

# MYCOTAXON

Volume 95, pp. 331-334 updated 9-Nov-06 Jan-Mar 2006

## Contributions to the Macrofungi of Bolu and Düzce Provinces, Turkey

DURSUN YAĞIZ<sup>1</sup>, AHMET AFYON<sup>1</sup>  
MUHSIN KONUK<sup>2</sup> & STEPHAN HELFER<sup>3</sup>

*dyagiz@selcuk.edu.tr aafyon@selcuk.edu.tr*  
*mkonuk@aku.edu.tr s.helfer@rbge.org.uk*

<sup>1</sup>*Selcuk University, Education Faculty*  
*42099, Meram, Konya-TURKEY*

<sup>2</sup>*Afyon Kocatepe University, Faculty of Art and Science*  
*Afyonkarahisar-TURKEY*

<sup>3</sup>*Royal Botanic Garden Edinburgh*  
*20A Inverleith Row, Edinburgh EH3 5LR, U.K.*

**Abstract** – This study was based on specimens of macrofungi collected from Bolu and Düzce provinces between 1998 and 2004. According to the field and laboratory results, 277 taxa belonging to 44 families (7 families of *Ascomycetes* and 37 of *Basidiomycetes*) have been identified. The full checklist is reproduced here including details of collection localities.

**Key words** — Macromycota, flora, Western Black Sea Region

### Introduction

This research was carried out in Bolu and Düzce provinces of Turkey which are situated in the Western Black Sea Region (Figure 1). These provinces are placed in squares A3-A4 according to the floristic square system (Davis 1965-1985). In the study area mainly the second type of oceanic rain fall regime occurs (Akman 1990). But in some parts (in the west and southwest) it also displays continental climatic features.

A checklist for macrofungi of Turkey was produced by Sesli & Denchev (2005). According to this there was only one previous study in the area (Sümer 1982). This account of wood decaying macrofungi and not many reports on other macrofungi are included. The study area is covered mainly by natural forest due to the prevailing climatic and edaphic conditions and limited timber extraction. The canopy vegetation of the study area is composed of mainly coniferous and broadleaved trees. The research area therefore is an ideal habitat for mycological studies. This paper presents the most up-to-date and extensive list of macrofungi of Bolu and Düzce provinces.

## Collection localities:

### Bolu:

- 1- Centre, around Yolçatı village, 760-800m; 31°29' E – 40°43' N
- 2- Centre, Akçalalan village, 1000m; 31°26' E – 40°40' N
- 3- Centre, around Abant lake, 1330m; 31°18' E – 40°44' N
- 4- Centre, around Kındıra village, 900m; 31°39' E – 40°42' N
- 5- Centre, Gölcük district, 950m; 31°37' E – 40°41' N
- 6- Gerede, around Aktaş village, 1370-1400m; 32°20' E – 40°41' N
- 7- Gerede, around Aşağı Ovacık village, 1400m; 32°23' E – 40°36' N
- 8- Gerede, around Günyayla houses, 1400m; 32°16' E – 40°34' N
- 9- Mengen, around Gökçesu town, 700m, 31°56' E – 40°55' N
- 10- Mengen, Dirgine forestry management highway 4<sup>th</sup> km, 700m; 32°05' E – 40°58' N
- 11- Mengen, around Babahızır village, 780m; 32°04' E – 40°54' N
- 12- Mengen, around Çubukköy village, 700-800m; 32°05' E – 40°59' N
- 13- Mengen, around Kıyaslar village, 700-800m; 32°05' E – 40°58' N
- 14- Mengen, around Yumrutaş village, 750m; 32°09' E – 40°52' N
- 15- Yeniçağa, around Köroğlu saddle, 1100m; 31°56' E – 40°47' N

### Düzce:

- 16- Akçakoca, Çiçekpınar district, 210m; 31°07' E – 41°05' N
- 17- Yığılca-Alaplı highway km 5, 350m; 31°15' E – 40°77' N
- 18- Yığılca, Centre-Düzce highway km 2, 350m; 31°15' E – 40°77' N

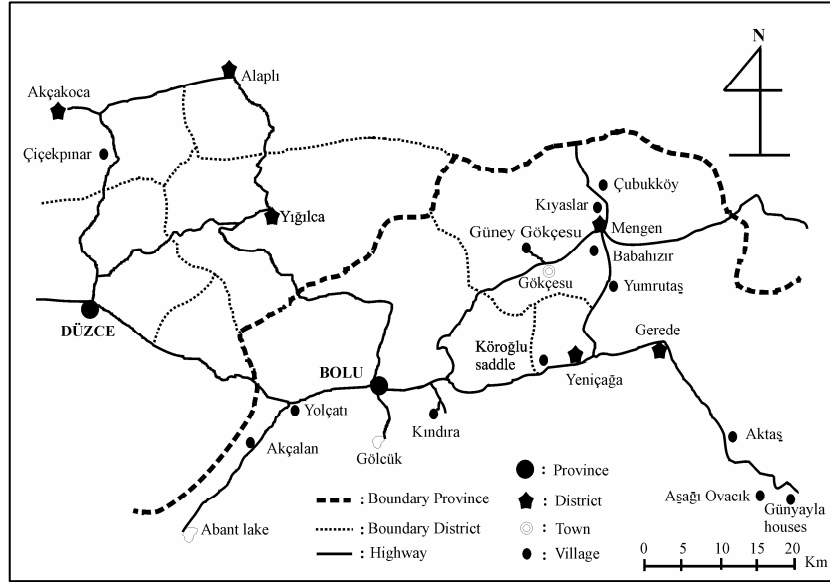


Figure 1: Map of the study area.

## Materials and Methods

Specimens were collected from the research area (Fig. 1) during field trips between 1998 and 2004. The morphological and ecological characters of the specimens were recorded *in situ* and their microscopic features determined in the laboratory. The diagnoses of the taxa were carried out with the help of Marchand (1971-1986), Phillips (1981), Moser (1983), Michael et al. (1983-1988), Breitenbach & Kränzlin (1984-1991) and Dähncke (1993). Taxa and their authors were given according to an amended CABI Bioscience electronic version (Kirk et al. 2004). The specimens are kept at Selcuk University, Education Faculty Herbarium (KNYA).

## Results

In our study, 277 species were recovered belonging to 44 families. The distribution of the species and their families are: *Dermataceae* 1, *Discinaceae* 1, *Helvellaceae* 4, *Rhizinaceae* 1, *Morchellaceae* 7, *Pezizaceae* 2, *Pyronemataceae* 1, *Agaricaceae* 14, *Albatrellaceae* 1, *Auriscalpiaceae* 1, *Bankeraceae* 3, *Bolbitiaceae* 11, *Boletaceae* 9, *Cantharellaceae* 1, *Clavariaceae* 1, *Clavulinaceae* 1, *Coprinaceae* 5, *Cortinariaceae* 15, *Dacrymycetaceae* 2, *Entolomataceae* 5, *Fomitopsidaceae* 1, *Ganodermataceae* 2, *Geastraceae* 4, *Gomphaceae* 2, *Gomphidiaceae* 2, *Hydnaceae* 1, *Hydnangiaceae* 1, *Hygophoropsidaceae* 1, *Hymenochaetaceae* 3, *Lycoperdaceae* 8, *Marasmiaceae* 16, *Paxillaceae* 1, *Phallaceae* 2, *Pleurotaceae* 1, *Pluteaceae* 11, *Polyporaceae* 10, *Ramariaceae* 4, *Rhizopogonaceae* 2, *Russulaceae* 38, *Stereaceae* 1, *Strophariaceae* 10, *Suillaceae* 4, *Tremellaceae* 2, and *Tricholomataceae* 64. Their collection dates, localities, habitats, collectors' names and herbarium numbers are given below.

### LIST OF TAXA

#### ASCOMYCOTINA

##### Dermataceae

1. *Mollisia melaleuca* (Fr.) Sacc.: Under oak , 08.05.2000, locality 12, A&Y:1599.

##### Discinaceae

2. *Gyromitra esculenta* (Pers.) Fr.: Around conifer stumps, 07.05.2000, locality 6, A:1571.

##### Helvellaceae

3. *Helvella acetabulum* (L.) Quél.: In conifer and broadleaved forest, 17.06.1998, locality 5, A&Y: 595; 13.06.1999, locality 12, A&Y: 1202.
4. *Helvella lacunosa* Afzel.: In conifer forest, 17.06.1998, locality 8, A&Y: 548.
5. *Helvella leucomelaena* (Pers.) Nannf.: Sandy soil in forest, 07.05.2000, locality 6, A:1577; 08.05.2000, locality 14, A&Y:1593.
6. *Helvella queletii* Bres.: In pine forest, 12.06.1999, locality 1, A&Y: 1153.

##### Morchellaceae

7. *Morchella elata* Fr.: In conifer forest, 07.05.2000, locality 6, A: 1585.
8. *Morchella esculenta* (L.) Pers.: In conifer forest, 07.05.2000, locality 6, A: 1574.
9. *Morchella esculenta* var. *umbrina* (Boud.) S. Imai: In pine forest, 08.05.2000, locality 14, A&Y: 1594.

10. *Morchella intermedia* Boud.: In conifer forest, 07.05.2000, locality 6, A&Y: 1575.
11. *Morchella rigida* Krombh.: In pine forest, 08.05.2000, locality 14, A&Y: 1592.
12. *Morchella vulgaris* (Pers.) Boud.: In pine forest, 08.05.2000, locality 14, A: 1613.
13. *Verpa conica* (O.F. Müll.) Sw.: In conifer forest, 07.05.2000, locality 6, A&Y: 1567.

#### **Pezizaceae**

14. *Caloscypha fulgens* (Pers.) Boud.: Under fir, 19.05.1999, locality 6, A&Y: 1079.
15. *Sarcosphaera coronaria* (Jacq.) J. Schröt.: In conifer forest, 17.05.1998, locality 12, A: 408; 18.06.1998, locality 3, A&Y: 598; 12.06.1999, locality 5, A: 1145; 08.05.2000, locality 14, A&Y: 1587.

#### **Pyronemataceae**

16. *Tarzetta catinus* (Holmsk.) Korf & J.K. Rogers: In conifer forest, 17.06.1998, locality 5, A&Y: 594.

#### **Rhizinaceae**

17. *Rhizina undulata* Fr.: In pine forest, 07.05.2000, locality 7, A&Y: 1562.

### **BASIDIOMYCOTINA**

#### **Agaricaceae**

18. *Agaricus arvensis* Schaeff.: In grass, 28.06.1999, A&Y: 1284; 08.07.2000, locality 6, A&Y: 1677.
19. *Agaricus augustus* Fr.: In grass, 05.07.1998, locality 6, A: 718.
20. *Agaricus bresadolianus* Bohus: In grass, 21.11.1999, locality 7, A&Y: 1517.
21. *Agaricus campestris* L. var. *campestris*: In grass, 19.07.1999, locality 6, A: 1293; 20.11.1999, locality 10, A: 1505; 05.11.2000, locality 12, A&Y: 1766.
22. *Agaricus essettei* Bon: In grass, 17.06.1998, locality 15, A&Y: 554.
23. *Agaricus litoralis* (Wakef. & A. Pearson) Konrad & Maubl.: In grass, 21.11.1999, locality 7, A&Y: 1516.
24. *Agaricus porphyrizon* P.D. Orton: In grass, 05.07.1998, locality 6, A&Y: 715.
25. *Chlorophyllum rachodes* (Vittad.) Vellinga: In grass, 05.11.2000, locality 13, A&Y: 1765.
26. *Lepiota cristata* (Bolton) P. Kumm.: In pastures, 05.11.2000, locality 13, A&Y: 1761.
27. *Lepiota ignivolvata* Bousset & Joss. ex Joss.: In broadleaved forest, 19.10.1998, Locality 1, A&Y: 778; 19.07.1999, locality 5, A&Y: 1328.
28. *Lepiota oreadiformis* Velen.: In grass, 07.05.2000, locality 7, A&Y: 1563.
29. *Macrolepiota excoriata* (Schaeff.) M.M. Moser: In pastures, 17.05.1998, A&Y: 391, 17.06.1998, locality 5, A&Y: 597; 20.11.1999, locality 13, A&Y: 1475.
30. *Macrolepiota mastoidea* (Fr.) Singer: In grass, 18.10.1998, A: 734, 20.11.1999, locality 13, A&Y: 1476; 19.10.1998, locality 16, A: 770.
31. *Macrolepiota procera* (Scop.) Singer var. *procera*: In mixed forest, 19.10.1998, A: 784, 28.09.2002, locality 1, A&Y: 1815; 06.08.1999, locality 5, A: 1332.

### **Albatrellaceae**

32. *Albatrellus subrubescens* (Murrill) Pouzar: In conifer forest, 06.08.1999, locality 5, A&Y: 1346.

### **Auriscalpiaceae**

33. *Auriscalpium vulgare* Gray: In conifer forest, 07.05.2000, locality 6, A&Y: 1580.

### **Bankeraceae**

34. *Hydnellum aurantiacum* (Batsch) P. Karst.: In pine forest, 28.09.2002, locality 15, A&Y: 1819.  
35. *Hydnellum scrobiculatum* (Fr.) P. Karst.: In pine forest, 17.06.1998, locality 15, A&Y: 552.  
36. *Phellodon tomentosus* (L.) Banker: In mixed forest, 19.07.1999, locality 5, A&Y: 1326.

### **Bolbitiaceae**

37. *Agrocybe paludosa* (J.E. Lange) Kühner & Romagn.: In pastures, 25.10.1998, locality 6, 803; 08.05.2000, locality 13, A&Y: 1605; 12.06.1999, locality 17, A&Y: 1166.  
38. *Agrocybe praecox* (Pers.) Fayod: In grass, 17.06.1998, locality 4, A&Y: 572; 20.11.1999, locality 10, A&Y: 1504; 08.05.2000, locality 14, A&Y: 1582.  
39. *Agrocybe vervacti* (Fr.) Singer: In grass, 08.05.2000, locality 14, A&Y: 1583.  
40. *Conocybe tenera* (Schaeff.) Kühner: In grass, 17.06.1998, locality 4, A&Y: 564.  
41. *Hebeloma album* Peck: Among shrubs, 19.10.1998, locality 16, A&Y: 774.  
42. *Hebeloma fragilipes* Romagn: In conifer forest, 16.05.1998, locality 8, A&Y: 385.  
43. *Hebeloma mesophaeum* (Pers.) Quel. var. *mesophaeum*: In conifer forest, 17.06.1998, locality 8, A&Y: 549.  
44. *Hebeloma senescens* (Batsch) Berk. & Broome: In conifer forest, 17.06.1998, locality 8, A: 551.  
45. *Hebeloma theobrominum* Quadr.: In conifer forest, 21.11.1999, locality 6, A&Y: 1527.  
46. *Panaeolus campanulatus* (L.) Quél.: In pastures, 20.11.1999, locality 10, A&Y: 1507.  
47. *Panaeolus subfirmus* P. Karst.: On horse dung, 12.06.1999, locality 18, A&Y: 1162.

### **Boletaceae**

48. *Boletus calopus* Pers.: In fir forest, 17.06.1998, locality 5, A: 587; 03.06.2004, locality 10, A&Y: 1832.  
49. *Boletus chrysenteron* Bull.: In coniferous forest, 17.06.1998, locality 4, A&Y: 574; 17.06.1998, A&Y: 589, 12.06.1999, A&Y: 1137, 06.08.1999, locality 5, A&Y: 1345; 08.07.2000, locality 6, A&Y: 1679.  
50. *Boletus edulis* Bull.: In mixed forest, 19.10.1998, locality 1, A: 789; 12.06.1999, A: 1154, 19.07.1999, locality 5, A&Y: 1327; 03.06.2004, locality 12, A&Y: 1829.  
51. *Boletus impolitus* Fr.: Under oak, 17.06.1998, locality 5, A&Y: 588.  
52. *Boletus legaliae* Pilát: In conifer forest, 17.06.1998, locality 4, A&Y: 556.

53. *Boletus luridus* Schaeff.: In conifer forest, 17.06.1998, locality 5, A: 586; 03.06.2004, locality 10, A&Y:1831.
54. *Boletus queletii* Schulzer: In conifer forest, 19.07.1999, locality 15, A&Y: 1305.
55. *Boletus reticulatus* Schaeff.: Under oak, 03.06.2004, locality 12, A&Y:1830.
56. *Boletus subtomentosus* L.: In coniferous forest, 18.06.1998, locality 3, A&Y: 603; 28.06.1999, locality 6, A&Y: 1286.

#### Cantharellaceae

57. *Cantharellus cibarius* Fr. var. *cibarius*: In mixed forest, 17.06.1998, locality 4, A: 578; 12.06.1999, A:1156, 07.08.1999, locality 1, A&Y:1353; 12.06.1999, locality 17, A: 1164; 13.06.1999, locality 12, A: 1201; 19.07.1999, locality 5, A: 1320.

#### Clavariaceae

58. *Clavaria acuta* Sowerby: Among leaf litter and grass, 20.11.1999, locality 10, A&Y:1500.

#### Clavulinaceae

59. *Clavulina cinerea* (Bull.) J. Schröt.: In conifer forest, 18.10.1998, locality 13, A&Y: 732; 20.11.1999, locality 10, A&Y: 1499.

#### Coprinaceae

60. *Coprinus comatus* (O.F. Müll.) Pers: Road side, 18.10.1998, locality 16, A: 761; 12.06.1999, locality 18, A: 1163.
61. *Coprinus niveus* (Pers.) Fr.: On cow dung, 07.05.2000, locality 6, A&Y: 1572.
62. *Coprinus truncorum* (Scop.) Fr.: On broadleaved stumps, 17.05.1998, locality 5, A&Y: 392.
63. *Psathyrella candolleana* (Fr.) Maire: In mixed forest, 12.06.1999, locality 7, A&Y: 1165; 08.05.2000, locality 11, A&Y: 1598.
64. *Psathyrella multipedata* (Peck) A.H. Sm.: Among grass in broadleaved forest, 17.06.1998, locality 5, A&Y: 583; 08.05.2000, locality 6, A&Y: 1615.

#### Cortinariaceae

65. *Cortinarius cinnamomeus* (L.) Fr.: In conifer forest, 17.06.1998, locality 4, A&Y: 563; 08.05.2000, locality 13, A&Y: 1607.
66. *Cortinarius croceus* (Schaeff.) Gray: In conifer forest, 17.06.1998, locality 4, A.Y: 562.
67. *Cortinarius stillatitius* Fr.: In broadleaved forest, 17.05.1998, locality 5, A&Y: 397.
68. *Cortinarius trivialis* J.E. Lange: In oak forest, 20.11.1999, locality 12, A&Y: 1461.
69. *Gymnopilus penetrans* (Fr.) Murrill: In fir debris, 20.11.1999, locality 10, A&Y: 1502.
70. *Inocybe acuta* Boud.: In mixed forest, 25.10.1998, locality 6, A&Y: 809.
71. *Inocybe assimilata* Britzelm.: In pine forest, 16.05.1998, locality 8, A: 386.
72. *Inocybe cincinnata* (Fr.) Quél. var. *cincinnata*: In conifer forest, 18.06.1998, locality 3, A&Y: 604; 20.11.1999, locality 13, A&Y: 1486; 08.05.2000, locality 14, A&Y: 1584.
73. *Inocybe erubescens* A. Blytt: In mixed forest, 18.06.1998, locality 3, A: 606. locality 15, A&Y: 1304.

74. *Inocybe fuscidula* Velen. var. *fuscidula*: In conifer forest, 17.05.1998, locality 15, A&Y: 410.
75. *Inocybe hirtella* Bres. var. *hirtella*: In mixed forest, 12.06.1999, locality 5, A&Y: 1142; 07.05.2000, locality 6, A&Y: 1570.
76. *Inocybe nitidiuscula* (Britzelm.) Lapl.: In pine forest, 07.05.2000, locality 13, A: 1601.
77. *Inocybe pusio* P. Karst.: In mixed forest, 17.05.1998, locality 5, A&Y: 405; 19.10.1998, locality 16, A&Y: 769.
78. *Inocybe queletii* Konrad: In pine forest, 17.05.1998, locality 15, A&Y: 409; 07.05.2000, locality 7, A&Y: 1560.
79. *Inocybe rimosa* (Bull.) P. Kumm.: 17.06.1998, locality 4, A: 576; 19.07.1999,

#### Dacrymycetaceae

80. *Calocera viscosa* (Pers.) Fr.: On rotten wood of fir, 19.07.1999, A&Y: 1324, 06.08.1999, locality 5, A&Y: 1333.
81. *Dacrymyces variisporus* McNabb: On dead wood of fir, 21.11.1999, locality 6, A&Y: 1535.

#### Entolomataceae

82. *Clitopilus prunulus* (Scop.) P. Kumm.: In grass, 05.11.2000, locality 12, A&Y: 1768.
83. *Entoloma hirtipes* (Schumach.) M.M. Moser: In mixed forest, 12.06.1999, locality 17, A&Y: 1168.
84. *Entoloma juncinum* (Kühner & Romagn.) Noordel.: In mixed forest, 08.05.2000, locality 12, A&Y: 1603.
85. *Entoloma sericatum* (Britzelm.) Sacc.: Among fir forest in moss, 17.05.1998, locality 5, A: 390.
86. *Entoloma sericeum* (Bull.) Quél.: In grass, 07.05.2000, locality 6, A&Y: 1568.

#### Fomitopsidaceae

87. *Fomitopsis pinicola* (Sw.) P. Karst.: On dead wood of fir, 19.05.1999, A&Y: 1080, 21.11.1999, A&Y: 1522, 08.07.2000, locality 6, A&Y: 1678.

#### Ganodermataceae

88. *Ganoderma adpersum* (Schulzer) Donk: Parasitic on oak, 06.08.1999, locality 5, A&Y: 1334.
89. *Ganoderma lucidum* (Curtis) P. Karst.: On roots of broadleaved trees, 17.05.1998, A&Y: 403, 12.06.1999, A&Y: 1138, 06.08.1999, locality 5, A&Y: 1347; 20.11.1999, locality 12, A&Y: 1464.

#### Geastraceae

90. *Geastrum fimbriatum* Fr.: On rich humus, 17.06.1998, locality 5, A&Y: 593.
91. *Geastrum pectinatum* Pers.: On soil in conifer forest, 25.10.1998, locality 6, A&Y: 804.
92. *Geastrum rufescens* Pers.: In conifer forest, 19.07.1999, locality 15, A&Y: 1306.
93. *Geastrum triplex* Jungh.: Under oak, 19.10.1998, locality 1, A&Y: 781.

#### Gomphaceae

94. *Clavariadelphus truncatus* (Quél.) Donk: Under fir, 21.11.1999, locality 6, A&Y: 1523.

95. *Lentaria afflata* (Lagger) Corner: On dead branches of oaks, 18.10.1998, locality 12, A&Y: 735.

#### Gomphidiaceae

96. *Chroogomphus helveticus* (Singer) M. M. Moser: In coniferous forest, 17.05.1998, locality 5, A&Y: 389; 17.06.1998, locality 4, A&Y: 573; 18.10.1998, locality 11, A&Y: 727; 19.10.1998, locality 1, A&Y: 791; 15.11.1998, locality 13, A&Y: 1018; 12.06.1999, locality 18, A&Y: 1161.
97. *Chroogomphus rutilus* (Schaeff.) O.K. Mill.: In coniferous forest, 20.11.1999, locality 13, A&Y: 1469; 08.05.2000, A&Y: 1568, 05.11.2000, locality 14, A&Y: 1757.

#### Hydnaceae

98. *Hydnum repandum* L.: In mixed forest, 28.09.2002, locality 1, A&Y: 1817.

#### Hydnangiaceae

99. *Laccaria laccata* (Scop.) Cooke: In conifer forest, 12.06.1999, locality 1, A&Y: 1140.

#### Hygrophoropsidaceae

100. *Tapinella atrotomentosa* (Batsch) Šutara: On stumps of conifers, 19.10.1998, locality 1, A&Y: 783.

#### Hymenochaetaceae

101. *Coltricia cinnamomea* (Jacq.) Murrill: On rich humus, 07.08.1999, locality 1, A&Y: 1355.
102. *Inonotus hispidus* (Bull.) P. Karst.: Parasitic on trunks and branches of broadleaved trees, 06.08.1999, locality 5, A&Y: 1348.
103. *Phellinus hartigii* (Allesch. & Schnabl) Pat.: Parasitic on fir woods, 08.07.2000, locality 6, A&Y: 1680.

#### Lycoperdaceae

104. *Bovista nigrescens* Pers.: In grass, 06.08.1999, locality 5, A&Y: 1337.
105. *Bovista plumbea* Pers.: In grass, 16.05.1998, locality 8, A&Y: 387; 18.06.1998, locality 3, A&Y: 602; 12.06.1999, locality 1, A&Y: 1157; 20.11.1999, locality 13, A&Y: 1485.
106. *Handkea excipuliformis* (Scop.) Kreisel: In pastures, 18.06.1998, locality 3, A&Y: 601; 19.10.1998, locality 1, A&Y: 785; 25.10.1998, A&Y: 806, 07.05.2000, locality 6, A&Y: 1573.
107. *Lycoperdon mammiforme* Pers.: In grass, 19.07.1999, locality 5, A&Y: 1329.
108. *Lycoperdon molle* Pers.: In grass, 05.07.1998, A&Y: 714, 21.11.1999, locality 6, A&Y: 1521; 06.08.1999, locality 5, A&Y: 1340; 20.11.1999, A&Y: 1481, 05.11.2000, locality 5, A&Y: 1759.
109. *Lycoperdon perlatum* Pers.: In pastures, 19.10.1998, locality 1, A&Y: 780; 25.10.1998, locality 6, A&Y: 805, 28.06.1999, A&Y: 1291; 20.11.1999, locality 13, A&Y: 1480; 12.06.1999, locality 17, A&Y: 1169.
110. *Lycoperdon pyriforme* Schaeff.: On dead wood of broadleaved and coniferous trees, 17.05.1998, A&Y: 404, 12.06.1999, locality 5, A&Y: 1141; 19.10.1998, locality 1, A&Y: 786.



111. *Vascellum pratense* (Pers.) Kreisel: In pastures, 12.06.1999, locality 1, A&Y: 1158.

#### **Marasmiaceae**

112. *Armillaria ostoyae* (Romagn.) Herink: On pine stumps or trunks, 12.06.1999, locality 1, A&Y: 1160.
113. *Armillaria tabescens* (Scop.) Emel: On dead wood of broadleaved trees, 19.10.1998, locality 16, A&Y: 776; 19.10.1998, locality 1, A&Y: 787.
114. *Flammulina velutipes* (Curtis) P. Karst: On dead wood of broadleaved trees, 20.11.1999, locality 10, A&Y: 1509.
115. *Marasmius alliaceus* (Jacq.) Fr.: On dead branches of beech, 17.05.1998, locality 5, A&Y: 394.
116. *Marasmius androsaceus* (L.) Fr.: On dead wood of conifers, 17.05.1998, locality 5, A&Y: 402.
117. *Marasmius cohaerens* (Alb. & Schwein.) Cooke & Quéf.: In conifer forest, 21.11.1999, locality 7, A&Y: 1512.
118. *Marasmius oreades* (Bolton) Fr.: In pastures, 16.05.1998, locality 8, A: 381; 12.06.1999, locality 1, A: 1159; 20.11.1999, locality 13, A&Y: 1488; 08.05.2000, locality 11, A&Y: 1597; 03.06.2002, locality 12, A&Y: 1823.
119. *Marasmius rotula* (Scop.) Fr.: On dead twigs and branches, 25.10.1998, locality 6, A&Y: 807; 13.06.1999, locality 12, A&Y: 1207.
120. *Marasmius scorodonius* (Fr.) Fr.: In conifer forest, 17.05.1998, locality 15, A&Y: 407
121. *Micromphale perforans* (Hoffm.) Gray: In fir forest on needle litter, 25.10.1998, locality 6, A&Y: 802.
122. *Rhodocollybia butyracea* f. *asema* (Fr.) Antonín et al. In mixed forest, 19.10.1998, locality 1, A&Y: 782.
123. *Strobilurus stephanocystis* (Kühner & Romagn. ex Hora) Singer: On conifer cones, 07.05.2000, locality 6, A&Y: 1576.
124. *Strobilurus tenacellus* (Pers.) Singer: On conifer cones, 28.05.2000, locality 3, A&Y: 1618.
125. *Xerula melanotricha* Dörfelt: On or near rotten stumps or roots of conifer, 06.08.1999, locality 5, A&Y: 1343.
126. *Xerula pudens* (Pers.) Singer: On buried oak wood, 19.07.1999, locality 5, A&Y: 1309.
127. *Xerula radicata* (Relhan) Dörfelt: On or near dead stumps of beech, 17.06.1998, A&Y: 584, 06.08.1999, locality 5, A&Y: 1330.

#### **Paxillaceae**

128. *Paxillus involutus* (Batsch) Fr.: Among broadleaved trees, 19.10.1998, locality 16, A: 771.

#### **Phallaceae**

129. *Mutinus caninus* (Huds.) Fr.: In leaf litter in woods, 18.06.1998, locality 2, A&Y: 612.
130. *Phallus impudicus* L.: In fir forest, 06.08.1999, locality 5, A&Y: 1341.

### **Pleurotaceae**

131. *Pleurotus ostreatus* (Jacq.) P. Kumm.: On stumps of fir wood, 05.07.1998, locality 6, A: 716; 20.11.1999, locality 10, A: 1510.

### **Pluteaceae**

132. *Amanita citrina* (Schaeff.) Pers. var. *citrina*: In pine forest, 19.07.1999, locality 15, A&Y: 1301.
133. *Amanitina citrina* var. *alba* (Gillet) E.-J. Gilbert: In pine forest, 20.11.1999, locality 13, A&Y: 1498.
134. *Amanita echinocephala* (Vittad.) Quél.: In mixed forest, 19.07.1999, locality 5, A&Y: 1327.
135. *Amanita gemmata* (Fr.) Bertill.: In conifer forest, 12.06.1999, locality 5, A: 1133; 19.07.1999, locality 6, A&Y: 1294.
136. *Amanita ovoidea* (Bull.) Link: In mixed forest, 28.09.2002, locality 15, A&Y: 1818
137. *Amanita pantherina* (DC.) Krombh.: Under oak, 03.06.2002, locality 12, A&Y: 1826.
138. *Amanita rubescens* Pers. var. *rubescens*: In conifer forest, 17.06.1998, locality 4, A&Y: 555; 12.06.1999, A&Y: 1136, 19.07.1999, locality 5, A&Y: 1321; under oak, 03.06.2002, locality 12, A&Y: 1825.
139. *Amanita vaginata* (Bull.) Lam. var. *vaginata*: In conifer forest, 17.06.1998, locality 4, A: 577; Under oak, 08.05.2000, A&Y: 1604, 03.06.2002, locality 12, A&Y: 1824; In garden, 19.10.1998, locality 16, A: 767.
140. *Pluteus salicinus* (Pers.) P. Kumm.: On broadleaved trees, 12.06.1999, locality 5, A&Y: 1147.
141. *Pluteus umbrosus* (Pers.) P. Kumm.: On rotting broadleaved trees, 07.08.1999, locality 5, A&Y: 1352.
142. *Volvariella bombycina* (Schaeff.) Singer: On decaying broadleaved trees, 17.06.1998, locality 5, A&Y: 579.

### **Polyporaceae**

143. *Fomes fomentarius* (L.) J. Kickx f.: Parasitic on wood of broadleaved trees, 17.05.1998, locality 5, A&Y: 401.
144. *Lenzites betulinus* (L.) Fr.: Parasitic on oak and beech, 06.08.1999, locality 5, A&Y: 1339; 20.11.1999, locality 12, A&Y: 1457.
145. *Perenniporia medulla-panis* (Jacq.) Donk: On dead wood of oak, 18.06.1998, locality 2, A&Y: 609; 21.11.1999, locality 6, A&Y: 1532.
146. *Polyporus ciliatus* Fr.: On rotten and branches of oak, 20.11.1999, locality 12, A&Y: 1462.
147. *Polyporus squamosus* (Huds.) Fr.: Parasitic on broadleaved trees, 19.07.1999, locality 5, A&Y: 1323.
148. *Polyporus varius* (Pers.) Fr.: Parasitic on broadleaved trees, 16.05.1998, locality 15, A&Y: 388; 18.06.1998, locality 2, A&Y: 615; 08.05.2000, locality 6, A&Y: 1612.
149. *Pycnoporus cinnabarinus* (Jacq.) P. Karst.: On dead wood of broadleaved trees, 06.08.1999, locality 5, A&Y: 1336; 13.06.1999, locality 12, A&Y: 1203.
150. *Trametes hirsuta* (Wulfen) Pilát: On dead wood of oak, 06.08.1999, locality 5, A&Y: 1331; 08.05.2000, locality 12, A&Y: 1600.

151. *Trametes pubescens* (Schumach.) Pilát: On dead wood of broadleaved trees, 18.06.1998, locality 2, A&Y: 614.  
 152. *Trametes versicolor* (L.) Lloyd: On dead of broadleaved trees, 17.05.1998, locality 5, A&Y: 393; 13.06.1999, locality 12, A&Y: 1206.

#### Ramariaceae

153. *Ramaria flava* (Tourn. ex Battarra) Quél.: In mixed forest, 03.06.2004, locality 1, A&Y: 1834.  
 154. *Ramaria flavescens* (Schaeff.) R.H. Petersen: Under broadleaved trees, 13.06.1999, locality 12, A&Y: 1193.  
 155. *Ramaria flavobrunnescens* (G.F. Atk.) Corner: In conifer forest, 05.07.1998, locality 6, A&Y: 717.  
 156. *Ramaria lutea* (Vent.) Schild: Under broadleaved trees, 13.06.1999, locality 12, A: 1194.

#### Rhizopogonaceae

157. *Rhizopogon ochraceorubens* A.H. Sm.: On sandy soil, 17.06.1998, A&Y: 581, 12.06.1999, locality 5, A&Y: 1135; 08.05.2000, locality 14, A&Y: 1591.  
 158. *Rhizopogon roseolus* (Corda) Th. Fr.: On sandy soil, 17.06.1998, locality 5, A&Y: 582; 20.11.1999, locality 13, A&Y: 1483; 08.05.2000, locality 9, A&Y: 1609.

#### Russulaceae

159. *Lactarius azonites* (Bull.) Fr.: Under oak, 07.08.1999, locality 1, A&Y: 1354.  
 160. *Lactarius chrysorrheus* Fr.: Under oak, 06.08.1999, locality 5, A&Y: 1335.  
 161. *Lactarius controversus* Pers.: Near hazel, locality 16, 19.10.1998, A: 765.  
 162. *Lactarius deliciosus* (L.) Gray: In conifer forest, 12.06.1999, locality 1, A: 1148.  
 163. *Lactarius deterrimus* Gröger: In conifer forest, 20.11.1999, locality 13, A&Y: 1474.  
 164. *Lactarius helvus* (Fr.) Fr.: In conifer forest, 18.10.1998, locality 13, A: 729.  
 165. *Lactarius hyginus* (Fr.) Fr.: In conifer forest, 17.06.1998, locality 4, A&Y: 559.  
 166. *Lactarius musteus* Fr.: In pine forest, 28.09.2002, locality 7, A&Y: 1820.  
 167. *Lactarius piperatus* (Scop.) Pers.: Under broadleaved trees, 06.08.1999, locality 5, A: 1345.  
 168. *Lactarius pyrogalus* (Bull.) Fr.: Under oak, 12.06.1999, locality 1, A&Y: 1149.  
 169. *Lactarius rufus* (Scop.) Fr.: In conifer forest, 18.06.1998, locality 3, A&Y: 607.  
 170. *Lactarius salmonicolor* R. Heim & Leclair: In fir forest, 19.07.1999, locality 5, A: 1319.  
 171. *Lactarius volemus* (Fr.) Fr.: In conifer and broadleaved forest, 06.08.1999, locality 5, A: 1338.  
 172. *Russula aeruginea* Fr.: Under oak, 03.06.2004, locality 12, A&Y: 1828.  
 173. *Russula acetolens* Rauschert: Near hazel, 19.10.1998, locality 16, A&Y: 768.  
 174. *Russula amethystina* Quél.: In fir forest, 19.07.1999, locality 5, A&Y: 1313.  
 175. *Russula anthracina* Romagn.: In conifer forest, 19.07.1999, locality 5, A&Y: 1308.  
 176. *Russula atropurpurea* (Krombh.) Britzelm.: Under oak, 13.06.1999, locality 12, A&Y: 1197; 20.11.1999, locality 13, A&Y: 1470.  
 177. *Russula aurea* Pers.: In conifer forest, 28.06.1999, A&Y: 1289, 19.07.1999, locality 6, A&Y: 1297; 19.07.1999, locality 15, A&Y: 1298.

178. *Russula brunneoviolacea* Crawshay: In mixed forest, 17.06.1998, locality 4, A&Y: 550.
179. *Russula cavipes* Britzelm.: In conifer forest, 19.07.1999, locality 15, A&Y: 1303.
180. *Russula claroflava* Grove: In mixed forest, 13.06.1999, locality 12, A&Y: 1200, 19.07.1999, locality 5, A&Y: 1317.
181. *Russula cyanoxantha* (Schaeff.) Fr.: In broadleaved and conifer forest, 12.06.1999, locality 1, A&Y: 1152; 19.07.1999, locality 5, A&Y: 1316; 20.11.1999, locality 13, A&Y: 1479.
182. *Russula delica* Fr.: In broadleaved and conifer forest, 12.06.1999, locality 1, A: 1151; 13.06.1999, locality 12, A: 1198; 19.07.1999, locality 6, A: 1295, 21.11.1999, locality 7, A&Y: 1513.
183. *Russula farinipes* Romell: Under beech, 19.07.1999, locality 5, A&Y: 1312.
184. *Russula fragilis* (Pers.) Fr. var. *fragilis*: In broadleaved and conifer forest, 19.07.1999, locality 5, A&Y: 1313; 20.11.1999, locality 13, A&Y: 1473; 05.11.2000, locality 12, A&Y: 1771.
185. *Russula heterophylla* (Fr.) Fr.: In mixed forest, 18.06.1998, locality 1, A&Y: 616.
186. *Russula laeta* Jul. Schäff.: In mixed forest, 07.08.1999, locality 1, A&Y: 1357.
187. *Russula luteotacta* Rea: Under oak, 05.11.2000, locality 12, A&Y: 1769.
188. *Russula ochroleuca* Pers.: In conifer forest, 18.06.1998, locality 3, A&Y: 608.
189. *Russula persicina* Krombh.: Under oak, 07.08.1999, locality 1, A&Y: 1349.
190. *Russula sanguinaria* (Schumach.) Rauschert: In broadleaved and conifer forest, 05.07.1998, locality 6, A&Y: 711; 19.07.1999, locality 5, A&Y: 1310; 28.09.2002, locality 1, A&Y: 1817.
191. *Russula torulosa* Bres.: Under pine, 20.11.1999, locality 13, A&Y: 1472.
192. *Russula turci* Bres.: In conifer forest, 17.06.1998, locality 15, A&Y: 553.
193. *Russula vesca* Fr.: Under oak, 13.06.1999, locality 12, A&Y: 1195.
194. *Russula vinosa* Lindblad: In conifer forest, 25.10.1998, A&Y: 796, 19.07.1999, locality 6, A&Y: 1296.
195. *Russula violeipes* Quéf.: In fir forest, 19.07.1999, locality 5, A&Y: 1311.
196. *Russula zvaraе* Velen.: Under broadleaved trees, 19.10.1998, locality 16, A&Y: 766; 12.06.1999, locality 1, A&Y: 1150; 20.11.1999, locality 13, A&Y: 1471.

#### **Stereaceae**

197. *Stereum sanguinolentum* (Alb. & Schwein.) Fr.: On dead wood of conifers, 17.05.1998, locality 5, A&Y: 395; 17.05.1998, locality 15, A&Y: 411.

#### **Strophariaceae**

198. *Hypholoma capnoides* (Fr.) P. Kumm.: On conifer stumps, 18.06.1998, locality 3, A&Y: 600.
199. *Hypholoma fasciculare* (Huds.) P. Kumm.: On stumps of conifer and broadleaved trees, 17.06.1998, A: 599, 12.06.1999, locality 5, A&Y: 1143, 19.10, locality 1, 1998, A: 788, 28.05.2000, locality 3, A&Y: 1623; 19.10.1998, locality 16, A: 775.
200. *Hypholoma marginatum* (Pers.) J. Schröt.: Under fir, 17.05.1998, locality 5, A&Y: 396.

201. *Pholiota flavida* (Schaeff.) Singer: On dead stumps of conifers, 19.10.1998, locality 1, A&Y: 779; 28.05.2000, locality 3, A&Y: 1624.
202. *Pholiota highlandensis* (Peck) A.H. Sm. & Hesler: On burnt ground, 21.11.1999, locality 7, A&Y: 1518.
203. *Pholiota gummosa* (Lasch) Singer: Near decaying wood, 20.11.1999, locality 13, A&Y: 1496.
204. *Pholiota tuberculosa* (Schaeff.) P. Kumm.: On fallen twigs and branches, 20.11.1999, locality 13, A&Y: 1467.
205. *Stropharia aeruginosa* (Curtis) Quél.: In conifer forest, 20.11.1999, locality 13, A&Y: 1468.
206. *Stropharia semiglobata* (Batsch) Quél.: In grass, 08.05.2000, locality 14, A&Y: 1589.
207. *Tubaria furfuracea* (Pers.) Gillet: On twigs and woody debris, 21.11.1999, locality 7, A&Y: 1519.

#### **Suillaceae**

208. *Suillus bovinus* (L.) Kuntze: In pine forest, 19.07.1999, locality 15, A&Y: 1300.
209. *Suillus granulatus* (L.) Roussel: In pine forest, 18.10.1998, A&Y: 722, 08.05.2000, locality 11, A&Y: 1595; 20.11.1999, locality 13, A&Y: 1496; 05.11.2000, locality 14, A&Y: 1755.
210. *Suillus luteus* (L.) Roussel: In conifer forest, 18.06.1998, locality 3, A&Y: 605; 12.06.1999, locality 1, A&Y: 1155; 28.06.1999, locality 6, A&Y: 1292; 08.05.2000, A&Y: 1605, 05.11.2000, locality 13, A&Y: 1758.
211. *Suillus variegatus* (Sw.) Kuntze: In conifer forest, 17.06.1998, locality 4, A&Y: 571; 08.05.2000, locality 9, A&Y: 1608.

#### **Tremellaceae**

212. *Tremella encephala* Willd.: On dead wood of fir trees, 21.11.1999, locality 6, A&Y: 1534.
213. *Tremella mesenterica* Retz.: On dead oak branches, 20.11.1999, A&Y: 1458, 03.06.2004, locality 12, A&Y: 1827.

#### **Tricholamataceae**

214. *Calocybe carnea* (Bull.) Donk: In pastures, 20.11.1999, locality 13, A&Y: 1482.
215. *Clitocybe brumalis* (Fr.) Quél.: In conifer forest, 17.06.1998, locality 5, A&Y: 592.
216. *Clitocybe clavipes* (Pers.) P. Kumm.: In conifer forest, 16.05.1998, locality 8, A&Y: 364, 07.05.2000, locality 7, A&Y: 1565; 19.10.1998, locality 16, A&Y: 772.
217. *Clitocybe dealbata* (Sowerby) P. Kumm: In grass, 17.06.1998, locality 5, A: 591; 20.11.1999, A:1487, 05.11.2000, A&Y: 1763, 03.06.2002, locality 13, A&Y: 1822.
218. *Clitocybe diatreta* (Fr.) P. Kumm.: In pine forest, 18.10.1998, locality 11, A&Y: 721.
219. *Clitocybe dicolor* (Pers.) J.E. Lange: In conifer forest, 20.11.1999, locality 10, A&Y: 1508, 08.05.2000, locality 11, A&Y: 1596.
220. *Clitocybe geotropa* (Bull.) Quél.: In conifer forest, 21.11.1999, locality 7, A: 1514.

221. *Clitocybe gibba* (Pers.) P. Kumm.: In conifer forest, 16.05.1998, locality 8, A&Y: 383, 05.07.1998, locality 6, A&Y: 719; 17.06.1998, locality 4, A&Y: 567, 19.10.1998, locality 1, A&Y: 790, 19.07.1999, locality 5, A&Y: 1318; 13.06.1999, locality 13, A&Y: 1208, 20.11.1999, A&Y: 1493.
222. *Clitocybe inornata* (Sowerby) Gillet: In pine forest, 17.06.1998, locality 4, A&Y: 569.
223. *Clitocybe nebularis* (Batsch) P. Kumm.: In conifer forest, 18.10.1998, locality 13, A&Y: 730.
224. *Clitocybe odorula* P. Karst.: In conifer forest, 21.11.1999, locality 6, A&Y: 1524.
225. *Clitocybe radicellata* Gillet.: In conifer forest, 21.11.1999, locality 6, A&Y: 1526.
226. *Clitocybe sinopica* (Fr.) P. Kumm.: In pine forest, 08.05.2000, locality 15, A&Y: 1610.
227. *Clitocybe vermicularis* (Fr.) Quél.: In conifer forest, 21.11.1999, locality 6, A&Y: 1525.
228. *Cystoderma amianthinum* (Scop.) Fayod: In conifer forest, 20.11.1999, locality 13, A&Y: 1466, 05.11.2000, locality 12, A&Y: 1767.
229. *Gymnopus dryophilus* (Bull.) Murrill: Among leaf litter in conifer forest, 16.05.1998, locality 8, A&Y: 382, 08.05.2000, locality 6, A&Y: 1611; 17.06.1998, locality 5, A&Y: 590; 18.10.1998, locality 11, A&Y: 723, 08.05.2000, locality 14, A&Y: 1588.
230. *Gymnopus erythropus* (Pers.) Antonín et al.: Under oak, 20.11.1999, locality 12, A&Y: 1460.
231. *Hygrocybe conica* (Scop.) P. Kumm. var. *conica*: In grassy areas, 17.06.1998, locality 5, A&Y: 580; 03.06.2004, locality 10, A&Y: 1833.
232. *Hygrocybe persistens* (Britzelm.) Singer var. *persistens*: In meadows, 19.10.1998, locality 16, A&Y: 764.
233. *Hygrophorus chrysodon* (Batsch) Fr.: In conifer forest, 25.10.1998, locality 8, A&Y: 794.
234. *Hygrophorus discoxanthus* Rea: In broadleaved forest, 19.10.1998, locality 16, A&Y: 773.
235. *Hygrophorus hedrychii* (Velen.) K. Kult: In grass, 20.11.1999, locality 12, A&Y: 1459.
236. *Hygrophorus ligatus* (Fr.) Fr.: In conifer forest, 21.11.1999, locality 6, A&Y: 1531.
237. *Hygrophorus piceae* Kühner: In conifer forest, 25.10.1998, locality 6, A: 795.
238. *Lepista glaucocana* (Bres.) Singer: In conifer forest, 25.10.1998, locality 6, A&Y: 810.
239. *Lepista inversa* (Scop.) Pat.: In conifer forest, 17.06.1998, locality 4, A&Y: 570, 18.06.1998, locality 2, A&Y: 610; 03.07.1998, A&Y: 712, 28.06.1999, A&Y: 1287, 21.11.1999, locality 6, A&Y: 1530.
240. *Lepista irina* (Fr.) H.E. Bigelow: In conifer forest, 25.10.1998, locality 6, A&Y: 811, 28.09.2002, locality 7, A&Y: 1821; 20.11.1999, locality 10, A&Y: 1506.
241. *Lepista nuda* (Bull.) Cooke: In conifer forest, 12.06.1999, locality 17, A&Y: 1167; 21.11.1999, locality 7, A&Y: 1515, 07.05.2000, locality 6, A&Y: 1566; 05.11.2000, locality 13, A&Y: 1760.

242. *Lichenomphalia umbellifera* (L) Redhead et al.: On blocks of peat, 21.11.1999, locality 6, A&Y: 1533.
243. *Melanoleuca cognata* (Fr.) Konrad & Maubl.: In grass, 07.05.2000, locality 6, A&Y:1579.
244. *Melanoleuca excissa* (Fr.) Singer var. *excissa*: In grass, 11.06.1999, locality 6, A&Y: 1132
245. *Melanoleuca graminicola* (Velen.) Kühner & Maire: In grass, 19.05.1999, locality 6, A&Y: 1082; 20.11.1999, locality 13, A&Y: 1484; 07.05.2000, locality 7, A&Y: 1561.
246. *Melanoleuca humilis* (Pers.) Pat.: In meadow, 20.11.1999, locality 13, A&Y: 1489.
247. *Melanoleuca langei* (Boekhout) Bon: In grass, 19.05.2002, locality 6, A&Y:1814
248. *Melanoleuca melaleuca* (Pers.) Murrill: In grass, 07.05.2000, locality 6, A&Y: 1578.
249. *Melanoleuca nivea* Métrod ex Boekhout: In grass, 17.06.1998, locality 4, A&Y: 560, 08.05.2000, locality 6, A&Y: 1614.
250. *Melanoleuca stridula* (Fr.) Singer: In grass, 25.10.1998, locality 6, A&Y: 808; 12.06.1999, locality 5, A&Y: 1139.
251. *Melanoleuca subalpina* (Britzelm.) Bresinsky & Stangl: Among grass, 17.06.1998, locality 4, A&Y: 561; 05.07.1998, A&Y: 720, 19.05.2002, locality 6, A&Y: 1813.
252. *Mycena crocata* (Schrad.) P. Kumm.: On dead twigs of fir trees, 17.05.1998, locality 5, A&Y: 399.
253. *Mycena epipterygia* (Scop.) Gray var. *eipiterygia*: Among leaf litter under conifers, 25.10.1998, A&Y: 802, 21.11.1999, locality 6, A&Y: 1528.
254. *Mycena flavescens* Velen.: In conifer forest, 25.10.1998, locality 6, A&Y: 800.
255. *Mycena flavoalba* (Fr.) Quél.: Among grasses and mosses, 28.05.2000, locality 3, A&Y: 1619.
256. *Mycena galopus* (Pers.) P. Kumm. var. *galopus*: On decaying conifer stumps, 13.06.1999, A&Y: 1204, 08.05.2000, locality 12, A&Y: 1602; 28.05.2000, locality 3, A&Y: 1625.
257. *Mycena inclinata* (Fr.) Quél.: On stumps of oak trees, 17.05.1998, locality 5, A&Y: 406.
258. *Mycena leptcephala* (Pers.) Gillet: In short grass, 28.05.2000, locality 3, A&Y: 1621.
259. *Mycena pura* (Pers.) P. Kumm.: Among leaf litter under conifer, 18.06.1998, locality 2, A: 613; 19.07.1999, locality 5, A: 1325; 28.05.2000, locality 3, A: 1620.
260. *Mycena rosea* (Schumach.) Gramberg: Among leaf litter under conifers, 17.05.1998, A: 398, 12.06.1999, locality 5, A&Y: 1134; 28.05.2000, locality 3, A: 1622.
261. *Mycena sanguinolenta* (Alb. & Schwein.) P. Kumm.: In conifer forest, 19.05.1999, locality 6, A&Y: 1081; 13.06.1999, locality 12, A&Y: 1205.
262. *Panellus stypticus* (Bull.) P. Karst.: On dead oak branches, 20.11.1999, locality 12, A&Y: 1463.

263. *Pseudoclitocybe cyathiformis* (Bull.) Singer: In grass, 20.11.1999, locality 13, A&Y: 1495.
264. *Tephrocybe confusa* (P.D. Orton) P.D. Orton: In conifer forest, 25.10.1998, locality 6, A&Y: 799.
265. *Tephrocybe palustris* (Peck) Donk: In moss, 12.06.1999, locality 5, A&Y: 1144.
266. *Tricholoma acerbum* (Bull.) Quél.: In mixed forest, 17.06.1998, locality 5, A&Y: 585; 05.07.1998, locality 6, A&Y: 713.
267. *Tricholoma albobrunneum* (Pers.) P. Kumm.: In pine forest, 05.11.2000, locality 13, A&Y: 1764.
268. *Tricholoma batschii* Gulden: In conifer forest, 17.06.1998, Locality 4, A&Y: 565; 20.11.1999, locality 13, A&Y: 1478.
269. *Tricholoma equestre* (L.) P. Kumm.: In conifer forest, 20.11.1999, locality 10, A&Y: 1511.
270. *Tricholoma fulvum* (Bull.) Sacc.: In conifer forest, 19.10.1998, locality 1, A&Y: 792.
271. *Tricholoma imbricatum* (Fr.) P. Kumm.: In pine forest, 20.11.1999, locality 13, A&Y: 1477.
272. *Tricholoma luridum* (Schaeff.) P. Kumm.: In conifer forest, 06.08.1999, locality 5, A&Y: 1342.
273. *Tricholoma pessundatum* (Fr.) Quél.: In pine forest, 18.10.1998, locality 11, A&Y: 724.
274. *Tricholoma scalpturatum* (Fr.) Quél.: In pine forest, 18.10.1998, locality 11, A&Y: 725.
275. *Tricholoma terreum* (Schaeff.) P. Kumm.: In conifer forest, 18.10.1998, A&Y: 728, 20.11.1999, locality 13, A&Y: 1497, 05.11.2000, locality 14, A&Y: 1756; 21.11.1999, locality 6, A&Y: 1520.
276. *Tricholomopsis rutilans* (Schaeff.) Singer: On stumps of conifers, 20.11.1999, locality 13, A&Y: 1465.
277. *Xeromphalina fellea* Maire & Malençon: In pine forest, 18.10.1998, locality 11, A&Y: 726.

## Discussion

277 species of macrofungi were collected from the study area (Bolu and Düzce provinces, located in the western Black Sea Region of Turkey). 17 of them belonged to Ascomycotina and 260 to Basidiomycotina. Sümer (1982) reported 102 wood decaying macrofungi from the study area. There are no other reports related to our study area known to the authors. Öder (1986) reported 17 poisonous macrofungi and 14 edible taxa from the East Black Sea Region (Öder 1988). Some reports from neighbouring regions of the study area were: Afyon et al. (2000) 62 taxa from Bartın; Afyon & Konuk (2002) 77 taxa from Zonguldak; Afyon et al. (2004) 170 taxa from Sinop; Yagız et al. (2005) 121 taxa from Karabük, and Afyon et al. (2005) 80 wood decaying macrofungi from Western Black sea region. When comparing taxa given from the neighbouring areas, the present study gives a very high number of recorded taxa. Bolu seems to be the richest area for its macrofungi species when compared to the other parts of Turkey. A diversity of habitats may be the cause for this abundance of taxa. The five most species-rich families and their species numbers are *Tricholomataceae* 64, *Russulaceae* 38, *Marasmiaceae* 16, *Cortinariaceae* 15 and



*Agaricaceae* 14. These 5 families include 147 species and their ratio is 53% when compared to total numbers of the taxa diagnosed.

### Acknowledgements

We would like to thank TÜBİTAK (The Scientific and Technical Research Council of Turkey) (TBAG-1659) and Selçuk University Scientific Research Project Commission (BAP: E.F/065) for supporting this study financially. Thanks are also due to Profs M. Isiloglu and R. Watling for reviewing the paper and for helpful comments.

### Literature Cited

- Afyon A, Konuk M, Yağız D. 2000. Bartın Yöresi Makrofungusları Üzerine Bir Araştırma. S. Ü. Eğitim Fak Fen Bilimleri Derg 8/2: 77-86.
- Afyon A, Konuk M, Yağız D. 2004. Macrofungi of Sinop Province. Turk J Bot 28:351-360.
- Afyon A, Konuk M, Yağız D, Helfer S, 2005. A study of wood decaying macrofungi of the western Black Sea Region, Turkey. Mycotaxon 93: 319-322.
- Akman Y. 1990. İklim ve Biyoiklim. Ankara: Palme Yayın Dağıtım.
- Breitenbach J, Kränzlin F. 1984-1991. Fungi of Switzerland. Vol.1-3. Lucerne: Verlag Mycologia.
- Davis PH (ed.). 1965-1985. Flora of Turkey and East Aegean Islands. Vol. 1-9, Edinburgh Univ. Press.
- Dähncke RM. 1993. 1200 Pilze. Aarau: AT Verlag.
- Kirk PM, et al. 2004. Authors of fungal names. CABI Bioscience, Wallingford. Electronic version: <http://www.speciesfungorum.org/AuthorsOfFungalNames.htm>
- Marchand A. 1971-1986. Champignons du Nord et du Midi. Tome. 1-9. Perpignan: Soc. Mycol. Des Pyrénées Méditerranée.
- Michael E, Hennig B, Kreisel H. 1983-1988. Handbuch für Pilzfreunde. Bd. 1-5. Stuttgart: Gustav Fischer Verlag.
- Moser M. 1983. In: Gams H (ed.). Kleine Kryptogamenflora. Stuttgart: Gustav Fischer Verlag.
- Öder N. 1986. Karadeniz Bölgesinde (Sinop-Artvin İlleri Arası) Yetişen Önemli Bazı Zehirli Mantarlar Üzerinde Taksonomik Araştırmalar. S. Ü. Fen-Edebiyat Fak Fen Derg 5: 87-104.
- Öder N. 1988. Karadeniz Bölgesinde (Sinop-Artvin İlleri Arası) Yetişen Halkın Tanıdığı Bazı Önemli Yeneni Mantarlar Üzerinde Taksonomik Araştırmalar. S. Ü. Fen-Edebiyat Fak Fen Derg 8: 215-257.
- Phillips R. 1981. Mushrooms and other Fungi of Great Britain and Europa. London: Pan Books Ltd.
- Sesli E, Denchev CM. 2005. Checklists of the myxomycetes and macromycetes in Turkey. Mycologia Balcanica 2: 119-160.
- Sümer S. (1982). Batı Karadeniz Bölgesi Özellikle Bolu Çevresinde Bulunan Odun Tahripçisi Mantarlar. İst. Üniv. Yayınları, No:2907/312.
- Yağız D, Afyon A, Konuk M. 2005. The Macrofungi of Karabük Province. Turk J Bot., 29:345-353.