

New additions to the Turkish Macromycota from Bingöl province (Turkey)

Yusuf UZUN¹, Abdullah KAYA^{2,*}, M. Emre AKÇAY¹, Kenan DEMİREL¹

¹Yüzüncü Yıl University, Arts & Science Faculty, Department of Biology, 65080, Van - TURKEY

²Adıyaman University, Education Faculty, 02040 Adıyaman - TURKEY

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Abstract: *Hymenoscyphus scutula* (Pers.) W. Phillips, *Crepidotus vulgaris* Hesler & A.H. Sm., *Psilocybe merdicola* Huijsman, and *Tricholoma inamoenum* (Fr.) Gillet are recorded for the first time from Turkey. Short descriptions and photographs of the taxa are given.

Key words: Biodiversity, macrofungi, new record, Bingöl, Turkey

Türkiye Makromikotasına Bingöl ilinden yeni ilaveler

Özet: *Hymenoscyphus scutula* (Pers.) W. Phillips, *Crepidotus vulgaris* Hesler & A.H. Sm., *Psilocybe merdicola* Huijsman ve *Tricholoma inamoenum* (Fr.) Gillet Türkiye'den ilk kez kaydedildi. Türlerin kısa özellikleri ve fotoğrafları verildi.

Anahtar sözcükler: Biyoçeşitlilik, makromantarlar, yeni kayıt, Bingöl, Türkiye

Introduction

Bingöl is situated in the East Anatolian region of Turkey and has a surface area of 8253 km². The climate of the area is Mediterranean according to Emberger's formula (Akman, 1999) with a rainfall of about 939.3 mm and an annual average temperature of 12.04 °C. The area falls in the Irano-Turanian flora sector. Forest areas are mainly characterised by *Quercus* sp. Planted cedar and pine populations also have considerable contributions, especially around Genç district. *Populus* sp. and *Salix* sp. populations are

abundant along the river or stream sides (Alay, 1996; Soylu, 2003).

The checklists presented by Solak et al. (2007) and Sesli and Denchev (2008) included 1814 macromycete taxa recorded in 416 published studies from Turkey until the end of 2008. During the following 1-year period, some new records have been given by Solak et al. (2009), Kaya (2009a, 2009b) and Aktaş et al. (2009), and almost 44 taxa were added to this list. At present the total number of Turkish Macromycetes stands at 1858.

* E-mail: akaya@adiyaman.edu.tr

The current study aims to contribute to the knowledge of Turkish macromycota by adding new records.

Materials and methods

Macrofungi samples were collected during routine field trips within the boundaries of Bingöl province between 2006 and 2008. Morphological and ecological properties of the samples were recorded and they were photographed in the field. Taking the samples to the laboratory, spore prints were obtained and macroscopic and microscopic measurements were carried out. Then they were identified with the help of Hesler and Smith (1965), Breitenbach and Kränzlin (1984), Ammirati et al. (1985), and Noordeloos et al. (1999).

The samples are kept in the Fungarium of Yüzüncü Yıl University, Department of Biology.

Results

Short descriptions, localities, collection dates, fungarium registration numbers (UB: Uzun Bingöl), and illustrations of the identified taxa are given.

Fungi

Ascomycota

Leotiomycetes

Helotiales

Helotiaceae

Hymenoscyphus scutula (Pers.) W. Phillips

Syn: *Belonioscypha ciliatospora* (Fuckel) Rehm, Rabenh., *Belospora ciliatospora* (Fuckel) Clem., *Ciboria ciliatospora* Fuckel., *Helotium ciliatosporum* (Fuckel) Boud., *Helotium ciliatosporum* f. album Le Gal, *Helotium scutula* (Pers.) P. Karst., *Helotium scutula* f. album (Le Gal) Dennis, *Helotium scutula* var. *fucatum* (W. Phillips) Rehm, *Helotium scutula* var. *lysimachiae* W. Phillips, *Helotium scutula* var. *rubi* Rehm, *Helotium scutula* var. *rudbeckiae* W. Phillips, *Helotium scutula* var. *solani* P. Karst., *Hymenoscyphus fucatus* (W. Phillips) Baral, *Hymenoscyphus fucatus* (W. Phillips) Baral & Hengstm., *Hymenoscyphus scutula* var. *fucatus* (W. Phillips) W. Phillips, *Hymenoscyphus scutula* var. *lysimachiae* (W. Phillips)

W. Phillips, *Hymenoscyphus scutula* var. *solani* (P. Karst.) Korf & W.Y. Zhuang, *Hymenoscyphus scutula* var. *solani* (P. Karst.) S. Ahmad, *Hymenoscyphus scutula* var. *suspecta* (Nyl.) P. Karst., *Hymenoscyphus suspectus* (Nyl.) Hengstm., *Peziza scutula* Pers., *Peziza suspecta* Nyl., *Phialea scutula* (Pers.) Gillet, *Phialea scutula* var. *fucata* W. Phillips.

Ascomarp 1-4 mm across, cup, saucer, or disc shaped, cream-yellow coloured, becomes darker when dry, hymenium smooth, margin sharp and paler, outer surface whitish and fibrous. Stem 1-6 mm, cylindrical, whitish-cream, cylindrical to tapering below (Figure 1a).

Spores 19-25 × 3.5-4.5 µm, hyaline, smooth, cylindrical, with 2 or several drops, usually septate and with colourless bristle at one or both ends (Figure 1b). Asci 100-110 × 8-10 µm, 8 spored, cylindrical and biseriolate.

Bingöl, Güveçli village, streamside, on wood remains, 38°50'872"N, 40°31'654"E, 1047 m, 18.10.2008, UB. 933.

Basidiomycota

Agaricomycetes

Agaricales

Inocybaceae

Crepidotus vulgaris Hesler & A.H. Sm.

Cap 6-20 mm across, shell to fan shaped, white to whitish, sometimes becoming brownish when dried, densely but finely hairy or pubescent. Flesh whitish, thin, soft. Lamellae radiating, from a lateral point, usually from the point of attachment, whitish, becomes brownish with age (Figure 2a). Stipe absent or like a tiny pseudo-stem.

Spores 5.5 × 4-4.5 µm, elliptical, sometimes finely punctuate (Figure 2b). Basidia 22-32 × 6-7 µm, 2-4 spored.

Bingöl, Ekinyolu village, pathside, on wood remains, 38°53'050"N, 40°33'863"E, 1014 m, 20.05.2008, UB. 743.

Strophariaceae

Psilocybe merdicola Huijsman

Cap 8-40 mm, conical to convex when young, expanding to plano-convex when mature, sometimes with a low umbo, hygrophanous when moist, shiny



Figure 1. *Hymenoscyphus scutula*. a) Ascocarps, b) Ascospores.



Figure 2. *Crepidotus vulgaris*. a) Basidiocarps, b) Basidiospores.

when dry, yellow to yellow-brown at centre, paler toward to margin, marginal zone usually covered with whitish velar remnants. Lamellae grey when young, become purple brown when mature, adnate. Stipe 50-100 × 3-4 mm, cylindrical, sometimes slightly enlarged toward the base, pale yellow to pale brown, minutely pruinose at apex, usually with white woolly fibrils at the base (Figure 3a).

Spores 12-19 × 7.5-10 µm, brown, ellipsoid to oblong with a germ pore (Figure 3b). Basidia cylindrical, 20-40 × 6-10 µm, 4 spored.

Bingöl, Göynük 2 village, on decaying cow dung, 38°51'763"N, 40°31'905"E, 1039 m, 18.05.2008, UB. 719; 728.

Tricholomataceae

***Tricholoma inamoenum* (Fr.) Gillet**

Cap 25-55 mm, campanulate to conical when young, conico-convex to plano-convex when mature

with an umbo, cream, pale yellow-ochre at centre, smooth. Lamellae white to pale yellow, emarginate to adnate. Stipe 50-110 × 4-11 mm, cylindrical, sometimes slightly enlarged at the base (Figure 4a), concolorous with the lamellae, slightly pruinose at the apex, smooth below.

Spores 9-11 × 6-7.5 µm, smooth, ellipsoid to oblong, with drops (Figure 4b). Basidia 40-55 × 10-12 µm, usually 4 spored.

Bingöl, Genç, Genç forest, around cedar trunk, 38°44'745"N, 40°34'202"E, 1075 m, 28.05.2006, UB. 20.

Discussion

Two members of the genus *Hymenoscyphus*, *H. calyculus* (Sowerby: Fr.) W. Phillips and *H. fructigenus* (Bull.: Fr.) Fr., and 7 members of *Crepidotus*, *C. calolepis* (Fr.) P. Karst., *C. cesatii* (Rabenh.) Sacc., *C. epibryus* (Fr.: Fr.) Quél., *C. lundellii* Pilát, *C. luteolus*



Figure 3. *Psilocybe merdicola*. a) Basidiocarps, b) Basidiospores.



Figure 4. *Tricholoma inamoenum*. a) Basidiocarps, b) Basidiospores.

(Lambotte) Sacc., *C. mollis* (Schaeff.: Fr.) Staude, *C. variabilis* (Pers. : Fr.) P. Kumm, had been recorded from Turkey (Sesli & Denchev, 2008). By October 2009, the recorded taxa number of the genera *Psilocybe* and *Tricholama* had reached 12 and 48 respectively (Sesli & Denchev, 2008; Solak et al., 2009; Aktaş et al., 2009). With this study a taxon is added to the existing numbers of each of the above

genera and some contributions were made to the knowledge of Turkish macromycota.

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