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Contributions to the Macrofungi Flora of Gümüşhane Province

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Abstract: Some macrofungi specimens were collected from Gümüşhane province between 2001 and 2003. As a result of field and laboratory studies, 105 taxa belonging to 2 classes and 24 families were identified. These taxa are presented in a list. Of the 105 taxa, 14 are new records for the mycoflora of Turkey.

Key Words: Macrofungi, Gümüşhane, Turkey.

Gümüşhane Yöresinin Makrofungus Florasına Katkıları

Özet: Gümüşhane yöresinde, 2001-2003 yılları arasında yapılan arazi çalışmaları ile bazı makrofungus örnekleri toplanmıştır. Arazi ve laboratuvar çalışmaları sonucunda 2 sınıf ve 24 familya içinde dağılım gösteren toplam 105 makrofungus taksonu tanımlanmıştır. Bu taksonlar liste halinde verilmiştir. Bunlardan 14 takson Türkiye mantar florası için yeni kayıttır.

Anahtar Sözcükler: Makrofunguslar, Gümüşhane, Türkiye

Introduction

Many studies have been carried out to determine the macrofungi flora of Turkey (Baytop, 1994; Baytop & Mat, 1998; Mat & Gücin, 2000; Sesli & Denchev, 2005), there is no report in the literature on the macrofungi flora of Gümüşhane.

Gümüşhane is a transitional area between the Black Sea and East Anatolia regions, and this is reflected in its vegetation. *Fagus* L. sp., *Pinus* L. sp., *Quercus* L. sp. and *Juniperus* L. sp. forests are dominant above 1500 m altitude. Gümüşhane is located in the East Black Sea region and is surrounded by Bayburt, Giresun, Trabzon and Erzincan (Figure 1). The geographical position of Gümüşhane is 38° 45' - 40° 12' East longitude, 39° 45' - 40° 50' North latitude and its altitude is about 1210 m. It covers 6575 km² consisting of 60% mountainous, 29% plateau and 11% lowland areas. In general, the climate is quite dry in summer, rainy in autumn and spring, and snowy in winter.

The aim of the present study was to determine the macrofungi taxa growing in Gümüşhane province, to identify edible, inedible, wood decaying and poisonous

taxa and to make a contribution to the macrofungi flora of Turkey.

Materials and Methods

The macrofungi samples were collected during field trips in Gümüşhane province between 2001 and 2003 (Figure 1). During field studies, colour slides of the macrofungal specimens were taken in their natural habitats. After relevant notes were taken on their morphological and ecological features, they were put in specially prepared boxes and brought to the laboratory. Their spore prints were taken and spore dimensions were measured using an ocular micrometer. Then dried specimens were placed in locked polyethylene bags and kept in a deep freeze at -20 °C to protect them from parasites. All specimens are kept in the Herbarium of Yüzüncü Yıl University, Department of Biology.

We identified the specimens using the literature on macrofungi by Breitenbach & Kränzlin (1984-2000), Bresinsky & Besl (1990), Buczacki (1989), Ellis & Ellis (1990), Jordan (1995), Kibby (1997), Moser (1983) and Phillips (1981).

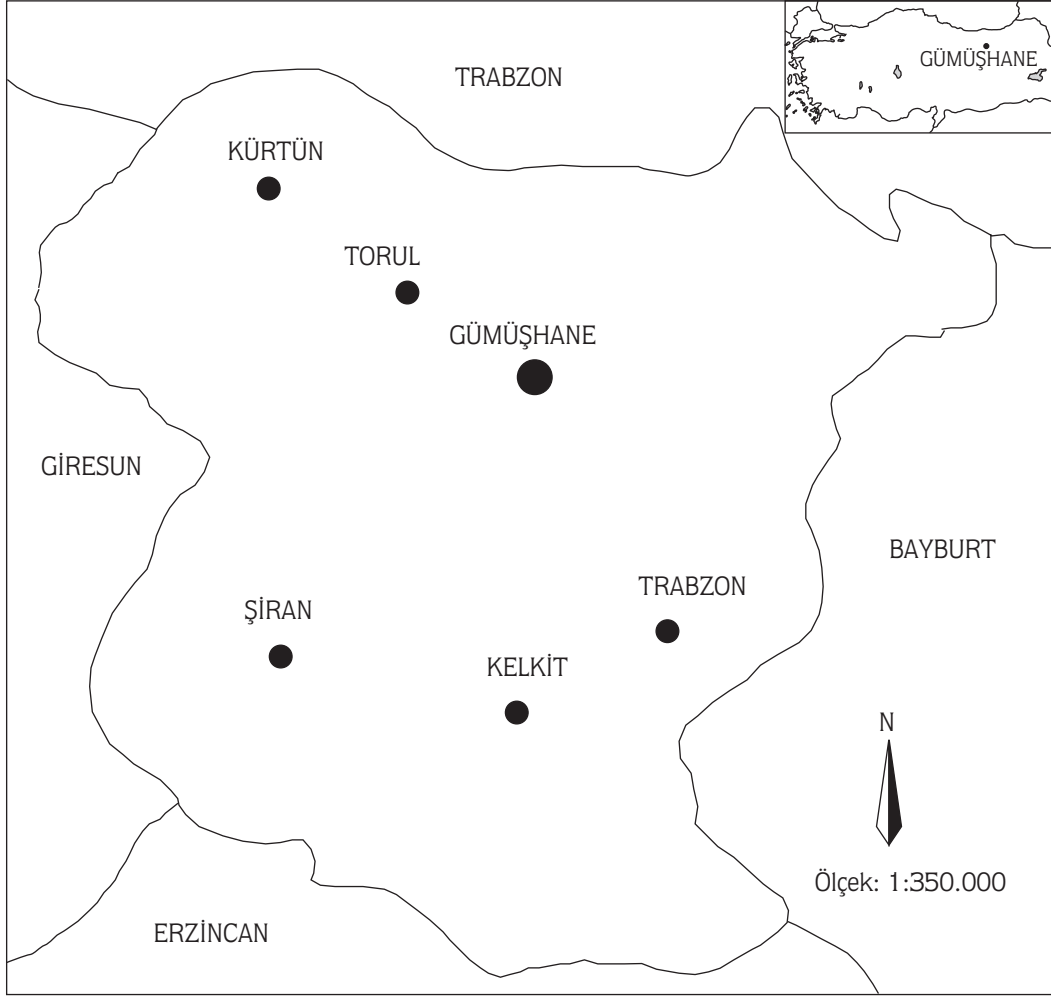


Figure 1. The study area.

Results

One hundred and five macrofungi taxa were identified belonging to 24 families in the classes *Ascomycetes* and *Basidiomycetes*. Collection localities, dates and herbarium registration numbers (K: Keleş, U: Uzun, D: Demirel) are given below. New records are indicated by an asterisk (*).

Ascomycetes

Pezizaceae

1. **Otidea alutacea* (Pers.) Masee

Gümüşhane, Kürtün, Örümcek Forest, in conifer forest, 17.09.2002, K.U.D. 1243.

Basidiomycetes

Hydnaceae

2. *Hydnum repandum* L.: Fr.

Gümüşhane, Zigana Mountain, in mixed forest, 16.09.2002, K.U.D. 1197; Kürtün, Özkürtün Village, Karaçukar Forest, in conifer forest, 17.09.2002, K.D.U. 1205; Zigana Mountain, in conifer forest, 09.09.2001, K.D.U. 879.

Hymenochaetaceae

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

Gümüşhane, Kale Village, on stumps of poplar trees, 04.11.2001, K.U.D. 1012.

4. *Phellinus igniarius* var. *cinereus* Niemelä
Gümüşhane, Şiran, on stumps of willow trees,
16.06.2003, K.U.D. 1499.

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

Gümüşhane, Kelkit, Ünlüpınar Village, on stumps of
willow trees, 16.06.2003, K.U.D. 1469.

6. *Phellinus vorax* (Harkness) Černý

Gümüşhane, Torul, on stumps of poplar trees,
10.05.2001, K.U.D. 855.

7. *Phellinus tuberosus* (Baumg.) Niemela

Gümüşhane, Kale Village, on *Prunus* sp., 04.11.2001,
K.U.D. 909; Akçahisar Village, on poplar tree,
04.11.2001, K.U.D. 913.

Polyporaceae

8. *Funalia troqii* (Berk.) Bond. & Sing.

Gümüşhane, Akçahisar Village, on poplar trees,
04.11.2001, K.U.D. 914; Köse, on stumps of willow
trees, 16.06.2003, K.U.D. 1495; Gümüşhane, Şiran, on
stumps of willow trees, 16.06.2003, K.U.D. 1503.

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

Gümüşhane, Kale Village, on poplar tree,
04.11.2001, K.U.D. 903.

10. *Fomitopsis pinicola* (Fr.) Karst.

Gümüşhane, on stumps of poplar trees, 04.11.2001,
K.U.D. 897.

11. *Polyporus squamosus* Huds.: Fr.

Gümüşhane, Kale Village, on stumps of poplar trees,
04.11.2001, K.U.D. 907; Kürtün, on stumps of willow
trees, 17.09.2002, K.U.D. 1248; Torul, on stumps of
poplar trees, 10.05.2001, K.U.D. 854; Torul, on stumps
of poplar trees, 16.09.2002, K.U.D. 1346; Köse, on
stumps of willow trees, 15.06.2003, K.U.D. 1507;
Gümüşhane, on stumps of willow trees, 15.06.2003,
K.U.D. 1509.

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

Gümüşhane, Kürtün, Örumcek Forest, on stumps of
pine tree, 17.09.2002, K.U.D. 1306.

13. *Trametes suaveolens* (L.: Fr.) Fr.

Gümüşhane, Kale Village, on stumps of willow trees,
04.11.2001, K.U.D. 906; Kürtün, Örumcek Forest, on
stumps of pine tree, 17.09.2002, K.U.D. 1247; Kürtün,

Özkürtün Village, Karaçukar Forest, on stumps of pine
tree, 17.09.2002, K.U.D. 1255.

Ganodermataceae

14. *Ganoderma adspersum* (Schulz.) Donk.

Gümüşhane, on *Morus* sp., 26.06.2002, K.U.D.
1423.

Clavulinaceae

15. *Clavulina cinerea* (Fr.) Schroet.

Gümüşhane, Kürtün, Örumcek Forest, in conifer
forest, 17.09.2002, K.U.D. 1236.

Schizophyllaceae

16. *Schizophyllum commune* Fr.

Gümüşhane, Kelkit, Ünlüpınar Village, on willow
trees, 16.06.2003, K.U.D. 1470.

Cantharellaceae

17. *Cantharellus cibarius* Fr.

Gümüşhane, Kürtün, Örumcek Forest, in conifer
forest, 17.09.2002, K.U.D. 1240; Kürtün, Özkürtün
Village, Karaçukar Forest, in conifer forest, 17.09.2002,
K.U.D. 1253; Zigana Mountain, in conifer forest,
09.09.2001, K.U.D. 889.

18. *Craterellus cinereus* Pers.: Fr.

Gümüşhane, Zigana Mountain, in mixed forest,
16.09.2002, K.U.D. 1203; Kürtün, Örumcek Forest, in
conifer forest, 17.09.2002, K.U.D. 1229.

Lycoperdaceae

19. *Lycoperdon lividum* Pers.

Gümüşhane, Torul, in garden, 16.09.2002, K.U.D.
1347.

20. *Lycoperdon molle* Pers.: Pers.

Gümüşhane, Torul, under *Rosa* sp., 27.05.2001,
K.U.D. 1432.

21. *Lycoperdon perlatum* Pers.

Gümüşhane, Zigana Mountain, in conifer forest,
09.09.2001, K.U.D. 888.

22. *Vascellum pratense* (Pers.: Qué.) Kreisel

Gümüşhane, Torul, on grassy places, 10.05.2001,
K.U.D. 846; Torul, Günay Village, steppe, 25.07.2002,
K.U.D. 1341; Torul, in garden, 16.09.2002, K.U.D.
1348.

Rhizopogonaceae

23. *Rhizopogon vulgaris* (Vitt.) Lange

Gümüşhane, Köse, in conifer forest, 06.06.2003, K.U.D. 1439.

Boletaceae

24. **Boletus pseudosulphurens* Kallenbach

Gümüşhane, Zigana Mountain, in conifer forest, 09.09.2001, K.U.D. 886.

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

Gümüşhane, Torul, Günay Village, in mixed forest, 25.07.2002, K.U.D. 1437.

26. *Leccinum scabrum* (Bul.: Fr.) S.F.Gray

Gümüşhane, Torul, Günay Village, in mixed forest, 25.07.2002, K.U.D. 1320.

27. *Suillus granulatus* (L.: Fr.) O.Kuntze

Gümüşhane, Torul, Günay Village, in mixed forest, 19.07.2002, K.U.D. 1397.

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

Gümüşhane Zigana Mountain, in mixed forest, 15.07.2001, K.U.D. 1429; Torul, Günay Village, in mixed forest, 25.07.2002, K.U.D. 1338; Köse, in conifer forest, 06.06.2003, K.U.D. 1443.

Pleurotaceae

29. *Pleurotus dryinus* (Pers.: Fr.) Kumm.

Gümüşhane, Zigana Mountain, on stumps of *Quercus* sp., 16.09.2002, K.U.D. 1199.

30. *Pleurotus eryngii* (DC.: Fr.) Quél.

Gümüşhane, steppe, 10.05.2001, K.U.D. 874.

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

Gümüşhane, Kürtün, Özkürtün Village, Karaçukar Forest, on stumps of pine trees, 17.09.2002, K.U.D. 1256; Kale Village, on stumps of poplar trees, 04.11.2001, K.U.D. 1012; Güvercinlik Village, on stumps of willow tree, 26.10.2002, K.U.D. 1425.

Hygrophoraceae

32. **Hygrocybe helobia* (Arnolds) Bon

Gümüşhane, Zigana Mountain, in conifer forest, 09.09.2001, K.U.D. 887.

33. *Hygrocybe punicea* (Fr.) Kumm.

Gümüşhane, Kürtün, Özkürtün Village, Karaçukar Forest, in conifer forest, 17.09.2002, K.U.D. 1218;

Kürtün, Örumcek Forest, in conifer forest, 17.09.2002, K.U.D. 1230.

34. *Hygrophorus agathosmus* Fr.: Fr.

Kürtün, Özkürtün Village, Karaçukar Forest, in conifer forest, 17.09.2002, K.U.D. 1209; Kürtün, Özkürtün Village, Karaçukar Forest, in conifer forest, 17.09.2002, K.U.D. 1219; Kürtün, Örumcek Forest, in conifer forest, 17.09.2002, K.U.D. 1222.

35. *Hygrophorus discoxanthus* (Fr.) Rea

Gümüşhane, Torul, in grassy places, 10.05.2001, K.U.D. 841.

Tricholomataceae

36. *Armillaria ostoyae* Romagn.

Gümüşhane, Zigana Mountain, in mixed forest, 16.09.2002, K.U.D. 1195; Kürtün, Özkürtün Village, Karaçukar Forest, in conifer forest, 17.09.2002, K.U.D. 1214; Kürtün, Örumcek Forest, in conifer forest, 17.09.2002, K.U.D. 1221.

37. *Clitocybe gibba* (Pers.: Fr.) Kumm.

Gümüşhane, Torul, in grassy places, 10.05.2001, K.U.D. 844.

38. *Clitocybe dealbata* (Sow.: Fr.) Kumm.

Gümüşhane, Kürtün, Örumcek Forest, in conifer forest, 17.09.2002, K.U.D. 1238; Kürtün, Özkürtün Village, Karaçukar Forest, in conifer forest, 17.09.2002, K.U.D. 1251.

39. *Collybia confluens* (Pers.: Fr.) Kumm.

Gümüşhane, Zigana Mountain, in mixed forest, 16.09.2002, K.U.D. 1190.

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

Gümüşhane, Torul, in grassy places, 10.05.2001, K.U.D. 850.

41. *Lyophyllum connatum* (Schum.: Fr.) Sing.

Gümüşhane, Kelkit, under poplar trees, 16.06.2003, K.U.D. 1484.

42. *Marasmius oreades* (Bolt.: Fr.) Fr.

Gümüşhane, Torul, in grassy places, 10.05.2001, K.U.D. 845.

43. *Marasmius rotula* (Scop.: Fr.) Fr.

Gümüşhane, Kürtün, Örumcek Forest, in conifer forest, 17.09.2002, K.U.D. 1226.

44. *Mycena inclinata* (Fr.) Quéf.

Gümüşhane, Kürtün, Örumcek Forest, in conifer forest, 17.09.2002, K.U.D. 1241; Kürtün, Özkürtün Village, Karaçukar Forest, in conifer forest, 17.09.2002, K.U.D. 1254.

45. **Mycena viridimarginata* Karst.

= *M. luteoalcalina* Sing. Kühn.

Gümüşhane, Zigana Mountain, on stumps of pine tree, 15.06.2002, K.U.D. 1094.

46. *Tricholoma albobrunneum* (Pers.: Fr.) Kumm.

Gümüşhane, Torul, Günay Village, in mixed forest, 25.07.2002, K.U.D. 1330.

47. *Tricholoma populinum* Lge.

Gümüşhane, Kürtün, in mixed wood, 17.09.2002, K.U.D. 1234.

Entolomataceae

48. **Entoloma corvinum* (Kühn.) Noord.

Gümüşhane, Torul, in grassy places, 10.05.2001, K.U.D. 843.

49. **Entoloma elodes* (Fr.: Fr.) Kumm.

= *E. helodes* (Fr.: Fr.) Kumm.

= *Rhodophyllus jubatus* Konr. & Maubl.

= *R. porphyrophaeus* Konr. & Maubl.

Gümüşhane, Torul, in grassy places, 10.05.2001, K.U.D. 851.

Pluteaceae

50. **Pluteus brunneoradiatus* Bonnard

Gümüşhane, Zigana Mountain, in conifer forest, 29.07.2001, K.U.D. 869.

51. *Pluteus minutissimus* Mre.

Gümüşhane, Güvercinlik Village, in garden, 15.06.2002, K.U.D. 1107.

52. **Pluteus nigrofloccosus* (R.Schulz) Favre

= *P. atromarginatus* (Sing.) Kühn.

= *P. tricuspidatus* Vel.

Gümüşhane, Torul, Günay Village, in mixed forest, 25.07.2002, K.U.D. 1322.

53. *Volvariella pusilla* (Pers.: Fr.) Sing.

Gümüşhane, Torul, in grassy places, 10.05.2001, K.U.D. 856.

54. *Volvariella speciosa* (Fr.: Fr.) Sing.

Gümüşhane, Torul, in clover field, 10.05.2001, K.U.D. 853; Gümüşhane, in clover field, 10.05.2001, K.U.D. 876; Kelkit, Ünlüpınar Village, steppe, 16.06.2003, K.U.D. 1476.

Amanitaceae

55. *Amanita gemmata* (Fr.) Gill.

Gümüşhane, Kürtün, Örumcek Forest, in conifer forest, 17.09.2002, K.U.D. 1235.

56. *Amanita excelsa* (Fr.) Bertillon

Gümüşhane, Zigana Mountain, in conifer forest, 29.07.2001, K.U.D. 868.

57. *Amanita muscaria* (L.: Fr.) Hook.

Gümüşhane, Zigana Mountain, in mixed wood, 16.09.2002, K.U.D. 1196; Kürtün, Özkürtün Village, Karaçukar Forest, in conifer forest, 17.09.2002, K.U.D. 1207; Kürtün, Örumcek Forest, in conifer forest, 17.09.2002, K.U.D. 1220; Zigana Mountain, in conifer forest, 09.09.2001, K.U.D. 880.

58. **Amanita nivalis* Grev.

= *A. oreina* (Favre) Heim ex Bon.

= *A. hyperborea* Karst.

Gümüşhane, Torul, Günay Village, in mixed forest, 25.07.2002, K.U.D. 1329.

Agaricaceae

59. *Agaricus bisporus* (Lge.) Imbach. var. *bisporus*

Gümüşhane, Torul, in grassy places, 10.05.2001, K.U.D. 842; Torul, in garden, 16.09.2002, K.U.D. 1344.

60. *Agaricus langei* (Møll.) Møll.

Gümüşhane, Zigana Mountain, in conifer forest, 15.07.2001, K.U.D. 865.

Lepiotaceae

61. *Lepiota cristata* (Bolt.: Fr.) Kumm.

Gümüşhane, Torul, under poplar trees, 16.09.2002, K.U.D. 1188.

62. *Leucoagaricus leucothites* (Vitt.) Wasser

Gümüşhane, Torul, in garden, 16.09.2002, K.U.D. 1349.

63. *Macrolepiota heimi* Locq.: Bon

Gümüşhane, Torul, Günay Village, in garden, 25.07.2002, K.U.D. 1398.

Coprinaceae

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

Gümüşhane, Geçitkale Village, in garden, 15.06.2002, K.U.D. 1104. Kürtün, in mixed wood, 17.09.2002, K.U.D. 1232.

65. *Coprinus comatus* (O. F. Müll.: Fr.) Pers.

Gümüşhane, Torul, Günay Village, in mixed forest, 25.07.2002, K.U.D. 1328; Köse, under willow trees, 16.06.2003, K.U.D. 1488.

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

Gümüşhane, Geçitkale Village, in garden, 15.06.2002, K.U.D. 1105.

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

Gümüşhane, in garden, 10.05.2001, K.U.D. 875; Güvercinlik Village, in garden, 15.06.2002, K.U.D. 1095; Kelkit, under poplar trees, 16.06.2003, K.U.D. 1482.

68. *Psathyrella atomata* (Fr.) Quél.

Gümüşhane, Kale Village, in garden, 04.11.2001, K.U.D. 901.

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

Gümüşhane, Köse, under willow trees, 10.06.2003, K.U.D. 1491.

Bolbitiaceae

70. *Agrocybe cylindracea* (DC: Fr.) Mre

Gümüşhane, Kelkit, Ünlüpınar Village, on stumps of willow trees, 16.06.2003, K.U.D. 1475.

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

Gümüşhane, Torul, in grassy places, 10.05.2001, K.U.D. 1434.

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

Gümüşhane, Torul, in grassy places, 10.05.2001, K.U.D. 1434; Geçitkale Village, in garden, 15.06.2002, K.U.D. 1102.

73. *Agrocybe sphaleromorpha* (Bull.: Fr.) Fayod

Gümüşhane, Geçitkale Village, in garden, 15.06.2002, K.U.D. 1101.

74. *Conocybe lactea* (Lge.) Métr.

Gümüşhane, Kale Village, in grassy places, 04.11.2001, K.U.D. 902.

75. *Conocybe sienophylla* (Berk. & Br.) Sing.

Gümüşhane, Torul, in grassy places, 10.05.2001, K.U.D. 858.

Strophariaceae

76. *Pholiota cerifera* (Karst.) Karst.

Gümüşhane, Kale Village, on stumps of poplar trees, 04.11.2001, K.U.D. 908.

77. *Pholiota highlandensis* (Peck) Hes. & Sm.

Gümüşhane, Kelkit, Ünlüpınar Village, under willow trees, 16.06.2003, K.U.D. 1467.

78. *Pholiota populnea* (Pers.: Fr.) Kuyp. & Tjall.

Gümüşhane, Kale Village, on stumps of poplar trees, 04.11.2001, K.U.D. 904.

79. *Stropharia semiglobata* (Batsch: Fr.) Quél.

Gümüşhane, in grassy places, 10.05.2001, K.U.D. 873.

Cortinariaceae

80. **Cortinarius rubricosus* Fr. Ss. Mos.

Gümüşhane, Kürtün, Örumcek Forest, in conifer forest, 17.09.2002, K.U.D. 1231.

81. *Gymnopilus penetrans* (Fr.: Fr.) Murril.

Gümüşhane, Geçit, on stumps of poplar trees, 5.06.2002, K.U.D. 1108.

82. *Inocybe cinctata* (Fr.: Fr.) Quél.

Gümüşhane, Kürtün, Özkürtün Village, Karaçukar Forest, in conifer forest, 17.09.2002, K.U.D. 1215.

83. *Inocybe dulcamara* (Alb. & Schwein) Quél.

Gümüşhane, Torul, under poplar trees, 16.09.2002, K.U.D. 1189.

84. *Inocybe fuscidula* Vel.

Gümüşhane, Zigana Mountain, in conifer forest, 09.09.2001, K.U.D. 892; Köse, under willow trees, 16.06.2003, K.U.D. 1490.

85. *Inocybe geophylla* (Sow.: Fr.) var. *lilacina* (Peck.) Gill.

Gümüşhane, Zigana Mountain, in conifer forest, on stumps of pine trees, 04.11.2001, K.U.D. 896.

86. *Inocybe pusio* (Karst.)
Gümüşhane, Torul, in grassy places, 10.05.2001, K.U.D. 857.
87. *Inocybe rimosa* (Bull.: Fr.) Kumm. var. *obsoleta* (Romagn.) Kuyper.
Gümüşhane, Zigana Mountain, in conifer forest, 09.09.2001, K.U.D. 895.
- Russulaceae**
88. *Lactarius bertillonii* Neuh.: Schaeff.
Gümüşhane, Zigana Mountain, in conifer forest, 09.09.2001, K.U.D. 878.
89. *Lactarius camphoratus* (Bull.: Fr.) Fr.
Kürtün, Özkürtün Village, Karaçukar Forest, in conifer forest, 17.09.2002, K.U.D. 1208.
90. *Lactarius controversus* (Pers.) Fr.
Gümüşhane, Torul, Günay Village, in mixed forest, 25.07.2002, K.U.D. 1325.
91. *Lactarius deliciosus* (Fr.) S.F.Gray
Gümüşhane, Zigana Mountain, in conifer forest, 09.09.2001, K.U.D. 890. Kürtün, Özkürtün Village, Karaçukar Forest, in conifer forest, 17.09.2002, K.U.D. 1212; Torul, Günay Village, in mixed forest, 25.07.2002, K.U.D. 1321.
92. *Lactarius salmonicolor* Heim & Lecl.
Gümüşhane, Zigana Mountain, in conifer forest, 09.09.2001, K.U.D. 885.
93. *Lactarius scrobiculatus* (Scop.: Fr.) Fr.
Gümüşhane, Zigana Mountain, in mixed wood, 16.09.2002, K.U.D. 1201; Kürtün, Özkürtün Village, Karaçukar Forest, in conifer forest, 17.09.2002, K.U.D. 1213.
94. **Lactarius tabidus* Fr.
Gümüşhane, Zigana Mountain, in mixed wood, 16.09.2002, K.U.D. 1202.
95. *Russula aeruginea* Lindblad.: Fr.
Gümüşhane, Torul, Günay Village, in mixed forest, 19.07.2002, K.U.D. 1396.
96. *Russula amoenolens* Romagn.
Gümüşhane, Torul, Günay Village, in mixed forest, 25.07.2002, K.U.D. 1326.
97. **Russula decipiens* Quéf.
Gümüşhane, Torul, Günay Village, in mixed forest, 25.07.2002, K.U.D. 1438.
98. *Russula delica* Fr.
Gümüşhane, Zigana Mountain, in conifer forest, 09.09.2001, K.U.D. 882; Torul, Günay Village, in mixed forest, 25.07.2002, K.U.D. 1340.
99. **Russula emeticicolor* Schaeff.
Gümüşhane, Torul, Günay Village, in mixed forest, 25.07.2002, K.U.D. 1323.
100. *Russula fellea* (Fr.) Fr.
Gümüşhane, Torul, Günay Village, in mixed forest, 25.07.2002, K.U.D. 1332.
101. **Russula firmula* Schaeff.
Gümüşhane, Zigana Mountain, in conifer forest, 09.09.2001, K.U.D. 927.
102. *Russula foetens* (Pers.: Fr.) Fr.
Gümüşhane, Kürtün, Özkürtün Village, Karaçukar Forest, in conifer forest, 17.09.2002, K.U.D. 1217.
103. *Russula obscura* Romell
Gümüşhane, Kürtün, Özkürtün Village, Karaçukar Forest, in conifer forest, 17.09.2002, K.U.D. 1211.
104. *Russula sanguinea* (Bull.) Fr.
Gümüşhane, Torul, Günay Village, in mixed forest, 25.07.2002, K.U.D. 1331.
105. *Russula sardonias* Fr.
Gümüşhane, Torul, Günay Village, in mixed forest, 25.07.2002, K.U.D. 1327.

Discussion

In the present study, 105 macrofungi taxa belonging to 2 classes and 24 families were identified. Among them, 38% (41 taxa) are edible, 49.4% (52 taxa) are inedible, 12.6% (12 taxa) are poisonous and 17.1% (18 taxa) cause wood decay.

Six taxa of edible macrofungi are well known and are eaten by local people, although 41 of the 105 identified taxa are reported as edible in the literature. These are *Cantharellus cibarius*, *Lactarius deliciosus*, *Agaricus bisporus* var. *bisporus*, *Pleurotus eryngii*, *Pleurotus ostreatus* and *Marasmius oreades*. According to official

records, no cases of poisoning have been recorded in the district so far. This might indicate that local people collect only well known taxa of macrofungi.

The most widespread families in the region are *Russulaceae* (18 taxa), *Tricholomataceae* (12 taxa) and *Cortinariaceae* (8 taxa). The members of *Tricholomataceae* have no particular habitat, while *Russulaceae* and *Cortinariaceae* prefer mostly forest environments.

The taxa identified in the present study were compared to those in studies carried out in neighbouring areas. The similarities were indicated as a percentage as

follows: Erzurum 31.8% (32 taxa), Maçka 11.2% (12 taxa) and Giresun 5.6% (6 taxa). These patterns show quite low similarities, possibly due to different climatic and vegetation conditions or stochastic sampling errors.

In conclusion, a contribution was made to the mycoflora of Turkey by adding 14 species as new records. These are *Otidea alutacea*, *Boletus pseudosulphurens*, *Hygrocybe helobia*, *Mycena viridimarginata*, *Entoloma corvinum*, *E. elodes*, *Pluteus brunneoradiatus*, *P. nigrofloccosus*, *Amanita nivalis*, *Cortinarius rubricosus*, *Lactarius tabidus*, *Russula decipiens*, *Russula emeticicolor* and *Russula firmula*.

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