

**FIRST RECORD OF *PERENNIPORIA OCHROLEUCA*  
(BERK.) RYVARDEN (POLYPORACEAE, BASIDIOMYCOTA),  
IN MADEIRA ISLAND (PORTUGAL)**

BY J. J. GONÇALVES SILVA <sup>1</sup>, M. KOSCHATZKY <sup>2</sup>, I. MELO <sup>3</sup> & M. DUEÑAS <sup>4</sup>

With 2 figures

*RESUMO.* É assinalada, pela primeira vez, a ocorrência do políporo *Perenniporia ochroleuca* (Berk.) Ryvarden na ilha da Madeira. Descrevem-se as características macroscópicas e microscópicas das coleções efetuadas. A espécie já foi referenciada no arquipélago dos Açores e em Portugal continental, de onde são conhecidas mais três espécies deste género [*Perenniporia fraxinea* (Bull.: Fr.) Ryvarden, *Perenniporia medulla-panis* (Jacq.: Fr.) Donk e *Perenniporia rosmarini* A. David & Malençon].

PALAVRAS CHAVE: *Perenniporia*, Fungi, Polyporales, novo registo, Madeira.

*ABSTRACT.* The polypore *Perenniporia ochroleuca* (Berk.) Ryvarden is reported as new to the Island of Madeira. The macroscopical and microscopical features of the collections are described. The species is already known in the Azores Archipelago and in mainland Portugal from where, another three species have been reported [*Perenniporia fraxinea* (Bull.: Fr.) Ryvarden, *Perenniporia medulla-panis* (Jacq.: Fr.) Donk and *Perenniporia rosmarini* A. David & Malençon].

KEYWORDS: *Perenniporia*, Fungi, Polyporales, new record, Madeira Island.

---

<sup>1</sup> Museu de História Natural do Funchal, Rua da Mouraria, 31, 9004-546 Funchal, Madeira, Portugal.  
E-mail: [juan.silva@cm-funchal.pt](mailto:juan.silva@cm-funchal.pt)

<sup>2</sup> Sågvägen 4, 56231 Norrahammar, Sweden.

<sup>3</sup> Jardim Botânico (MNHNC), Universidade de Lisboa / CBA-FCUL, Rua da Escola Politécnica, 58, 1250-102 Lisboa, Portugal.

<sup>4</sup> Real Jardín Botánico, Plaza de Murillo, 2, 28014 Madrid, Spain.

## INTRODUCTION

To date, 738 *taxa* of fungi were recorded from the Island of Madeira, and the polypore family (Polyporaceae) totals only 12 *taxa* (MELO & CARDOSO, 2008).

*Perenniporia* Murrill is a cosmopolitan genus that includes about 86 species, according to Index Fungorum ([www.indexfungorum.org](http://www.indexfungorum.org)). In mainland Portugal, four species of *Perenniporia* are known: *Perenniporia fraxinea* (Bull.: Fr.) Ryvarden, *Perenniporia medullapanis* (Jacq.: Fr.) Donk, *Perenniporia rosmarini* A. David & Malençon, and *Perenniporia ochroleuca* (Berk.) Ryvarden (MELO *et al.*, 2007). The last species is also reported from the Macaronesian region, being frequent in the Azores Archipelago [Flores, Graciosa, Pico and São Miguel islands] (MELO *et al.*, 2010) and in the Canary Islands [El Hierro, La Palma, La Gomera, Tenerife and Gran Canaria] (BAÑARES BAUDET, 2005; BELTRÁN TEJERA, 2010).

According to RYVARDEN & GILBERTSON (1994), *Perenniporia ochroleuca* is distributed in the Mediterranean area of Europe, being also widespread throughout the tropical zones and circumglobal. We consider that this *taxon* was introduced not only in the Island of Madeira but along the Macaronesian region.

## MATERIALS AND METHODS

The description of the species was based on the specimens deposited in The Natural History Museum of Funchal (MMF), LISU and MA-Fungi Herbaria. The names of the Herbaria are abbreviated according to Index Herbariorum (THIERS, continuously updated). Measurements were made from microscopical sections mounted in 3% KOH.



Fig. 1 - Basidioma of *P. ochroleuca*.



Fig. 2 - Hymenophore of *P. ochroleuca*.

The following description is based on the specimens collected from the Island of Madeira (Fig. 1 and 2):

Basidioma perennial, pileate, broadly attached to the substrate or with a narrow base, applanate, dimidiate or unguulate, up to 7 cm wide, projecting 1-5 cm horizontally from the wood, 1-2.5 cm thick. Profile of the thick basidioma triangular, of the thinner ones wedge-shaped. Pileus upper surface glabrous, cream-ochraceous, later discoloured, with distinctly concentric zones, sulcate to smooth, finely radiately striate. Border thick, rounded, entire or slightly lobed, usually light-coloured. Pores circular, 2-4 per mm, pore surface white, cream, or ochraceous to discoloured, lighter towards the border. Context 1-4 mm thick, white to pale ochraceous, weakly zonate, corky when fresh, but woody hard when dry. The tubes single or indistinctly stratose, 3-10 mm thick, concolorous with context.

Hyphal system trimitic; generative hyphae thin-walled, hyaline, clamped, 1.5-3.5  $\mu\text{m}$  in diameter; skeletal hyphae hyaline, becoming thick-walled with a distinct lumen, 2-6  $\mu\text{m}$  in diameter, often with secondary simple septa, straight to slightly tortuous, unbranched or with an occasional branch, not or slightly dextrinoid; binding hyphae, hyaline, thick-walled with a distinct lumen, irregularly and sparingly branched, 2-5  $\mu\text{m}$  in diameter, abundant in the dissepiments, more or less dextrinoid. Fusoid cystidioles sometimes present, projecting, 23-40 x 5-8  $\mu\text{m}$ . Basidia clavate, 4-sterigmate, 25-40 x 8.5-15  $\mu\text{m}$ , with a basal clamp.

Basidiospores ellipsoid, truncate at the apex, hyaline, thick-walled, smooth, 12-17 x 7.5-10  $\mu\text{m}$ , weakly to strongly dextrinoid in Melzer's reagent, abundant in microscopic preparations.

*P. ochroleuca* causes a white rot in the wood. In the Island of Madeira it was found on both native and introduced angiosperms.

The characters of the Madeiran specimens fit well with the previously published descriptions (RYVARDEN & GILBERTSON, 1994; BERNICCHIA, 2005). The small, unguulate, cream-ochraceous basidiomata, combined with the large truncate and dextrinoid spores are characteristic of the species.

Specimens studied: **PORTUGAL, MADEIRA: Funchal**, on unidentified wood, 22 Dec 1989, Max Koschatzky, MMF 24573; **Funchal**, Fajã de Dentro, Levada do Curral, on unidentified wood, 13 Jan 1994, M. Koschatzky, MMF 25669; **Funchal**, Monte, Corujeira, on angiosperm, 08 Dec 2004, M. Koschatzky, MMF 41996; **Funchal**, Monte, Corujeira de Fora, on unidentified wood, 31 Jan 1997, M. Koschatzky, MMF 35738; **Funchal**, Monte, Levada dos Tornos, on *Erica platycodon* subsp. *maderincola*, 13 Dec 1997, M. Koschatzky, MMF 35740; **Funchal**, Monte, Levada dos Tornos (300 m from Babosas), on *Acacia* sp., 18 Dec 2009, M. Koschatzky, MMF 41735; **Funchal**, Monte, Quinta do Monte, on unidentified wood, 16 Dec 2009, M. Koschatzky, MMF 41736; **Funchal**, Parque Ecológico do Funchal, on *Laurus novocanariensis*, 14 Jan 2003, M. Koschatzky, MMF 35723; **Funchal**, Quinta do Palheiro Ferreiro (Blandy Garden), on *Quercus robur*, 10 Dec 1997, M. Koschatzky, MMF 35741; ibidem, on *Prunus* sp., 12. Dec 1997, M. Koschatzky, MMF 35739; **Machico**, Portela, from Portela to Funduras, 28SCB3025, 605 m, on *Erica* sp., 18 Oct 2006, 9355 I. Melo, LISU 211208; ibidem, on *Laurus novocanariensis*, 10855MD, MA-Fungi 82078; ibidem, on *Pinus pinaster*, 16356Tell., MA-Fungi 82079; **Machico**, Serra das Funduras, on *Laurus novocanariensis*, 20 Dec 2011, A. Freitas, B. Melim, J. Silva, M. Koschatzky & P. Gomes, MMF 42135; **Santana**, Ribeiro Frio, on unidentified wood, Dec 1994, J. G. Quinn, MMF 35779; **São Vicente**, Boaventura, Levada dos Tornos, 28SCB1428, 650 m, on unidentified wood, 20 Oct 2006, 9413 I. Melo, LISU 211260.

#### ACKNOWLEDGEMENTS

The field work in 2006 was supported by the DGI project no. CGL-2005-01192/BOS (Spain).

## REFERENCES

BAÑARES BAUDET, A.:

2005. Fungos (Protozoa, Chromista, Fungi). *In*: Arechavaleta, M., Zurita, N., Marrero, M. C. & Martín, J. L. (eds.), *Lista preliminar de especies silvestres de Cabo Verde (hongos, plantas y animales terrestres) 2005*, pp. 23-26. Consejería de Medio Ambiente y Ordenación Territorial, Gobierno de Canarias.

BELTRÁN TEJERA, E. B.:

2010. Fungi. *In*: *Lista de especies silvestres de Canarias. Hongos, plantas y animales terrestres. 2009*. Arechavaleta, M., Rodríguez, S., Zurita, N. & García, A. (Coord.). Gobierno de Canarias, pp. 25-70.

BERNICCHIA, A.:

2005. *Polyporaceae* s. l. Edizioni Candusso. Itália. 808 pp.

MELO, I., J. C. CARDOSO & M. T. TELLERIA:

2007. Annotated list of polypores for the Iberian Peninsula and Balearic Islands. *Bibliotheca Mycologica*, **203**: 1-183.

MELO, I. & J. CARDOSO:

2008. Os Fungos (Fungi) dos arquipélagos da Madeira e das Selvagens. *In*: Borges, P. A. V., Abreu, C., Aguiar, A. M. F., Carvalho, P., Jardim, R., Melo, I., Oliveira, P., Sérgio, C., Serrano, A. R. M. & Vieira, P. (eds.). *A list of the terrestrial fungi, flora and fauna of Madeira and Selvagens archipelagos*, pp. 57-93. Direcção Regional do Ambiente da Madeira and Universidade dos Açores, Funchal and Angra do Heroísmo.

MELO, I., J. CARDOSO, M. DUEÑAS, I. SALCEDO & M. T. TELLERIA:

2010. Lista dos Fungos. *In*: Borges, P. A. V., Costa, A., Cunha, R., Gabriel, R., Gonçalves, V., Martins, A. F., Melo, I., Parente, M., Raposeiro, P., Rodrigues, P., Santos, R. S., Silva, L., Vieira, P. & Vieira, V. (eds.). *A list of the terrestrial and marine biota from the Azores*, pp. 37-58. Princípia, Cascais, 432 pp.

RYVARDEN, L. & R. L. GILBERTSON:

1994. *European Polypores*. Part 2 – Meripilus – Tyromyces. Fungiflora A/S. Norway. 743 pp.

THIERS, B.:

[*continuously updated*].

*Index Herbariorum*: A global directory of public herbaria and associated staff.  
New York Botanical Garden's Virtual Herbarium.

<http://sweetgum.nybg.org/ih/>