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Macrofungi Flora of Bozkır District (Konya)

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Abstract: The macrofungi specimens were collected from different localities of the Bozkır (Konya) district in 2000-2001, particularly during autumn and spring. As a result of these field and laboratory studies, 74 species belonging to 23 families were identified. Of these, seven belong to *Ascomycetes* and 67 belong to *Basidiomycetes*.

Key Words: Bozkır, Macrofungi, Flora, Turkey

Bozkır İlçesi Makromantarları

Özet: 2000-2001 yıllarının özellikle ilkbahar ve sonbahar aylarında Bozkır ilçesinin farklı lokalitelerinden makromantar örnekleri toplanmıştır. Arazi ve laboratuvar çalışmaları sonucu 23 familyaya ait 74 tür bulunmuştur. Bunlardan 7'si *Ascomycetes*, 67'si *Basidiomycetes* sınıflarına aittir.

Anahtar Sözcükler: Bozkır, Makromantarlar, Flora, Türkiye.

Introduction

While much research has been done on macrofungi, studies on Turkish macrofungi flora are still incomplete.

The Bozkır district was chosen as the research area for this study, because its macrofungi have not been investigated. Plant distributions and field features in Bozkır are very suitable for macrofungi growth. The field study was chiefly carried out in the autumn and spring.

The Bozkır district is 1489 km² (Figure 1). The region is surrounded by Çumra and Akören in the north, Hadim and Antalya in the south, Güneysınır in the east, and Antalya and Ahırılı in the west.

The climate of Bozkır is a humid and semi-humid Mediterranean type.

Materials and Methods

The materials for this study were collected during field trips in the Bozkır district (Figure 1) in 2000-2001. The morphological and ecological characteristics of the macrofungi were recorded and they were photographed

in their natural habitats. Specimens were then taken to the laboratory and spore prints were obtained. The identification of taxa was carried out according to the literature (Kreisel, 1969; Watling, 1973; Moser, 1983; Phillips, 1981; Michael et al., 1983, 1985, 1986, 1987; Grünert & Grünert, 1984, 1991; Breitenbach & Kränzlin, 1984, 1986, 1991, 1995; Pegler, 1987; Hennig & Kreisel, 1987; Dähncke, 1988; Bresinsky & Besl, 1990; Ellis & Ellis, 1990; Tröger, 1990; Dähncke, 1993; Jordan, 1996; Smith, 1996; Winkler, 1996; Gerhardt, 1997; and Pace, 1998).

The specimens are kept in the Fungarium of Selçuk University Mushroom Application and Research Centre.

Results

Ascomycetes

Morchellaceae

1. *Morchella conica* Pers. var. *conica* Pers.

Üçpınar town, 26.04.2001, 1750 m, Kaşık-Doğan-Sabahlar 21.

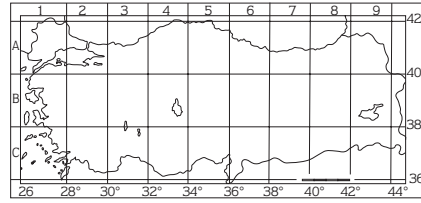
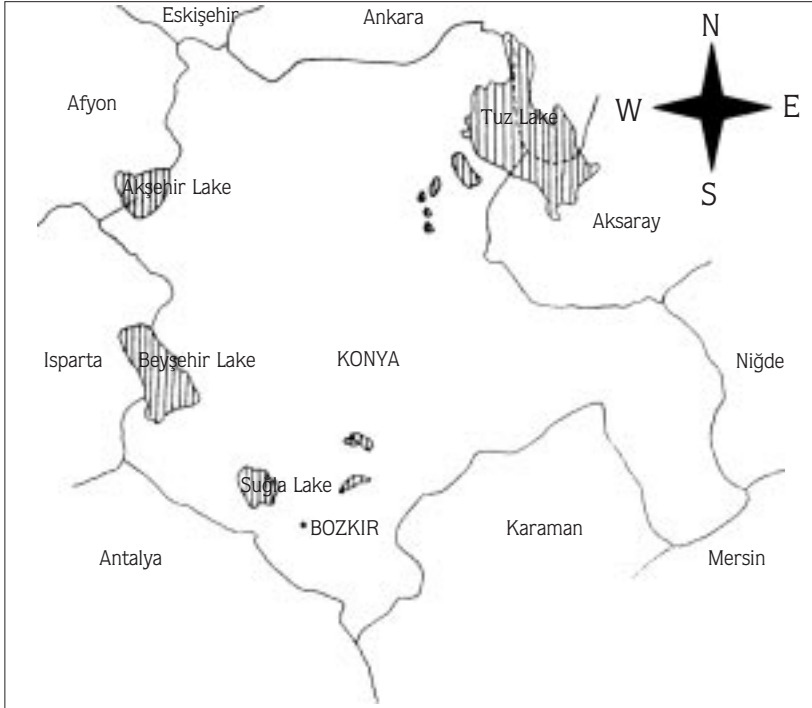


Figure 1. Study area (1/1390000)



2. *Morchella elata* Fr.

Üçpınar town, 26.04.2001, 1700 m, Kaşık-Doğan-Sabahlar 17.

3. *Morchella esculenta* Pers.: *St. Amans* var. *umbrina* Boud.

Üçpınar town, 10.05.2001, 1750 m, Kaşık-Doğan-Sabahlar 39.

Helvellaceae

4. *Helvella leucomelaena* (Pers.) Nannf.

Syn: *Paxina leucomelas* (Pers.) O.Kuntze

Acetabula leucomelas (Pers.) Sacc.

Peziza amphora Quéf.

Üçpınar town, 22.05.2001, 1700 m, Kaşık-Sabahlar 47.

5. *Helvella spadicea* Schaeff.

Syn: *Helvella leucopus* Pers.

Hacıyunuslar village, 09.05.2001, 1250 m, Kaşık-Sabahlar 38.

Humariaceae

6. *Sepultaria sumneriana* (Cke.) Mass.

Between Sarioğlan and Boyalı, 29.04.2000, 1350 m, Öztürk-Aktaş 2; Üçpınar town, 09.05.2001, 1700 m, Kaşık-Sabahlar 37.

Pezizaceae

7. *Sarcosphaera crassa* (Santi: Steudel) Pouz.

Syn: *Sarcosphaera eximia* (Dur. et Lév.) R.Maire

Sarcosphaera coronaria (Jacq.: Cke.) Boud.

Üçpınar town, 26.04.2001, 1750 m, Kaşık-Doğan-Sabahlar 18.

Basidiomycetes**Hymenochaetaceae****8. Phellinus igniarius (L.: Fr.) Quél.**

Syn: *Polyporus igniarius* L.: Fr.

Trametes igniarius Karsten

Fomes igniarius (L.: Fr.) Fr.

Fomes trivialis Bresadol

Çarşamba Çayı edge, 29.04.2000, 1100 m, Öztürk-Aktaş 4,5; Papuççular village, water edge, 29.11.2000, 1200 m, Kaşık-Sabahlar 14; Kovanlık village, water edge, 26.04.2001, 1100 m, Kaşık-Doğan-Sabahlar 28.

9. Phellinus tuberculatus (Baumg.) Niemelä

Syn: *Phellinus pomaceus* (Pers.: S.F.Gray) Maire

Çarşamba Çayı edge, 26.05.2001, 1100 m, Öztürk-Aktaş 170.

Polyporaceae**10. Fomes fomentarius (L.: Fr.) Fr.**

Bozkır-Dere roadside, 29.04.2000, 1100 m, Öztürk-Aktaş 14; Papuççular village, 26.04.2001, 1200 m, Kaşık-Doğan-Sabahlar 30.

11. Trametes gibbosa (Pers.: Fr.) Fr.

Çarşamba Çayı edge, 29.04.2000, 1100 m, Öztürk-Aktaş 6; Kovanlık village, 22.05.2001, 1100 m, Kaşık-Sabahlar 59.

12. Trametes hirsuta (Wulf.: Fr.) Pil.

Aygırdibi, 13.05.2000, 1350 m, Öztürk-Aktaş 73; Sorkun-Dere roadside, 14.05.2000, 1260 m, Öztürk-Aktaş 66; Yaz village, 22.05.2001, 1500 m, Kaşık-Sabahlar 54.

Geastraceae**13. Geastrum pectinatum Pers.**

Üçpınar town, 22.05.2001, 1700 m, Kaşık-Sabahlar 51.

Lycoperdaceae**14. Bovista plumbea Pers.: Pers.**

Tepelice village, 22.05.2001, 1500 m, Kaşık-Sabahlar 53.

15. Lycoperdon mamaeforme Pers.: Pers.

Hisarlık village, 28.11.2000, 1500 m, Kaşık-Sabahlar 24.

16. Lycoperdon molle Pers.: Pers.

Aygırdibi, 13.05.2000, 1370 m, Öztürk-Aktaş 75; Hisarlık village, 28.11.2000, 1500 m, Kaşık-Sabahlar 11; Üçpınar town, 22.05.2001, 1700 m, Kaşık-Sabahlar 52.

Astraeaceae**17. Astraeus hygrometricus (Pers.) Morg.**

Karacaardıç village, 28.11.2000, 1500 m, Öztürk-Aktaş 30; Yaz village, 28.11.2000, 1450 m, Kaşık-Sabahlar 6.

Tulostomataceae**18. Tulostoma brumale Pers.:Pers**

Syn: *Tulostoma mammosum* Fr.

Yazdamı village, 22.05.2001, 1600 m, Kaşık-Sabahlar 55.

Rhizopogonaceae**19. Rhizopogon roseolus (Fr.: Fr.) Th. Fr.**

Akçapınar village, 29.04.2000, 1300 m, Öztürk-Aktaş 17; Üçpınar town, 26.04.2001, 1700 m, Kaşık-Doğan-Sabahlar 22.

Boletaceae**20. Boletus reticulatus Schaeff.**

Syn: *Boletus edulis* subsp. *reticulatus* (Schaeff.) Konr. & Maubl.

Boletus aestivalis Paulet: Fr.

Aygırdibi, 13.05.2000, 1400 m, Öztürk-Aktaş 72; Üçpınar town, 22.05.2001, 1750 m, Kaşık-Sabahlar 49.

21. Suillus grevillei (Klotzsch: Fr.) Sing.

Syn: *Suillus flavus* (With.) Sing.

Boletus elegans Schum.

Üçpınar town, 28.11.2000, 1750 m, Kaşık-Sabahlar 3.

22. Suillus luteus (L.) S.F.Gray.

Sorkun-Dere roadside, 14.05.2000, 1260 m, Öztürk-Aktaş 114; Üçpınar town, 28.11.2000, 1750 m, Kaşık-Sabahlar 5.

23. Xerocomus subtomentosus (L.) Quél.

Syn: *Boletus subtomentosus* L.

Sorkun-Dere roadside, 22.05.2001, 1260 m, Öztürk-Aktaş 168.

Pleurotaceae

24. *Lentinus tigrinus* (Bull.: Fr.) Fr.

Syn: *Panus tigrinus* (Bull.: Fr.) Sing.

Pınarcık village water edge, 29.04.2000, 1100 m, Öztürk-Aktaş 20,26; Kovanlık village, 26.04.2001, 1100 m, Kaşık-Doğan-Sabahlar 25.

25. *Pleurotus ostreatus* (Jacq.: Fr.) Kumm.

Pınarcık village water edge, 29.04.2000, 1100 m, Öztürk-Aktaş 22; Soğucak village, 26.04.2001, 1200 m, Kaşık-Doğan-Sabahlar 26.

26. *Pleurotus salignus* Fr.

Çağlayan village, 29.04.2000, 1150 m, Öztürk-Aktaş 8.

Tricholomataceae

27. *Clitocybe fragrans* (With.: Fr.) Kumm.

Syn: *Clitocybe suaveolens* (Schum. ex Fr.) Kumm. auct. p.p.

Sorkun-Dere roadside, 29.11.2000, 1280 m, Öztürk-Aktaş 122.

28. *Collybia butyrecea* (Bull.: Fr.) Kumm. var. *butyrecea* Fr.

Tepelice village, 28.11.2000, 1500 m, Kaşık-Sabahlar 8.

29. *Collybia dryophila* (Bull.: Fr.) Kumm.

Sorkun-Dere roadside, 29.11.2000, 1280 m, Öztürk-Aktaş 135; Üçpınar town, 28.11.2000, 1750 m, Kaşık-Sabahlar 1; Hisarlık village, 22.05.2001, 1500 m, Kaşık-Sabahlar 56.

30. *Cystoderma granulorum* (Batsch: Fr.) Fay.

Sorkun-Dere roadside, 29.11.2000, 1280 m, Öztürk-Aktaş 127; Hisarlık village, 28.11.2000, 1500 m, Kaşık-Sabahlar 13.

31. *Melanoleuca cognata* (Fr.) Konr. & Maubl. ss. Lge. var. *cognata* Kühn.

Syn: *Tricholoma cognatum* (Fr.) Gill. ss. Lge.

Tricholoma arcuatum (Bull.: Fr.) Qué. ss. Bres.

Hacıyunuslar village, 10.05.2001, 1250 m, Kaşık-Doğan-Sabahlar 44.

32. *Melanoleuca graminicola* (Vel.) Kühn. & Mre.

Syn: *Melanoleuca graminicola* var. *minor* ined.

Sorkun-Dere roadside, 29.04.2000, 1280 m, Öztürk-Aktaş 12.

33. *Melanoleuca stridula* (Fr.) Sing.

Hacıyunuslar village, 22.05.2001, 1250 m, Kaşık-Sabahlar 64.

34. *Melanoleuca subalpina* (Britz.) Bresinsky & Stangl

Syn: *Melanoleuca evenosa* ss. Konr.

Tricholoma crista ss. Bres.

Karacaardıç village Sarılar Ağaçı, 30.04.2000, 1550 m, Öztürk-Aktaş 33.

35. *Melanoleuca substrictipes* Kühn.

Papuççular village, 26.04.2001, 1200 m, Kaşık-Doğan-Sabahlar 36.

36. *Mycena adonis* (Bull.: Fr.) Gray.

Sorkun-Dere roadside, 29.11.2000, 1280 m, Öztürk-Aktaş 126.

37. *Mycena polygramma* (Bull.: Fr.) S.F. Gray

Sorkun-Dere roadside, 29.11.2000, 1280 m, Öztürk-Aktaş 131; Yaz village, 28.11.2000, 1500 m, Kaşık-Sabahlar 7.

38. *Mycena pura* (Pers.: Fr.) Kumm. f. *pura*

Syn: *Mycena pseudopura* (Cke.) Sacc.

Sorkun-Dere roadside, 29.04.2000, 1280 m, Öztürk-Aktaş 13; 14.05.2000, 1280 m, Öztürk-Aktaş 71,72; 22.05.2001, 1280 m, Öztürk-Aktaş 166.

39. *Omphalina oniscus* (Fr.: Fr.) Quel.

Sorkun-Dere roadside, 29.11.2000, 1280 m, Öztürk-Aktaş 134.

40. *Strobilurus stephanocystis* (Hora) Sing.

Akçapınar village, 29.04.2000, 1400 m, Öztürk-Aktaş 19.

41. *Tricholoma populinum* Lge.

Syn: *Tricholoma suffocatum* Richon et Roze

Tricholoma pessundatum ss. Konr. & Maubl.

Soğucak village, 29.11.2000, 1250 m, Kaşık-Sabahlar 15.

42. *Tricholoma portentosum* (Fr.) Quel.

Aygırdibi, 13.05.2000, 1380 m, Öztürk-Aktaş 61.

43. *Tricholoma scalpturatum* (Fr.) QuéL.

Syn: *Tricholoma argyraceum* (Bul.) Gill.

Aygırdibi, 13.05.2000, 1380 m, Öztürk-Aktaş 62,77; Sorkun-Dere roadside, 29.11.2000, 1280 m, Öztürk-Aktaş 129.

44. *Tricholoma terreum* (Schaeff.: Fr.) Kumm.

Sorkun-Dere roadside, 14.05.2000, 1280 m, Öztürk-Aktaş 109; Üçpınar town, 10.05.2001, 1700 m, Kaşık-Doğan-Sabahlar 41.

Pluteaceae

45. *Volvariella speciosa* (Fr.) Sing.

Karacaardıç village, Göbetle, 30.04.2000, 1550 m, Öztürk-Aktaş 32; Aygırdibi, 13.05.2000, 1380 m, Öztürk-Aktaş 78.

Amanitaceae

46. *Amanita excelsa* (Fr.) Bertillon

Syn: *Amanita ampla* Pers.

Amanita spissa (Fr.) Kumm.

Aydıncık village, 07.06.2000, 1300 m, Öztürk-Aktaş 115.

47. *Amanita strobiliformis* (Paul. ex Vitt.) Bertillon

Syn: *Amanita solitaria* (Bull.: Fr.) Kumm. ss. auct. europ. plur.

Amanita pellita Paul. ex Bertillon

Aydıncık village, 26.05.2001, 1300 m, Öztürk-Aktaş 172.

Lepiotaceae

48. *Lepiota alba* (Bres.) Sacc.

Hacıyuluslar village, 10.05.2001, 1200 m, Kaşık-Doğan-Sabahlar 46.

49. *Lepiota oreadiformis* Vel.

Syn: *Lepiota laevigata* (Lge.) Rea

Lepiota pratensis (Fr.) Rea

Aygırdibi, 13.05.2000, 1380 m, Öztürk-Aktaş 76.

50. *Leucoagaricus badhamii* (Berk. & Br.) Sing.

Syn: *Lepiota meleagroides* Huijism

Leucocoprinus badhamii (Berk. & Br.) Locquin

Pınarcık village water edge, 29.04.2000, 1100 m, Öztürk-Aktaş 21.

Agaricaceae

51. *Agaricus bisporus* (Lge.) Imbach

Syn: *Agaricus hortensis* (Cke.) Imai

Aygırdibi, 13.05.2000, 1380 m, Öztürk-Aktaş 71; Yaz village, 10.05.2001, 1400 m, Kaşık-Doğan-Sabahlar 43.

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

Papuççular village, 10.05.2001, 1250 m, Kaşık-Doğan-Sabahlar 45.

53. *Agaricus essettei* Bon

Syn: *Agaricus abruptibulbus* Peck. ss. auct. europ.

Psalliota silvicola ss. Lge.

Sorkun town, 29.04.2000, 1300 m, Öztürk-Aktaş 15; Karacaardıç village, Göbetle, 30.04.2000, 1550 m, Öztürk-Aktaş 31.

Coprinaceae

54. *Coprinus atramentarius* (Bull.: Fr.) Fr.

Papuççular village, 22.05.2001, 1200 m, Kaşık-Sabahlar 60.

55. *Coprinus comatus* (Müll.) S.F.Gray

Çağlayan village, 29.04.2000, 1150 m, Öztürk-Aktaş 7; Pınarcık village, 29.04.2000, 1100 m, Öztürk-Aktaş 27; Karacaardıç village, 30.04.2000, 1400 m, Öztürk-Aktaş 28; Kovanlık village, 26.04.2001, 1100 m, Kaşık-Doğan-Sabahlar 33; Hacıyuluslar village, 22.05.2001, 1200 m, Kaşık-Sabahlar 65.

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

Syn: *Psathyrella disseminata* (Pers.: Fr.) QuéL.

Pseudocoprinus disseminatus (Pers.: Fr.) Kumm.

Hacıyuluslar village, 26.04.2001, 1250 m, Kaşık-Doğan-Sabahlar 34; Papuççular village, 10.05.2001, 1200 m, Kaşık-Doğan-Sabahlar 66.

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

Pınarcık village water edge, 29.04.2000, 1100 m, Öztürk-Aktaş 23; Hacıyuluslar village, 22.05.2001, 1250 m, Kaşık-Sabahlar 58.

58. *Panaeolus fimicola* (Fr.) Gill.

Syn: *Panaeolus dunensis* Bon & Courtec.

Dere town exit, 29.04.2000, 1200 m, Öztürk-Aktaş 11.

59. *Panaeolus olivaceus* Moell.

Akçapınar village, 29.04.2001, 1350 m, Öztürk-Aktaş 152.

60. *Panaeolus papilionaceus* (Bull.: Fr.) Quél.

Dere town exit, 29.04.2000, 1200 m, Öztürk-Aktaş 10; Akçapınar village, 29.04.2000, 1350 m, Öztürk-Aktaş 18; Sorkun-Dere roadside, 22.05.2001, 1250 m, Öztürk-Aktaş 67; Papuççular village, 22.05.2001, 1200 m, Kaşık-Sabahlar 62; Hacıyunuslar village, 10.05.2001, 1200 m, Kaşık-Doğan-Sabahlar 67.

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

Syn: *Hypoloma egenula* (Berk. & Br.) Sacc.

Aygırdibi, 13.05.2000, 1380 m, Öztürk-Aktaş 65,67; Hisarlık village, 10.05.2001, 1500 m, Kaşık-Doğan-Sabahlar 42.

62. *Psathyrella tephrophylla* (Romagn.) Bon

Aygırdibi, 13.05.2000, 1380 m, Öztürk-Aktaş 60.

Bolbitiaceae

63. *Agrocybe paludosa* (Lge.) Kühn. & Romagn.

Syn: *Pholiota praecox* var. *paludosa* Lge.

Aygırdibi, 13.05.2000, 1400 m, Öztürk-Aktaş 69.

64. *Agrocybe praecox* (Pers.: Fr.) Fay.

Syn: *Agrocybe praecox* (Pers.: Fr.) Kumm.

Papuççular village, 22.05.2001, 1200 m, Kaşık-Sabahlar 61.

65. *Agrocybe semiorbicularius* (Bull.: Fr.) Fay.

Syn: *Agrocybe arenaria* (Peck.) Sing.

Agrocybe arenicola (Berk.) Sing.

Agrocybe pediades (Fr.) Fay.

Akçapınar village, 29.04.2000, 1250 m, Öztürk-Aktaş 16.

66. *Conocybe tenera* (Schaeff.: Fr.) Fay.

Hacıyunuslar village, 26.04.2001, 1200 m, Kaşık-Doğan-Sabahlar 32.

Strophariaceae

67. *Hypholoma fasciculare* (Huds.: Fr.) Kumm.

Üçpınar town, 26.04.2001, 1750 m, Kaşık-Doğan-Sabahlar 20.

68. *Pholiota tuberculosa* (Schaeff.: Fr.) Kumm.

Syn: *Pholiota curvipes* (Fr.) Quél.

Pınarcık village water edge, 29.04.2000, 1100 m, Öztürk-Aktaş 24.

Cortinariaceae

69. *Hebeloma eburneum* Mal.

Harmanpınar village road, 30.04.2000, 1300 m, Öztürk-Aktaş 34; Üçpınar town, 28.11.2000, 1750 m, Kaşık-Sabahlar 4; Soğucak village, 26.04.2001, 1250 m, Kaşık-Doğan-Sabahlar 19; Hisarlık village, 22.05.2001, 1500 m, Kaşık-Sabahlar 57.

70. *Hebeloma mesophaeum* (Pers.: Fr.) Quél.

Üçpınar town, 26.04.2001, 1750 m, Kaşık-Doğan-Sabahlar 29.

71. *Inocybe fastigiata* (Schaeff.: Fr.) Quél.

Üçpınar town, 22.05.2001, 1700 m, Kaşık-Sabahlar 50.

72. *Inocybe queletii* Maire & Konrad

Aygırdibi, 13.05.2000, 1400 m, Öztürk-Aktaş 70.

Russulaceae

73. *Russula ochroleuca* (Pers.) Fr.

Karacaardıç village, 11.06.2000, 1500 m, Öztürk-Aktaş 116.

74. *Russula sanguinea* (Bull.: St. Am.) Fries.

Üçpınar town, 28.11.2000, 1750 m, Kaşık-Sabahlar 2.

Discussion

With this study, 74 macrofungi taxa have been determined. Of these, seven belong to *Ascomycetes* and 67 belong to *Basidiomycetes*.

The distribution of 74 species into families is as follows: *Morchellaceae* 3, *Helvellaceae* 2, *Humariaceae* 1, *Pezizaceae* 1, *Hymenochaetaceae* 2, *Polyporaceae* 3, *Geastraceae* 1, *Lycoperdaceae* 3, *Astraeaceae* 1, *Tulostomataceae* 1, *Rhizopogonaceae* 1, *Boletaceae* 4,

Pleurotaceae 3, *Tricholomataceae* 18, *Pluteaceae* 1, *Amanitaceae* 2, *Lepiotaceae* 3, *Agaricaceae* 3, *Coprinaceae* 9, *Bolbitiaceae* 4, *Strophariaceae* 2, *Cortinariaceae* 4, *Russulaceae* 2.

The most widespread families in the region are *Tricholomataceae* (18) and *Coprinaceae* (9). These families grow easily because they do not require a special habitat.

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