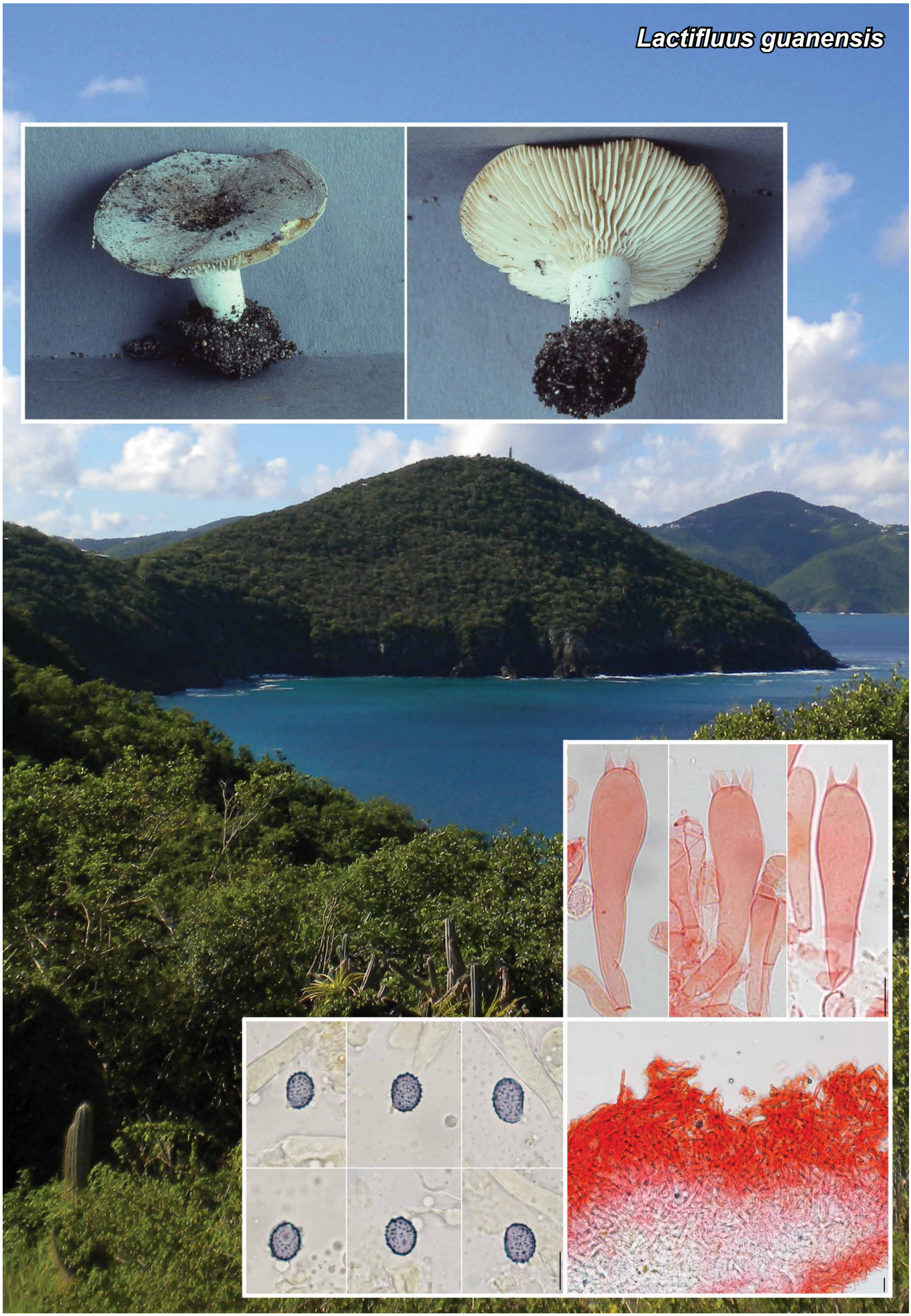

Lactifluus guanensis

Fungal Planet 1018 – 18 December 2019

Lactifluus guanensis Delgat & Lodge, *sp. nov.*

Etymology. Refers to the island where the species was found.

Classification — *Russulaceae*, *Russulales*, *Agaricomycetes*.

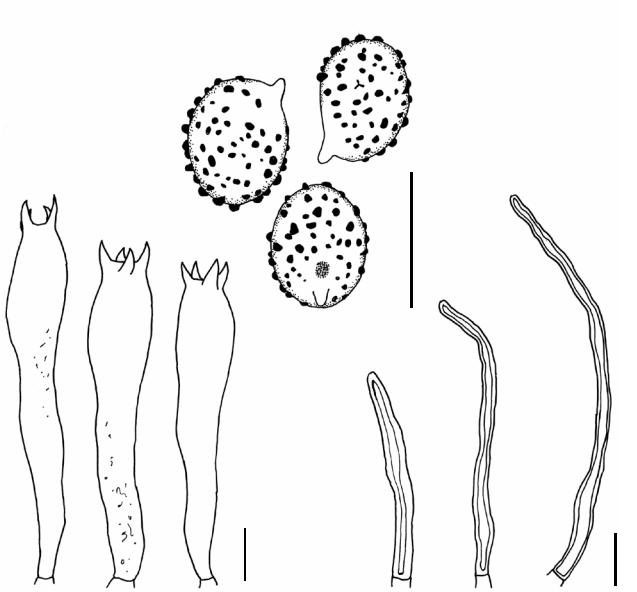
Pileus 56 mm diam, planoconvex with depressed centre; margin straight; surface minutely pubescent, wrinkled near the margin, dry, light drab fading to drab grey. *Stipe* 21 × 8–12 mm, regular and cylindrical, slightly tapering downwards, stuffed; surface smooth, dry, white. *Lamellae* adnate, some forked near stipe, some crisped, subdistant, more than 1 mm apart halfway the radius, with abundant lamellulae in a regular short-long-short pattern (3–7 between two lamellae), cream to pale horn, staining slowly raw sienna; edge concolorous and entire. *Context* white, brown at the base and in the centre, rapidly turning cinnamon when cut. *Smell* slightly foetid, like rotting meat. *Taste* sweet, very slowly faint acrid. *Latex* white, staining brown. *Basidiospores* broadly ellipsoid to ellipsoid, (7.3–) 7.5–*9.5*–11.4(–11.7) × 6–*7.2*–8.4 µm (Q = 1.15–*1.32*–1.49); ornamentation amyloid, composed of isolated warts, up to 1 µm high; plage distinct and often weakly centrally to distally amyloid. *Basidia* 52.5–*62.5*–72.5 × 9.5–*12*–14(–14.5) µm, subclavate, 4-spored. *Pleurocystidia* absent. *Pseudocystidia* inconspicuous, 6.5–8 µm wide, not emergent. *Lamellar edge* fertile. *Hymenophoral trama* mixed, with sphaerocytes, hyphae and abundant lactifers. *Pileipellis* a dense lamprotrichoderm; terminal elements 22.5–*70*–117 × 2–*3*–4 µm, cylindrical, rarely subcapitate, thick-walled, often refringent; subpellis composed of thick-walled interwoven hyphae. *Stipitipellis* as pileipellis.

Distribution — So far only known from the type locality, the North Bay woods on Guana Island. Occurring on sandy soil under *Coccoloba uvifera*.

Typus. British Virgin Isles, Guana Island, North Bay woods, N18°28'42" W64°34', 24 Oct. 1997, *D.J. Lodge* (holotype GUA-104 (CFMR), ITS sequence GenBank MK046851, MycoBank MB831225).

Notes — *Lactifluus guanensis* belongs to *L.* subg. *Gymnocarpi*, which is supported by molecular data (ITS phylogeny: see Supplementary Fig. FP1018), as well as by morphological characters, such as the absence of true pleurolamprocystidia and a brownish colour reaction of the latex and/or the context when exposed to air. *Lactifluus guanensis* is part of an unnamed section (Clade 1; Clade 9 in De Crop et al. 2017), a section which contains exclusively Neotropical species, mostly species from the Antilles. Morphologically this species has similar characters to the other species in this section (e.g., *L. murinipes*, *L. nebulosus, L. putidus*), such as dull basidiocarp colours, brown staining of the latex and context, unpleasant smell and spore ornamentation consisting of isolated warts.

There is only one other *Lactifluus* species known from the Greater Antilles or associated with *Coccolobo uvifera. Lactarius coccolobae** closely resembles *Lactifluus guanensis*. However, *L. coccolobae* has more narrow basidia (8–9.5 µm wide), slightly shorter spores (7.2–9(–10.8) µm long), lower spore ornamentation (up to 0.3 µm) and a gelatinised pileipellis (Miller et al. 2000). On the other hand, *Lactifluus guanensis* is easily distinguishable from *Lactifluus* species from the Lesser Antilles, notably due to the often amyloid plage, the absence of macrocystidia and the lamprotrichoderm structure of the pileipellis consisting of thick-walled elements. Only *L. caribaeus* also lacks macrocystidia and has a trichodermial pileipellis, but differs by the distinctly smaller and more globose spores (6.6–*7.6*–8.5 × 5.8–*6.3*–6.8 µm (Q = 1.06–*1.20*–1.35)) with inamyloid plage, and by the thin-walled terminal elements of the pileipellis.



Lactifluus guanensis: basidiospores; basidia; pileipellis terminal elements. Scale bars = 10 µm.

* this species is yet to be recombined in *Lactifluus*.

Colour illustrations. Guana Island, British Virgin Isles. Basidiocarp of *Lactifluus guanensis* (holotype GUA-104); pileipellis; basidia; basidiospores. Scale bars = 10 µm.

Supplementary material

FP1018 Maximum Likelihood phylogeny based on ITS sequence data of *Lactifluus* subg. *Gymnocarpi*.

Lynn Delgat & Annemieke Verbeken, Department of Biology, Ghent University, Karel Lodewijk Ledeganckstraat 35, Ghent, Belgium; e-mail: lynn.delgat@ugent.be & mieke.verbeken@ugent.be
D. Jean Lodge, Department of Plant Pathology, 2105 Miller Plant Sciences Bldg., University of Georgia, Athens, GA 30606, USA; e-mail: dlodgester@gmail.com