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Some Interesting Agarics Presented in the Mycological Exhibitions of Madrid and Salamanca (Spain) in 1989.

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Summary. During the mycological exhibitions of Madrid and Salamanca (Spain), some interesting species were sampled and studied. *Oudemansiella xeruloides* var. *hispanica* is described and its taxonomic position discussed. *Bolbitius variicolor* is recorded for the first time in Spain. *Agrocybe setulosa*, *Boletus permagnificus*, *Boletus spretus* and *Hypsizygus tessulatus* are rare species with chorological interest. *Hebeloma radicosum* and *Limacella illinita* are seldom recorded in the Iberian Peninsula, and ecological comments of both are given.

Résumé. Durant les expositions mycologiques de Madrid et Salamanca, certaines espèces intéressantes ont été récoltées et étudiées. *Oudemansiella xeruloides* var. *hispanica* est décrite et sa position taxonomique par rapport aux espèces voisines discutée. *Bolbitius variicolor* est une espèce nouvelle pour la mycoflore de l'Espagne. *Agrocybe setulosa*, *Boletus permagnificus*, *Boletus spretus* et *Hypsizygus tessulatus* sont des espèces rares d'intérêt chorologique. *Hebeloma radicosum* et *Limacella illinita* sont des espèces fréquentes en Europe, mais elles ont été peu citées en Espagne. Nous apportons des données chorologiques et écologiques sur ces deux espèces.

Zusammenfassung. Es werden einige interessante Arten vorgestellt, die bei Pilzausstellungen in Madrid und Salamanca gezeigt wurden. *Oudemansiella xeruloides* var. *hispanica* wird beschrieben und ihre taxonomische Stellung diskutiert. *Agrocybe setulosa*, *Boletus permagnificus*, *Hypsizygus tessulatus* und *Boletus spretus* sind seltene, chorologisch interessante Arten. Die beiden Arten *Hebeloma radicosum* und *Limacella illinata* sind im übrigen Europa häufig, aber in Spanien selten. Ihre Ökologie und Chorologie werden diskutiert.

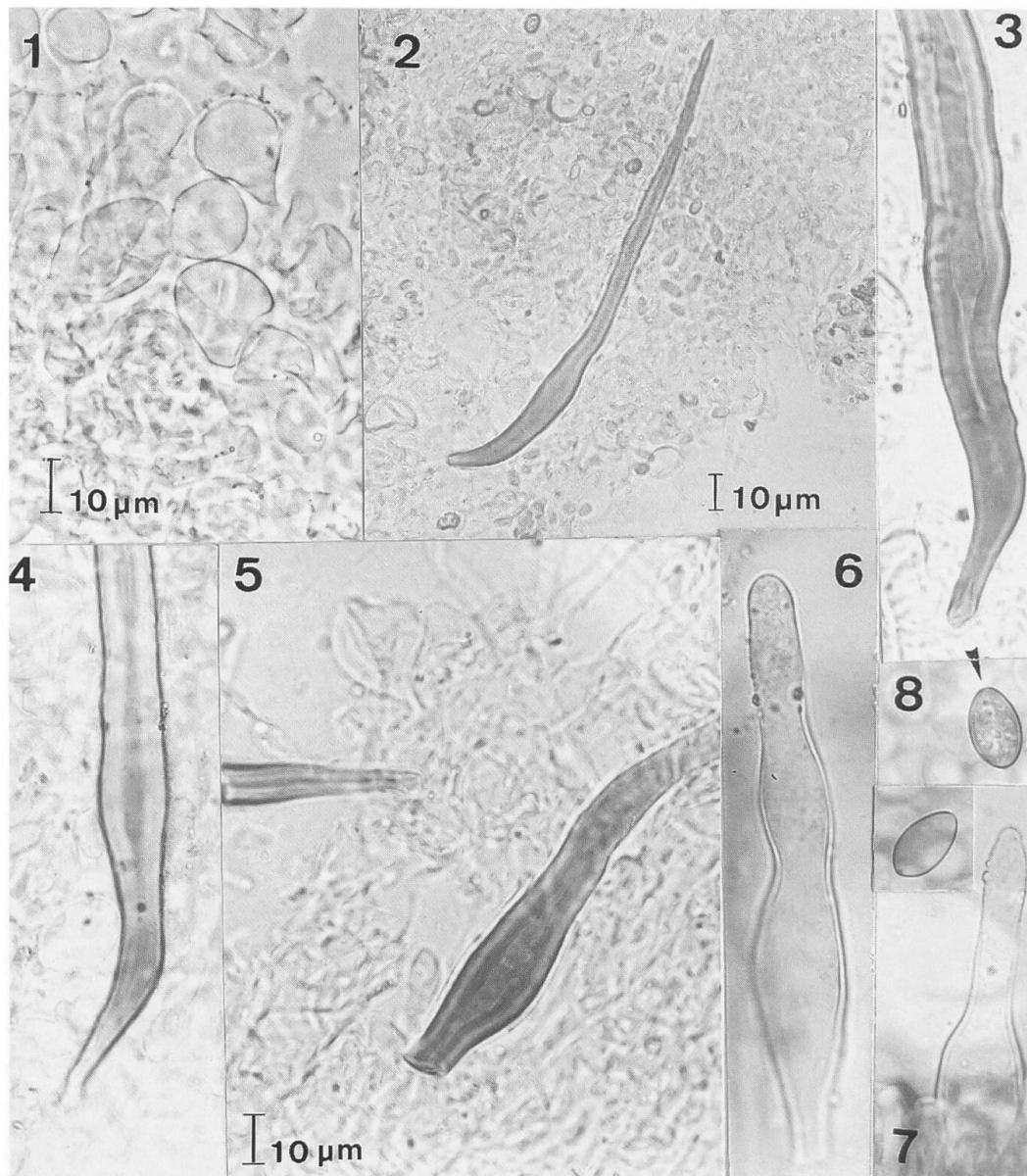
Introduction

The many mycological exhibitions that take place in some provinces of Spain each year are a major source of fungal material, generally of great scientific interest. The aim of this contribution is to cite or describe some fleshy fungi (Agaricales s. lato) sampled in two exhibitions held in Madrid and Salamanca during the autumn of 1989 and subsequently studied. A few are frequent species in central and northern Europe, but not in Spain, whilst the rest of them seem to be rare taxa in Europe; *Bolbitius variicolor* was previously unknown in the Iberian Peninsula. All the specimens have been deposited at the Herbarium of Plant Biology (Botany) of Alcalá de Henares University (H.AH).

The photographs have been made in a Nikon Labophot microscope, with an incorporated photographic system. Macroscopic characters were photographed with a Nikkormat camera with a Starblitz circular flash. In both cases we have used a Kodak Plux-X pan, 125 ASA film.

Agrocybe setulosa Moreno & Barrasa, Cryptog., Mycol. 5:103,105 (1984).

Figs. 1-8.



Figures 1-8: *Agrocybe setulosa*.

1-5: epicutis and pileocystidia. H.AH 11743; 6-8: cheilocystidia and spores. H.AH 2904.

This rare species is readily distinguished by its ellipsoid spores which measure $13-15 \times 7-8(-9) \mu\text{m}$, with an apical and central germ pore of $-1 \mu\text{m}$ diam., its lageniform, frequently capitate cheilo- and pleurocystidia, and its caulo- and pileocystidia with thick, yellowish walls, and that often reach more than $100 \mu\text{m}$ in length. These cystidia, similar to "setae", are unique in the genus.

It was previously known from the Guadarrama Mountain Range (Madrid) where it was first described by Moreno & Barrasa (1984). Possibly this species is widely distributed in the Peninsula, perhaps mistaken with *A. semiorbicularis* (Bull.: Fr.) Fayod s. lato and *A. vervacti* (Fr.) Singer. However, it can be recognized readily, using a hand-lens after being collected, owing to the presence of protruding setae in the epicutis.

Material studied: Pto. Vallejera (Salamanca), grassy and open *Quercus pyrenaica* forest ("melojar"), 25-XI-1989, M. Ladero, H.AH 11743.

Bolbitius variicolor Atk., Studies of American Fungi: 154 (1900). Fig. 9

Several authors (e.g. Watling 1982) have pointed out the differences between this species, *Bolbitius titubans* (Bull.:Fr.) Fr. and *B. vitellinus* (Pers.:Fr.) Fr. *Bolbitius variicolor* is characterized by the large dimensions, yellowish shades on the stem and a brownish-yellow cap with olivaceous tones, wrinkled radially.

Bolbitius variicolor was hitherto unknown in Spain, it has been recorded in other European countries, such as the United Kingdom (Watling, 1982), West-Germany (Enderle & al., 1985) and Italy (Migliozzi & Coccia, 1988). It might be expected to be widespread in Europe, and is considered a rare species.

Material studied: Surroundings of Peguerinos (Avila), in a grassy *Quercus pyrenaica* forest, 17-XI-1989, leg. F. D. Calogne, H.AH 11739.



Figure 9: *Bolbitius variicolor* basidiocarp. H.AH 11739

Boletus permagnificus Pöder., Sydowia 34: 149 (1981) 1982.

= *Boletus siculus* Inzenga ss. Alessio non Inzenga, Fungi Europaei 2 (*Boletus*): 246 (1985).

Since it was discovered and described as a new species in Italy by Pöder (1983), we have not found many references on this species. However, it is known in Spain from specimens sampled in Cáceres (Extremadura, Spain) and recorded by Moreno & Esteve-Raventós (1988). It is not a rare species in *Quercus suber* and *Quercus ilex* forests on the acid soils of Extremadura. This new recording in Salamanca might indicate that a wider distribution could be expected in Southern and Central Spain.

Recently, *B. permagnificus* was found in Corsica according to the "Catalogue Ecologique des champignons supérieurs méditerranéens" fasc. IV. Bolets, 1989, made by Chevassut & al.

Material studied: Sotoserrano (Salamanca), in a *Quercus ilex* spp. *rotundifolia* forest, 26-XI-1989, leg. V. Gonzalez, H.AH 11742.

Boletus spretus Berteau, Doc. Mycol. 18 (72): 62 (1988).

= *Boletus aemilii* Barbier ss. Alessio non Barbier, Fungi Europaei 2 (*Boletus*): 263-267 (1988).

= *Boletus bicolor* Peck ss. Galli non Peck, I Boleti della nostra regione: 106 (1980).

= *Boletus speciosus* Frost ss. Marchand, Champignons du Nord et du Midi 3, pl. 218 (1974).

The specimens studied match the description and remarks of Moreno & Esteve-Raventós (1988) from material collected in Madrid. It was then published as *B. aemilii* Barbier ss. Alessio and was still unknown in our Peninsula.

The iconography of Alessio (1985) illustrates this rare taxon quite well (as *B. aemilii*); it is characterized by the pinkish to purplish cap and stem, deep yellow tubes, slightly rooting stipe, and white to yellowish flesh that turns blue when cut or bruised.

Material studied: Sotoserrano (Salamanca), in *Castanea sativa* and *Quercus ilex* spp. *rotundifolia* forest, 26-XI-1989, leg. V. Gonzalez, H.AH 11746.

Hebeloma radicosum (Bull.: Fr.) Ricken, Die Blätterpilze: 115 (1915).

It is sometimes found in Northern Spain, often in beech-woods, but also in *Castanea* and *Quercus* forests, though very rare in this habitat.

Material studied: Pto. Vallejera (Salamanca), in *Quercus pyrenaica* humus, 25-XI-1989, leg. M. Ladero, H.AH 11741.

Hypsizygus tessulatus (Bull.:Fr.) Singer, Mycologia 39: 77 (1947).

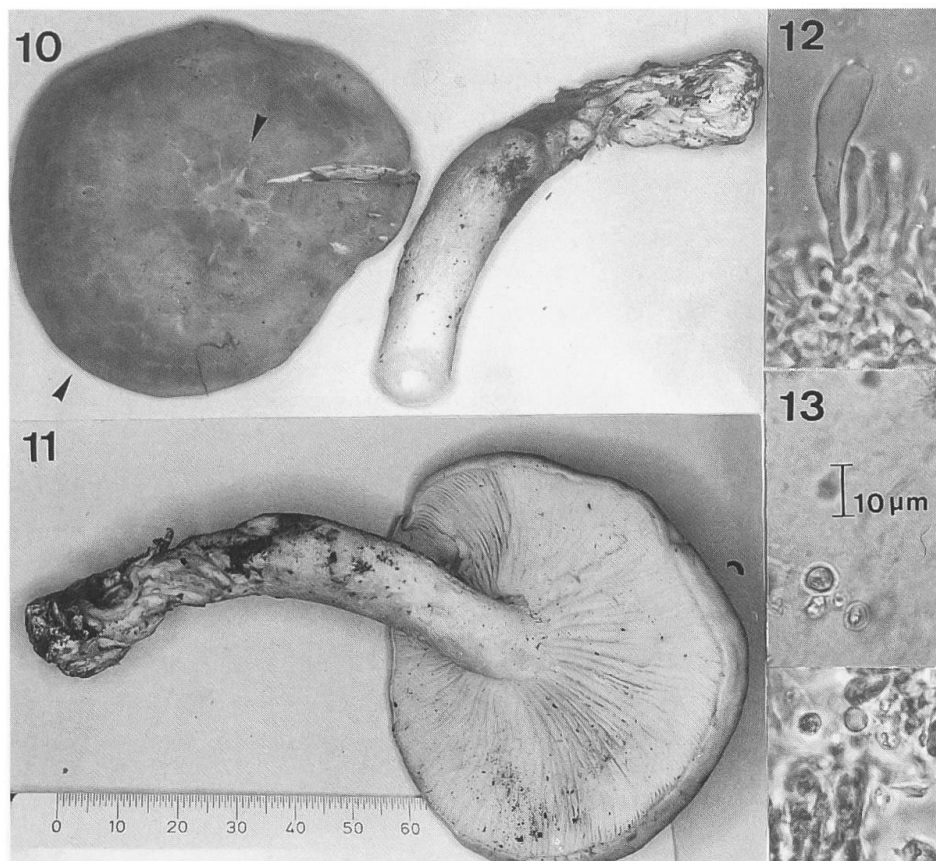
= *Lyophyllum ulmarium* (Bull.: Fr.) Kühner, Bull. Soc. Linn. Lyon 7: 211(1938).
Figs. 10-13.

Our material shows the following characters: cap uniformly ochraceous to ochre-whitish, except for the margin, which is paler, 5 cm diam. convex to plano-convex, typically tessulated, non-striated, with an incurved margin. Stem whitish or concolorous, cylindrical, hollow, finely pruinose. Flesh white with a strong mealy smell. Gills whitish, very anastomosing, sinuate to slightly decurrent. Basidia 4-spored. Spores subglobose, 4-5 μm diam., cyanophilous, non-amyloid. Epicutis of filamentous, clamped hyphae.

Seldom recorded in Spain; since Lazaro-Ibiza (1907) from Guadalajara, it has only appeared in Cataluña (Maire & al., 1933), Madrid (Calonge & Zugaza, 1973) and Vasque country (Mendoza & Díaz, 1990).

A recent, complete description was provided by Dermek (1987), where *Lyophyllum ulmarium* is considered as synonymous.

Material studied: Gonzal, Puerto Marin (Lugo), on a *Quercus robur* living trunk, 16-XI-1989, leg. A. Guerra, H.AH 11735.



Figures 10-13: *Hypsizygus tessulatus*.
basidiocarp, basidium and spores. H.AH 11739

Limacella illinata (Fr.) Murrill, North Am. Fl. 10: 40 (1914).

No recent compilations or monographs about the European *Limacella* species exist (apart from that of Courtecuisse, 1984), but *L. illinata* is easy to recognize by its glutinous, whitish basidiome with "lepiotoid" habit, lack of a ring, and subglobose, slightly verrucose spores (4-5 μm). In Spain, *L. illinata* is a rare species growing in coniferous (*Pinus* spp.) and sclerophilous (*Quercus* spp.) forests, and in mossy heathlands (under *Erica arborea*).

Material studied: Candelario (Salamanca), in *Pinus sylvestris* humus, 25-XI-1989, leg. M. Ladero, H.AH 11740.

Oudemansiella xeruloides Bon var. *hispanica* Moreno & Esteve-Raventós, var. nov. Figs. 14-20.

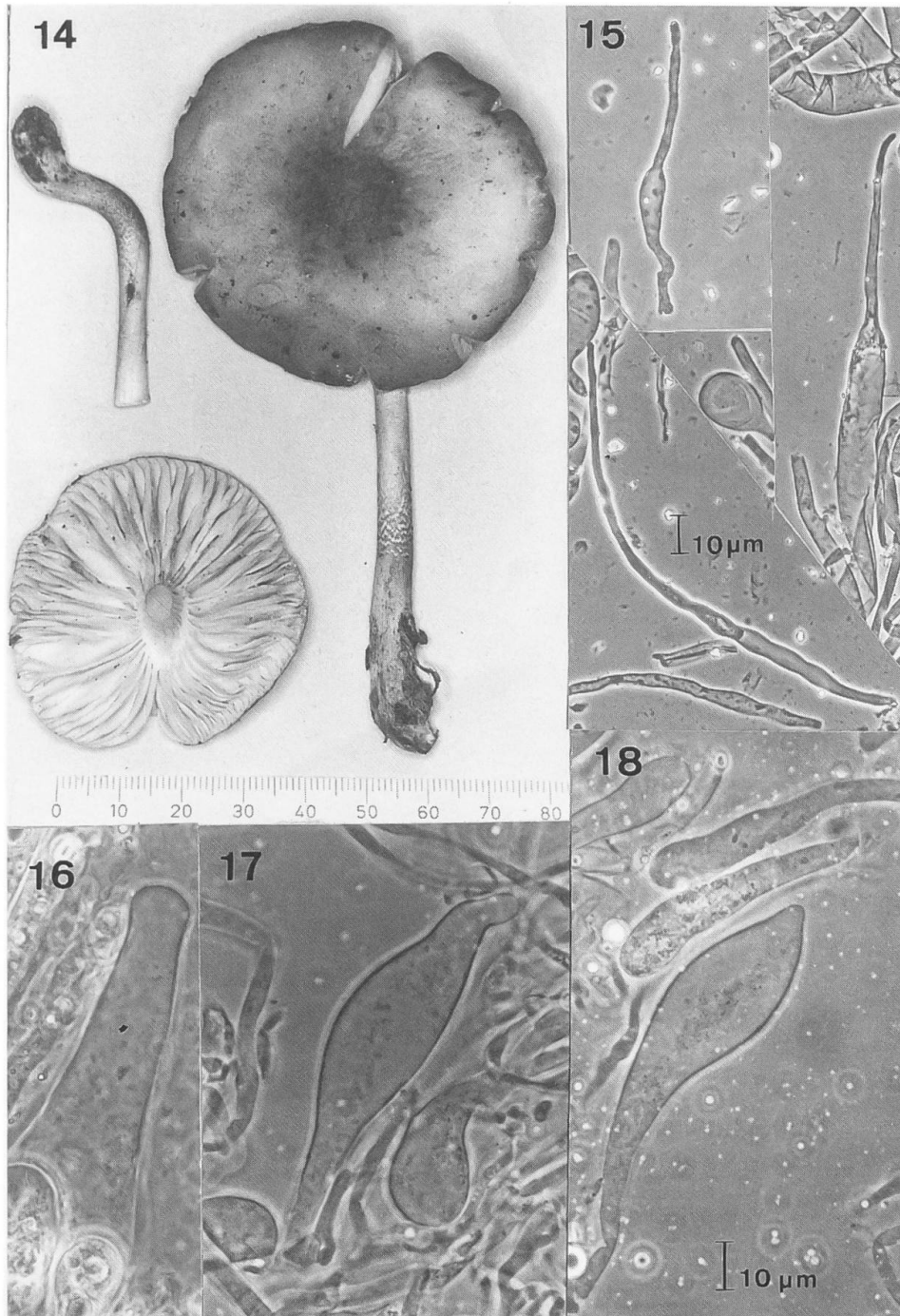
Oudemansiella xeruloides var. *hispanica* differt ab *Oudemansiella xeruloides* sua maiore magnitudine et quia illa habitate in nemoribus *Populionis albae*.

Aranjuez (Madrid), 17-XI-1989, leg. D. Clé, E. Pérez-Cano & E. Blanco, H.AH 11737, **Holotypus**.

This new taxon is close to *O. xeruloides* Bon in its microscopical characters, but differs in basidiome dimensions and its ecology. It was first considered as var. *xeruloides* (Moreno & Bon, 1985), but the constancy of its characters in the new samples has made us consider it as a new variety, as was already suggested by Moreno & Bon (1985). Characters not mentioned in former descriptions are: a fistulose stipe, lamellulae present, flesh whitish to slightly ochre when cut, a fungoid, banal smell, and wider spores (\times 11-13 μm). We reproduce the differences between the French and Spanish collections, such as were indicated by Moreno & Bon (1985) and that have proved to be constant, except for spore dimensions that overlap and facial cystidia, that seem to be rare and have not been observed by some authors (Reid, 1985; Pegler & Young, 1987).

	French collections:	Spanish collections:
Cap	- Convex to flat, 2-3 cm diam.	- Convex with wide and broad umbo, 3-6 cm diam.
Stipe	- Deeply rooting, whitish, 3-5 x 0.3-0.5 cm	- Deeply rooting, whitish, 8-14 x 0.3-0.8 cm
Ecology	- Helichrysetum et Roseto- Ephedretum (<i>Rosa spinosissimum</i> , <i>Ephedra distachia</i> et <i>Helichrysum stoechas</i>) Sabulicolous.	- Populion albae (<i>Glycyrrhiza glabra</i> , <i>Populus alba</i> et <i>Scirpus holoschoenus</i>) Silvicolous.

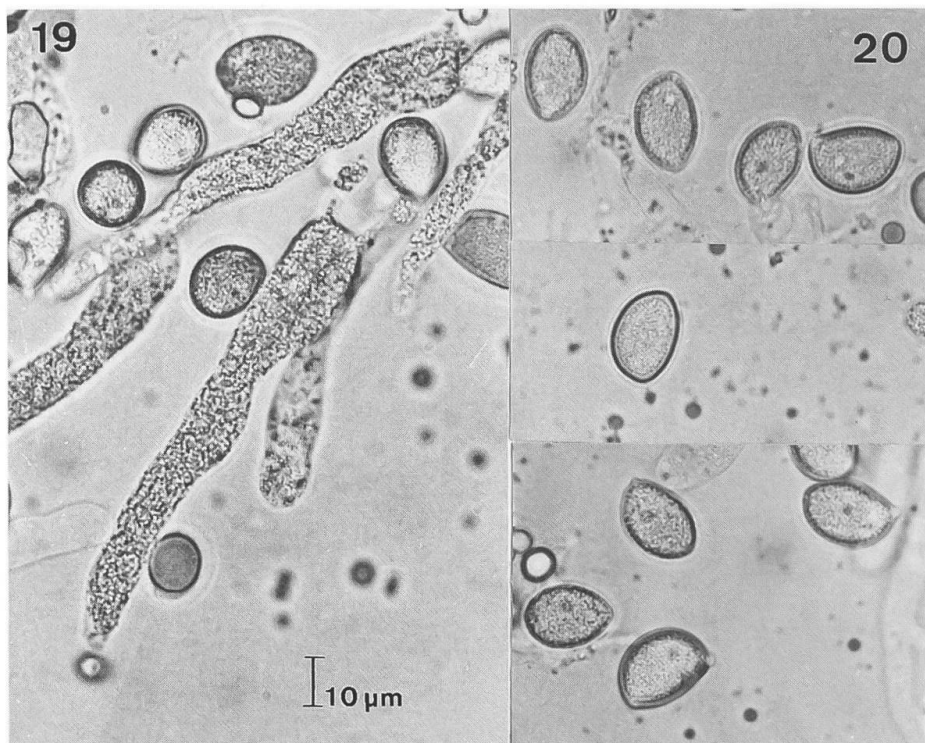
Oudemansiella xeruloides was recently studied by Dörfelt (1980), Priou & Trarieux (1985) and Reid (1985). The study of the type by this last author has revealed larger spore dimensions (14-19 (-21) x 10-13.5 μm) than those



Figures 14-18: *Oudemansiella xeruloides* var. *hispanica*.
14: basidiocarps (holotypus); 15: pileocystidia, H.AH 2711.
16-17: marginal cystidia (holotypus); 18: facial cystidia, H.AH 2711.

indicated by Bon (1975) in the original description. Pegler & Young (1987) place *O. xeruloides* in section *Albotomentosi* Cléménçon, characterized by a hymeniform epicutis formed by non-gelatinized cells and hyaline to brownish pileocystidia. These authors indicate similar spore dimensions to those of Reid (1985) and larger than Bon (1975).

Oudemansiella mediterranea (Pacioni & Lalli) Horak is, according to Horak (1988), a different species by its thinner-walled and smaller spores, 12-15 x 79.5 µm, and with frequent, metuloid facial cystidia.



Figures 19-20: *Oudemansiella xeruloides* var. *hispanica*: basidia and spores (holotypus).

Oudemansiella xeruloides var. *hispanica* is a rare variety that grows in river bank forests in basic soil (with *Populus alba* and *Glycyrrhiza glabra*). It has been collected in two different localities in the province of Madrid.

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