

Clitopilus gallaecicus, a new species in section *Pleurotelloides* from Spain

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Abstract: A full description is given of *Clitopilus gallaecicus*, a new species in section *Pleurotelloides*, found in Galicia (NW Spain). Macroscopical characters are described in detail and drawings of microscopic characters of the basidiomata are presented. The differences to similar taxa of section *Pleurotelloides* are given.

Résumé: Une description complète est donnée de *Clitopilus gallaecicus*, une nouvelle espèce dans la section *Pleurotelloides*, trouvée en Galice (nord-ouest de l'Espagne). Les caractères macro- et microscopiques des basidiomes sont présentés et illustrés. Les différences de taxons similaires de la section *Pleurotelloides* sont donnés.

Zusammenfassung: Eine vollständige Beschreibung von *Clitopilus gallaecicus*, einer neuen Art der Sektion *Pleurotelloides*, die in Galizien (im Nordwesten Spaniens) gefunden wurde, wird gegeben. Die makro- und mikroskopischen Merkmale der Basidiomata werden detailliert beschrieben und illustriert. Die Unterschiede zu einigen ähnlichen Taxa der Sektion *Pleurotelloides* werden angeführt.

Clitopilus (FR. ex RABENH.) P. KUMM. was a small genus of *Entolomataceae* (*Basidiomycota*, *Agaricales*) traditionally comprising saprotrophic and mycorrhizal species characterised by basidiomata with an omphalioid, clitocyboid or pleurotoid habitus, subdecurrent to decurrent lamellae, a pink or pinkish brown spore-print, spores distinctively furrowed by 3-12 longitudinal ribs, appearing angular in polar view, and the sericeous cutis on the pileus (SINGER 1986; NOORDELOOS 1993, 2008; VIZZINI & al. 2011). Recently, CO-DAVID & al. (2009) have enlarged the circumscription of *Clitopilus* by adding also *Clitopilopsis* MAIRE and *Rhodocybe* MAIRE.

During a revision of material collected by members of the Asociación Micológica Brincabo (Pontevedra, Spain), a remarkable *Clitopilus* species found in 2006 on wood of oak (*Quercus robur* L.) has been studied. Based on the pleurotoid habitus and occurrence on wood, the specimens belong in sect. *Pleurotelloides* SINGER. However, the morphological characters are so different from the known species that it is described here as new.

Materials and methods

The specimens were collected, documented and preserved using standard methods. Morphological descriptions and drawings are based on the study of fresh material and photographic images. Micro-

scopic observations were recorded on dried material with standard methods, using sections mounted in a solution of 1% Congo red in water, in 10% ammonia or in 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).

Taxonomy

***Clitopilus gallaecicus* BLANCO-DIOS, spec. nova** (Figs. 1-3)

Mycobank MB 803604

Descriptio latina:

Habitus pleurotoideus. Pileus 80–90 mm latus, conchatus, flabelliformis vel reniformis, lobatus, involutus vel deflexus, glaber, ab cremeus ad ochraceo-brunneus. Lamellae haud confertae, adnatae vel subdecurrentes, albidae deinde salmoneo-brunneae. Stipes 12-15 longus, 8-13 mm latus, lateralis, reductus, attenuatus, cremeo-ochreus. Caro albida, mollis, immutabilis. Odor farinosus, deinde spermatico-farinosus. Sapor fortiter farinosus, leviter amarus. Sporae (8-)8,5-13,5(-14,5) μm longae, (4,5-)5-7(-7,5) μm latae, $Q = 1,3\text{--}2,5$ μm , $Q_m = 1,84$, ab ellipsoideae ad oblongae, 5-8 costulis ornatae. Basidia 20-35 $\times$ 8,5-10,5 μm , tetrasporigera, clavata, afibulata. Acies lamellarum homogenea. Cystidia desunt. Pileipellis cutis trichoderma transient, hyphis cylindraceis, subcylindraceis vel leviter constrictis, 1-20 μm latis, cum elementis terminalis cylindraceis, subcylindraceis, fusiformibus vel lageniformibus, 18,5-39,5 $\times$ 4,5-7,5 μm , vel clavatis vel sphaeropedunculatis, 10,5-61 $\times$ 6,5-17,5 μm . Pigmenta absentia. Fibulae nullae. Ad lignum *Quercus* crescens.

Holotypus: Spain, Pontevedra, Moraña, Santa Lucía, UTM 29TNH3315, 170 m s. m., on wood of oak (*Quercus robur*), 28. 10. 2006, leg. FRANCISCO LAMEIRO (holotype, LOU-Fungi 19571).

Etymology: *gallaecicus*, from the autonomous community of Galicia (NW of Spain) where the specimens were found.

Characters:

Basidioma: pleurotoid, solitary.

Pileus: 80-90 mm broad, shell shaped, flabelliform to reniform, lobed, more or less plano-convex with involute or deflexed margin, not hygrophanous, not translucently striate, creamy, ochre to ochre-brown, smooth, glabrous.

Lamellae: moderately distant, subdecurrent or decurrent, narrowly ventricose, intermixed with lamellulae, at first whitish-cream, finally pinkish-brown with age, with entire, concolorous lamellar edge.

Stipe: 12-15 $\times$ 8-13 mm, short, lateral, attenuate, solid, creamy to ochre, unchanging.

Context: whitish, soft, unchanging. Smell farinaceous, finally sperm-like-farinaceous. Taste strongly farinaceous and weakly bitter.

Spore print: salmon-pink to pinkish-brown.



Figs. 1-2. *Clitopilus gallaecicus*. Holotype.

Spores: (8-)8.5-13.5(-14.5) $\times$ (4.5-)5-7(-7.5) μm , $Q = 1.3-2.5$, $Q_m = 1.84$, on average $10.4 \times 5.7 \mu\text{m}$ ($n = 100$), ellipsoid to oblong (some subfusiform) in side-view, with 5-8 ribs.

Basidia: $20-35 \times 8.5-10.5 \mu\text{m}$, 4-spored, sterigmata $2.0-4.5 \mu\text{m}$ long, clavate, clamp connections absent.

Lamellar edge: fertile. Cheilo- and pleurocystidia absent.

Pileipellis: a cutis with transitions to a trichoderm, gradually passing into pileitrama, made up of hyphae $1-20 \mu\text{m}$ in diam., cylindrical, subcylindrical to slightly constricted, septate, thin-walled, with cylindrical, subcylindrical, fusiform or lageniform terminal elements to $18.5-39.5 \times 4.5-7.5 \mu\text{m}$, or clavate or sphaeropedunculate terminal elements to $10.5-61 \times 6.5-17.5 \mu\text{m}$. Pigment absent.

Pileitrama: subregular, made up of hyphae $1.5-16.5 \mu\text{m}$ in diam.

Stipitipellis: a cutis of subcylindrical to slightly constricted hyphae, $1.5-14 \mu\text{m}$ in diam. Caulocystidia not observed.

Clamp connections: absent.

Habitat: on wood of oak (*Quercus robur*).

Distribution: so far only known from a single locality in Moraña municipality, Galicia (Northwest of Spain).

Specimens examined (besides holotype): **Spain:** Pontevedra, Moraña, Santa Lucía, UTM 29TNH3315, 170 m s. m., on wood of oak (*Quercus robur*), 11. 11. 2012, leg. JAIME B. BLANCO-DIOS (LOU-Fungi 19572).

Discussion

The section *Pleurotelloides* comprises small, whitish, pleurotoid taxa of variable size and shape, which are mainly distinguished on account of their growth-form, smell, spore-size and habitat (NOORDELOOS 1993). *Clitopilus gallaecicus* clearly fits in section *Pleurotelloides* based on its pleurotoid habitus and habitat on wood but is unique with respect to the other known *Clitopilus* species of this section by the following combination of features: (i) pileus larger (80-90 mm broad), creamy, ochre to ochre-brown, (ii) stipe up to $15 \times 13 \text{ mm}$, attenuate, (iii) spores larger, (8-)8.5-13.5(-14.5) $\times$ (4.5-)5-7(-7.5) μm , $Q = 1.3-2.5$, $Q_m = 1.84$, on average $10.4 \times 5.7 \mu\text{m}$, and (iv) pileipellis made up of hyphae with cylindrical, subcylindrical, fusiform or lageniform terminal elements to $18.5-39.5 \times 4.5-7.5 \mu\text{m}$, or clavate or sphaeropedunculate terminal elements to $10.5-61 \times 6.5-17.5 \mu\text{m}$.

Among the morphologically similar species of this section, the closest taxa are *Clitopilus daamsii* NOORDEL. and *C. rhodophyllus* (BRES.) SINGER. So far in this section *Clitopilus daamsii* (including the var. *tropicus* T. H. LI, W. Q. DENG & Y. H. SHEN) was the only known species having some spores longer than $10 \mu\text{m}$ (DENG & al. 2010). It differs especially by (i) the pileus, which is white and smaller, only up to 8 mm broad, (ii) by the stipe, which is absent or, when present, then strongly reduced, up to $1.5 \times 1 \text{ mm}$, white, pruinose, and (iii) by slightly smaller spores (NOORDELOOS 1984, 1988). *Clitopilus rhodophyllus* superficially also resembles our species but differs strikingly by the smaller pileus, up to $40 \times 30 \text{ mm}$, whitish or rather pale cream-coloured with a slight pink tinge; stipe strongly reduced (2-3 mm) or absent; spores smaller; and growth in dense, imbricate clusters (BRESADOLA 1929, NOORDELOOS 1993).

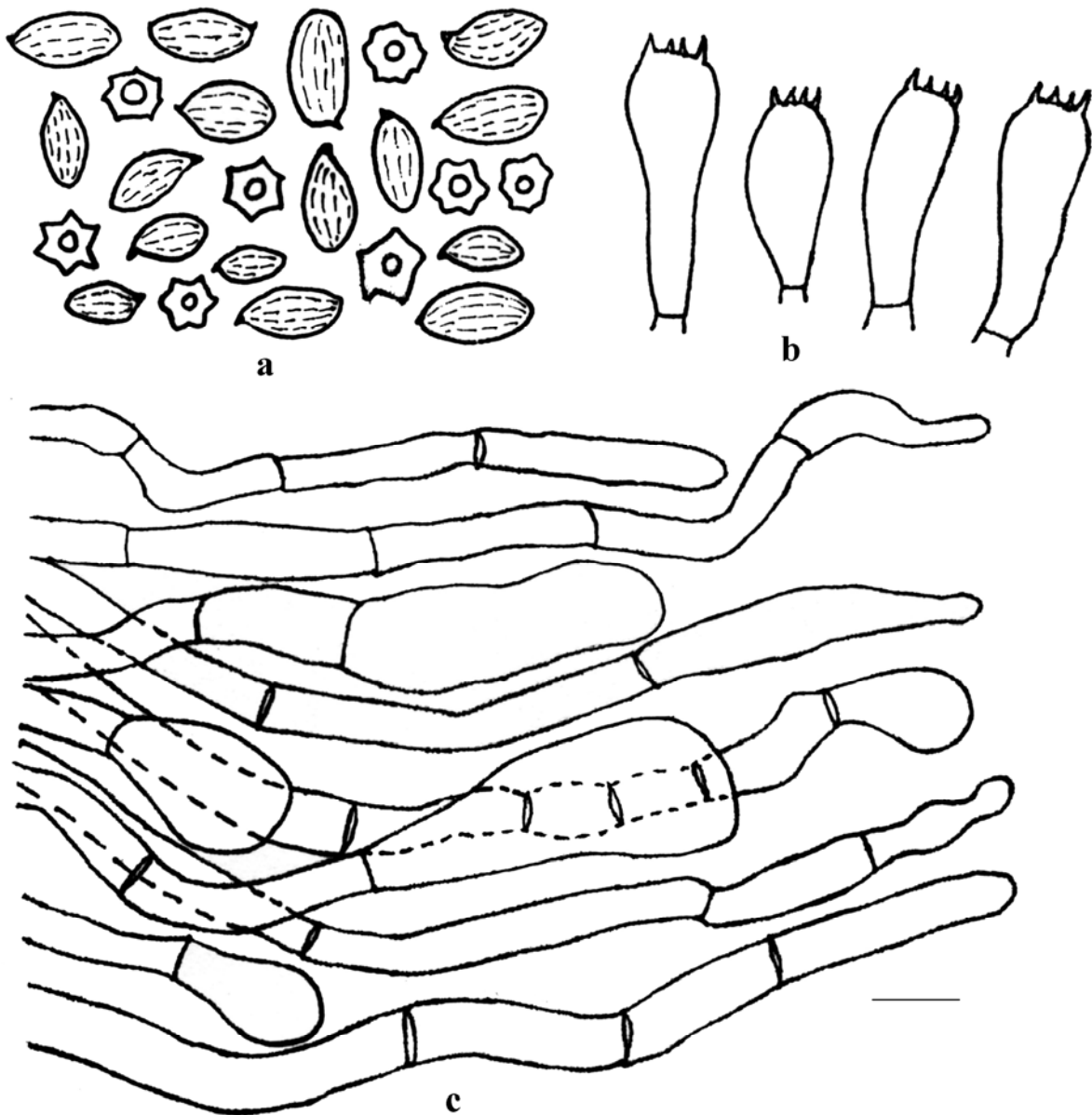


Fig. 3. *Clitopilus gallaecicus* (holotype, LOU-Fungi 19571). a Spores, b basidia, c pileipellis. Bar: 10 µm.

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