



Bulletin
de la

SOCIÉTÉ LINNÉENNE
DE LYON



***Postia saxonica*, a new species of *Postia* (Basidiomycota, Polyporales, Fomitopsidaceae) from Germany**

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Summary. – A new polypore species, *Postia saxonica* (Basidiomycota), is described and illustrated. It was found in one locality in Germany, growing on the fungus *Daedalea quercina*. Macroscopically it remembers *Postia hirsuta* Shen & Cui (Shen & Cui, 2014), but differs by the presence of gloeopleurous hyphae, hymenial cystidioles and narrow, oblong-ellipsoid to cylindrical spores, up to 12 µm long. Its ecology and position within the genus is discussed.

Key words. – *Postia*, polyporoid fungi, taxonomy, Europe.

***Postia saxonica*, une nouvelle espèce de *Postia* (Basidiomycota, Polyporales, Fomitopsidaceae) d'Allemagne**

Résumé – Une nouvelle espèce de polypore (Basidiomycota), *Postia saxonica*, est décrite et illustrée. Elle a été trouvée dans une localité en Allemagne, trois basidiomes étant installés sur un basidiome de *Daedalea quercina*. Macroscopiquement elle est très proche de *Postia hirsuta*. Elle en diffère par la présence d'hyphes gléoplères dans la chair proche du support et de cystidioles fusiformes dans l'hyménium, non indiquées chez *P. hirsuta*. Ses spores, oblongues-ellipsoïdes à cylindriques, mesurent jusqu'à 12 µm de longueur et 4(–5) µm de largeur, comparativement à celles de *P. hirsuta* beaucoup plus étroites : $4,35 \times 1,1$ µm de dimensions moyennes. Les espèces du genre *Postia* sont saprotrophes et développent une carie brune. Le support particulier du type (basidiome en place sur *Quercus* sp. de *Daedalea quercina*) ne montrait aucune dégradation caractéristique de même que le propre support de ce *D. quercina*. Il est donc impossible de dire aujourd'hui si ce basidiome de *D. quercina* a été utilisé comme simple support par notre *Postia* pour y installer ses basidiomes et de quelle manière ces derniers extraient leur nourriture. Son écologie et sa position au sein du genre sont discutés.

Mots-clé. – *Postia*, polypores, taxinomie, Europe.

INTRODUCTION

Postia Fr. (Polyporales, Fomitopsidaceae) is a cosmopolitan polypore genus causing brown rot on dead wood. It is characterized by annual basidiocarps, monomitic hyphal structure with clamped generative hyphae and hyaline, thin-walled spores (JÜLICH, 1982). For long the species of this genus were placed in *Oligoporus* Bref. (BERNICCHIA, 2005; RYVARDEN & GILBERTSON, 1994; RYVARDEN & MELO, 2014), a polyphyletic genus now split into four genera, according to phylogenetic studies (NIEMELÄ *et al.*, 2005; ORTIZ-SANTANA *et al.*, 2013): *Oligoporus*, *Postia*, *Spongiporus* Murrill, and *Rhodonía* Niemelä & K.H. Larss.

Recently, three basidiocarps of a curious polypore were found growing on a dead basidiocarp of another polypore species, *Daedalea quercina* (L.) Pers. This kind of association is frequent in genera like *Antrodiella* Ryvarden & I. Johans. and *Skeletocutis* Kotl. & Pouzar, and SPIRIN *et al.* (2006) reported a specimen of *Oligoporus balsameus* (Peck) Gilb. & Ryvarden found on *Fomitopsis rosea* (Alb. & Schwein.) Kotlaba & Pouzar. For the time being the new species fits into the frame of the genus *Postia*. A future molecular analysis is needed to confirm this inclusion.

MATERIALS AND METHODS

The study was based on specimens collected in Germany. The collections are deposited in GLM, LISU and LY. Dried and fresh samples were used for light microscope studies. Measurements and drawings were made from microscopic sections mounted in 3% KOH solution, Cotton Blue, Melzer's reagent and examined at up to $\times 1,000$ with a Nikon Eclipse microscope and an Olympus BX51 microscope with a drawing tube. Lengths and widths of 30 spores and 10 basidia were measured from each sample.

DESCRIPTION OF SPECIES

Postia saxonica Dämmrich, Melo & B. Rivoire, sp. nov.

MycoBank MB817701

Etymology: *saxonica* referring to the location in the state of Saxony, Germany.

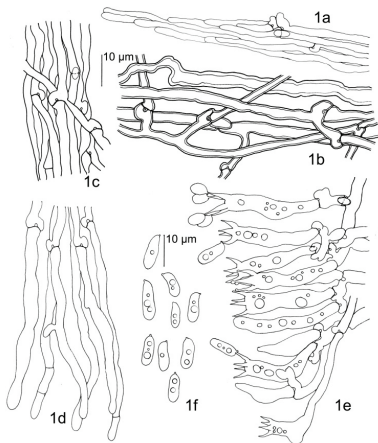


Figure 1. *Postia saxonica* [F. Dämmrich 11108]: a) hyphae from pileal surface; b) hyphae from context; c) hyphae from dissepiment; d) hyphae from dissepiment edge; e) hymenium; f) spores. (Del. I. Melo)

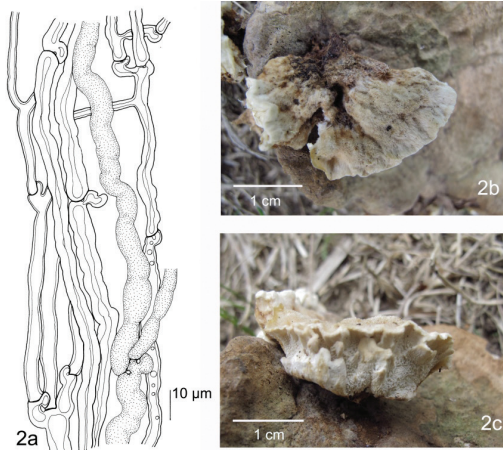


Figure 2. *Postia saxonica* [F. Dämmrich 11108]: a) hyphae from context adjacent to substrate (Del. I. Melo); b) basidiocarp, upper surface (Photo F. Dämmrich); c) basidiocarp, pores. (Photo B. Rivoire).

Diagnosis: Differs from *Postia hirsuta* by the presence of gloeoplerous hyphae in the context, cystidioles in the hymenium and larger spores, up to $12 \times 4 \mu\text{m}$.

Holotype: Germany, Saxony, Burgstädt, Gückelsberg (N 50.946067, E 12.796657), 320 m asl, on *Daedalea quercina*, 28 September 2015, leg. F. Dämmrich 11108 (GLM F105766, isotype LISU 254180, LY BR-6272)).

Basidiocarps annual, effuse-reflexed to pileate, sessile, soft to fibrous when fresh, corky when dry, with an odour reminiscent of curry and taste slightly acid. Pilei semicircular, projecting up to 3 cm long, 3.5 cm wide and up to 1 cm thick at the base, margin obtuse, undulate. Upper surface velutinous to hirsute, azonate, white-greyish when fresh, becoming dark cream when dry, brownish at the base; pore surface white, pores 2–4 per mm, angular, irregular, dissepiments thin, partly lacerate when dry; context white, concolorous with the tubes.

Hyphal system monomitic; hyphae with clamp connections, contextual hyphae thin to thick-walled, walls slightly swelling inwards in KOH, $2\text{--}7 \mu\text{m}$ in diam., tramal hyphae thin-walled close to dissepiment edge, slightly thick-walled in upper parts, $2.3\text{--}3.5 \mu\text{m}$ in diam. In the context, adjacent to the substrate, presence of very thick-walled hyphae, some straight, mostly non septate, but with occasional branching and clamps; presence of gloeoplerous hyphae. Hyphal walls strongly metachromatic in cresyl blue. Cystidia absent, but some ventricose, thin-walled cystidioles present in the hymenium, $18\text{--}23 \times 5\text{--}6 \mu\text{m}$. Basidia $25\text{--}35 \times 5.5\text{--}7 \mu\text{m}$, subclavate, sinuous, clamped at the base, filled with oil drops, with 4 sterigmata up to $7.5 \mu\text{m}$ in length. Spores $7\text{--}12(-12.8) \times 3.5\text{--}4(-5) \mu\text{m}$, oblong-ellipsoid to cylindrical, thin-walled, smooth, with oil drops, inamyloid, acyanophilous.

Habitat: growing on *Daedalea quercina* on a stump of *Quercus* sp., in a mixed forest on acid soil. A polypore with such a kind of habitat is not easily overlooked, so *P. saxonica* must be a rare species in Europe.

DISCUSSION

Externally, the velutinous to hirsute upper surface of *Postia saxonica* reminds *Postia hirsuta* L.L. Shen & B.K. Cui, recently described from China (SHEN & CUI, 2014), a species growing on angiosperms, with smaller spores, $(3.6\text{--})4\text{--}4.8(-5.2) \times (0.8\text{--})1\text{--}1.2 \mu\text{m}$, and no cystidiole in the hymenium. Also the basidiocarps of *P. hirsuta* have no odour or taste unlike those of *P. saxonica* which have a spicy odour and slightly acid taste. *P. saxonica* seems more related to the complex of *P. placenta* (Fr.) M.J. Larsen & Lombard / *Postia rancida* (Bres.) M.J. Larsen & Lombard, presenting a similar hyphal structure, with some contextual hyphae straight, thick-walled to subsolid, mostly non-septate but with occasional clamps, and gloeoplerous hyphae. However, in spite of a deeply search, true skeletal hyphae were not found in *P. saxonica* unlike *P. placenta* which presents such hyphae in the mycelium found in the attacked wood.

P. saxonica was found only once in the type locality, on an old basidiocarp of *Daedalea quercina*. A specimen of *Oligoporus balsameus* (Peck) Gilb. & Ryvarden was found on the same substrate (Germany, Saxony, Wilkau-Haßlau Vielauer Wald (N 50.685479, E 12.522806), 20 Sept. 2015, leg. E. Tüngler, det. F. Dämmrich, conf. B. Rivoire, Herbarium Dämmrich No. 11107), easily distinguished by its distinct cystidia and short ellipsoid, slightly thick-walled spores.

Acknowledgements. – Special thanks are due to Prof. Leif Ryvarden (Oslo, Norway) for the confirmation about the new species. We are grateful to Nicolas Van Vooren for important remarks and critical review of the manuscript.

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Rédaction : Marie-Claire PIGNAL - Directeur de publication : Bernard GUÉRIN

Conception graphique de couverture : Nicolas VAN VOOREN



Tome 86 Fascicule 3-4 Mars - Avril 2017

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Prix 10 euros

ISSN 0366-1326 - N° d'inscription à la CPPAP : 0418G85671

Imprimé par Imprimerie Brailly, 69564 Saint-Genis-Laval Cedex

Imprimé en France • Dépôt légal : février 2017

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