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Mycena ustalis, a new record for the mycobiota of Turkey

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Mycena ustalis, Türkiye mikobiyotası için yeni bir kayıt

Abstract: The small agaric, *Mycena ustalis* Aronsen & Maas Geest. (*Mycenaceae*), is given as new record from Turkey. The macro and micromorphological photographs of the species and a brief description of the species are provided.

Key words: Biodiversity, *Mycena*, new record, Trabzon

Özet: Küçük bir agarik olan *Mycena ustalis* Aronsen & Maas Geest. (*Mycenaceae*), Türkiye'den yeni kayıt olarak verilmiştir. Türün makro ve mikromorfolojilerine ilişkin fotoğrafları ve kısa bir betimlemesi verilmiştir.

Anahtar Kelimeler: Biyoçeşitlilik, *Mycena*, yeni kayıt, Trabzon

1. Introduction

Mycena (Pers.) Roussel is a genus in the family *Mycenaceae* Underw. Members of the genus have cosmopolitan distribution, and play a vital role in litter decomposition since the majority of them are saprotrophic (Pegler, 1986; Singer, 1986). Kirk et al. (2008) reports the existance of almost five hundred *Mycena* species in the world.

The checklists, prepared by Sesli and Denchev (2014) and Solak et al. (2015) compiled 62 *Mycena* species from Turkey. In 2017 three *Mycena* species, *M. meliigena* (Berk. & Cooke) Sacc., *M. pearsoniana* Dennis ex Singer and *M. pterigena* (Fr.) P. Kumm. were added to list by Türkekul (2017), Uzun and Demirel (2017) and Uzun et al. (2017). Currently 65 species of the genus are known to exist in Turkey.

During a field trip within the boundaries of Of district of Trabzon province, some brownish *Mycena* samples were collected from the cemetary. As a result of field and laboratory studies, the samples were identified as *Mycena ustalis* Aronsen & Maas Geest. The current checklists (Sesli and Denchev, 2014; Solak et al., 2015) on Turkish mycobiota and the contributions made after the checklists (Uzun et al., 2015; Akata et al., 2016; Işık et al., 2016; Sesli et al., 2016; Taşkın et al., 2016; Türkekul and Işık, 2016; Çöl et al., 2017; Demirel et al., 2017; Kaşık et al., 2017; Uzun et al., 2017; Alkan et al., 2018; Kaya and Uzun, 2018; Kaygusuz et al., 2018), revealed that *M. ustalis* has not been reported from Turkey before.

The study aims to make a contribution to the mycobiota of Turkey.

2. Materials and Method

Basidiomata of *M. ustalis* species were collected from Of district of Trabzon province in 2017. During field studies, the ecological characteristics of the fruit bodies were recorded and macro photographs of them were taken at their natural habitats. Carrying the samples to the fungarium, they were dried in an air conditioned room, and prepared as fungarium materials in polyethylene bags. Dry materials were used for microscopic investigations. A Leica DM500 trinocular compound microscope was used for micromorphologic measurement and investigations. By comparing the obtained macromorphological and micromorphological data with Aronsen and Maas Geesteranus (1989) and NBIC (2018), identification of the specimens were performed. The samples are kept at the fungarium of Van Yüzüncü Yıl University in Van, Turkey (VANF).

3. Results

Basidiomycota R.T. Moore
Agaricales Underw.
Mycenaceae Roze

Mycena ustalis Aronsen & Maas Geest.

Macroscopic features: Pileus 9-38 mm across, conical to campanulate when young, broadly convex to applanate at maturity, slightly umbonate, surface smooth to very finely fibrillose when young, somewhat sulcate when mature, especially towards the margin, dark blackish to bluish brown when young, brown when mature, darker at the center, paler toward the margin. Margin whitish when young, brownish when mature. Flesh thin, odor and taste not distinctive. Lamellae adnate to uncinate, white when young, dark grey to pale grey at maturity. Stem 35-70 × 3-4 mm, cylindrical to somewhat compressed, slighthly curved and widened towards the base, almost concolorous with the pileus or darker, especially when mature, white puberulous when young, puberules paler to brownish at maturity (Fig. 1).

Microscopic features: Basidia 27-46 × 6.5-9.2 µm, cylindrical to slightly clavate, with 2-4 sterigmata (Fig. 2a), some clamped. Cheilocystidia 21-62 × 7.2-17 µm, clavate to fusiform (Fig. 2b). Spores 7.8-12 × 5.5-7.4 µm, ellipsoid to pip shaped, smooth (Fig. 2c).

Ecology: *Mycena ustalis* was reported to grow in grass near or on needles of *Juniperus* L. (Aronsen and Maas Geesteranus, 1989).

Specimen examined: Trabzon, Of, İrfanlı village cemetary, among grass under *Juniperus* and *Cupressus* L. sp., 40°56′N-43°15′E, 138 m, 19.11.2017, AK.2964.

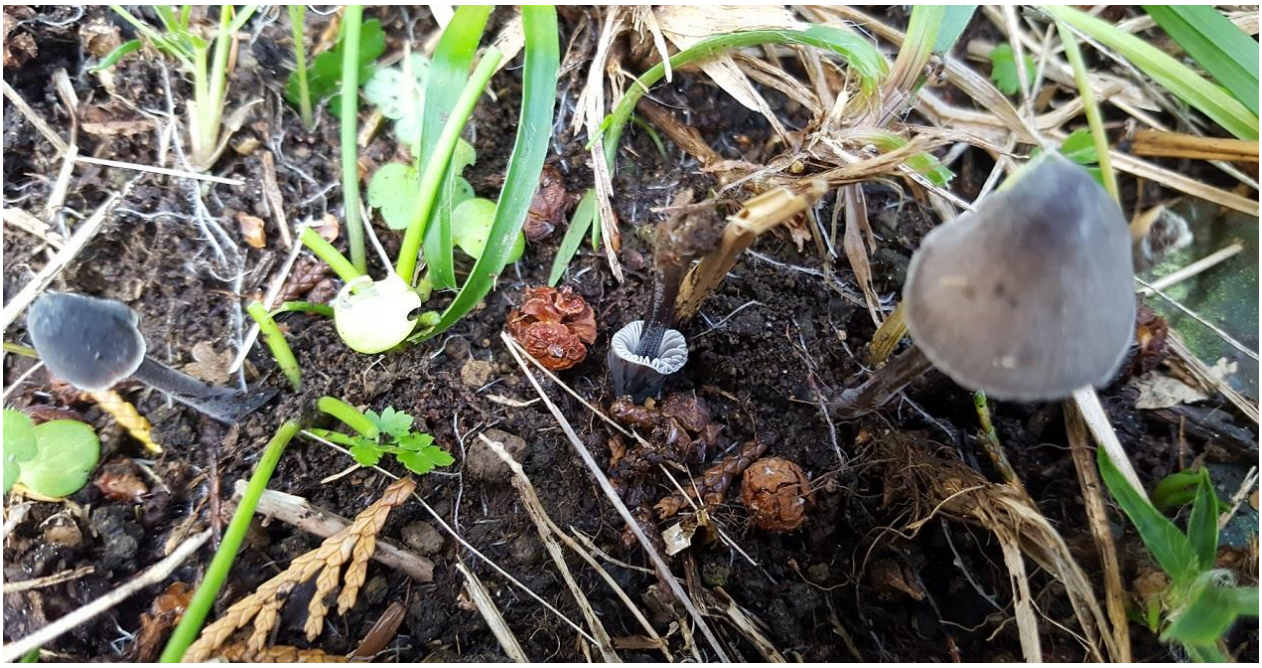

Figure 1. Basidiocarps of *Mycena ustalis*

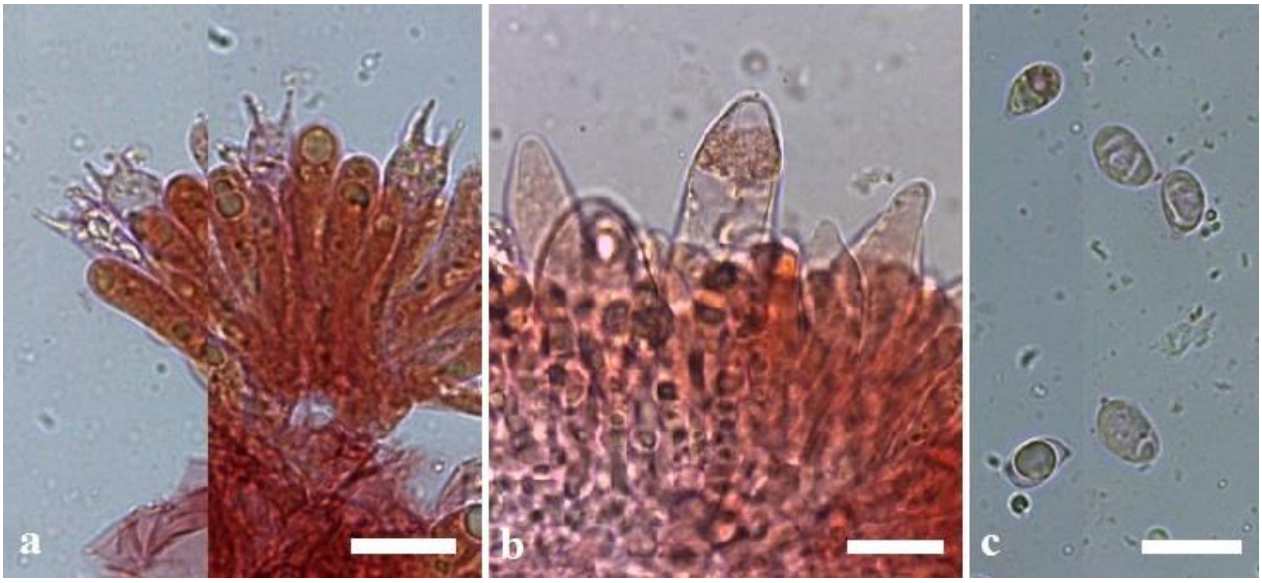

Figure 2. basidia (a), cheilocystidia (b) and basidiospores (c) of *Mycena ustalis* (Congo red) (bars 15 µm)

4. Discussions

Mycena ustalis is a member of the section *Fragilipedes* (Fr.) Quél. (Aronsen and Maas Geesteranus, 1989). The macro and micromorphological characters of the determined sample, generally conforms thoose investigated by Aronsen and Maas Geesteranus (1989). Habitat of the sample is also similar, except the existance of *Cupressus* species beside the *Juniperus* species.

Though Aronsen and Maas Geesteranus (1989) mentions about a nitrous odor of *M. ustalis*, we could not observe a distinct odor from our Turkish collection.

Morphologically, *M. leptocephala* (Pers.) Gillet is similar to *M. ustalis* as having dark blackish brown pileus and stem, but differs from the latter species by growing among needle litter under conifers.

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