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Research Article
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A New Species Record For Turkey Mycobiota: *Macrophoma strobi*

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Abstract: *Macrophoma strobi* (Berk. & Broome) Berl. & Voglino has been identified on fallen cones of *Pinus sylvestris* L. and it has been recorded first time for Turkey mycobiota. The samples are deposited at the Ahi Evran University, Arts and Sciences Faculty, Mycology Laboratory.

Key words: Biodiversity, *Macrophoma*, Microfungi, New record, *Pinus sylvestris*.

Türkiye Mikobiyotası İçin Yeni Bir Tür Kaydı: *Macrophoma strobi*

Öz: *Macrophoma strobi* (Berk. & Broome) Berl. & Voglino, *Pinus sylvestris* L.'in düşen kozalak pulları üzerinde teşhis edilmiştir ve Türkiye mikobiyotası için yeni kayıttır. Örnekler Ahi Evran Üniversitesi, Fen-Edebiyat Fakültesi, Mikoloji Laboratuvarında muhafaza edilmektedir.

Anahtar kelimeler: Biyoçeşitlilik, *Macrophoma*, Mikromantar, Yeni kayıt, *Pinus sylvestris*.

Introduction

The micromycobiota of Turkey has not been extensively investigated and most of the studies deal with powdery mildews and rust fungi (Erysiphales and Pucciniales). A limited number of studies on microfungi are mostly related to agricultural and partly wild herbaceous plants (Bremer et al., 1952; Petrak, 1953; Karel, 1958; Karaca, 1960; Göbelez, 1963; Öner et al., 1974; Tamer et al., 1987; 1989; 1990; 1998; Kabaktepe and Bahçecioğlu, 2005). In the last nineteen years research on these fungi have greatly increased in the country (Hüseyinov and Selçuk, 1999; Hüseyin and Selçuk, 2001; Hüseyinov and Selçuk, 2001; Hüseyin and Selçuk, 2002a; 2002b; Selçuk et al., 2003; Mel'nik et al., 2004; Hüseyin et al., 2005; Selçuk et al., 2009; Selçuk et al., 2012a; 2012b; Hüseyin and Selçuk, 2014; Selçuk and Ekici, 2014; Selçuk and Hüseyin, 2014; Selçuk et al., 2014; Vasighzadeh et al., 2014; Akgul et al., 2011; 2015; Hüseyin et al., 2016; Hüseyin and Selçuk, 2016; Selçuk et al., 2016).

Material and Method

The microfungus sample was collected during periodic mycological excursions from the Kaman district, Kırşehir Province in May 2013. It was transferred to the laboratory and microscopic investigations were carried out. The collections were examined in distilled water and for photomicrographs Olympus BX 53 with Olympus DP 22 digi-CAM (Japan) research microscope (Axio imager 2 equipped with Nomarski differential interference contrast optics) was used. The specimens were identified with the help of Grove (1935), Streets (1984), and Barnett and Hunter (1998). The host plant was identified using the "Flora of Turkey and East Aegean Islands" (Davis, 1965–85). The current names of taxa are given according to Index Fungorum (Url 1). The author names follow Kirk et al. (2008). The sample is deposited at the Ahi Evran University, Arts and Sciences Faculty, Mycology laboratory, in Kırşehir province.



Results

Identified species is given below with its systematic, current name, identified source, description, parts of plant that it's growth on, collected locality, coordinate, altitude, date, collector & deposited number, and synonyms.

Ascomycota

Pezizomycotina

Dothideomycetes

Botryosphaeriales

Botryosphaeriaceae

***Macrophoma* (Sacc.) Berl. & Voglino**

***Macrophoma strobi* (Berk. & Broome) Berl. & Voglino ,Figs 1.**

[Grove, 1935: 128; Streets, 1984: 7.11; Barnett and Hunter, 1998: 164]

Conidiomata pycnidial, scattered or subgregarious, immersed, globose, black, about 140-245 µm diam. Ostiole length and shining papilla. Conidia cylindrical, straight, rounded at the apex, and sometimes biguttulate at the apex, 11.3-13.5 x 2.2-3.25 µm.

On fallen cones of *Pinus sylvestris* L., Kırşehir province, Kaman district, around the Japan garden, 1077 m a.s.l., 39° 20' 702"N, 33° 47' 381"E, 07.5.2013. TG. 0116.

Discussion

M.strobi and its synonyms were identified on needles of some coniferous trees, but it shouldn't be forgotten that "*strobi*" as epithet refers to cone. To put it simply, the fungus generally caulicolous, foliicolous, or conecolous, but we found it as conecolous.

There is every reason to believe that this is merely an early state of *Diplodina strobi* Grove, before the septum is developed (Grove, 1935).

M. strobi has been recorded first time for Turkey mycobiota.

Synonyms of *M. strobi* that are:

Sphaeropsis strobi Berk. & Broome, Ann. Mag. Nat. Hist., Ser. 2(5): 375 (1850).

Phoma strobi (Berk. & Broome) Sacc., Syll. Fung. (Abellini) 3: 101 (1884).

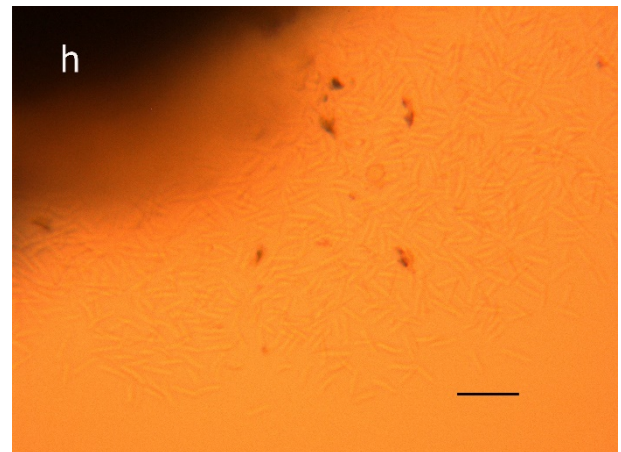
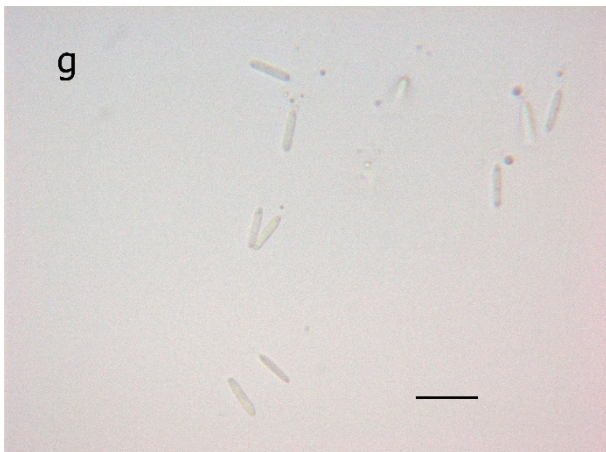
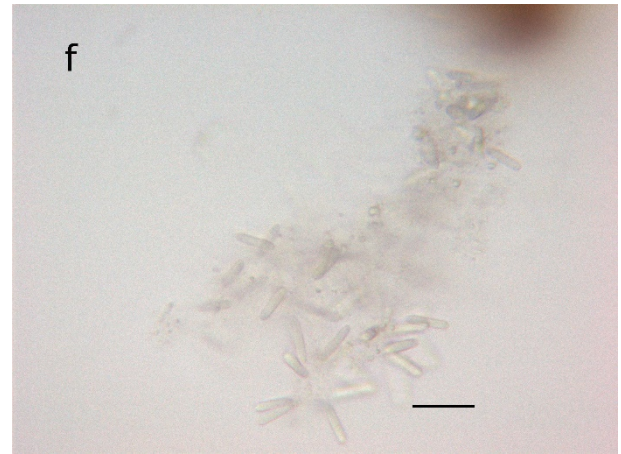
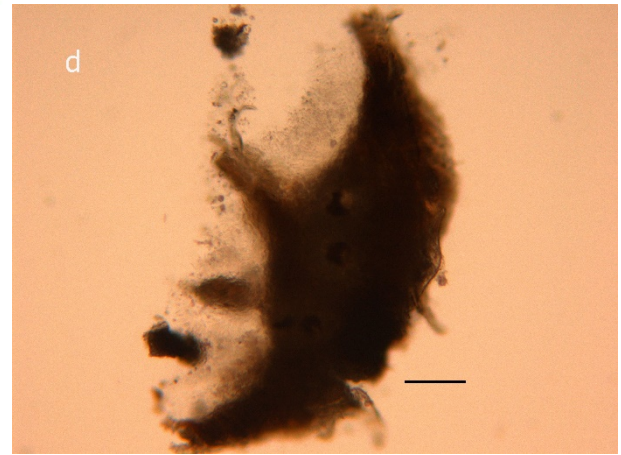
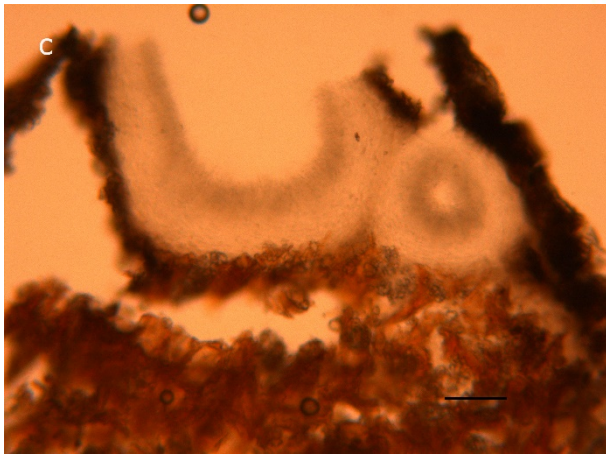
Diplodina strobi (Berk. & Broome) Grove, British Stem- and Leaf-Fungi (Coelomycetes) (Cambridge) 1: 336 (1935).

Discella strobi (Berk. & Broome) M. Morelet, Ann. Soc. Sci. Nat. Arch. Toulon et du Var 204: 8 (1973).

Sirococcus strobi (Berk. & Broome) M. Morelet, Ann. Soc. Sci. Nat. Arch. Toulon et du Var 205: 9 (1973).



Figs 1. *M. strobi*: **a** Infected pine cone; **b** Pycnidia on scale of a cone; **c** Vertical section of a conidioma; **d** A part of pycnidial generative wall; **e-h** Conidia. (Scale bar: c: 45 µm, d: 50 µm, e-g:16 µm, h: 27 µm.



Figs 1: (Continued)

M. strobi: **a** Infected pine cone; **b** Pycnidia on scale of a cone; **c** Vertical section of a conidioma; **d** A part of pycnidial generative wall; **e-h** Conidia. (Scale bar: c: 45 μ m, d: 50 μ m, e-g: 16 μ m, h: 27 μ m).



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