

New Ascomycete records for Turkish macromycota

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Abstract: *Ascobolus stercorarius* (Bull.) J.Schröt. (*Ascobolaceae*), *Cheilymenia fimicola* (De Not. & Bagl.) Dennis (*Pyronemataceae*), *Plectania melastoma* (Sowerby) Fuckel, and *P. rhytidia* (Berk.) Nannf. & Korf (*Sarcosomataceae*) are given as new records at the genus level for the macromycota of Turkey.

Key words: Macrofungi, Ascomycete, new record, Turkey

Türkiye makromikotası için yeni Askomiset kayıtları

Özet: *Ascobolus stercorarius* (Bull.) J.Schröt. (*Ascobolaceae*), *Cheilymenia fimicola* (De Not. & Bagl.) Dennis (*Pyronemataceae*), *Plectania melastoma* (Sowerby) Fuckel ve *P. rhytidia* (Berk.) Nannf. & Korf (*Sarcosomataceae*) cins düzeyinde Türkiye makromikotası için yeni kayıt olarak verilmiştir.

Anahtar sözcükler: Makrofungus, Askomiset, yeni kayıt, Türkiye

Introduction

During routine field studies in the Arsin and Yomra districts of Trabzon Province, some ascomycetous macrofungi samples were collected and identified. According to the literature on Turkish macrofungi (Solak et al., 2007; Sesli & Denchev, 2008; Kaya et al., 2009; Aktaş et al., 2009; Kaya et al., 2010; Uzun et al., 2010; Akata et al., 2011a; Akata et al., 2011b; Allı et al., 2011), *Ascobolus stercorarius* (Bull.) J.Schröt. (*Ascobolaceae*), *Cheilymenia fimicola* (De Not. & Bagl.) Dennis (*Pyronemataceae*), *Plectania melastoma* (Sowerby) Fuckel, and *P. rhytidia*

(*Sarcosomataceae*) are new records for the macromycota of Turkey.

The present study aims to make a contribution to the knowledge of macromycota of Turkey by adding new taxa.

Materials and methods

Macrofungi samples were collected in Trabzon Province in 2009 and 2010. Colour photographs were taken and ecological properties were noted. After the necessary macroscopic and microscopic

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investigations were carried out in the fungarium, they were identified with the help of Breitenbach and Kränzlin (1984), Palacios et al. (1991), Zhishu et al. (1993), Jordan (1995), Hansen and Knudsen (2000), Medel et al. (2000), and Spooner (2002).

The samples are kept in the herbarium of Ankara University (ANK).

Results

Ascomycota Whittaker

Pezizomycetes O.E.Erikss. & Winka

Pezizomycetidae Locq.

Pezizales J.Schröt.

Ascobolaceae Boud. ex Sacc.

Ascobolus stercorarius (Bull.) J.Schröt. (1893) (Figure 1).

Syn: *Ascobolus aerugineus* Fr. (1818), *A. furfuraceus* Pers. (1794), *Peziza fusca* Bolton (1790), *P. stercoraria* Bull. (1788), *P. stercoraria* Sowerby (1803).

Macroscopic and microscopic features:

Apothecia 2-4 mm broad, subglobose or cup-shaped at first, shallowly saucer-shaped, and stalkless on the substrate when mature, hymenium smooth, greenish to sulphur yellow when young, violet to olive brown and roughened when mature, outer surface concolourous, lighter, and minutely scurfy, flesh pallid, yellowish brown, and thin. Spores 23-25 × 10-13 µm, ellipsoid, hyaline when young, violet brown

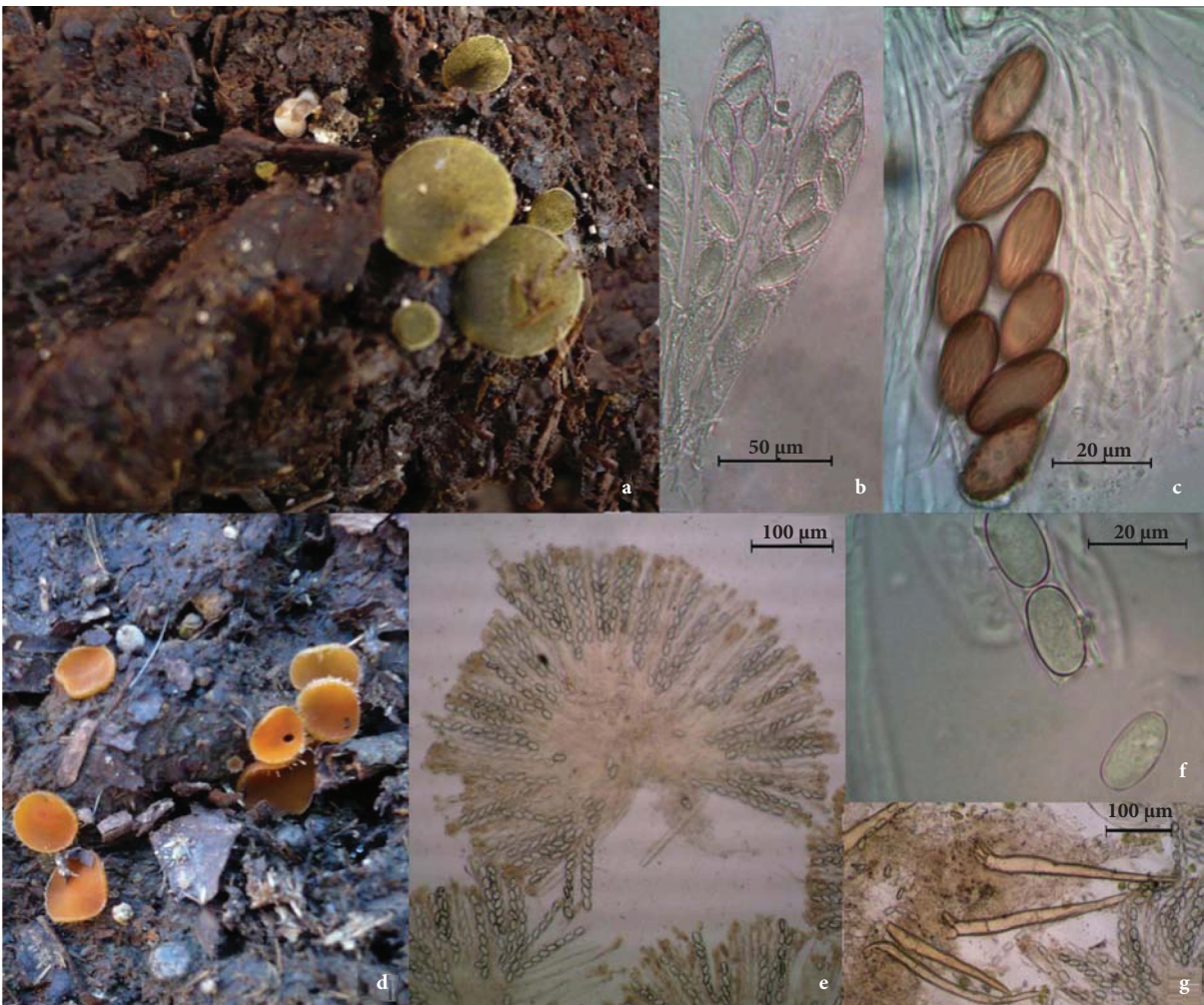


Figure 1. *Ascobolus stercorarius*: a - ascocarps, b - asci, and c - ascospores; *Cheilymenia fimicola*: d - ascocarps, e - asci, f - ascospores, and g - hairs.

to brownish with ornamented 7-9 anastomosing, light coloured, longitudinal subparallel ridges when mature. Asci 200-210 × 20-21 µm, 8 spored, paraphyses filiform, septate, non-forked, somewhat thickening at the tips.

Trabzon: Arsin, Güneyce village, path side, on cow dung, 40°51'N, 38°47'E, 190 m, 15.05.2010, *Akata & Uzun* 546.

Pyronemataceae Corda

Cheilymenia fimicola (De Not. & Bagl.) Dennis (1978) (Figure 1).

Syn: *Arrhenia fimicola* Bagl. (1866), *Auriscalpium fimicola* (Bagl.) Kuntze (1898), *Cheilymenia coprinaria* (Cooke) Boud. (1907), *C. coprinaria* var. *minima* (Grove) Ramsb. (1913), *Humaria coprinaria* (Cooke) Kanouse (1948), *Lachnea coprinaria* (Cooke) Sacc. (1889), *Patella coprinaria* (Cooke) Seaver (1928), *Peziza coprinaria* Cooke (1875).

Macroscopic and microscopic features:

Apothecia 3-5 mm broad, conical when young, saucer- to plate-shaped when mature, hymenium smooth, orange, outer surface paler with scattered stiff, brownish hairs, margin ciliated with light brown hairs. Spores 18-19 × 8-9 µm, ellipsoid, hyaline, and smooth without droplets. Asci 225-230 × 12-13 µm, eight spored, paraphyses slender, septate, tips slightly thickened, hairs to 450-470 × 25-30 µm, septate, base rooting, brownish, lighter toward the tips.

Trabzon, Arsin, Güneyce village, path side, on cow dung, 40°51'N, 39°57'E, 200 m, 15.05.2010, *Akata & Uzun* 562.

Sarcosomataceae Kobayasi

Plectania melastoma (Sowerby) Fuckel (1870) (Figure 2).

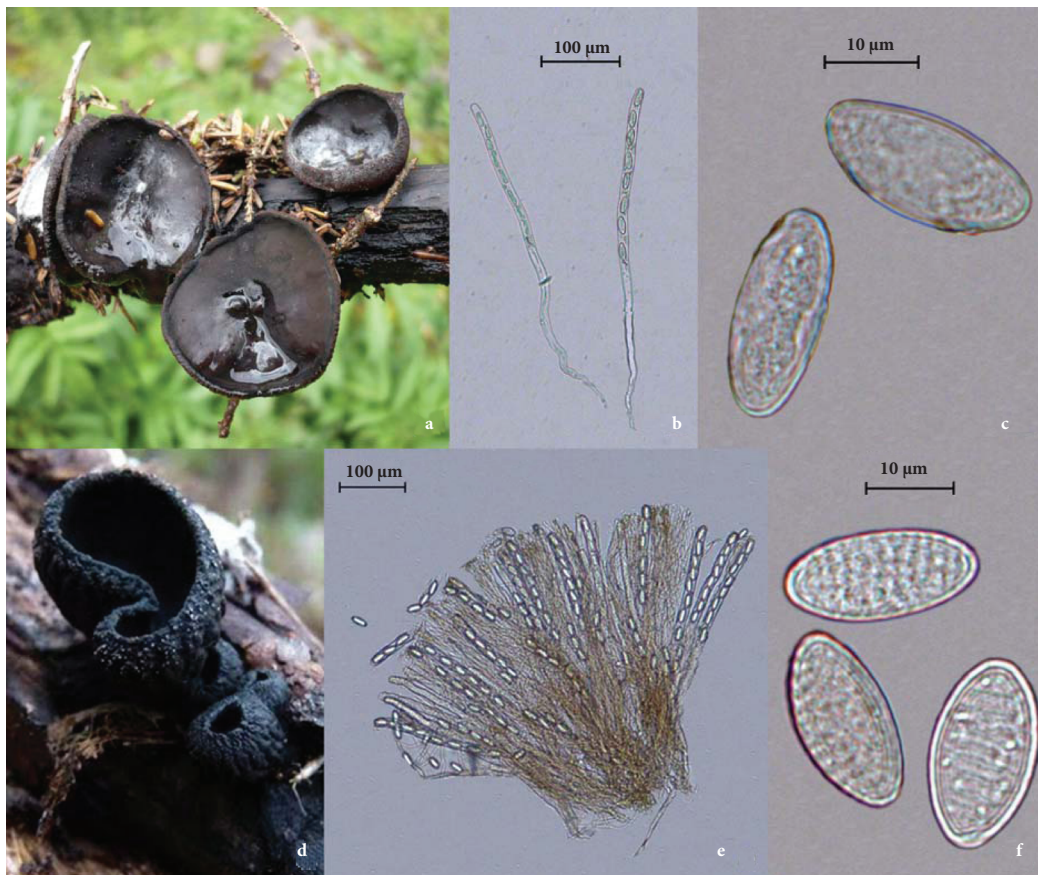


Figure 2. *Plectania melastoma*: a - ascocarps, b - asci, and c - ascospores; *Plectania rhytidia*: d - ascocarps, e - asci and paraphyses, and f - ascospores.

Syn: *Bulgaria melastoma* (Sowerby) Seaver (1928), *Calycina melastoma* (Sowerby) Gray (1821), *Mollisia atrorufa* Sacc. (1885), *Peziza atrorufa* Grev. (1825), *P. melastoma* Sowerby (1798), *Peziza rhizopus* Alb. & Schwein. (1805), *Sarcoscypha melastoma* (Sowerby) Rehm (1895), *Urnula melastoma* (Sowerby) Boud. (1907).

Macroscopic and microscopic features:

Apothecia 15-20 mm wide, cup-shaped, usually with very short foot when young, almost sessile when open, and flattened at maturity, margin incurved when young. Hymenium smooth, black, or very dark brown. Outer surface concolourous, but covered with small red or orange granules, especially along the margin. Spores 19-23 × 9.5-12 µm, ellipsoidal to slightly fusiform, hyaline, with numerous oil drops when young while none at maturity. Asci 350-500 × 13-16 µm, cylindrical, 8 spored, sometimes slightly twisted at the apex when mature. Paraphyses branched, septate, slightly enlarged at apex.

Trabzon: Yomra, Çamlıyurt village, on dead twigs of *Picea orientalis* (L.) Link., 40°47'N, 39°47'E, 1420 m, 12.10.2009, Akata & Uzun 522.

Plectania rhytidia (Berk.) Nannf. & Korf (1957) (Figure 2).

Syn: *Peziza rhytidia* Berk. (1855), *Sarcosoma rhytidium* (Berk.) Le Gal (1953), *Urnula rhytidia* (Berk.) Cooke (1889).

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Macroscopic and microscopic features:

Apothecia 5-15 mm in diameter, cup-shaped, sessile, or slightly stipitate, completely black. Hymenium smooth. Outer surface hairy-tomentose with large longitudinal and sometimes forked ribs. Margin involute due to wavy ribs. Spores 21-24 × 10-12.5 µm, ellipsoid to subfusiform, hyaline, with transverse grooves on the convex part. Asci 300-450 × 12-18 µm, 8 spored, paraphyses cylindrical, branched basally, apex simple or rarely branched.

Trabzon: Yomra, İkisü village, on *Corylus* sp. wood, 40°56'N, 39°48'E, 200 m, 09.09.2009, Akata & Uzun 401.

Discussion

According to current checklists (Solak et al., 2007; Sesli & Denchev, 2008), 152 ascomycetous macrofungi taxa had been recorded from Turkey by the end of 2010. During the year 2011, Allı et al. (2011) and Akata et al. (2011b) added 3 and 2 taxa respectively, increasing the number to 157.

With this study, 4 new taxa (*Ascobolus stercorarius*, *Cheilymenia fimicola*, *Plectania melastoma*, and *P. rhytidia*) and 3 new genera (*Ascobolus* Pers., *Cheilymenia* Boud., and *Plectania* Fuckel) are added to the list of Turkish macromycota and the standing count of ascomycetous macrofungi taxa of Turkey is increased to 161.

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