

## New Ascomycete Record for Turkish Mycobiota

### Türk Mikobiyotası için Yeni Askomiset Kaydı

Research Article

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#### ABSTRACT

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In the current study, *Peziza succosella* (Le Gal & Romagn.) M.M. Moser ex Aviz.-Hersh. & Nemlich was reported for the first time from Turkey. Microscopic drawings and description of the taxon were given together with morphological photograph. In addition the current list of the genus *Peziza* in Turkey was presented.

#### Key Words

Biodiversity, *Peziza*, New record, Turkish mycobiota.

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#### ÖZ

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Bu çalışmada, *Peziza succosella* (Le Gal & Romagn.) M.M. Moser ex Aviz.-Hersh. & Nemlich Türkiye'den ilk kez rapor edildi. Taksonun tanımlanması ve mikroskopik çizimleri morfolojik fotoğrafı ile birlikte verildi. Buna ek olarak, Türkiye'deki *Peziza* cinsinin güncel listesi sunuldu.

#### Anahtar Kelimeler

Biyçeşitlilik, *Peziza*, Yeni kayıt, Türk mikobiyotası.

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## Introduction

Biological diversity or biodiversity, which as concept is product of the last 30 years, is "the variety of life", and refers collectively to variation at all levels of biological organization. Investigation of this topic is the most important task of taxonomists [1-3].

Many studies have been performed on macro-fungal biodiversity by Turkish mycologists, and approximately 2400 taxa have been reported. Among this number, the *Peziza* Dill. ex Fr., which is the largest genus of the family *Pezizaceae* Dumort with over 100 species in the world, is represented with 27 species in Turkey until now [4-6].

The purpose of this study was to contribute to the biodiversity of this country by reporting a new interesting record of the genus *Peziza*.

## MATERIALS and METHODS

The specimens were collected from Söke (Aydın) in 2014. Morphological and ecological characteristics of the samples were noted and photographed in their natural habitats. After field studies, specimens were taken to the laboratory. Microscopic characters were observed by light microscope using Melzer's reagent and distilled water. The identification of species was carried out using the literature [7-9]. The collections were deposited at the personal fungarium in Süleyman Demirel University.

## RESULTS

A short description of *Peziza succosella* was given below. The systematic of taxon is in accordance with Index Fungorum [10].

*Fungi* Bartling

*Ascomycota* Whittaker

*Pezizomycotina* O.E. Erikss. & Winka

*Pezizomycetes* O.E. Erikss. & Winka

*Pezizomycetidae* Locq.

*Pezizales* J. Schröt.

*Pezizaceae* Dumort.

*Peziza* Dill. ex Fr.

*Peziza succosella* (Le Gal & Romagn.) M.M. Moser

ex Aviz.-Hersh. & Nemlich (Figure 1)

*Syn: Galactinia succosella* Le Gal & Romagn.

Hymenium smooth, greyish brown; apothecia 10-20 mm broad, initially disc shaped, slightly irregular at older stage, fragile, sessile to sub-sessile; outer surface smooth-glabrous, pale grey. Asci 250-350 × 15-17 μm, cylindrical shaped, operculate, unitunicate, amyloid, 8-spored, uniseriate. Ascospores 15-19 × 8-11 μm, ellipsoid, usually uniguttulate, ornamented (when examined with in Melzer's reagent), irregular warts (approx. 1.5 μm) with partially reticulate surface. Paraphyses, the same length as asci and one third wide, with septa and extended apex. Habitat: in small groups, on the damp ground of the woods, in spring [7-9].

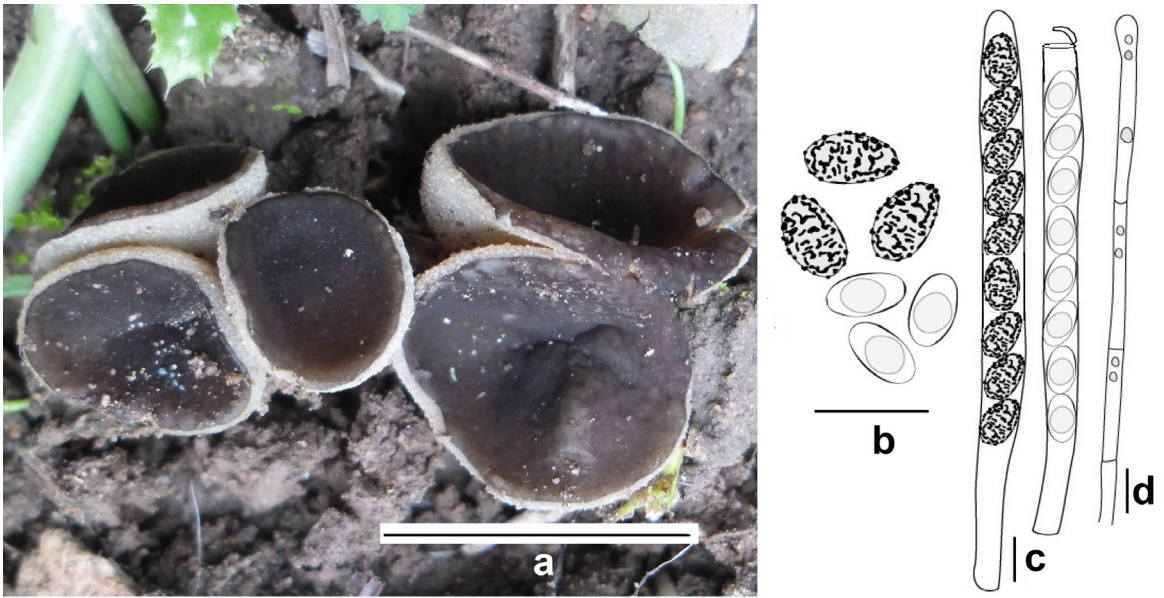
**Specimen Examined:** Turkey, Aydın province, Söke district, Doğanbey village around, altitude 5 meters, on soil, *Quercus* spp. and *Pinus* spp. mixed forest, 18.01.2014 (ÖFÇ 657).

## DISCUSSION

*Peziza succosella* is identified as a new record for Turkish mycobiota. According to recent studies, twenty seven *Peziza* species have been reported in Turkey to the present date [5,6,10-12]. In the present study, *Peziza succosella* is reported as 28th member of Turkish *Peziza* (Table 1).

Other species that have been reported as *Peziza* spp. but now synonyms; *P. ampelina* Pass. (= *Pyrenopeziza ampelina* (Pass.) Rehm) [56,57], *P. amphora* Quél. (= *Helvella solitaria* P. Karst.) [33], *P. celtica* (Boud.) M.M. Moser (= *Pachyella celtica* (Boud.) Häffner) [15], *P. coccinea* Jacq. (= *Sarcoscypha coccinea* (Gray) Boud.) [5,58], *P. erucaeformis* Batsch (incorrect) [5].

*Peziza succosa* differs from the *P. succosella* by its yellowish olivaceous-brown hymenium. Also *P. succosa* size of apothecia is bigger than *P. succosella*. In these two species, apothecia when injured immediately exuding a juice which quickly turns yellow. On the contrary, juice of *P. michelii* becomes yellowish after a while. Also its hymenium initially violet, then brownish [7,8,59,60].



**Figure 1.** *Peziza succosella*, a). ascocarp, b). ascospores, c). ascus and d). paraphyse, (scale bars: a= 20 mm; b, c and d= 20 µm) (photo by Ö.F. ÇOLAK, line drawings by O. KAYGUSUZ).

**Table 1.** List of the genus *Peziza* in Turkey.

| <i>Peziza</i> species   | Solak et al. 2007 [58] | Sesli and Denchev 2008 [5] | Solak et al. 2015 [6] | References    |
|---|------------------------|----------------------------|-----------------------|---------------|
| <i>P. ammophila</i> Durieu & Lév.   | (-)                    | (+)                        | (+)                   | [13]          |
| <i>P. arenaria</i> Osbeck   | (-)                    | (+)                        | (+)                   | [14]          |
| <i>P. arvernensis</i> Roze & Boud.  | (+)                    | (+)                        | (+)                   | [15-19]       |
| <i>P. badia</i> Pers.   | (+)                    | (+)                        | (+)                   | [20-22]       |
| <i>P. cerea</i> Sowerby   | (+)                    | (+)                        | (+)                   | [23]          |
| <i>P. depressa</i> Pers.<br>(Syn: <i>P. applanata</i> (Hedw.:Fr.) Alb. & Schwein) | (+)                    | (+)                        | (+)                   | [18,24-27]    |
| <i>P. domiciliana</i> Cooke   | (+)                    | (+)                        | (+)                   | [15,18,28,29] |
| <i>P. echinospora</i> P. Karst.   | (-)                    | (-)                        | (+)                   | [30]          |
| <i>P. fimeti</i> (Fuckel) E.C. Hansen   | (-)                    | (+)                        | (-)                   | [31]          |
| <i>P. granularis</i> Donadini   | (-)                    | (-)                        | (-)                   | [12]          |
| <i>P. granulosa</i> Schumach.   | (+)                    | (+)                        | (+)                   | [28,32,33]    |
| <i>P. lobulata</i> (Velen.) Svr ek  | (-)                    | (-)                        | (+)                   | [34]          |

|  |     |     |     |               |
|--|-----|-----|-----|---------------|
| <i>P. michelii</i> (Boud.)<br>Dennis                                       | (+) | (+) | (+) | [32]          |
| <i>P. micropus</i> Pers.   | (+) | (+) | (+) | [16-35]       |
| <i>P. moravecii</i> (Svr ek)<br>Donadini                                   | (-) | (+) | (+) | [36]          |
| <i>P. phyllogena</i><br>Cooke (Syn: <i>P.</i><br><i>badioconfusa</i> Korf) | (-) | (-) | (-) | [37-41]       |
| <i>P. praetervisa</i> Bres.  | (-) | (-) | (+) | [29]          |
| <i>P. pseudoviolaacea</i><br>Donadini                                      | (-) | (-) | (-) | [11]          |
| <i>P. punctispora</i><br>(Pfister) Donadini                                | (-) | (-) | (+) | [42]          |
| <i>P. repanda</i> Pers.  | (+) | (+) | (+) | [20,22,40,43] |
| <i>P. ripensis</i> E.C.<br>Hansen  | (-) | (-) | (-) | [11]          |
| <i>P. saniosa</i> Schrad.  | (-) | (+) | (+) | [44]          |
| <i>P. sepiatra</i> Cooke   | (-) | (-) | (+) | [45]          |
| <i>P. succosa</i> Berk.  | (+) | (+) | (+) | [18,19,29,46] |
| <i>P. succosella</i>   | (-) | (-) | (-) | This study    |
| <i>P. varia</i> (Hedw.) Alb.<br>& Schwein.                                 | (+) | (+) | (+) | [29,41,47]    |
| <i>P. vesiculosa</i> Bull.   | (+) | (+) | (+) | [28,48-52]    |
| <i>P. violacea</i> Pers.   | (+) | (+) | (+) | [53-55]       |

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