

A new record for the Turkish Mycota: *Inocybe phaeodisca* Kühner var. *phaeodisca*

Ertuğrul SESLİ *¹, Takahito KOBAYASHI²

¹Department of Biology Education, Karadeniz Technical University, Trabzon, Turkey

²Iriomote station, Tropical Biosphere Research Center, University of the Ryukyus 870 Uehara, Taketomi, Yaeyama, Okinawa 907-1541. Japan

Abstract

The basidiomes of *Inocybe phaeodisca* Kühner var. *phaeodisca* were collected and studied first time from Turkey. The structure of pileipellis, cystidia, basidia and spores were illustrated and the description of the taxon is given according to morphological studies.

Key words: taxonomy, Trabzon, Turkey, *Inocybe phaeodisca*

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Türkiye Mikotası için yeni bir kayıt: *Inocybe phaeodisca* Kühner var. *phaeodisca*

Özet

Inocybe phaeodisca Kühner var. *phaeodisca* (Kirli mantar)'ın frükifikasyon organları ilk kez Türkiye'den toplanarak çalışıldı. Şapka kabuğu, sistidyum, bazidiyum ve sporların yapısı aydınlatıldı ve saptanan morfolojik özelliklere göre taksonun tanımı verildi.

Anahtar kelimeler: taksonomi, Trabzon, Türkiye, *Inocybe phaeodisca*

1. Introduction

Inocybe is a large genus of fungi and approximately 1700 taxa currently exist (URL 1). Members of the genus are mycorrhizal, most of them are brown, although some lilac or purplish, and rarely reddish. The genus is first placed in *Cortinariaceae*, however, molecular studies suggest that it is better to place it in *Inocybaceae*. (URL 1; URL 2).

The species of this group are not suitable for consumption; many species contain large amount of poison and some species are hallucinogenic.

Inocybe is common in Turkey and about 70 species were recorded up to date. Recently, many macrofungal studies have been carried out in the region (Akata and Yaprak, 2013) and in Turkey (Atila and Kaya, 2013). Before the present study, we recorded *I. duriuscula* Rea, *I. erubescens* A. Blytt, *I. geophylla* var. *lilacina* (Peck) Gillet, *I. gymnocarpa* Kühner, *I. olida* Maire, *I. perbrevis* (Weinm.) Gillet, *I. rimos*a (Bull. : Fr.) P. Kumm., *I. sindonia* (Fr.) P. Karst. and *I. subrubescens* G.F. Atk. in the region (Sesli and Denchev, 2008; Solak et al, 2007).

The East Black Sea coast which the material collected has a humid subtropical climate with considerable effects of marine. The average air temperature is about 23°C in summer and 7°C in winter.

2. Materials and methods

Fruiting bodies were collected from the campus of Fatih Faculty of Education of the Karadeniz Technical University in Trabzon on 22.01.2010. The color, texture, odor, and the properties of the habitat were noted. The color

* Corresponding author / Haberleşmeden sorumlu yazar: Tel.: 904623777307; Fax.: +904632487344; E-mail: ertugrulsesli@yahoo.com

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terms used are those from Kornerup & Wanscher (1967). The pileus of a basidiome was cut and placed on white paper to obtain spore print. Rest of the specimens were dried and kept in the fungarium for further studies. A Zeiss Axio Imager A2 microscope was used to illuminate the structures of the pileipellis, clamp connections, cystidia, basidia and spores (Clémenton, 2009).

Dried materials were deposited in the Karadeniz Technical University, Fatih Faculty of Education in Trabzon (FEFH Sesli 2716) and in the mycological herbarium of the Hokkaido University Museum in Japan (SAPA 1249). With the help of the field and laboratory studies, the taxon was described according to Kobayashi (2002a), Kobayashi (2002b), Kornerup and Wanscher (1967), Kühner (1955) and Kuyper (1986).

3. Results

3.1. Inocybaceae

3.2. *Inocybe phaeodisca* Kühner var. *phaeodisca* (Figure 1-2)

Syn. *Inocybe descissa* sensu Dennis, Orton & Hora

Pileus light brown to brownish orange, cracked (Knudsen and Vesterholt, 2008), bell shaped to convex with umbo, silky, smooth to fibrillose, 1.5–4 cm across. Lamellae adnate to sinuate, crowded, grayish white, light brown to light yellow, with fimbriate white edge. Stipe, pinkish buff to whitish, 3–6 × 0.5–0.8 cm and solid. Spore print brown. Pileipellis composed of hyaline to yellowish brown periclinal hyphae. Odor somewhat spermatic and the taste mild. Some hyphae of pileipellis clamped and 5–12 µm wide. Cheilocystidia lageniform, ventricose to fusiform, almost hyaline, thick-walled, slightly yellow, with a pedicellate base, (58–)65–85 × (12–)14–25 µm and abundant. Paracystidia abundant on edges of lamellae, often catenate with clavate to broadly clavate terminal cells. Basidia clavate, 2–4 spored, 25–30 × 8–10 µm, many together and hyaline to slightly lemon. Spores amygdaliform with a conical apiculus, 9–11(–13) × 5–6.5 µm and yellowish brown. Hymenophoral trama composed of subregular hyphae. Caulocystidia present at apex only and similar to hymenial cystidia. Cauloparacystidia present along with caulocystidia and similar to hymenial paracystidia.

Collections examined: Turkey: Trabzon, the campus of Fatih Education Faculty. Gregarious, under *Pinus pinea* (41° .01'.04" and 39° .60'. 99"), 22 Jan. 2010. (FEFH Sesli 2716 and SAPA 1249).

4. Conclusions

This *Inocybe* belongs to the subgenus *Inocibium* (Earle) Singer section *Tardae* M. Bon. This name was accepted in the revision by Kuyper (1986). We found that the Turkish materials coincide with *I. phaeodisca* var. *phaeodisca* reported by Kühner (1955) and Kuyper (1986). This taxon was also reported in Japan by Kobayashi (2002a) and the characteristics of the Japanese material agreed well with the present Turkish materials. A close relatives, *Inocybe phaeodisca* Kühner var. *geophylloides* Kühner differs from the present taxon by whitish and smaller basidiomes (Kobayashi, 2002b; Kühner, 1955).



Figure 1. Basidiomes of *Inocybe phaeodisca* Kühner var. *phaeodisca*

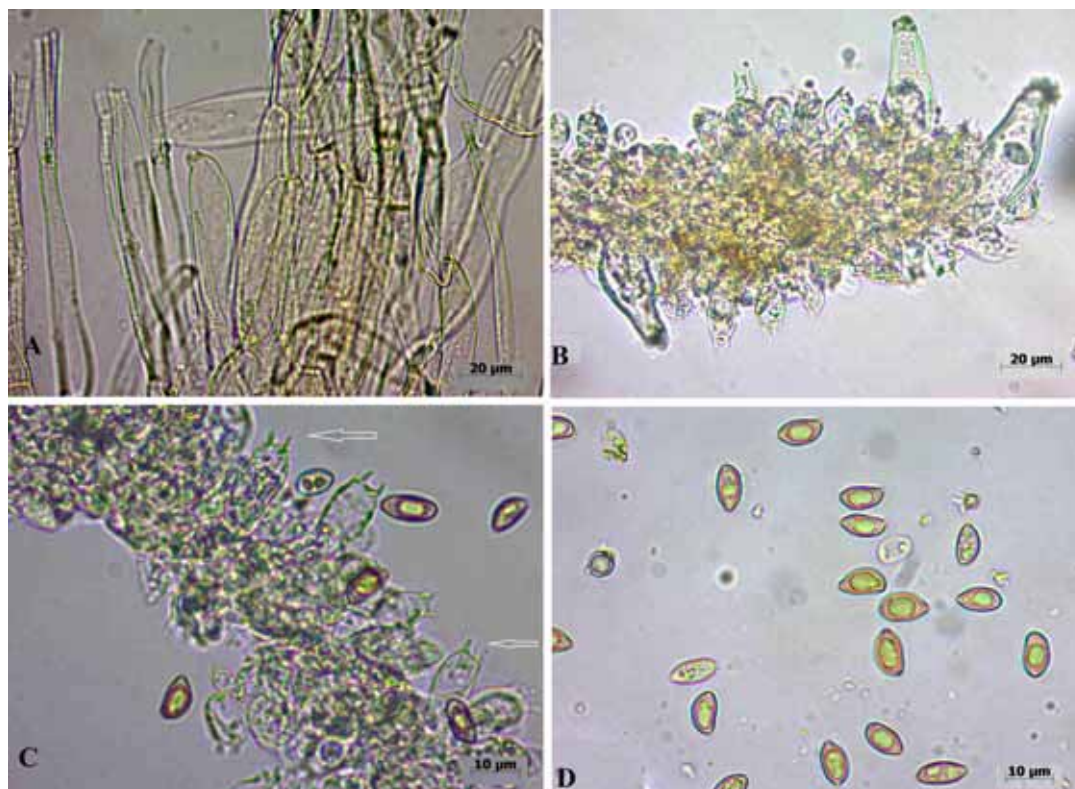


Figure 2. Microscopy of *Inocybe phaeodisca* Kühner var. *phaeodisca*: A- pileipellis, B- cheilocystidia, C- basidia, D- spores

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