

*Scleroderma capeverdeanum*

Fungal Planet 447 – 4 July 2016

***Scleroderma capeverdeanum* M.P. Martín, M. Dueñas & Telleria, sp. nov.**

*Etymology.* The name refers to the country where the holotype was collected.

*Classification* — *Sclerodermataceae*, *Boletales*, *Agaricomycetes*.

*Macroscopic characteristics* — *Basidiomes* epigeous, depressed globose to subglobose, 0.8–20 mm diam, sessile (all the sizes from dry specimens); the base attached to the substrate by a tuft of mycelium and rhizomorphs. *Peridium* thin (up to 1 mm thick), 2-layered: external layer pale yellowish to yellowish brown (colour 250; Séguý 1936) covered by dark brown scales (colour 701), very thin in young specimens, leaving the surface finely areolated; internal layer whitish. *Dehiscence* by an irregular and lacerate apical pore. *Gleba* compact when young, becoming powdery when old, blue greyish (colour 493) to grey-violet (colour 660).

*Microscopic characteristics* — *Basidiospores* globose, 8.5–9.5(–10.5) µm diam, including ornamentation, densely echinulate (ornamentation 0.5–1 µm high), dark brown in 5 % KOH. Outer layer of peridium composed of interwoven hyphae, hyaline to yellowish, 3.5–4 µm diam; the inner layer composed of interwoven hyphae, hyaline, 3–5 µm diam, with clamp-connections.

*Typus.* CAPE VERDE, Santiago Island, Parque Natural Serra de Malagueta, Concejo Sta. Catarina, alt. 907 m, N15°10'28" W28°40'37", on a slope under *Furcraea foetida* and *Lantana camara*, 20 Sept. 2010, M.P. Martín MPM3238 (holotype MA-Fungi 87406, ITS sequence GenBank KU747111, LSU sequence GenBank KU747110, MycoBank MB816518).

*Additional material examined of Scleroderma bovista.* CAPE VERDE, Santiago Island, Parque Natural Serra de Malagueta, Concejo Sta. Catarina, alt. 914 m, N15°10'28" W28°40'37", on a slope, 20 Sept. 2010, M.P. Martín MPM3241 (MA-Fungi 87407, ITS sequence GenBank KX017590).

Strict consensus tree of 100 equally most parsimonious trees was obtained after heuristic search (PAUP v. 4.0a147) of ITS nrDNA sequences. The two new *Scleroderma* species described in this issue are marked with rectangles: *S. capeverdeanum* and *S. dunensis* (see Fungal Planet 448). New sequences of *S. bovista* from Cape Verde, and *S. nitidium* from Brazil are marked in **bold**. The accession number from EMBL/GenBank or UNITE databases are indicated. Bootstrap values greater than 50 % are indicated on the branches. As in our preliminary studies (Phosri et al. 2009, Rusevska et al. 2014), *Pisolithus arhizus* was included as outgroup.

*Colour illustrations.* Cape Verde, Parque Natural Serra de Malagueta, where the species was collected (M.T. Telleria); basidiome (holotype MA-Fungi 87406), echinulate spores (holotype MA-Fungi 87406). Scale bars: basidiomata = 0.5 cm; spores = 1 µm.

*Notes* — Mature basidiomes of *Scleroderma capeverdeanum* show a peridium with brown squamules, similar to *Scleroderma verrucosum*, a species widely distributed in Azores, Canaria Islands, Madeira and Morocco (Kreisel 2001), also with echinulate spores; however, in young specimens, the peridium is finely areolated as in *Scleroderma bovista*, but this species has reticulate spores. Specimens of *S. capeverdeanum* were found in the same locality as collection MA-Fungi 87407 of *Scleroderma bovista*, as indicated in the additional material examined. Based on a megablast search of NCBI's GenBank nucleotide database, the closest hits using ITS sequences of *S. capeverdeanum* were two sequences of Chinese specimens collected under *Eucalyptus grandis* (GenBank HM237173 and HM237174), and misidentified as *S. polyrhizum* and *S. aurantium*, respectively. In the ITS analyses *S. capeverdeanum* cluster with these two sequences from China, as a sister group of *S. dunensis*, a new species described from Brazil (this issue). Until now, no species of *Scleroderma* were reported from Cape Verde.

