



Sistotremastrum chilensis (Trechisporales, Basidiomycota), a new species from Chilean Patagonia

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Abstract

Sistotremastrum chilensis sp. nov. is described and illustrated on the basis of morphological and molecular data. Specimens of this corticioid fungus were collected in Huinay Reserve, in the Valdivian temperate rainforest of the Chilean Northern Patagonian region. Affinities with other species of the genus are discussed.

Resumen

Sobre la base de datos morfológicos y moleculares se describe e ilustra la especie nueva *Sistotremastrum chilensis*. Los especímenes de este hongo corticioide se recolectaron en la Reserva de Huinay, en el bosque húmedo valdiviano de la región chilena del norte de Patagonia. Se discuten las afinidades de esta especie con las del resto del género.

Key words: Chile, Comau fjord, ITS nrDNA, taxonomy, wood-inhabiting fungi

Introduction

According to Gorjón & Hallenberg (2013) few studies about corticioid fungi have been focussed in the Chilean Patagonia and 94 species has been reported in their check-list. During an investigation in Huinay Reserve in the Chilean fjords region, we collected several specimens which correspond to *Sistotremastrum* Eriksson (1958: 62), but do not fit any described species of this genus.

Sistotremastrum is a small and cosmopolitan genus of corticioid fungi described to accommodate two species: *Sistotremastrum suecicum* Litsch. ex Eriksson (1958: 62), as type species, and *Corticium niveocremaum* Höhnelt & Litschauer (1908: 1117). Four species have been placed in this genus. *Sistotremastrum suecicum*, originally described from Sweden, is widely distributed in Europe, including the Macaronesian region, as well as Canada and USA (Eriksson *et al.* 1984, Telleria *et al.* 2008, 2009, Ginns & Lefebvre 1993); it has also been reported from China (Dai *et al.* 2004) and Southern Argentina (Greslebin 2001, Greslebin & Rajchenberg 2003). Additionally, Boidin & Gilles (1994a) studied three *Sistotremastrum* specimens (LY 11617, 14084, 14246) from Reunion Island which were identified as *Sistotremastum* cf. *suecicum*, differing by the hyphae, basidia and spores sizes.

Sistotremastrum niveocremaum (Höhnelt & Litschauer) Eriksson (1958: 62), originally described from Austria, is common in Europe including Macaronesian islands (Kotiranta & Saarenoksa 1990, Beltrán-Tejera 2004, Telleria *et al.* 2009), the formerly Soviet Union, Turkey, Caucasus region and Iran (Hallenberg 1978, Ghobad-Nejhad *et al.* 2009, Ghobad-Nejhad 2011, Ghobad-Nejhad & Hallenberg 2012); it has also been reported from China (Dai *et al.* 2004), India (Hjortstam & Ryvarden 2007) and Japan (Maekawa 1993), as well as North America (Ginns & Lefebvre 1993) and South America where it is known from Brazil (Hjortstam & Bononi 1987), Colombia (Hjortstam & Ryvarden 1997) and Southern Argentina (Greslebin & Rajchenberg 2003). The other two species present a more restricted distribution. *Sistotremastrum lateclavigerum* Boidin & Gilles (1994b: 217), described from France, is only known from its type locality, and *Sistotremastrum guttuliferum* Melo, M. Dueñas, Telleria & M.P. Martín in Telleria *et al.* (2013), described from Madeira Island, is also found in the Azores Archipelago and Canary Islands in the Macaronesian region.

Additional specimens examined:—CHILE. Los Lagos (X Region), Palena province, Comuna Hualaihué, Comau fjord, Huinay Reserve, path to Cerro del Tambor, 100 m, 42°22'44.5"S 72°24'25.8"W, on unidentified wood, 26 April 2012, *M. Dueñas, M.P. Martín & M.T. Telleria*, 19594Tell. (MA-Fungi 86366!). Los Lagos (X Region), Palena province, Comuna Hualaihué, Comau fjord, Huinay Reserve, 147 m, 42°22'9.0"S 72°24'42.7"W, on *Lophosoria quadripinnata*, 30 April 2012, *M. Dueñas, M.P. Martín & M.T. Telleria*, 19709Tell. (MA-Fungi 86367!).

Discussion

From a morphological point of view, *Sistotremastum chilensis* is related to *S. guttuliferum*. Both share subicular hyphae with small oil drops in the cytoplasm and narrowly ellipsoid spores, 5–6.5 × 2.5–3 µm, but differ by the shape of basal and subhymenial hyphae, composed by rather short and wide cells in *S. guttuliferum* (Telleria *et al.* 2013) and long and thin ones in *S. chilensis*. Both also differ in their distribution: Macaronesian region, in the North Atlantic Ocean, and Chilean Northern Patagonia region respectively. The spores of *S. suecicum* are also narrowly ellipsoid but smaller, 4.5–6 × 1.5–2 µm, and *S. niveocremeum* has subcylindrical to allantoid spores, 6–9 × 2.5–3(–4) µm (Eriksson *et al.* 1984). *Sistotremastrum lateclavigerum* is the only species known in the genus with cystidia (Boidin & Gilles 1994b).

Key to species

1. Cystidia present (leptocystidia)..... *S. lateclavigerum*
- Cystidia absent 2
2. Subicular hyphae with oil drops in the cytoplasm. Spores narrowly ellipsoid, 5–6.5 × 2.5–3 µm 3
- Subicular hyphae without oil drops in the cytoplasm 4
3. Hyphae composed by rather short and wide cells. Subicular hyphae (10–)14–18 × (6–)7–9 µm and subhymenial hyphae 8–12 × 4–5 µm *S. guttuliferum*
- Hyphae composed by long and thin cells. Subicular hyphae (14–)20–23 × 4–6 µm and subhymenial hyphae 15–23(–38) × 3–4 µm *S. chilensis*
4. Spores subcylindrical to allantoid 6–9 × 2.5–3(–4) µm *S. niveocremeum*
- Spores narrowly ellipsoid, 4.5–6 × 1.5–2 µm *S. suecicum*

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