



Macrofungi of Akdağmadeni (Yozgat/Turkey) and Gemerek (Sivas/Turkey)

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Abstract

The current study is based on the macrofungi specimens collected from Akdağmadeni (Yozgat) and Gemerek (Sivas) between 2010 and 2011. As a result of field and laboratory studies, 66 taxa belonging to 23 families in *Ascomycota* and *Basidiomycota* were reported. All taxa are listed together with their habitat, altitude, locality, collection date, and accession numbers.

Key words: Macrofungi, biodiversity, Akdağmadeni (Yozgat), Gemerek (Sivas), Turkey

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Akdağmadeni (Yozgat) ve Gemerek (Sivas) makrofungusları

Özet

Mevcut çalışma 2010 ve 2011 yılları arasında Akdağmadeni (Yozgat) ve Gemerek (Sivas)'den toplanan makrofungi örnekleri üzerinde yapılmıştır. Arazi ve laboratuvar çalışmalarının sonucu olarak *Ascomycota* ve *Basidiomycota* sınıflarında 23 familyaya ait 66 takson rapor edilmiştir. Tüm taksonlar habitat bilgileri, coğrafik konum, yükseklik, lokalite, toplama tarihi ve numaraları ile birlikte listelenmiştir.

Anahtar kelimeler: Makrofunguslar, biyoçeşitlilik, Akdağmadeni (Yozgat), Gemerek (Sivas), Türkiye

1. Introduction

Many studies on macrofungal diversity of Turkey have been carried out and they were presented as checklists in different times (Doğan et al., 2005; Solak et al., 2007; Sesli and Denchev, 2011). New additions of the results of recent works were also added to these data which were not included in the above checklists (Akata, 2010; Akata and Halıcı, 2010; Akata et al., 2011; 2011a; Allı, 2011; Allı et al., 2011; Doğan et al. 2010; Keleş and Demirel 2010).

Previous taxonomic studies on macrofungal diversity around the study area were conducted by Selçuk et al., (2000), Huseyinov et al., (2001), Kaşık et al., (2002, 2002a, 2003) Türkoğlu and Gezer (2006). However, there is not any detailed mycological study in Akdağmadeni (Yozgat) and Gemerek (Sivas).

Akdağmadeni district belonging to Yozgat province is located in the north-east of Yozgat. The neighbour districts are Sarkışla in the east, Çayıralan in the south, Sarıkaya and Saraykent in the west, Kadişehri in the north. Gemerek district belonging to Sivas province is neighbour with Sarkışla in the east of, Sarioğlan in the west, Çayıralan and Akdağmadeni in the north (Figure 1).

According to climatologic data from meteorological station, in the Akdağmadeni District the lowest temperature on average was measured -21.4 °C in February. The highest temperature on average was measured 35.6 °C in August. Annual rainfall is 528 milimeters. In the Gemerek District, the lowest temperature on average was measured -29.2 °C in February. The highest temperature was measured 41.2 °C in July. Annual rainfall is 407 milimeters. The

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boundaries of the research area include forested area in the Akdağmadeni District and in the Gemerek District (Figure 1). In the area the vegetation is dominated by *Pinus nigra* J.F. Arnold, *Pinus sylvestris* L., *Populus tremula* L., and the members of the genera *Quercus* L., *Juniperus* L., *Salix* L., *Pyrus* L., *Cretagus* L., *Astragalus* L., *Orchis* L. and *Thymus* L.

The aim of the present study is to determine the macrofungal composition of Akdağmadeni (Yozgat) and Gemerek (Sivas), and make contribution to the macromycota of Turkey.

2. Materials and methods

Fungi samples were collected periodically from Akdağmadeni (Yozgat) and Gemerek (Sivas) in autumn, spring and summer between 2010 and 2011. Relevant morphological and ecological characteristics of the macrofungi were recorded and they were photographed in their natural habitats. Then the samples were taken to the herbarium. Necessary macroscopic and microscopic measurement data were obtained in the herbarium. Some reagents (distillate water, Melzer's reagent, 5% KOH, Congo red etc.) were also used for data collection. Identification of the specimens was performed with the help of literature (Breitenbach and Kränzlin, 1984-2000; Hansen and Knudsen, 1992-2000; Kränzlin, 2005; Jordan, 2004). The specimens are kept at the Fungarium of Erciyes University.



Figure1. The map of study area.

3. Results

As a result of this study, 66 taxa belonging to 23 families of the *Ascomycota* and *Basidiomycota* were identified. The systematics of the taxa are in accordance with Cannon and Kirk (2007) and Kirk et al. (2008), and they were listed together with their distribution, habitat, locality, collection date, and accession numbers (ZK: Zekiye KIRIŞ).

Ascomycota Caval.-Sm.

Pezizales J. Schröt.

Helvellaceae Fr.

Helvella acetabulum (L.) Quéf.: Yozgat, Akdağmadeni, in *Pinus sylvestris* L. forest, 39° 39' 450" N, 035° 55' 251" E, 1410 m, 27.05.2011, ZK. 415.

Helvella leucomelaena (Pers.) Nannf.: Yozgat, Akdağmadeni, in *Pinus sylvestris* L. forest, 39° 39' 474" N, 035° 56' 649" E, 1507 m, 27.05.2011, ZK. 420.

Helvella leucopus Pers.: Sivas, Gemerek district, Sızır town, on road, under *Populus tremula* L., 39° 18' 422" N, 035° 57' 057" E, 1370 m, 14. 05. 2011, ZK. 354.

Helvella queletii Bres.: Yozgat, Border province of Yozgat, in *Populus tremula* L.-*Pinus sylvestris* L. mixed forest, 39° 19' 35" N, 035° 48' 41" E, 1650 m, 21.06.2011, ZK. 466.

Morchellaceae Rchb.

Mitrophora semilibera (DC.) Lév.: Sivas, Gemerek, Eşikli village, in meadows, 39° 21' 898" N, 035° 58' 558" E, 1430 m, 14.05.2011, ZK. 366.

Morchella elata Fr. var. *elata*: Yozgat, Akdağmadeni, in *Pinus sylvestris* L. forest, 39° 39' 450" N, 035° 55' 251" E, 1410 m, 27.05.2011, ZK. 390.

Morchella esculenta (L.) Pers.: Yozgat, Akdağmadeni, in *Pinus sylvestris* L. forest, 39° 39' 450" N, 035° 55' 251" E, 1410 m, 27.05.2011, ZK. 388.

Pezizaceae Dumort

Peziza arvernensis Boud.: Yozgat, Akdağmadeni, in *Pinus sylvestris* L. forest, 39° 39' 450" N, 035° 55' 251" E, 1410 m, 27.05.2011, ZK. 408.

Pyronemataceae Corda

Scutellinia scutellata (L.) Lambotte: Sivas, Gemerek, Sızır town, in *Pinus sylvestris* L. forest, 39° 25' 061" N, 035° 49' 758" E, 1650 m, 26.09.2010, ZK.172.

Basidiomycota Whittaker ex Moore**Agaricales** Underw.**Agaricaceae** Chevall

Agaricus impudicus (Rea) Pilát: Sivas, Gemerek, Akdağmadeni, in *Pinus nigra* J.F. Arnold forest, 39° 29' 870" N, 35° 56' 603" E, 1661 m, 21.06.2010, ZK. 064.

Bovista nigrescens Pers.: Sivas, Gemerek, Sızır town, in *Pinus nigra* J.F. Arnold forest, 39° 25' 663" N, 35° 53' 183" E, 1584 m, 16.05.2010, ZK. 08.

Bovista plumbea Pers.: Sivas, Gemerek, Sızır town, in *Pinus nigra* J.F. Arnold forest, 39° 25' 430" N, 35° 51' 697" E, 1630 m, 01.11.2010, ZK. 349.

Coprinus comatus (O.F. Müll.) Pers.: Sivas, Gemerek, Sızır town, in *Pinus nigra* J.F. Arnold forest, 39° 25' 484" N, 035° 51' 823" E, 1550 m, 26.09.2010, ZK.158.

Crucibulum laeve (Huds.) Kambly: Yozgat, Akdağmadeni, in *Pinus sylvestris* L. , 39° 30' 371" N, 035° 56' 407" E, 1700 m, 24.10.2010, ZK. 278. Sivas, Gemerek, Sızır town, in *Pinus nigra* J.F. Arnold forest, 39° 25' 430" N, 35° 51' 697" E, 1630 m, 01.11.2010, ZK. 346.

Echinoderma asperum (Pers.) Bon: Sivas, Gemerek, Sızır town, Cennet stream, in *Pinus nigra* J.F. Arnold forest, 39° 25' 484" N, 035° 51' 823" E, 1550 m, 26.09.2010, ZK. 155.

Lepiota cristata (Bolton) P. Kumm.: Sivas, Gemerek, Sızır town, Cennet stream, in *Pinus nigra* J.F. Arnold forest, 39° 24' 900" N, 035° 50' 593" E, 1615 m, 26.09.2010, ZK. 167.

Lycoperdon lividum Pers.: Sivas, Gemerek, Sızır town, in *Pinus nigra* J.F. Arnold forest 39° 25' 369" N, 35° 53' 955" E, 1519 m, 26.09.2010, ZK. 052.

Lycoperdon mammiforme Pers.: Sivas, Gemerek, Sızır town, in *Pinus nigra* J.F. Arnold forest, 39° 24' 935" N, 035° 50' 861" E, 1660 m, 24.10.2010, ZK. 285.

Lycoperdon marginatum Vittad.: Sivas, Gemerek, Sızır town, in *Pinus nigra* J.F. Arnold forest, 39° 24' 935" N, 035° 50' 861" E, 1660 m, 24.10.2010, ZK. 290.

Lycoperdon molle Pers.: Sivas, Gemerek, in *Pinus nigra* forest, 39° 29' 870" N, 035° 56' 603" E, 1661 m, 21.06.2010, ZK. 076.

Lycoperdon nigrescens Wahlenb.: Sivas, Gemerek, Sızır town, in *Pinus sylvestris* L. forest 39° 28' 222" N, 035° 57' 274" E, 1606 m, 24.07.2010, ZK. 098.

Lycoperdon perlatum Pers.: Sivas, Gemerek, Sızır town, in *Pinus sylvestris* L. forest, 39° 25' 061" N, 035° 49' 758" E, 1650 m, 26.09.2010, ZK. 170. Yozgat, Akdağmadeni, Nalbant mountain, in *Pinus sylvestris* L. forest, 39° 34' 786" N, 36° 01' 806" E, 1965 m, 01.11.2010, ZK. 333.

Lycoperdon pyriforme Schaeff.: Sivas, Gemerek, Sızır town, in *Pinus nigra* J.F. Arnold forest,, 39° 24' 935" N, 035° 50' 861" E, 1660 m, 24.10.2010, ZK. 293.

Lycoperdon umbrinum Pers.: Yozgat, Akdağmadeni, Nalbant mountain, in *Pinus sylvestris* L. forest, 39° 34' 786" N, 36° 01' 806" E, 1965 m, 01.11.2010, ZK. 335.

Lycoperdon utrifforme Bull.: Yozgat, Akdağmadeni, Başçatak village, in *Pinus sylvestris* L. forest, 39° 30' 979" N, 035° 55' 746" E, 1725 m, 24.10.2010, ZK. 265.

Macrolepiota excoriata (Schaeff.) Wasser: Yozgat, Akdağmadeni, Başçatak village, in *Pinus sylvestris* L. forest 39° 30' 979" N, 035° 55' 746" E, 1725 m, 24.10.2010, ZK. 259.

Macrolepiota procera (Scop.) Singer var. *procera*: Sivas, Gemerek, Sızır town, in *Pinus sylvestris* L. forest, 39° 24' 585" N, 035° 50' 275" E, 1790 m, 02.10.2010, ZK. 190.

Tulostoma squamosum Pers.: Sivas, Gemerek, Akdağmadeni, in *Pinus nigra* J.F. Arnold forest, 39° 29' 870" N, 35° 56' 603" E, 1661 m, 21.06.2010, ZK. 071. Sivas, Gemerek, Sızır town, in *Pinus sylvestris* L. forest, 39° 25' 605" N, 35° 53' 126" E, 1574 m, 14.05.2011, ZK. 375.

Bolbitiaceae Singer

Bolbitius titubans (Bull.) Fr. var. *titubans*: Yozgat, Akdağmadeni, in *Pinus sylvestris* L. forest, on plant debris, 39° 40' 467" N, 035° 48' 139" E, 1340 m, 27.05.2011, ZK. 381.

Conocybe antipus (Lasch) Fayod: Sivas, Akdağmadeni, in *Pinus sylvestris* L. forest, 39° 30' 371" N, 035° 56' 407" E, 1700 m, 24.10.2010, ZK. 275.

Inocybaceae Jülich

Inocybe amethystina Kuyper: Sivas, Gemerek, Akdağmadeni, in *Pinus nigra* J.F. Arnold forest, 39° 29' 870" N, 35° 56' 603" E, 1661 m, 21.06.2010, ZK. 063.

Inocybe assimilata Britzelm.: Sivas, Gemerek, Akdağmadeni, in *Pinus nigra* J.F. Arnold forest, 39° 29' 870" N, 35° 56' 603" E, 1661 m, 21.06.2010, ZK. 072.

Inocybe bongardii (Weinm.) Quél. var. *bongardii*: Sivas, Akdağmadeni, in *Pinus sylvestris* L. forest, 39° 30' 371" N, 035° 56' 407" E, 1700 m, 24.10.2010, ZK. 281.

Inocybe rimosa (Bull.) P. Kumm.: Sivas, Gemerek, Sızır town, in *Pinus sylvestris* L. - *Juniperus* sp. L. mixed forest 39° 25' 424" N, 35° 51' 799" E, 1660 m, 21.06.2010, ZK. 082. Sivas, Gemerek, Sızır town, in *Pinus sylvestris* L. - *Juniperus* sp. L. mixed forest, 39° 25' 684" N, 35° 52' 319" E, 1560 m, 21.06.2010, ZK. 036. Sivas, Gemerek, Sızır town, in *Pinus sylvestris* L. forest, 39° 28' 222" N, 35° 57' 274" E, 1606 m, 24.07.2010, ZK. 041.

Marasmiaceae Roze ex Kühner

Marasmius epiphyllus (Pers.) Fr.: Sivas, Gemerek, Sızır town, under *Populus tremula* L., on leaf, 39° 18' 437" N, 035° 56' 829" E, 1325 m, 03.10.2010, ZK. 201.

Mycenaceae Overeem

Mycena epipterygia (Scop.) Gray: Yozgat, Çat forests, in *Pinus sylvestris* L. forest 39° 28' 660" N, 035° 57' 922" E, 1660 m, 01.11.2010, ZK. 326.

Xeromphalina caucinialis (With.) Kühner & Maire: Yozgat, Akdağmadeni, Başçatak village, in *Pinus sylvestris* L. forest, 39° 30' 979" N, 035° 55' 746" E, 1725 m, 24.10.2010, ZK. 270.

Physalacriaceae Corner

Strobilurus stephanocystis (Kühner & Romagn. ex Hora) Singer: Sivas, Gemerek, Sızır town, on *Pinus nigra* J.F. Arnold cone, 39° 24' 935" N, 035° 50' 861" E, 1660 m, 24.10.2010, ZK. 299.

Pleurotaceae Kühner

Pleurotus ostreatus (Jacq.) P. Kumm.:

Sivas, Gemerek, Sızır town, on *Populus tremula* L., 39° 18' 422" N, 035° 57' 057" E, 1370 m, 14. 05. 2011, ZK. 356.

Psathyrellaceae Vilgalys, Moncalvo & Redhead

Coprinellus disseminatus (Pers.) J.E. Lange: Sivas, Gemerek, Eşikli village, on *Salix* sp. L. stump, 39° 21' 898" N, 035° 58' 558" E, 1430 m, 14.05.2011, ZK. 364.

Coprinopsis atramentaria (Bull.) Redhead, Vilgalys & Moncalvo: Sivas, Gemerek, Sızır town, under *Salix* sp. L., 39° 25' 580" N, 035° 54' 953" E, 1525 m, 02.10.2010, ZK. 194.

Coprinopsis nivea (Pers.) Redhead, Vilgalys & Moncalvo: Sivas, Gemerek, Sızır town, in *Pinus nigra* J.F. Arnold forest, on dung, 39° 24' 935" N, 035° 50' 861" E, 1660 m, 24.10.2010, ZK. 289.

Coprinopsis picacea (Bull.) Redhead, Vilgalys & Moncalvo: Sivas, Gemerek, Sızır town, in *Pinus sylvestris* L. - *Juniperus* sp. mixed forest, 39° 25' 473" N, 35° 54' 464" E, 1531 m, 18.04.2010, ZK. 06.

Strophariaceae Singer & A.H. Sm.

Agrocybe pediades (Fr.) Fayod: Sivas, Gemerek, Sızır town, in *Pinus nigra* J.F. Arnold forest, 39° 25' 605" N, 35° 53' 126" E, 1574 m, 14.05.2011, ZK. 378.

Hebeloma laterinum (Batsch) Vesterh.: Sivas, Gemerek, Sızır town, in *Pinus nigra* J.F. Arnold forest, 39° 24' 971" N, 035° 50' 689" E, 1656 m, 02.10.2010, ZK. 184.

Hypoloma fasciculare (Huds.) P. Kumm. var. *fasciculare*: Yozgat, in *Populus tremula* L. - *Pinus sylvestris* L. mixed forest, on stumps of *Pinus sylvestris* L., 39° 19' 35" N, 035° 48' 41" E, 1650 m, 21.06.2011, ZK. 476.

Pholiota cerifera P. Karst.: Sivas, Gemerek, Sızır town, on *Quercus* sp. L., 39° 18' 437" N, 035° 56' 829" E, 1325 m, 03.10.2010, ZK. 202.

Tricholomataceae R. Heim ex Pouzar

Clitocybe dealbata (Sowerby) Gillet: Sivas, Gemerek, Sızır town, in *Pinus nigra* J.F. Arnold forest, 39° 25' 430" N, 35° 51' 697" E, 1630 m, 01.11.2010, ZK. 347.

Lepista nuda (Bull.) Cooke: Sivas, Gemerek, Sızır town, in *Pinus nigra* forest, 39° 24' 935" N, 035° 50' 861" E, 1660 m, 24.10.2010, ZK-308. Yozgat, Akdağmadeni, Başçatak village, in *Pinus sylvestris* L. forest, 39° 30' 979" N, 035° 55' 746" E, 1725 m, 24.10.2010, ZK. 245.

Melanoleuca cognata (Fr.) Konrad & Maubl. var. *cognata*: Sivas, Gemerek, Sızır town, in *Pinus nigra* J.F. Arnold forest, 39° 24' 597" N, 35° 49' 794" E, 1762 m, 02.10.2010, ZK. 183.

Myxomphalia maura (Fr.) Hora: Sivas, Gemerek, Sızır town, in *Pinus nigra* J.F. Arnold forest, 39° 24' 935" N, 035° 50' 861" E, 1660 m, 24.10.2010, ZK. 292.

Tricholoma terreum (Schaeff.) P. Kumm.: Sivas, Gemerek, Sızır town, in *Pinus nigra* J.F. Arnold forest, 39° 24' 971" N, 035° 50' 689" E, 1656 m, 02.10.2010, ZK. 185, Sivas, Gemerek, Sızır town, in *Pinus nigra* J.F. Arnold forest, 39° 24' 935" N, 035° 50' 861" E, 1660 m, 24.10.2010, ZK. 309.

Boletales E.-J. Gilbert

Gomphidiaceae Maire ex Jülich

Chroogomphus rutilus (Schaeff.) O.K. Mill.: Sivas, Gemerek, Akdağmadeni, in *Pinus nigra* J.F. Arnold forest, 39° 29' 870" N, 35° 56' 603" E, 1661 m, 21.06.2010, ZK. 089. Sivas, Gemerek, Sızır town, in *Pinus nigra* J.F. Arnold forest, 39° 25' 684" N, 35° 52' 319" E, 1560 m, 21.06.2010, ZK. 033. Sivas, Gemerek, Sızır town, in *Pinus nigra* J.F. Arnold forest, 39° 29' 870" N, 35° 56' 603" E, 1661 m, 21.06.2010, ZK. 054. Yozgat, Çayıralan, in *Pinus sylvestris* L. forest, 39° 19' 30" N, 035° 50' 17" E, 1560-1600 m, 21.06.2011, ZK. 451. Yozgat, Akdağmadeni, Başçatak village, in *Pinus sylvestris* L. forest, 39° 30' 979" N, 035° 55' 746" E, 1725 m, 24.10.2010, ZK. 249.

Rhizopogonaceae Gäum. & C.W. Dodge

Rhizopogon roseolus (Corda) Th. Fr.: Sivas, Gemerek, Akdağmadeni, in *Pinus nigra* J.F. Arnold forest, 39° 29' 870" N, 35° 56' 603" E, 1661 m, 21.06.2010, ZK. 084. Yozgat, Akdağmadeni, in *Pinus sylvestris* L. forest, 39° 34' 786" N, 36° 01' 806" E, 1965 m, 01.11.2010, ZK. 493.

Suillaceae Besl & Bresinsky

Suillus bovinus (Pers.) Roussel: Yozgat, Akdağmadeni, Başçatak village, in *Pinus sylvestris* L. forest, 39° 30' 979" N, 035° 55' 746" E, 1725 m, 24.10.2010, ZK. 250.

Suillus granulatus (L.) Roussel: Sivas, Akdağmadeni, in *Pinus sylvestris* L. forest, 39° 30' 371" N, 035° 56' 407" E, 1700 m, 24.10.2010, ZK. 262. Sivas, Gemerek, Sızır town, in *Pinus sylvestris* L. forest, 39° 25' 424" N, 35° 51' 799" E, 1660 m, 21.06.2010, ZK. 50. Yozgat, Akdağmadeni, in *Pinus nigra* J.F. Arnold forest, 39° 39' 450" N, 035° 55' 251" E, 1410 m, 27.05.2011, ZK. 399.

Suillus luteus (L.) Roussel: Sivas, Gemerek, in *Pinus nigra* J.F. Arnold forest, 39° 29' 870" N, 35° 56' 603" E, 1661 m, 21.06.2010, ZK. 087. Sivas, Gemerek, Sızır town, in *Pinus nigra* J.F. Arnold forest, 39° 29' 870" N, 35° 56' 603" E, 1661 m, 21.06.2010, ZK. 94. Sivas, Gemerek, Sızır town, in *Pinus nigra* J.F. Arnold forest, 39° 25' 684" N, 35° 52' 319" E, 1560 m, 21.06.2010, ZK. 032.

Geastrales K. Hosaka & Castellano**Geastraceae** Corda

Geastrum elegans Vittad.: Yozgat, Akdağmadeni, Başçatak village, in *Pinus sylvestris* L. forest, 39° 30' 979" N, 035° 55' 746" E, 1725 m, 24.10.2010, ZK. 240.

Geastrum minimum Schwein.: Sivas, Gemerek district, Sızır town, in *Pinus nigra* J.F. Arnold forest, 39° 25' 684" N, 35° 52' 319" E, 1560 m, 21.06.2010, ZK. 037.

Polyporales Gäum.**Meruliaceae** Rea

Bjerkandera adusta (Willd.) P. Karst.: Sivas, Gemerek, Çat forests, on *Populus tremula* L. stump, 39° 17' 990" N, 35° 57' 747" E, 1332 m, 03.10.2010, ZK. 200.

Polyporaceae Fr. ex Corda

Trametes hirsuta (Wulfen) Lloyd: Yozgat, Akdağmadeni, on *Quercus* sp. L., 39° 39' 450" N, 035° 55' 251" E, 1410 m, 27.05.2011, ZK. 401.

Russulales Kreisel ex P.M. Kirk, P.F. Cannon & J.C. David**Russulaceae** Lotsy

Lactarius deliciosus (L.) Gray: Sivas, Gemerek, Sızır town, Cennet stream, in *Pinus nigra* J.F. Arnold forest, 39° 24' 935" N, 035° 50' 861" E, 1660 m, 24.10.2010, ZK. 297.

Russula delica Fr.: Sivas, Gemerek, Sızır town, in *Pinus sylvestris* L. forest, 39° 24' 603" N, 035° 50' 747" E, 1761 m, 02.10.2010, ZK. 195. Sivas, Gemerek, Sızır town, in *Pinus nigra* J.F. Arnold forest, 39° 28' 222" N, 35° 57' 274" E, 1606 m, 24.07.2010, ZK. 100.

Russula queletii Fr.: Yozgat, Akdağmadeni, Başçatak village, in *Pinus sylvestris* L. forest, 39° 30' 979" N, 035° 55' 746" E, 1725 m, 24.10.2010, ZK. 252.

Stereaceae Pilát

Stereum hirsutum (Willd.) Pers.: Yozgat, in *Populus tremula*-*Pinus sylvestris* L. mixed forest, on *Pinus sylvestris* L., 39° 19' 35" N, 035° 48' 41" E, 1650 m, 21.06.2011, ZK. 477.

Thelephorales Corner ex Oberw.**Bankeraceae** Donk

Sarcodon imbricatus (L.) P. Karst.: Yozgat, Akdağmadeni, Gülören village, in *Pinus sylvestris* L. forest, 39° 35' 006" N, 36° 07' 394" E, 1810 m, 01.09.2010, ZK. 020.

4. Conclusions

In the present study, 66 macrofungi taxa, in 23 families and 42 genera, were reported. Nine of them belong to *Ascomycota* and 57 to *Basidiomycota*.

The distribution of the taxa and their families are as follows: *Agaricaceae* 19, *Tricholomataceae* 5, *Helvellaceae* 4, *Inocybaceae* 4, *Psathyrellaceae* 4, *Strophariaceae* 4, *Morchellaceae* 3, *Mycenaceae* 2, *Russulaceae* 3, *Suillaceae* 3, *Bolbitiaceae* 2, *Geastraceae* 2, *Bankeraceae* 1, *Gomphidiaceae* 1, *Marasmiaceae* 1, *Meruliaceae* 1, *Pezizaceae* 1, *Physalacriaceae* 1, *Pleurotaceae* 1, *Polyporaceae* 1, *Pyronemataceae* 1, *Rhizopogonaceae* 1 and *Stereaceae* 1.

Twenty-two of the 66 taxa are edible, but only *Morchella esculenta*, *M. elata*, *Lactarius deliciosus*, *Rhizopogon roseolus*, *Agaricus impudicus* and *Pleurotus ostreatus* are known as edible mushrooms by local people.

There are also eight poisonous mushrooms in the study area. These are: *Echinoderma asperum*, *Inocybe amethystina*, *I. assimilata*, *I. bongardii*, *I. rimosa*, *Coprinopsis atramentaria*, *Hypholoma fasciculare* var. *fasciculare* and *Clitocybe dealbata*. There is not any record of poisoning event in the study area, because the local people collect and eat only well known edible mushrooms.

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