

Studies in the genus *Psathyrella* in Spain. III. *Psathyrella magnispora*, a new species in subsection *lutenses*

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Summary: *Psathyrella magnispora* sp. nov., a new species from subsection *Lutenses* Kits van Wav., collected in Spain, is described and illustrated macro- and microscopically. Besides, it is compared with other species of subsection *Lutenses* Kits van Wav., i.e. *P. noli-tangere*, *P. reticulata*, *P. twickelensis*, subsection *Spadiceogriseae* Kits van Wav., i.e. *P. clivensis*, and section *Pennatae* Romagn. emend. Kits van Wav., i.e. *P. fulvescens* var. *brevicystis*.

Zusammenfassung: *Psathyrella magnispora* sp. nov., eine in Spanien gefundene neue Art aus der Untersektion *Lutenses* Kits van Wav., wird beschrieben, in ihren makro- und mikroskopischen Details (einschließlich Farbtafel) dargestellt und mit anderen Arten der Untersektion *Lutenses* (*Psathyrella noli-tangere*, *P. reticulata*, *P. twickelensis*), der Untersektion *Spadiceogriseae* Kits van Wav. (*P. clivensis*) sowie der Sektion *Pennatae* Romagn. emend. Kits van Wav. (*P. fulvescens* var. *brevicystis*) verglichen.

Introduction

As mentioned previously (HEYKOOP & ESTEVE-RAVENTÓS 1994; HEYKOOP & MORENO 1998), the genus *Psathyrella* (Fr.) Quél. is a taxon to which little attention has been paid in Spain, often being neglected by the majority of mycologists. On the other hand, the mediterranean areas, and more specifically the Iberian Peninsula, host a high diversity of fungi, many of them being endemic and associated with specific plants in its ecosystems. In recent times, many mycological studies have been carried out in Spain which resulted in the description of several new species in different taxonomic groups: e.g. *Xeromphalina junipericola* Moreno & Heykoop (MORENO & HEYKOOP 1996), *Marasmiellus phaeomarasmoides* Moreno, Heykoop, Esteve-Rav. & Horak (MORENO & al., 1997), *Phaeomarasmius gypsophilus* Esteve-Rav., Villarreal, Heykoop & Horak (ESTEVE-RAVENTÓS & al. 1998), *Inocybe inexpectata* Villarreal, Esteve-Rav., Heykoop & Horak (VILLARREAL & al., 1998), *Mycena olivaceoflava* Villarreal, Heykoop & Maas G. (VILLARREAL & al. 1999),

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among others. However, the mediterranean mycobiota still remains poorly known and more new species are likely to be discovered in the future. This is the case with this new *Psathyrella* which has been discovered in chalk grasslands in mediterranean forests of *Quercus faginea* Lam. and *Quercus ilex* L. ssp. *ballota* (Desf.) Samp.

Materials and methods

The material studied was collected in the province of Guadalajara, Peninsular Spain. Type material has been deposited at AH (Herbarium of Alcalá de Henares University, Spain). Basidiospore measurements were made following the method of HEINEMANN & RAMELOO (1985).

Results

Psathyrella magnispora Heykoop & G. Moreno sp. nov., Figs. 1–3

Etymology: because of its characteristic large spores

Basidiomata solitaria vel gregaria. Pileus 7–25 mm latus, convexus vel planoconvexus, hygrophanus, non striatus, initio obscure brunneus vel spadiceo-brunneus, in sicco cinereo-cremeus vel cinereo-brunneus, colore rosea destitutus. Velum albidum fugax, primo cortinam fibrillosam, dein fibrillas ad marginem formans. Lamellae primo albiae vel cinereo-albiae deinde cinereo-brunneae vel leviter violaceae, adnatae, crebrae, acie lamellarum alba. Stipes 13–35 x 1,5–2,5 mm, cylindraceus, albidus vel cremeo-stramineus in parte inferiore, ad apicem pruinatus. Odore saporeque nullis.

Sporae 9,5–10,9 x 7–7,3 µm (dimensiones mediae), ellipsoideae, leves, in NH₄OH 10% observatae aurantiaco-brunneae, non-opacae, poro germinativo indistinctus (callus). Basidia 22–30 (32) x 10–12 (14) µm, clavata, 4-sporigera, fibulata. Pleurocystidia (28) 40–50 x (10) 12–17 µm, utriformia vel sublageniformia apicibus obtusis, plurimum (sub)capitata, raro fusiformia, hyalina, tunica tenui praedita vel plerumque tunica incrassata, lutea in NH₄OH 10%. Cheilocystidia 24–40 (47) x 10–17 µm, pleurocystidiis similia, paucis tenuitunicatis et incoloratis cellulis spheropedunculatis et clavatis 15–20 x 9–13 µm immixtae. Caulocystidia cheilocystidiis similia. Trama lamellarum pigmento praedita.

Habitat: inter graminis (e.g. Koeleria vallesiana (Honckeny) Gaudin). Typus: Hispania, Guadalajara, Carabias, 27-10-1999, leg. J. Checa, M.N. Blanco, G. Díaz et M. Heykoop, Typus in herbario AH sub no. 24929 depositus.

Material examined

SPAIN: Between Carabias and Moratilla, province of Guadalajara; leg. F. Esteve & J. Álvarez; 12-XI-1988; terrestrial in chalk grasslands, AH 13769. Between Carabias and Moratilla, province of Guadalajara; leg. F. Esteve & J. Álvarez; 12-XI-1988, in chalk grasslands, AH 13770. Carabias, province of Guadalajara; 27-X-1999, leg. J. Checa, M.N. Blanco, G. Díaz & M. Heykoop, in chalk grasslands, AH 24929 (Holotypus). Carabias, province of Guadalajara, 27-X-1999, leg. J. Checa, M.N. Blanco, G. Díaz & M. Heykoop, in chalk grasslands among *Koeleria vallesiana*, AH 24930.

Basidiomata isolated to gregarious. Pileus 7–25 mm in diam., convex to applanate-convex, with a slightly obtuse umbo in young stages, hygrophanous, not striate, at first very dark brown to date-brown, drying out first at margin to ochraceous or orange-ochraceous, the centre remaining first dark date-brown, later drying out to greyish-beige or cream greyish and finally pale brown-greyish,



Fig. 1: *Psathyrella magnispora* (AH 24930): Basidiocarps

without pink. Context thin and concolorous with the cap. Veil fibrillose, whitish, forming a cortina uniting the margin of the cap and the upper portion of the stem, disappearing at maturity and leaving fugacious whitish fibrils along the cap margin. Gills at first whitish, then greyish-whitish to progressively brown-greyish with lilac-violaceous tinges, adnate, very close, lamella-edge white. Lamellulae present. Stipe 13–35 x 1.5–2.5 mm, cylindrical, fragile, whitish with cream strawish tinges, especially in the lower half, sometimes slightly radicating, with pruinose apex (caulocystidia). Context concolorous with stipe. Smell and taste not distinctive.

Spores ellipsoid to broadly ellipsoid, smooth, with dense granular content, orange-brown in NH_4OH 10%, with a reddish hue, not opaque, with very indistinct, practically absent germ pore (callus), easier to observe under phase contrast, size:

9.5–10.45–11.8 (–12) x 6.5–7.19–7.8 (–8) μm ; Q = 1.33–1.45–1.61 (–1.64) (n = 21) (AH 24930)

9.5–10.24–11.4 (–11.5) x 7–7.26–7.9 (–8) μm ; Q = 1.25–1.41–1.57 (n = 21) (AH 24929)

10–10.9–11.5 x 7–7.07–7.4 (–7.5) μm ; Q = 1.43–1.54–1.64 (n = 22) (AH 13769)

(8.5–) 9–9.52–10.5 (–11) x 7–7.04–7.3 (–7.5) μm ; Q = 1.27–1.35–1.43 (n = 23) (AH 13770)

Basidia clavate, clamped, tetrasporic, 22–30 (–32) x 10–12 (–14) μm . Pleurocystidia (28–) 40–50 x (10–) 12–17 μm , utriform to sublageniform with obtuse apex, many (sub)capitate, sometimes with forked apex, more rarely fusiform, hyaline, often with refractive and locally thickened walls and then yellowish (to greenish) in NH_4OH 10%, some of them with mucoid droplets on the surface. Cheilocystidia 24–40 (–47) x 10–17 μm , similar to pleurocystidia, very abundant and densely packed, few to many with thickened and refractive walls (up to 2 μm), intermixed with clavate to spheropedunculate cells, 15–20 x 9–13 μm , few in number, thin-walled and colourless. Stipitipellis a cutis, covered with caulocystidia, 35–42 x 9–14 μm , utriform to sublageniform or (sub)capitate, few to many with refractive and thickened walls (up to 2.5 μm), especially in the neck

