

Boletus aemilii Barbier, **B. permagnificus** Pöder and **Xerocomus truncatus** Singer, Snell & Dick, in Spain

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Resumen: Moreno, G. & Esteve-Raventós, F. *Boletus aemilii* Barbier, *B. permagnificus* Pöder y *Xerocomus truncatus* Singer, Snell & Dick, en España. *Lazaroa*, 10: 253-258 (1987). [Publicado en 1988].

Se describen macro y microscópicamente *Boletus aemilii* Barbier, conocido de Francia e Italia y *B. permagnificus* Pöder, descrito solamente de Italia, ampliándose su corología a la Península Ibérica. Se comenta el problema nomenclatural entre *Xerocomus truncatus* Singer, Snell & Dick y *Xerocomus truncatus* Singer, Snell & Dick, in Spain. *Lazaroa*, 10: 253-258 (1987). [Date of publication 1988].

Abstract: Moreno, G. & Esteve-Raventós, F. *Boletus aemilii* Barbier, *B. permagnificus* Pöder and *Xerocomus truncatus* Singer, Snell & Dick, in Spain. *Lazaroa*, 9: (1986).

Boletus aemilii Barbier, only known from France and Italy and *B. permagnificus* Pöder, only known from Italy, are described macro and microscopically. The nomenclatural problem between *Xerocomus truncatus* Singer, Snell & Dick and *Xerocomus porosporus* Imler is discussed.

INTRODUCTION

The order *Boletales* Gilbert is well represented in the European mycoflora and also in the Iberian Peninsula. In that respect, we emphasize the studies (many including icones or photographs) of MARCHAND (1975), ENGEL & al. (1978, 1983), GALLI (1980), MERLO & al. (1980) and ALESSIO (1985) and what we might call the «classic ones» such as SINGER (1965, 1967) and PILAT & DERMEK (1974).

Though it is evident the existence of many bibliographic references, we currently do not know the chorology of certain species or inclusively some of

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them have been collected or described a few times and only from some European countries.

In this work, we intend to contribute with our data about two species of *Boletus s. str.*, both very rare but readily recognized from close species.

As for *Xerocomus truncatus* Singer, Snell & Dick, this is a species which is being gradually known in several European countries; it has possibly been mistaken with some others species of *Xerocomus*. In our country, during the summer-autumn of 1986, we have been able to collect it in abundance and complete some data concerning the chromatic variation in the different stages of development of its fruitbodies.

The studied material has been deposited in the Herbarium of the Department of Plant Biology (Botany) at the University of Alcalá de Henares together with color slides taken «in situ» of the species described here for any consult or revision.

Boletus aemilii Barbier, Bull. Soc. mycol. France 36: 53 (1915).

= *B. bicolor* Peck s. Galli non Peck, I Boleti delle nostre regioni: 106 (1980)

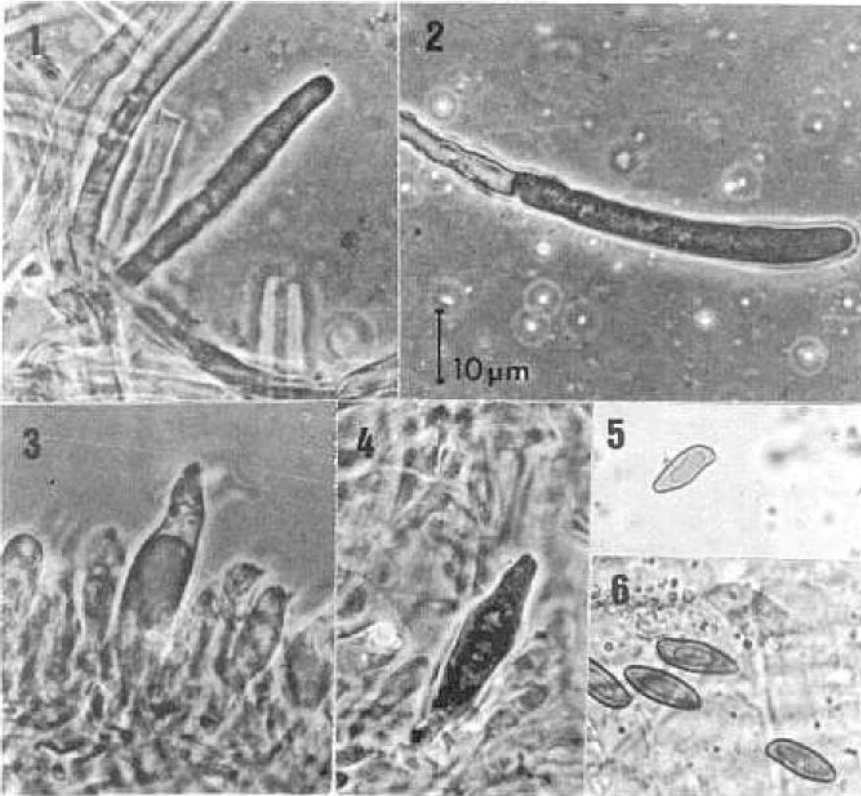
Madrid: Port of Somosierra, in humus of *Betula fontqueri* Rothm. & *Corylus avellana* L., acid soil. 31.10.1986. G. Moreno, HAH 9884.

Our collection macroscopically agrees with that of ALESSIO (1985). The microscopic characters are the following: Pileipellis formed by clamp-less hyphae, these are cylindrical and branched with intracellular brownish pigments, the final cell being 4-7 μm wide (Phot.: 1-2). Basidia clavate and four-spored, 29-40 \times 8,5-11 μm . Cystidia rare, fusiform, 40-70 \times 8-10 μm (Phot. 3-4). Spores ellipsoid-fusiform, smooth, yellow-olivaceous colored, 11-14 \times 5-6 μm (Phot. 5-6).

Comments: This species is macroscopically characterized by its robust habit, red-purplish colored pileus with decurved to flat and sinuate-undulate margin, a solid stem, tapering a little at the base, covered nearly all by a typical granulation concolorous to the cap on a yellowish ground. The tubes are rather short and yellow colored and the flesh turns more or less deep-blue when cut.

GALLI (1980) comments on the presence of *B. bicolor* Peck in Italy; however, his description and photograph clearly fit the present concept of *B. aemilii* Barbier s. Alessio and is different from *B. bicolor* (species originally described in America) because the last has a slender habit, a colored but not-granulose stem and smaller spores, according to the interpretation of SMITH & THIERS (1971), whose description recommends us to include it in the concept of *Xerocomus rubellus* (Krombh.) Quélet, as it has already been done by some authors (e.g., SINGER, 1967).

This species is recorded for the first time in our country.



Figs. 1 to 6.—*Boletus aemilii* (HAH 9884): 1-2, Pileipellis; 3-4, Cistidia; 5-6, Spores.

Boletus permagnificus Pöder, *Sydowia*, *Ann. Mycol.* 34: 149 (1981) 1982.
= *B. siculus* Inzenga s. *Alessio* non Inzenga, *Fungi Europaei* 2 (*Boletus*): 246 (1985).

Cáceres: Finca Las Cansinas, Parc of Monfragüe, in humus of *Quercus suber* L., acid soil. 23.10.1986. *M. N. Blanco*, *M. Heykoop* & *G. Moreno*, HAH 9885.

Our collection macroscopically agrees with that of PÖDER (1983). Its main microscopic characters are the following: Pileipellis formed by short and branched hyphae, cylindrical and clamp-less, with intracellular brownish pigments, the terminal cell being 4-8,5 µm wide (Phot. 7-8). Basidia broadly clavate and four-spored, 30-40 × 10-14 µm (Phot. 11 a 13). Cystidia rare, fusiform and hyaline, 50-55 × 8-10 µm (Phot.: 9-10). Spores ellipsoid-fusiform, smooth, yellow-olivaceous colored, 12,5-15 × 5-6,5 µm (Phot. 14-15).

Comments.: This species is characterized by growing in dense fascicles with fruitbodies in different stages of growth, sometimes forming typical rings. It is a member of section *Luridi* Fr. distinguished by its red-purplish cap, fusiform

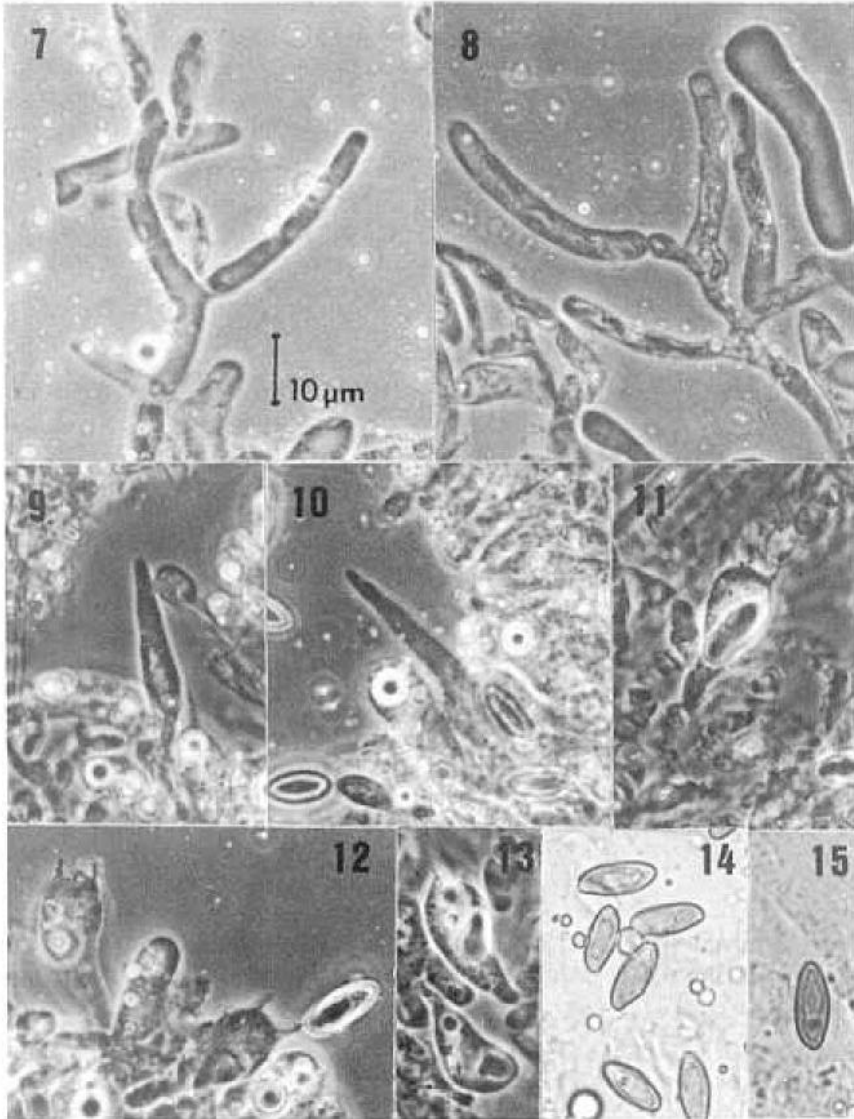


Fig. 7 to 15.—*Boletus permagnificus* (HAH 9885): 7-8, Pileipellis; 9-10, Cistidia; 11 to 13, Basidia; 14-15, Spores.

stem with a wide purple reticle which covers it all and decurrent tubes with red-orange pores.

ALESSIO (1981, 1985) considers this species as synonymous with *B. siculus* Inzenga but later on, PÖDER (1983) and BELLU (1986) argue that there exist convincing reasons for not accepting Alessio's conclusion.

B. permagnificus is a mediterranean species, mycorrhizogenous of *Quercus* sps. (mainly of *Quercus suber* L.), and this makes us suppose its possible existence in the African continent. It is recorded for the first time in our country and it was only known from Italy up to the present date.

Xerocomus truncatus Singer, Snell & Dick, *Mycologia* 51: 573 (1959) 1960
= *X. porosporus* Imler, Bull. Soc. mycol. France 74: 97-98 (1958) nom. nud.
(no type is indicated).

Madrid: Port of Somosierra, in humus of *Betula fontqueri* Rothm. and *Corylus avellana* L., acid soil. 1.10.1986. R. Galán, F. Esteve-Raventós & G. Moreno. HAH 9646, 9887.

Comments: This species is little known in Europe; this is the reason why descriptions are rather few. It is studied in the works of PILAT & DERMEK (1974), CETTO (1976), MORENO & BON (1977), PHILLIPS (1981) and MORENO & al. (1986); besides we must adjoin the complete descriptions of IMLER (1958, 1964).

The nomenclatural problem concerning this species is complex and has already been treated by PILAT & DERMEK (1974) and ALESSIO (1985). These authors give priority or prefer to adopt the epithet *X. porosporus* Imler. It is really true that Imler knew this fungus quite well and that he, from 1955 when it was first mentioned until 1958 when it was given a latin diagnosis (by the own Imler), picked a great number of fruitbodies to watch its variability and separate it from *X. chrysesteron*, but he forgot to give any reference to a typus. That is the reason why, if we strictly follow the Code of Botanical Nomenclature (VOSS & al., 1983) in its article 32, it is just from the first of January of 1985 that this requirement forgotten by Imler is absolutely necessary to give public validity to a taxon. We imagine that Imler sent his work to print before this strict date, but the Code is sharp with regard to the subject under discussion. We share Imler's feelings and also Alessio's, but we must be strict and respect the Code, to our regret. Consequently, we give preference to *X. truncatus* as has been done by SINGER (1967) and MOSER (1983) before.

MORENO & BON (1977) and MORENO & al. (1986) differentiated between *X. porosporus* and *X. truncatus*, among other things, by the brownish color of the stem in the first, but during the autumn of 1986, we had the opportunity of collecting and making photographs of innumerable fruitbodies in the Sierra de Guadarrama (central area of the Iberian Peninsula). They also showed reddish colors in the stem, with all the tones between brown and red. The sporal measurements and the habitat (broad-leaved and conifers) are those of *X. truncatus*.

X. truncatus is a good species with a typical character: the spores show in great majority a truncate apex; MORENO & al. (1986: 602) photographed this character with precision under the S.E.M.

Our observations in more than one hundred fruitbodies do not show any reddish tinge under the cuticle (such as it is indicated by IMLER, 1964), and this is partly against the comments made by SINGER (1967) and SMITH & THIERS

(1971) about the presence of reddish colours under the cuticle; this character could be variable as well as the color of the stem, but, in our opinion, not the presence of more or less truncate spores.

We admit *Xerocomus* Quélet at the moment, in spite of its closeness with *Boletus* s. str. Further studies will be necessary to add more sharp limits between both genera.

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