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Studies on *Wrightoporia* (Basidiomycota) from southern Brazil

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Abstract

In recent surveys of polyporoid fungi from Rio Grande do Sul State, southern Brazil, some interesting resupinate specimens belonging to the genus *Wrightoporia* were found. *Wrightoporia araucariae* is described as new, based on the fragile, whitish basidiomes which grow exclusively on *Araucaria angustifolia*; and *W. bracei* is recorded for the first time from Rio Grande do Sul State. In addition, *W. efibulata* is synonymized to *Wrightoporia bracei* based on collected specimens and herbarium material. The species are described, illustrated and discussed, and an identification key to the neotropical species of *Wrightoporia* is provided.

Key words: Wrightoporiaceae, xylophilous fungi, Russulales, taxonomy

Introduction

The genus *Wrightoporia* Pouzar belongs to the family Wrightoporiaceae Jülich (Larsson 2007) and, according to Mycobank databases (Robert et al. 2005), about 40 species are currently accepted in the genus. It is characterized by basidiomes with a tubular hymenophore and finely ornamented, amyloid basidiospores. The hyphal system is usually dimitic with clamped generative hyphae, but hyphae with simple septa can also occur. Also, the skeletal hyphae are often dextrinoid. *Wrightoporia* belongs to the order Russulales, which is distinct among the Agaricomycetes due to the ornamented amyloid basidiospores and the presence of a gloeopleurous hyphal system (Miller *et al.* 2006).

So far, five species of *Wrightoporia* are known from Brazil: *W. avellanea* (Bres.) Pouzar (Gerber & Loguercio-Leite 2000), *W. bracei* (Murrill) I. Lindblad & Ryvarden (Loguercio-Leite & Wright 1991), *W. cremea* Ryvarden (Ryvarden 1987), *W. porilacerata* C.L. Leite, A.L. Gerber & Ryvarden (Loguercio-Leite *et al.* 1998) and *Wrightoporia tropicalis* (Cooke) Ryvarden (Rick 1959).

During recent surveys in Rio Grande do Sul State, a resupinate species of *Wrightoporia* was found growing exclusively on dead logs of *Araucaria angustifolia* (Beltol.) Kuntze and herein is described as new. *Wrightoporia bracei*, previously known only from Santa Catarina State in Brazil, is recorded for the first time from Rio Grande do Sul State. In addition, a new synonymy is proposed for *Wrightoporia efibulata* I. Lindblad & Ryvarden, based on type studies.

Material and Methods

Specimens were collected in areas of Atlantic rainforest (Dense Ombrophilous Forests) and Araucaria forest (Mixed Ombrophilous Forests) in Rio Grande do Sul State, southern Brazil, between 2007 and 2010, dried and deposited at the ICN Herbarium of the Federal University of Rio Grande do Sul. Specimens from the Botanical Museum of the University of Oslo (O) and the U.S. National Fungus Collection (BPI) were used for comparison. The specimens were examined according to Núñez & Ryvarden (2001). For microscopic analysis, hand-cut sections of the basidiomes were mounted on microscope slides with a drop of 3% KOH solution and 1% aqueous

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4. Pores large, 1–3 per mm, often lacerate 5
4. Pores small, 4–8 per mm, round to angular 6

5. Basidiomes white to cream, basidiospores globose to subglobose, 5–6 × 4–5 µm ..... *W. lenta*
5. Basidiomes cream to pale brown, usually with darker patches, basidiospores subglobose to broadly ellipsoid, 3.5–4.5 × 2.5–3.5(4) µm ..... *W. avellanea*

6. Basidiomes soft and fragile, margin mycelioid, pores 4–6 per mm, basidiospores globose to subglobose 3–4 × 3–3.5 µm, on gymnosperms (gen. *Araucaria*) ..... *W. araucariae*
6. Basidiomes tough, margin rounded, pores 6–8 per mm, basidiospores ellipsoid 3–3.5(4) × 2.5–2.8 µm, on angiosperms ..... *W. neotropica*

7. Basidiomes fleshy when fresh, pores 1–3 per mm, hyphal system monomitic ..... *W. porilacerata*
7. Basidiomes corky to soft when fresh, pores 3–5 per mm, hyphal system di-trimitic 8

8. Pileus surface reddish brown, pores irregular, sometimes elongated, basidiospores ellipsoid (3–3.5 × 2 µm) ..... *W. brunneo-ochracea*
8. Pileus surface cream to pale ochraceous, pores regular, round to angular, basidiospores subglobose (3.5–4 × 3 µm) ..... *W. cremea*

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References

Backes, A. (1999) Condicionamento climático e distribuição geográfica de *Araucaria angustifolia* (Bertol.) Kuntze no Brasil - II. *Pesquisas - Botânica* 49: 31–51.

David, A. & Rajchenberg, M. (1987) A reevaluation of *Wrightoporia* and *Amylonotus* (Aphyllophorales, Polyporaceae). *Canadian Journal of Botany* 65: 202–209. http://dx.doi.org/10.1139/b87-027

Gerber, A.L. & Loguercio-Leite, C. (2000) Polyporoid wood-rotting fungi (Basidiomycetes) II – new records from southern Brazil. *Mycotaxon* 76: 175–185.

Larsson, K.-H. (2007) Re-thinking the classification of corticioid fungi. *Mycological Research* 111: 1040–1063. http://dx.doi.org/10.1016/j.mycres.2007.08.001

Lindblad, I. & Ryvarden, L (1999) Studies in neotropical polypores. 3. New and interesting Basidiomycetes (Poriales) from Costa Rica. *Mycotaxon* 71: 335–359.

Loguercio-Leite, C., Gerber, A.L. & Ryvarden, L. (1998) *Wrightoporia porilacerata*, a new species of pore fungi from southern Brazil. *Mycotaxon* 67: 251–255.

Loguercio-Leite, C. & Wright, J.E. (1991) Contribution to a biogeographical study of the austro-american xylophilous polypores (Aphyllophorales) from Santa Catarina Island, SC., Brazil. *Mycotaxon* 41: 161–167.

Miller, S.L., Larsson, E., Larsson, K.-H., Verbeken, A. & Nuytinck, J. (2006) Perspectives in the new Russulales. *Mycologia* 98: 960–970. http://dx.doi.org/10.3852/mycologia.98.6.960

Mota, F.S. (1951) Estudos do clima do Estado do Rio Grande do Sul, segundo o sistema de W. Köppen. *Revista Brasileira de Geografia* 13: 275–284.

Núñez, M. & Ryvarden, L. (2001) East Asian polypores. *Synopsis Fungorum* 13: 1–168.

Rick, J. (1959) Basidiomycetes Eubasidii in Rio Grande do Sul – Brasilia. 3. Hypochnaceae, Clavariaceae, Craterellaceae, Hydnaceae. *Iheringia, Bot*. 5: 125–192.

Robert, V., Stegehuis, G. & Stalpers, J. (2005) The MycoBank engine and related databases. http://www.mycobank.org (Accessed 07 February 2014).

Ryvarden, L. (1987) New and noteworthy polypores from tropical America. *Mycotaxon* 28: 525–541.

Ryvarden, L. (2000) Studies in neotropical polypores 7. *Wrightoporia* (Hericiaceae, Basidiomycetes) in tropical America. *Karstenia* 40: 153–158.

Thiers, B. (2010) Index Herbariorum: A global directory of public herbaria and associated staff. New York Botanical Garden's Virtual Herbarium. http://sweetgum.nybg.org/ih/