *V. melanodiscus*). Its anamorph in section *Cytosporopsis* is unique among the morphological forms found in the genus *Cytospora*.

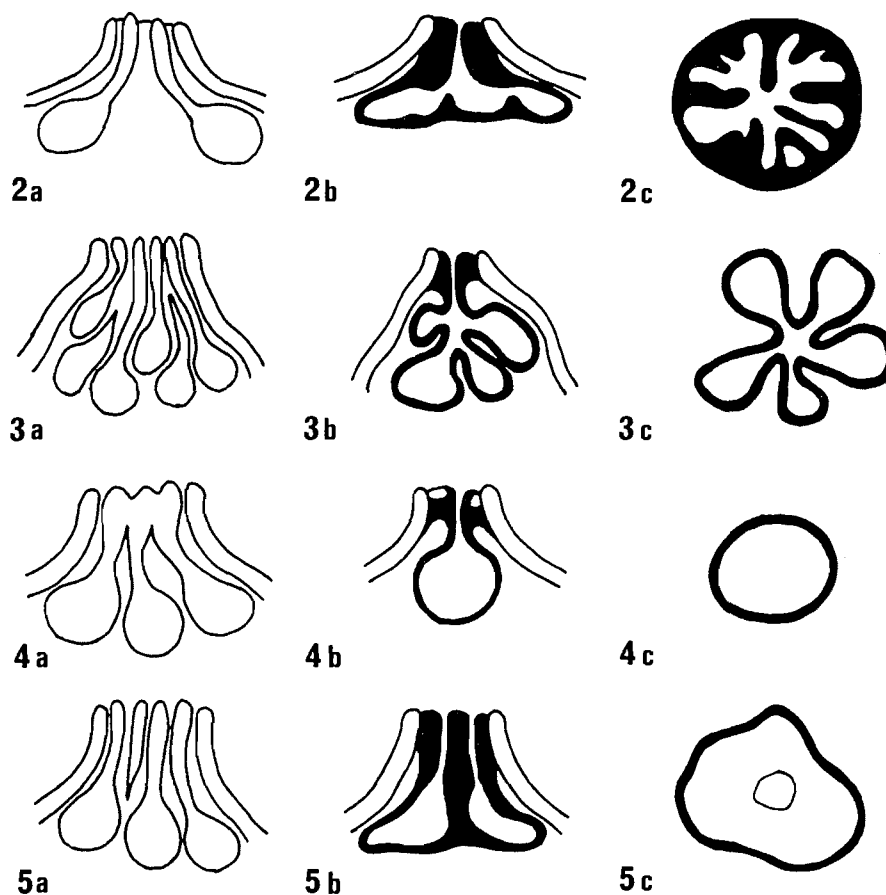
Gvritishvili's (1982) scheme groups the infrageneric taxa of *Cytospora* into three subgenera: sections *Cytospora* and *Cytophoma* in subgenus *Cytospora*, sections *Leucocytospora* (Hoehn.) Gvrit. and *Cytosporopsis* in subgenus *Leucocytospora* Hoehn., and sections *Torsellia* and *Lamyella* (Fr.) Gvrit. in subgenus *Torsellia* (Fr.) Gvrit. I feel that our present knowledge does not support such a complex scheme, and I therefore propose a simpler one. Section *Leucocytospora*, which accommodates anamorphs of the genera *Leucostoma* and *Valsella*, should be raised to the rank of genus. von Hoehnel (1927) is often cited as having done this, but it is doubtful that the mere publication of the new combination, *Leucocytospora corni* (West.) Hoehn., constitutes an intentional change of rank. Gvritishvili's section *Lamyella* differs from section *Torsellia* only in having numerous ostioles, and since I have found the number of ostioles to be a variable feature, I place *Lamyella* in synonymy with *Torsellia*. Anamorphs of *Valsa* species are distributed among sections *Cytospora*, *Torsellia*, *Cytophoma*, and *Cytosporopsis*, with no groupings into subgenera.

Materials and methods

Fruiting structures were rehydrated in 2% KOH and sectioned at a thickness of 15–25 μm with a freezing microtome or squash mounted. Sections or squashes were mounted in Poirrier's blue (0.15% in lactic acid), 1% aqueous phloxine, Melzer's reagent (Booth 1971), or 100% lactic acid. Measurements were made in Poirrier's blue after rehydration in 2% KOH.

Because of the consistency of generic features such as spore morphology, ascus shape, and conidiogenous cell structure, descriptions of these characters are given only in the generic descriptions, and not repeated in the species descriptions.

Herbarium abbreviations are taken from Holmgren and Keuken (1974). Other abbreviations used are HT, holotype; IT, isotype; ILT, isolectotype; IST, isosytype; LT, lectotype; NT, neotype; and ST, syntype. In the alphabetical listing by epithets, accepted names are preceded by an asterisk and specimens examined are listed under the following headings: holotype, isotype, syntype, isosytype, or authentic specimen.



FIGS. 2–5. Diagrams illustrating some distinguishing features of the morphological groups within *Valsa* and *Cytospora*. (Figs. 2a, 3a, 4a, and 5a) Longitudinal sections of teleomorphs, showing perithecia with ostioles emerging through the stromatic disc; (Figs. 2b, 3b, 4b, and 5b) longitudinal sections and (Figs. 2c, 3c, 4c, and 5c) tangential sections of anamorphs, showing locule arrangement and location of ectostroma (filled in areas). Fig. 2a. *Valsa* section *Valsa*. Figs. 2b and 2c. *Cytospora* section *Cytospora*. Fig. 3a. *Valsa* section *Monostichae*. Fig. 3b and 3c. *Cytospora* section *Torsellia*. Fig. 4a. *Valsa* section *Cypri*. Figs. 4b and 4c. *Cytospora* section *Cytophoma*. Fig. 5a. *Valsa melanodiscus*. Figs. 5b and 5c. *Cytospora* section *Cytosporopsis*.

Key to genera and species

- A. Disc white, prominent; entostroma well-developed, usually delimited basally by a black stromatic zone B
- A. Disc white or not, but if white, then entostroma not well developed; usually not delimited below by a black stromatic zone C
- B. Asci 8-spored *Leucostoma*
- B. Asci multispored *Valsella*
- C. Ascospores 10–30 μm long; perithecia 300–700 μm in diameter, 2–20(–30) per stroma; anamorph in section *Cytophoma* or *Cytospora* D
- C. Ascospores 3–12 μm long; perithecia 150–450 μm in diameter, (10–)15–40 per stroma; anamorph in section *Torsellia* or *Cyclocytospora*; (section *Monostichae*) H
- D. Perithecial ostioles fused; perithecia in loose clusters; ectostroma poorly developed; entostroma often well-developed; anamorph in section *Cytophoma*; on *Oleaceae* (section *Cypri*) *V. cypri* (p. 1358)
- D. Perithecial ostioles not fused; perithecia usually circinate; ectostroma generally well developed; entostroma never well developed; anamorphs in section *Cytospora* (section *Valsa*) E
- E. Disc tan, gray, brown or black with ostioles arranged in a ring around the margin F
- E. Disc white to light gray with ostioles clustered or scattered in the center, or the disc reduced and the ostioles clustered . . . G
- F. Ascospores 9–30 μm long; omnivorous *V. ambiens* subsp. *ambiens* (p. 1358)
- F. Ascospores 8–15 μm long; on *Populus* or *Salix* *V. sordida* (p. 1362)
- G. Ascospores 8–20 μm long; on *Acer* *V. ambiens* subsp. *leucostomoides* (p. 1361)
- G. Ascospores 14–30 μm long; on *Salix* or *Populus* *V. salicina* (p. 1362)
- H. Ectostroma poorly developed; disc usually filled with closely packed ostioles; anamorph in section *Torsellia* *V. ceratosperma* (p. 1363)
- H. Ectostroma well developed; disc prominent; ostioles scattered or clustered in the center; anamorph in section *Cytosporopsis* *V. melanodiscus* (p. 1366)

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Descriptions of genera, sections, and accepted species

Valsa Fr., Summa Veg. Scand. p. 410. 1849, nomen conservandum propositum, non *Valsa* Adans. 1763, nomen rejiciendum propositum (vide Cannon and Hawksworth 1983). LECTOTYPE SPECIES: *Valsa ambiens* (Pers.: Fr.) Fr. (vide von Hoehnel 1917)

Fruit bodies stromatic, immersed in inner bark or outer layers of wood, slightly to strongly erumpent. Ectostroma dense, composed of globose, angular, or hyphal, thick-walled cells, with or without amorphous material near the disc surface. Cell walls in superficial regions variable in color, those of inner regions olive to brown. Entostroma less dense, composed of loosely interwoven, septate, thin-walled, hyaline or brown-walled hyphae and containing host cells. Perithecia in groups with convergent beaks, embedded in entostroma. Walls of perithecia 15–35 μm thick, with epidermoid to angular outer cell layer. Beaks formed of elongate or brick-shaped cells, lined with periphyses. Centrum diaphragmose, paraphysate at maturity. Asci clavate to fusoid with apical, inamyloid, refractive ring, detaching at maturity and tending to disintegrate with age. Ascospores allantoid, hyaline, thin walled, 8 or fewer per ascus.

ANAMORPHIC GENUS: *Cytospora* Ehrenb., Sylv. Mycol. Berol. p. 28. 1818. LECTOTYPE SPECIES: *Cytospora chrysosperma* (Pers.: Fr.) Fr. (vide Donk 1964)

Disc variable in color and development, prominent to reduced, with 1–10 ostioles. Locules globoid, doughnut shaped, or flattened, formed in ectostroma, with or without internal chambers formed by involutions of inner wall. Outer cell layer epidermoid to angular. Cells walls thick and brown in outer layers, thinner and hyaline near the conidiogenous regions. Entire inner surface lined with slender, irregularly branched conidiophores 10–30 μm long. Conidiogenous cells phialidic, with narrow apices and barely visible collarettes. Conidia hyaline, allantoid, aseptate, eguttulate, thin walled, exuded in whitish to yellow droplets or tendrils.

Valsa section *Cypri* Urban, Preslia, 29: 394. 1957. HOLOTYPE SPECIES: *Valsa cypri* (Tul.) Tul. & C. Tul. (vide Urban 1957)

Disc composed of united ostioles, ectostroma gray to black, but usually lacking or poorly developed, entostroma well to poorly developed. Perithecia large, 300–500 μm in diameter, 3–15(–25) per stroma, arranged irregularly or in a loose cluster, with beaks centrally to laterally inserted. Asci 40–70 \times 9–15 μm . Ascospores 14–25 \times 3–5 μm . Anamorphs in section *Cytophoma* with a single globoid locule and a flared ectostromatic ring around the ostiole beneath the bark.

Valsa cypri (Tul.) Tul. & C. Tul., Sel. Carp. Fung. 2: 194. 1863. HOLOTYPE: Tulasne, Bois de Boulogne, near Paris (as *Sphaeria cypri* Tul.) (P). BASIONYM: *Sphaeria cypri* Tul., C.R. Hebd. Séances Acad. Sci. 42: 706. 1856

Fig. 6

= *Valsa fraxinina* Peck, Bull. Torrey Bot. Club, 11: 28. 1884
= *Valsa chionanthi* Ellis & Everh., Proc. Acad. Sci. Philadelphia, 46: 340. 1894

= *Engizostoma chionanthi* (Ellis & Everh.) O. Kuntze, Rev. Gen. Plant. 3, Pt. 2, p. 473. 1898

ANAMORPH: *Cytospora pruinosa* (Fr.: Fr.) Sacc., Michelia, 1: 519. 1879. ISOTYPE: Fries, Scler. Suec. 82 (FH).

BASIONYM: *Sphaeria pruinosa* Fr., Kgl. Vetensk. Acad. Handl. 38: 104. 1817

Fig. 7

= *Cytophoma pruinosa* (Fr.: Fr.) Hoehn., Sitzungsber. Akad. Wiss. Wien, Math.-Naturwiss. Kl., Abt. 1, 123: 85. 1914

= *Sphaeria ligustri* Schw., Syn. Fung. Am. Bor. p. 219. 1832

= *Valsa ligustri* (Schw.) Schroet., in Cohn, Krypt.-Fl. Schlesiens, Bd. 3, Vol. 2, Pt. 4: 412. 1897

= *Cytospora chionanthi* Ellis & Everh., Proc. Acad. Sci. Philadelphia, 46: 340. 1894 (as "*Cytispora chionanthi*")

= *Cytospora annularis* Ellis & Everh., Bull. Torrey Bot. Club, 24: 288. 1897 (as "*Cytispora annularis*")

(See Urban (1958) for other synonyms.)

Disc usually absent, but appearing to be black because of the united ostioles, or, if present, then gray, circular, up to 750 μm in diameter. Ectostroma usually lacking or poorly developed, entostroma variable. Ostioles large, united, usually completely occupying the disc region. If the disc is present, then the ostioles form a central cluster. Asci 40–70 \times 9–15 μm . Ascospores 12–20 \times 3–5 μm , 8 per ascus. Anamorph with variable disc, sometimes prominent, gray, circular, with a single, central, black ostiole, but more often reduced, the ostiole then conical and black. Ectostroma forming a flared ring between the ostiole and the bark. Entostroma well to poorly developed. Locule single, globoid. Conidia 4–7 \times 1 μm . HOSTS: Oleaceae. DISTRIBUTION: North America, Europe.

NOTES: The black "disc" formed by the united ostioles is a distinctive and relatively reliable character for this species. Some specimens of *V. ambiens* have reduced discs and closely packed ostioles, but they do not coalesce to become a solid structure as do those of *V. cypri*. Even when a stromatic disc is present in *V. cypri* (as in the type of *Valsa fraxinina*), the ostioles are fused below the disc surface. The anamorph is also distinctive, because of its simple, globoid locule and flared ectostromatic ring, and this species should not be confused with any other.

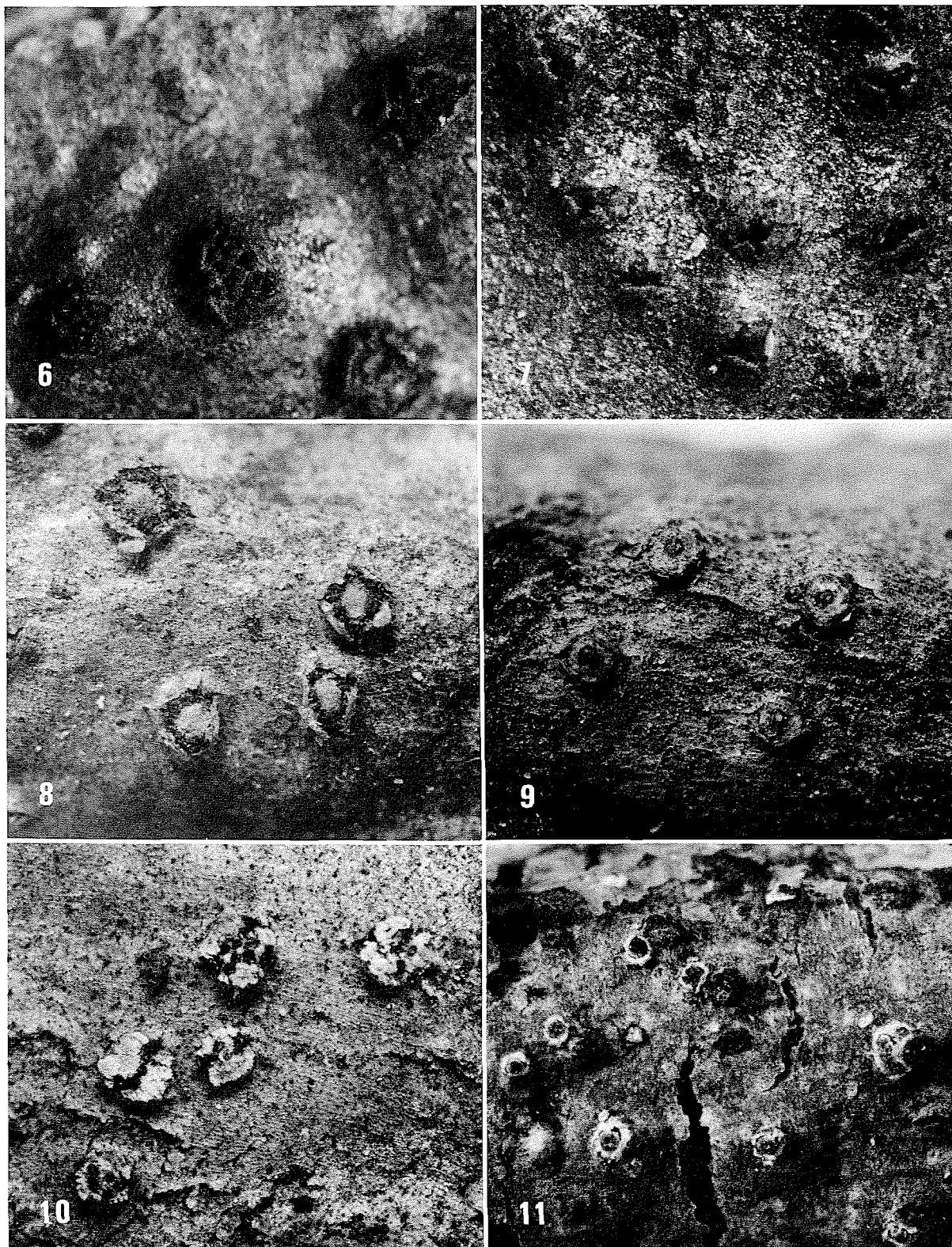
SPECIMENS EXAMINED: CANADA: on *Fraxinus* (*Valsa fraxinina*, HT), leg. Macoun (NYS). U.S.A.: PENNSYLVANIA: Schweinitz, Syn. Fung. 1684-539 (*Sphaeria ligustri*, HT) (PH); SOUTH DAKOTA: Griffiths 184 (*Cytospora annularis*, presumed HT) (CUP); WEST VIRGINIA: Nuttall 427 + 428 (single packet) (*Valsa chionanthi*, presumed IT) (NY); Nuttall 427, on *Chionanthus virginica* (*Cytospora chionanthi*, presumed ST), March 25, 1894 (NY).

Valsa* section *Valsa

= *Circinatae* (Nits.) Urban, Preslia, 29: 395. 1957

Disc usually prominent, but sometimes reduced. Ectostroma usually well developed and entostroma poorly developed. Perithecia large, 300–650 μm in diameter, (1–)3–15(30) per stroma, circinate to clustered, but usually extending laterally under the bark, with long, laterally inserted beaks. Asci 30–80 \times 6–12 μm . Ascospores 8–30 \times 1.5–8 μm , 8 or fewer per ascus. Anamorphs in section *Cytospora*, each conidioma having a single, complex locule divided into chambers by projections of inner wall tissue, with adjacent chambers sharing a common wall.

Valsa ambiens (Pers.: Fr.) Fr., Summa Veg. Scand., Pars Post., p. 412. 1849. subsp. *ambiens*. NEOTYPE: PR



FIGS. 6–11. Surface views of ascomata and conidiomata showing disc morphology. Fig. 6. *Valsa cypri* on *Fraxinus americana* (CUP 30228). 10×. Fig. 7. *Cytospora pruinosa* on *Fraxinus americana* (CUP 30228). 10×. Fig. 8. *Valsa ambiens* subsp. *ambiens* on *Ulmus* (Kochmann, Mycol. Pol. 385, CUP). 10×. Fig. 9. *Cytospora leucosperma* on *Ulmus* (Kochmann, Mycol. Pol. 385, CUP). 10×. Fig. 10. *Valsa ambiens* subsp. *leucostomoides* on *Acer saccharum* (CUP 60137). 10×. Fig. 11. *Cytospora annulata* on *Acer saccharum* (CUP 60137). 10×.

- 163781, on *Tilia* (as *V. ambiens*) (PR) (vide Urban 1957).
 BASIONYM: *Sphaeria ambiens* Pers., Syn. Meth. Fung. p. 44. 1801: Fr. Fig. 8
- =*Sphaeria expers* Schw., Syn. Fung. Am. Bor. p. 203. 1832
 ≡*Valsa expers* (Schw.) Cooke, Proc. Acad. Nat. Sci. Philadelphia, 29: 125. 1877
 ≡*Calosphaeria expers* (Schw.) Ellis & Everh., N. Am. Pyren. p. 512. 1892
- =*Valsa mesoluca* Berk. & Curt., Grevillea, 4: 103. 1876
- =*Valsa pauperata* Cooke & Ellis, Grevillea, 6: 93. 1877
 ≡*Engizostoma pauperatum* (Cooke & Ellis) O. Kuntze, Rev. Gen. Plant. 3, Pt. 2: 475. 1898
- =*Valsa laurina* Cooke & Ellis, Grevillea, 7: 9. 1878
 ≡*Engizostoma laurinum* (Cooke & Ellis) O. Kuntze, Rev. Gen. Plant. 3, Pt. 2, p. 474. 1898
- =*Valsa myinda* Cooke & Ellis, Grevillea, 6: 93. 1878, emend. Reid and Cain, Can. J. Bot. 40: 837–841. 1962
 ≡*Diaporthe myinda* (Cooke & Ellis) Sacc., Syll. Fung. 1: 611. 1882
 ≡*Cryptodiaporthe myinda* (Cooke & Ellis) Wehmeyer, Univ. Mich. Stud. Sci. Ser. 9: 199. 1933
- =*Valsa menispermi* Ellis & Holw., J. Mycol. 1: 4. 1885
- =*Valsa ribicola* Ellis & Everh., Proc. Acad. Sci. Philadelphia, 46: 340. 1894
 ≡*Engizostoma ribicola* (Ellis & Everh.) O. Kuntze, Rev. Gen. Plant. 3, Pt. 2: 475. 1898
- =*Valsa conscripta* Cooke & Ellis, Grevillea, 7: 8. 1878
 ≡*Engizostoma conscriptum* (Cooke & Ellis) O. Kuntze, Rev. Gen. Plant. 3, Pt. 2: 473. 1898
- =*Valsa obtecta* Cooke & Ellis, Grevillea, 7: 9. 1878
 ≡*Engizostoma obtectum* (Cooke & Ellis) O. Kuntze, Rev. Gen. Plant. 3, Pt. 2: 474. 1898
- =*Valsa clausa* Cooke & Ellis, Grevillea, 8: 13. 1879
 ≡*Engizostoma clausum* (Cooke & Ellis) O. Kuntze, Rev. Gen. Plant. 3, Pt. 2: 473. 1898
- =*Valsa celtidis* Ellis & Everh., Bull. Torrey Bot. Club, 24: 133. 1897
- =*Valsa amorphae* Ellis & Everh., Bull. Torrey Bot. Club, 24: 133. 1897
- =*Valsa symphoricarpi* Rehm, Ann. Mycol. 9: 365. 1911
- =*Valsa ambiens* (Pers.: Fr.) Fr. var. *shepherdiae* Sacc., Atti Mem. Accad. Patav. Sci. Lett. Art, 33: 166. 1917
- =*Valsa ambiens* (Pers.: Fr.) Fr. f. *eleagni* Rehm, Ann. Mycol. 16: 217. 1918
- ANAMORPH: *Cytospora leucosperma* (Pers.: Fr.) Fr., Syst. Mycol. 2: 543. 1823 (as "*Cytispora leucosperma*").
 LECTOTYPE: Fries, Scler. Suec. 156 #6 (UPS) (designated here). BASIONYM: *Naemospora leucosperma* Pers., Obs. Mycol. 1: 81. 1796: Fr. Fig. 9
- =*Cytospora carphosperma* Fr.: Fr., Syst. Mycol. 2: 543. 1823 (as "*Cytispora carphosperma*")
- =*Cytospora ambiens* Sacc., Michelia, 1: 519. 1879 (as "*Cytispora ambiens*")
- =*Cytospora celtidis* Ellis & Everh., Proc. Acad. Sci. Philadelphia, 46: 360. 1894 (as "*Cytispora celtidis*")
- =*Cytospora exasperans* Ellis & Everh., Proc. Acad. Sci. Philadelphia, 46: 360. 1894 (as "*Cytispora exasperans*")
- =*Cytospora celastrina* Ellis & Barth., Erythea 4: 80. 1896 (as "*Cytispora celastrina*")
- =*Cytospora juglandicola* Ellis & Barth., Erythea, 4: 23.

- 1896 (as "*Cytispora juglandicola*," non *Cytospora juglandicola* Sacc., Michelia, 2: 263. 1881)
- =*Cytospora sassafras* Ellis & Everh. in Millspaugh and Nuttall, Publ. Field Columbian Mus., Bot. Ser. 1: 112. 1896 (as "*Cytispora sassafras*")
- =*Cytospora sambucina* Ellis & Barth., Erythea 5: 48. 1897 (as "*Cytispora sambucina*")
- =*Cytospora boreella* Earle, in Greene, Plantae Bakerianae, 2: 26. 1901
- =*Cytospora phomopsis* Sacc., Ann. Mycol. 13: 119. 1915
- =*Cytospora nyssae* Fairm., Proc. Rochester Acad. Sci. 6: 119. 1922
- =*Cytospora sambucicola* Tehon & Stout, Mycologia, 21: 189. 1929
- =*Cytospora sambucina* Tehon & Daniels, Mycologia, 19: 122. 1927 (non *Cytospora sambucina* Ellis & Barth. 1897)
- =*Cytospora simplex* Hoehn., Mitt. Bot. Lab. Tech. Hochsch. Wein, 4: 73. 1927

Disc gray, tan, brown, or black, convex to nearly flat, up to 1.1 mm in diameter, circular or irregular, usually prominent, but sometimes reduced or absent. Ascomata forming rounded or conical protuberances on the bark surface. Ectostroma usually well developed in the upper regions. Entostroma normally limited to the region near the perithecial walls. Ostioles arranged in a ring around the margin of the disc, or, if numerous, also occupying part of the interior of the disc. If the disc is reduced or absent, the ostioles may form a cluster, but never if the disc is well developed. Perithecia circinate or occasionally clustered below the disc, 300–650 μm in diameter, (1–)3–15(–30) per stroma, globoid or oblong, with long beaks which may be swollen at the tips. Asci 30–70 \times 6–15 μm . Ascospores 9–30 \times 1.5–6 μm , 8 or fewer per ascus. Anamorph sometimes found with teleomorph in the same stroma, but more often separate, with a variable disc up to 750 μm in diameter, well developed to absent, pale tan, gray, brown, or black, flat to conical, with 1–8 black or concolorous ostioles. Locule one per stroma, composed of numerous irregular or radiating chambers lined with thin-walled angular cells, from which the conidiophores arise. Conidia 2.5–8 \times 0.75–2 μm . HOSTS: Numerous woody angiosperms. DISTRIBUTION: Worldwide.

NOTES: *Valsa ambiens* subsp. *ambiens* has a wide host range and a broad range of variation in disc and stromatal characteristics. Although entostromatal development never approaches that of typical examples of *V. ceratosperma*, the ectostroma can vary from being nearly absent to well developed. The anamorph is more difficult to characterize, and if the teleomorph is absent, it may be impossible to distinguish *V. ambiens* subsp. *ambiens* from other members of section *Valsa*.

Valsa ambiens subsp. *ambiens* apparently does not occur on *Acer saccharum* or *A. platanoides*. The North American collections on these species that I have seen (most labelled *V. ambiens*) are actually *V. ambiens* subsp. *leucostomoides*.

The collections of Cooke and Ellis on *A. rubrum* and *A. saccharinum*, labelled *V. pauperata*, appear to belong to a morphologically distinct population within *V. ambiens*. The ostioles are large and usually emerge in tight clusters or in irregular groups with a reduced disc, but they do occasionally form a distinct ring around a dark circular disc. Anatomical characters are similar to those of *V. ambiens* subsp. *ambiens* on hosts other than *Acer* species, and the anamorphs are indistinguishable. The fact that all of these collections came from

either New Jersey or West Virginia, on *A. rubrum* or *A. saccharinum*, suggests limited geographical and host ranges, and they are hereafter referred to as the maple form of *V. ambiens* subsp. *ambiens*. Other hosts also seem to be associated with characteristic forms of *V. ambiens* subsp. *ambiens*, such as the tan or cream-colored disc often found on *Crataegus* and the dark gray to black disc common on *Malus*. Although these host-related morphological forms may actually be separable at some infraspecific or even specific rank, the morphological evidence available at present suggests that they are relatively variable and indistinct from each other and from other representatives of *V. ambiens* subsp. *ambiens*, and they therefore should not be recognized at higher rank unless new evidence shows otherwise. Urban (1958) treats these and other forms similarly, listing 14 different host-related forms under *V. ambiens*.

The anamorph of *V. ambiens* has commonly been known by the name *Cytospora ambiens* Sacc., but this is incorrect, since there are several older names sanctioned by Fries which could have been adopted for this species. *Cytospora leucosperma* is the earliest of these and is therefore the correct name for the anamorph of *V. ambiens* subsp. *ambiens*.

SPECIMENS EXAMINED: EUROPE: Fries, Scler. Suec. 156 No. 6 (*Cytospora leucosperma*, LT, designated here), (UPS); PR163781, on *Tilia* (*Valsa ambiens*, NT), (PR); Fries, Scler. Suec. 8, on *Tilia* (*Sphaeria ambiens*) (UPS); Saccardo 458, on *Tilia* (*Cytospora ambiens*, ST), France (PAD); Saccardo 41, on *Juglans* (*Cytospora ambiens*, ST), France (PAD). U.S.A.: COLORADO: Baker 23, on *Salix* (*Cytospora borella*, ST) (CUP); ILLINOIS: 7426, on *Sambucus canadensis* (*Cytospora sambucina*, HT) (ILLS); IOWA: Holway, on *Menispermum canadense* (*Valsa menispermii*, presumed HT), Decorah, IO, 1873 (NY); KANSAS: Bartholomew, on *Sambucus canadensis* (*Cytospora sambucina*, HT), Rooks Co., 10 April, 1876 (CUP); Ellis, F. COI. 1144, on *Cornus asperifolia* (*Cytospora corni*, IT, as *C. simplex*) (CUP); Bartholomew 2082, on *Celtis occidentalis* (*Valsa celtidis*, presumed HT), Phillips Co., (FH); Bartholomew 2048, on *Amorpha fruticosa* (*Valsa amorphae*, HT) (FH); Bartholomew 1716, on *Celastrus scandens* (*Cytospora celastrina*, HT) (FH); Bartholomew 1550, on *Ribes aureum* (*Valsa ribicola*, presumed HT) (FH); Bartholomew 1606, on *Juglans nigra* (*Cytospora juglandicola*, HT) (FH); NEW JERSEY: Ellis 2513b, on *Clethra alnifolia* (*Valsa obtecta*, HT) (K); Ellis 3100, on *Quercus coccinea* (*Valsa clausa*, HT) (FH); Ellis 2861, on *Comptonia* and *Carya* (*Valsa conscripta*, HT) (FH); Ellis 2788, on *Acer* (*Valsa myinda*, IT) (NY); Ellis 2792a, on *Acer* (*Valsa pauperata*, HT) (NY); Ellis 3371, on *Acer* (*Valsa pauperata*) Oct. 1877 (NY); Ellis 2792b, on *Acer* (*Valsa pauperata*) (FH); Ellis 3200, on *Acer* (*Valsa pauperata*) (NY); Ellis 3371, on *Acer* (*Valsa pauperata*) Dec. 1878 (NY); Ellis 2855, on *Sassafras* (*Valsa laurina*, HT) (K); de Theumen, Mycol. Univ. 1954, on *Acer* (*Valsa pauperata*) (NY); 60132, on *Acer rubrum* (CUP); NEW YORK: Fairman 4692, on *Nyssa sylvatica* (*Cytospora nyssae*, HT) (CUP); H. D. House, on *Sassafras varrifolium* (*Cytospora phomopsis*, HT), Albany, 30 August, 1913 (PAD); NORTH DAKOTA: Brenckle, F. Dak. 150, on *Symphoricarpos occidentalis* (*Valsa symphoricarpi*, IT) (NY); Brenckle 1138, on *Shepherdia argentea* (*Valsa ambiens* var. *shepherdiae*, HT) (PAD); Brenckle, F. Dak. 324, on *Eleagnus argentea* (*Valsa ambiens* f. *eleagni*, presumed IT) (CUP); PENNSYLVANIA: Curtis 4207, on *Viburnum dentatum* (*Valsa mesoluca* HT) (FH); Schw. Syn. Fung. 1396-249 (*Valsa expers*, HT) (PH); WEST VIRGINIA: Nuttall 666, on *Sassafras*

(*Cytospora sassafras*, ST) (NY); Nuttall 314, on *Celtis* (*Cytospora celtidis*, HT) (NY); Nuttall 386, on *Acer* (*Cytospora exasperans*, ST) (NY); Nuttall 317 (*Cytospora exasperans*, ST) (NY); Nuttall 423 + 424 (single packet), on *Acer rubrum* (*Valsa pauperata*) (NY); Nuttall 450, on *Acer saccharinum* (*Valsa pauperata*) (NY); Nuttall, on *Acer rubrum* (*Valsa pauperata*), Nuttallburg, April, 1894 (NY).

Valsa ambiens (Pers.: Fr.) Fr. subsp. *leucostomoides* (Peck) Spielman, comb. nov. HOLOTYPE: Peck, on *Acer saccharum*, Helderberg Mts., NY, May (as *V. leucostomoides*) (NYS). BASIONYM: *Valsa leucostomoides* Peck, N.Y. State Bot. Rep. 38: 103. 1885 Fig. 10

=? *Sphaeria pseudoplatani* Fr., in Kunze and Schmidt, Mykol. Hefte, 2: 47. 1823

= *Valsa pseudoplatani* (Fr.) Nits., Pyren. Germ. p. 205. 1870

= *Valsa acericola* Otth, Mitt. Naturforsch. Ges. Bern, 724: 98. 1870

=? *Valsa platanoidis* Otth, Mitt. Naturforsch. Ges. Bern, 724: 97. 1870

= *Valsa grisea* Peck, Bull. Torrey Bot. Club, 11: 28. 1884

= *Valsa rhodospora* Sacc., Ann. Mycol. 4: 275. 1906

= *Valsa saccharina* Rehm, Ann. Mycol. 10: 540. 1912

ANAMORPH: *Cytospora annulata* Ellis & Everh., Proc. Acad. Sci. Philadelphia, 45: 160. 1893 (as "*Cytispora annulata*"). HOLOTYPE: Ellis and Everhart, N. Am. Fung. 2770, on *Acer negundo*, Brookings, SD, Oct. 1871, leg. T. A. Williams Fig. 11

= *Cytospora negundinis* Ellis & Everh., Proc. Acad. Sci. Philadelphia, 46: 360. 1894

Disc chalky white to light gray, furfuraceous, circular to irregular, flat, prominent or rarely reduced, up to 700 μm in diameter. Ascomata forming conical or rounded protuberances on the bark surface. Ectostroma usually well developed in the upper regions. Entostroma normally limited to the region near the perithecial walls. Ostioles clustered or scattered in center of disc. Perithecia circinate, 2–10(–15) per stroma, 300–500 μm in diameter. Asci 30–65 \times 6–10 μm . Ascospores 8–20 \times 2–4 μm . Anamorph with white to gray disc, sometimes with a dark border, circular to irregular, rounded or flat, with 1–4 black or gray ostioles located in the center or to one side. Locule one per stroma, composed of numerous irregular or radiating chambers lined with thin-walled angular cells, from which the conidiophores arise. Conidia 3–6 \times 0.75–1 μm . HOSTS: *Acer saccharum*, *A. platanoides*, *A. rubrum*, *A. negundo*, *A. saccharinum*, and *Fraxinus*. DISTRIBUTION: Northeastern and northcentral United States, eastern Canada, northern Europe.

NOTES: The white disc and few, clustered ostioles are diagnostic features for this subspecies, and even when the disc is reduced, white ectostromatic material can usually be seen around the edges or in the interior of the disc. The number of ostioles and the ascospore dimensions never reach the maximum values found in *V. ambiens* subsp. *ambiens*, and in the anamorph the disc is often chalky white, a color never found in the anamorph of *V. ambiens* subsp. *ambiens*. Based on my collections and on specimens from FH, NY, NYS, and CUP, the geographic range of *V. ambiens* subsp. *leucostomoides*

does not overlap the range of the maple form of *V. ambiens* subsp. *ambiens*, although both ranges are included in the range of *V. ambiens* subsp. *ambiens* on hosts other than *Acer*.

The syntypes of *Valsa grisea* Peck are on *A. rubrum* and *Fraxinus*. The morphology of both the *Fraxinus* and *Acer* collections is identical with typical specimens of *V. ambiens* subsp. *leucostomoides*, and *V. grisea* is therefore included in this taxon, although the *Fraxinus* specimen is the only collection of *V. ambiens* subsp. *ambiens* on a non-*Acer* host. Some European collections on *Acer* species also belong in *V. ambiens* subsp. *leucostomoides*. *Valsa acericola* (on *A. pseudoplatanus*) and *V. platanoidis* (on *A. platanoides*) are, according to Otth's descriptions, identical, except for a slight difference in ascospore size, but only the type of *V. acericola* could be obtained for study. *Valsa pseudoplatani* (Fr.) Nits. may also belong in this taxon, and if so, it would be the oldest name. However, no type or authentic material could be located.

SPECIMENS EXAMINED: EUROPE: Otth, on *Acer platanoides* (*Valsa acericola*, HT), Switzerland (BERN); Rabenhorst, F. Europ. 1131, on *Acer platanoides* (*Valsa ambiens*), Austria (CUP); Kochmann, Mycotheca Polonica 388, on *Acer campestre* (*Valsa pseudoplatani*), Poland (CUP). CANADA: ONTARIO: Rehm, Ascom. Exs. 2025, on *Acer saccharinum* (*Valsa saccharina*, HT) (NY); Peck, on *Acer rubrum* and *Fraxinus* (*Valsa grisea*, HT), leg. Macoun (NYS); R. F. Cain 1385, on *Acer* (*Valsa pauperata*) (NY); R. F. Cain 2620, on *Acer saccharinum* (*Valsa leucostomoides*) (NY); R. F. Cain 2621, on *Acer saccharinum* (*Valsa leucostomoides*) (NY); R. F. Cain 2622, on *Acer saccharum* (*Valsa leucostomoides*), Lynden (NY); R. F. Cain 5008, on *Acer saccharinum* (*Valsa leucostomoides*) (NY). U.S.A.: ILLINOIS: 60135, on *Acer negundo* (*Cytospora annulata*), (CUP); KANSAS: Bartholomew 1449, on *Negundo aceroides* (*Cytospora negundinis*, HT) (FH); NEW YORK: Fairman, on *Acer* (*Valsa rhodospora*, HT) (PAD); Peck, on *Acer saccharum* (*Valsa leucostomoides*, HT) (NYS); Peck, on *Acer* (*Valsa pauperata*), N. Greenbush (NY); Peck, on *Acer* (*Valsa leucostomoides*), Brewerton (NYS); Ellis & Everhart, N. Am. Fung. 2770, on *Negundo aceroides* (*Cytospora annulata*, IT) (FH, CUP); Ellis & Everhart, N. Am. Fung. 1571, on *Acer* (*Valsa pauperata*) (NY); R. Latham 1428, on *Acer* (*Valsa pauperata*) (NY); Shear, N.Y. Fungi 157, on *Acer saccharinum* (NYS); Peck, on *Acer* (*Valsa leucostomoides*), Brewerton (NYS); E. A. Burt, on *Acer saccharinum* (*Valsa leucostomoides*), 17 Sept., 1894 (NY); Ellis & Everhart, N. Am. Fung. 3228 (*Valsa leucostomoides*) (NY, CUP); 8373, on *Acer* (*Valsa leucostomoides*) (CUP); 60134, on *Acer saccharum* (CUP); 60136, on *Acer saccharum* (CUP); 60137, on *Acer saccharum* (CUP).

Valsa salicina (Pers.: Fr.) Fr., Summa Veg. Scand. p. 412. 1849. LECTOTYPE: Pers.: Fr., Fries, Scler. Suec. 10 (as *Sphaeria salicina*) (BPI) (designated here). BASIONYM: *Sphaeria salicina* Pers., Syn. Meth. Fung., p. 47. 1801: Fr.

=*Valsa socialis* Ellis & Everh., Bull. Torrey Bot. Club, 24: 132. 1897

ANAMORPH: *Cytospora fugax* (Bull.: Fr.) Fr., Syst. Mycol. 2: 544. 1823. ISOTYPE: Fries, Scler. Suec. 211 (FH). BASIONYM: *Variolaria fugax* Bull., Hist. Champ. Fr. 2, Pt. 1: 187. 1791

Disc usually prominent, but sometimes reduced, snowy

white to light gray, circular, oblong or irregular, flat or rounded, similar to *V. ambiens* subsp. *leucostomoides*. Ascomata forming conical or rounded protuberances on the bark surface. Ectostroma usually well developed in upper regions. Entostroma normally limited to the region near the perithecial walls. Ostioles scattered or forming a ring within the disc, rarely encircling the disc as in *V. ambiens* subsp. *ambiens*. If the disc is reduced, the ostioles may be clustered. Perithecia 2–10 per stroma, 300–600 μm in diameter. Asci 45–70 \times 10–16 μm . Ascospores (12–)15–30 \times 4–6 μm , usually 4 but sometimes up to 8 per ascus. Anamorph with white to light gray disc and a single black ostiole located in the center. Locule one per stroma, composed of numerous irregular or radiating chambers lined with thin-walled angular cells, from which the conidiophores arise. Conidia 4–8 \times 0.8–1.5 μm . HOSTS: *Salix* species. DISTRIBUTION: North America and Europe.

NOTES: There has apparently been much confusion in regard to species of *Valsa* on *Salix*. Hubbes (1960) studied 73 collections identified as *V. ambiens*, *V. sordida*, *V. germanica*, or *V. salicina*, from *Salix*, *Populus*, and other hosts. Because ascospore sizes overlapped among the four groups, he concluded that they were all conspecific. However, other morphological characteristics of the collections studied were not described. Collections on Salicaceae which I have seen fall into two different morphological groups (not necessarily correlated with the name found on the specimen label): one group with dark discs, ostioles tending to encircle the disc, mostly 8-spored asci, and small ascospores; and the other group with white discs, clustered or irregularly distributed ostioles, generally 4-spored asci, and large ascospores. The former group is conspecific with the type of *V. sordida* and the latter group with the type of *V. salicina*. In contrast to *V. salicina*, *V. ambiens* tends to have darker discs which are encircled by ostioles, and its ascospores are larger than those of *V. sordida*. *Valsa salicina* thus appears to differ sufficiently from *V. sordida* and from *V. ambiens* to be maintained as a separate species.

SPECIMENS EXAMINED: EUROPE: Fries, Scler. Suec. 10 (*Sphaeria salicina*, LT) (BPI); Herb. Barb.-Boiss. 239, on *Salix*, Austria (CUP); U.S.A. ILLINOIS: Bartholomew, F. Col. 3000, on *Salix longifolia* (CUP); KANSAS: Bartholomew 2099, on *Salix cordata* (*Valsa socialis*) (HT) (FH); MONTANA: Bartholomew, F. Col. 4400, on *Salix lutea* (CUP).

Valsa sordida Nits., Pyren. Germ. pp. 203–205. 1870. ISOTYPE: Fuckel, Fungi Rhenani 616, on *Populus* (as *Valsa ambiens*) (CUP).

ANAMORPH: *Cytospora chrysosperma* (Pers.: Fr.) Fr., Syst. Mycol. 2: 541. 1823. ISOTYPE: Fries, Scler. Suec. 154 (BPI). BASIONYM: *Naemaspora chrysosperma* Pers., Obs. Mycol. 1: 80. 1796: Fr.

=*Cytospora pulcherrima* Dearn. & Hansbr., Can. J. Res. 10: 126–127. 1934

Disc prominent or reduced, gray, tan, to black, convex, circular or irregular, similar to that of *V. ambiens* subsp. *ambiens*. Ascoma rounded to conical. Ectostroma well developed, often convex below and delimited abruptly from the entostroma, which is sparse and limited to the region near the perithecial walls. Ostioles arranged in a ring around the margin of the disc. Perithecia circinate, 2–15(–30) per stroma, 300–450 μm in diameter. Asci 35–50 \times 6–10 μm . Asco-

spores 8–12(–15) × 1–3 μm. Anamorph with variable disc, gray to black, prominent or reduced, usually with pronounced and abruptly delimited ectostroma, with 1 or 2 ostioles. Locule one per stroma, composed of numerous irregular or radiating chambers lined with thin-walled angular cells, from which the conidiophores arise. Conidia 3–7 × 0.75–1 μm. HOSTS: *Populus*, *Salix*, and less commonly, other woody angiosperms. DISTRIBUTION: North America, Europe, U.S.S.R., Japan.

NOTES: *Valsa sordida*, a well-known pathogen of *Populus*, differs from *V. ambiens* chiefly in having smaller ascospores (see discussion under *V. salicina*). Externally, it is very much like *V. ambiens* subsp. *ambiens*, and in the conidial state the two are difficult to separate. However, the difference in ascospore size is quite consistent, and *V. sordida* is accepted here at the rank of species.

SPECIMENS EXAMINED: EUROPE: Fuckel, F. Rhen. 616, on *Salix* (*V. ambiens*, IST) (BPI); Herb. Barb.-Boiss. 230 (Fuckel, F. Rhen. 1977), on *Salix*. CANADA: Hansbrough 40845, on *Alnus tenuifolia* (*Cytospora pulcherrima*, LT, designated here), B.C. (DAOM); Hansbrough 40844, on *Salix* (*Cytospora pulcherrima*, ST), B.C. (DAOM); Hansbrough 40846, on *Populus trichocarpa* (*Cytospora pulcherrima*, ST), B.C. (DAOM); Hansbrough 40847, on *Cornus occidentalis* (*Cytospora pulcherrima*, ST), B.C. (DAOM); Hansbrough 40848, on *Crataegus brevispina* (*Cytospora pulcherrima*, ST), B.C. (DAOM); Hansbrough 40849, on *Philadelphus gordonianus* (*Cytospora pulcherrima*, ST), B.C. (DAOM); Hansbrough 40850, on *Betula fontinalis* (*Cytospora pulcherrima*, ST), B.C. (DAOM); Hansbrough 40853, on *Amelanchier florida* (*Cytospora pulcherrima*, ST), B.C. (DAOM); Hansbrough 40856, on *Sambucus glauca* (*Cytospora pulcherrima*, ST), B.C. (DAOM); Ellis 85, on *Acer glabrum* (*Cytospora pulcherrima*, ST), ex Herb. Dearness, B.C. (NY); Rehm, Ascom. Exs. 82b, on *Salix* (*Valsa salicina*), Ontario (CUP); Fairman 112, on *Salix* (*Valsa salicina*), Ontario (CUP); U.S.A.: COLORADO: Griffiths, W. Am. Fungi 326, on *Salix* (*Valsa salicina*) (CUP); IOWA: Ellis, N. Am. Fung. 1186, on *Populus* (CUP); NEW YORK: Fairman 117, on *Salix* (*Valsa salicina*) (CUP); Fairman 2605, on *Salix* (*Valsa salicina*) (CUP).

Valsa section *Monostichae* (Nits.) Urban, Preslia, 29: 394. 1957. LECTOTYPE SPECIES: *Valsa abietis* (Fr.: Fr.) Fr. (vide Urban 1957)

Disc not prominent, usually filled with closely packed ostioles. Ascoma strongly to barely erumpent. Ectostroma poorly developed and entostroma usually well developed but sometimes poorly developed. Perithecia small, 150–400 μm in diameter, (5–)15–40 per stroma, crowded closely together below the disc, or occasionally spread more widely, with beaks mostly centrally or somewhat laterally inserted. Asci 30–45 × 5–6 μm. Ascospores 3–12 × 0.75–2.5 μm. Anamorphs in section *Torsellia*, with numerous separate, baglike locules formed of ectostromatic tissue, joining in the center where the ostiole(s) form. Adjacent locules not sharing common walls, and locules not subdivided by invaginations into chambers. Entostromatic tissue often surrounding the locules.

Valsa ceratosperma (Tode: Fr.) Maire, Publ. Inst. Bot. 3: 20. 1937. NEOTYPE: Mougeot and Nestler, Stirp. Vog.-Rhen. 567 (as *Sphaeria ceratosperma*) (CUP) (vide Hubbes 1960). BASIONYM: *Sphaeria ceratosperma* Tode, Fungi Mecklenb. 2: 53. 1791: Fr. Fig. 12

- =*Diatrype ceratosperma* (Tode: Fr.) Fr., Summa Veg. Scand. p. 385. 1849
- =*Sphaeria ceanothi* Schw., Syn. Fung. Am. Bor. p. 202. 1832
- =*Valsa ceanothi* (Schw.) Cooke, Proc. Acad. Nat. Sci. Philadelphia, 29: 125. 1877.
- =*Sphaeria conspurcata* Schw., Syn. Fung. Am. Bor. p. 201. 1832
- =*Valsa conspurcata* (Schw.) Cooke, Proc. Acad. Nat. Sci. Philadelphia, 29: 125. 1877
- =*Sphaeria frustrum-coni* Schw., Syn. Fung. Am. Bor. p. 200. 1832
- =*Valsa frustrum-coni* (Schw.) Curt., Geol. Nat. Hist. Surv. N.C. p. 142. 1867
- =*Cytospora frustrum-coni* (Schw.) Starb., Bih. Kgl. Sven. Vetensk.-Akad. Handl. 25: 71. 1894
- =*Sphaeria radicum* Schw., Syn. Fung. Am. Bor. p. 201. 1832
- =*Valsa radicum* (Schw.) Cooke, Proc. Acad. Nat. Sci. Philadelphia, 29: 124. 1877
- =*Sphaeria rhizinia* Schw., Syn. Fung. Am. Bor. p. 203. 1832
- =*Valsa rhizinia* (Schw.) Cooke, Proc. Acad. Nat. Sci. Philadelphia, 29: 125. 1877
- =*Sphaeria rimicola* Schw., Syn. Fung. Am. Bor. p. 203. 1832
- =*Valsa rimicola* (Schw.) Cooke, Proc. Acad. Nat. Sci. Philadelphia, 29: 125. 1877
- =*Calosphaeria rimicola* (Schw.) Ellis & Everh., N. Am. Pyren. p. 509. 1892
- =*Valsa exigua* Nits., Pyren. Germ. p. 196. 1870
- =*Valsa americana* Berk. & Curt., Grevillea, 4: 102. 1876
- =*Valsa caryigena* Berk. & Curt., Grevillea, 4: 102. 1876
- =*Valsa leiphaemoides* Berk. & Curt., Grevillea, 4: 101. 1876
- =*Valsa decidua* Cooke & Ellis, Grevillea, 6: 11. 1877
- =*Engizostoma deciduum* (Cooke & Ellis) O. Kuntze, Rev. Gen. Plant. 3, Pt. 2: 473. 1898
- =*Valsa delicatula* Cooke & Ellis, Grevillea, 6: 10. 1877
- =*Engizostoma delicatulum* (Cooke & Ellis) O. Kuntze, Rev. Gen. Plant. 3, Pt. 2: 473. 1898
- =*Valsa praestans* Cooke, Proc. Acad. Nat. Sci. Philadelphia, 29: 117. 1877
- =*Valsa rubi* Peck, N.Y. State Bot. Rep. 28: 72. 1877 (non *Valsa rubi* Fuckel, Symb. Mycol. p. 200. 1870)
- =*Valsa rugiella* Cooke & Ellis, Grevillea, 5: 92. 1877
- =*Eutypella rugiella* (Cooke & Ellis) Sacc., Syll. Fung. 1: 156. 1882
- =*Engizostoma rugiellum* (Cooke & Ellis) O. Kuntze, Rev. Gen. Plant. 3, Pt. 2: 475. 1898
- =*Valsa gossypina* Cooke, Proc. Acad. Sci. Philadelphia, 29: 115. 1878
- =*Valsa nyssae* Cooke, Grevillea, 6: 145. 1878
- =*Valsa rhoiphila* Cooke & Ellis, Grevillea, 7: 9. 1878 (as "*Valsa rhuiphila*")
- =*Engizostoma rhoiphilum* (Cooke & Ellis) O. Kuntze, Rev. Gen. Plant. 3, Pt. 2: 475. 1898
- =*Valsa chlorodisca* Cooke & Ellis, Grevillea, 8: 13. 1879
- =*Engizostoma chlorodiscum* (Cooke & Ellis) O. Kuntze, Rev. Gen. Plant. 3, Pt. 2: 473. 1898
- =*Valsa excorians* Cooke & Ellis, Grevillea, 8: 14. 1879
- =*Engizostoma excorians* (Cooke & Ellis) O. Kuntze, Rev. Gen. Plant. 3, Pt. 2: 474. 1898
- =*Valsa ligustrina* Cooke, Grevillea, 8: 14. 1879
- =*Valsa macluriae* Cooke & Ellis, Grevillea, 8: 14. 1879
- =*Eutypella macluriae* (Cooke & Ellis) Ellis & Everh., N. Am. Pyren. p. 496. 1892
- =*Engizostoma macluriae* (Cooke & Ellis) O. Kuntze, Rev.

- Gen. Plant. 3, Pt. 2: 474. 1898
 =*Diatrype macluræ* (Cooke & Ellis) Berl., Icon. Fung. 3: 89. 1902
 =*Valsa multiplex* Cooke & Ellis, Grevillea, 8: 14. 1879
 =*Valsa lutescens* Ellis, Bull. Torrey Bot. Club, 9: 111. 1882
 =*Eutypella lutescens* (Ellis) Sacc., Syll. Fung. 2, Add. p. vii. 1883
 =*Engizostoma lutescens* (Ellis) O. Kuntze, Rev. Gen. Plant. 3, Pt. 2: 474. 1898
 =*Valsa agnostica* Cooke & Harkn., Grevillea, 13: 17. 1884
 =*Valsa minutella* Peck, Bull. Torrey Bot. Club, 11: 27. 1884
 =*Valsa morigena* Berk. & Curt., in Cooke, Grevillea, 14: 46. 1885
 =*Valsa floriformis* Ellis & Everh., Proc. Acad. Sci. Philadelphia, 42: 222. 1891 ("1890")
 =*Engizostoma floriformis* (Ellis & Everh.) O. Kuntze, Rev. Gen. Plant. 3, Pt. 2: 474. 1898
 =*Valsa diospyri* Ellis & Everh., Proc. Acad. Sci. Philadelphia, 46: 340. 1894
 =*Valsa etherialis* Ellis & Everh., Proc. Acad. Sci. Philadelphia, 46: 341. 1894
 =*Engizostoma etheriale* (Ellis & Everh.) O. Kuntze, Rev. Gen. Plant. 3, Pt. 2: 474. 1898
 =*Valsa macrocarpa* Ellis & Everh., Bull. Torrey Bot. Club, 24: 280. 1897
 =*Valsa clavigera* Dearn. & Barth., Mycologia, 9: 345. 1917
- ANAMORPH: *Cytospora sacculus* (Schw.) Gvrit., Mikol. Fito-patol. 3: 207. 1969. HOLOTYPE: Schweinitz, Syn. Fung. 1309-164, Salem (as *Sphaeria sacculus*) (PH). BASIONYM: *Sphaeria sacculus* Schw., Schr. Naturforsch. Ges. Leipzig, 1: 30. 1822 Fig. 13
- =*Rabenhorstia sacculus* (Schw.) Starb., Bot. Not. p. 26. 1893
 =*Torsellia sacculus* (Schw.) Starb., Bih. Kgl. Sven. Vetensk.-Akad. Handl. 25: 68. 1894
 =*Sphaeria sphaerocephala* Schw., Schr. Naturforsch. Ges. Leipzig 1: 43. 1822
 =*Cytospora sphaerocephala* (Schw.) Sacc., Syll. Fung. 3: 257. 1884
 =*Lamyella sphaerocephala* (Schw.) Starb., Bih. Kgl. Sven. Vetensk.-Akad. Handl. 25: 69. 1894
 =*Cytospora difformis* Schw., Syn. Fung. Am. Bor. p. 248. 1832 (as "*Cytispora difformis*")
 =*Cytospora chloroglaea* Berk. & Curt., Grevillea, 2: 99. 1874 (as "*Cytispora chloroglaea*")
 =*Cytospora smilacis* Cooke, Grevillea, 7: 52. 1878
 =*Cytospora ceratophora* Sacc., Michelia, 1: 519. 1879 (as "*Cytispora ceratophora*")
 =*Cytospora grandis* Peck, N.Y. State Bot. Rep. 40: 60. 1887
 =*Cytospora caryigena* Ellis & Everh., Proc. Acad. Nat. Sci. Philadelphia, 46: 359. 1894 (as "*Cytispora caryigena*")
 =*Cytospora gleditsiae* Ellis & Barth., Erythea, 4: 80, 81. 1896 (as "*Cytispora gleditsiae*")
 =*Cytospora amorphae* Ellis & Barth., Erythea, 5: 48. 1897 (as "*Cytispora amorphae*")
 =*Cytospora macluræ* (Ellis & Barth., Erythea, 5: 48. 1897 (as "*Cytispora macluræ*")
 =*Cytospora tumulosa* Ellis & Everh., Bull. Torrey Bot. Club, 24: 288. 1897 (as "*Cytispora tumulosa*")

=*Cytospora ailanthi* Berk. & Curt. ex Grove, Bull. Misc. Inf. R. Bot. Gard. 1923: 5. 1923. (*Cytospora ailanthi* Berk. & Curt., Grevillea, 2: 99. 1874, nom. nud.)

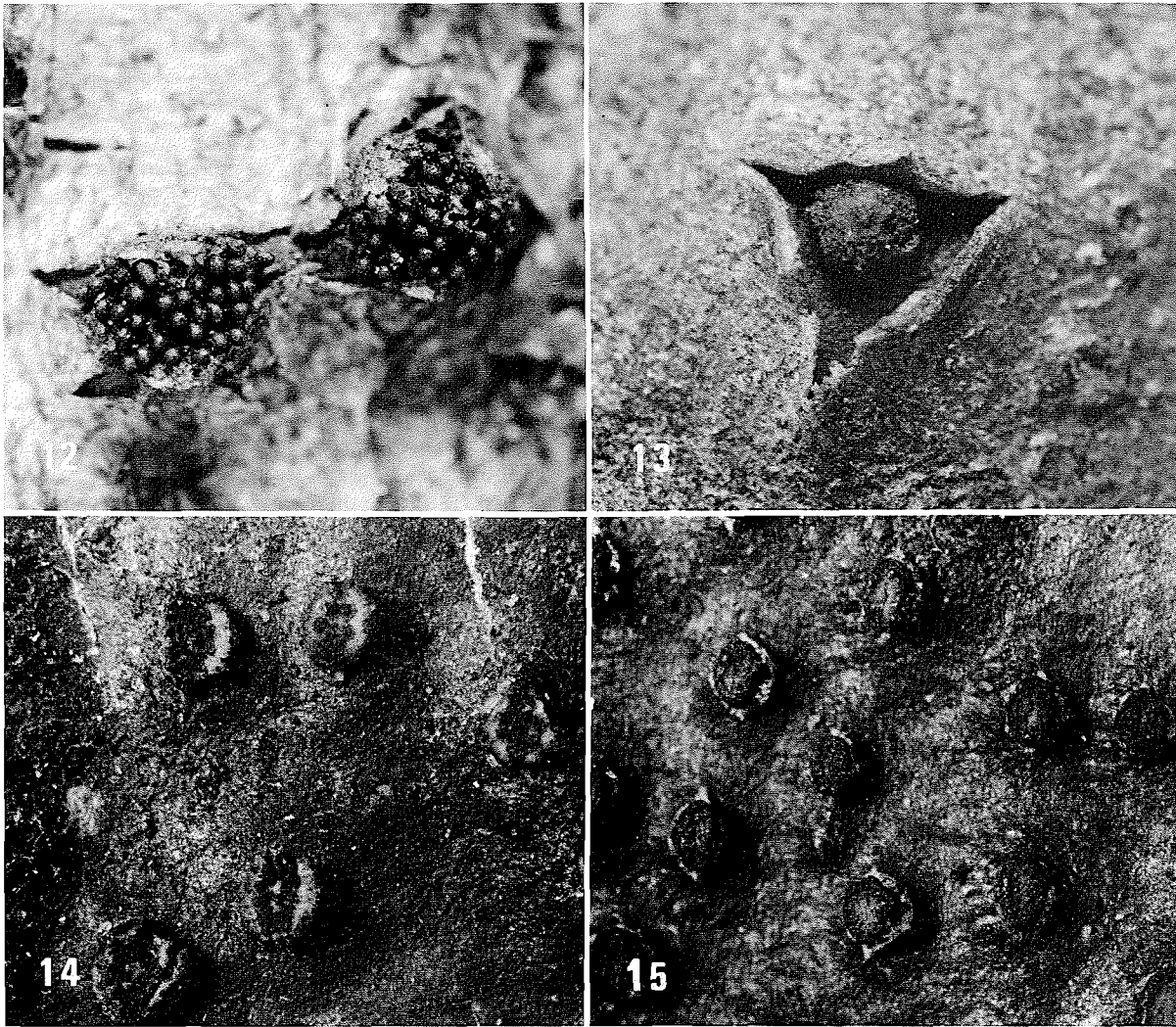
Disc cream colored, tan, or brown, usually inconspicuous because of the numerous ostioles, up to 2.5 mm in diameter. Ascromata conical or dome shaped. Ostioles black, closely packed and filling disc, or occasionally occupying only part of the disc area, level with stroma or extending up to 2 mm beyond it. Ectostroma poorly developed. Entostroma usually well developed, often massive, forming a dome-shaped mass surrounding the perithecia, and sometimes extending laterally under the bark. Perithecia numerous, (5-)15-40 per stroma, closely packed beneath disc, small, 150-400 µm in diameter, globose or compressed as a result of crowding. Beaks long and sinuous, not swollen at the tips. Asci small, 30-45 × 5-6 µm. Ascospores small, 3-12 × 1-3 µm, rarely less than 8 per ascus. Anamorph almost always in separate stromata from teleomorph, with a variable disc up to 600 µm in diameter, gray to black, flat or conical, with 1-8 black, brown, or gray ostioles. Locules numerous to few per stroma, united near center but easily separable, globose, irregular, or compressed, with walls of ectostromatic tissue. Entostromatic tissue usually surrounding the locules, sometimes forming a dome-shaped structure. Ostioles 1-8 per conidioma. Conidia 2.5-7 × 0.75-1 µm. HOSTS: Numerous woody angiosperms. DISTRIBUTION: Worldwide.

NOTES: *Valsa ceratosperma* exhibits great variability in appearance, and when the massive entostroma and the numerous perithecia are not present, collections can be difficult to classify. The type specimen of *V. exigua* Nits. has mostly immature ascromata and was believed by von Hoehnel (1928) to be allied with the large-spored species of section *Valsa*. However, my search of the specimen revealed a few mature stromata with ascospores 8-10 × 1.5-2 µm, as well as associated conidiomata containing typical *Torsellia*-type locules. I therefore conclude that the collection belongs in section *Monostichae* and that it is conspecific with *V. ceratosperma*.

Some specimens of *V. ceratosperma* exhibit unusual morphology. *Valsa nyssae* has ascromata with a central, *Torsellia*-type anamorph and peripherally placed perithecia, the whole embedded in a massive entostroma. *Cytospora macluræ* has typical locules which contain distinctly brownish masses of conidia (although individual conidia are hyaline). All eight different collections examined had this unusual coloration of the conidia *en masse*. The entostroma is sometimes expanded so that it runs out under the bark and may even be continuous between closely spaced ascromata (as in *V. morigena*). Occasionally a black basal zone is also developed (*V. clavigera*). In the *Acer rubrum* form of *V. ceratosperma* (*V. rugiella*, *V. etherialis*) this black zone is almost always present, but in other respects the morphology is typical of *V. ceratosperma*.

I lectotypify *V. americana* Berk. & Curt. by Curtis 3825, on *Rosa*. The protologue gives no specimen number or locality, and the numerous specimens under the name *V. americana* in the Curtis herbarium represent several different taxa. Curtis 3825 was chosen because it matches the diagnosis and is in good condition.

SPECIMENS EXAMINED: EUROPE: Mougéot and Nestler, Stirp. Vog.-Rhen. 567 (ILT) (CUP); 367187-2, 367187-3, on *Acer campestre* (*Valsa exigua*, ST), Germany (B); Saccardo 616, on *Fraxinus* (*Cytospora ceratophora*, HT), France (PAD). CANADA: Macoun, on *Quercus* (*Valsa minutella*,



FIGS. 12–15. Surface views of ascomata and conidiomata showing disc morphology. Fig. 12. *Valsa ceratosperma* on *Holodiscus discolor* (Bartholomew, F. Col. 5099, CUP). 20×. Fig. 13. *Cytospora sacculus* on *Quercus rubrum* (Thaxter and Linder, Reliq. Farl. 636, CUP). 20×. Fig. 14. *Valsa melanodiscus* on *Alnus* (Peck 35, NYS). 10×. Fig. 15. *Cytospora umbrina* on *Alnus* (Peck 35, NYS). 10×.

presumed HT), Belleville, (NYS). U.S.A.: CALIFORNIA: Harkness 2554, on *Ribes* (*Valsa agnostica*, HT), Herb. Cooke (K); KANSAS: Bartholomew 2011, on *Gleditsia triacanthos* (*Cytospora gleditsiae*, HT) (FH); Bartholomew 2049, on *Amorpha fruticosa* (*Cytospora amorphae*, HT) (FH); Bartholomew 1999, on *Maclura aurantiaca* (*Cytospora maclurae*, HT) (FH); Bartholomew 1999, on *M. aurantiaca* (*Cytospora maclurae*) 7 April, 1897 (CUP); F. Col. 2222, on *M. aurantiaca* (*Cytospora maclurae*) (CUP); Bartholomew, on *M. aurantiaca* (*Cytospora maclurae*), April 7, 1897 (FH); Bartholomew 2399, on *Quercus macrocarpa* (*Valsa macrocarpa*, presumed HT) (CUP); MISSOURI: Demetrio 13, on *Populus monilifera* (*Valsa floriformis*, HT) (NY); NEW YORK: Curtis 4500, on *Cornus serica* (*Cytospora chloroglaea*, IT) (FH); Curtis 3432, (*Cytospora ailanthi*, IT) (FH); NEW JERSEY: Ellis, on *Acer rubrum* (*V. rugiella*, presumed HT) (FH); Ellis 2957, on *Rhus venata* (*Valsa rhuiphila*, HT) (NY); Ellis 3104, on *Maclura aurantiaca* (*Valsa maclurae*, HT) (NY); Ellis 3106, on *Quercus coccinea* (*Valsa multiplex*, HT) (NY); Ellis, N. Am. Fung. 876, on *Quercus coccinea* (*Valsa lutescens*, presumed HT), February, 1881 (CUP); Ellis 3211, on *Andromeda ligustrina* (*Valsa ligustrina*, ST) (K); Ellis 2895, on *Andromeda ligus-*

trina (*Valsa ligustri*, ST) (K); Ellis 3226, on *Carya* (*Valsa chlorodisca*, HT) (NY); Ellis 3095, on *Pyrus arbutifolia* (*Valsa excorians*, HT) (NY); Ellis 2503, on *Vaccinium* (*Valsa delicatula*, ST) (FH); Ellis 2491, on *Azalea* (*Valsa decidua*, HT) (NY); Ellis 2425, on *Nyssa multiflora* (*Valsa praestans*, HT) (NY); NEW YORK: Peck, on *Rhus typhina* (*Cytospora grandis*, HT) (NYS); Peck, on *Rubus* (*Valsa rubi*, HT) (PH); PENNSYLVANIA: Schw. Syn. Fung. 1336-189 (*Sphaeria conspurcata*, HT) (PH); Schw. Syn. Fung. 1376-229 (*Sphaeria ceanothi*, HT) (PH); Schw. Syn. Fung. 2159-16, on *Quercus* (*Cytospora difformis*, HT) (PH); Schw. Syn. Fung. 1329-182 (*Sphaeria frustrum-coni*, HT) (PH); Schw. Syn. Fung. 1355-188 (*Sphaeria radicum*, HT) (PH); Schw. Syn. Fung. 1398-251 (*Sphaeria rhizinia*, HT) (PH); Schw. Syn. Fung. 1397-250 (*Sphaeria rimicola*, HT) (PH); Schw. Syn. Fung. 1689-544 (*Cytospora sphaerocephala*, HT), Salem (PH); Curtis 3825, on *Rosa* (*Valsa americana*, LT, designated here) leg. Michener, 1853 (Michener 1317) (FH); Curtis 5150 (*Sphaeria caryigena*, HT) (PH); Syn. Fung. 1309-164, on *Bignonia* (*Sphaeria sacculus*, HT) (PH); SOUTH CAROLINA: Ravenel, F. Am. Exs. 194, on *Nyssa* (*Valsa nyssae*, IT) (NY); Ravenel 1387, on *Gossypina* (*Valsa gossypina*, HT), Herb. Cooke (K); Curtis 1895, on

Morus multicaulis (*Valsa morigena*, IT) (FH); Curtis 2505, on *Quercus* (*Valsa leiphaemioides*, ST) (FH); WASHINGTON: Bartholomew, F. Col. 5099, on *Holodiscus discolor* (*Valsa clavigera*, IT) (CUP); WEST VIRGINIA: Nuttall 513, on *Carya alba* (*Cytospora caryigena*, HT) (NY); Nuttall 808, on *Magnolia fraseri* (*Cytospora tumulosa*, HT) (NY); Nuttall 253, on *Diospyros virginiana* (*Valsa diospyri*, HT) (FH); Nuttall 373, on *Acer rubrum* (*Valsa etherialis*, HT) (NY).

Valsa melanodiscus Otth, Mitt. Naturforsch. Ges. Bern, 724: 97. 1870. ISOTYPE: Hoehnel 4182, on *Alnus incana*, Steffisburg, Schweiz, leg. Otth (FH). (The holotype is presumably at BERN, but it could not be located.) Fig. 14

= *Valsa alni* Peck, N.Y. State Bot. Rep. 25: 103. 1873
= *Valsa truncata* Cooke & Peck, in Peck, N.Y. State Bot. Rep. 25: 103. 1873

ANAMORPH: *Cytospora umbrina* (Bonord.) Sacc., Syll. Fung. 3: 259. 1884. BASIONYM: *Psecadia umbrina* Bonord., Abh. Naturforsch. Ges. Halle 8: 131. 1864
Fig. 15
≡ *Cytosporopsis umbrina* (Bonord.) Hoehn., Ann. Mycol. 16: 124. 1918
= *Cytospora truncata* Sacc., Syll. Fung. 3: 258. 1884
= *Cytospora melanodiscus* Hoehn., Sitzungsber. Akad. Wiss. Wien, Math.-Naturwiss. Kl., Abt. 1, 115: 12. 1906
≡ *Cyclocytospora melanodiscus* (Hoehn.) Hoehn., Mitt. Bot. Lab. Tech. Hochsch. Wien, 5: 18. 1928

Disc brown, circular, strongly erumpent, flat topped, usually prominent, up to 1 mm in diameter. Ectostroma usually well developed but sometimes sparse. Entostroma usually well developed, surrounding the perithecia above and below. Ostioles clustered or scattered through the center, sometimes in a lenticular area in the center of the disc. Perithecia large, 300–500 μm in diameter, 8–30 per stroma, clustered beneath disc. Asci 35–45 × 6–9 μm. Ascospores 6–10 × 1 μm. Anamorph with prominent, brown, circular to elliptical disc. Ostioles in a ring near margin of disc, (1–)3–10 per stroma. Locule one per stroma, flattened doughnut shaped, lined with conidiophores, usually surrounded below by entostroma. Conidia 3–5 × 1 μm. HOSTS: *Alnus*. DISTRIBUTION: Europe and North America.

NOTES: Because of the ascospore size and entostromatic development I place *V. melanodiscus* in section *Monostichae*, although in other respects it does not agree with the characteristics of the section. Urban (1958) placed it in section *Valsa*, but as he suggested, it may be better placed in a section of its own. The type specimen of *V. alni* contains no anamorph and has a much less prominent disc than is typical of *V. melanodiscus*, but the abundant ectostroma is characteristic of the species.

Having examined Otth's collection of *V. melanodiscus* (from which *C. melanodiscus* was named) but not *C. umbrina*, I am following Gvritshvili (1982) in accepting the name *C. umbrina* for the anamorph of *V. melanodiscus*.

SPECIMENS EXAMINED: EUROPE: Hoehnel 4182, on *Alnus incana* (*Valsa melanodiscus*, IT, and *Cytospora melanodiscus*, IT), Schweiz (FH). U.S.A.: NEW YORK: Peck, on *Alnus rugosa* (*Valsa alni*, HT) (NYS); Peck 35, on *Alnus* (*Valsa truncata*, HT, and *Cytospora truncata*, HT) (NYS).

Alphabetical listing of described *Valsa* and *Cytospora* species by epithets

Correct names according to current concepts are preceded by an asterisk.

Cytospora abnormis Berk. & Curt., Grevillea, 2: 98. 1874
≡ *Phoma abnormis* (Berk. & Curt.) Sacc., Syll. Fung. 3: 69. 1884

ISOTYPE: Curtis 3288, Society Hill, SC (FH).

HOST: *Robinia*.

NOTE: This is a species of *Phomopsis* Sacc.

Valsa acericola. See *V. ambiens* subsp. *leucostomoides*.

Valsa acerina Peck, N.Y. State Bot. Rep. 28: 74. 1877
≡ *Diaporthe acerina* (Peck) Sacc., Syll. Fung. 1: 611. 1882

HOLOTYPE: Peck, on *Acer spicatum*, Indian Lake, July 1874 (NYS).

Valsa acrocystis Peck, N.Y. State Bot. Rep. 33: 34. 1880
≡ *Melanconiella acrocystis* (Peck) Berl. & Vogl., Addit. Syll. Fung. p. 128. 1886

≡ *Melanconis acrocystis* (Peck) Ellis & Everh., N. Am. Pyren. p. 526. 1892

HOLOTYPE: Peck, on *Betula lenta*, N. Greenbush, NY, May, 1879 (NYS).

Sphaeria aculeans Schw., Syn. Fung. Am. Bor. p. 204. 1832
≡ *Valsa aculeans* (Schw.) Berk., Grevillea, 4: 103. 1876
≡ *Valsa aculeatus* (Schw.) Cooke, Proc. Acad. Nat. Sci. Philadelphia, 29: 119. 1877 (Lapsus calami for *V. aculeans*)

≡ *Calospora aculeans* (Schw.) Sacc., Syll. Fung. 2: 233. 1883

≡ *Cryptospora aculeans* (Schw.) Ellis & Everh., N. Am. Pyren. p. 535. 1892

≡ *Diaporthe aculeans* (Schw.) Hoehn., Ann. Mycol. 16: 108. 1918

≡ *Cryptodiaporthe aculeans* (Schw.) Wehmeyer, Univ. Mich. Stud. Sci. Ser. 9. p. 212. 1933.

HOLOTYPE: Syn. Fung. 1399–252, Bethlehem (PH).

HOST: *Rhus typhina*.

Sphaeria aequilinearis Schw., Schr. Naturforsch. Ges. Leipzig 1: 38. 1822

≡ *Diatrype aequilinearis* (Schw.) Farl., in Farlow and Seymour, Provisional Host Index 1: 5. 1888

≡ *Valsa aequilinearis* (Schw.) Ellis & Everh., N. Am. Pyren. p. 469. 1892

≡ *Eutypella aequilinearis* (Schw.) Starb., Bih. Kgl. Sven. Vetensk.-Akad. Handl. 19: 15. 1893

HOLOTYPE: Syn. Fung. 1293–148, Salem (PH).

HOST: *Berberis*.

Valsa agnostica. See *V. ceratosperma*.

Cytospora ailanthi. See *V. ceratosperma*.

Cytospora albiceps Ellis & Kellerm., J. Mycol. 5: 142. 1889
NOTE: Not seen.

Valsa albocincta Cooke & Peck, in Cooke, Proc. Acad. Nat.

- Sci. Philadelphia, 29: 120. 1877
 ≡**Diaporthe albocincta* (Cooke & Peck) Sacc., Syll. Fung. 1: 610. 1882
 ISOTYPE: Cooke 317 on *Acer spicatum*, leg. Peck (K).
- Sphaeria albofarcta* Schw., Syn. Fung. Am. Bor. p. 218. 1832
 ≡*Cytospora albofarcta* (Schw.) Starb., Bih. Kgl. Sven. Vetensk.-Akad. Handl. 25: 70. 1894
 NOTE: Not seen.
- Valsa albofusca* Cooke & Ellis, Grevillea, 5: 31. 1876
 ≡*Cryptosporella albofusca* (Cooke & Ellis) Sacc., Syll. Fung. 1: 470. 1882
 ≡*Cryptospora albofusca* (Cooke & Ellis) Ellis & Everh., N. Am. Pyren. p. 535. 1892
 ≡*Sillia albofusca* (Cooke & Ellis) Hoehn., Ann. Mycol. 16: 109. 1918
 HOLOTYPE: Ellis, Newfield, NJ, Dec. 1876 (FH).
 HOST: *Quercus obtusiloba*.
 NOTE: This is a species of *Ophiovalsa* Petrak.
- Valsa albopuncta* Ellis & Everh., in Millspaugh and Nuttall, Publ. Field Columbian Mus., Bot. Ser. 1, p. 133. 1896
 ISOTYPE: F. Col. 637, on *Liriodendron tulipifera*, Nuttallburgh, WV, Oct. 1894 (CUP).
 NOTE: This is a species of *Leucostoma*.
- Valsa albovelata* Berk. & Curt., Grevillea, 4: 102. 1876
 ≡*Diaporthe albovelata* (Berk. & Curt.) Sacc., Syll. Fung. 1: 615. 1882
 SYNTYPES: Curtis 2479, on *Rhus copallina*, Society Hill, SC, Dec. 1848, and Curtis 1885, on *Rhus copallina*, Santee Canal, SC (Ravenel 577) (FH).
 NOTE: This is a species of *Cryptodiaporthe* Petrak.
- Valsa aleurina* Berk. & Curt. ex Cooke, Grevillea, 14: 46. 1885
 ≡**Eutypella aleurina* (Berk. & Curt.) Berl. & Vogl., Addit. Syll. Fung. p. 30. 1886
 AUTHENTIC SPECIMEN: Curtis 1764, on *Platanus*, Santee Canal, SC, leg. Ravenel (Ravenel 492) (FH).
 NOTE: The specimen examined matches the type diagnosis but not the locality or collection number.
- Sphaeria allostoma* Schw., Syn. Fung. Am. Bor. p. 200. 1832
 ≡*Valsa allostoma* (Schw.) Cooke, Proc. Acad. Nat. Sci. Philadelphia, 29: 124. 1877
 ≡*Eutypa allostoma* (Schw.) Cooke, Grevillea 13: 39. 1884
 HOLOTYPE: Syn. Fung. 1332-185, on *Robinia*, Lancaster (PH).
 NOTE: This is a species of *Eutypella* (Nits.) Sacc.
- Valsa alni*. See *V. melanodiscus*.
- Cytospora ambiens*. See *V. ambiens* subsp. *ambiens*.
- Valsa ambiens*. See p. 1358.
- Valsa ambiens* f. *eleagni*. See *V. ambiens* subsp. *ambiens*.
- Valsa ambiens* subsp. *ambiens*. See p. 1358.
- Valsa ambiens* subsp. *leucostomoides*. See p. 1361.
- Valsa ambiens* var. *shepherdiae*. See *V. ambiens* subsp. *ambiens*.
- Valsa americana*. See *V. ceratosperma*.
- Valsa amorphae*. See *V. ceratosperma*.
- Cytospora amorphae*. See *V. ceratosperma*.
- Sphaeria amorphostoma* Schw., Syn. Fung. Am. Bor. p. 200. 1832
 ≡*Valsa amorphostoma* (Schw.) Cooke, Proc. Acad. Nat. Sci. Philadelphia, 29: 124. 1877
 HOLOTYPE: Syn. Fung. 1334-187, Bethlehem (PH).
 HOST: *Gleditsia*.
 NOTE: This species is *Aglaospora anomia* (Fr.: Fr.) Lamb., fide Wehmeyer 1941.
- Valsa ampelopsidis* Ellis, Bull. Torrey Bot. Club, 9: 112. 1882
 ≡*Cryptosporella ampelopsidis* (Ellis) Sacc., Syll. Fung. 9: 610. 1891
 ≡*Diaporthe ampelopsidis* (Ellis) Ellis & Everh., N. Am. Pyren. p. 434. 1892
 ISOTYPE: Ellis, N. Am. F. 881, on *Ampelopsidis quinquefolia*, Newfield, NJ, July 1880 (CUP).
 NOTE: This is a species of *Melanconis* Tul.
- Cytospora annularis*. See *V. cypri*.
- Cytospora annulata*. See *V. ambiens* subsp. *leucostomoides*.
- Valsa apatela* Ellis & Holw., Bull. Lab. Nat. Hist. Iowa State Univ. 3(3): 42. 1895
 ≡*Calospora apatela* (Ellis & Holw.) Sacc., Hedwigia Beibl. 35: xxxi. 1896
 NOTE: Not seen.
- Valsa apatosa* Cooke & Ellis, Grevillea 6: 12. 1877
 ≡*Valsaria apatosa* (Cooke & Ellis) Sacc., Syll. Fung. 1: 746. 1882
 ≡*Pseudovalsa apatosa* (Cooke & Ellis) Cooke, Grevillea, 14: 55. 1885
 ISOTYPES: Ellis 2431, on *Nyssa multiflora*, Newfield, NJ (NY, K).
 NOTE: This fungus is *Massariovalsa sudans* (Berk. & Curt.) Sacc.
- Valsa apocrypta* Cooke & Ellis, Grevillea, 8: 15. 1879
 ≡*Diaporthe apocrypta* (Cooke & Ellis) Sacc., Syll. Fung. 1: 621. 1882
 HOLOTYPE: Ellis 3099, on *Carya*, Newfield, NJ, Nov. 1878 (FH).
 NOTES: Wehmeyer (1933) accepts Saccardo's transfer to *Diaporthe* Nits. but notes the lack of any ventral zone. Because I also found no ventral zone, I believe the species belongs in *Cryptodiaporthe*.
- Valsa atomaespora* Cooke, Grevillea, 11: 109. 1883
 ≡*Eutypa atomaespora* (Cooke) Sacc., Syll. Fung. 2, Add. vii. 1883 (as "*Eutypa atomospora*")
 ISOTYPE: Ravenel, F. Am. Exs. 660, on *Cornus*, Seaboard, SC (NY).
 NOTE: This is a species of *Eutypella*.

- Valsa berchemiae* Cooke, Proc. Acad. Nat. Sci. Philadelphia, 29: 112. 1877
 ≡ *Eutypella berchemiae* (Cooke) Sacc., Syll. Fung. 1: 154. 1882
 AUTHENTIC SPECIMEN: Ellis and Everhart, N. Am. Fung. 1576, on *Berchemia volubilis*, Pineopolis, SC, leg. Ravenel (CUP).
- Valsa bicincta* Cooke & Peck, N.Y. State Bot. Rep. 29: 64. 1878
 ≡ *Diaporthe bicincta* (Cooke & Peck) Sacc., Syll. Fung. 1: 622. 1882
 HOLOTYPE: Peck, on *Juglans cinerea*, Greenbush, NY, May 1872 (NYS).
- Sphaeria bignoniae* Schw., Schr. Naturforsch. Ges. Leipzig, 1: 29. 1822
 ≡ *Valsa bignoniae* (Schw.) Curt., Geol. Nat. Hist. Surv. N.C. 3, Bot. p. 141. 1867
 ≡ *Valsaria bignoniae* (Schw.) Cooke, Grevillea, 13: 39. 1884
 PRESUMED HOLOTYPE: Syn. Fung. 1310-165, Salem (PH).
 NOTES: The original description gives no collection data for this species, but the upper two of the three wood fragments glued on the sheet match the original diagnosis and belong in *Melanconis*. The lower fragment contains only *V. ceratosperma*.
- Valsa binocolata* Ellis, Bull. Torrey Bot. Club, 9: 111. 1882
 ≡ *Diaporthe binocolata* (Ellis) Sacc., Syll. Fung. 2, Add. xviii. 1883.
 ≡ *Hercospora binocolata* (Ellis) Hoehn., Mitt. Bot. Lab. Tech. Hochsch. Wien, 3: 19. 1926
 HOLOTYPE: Ellis, on *Magnolia glauca*, Newfield, NJ, Jan. 1882 (FH).
- Cytospora boreella*. See *V. ambiens* subsp. *ambiens*.
- Valsa canodisca* Ellis & Holw., Proc. Acad. Sci. Philadelphia, 42: 223. 1890
 ≡ *Eutypella canodisca* (Ellis & Holw.) Ellis & Everh., N. Am. Pyren. p. 496. 1892
 HOLOTYPE: Holway, on *Salix*, Decorah, IO, May 9, 1886 (NY).
- Valsa capillata* Ellis & Everh., J. Mycol. 4, plate 74. 1888
 ≡ *Eutypella capillata* (Ellis & Everh.), N. Am. Pyren. p. 489. 1892
 ≡ *Engizostoma capillatum* (Ellis & Everh.) O. Kuntze, Rev. Gen. Plant. 3, Pt. 2: 472. 1898
 ≡ *Peroneutypella capillata* (Ellis & Everh.) Berl., Icon. Fung. 3: 84. 1902
 HOLOTYPE: Langlois 1254, St. Martinsville, LA, 24 May, 1888 (NY).
- Cytospora carnea* Ellis & Everh., Proc. Acad. Nat. Sci. Philadelphia, 45: 160. 1893
 HOLOTYPE: Harvey, on *Tilia*, Orono, ME (NY).
 NOTE: This is a species of *Phomopsis*.
- Cytospora carphosperma*. See *V. ambiens* subsp. *ambiens*.
- Valsa caryigena*. See *V. ceratosperma*.
- Cytospora caryigena*. See *V. ceratosperma*.
- Valsa castanicola* Berk. & Curt., in Berk., Grevillea, 4: 101. 1876
 ≡ *Fenestella castanicola* (Berk. & Curt.) Sacc., Syll. Fung. 2: 331. 1883
 ISOTYPE: Curtis 3336, on *Castanea*, 1851, Mts. Virginia (as "*castanophila*").
 NOTE: The perithecia in this specimen have no contents.
- Valsa ceanothi* (Schw.) Cooke. See *V. ceratosperma*.
- Valsa ceanothi* Rehm, Ann. Mycol. 9: 365. 1911.
 NOTE: Not seen.
- Cytospora ceanothi* Schw., Syn. Fung. Am. Bor. p. 248. 1832
 HOLOTYPE: Syn. Fung. 2058-15, Bethlehem (PH).
 HOST: *Ceanothus*.
 NOTES: The conidiogenous cells of *C. ceanothi* resemble those of *Phoma* Sacc., but the stromatic character of the fruiting structure precludes placement in that genus, so I tentatively assign the species to *Pseudosclerophoma* Petrak. The number on the sheet is apparently a mistake, since *C. ceanothi* is entry 2158 in the Syn. Fung.
- Cytospora celastris* Clem., Bot. Surv. Nebraska, 4: 5. 1896
 PRESUMED HOLOTYPE: Clements 4463, on *Celastris scandentis*, Otowanie Woods, NE.
 NOTES: The specimen belongs in *Phomopsis*. The collection data match the type description, except for the number (4742 in the original diagnosis), and no other specimen bearing the name *C. celastris* could be located.
- Cytospora celastrina*. See *V. ambiens* subsp. *ambiens*.
- Valsa celtidis* Cooke, Grevillea, 5: 55. 1876
 ≡ *Valsaria celtidis* (Cooke) Sacc., Syll. Fung. 1: 742. 1882
 HOLOTYPE: Ravenel 1833 (K).
- Valsa celtidis* Ellis & Everh. See *V. ambiens* subsp. *ambiens*.
- Cytospora celtidis*. See *V. ambiens* subsp. *ambiens*.
- Cytospora ceratophora*. See *V. ceratosperma*.
- Valsa ceratosperma*. See p. 1363.
- Valsa cercophora* Ellis, Bull. Torrey Bot. Club, 9: 99. 1882
 ≡ *Diaporthe cercophora* (Ellis) Sacc., Syll. Fung. 2, Add. xlix. 1883.
 PRESUMED ISOTYPE: Ellis, N. Am. F. 1187, on *Ilex opaca*, Newfield, NJ, July 1882 (NY).
 NOTES: The specimen cited above differs from the original data, which specify March rather than July, but its morphology matches exactly the data in the diagnosis.
- Valsa chionanthi*. See *V. cypri*.
- Cytospora chionanthi*. See *V. cypri*.
- Valsa chlorodisca*. See *V. ceratosperma*.
- Valsa chloroglaea*. See *V. ceratosperma*.

Cytospora chrysosperma. See *V. sordida*.

Valsa cinctula Peck, N.Y. State Bot. Rep. 29: 59. 1876
 =*Cryptospora cinctula* (Peck) Sacc., Syll. Fung. 2: 363. 1883
 =*Sillia cinctula* (Cooke & Peck) Hoehn., Ann. Mycol. 16: 109. 1918
 =**Ophiovalsa cinctula* (Cooke & Peck) Petrak, Ann. Mycol. 19: 274. 1965
 HOLOTYPE: Peck, on *Castanea*, Guilderland, May (NYS).

Valsa clausa. See *V. ambiens* subsp. *ambiens*.

Valsa clavigera. See *V. ceratosperma*.

Valsa clavulata Cooke, Grevillea 18: 86. 1890
 =*Peroneutypella clavulata* (Cooke) Berl., Icon. Fung. 3: 83. 1902
 HOLOTYPE: Ellis, on *Ailanthus*, Staten Island, NY, leg. Mrs. E. G. Britton (FH).
 NOTE: This is a species of *Eutypella*.

Valsa clethraecola Cooke & Ellis, Grevillea, 5: 92. 1877
 =**Valsaria clethraecola* (Cooke & Ellis) Sacc., Syll. Fung. 1: 748. 1882 (as "*Valsaria clethricola*")
 =*Pseudovalsa clethraecola* (Cooke & Ellis) Cooke, Grevillea 14: 55. 1885 (as "*Pseudovalsa clethricola*")
 HOLOTYPE: Ellis 2436, on *Clethra alnicola* (K).

Valsa cooperta Cooke, Proc. Acad. Nat. Sci. Philadelphia, 29: 118. 1877
 HOLOTYPE: Ravenel 1903, on *Ulmus*, N.Y., leg. Ellis (K).
 NOTE: The specimen contained only anamorphic structures.

Sphaeria comptoniae Schw., Syn. Fung. Am. Bor. p. 201. 1832
 =*Valsa comptoniae* (Schw.) Cooke, Proc. Acad. Nat. Sci. Philadelphia, 29: 125. 1877
 =*Diaporthe comptoniae* (Schw.) Ellis & Everh., Proc. Acad. Nat. Sci. Philadelphia 42: 234. 1890
 HOLOTYPE: Syn. Fung. 1353-206, Bethlehem (PH).
 HOST: *Comptonia*.
 NOTES: This is probably a species of *Corniculariella* Karst. The fructification consists of an erumpent stroma covered with fingerlike outgrowths, each one of which contains, in its tip, a locule lined with conidiophores bearing hyaline, septate, filiform conidia.

Valsa condensata Berk. & Curt., Grevillea, 4: 102. 1876
 =**Fenestella condensata* (Berk. & Curt.) Sacc., Syll. Fung. 2: 330. 1883
 ISOTYPE: Curtis 3364, on *Quercus montana*, VA, June 1851 (FH).

Valsa conscripta. See *V. ambiens* subsp. *ambiens*.

Sphaeria conseptata Schw., Syn. Fung. Am. Bor. p. 202. 1832
 =*Valsa conseptata* (Schw.) Cooke, Proc. Acad. Nat. Sci. Philadelphia, 29: 125. 1877
 =**Eutypella conseptata* (Schw.) Ellis & Everh., N. Am. Pyren. p. 498. 1892
 ISOTYPE: Collins Coll. 141 (Spec. ex Syn. 1374), on *Gleditsia*, Bethlehem (PH).

Valsa conspurcata. See *V. ceratosperma*.

Valsa constellata Berk. & Curt. ex Cooke, Grevillea, 14: 46. 1885
 =**Eutypella constellata* (Berk. & Curt.) Berl. & Vogl., Addit. Syll. Fung. p. 31. 1886
 =*Eutypella monticulosa* (Berk. & Curt.) Sacc. var. *constellata* (Berk. & Curt.) Berl., Icon. Fung. 3: 62. 1900
 PRESUMED ISOSYNTYPES: Curtis 2796, on *Carya*, June 1849 (FH); Curtis 2697, on *Vitis*, 1849 (FH); and Curtis 2800, Sept. 1849 (FH), all from Society Hill, SC.
 NOTES: The locality of these collections differs from that in the type description (NC), but the other data fit the description.

Valsa cornina Peck, N.Y. State Bot. Rep. 38: 102. 1885
 AUTHENTIC SPECIMEN: Peck, Bethlehem (NYS).
 NOTES: This may be a species of *Calosphaeria* Tul. The specimen examined has blunt-cylindric asci, and falcate, 3- to 5-septate, hyaline, ascospores which measure 12–17 × 2–3 μm. The perithecia lie just under the bark in circinate clusters with rather short, converging beaks. The original diagnosis cites a specimen from Albany, NY.

Valsa corymbosa Cooke & Ellis, Grevillea, 8: 15. 1879
 =*Diaporthe corymbosa* (Cooke & Ellis) Sacc., Syll. Fung. 1: 622. 1882
 =**Diaporthe oxyspora* var. *corymbosa* (Cooke & Ellis) Wehm., Univ. Mich. Stud. Sci. Ser. 9. p. 161. 1933
 HOLOTYPE: Ellis 3224, on *Vaccinium corymbosum*, NJ (FH).

Valsa corynostoma Berk. & Rav., in Berkeley, Grevillea 4: 101. 1876
 =**Eutypella corynostoma* (Berk. & Rav.) Sacc., Syll. Fung. 1: 156. 1882
 =*Peroneutypella corynostoma* (Berk. & Rav.) Berl., Icon. Fung. 3: 83. 1900
 PRESUMED ISOTYPE: Ravenel, on *Acer rubrum*, SC (CUP).

Sphaeria crataegi Schw., Syn. Fung. Am. Bor. p. 207. 1832
 =*Cucurbitaria crataegi* (Schw.) Ellis & Everh., N. Am. Pyren. p. 240. 1892
 HOLOTYPE: Syn. Fung. 1445-300, Bethlehem (PH).
 HOST: *Crataegus*.
 NOTE: This is a species of *Fenestella* Tul.

Valsa cypri. See p. 1358.

Valsa decidua. See *V. ceratosperma*.

Valsa delicatula. See *V. ceratosperma*.

Valsa deusta Ellis & Everh., J. Mycol. 4: 74. 1888
 =**Eutypella deusta* (Ellis & Everh.) Ellis & Everh., N. Am. Pyren. p. 489. 1892
 =*Engizostoma deustum* (Ellis & Everh.) O. Kuntze, Rev. Gen. Plant. 3, Pt. 2: 473. 1898
 HOLOTYPE: Langlois 1334, on *Carya olivaeformis*, St. Martinsville, LA, 16 June, 1888 (CUP).

Valsa didymospora Ellis, Bull. Torrey Bot. Club, 9: 98. 1882
 NOTE: Not seen.

Cytospora difformis. See *V. ceratosperma*.

Valsa diospyri. See *V. ceratosperma*.

Sphaeria divergens Schw., Schr. Naturforsch. Ges. Leipzig, 1: 39. 1822

≡*Valsa divergens* (Schw.) Curt., Geol. Nat. Hist. Surv. N.C. 3, Bot. p. 143. 1867

≡*Cryptosporella divergens* (Schw.) Berl. & Vogl., Addit. Syll. Fung. p. 70. 1886

≡*Cryptospora divergens* (Schw.) Ellis & Everh., N. Am. Pyren. p. 529. 1892

HOLOTYPE: Syn. Fung. 1393-246, Salem (PH).

HOST: *Liquidambar*.

NOTE: This is a species of *Calosphaeria*.

Hypoxyylon erinaceum Berk. & Rav. in Berkeley, Grevillea, 4: 94. 1876

≡*Valsa erinacea* (Berk. & Rav.) Cooke, in Saccardo, Syll. Fung. 9: 458. 1891

PRESUMED ISOTYPE: Ravenel, on *Liquidambar*, SC (NY).

NOTES: This specimen contains superficial, gregarious, long-beaked perithecia. The clavate, tapered asci, the elliptical, hyaline ascospores ($5-6 \times 1-1.5 \mu\text{m}$), and the paraphysate centrum are similar to *Calosphaeria*, but the habit is unusual for this genus.

Cytospora eriogoni W. B. Cooke, in Cooke and Shaw, Mycologia, 44: 798. 1952

ISOTYPE: W. B. Cooke 25631, *Eriogonum pyrolaeifolium*, Siskiyou Co., CA, 8 August 1949 (CUP).

NOTES: The fruiting structures on this specimen are superficial, gregarious, and irregular in shape. The conidia are bacillar in shape, $3-4 \times 1.5 \mu\text{m}$, and borne on ampulliform phialides which line the wall of the conidioma. The specimen may belong in *Chaetophoma* Cooke.

Valsa etherialis. See *V. ceratosperma*.

Valsa eucalypti Cooke & Harkn., in Cooke, Grevillea, 9: 85. 1881

HOLOTYPE: Harkness 1287a, on *Eucalyptus*, CA (BPI).

NOTE: This is a species of *Leucostoma*.

Cytospora eutypelloides Sacc., Ann. Mycol. 8: 345. 1910

HOLOTYPE: Fairman, *Prunus armeniaceae*, Lyndonville, NY, Nov. 1909 (CUP).

NOTES: I am unable to find a genus for this specimen. The fruiting body consists of a number of columnar, thick-walled, nonostiolate locules which widen into intercommunicating chambers below, the entire structure lined with branched, tapered conidiophores. The conidia are $3-4 \mu\text{m}$ long and bacilliform.

Cytospora exasperans. See *V. ambiens* subsp. *ambiens*.

Valsa excorians. See *V. ceratosperma*.

Valsa exigua. See *V. ceratosperma*.

Valsa expers. See *V. ambiens* subsp. *ambiens*.

Valsa exudans Peck, N.Y. State Bot. Rep. 40: 67. 1887

≡*Anthostoma ellisii* Sacc. var. *exudans* (Peck) Sacc., Syll. Fung. 9: 521. 1891 (as "var. *exsudans*")

≡*Anthostomella microsporum* Karst. var. *exudans* (Peck) Farl., Bibliographic Index of North American Fungi 1, Pt. 1. 1905

HOLOTYPE: Peck, on *Alnus incana*, Elizabethtown, NY, Sept. (NYS).

NOTES: This specimen belongs in the genus *Bolinia* Sacc. The 40th Report was circulated to legislators and selected mycological colleagues in 1887, and to the general public in 1920. It could be argued that the first distribution did not satisfy the requirements for effective publication.

Valsa fagicola Ellis & Everh., Bull. Torrey Bot. Club, 10: 118. 1883

≡*Calosphaeria fagicola* (Ellis & Everh.) Ellis & Everh., N. Am. Pyren. 510. 1892

HOLOTYPE: Ellis 364, on *Fagus ferruginea*, West Chester, PA (NY).

Valsa farinosa Ellis, Bull. Torrey Bot. Club, 9: 99. 1882

≡*Cryptosporella farinosa* (Ellis) Sacc., Syll. Fung. 2, Add. xxxv. 1883

≡*Cryptospora farinosa* (Ellis) Ellis & Everh., N. Am. Pyren. p. 532. 1892

ISOTYPE: Ellis, N. Am. F. 1572, on *Quercus*, Newfield, NJ, April 1882 (NY).

Valsa femoralis Peck, N.Y. State Bot. Rep. 28: 74. 1877

≡*Cryptospora femoralis* (Peck) Sacc., Syll. Fung. 2: 362. 1883

≡*Ophiovalsa femoralis* (Peck) Petrak, Ann. Mycol. 19: 273. 1966

SYNTYPES: Peck, on *Alnus*, W. Albany, NY, June 1874, and Greenbush, July 1874 (NYS).

Cytospora ficicola Berk. & Curt., Grevillea, 2: 98. 1874

ISOTYPE: Curtis 4011, PA (Michener 1618) (FH).

NOTE: This is a species of *Phomopsis*.

Valsa floriformis. See *V. ceratosperma*.

Valsa fraxinicola Cooke & Peck, in Peck, N.Y. State Bot. Rep. 29: 59. 1876

≡*Eutypella fraxinicola* (Cooke & Peck) Sacc., Syll. Fung. 1: 154. 1882

HOLOTYPE: Peck, Tyre (NYS).

HOST: *Fraxinus*.

Valsa fraxinina. See *V. cypri*.

Valsa frustrum-coni. See *V. ceratosperma*.

Cytospora fugax. See *V. salicina*.

Valsa fulvella Berk. & Rav., Grevillea, 4: 101. 1876

HOLOTYPE: Ravenel 1825, on *Platanus*, SC (CUP).

NOTES: The stromata of this specimen are intermediate between *Diatrype* Fr. and *Eutypella*, and no generic assignment is made here.

Sphaeria fulvo-pruinata Berk., London J. Bot. 4: 312. 1845

≡*Valsa fulvo-pruinata* (Berk.) Cooke, Proc. Acad. Sci. Philadelphia, 29: 122. 1877

≡*Diaporthe fulvo-pruinata* (Berk.) Sacc., Syll. Fung. 1,

- p. 621. 1882
 ≡**Valsaria fulvo-pruinata* (Berk.) Sacc., Syll. Fung. 1, p. 747. 1882
 ISOTYPE: Lea, Ohio, misit Berkeley (FH).
- Valsa gemmata* Berk. & Curt., Grevillea, 4: 102. 1876
 ≡*Calospora gemmata* (Berk. & Curt.) Sacc., Syll. Fung. 2: 233. 1883
 ≡*Cryptospora gemmata* (Berk. & Curt.) Ellis & Everh., N. Am. Pyren. p. 537. 1892
 ISOTYPE: Curtis 3046, on *Rhus radicans*, Santee Canal, SC, Feb. 1850 (Ravenel 1222) (FH).
 NOTE: This is a species of *Eutypella*.
- Valsa glandulosa* Cooke, Grevillea, 7: 52. 1878
 ≡**Eutypella glandulosa* (Cooke) Ellis & Everh., N. Am. Pyren. p. 491. 1892
 HOLOTYPE: Ravenel 2385, on *Ailanthus glandulosa*, Aiken, SC (K).
- Cytospora gleditsia*. See *V. ceratosperma*.
- Valsa glyptica* Berk. & Currey, in Berkeley, Grevillea, 4: 100. 1876
 ≡*Diaporthe glyptica* (Berk. & Currey) Sacc., Syll. Fung. 1: 629. 1882
 NOTE: Not seen.
- Sphaeria goniostoma* Schw., Syn. Fung. Am. Bor. p. 202. 1832
 ≡*Valsa goniostoma* (Schw.) Curt., Geol. Nat. Hist. Surv. N.C. 3, Bot. p. 142. 1867
 ≡**Eutypella goniostoma* (Schw.) Sacc., Syll. Fung. 1: 154. 1882
 SYNTYPES: Syn. Fung. 1373-226, on *Ulmus* and *Sassafras*, Salem and Bethlehem (PH).
- Cytospora gordoniae* Berk. & Curt., in Berkeley, Grevillea, 2: 99. 1874.
 NOTE: Not seen.
- Valsa gossypina*. See *V. ceratosperma*.
- Cytospora grandis*. See *V. ceratosperma*.
- Valsa grisea*. See *V. ambiens* subsp. *leucostomoides*.
- Cytospora halesiae* Ellis & Everh., Proc. Acad. Nat. Sci. Philadelphia, 46: 361. 1894
 HOLOTYPE: Nuttall, on *Halesia*, WV, May 1894 (NY).
 NOTE: This is a species of *Phomopsis* (see Wehmeyer 1933).
- Sphaeria halseyana* Schw., Syn. Fung. Am. Bor. p. 200. 1832
 ≡*Valsa halseyana* (Schw.) Cooke, Proc. Acad. Nat. Sci. Philadelphia, 29: 125. 1877
 ≡*Eutypella halseyana* (Schw.) Berl. & Vogl., Addit. Syll. Fung. p. 31. 1886
 HOLOTYPE: Syn. Fung. 1319-172, NY (PH).
 NOTE: This is a species of *Diatrype*.
- Sphaeria hyalosperma* Achar., in Fries, Obs. Mycol. 1: 187. 1815
 ≡*Cytospora hyalosperma* (Achar.: Fr.) Fr., Syst. Mycol. 2: 545. 1823
 NOTE: Not seen.
- Valsa hylodes* Ellis & Everh., J. Mycol. 2: 40. 1886
 ≡*Calosphaeria hylodes* (Ellis & Everh.) Berl. & Vogl., Addit. Syll. Fung. p. 24. 1886
 HOLOTYPE: Langlois, LA, Nov. 1885 (FH).
 NOTE: This is a species of *Eutypella*.
- Valsa impulsa* Cooke & Peck, in Peck, N.Y. State Bot. Rep. 27: 109. 1877
 ≡**Diaporthe impulsa* (Cooke & Peck) Sacc., Syll. Fung. 1: 618. 1882
 HOLOTYPE: Peck, on *Fraxinus?* Adirondak Mts. (NYS).
- Valsa inconspicua* Cooke & Ellis, Grevillea, 6: 11. 1877
 ≡*Calospora inconspicua* (Cooke & Ellis) Sacc., Syll. Fung. 2: 233. 1883
 ≡*Cryptospora inconspicua* (Cooke & Ellis) Ellis & Everh., N. Am. Pyren. p. 537. 1892
 HOLOTYPE: Ellis 2583, on *Alnus*, Newfield, NJ, Oct. 1875 (NY).
 NOTES: This belongs in *Calosphaeria*, although the perithecia lie unusually deep in the inner bark compared with most specimens of *Calosphaeria*.
- Sphaeria indistincta* Schw., Syn. Fung. Am. Bor. p. 202. 1832
 ≡*Valsa indistincta* (Schw.) Cooke, Proc. Acad. Nat. Sci. Philadelphia, 29: 125. 1877
 ≡**Eutypella indistincta* (Schw.) Ellis & Everh., N. Am. Pyren. p. 499. 1892
 HOLOTYPE: Schw. Syn. Fung. 1377-230, Bethlehem (PH).
- Valsa innumerabilis* Peck, N.Y. State Bot. Rep. 30: 65. 1878
 ≡**Eutypella innumerabilis* (Peck) Sacc., Syll. Fung. 1: 156. 1882
 HOLOTYPE: Peck, on *Ulmus*, Greenbush, May (NYS).
- Valsa innata* Berk. & Curt., in Berkeley, Grevillea, 4: 102. 1876
 ≡*Cryptospora innata* (Berk. & Curt.) Sacc., Syll. Fung. 1: 470. 1882
 ≡*Diaporthe innata* (Berk. & Curt.) Sacc., Syll. Fung. 1: 630. 1882
 PRESUMED ISOTYPE: Curtis 4496, on *Castanea*, Black Mts., NC, 1854 (FH).
 NOTES: This species belongs in *Lopadostoma* (Nits.) Trav. The packet has no number, and the collection locality is different from that in the type description (Mts. Virginia), but the rest of the data agree.
- Sphaeria juglandicola* Schw., Schr. Naturforsch. Ges. Leipzig, 1: 102. 1822
 ≡*Valsa juglandicola* (Schw.) Cooke, Proc. Acad. Nat. Sci. Philadelphia, 29: 124. 1877
 ≡**Eutypella juglandicola* (Schw.) Ellis & Everh., N. Am. Pyren. p. 495. 1892
 HOLOTYPE: Syn. Fung. 1328-181, Salem, Bethlehem (PH).
- Cytospora juglandicola*. See *V. ambiens* subsp. *ambiens*.
- Valsa juglandina* Cooke & Ellis, Grevillea, 5: 92. 1877
 ≡**Eutypella juglandina* (Cooke & Ellis) Sacc., Syll. Fung.

- I: 154. 1882
HOLOTYPE: Ellis 2421, on *Juglans regia*, Newfield, NJ, Oct. 1876 (NY).
- Valsa lasiostoma* Ellis & Everh., Bull. Torrey Bot. Club, 10: 89. 1883
≡ *Engizostoma lasiostomum* (Ellis & Everh.) O. Kuntze, Rev. Gen. Plant. 3, Pt. 2: 474. 1898
HOLOTYPE: Ellis, on *Quercus alba*, March 1883 (NY).
NOTE: This is a species of *Calosphaeria*.
- Valsa laurina*. See *V. ambiens* subsp. *ambiens*.
- Valsa lavaterae* Cooke & Harkn., in Cooke, Grevillea, 14: 8. 1885
HOLOTYPE: Harkness 2361, on *Lavatera assurgentifolia* (K).
NOTE: This is a species of *Eutypella*.
- Sphaeria leaiana* Berk., London J. Bot. 4: 311. 1845
≡ *Valsa leaiana* (Berk.) Cooke, Proc. Acad. Sci. Philadelphia, 29: 113. 1877
≡ *Eutypella leaiana* (Berk.) Sacc., Syll. Fung. 1: 154. 1882
ISOTYPE: Lea, Ohio, Misit Berkeley (FH).
- Valsa leiphaemoides*. See *V. ceratosperma*.
- **Cryptosporella lentaginis* Rehm, Am. Nat. Feb. 1883
≡ *Valsa lentaginis* (Rehm) Ellis & Everh., N. Am. Fungi, No. 1579. 1886
ISOTYPE: Ellis and Everhart, N. Am. F. 1579, on *Viburnum lentago*, Decorah, IO, June 1882, leg. Holway (NY).
- Valsa lepargyraeae* Earle, in Greene, Plantae Bakerianae, 2: 25. 1901
NOTE: Not seen.
- Valsa leptasca* Peck & G. W. Clinton, in Peck, N.Y. State Bot. Rep. 29: 59. 1878
≡ *Cryptosporella leptasca* (Peck & Clinton) Sacc., Syll. Fung. 1: 469. 1882
≡ *Cryptospora leptasca* (Peck & Clinton) Ellis & Everh., N. Am. Pyren. p. 532. 1892
≡ *Flageoletia leptasca* (Peck & Clinton) Hoehn., Oesterr. Bot. Z. 66: 57. 1916
≡ *Phomatospora leptasca* (Peck & Clinton) J. Reid & Booth, Can. J. Bot. 44: 448. 1966
HOLOTYPE: Peck, on *Rhus*, Buffalo, leg. Clinton (NYS).
- Cytospora leucophthalma* Berk. & Curt., Grevillea, 2: 99. 1874
ISOTYPE: Curtis 2769, on *Cerasus caroliniensis*, Society Hill, SC, Sept. 1849 (FH).
NOTE: This is an anamorph of *Leucostoma* or *Valsella*.
- Valsa leucopsis* Ellis & Everh., Proc. Acad. Sci. Philadelphia, 47: 425. 1895
≡ *Engizostoma leucopsis* (Ellis & Everh.) O. Kuntze, Rev. Gen. Plant. 3, Pt. 2: 474. 1898
HOLOTYPE: on *Fraxinus viridis?* Cody, NE, 28 March 1893, leg. J. M. Bates (NY).
NOTE: This is a species of *Leucostoma*.
- Cytospora leucosperma*. See *V. ambiens* subsp. *ambiens*.
- Cytospora leucosticta* Ellis & Barth., Erythea, 5: 48. 1897
HOLOTYPE: Bartholomew 2123, on *Pyrus malus*, Rooks Co., KA, 21 April 1896 (NY).
NOTE: This is an anamorph of *Leucostoma* or *Valsella*.
- Valsa ligustri*. See *V. cypri*.
- Valsa ligustrina*. See *V. ceratosperma*.
- Valsa linderiae* Peck, N.Y. State Bot. Rep. 29: 59. 1878
≡ *Eutypella linderiae* (Peck) Berl., Icon. Fung. 3: 66. 1902
HOLOTYPE: Peck, Albany (NYS).
HOST: *Lindera benzoin*.
- Sphaeria liquidambaris* Schw., Schr. Naturforsch. Ges. Leipzig, 1: 38. 1822
≡ *Valsa liquidambaris* (Schw.) Cooke, Grevillea, 5: 34. 1876
HOLOTYPE: Syn. Fung. 1352-205, Salem (PH).
HOST: *Liquidambar*.
NOTE: This is a species of *Calosphaeria*.
- Valsa lupini* Cooke & Harkn., in Cooke, Grevillea, 14: 8. 1885
ISOTYPES: Harkness 1990, on *Lupinus*, San Francisco Co., CA (BPI) and Harkness 1990, on *Lupinus*, CA (K).
NOTE: This fungus belongs in *Eutypella*.
- Valsa lutescens*. See *V. ceratosperma*.
- Valsa macluriae*. See *V. ceratosperma*.
- Cytospora macluriae*. See *V. ceratosperma*.
- Valsa macrocarpa*. See *V. ceratosperma*.
- Valsa magnispora* Ellis & Everh., J. Mycol. 3: 42. 1887
≡ *Diaporthe magnispora* (Ellis & Everh.) Sacc., Syll. Fung. 9: 707. 1891
≡ *Cryptodiaporthe magnispora* (Ellis & Everh.) Wehmeyer, Univ. Mich. Stud. Sci. Ser. 9. p. 204. 1933
HOLOTYPE: Meschutt, on *Acer*, Plainfield, NJ, July 1886 (NY).
- Valsa majuscula* Cooke & Harkn., in Cooke, Grevillea, 13: 17. 1884
≡ *Valsaria majuscula* (Cooke & Harkn.) Ellis & Everh., N. Am. Pyren. p. 561. 1892
HOLOTYPE: Harkness 1997, on *Salix*, CA (K).
NOTE: This is *Massariovalsa sudans*.
- Valsa mahaleb* Cooke & Ellis, Grevillea, 6: 11. 1877
≡ *Engizostoma mahaleb* (Cooke & Ellis) O. Kuntze, Rev. Gen. Plant. 3, Pt. 2: 474. 1898
HOLOTYPE: Ellis 2605, on *Prunus mahaleb*, Newfield, NJ, 26 May 1877 (FH).
NOTES: The only fungus found on this specimen is *Botryosphaeria* Ces. & De Not. (see Ellis 1879). The type diagnosis suggests that the authors described an immature stage of *Botryosphaeria*.
- Valsa melanodiscus*. See p. 1366.
- Cytospora melanodiscus*. See *V. melanodiscus*.

Valsa menispermi. See *V. ambiens* subsp. *ambiens*.

Valsa mesoluca. See *V. ambiens* subsp. *ambiens*.

Valsa microcarpa Ellis & Everh., J. Mycol. 4: 122. 1888
 ≡ *Eutypella microcarpa* (Ellis & Everh.) Ellis & Everh.,
 N. Am. Pyren. p. 496. 1892
 ≡ *Engizostoma everhartii* O. Kuntze, Rev. Gen. Plant. 3,
 Pt. 2: 472. 1898
 ≡ *Peroneutypella microcarpa* (Ellis & Everh.) Berl., Icon.
 Fung. 3: 83. 1902
 NOTE: Not seen.

Sphaeria microtheca Cooke & Ellis, Grevillea, 5: 51. 1876
 ≡ *Calosphaeria microtheca* (Cooke & Ellis) Sacc., Syll.
 Fung. 1: 97. 1882
 ≡ *Valsa microtheca* (Cooke & Ellis) Cooke, Grevillea, 14:
 52. 1885
 HOLOTYPE: Ellis 2378, on *Andromeda* (K).

Valsa minutella. See *V. ceratosperma*.

Sphaeria modesta Schw., Syn. Fung. Am. Bor. p. 201. 1832
 ≡ *Valsa modesta* (Schw.) Cooke, Proc. Acad. Nat. Sci.
 Philadelphia 29: 125. 1877
 HOLOTYPE: Syn. Fung. 1337–190, Bethlehem (PH).
 NOTES: The specimen contains no ascospores but does have
 a distinct dorsal black zone which descends into the wood, a
 feature never found in *Valsa*. Stevenson (1878) looked at material
 from the Schweinitz herbarium and found allantoid, hyaline
 ascospores. Since early mycologists were often unable to
 tell whether spores were faintly colored or hyaline (compare
 Stevenson's descriptions of *Sphaeria juglandicola*, *S. indis-*
tincta, and *S. quadrifida*), it is likely that *S. modesta* belongs
 in *Eutypella*.

Valsa monticulosa Berk. & Curt., in Cooke, Proc. Acad. Nat.
 Sci. Philadelphia, 29: 112. 1877
 ≡ *Eutypella monticulosa* (Berk. & Curt.) Sacc., Syll. Fung.
 1: 155. 1882
 ISOTYPE: Curtis 2223, on *Magnolia glauca*, Society Hill, SC,
 Nov. 1848 (FH).

Valsa morigena. See *V. ceratosperma*.

Valsa mucronata Peck, N.Y. State Bot. Rep. 28: 74. 1877
 ≡ *Diaporthe mucronata* (Peck) Sacc., Syll. Fung. 1: 629.
 1882
 HOLOTYPE: Peck, on *Salix*, Sandlake, Sept. 1874 (NYS).

Valsa multiplex. See *V. ceratosperma*.

Valsa munda Berk. & Curt., Grevillea, 4: 100. 1876
 ISOTYPE: Curtis 5196, on *Cornus serica*, AL, winter 1854–5,
 leg. Peters (FH).
 NOTE: This is a species of *Leucostoma*.

Valsa myinda. See *V. ambiens* subsp. *ambiens*.

Valsa myricae Cooke & Ellis, Grevillea, 7: 8. 1878
 ≡ *Eutypella myricae* (Cooke & Ellis) Sacc., Syll. Fung. 1:
 155. 1882
 ≡ *Calosphaeria myricae* (Cooke & Ellis) Ellis & Everh.,

N. Am. Pyren. p. 511. 1892
 ≡ *Circinostoma myricae* (Cooke & Ellis) House, Bull. N.Y.
 State Mus. 266: 41. 1925
 HOLOTYPE: Ellis 2903, on *Myrica*, Newfield, 28 Nov. 1875
 (NY).

Cytospora negundinis. See *V. ambiens* subsp. *ambiens*.

Valsa nigrofacta Cooke & Ellis, Grevillea, 6: 12. 1877
 ≡ *Valsaria nigrofacta* (Cooke & Ellis) Sacc., Syll. Fung. 1:
 748. 1882 (as "*Valsaria nigrificata*")
 ≡ *Pseudovalsaria nigrofacta* (Cooke & Ellis) Cooke, Grevillea,
 14: 55. 1885 (as "*Pseudovalsaria nigrificata*")
 HOLOTYPE: Ellis 2530, Newfield, Sept. 1877 (NY).
 HOST: *Sassafras*.

Valsa niphoclina Cooke, Grevillea, 11: 109. 1883
 ≡ *Eutypella niphoclina* (Cooke) Sacc., Syll. Fung. 2, Add.
 vii. 1883
 ISOTYPES: Ravenel, Fung. Am. 748, on *Betula*, Florence, SC
 (NY, K).
 AUTHENTIC SPECIMEN: Ravenel 3314, on *Betula nigra*, Black
 Creek near Florence, SC, April 1881 (K).
 NOTE: The specimens did not have, and may never have
 had, any fruiting structures.

Valsa nyssae. See *V. ceratosperma*.

Cytospora nyssae. See *V. ambiens* subsp. *ambiens*.

Valsa obscura Peck, N.Y. State Bot. Rep. 28: 73. 1877
 ≡ *Diaporthe obscura* (Peck) Sacc., Syll. Fung. 1: 627. 1882
 HOLOTYPE: Peck, on *Rubus strigosus*, Albany, May 1874
 (NYS).
 NOTE: This is a species of *Apioporthes* Theiss. & Syd.

Valsa obtecta. See *V. ambiens* subsp. *ambiens*.

Valsa ocularia Cooke & Ellis, Grevillea, 6: 11. 1877
 ≡ *Diaporthe ocularia* (Cooke & Ellis) Sacc., Syll. Fung. 1:
 616. 1882
 HOLOTYPE: Ellis 2488, on *Ilex glabra*, Newfield (NY).

Sphaeria oligostoma Schw., Syn. Fung. Am. Bor. p. 200.
 1832
 ≡ *Valsa oligostoma* (Schw.) Cooke, Proc. Acad. Nat. Sci.
 Philadelphia, 29: 124. 1877
 HOLOTYPE: Syn. Fung. 1333–186, Bethlehem (PH) (HT).
 NOTE: The stromata in the above specimen have a black
 dorsal zone and circinate perithecia with no contents.

Valsa opulifoliae Peck, N.Y. State Bot. Rep. 38: 103. 1885
 HOLOTYPE: Peck, on *Spirea opulifolia*, W. Albany, 25 April,
 1884 (NYS).
 NOTE: This is a species of *Diaporthe*.

Valsa orbicula Berk. & Curt., Grevillea, 4: 100. 1876
 ISOTYPE: Curtis 3404, on *Salix*, Stockbridge, MA, fall 1851
 (FH) (as "*Sphaeria orbicularis*").
 NOTE: This is a species of *Leucostoma*.

Cytospora orthospora Berk. & Curt., Grevillea, 2: 98. 1874
 ISOSYNTYPES: Curtis 4681, NJ, leg. Laning, and 5158, leg.

Michener, both on *Robinia* (FH).

NOTE: This is a species of *Phomopsis* (see Wehmeyer 1933).

Valsa oxyspora Peck, N.Y. State Bot. Rep. 28: 73. 1877
 =**Diaporthe oxyspora* (Peck) Sacc., Syll. Fung. 1: 627. 1882

HOLOTYPE: Peck, on *Nemopanthes*, Sandlake, NY, Aug. 1874 (NYS).

Valsa pallida Ellis, J. Mycol. 4: 58. 1888
 =**Engizostoma pallidum* (Ellis & Everh.) O. Kuntze, Rev. Gen. Plant. 3, Pt. 2: 475. 1898

NOTE: Not seen.

Cytospora pallida Ellis & Everh., J. Mycol. 8: 12. 1902
 SYNTYPES: Ellis, on *Quercus tinctoria*, (as "*Neocyttispora pallida*"), Newfield, NJ, Nov.–Apr. 1901–2.

NOTES: This specimen resembles the *Dothiorina* Hoehn. anamorph of *Chlorociboria aeruginascens* (Nyl.) Kanouse (see Dixon 1975), except that it lacks the green color described for that fungus. The conidia are borne in compressed-globoid cavities in a gelatinous fruit body.

Sphaeria papyriferae Schw., Syn. Fung. Am. Bor. p. 202. 1832

=**Valsella papyriferae* (Schw.) Berl. & Vogl., Addit. Syll. Fung. p. 31. 1886

HOLOTYPE: Syn. Fung. 1375–228, Bethlehem (PH).

HOST: *Morus papyriferae*.

NOTE: This is a species of *Diatrypella* (Ces. & DeNot.) Cooke.

Valsa parasitica Cooke & Ellis, Grevillea, 8: 9. 1878

HOLOTYPE: Ellis 2844, on *Massaria sudans*, Oct. 1877 (NY).

NOTE: This is *Calosphaeria parasitica* Fuckel, Symb. Mycol., Nachtr. 2: 41. 1873.

Cytospora parva Berk. & Curt., Grevillea, 2: 98. 1874

PRESUMED ISOTYPE: Curtis 3724, on *Robinia*, Society Hill, SC, March 1877 (FH).

NOTE: This is a species of *Phomopsis*.

Valsa paucispora Peck, N.Y. State Bot. Rep. 33: 3. 1880

=**Cryptosporella paucispora* (Peck) Berl. & Vogl., Addit. Syll. Fung. p. 70. 1886

=**Cryptospora paucispora* (Peck) Ellis & Everh., N. Am. Pyren. p. 529. 1892

HOLOTYPE: Peck, on *Alnus*, N. Greenbush, NY (NYS).

Valsa paulula Cooke & Ellis, Grevillea, 7: 9. 1878

=**Diaporthe paulula* (Cooke & Ellis) Sacc., Syll. Fung. 1: 617. 1882

=**Cryptodiaporthe paulula* (Cooke & Ellis) Wehmeyer, Univ. Mich. Stud. Sci. Ser. 9. p. 201. 1933

HOLOTYPE: Ellis 2943, on *Nyssa multiflora*, NJ (K).

Valsa pauperata. See *V. ambiens* subsp. *ambiens*.

Valsa peckii Howe, in Peck, N.Y. State Bot. Rep. 27: 109. 1877

=**Valsaria peckii* (Howe) Sacc., Syll. Fung. 1: 746. 1882

HOLOTYPE: Peck, on *Vaccinium corymbosum*, Forestburgh, Sept. (NYS).

NOTE: I agree with M. E. Barr (personal communication) in placing this fungus in *Endoxylina* Romell.

Valsa pennsylvanica Berk. & Curt., in Berkeley, Grevillea, 4: 100. 1876

=**Calospora pennsylvanica* (Berk. & Curt.) Sacc., Syll. Fung. 2: 232. 1883

=**Cryptospora pennsylvanica* (Berk. & Curt.) Ellis & Everh., N. Am. Pyren. p. 536. 1892

=**Diaporthe pennsylvanica* (Berk. & Curt.) Wehmeyer, Univ. Mich. Stud. Sci. Ser. 9: 147. 1933

NOTE: Not seen.

Cytospora persicae Schw., Syn. Fung. Am. Bor. p. 248. 1832
 HOLOTYPE: Syn. Fung. 2056-13, on *Prunus persica*, Salem, Bethlehem (PH).

NOTE: This is an anamorph of *Leucostoma* or *Valsella*.

Valsa personata Cooke & Ellis, Grevillea, 7: 9. 1878

=**Diaporthe personata* (Cooke & Ellis) Sacc., Syll. Fung. 1: 612. 1882

HOLOTYPE: Ellis 2918, on *Robinia pseudoacacia*, NJ (K).

Cytospora phlyctaenoides Ellis & Everh., Proc. Acad. Nat. Sci. Philadelphia, 46: 360. 1894.

HOLOTYPE: Ellis, on *Corylus avellanea*, Newfield, NJ, June 1894 (NY).

NOTE: This is a species of *Phomopsis*.

Valsa phomaspora Cooke & Ellis, Grevillea, 6: 10. 1877

=**Diaporthe phomaspora* (Cooke & Ellis) Sacc., Syll. Fung. 1: 630. 1882

=**Cryptosporella phomaspora* (Cooke & Ellis) Cooke, Grevillea, 14: 53. 1885

=**Apioportha phomaspora* (Cooke & Ellis) Wehmeyer, Univ. Mich. Stud. Sci. Ser. 9: 222. 1933

=**Cryptodiaporthe phomaspora* (Cooke & Ellis) Barr, Mycol. Mem. 7: 139. 1978

HOLOTYPE: Ellis 2481, on *Myrica*, 18 June, 1877 (NY).

Cytospora phomopsis. See *V. ambiens* subsp. *ambiens*.

**Diatrype plagia* Berk. & Curt., Grevillea, 4: 96. 1876

[*Valsa plagia* Berk. & Curt., in Curt., Geol. Nat. Hist. Surv. N.C. 3, Bot. p. 141. 1867 (nom. nud.)]

=**Valsa plagia* (Berk. & Curt.) Cooke, Proc. Acad. Nat. Sci. Philadelphia, 29: 123. 1877

ISOTYPE: Curtis 2120, on *Liriodendron*, Society Hill, SC, Apr. 1851 (FH).

NOTE: The original description gives the specimen number as 212, no doubt a mistake.

Sphaeria platani Schw., Syn. Fung. Am. Bor. p. 202. 1832

=**Valsa platani* (Schw.) Peck, N.Y. State Bot. Rep. 25: 103. 1875

=**Eutypella platani* (Schw.) Sacc., Syll. Fung. 1: 155. 1882

HOLOTYPE: Syn. Fung. 1372-225, Bethlehem (PH).

NOTES: The specimen has immature asci, but the sulcate ostioles and stromatal architecture indicate placement in *Eutypella*.

Valsa platanoidis. See *V. ambiens* subsp. *leucostomoides*.

Valsa praestans. See *V. ceratosperma*.

Cytospora pruinosa. See *V. cypri*.

Cytospora pruni Ellis & Dearn., Can. Rec. Sci. 5: 268-269. 1893

≡**Phomopsis pruni* (Ellis & Dearn.) Wehmeyer, Pap. Mich. Acad. Sci. 6: 380. 1926

HOLOTYPE: Dearness 1817, on *Prunus virginiana*, London, Ontario, May, 1892 (DAOM).

Valsa prunicola Peck, N.Y. State Bot. Rep. 33: 33. 1880

≡**Diaporthe prunicola* (Peck) Wehmeyer, Univ. Mich. Stud. Sci. Ser. 9: 126. 1933

HOLOTYPE: Peck, on *Prunus pennsylvanica*, Sandlake, May (NYS).

Valsa pseudoplatani. See *V. ambiens* subsp. *leucostomoides*.

Sphaeria pugillus Schw., Schr. Naturforsch. Ges. Leipzig, 1: 107. 1822

≡*Valsa pugillus* (Schw.) Curt., Geol. Nat. Hist. Surv. N.C. 3, Bot. p. 142. 1867

HOLOTYPE: Schweinitz, Syn. Fung. 1322-175, PA (PH).

NOTE: This is a species of *Eutypella*.

Valsa pulchelloidea Cooke & Ellis, Grevillea, 6: 92. 1878

≡**Calosphaeria pulchelloidea* (Cooke & Ellis) Ellis & Everh., N. Am. Pyren. p. 508. 1892

HOLOTYPE: Ellis 2804, on *Quercus* (CUP).

Cytospora pulcherrima. See *V. sordida*.

Valsa pullula Berk. & Curt., Grevillea, 14: 47. 1885

ISOTYPE: Curtis 4197, on *Castanea vesca*, leg. Michener, PA (FH).

NOTE: This is a species of *Cryptodiaporthe*.

Valsa pulviniceps Peck, N.Y. State Bot. Rep. 32: 50. 1879

≡*Cryptospora pulviniceps* (Peck) Sacc., Syll. Fung. 9: 940. 1891

≡*Anthostoma pulviniceps* (Peck) Ellis & Everh., N. Am. Pyren. p. 578. 1892

HOLOTYPE: Peck, on *Sambucua canadensis*, Richmondville, NY (NYS).

NOTE: Barr has synonymized this name under *Berlesiella nigerrima* (Blox.) Sacc. (Bigelow and Barr 1964).

Valsa punctostoma Ellis, Am. Nat. 17: 316. 1883

≡*Diaporthe stictostoma* Sacc., Syll. Fung. 2, Add. p. *xlviii*. 1883

HOLOTYPE: Holway 185, on *Amelanchier canadensis*, Deco-rah, IO, July, 1882 (NYS).

NOTE: This is a species of *Cryptosporella* Sacc.

Valsa pusio Berk. & Curt., in Cooke, Grevillea, 14: 46. 1885

NOTE: Not seen.

Sphaeria quadrifida Schw., Syn. Fung. Am. Bor. p. 203. 1832

≡*Valsa quadrifida* (Schw.) Cooke, Proc. Acad. Nat. Sci. Philadelphia, 29: 125. 1877

≡**Eutypella quadrifida* (Schw.) Ellis & Everh., N. Am. Pyren. p. 499. 1892

HOLOTYPE: Syn. Fung. 1378-231, Bethlehem (PH).

Cytospora quercina Schw., Syn. Fung. Am. Bor. p. 248. 1832

HOLOTYPE: Schweinitz, Syn. Fung. 2160-17, on *Quercus*, Bethlehem (PH).

NOTES: The locules of this fungus are located on the flanks of the stromata of a *Melanconis* species. Brown, fusoid α -conidia borne on cylindrical conidiophores (described in the diagnosis) and hyaline, oblong β -conidia are present. The specimen is therefore assigned to *Melanconium* Link ex Fr.

Valsa radicum. See *V. ceratosperma*.

Valsa rhizina. See *V. ceratosperma*.

Valsa rhodospora. See *V. ambiens* subsp. *leucostomoides*.

Valsa rhoiphila. See *V. ceratosperma*.

Cytospora rhois-hirtae Nutt., In Millspaugh and Nuttall, Publ. Field Columbian Mus., Bot. Ser. 1: 112. 1896

NOTE: Not seen.

Valsa ribicola. See *V. ambiens* subsp. *ambiens*.

Valsa rimicola. See *V. ceratosperma*.

Cytospora robiniae Schw., Syn. Fung. Am. Bor. p. 248. 1932

HOLOTYPE: Schweinitz, Syn. Fung. 2157-14, on *Robinia*, Bethlehem (PH).

NOTE: This is a species of *Phomopsis* (see Wehmeyer 1933).

Valsa rubi. See *V. ceratosperma*.

Cytospora rubi Schw., Syn. Fung. Am. Bor. p. 248. 1832

HOLOTYPE: Syn. Fung. 2161-18, on *Rubus*, Bethlehem (PH).

NOTE: This is a species of *Phomopsis*.

Sphaeria rubincola Schw., Syn. Fung. Am. Bor. p. 200. 1832

≡*Valsa rubincola* (Schw.) Cooke, Proc. Acad. Nat. Sci. Philadelphia, 29: 124. 1877

≡*Diatrypella rubincola* (Schw.) Starb., Bih. Kgl. Sven. Vetensk.-Akad. Handl. 19(3): 21. 1894

ISOTYPE: Syn. Fung. 1331-184, Bethlehem (PH).

NOTE: This is a species of *Diatrype*.

Sphaeria rufescens Schw., Syn. Fung. Am. Bor. p. 203. 1832

≡*Valsa rufescens* (Schw.) Peck, N.Y. State Bot. Rep. 30: 76. 1878

≡*Calospora rufescens* (Schw.) Sacc., Syll. Fung. 2, Add. p. *lxii*. 1883

HOLOTYPE: Syn. Fung. 1395-248, Salem, Bethlehem (PH).

NOTE: This is *Cryptodiaporthe aculeans* (see Wehmeyer 1933).

Valsa rugiella. See *V. ceratosperma*.

Valsa saccharina. See *V. ambiens* subsp. *leucostomoides*.

Valsa sabalina Cooke, Grevillea, 7: 52. 1878

≡**Eutypella sabalina* (Cooke) Ellis & Everh., N. Am. Pyren. p. 497. 1892

HOLOTYPE: Cooke 2437, on *Sabal*, Darien, GA (K).

Cytospora sacculus. See *V. ceratosperma*.

Valsa salicina. See p. 1362.

Cytospora sambucicola. See *V. ambiens* subsp. *ambiens*.

Valsa sambucina Peck, N.Y. State Bot. Rep. 28: 75. 1877
 ≡ *Pseudovalsa sambucina* (Peck) Sacc., Syll. Fung. 2: 137. 1883
 ≡ *Aglaospora sambucina* (Peck) O. Kuntze, Rev. Gen. plate 3, Pt. 2. p. 441. 1898
 ≡ **Thyridaria sambucina* (Peck) Wehmeyer, Lloydia, 4: 253. 1941
 HOLOTYPE: Peck, on *Sambucus canadensis*, Catskill Mts., NY (NYS).

Cytospora sambucina. See *V. ambiens* subsp. *ambiens*.

Cytospora sassafras. See *V. ambiens* subsp. *ambiens*.

Cytospora sassafrasicola Tehon & Daniels, Mycologia, 19: 122. 1927
 HOLOTYPE: 12161, on *Sassafras variifolium*, Olney, IL, June 14, 1924, leg. P. A. Young (ILLS).
 NOTE: This is a species of *Phomopsis*.

Sphaeria scabriseta Schw., Syn. Fung. Am. Bor. p. 203. 1832
 ≡ *Valsa scabriseta* (Schw.) Cooke, Proc. Acad. Nat. Sci. Philadelphia, 29: 125. 1877
 ≡ **Calosphaeria scabriseta* (Schw.) Sacc., Syll. Fung. 1: 100. 1882
 ≡ *Eutypa scabriseta* (Schw.) Berk. & Curt., Grevillea 4: 97. 1876
 ≡ *Circonostoma scabrisetum* (Schw.) House, Bull. N.Y. State Mus. 266: 41. 1925
 HOLOTYPE: Syn. Fung. 1394-247, Bethlehem (PH).
 NOTES: The perithecia in the specimen are empty, but the habit is that of *Calosphaeria*.

Sphaeria scoparia Schw., Schr. Naturforsch. Ges. Leipzig, 1: 37. 1822
 ≡ *Valsa scoparia* (Schw.) Curt., Geol. Nat. Hist. Surv. N.C. 3, Bot. p. 141. 1867
 ≡ **Eutypella scoparia* (Schw.) Ellis & Everh., N. Am. Pyren. p. 495. 1892
 ≡ *Peroneutypella scoparia* (Schw.) Berl., Icon. Fung. 3: 83. 1902
 HOLOTYPE: Syn. Fung. 1318-171, Carolina (PH).

Cytospora simplex. See *V. ambiens* subsp. *ambiens*.

Cytospora smilacis. See *V. ceratosperma*.

Valsa socialis. See *V. salicina*.

Valsa sociata Cooke & Ellis, Grevillea, 6: 11. 1877
 ≡ **Diaporthe sociata* (Cooke & Ellis) Sacc., Syll. Fung. 1: p. 614. 1882
 HOLOTYPE: Ellis, on *Benzoin odoriferum*, Newfield, NJ, May 1875 (NY)

Valsa sordida. See p. 1362.

Cytospora sphaerocephala. See *V. ceratosperma*.

Valsa subclypeata Cooke & Peck, N.Y. State Bot. Rep. 27: 109. 1875

HOLOTYPE: Peck, on *Rhododendron*, Forestburgh, NY (NYS).

NOTE: This is a species of *Leucostoma*.

Valsa subcuticularis Cooke & Ellis, Grevillea, 8: 14. 1879
 ≡ **Calsophaeria subcuticularis* (Cooke & Ellis) Ellis & Everh., N. Am. Pyren. p. 509. 1892
 HOLOTYPE: Ellis 3103, on *Ilex*, Malaga, NJ, Sept. 1878 (FH).

Valsa symphoricarpi. See *V. ambiens* subsp. *ambiens*.

Valsa tecta Cooke, Grevillea, 11: 109. 1883
 ≡ **Diaporthe tecta* (Cooke) Sacc., Syll. Fung. 2, Add. p. clviii. 1883
 HOLOTYPE: Rav., F. Am. Exs. 747, on *Myrica*, Darien, GA (NY).

Valsa tomentella Peck, N.Y. State Bot. Rep. 35: 144. 1884
 ≡ *Cryptospora tomentella* (Peck) Berl. & Vogl., Addit. Syll. Fung. p. 192. 1886
 ≡ *Cryptospora betulae* Tul. var. *tomentella* (Peck) Berl., Icon. Fung. 2: 157. 1899
 ≡ **Ophiovalsa tomentella* (Peck) Petrak, Ann. Mycol. 19: 275. 1966
 HOLOTYPE: Peck, on *Betula populifolia*, W. Albany, NY, May (NYS).

Sphaeria toxici Schw., Syn. Fung. Am. Bor. p. 200. 1832
 ≡ *Valsa toxici* (Schw.) Berk., Grevillea, 4: 99. 1876
 ≡ *Valsaria toxici* (Schw.) Sacc., Syll. Fung. 1: 746. 1882
 HOLOTYPE: Syn. Fung. 1330-183, Salem, Bethlehem (PH).
 NOTE: This is a species of *Eutypella*.

Valsa trichispora Cooke & Peck, N.Y. State Bot. Rep. 29: 58. 1876
 ≡ *Cryptospora trichispora* (Cooke & Peck) Sacc., Syll. Fung. 2: 363. 1883 (as "*Cryptospora trichospora*")
 ≡ **Ophiovalsa trichispora* (Cooke & Peck) Barr, Mycol. Mem. 6: 145. 1978
 HOLOTYPE: Peck, on *Quercus*, Greenbush, NY, Nov. (as "*Valsa trichospora*") (NYS)

Valsa tribulosa Berk. & Curt., Grevillea, 4: 102. 1876
 ≡ *Pseudovalsa tribulosa* (Berk. & Curt.) Sacc., Syll. Fung. 2: 137. 1883 (as "*Pseudovalsa tubulosa*")
 ≡ *Calospora tribulosa* (Berk. & Curt.) Sacc., Syll. Fung. 2: 232. 1883
 ≡ *Aglaospora tribulosa* (Berk. & Curt.) O. Kuntze, Rev. Gen. Plant. 3, Pt. 2: 441. 1898 (as "*Aglaospora tubulosa*")
 ISOTYPE: Curtis 5003, on *Alnus*, Society Hill, SC, Oct. 1855 (FH).
 NOTE: This is a species of *Melanconis* (see Wehmeyer 1941).

Valsa truncata. See *V. melanodiscus*.

Cytospora truncata. See *V. melanodiscus*.

Valsa tuberculosa Ellis, Bull. Torrey Bot. Club, 8: 89. 1881
 ≡ **Diaporthe tuberculosa* (Ellis) Sacc., Syll. Fung. 1: 620. 1882

- ≡*Chorostate tuberculosa* (Ellis) Sacc., Syll. Fung. 24: 750. 1928
HOLOTYPE: Ellis 9381a, on *Amelanchier canadensis*, Newfield, NJ, 6 April, 1879 (NY).
- Valsa tumidula* Cooke & Peck, in Peck, N.Y. State Bot. Rep. 29: 58. 1876
≡**Eutypella tumidula* (Cooke & Peck) Sacc., Syll. Fung. 1: 155. 1882
HOLOTYPE: Cooke 266, on *Crataegus*, Garrisons, NY (K).
- Cytospora tumulosa*. See *V. ceratosperma*.
- Sphaeria variolaria* Schw., Syn. Fung. Am. Bor. p. 203. 1832
≡*Valsa variolaria* (Schw.) Cooke, Proc. Acad. Nat. Sci. Philadelphia, 29: 125. 1877
ISOTYPE: Syn. Fung. 1371-224, Bethlehem (PH).
NOTE: This is a species of *Eutypella*.
- Valsa ventriosa* Cooke & Ellis, Grevillea, 6: 93. 1877
≡**Eutypella ventriosa* (Cooke & Ellis) Sacc., Syll. Fung. 1: 151. 1882
≡*Engizostoma ventriosum* (Cooke & Ellis) O. Kuntze, Rev. Gen. Plant. 3, Pt. 2, p. 475. 1898
HOLOTYPE: Ellis 2805, on *Ailanthus*, NJ (K).
- Valsa venusta* Ellis, Bull. Torrey Bot. Club, 9: 112. 1882
≡*Eutypella venusta* (Ellis) Sacc., Syll. Fung. 2, Add. p. vii. 1883
≡*Engizostoma venustum* (Ellis) O. Kuntze, Rev. Gen. Plant. 3, Pt. 2: 475. 1898
HOLOTYPE: Ellis, N. Am. F. 875, on *Robinia pseudoacacia*, Newfield, NJ, June, 1881 (CUP).
NOTES: This specimen is conspecific with *V. cornina* Peck. See notes under that epithet.
- Sphaeria vitis* Schw., Schr. Naturforsch. Ges. Leipzig, 1: 39. 1822
≡*Valsa vitis* (Schw.) Fuckel, Symb. Mycol. p. 199. 1870
≡*Diatrype vitis* (Schw.) Berk., Grevillea, 4: 96. 1876
≡**Eutypella vitis* (Schw.) Berl., Icon. Fung. 3: 65. 1902
HOLOTYPE: Syn. Fung. 1362-215, Salem and Bethlehem (PH).
NOTES: See Cooke (1885) for a discussion of the confusion connected with this name.
- Valsa woolworthii* Peck, N.Y. State Bot. Rep. 28: 73. 1877
≡**Diaporthe woolworthii* (Peck) Sacc., Syll. Fung. 1: 615. 1882
HOLOTYPE: Peck, on *Carya*, Greenbush, NY, May 1874 (NYS).
- Valsa xanthoxyli* Peck, N.Y. State Bot. Rep. 31: 49-50. 1879
≡*Pseudovalsa xanthoxyli* (Peck) Sacc., Syll. Fung. 2: 137. 1883
≡*Fenestella xanthoxyli* (Peck) Sacc., Syll. Fung. 2: 332. 1883
≡**Thyronectria xanthoxyli* (Peck) Ellis & Everh., N. Am. Pyren. p. 92. 1892
≡*Aglaospora xanthoxyli* (Peck) O. Kuntze, Rev. Gen. Plant. 3, Pt. 2: 441. 1898
HOLOTYPE: Peck, on *Xanthoxylum americanum*, W. Troy, NY, Oct. 1878 (NYS).

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