New taxa of *Laeticorticium* (Aphyllophorales, Corticiaceae)

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Three species of *Laeticorticium* are described as new: ***L. canfieldii*** from Arizona; ***L. durangensis*** from Mexico; and ***L. mississippiensis*** from Mississippi.

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Trois nouvelles espéces de *Laeticorticium* sont décrites: ***L. canfieldii*** provenant de l'Arizona; ***L. durangensis,*** du Mexique; et ***L. mississippiensis,*** de l'Etat du Mississippi.

The genus *Laeticorticium* was erected by Donk (1956) to encompass those taxa of corticiaceous fungi that possess a catahymenium consisting of dendrohyphidia, basidia that at an early stage in their development produce (in a number of species) a thick- to thin-walled probasidium, clamped hyphae, and smooth basidiospores that do not possess starch or dextrin in their cell walls as demonstrated by Melzer's reagent.

In the course of our investigations we have examined type or authentic material for all known species of the genus except *Laeticorticium roseum* (Pers. per Fr.) Donk (original examples of which are not available). We conclude from our studies that three taxa are heretofore unknown and they are described herein as new.

Laeticorticium canfeldii M. J. Larsen et Gilbertson, *sp. nov.* Figs. 1–2

ETYMOLOGY: Named for E. R. Canfield.

Basidiocarpa resupinata; area fecunda subroseobubalina; hymenio superficie laevi; hyphis subiculis 2.5–4 μm diam, fibulatis; probasidiis (Fig. 1) adsunt; basidiis (Fig. 1) 90–120 × 8–10 μm, sinuosis clavatis; basidiosporis (Fig. 2) 11–15 × 6-8.5 μm, late ellipsoideis, conglomeratis carneis, hyalinis in alcalinis inferis microscopicis.

Heterothallinis et ? bipolaribus.

HOLOTYPUS: U.S.A.: Arizona, Coronado Nat. Forest, Graham Co., Pinaleno Mts., ad ligna *Juglans major* (Torr.) Heller, leg. E. R. Canfield 72-11, 10 II 1972 (ARIZ[1]), et isotypus in CFMR.[2]

Basidiocarp annual, resupinate, effused in small patches, separable in small pieces, up to 0.4 mm thick; hymenial surface smooth, pinkish buff (near Seashell Pink[3]), subiculum white; sterile margin narrow, villose, white.

Hyphal system monomitic. Subicular hyphae 2.5–4 μm diam, clamped, thick-walled, hyaline; dendrohyphidia abundant and forming a distinct catahymenium of extensively and intricately branched hyphae, clamped; probasidia (Fig. 1) present, somewhat globose to irregular in outline, frequently thick-walled, usually located directly adjacent to, but not in, subicular tissue; basidia (Fig. 1) 90–120 × 8–10 μm, sinuous-clavate, four-sterigmate, with sterigmata up to 6 μm long; basidiospores (Fig. 2) 11–15 × 6–8.5 μm, broadly ellipsoid, sometimes tapering noticeably towards the apicular end, hyaline, with walls smooth.

REMARKS: *Laeticorticium canfieldii* is morphologically very similar to *L. roseum* (Pers. per Fr.) Donk, *L. durangensis* M. J. Larsen et Gilbertson, and *L. roseum* - gp. B of Boidin *et al.* (1968). *Laeticorticium roseum* is homothallic, and the

[1]Unless otherwise indicated, capital letters used to designate herbaria are those of Lanjouw and Stafleu (1964).

[2]Herbarium of the Center for Forest Mycology Research, Forest Products Laboratory, Forest Service, U.S. Department of Agriculture, Madison, Wis., 53705.

[3]Capitalized color names are from Ridgway (1912).

basidiospore size of *L. canfieldii* (11–15 × 6–8.5 μm) separates it from *L. durangensis* and *L. roseum* - gp. B, where spores measure 16–24 × 8–12 μm and 9–12 × 7–9 μm, respectively. Dimon crosses have been attempted between *L. canfieldii* and *L. roseum* - gp. B, but compatibility could not be demonstrated.

Additional collections and isolates of this species have not been obtained. This species is apparently associated with a white-rot.

Laeticorticium durangensis M. J. Larsen et Gilbertson, *sp. nov.* Figs. 3–4

ETYMOLOGY: From *durango* (Province of Durango, Mexico) + *-ensis* (L., suff. indic. origin) = *durangensis.*

Basidiocarpa resupinata, rimosescenti; contextibus bistratosis; area fecunda subroseobubalina; hymenio superficie laevi; hyphis subiculis 2.5–4 μm diam, fibulatis; probasidiis (Fig. 3) adsunt; basidiis (Fig. 3) 40–50(–70) × 10–12 μm, sinuosis clavatis; basidiosporis (Fig. 4) 16–19–24 × 8–10-12 μm, late ellipsoideis vel anguste ellipsoideis, conglomeratis carneis, hyalinis in alcalinis inferis microscopicis.

Heterothallinis et bipolaribus.

HOLOTYPUS: Nova Hispania, Durangensis, ad strobilis et ramis *Pinus ponderosa* Laws., leg. G. B. Cummins, 13 X 1971 (FP 133141 in CFMR).

Basidiocarp annual, resupinate, adnate, occurring in small patches and effused up to 4 × 3 cm, up to 0.4 mm thick; hymenial surface smooth and undulating, becoming pulverulent, pale pinkish buff (near Seashell Pink), cracking on drying and exposing a pale pink to pale orange layer of tissue below the hymenial surface; subiculum white; sterile margin abrupt, narrow, pruinose, paler than hymenial surface.

Hyphal system monomitic. Subicular hyphae 2.5–4 μm diam, clamped, thick-walled, hyaline; dendrohyphidia abundant and forming a distinct catahymenium, 3-4 μm diam, intricately branched, clamped; probasidia (Fig. 3) thick-walled, irregularly shaped; basidia (Fig. 3) 40-50 (–70) × 10–12 μm, clavate, normally sinuous and contorted, four-sterigmate, sterigmata up to 8 μm long; basidiospores (Fig. 4) 16–19–24 × 8–10–12 μm, distinctly pink in mass (spore print), hyaline under the microscope, broad to narrowly ellipsoid, sometimes with septa.

REMARKS: Single spore matings have demonstrated that the species is heterothallic and bipolar. Distinct diffusion zones are produced when the fungus is grown on gallic and tannic acid. Cultures also react strongly to gum guaiac solution, indicating that the organism probably produces a white rot.

Laeticovticium mississippiensis Lentz ex M. J. Larsen et Gilbertson, *sp. nov.* Figs. 5–6

ETYMOLOGY: From *mississippi* (State of Mississippi) + *-ensis* (L., suff. indic. origin) = *mississippiensis.*

Basidiocarpis resupinatis, pruinosis; area fecunda pallidobubalina; hymenio superficie laevi; hyphis subiculis 2–3.5 μm diam, fibulatis, encrustatis; probasidiis (Fig. 5) adsunt; basidiis (Fig. 5) 40–65(–75) × 9–13 μm, sinuosis clavatis; basidiosporis (Fig. 6) 15–18 × 8–11 μm, obovatis vel late ellipsoideis, hyalinis.

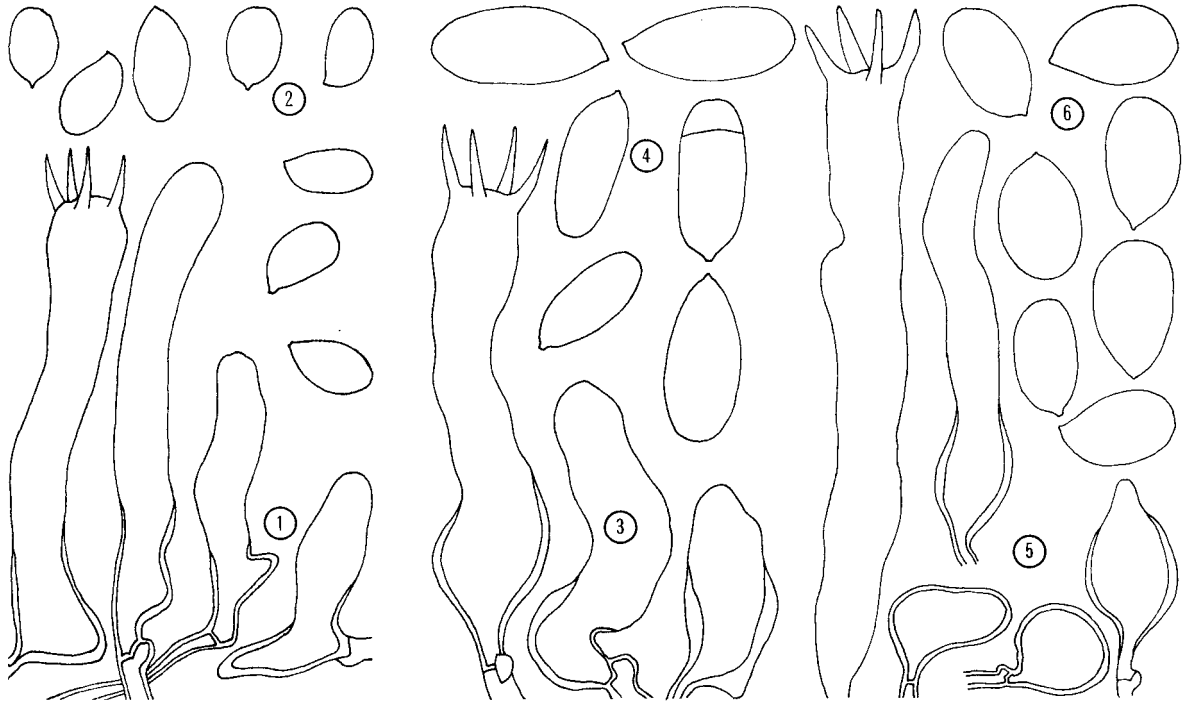
HOLOTYPUS: U.S.A.: Mississippi, Stoneville, ad ligna "*Morus* sive *Carya,*" leg. P. L. Lentz, 7 X 1955, FP 106664 (BPI), et isotypus in CFMR.

Basidiocarps annual, resupinate, occurring in small patches which eventually coalesce, up to 0.2 mm thick, pruinose; fertile area pale buff (near Light Buff to Light Ochraceous-Buff); hymenial surface smooth; subiculum obscure, apparently concolorous with, to paler than, the fertile area; sterile margin narrow, pruinose, concolorous with, to paler than, the fertile area.

Hyphal system monomitic. Subicular hyphae 2–2.5(–3) μm diam, clamped, becoming 3–3.5 μm towards the hymenium, heavily encrusted with granular appearing material; dendrohyphidia arising from the same tissue as basidia, 2–4 μm diam at base, clamped, becoming extensively and very intricately branched; probasidia (Fig. 5) formed directly adjacent to subicular tissue, normally irregular in outline but frequently napiform, 12–18 μm across; basidia (Fig. 5) 40-65 (–75) × 9–13 μm, sinuous-clavate, four-sterigmate, sterigmata up to 5 μm long, basidiospores (Fig. 6) 15–18 × 8–11 μm, obovate to broadly ellipsoid, hyaline.

ADDITIONAL SPECIMENS EXAMINED: Mississippi, Stoneville, on hardwood on the ground [?*Quercus*], coll. P. L. Lentz, 14 X 1955, FP 106848 (CFMR), and on *Cornus,* P. L. Lentz FP 106807 (CFMR).

REMARKS: *Laeticorticium mississippiensis* is separated from other species of the genus by its



FIGS. 1–6. Line drawings of basidia in various stages of development and basidiospores of *L. canfieldii* (Figs. 1-2), *L. durangensis* (Figs. 3-4), and *L. mississippiensis* (Figs. 5–6);each from the respective holotype. Scale 1 mm = 1 μm.

very thin and scanty basidiocarps, and compact subicular tissue. Its spores are similar to those of *L. canfieldii* in shape, but are somewhat larger, measuring 15–18 × 8–11 μm.

Basidiocarps of *L. mississippiensis* are associated with a white-rot.

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