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# Macrofungi of Sinop Province

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**Abstract:** This study was based on macrofungi specimens collected from Sinop province between 1998 and 2000. According to the field and laboratory work, 170 taxa belonging to 32 families have been identified and 32 of these taxa were added to Turkey's macromycota flora as new records.

**Key Words:** Macromycota, taxonomy, new records, Turkey

## Sinop Yöresi Makrofungusları

**Özet:** Bu çalışma 1998–2000 yılları arasında Sinop yöresinden toplanan mantar örneklerine dayanılarak yapılmıştır. Arazi ve laboratuvar çalışmaları sonucu 32 familyaya ait 170 takson teşhis edilmiştir. Bu taksonlardan 32 tanesi Türkiye için yeni kayıttır. Bu yeni kayıt türler Türkiye makrofungus florasına ilave edilmiştir.

**Anahtar Sözcükler:** Makrofunguslar, taksonomi, yeni kayıtlar, Türkiye

## Introduction

This investigation covers only Sinop province, which is located in the Western Black Sea region of Turkey (Figure 1). Although the study area is affected by the Black Sea climate (oceanic climate) predominantly, the influence of a Mediterranean climate is also seen in some parts of the study area (Akman, 1990).

The vegetation of the study area shows some variations due to climatic effects. The inner parts have mainly coniferous and broadleaved trees. There are bushy forms of these trees in the costal area. Mat (2000) has previously reported some studies carried out in different parts of Turkey. It seems from this research that there has not been sufficient research around Sinop province. The research was planned not only because of the lack of research on the area but also for the investigation of the effect of climate on vegetation and on the growth of mushrooms.

## 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 dried under suitable conditions and thymol crystals were added to the collection bags in order to protect them against harmful organisms (Öder, 1986). The specimens were prepared as herbarium materials and stored in the laboratory of Selçuk University, Education Faculty, Science Education Department.

## Results

Species collected from the research area are listed below. In the list, A and D indicate Afyon and Yağız, respectively, as collectors of particular specimens. The asterisk indicates that this taxon is new for the Turkish macromycota flora.

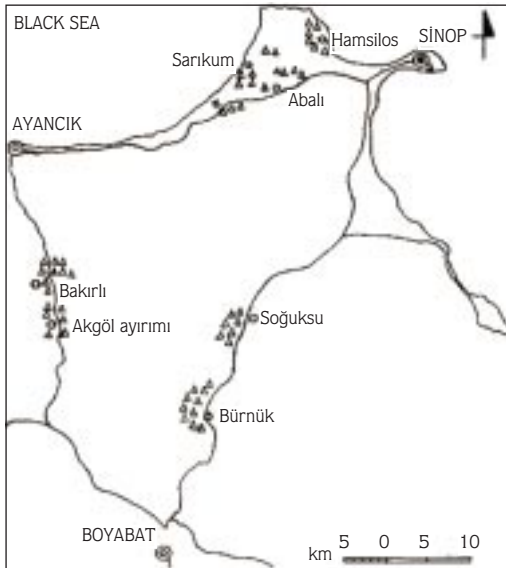
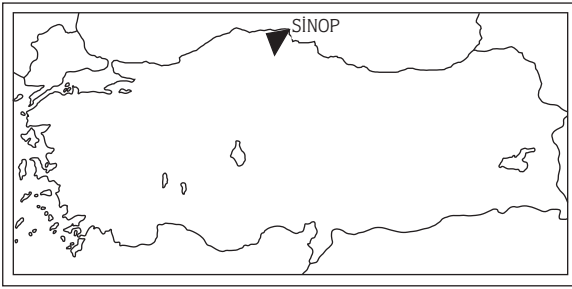


Figure 1. Study area

## Ascomycetes

### Helvellaceae

#### 1. *Helvella crispa* (Scop.) Fr.

Sinop: Ayancık, Bakırlı village, in beech forest, 780 m, 30.10.1999, A.1433.

#### 2. *Rhizina undulata* Fr.

Sinop: Boyabat, Bürnük village, in coniferous forest, 1210 m, 21.04.2002, A.1545.

### Humariaceae

#### 3. *Calosypha fulgens* (Pers.) Boud.

Sinop: Boyabat, Bürnük village, under fir trees, 1210 m, 25.05.1999, A.1111.

### Morchellaceae

#### 4. *Morchella deliciosa* Fr.

Sinop: Boyabat, Bürnük village, under fir trees, 1210 m, 20.05.1999, A. 1107.

#### 5. *Morchella elata* Fr.

Sinop: Boyabat, Bürnük village, under fir trees, 1210 m, 20.05.1999, A. 1109.

#### 6. *Morchella esculenta* Pers. ex St. Amans var. *costata* Vent.

Sinop: Boyabat, Bürnük village, in coniferous forest, 1210 m, 20.05.1999, A. 1106.

#### 7. \* *Morchella esculenta* Pers.: St. Amans var. *umbrina* Boud.

Sinop: Boyabat, Bürnük village, under fir trees, 1210 m, 20.05.1999, A. 1108.

## Basidiomycetes

### Agaricaceae

#### 8. *Agaricus augustus* Fr.

Sinop: Boyabat, Bürnük village, in grass, 1210 m, 2 6.06.1999, A. 1226, 29.10.1999, A.1400.

#### 9. *Agaricus bisporus* (Lge.) Sing.

Sinop: Centre, Abalı village, in grass, 40 m, 04.07.1998, A. D. 690.

#### 10. *Agaricus campestris* (L.) Fr.

Sinop: Boyabat, Bürnük village, in grass, 1210 m, 03.07.1998, A.644, 29.10.1999, A. 1401.

#### 11. *Agaricus essetei* Bon

Sinop: Boyabat, Bürnük village, in grass, 1210 m, 26.06.1999, A. D. 1225.

#### 12. *Agaricus langei* (Moell.) Moell.

Sinop: Boyabat, around Bürnük village, in pastures, 1210 m, 29.10.1999, A. D. 1393.

#### 13. *Agaricus macrosporus* (Moell. & Schaeff.) Pil.

Sinop: Ayancık, Akgöl highway fork, in pastures, 1280 m, 30.10.1999, A. D. 1436.

#### 14. *Agaricus placomyces* Peck

Sinop: Centre, Abalı village, in grass, 40 m, 30.10.1999 m, A. D. 1416.

#### 15. *Agaricus silvicola* (Vitt.) Sacc.

Sinop: Centre, around Abalı village, in broadleaved forest, 40 m, 30.10.1999, A. 1423.

**Amanitaceae****16. Amanita citrina** (Schaeff.) S.F.Gray

Sinop: Centre, around Soğuksu village, under fir trees, 1240 m, 26.6.1999, A. D. 1235.

**17. Amanita excelsa** (Fr.) Bertillon

Sinop: Centre, around Abalı village, under beech trees, 40 m, 04.07.1998, A. D. 667.

**18. Amanita gemmata** (Fr.) Bertillon

Sinop: Centre, around Abalı village, under beech trees, 30 m, 04.07.1998, A. D. 666.

**19. Amanita pantherina** (DC: Fr.) Krombh.

Sinop: Centre, Abalı village, under beech trees, 30 m, 07.07.2000, A. 1664.

**20. Amanita rubescens** Pers.: Fr.

Sinop: Centre, around Abalı village, under beech trees, 30 m, 04.07.1998, A. D. 665, 07.07.2000, A.D. 1663.

**21. Amanita vaginata** (Bull.: Fr.) Quéf.

Sinop: Boyabat, around Bü rnük village, in grass, 1210 m, 03.07.1998, A. 647, 29.10.1999, A.D.1404, Centre, Abalı village, 40 m, 27.06.1999, A.1271, 07.07.2000, A.D. 1662.

**Bolbitiaceae****22. Agrocybe cylindracea** (DC: Fr.) Mre.

Sinop: Centre, Hamsilos bay, parasitic on willows, 10 m, 22.04.2000, A. D. 1552.

**23. Agrocybe dura** (Bolt.: Fr.) Sing.

Sinop: Centre, around Soğuksu village, in grass, 1240 m, 26.06.1999, A. D.1228.

**24. Conocybe tenera** (Schaeff.: Fr.) Kühn.

Sinop: Boyabat, around Bü rnük village, in grass, 1210 m, 20.05.1999, A. D. 1105.

**Boletaceae****25. \* Boletus appendiculatus** Schaeff.: Fr.

Sinop: Boyabat, around Bü rnük village, in coniferous forest, 1210 m, 03.07.1998, A. D. 638.

**26. Boletus calopus** Fr.

Sinop: Centre, Soğuksu village, under fir trees, 1240 m, 26.06.1999, A.1232.

**27. Boletus edulis** Bull.: Fr.

Sinop: Boyabat, around Bü rnük village, in mixed forest, 1210 m, 03.07.1998, A. 642, Centre, Soğuksu village, 1240 m, 26.06.1999, A. 1233, Abalı village, 30 m, 07.07.2000, A. D. 1667.

**28. Boletus fragrans** Vitt.

Sinop-Ayancık highway 30 km along, under beech trees, 60 m, 07.07.2000, A. D. 1668.

**29. Boletus luridus** Schaeff.: Fr.

Sinop: Boyabat, around Bü rnük village, in coniferous forest, 1210 m, 26.06.1999, A.D. 1227.

**30. Boletus radicans** Pers.: Fr.

Sinop-Ayancık highway 30 km along, under beech trees, 60 m, 07.07.2002, A. 1665.

**31. Boletus reticulatus** Schaeff.

Sinop: Boyabat, around Bü rnük village, under pine trees, 1210 m, 03.07.1998, A. D. 643, Centre, Abalı village, under beech trees, 40 m, 07.07.2000, A. D. 1666.

**32. Leccinum carpini** (R.Schulz) Mos.

Sinop: Centre, around Abalı village, in mixed forest, 40 m, 27.06.1999, A. D. 1252.

**33. Leccinum nigrescens** (Richon & Roze) Sing.

Sinop: Centre, around Abalı village, in broadleaved and conifer forest, 40 m, 04.07.1998, A. D. 670; Soğuksu village, 1240 m, 26.06.1999, A. D. 1231.

**34. \* Leccinum onychinum** Watling nom prov.

Sinop: Centre, Abalı village, under beech trees, 30 m, 04.07.1998, A. D. 669.

**35. Leccinum scabrum** (Bull.: Fr.) S.F.Gray

Sinop: Centre, Abalı village, under beech trees, 30 m, 04.07.1998, A. D. 668; 07.07.2000, A.D. 1969.

**36. Suillus bovinus** (L.: Fr.) O.Kuntze

Sinop: Boyabat, Bü rnük village, in coniferous forest, 1210 m, 29.10.1999, A. D. 1386.

**37. Suillus luteus** (L.) S.F.Gray

Sinop: Boyabat, Bü rnük village, under pine trees, 1210 m, 03.07.1998, A. D. 641; 06.07.2000, A.D. 1643.

38. *Xerocomus badius* (Fr.: Fr.) Gilb.

Sinop: Boyabat, Bürnük village, under pine trees, 1210 m, 03.07.1998, A. D. 645; 06.07.2000, A. D. 1642.

39. *Xerocomus chrysenteron* (Bull.) Quéf.

Sinop: Centre, Abalı village, in broadleaved and coniferous forest, 40 m, 27.06.1999, A. D. 1253; Boyabat, Bürnük village, 1210 m, 06.07.2000, A. D. 1641.

40. *Xerocomus moravicus* (Vacek) Herink

Sinop-Ayancık highway 30 km along, under beech trees, 60 m, 04.07.1998, A. D. 698.

41. *Xerocomus subtomentosus* (L.) Quéf.

Sinop-Ayancık highway 30 km along, under beech trees, 60 m, 04.07.1998, A. D. 696; Centre, Abalı village, 30 m, 27.06.1999, A. D. 1254.

Cantharellaceae

42. *Cantharellus cibarius* Fr.

Sinop: Centre, Soğuksu village, under coniferous and broadleaved trees, 1240 m, 03.07.1998, A.651; Abalı village, 40 m, 27.6.1999, A.1260.

43. \* *Cantharellus friesii* Quéf.

Sinop: Centre, Abalı village, under beech trees, 40 m, 04.07.1998, A. D. 671.

44. *Cantharellus ferruginescens* Orton

Sinop: Centre, Soğuksu village, under fir trees, 1240 m, 26.06.1999, A. D.1234.

Clathraceae

45. *Clathrus ruber* Micheli: Pers.

Sinop: Centre, Abalı village, on soil in hardwood forest 40 m, 04.07.1998, A. D. 661; 27.06.1999, A. D. 1245.

Coprinaceae

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

Sinop: Centre, Abalı village, in pastures, 40 m, 04.07.1998, A. D. 663; Ayancık, Bakırlı village, road side, 780 m, 30.10.1999, A. 1432.

47. \* *Coprinus congregatus* (Bull.: St. Amans) Fr.

Sinop: Centre, Abalı village, on dung, 30 m, 04.07.1998, A. D. 688.

48. *Coprinus lagopus* Fr.

Sinop-Ayancık highway 30 km along, in leaf litter, 60 m, 07.07.2000, A. D. 1658.

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

Sinop: Centre, around Abalı village, on broadleaved stumps, 40 m, 30.10.1999, A. D. 1421; around Sarıkum, 10 m, 22.04.2000, A. D. 1557.

50. *Coprinus niveus* (Pers.: Fr.) Fr.

Sinop: Centre, Soğuksu village, on cow dung, 1240 m, 26.06.1999, A. D. 1230; Boyabat, Bürnük village, 1210 m, 29.10.1999, A. D. 1402.

51. *Coprinus picaceus* (Bull.: Fr.) S.F.Gray

Sinop: Centre, Abalı village, in beech forest, 40 m, 07.07.2000, A. D. 1645.

52. \* *Paneolus speciosus* Orton

Sinop: Boyabat, Bürnük village, on horse dung, 1210 m, 20.05.1999, A. D. 1102.

53. *Paneolus sphinctrinus* (Fr.) Quéf.

Sinop: Centre, Abalı village, in pastures, 40 m, 27.06.1999, A. D. 1274.

54. *Psathyrella hydrophila* (Bull.: Merát) Maire

Sinop: Centre, Abalı village, in damp broadleaved forest, 30 m, 04.07.1998, A. D. 678.

Corticaceae

55. *Steccherinum ochraceum* (Pers. apud. Gmelin: Fr.) S.F.Gray

Sinop: Centre, Abalı village, on dead wood of beech, 40 m, 30.10.1999, A. D. 1425.

56. *Stereum ochraceo-flavum* (Schw.) Ellis

Sinop: Centre, Hamsilos bay, on dead wood of oaks, 20 m, 22.04.2000, A. D. 1548.

57. *Stereum sanguinolentum* (Alb. & Schw.: Fr.) Fr.

Sinop: Boyabat, Bürnük village, on dead wood of conifers, 1210 m, 21.04.2000, A. D. 1541.

Cortinariaceae

58. \* *Cortinarius cinnamomeus* (L.: Fr.) Fr.

Sinop: Centre, Abalı village, among beech trees, 40 m, 04.07.1998, A. D. 689.

59. *Cortinarius pulchripes* Fr.

Sinop: Boyabat, Bürnük village, in coniferous forest, 1210 m, 20.05.1998, A. D. 1104.

60. \* *Cortinarius vibratilis* (Fr.) Fr.

Sinop: Boyabat, Bürnük village, in coniferous and broadleaved forest, 1240 m, 20.05.1999, A.D. 1103; Centre, Abalı village, 40 m, 27.06.1999, A. D. 1268.

61. *Hebeloma crustiliniforme* (Bull.: Fr.) Quéf.

Sinop: Boyabat, Bürnük village, in coniferous forest, 1210 m, 06.07.2000, A. 1636.

62. *Hebeloma mesophaeum* (Pers.: Fr.) Quéf.

Sinop: Centre, Abalı village, under beech trees, 40 m, 04.07.1998, A. D. 664.

63. \* *Hebeloma radicosum* (Bull.: Fr.) Richon.

Sinop: Ayancık, Akgöl highway fork, under fir trees, 1280 m, 30.10.1999, A. D. 1443.

64. \* *Inocybe bresadolae* Mass.

Sinop: Centre, Abalı village, in coniferous and broadleaved forest, 30 m, 04.07.1998, A. D. 677.

**Entolomataceae**65. *Entoloma mammosum* (Fr.) Hesler.

Sinop: Boyabat, Bürnük village, in grass, 1210 m, 21.04.2000, A.1543.

66. *Entoloma sericeum* (Bull. ex Merát) Quéf.

Sinop: Centre, Abalı village, in grass, 40 m, 30.10.1999, A. D. 1431.

**Ganodermataceae**67. *Ganoderma adspersum* (Schulz.) Donk.

Sinop: Centre, Abalı village, parasitic on oak and beech trees, 30 m, 03.07.1997, A. D. 656; 21.05.1999, A. D. 1115; Hamsilos bay, 20 m, 22.04.2000, A. D. 1547.

68. *Ganoderma applanatum* (Pers.: Wallr.) Pat.

Sinop: Centre, Abalı village, parasitic on beech trees, 40 m, 27.06.1999, A. D. 1242; 22.04.2000, A. D. 1554; Boyabat, Bürnük village, 1210 m, 06.07.2000, A. D. 1639.

69. *Ganoderma lucidum* (Fr.) P.Karst.

Sinop: Boyabat, Bürnük village, on roots of broadleaved trees, 1210 m, 03.07.1998, A.

D. 655; 06.07.2000, A. D. 1640; Centre, Abalı village, 40 m, 27.06.1999, A. D. 1244.

**Hericiaceae**70. *Heridium erinaceus* (Bull.: Fr.) Pers.

Sinop: Boyabat, Bürnük village, on living beech trees, 1210 m, 03.07.1998, A. D. 640.

**Hygrophoraceae**71. *Hygrophorus poetarum* Heim

Sinop: Boyabat, around Bürnük village, under beech trees, 1210 m, 29.10.1999, A.1387; Centre, Abalı village, 40 m, 30.10.1999, A. D. 1409.

**Hymenochaetaceae**72. *Phellinus nigricans* (Fr.) Karst.

Sinop: Centre, Abalı village, on dead or severely damaged trunks of elm, 40 m, 03.07.1998, A. D. 653.

**Lepiotaceae**73. *Lepiota brunneo-incarnata* Chodat & Martin

Sinop: Centre, D.S.İ. camping area, in pastures, 20 m, 30.10.1999, A. D. 1406.

74. *Lepiota cristata* Kumm.

Sinop: Centre, D.S.İ. camping area, in pastures, 20 m, 30.10.1999, A. 1407.

75. *Macrolepiota excoriata* (Schaeff.: Fr.) Mos.

Sinop: Boyabat, Bürnük village, in coniferous forest, 1210 m, 29.10.1999, A. D. 1398; 06.07.2000, A. D. 1638.

76. *Macrolepiota mastoidea* (Fr.) Sing.

Sinop: Boyabat, Bürnük village, in coniferous forest, 1210 m, 29.10.1999, A. 1396.

77. *Macrolepiota procera* (Scop.: Fr.) Sing.

Sinop: Centre, Abalı village, in grass, 30 m, 30.10.1999, A. 1418.

78. *Macrolepiota rhacodes* (Vitt.) Sing.

Sinop: Centre, Abalı village, in grass, 30 m, 27.06.1999, A. D. 1243.

**Lycoperdaceae**79. *Calvatia excipuliformis* (Pers.) Perdeck

Sinop: Centre, Abalı village, in pastures, 40 m, 30.10.1999, A. D. 1426.

80. *Calvatia utriformis* (Bull.: Pers.) Jaap.

Sinop: Centre, Soğuksu village, in pastures, 1240 m, 26.06.1999, A. D. 1236; Ayancık, Akgöl highway fork, 1280 m, 30.10.1999, A. D. 1444.

81. *Lycoperdon mammaeforme* Pers.: Pers.

Sinop: Centre, Abalı village, in grass, 40 m, 04.07.1998, A. D. 675.

82. *Lycoperdon perlatum* Pers.

Sinop: Boyabat, Bürnük village, in pastures, 1210 m, 29.10.1999, A. D. 1388.

83. *Lycoperdon pyriforme* Schaeff.: Pers.

Sinop: Centre, Soğuksu village, on dead wood of broadleaved and coniferous trees, 1240 m, 26.06.1999, A. D. 1229; Abalı village, 40 m, 27.06.1999, A. D. 1239; Boyabat, Bürnük village, 29.10.1999, A. D. 1405; Ayancık, Akgöl highway fork, 1280 m, 30.10.1999, A. D. 1445.

84. *Vascellum pratense* (Pers.: Pers.) Kreisel

Sinop: Ayancık, Akgöl highway fork, in pastures, 1280 m, 30.10.1999, A. D. 1441.

**Nidulariaceae**

85. *Crucibulum laeve* (Huds.) Kambly

Sinop: Centre, Soğuksu village, on buried wood, 1240 m, 26.06.1999, A. D. 1238.

86. *Cyathus olla* Batsch: Pers.

Sinop: Centre, Abalı village, in sandy soil, 40 m, 27.06.1999, A. D. 1255.

**Paxillaceae**

87. *Paxillus involutus* (Batsch: Fr.) Fr.

Sinop: Centre, D.S.İ. camping area, in pastures, 20 m, 30.10.1999, A. D. 1408.

**Pleurotaceae**

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

Sinop: Boyabat, Bürnük village, on stumps of fir woods, 1210 m, 06.07.2000, A. D. 1632.

89. *Pleurotus pulmonarius* Fr.

Sinop: Centre, Abalı village, on stumps of beech wood, 40 m, 30.10.1999, A. D. 1412.

**Pluteaceae**

90. *Pluteus leoninus* (Schaeff.: Fr.) Kumm.

Sinop: Centre, Abalı village, on dead stumps of beech, 40 m, 27.06.1999, A. D. 1241.

91. *Pluteus salicinus* (Pers.: Fr.) Kumm.

Sinop: Centre, Sarikum bay, on dead willow stumps, 10 m, 22.04.2000, A. D. 1556.

92. *Volvoriella bombycina* (Schaeff.: Fr.) Sing.

Sinop: Centre, Abalı village, on decaying beech woods, 30 m, 03.07.1998, A. D. 652.

**Polyporaceae**

93. *Antrodia xantha* (Fr.: Fr.) Ryv.

Sinop: Boyabat, Bürnük village, on dead wood of conifers, 1210 m, 29.10.1999, A. D. 1389.

94. *Fomes fomentarius* (L.: Fr.) Fr.

Sinop: Centre, Abalı village, parasitic on beech wood, 30 m, 27.06.1999, A. D. 1249.

95. *Fomitopsis rosea* (Alb. & Schw.) Karst.

Sinop: Centre, Abalı village, on pine wood, 30 m, 30.10.1999, A. D. 1424.

96. \* *Phyllotopsis nidulans* (Pers.: Fr.) Sing.

Sinop: Centre, Abalı village, on beech wood, 40 m, 03.07.1998, A. D. 654.

97. *Polyporus ciliatus* Fr.

Sinop: Centre, Abalı village, on rotten wood of broadleaved trees, 40 m, 27.06.1999, A. D. 1246.

98. *Polyporus varius* Pers.: Fr.

Sinop: Centre, Abalı village, on dead wood of beech trees, 40 m, 22.04.2000, A. D. 1555.

99. *Pycnoporus cinnabarinus* (Jacq.: Fr.) Karst.

Sinop: Centre, Abalı village, on dead wood of broadleaved trees, 30 m, 04.07.1998, A. D. 683; Ayancık highway fork, 1280 m, 30.10.1999, A. D. 1446.

100. *Trametes pubescens* (Schum.: Fr.) Pil.

Sinop: Centre, Hamsilos bay, on dead wood of beech trees, 20 m, 22.04.2000, A. D. 1551.

101. *Trametes versicolor* (Fr.) Pil.

Sinop: Centre, Abalı village, on dead wood of beech trees, 40 m, 04.07.1998, A. D. 673; 27.06.1999, A. D. 1247; 30.10.1999, A. D. 1415.

## Ramariaceae

102. *Ramaria aurea* (Schaeff.: Fr.) Quél.

Sinop: Centre, Abalı village, in broadleaved and coniferous forest, 40 m, 04.07.1998, A.679; Boyabat, Bürnük village, 1210 m, 29.10.1999, A. 1391.

103. *Ramaria botrydis* (Fr.) Ricken

Sinop: Boyabat, Bürnük village, under fir trees, 1210 m, 29.10.1999, A. D. 1392.

104. *Ramaria flava* (Schaeff.: Fr.) Quél.

Sinop: Centre, Abalı village, in broadleaved and coniferous forest, 40 m, 27.06.1999, A.1266; Boyabat, Bürnük village, 1210 m, 29.10.1999, A. 1394.

105. *Ramaria lutea* (Vitt.) Schild

Sinop: Centre, Abalı village, under beech trees, 40 m, 27.06.1999, A. 1265.

## Rhizopogonaceae

106. *Rhizopogon roseolus* (Corda) T.M.Fries

Sinop: Centre, Abalı village, on sandy soil, 40 m, 04.07.1998, A. D. 687; Hamsilos bay, in coniferous forest, 20 m, 22.04.2000, A. D. 1553.

## Russulaceae

107. \* *Lactarius decipiens* Quél.

Sinop: Centre, Abalı village, under beech trees, 40 m, 04.07.1998, A. D. 684.

108. *Lactarius piperatus* (L.: Fr.) S.F.Gray

Sinop: Centre, Abalı village, under beech trees, 30 m, 04.07.1998, A. 662; 40 m, 27.06.1999, A.1261; 07.07.2000, A. 1659.

109. \* *Lactarius resimus* Fr.

Sinop: Boyabat, Bürnük village, in coniferous forest, 1210 m, 29.10.1999, A. D. 1390.

110. \* *Lactarius vietus* Fr.

Sinop: Centre, Abalı village, under beech trees, 40 m, 04.07.1998, A. D. 685.

111. *Lactarius volemus* Fr.

Sinop: Centre, Abalı village, under beech trees, 40 m, 04.07.1998, A. 686; 27.06.1999, A. 1262; Ayancık, 30 km along highway, 60 m, 07.07.2000, A. 1661.

112. *Russula adulterina* Fr.

Sinop: Centre, Abalı village, under beech trees, 40 m, 07.07.2000, A. D. 1650.

113. *Russula aeruginea* Lindblad: Fr.

Sinop: Centre, Abalı village, under beech trees, 40 m, 04.07.1998, A. D. 691; 30.10.1999, A. D. 1428.

114. *Russula albonigra* Krombh.

Sinop: Centre, Abalı village, under beech trees, 40 m, 07.07.2000, A. D. 1657.

115. \* *Russula amoena* Quél.

Sinop: Centre, Abalı village, under beech trees, 40 m, 07.07.2000, A. D. 1656.

116. \* *Russula anthracina* Romagn.

Sinop: Centre, Abalı village, under beech trees, 40 m, 27.06.1999, A. D. 1259.

117. *Russula atropurpurea* (Krombh.) Britz

Sinop: 30 km along Ayancık highway, under beech trees, 60 m, 04.07.1998, A. D. 695.

118. *Russula betularum* (Hora) Romagn.

Sinop: Centre, Abalı village, under beech trees, 40 m, 04.07.1998, A. 693; 30.10.1999, A. 1414; 07.07.2000, A. 1649.

119. \* *Russula brunneoviolacea* Crawshay

Sinop: Centre, Abalı village, under beech trees, 40 m, 03.07.1998, A. D. 658; 25.06.1999, A. D. 1258.

120. *Russula cessans* Pers.

Sinop: Ayancık, Akgöl, highway fork, under fir trees, 1280 m, 30.10.1999, A. D. 1442; Boyabat, Bürnük village, 06.07.2000, A. D. 1634.

121. *Russula cyanoxantha* Schaeff.: Fr.

Sinop: Centre, Soğuksu village, in fir forest, 1240 m, 26.06.1999, A. D. 1237; Abalı village, under beech trees, 40 m, 07.07.2000, A. D. 1647.

122. \* *Russula farinipes* Romelli ap. Britz.

Sinop: Centre, Abalı village, under beech trees, 40 m, 04.07.1998, A. D. 659.

123. \* *Russula fragilis* (Pers.: Fr.) Fr.

Sinop: Centre, Abalı village, under beech trees, 40 m, 03.07.1998, A. D. 657; 27.06.1999, A. D. 1263.

124. *Russula grisea* (Pers.: Secr.) Fr.

Sinop: Centre, Abalı village, under beech trees, 40 m, 07.07.2000, A. D. 1654.



125. \* *Russula ionochlora* Romagn.  
Sinop: Centre, Abalı village, under beech trees, 40 m, 04.07.1998, A. D. 694.
126. *Russula laurocerasi* Melzer  
Sinop: Centre, Abalı village, under beech trees, 40 m, 30.10.1999, A. D. 1427.
127. \* *Russula livescens* (Batsch) Quéf.  
Sinop: Centre, Abalı village, under beech trees, 40 m, 07.07.2000, A. D. 1653.
128. *Russula mairei* Sing.  
Sinop: Centre, Abalı village, under beech trees, 40 m, 27.06.1999, A. D. 1256; 07.07.2000, A. D. 1648.
129. *Russula nigricans* (Bull.) Fr.  
Sinop: Centre, Abalı village, under beech trees, 40 m, 04.07.1998, A. D. 674.
130. \* *Russula olivescens* (Pers.) Bres.  
Sinop: Centre, Abalı village, under beech trees, 40 m, 07.07.2000, A. D. 1651.
131. *Russula parazurea* Schaeff.  
Sinop: Centre, Abalı village, under beech trees, 40 m, 07.07.2000, A. D. 1655.
132. *Russula persicina* Krombh.: Melz. & Zv.  
Sinop: Centre, Abalı village, under beech trees, 40 m, 04.07.1998, A. D. 692; 27.06.1999, A. D. 1257.
133. \* *Russula pulchella* Borszczow  
Sinop: 30 km along Ayancık highway, under beech trees, 60 m, 07.07.2000, A. D. 1652.
134. \* *Russula rosacea* Pers.: S.F.Gray  
Sinop: Centre, Abalı village, under beech trees, 40 m, 04.07.1998, A. D. 660.
135. *Russula sanguinea* (Bull. ex St. Amans) Fr.  
Sinop: Boyabat, Bü rnük village, in coniferous forest, 1210 m, 03.07.1998, A. D. 649.
136. *Russula subfoetens* Smith  
Sinop: 30 km along Ayancık highway, under beech trees, 60 m, 04.07.1998, A. D. 697.
137. *Russula torulosa* Bres.  
Sinop: Boyabat, Bü rnük village, in coniferous forest, 1210 m, 03.07.1998, A. D. 648.
138. \* *Russula vinosa* Lindblad  
Sinop: Boyabat, Bü rnük village, in coniferous forest, 1210 m, 16.09.2000, A. D. 1681.
- Schizophyllaceae**
139. *Schizophyllum commune* Fr.: Fr.  
Sinop: Centre, Abalı village, on dead wood of broadleaved and coniferous trees, 30 m, 27.06.1999, A. D. 1248; Hamsilos bay, 22.04.2000, A. D. 1550.
- Sclerodermataceae**
140. \* *Scleroderma areolatum* Ehrenb.  
Sinop: Centre, Abalı village, on soil at forest edges, 40 m, 04.07.1998, A. D. 672.
- Strophariaceae**
141. *Hypholoma fasciculare* (Huds.: Fr.) Kumm.  
Sinop: Boyabat, Bü rnük village, on pine stumps, 1210 m, 20.05.1999, A. 1113; Centre, Abalı village, on oak stumps, 30 m, 27.06.1999, A. 1250.
- Tremellaceae**
142. *Exidia glandulosa* Fr.  
Sinop: Ayancık, Akgöl highway fork, on dead branches of broadleaved trees, 1280 m, 30.10.1999, A. D. 1435.
143. *Sebacina incrustans* (Fr.) Tul.  
Sinop: Centre, around Abalı village, in pastures, 40 m, 04.07.1998, A. D. 676; 27.06.1999, A. D. 1264; 07.07.2000, A. D. 1644.
- Tricholamataceae**
144. *Armillaria mellea* (Vahl.: Fr.) Kumm.  
Sinop: Centre, around Abalı village, on wood of beech, 40 m, 04.07.1998, A. D. 1682.
- 145.\* *Clitocybe brumalis* (Fr.: Fr.) Kumm.  
Sinop: Boyabat, around Bü rnük village, in coniferous forest, 1210 m, 21.04.2000, A. D. 1542; Centre, Hamsilos bay, 22.04.2000, A. D. 1549.
146. *Clitocybe dealbata* (Sow.: Fr.) Kumm.  
Sinop: Boyabat, around Bü rnük village, in grass, 1210 m, 03.07.1998, A. 646.
147. *Clitocybe gibba* (Pers.: Fr.) Kumm.  
Sinop: Centre, around Abalı village, in mixed forest, 40 m, 30.10.1999, A. D. 1419.

148. \* *Collybia cookei* (Bres.) J.D.Arnold  
Sinop: Centre, around Abalı village, on litter, 40 m, 30.10.1999, A. D. 1413.
149. *Collybia butyracea* (Fr.: Fr.) Kumm. var. *asema* Fr.  
Sinop: Ayancık, Akgöl highway fork, in pastures, 1280 m, 30.10.1999, A. D. 1434.
150. *Collybia dryophila* (Bull.: Fr.) Kumm.  
Sinop: Centre, around Abalı village, among leaf litter under mixed forest, 30 m, 04.07.1998, A. D. 681; 21.05.1999, A. D. 1114.
151. *Cystoderma amianthinum* (Scop.: Fr.) Kondr. & Maubl.  
Sinop: Boyabat, around Bü rnük village, in coniferous forest, 1210 m, 29.10.1999, A. D. 1397.
152. *Lepista nuda* (Bull.: Fr.) Cke.  
Sinop: Centre, around Abalı village, under pine trees, 40 m, 30.10.1999, A. 1417.
153. *Marasmius oreades* (Bolt.: Fr.) Fr.  
Sinop: Boyabat, around Bü rnük village, in pastures, 1210 m, 03.07.1998, A. 639; Centre, around Abalı village, 40 m, 27.06.1999, A. 1267; 30.10.1999, A.1429; D.S.İ. camping area, 20 m, 22.04.2000, A. 1546.
154. *Melanoleuca brevipes* (Bull.: Fr.) Pat.  
Sinop: Boyabat, around Bü rnük village, in grass, 1210 m, 20.05.1999, A. D. 1112; 29.10.1999, A. D. 1395; Centre, around Abalı village, 40 m, 30.10.1999, A. D. 1410.
155. *Melanoleuca humulis* (Pers.: Fr.) Sing.  
Sinop: Ayancık, Akgöl highway fork, in coniferous forest, 1280 m, 30.10.1999, A. D. 1437.
156. *Melanoleuca subalpina* (Britz.) Bres. & Stangl  
Sinop: Boyabat, around Bü rnük village, coniferous forest, 1210 m, 06.07.2000, A. D. 1635.
157. *Mycena epipterygia* (Scop.: Fr.) S.F.Gray  
Sinop: Boyabat, around Bü rnük village, among leaf litter under conifer, 1210 m, 29.10.1999, A. D. 1403.
158. \* *Mycena flavoalba* (Fr.) Qué l.  
Sinop: Centre, around So ğuksu village, among grasses and mosses, 1240 m, 03.07.1998, A. D. 650.
159. *Mycena pura* (Pers.: Fr.) Kumm.  
Sinop: Centre, around Abalı village, in beech litter, 40 m, 27.06.1999, A.1272.
160. *Mycena rosea* (Bull.) Gramberg  
Sinop: Centre, Abalı village, among leaf litter, 40 m, 27.06.1999, A.1273.
161. *Oudemansiella mucida* (Schrod.: Fr.) v. Hoehnel  
Sinop: Centre, Abalı village, on dead wood of beech trees, 40 m, 30.10.1999, A. D. 1411.
162. \* *Tricholoma acerbum* (Bull.: Fr.) Qué l.  
Sinop: Centre, Abalı village, under beech trees, 40 m, 27.06.1999, A. D. 1269
163. *Tricholoma lascivum* (Fr.) Gill.  
Sinop: Centre, Abalı village, under beech trees, 40 m, 30.10.1999, A. D. 1420; Ayancık, Akgöl highway fork, under fir trees, 1280 m, 30.10.1999, A. D. 1438.
164. \* *Tricholoma portentosum* (Fr.) Qué l.  
Sinop: Boyabat, Bü rnük village, in coniferous forest, 1210 m, 20.05.1999, A. D. 1110; 21.04.2000, A. D. 1544.
165. *Tricholoma saponaceum* (Fr.) Kumm.  
Sinop: Boyabat, Bü rnük village, in coniferous forest, 1210 m, 29.10.1999, A. D. 1399.
166. \* *Tricholoma sulphurescens* Bres.  
Sinop: Ayancık, Akgöl highway fork, under fir trees, 1280 m, 30.10.1999, A. D. 1439.
167. *Tricholoma terreum* (Schaeff.: Fr.) Kumm.  
Sinop: Ayancık, Akgöl highway fork, under fir trees, 1280 m, 30.10.1999, A. D. 1440.
168. *Tricholomopsis rutilans* (Schaeff.: Fr.) Sing.  
Sinop: Centre, around Abalı village, on stumps of beech trees, 40 m, 27.6.1999, A. D. 1251.
169. *Xerula melanotricha* Dörfelt  
Sinop: Boyabat, Bü rnük village, on wood of conifers, 1210 m, 06.07.2000, A. D. 1637.
170. *Xerula radicata* (Relhan: Fr.) Dörfelt  
Sinop: Centre, Abalı village, on or near dead stumps of beech trees, 40 m, 04.07.1998, A. D. 680; 27.06.1999, A. 1270; 30.10.1999, A. D. 1430.

## Discussion and Conclusion

According to the results obtained, 170 macrofungi were identified, 7 of them belonging to ascomycetes and 163 to basidiomycetes. In comparison with the other studies carried out near the study area (Öder, 1986, 1988; Sesli, 1993, 1998; Demirel, 1998, 1999; Afyon et al., 2000; Afyon and Konuk, 2001 a, 2001b; Pekşen and Karaca, 2003) macrofungi species of Sinop 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 very humid plots. These conditions are optimal for the growth of mushrooms.

One hundred and seventy macrofungi were identified; 17 of them (*Morchella deliciosa*, *M. elata*, *M. esculenta*

var. *costata*, *M. esculenta* var. *umbrina*, *Agaricus campestris*, *A. augustus*, *A. silvicola*, *Boletus edulis*, *Cantharellus cibarius*, *Coprinus comatus*, *Pleurotus ostreatus*, *Macrolepiota mastoidea*, *M. procera*, *Lactarius piperatus*, *L. volemus*, *Lepista nuda* and *Marasmius oreades*) are eaten and known by the local people. Furthermore, *Morchella* spp., *Cantharellus cibarius* and *Lactarius volemus* are collected and exported. However, the local people do not know whether other species are edible or not or have evaluated them as poisonous.

Thirty-two taxa were added to the Turkish macromycota as new records.

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