

Julella Fabre
(INCERTAE SEDIS)

After Harris, 1995, and others

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Thallus crustose, not, or only facultatively lichenized; photobiont, if present, Trentepohlia. Perithecia circular to ellipsoid in outline. Involucrellum dark, usually laterally spreading, composed of compacted hyphae and bark cells; wall pigment greenish or brown, K+ greenish, N-; exciple thin, pale or colorless, surrounding the centrum. Hymenium I-. Hamathecium of abundant, richly branched and anastomosing, slender paraphyses. Asci (2-)8-spored, cylindrical to clavate, I-, the inner wall thickened towards apex, \pm with a shallow, broad ocular chamber. Spores ellipsoid, submuriform to muriform, colorless, with a distinct, gelatinous perispore. Pycnida black; conidia bacilliform to shortly thread-like, simple, colorless. No substances. On bark. Temperate to tropical.

I. Asci with 2 or 4 Ascospores

1. Asci containing 4 spores. Ostiole apical, colorless. Ascomata \pm superficial, with narrow hyphal ring. microconidia 15-18 x 0.5 μ m. Spores (20-)30-35(-45) x 12-15 μ m, with 7-9 rows of cells. Thallus very thin to thin, smooth to slightly rough, ashy gray to whitish, becoming chinky and subareolate. Non-lichenized (according to Harris; lichenized, with Trentepohlia, according to Wirth). Perithecia scattered, (0.1-)0.25-0.4 mm across, round, hemispherical to conical, initially immersed but finally superficial, the superficial portion strongly convex and black, slightly shiny, surrounded by a dark hyphal ring; ostiole minute and scarcely visible; wall entire, brown, thicker above, ca. 50 μ m, thinner below, 15-20 μ m. Hymenium I-. Interthecial hyphae ca. 1-2 μ m thick, septate, branched and anastomosed. Asci cylindrical to clavate, tip little thicker than the walls, inner surface with a broadly rounded indentation. Spores hyaline (or tinged brownish according to Fink, oblong to broadly ellipsoid, 5-8(-9)-septate transversely and (1-)2-3-septate longitudinally (rarely to 5-septate according to Fink), irregularly arranged, slightly constricted at the septa, especially the median one; thick gelatinous sheath evident in K. On various barks, Maine to Michigan (also S. Carolina, Tennessee and Illinois, according to Fink).J. lactea (Massal.) Barr

1. Asci with 2 spores. 2

2. Ascospores 27-35 x 10-12.5 μ m, with 8-9 rows of cells; microconidia 14-17 x 0.5 μ m. Texas. J. dispersa (Mull. Arg.) R. C. Harris

2. Ascospores 40-51 x 17-21 μ m, with 9-11 rows of cells. Ascoma not strongly immersed; clypei often fused; ostioles often surrounded by a whitish ring. Growing on a wide variety of bark in dry habitats. Florida. J. geminella (Nyl.) R. C. Harris

II. Asci at least initially containing 8 spores (rarely 1-several aborting)
Spores hyaline

1. Asci clavate to pyriform with biseriately to irregularly arranged spores. 2
1. Asci long-cylindrical, 200-300 x 20-25 μm , with uniseriate spores. Spores 24 x 9 μm or over. 8
 2. Asci broad, mostly pyriform but occasionally long-ellipsoidal; ascospores 26-38 x 12-16 μm , with 8-10 rows of cells; microconidia 10-20 μm long. Superficial thallus thin, in small or larger areas, smooth, somewhat shining, greenish gray, varying toward ashy or yellowish. Perithecia oblong, 0.15-0.3 x 0.25-0.5 mm across, superficial portion convex, black; spores oblong-ellipsoid, 8-12-septate transversely and 2-3-septate longitudinally, 22-37 x 11-18 μm . On trees, Louisiana, Florida, S. Carolina, Texas J. sublactea (Nyl.) R. C. Harris (synonyms: Polyblastiopsis sublactea, Clathroporina exciugella; Clathroporina amygdalina sensu Fink--description from Fink; may be not be good)
 2. Asci narrower clavate or short-cylindrical. 3
3. Ascospores 25 μm long or more. 4
3. Ascospores 25 μm long or shorter. 6
 4. Spores with 4 rows of cells. Ontario. Spores 25-30 x 7.5-10 μm ; asci 65-75 x 25-30 μm . Thallus absent; no algae seen. Ascocarps scattered, brownish black, hemispherical or slightly flattened, not much immersed, ca. 0.25 mm diam.; wall lacking below, 20-30 μm thick. Hymenium I-. Interthecial hyphae 2-3 μm thick, septate, branched and anastomosed. Asci obclavate to obovate, thickened at the tip. Spores 8, irregularly arranged, clavate with the upper part considerably shorter and broader than the lower, 5-septate transversely, 1-4 cells longitudinally septate, with a gelatinous sheath. On Alnus, Ontario. J. sp. 2 (Harris, 1973; not mentioned by Harris 1995)
 4. Spores with 8-10 rows of cells. Florida. 5
5. Microconidia filiform, curved, 16-27 μm long; ascospores 24-34 x 8.5-11 μm , with 8-10 rows of cells. Florida. J. variiformis R. C. Harris
5. Microconidia rod-shaped, 6-9 μm long; ascospores 24-33 x 10-15 μm , with 8(-10) rows of cells. Florida. J. asema R. C. Harris
 6. Growing in northern areas. Spores 17-19 x 6-7.5 μm ; asci 35-45 x 18-30 μm . Thallus lacking; no algae seen. Ascocarps scattered, brown to blackish, 0.15-0.20 mm diam.; wall lacking below, 20-30 μm thick. Hymenium I-. Interthecial hypahe thick, septate and much branched with an almost parenchymatous appearance. Asci oval to obovate, wall thickened at the tip. Spores 8, irregularly arranged, hyaline, ovate-elliptic to clavate, 3-5-septate transversely, 1-2(-4) cells longitudinally septate, with a gelatinous sheath. On Quercus and Betula, Minnesota and S. Dakota. J. sp. 1 (Harris, 1973; not mentioned by Harris 1995)
 6. Growing in California or Florida. 7
7. Microconidia not known; ascospores 13-19 x 7-9 μm . California. [Peltosphaeria californica Petrak] (no material seen by Harris)
7. Microconidia 6-10 μm long; ascospores 17-23 x 7-9 μm . Asci cylindrical to clavate or narrowly obovate; spores submuriform, 5-7 x 1-2-septate, (14-)17-25 x (6-)7-10 μm , usually constricted at the septa, more so at the median septum; one half of the spore sometimes broader than other; thick gelatinous sheath present. Thallus thin, ashy gray or whitish, slightly rough, or

the superficial portion sometimes absent and the imbedded portion indicated by a grayish coloration, or not evident when on Betula. Non-lichenized. Perithecia scattered, 0.15-0.3 mm across, hemispherical, especially when young, but in age flat-topped or even depressed in the center, roundish to ellipsoid, when on Betula surrounded by a longish, blackish, 0.5-1 mm across hyphal ring; superficial portion hemispherical, black, sometimes shiny; ostiole minute, rarely visible, sometimes indicated by a whitish area; wall entire or dimidiate, brown, often olive-greenish around the ostiole (N-, K+ olive-green), colorless and thinner below. Hymenium I-. Interthecial hyphae 1.5-2 μ m thick, short-celled, much branched and anastomosed, occasionally appearing almost parenchymatous. Asci with inner surface of thickened tip with or without an indentation, 50-105 x 15-25 μ m. Spores oblong to ellipsoid, irregularly arranged, hyaline. Pycnidia black, 50-100 μ m diam.; microconidia colorless, simple, rod-shaped, 8-10 x 1-1.5 μ m. On various hardwood trees, Florida (questionable), Louisiana, Mississippi, S. Carolina to Maine, W to Minnesota and Iowa; Canada. J. fallaciosa (Stizenb. ex Arnold) R. C. Harris

7. Ascospores large, 29-46 x (9.5-)11-14 μ m. 8

7. Ascospores smaller, 24-30 x 9-11 μ m. Microconidia 5-6 μ m long. Spores with 8-9 rows of cells. On Xanthoxylum, Florida. J. sp. (Harris 1995)

8. Ascospores 36-46 x 12-13(-15) μ m, rather irregularly 7-11 x 1-2-septate, with large cells; microcnidia 6-7 μ m long. On bark of Taxodium, Florida. J. taxodii R. C. Harris

8. Ascospores 29-37 x 11-14 μ m, regularly 7-11 x 2-4-septate, with smaller cells; microconidia 10-11 μ m long. On decorticate stems of shrubs, California. J. vitrispora (Cooke & Harkness) Barr

Descriptions of Species

J. asema

Thallus indicated by whitish discoloration of bark. Ascomata orbicular, initially immersed and flat, becoming hemispherical, 0.5 mm diam., with or without a dark surrounding clypeoid ring; ostiole sometimes surrounded with pale ring. Asci oval to clavate, with 8 spores \pm biserially arranged. Ascospores with one end narrower, often slightly constricted at median septum, 7(-9) x 2-4-septate, 24-33 x 10-15 μ m, often with a gel sheath. Microconidia rod-shaped, 6-7 μ m.

J. taxodii

Thallus not evident or a whitish discoloration of the bark. Ascomata immersed to somewhat emergent with age, \pm spherical, 0.45-0.7 mm diam., usually with a broad clypeus, 0.6-1.8 mm diam. ASci narrowly cylindrical, 200-300 x 20-25 μ m, often with a long stipe, with 8 uniseriate spores. Ascospores fusiform, rather irregularly 9-10 x 1-2-septate with large cells, 36-46 x 12-13(-15) μ m, often with an obvious gel sheath. Microconidia rod-shaped, 5-7 x 0.5 μ m.

J. variiformis

Thallus indicated by whitish or grayish area of disrupted bark. Ascomata extremely variable, from forms with immersed ascomata and the clypeus flush with the bark surface and a whitish ring around the ostiole (young forms?) To foms \pm superficial and hemispherical with a dark hyphal, clypeoid ring well developed to absent, on barks which erode occasionally and thus raised on pedestals of bark held together by the ascoma, black; centrum c. 0.5 mm diam., but

clypeus to 2 mm

diam. and irregular groups of fused clypei to several mm; clypeus with dense to diffuse hyphae in upper bark layer. Asci fusiform to \pm clavate, with 8 mostly biseriate spores. Ascospores long-ovoid or short-cylindric, 7 x 1-3-septate, 24-34 x 8.5-11 μ m, often with an obvious gel sheath. Microconidia filiform, arcuate, (16-)22-27 x 0.5 μ m. In exposed, often dry, scrub habitats.

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Literature

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