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TWO NEW LIGNICOLOUS FUNGI ADDITIONS TO TURKEY MYCOTA

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Abstract: Two rare wood decaying fungi were collected in Cocakdere district (Mersin-Arslanköy). *Crustoderma dryinum* was determined on *Pinus nigra* subsp. *nigra* var. *caramanica* while *Kavinia alboviridis* was determined on *Abies cilicica* subsp. *cilicica.* The genera are new for Turkey mycota. The map showing collection site and line drawings of the fungi micromorphology are given.

Key words: *Crustoderma, Kavinia*, new records, lignicolous fungi, Turkey

TÜRKİYE MYCOTA'SINA İKİ YENİ LİGNİKOLOZ MANTAR İLAVESİ

Özet: Cocakdere yöresinden (Mersin-Arslanköy) iki nadir odun tahripçisi mantar toplandı. *Crustoderma dryinum Pinus nigra* subsp. *nigra* var. *caramanica* üzerinde, *Kavinia alboviridis* ise *Abies cilicica* subsp. *cilicica* üzerinde belirlendi. Cinsler Türkiye mikota'sı için yenidir. Toplama yerlerini gösteren harita ve mantarların mikroskobik çizimleri verilmiştir.

Anahtar kelimeler: *Crustoderma, Kavinia*, yeni kayıtlar, lignikoloz mantarlar, Türkiye

INTRODUCTION

Macrofungi species were collected from Cocakdere district (Mersin-Arslanköy). The forest ecosystems of the area are very old and they are very suitable for the growth of macrofungi. The forest stands of this area are also under special protection by the Forestry Ministry. According to the analysis of the appropriate literatures, macrofungi were not collected or identified from this area (DOĞAN et al. 2005, SESLİ & DENCHEV 2005, 2008).

The research area is situated on the Bolkar Mountain. It occupies a valley 15 km in length and 1.5-2 km in width. The top of the area is 2400 m while the altitude from the base is 1400 m. (Fig. 1). The vegetation of Cocakdere district consists generally of coniferous forests; the main tree is *Cedrus libani* A.Rich.. The forests are both pure stands or mixed with *Abies cilicica* (Ant. & Kotschy) Carr. subsp. *cilicica*, *Pinus nigra* J.F. Arnold subsp. *nigra* var. *caramanica* (Loudon) R. Businský, *Juniperus excelsa* M. Bieb. and *Juniperus foetidissima* Willd.

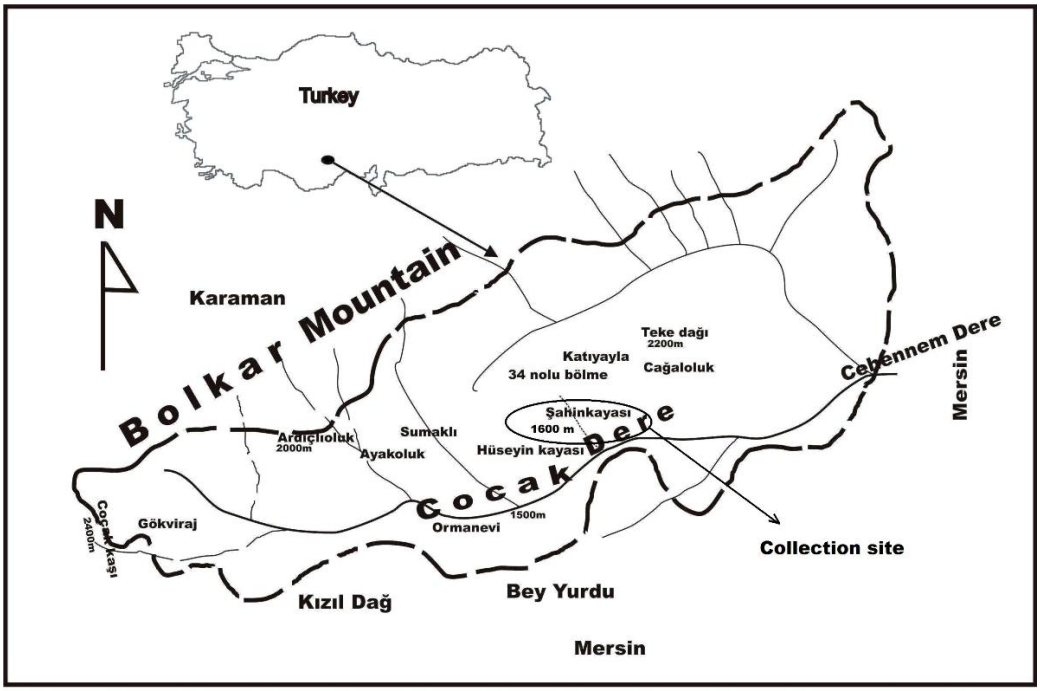

Figure 1. The map of Cocakdere district.

MATERIALS AND METHODS

Microscopic study of the fungi was done at x 40 and x 100 magnifications, with applying the conventional reagents; IKI, 5 % KOH and cotton blue. For species identification, the following handbooks were used: BREITENBACH & KRANZLIN (1986), ELLIS & ELLIS (1990), ERIKSSON & RYVARDEN (1975, 1976), JULICH (1984). The genera are taxonomically arranged according to the CANNON & KIRK (2007). The materials are deposited in Fungarium of Mushroom Application and Research Centre at Selçuk University in Konya.

RESULTS

Basidiomycota
Basidiomycetes
Lentariaceae

Kavinia alboviridis (Morgan) Gilb. & Budington, *J. Ariz. Acad. Sci.* **6**(2): 95, 1970.

Fruitbody resupinate, effused reflexed, with loose subiculum and numerous rhizomorphs, hymenial aculei dense, mostly 1–4 mm long, narrow (0.2–0.3 mm), cylindrical, apically conical and tapering to the subulate. Sterile apex initially white, then greenish, olive green with age. Subiculum white, cottony. Margin variable, cottony or fibrillose. **Hyphal system** monomitic, hyphae 2–4 µm wide, (Fig. 2a) in young texture thin-walled and smooth, older hyphae in subiculum and rhizomorphs with somewhat thickened walls, often encrusted. **Cystidia** absent. **Basidia** clavate, 20(–40) x

6–7 µm, (Fig. 2b) basally tapering to stalk-like part of varying length, with 4 sterigmata and basal clamps. **Spores** yellowish, subfusiform, tapering to apiculus, with thickened walls, externally ornamented with cyanophilous warts, 8–12 x 3–5 µm (Fig. 2c).

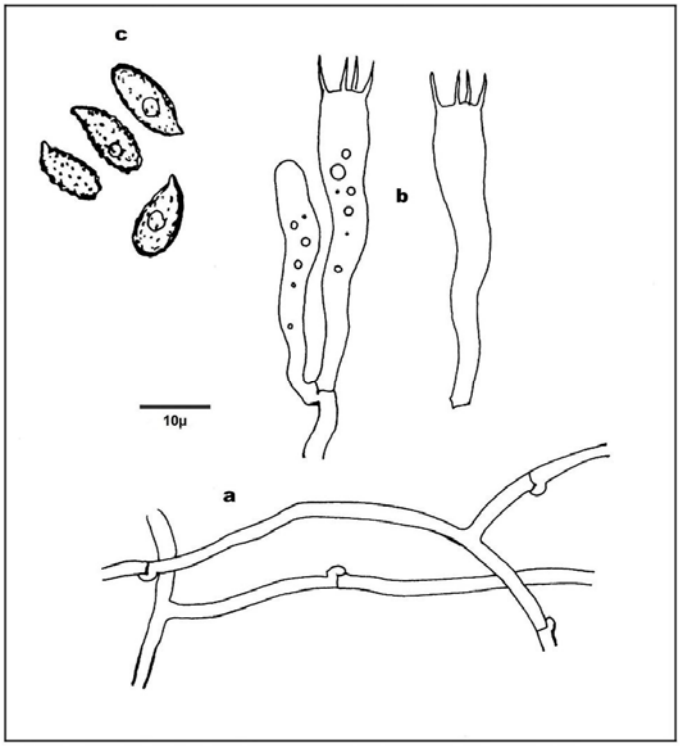

Figure 2. *Kavinia alboviridis,* a) hyphae b) basidia, c) spores

Material examined: Turkey; Mersin-Arslanköy, Cocakdere district, Şahin kayası, on decaying *Abies cilicica* subsp. *cilicica,* 1600 m, 13 June 2005, **Coll. No**: Doğan 2069.

Meruliaceae

Crustoderma dryinum (Berk. & M.A. Curtis) Parmasto, *Conspectus Systematis Corticiacearum* (Tartu): 88, 1968.

Fruibody resupinate, widely effused and closely attached to the substratum, moderately thick (0.1–0.3 mm), ceraceous when fresh, membranaceous to crustaceous when dry, pale ochraceous, yellowish cinnamon to saffron coloured, margin abrupt and undifferentiated, or narrow and finely fibrillose, hymenium smooth, velvety by the projecting cystidia. **Hyphal system** monomitic, hyphae 2-4 µm wide, (Fig. 3a) yellowish, the basal hyphae somewhat thick-walled, in the hymenium mostly thin-walled, richly branched and provided with clamps. **Cystidia** numerous, 80–120 x 5–7 µm, (Fig. 3b) projecting 40–60 µm, cylindrical or apically tapering, rarely somewhat clavate, walls basally thick, thinning apically. **Basidia** 24–30 x 5–6 µm, (Fig. 3c) narrowly clavate to subcylindrical, with age somewhat thick-walled with 4 thin

sterigmata. **Spores** hyaline to yellowish, 7–9 x 2.5–3.5 µm, (Fig. 3d) narrowly elliptic to subcylindrical, rarely narrowly obovate or adaxially slightly concave, inamyloid.

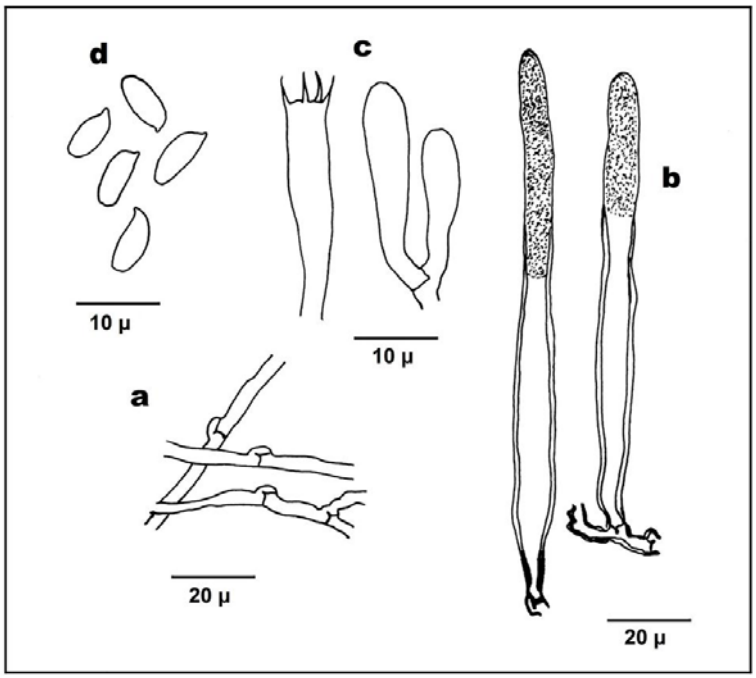

Figure 3. *Crustoderma dryinum,* a) hyphae, b) cystidia, c) basidia, d) spores

Material examined: Turkey; Mersin-Arslanköy, Cocakdere district, Şahin kayası, on decaying *Pinus nigra* subsp. *nigra* var. *caramanica* wood, 1600 m, 13 May 2004, **Coll. No:** Doğan 1821.

REMARKS

Kavinia is an easily recognized genus by the lack of a fertile hymenium between the hymenial aculei and resupinate hydnoid fruiting body. *Kavinia alboviridis* has some special features than other members in this genus; green colour, small subulate aculei and rough spores, which are yellow under the microscope and ochraceous in mass. The distribution of this species is rare. It grows on well-decayed coniferous and deciduous wood.

Crustoderma dryinum is rare on conifer wood. It can be easily recognized by bright cinnamon to saffron colour of hymenial surface. It has also some distinctive microscopic characters as very big and numerous cystidia, and the spores strongly stained in cotton blue.

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