

A New Jelly Ascomycetous Genus Record for Turkish Mycobiota

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Abstract: *Leotia lubrica* (Scop.) Pers. was reported from Yomra district of Trabzon (Turkey). It is the first member of the genus *Leotia* to be recorded from Turkey. Short description and the photographs of the species are provided and discussed briefly.

Key words: Biodiversity, Macrofungi, new record, *Ascomycota*

Türkiye Mikobiyotası için Yeni Bir Jelimsi Askomiset Cins Kaydı

Özet: *Leotia lubrica* (Scop.) Pers. Trabzon (Turkey)'un Yomra ilçesinden rapor edilmiştir. Bu *Leotia* cinsinin Türkiye'den kaydedilen ilk üyesidir. Türün kısa deskripsiyonu ve fotoğrafları verilmiş, kısaca tartışılmıştır.

Anahtar kelimeler: Biyoçeşitlilik, Makromantarlar, yeni kayıt, *Ascomycota*

1. Introduction

Leotia Pers. is a small genus, in the family *Leotiaceae*, and contains species of inoperculate discomycetes with stipitate-capitate ascomata. The position of the genus in *Ascomycota* was changed several times. *Leotia*, also known as jelly babies, used to be classified with other earth tongues in the *Geoglossaceae* and *Helotiaceae*, until the reformulation of *Helotiaceae* as *Leotiaceae* in 1973 [1,2]. According to Index fungorum five confirmed species, *Leotia atra* Weinm., *L. chlorocephala* Schwein., *L. infundibuliformis* (Schaeff.) Fr., *L. lubrica* (Scop.) Pers and *L. Nana* (With.) Fr., currently exist in the genus [3].

Despite the widespread occurrence of *Leotia* [4], and 1858 recorded macromycete taxa [5-7], it has not been recorded from Turkey so far. The study aims to make contribution to the macromycota of Turkey.

2. Materials and Method

Fruit bodies of *Leotia lubrica* were collected from Yomra district of Trabzon province (Turkey) during routine field trips. Relevant morphological and ecological characteristics of the samples were recorded and they were photographed in their natural habitats. Then the samples were taken to the laboratory. Necessary macroscopic and microscopic measurement data were obtained by using a ruler, light microscope, micrometers and necessary chemicals (distillate water, Melzer's reagent, 5% KOH).

Identification was performed with the help of literature [8-10]. The specimens are deposited at the herbarium of Ankara University (ANK).

3. Results

Short description, photographs of fruit bodies and microphotographs of asci, ascospores and paraphyses of *Leotia lubrica* are provided.

3.1. *Leotia lubrica* (Scop.) Pers., 1797.

Syn: *Helvella lubrica* Scop., *Leotia gelatinosa* Hill.

3.1.1. *Macroscopic features*: Cap 8-15 mm broad, irregularly rounded or lobed, margin inrolled, surface smooth, viscid when moist, yellowish, yellow green or light olive brown. Flesh thin and gelatinous. Stipe cylindrical, 40-70 × 4-7 mm, more or less equal, yellow to ochraceous, sometimes with tinged greenish granules (Figure 1), hollow when mature.

3.1.2. *Microscopic features*: Spores 21-24 × 5-6 µm, smooth, subfusiform, slightly curved, with 3 to 5 septa and 5-7 drops, hyaline (Figure 2a). Asci 140-170 × 8-14 µm, 8 spored and inoperculate (Figure 2b). Paraphyses filiform and forked (Figure 2c).

3.1.3. *Ecology*: Saprobe, growing gregariously or clustered under hardwood and conifer forest, sometimes forest edges on soil, among grasses or mosses during late summer to late autumn [1,8,9].

3.1.4. *Distribution*: Trabzon, Yomra, Çamlıyurt, roadside, on soil, under *Alnus* sp., 40°53'51"N - 39°50'39"E, 850 m, 24.09.2009, Akata 2713.



Figure 1. Fruit bodies of *Leotia lubrica*.

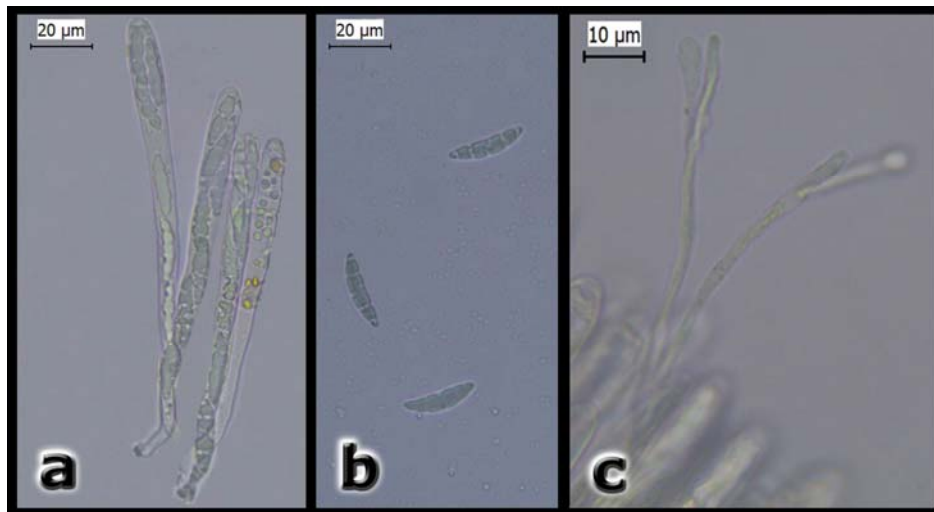


Figure 2. Microstructures of *Leotia lubrica*. a. Asci, b. Ascospores, c. Paraphyses

4. Discussion

Leotia lubrica resembles *Cudonia circinans* (Pers.) Fr. in terms of morphology and ecology. Both of them are saprobe and grow on soil or on rotten wood (even rare) gregariously, in groups or clusters, especially in conifers. But it differs from *C. circinans* with its gelatinous structure and yellow-green tints. *C. circinans* is not gelatinous and lacks of yellow-green tints. The spore shape and size are also different. *L. lubrica* has spindle-shaped spores ($16-25 \times 4-6 \mu\text{m}$) while *C. circinans* has needle-shaped spores ($30-40 \times 2 \mu\text{m}$) [1,8,11]. It may also be confused with *L. chlorocephala* due to its morphology. This time care must be taken to the greenish to dark green cap and greenish to pale green stalk of this species while *L. lubrica* is usually yellowish and larger [12].

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