

**Contribution to the study of the mycoflora  
of Andalusia (Spain) XIII  
Agaricales VI**

**Taxonomic notes on two interesting Agarics from the Iberian Peninsula**

by

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With 5 figures

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**Summary:** *Conocybe arrhenii* var. *squamosipes* var. nov. is described and commented. The new combination *Pholiota oedipus* var. *ochroflavida* (Malençon) comb. et stat. nov. is proposed.

**Resumen:** Se describe y comenta *Conocybe arrhenii* var. *squamosipes* var. nov. Se propone la nueva combinación *Pholiota oedipus* var. *ochroflavida* (Malençon) comb. et stat. nov.

**Key words:** *Conocybe arrhenii* var. *squamosipes*, *Pholiota oedipus* var. *ochroflavida*, taxonomy, Agaricales, Iberian Peninsula, Spain.

**Introduction**

This brief taxonomic note is focused on two agaric taxa from Southern Spain (Andalucía), viz. *Conocybe arrhenii* var. *squamosipes*, which is proposed as new, and *Pholiota oedipus* var. *ochroflavida*, which is combined and the status changed. Detailed descriptions of both and comments about their taxonomic position are given. Both taxa were previously unknown from the Iberian Peninsula.

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The methods followed have been the usual ones in these studies. Voucher material is deposited at the Herbarium of the Faculty of Sciences of Granada University (GDAC) and the Herbarium of the Mycological Society of Sierras Subbéticas (SMSS). For author's abbreviations we have followed Kirk & Ansell (1992). Unpublished collections of *Pholiota ochroflavida* from the provinces of Madrid and Jaén, which are deposited at the Herbarium of Alcalá University (AH) have been additionally studied and compared with our specimens.

***Conocybe arrhenii* (Fr.) Kits van Wav. var. *squamosipes* A. Ortega & Esteve-Rav. var. nov.**

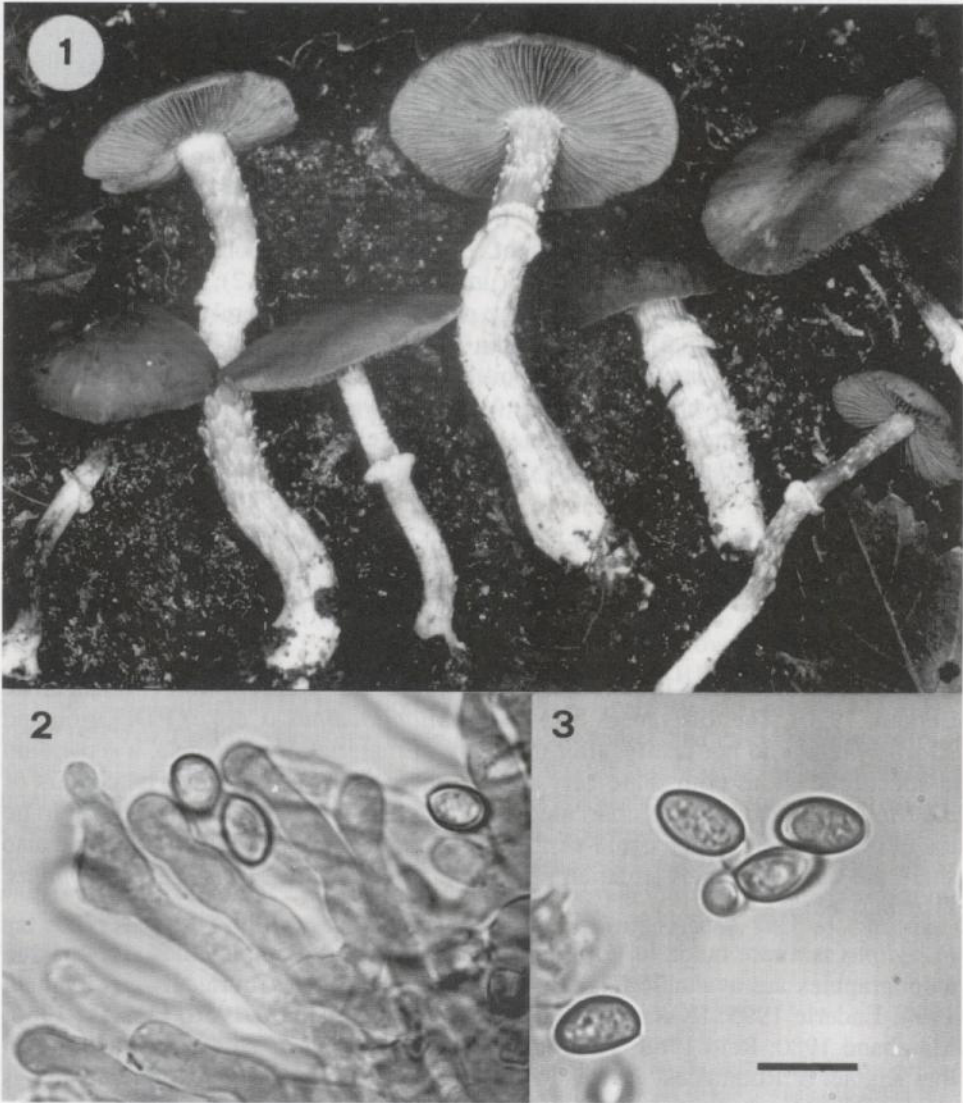
A typo differt habitu robustiore et stipite fibrilloso-squarrosi. Holotypus: GDAC 39053.

Fruitbodies gregarious (Fig. 1). Pileus 20-40 mm diam., reddish-ochraceous to ochraceous, conico-campanulate when young, then convex to plano-convex with a broad obtuse umbo, slightly striate when humid, with whitish veil remnants at the margin; lamellae crowded, adnate, ochraceous to orange ochraceous; stipe 20-60 × 3-8(-10) mm, cylindrical, moderately enlarged at the base, white, becoming brownish at the base with age, markedly fibrillose-scaly under a broad, membranose and persistent ring, conspicuously striate in its external part. Smell none. Spore print brownish ochraceous. Spores 7.2-8(-9) × 4.2-4.8(-5.5) µm ( $X_m = 7.5 \times 4.6$  µm; Q:L/l = 1.5-1.7(-1.8);  $Q_m = 1.6$ ), ellipsoid-amygdaliform to amygdaliform, ochraceous, with small and sometimes inconspicuous germ pore (Fig. 3). Basidia 4-spored. Cheilocystidia 30-40 × 4-7 µm cylindrical to sublageniform, non capitate, with obtuse apex, sinuose (Fig. 2). Pileipellis a hymenoderm consisting of pyriform cells of 18-30 µm diam. with abundant membranal brownish pigment. Clamp-connections present.

Material studied.- CÓRDOBA: Quintilla, Arroyo Gamiz, under *Ulmus minor*, 2.10.1994, Leg.: J. Gomez & B. Moreno, GDAC 39053 (Typus). Isotypus at the Herbarium of the Sociedad Micológica de las Sierras Subbéticas, SMSS 720.

This new variety differs from the type species by the stouter basidiocarps and the markedly fibrillose-squarrose stipe, both below and above the ring, a character that had not been previously described in the literature for this common species in Europe (Watling 1982, 1983, 1988; Lanzoni 1987; Lonati 1991; Bon 1992; Enderle 1991). A fibrillose stipe has been previously described for *C. arrhenii* (Fr.) Kits van Wav. by Kits van Waveren (1970), but this is never so conspicuously squamose to squarrose as in the new taxon proposed; in fact, this author depicts a specimen with a fibrillose-squamulose stipe in his revision of the annulate European taxa (Kits van Waveren, loc. cit.:140, fig.9-left-), always making reference to much more slender specimens. In all other respects, our material fits *C. arrhenii* rather well, especially by the persistent striate ring, the narrow, cylindrical to sublageniform cheilocystidia and the spores provided with a small inconspicuous germ pore. *Conocybe hadrocystis* (Kits van Wav.) Watling, which was first considered as a variety of *C. arrhenii* (cf. Kits van Waveren, loc. cit.:150), is quite similar in macroscopical characters, but differs in the mostly capitate and broader cheilocystidia (cf. Watling 1982; Enderle 1996, etc.).

The type specimens of var. *squamosipes* were first determined as *Pholiotina hadrocystis* (Kits van Wav.) Courtec. and later published under this name by Gómez et al. (1995). A short description and color photograph can be consulted in Ortega et al. (1996:105, fig.108).



Figs. 1-3. *Conocybe arrhenii* var. *squamosipes* (Holotypus). Fig. 1. Habit. Fig. 2. Cheilocystidia. Fig. 3. Spores. Bar = 10  $\mu$ m.

**Pholiota oedipus** var. **ochroflavida** (Malençon in Malençon & Bertault) Esteve-Rav. & A. Ortega comb. et st. nov.

(Basionym: *Dryophila ochroflavida* Malençon in Malençon & Bertault (1970), Flore des Champignons Supérieurs du Maroc 1:322-323)

= *Pholiota ochroflavida* (Malençon) Bon, Doc. Mycol. 6(24):46 (1976) - nom. inval., Art.33.2-, - incorrect citation of the protologue-

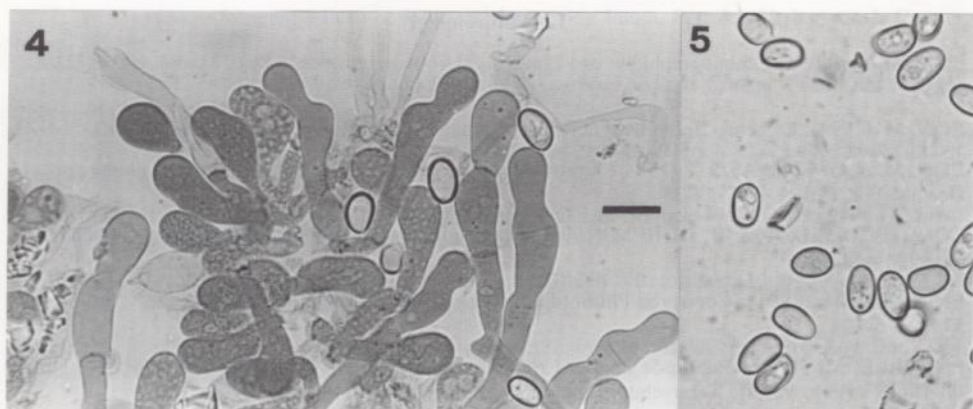
= *Pholiota ochroflavida* (Malençon) Lanzoni, Boll. Gruppo Micol. G. Bresadola 29(3-4):190 (1986)

Pileus 20-40 mm diam., plano-convex to applanate, depressed to concave at maturity, hygrophanous, striate, slightly viscid when fresh, brown-ochraceous becoming yellow-ochraceous when dry. Gills distant, adnate-sinuose to moderately subdecurrent, yellow-ochraceous to brown-ochraceous, with floccose white edge. Stipe 40-60 × 3-4.5(-6) mm, cylindrical, sometimes tapering at the base, white, hollow, with fibrillose to slightly membranose and fugaceous cortiniform ring. Odor and taste none. Pileipellis a more or less developed ixocutis composed by narrow, branched and cylindrical hyphae, 2-4 µm wide. Subcutis formed by shorter and wider hyphae, up to 15 µm in diam., with parietal yellowish pigment, not gelatinized. Spores(7-)7.5-9(-9.8) × (4.2-)4.5-5(-5.5) µm (Xm = 8.5 × 4.85 µm; Q:L/l = 1.6-1.9(-2); Qm = 1.75), pale yellow, ellipsoid in frontal view, slightly phaseoliform in lateral view, with inconspicuous germ pore (Fig. 5). Cheilocystidia 30-50 × 6-10 µm, thin walled, cylindrical, cylindrical-claviform or cylindrical-moniliform, sometimes with (sub-)capitate apex, with or without transversal septa (Fig. 4). Pleurocystidia none. Basidia clavate, 4-spored, 20-25 × 6-8 µm. Subhymenium scarcely developed. Tramal hyphae composed by broad cells, 12-20 µm wide, with yellowish parietal pigment. Clamp-connections present.

Material studied.- CÓRDOBA: Priego de Córdoba, Arroyo Gamiz, on dead leaves of *Ulmus minor*, 20.10.1990, Leg.: J. Gómez & B. Moreno, GDAC 40145, SMSS 375. JAÉN: locality unknown, on dead leaves of *Populus* sp., 19.3.1991, Leg.: F. Jiménez, AH 22118. MADRID: El Paular, river Lozoya, on dead leaves of *Ulmus minor* and *Populus* sp., 11.5.1984, Leg.: F. Esteve-Raventós & J.M. Barrasa, AH 22119.

The material studied is in agreement with the original description (Malençon & Bertault 1970). The differences between *Pholiota oedipus* (Cooke) P.D. Orton and *P. ochroflavida* do not justify, after the study of material of these taxa, a separation at specific level, as both share very similar microscopic characters. The colours of the fruitbodies and the (possible) mediterranean distribution of the latter seem to be the only characters which could permit a separation from *P. oedipus*; both taxa also share the same ecologies (riparian plant communities under *Ulmus*, *Tilia*, *Populus*, *Fraxinus*, etc.).

*P. oedipus* is a rare taxon in Europe, but many and very complete descriptions and iconographies are available (e.g. Bon & Chevassut 1974; Courtecuisse & Duhem 1994; Enderle 1995; Eyssartier 1995; Kühner & Romagnesi 1956; Lanzoni 1986; Marchand 1980; Reid 1968; Tjallingii-Beukers 1987; etc.). This is the same taxon that Kühner & Romagnesi (1953) described as *Dryophila sordida* Kühner, which is characterized by the brownish to brownish-olivaceous colours of the pileus. In North America, Smith & Hesler (1968:81) have probably described *P. oedipus* under the



Figs. 4-5. *Pholiota oedipus* var. *ochroflavida* (GDAC 40145). Fig. 4. Cheilocystidia. Fig. 5. Spores. Bar = 10  $\mu$ m.

name of *Pholiota mutans* A.H. Sm. & Hesler, collected under *Populus* ("aspens"); these authors justify the separation of *P. mutans* as a different species only on a geographic basis, but the description of this taxon is in full concordance with the European and traditional concept of *P. oedipus*. Lanzoni (loc. cit.) considers *P. mutans* as a variety of *Phaeogalera oedipus* (Cooke) Romagn. and *Pholiota ochroflavida* as a distinct species, an opinion that is not shared by us. *Dryophila olivacea* Maire & Malençon (in Malençon & Bertault, 1970:325) is very probably conspecific with *P. oedipus*, though characterized by the deep olivaceous pilei; this taxon could probably represent *P. oedipus* in the sense of Marchand (1980, pl.584) as the deep olivaceous-grey pilei represented in the plate suggest.

The taxonomic position of *P. oedipus* is a matter of great controversy; in our opinion, it would be better accommodated in the genus *Pholiota* (Fr.) P.Kumm., as it has been previously considered so by Reid (loc. cit.), Smith & Hesler (loc. cit.), Moser (1983), Rald (1992) or Tjallingi-Beukers (loc. cit.); the thin walled and pallid yellow-ochraceous spores with an inconspicuous germ pore would suggest the inclusion in this genus. However, some authors consider a better position in the genus *Phaeogalera* Kühner (e.g. Romagnesi, 1980; Lanzoni, loc. cit.; Jacobson, 1990), or in *Kuehneromyces* Singer & A.H.Sm. (Bon, 1994:70). Nevertheless, these two genera have thick walled and darker spores, normally with a very conspicuous germ pore, characters that could suggest a closer relationship with some Cortinariaceae, such as *Galerina* Earle.

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