

Antrodia pini-cubensis, a new polypore from the Caribbean area

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A new polypore *Antrodia pini-cubensis* Vampola, Kotlaba et Pouzar is described from a collection by the second author from Cuba in the Caribbean area. This fungus was reported ten years ago as a new species for Cuba under the incorrect name of *Antrodia oleracea* (Davids. et Lomb.) Ryv. *A. pini-cubensis* forms thin resupinate carpophores with small pores. It grows saprophytically on dead wood of *Pinus cubensis* and causes a brown rot of wood.

Key words: *Antrodia pini-cubensis*, Cuba, polypore

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Je popsán nový druh chorošů *Antrodia pini-cubensis* Vampola, Kotlaba et Pouzar podle nálezů druhého z autorů na ostrově Kuba v karibské oblasti. Před 10 lety byla tato houba uvedena jako nový druh pro Kubu pod chybným určením jako *Antrodia oleracea* (Davids. et Lomb.) Ryv. *A. pini-cubensis* tvoří tenké resupinatní plodnice s drobnými póry a roste saprofytičky na mrtvém dřevu borovice *Pinus cubensis*. Působí hnědou hnilobu dřeva.

During a five month's stay in Cuba (November 19, 1966 – April 19, 1967) the second author collected rich material of many macromycetes in various parts of this island. Ten species of polypores were selected from this material and published as rare or new species for Cuba (Kotlaba, Pouzar et Ryvarden 1984). Among these species, one very interesting resupinate polypore was mentioned which has been collected on 13. III. 1967 on a fallen, dead trunk of the East-Cuban endemic pine *Pinus cubensis* Griseb. near Mayarí (SE of Holguín) in the mountains of Sierra de Nipe, province Oriente (eastern part of Cuba). Part of this material was sent to J. L. Lowe, who identified it at that time as *Poria oleracea* Davids. et Lomb. and, in the mentioned paper, it was cited as *Antrodia oleracea* (Davids. et Lomb.) Ryv.

In 1991, the first author studied several herbarium specimens of *Poria oleracea* Davids. et Lomb. on loan to the National Museum in Prague by the Forest Products Laboratory, Madison, U.S.A. and, at the same time, he also revised the above mentioned collection from Cuba. In a detailed comparative study, he ascertained that the Cuban fungus was surely not identical with *Poria oleracea*. He further found in the PRM herbarium an additional herbarium specimen of this fungus (PRM 879880), evidently a duplicate, which has been identified by L. Ryvarden

as *Antrodia* cfr. *oleagina*, i. e. the correct name of this species now appears to be *Amyloporia sordida* (Ryv. et Gilberts.) Vampola et Pouzar (see Vampola et Pouzar 1993). However, by a comparative study of the type of *Poria oleagina* Overh., from the mycological herbarium of the University of Pennsylvania (PACMA 00632), he came to the conclusion that Ryvar den's identification also cannot be accepted and the Cuban fungus is a new species. As further study led to the same conclusion, we describe it below as a new species.

***Antrodia pini-cubensis* Vampola, Kotlaba et Pouzar, spec. nov.**

Carposomata annua, resupinata, tenua, albida usque cremea, circa 1.5 – 7 x 0.6 – 1.7 cm; tubulis brevibus, 0.3 – 1.5 mm longis, poris minutis, 6 – 7 per 1 mm, rotundatis usque angulato-rotundatis. Systema hypharum dimiticum, hyphis generativis fibuligeris, tenuiter tunicatis, 2 – 4 μm latis; hyphis skeleticis crasse tunicatis (cum tunica in solutione kalii hydroxydati introrsum incrassante), 2 – 4 μm latis, abundantibus, in subiculo saepe ramificatis. Hymenium basidiis late clavatis tetrasterigmaticis, 10 – 18 x 5 – 6.5 μm , et cystidiolis fusiformibus abundantibus, 8 – 18 x 4 – 5.5 μm , constitutum. Sporae hyalinae, laevis, tenuiter tunicatae, cylindricae, leniter arcuatae, 4.5 – 6.5 x 1.5 – 2.2 μm ; omnes structurae non amyloideae, neque dextrinoideae, nec cyanophilae.

Typus: Cuba, provincia Oriente, montes Sierra de Nipe apud Mayarí; ad truncum iacentem putridum *Pini cubensis*, 13. III. 1967, leg. F. Kotlaba, in herbario Musei Nationalis Pragae asservatur (holotypus: PRM 756464, isotypus PRM 879880).

Carpophores annual, resupinate, very thin, forming small irregular patches measuring mostly only 1.5 – 7 x 0.6 – 1.7 cm, which are whitish to cream. Tubes are very short, merely 0.3 – 1.5 mm long, thin-walled, with entire edges, under strong magnification finely ciliate. Pores are very small, 6 – 8 per 1 mm, rounded or at some places also angulate rounded. Subiculum is extremely thin, cottony, nearly imperceptible, forming a very narrow sterile margin. The white woolly mycelium penetrates the fissures in the rotten wood.

Hyphal system is dimitic, formed by generative and skeletal hyphae. Generative hyphae are thin-walled, hyaline, branched, clamped, 2 – 4 μm wide; skeletal hyphae are unbranched, thick-walled, in the subiculum often branched, 2 – 4 μm thick; both hyphae are inamyloid and indextrinoid, but KOH solution causes an inward thickening of the skeletal hyphal wall. The hymenium is formed by basidia and numerous cystidioles. Basidia are broadly clavate, tetrasporic, with basal clamps, 10 – 18 x 5 – 6.5 μm . Cystidioles with basal clamps, slender fusiform with the apices sometimes sharp pointed, 8 – 18 x 4 – 5.5 μm . Spores are hyaline, smooth, thin-walled, cylindrical and slightly bent, inamyloid and indextrinoid, 4.5 – 6.5 x 1.5 – 2.2 μm . Collapsing spores are often strikingly wedge-shaped, narrowing to one end.

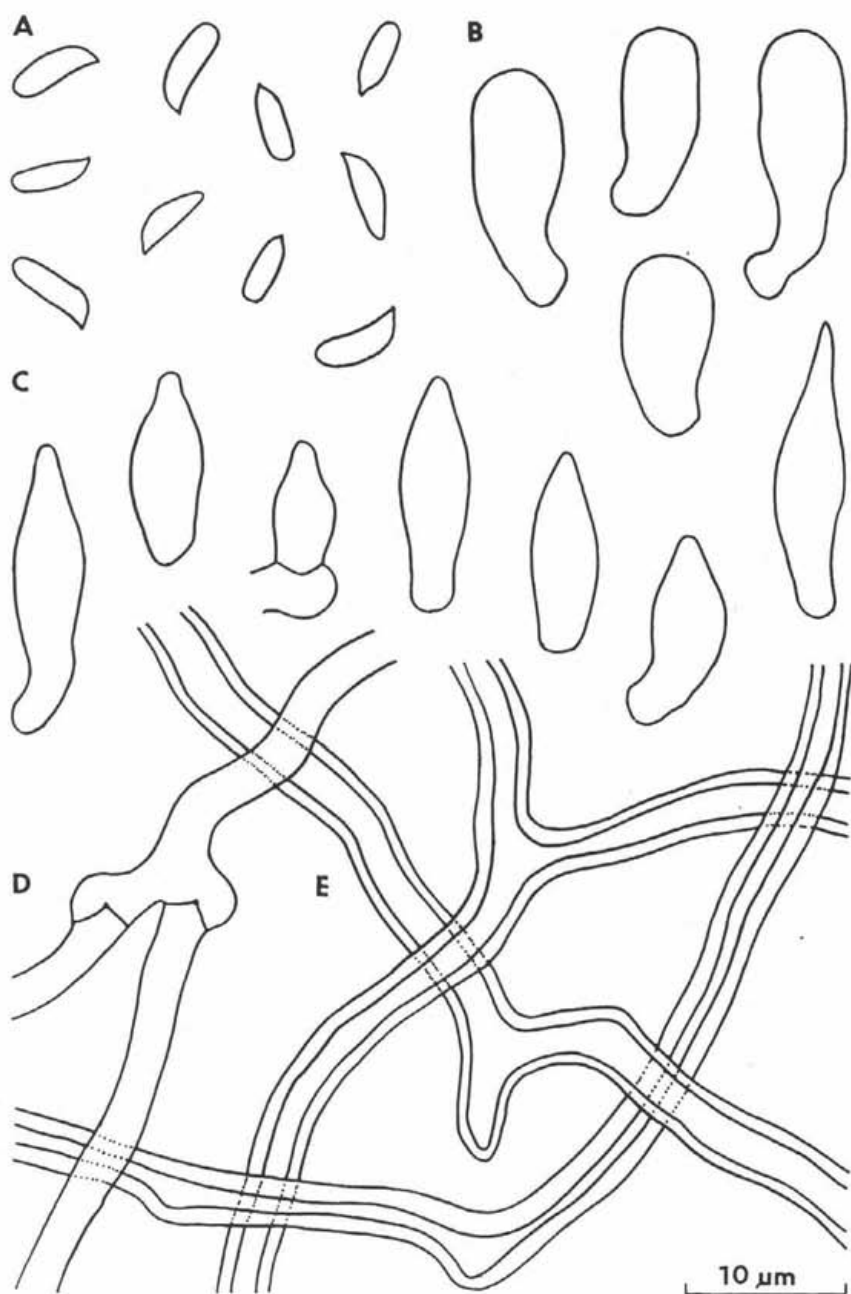


Fig. 1. *Antrodia pini-cubensis* Vampola, Kotl. et Pouzar.
A) spores, B) basidia, C) cystidiols, D) generative hyphae, E) skeletal hyphae.

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Locality: Cuba, north part of the province Oriente, in the Sierra de Nipe, SW of Mayarí (SE of Holguín), ca 500 m alt., on a fallen trunk of *Pinus cubensis*, 13. III. 1967, leg. F. Kotlaba (PRM 756464, 879880).

In the genus *Antrodia* s. l., there exist several resupinate species, which are either macro- or microscopically similar and may be mistaken for *A. pini-cubensis*.

Antrodia oleracea (Davids. et Lomb.) Ryv. grows on dead wood of frondose trees, especially oaks (it is unknown on conifers), and differs macroscopically by somewhat thicker carpophores with larger pores. Substantial differences, however, are present in the microstructure. The tubulotrampa of *A. pini-cubensis* is dimitic with abundant thick-walled skeletal hyphae, whereas the tubulotrampa of *A. oleracea* is monomitic and skeletal hyphae can only rarely be found and solely in the subiculum. The shape of the spores of both species is also different with those of *A. pini-cubensis* strikingly slender.

Macroscopically somewhat similar is *Amyloporia sordida* (Ryv. et Gilberts.) Vampola et Pouzar. This species, however, forms perennial stratified carpophores of a darker colour and its skeletal hyphae wholly dissolve in a solution of KOH.

Macroscopically very similar is *Antrodia albobrunnea* (Rom.) Ryv. but it differs microscopically by the presence of very striking brown generative hyphae in the subiculum.

Antrodia infirma Renvall et Niemelä (1992), recently described from Finland, is also somewhat similar. However, we have studied a specimen of this species and it is obvious that it differs by the somewhat larger spores and the structure of the subiculum and trama, where the skeletal hyphae are very rare.

In spite of the fact that *A. pini-cubensis* has until now only been found in Cuba, it occurs possibly in other countries too and, besides *Pinus cubensis*, perhaps also on further hosts, especially conifers. When collecting and studying resupinate polypores from the tropics and subtropics, *Antrodia pini-cubensis* should be taken in consideration.

REFERENCES

- KOTLABA F., POUZAR Z. and RYVARDEN L. (1984): Some polypores, rare or new for Cuba. - Čes. Mykol. 38: 137 - 145.
- RENVALL P. and NIEMELÄ T. (1992): Basidiomycetes at the timberline in Lapland 3. Two new boreal polypores with intricate hyphal systems. - Karstenia 32: 29 - 42.
- VAMPOLA P. and POUZAR Z. (1993): Příspěvek k poznání vzácného resupinálního choroše *Amyloporia sitchensis*. - Čes. Mykol. 46: 213 - 222.