

Melaspilea Nyl.

(GRAPHIDALES: GRAPHIDACEAE s. lato: MELASPILEACEAE)

After Fink, and others

Rev. 5/94

Thallus immersed, often evanescent or scarcely apparent. Photobiont usually Trentepohlia, sometimes chlorococcoid or absent.

Ascomata immersed to superficial, \pm rounded to elongated and lirelliform, sometimes branched; disc exposed or slitlike, black. Thalline exciple absent. True exciple prosoplectenchymatous, sometimes indistinct, to well developed and continuous below the hymenium, or stipelike, dark brown to black. Epithecium usually dark brown. Hymenium colorless or brownstriate, I or I+ blue. Hypothecium colorless to brown. Paraphyses threadlike, simple to sparsely branched or anastomosed, mostly free. Asci elongateclavate, generally thickened at the apex, usually with I, K/I apical dome and an internal ocular chamber. Spores ellipsoid to soleshaped, colorless at first, usually 1septate [rarely to 57septate, e.g., in "M. octomera"), often \pm distinctly brown and smooth to warty at maturity, thinwalled, the cells not lensshaped, N.

Pycnospores long. Thallus usually with no substances, rarely with an unidentified pigment. On bark, more rarely rock. or other lichens. Best developed in tropical regions.

1. Parasitic on lichens. Thallus imbedded in the host and invisible.2

1. On trees or old wood, not parasitic on lichens.3

2. Apothecia 0.20.4 mm across, round to irregular, sessile; disk flat, black; exciple thin, black, becoming irregular; hypothecium hyaline; paraphyses indistinct; asci subpyriform, the apical wall somewhat thickened; spores 6 or more commonly 8, hyaline to brownish, obovoid, one cell larger, 1623 x 69 μ m. On thallus of Pyrenula sp., Louisiana and Florida.M. cupularis Mll. Arg.

2. Apothecia 0.30.9 x 0.120.2 mm, short and narrow, adante, scattered to clustered, straight or rarely and obscurely curved, very rarely branched; disk closed and usually indicated by an obscured, depressed, black line, to narrowly open, concave to flat, black; exciple rather thin, black; hypothecium hyaline; asci becoming saccate; spores brown, oblongellipsoid, 1521 x 69 μ m. On sepcies of Trypethelium, Conotrema and Thelotrema, N.

Carolina to Florida, W to Louisiana. "M. tribuloides
(Tuck.) Mll. Arg." (= a nonlichenized fungus)

3. Apothecia more or less elongated.4

3. Apothecia irregular, but not elongated.9

4. Spores 57septate. Thallus very thin, smooth, greenishgray to whitish. Apothecia 0.51 x 0.250.3 mm, irregularly oblong, sessile; disk closed to \pm open, flat, black; exciple black, prominent, becoming longitudinally furrowed; hypothecium brownish; spores hyaline to brownish, ellipsoid to fusiform, 1825 x 57 μ m. On trees, Florida and Louisiana.M. octomera Mll. Arg.

4. Spores 1septate.5

5. Apothecia reaching 0.81.5 mm in length.6

5. Apothecia not more than 0.6 mm in length.8

6. Apothecia 11.5 mm in length. Thallus thin, smooth, greenishgray to ashy white, or disappearing and the imbedded portion indicated at the surface by an ashy coloration. Apothecia 0.41 mm across, irregular, slightly immersed to adnate; disk flat, black; exciple thin, black, usually prominent; hypothecium hyaline to brownish; paraphyses conglutinate; asci subpyriform; spores hyaline to brownish, oblong, 1824 x 811 μ m. On Trees, Florida to Texas. (also see M. demissa).M. maculosa (Fr.) Mll. Arg.

6. Apothecia not more than 0.8 mm in length.7

7. Thallus greenish gray to ashy. Thallus very smooth, greenish gray to ashy, sometimes disappearing, and the imbedded portion indicated at the surface by a grayish coloration. Apothecia 0.40.8 x 0.10.25 mm, short to elongated and narrow, sessile; disk closed to \pm open, flat, black; exciple thin, black, prominent; hypothecium hyaline; paraphyses unbranched; asci cylindricoclavate; spores 48, hyaline, oblongovoid, one cell larger, 1217 x 46.5 μ m. On old wood, Massachusetts.M. cinerascens (Willey) Fink

7. Thallus whitish or creamy, \pm evanescent. Thallus thin to very thin, smooth. Apothecia 0.11.0 x (0.1)0.20.4 mm, aggregated into groups, sometimes crowded, elongate, branched, often triradiate, erumpent to \pm superficial; disc slitlike but expanded with age; true exciple thin, black, prominent, strongly inflexed at first; hymenium \pm colorless, I; hypothecium hyaline; paraphyses indistinct, anastomosed; asci 4065 x 1217 μ m, 8 spored, clavate, with an internal ocular chamber, I; spores 1217

x 47 um, soleshaped to obovoid, colourless, becoming pale brown, one cell larger. On bark of deciduous trees and conifers, Louisiana and California.M. constrictella (Stirton) A. L. Sm.

8. Apothecia 1(2) x 0.10.2 mm (0.20.4 mm long according to Fink). Thallus very thin, whitish, or disappearing, the imbedded portion indicated at the surface by an ashy white coloration. Apothecia irregularly oblong or elliptical, sessile; disk closed to \pm open, flat, black; exciple thin, black, prominent; hypothecium hyaline; hymenium ca. 70 um thick (incl. epithecium), colorless or yellowish brown, I+ yellowish brown; epithecium ca. 13 um or indistinct, yellowish brown; paraphyses free, not numerous, simple; asci \pm clavate to subpyriform, 4340 x 10.513 um; spores 8, biseriate, 1septate, constricted, hyaline to pale brown, (15)1724 x (6.5)8.510.5 um, ovoid, one cell somewhat broader. Excipulum dimidiate. On bark in deciduous forest, Smoky Mountains and Massachusetts; also reported from Maryland, Pennsylvania, Illinois and Iowa.M. demissa (Tuck.) Zahlbr.

8. Apothecia 0.40.6 x 0.20.4 mm. Thallus very thin, smooth, whitish. Apothecia round to variously irregular, sessile; disk flat, black; exciple thin, black, rarely disappearing; hypothecium hyaline; paraphyses indistinct; asci broadly clavate to subpyriform; spores hyaline, ovoid, one cell larger, 1217 x 56.5 um. On trees, New Hampshire.M. deformis (Schaerer) Nyl.

9. Apothecia reaching 0.81 mm across.10

9. Apothecia not more than 0.4 mm across.11

10. Spores 1218 x 68.5 um. Thallus thin, smooth to somewhat powdery, whitish to light gray, often disappearing; with upper cortex to 70 um thick (according to Poelt). Apothecia solitary, \pm evenly distributed, 0.41 mm across (to 23 mm wide according to Poelt), \pm immersed to adnate, round to irregularly oblong (ellipticalmultangular); disk flat to slightly convex (or strongly convex according to Poelt), black; exciple thin, black, prominent or rarely disappearing; hypothecium brownish to dark brown; paraphyses rarely branched, enlarged toward apices; asci clavate; spores hyaline to smoky brown, oblong, cells equal. Stylospores in hemispherical envelope, elliptical, 810 x 45 um. On deciduous trees, New England, Florida, Louisiana, Iowa, Nebraska, Minnesota.M. arthonioides (Fe) Nyl. (= M. urceolata (Fr.) Almb. according to Poelt

10. Spores (12)1622 x 710(12.5) um, soleshaped, 48, smooth,

remaining colorless or pale brown. Thallus evanescent, gray to cream, very thin, smooth. Apothecia to 0.30.8(1.5) mm diam., rounded or irregularly angular, erumpent; disc flat, black; true exciple thin, black, somewhat irregular; hymenium colorless to brownish in parts, I+ blue; hypothecium brownish to dark brown; paraphyses few, slender, branched and anastomosing; asci 4575 x 1225 um, (4)8spored, clavate to subpyriform, the apical wall somewhat thickened, with an internal ocular chamber, apex I+ blue. On smooth bark of oak. Louisiana.M. amota Nyl.

11. Disc open, flat, and somewhat wrinkled, black. Thallus very thin, whitish gray, often scarcely visible (according to Fink; with lower cortex according to Poelt). Apothecia solitary, ± symmetrically distributed, 0.10.25 mm across, round to somewhat irregular, sessile; exciple thin (1520 um wide laterally), black; hypothecium yellowish (hyaline according to Fink); asci subpyriform; spores hyaline to brownish, ovoid, cells equal (one cell larger according to Fink), 1719 x 78 um (according to Fink; 1822 x 79 um in f. proximella, 2428 x 1012 um in f. fugax (Mll. Arg.) Redgr., according to Poelt). On deciduous trees and conifers, Vermont.M. proximella Nyl.

11. Disc closed to narrowly open. Thallus inconspicuous, very thin, smooth, ashy, sometimes disappearing. Apothecia 0.20.8 x 0.10.2 mm, oblong to ellipsoid (round to irregular according to Fink), branched (rarely so according to Fink), usually curved, sometimes aggregated, superficial; disk closed or narrowly open, black; true exciple thick, raised, inflexed; hymenium colorless, I+ blue; hypothecium colorless and in contact with the substratum; paraphyses confluent, sparsely branched; asci 3750 x 1426 um, (4)8spored, clavate, with an internal ocular chamber, I; spores 1321(23) x 511 um, soleshaped to obovoid or ellipsoid, ± warted, brown, one cell larger. On smooth surface of mature pine bark, Massachusetts. "Material is doubtful" according to Fink.M. lentiginosula (Nyl.) A. L. Sm.

ADD:

Louisiana. M. mesophlebia Mll. Arg.

M. stellans Zahlbr.

Literature

Awasthi. 19 . Microlichens of India, etc.

Degelius, G. 19 . Lichens of Smoky Mountains.

Fink, B. 1935. Lichen Flora of the United States.

Galloway, D. 1985. Flora of New Zealand Lichens.

Hawksworth, D. L. 1992. Melaspilea. In: Purvis, et al., Lichen Flora of Great Britain and Ireland.

Poelt, J. 1969. Bestimmungsschlssel europischer Flechten.

Redinger, 1937/1938. [Cited by Poelt; need to see this]