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Nomenclatural novelties : Christian Schwarz

Entoloma medianocte C.F. Schwarz, in C.F. Schwarz, sp.nov.
IF551102

Please see full text of document at: http://scmycoflora.org/documents/Entoloma-medianocte.pdf The recent work of Morgado, Noordeloos, Lamoureux and Geml (2013) clarified species concepts of those Entoloma in Europe that produce large, bluish-capped fruitbodies. E. bloxamii was epitypified with Austrian material (M.E. Noordeloos 200442), and E. madidum was neotypified with material from the Netherlands (M.E. Noordeloos 2004030). Despite having been considered synonymous for many years, Morgado et al. found that E. bloxamii and E. madidum are indeed distinct, separable both by macro- and micro-morphology as well as by their DNA sequence. Largent referred the western North American taxon to E. madidum and later to E. bloxamii, but the very different ecologies and widely separated geographic ranges of those species caused many to view the application of European names in the Pacific states of North America with suspicion. A few early sequences from Californian material suggested that it was indeed distinct, and Morgado et al. (2013) later reached the same conclusion using a multigene phylogeny, but they lacked field experience with the western North American species, and stopped short of naming it. Genetic sequences independently obtained here agree with these findings, and in combination with morphological data, E. medianocte is distinguished from the European taxa and described below. Entoloma medianocte sp. nov. C.F. Schwarz UCSC-0340 (HOLOTYPE), GenBank KP852558, 22 Nov 2012, Fall Creek Flats, Santa Cruz Co., CA, USA; Entoloma medianocte f. eos f. nov. C.F. Schwarz UCSC-0338, (HOLOTYPE) GenBank KP852559, 4 Nov 2012, Smith Grade, Santa Cruz Co., CA, USA. Fruitbody morphology: Cap 3-15 cm broad, rounded-convex when young, margin often inrolled, becoming broadly convex to plane, sometimes with a very low, round umbo, sometimes irregularly uplifted or wavy in age; very young fruitbodies buried in duff pale whitish-beige to cream colored, otherwise grayish-blue, sky-blue or powder blue, ranging through royal blue, but most typically dark grayish-blue to navy blue or midnight blue at maturity. At any age sometimes showing a narrow and contrasting whitish margin, and often with a pale silvery bloom over the center of cap. Occasionally irregularly pigmented with grayish-beige splotches and streaks. Surface nearly smooth to strongly wrinkled-rivulose, viscid to dry. Gills whitish to creamy at first, often with a pale blue wash near the margin, becoming pinkish as the spores mature. Sometimes entirely washed bluish. Usually notched, sometimes narrowly adnate, fairly close, edges often irregular, gills sometimes wavy. Stipe 6-10 cm tall, 1.5-3 cm thick. Whitish, developing sky-blue to grayish-blue tones, sometimes yellowish near the base. Club-shaped or cylindrical, sometimes tapered at base. Usually fairly robust, surface often with silky-silvery sheen and vertically-marbled appearance. Surface nearly smooth and usually with thin, appressed chevrons of silvery or whitish tissue. Flesh quite firm, solid, whitish or pale bluish (especially near cap surface). Bruising reactions absent. Odor indistinct. Taste indistinct. KOH reactions indistinct or sometimes weakly orangey-brown on cap. Spore deposit cinnamon-pinkish to salmon. Microscopy: Pileipellis a cutis of entangled, clamped hyphae embedded in a gelatinous matrix. Cystidia absent from lamellae and stipe surface. Spores 6.5â€“9 Ã— 6-8.5 microns (averaging around 7.5 Ã— 7.5 Âµm), fairly typically entolomatoid, with 5â€“6 sides, nearly isodiametric, fairly thick-walled, with a prominent hilar appendage. Clamps present in all tissues. Basidia 4-spored. Habit and habitat: Fruiting singly or in large groups, sometimes in clusters. Most abundant in forest stands dominated by Coast Redwood (Sequoia sempervirens), or in mixed forests including Tanoak (Notholithocarpus densiflorus) and Madrone (Arbutus menziesii). In drier or inland areas and in the southern reaches of its range, it appears to fruit commonly under California Bay-Laurel (Umbellularia californica) and various live oaks (Quercus spp.), while north of California it apparently prefers Red Cedar (Thuja plicata), and possibly other trees in the Cupressaceae. Nowhere in the western United States is it regularly found in grasslands or meadows, unlike its European counterparts. Usually fruiting from mid-fall through early winter, generally most abundant from November through January. Although some species in this group are thought to be ectomycorrhizal, this species often occurs in pure stands of Coast Redwood, which does not form such associations. The European taxa are morphologically quite similar (although a person familiar with all the taxa involved would likely be able to distinguish them by a gestalt sense involving intensity of colors and stature), but are amply distinguished by a combination of ecology, spore size, and DNA sequence. Although there is a wide range of variation and overlap in spore dimensions of species in this complex, the average spore dimensions of E. medianocte (~ 7.5 x 7.5) are smaller than those of E. bloxamii (avg. 8.2 Ã— 8.3 Âµm), but larger than those of both E. madidum (6.8 Ã— 6.7 Î¼m) and E. caesiolamellatum (7.1 Ã— 7.1 Âµm). Similar species occurring along the Pacific coast of the United States are scarce. The vast majority of other blue Entoloma in the western United States are smaller and more slender. Large fruitbodies of Entocybe nitida have been confused for this species, but aside from being more slender, their spore morphology is also quite different, with more numerous facets. A few Tricholoma species in our area produce somewhat similar-looking grayish-capped fruitbodies but have more distinctly sinuate gills that donâ€™t turn pink in age (remaining whitish), and less distinct blue tones in the cap.

Holotype UCSC-0340 .