

*Australohydnum dregeanum* (Basidiomycetes, Stereaceae)  
in Europe

by

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With 2 figures

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**Abstract:** The first record of *Australohydnum dregeanum* (Berk.) Hjortstam & Ryvarden is reported as new from Portugal as well as Europe. A brief description of the species based on the Portuguese specimen is given and its world distribution is surveyed.

**Key words:** chorology, Europe, Portugal, *Australohydnum dregeanum*.

**Resumo:** A ocorrência de *Australohydnum dregeanum* (Berk.) Hjortstam & Ryvarden é referida pela primeira vez em Portugal e representa também o primeiro registo desta espécie na Europa. É dada uma breve descrição da espécie baseada no material português e feito um levantamento da sua distribuição mundial.

**Palavras chave:** corologia, Europa, Portugal, *Australohydnum dregeanum*.

*Australohydnum dregeanum* (Berk.) Hjortstam & Ryvarden is an insufficiently known species with a variable resupinate basidiome, from being almost smooth with scattered tubercles to irpicoid with flattened teeth coalescent at the base, to hydroid. Based on this variation it is no surprise that it has been described several times. Berkeley (1846) described it from South Africa as *Corticium dregeanum* and then, together with Broome (Berkeley & Broome 1875), based on a collection from Sri Lanka, under the name *Irpex vellereus*. Further Reichardt (1866), described it from Australia,

as *Hydnum griseo-fuscescens*, and Lloyd (1917), from Japan as *Irpex purpureus* based on a collection from A. Yasuda. Talbot (1954), comparing *Irpex vellereus* with *Corticium dregeanum* concluded that they were conspecific and later, Reid (1963), placed *I. vellereus* in synonymy with *Hydnum griseo-fuscescens*. Then, Hjortstam & Ryvar den (1990), considered *Hydnum griseo-fuscescens* synonym with *A. dregeanum*. Recently, Hattori & Ryvar den (1994), studying the types of species described from Japan, concluded that also *Irpex purpureus* is a taxonomic synonym of *A. dregeanum*. The global distribution of *A. dregeanum* is still uncertain, but apparently it is known from Africa, besides the type locality. Talbot (1951) reported it from Cameroon and Kenya, as *Lopharia dregeana* (Berk.) Talbot. Moreover it is known from Australia, cited by Reichardt (1866) and Reid (1956), as *Irpex vellereus* Berk. & Broome, Japan (Lloyd 1978), Sri Lanka (Berkeley & Broome 1875) and India (De 1998, as *Oxyporus vellereus* (Berk. & Broome) A. Roy & A.B. De). Gilbertson and Adaskaveg (1993) reported it from Hawaii, as *Irpex griseo-fuscescens* (Reichardt) D.A. Reid, but their description and illustration do not conform to our concept, which is in accordance with the concepts of Reid (1956) and Jülich (1978).

The Portuguese specimen was growing on dry fallen branches of olive tree (*Olea europaea*) and, at first sight, looked like an old and foliose lichen thallus. A microscopical examination revealed its identity, and its first occurrence in Europe. The specimen has been compared with authentic material at Kew (K) and its identity has been confirmed.

The locality is situated in the western centre region of Portugal (60 km far from the sea), on a gentle slope of a small mound, facing NW, in a holm oak forest (*Quercus ilex* ssp. *rotundifolia*), with small portions of abandoned olive grove (*Olea europaea*) and lusitanic oak (*Q. faginea*) in regeneration, established on Middle Jurassic limestone. The climate in the area is Mediterranean humid with strong Atlantic influence.

The following description is based on the Portuguese specimen.

**Australohydnum dregeanum** (Berk.) Hjortstam & Ryvar den, Synopsis Fung. 4: 61.1990  
Icon. – Figs 1, 2

Basidiome resupinate, effuse, large and conspicuous, membranaceous, thickness variable from 0.5 to 2 mm; hymenium more or less tuberculate, with scattered raduloid knobs or aculei, colour cream, then greyish cream with a faint rosy to brownish tint and cracking when dry; margin conspicuous, paler than the fertile area, loosening from the substrate, fibrillose. In a vertical section the hymenium is separated from the subiculum by a darker line, visible to the naked eye.

Hyphal system pseudodimitic (i.e., considerably thick-walled generative hyphae), without clamps, hymenial hyphae thin to slightly thick-walled, 1.5-3 µm wide, with basidia branching off and forming a narrow subhymenium, subicular hyphae thick-walled to almost solid, 4-8 µm wide, sparsely ramified, more or less parallel and together with pseudocystidia in the knobs or aculei, interwoven and sometimes densely incrustated in the basal part. Marginal hyphae with cystidiform aspect, thick-walled, up to 4.5 µm wide, ramified, richly incrustated.

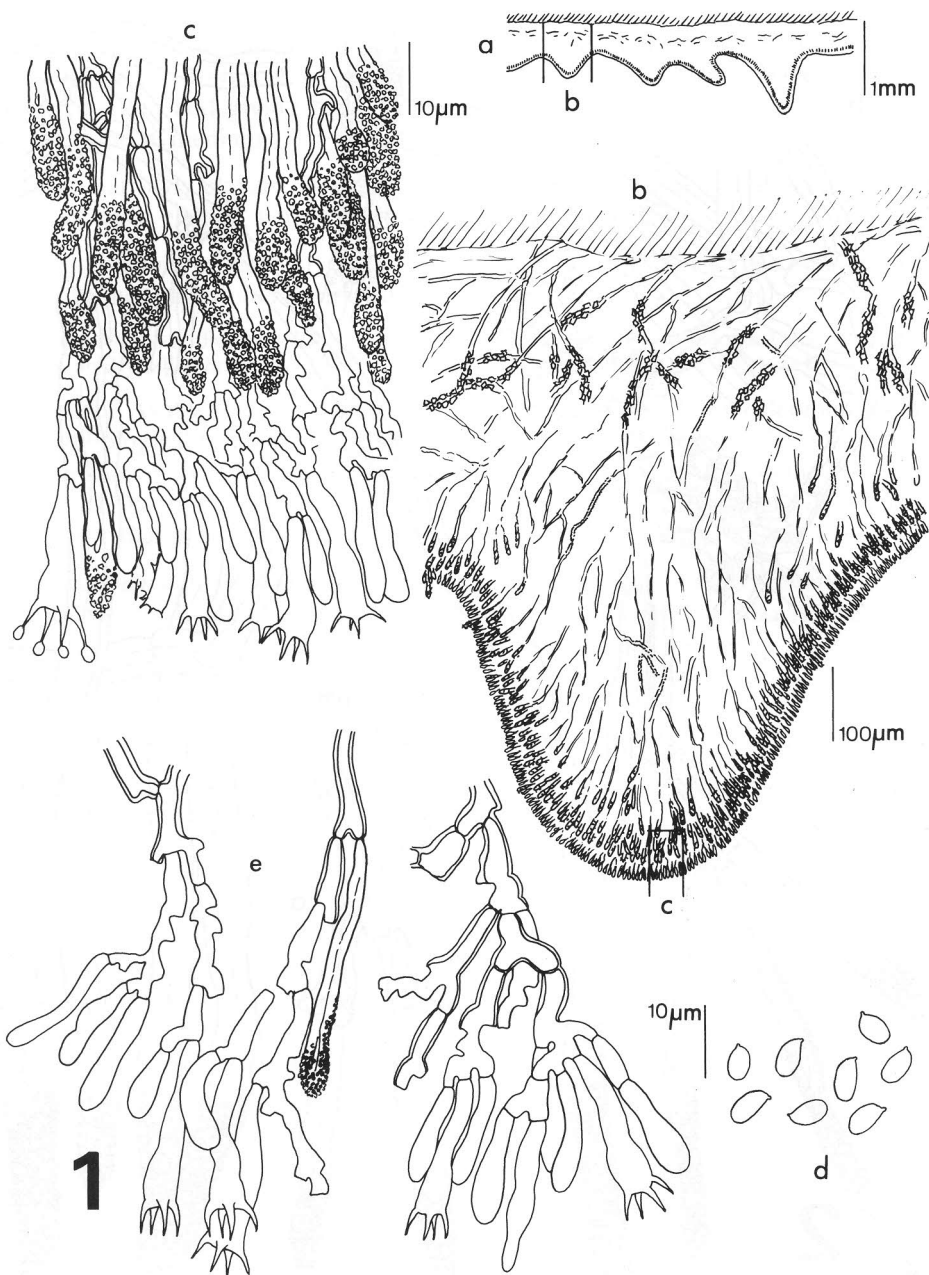


Fig. 1. *Australohydnum dregeanum*: a, b. section through basidioma, c. hymenial, subhymenial and cystidial layers, d. basidiospores, e. hymenium and subhymenium.

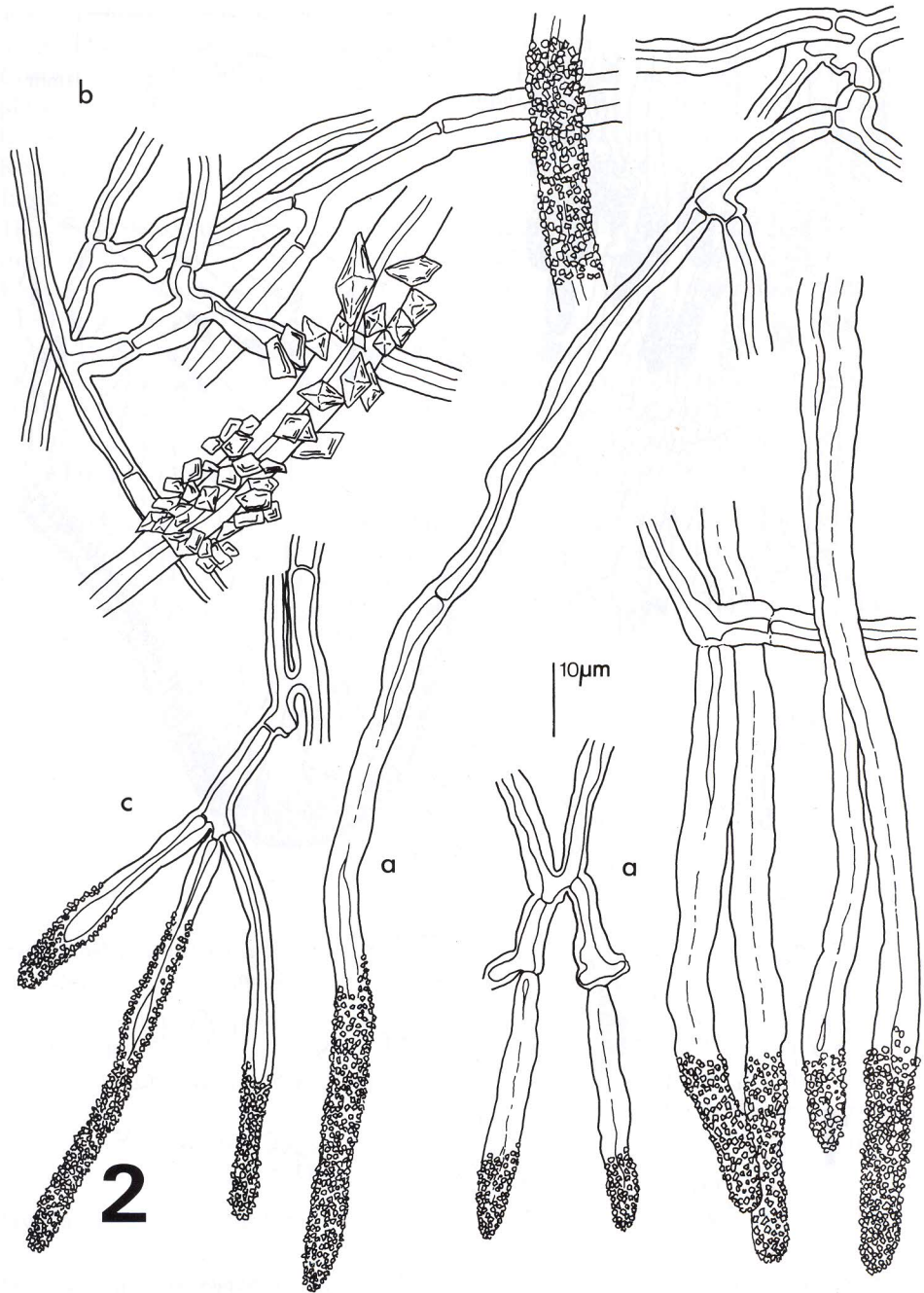


Fig. 2. *Australohydnum dregeanum*: a. cystidia, b. basal hyphae, c. hyphae from the margin.

Cystidia (skeletocystidia) numerous, sub-cylindrical, obtuse, thick-walled to solid, arising from thick-walled hyphae, minutely incrustated in the apices, the encrustated part normally  $16-48 \times 4.5-7 \mu\text{m}$ , the apices arranged in a dense layer below the subhymenium and giving the appearance of a darker line, very rarely emerging through the hymenium.

Basidia narrowly clavate,  $20-25 \times 4-4.5(-5) \mu\text{m}$ , in the basal part about  $2 \mu\text{m}$  wide, without basal clamps, with 4 up to  $4.5 \mu\text{m}$  long sterigmata.

Spores ellipsoid to narrowly ellipsoid to subcylindrical, thin-walled, smooth, non-amylid, non-dextrinoid, non-cyanophilous,  $4.8-6.4 \times 2.8-3.2 \mu\text{m}$ .

SPECIMEN EXAMINED. - Portugal: Ribatejo, Ferreira do Zêzere, Areias, near Avecasta Cave, 29SNE5100, 250 m, on dry fallen branches of *Olea europea*, 24.IX.1996, I. Melo & J. Cardoso 6959, LISU.

REMARKS. - As it was above-mentioned, *A. dregeanum* exhibits considerable variation at morphological level and the same can be said about its anatomy. For instance, the arrangement of cystidia in a dense subhymenial layer, is only found in the Portuguese specimen. We should not be surprised if future investigations based on DNA sequences will show that there are several taxa involved in the current taxonomic concept.

*A. dregeanum* agrees in some respects with *Phlebiopsis*, the main differences are the pseudodimitic hyphal system and the presence of skeletocystidia (Hjortstam & Ryvarden 1990). It reminds one also of some non clamped species of *Steccherinum*, but in this genus the hymenophore is always odontoid to hydroid.

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