

Melanoleuca dominicana



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Melanoleuca dominicana Angelini, Para & Vizzini, *sp. nov.*

Etymology. The name *dominicana* (Spanish) refers to the occurrence of the species in the Dominican Republic.

Classification — *Incertae sedis* in the *Pluteineae*, *Agaricales*, *Agaricomycetes*.

Pileus 4–5 cm diam, applanate, depressed with an umbilicate centre, rarely with a large and low umbo; pileus surface smooth, opaque, always very dark in the centre, brownish, up to blackish brown, otherwise ochre-brown, grey-brownish, also ash-grey. **Lamellae** medium crowded, with numerous lamellulae ($l = 1-3$) of various lengths emarginated with long decurrent tooth, straight, white. **Stipe** 3.5–4 × 0.5–1 cm, central, cylindrical, enlarged at the apex, clavate at the base, longitudinally fibrillose, from brown to dirty greyish brown, blackening at the base. **Context** white brownish in the pileus, brown in the stipe, brown blackish in the stipe base. **Odour** and **taste** not distinctive. **Spores** 5.8–7.8 × 4.8–6 µm (av. 7 × 5.3 µm, $Q = 1.16-1.51$, $Q_m = 1.32$), subglobose, hyaline, warty; warts isolated rarely with thin ridges, with evident suprapicular zone, amyloid. **Basidia** 2–4-spored, 31.5–36 × 7.2–9.6 µm, clavate, with pedunculate fusiform base. **Cheilocystidia** 38.4–48 × 4.8–9.6 µm, very numerous, mainly nettle-hair shaped (urticoid) to fusoid with a transversal septum and crystals at the apex (excisica-type). **Pleurocystidia** not observed. **Paracystidia** very numerous, cylindroid-clavate to irregularly clavate. **Pileipellis** a cutis with up to 4 µm wide hyphae, confusedly intertwined with few emerging elements. **Pileocystidia** not observed. **Stipitipellis** a cutis with parallel hyphae from which scattered cauloparacystidia emerge; outermost hyphae cylindrical, up to 170 µm long and 3.5 µm wide, in the inner layer cylindrical to allantoid, up to 48 µm long ad 8.5 µm wide. **Caulocystidia** not observed. **Cauloparacystidia** cylindroid to flexuous, cylindroid-clavate, sometimes bifurcate, 21.5–36 × 3.4–7.2 µm. **Lamellar trama** regular, with parallel, slightly intertwined hyphae, 5–7 µm wide. **Clamp connections** absent in all tissues.

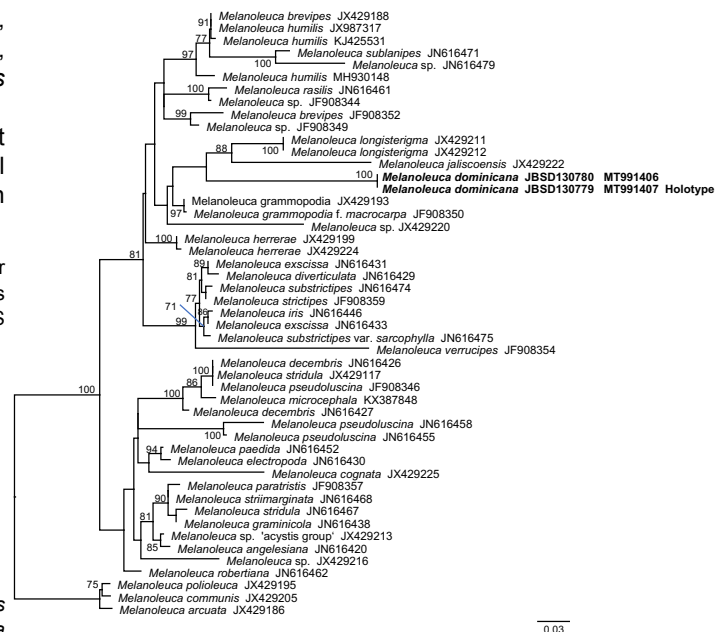
Habitat & Distribution — Growing solitary on tropical forest litter with both deciduous and coniferous trees, from sea level to the mountains. Uncommon in the studied area. So far known only from the Dominican Republic.

Typus. DOMINICAN REPUBLIC, La Vega, Jarabacoa, two basidiomes on litter from a tropical mountain forest, with both broad-leaved and coniferous trees (*Pinus occidentalis*), 6 Dec. 2014, C. Angelini (holotype JBSD130779, ITS sequence GenBank MT991407, MycoBank MB837378).

Colour illustrations. Dominican Republic, La Vega, Jarabacoa, *Pinus occidentalis* forest, where the holotype specimen was collected. *Melanoleuca dominicana* basidiomata in field (holotype JBSD130779); fresh basidiomata after being collected (JBSD130780); fresh pileus (JBSD130781); lamellae attachment detail; cheilocystidia and spores; line drawings (spores, basidia, cheilocystidia, paracystidia, stipitipellis). Scale bars = 1 cm (basidiomes), 10 µm (cheilocystidia and spores, pictures).

Additional materials examined. DOMINICAN REPUBLIC, Puerto Plata, Sosua, one basidiome collected on litter of a heavily anthropized humid woodland of deciduous trees, a few km from the sea, 29 Nov. 2013, C. Angelini JBSD130781; *ibid.*, 30 Nov. 2013, C. Angelini, JBSD130780, ITS sequence GenBank MT991406.

Notes — The new species belongs in subg. *Urticocystis*. The two collections of *Melanoleuca dominicana* clustered in a strongly supported clade (MLB = 100) sister to *M. jaliscoensis* and *M. longisterigma* clade but without support. *Melanoleuca dominicana* is well differentiated from the other *Melanoleuca* species described in literature, based on morphological and/or molecular characteristics. *Melanoleuca tucumanensis*, *M. tucumanensis* var. *colorata* and *M. tucumanensis* var. *striata* from Argentina (Singer & Digilio 1951, Raithelhuber 1974) have larger spores (7.5–10.3 × 6.2–7.5 µm, Singer & Digilio 1951; 7.2–9.6 × 4.8–7.2 µm, pers. obs.). Despite several attempts, it was not possible to sequence neither the type nor other available collections of these three latter taxa. *Melanoleuca jaliscoensis* from Mexico differs from *M. dominicana* by its larger pileus (6.5–10 cm broad) and presence of pleurocystidia (Sánchez-García et al. 2013). *Melanoleuca longisterigma* from Mexico is distinguished by up to 10 µm long spores, a relevant percentage of mono- to bisporic basidia with long sterigmata and cylindrical to fusoid non-septate cheilocystidia without apical crystals (Sánchez-García et al. 2013). *Melanoleuca yucatanensis* from Mexico has pleurocystidia and shows shorter spores, (5.2–)6–7 µm long (Bon 1984).



Maximum-likelihood analysis of the nrITS region of *Melanoleuca* subg. *Urticocystis* species was performed with RAxML v. 8 (Stamatakis 2014) using the GTR+G model (1000 bootstrap replicates). Only maximum-likelihood bootstrap support values $\geq 70\%$ are shown in the phylogenetic tree. The scale bar represents the number of nucleotide changes per site.

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