

Conocybe romagnesii, a new species of section *Candidae* from Spain

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Abstract: *Conocybe romagnesii*, a new species of sect. *Candidae*, is described. It is characterized by very pale, almost hyaline, but thick-walled spores without germ-pore. Drawings of microscopic features and a colour photograph are given, delimitation of similar taxa is discussed and a key of sect. *Candidae* in Europe is included.



Fig. 1. *Conocybe romagnesii* (Holotype). – Phot. G. MORENO.

Zusammenfassung: *Conocybe romagnesii*, eine neue Art aus der Sektion *Candidae*, wird neu beschrieben. Sie ist gekennzeichnet durch sehr helle, fast hyaline, aber dickwandige Sporen ohne Keimpore. Mikrozeichnungen und eine farbige Abbildung werden gegeben, die Abgrenzung gegenüber nahe stehenden Taxa wird mit Hilfe eines Schlüssels der Sektion *Candidae* in Europa dargestellt.

Resumen: Se describe *Conocybe romagnesii*, una nueva especie de la sección *Candidae*. Se caracteriza por las esporas muy pálidas, frecuentemente hialinas, pero de gruesas paredes y sin poro germinativo. Dibujos de los caracteres microscópicos y una fotografía en color son incluidas. Se compara con táxones similares y se incluye una clave de la sección *Candidae* en Europa.

During revision of *Bolbitiaceae* specimens of the herbarium AH by the first author, several collections of a taxon of sect. *Candidae* (KÜHNER) SINGER were detected, which macroscopically very much resembled *Conocybe albipes* (OTTH) HAUSKN. However, microscopically it had completely different spores without germ-pore. It was revealed that the second author had sent material of one of these collections to H. ROMAGNESI in the middle of the 70ties. ROMAGNESI (pers. comm.) considered them to be an albino-mutation of another species. As such peculiar fruiting bodies have been found on three different places in the "Ciudad Universitaria" of Madrid and also in Villaviciosa de Odón, 20 km apart, and in the following years several times by the second author, this opinion seemed to be very strange. The spores of all the finds were of similar size as those of *Conocybe albipes*, but much paler, hyaline yellow with yellowish wall, and had absolutely no germ-pore. This latter deviation can not at all be explained by albinism, thus we came to the conclusion that it must be a separate taxon, which we describe as new species below.

***Conocybe romagnesii* HAUSKN. & G. MORENO, spec. nova** (Figs. 1, 2)

Latin diagnosis:

Conocybe albipes similis, sed ab ea differt sporis sine poro germinativo, pallidioribus, pallide luteis in KHO.

Type: Spain, Madrid, Jardín Facultad de Farmacia, Ciudad Universitaria, between *Poaceae*, 10. 7. 1974, leg. M. T. TELLERÍA & G. MORENO (AH 327, holotypus).

Characters:

Pileus: 7-18 mm broad, 6-15 mm high, conical to campanulate, snow white, viscous, smooth, translucently striate, slightly sticky. Margin decurved to flat in maturity, irregular to slightly dented.

Stipe: 60-90 mm long, 1-2 mm thick, cylindrical, base distinctly bulbous (up to 4 mm thick), without remnants of veil, snow white, hyaline-white like the pileus. Surface glabrous to slightly pruinose at apex only.

Lamellae: with lamellulae, narrow adnate, crowded, slightly ventricose, young white, mature slightly cream, old deliquescent.

Context: white, hyaline white, smell and taste indistinct, old deliquescent.

Spores: 9.5-(10.5)-13.5 x 7.5-10.5 μm , mean 11.3-11.9 x 8.4-8.7 μm , Q = 1.25-1.6, ellipsoidal, not lentiform, mature with thick, yellow wall, germ-pore absolutely absent, hyaline yellow in KOH.

Basidia: 4-(very rarely 2-)spored, 20-27 x 11-14 μm , claviform with up to 2 μm long sterigmata.

Clamp connections: present.

Cheilocystidia: lecythiform, 19-26 x 8-15 μm , capitulum 2.5-4 μm broad, neck 5-10 μm long.

Pseudoparaphyses: present.

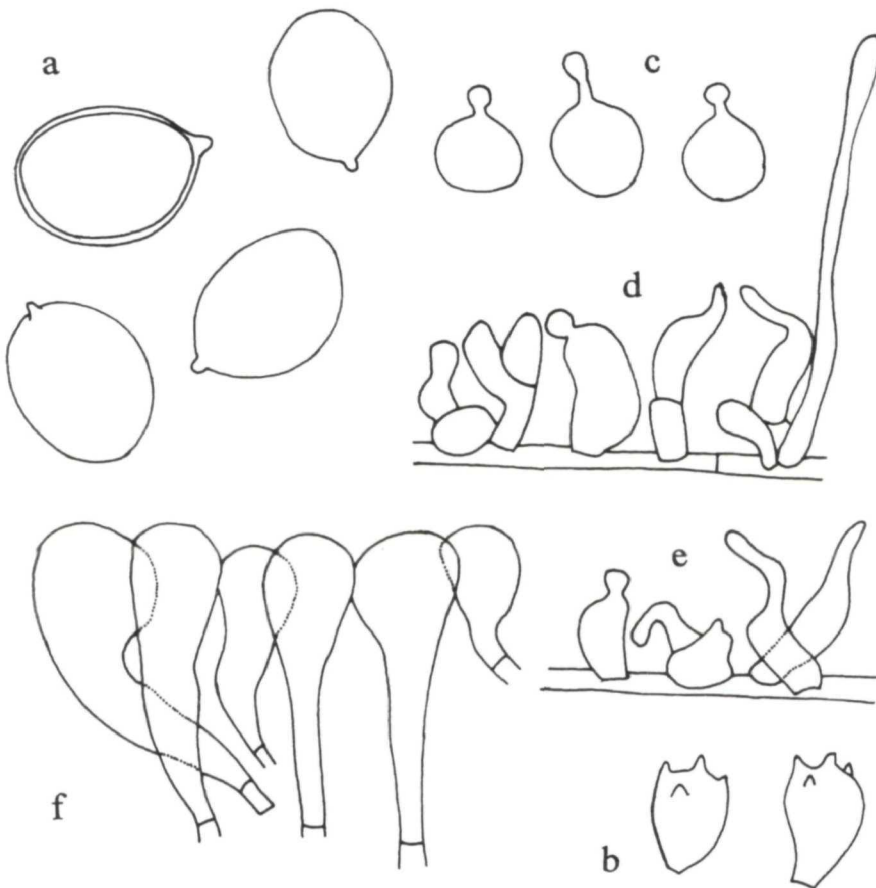


Fig. 2 a-f. *Conocybe romagnesii*. a Spores, x 2000, b basidia, x 800, c cheilocystidia, x 800, d, e stipe covering, x 800, f pileipellis, x 800.

Stipe covering: consisting of mostly hair-like (up to 70 x 3 µm) and non-lecythiform elements (15-35 x 7-12 µm), scattered over the whole stipe inbetween a few lecythiform elements similar to cheilocystidia, but more variable in shape with thicker and shorter neck.

Pileipellis: hymeniform consisting of elongate-pearshaped elements (13-22 µm broad, 25-60 µm long), inbetween no pileocystidia found.

Habitat and distribution: always occurring in grasslands; up to now only known of the vicinity of Madrid (Spain).

Collections examined (besides type): Spain: Madrid, Ciudad Universitaria, between *Poaceae*, March 1974, leg. G. MORENO (AH 326); - - 15. 6. 1974, leg. M. T. TELLERÍA & G. MORENO (AH 325), - Villaviciosa de Odón, 10. 7. 1974, leg. F. D. CALONGE (AH 11931).

The placement of the new species within sect. *Candidae* is clear because of the white colour, the slightly sticky pileus, the habitus as a whole, the slightly deliquescent lamellae and the presence of pseudoparaphyses. Although this section has been treated by the first author only recently (HAUSKNECHT 1998), there have been several changes since in Europe. A tropical species, *Conocybe zeylanica* (PETCH) BOEDIJN, could be found in glass houses (HAUSKNECHT 2002). *Conocybe albipes* var. *pseudocrispa* HAUSKN. was raised to species rank by ARNOLDS (2003). A further member of the section, *Conocybe umbonata* (MASSEE) WATLING, which has been described at the beginning of the 20th century and was missing since was refound in glass houses (HAUSKNECHT & al. 2005). Presently, in Europe there exist six species and one variety within sect. *Candidae* which are keyed out below:

- | | | |
|-------|--|----------------------------------|
| 1 | Pileus white, whitish, ivory, cream, but disc sometimes with ochre tints.
Grassy places | 2 |
| 1* | Pileus distinctly coloured, especially darker in the centre. In Europe only
in glass houses and flower pots | 4 |
| 2 | Basidia 2-spored | |
| | | 1. <i>C. pseudocrispa</i> |
| 2* | Basidia mostly 4-spored | 3 |
| 3 | Spores yellowish in KOH at the most, germ-pore absent | |
| | | 2. <i>C. romagnesii</i> |
| 3* | Spores darker, distinct, large germ-pore present (pileus rugose = var.
<i>rugata</i>) | |
| | | 3. <i>C. albipes</i> |
| 4 (1) | Spores in front view mitra-shaped, distinctly angular, 8-11 µm long. Pi-
leus acutely umbonate, young centre with greenish tints | |
| | | 4. <i>C. umbonata</i> |
| 4* | Spores ellipsoidal, somewhat lentiform flattened, 10-14 µm long. Pileus
never acutely umbonate, with pale brown to reddish-orange colours | 5 |
| 5 | Pileus 10-30 mm broad, dull brownish, brownish grey, grey-beige, mar-
gin concolourous, drying whitish. Stipe 25-70 x 1-2.5 mm, whitish | |
| | | 5. <i>C. crispella</i> |

- 5* Pileus 10-60 mm broad, reddish-orange, rusty orange, orange yellow, margin yellowish. Stipe 50-230 mm long, up to 7 mm thick

6. *C. zeylanica*

Very pale, almost hyaline spores are rare in the genus *Conocybe*, but also present in other sections. *Conocybe spiculoides* KÜHNER & WATLING of sect. *Conocybe* and *C. pallidospora* KÜHNER & WATLING of sect. *Pilosellae* (KÜHNER) SINGER have nearly hyaline, very thin-walled spores with \pm distinct germ-pore. Presence or absence of the germ-pore of the spores is considered to be a very important character in the genus and leads to differentiation in species rank. An exception are taxa with thin-walled spores, where a thinner part (callus) of the spore wall replaces the germ-pore, and where in a spore print spores with an indistinct or without germ-pore, or with callus are present, e.g., in *Conocybe pilosella* (FR.: FR.) KÜHNER.

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