
Notes on the genus *Entoloma* in the Northwest of the Iberian Peninsula (V). *Entoloma lucense*, a new species in subgenus *Omphaliopsis*

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A full description is given of *Entoloma lucense*, a new species in subgenus *Omphaliopsis*, found in Galicia (NW of Spain). Morphological description and drawings of macro- and microscopic characters of the basidiomata are presented. Other close taxa of subgenus *Omphaliopsis* are discussed.

Key words – *Agaricales* – *Basidiomycota* – *Entolomataceae* – Spain – taxonomy.

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Introduction

Entoloma is the second largest genus of *Agaricales* (after *Cortinarius*) and is highly variable in morphological characters. It is estimated to contain more than 1500 species and is found worldwide, from arctic to tropical habitats (Noordeloos & Morozova 2010). Although it is fairly well known, in particular from Europe (Noordeloos 1992, 2004), new species are continually being discovered.

During a revision of material collected by the author (some findings have been published—Blanco-Dios 1999, 2010, 2012, Blanco-Dios & Castro 2008), a remarkable little *Entoloma* species found in 1987 and 1992 under Monterey and maritime pines (*Pinus radiata* D. Don, *P. pinaster* Aiton) has been studied. Its morphological characters are so

different from the known species that it is described here as new.

Methods

The specimens were collected, documented and preserved using standard methods. Morphological descriptions and drawings are based on the study of fresh material; photographic images were not obtained. Microscopic observations were recorded on dried material with standard methods, using sections mounted in a solution of 1% Congo red in water, ammonia 10% or 3% KOH. Microscopic structures were drawn with help of a drawing tube. The collected material has been deposited in the mycological herbarium LOU-Fungi (Centro de Investigación Forestal de Lourizán, Pontevedra, Spain).

Results

Entoloma lucense Blanco-Dios, sp. nov.

Figs 1–5

Mycobank: MB803461

Etymology – *lucense*, from the municipality and province of Lugo (Galicia, Spain).

Entoloma incarnatofuscescens similis sed differt sporae (8–)9.5–12.5(–14.5) × (7.5–)8–10(–11.5) μm, 5–8(–10)-angulatae, heterodiametrales, basidia fibulata, acies lamellarum heterogenea, cheilocystidia 21–60 × 7.5–22.5 μm, clavata, fusiformia, lageniformia, mucronata, sphaerostipitata, utriformia vel vesiculata, fibulae praesentes.

Holotype – SPAIN. Lugo: Lugo, San Xiao de Bocamaos, 29TPH1366, 440 m, forest of *Pinus pinaster* and *P. radiata*, near a stump of pine, 25.XI.1987, J.B. Blanco-Dios (LOU-Fungi 19569).

Pileus 7–12 mm broad, conical to plano-convex with depressed to umbilicate centre, and involute then deflexed, finally straight margin, weakly to distinctly hygrophanous, when moist deeply translucently striate, pinkish grey to purplish grey, darker at centre and on striae, minutely squamulose at centre, towards margin radially fibrillose. Lamellae moderately crowded, deeply decurrent (specially with age), triangular or arcuate, up to 2 mm broad, greyish pink, finally brownish pink, with entire and concolorous edge. Stipe 9–13.5 × 1–1.5 mm, slender, fragile, cylindrical, curved, blue grey or steel blue, solid then fistulose, polished or with a few longitudinal fibrils, with white basal tomentum. Context brown to ochre in cortex of pileus, bluish in cortex of stipe, inner part whitish. Smell none and taste weakly mild. Spore print pinkish.

Basidiospores (8–)9.5–12.5(–14.5) × (7.5–)8–10(–11.5) μm, Q= 1–1.47, Qav = 1.17, (n = 100), heterodiametric, 5–8 (10)–angled in side-view with pronounced or irregular, rather blunt angles. Basidia 23–39.5 × 8–16.5 μm, 4-spored, sterigmata 2–5.5 μm long, clavate, clamped. Lamellae edge heterogeneous. Cheilocystidia 21–60 × 7.5–22.5 μm, clavate, fusiform, lageniform, mucronate, sphaeropedunculate, utriform or vesicular, scattered. Pileipellis a cutis with transitions to a

trichoderm, made up of hyphae 2.5–18.5 μm in diameter, subcylindric to slightly constricted, septate, thin-walled, with slightly inflated clavate terminal elements to 12.5–24 × 4–9.5 μm, gradually passing into pileitrama. Pileitrama subregular, made up of hyphae 1.5–15.5 μm in diameter. Stipitipellis a cutis of subcylindrical to slightly constricted hyphae, 1.5–11.5 μm in diameter, caulocystidia absent. Pigment brown, ochre-grey, grey to subhyaline, intracellular granular (preponderantly) or minutely encrusting and parietal in the hyphae of pileipellis, and ochre-grey to subhyaline in pileitrama and stipitipellis. Brilliant granules present, often sparse. Clamp connections present.

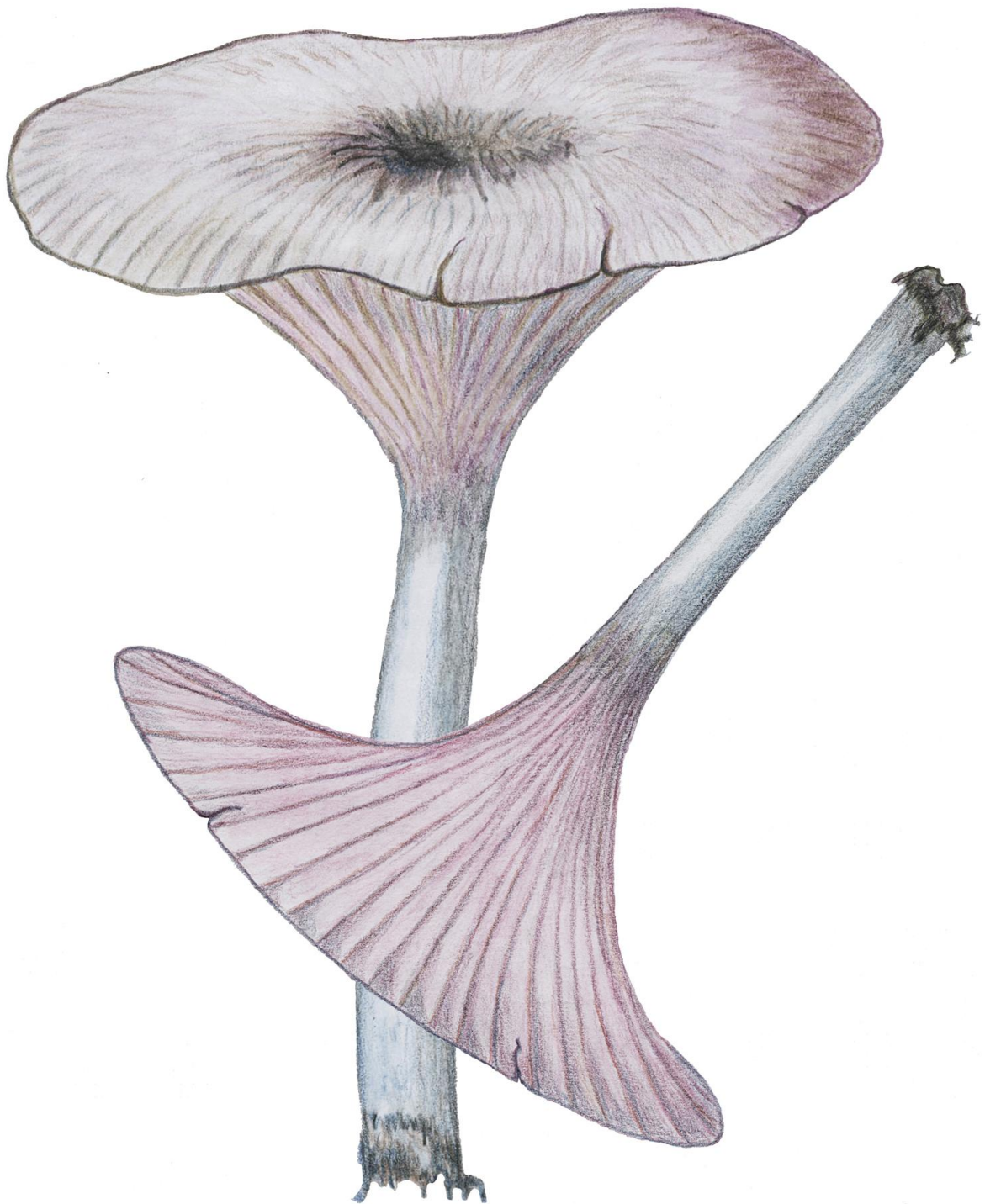
Known distribution – up to now known only from the type locality (San Xiao de Bocamaos, Lugo, Spain).

Material examined – SPAIN. Lugo: Lugo, San Xiao de Bocamaos, 29TPH1366, 440 m, forest of *Pinus pinaster* and *P. radiata*, near a stump of pine, 25 Nov 1987, J.B. Blanco-Dios, LOU-Fungi 19569 (holotype); *ibidem*, 5 Nov 1992, J.B. Blanco-Dios, LOU-Fungi 19570.

Discussion

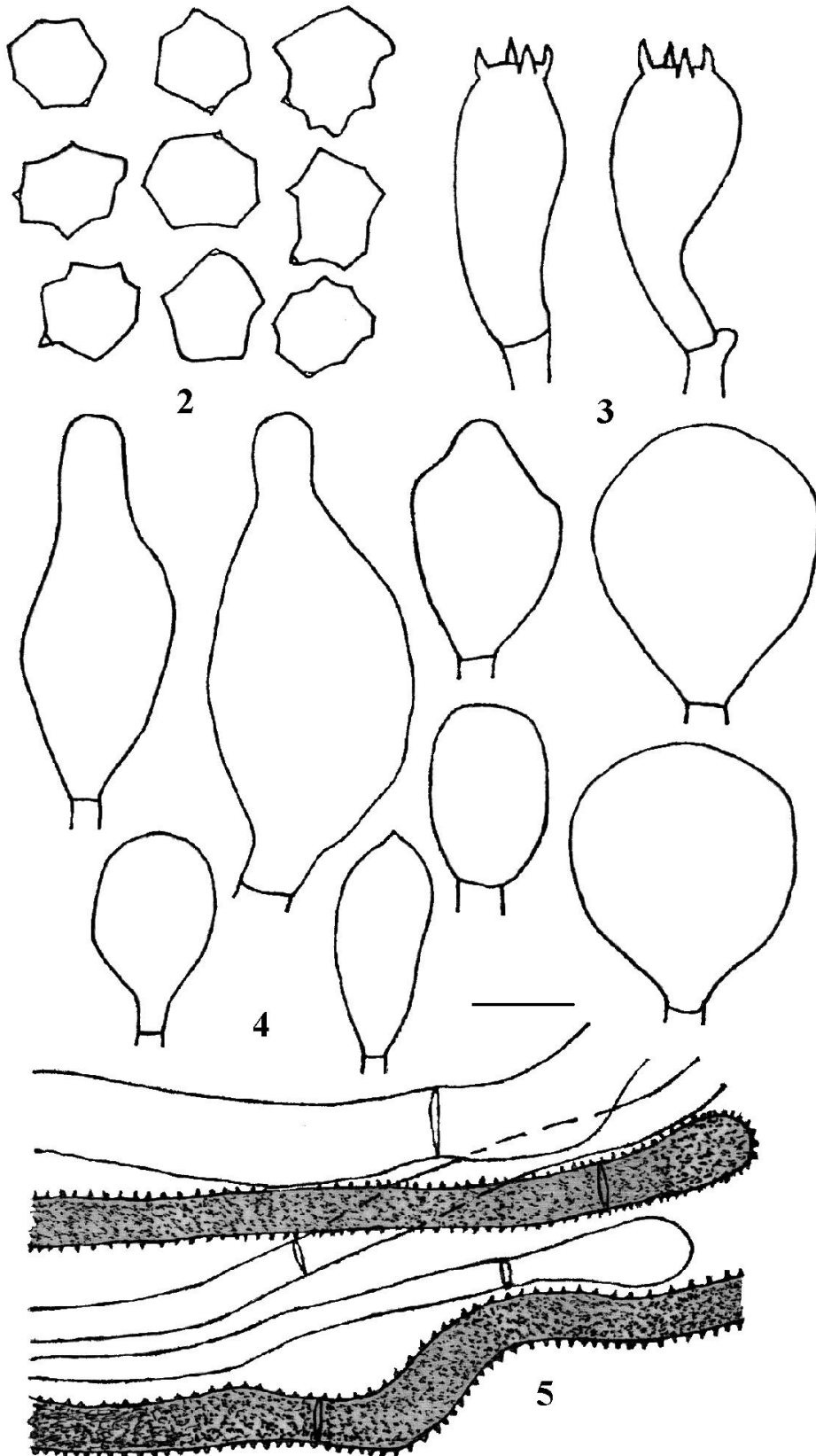
Entoloma lucense is a little species in subgenus *Omphaliopsis* Noordel. (Noordeloos 1992, 2004) with basidiocarps omphalinoid, spores heterodiametric, cheilocystidia clavate, fusiform, lageniform, mucronate, sphaeropedunculate, utriform or vesicular and clamp-connections present.

Among the morphologically similar species of this subgenus, the closest European taxa are *Entoloma incarnatofuscescens* (Britzelm.) Noordel., *E. hausknechtii* Noordel. and *E. amygdalinum* Noordel. The first species differs specially in having smaller spores, fertile lamellar edge and clamp-connections absent (Noordeloos 1992, Ludwig 2007, Vila & Caballero 2007). *Entoloma hausknechtii* also superficially resembles our species but has a shorter spores, fusiform to cylindrical-attenuate cheilocystidia, smaller than basidia, and clamp-connections absent (Noordeloos 2004). *Entoloma amygdalinum* differs strikingly by the strong smell of almonds, narrower and shorter spores and cheilocystidia cylindrical to flexuose (Noordeloos 1992).



A. /2012

Fig. 1 – *Entoloma lucense*. Holotype. Drawn by Amancio Castro.



Figs. 2–5 – *Entoloma lucense* (holotype, LOU-Fungi 19569). 2 Basidiospores. 3 Basidia. 4 Cheilocystidia. 5 Pileipellis. **Scale bar** = 10 μ m. Drawn by Jaime B. Blanco Dios.

Among extra-European taxa, the species from Tasmania *Entoloma austrorhodocalyx* G. Gates & Noordel. resembles our species but differs specially by the lack of blue grey or steel blue color stipe, much shorter spores, subsodiametric and fertile lamellar edge (Gates & Noordeloos 2007).

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