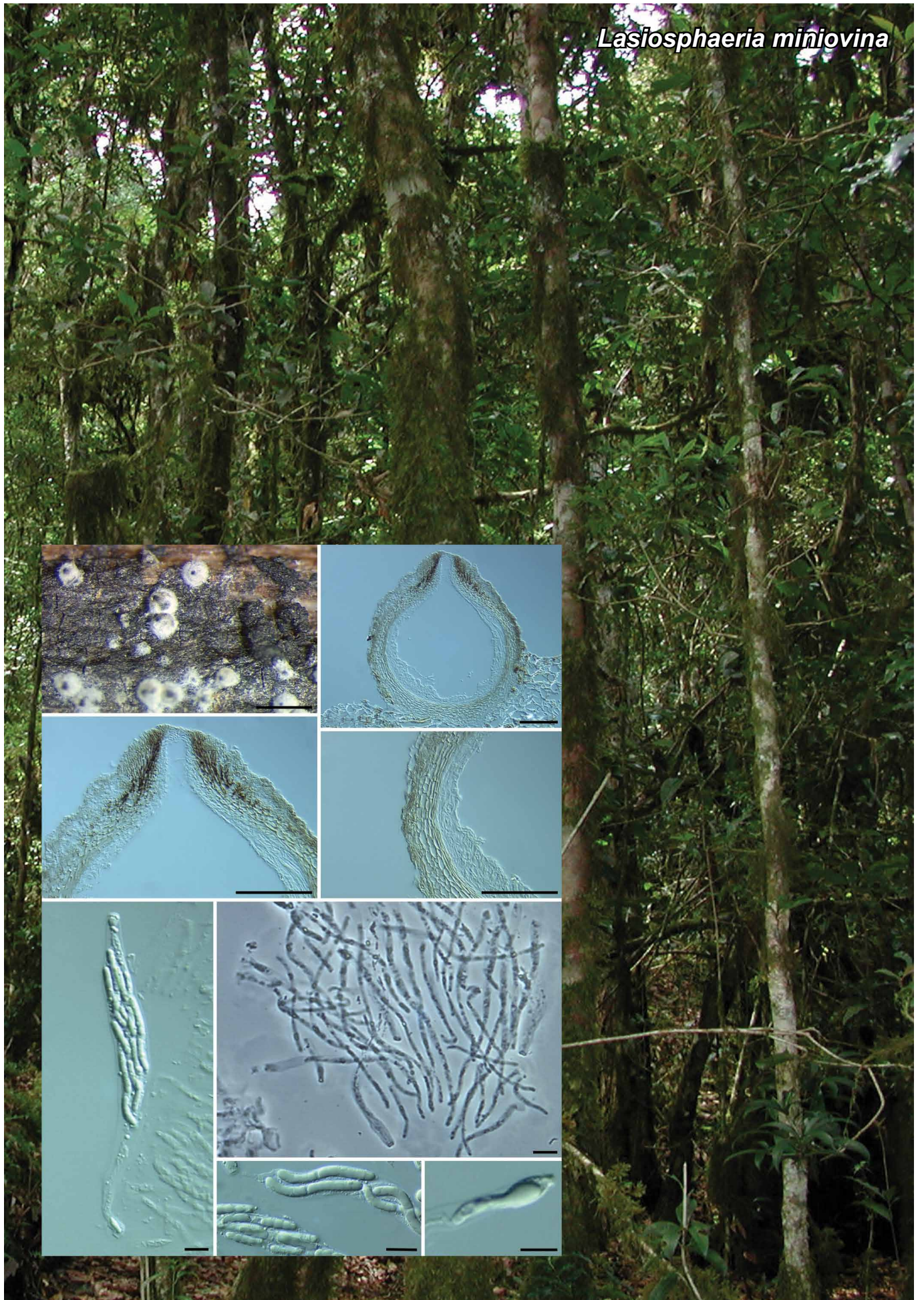


*Lasiosphaeria miniovina*





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***Lasiosphaeria miniovina* A.N. Mill. & Huhndorf, sp. nov.**

*Etymology.* The specific epithet refers to this species resembling a smaller version of *L. ovina*.

*Classification* — *Lasiosphaeriaceae*, *Sordariales*, *Sordariomycetes*.

*Ascomata* ampulliform to ovoid, papillate, 200–250 µm diam, 200–350 µm high, numerous, scattered to gregarious, superficial; young ascomata tomentose, white, tomentum becoming tightly appressed, crust-like and cream to waxy and brownish grey with age, areolate, finally tomentum wearing away and ascomata becoming black and glabrous; neck conical, glabrous, black. *Ascomatal wall* of *textura angularis* in surface view, in longitudinal section 3-layered, 20–40 µm thick, inner layer pseudoparenchymatous, 5–8 µm thick, composed of 3–5 layers of elongate, flattened, pale brown cells, middle layer pseudoparenchymatous, 10–16 µm thick, composed of 3–5 layers of polygonal to angular, pale brown cells, outer layer prosenchymatous, 5–16 µm thick, composed of several to few layers of hyphae depending on age of ascomata, hyphae 1–2.5 µm wide, hyaline to pale brown, septate, thin-walled. *Ascomatal apex* with periphyses. *Centrum* with yellow pigments that quickly diffuse in water. *Paraphyses* filiform, 2–5 µm wide, longer than asci, hyaline, numerous, septate, unbranched, persistent. *Asci* cylindrical, 85–130 × 8–14 µm, stipitate, stipe 24–46 × 2.5–4.5 µm, numerous, unitunicate, thin-walled, apex truncate; ring narrow, shallow, refractive; subapical globule smooth, 2–4 µm wide; with 8 bi- to triseriate ascospores. *Ascospores* cylindrical, ends rounded, 22–33 × 2.5–4.5 µm (av. 28 ± 2.5 × 3.5 ± 0.5), straight when first produced, hyaline, aseptate, without appendages; becoming sigmoid to geniculate, 1-septate, after liberation from the ascus head slightly swelling up to 5.5 µm wide, remaining hyaline, rarely becoming up to 7-septate with age, hyaline to yellowish, occasionally producing phialides directly from the ascospores.

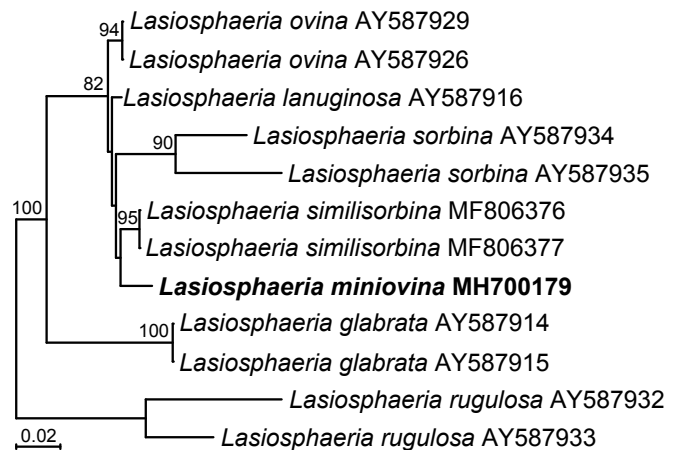
*Habitat* — Decayed wood in a tropical forest.

*Distribution* — Known only from Costa Rica.

*Typus.* COSTA RICA, San Jose, San Gerardo de Dota, Albergue de Montage, Savergre, Sendero la Quebrada, on 10 cm branch with loose bark, N9.33 W83.48, 701 m elev., 12 May 1996, S.M. Huhndorf & F.A. Fernandez (holotype SMH 2392 (F), isotype at ILLS, ITS-LSU sequence GenBank MH700179, MycoBank MB827965).

*Colour illustrations.* Background photo of typical tropical forest in Costa Rica; ascomata, longitudinal section through ascoma, longitudinal section through ascomal neck, longitudinal section through ascomal wall, ascus, paraphyses, ascospores and ascospore with swollen head. Scale bars = 500 µm (ascomata), 100 µm (ascomal sections), 10 µm (all others). Photos: Andrew N. Miller, Sabine M. Huhndorf, Gregory M. Mueller.

*Notes* — *Lasiosphaeria miniovina* possesses the typical characters known for the genus: tomentose ascomata containing yellow centrum pigments (Miller & Huhndorf 2004a, b). This species can be distinguished by its small whitish ascomata, presence of a distinct ascal subapical globule, and short cylindrical ascospores that lack appendages and produce swollen heads with age. It has ascomata, asci and ascospores resembling *L. ovina*, but all characters are about half the size as those found in *L. ovina*. *Lasiosphaeria ovina* has ascospores with appendages but the ascospores never form a swollen head, whereas *L. miniovina* has ascospores that lack appendages and that form a swollen head with age. *Lasiosphaeria miniovina* is only known from Costa Rica, whereas *L. ovina* occurs widespread throughout north temperate regions, although it has been reported once from Costa Rica (as *Lasiosphaeria chrysentera*; Miller & Huhndorf 2004b). *Lasiosphaeria lanuginosa* occurs in Costa Rica and was collected at the same time (GenBank AY587916) as *L. miniovina*, but it differs in having longer ascospores (33–60 vs 22–33 µm) and ascospores with long, lash-like appendages.



Maximum likelihood tree generated using PhyML in Seaview v. 4.5.4 (Gouy et al. 2010). *Lasiosphaeria miniovina* is in **bold**. Numbers above branches refer to bootstrap support values. GenBank accession numbers for the ITS region are given after taxon names.

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