

SOME MACROFUNGI OF IHLARA VALLEY

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ABSTRACT

Macrofungi samples have been collected during field trips carried out in the Ihlara Valley which is private protection region because of its historical and cultural features in 2000-2001 years. The region is very rich place as nature and historical features. There are many of churches and house curving in stones, also some fungi images in house and churches in the region. As a result of field and laboratory studies, 31 species belonging to 14 families were identified. Four of them belong to *Ascomycetes* and 27 belonging to *Basidiomycetes*. The distribution of 31 species into the families as follows; *Coprinaceae* eight, *Tricholomataceae* five, *Bolbitiaceae* four, *Agaricaceae* two, *Hymenochaetaceae* two, *Morchellaceae* two, *Helvellaceae* one, *Humariaceae* one, *Polyporaceae* one, *Sclerodermataceae* one, *Paxillaceae* one, *Strophariaceae* one, *Cortinariaceae* one and *Russulaceae* one.

Keywords: Macrofungi, Ihlara Valley, Aksaray, Turkey

IHLARA VADİSİNİN BAZI MAKROFUNGUSLARI

ÖZET

2000-2001 yılları arasında, tarihi ve kültürel özelliklerinden dolayı özel koruma alanı olan Ihlara Vadisinde yapılan arazi çalışmalarında makrofungus örnekleri toplanmıştır. Bölge doğa ve tarihi özellikleri bakımından oldukça zengindir. Yörede bir çok kaya oyma evleri ve kiliseler vardır ve bu yapıların içinde de mantar figürlerine rastlanmaktadır. Arazi ve laboratuvar çalışmaları sonucu 14 familyaya ait 31 tür teşhis edilmiştir. Bunlardan dört' ü *Ascomycetes* ve 27' si *Basidiomycetes* sınıfına aittir. 31 türün familyalara göre dağılımı şu şekildedir; *Coprinaceae* sekiz, *Tricholomataceae* beş, *Bolbitiaceae* dört, *Agaricaceae* iki, *Hymenochaetaceae* iki, *Morchellaceae* iki, *Helvellaceae* bir, *Humariaceae* bir, *Polyporaceae* bir, *Sclerodermataceae* bir, *Paxillaceae* bir, *Strophariaceae* bir, *Cortinariaceae* bir ve *Russulaceae* bir.

Anahtar Kelimeler: Makrofunguslar, Ihlara Vadisi, Aksaray, Türkiye

INTRODUCTION

Ihlara valley is near the city of Aksaray in the middle of Anatolian Region, the length of valley is 14 km, and depth is 110 m (Figure 1). Ihlara Valley is very interesting place as its forming and historical features. It have been formed in the Neocene and 4th terms as a consequence of tectonically activity. Populated areas Selime, Belisırma and Yaprakhisar villages appeared. Melendiz Stream in Ihlara Valley have a greater depth by digging the base of the canyon. A greater member of churches carved on rocks are found in the valley.

There are some mushrooms drawings on the churches walls. These mushroom paintings belonging to 6th century [1]. Moreover, we took picture of *Morchella* on the wall of Yılanlı church (Figure 2).

It was approximately determined 200 vascular plant species belonging to 20 families between April 1992 and March 1993 in the region [2]. Within these plants, growing trees in the region are black pine, poplar, willow, oleaster, walnut and apple. These trees area are most suitable regions for growth of macrofungi, for this reason we investigated to macrofungi in these area.

MATERIAL AND METHODS

The materials for this study were collected on field trips carried out from Ihlara Valley between the years 2000-2001. In the field, some ecological and morphological properties of specimens were noted and photographed. Then the specimens were taken to the laboratory. The spore prints were obtained and spore dimensions were measured with an ocular micrometer for identification. As a result of the field and laboratory studies,

specimens were identified with the help of literature, Bresinsky & Besl 1990 [3], Breitenbach & Kränzlin 1983-1995 [4], Moser 1983[5].

After macrofungi specimens were identified and dried, they were preserved in polythene bags containing 5 g thymol crystals.

Macrofungi specimens are kept at Selçuk University Fungarium of Mushroom Application and Research Centre, Konya.

RESULTS

The macrofungi consisting of 31 taxa belonging 14 families were identified. These taxa's, localities, habitats, collected dates, and fungarium numbers were given below.

Ascomycetes

Morchellaceae

1. *Mitrophora semilibera* (DC: Fr.) Lév.

Yaprakhisar, on sandy soils in poplar and willow trees, 09.04.2001, Kaşık, Öztürk, Türkoğlu 500, Melendiz river bank on sandy soil, near the Kokar church, 16.04.2001, Türkoğlu 519.

2. *Morchella esculenta* Pers.: St. Amans var. *vulgaris* Pers.

Yaprakhisar, on needle litter of black pine trees, 09.04.2001, Kaşık, Öztürk, Türkoğlu 518, 520.

Helvellaceae

3. *Helvella spadicea* Schaeff.

Belisırma, on sandy soil near the bank, 16.04.2001, Türkoğlu 524.

Humariaceae

4. *Sepultaria arenosa* (Fuckel) Bond.

Melendiz river bank, on soil near the Kokar church, 16.04.2001, Türkoğlu 510

Basidiomycetes

Hymenochaetaceae

5. *Phellinus igniarius* (L.: Fr.) Quél.

Near the Ala church, on poplar trees, 09.04.2001, Kaşık, Öztürk, Türkoğlu 403.

6. *Phellinus nigricans* (Fr.) Karst.

Near the Ala church, on walnut trees, 20.10. 2000, Türkoğlu 345.

Polyporaceae

7. *Polyporus squamosus* Fr.

Yaprakhisar, on poplar trees near the bank, 16.04.2001, Türkoğlu 503.

Sclerodermataceae

8. *Pisolithus arhizus* (Pers.) Rauschert

Near the Ağaçalı church, on soil, 16.04.2001, Türkoğlu 533.

Paxillaceae

9. *Paxillus involutus* (Batsch) Fr.

Belisırma, near the poplar trees, 20.11.2000, Türkoğlu 343.

Tricholomataceae10. *Omphalina oniscus* (Fr. : Fr.) Quél.

Melendiz River bank , on grass, 1 km from Belisırma 16.04.2001, Türkoğlu 507.

11. *Lepista nuda* (Bull.: Fr.) Cke

Melendiz River bank, between black pine trees, near the Karanlık kale church, 16.04.2001, Türkoğlu 514.

12. *Melanoleuca luteolosperma* (Britz.) Sing

Belisırma, on grass in black pine forest, 09.04.2001, Kaşık, Öztürk, Türkoğlu 501.

13. *Melanoleuca melaleuca* (Pers. : Fr.) Mre.

Belisırma, on grass in black pine forest, 09.04.2001, Kaşık, Öztürk, Türkoğlu 406.

14. *Armillaria mellea* (Vahl : Fr.) Kumm.

Near the Ala church, on poplar trees, Türkoğlu 405.

Agaricaceae15. *Agaricus bitorquis* (Quél.) Sacc.

Melendiz River bank, under soil 1 km from Belisırma, 20.11.2000, Türkoğlu 342.

16. *Agaricus campestris* (L.) Fr.

Melendiz River bank, on soil with manure, 1 km from Belisırma, 16.04.2001, Türkoğlu 525.

Coprinaceae17. *Coprinus comatus* (Müll.: Fr.) S.F. Gray

Belisırma, on grass, 16.04.2001, Türkoğlu 513.

18. *Coprinus disseminatus* (Pers.: Fr.) S. F. Gray

Belisırma, on poplar trunks, 16.04.2001, Türkoğlu 517.

19. *Coprinus micaceus* (Bull.: Fr.) Fr.

Belisırma, under willow and poplar trees, 16.04.2001, Türkoğlu 534.

20. *Panaeolus olivaceus* (Bull.: Fr.) Quél.

Melendiz River bank, on meadow, near the Yılanlı church, 16.04.2001, Türkoğlu 539.

21. *Psathyrella candolleana* (Fr.:Fr.) Mre.

Yaprakhisar, under poplar trees near the bank, 16.04.2001, Türkoğlu 540.

22. *Psathyrella multipedata* (Peck.) Sm.

Yaprakhisar, on grass near the bank, 16.04.2001, Türkoğlu 537.

23. *Psathyrella murcida* (Fr.)Kits van Wav.

Melendiz River bank, on grass, near the Direkli church, 09.04.2001, Kaşık,Öztürk, Türkoğlu 409.

24. *Psathyrella tephrophylla* (Romagn.) Bon.

Melendiz River bank, on grass, 2 km from Selime, 09.04.2001, Kaşık,Öztürk, Türkoğlu 408.

Bolbitiaceae

25. *Agrocybe dura* (Bolt.) Sing.

Selime, on grass, 16.04.2001, Türkoğlu 526.

26. *Agrocybe cylindraceae* (D.C: Fr.) Mre.

Selime, on poplartrunks, 16.04.2001, Türkoğlu 531.

27. *Agrocybe semiorbicularis* (Bull.: Fr.) Fay.

Melendiz River bank, on meadow, near the Eğritaş church, 16.04.2001, Türkoğlu 538.

28. *Agrocybe vervacti* (Fr.) Sing.

Melendiz River bank, on grass, 1 km from Yaprakhisar, 16.04.2001, Türkoğlu 505.

Strophariaceae

29. *Pholiota populnea* (Pers.: Fr.) Kuyp.& Jall.

Near the Yılanlı church, on poplar trees, 13.11.2000, Kaşık,Öztürk, Türkoğlu 341.

Cortinariaceae

30. *Hebeloma eburneum* Mal.

Belisırma, under black pine trees, 16.04.2001, Türkoğlu 515.

Russulaceae

31. *Russula delica* Fr.

Melendiz River bank, under black pine trees, 2 km from Belisırma 16.04.2001, Türkoğlu 511.

CONCLUSION AND DISCUSSION

In this study, 31 macrofungi species were identified, 4 of which belonged to Ascomycetes and 27 to Basidiomycetes. The distribution of 31 species into the families are as follows: *Coprinaceae* 8, *Tricholomataceae* 5, *Bolbitiaceae* 4, *Agaricaceae* 2, *Hymenochaetaceae* 2, *Morchellaceae* 2, *Helvellaceae* 1, *Humariaceae* 1, *Polyporaceae* 1, *Sclerodermataceae* 1, *Paxillaceae* 1, *Strophariaceae* 1, *Cortinariaceae* 1, Russulaceae 1. The most species rich families in the region are *Coprinaceae* family (25%). Because of the valley have bushes, trees such as poplar and willow trees around Melendiz Stream. Therefore its a favourable condition for the growth of *Coprinaceae* members. In comparison to Kaşık and Öztürk's studies, carried out near the research area [6,7], there are some similarities in terms of the species growing in Ihlara Valley. This could be because of similarities in climates, habitats and plant flora.

Morchella esculenta known as kuzu göbeği, *Lepista nuda* known as mor mantar, *Agaricus bitorquis* known as göbelek mantarı, *A. campestris* known as çayır mantarı and *Russula delica* known as çam mantarı are commonly eaten by local people. *M.esculenta*, *L.nuda* and *R.delica* are growing in pine forest and collecting very much by local people.

Panaeolus olivaceus is poisonous and *A. mellea* is edible when cooked. These species not known by local people.

Local people have interested in macrofungi since antic times. The evidence of their interesting are the mushrooms pictures on house and cave walls [1] and (Figure 2).

Finally, the macrofungi taxa of Ihlara Valley were added to the Turkish macrofungi flora

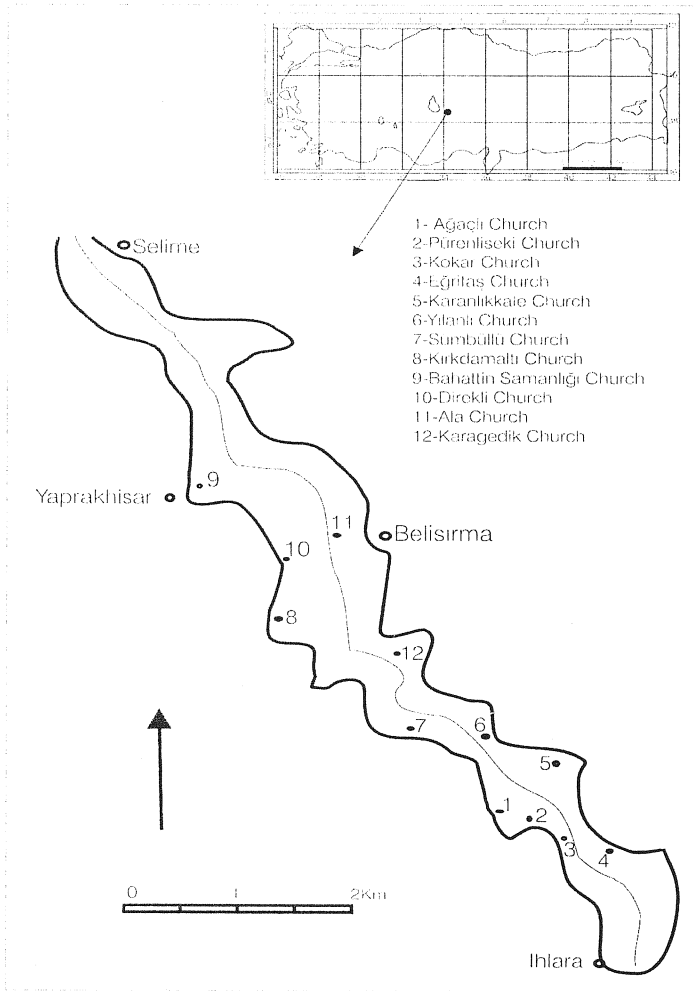


Figure 1. The study area

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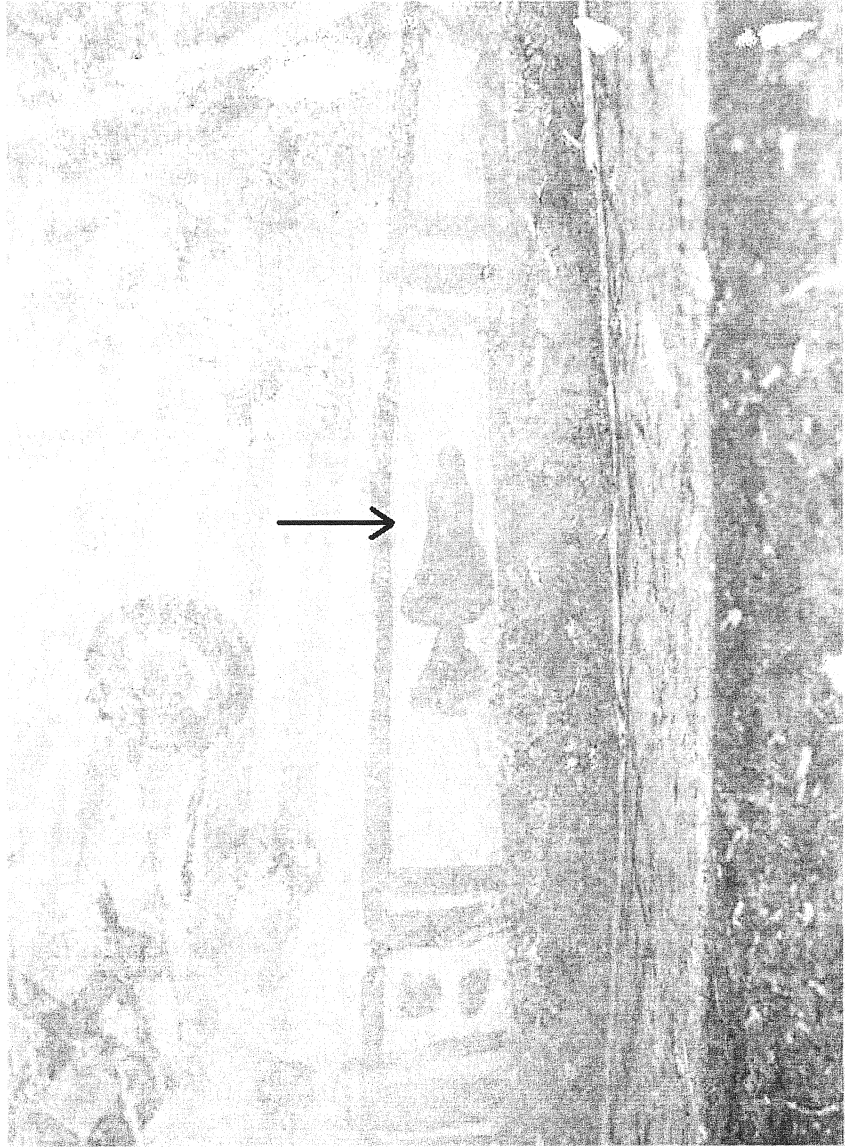


Figure 2. Figures of *Morchella* on the wall of Yılanlı church

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