



Coprotus Korf & Kimbr.: A new coprophilous genus record for the mycobiota of Türkiye

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Received : 28.07.2022
Accepted : 07.08.2022
Online : 10.08.2022

Coprotus Korf & Kimbr.: Türkiye mikobiyotası için yeni bir koprofil cins kaydı

Abstract: The genus *Coprotus* Korf & Kimbr. was given as new record for the mycobiota of Türkiye based on the collection and the identification of *Coprotus ochraceus* (P. Crouan & H. Crouan) J. Moravec from Şirvan district of Siirt province. A brief description of the species is given together its photographs related to its macro and micro morphologies.

Key words: New genus record, macrofungi, *Pezizales*, Türkiye

Özet: *Coprotus* Korf & Kimbr cinsi, *Coprotus ochraceus* (P. Crouan & H. Crouan) J. Moravec'un Siirt ili Şirvan ilçesinden toplanıp teşhis edilmesine bağlı olarak Türkiye mikobiyotası için yeni kayıt olarak verilmiştir. Türün kısa bir betimlemesi, makro ve mikromorfolojilerine ilişkin resimlerle birlikte verilmiştir.

Anahtar Kelimeler: Yeni cins kaydı, makromantarlar, *Pezizales*, Türkiye

Citation: Akçay ME, Dengiz Y, Kesici S (2022). *Coprotus* Korf & Kimbr.: A new coprophilous genus record for the mycobiota of Türkiye. Anatolian Journal of Botany 6(2): 75-77.

1. Introduction

Though the generic name *Coprotus* Korf & Kimbr. was first introduced by Korf in 1954 as a segregate of the genus *Ascophanus* Boud., it was validated by Kimbrough and Korf in 1967 (Kušan et al. 2018). Members of the genus have a coprophilous ecology and are characterised by an oblate to discoid or lenticular, whitish to yellowish or translucent apothecia; operculate, non-amyloid, eight to 256 spored asci; hyaline, smooth, de Bary bubbled and aguttulate ascospores; filiform, hyaline or pigmented paraphyses, generally bent to uncinately or swollen at the apex; and an excipulum mainly composed of globose to angular cells (Kimbrough et al., 1972; Bell, 2005).

Kuşan et al. (2018) gives the accepted species number in the genus *Coprotus* as 29. On the other hand IndexFungorum (2022) currently list 26 conformed *Coprotus* species. Considering the latest checklist (Sesli et al., 2020) and post-checklist publications on higher ascomycetous fungi of Türkiye (Akata and Erdoğan, 2020; Akata et al., 2020; Çetinkaya et al., 2020; Kaplan et al., 2020; Uzun and Kaya 2020a,b; Uzun et al., 2020; Acar, 2021; Altuntaş et al., 2021; Berber et al., 2021; Çetinkaya and Uzun, 2021; Doğan, 2021; Kaplan et al., 2021; Kesici and Uzun, 2021; Uzun, 2021a,b; Uzun and Kaya, 2021a,b; Uzun and Kaya, 2022) any member of the genus have been reported from Türkiye.

The study aims to make a contribution to the mycobiota of Türkiye by adding a new ascomycete genus record.

2. Material and Method

Specimens were collected from Sit village of Şirvan (Siirt) district during a field study in 2014. Morphological and

ecological characteristics of the samples were recorded during the field study and they were photographed in their natural habitats. Then, they were taken to the laboratory and microscopic investigations were carried out on them. Observations of apothecia were made using a Leica EZ4 stereo-microscope under magnifications up to 35×. Microscopic investigation was performed under a Leica DM500 light microscope mounted with a Leica ICC50 HD camera. Reagents such as 5% KOH and Iodine (IKI) were used as investigation media. Identification was performed with the aid of the relevant literature (Kimbrough et al., 1972; Thind et al., 1978; Bell, 2005; Thompson 2013; Melo et al., 2015; Kušan et al., 2018).

3. Results

Ascomycota Caval.-Sm.

Pezizomycetes O.E. Erikss. & Winka

Pezizales J. Schröt.

Coprotus ochraceus (P. Crouan & H. Crouan) J. Moravec

Macroscopic and microscopic features: Apothecia scattered to gregarious, without stalk, globular-discoid, pale yellowish to orange or ochraceous, 0.5-1.8 mm diam., smooth and without hairs (Fig. 1a,b). Excipulum of large celled textura globulosa-angularis with basal cells 20-40 µm diam., weakly to non-cyanophilous, marginal cells elongated. Paraphyses cylindric-clavate, sometimes curved at tips, septate, 2-3 µm thick at the base, enlarged towards the apices up to 5-7 µm, with yellowish cytoplasmic contents (Fig. 1f,g,h). Asci eight-spored, cylindrical, rounded above, tapers towards the base, 110-190 × 15-30

μm , no color change in iodine (Fig. 1e,f). Ascospores usually uniseriate, hyaline, smooth, ellipsoid, rounded at poles, $14\text{-}19 \times 9\text{-}13 \mu\text{m}$, each with a conspicuous de Bary bubble (Fig. 1c,d).

Coprotus ochraceus grows on dung of many animals especially of ruminants (cow, sheep, horse, deer and rabbit) from spring to autumn (Kimbrough et al., 1972; Thind et al., 1978; Thompson 2013; Melo et al., 2015).

Specimen examined: Siirt, Şirvan, Sit village, on accumulated herbivorous manure, $38^{\circ}05' \text{N}$, $42^{\circ}04' \text{E}$, 1328 m, 13.04.2014, Y. Denğiz 130.

4. Discussions

Coprotus ochraceus is reported for the first time from Türkiye. General characteristics of the investigated specimen are in agreement with those given in literature (Kimbrough et al., 1972; Thind et al., 1978; Thompson 2013; Melo et al., 2015).

The species seems to have a cosmopolitan distribution. It is currently known from four continents (Asia, America, Australia, Europe) and 20 countries (Argentina, Belgium, Bermuda, Brazil, Canada, Czech Republic, Denmark,

France, Germany, U.S.A, India, Pakistan, Italy, Norway, Poland, Puerto Rico, Republic of Tajikistan, Sweden, Venezuela, United Kingdom) (Melo et al., 2015).

Coprotus ochraceus shows general aspect similar to *Cheilymenia granulata*, but can be distinguished from *C. granulata* with the smaller and weakly or non-cyanophilous excipular cells. *Coprotus vicinus* and *C. luteus* are also similar to *C. ochraceus* in color and substrate choice, but *C. vicinus* has smaller asci and larger ascospores (up to $25 \mu\text{m}$ in length) and *C. luteus* has smaller ascospores ($8\text{-}13 \times 4.5\text{-}7 \mu\text{m}$).

Conflict of Interest

Authors have declared no conflict of interest.

Authors' Contribution

The authors contributed equally.

Acknowledgments

The authors thank Van Yüzüncü Yıl University for financially supporting this study (Project number: 2014-FBE-YL039).

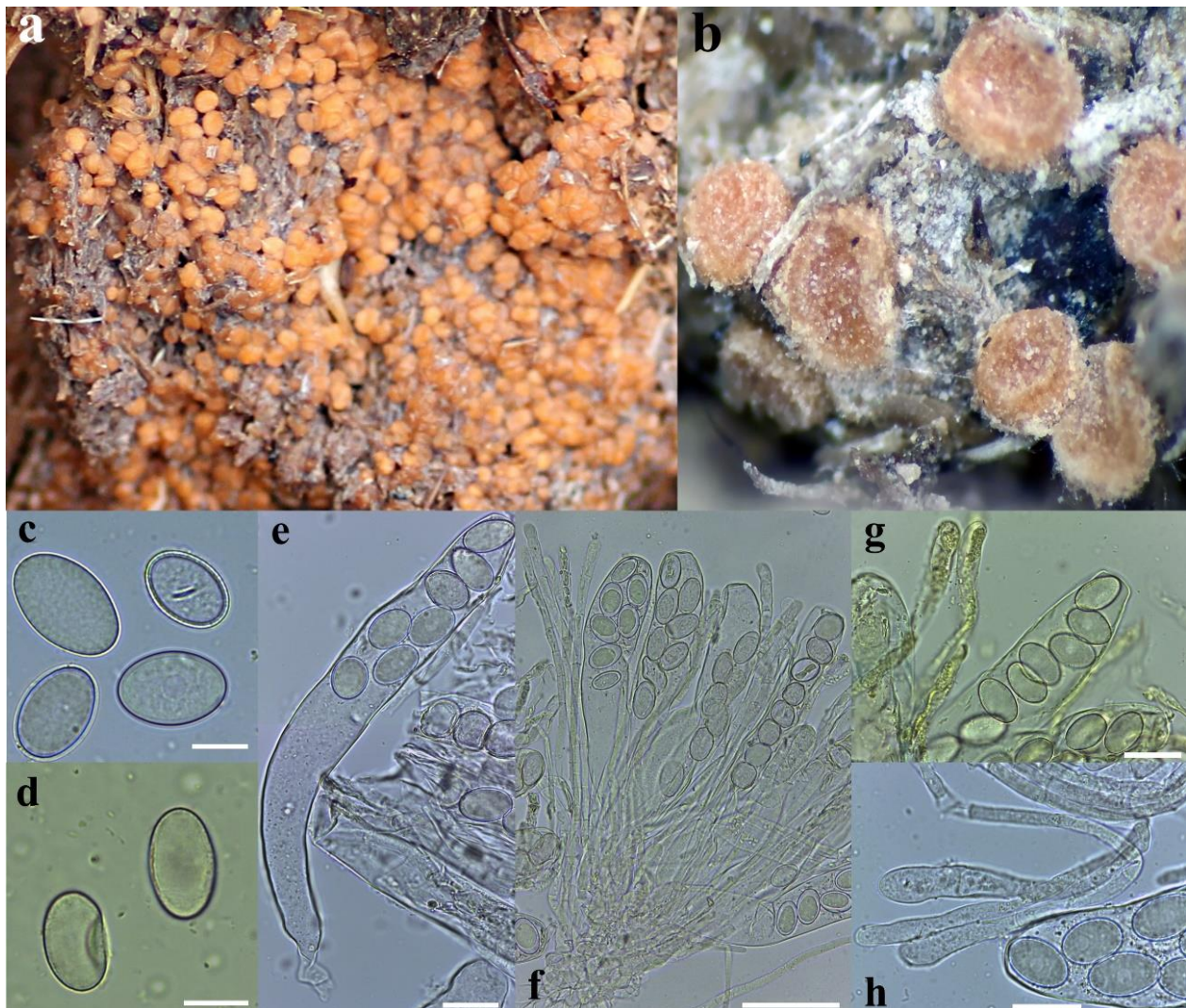


Figure 1. *Coprotus ochraceus*: a- apothecia on natural substrate, b- apothecia under stereo microscope (35 \times magnification), c- ascospores (in water, bar= 10 μm), d- ascospores (in IKI, bar= 10 μm), e- ascus (bar= 20 μm), f- asci and paraphyses (bar= 50 μm), g- apices of an ascus and paraphyses (in IKI, bar= 20 μm), h- apices of an ascus and paraphyses (in water, bar= 20 μm).

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