

# The Macrofungi of Karabük Province

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**Abstract:** This study was based on specimens of macrofungi collected from Karabük province between 1998 and 2000. It resulted in the identification of 121 taxa belonging to 33 families, and 14 taxa were added to the Turkish mycota flora as new records.

**Key Words:** Turkish mycota, flora, Karabük, Turkey

## Karabük Yöresi Makrofungusları

**Özet:** Bu çalışma 1998-2000 yılları arasında Karabük yöresinden toplanan mantar örneklerine dayanılarak yapılmıştır. Arazi ve laboratuvar çalışmaları sonucu 33 familyaya ait 121 takson teşhis edilmiştir. Bunlardan 14 takson Türkiye mikoflorasına yeni ilave edilmiştir.

**Anahtar Sözcükler:** Türkiye mikotasi, flora, Karabük, Türkiye

## Introduction

This investigation covers only Karabük province, which is located in the Western Black Sea region of Turkey (Figure 1). According to the Flora of Turkey grid system, Karabük is in the grid A4 square (Davis, 1965-1985). The climate of Karabük is of a semi-dry cool type. The annual rainfall average is 475.8 mm and the annual average temperature is 13.2 °C. The rainfall regime is WSAS (Akman, 1990).

The vegetation of the study area is dominated by coniferous and broadleaved trees. Mat (2000) has previously reported some studies carried out in different parts of Turkey. It seems that research around Karabük province is inadequate. The present research was planned not only because of the lack of data from the area but also as an investigation of the effect of climate on vegetation in the growth of macrofungi.

## Materials and Methods

Mushroom specimens were collected from the research area during field trips between 1998 and 2000.

The morphological and ecological properties of the specimens were recorded where they were found and their microscopic features determined in the laboratory. They were identified with the help of Phillips (1981), Moser apud Gams (1983), Marchand (1971-1986), Michael et al. (1983-1988), Breitenbach and Kränzlin (1984-1991) and Dähncke (1993). The specimens were prepared as herbarium material and stored in the laboratory of Selçuk University, Education Faculty, Science Education Department.

## Results

Fungus specimens collected from the research area are listed below. In the list, A and Y indicate Afyon and Yağız, respectively, as collectors of particular specimens.

### Ascomycetes

#### Helvellaceae

##### 1. *Helvella lacunosa* Afzel.

A4 Safranbolu, Satköy village, near streams, under poplar, 380 m, 25.04.1999, A. Y. 1075.

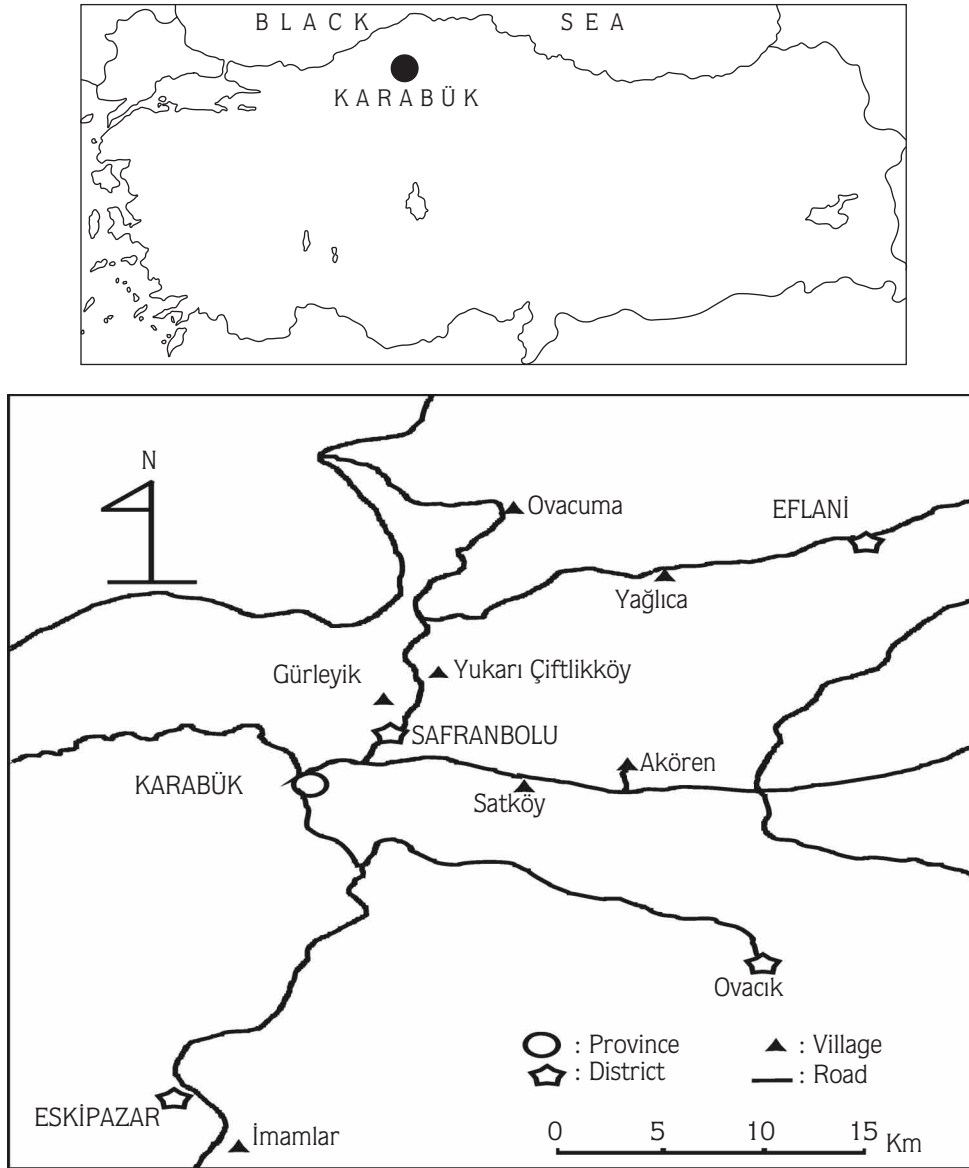


Figure 1. Study area.

2. *Helvella leucopus* Pers.

A4: Safranbolu, Satköy village, near streams, under poplar, 380 m, 23.04.1999, A. Y. 1049.

**Morchellaceae**

3. *Morchella esculenta* (L.) Pers. var. *esculenta*

A4 Safranbolu, Satköy villlage, near streams, under poplar, 380 m, 25.04.1999, A. Y. 1072.

**Pezizaceae**

4. *Caloscypha fulgens* (Pers.) Boud.

A4 Safranbolu, Gürleyik district, under fir trees, 825 m, 22.05.1999, A. Y. 1127.

5. *Peziza vesiculosa* Bull.

A4 Safranbolu, Gürleyik district, on compost heap, 825 m, 22.05.1999, A. Y. 1128.

**Pyronemataceae**

6. *Flavoscypha cantharella* (Fr.) Harmaja

A4 Safranbolu, Gürleyik district, under beech trees, 825 m, 27.05.2000, A. Y. 1617.

### Basidiomycetes

#### Agaricaceae

##### 7. *Agaricus bisporus* (J.E.Lange) Pilát

A4 Safranbolu-Bartın highway 16 km along, in grass, 1030 m, 15.11.1998, A. Y. 1029.

##### 8. *Agaricus campestris* L.

A4 Safranbolu-Bartın highway 16 km along, in grass, 1030 m, 15.11.1998, A.1028.

##### 9. *Agaricus silvicola* (Vittad.) Peck

A4 Safranbolu, Gürleyik district, in grass, 825 m, 15.11.1998, A. 988.

##### 10. *Lepiota cristata* (Bolton) P.Kumm.

A4 Safranbolu-Bartın highway 16 km along, in pastures, 1030 m, 15.11.1998, A. Y. 1044.

##### 11. *Macrolepiota rhacodes* (Vittad.) Singer

A4 Safranbolu-Bartın highway 16 km along, in grass, 1030 m, 15.11.1998, A. Y. 1027.

#### Albatrellaceae

##### 12. *Albatrellus cristatus* (Schaeff.) Kotl. & Pouzar

A4 Safranbolu, Yukarı Çiftlikköy village, 825 m, under broadleaved trees, 25.10.1998, A. Y. 818; Safranbolu, Gürleyik district, 825 m, 15.11.1998, A. Y. 1014.

#### Bankeraceae

##### 13. *Hydnellum auratile* (Britzelm.) Maas Geest.

A4 Safranbolu, Yukarı Çiftlikköy village, on soil in coniferous forest, 825 m, 25.10.1998, A. Y. 817.

#### Bolbitiaceae

##### 14. *Agrocybe vervacti* (Fr.) Singer

A4 Eflani, Yağlıca village, in grass, 880 m, 22.05.1999, A. Y. 1118.

##### 15. *Conocybe tenera* (Schaeff.) Fayod

A4 Safranbolu, Satköy village, near streams, in grass, 380 m, 23.04.1999, A. Y. 1050.

#### Boletaceae

##### 16. *Leccinum carpini* (R.Schulz) M.M.Moser

A4 Safranbolu, Gürleyik district, in mixed forest, 825 m, 15.11.1998, A. Y. 1017.

##### 17. *Xerocomus subtomentosus* (L.) Fr.

A4 Eskipazar, around İmamlar village, under oak, 950 m, 15.11.1998, A. Y. 945; A4 Safranbolu, Gürleyik district, under broadleaved trees, 825 m, 15.11.1998, A. Y. 963.

#### Clavariaceae

##### 18. *Clavulinopsis corniculata* (Schaeff.) Corner

A4 Safranbolu, Gürleyik district, in meadows among grasses, 825 m, 15.11.1998, A. Y. 978.

#### Clavulinaceae

##### 19. *Clavulina cinerea* (Bull.) J.Schröt.

A4 Safranbolu, Gürleyik district, in fir forest, 825 m, 15.11.1998, A. Y. 979.

#### Coprinaceae

##### 20. *Coprinus comatus* (O.F.Müll.) Gray

A4 Safranbolu, Centre, sandy soil, 300 m, 18.05.1998, A. Y. 413.

##### 21. *Psathyrella candolleana* (Fr.) Maire

A4 Ovacuma, Centre, on or near deciduous trees, 380 m, 22.05.1999, A. Y. 1129.

##### 22. *Psathyrella obtusata* (Fr.) A.H.Sm.

A4 Ovacuma, Centre, on or near deciduous trees, 380 m, 22.05.1999, A. Y. 1130.

#### Cortinariaceae

##### 23. \**Cortinarius cinnamomeoluteus* P.D.Orton

Safranbolu, Yukarı Çiftlikköy village, 825 m, on damp forest soil, 25.10.1998, A. D. 814.

##### 24. \**Cortinarius fasciatus* Fr. ss. J.E.Lange

Syn: *Cortinarius fulvescens* Fr.

Safranbolu, Gürleyik district, in coniferous forest, 825 m, 22.05.1999, A. D. 1124.

##### 25. *Cortinarius gentilis* (Fr.) Fr.

A4 Centre, Ovacık highway 5 km along, 380 m, in pine forest, 15.11.1998, A. 958.

##### 26. \**Cortinarius herbarum* Rob.Henry

Safranbolu, Gürleyik district, in coniferous forest, 825 m, 15.11.1998, A. D. 1007.

##### 27. *Cortinarius splendens* Rob.Henry

A4 Centre, Ovacık highway 5 km along, 380 m, in mixed forest, 15.11.1998, A. 959; A4 Safranbolu,

Gürleyik district, under broadleaved trees, 825 m, 15.11.1998, A. Y. 966.

28. *Cortinarius subturbinatus* Rob.Henry

A4 Safranbolu-Bartın highway 16 km along, in mixed forest, 1030 m, 15.11.1998, A. Y. 1046.

29. \**Dermocybe carpineti* M.M.Moser

Safranbolu, Yukarı Çiftlikköy village, among oak trees, 825 m, 25.10.1998, A. D. 815.

30. \**Dermocybe semisanguinea* (Fr.) M.M.Moser

Safranbolu-Bartın highway 16 km along, in coniferous forest, 1030 m, 25.10.1998, A. D. 825.

31. *Hebeloma eburneum* Malençon

A4 Safranbolu, Gürleyik district, under coniferous forest, 825 m, 22.05.1999, A. Y. 1123.

32. *Hebeloma edurum* Métrod ex Bon

A4 Safranbolu, Yukarı Çiftlikköy village, in grassy coniferous forest, 825 m, 25.10.1998, A. Y. 823.

33. *Hebeloma fragilipes* Romagn.

A4 Safranbolu, Gürleyik district, in mixed forest, 825 m, 15.11.1998, A. Y. 1009.

34. *Hebeloma sinapizans* (Fr.) Sacc.

A4 Safranbolu, Gürleyik district, under broadleaved trees, 825 m, 15.11.1998, A. 1008.

35. *Inocybe fastigiata* (Schaeff.) Quél.

A4 Safranbolu-Bartın highway 16 km along, in mixed forest, 1030 m, 25.10.1998, A. 828; Safranbolu, Gürleyik, 825 m, 22.05.1999, A.1125; A4 Eskipazar, around İmamlar village, 1000 m, 28.06.1999, A.1282.

36. *Inocybe geophylla* (Pers.) P.Kumm. var. *violaceae* (Pat.) Sacc.

A4 Safranbolu-Bartın highway 16 km along, in grassy coniferous forest, 1030 m, 15.11.1998, A. Y. 1033.

37. *Inocybe nitidiuscula* (Britzelm.) Lapl.

A4 Centre, Ovacık highway 5 km along, in pine forest, 380 m, 15.11.1998, A. 949.

38. *Inocybe patouillardii* Bres.

A4 Eskipazar, around İmamlar village, under broadleaved trees, 950 m, 17.05.1998, A. 412; Centre, Ovacık highway 5 km along, 380 m, 15.11.1998, A. 948.

39. *Inocybe queletii* Konrad

A4 Centre, Ovacık highway 5 km along, in pine forest, 380 m, 15.11.1998, A. Y. 950.

Entolomataceae

40. *Entoloma saepium* (Noulettef-Dass.) Richon & Roze

A4 Safranbolu, Yukarı Çiftlikköy village, among shrubs, 825 m, 25.10.1998, A. 821.

Ganodermataceae

41. *Ganoderma applanatum* (Pers.) Pat.

A4 Safranbolu, Gürleyik district, parasitic on oak trees, 825 m, 15.11.1998, A. Y. 973.

42. *Ganoderma lucidum* (Curtis) P.Karst.

A4 Safranbolu, Gürleyik district, on roots of broadleaved trees, 825 m, 15.11.1998, A. Y. 974.

Gomphaceae

43. *Clavariadelphus truncatus* (Quél.) Donk

A4 Safranbolu, Gürleyik district, under fir trees, 825 m, 15.11.1998, A. Y. 968.

Gomphidiaceae

44. *Chroogomphus helveticus* (Singer) M.M.Moser

A4 Safranbolu, Gürleyik district, in coniferous forest, 825 m, 15.11.1998, A. Y. 1018.

45. *Chroogomphus rutilus* (Schaeff.) O.K.Mill.

A4 Safranbolu, Yukarı Çiftlikköy village, in coniferous forest, 825 m, 25.10.1998, A. Y. 819; Safranbolu, Gürleyik district, 825 m, 15.11.1998, A. Y. 1019.

Hydnangiaceae

46. *Laccaria laccata* (Scop.) Fr.

A4 Safranbolu, Gürleyik district, under coniferous and broadleaved trees, 825 m, 15.11.1998, A. Y. 1006.

Hymenochataceae

47. *Phellinus tremulae* (Bondartsev) Bondartsev & Borissov

A4 Eskipazar, around İmamlar village, parasitic or saprophytic on oak, 950 m, 15.11.1998, A. Y. 944.

Lycoperdaceae

48. *Calvatia excipuliformis* (Scop.) Perdeck

A4 Safranbolu, Gürleyik district, in pastures, 825 m, 15.11.1998, A. Y. 1011.

49. *Calvatia utriformis* (Bull.) Jaap

A4 Eskipazar, around İmamlar village, in pastures, 1000 m, 28.06.1999, A. Y. 1283.

50. *Lycoperdon perlatum* Pers.

A4 Safranbolu, Gürleyik district, in pastures, 825 m, 15.11.1998, A. Y. 1010.

51. *Lycoperdon pyriforme* Schaeff.

A4 Safranbolu-Bartın highway 16 km along, on dead wood of broadleaved and coniferous trees, 1030 m, 15.11.1998, A. Y. 1045.

52. *Vascellum pratense* (Pers.) Kreisel

A4 Safranbolu-Bartın highway 16 km along, in pastures, 1030 m, 25.10.1998, A. Y. 824.

## Marasmiaceae

53. *Armillaria mellea* (Vahl.) P.Kumm.

A4 Safranbolu, Gürleyik district, on wood of beech, 825 m, 15.11.1998, A. Y. 1013.

54. *Marasmius androsaceus* (L.) Fr.

A4 Safranbolu, Gürleyik district, on dead twigs of conifer, 825 m, 15.11.1998, A. Y. 1021.

55. \**Strobilurus tenacellus* (Pers.) Singer

Eflani, Yağlıca village, on conifer cones, 880 m, 22.05.1999, A.D. 1120.

56. *Xerula radicata* (Rehhan) Dörfelt

A4 Safranbolu, Gürleyik district, on or near dead stumps of beech trees, 825 m, 25.10.1998, A. Y. 812.

## Paxillaceae

57. *Paxillus filamentosus* Fr.

A4 Safranbolu, Satköy village, near streams, under poplar, 380 m, 25.04.1999, A. 1074.

## Pleurotaceae

58. *Pleurotus eryngii* (DC.) Gillet

A4 Safranbolu, Gürleyik district, on decaying remains of umbellifers, 825 m, 15.11.1998, A. Y. 1023.

59. *Pleurotus ostreatus* (Jacq.) P.Kumm.

A4 Safranbolu, Gürleyik district, on stumps of fir wood, 825 m, 15.11.1998, A. 1022.

## Polyporaceae

60. *Polyporus brumalis* (Pers.) Fr.

A4 Safranbolu, around Akören village, on dead branches of oak trees, 350 m, 18.05.1998, A. Y. 415; Safranbolu, 825 m, 15.11.1998, A. Y. 969; Eflani, Yağlıca village, 880 m, 22.05.1999, A. Y. 1119.

61. *Trametes pubescens* (Schumach.) Pilát

A4 Safranbolu, Gürleyik district, on dead branches of beech trees, 825 m, 15.11.1998, A. Y. 972.

## Pluteaceae

62. *Amanita gemmata* (Fr.) Bertill.

A4 Safranbolu-Bartın highway 16 km along, in oak forest, 1030 m, 15.11.1998, A. 1034.

63. *Amanita ovoidea* (Bull.) Link

A4 Safranbolu, around Akören village, in mixed forest, 350 m, 18.05.1998, A. Y. 414; Yukarı Çiftlikköy village, 825 m, 25.10.1998, A. Y. 813.

64. \**Limacella illinita* (Fr.) Maire

Centre, Ovacık highway 5 km along, in mixed forest, 380 m, 15.11.1998, A. D. 962.

## Ramariaceae

65. *Ramaria flava* (Tourn. ex Battarra) Quéf.

A4 Safranbolu, Gürleyik district, under broadleaved trees, 825 m, 15.11.1998, A. 985.

66. \**Ramaria flavobrunnescens* (G.F.Atk.) Corner

Safranbolu, Gürleyik district, in mixed forest, 825 m, 15.11.1998, A. D. 986.

67. *Ramaria lutea* (Vent.) Schild

A4 Safranbolu, Gürleyik district, under beech trees, 825 m, 15.11.1998, A. 987.

## Rhizopogonaceae

68. *Rhizopogon roseolus* (Corda) Th.Fr.

A4 Centre, Ovacık highway 5 km along, on sandy soil, 380 m, 15.11.1998, A. Y. 955.

## Russulaceae

69. *Lactarius chrysorrheus* Fr.

A4 Safranbolu, Gürleyik district, under oak trees, 825 m, 15.11.1998, A. Y. 980.

70. *Lactarius deliciosus* (L.) Gray

A4 Centre, Ovacık highway 5 km along, under coniferous trees, 380 m, 15.11.1998, A. Y. 954; Safranbolu, Gürleyik district, 825 m, 15.11.1998, A. Y. 965.

71. *Lactarius intermedius* Krombh.

A4 Safranbolu, Gürleyik district, in fir forest, 825 m, 15.11.1998, A. Y. 1020.

72. *Russula aeruginea* Fr.

A4 Safranbolu, Gürleyik district, under beech trees, 825 m, 15.11.1998, A. Y. 981.

73. *Russula atropurpurea* (Krombh.) Britzelm.

A4 Safranbolu, Gürleyik district, under beech trees, 825 m, 15.11.1998, A. Y. 982.

74. *Russula cyanoxantha* (Schaeff.) Fr.

A4 Safranbolu-Bartın highway 16 km along, in fir forest, 1030 m, 25.10.1998, A. Y. 829; 15.11.1998, A. Y. 1043.

75. *Russula delica* Fr.

A4 Safranbolu-Bartın highway 16 km along, in mixed forest, 1030 m, 15.11.1998, A. Y. 1042; Eskipazar, around İmamlar village, 1000 m, 28.06.1999, A. Y. 1281.

76. *Russula emetica* (Schaeff.) Pers. var. *silvestris* Singer

A4 Safranbolu-Bartın highway 16 km along, in mixed forest, 1030 m, 15.11.1998, A. Y. 1031.

77. *Russula farinipes* Romell

A4 Eskipazar, around İmamlar village, under oak trees, 950 m, 05.07.1998, A. Y. 708.

78. *Russula maculata* Qué. & Roze

A4 Eskipazar, İmamlar village, under oak trees, 950 m, 05.07.1998, A. Y. 709.

**Sclerodermataceae**

79. *Astraeus hygrometricus* (Pers.) Morgan

A4 Eskipazar, around İmamlar village, on sandy soil under oaks, 950 m, 05.07.1998, A. Y. 710.

**Stereaceae**

80. *Stereum hirsutum* (Willd.) Pers.

A4 Safranbolu, Gürleyik district, on branches of oak, 825 m, 15.11.1998, A. Y. 970.

81. *Stereum ochraceoflavum* (Schwein.) Fr.

A4 Safranbolu, Gürleyik district, on wood oak dead, 825 m, 15.11.1998, A. Y. 971.

82. *Stereum sanguinolentum* (Alb. & Schwein.) Fr.

A4 Safranbolu-Bartın highway 16 km along, on dead fir wood, 1030 m, 15.11.1998, A. Y. 1032.

**Strophariaceae**

83. *Hypholoma fasciculare* (Huds.) Qué.

A4 Safranbolu, Gürleyik district, on stumps of coniferous and broadleaved trees, 825 m, 15.11.1998, A. Y. 976.

84. *Hypholoma sublateritium* (Schaeff.) Qué.

A4 Safranbolu, Gürleyik district, on broadleaved stumps, 825 m, 15.11.1998, A. Y. 975.

85. *Pholiota aurivella* (Batsch) Fr.

A4 Safranbolu, Gürleyik district, parasitic on willow trees, 825 m, 15.11.1998, A. Y. 1012.

86. *Pholiota flavida* (Schaeff.) Singer

A4 Safranbolu, Gürleyik district, on dead stumps of conifers, 825 m, 15.11.1998, A. Y. 977.

**Suillaceae**

87. *Suillus bellini* (Inzenga) Watling

A4 Centre, Ovacık highway 5 km along, in pine forest, 380 m, 15.11.1998, A. Y. 960.

88. *Suillus granulatus* (L.) Snell

A4 Centre, Ovacık highway 5 km along, in coniferous forest, 380 m, 15.11.1998, A. Y. 957; Safranbolu, Gürleyik district, 825 m, 15.11.1998, A. Y. 967.

89. *Suillus luteus* (L.) Gray

A4 Safranbolu, Yukarı Çiftlikköy village, in pine forest, 825 m, 25.10.1998, A. Y. 816; Centre, Ovacık highway 5 km along, 380 m, 15.11.1998, A. Y. 961; Safranbolu-Bartın highway 16 km along, 1030 m, 15.11.1998, A. Y. 1048.

**Tricholomataceae**

90. *Clitocybe dealbata* (Sowerby) Gillet

A4 Safranbolu-Bartın highway 16 km along, in grass, 1030 m, 25.10.1998, A. Y. 826; Centre, Ovacık highway 5 km along, 380 m, 15.11.1998, A. Y. 952; Safranbolu, Gürleyik district, 825 m, 15.11.1998, A. Y. 964.

91. *\*Clitocybe dicolor* (Pers.) J.E.Lange  
Centre, Ovacık highway 5 km along, in pine forest, 380 m, 15.11.1998, A. D. 951.
92. *Clitocybe geotropa* (Bull.) Quél.  
A4 Safranbolu, Gürleyik district, in coniferous forest, 825 m, 22.05.1999, A.1122; 27.05.2000, A.1616.
93. *\*Clitocybe lateritia* J.Favre  
Safranbolu-Bartın highway 16 km along, in pastures, 1030 m, 15.11.1998, A. D. 1039.
94. *Clitocybe odora* (Bull.) P.Kumm.  
A4 Safranbolu-Bartın highway 16 km along, in coniferous forest, 1030 m, 15.11.1998, A. Y. 1026.
95. *\*Collybia cirrhata* (Schumach.) P.Kumm.  
Eskipazar, around İmamlar village, in oak, on decomposed remains of mushrooms, 950 m, 15.11.1998, A. D. 943.
96. *Collybia dryophila* (Bull.) P.Kumm.  
A4 Centre, Ovacık highway 5 km along, among leaf litter under pine forest, 380 m, 15.11.1998, A. Y. 956; 03.11.2000, 380 m, A. Y. 1686.
97. *\*Cystoderma fallax* A.H.Sm. & Singer  
Safranbolu, Yukarı Çiftlikköy village, in pine forest, 825 m, 25.10.1998, A. D. 822.
98. *Lepista inversa* (Scop.) Pat.  
A4 Safranbolu-Bartın highway 16 km along, in coniferous forest, 1030 m, 15.11.1998, A. Y. 1047.
99. *Lepista nebularis* (Fr.) Harmaja  
A4 Safranbolu-Bartın highway 16 km along, in coniferous forest, 1030 m, 25.10.1998, A. Y. 827; 15.11.1998, A. Y. 1025.
100. *Lepista nuda* (Bull.) Cooke  
A4 Safranbolu, Gürleyik district, in coniferous forest, 825 m, 15.11.1998, A. 984.
101. *Lepista sordida* (Fr.) Singer  
A4 Safranbolu, Gürleyik district, along grassy forest edges, 825 m, 15.11.1998, A. Y. 983.
102. *Melanoleuca graminicola* (Velen) Kühner & Maire  
A4 Centre, Ovacık highway 5 km along, in grass, 380 m, 15.11.1998, A. Y. 946.
103. *Mycena epipterygia* (Scop.) Gray  
A4 Centre, Ovacık highway 5 km along, among leaf litter under conifer, 03.11.2000, 380 m, A. Y. 1684.
104. *Mycena galopus* (Pers.) P.Kumm.  
A4 Centre, Ovacık highway 5 km along, on decaying conifer, 03.11.2000, 380 m, A. Y. 1685.
105. *\*Mycena laevigata* (Lasch) Gillet  
Safranbolu-Bartın highway 16 km along, on mossy conifer, 1030 m, 15.11.1998, A. D. 1035.
106. *Mycena pura* (Pers.) P.Kumm.  
A4 Safranbolu-Bartın highway 16 km along, among leaf litter under conifer, 1030 m, 15.11.1998, A. 1030.
107. *Hygrocybe virginea* (Wulfen) P.D.Orton & Watling var. *fuscescens* (Bres.) Arnolds  
A4 Safranbolu, Gürleyik district, in grassy areas, 825 m, 15.11.1998, A. 1016.
108. *Hygrophorus discoxanthus* Rea  
A4 Safranbolu, Gürleyik district, in beech forest, 825 m, 15.11.1998, A. Y. 1015.
109. *Hygrophorus latitabundus* Britzelm.  
A4 Centre, Ovacık highway 5 km along, in pine areas, 380 m, 15.11.1998, A. 947.
110. *Hygrophorus unicolor* Gröger  
A4 Safranbolu-Bartın highway 16 km along, in beech forest, 1030 m, 15.11.1998, A. Y. 1040.
111. *Tricholoma album* (Schaeff.) P.Kumm.  
A4 Safranbolu-Bartın highway 16 km along, in broadleaved forest, 1030 m, 15.11.1998, A. Y. 1038.
112. *Tricholoma fracticum* (Britzelm.) Kreisel  
A4 Safranbolu, Gürleyik district, in coniferous forest, 825 m, 15.11.1998, A. Y. 1001.
113. *\*Tricholoma fulvum* (Bull.) Sacc.  
Safranbolu-Bartın highway 16 km along, in coniferous forest, 1030 m, 15.11.1998, A. D. 1036.
114. *Tricholoma lascivum* (Fr.) Gillet  
A4 Safranbolu, Gürleyik district, in broadleaved trees, 825 m, 15.11.1998, A. Y. 1005.
115. *Tricholoma orirubens* Quél.  
A4 Safranbolu, Gürleyik district, in coniferous forest, 825 m, 15.11.1998, A. Y. 1002.

116. *Tricholoma sejunctum* (Sowerby) Quéf.  
A4 Safranbolu, Gürleyik district, in mixed forest, 825 m, 15.11.1998, A. Y. 1003.
117. *Tricholoma sulphurescens* Bres.  
A4 Safranbolu, Gürleyik district, in mixed forest, 825 m, 15.11.1998, A. Y. 1000.
118. *Tricholoma sulphureum* (Bull.) P.Kumm.  
A4 Safranbolu, Gürleyik district, in mixed forest, 825 m, 15.11.1998, A. Y. 999.
119. *Tricholoma terreum* (Schaeff.) Quéf.  
A4 Safranbolu, Yukarı Çiftlikköy village, in coniferous forest, 825 m, 25.10.1998, A. Y. 820; Safranbolu, Gürleyik district, 825 m, 15.11.1998, A. Y. 1004.
120. *Tricholoma virgatum* (Fr.) P.Kumm.  
A4 Safranbolu-Bartın highway 16 km along, in coniferous forest, 1030 m, 15.11.1998, A. Y. 1037.
121. *Tricholomopsis rutilans* (Schaeff.) Singer  
A4 Safranbolu, Gürleyik district, on stumps of beech trees, 825 m, 15.11.1998, A. Y. 1024.

## Discussion and Conclusion

According to the results obtained, 121 macrofungi were identified, 6 of them belonging to *Ascomycetes* and 115 to *Basidiomycetes*. In comparison with other studies carried out near the study area (Öder, 1986, 1988; Sesli, 1993, 1998; Demirel, 1998, 1999; Afyon et al., 2000; Afyon and Konuk, 2001a, 2001b; Pekşen and Karaca,

2003; Afyon et al., 2004) the macrofungi species of Karabük appear to be fairly similar to those present in the region. This could be because of the similarities in vegetation and climate with the other parts of the western Black Sea region.

This study is the most extensive research in the area regarding the number of taxa and new records given. This might be due to the conditions of the study area, which exhibits many different habitats, such as mixed forests, and humid plants. The percentage of woodland of the research area is more than 65% and these conditions are optimal for the growth of mushrooms.

*Russula delica* is collected and consumed in İmamlar village of Eskipazar. *Clitocybe geotropa* is collected locally and sold in Safranbolu markets as an edible mushroom. *Lactarius deliciosus* is consumed in the study area. *Morchella esculenta* var. *esculenta* is collected for export.

Fourteen taxa were added to the Turkish macromycota as new records. These are *Limacella illiniata*, *Cortinarius cinnamomeoluteus*, *C. fasciatus*, *C. herbarum*, *Dermocybe carpineti*, *D. semisanguinea*, *Ramaria flavobrunnescens*, *Clitocybe bicolor*, *C. lateritia*, *Collybia cirrhata*, *Cystoderma fallax*, *Mycena laevigata*, *Strobilurus tenacellus* and *Tricholoma fulvum*.

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