

**Mycoporum Flotow ex Nyl.**  
[Flotow in Körber according to Awasthi]  
(MYCOPORACEAE)

After Harris, 1973, 1995

Rev. 5/94

Thallus immersed, inconspicuous or slightly bleaching the substratum, almost homeomerous, ecorticate. Ascomata circular or irregular in outline, partially or entirely crestlike divided (peridia) with one to several perithecia-like locules, each with a lateral or terminal ostiole. Involucrum overlying the locules, dark brown, K-, clypeate, composed of compacted hyphae and bark cells; outer and lower edges of locules without a distinct true exciple. Hamathecium of branched, short-celled,  $\pm$  moniliform pseudoparaphyses,  $\pm$  gelatinized and indistinct when the asci are fully mature (or persistent and branched and compact, according to Awasthi), I-. Asci 8-spored, fissitunicate, broadly ellipsoid, obpyriform or subglobose, I-, thickened at the top. Spores 3-5-septate transversely, with a few longitudinal divisions (submuriform) when mature,  $\pm$  ovoid-oblong, constricted at middle septum with the upper half wider and more rounded than the lower, colorless (or brownish according to Awasthi); perispore not apparent. Conidiomata not known. No substances. At least one species is lichenized, with Trentepohlia (Palmella according to Awasthi). On smooth bark of twigs and branches. Temperate.

1. Ascoma simple, with only a single chamber. .... 2
1. Ascoma compound, with several to many chambers, each with a pore, each containing many asci. .... 3
  2. Ascospores mostly 2-celled, 4-celled and brownish in old age, 28-40 x 8-12  $\mu$ m. Florida.; Maine, Oregon, Washington. .... M. antecellens (Nyl.) R. C. Harris
  2. Ascospores muriform, 22-37 x 7-9.5  $\mu$ m, with 8-9 rows of locelli, not seen to become brownish. Florida. .... M. uniloculatum R. C. Harris
3. Ascospores muriform. .... 4
3. Ascospores transversely septate. .... 6
  4. Ascospores 23-28(-30) x 9-12  $\mu$ m, with 8 rows of locelli. Not uncommon, Florida, Alabama, South Carolina. .... M. acervatum R. C. Harris
  4. Ascospores over 30 x 12  $\mu$ m. .... 5
5. Ascospores 30-38(-43) x 12-17(-18)  $\mu$ m, with 8-9 rows of locelli. On trees, Massachusetts to Florida, W to Ohio and Nebraska; the report from California is based on an Arthothelium. .... M. compositum (Massal.) R. C. Harris (synonym M. ohioense, M. pycnocarpum)
5. Ascospores (36-)39-48(-55) x (14-)16-21(-24)  $\mu$ m, with (9-)10(-11) rows of locelli. Florida. I haven't seen a description of this species. .... M. pycnocarpoides Müll. Arg.
  6. Ascospores mostly 4-celled, only immature ascospores 2-celled. .... 7
  6. Ascospores mostly 2-celled, some becoming 4-celled when old. .... 8
8. Ascospores 17-22 x 5.5-7  $\mu$ m; physes obscured by oil. California; rare in Florida. .... M. californicum (Zahlbr.) R. C. Harris
8. Ascospores 15-17 x 4-5.5  $\mu$ m; physes not obscured by oil. Rare, Florida. .... (Tomasellia americana)

9. Ascospores relatively short and “fat”, 1.5-2.5 times longer than broad, 17-22(-25) x 7.5-10  $\mu\text{m}$ ; upper cell markedly shorter than lower. Common, Florida. .... M. sparsellum Nyl.
9. Ascospores fusiform, relatively slender, 2.5-4 times longer than broad. .... 10
10. Ascospores small, 10-13 x 3-3.5  $\mu\text{m}$ ; ascoma with a distinct brown basal layer; macroconidia oblong, c. 5 x 2  $\mu\text{m}$ . On Taxodium or old wood. Florida. .... M. buckii R. C. Harris
10. Ascospores larger, over 15 x 5  $\mu\text{m}$ ; ascoma without well developed brown basal layer; macroconidia not known. .... 11
11. Ascospores 17-20(-22) x 5-6(-7)  $\mu\text{m}$ . Very common. Florida. .... M. eschweileri (Mull. Arg.) R. C. Harris
11. Ascospores 20-27 x 6.5-8  $\mu\text{m}$ . Not uncommon, Florida; Massachusetts. .... M. lacteum (Ach.) R. C. Harris (syn. M. difforme Minks)

### **M. acervatum**

Thallus indicated by whitish blotch on bark, in type patchily covered by small clumps of algae. Ascomata orbicular to  $\pm$  irregular in outline, flattened, 0.5-1.0 mm diam. Asci obpyriform, 60-75 x 30-40  $\mu\text{m}$ , with ascospores irregularly arranged. Ascospores oblong-elliptical with rounded ends, slightly constricted at median septum, colorless (no brown ones observed), muriform, with 8 rows of 2-6 cells, 23-28(-30) x 9-12  $\mu\text{m}$ . Pycnidia with microconidia, oblong, 3 x 1.5  $\mu\text{m}$ .

### **M. antecellens**

Asocarps superficial, hemispherical to flattened, 0.3-0.6 mm diam.; wall brown, not heavily carbonized, lacking below. Paraphyses thick, to 3  $\mu\text{m}$ , somewhat irregular. Asci ovate to narrowly ovate, (65-)80-105 x (20-)27-35(-40)  $\mu\text{m}$ . Spores irregularly arranged, narrowly ovate; perispore usually not obvious. Microconidia short, rod-like, 3-4 x 1  $\mu\text{m}$ . On smooth bark. Maine, Oregon, Washington; Florida.

### **M. buckii**

Thallus a whitish blotch on substrate. Ascomata black, superficial, compound, multiostiolate, with many chambers, orbicular to elliptical (elongated with the grain of the wood), 0.5-1.0 mm diam., or to c. 0.5 x 1.0 mm, with a brown basal layer. Asci obclavate to  $\pm$  fusiform, 40-55 x 10-14  $\mu\text{m}$ , with ascospores weakly biserial to irregularly arranged. Ascospores fusiform, colorless, 2-celled, 10-13 x 3-3.5  $\mu\text{m}$ . Microconidia not found. Pycnidia with macroconidia, oblong, colorless, c. 5 x 2  $\mu\text{m}$ .

### **M. californicum**

Spores 17-22 x 5.5-7  $\mu\text{m}$ . Asocarps orbicular, elliptical or irregular in outline, 0.3-0.7 mm in diameter or length, often ca. 0.1 mm or less in width, 0.05-0.1 mm in height, with few to many locules. Asci mostly ovate or elliptical, less commonly narrowly ovate or narrowly elliptical, 45-60 x (15-)20-27  $\mu\text{m}$ . Spores irregularly arranged, narrowly ovate, mostly 4-celled; perispore thin. On smooth bark. California, Texas; Florida; Hawaii

### **M. compositum**

Thallus thin, smooth to slightly rough or rarely scurfy or warty, ashy gray, sometimes disappearing. Trentepohlia present in scattered clumps, not abundant. Perithecia scattered, 0.2-1.0 mm long, usually 0.1-0.2 mm less in width (0.3-0.5 mm across according to Fink), elliptical, oblong or irregular, the superficial portion cushion-shaped, convex to subhemispherical or often depressed,  $\pm$  distinctly papillate, dark brown to black, often slightly shiny; ascocarp compound (resembling a group of small black beads glued together), containing 1-10 separate chambers, each with its own ostiole; ostioles large, usually easily visible (especially when wet) due to lighter color; upper layer of stroma dark, carbonaceous, ca. 20-40  $\mu$ m thick, carbonization usually not penetrating very far downward into the sterile layers separating the chambers, which are mostly hyaline, ca. 10-20  $\mu$ m thick, stromatic layer at the base hyaline or somewhat carbonaceous, especially below the layers separating the chambers. Hymenium I-. Interthecial hyphae indistinct, short-celled, much branched and anastomosed, appearing almost parenchymatous. Asci obclavate-saccate, much thickened at tip, 70-85 x 35-50  $\mu$ m. Spores 8 per ascus, initially hyaline, soon brown, oblong to oblong-ellipsoid, muriform, 7-9(-11)-septate transversely and 1-3-septate longitudinally, (23-)33-46 x (9-)13-19  $\mu$ m [the much larger dimensions in M. ohioensis given by Fink, is in error, based on the asci, not the spores], constricted only at the median septum, dividing the spores into two usually unequal parts.

### **M. eschweileri**

Spores 17-20(-22) x 5-6(-7)  $\mu$ m. Ascocarps orbicular to irregular, 0.3-0.6(-0.8) mm in diameter or length, often somewhat less in width, 0.06-0.12 mm in height, with few to many locules. Asci narrowly ovate, 42-65 x 20-23(-26)  $\mu$ m. Spores irregularly arranged, narrowly ovate, mostly 2-celled, a few spores becoming 4-celled; perispore thin. Microconidia baciliform, 4-5 x 1  $\mu$ m. On bark and rarely on palmetto petioles. Material from Iowa and Minnesota have a very thin wall, and the spores tend to collapse. Southeastern U.S. .

### **M. lacteum**

Spores (18-)20-27 x (5-)6.5-8  $\mu$ m, mostly 1-septate (a few 3-septate), the upper cell broader and with  $\pm$  pointed apex, each cell biguttulate, colorless, but a few old spores sometimes 3-septate and/or brownish; perispore thin to moderately thick. Ascomata 0.25-0.6(-0.8) mm in diameter or length, 0.09-0.13 mm in height,  $\pm$  circular to elliptical or more usually irregular in outline, with (1-)2-15 locules, sometimes decaying at center leaving an irregular circle of locules; tissue between locules colorless or pale brown. Pseudoparaphyses 1.2-1.7(-2)  $\mu$ m wide, the cells 7-12  $\mu$ m long. Asci ovate to elliptical or narrowly ovate to narrowly elliptical, 50-75(-100) x (17-)24-27(-30)  $\mu$ m. Spores irregularly arranged, narrowly ovate. Pycnidia rare, 30-60  $\mu$ m diam.; conidia 3-4 x 0.8  $\mu$ m. On bark and wood. California, Alabama, Florida, Massachusetts, South Carolina, Texas.

Thallus very thin, greenish gray to ashy, smooth, or imbedded and indicated by a whitish area. Perithecia small, 0.3-0.5 mm across, partly immersed, the superficial portion round to oblong or irregular, strongly convex, becoming obscurely papillate; spores 1-3-septate, ellipsoid, 16-27 x 5-9  $\mu$ m. On trees, Massachusetts. .... [Mycopterellum difforme (Minks) Fink]

### **M. pycnocarpoides**

**M. sparsellum**

Spores 1.5-2.5 times longer than broad, 17-22(-25) x 7.5-10  $\mu\text{m}$ . Ascocarps orbicular, elliptical or irregular in outline, 0.4-0.6 mm in diameter or length, often somewhat less in width, 0.08-0.2 mm in height, with relatively few locules (up to c. 15). Asci ovate or elliptical, 55-85 x 24-35  $\mu\text{m}$ . Spores irregularly arranged, ovate, 2-celled; perispore thin. Microconidia baciliform, 4-5 x 1  $\mu\text{m}$ . Florida.

**M. uniloculatum**

Thallus indicated by pale olive brown blotch apparently due to a superficial layer of algae in clumps that do not seem to be surrounded by hyphae. Ascomata orbicular, flattened, 0.1-0.2 mm diam., with a single hymenium, with a weak clypeal ring. Physes with short, irregular cells, mostly obscured by oil droplets. Asci obpyriform, c. 60-75 x 30-35  $\mu\text{m}$ , with irregularly arranged ascospores. Ascospores fusiform, constricted at median septum, colorless, muriform, with (6-)8 rows of 1-4 locelli, 22-32 x 7-9.5  $\mu\text{m}$ . Pycnidia with short rod-like microconidia, 3-5 x 1  $\mu\text{m}$ .

**Literature**

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