Research Article

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From La Palma (Canary Islands, Spain), Lyophyllum rosae-mariae sp. nov. (Basidiomycota, Agaricomycetes) was discovered.

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INTRODUCTION

During a lengthy field study of Agaricales, we discovered a Lyophyllum P. Karst. emend. Kühner collection at La Palma, Canary Islands, for which we were unable to come up with a suitable name.

Small, smooth, globose to subglobose basidiospores, not longer than 30 µm, are carried by small basidia, and the brown, medium-sized basidiomes with clearly black lamellae in siccis.

At an elevation of 1300 meters above sea level, in a pine forest with Pinus radiata Don, Rose Marie Dähncke collected a collection of many basidiomes that are in a good condition of conservation.

We suggest naming this agaric species after our colleague and friend Rose Marie Dähncke. who has found numerous new Lyophyllaceae taxa in La Palma; the majority of these taxa are the subject of upcoming studies.

Techniques

The macroscopic descriptions are derived on A. Vizzini's analysis of recently discovered material.

All micromorphological data and microscopic descriptions are based on herbarium material that has been reconstituted in 2% KOH and stained with Phloxin B and Congo red. The basidia's siderophilous granulation was highlighted with cotton blue. The measurements of 32 spores are used to calculate the mean values and spore size range.

The following acronym is used in the explanations of the microscopic details: Qm stands for the spores' average quotient of length and breadth.

The Index Fungorum Authors of Fungal Names website (http://www.indexfungorum) is followed for author citation abbreviations. org/Names/FungalNames/AuthorsOf.asp).

The abbreviations used in herbariums are based on Holmgren & Holmgren (1998). The Herbarium Generale del Dipartimento di 84 Biología Vegetale, Università degli Studi di Torino, Italy, is home to all of the material that has been investigated.

The new species' Latin description is available at Mycobank (http://www.mycobank.org/DefaultPage.aspx).

Outcomes

Figs. 1-4 of Lyophyllum rosae-mariae Contu & Vizzini, sp. nov. MycoBank 515100

Etymology: named for the modern amateur mycologist Rose Marie Dähncke, who spent many years studying the mycota of the Canary Islands and central Europe and found many intriguing species, some of which were new.

Pileus interdum obtuse umbonatus, brunneus, levis, siccus, haud striatus, parce carnosus, convexus, ad medium interdum. Lamellae modice confertae, in sicco nigrae, uncinatoadnatae, griseo-brunneae, tactu brunnescentes. 4-4.5 x 0.8-0.9 cm stipes cylindricalus, griseo-brunneus, fibrillosus, sed ad basim leviter. Kindly note that brunnea is conspicuous in siccis nigrescens. Debile odor of sulfur. Sporae are 3.5-4.5 × 3-4.2 µm, leves, hyalinae, subglobulosae, and globulosae.

Tetraspora, basidia 22–30 × 6-7.5 µm. Nullae vel incospicuae cellule marginales. Excerpta pilei radialibus, iacentibus, 2.5–5 µm longitudinally efformata, suprapellis gelata. Numerical fibulae.

Holotypus - Hispania, Insulae Canariae, in insula La Palma dicta, ad locum dictum Paired Vieja, 15.X.2001, leg. R.M. Dähncke (TO HG1724).

Pileus: 3-5.5 cm, smooth, dry, not striate, hygrophanous, ochraceous-brown when wet, fading to softer hues, not very fleshy, not cartilaginous, convex with a subparaboloid edge, not or obtusely umbonate. Normally densely packed, thick, uncinate-adnate, brownish grey lamellae that do not turn blue after handling but instead take on a wood-brown tint. Stipe: 4-4.5 × 0.8-0.9 cm, round, pale brown, somewhat extended downward, appressed fibrillose, with a white pruina covering the apex. Thin context, lighter in the stipe and ochraceous brown in the pileus. Faint flavor and scent. Brown dried substance with the exception of the dark-colored lamellae.

Spores (n = 32) roughly 4 x 3.5 µm, Qm = 1.1, hyaline, cyanophilous, globose to subglobose, typically with a single big oil drop, smooth, thickwalled when old (Fig. 2). 3.5-4.5 × 3-4.2 µm. On average. The subhymenium is ramose to subcellular, and the basidia are 22–30 × 6-7.5 µm, four-spored, clavate (Fig. 3), with siderophilous granulation becoming clearly evident also in cotton blue. Regular hymenophoral trama composed of slender hyaline hyphae.

None of the marginal cells or cystidia. Pileipellis made up of a distinct cutis with intraparietal pigment that is composed of smooth, cylindrical hyphae that are oriented radially and range in width from 2.5 to 5 µm (Fig. 4); an ixocutis and suprapellis. There are clamps at every septa. Not visible are thromboplerous hyphae.

Distribution known to exist in Spain's Canary Islands.

Material examined: 1300 meters above sea level in a pine forest with P. radiata, Spain, Canary Islands, La Palma, Pared Vieja, October 15, 2001, leg. RM Dähncke (TO HG1724, homotypus).

Talk

The characteristics of this species include browning lamellae that only turn black in dried specimens, a brown, smooth, convex pileus, a context devoid of taste or smell, and, in terms of micromorphology, small, smooth, mostly globose basidiospores that are no longer than 6 µm, small basidia, and a gelatinized suprapellis.

There are no recognized taxa in the European literature that have a comparable set of characteristics.

Boud. / Lyophyllum helvella The deeper hues of the pileus make Clémençon easy to distinguish.

the compact context, the gray, non-browning lamellae, the typically revolute pileus edge, and, under a microscope, the increased size of the suprapellis and basidiospores (Clémençon, 1983, 1986, Bon 1999, Musumeci & Contu 2008).

The only species of Lyophyllum subeustygium that is known to exist outside of Spain is Lyophyllum subeustygium Fern. Sas., Pérez-De-Greg. & Contu. It differs in that it has darker tinges in the piloselmus, grey lamellae that turn black when handled or bruised, a darker, frequently rooting stipe, a mealy-smelling context, and larger, subglobose to broadly ellipsoid basidia that are carried by bigger basidia (Fernandez-Sasia et al. 2004, Lopez Alvarez & Rodriguez Diaz 2008). Larger basidiospores and basidia, as well as milder tinges throughout, are characteristics of the related L. eustygium (Cooke) Clémençon (Clemençon 1982a, 1986, Bon 1999).

The pileus and stipe of Lyophyllum paelochroum Clémençon have dark undertones.

However, when it gets injured, its basidia and spores are significantly bigger, the context tastes and smells mealy, and its lamellae and context immediately become black (Clémençon 1982b). Although L. amariusculum Clémençon and the former are extremely similar, the latter differs in that it has a darker tint in the pileus, stigma, and gills as well as a bitter flavor (Clemençon 1982a, 1986, Bon 1999, Consiglio & Contu 2002).L. leptosarx Clémençon & A.H. Sm. has been excluded from the list of non-European species that Clémençon & Smith (1983) identified as important due to its fuscous then greyish pileus, clearly bluing context, naked, non-fibrillose stalk, context strongly smelling like "green corn," larger and stouter basidia, and bigger basidiospores, which are characterized as broadly ellipsoid.

"5.4-7.2×4.5-5.9µm" in the protologue, and L. ochrocinerascens Clémençon & A.H. Sm. based on its significantly larger basidiospores and basidia, the whitepruinose, the yellowish then greyish pileus, and its briefly decurrent, grey-staining lamellae.

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