

Echinoporia inermis* G. Coelho, sp. nov.*MycoBank:** MB505890.**Etymology:** Referring to basidiomes lacking spiny projections on pileus surface.

Latin diagnosis: basidiomata annua, resupinata ad effuso-reflexa, alba vel albo-brunnescens, poris 0.5–2 per mm. Systema hypharum dimiticum hyphis generatoriis fibulatis, hyalinis, tenuitunicatis ad leviter crassitunicatis, (2.4–)2.6–4.4(–5.2) μm latis; hyphis skeletalibus hyalinis, crassitunicatis, (2.4–)2.6–4.4(–5.2) μm latis. Hymenium sporis subglobosis vel lato-ellipsoideis, (4.4–)4.8–5.6(–6) \times (3.2–)3.6–4.2(–4.8) μm ; cystidiis ventricosis, (9.2–)12–20(–30.4) \times (4.4–)4.8–6.4(–6.8) μm . Arthroconidia ad apices hyphae dissepimentarum crescentia, ellipsoidea vel fusioidea, fibulis vestigialis, (6–)8–12(–14.4) \times (3.6–)4.4–6(–6.8) μm . Ad ligno putrido *Sennae macrantherae* (manduirana, Fabaceae).

Description: *Basidiome* annual, initially nodulose, then resupinate with slightly reflexed to effuse-reflexed borders, up to 30 \times 18 \times 5 mm, membranaceous to almost cartilaginous when fresh, papery and firm upon drying, light in weight. Pileus formed by the reflexed part of basidiome, up to 5 mm from the substrate to the growing margin; pilear surface velutinous or with some agglutinated hyphae similar to hairs or scales, white (8/1 10YR)¹, very pale brown (8/2–7/4 10YR), to yellow (8/6–7/8 10YR); margin indistinct. Hymenophore poroid, concolorous to the pileus, not shining; pores round to usually polygonal, (0.5–)1–2/mm, $P_m = 1.43$, $n = 61/1$; dissepiments velutinous, entire. Tube layer concolorous to the pileus, up to 3.5 mm thick, non-stratified. Context concolorous to the pileus, up to 1.5 mm, homogeneous. *Hyphal system* dimitic. *Tramal generative hyphae* clamped, hyaline, thin- to slightly thick-walled, with a wide lumen, smooth, often branched, (2.4–)2.6–4.4(–5.2) μm diam, $D_m = 3.1$, $n = 61/1$. *Tramal skeletal hyphae* hyaline, thick-walled, with a narrow lumen, usually regular to somewhat tortuous in outline, (2.4–)2.6–4.4(–5.2) μm diam, $D_m = 3.1$, $n = 60/1$. *Contextual generative hyphae* clamped, hyaline, thin- to slightly thick-walled, with a wide lumen, smooth, often branched, 2.8–4(–4.4) μm diam, $D_m = 3.2$, $n = 60/1$. *Contextual skeletal hyphae*, hyaline, thick-walled, with a narrow lumen, usually regular to somewhat tortuous in outline, (3.2–)3.6–4.4(–5.2) μm diam, $D_m = 4.1$, $n = 62/1$. *Hymenium* with *basidia* clavate, four-sterigmate, (9.6–)10.4–16(–17.6) \times (4–)4.4–5.6(–6) μm , $L_m \times W_m = 13.5 \pm 2.04 \times 4.89 \pm 0.50$, $Q_r = 1.85–4.00$, $Q_m = 2.79 \pm 0.55$, $n = 61/1$. *Basidiospores* from subglobose, broadly-ellipsoid, ellipsoid to narrowly-ellipsoid, slightly thick-walled, smooth, hyaline, (4.4–)4.8–5.6(–6) \times (3.2–)3.6–4.2(–4.8) μm , $L_m \times W_m = 5.2 \pm 0.36 \times 4.0 \pm 0.29$, $Q_r = 1.13–1.88$, $Q_m = 1.31 \pm 0.11$, $n = 70/1$. *Cystidia* ventricose, smooth, sometimes elongated and constricted, thin- to slightly thick-walled, (9.2–)12–20(–30.4) \times (4.4–)4.8–6.4(–6.8) μm , $L_m \times W_m = 16.30 \pm 4.46 \times 5.31 \pm 0.66$, $Q_r = 1.75–4.62$, $Q_m = 3.10 \pm 0.94$, $n = 61/1$. *Arthroconidia* produced from thin-walled hyphal ends at the dissepiments, around the pore mouths, hyaline, ellipsoid to almost fusoid, with a remnant clamp connection at one end and rounded, obtuse to slightly truncate at the other end, smooth, thick-walled, (6–)8–12(–14.4) \times (3.6–)4.4–6(–6.8) μm , $L_m \times W_m = 9.80 \pm 1.70 \times 4.87 \pm 0.67$, $Q_r = 1.36–3.56$, $Q_m = 2.04 \pm 0.45$, $n = 62/1$. Substrate: on decayed wood of *Senna macranthera* (DC. ex Collad.) Irwin & Barneby (manduirana, Fabaceae). Associated with white-rot.

Typus: **Brazil**, Rio Grande do Sul State, Santa Maria, District of Boca do Monte, FEPAGRO, on *Senna macranthera*, 19 June 2006, collected by G. Coelho, ICN 139389, **holotypus**.

Notes: *Echinoporia inermis* has white to cream basidiomes with a smooth pileus surface, pores 0.5–2/mm, basidiospores 4.5–6 \times 3–5 μm , arthroconidia 6–14.5 \times 3.5–7, and cystidia ventricose 9–30 \times 4.5–7 μm . The kind of hyphal system, basidiospores, and cystidia combined with the absence of spiny outgrowths on the pileus surface suggest that this species is related to *Hyphodontia* J. Erikss. *Echinoporia inermis* appears, however, to be more related to *Echinoporia* Ryvar den, due to the presence of arthroconidia as defined by Langer², even though these asexual spores arise from the dissepimental hyphae instead of on the pileus surface. *Echinoporia hydno-phora* (Berk. & Broome) Ryvar den differs by having smaller pores (3–5/mm), lagenocystidia with a little crystalline incrustation, clavate hyphal endings with a strong thickened wall arising from the subhymenium, and arthroconidia produced on the pileus surface from bristle-like outgrowths^{2,3}. *Echinoporia aculeifera* (Berk. & M.A. Curtis) Ryvar den also has large pores (1–3/mm), and besides producing arthroconidia from pilear bristle-like outgrowths, it has cream to vivid orange basidiomes, and hymenial, ventricose lagenocystidia with apical needle-like crystals soluble in 5 % KOH, and subicular to subhymenial, capitate cystidia with an apical exudate not soluble in 5 % KOH^{2,4}.

Colour illustrations: Trees of *Senna macranthera* (DC. ex Collad.) Irwin & Barneby; basidiomes of *Echinoporia inermis*. Scale bar = 1 cm. A. Basidia, B. Basidiospores, C. Mature arthroconidia, D. Arthroconidia growing from dissepimental hyphae, E. Ventricose cystidia, F. Generative hyphae. G. Skeletal hyphae (G. Coelho). Scale bar = 10 μm .

References: ¹Munsell (1994). *Munsell Soil Color Charts*. Macbeth (USA): Munsell Co. ²Langer E (1994). The genus *Hyphodontia* John Eriksson. *Bibliotheca Mycologica* **154**: 1–298. ³Ryvar den L, Johansen I (1980). *A preliminary polypore flora of East Africa*. *Fungiflora*, Oslo, Norway. 636 p. ⁴Gilbertson RL, Ryvar den L (1986). North American Polypores. *Fungiflora* **1**: 1–433.

Gilberto Coelho, Fundamentos da Educação Dept., UFSM, Campus Camobi, CEP 97105-900, Santa Maria, RS, Brasil. Email: coelhoqb@yahoo.com.br

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