

FIRST RECORD OF *INONOTUS RICKII* (BASIDIOMYCETES, HYMENOCHAETACEAE) IN PORTUGAL

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of *Inonotus rickii* (Basidiomycetes, Hymenochaetaceae) in
Portugal. *Portugaliae Acta Biol.* **20**: 265-269.

Inonotus rickii (Pat.) Reid is reported as new to Portugal. A
brief description of the species based on Portuguese
specimens is given and its world distribution is surveyed.

Key words: corologia, Portugal, *Inonotus rickii*.

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referência de *Inonotus rickii* (Basidiomycetes, Hymeno-
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Inonotus rickii (Pat.) Reid é referido, pela primeira vez, para
Portugal. É dada uma breve descrição da espécie baseada no
material português assim como uma revisão da sua
distribuição mundial.

Palavras chave: corologia, Portugal, *Inonotus rickii*.

On September 2000, specimens of *Inonotus rickii* (Pat.) Reid (anamorph),
were detected growing on the base of trunk and principal branches of living trees
of *Celtis australis* L., along sidewalks and in public gardens, in Lisbon. A single
specimen emerged from a wounded living trunk of *Sapindus saponaria* L. at the
Botanical Garden. The trees were monitored regularly and, on November 2002,
large fruit bodies (teleomorph) developed.

Widespread in tropical and subtropical zones, the species was first reported
from the Mediterranean area, Morocco, by MALENÇON (1970) and then,
progressively, has been extending its distribution to the north and west of the
Mediterranean border.

I. rickii, at least in Europe, prefers environments which are affected by human activity (KOTLABA & POUZAR, 1994). According to BARNARD (1993), it is an aggressive parasite, attacking living hardwoods, causing a white rot of the heartwood of branches and trunks, and sometimes infecting the sapwood as well, resulting in tree decline and mortality (DAVIDSON *et al.* 1942).

The following description is based on Portuguese specimens:

Inonotus rickii (Pat.) Reid, Kew Bull. 12: 141. 1957

Figs. 1, 2

Xanthochrous rickii Pat., Bull. Soc. Mycol. France 24: 6. 1908

Ptychogaster cubensis Pat., Bull. Soc. Mycol. France 12: 133. 1896

Basidiome (teleomorph) annual, at first soft and fleshy and then becoming firm, attached to the substrate widely and firmly, sessile, applanate to ungulate, single to imbricate, up to 45 cm wide and 10 cm thick, margin acute or obtuse, entire, undulate. Upper surface golden brown and tomentose in younger parts, oldest parts dark rusty brown and rough, becoming rimose.

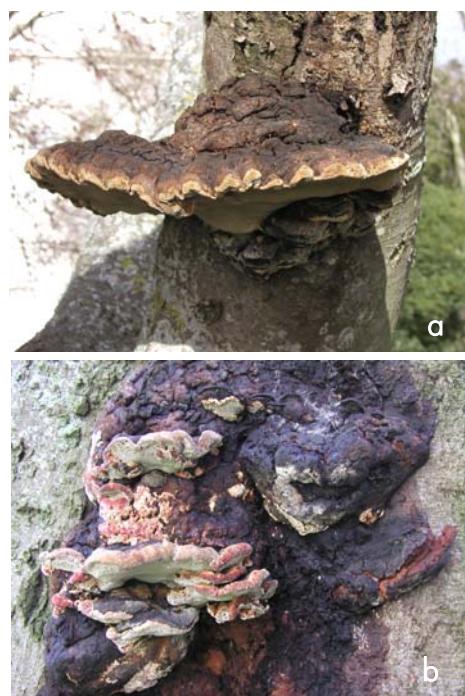


Figure 1. Basidiomes of *Inonotus rickii* growing on a living *Celtis australis*. a) teleomorph on a principal branch, b) anamorph and teleomorph on the base of trunk.

Imperfect fruitbody (anamorph) semi-spherical or cushion shaped, soft and fleshy at first, velvety to the touch, yellowish brown to golden brown, later dark brownish and the inner parts totally desintegrating to a mass of chlamydospores, and by age the whole fruitbody is transformed to this kind of spores.

Context up to 8 cm thick, dark rusty brown, concentrically zonate, fibrous in texture, watery and spongy when fresh, hard and brittle when dry, with a silky sheen, sometimes crumbling into a mass of chlamydospores. Tube layer non-stratified, distinct from the context, golden brown, brittle when dry, up to 15 mm thick.

Hymenial surface plane to concave, pale brown, often covered by a cream-coloured pruina of secondary hyphae, sometimes reddish brown owing to the large mass of chlamydospores adhering to the surface. Pores me-

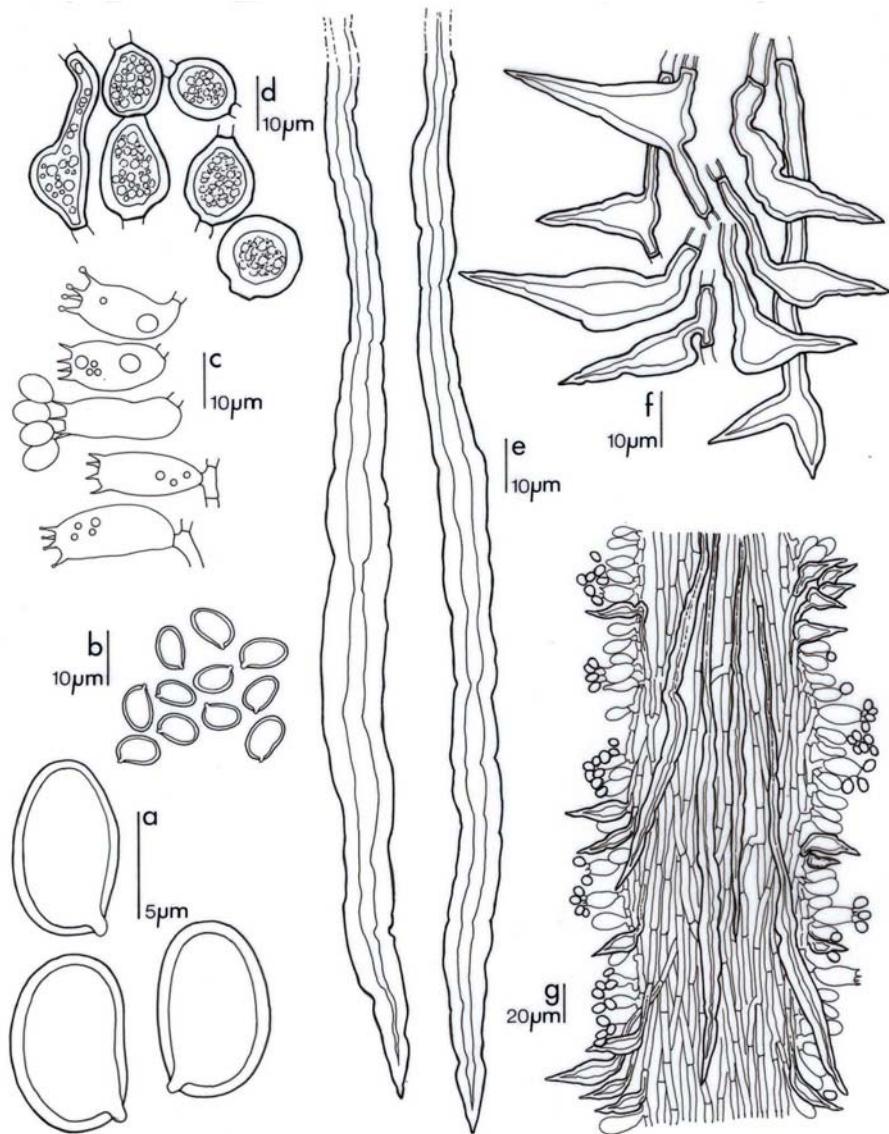


Figure 2. *Inonotus rickii*. a, b) basidiospores, c) basidia, d) chlamydospores, e) setal hyphae, f) hymenial setae, g) vertical section through dissepiment (M. F. Caetano & P. Ramos, LISVA).

dium to large 2-4 per mm., round to angular, with thin dissepiments, pore mouths entire.

Hyphal system monomitic with setal hyphae. Hyphae simple septate, occasionally branched, yellowish brown to pale brownish. Hyphae in context subparallel, thin to slightly thick-walled, 3-8.5 μm in diam., in the transition zone between trama and context narrower and more ramified. Hyphae in hymenial trama subparallel, thin to slightly thick-walled, 3-6 μm in diam.

Setal hyphae frequent, present in the context and in the dissepiments, running parallel to the tubes and sometimes diverging out through the hymenium, up to 15 μm in diam. at the widest point, and more than 250 μm long, subulate, with very thick walls, dark chestnut brown.

Hymenial setae numerous, 15-40 x 5-11 μm , ventricose to subulate, sometimes with heel, very thick-walled, dark chestnut brown.

Basidia broadly clavate to cylindric, 15-25 x 6.5-10 μm , with 4 sterigmata up to 4.5 μm long and oil drops in the cytoplasm.

Spores 6-8.5(-9) x 4.5-5.5 μm , broadly ellipsoid, with applanated supra-apical region, thick-walled, golden yellow, in KOH reddish brown, inamyloid, index-trinoid, acyanophilous.

Chlamydospores 10-15 μm in diam., irregular, globose to pyriform, very thick-walled, golden brown to reddish brown, presenting sometimes remnants of hyphoid processus.

Material studied: Lisboa, próximo do Palácio Nacional da Ajuda, 29SMC8284, na base de tronco ferido de *Celtis australis*, 22-XI-2002, M. F. Caetano & P. Ramos, LISVA, LISU (anamorph and teleomorph); Lisboa, Jardim Botânico, 29SMC8785, na ferida do tronco de *Sapindus saponaria*, 7-XI-2002, 8492 I. Melo, LISU (anamorph).

Distribution: As it was above mentioned, the species is common throughout tropical and subtropical zones, being known from Southern U. S. (Florida, Louisiana, Arizona) (GILBERTSON & RYVARDEN 1986), Argentine, Brazil, Peru, Hawaii, Haiti, Bahamas, Cuba, Martinique, Jamaica, Guadeloupe, Guinea, India, Pakistan and Birmany (JACQUENOUD 1985). CHANG (1998) reported it from Taiwan.

Still rare in the Mediterranean region, besides Morocco (MALENÇON 1970), records exist from Italy (JACQUENOUD 1985, 1987; INTINI 1988), Montenegro and Greece (KOTLABA & POUZAR 1994), France (PIERI & RIVOIRE 1996), Spain (INTINI 2002) and now Portugal, growing on living trunks of *Acer negundo*, *Celtis australis*, *Parkinsonia* sp., *Sambucus nigra* and *Schinus molle*.

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