

Amanita domingensis



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***Amanita domingensis* Angelini & Vizzini, sp. nov.**

Etymology. Referring to the place of the first collection, Santo Domingo, the capital of the Dominican Republic.

Classification — *Amanitaceae*, *Agaricales*, *Agaricomycetes*.

Pileus (4.5–)5.5–6(–8.5) cm diam, campanulate, then convex, plane convex, sometimes depressed at the centre at maturity and then with a poor developed obtuse umbo, margin striated up to 1/3 of the radius; surface glabrous, opaque, oily, viscid when moist, ash grey, covered with general veil remnants in the form of whitish grey floccose patches or warts, more abundant on the centre. *Lamellae* free, sometimes distant, straight, interspersed with lamellulae of varying length, 0.5 cm wide, white then white-yellow and with a finely eroded grey edge. *Stipe* 8–10 × 0.7–0.9 cm, cylindrical, straight or slightly sinuous, narrowing and flared upwards, internally fistulous; surface covered with small, grey fibrillose squamules, sometimes becoming progressively more snakeskin-patterned and greyer towards the base, on a white background. *Volva* ± membranous, slightly adherent, low, internally white, externally whitish in the hypogeous part, grey in the emerging part, tending to fracture horizontally forming one or more rings of dark volval material at the stipe base. *Annulus* absent. *Context* thin, 0.2–0.3 cm thick (in the pileus), white. *Odour* and *taste* not distinctive. *Spores* (10–)11–12(–13.5) × 8–9 μm (av. 11.4 × 8.5 μm, $Q_m = 1.35$), broadly ellipsoid to oblong, thin-walled, mostly containing one large drop, hyaline, inamyloid, with slightly prominent and eccentric apiculus. *Basidia* 30–50 × 13–15 μm, clavate, mostly tetrasporic, sometimes bisporic, with sterigmata up to 5 μm long. *Marginal cells* present but not abundant, not emerging over the basidia, mostly consisting of single thin-walled elements, sometimes bi-catenulate, rarely tri-catenulate, whose basal element, when present, has a mostly ovoid shape, while the terminal one has a pyriform or ovoid-claviform shape, 16–22 × 10–11 μm wide. *Partial veil* consisting of sphaeropedunculate elements on the lamellar edge, 25–30 × 22–25 μm wide. *Universal veil* (volva) mixed in structure (membranous + spherocytic) consisting of intertwining hyphae 5–6 μm wide, with also subglobose to sphaeropedunculate elements, 30–45 × 20–35 μm wide. *Subhymenium* a puzzle layer of cubic-multifaceted cells, about 50 μm wide. *Lamellar trama* divergent. *Pileipellis* an ixocutis of stretched and variously intertwined hyphae, with rounded terminals up to 7 μm wide, completely immersed in a hyaline gelatinous layer. *Context* of non-inflated hyphae, 3–9 μm wide. *Stipitipellis* a cutis, similar to pileipellis, but non-gelatinized, consisting of parallel non-inflated hyphae, 5–7 μm wide, covered by a layer of hyphae of the universal veil with elongated, pyriform, large terminal elements, 70–180 μm wide; occasionally, with pedunculate spherocytes, residues of the partial veil, similar in shape and size to those of the lamellar edge, 25–35 × 20–25 μm wide. *Stipititrama* acrophysalidic. *Clamp-connections* absent.

Colour illustrations. Dominican Republic, Puerto Plata, Sosua, deciduous natural forest. Fresh basidiomes in field (holotype JBSD130784); volva detail; fresh basidiomes in field (JBSD130785); spores. Scale bars = 1 cm (basidiomes), 10 μm (spores).

Habitat & Distribution — Exclusive in deciduous woods (probably associated with *Coccoloba diversifolia*), from the plains (but far from the beaches) to the hills, gregarious or as single specimens, in autumn and winter. Common.

Typus. DOMINICAN REPUBLIC, National Garden of Santo Domingo, Distrito Nacional, six specimens collected on litter of deciduous wood, 24 Nov. 2014, *C. Angelini* (holotype JBSD130784, ITS and LSU sequences GenBank MT991052 and MT991057, MycoBank MB837379).

Additional materials examined. DOMINICAN REPUBLIC, National Garden of Santo Domingo, Distrito Nacional, on litter of deciduous wood, 18 Nov. 2013, *C. Angelini* JBSD130785 (ITS and LSU sequences GenBank MT991053 and MT991058); Puerto Plata, Sosua, 25 Dec. 2016, *C. Angelini* JBSD130786 (ITS and LSU sequences GenBank MT991054 and MT991059).

Notes — *Amanita domingensis* is one of the few Dominican *Amanita* species not in association with conifers and represents the most common and abundant *Amanita* in the deciduous forests. It belongs in sect. *Vaginatae* (subg. *Amanita*) where, in the molecular analysis, it occupies an isolated position. *Amanita arenicola* from Puerto Rico and the British Virgin Islands, which is common on the beaches in association with *Coccoloba uvifera*, is distinguished from the new species by its exclusively sabulicolous habitat, the veil, the stipe, the lamellae and the lamellar edge that are completely white at all developmental stages (Miller et al. 2000) and the different ITS sequence, 448/527 bp (85 %) similar. *Amanita antillana* described from Trinidad and Tobago as an ectomycorrhizal associate of *Coccoloba pubescens* and *Haematoxylum campechianum*, differs by the olive brown pileus, usually devoid of velar remnants and with a shortly striated margin, the fragile ochraceous brown volva that often disappears from the stipe at maturity, and broader spores, 10–13.5(–15) × 7.5–11.5(–13) μm (Dennis 1952, Pegler 1983).

Supplementary material

FP1142 Maximum-likelihood analysis of the nrITS region of *Amanita* sect. *Vaginatae* species was performed with RAxML v. 8 (Stamatakis 2014) using the GTR+G model (1000 bootstrap replicates, bootstrap support values ≥ 70 % are shown). The scale bar represents the number of nucleotide changes per site.

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