



This article is cited as: Yorulmazlar İ., Uzun Y. and Kaya A. (2025). Two New *Mycena* Records for Türkiye, *Mantar Dergisi*, 16(2) 100-104.

Geliş(Received) :12.05.2025

Kabul(Accepted) :08.07.2025

Research Article

Doi: 10.30708.mantar.1697694

Two New *Mycena* Records for Türkiye

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Abstract: Two *Mycena* (Pers.) Roussel species, *Mycena chlorantha* (Fr.) P. Kumm. and *M. pseudopicta* (J.E. Lange) Kühner, are reported for the first time as new records for the mycobiota of Türkiye, based on the investigation of the collections made from Ankara. Short descriptions of the species are given together with the photographs related to their macro and micromorphologies, and discussed briefly.

Keywords: Biodiversity, *Mycenaceae*, new record, Türkiye

Türkiye İçin İki Yeni *Mycena* Kaydı

Öz: İki *Mycena* (Pers.) Roussel türü, *Mycena chlorantha* (Fr.) P. Kumm. ve *M. pseudopicta* (J.E. Lange) Kühner, Ankara'dan toplanan örneklerin incelenmesi sonucunda, Türkiye mikrobiyotası için yeni kayıt olarak tespit edilmiştir. Türlerin kısa betimlemeleri, makro ve mikromorfolojilerine ilişkin fotoğraflarıyla birlikte, verilmiş ve kısaca tartışılmıştır.

Anahtar kelimeler: Biyoçeşitlilik, *Mycenaceae*, yeni kayıt, Türkiye

Introduction

Mycena (Pers.) Roussel is a large genus of the family *Mycenaceae* Overeem. The members of the genus are generally characterized by small agarics with fragile and thin, conical to campanulate pileus, adnate or decurrent lamellae, white spore print, 1-4-spored basidia, intricate cystidia and hyaline and smooth basidiospores (Pegler, 1986; Singer, 1986; Uzun and Demirel, 2017). Almost all species of the *Mycena* are saprotrophic and play a vital role in decomposition of litter in forest. Generally, most of the species of the genus have cosmopolitan distribution, and Index Fungorum lists 2443 *Mycena* records, with more than 1600 confirmed species (URL1).

In spite of the cosmopolitan distributions of *Mycena* members, Keleş (2019) mentions about the existence of 65 species of *Mycena* in Türkiye while Sesli et al. (2020) lists 58 species. Investigation of the current checklist (Sesli et al., 2020) and latest contributions (Keleş and Kaya, 2023; Şahin et al., 2023; Dalkıran et al., 2024; Keleş et al., 2024; Uzun, 2024; Acar et al., 2025) to the macromycota of Türkiye revealed that *Mycena chlorantha* (Fr.) P. Kumm. and *M. pseudopicta* (J.E. Lange) Kühner have not been reported from Türkiye before. The study aims to make a contribution to the mycobiota of Türkiye.



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Atıflamada APA stili kullanılmıştır, iThenticate ile taranmıştır./ APA style was used in citation, plagiarism was checked with iThenticate.

Material and Method

Fruit bodies of *Mycena chlorantha* and *M. pseudopicta* were collected from Ayaş and Güdül (Ankara) districts during routine field researches carried out within the scope of a PhD thesis. They were photographed at their natural habitat and characteristics related to its ecology and morphology were noted. The samples were dried and prepared as fungarium material, according to the routine mycological methods, after the transportation of the sample to the laboratory. Microscopical investigations were conducted on dry materials under a Leica DM 2500 trinocular light microscope, mounted in water, Congo Red, KOH or Lacto Phenol Cutton Blue. Identification was performed with the help of Moreno et al. (1990), Hansen and Knudsen (1992), Moreno and Heykoop (2002), Melis et al. (2017), Læssøe and Petersen (2019), Villareal et al. (2023) and Aronsen (2025a,b). The specimens are kept at Biology Department, Science Faculty, Gazi University, Türkiye.

Results

Fungi R.T. Moore

Basidiomycota R.T. Moore

Agaricomycetes Doweld

Agaricales Underw.

Mycenaceae Roze

Mycena (Pers.) Roussel

Mycena chlorantha (Fr.) P. Kumm., Führ. Pilzk. (Zerbst): 110 (1871)

Synonymy: *Agaricus chloranthus* Fr., *Mycena chlorantha* f. *bispora* Malençon, *Mycena chlorantha* f. *caespitosa* Courtec. & Guinb.

Macroscopic and microscopic features: Cap 6-21 mm in diameter, obtusely conical or convex to campanulate, some with an obtuse umbo, smooth to shallowly grooved or translucent-striate, pale yellowish grey green to light brownish green or olivaceous yellowish green, some with slightly darker center. Flesh, thin, whitish. Taste indistinct, odor iodoform when dried. Lamellae adnate to emarginate, dingy whitish to pale yellowish grey-green, edges light yellowish to lemon yellow or greenish yellow. Stipe 20-50(60) x 1-2 mm, cylindrical, some slightly narrowed above, straight or somewhat curved, glabrous or somewhat pruinose towards the apex, covered with long, coarse, flexible, light greyish to whitish fibers at the base, slightly shiny, pale greyish brown to dingy yellowish grey or pale watery-grey. Basidia 22-40 x 8-11.5 µm, clavate, 4-sored. Cheilocystidia 15-45 x 9-23 µm, clavate to pyriform, with evenly spaced warts or apical cylindrical excrescences of different lengths, rarely smooth (Fig. 2b,c). Pleurocystidia are similar to cheilocystidia. Basidiospores 8.1-9.6 x 4-4.9 µm, ellipsoid, smooth, amyloid (Fig. 2d,e).

Ecology: *Mycena chlorantha* was reported to grow among sparse vegetation of grasses, on buried or decaying stems of *Poaceae* such as *Ammophila*, *Leymus*, *Carex* L. and *Celtica* F.M.Vázquez & Barkworth, on poor sandy soil in coastal dunes or sandy inland areas (Moreno et al., 1990; Hansen and Knudsen, 1992; Læssøe and Petersen, 2019; Villareal et al., 2023).

Specimen examined: Ankara, Ayaş, around Çanuh pond, at the base of *Poaceae* sp. on sandy soil, 40°10'N-32°26'E, 1017 m., 16.12.2023, İnci.713. Suggested Turkish name is "kumcul kukulcuk".



Figure 1. Basidiocarps of *Mycena chlorantha*

Comments: *Mycena chlorantha* has been presented as a new record for the mycobiota of Türkiye. General characteristics of the Turkish collection are in agreement with Moreno et al. (1990), Læssøe and Petersen (2019) and Villareal et al. (2023). Macroscopically *Mycena chlorantha* can be confused with *M. flavescens* Velen. Due to its yellow-greenish coloring, but the paler yellowish colouring and the raphanoid or raw potato smell, and the wider pileipellis hyphae (up to 27 μm), of *M. flavescens* differs it from *M. chlorantha*. The pileus of *M. arcangeliana* Bres. also posses yellow-

greenish colours in the pileus, but differs from *M. chlorantha* with its lignicolous habitat, pinkish tones in lamellae, and violet-greyish coloring of the stipe (Moreno et al., 1990; Villareal et al., 2023). Though some researchers have regarded *M. chlorantha* to exist only in coastal dunes, Villareal et al. (2023) claim that the species is not exclusive to coastal environments, based on the collection of their samples from sandy inland areas where *Celtica gigantea* (Link) F.M.Vázquez & Barkworth is present.

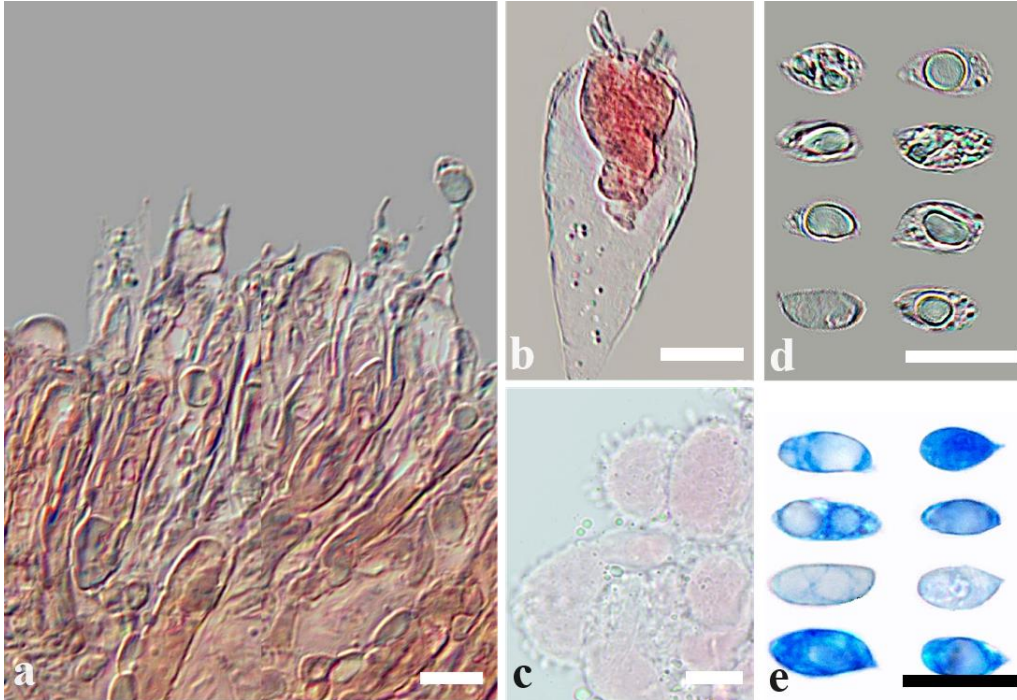


Figure 2. Basidia (a), cystidia (b,c), and basidiospores (d,e) of *Mycena chlorantha* (bars: 10 μm , a-c: in Congo Red, d: in % 5 KOH, e: in LPCB)

Mycena pseudopicta (J.E. Lange) Kühner, Encyclop. Mycol. 10: 363 (1938)

Synonyms: *Omphalia pseudopicta* J.E. Lange

Pileus 6-15 mm in diameter, hemispherical to plano-convex, somewhat broadly umbonate or very rarely depressed in age, not or little sulcate, glabrescent, dark brown to grey brown, the margin somewhat crenulate or whitish pruinulose. Lamellae distant, with lamellula, whitish to grey with a whitish edge, decurrent. Stipe 18-40 \times 0.8-1.5 mm, cylindrical, hollow, almost equal or slightly enlarged below, mainly glabrescent, pruinose towards the apex, covered with whitish fibrils towards the base, pale brown to greyish in some part (Fig. 3). Taste and odour not distinctive.

Basidia 24-32 \times 7-9 μm , clavate, 2-spored, sterigmata up to 7 μm (Fig. 4a,b). Cheilocystidia 21-30 \times 6-13 μm , clavate, subcylindrical to irregularly shaped, with few to fairly numerous, simple to branched, coarse,

curved, mostly apical outgrowths (Fig. 4c,d). Pleurocystidia not observed. Basidiospores 9.5-12.5 \times 5.5-6.7 μm , ellipsoid to subcylindrical, smooth (Fig. 4e)

Ecology: *Mycena pseudopicta* was reported to grow in dry, unfertilized grasslands (Læssøe and Petersen, 2019), among mosses, lichens or leaf litter (Melis et al., 2017; Aronsen, 2025a), on roots and basal leaves of *Dactylis glomerata* subsp. *hispanica* (Roth) Nyman (Moreno and Heykoop, 2002).

Specimen examined: Ankara, Güdül, Avşar neighbourhood, grassy-mossy area in the forest, 40°09'N-32°14'E, 17.12.2023, İnci.797. Suggested Turkish name is "kök kukulcuk".

Comments: *Mycena pseudopicta* is characterized by its white or grey strongly decurrent gills, bisporic basidia, coarsely diverticulate cheilocystidia, the absence of pleurocystidia and clamp connections, and its fructification on graminicolous debris. *Mycena cinerella* (P. Karst.) P. Karst., *M. concolor* (J.E. Lange) Kühner and

M. subconcolor A.H. Sm., all of which are also in the section Cinerellae together with *M. pseudopicta*, share some macroscopic similarities with *M. pseudopicta*. *Mycena cinerella* is also similar to *M. pseudopicta* in presence of diverticulate cheilocystidia, but the strong farinaceous odour, less decurrent lamellae, 4-spored basidia differs it from *M. pseudopicta*. *Mycena concolor*

can be differentiated from *M. pseudopicta* with its ascending or arcuate, subhorizontal lamellae, heterogeneous lamellar-edge and 4-spored basidia while *M. subconcolor* can be differentiated by its subhorizontal, subdecurrent lamellae, heterogeneous lamellar-edge and 4-spored basidia (Moreno et al., 1990; Moreno and Heykoop, 2002).



Figure 3. Basidiocarps of *Mycena pseudopicta*

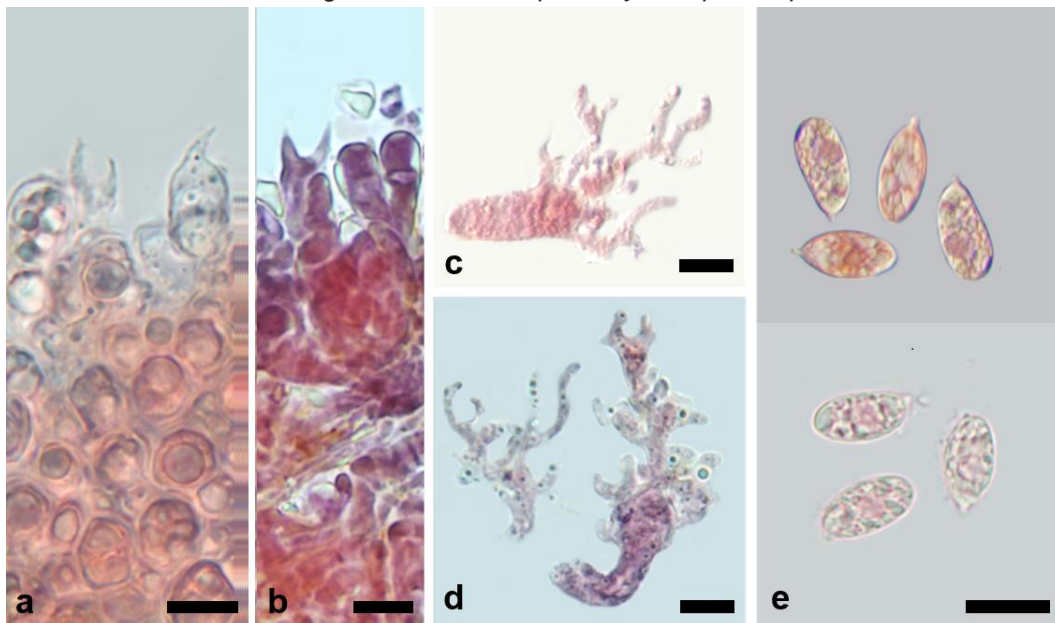


Figure 4. Basidia (a,b), cheilocystidia (c,d) and basidiopores (e) of *Mycena pseudopicta* (bars: 10 μ m, a-e: in Congo Red)

Author contributions

The authors have equal contribution.

Conflicts of interest

The authors declare no competing interests.

Ethical Statement

It is declared that scientific and ethical principles have been followed while carrying out and writing this study and that all the sources used have been properly cited (İnci YORULMAZLAR, Yasin UZUN, Abdullah KAYA).

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