



A New and Interesting *Peziza* Record from Sweet Gum Forest in TURKEY

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Abstract: In this study, *Peziza punctispora* (Pfister) Donadini, collected from sweet gum forest is reported for the first time from Turkey. A short description of taxon and macro and microphotographs are presented.

Key Words: *Peziza punctispora*, *Liquidambar orientalis*, new record, mycota, Muğla, Turkey

Türkiye'deki Günlük Ormanlarından Yeni ve İlginç Bir *Peziza* Kaydı

Öz: Bu çalışmada, günlük ormanından toplanan *Peziza punctispora* (Pfister) Donadini Türkiye'den ilk defa rapor edilmektedir. Türün kısa deskripsiyonu, makro ve mikro fotoğrafları verilmiştir.

Anahtar Kelimeler: *Peziza punctispora*, *Liquidambar orientalis*, yeni kayıt, mantarlar, Muğla, Türkiye

Introduction

Turkey has unique plant biodiversity and most of them are endemic species. Among these endemic species, *Liquidambar orientalis* Mill. is very important by using economically for local people. Besides of its economic importance, *L. orientalis* forests act a role as host for other plant and mushrooms. Especially, it encourages the mushroom species by moisture structures of its forests (İşiloğlu et al., 2011).

The members of *Peziza* Dill ex. Fr. produce sessile or stipate, cupulate, turbinate, pulvinate, cup shaped, apothecia, a range of a few millimeters to more than ten centimeters in diameters. Ascospores of them are smooth or ornamented, elliptical or rounded, and eight spored in an ascus (Dennis, 1981; Hansen and Knudsen, 2000; Akata and Kaya, 2012).

In recent years, some studies have been concluded about the genus *Peziza* in Turkey.

According to these studies, *Peziza sepiatra* Cooke, *Peziza pseudoviolacea* Donadini, *Peziza ripensis* E.C. Hansen, *Peziza fimeti* (Fuckel) E.C.Hansen, *Peziza saniosa* Schrad. and *Peziza ammophila* Durieu & Lév are recorded as new records for Turkish mycota (Akata and Kaya, 2012; Akata and Yaprak, 2013; Uzun et. al., 2014a; Uzun et. al., 2014b; Kaya, 2015). Similarly, the aim of the present study is to make contribution to the macrofungi of Turkey.

During to routine field trips, a *Peziza* sp. was collected on *L. orientalis* stump and identified as *Peziza punctispora* (Pfister) Donadini. According to the current literature, *Peziza punctispora* has been observed as new record for Turkey (Sesli and Denchev, 2008; Solak et. al., 2015).



Material and Method

The specimens were collected from sweet gum forest, Köyceğiz, Muğla. 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. The specimen was identified by using microscopic, macroscopic and ecological characters (Pfister, 1973; Dennis, 1981; Hansen and Knudsen, 2000; Hansen et al., 2001). The identified fungus specimen was deposit at Fungarium of Muğla Sıtkı Koçman University.

Result

A short description of *Peziza punctispora* was given below. The systematic of taxon is in accordance with Index Fungorum (URL 1).

Ascomycota R.H. Whittaker
 Pezizomycetes O.E. Erikss. & Winka
 Pezizomycetidae Locq
 Pezizales J. Schröt.
 Pezizaceae Dumort.
Peziza punctispora (Pfister) Donadini
Syn. *Pachyella punctispora* Pfister

Apothecia approximately 2.5-3 cm across, flat to concave, attached broadly but margins free, upper surface sticky when fresh, medium to dark brown, often with hints of purple,

References

- Akata I., Kaya A., *Two New Additions to Turkish Ascomycota*, International Journal of Botany, 8 (2):79-81(2012).
 Akata I., Yaprak A.E., *A new Peziza record for Turkish mycota*, Biodicon, 6/1: 32-34(2013).
 Dennis R.W.G., *British Ascomycetes*, Verlag, Germany(1981).
 Hansen L., Knudsen H., *Nordic Macromycetes Vol. 1, Ascomycetes*, Nordsvamp, Copenhagen(2000).
 Hansen K., Læssøe T., Pfister DH., *Phylogenetics of the Pezizaceae, With an Emphasis on Peziza*, Mycologia, 93 (5): 958-990(2001).
 Işıloğlu M., Allı H., Güngör H., Candar S., *Macrofungi of Liquidambar orientalis Mill. Forests in Muğla (Turkey)*, XVI. Congress of European Mycologists, 19-23 September 2011, p. 160, Halkidiki, Greece(2011).
 Kaya A., *Contributions to the Macrofungal Diversity of Atatürk Dam Lake Basin*, Turk J Bot, 39: 162-172(2015).
 Pfister D.H., *The piselepezioid fungi, IV. The Genus Pachyella (Pezizales)*, Can. J. Bot., 51 (11): 2009-2023(1973).
 Sesli E., Denchev C.M., *Checklists of the Myxomycetes, Larger Ascomycetes, and Larger Basidiomycetes in Turkey*, Mycotaxon 106: 65–67(2008). + [complete version, 1–145, new version uploaded in January 2014].

smooth or wrinkled, fading with age, hymenium bay to umber sometimes with vinaceous tints (Figure 1: a-b). Flesh, somewhat rubbery or gelatinous when fresh. Stemless. Asci with bluish tips in Melzer's reagent, 375-450 x 19-25 µm (Figure 1: c). Ascospores, ellipsoid, one or commonly two guttulate, marked with minute warts, 20-25 x 12-15 µm (Figure 1: d-f). Paraphyses expanded at the tip to 8 µm (Figure 1: e).

Ecology, saprobic, in small groups, on grows water-soaked rotten wood, spring but, according to the literature grows in the summer and fall months (Pfister, 1973; URL 2).

Material examined: Turkey, Muğla, Köyceğiz, Kazancı area, on rotten stump of *Liquidambar orientalis*, 25.04.2014, ÖFÇ 726 and 23.03.2015, ÖFÇ 1245.

Discussion

Peziza punctispora is identified as a new record for Turkish mycota. The epitet of this species is "punctispora" due to its punctuate spores. *Pachyella babingtonii* (Sacc.) Boud. differs from the *P. punctispora* by its smooth spores (Pfister, 1973; Dennis, 1981).

According to recent studies, twenty four *Peziza* species have been reported in Turkey to the date (Sesli and Denchev, 2008; Solak et al. 2015). In the present study, *Peziza punctispora* is reported as twenty fifth member of Turkish *Peziza*.

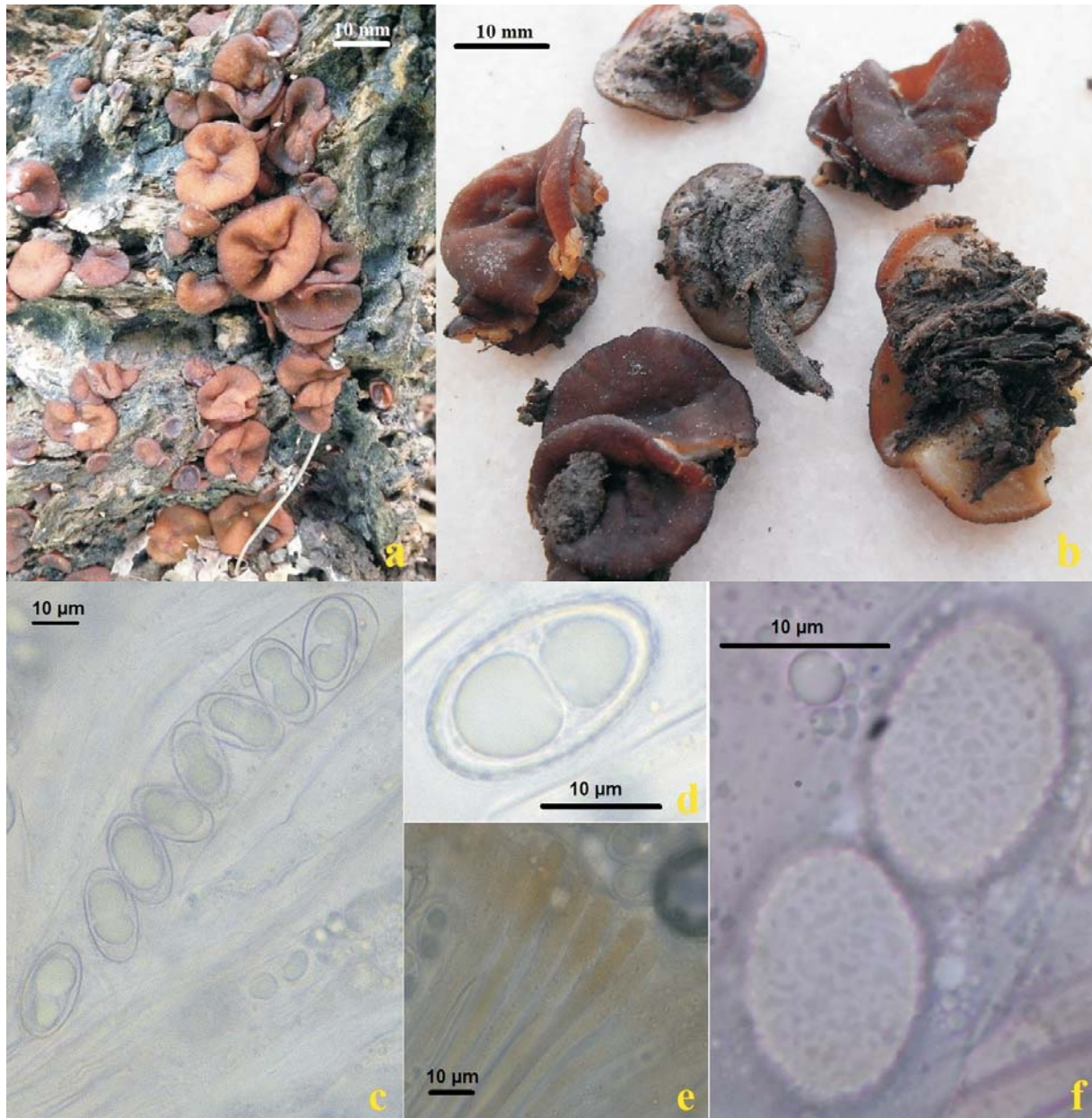


Figure 1. *Peziza punctispora*, a-b. ascocarp, c.ascus, d-f. ascospores in optical section and surface view (in Melzer's reagent), e. paraphyse.

Solak M.H., Işıloğlu M., Kalmış E., Allı H., *Macrofungi of Turkey Checklist Vol. II.*, Üniversiteler Ofset, İzmir(2015).
 Uzun Y., Acar İ., Akçay M.E., Akata I., *Additions to the Turkish Discomycetes*, Turk J Bot, 38:617-622(2014a).
 Uzun Y., Kesici S., Acar İ., *Türkiye Pezizales'leri için Yüksekova (Hakkari) Yöresinden İki Yeni Kayıt*, I. Ulusal Mikoloji Günleri, 01-04 Eylül 2014, Özet Kitabı, s. 35, Erzurum(2014b).

URL 1. <http://www.indexfungorum.org>: access date:15.01.2015

URL 2. http://www.mushroomexpert.com/pachyella_punctispora.html: access date:15.01.2015