Some new records for the Turkish macromycota

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Abstract. The present paper is based on macrofungal specimens collected from Muğla City, in years of 2004-2005. As a result of field and laboratory studies, seven new records are presented. These are *Hebeloma syrjense, H. sordescens, Pluteus robertii, Psilocybe cubensis, P. subviscida* var. *velata, Stropharia luteonitens* and *Mycena rorida.*

Key words: fungal diversity, macrofungi, new records, Turkey

Introduction

In this study, several macrofungal specimens were collected during field trips to Muğla City in the years of 2004 and 2005. After field and laboratory studies, 81 taxa were identified. Among 81 taxa, seven are new for Turkey. The new records are presented with their descriptions, localities, collecting dates, and fungarium numbers.

Materials and Methods

Fungal specimens were collected from different localities from the research area. The morphological and ecological characteristics of the macrofungi were recorded and photographed in their natural habitats. After the field work specimens were brought to the laboratory. Their spore prints were taken. Dried specimens were numbered and placed in polyethylene bags. They were frozen for a week to avoid internal and external parasite attacks. The specimens were identified with their macroscopic and microscopic characters using current reference books (Phillips 1981; Guzman 1983; Moser 1983; Lincoff 1984; Orton & Watling 1986; Bon 1987; Watling & Gregory 1987; Bresinsky & Besl 1989; Breitenbach & Kränzlin 1991, 2000). All specimens are kept in the fungarium of Muğla University.

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New records

Bolbitiaceae

Hebeloma syrjense P. Karst.

Pileus 2-4 cm across, conical to campanulate when young, later convex to plane, somewhat hygrophanous, not greasy, damp yellow to cinnamon-brown (Fig. 1). **Flesh** whitish, thick in the center of the pileus, thin toward the margin, odor weakly soapy and radish when cut, very bitter. **Lamellae** cream-colored when young, later gray-pink to cinnamon-brown, with opalescent droplets on the edges when fresh and young, with brown spots when old, notched and narrowly attached, edges white-floccose. **Stipe** 4-7 × 0.4-0.9 cm, cylindrical. **Spore print** umber brown. **Spores** 8-10.5 × 4.5-6 µm, ellipsoid to amygdaliform (Fig. 8a), moderately verrucose, ocher-yellow. **Cheilocystidia** 35-50 × 4-7 µm, cylindrical to flexuous (Fig. 8b), hyaline and thin-walled. Cells of **cap cuticle** cylindric and thin-walled (Fig. 8c), hyaline.

It grows on the ground in coniferous woods.

Specimen examined: Muğla, Yeşilyurt-Yerkesik roadside, 4 Dec 2004 (H. Baş 355).

Hebeloma sordescens Vesterh.

Pileus 3.5-4 cm across, conical to campanulate when young, later convex to plane, hazel to brown hazel, extreme margin paler (Fig. 2). **Flesh** cream. **Lamellae** cream-colored when young, later gray-pink to cinnamon-brown. **Stipe** 3.5-

Figs 1-7. Basidiomata. **1** – *Hebeloma syrjense,* **2** – *H. sordescens,* **3** – *Pluteus robertii,* **4** – *Psilocybe cubensis,* **5** – *P. subviscida* var. *velata,* **6** – *Stropharia luteonitens,* **7** – *Mycena rorida*

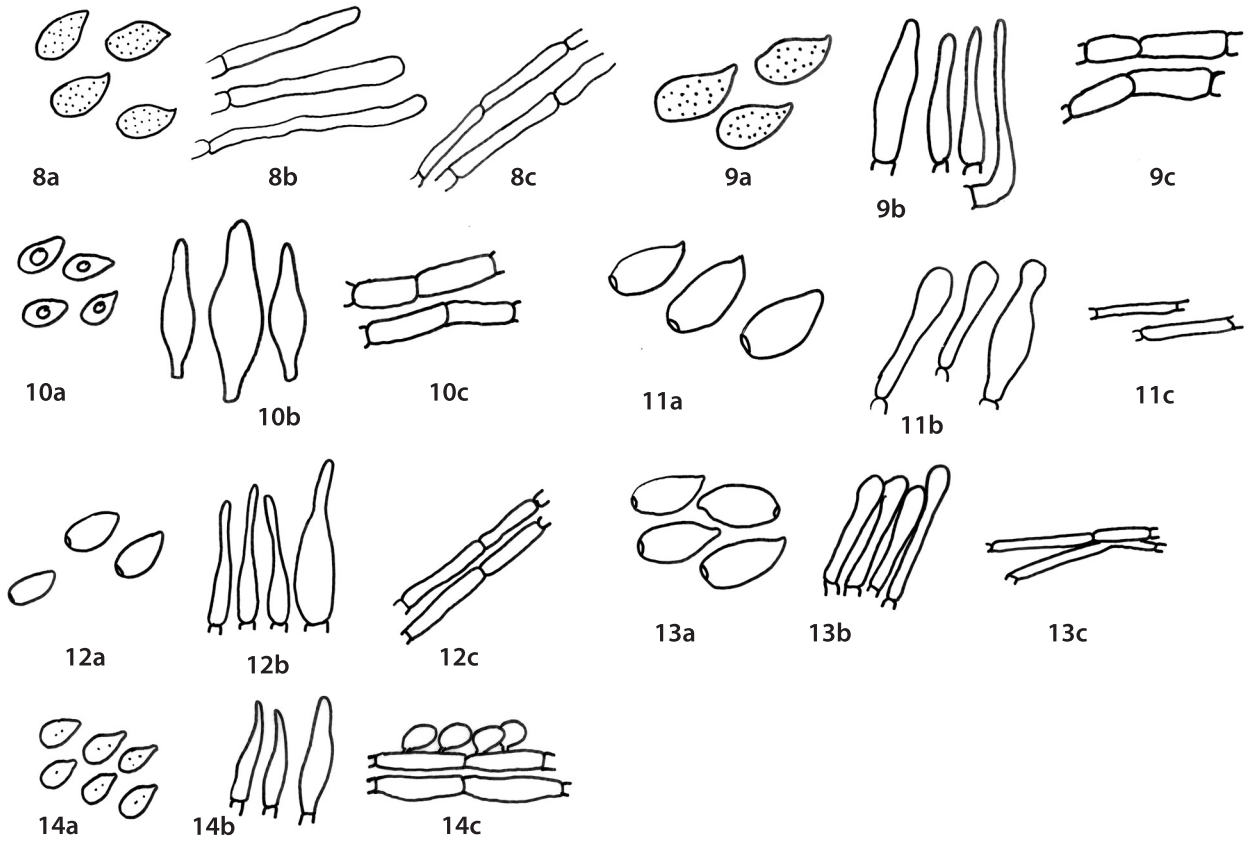

Fig. 8. *Hebeloma syrjense.* **Fig. 9.** *H. sordescens.* **Fig. 10.** *Pluteus robertii.* **Fig. 11.** *Psilocybe cubensis.* **Fig. 12.** *P. subviscida* var. *velata.* **Fig. 13.** *Stropharia luteonitens*. **Fig. 14.** *Mycena rorida.* **Figs 8-14: a** – basidiospores, **b** – cheilocystidia, **c** – cells of cap cuticle

4.5 × 0.4-0.9 cm, cylindrical, whitish, then with brownish tone. **Spore print** umber brown. **Spores** 8.5-11 × 5-6.5 µm, amygdaliform (Fig. 9a), moderately verrucose, ocher-yellow. **Cheilocystidia** 30-48 × 8-11 µm, cylindrical, usually with swollen base (Fig. 9b), hyaline and thin-walled. Cells of **cap cuticle** elongate cylindric (Fig. 9c), thin-walled and hyaline.

It grows in gregarious in pine forest.

Specimen examined: Muğla, Yeşilyurt-Yerkesik roadside, 4 Dec 2004 (H. Baş 354).

This species is characterized by its amygdaliform spores and relatively pale bicolored pileus. Although according to Moser (1983), Breitenbach & Kränzlin (2000), and Vesterholt (2005) it grows in hardwood forest, it was found in coniferous forest.

Pluteaceae

Pluteus robertii (Fr.) P. Karst.

Pileus 3-4 cm, convex, expanded but often retaining an umbo, with small erect and recurved reddish brown scales at margin and around center on cream colour background (Fig. 3). **Flesh** cream colour to light buff. **Lamellae** clay pink, smell indistinct. **Stipe** 4-5 × 0.4-0.7 cm, cylindrical but slightly bulbous at base, cream colour becoming darker at base, delicate. **Spore print** pinkish. **Spores** 6-7 × 5-6 µm, subglobose or broadly ellipsoid (Fig. 10a). **Cheilocystidia** 30-80 × 10-15 µm, clavate, fusiform and lageniform (Fig. 10b). Cells of **cap cuticle** elongate cylindric, thin-walled (Fig. 10c) and hyaline.

It grows on rotting twigs of deciduous trees.

Specimen examined: Göktepe village, 22 Nov 2004 (H. Baş 182).

Characteristic of this species are cheilocystidia without hooks and reddish brown scales on cap.

Strophariaceae

Psilocybe cubensis (Earle) Singer

Pileus 2-5 cm, conic campanulate with acute umbo at first but then convex or plano-convex with only an obtuse umbo, viscid, smooth, pallid, cream or buff at first becoming more strongly coloured with age in the same shades, or brick colour towards umbo, whitish veil fragments at margin, becoming patchly blueish where handled (Fig. 4). **Flesh** thin and whitish, taste slightly mealy; smell none. **Lamellae** adnate or adnexed, drab at first then brown-vinaceous, finally violaceous black with prominent white margin, crowded, narrow becoming ventricose in midportion. **Stipe** 5-10 × 0.5-1 cm, subequal tapered upwards from a slightly or distinctly swollen base, white throughout, annulate, blueing where injured; annulus membranous thin, collapsing, fragile but persistent. **Spore print** purplish brown. **Spores** 12-17 × 8-11 µm, ovate to broadly ellipsoid with a distinct central germ-pore (Fig. 11a). **Cheilocystidia** 15-30 × 6-10 µ, fusiform with

subcapitate apex (Fig. 11b), hyaline and thin-walled. Cells of **cap cuticle** gelatinized, cylindric, and narrow (Fig. 11c).

It grows in rich pastures in fertilized area.

Specimen examined: Muğla, Göktepe village, 22 Nov 2004 (H. Baş 189).

P. cubensis is distinguished by having very large spores, blueing where damaged and annulate stem.

Psilocybe subviscida (Peck) Kauffman var. ***velata*** Noordel. & Verduin

Pileus 0.5-2 cm, convex then expanded ± plane, sometimes slightly obtusely umbonate, burnt sienna or tawny-date to umber or purplish-date, drying pale ochraceous or ochraceous honey from center out and sometimes with tawny tinge especially around center when half dry, extreme margin often remaining dark for sometime, striate at margin only when moist, with veil traces at margin when fresh, viscid with separable pellicle (Fig. 5). **Flesh** concolorous, drying reddish ochraceous to pale buff or whitish. Taste and smell none or slightly fungoid. **Lamellae** adnate-decurrent, slightly ventricose with tooth to ± triangular, pale- or clay-umber then deeper umber or violaceous umber. **Stipe** 1.5-3.5 × 0.1-0.2 cm, equal or slightly thickened at base or apex, ochraceous honey or pale date then often darker date or umber at base, slightly hygrophanous, veil leaving white or whitish ring-zone. **Spore-print** purplish brown. **Spores** 6-8.5 × 4.5-5.5 µm, ellipsoid-amygdaliform slightly lentiform, with a germ-pore (Fig. 12a). **Cheilocystidia** 25-50 × 5-10 µm, sublageniform or lageniform (Fig. 12b), hyaline, thin-walled with a narrow and long neck (3-5 µm). Cells of **cap cuticle** of filamentous, thin, narrow, and gelatinized (Fig. 12c).

It grows in short grass.

Specimen examined: Muğla, Muğla University Campus area, 26 Dec 2004 (H. Baş 422).

It is recognized by tawny tinged cap.

Stropharia luteonitens (Vahl) Quél.

Pileus 1-3 cm, conico-convex or campanulate to convex with slight umbo, ochraceous or dark buff with hint of grey especially towards margin becoming more fulvous with age, hygrophanous, viscid with thick separable pellicle, smooth striate at margin (Fig. 6). **Flesh** thin, pallid. Taste indistinct; smell rather unpleasant with hint of radish. **Lamellae** broadly adnate to adnate-decurrent, first ivory with hint of drab, finally bay to fuscous brown, with white irregular edge. **Stipe** 3-6 × 0.1-0.3 cm, equal or slightly bulbous towards base, whitish to pale ochraceous or almost concolorous with cap, annulate, covered in fibrillose to silky fibrillose remnants of veil downwards, stuffed. **Spore print** brown-vinaceous. **Spores** 14.5-19 × 7-11 µm, subellipsoid to ellipsoid (Fig. 13a), thick-walled, dark yellowish brown with a broad central germ-pore. **Cheilocystidia** 25-50 × 5-8 µm, cylindrical to sublageniform with subcapitate apex (Fig. 13b), hyaline, and thin-walled. Cells of **cap cuticle** of filamentous, cylindric narrow hyphae (Fig. 13c).

It grows on rich soil in pasture.

Specimen examined: Muğla, Göktepe village, 22 Nov 2004 (H. Baş 190).

S. luteonitens is recognized by its not blueing cap, weakly radish smell, and very large spores.

Tricholomataceae

Mycena rorida (Scop. : Fr.) Quél.

Pileus 0.5-1 cm across, hemispherical to planoconvex, center always ± indented to somewhat umbilicate, surface velvety and somewhat micaceous depending on the direction of light, grooved-striate, whitish cream, brownish to gray-brownish toward the center, margin undulating-striate (Fig. 7). **Flesh** membranous, odor and taste indistinct. **Lamellae** white, decurrent, edges smooth to somewhat floccose. **Stipe** 1.5-4 × 0.05-0.1 cm, whitish to translucent, whole length when fresh enveloped in a slimy, transparent substance which has a tendency to flow downward, delicate. **Spore print** white. **Spores** 9-12 × 4-6 µm, ellipsoid to cylindric-ellipsoid (Fig. 14a), smooth, hyaline, with drops. **Cheilocystidia** 25-35 × 4-6 µm, fusiform to clavate (Fig. 14b), hyaline, and thin-walled. Cells of **cap cuticle** hymeniform with vesicular elements deeper hyphae cylindrical (Fig. 14c).

It grows gregarious on rotting stumps of deciduous tree.

Specimen examined: Muğla, Göktepe village, 22 Nov 2004 (H. Baş 188).

Mycena rorida cannot be mistaken in nature because of its color and form, therefore is easy to recognize. This beautiful *Mycena* has dry pileus and slimy stipe.

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