



***Strobilomyces strobilaceus* (Scop.) Berk. (Boletaceae Chevall.), a new genus record for Turkish Mycobiota**

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Abstract

Strobilomyces strobilaceus (Scop.) Berk. belonging to the family *Boletaceae* Chevall. was reported from Zigana Mountain (Gümüşhane). It is the first member of the genus *Strobilomyces* Berk. to be registered from Turkey. A short diagnosis, ecology, distribution and photographs related to macro and micromorphologies of the species are provided.

Key words: *Strobilomyces strobilaceus*, Biodiversity, Macrofungus, New record, Turkey

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***Strobilomyces strobilaceus* (Scop.) Berk. (Boletaceae Chevall.), Türkiye mikobiyotası için yeni bir cins kaydı**

Özet

Boletaceae Chevall. familyasına mensup *Strobilomyces strobilaceus* (Scop.) Zigana Dağı'ndan (Gümüşhane) rapor edilmiştir. Bu *Strobilomyces* Berk. cinsinin Türkiye'den kaydedilen ilk üyesidir. Türün kısa deskripsiyonu, ekolojisi, yayılışı ve makro ve mikromorfolojilerine ait fotoğrafları verilmiştir.

Anahtar kelimeler: *Strobilomyces strobilaceus*, Biyoçeşitlilik, Makrofungus, Yeni kayıt, Türkiye

1. Introduction

Strobilomyces is a small genus, in the family *Boletaceae* (Boletales) in having coarsely to scaly, blackish or grayish cap with partial veils, woolly stems reticulate or warty spores (Arora, 1986). The species of the genus are almost worldwide. It is known from Asia, Africa, North America, Europe and Australia (Sato et al., 2005).

Strobilomyces strobilaceus is the only European member of this genus and commonly known as old man of the woods in Europe and as Saçlı mantar in Turkey. This species is characterized by very soft dark grey to black pyramidal and overlapping scales on the cap surface. In spite of the widespread occurrence throughout Europe, it is included in the National red lists of a number of countries (Assyov et al., 2011).

According to current checklists on macromycota of Turkey (Solak et al., 2007; Sesli and Denchev, 2008) and latest records (Akata, 2010; Gücin et al., 2010; Uzun et al., 2010; Akata and Halıcı, 2010; Akata et al., 2011a; 2011b; Allı, 2011; Allı et al., 2011; Doğan et al. 2010; Keleş and Demirel 2010), *Strobilomyces strobilaceus* is reported for the first time from Turkey.

The aim of the current study is to make a contribution to Turkish mycobiota by adding a new genus record.

2. Materials and methods

Fungi specimens were collected from Zigana Mountain (Gümüşhane) in 2011. Relevant morphological and ecological properties of the samples were noted and they were photographed in their natural habitats. Thereafter they were taken to the laboratory for necessary macroscopic and microscopic investigations. Reagents such as Melzer reagent, 5% KOH, distillate water were used. Identification was performed with the aid of literature (Arora, 1986;

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Breitenbach and Kranzlin, 1991; Hansen and Knudsen, 1992; Jordan, 2004; Phillips, 1981). The identified specimens were deposited at the Ankara University Herbarium (ANK).

3. Results

A short diagnosis, ecology and distribution, geographical position, locality and collection date, photographs of the fruit body and spores are provided. The systematics of the taxon is in accordance with Kirk et al. (2008).

Fungi

Basidiomycota Whittaker ex Moore

Boletales E.-J. Gilbert

Boletaceae Chevall.

Strobilomyces Berk.

Strobilomyces strobilaceus (Scop.) Berk. (1851)

Synonymy: *Boletus cinereus* Pers. (1801), *B. floccopus* Pers. (1796), *B. strobilaceus* Scop. (1772), *B. strobiliformis* Vill. (1789), *B. strobiliformis* Dicks. (1785), *Strobilomyces floccopus* (Vahl) P. Karst. (1882), *S. strobiliformis* Beck (1923).

Macroscopic features: Pileus 6-9 cm across, hemispherical when young, then expanding to convex, dark grey with some whitish areas (Figure 1a), mouse gray brown to black covered with large and thick, brownish to black, pyramidal and erected scales some of which overhanging to margin (Figure 1b). Margin irregularly fimbriate to floccose, with grayish partial veil, quickly disrupting and leaving remnants on margin and upper portion of the stipe. Flesh thick and firm, whitish, pink when cut, then turning blackish-brown. Odor and taste not distinctive, Pores angular (Figure 1d), whitish at first, then gray brownish, reddish when bruised. Tubes up to 15 mm long, greyish white, reacting similarly with pores when bruised. Stipe 8-11 x 1-2 cm, cylindrical, somewhat thickened at apex, fibrillose or floccose, almost concolorous with the pileus, covered with wooly scales. Annular zone pale grayish at apex (Figure 1c).

Microscopic features: Basidiospores 10-12 x 9-11 μm , brown, subglobose with reticulate ornamentation (Figure 1e). Basidia 50-60 x 15-18 μm , clavate, 2 or 4 spored, without basal clamp. Cystidia 70-80 x 25-30 μm , fusiform to ventricose with brown pigments. Pileipellis consisting of parallel, short-celled hyphae 8-11 μm across, with brownish pigments, septa without clamps.

Ecology: Summer to fall, solitary to gregarious, in hardwood and coniferous forests, on soil, colline to mountain, more rarely subalpine elevation, rare (Arora, 1986; Breitenbach and Kranzlin, 1991; Hansen and Knudsen, 1992, Jordan, 2004).

Specimen examined: TURKEY—Gümüşhane: Zigana mountain, Hamsi village, in spruce (*Picea orientalis* (L.) Link) forest, on soil, 40° 42' N, 39° 28' E, 1360 m, 02.09.2011, Akata 4084.

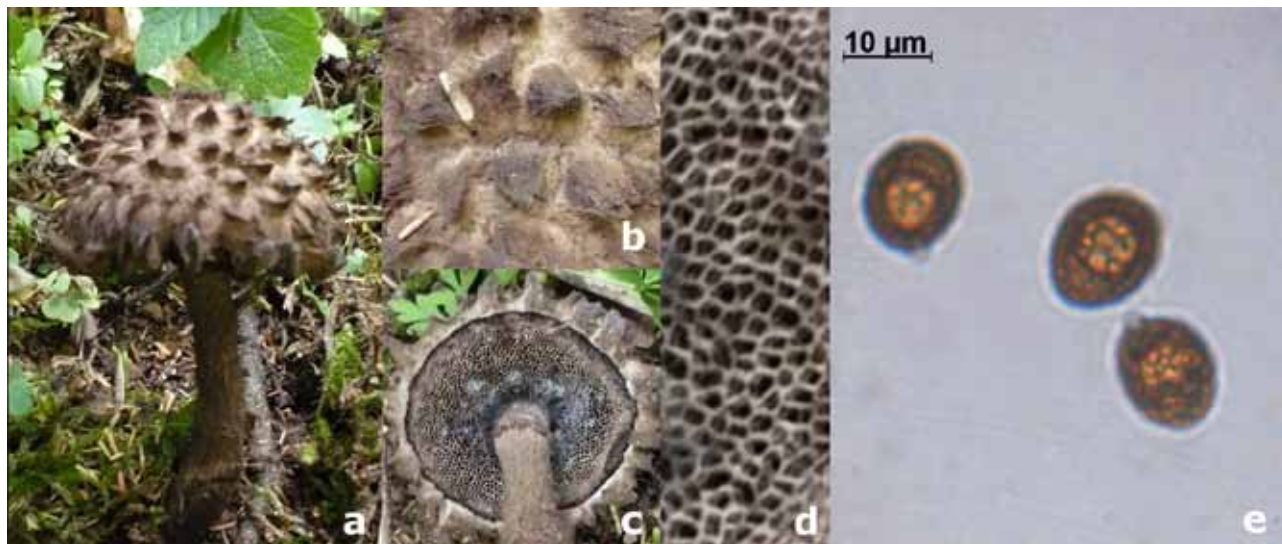


Figure 1. *Strobilomyces strobilaceus*: a- basidiocarp, b- scales, c- annular zone, d-pores, e-basidiospores.

4. Conclusions

S. strobilaceus can be confused with *S. confusus* Singer and *S. dryophilus* Cibula & N.S. Weber in terms of morphology and ecology. They have coarsely to scaly caps and wooly stems, and grow on soil. *S. confusus* is quite similar in color and overall aspect, but has a slightly smaller cap with smaller and more erect scales and its spores have

irregular ridges that resemble a partial mesh. *S. dryophilus* has a dull grey-pink to pinkish- tan cap and produces spores with a complete mesh (Arora, 1986).

According to Sesli and Denchev 2011 and recently published data (Akata et al., 2011a; 2011b; Allı, 2011; Allı et al., 2011), three genera (*Boletus* L., *Leccinum* Gray and *Phylloporus* Quél.) of the family *Boletaceae* have so far been reported from Turkey.

With the present study, *Strobilomyces strobilaceus* is added to mycobiota of Turkey as new record, at genus level and current genus number of Turkish *Boletaceae* increased to four.

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