

A Study on Macrofungal diversity of Bozyazı Province (Mersin), Turkey

Hasan Hüseyin DOĞAN^{1*}, Murat Ali KÜÇÜK¹, Ilgaz AKATA²

¹*Selçuk University, Science Faculty, Biology Department, 42031 Campus /Konya, Turkey*

²*Ankara University, Faculty of Science, Department of Biology, 06100 Tandoğan /Ankara, Turkey*

Received: 04.04.2010 Revised: 02.07.2010 Accepted: 08.07.2010

ABSTRACT

The material under study comprises macrofungi specimens that were collected from different localities in Bozyazı (Mersin) between 2005 and 2007. As the result of field and laboratory studies, 96 taxa belong to 11 of Ascomycota, and 85 taxa of 12 orders and 41 families of Basidiomycota were identified.

Key Words: *Macrofungi, Bozyazı (Mersin), Turkey.*

1. INTRODUCTION

Numerous studies of the macrofungal diversity for Turkey have been conducted and these studies were given as a checklist in different times [1-4]. Recently, new additions were also added to these data which were not included in the previous checklists [5-12].

According to the relevant literature, there is no research have been made on macrofungal diversity in Bozyazı region covering 700 km² in south of Turkey (Figure 1). The study area was selected by considering its apparent

potential in supporting an abundantly rich macrofungi biota growing in different habitats located in the Bozyazı.

The county is at the coast of the Mediterranean Sea, Anamur County is in its west, Aydıncık County is in its east and Ermenek County is in its north. According to climatologic data of Bozyazı meteorological station, the climate of the area is humid and semi-humid Mediterranean-type climate with annual rainfall of 965 mm. and 10 °C annual average temperature.

*Corresponding author, e-mail: hhuseyindogan@yahoo.com

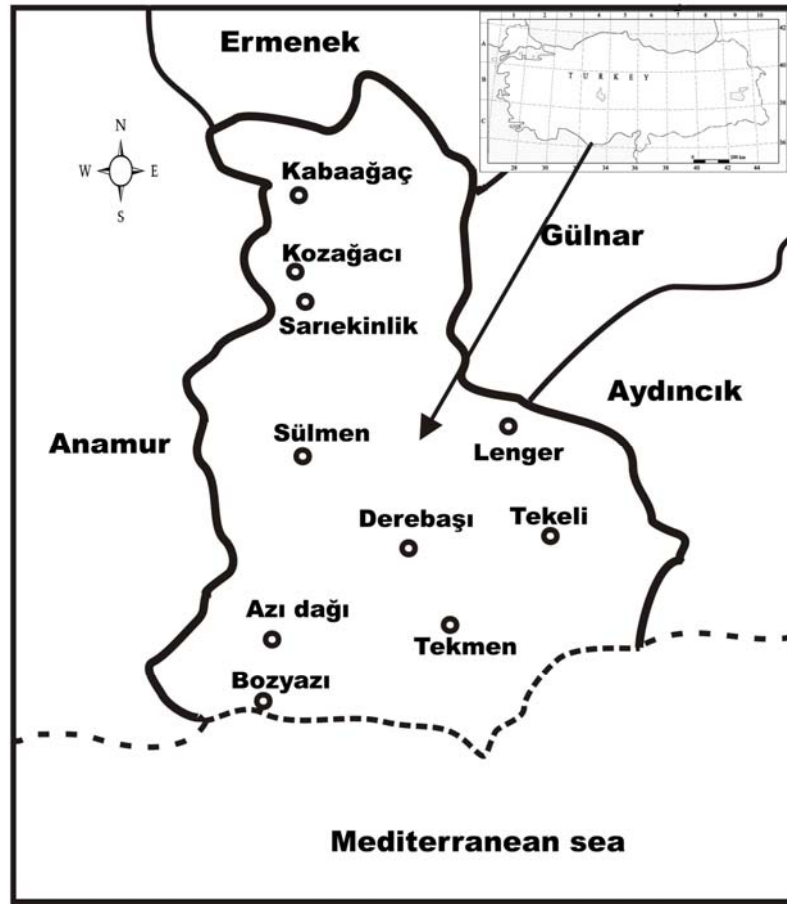


Figure 1. The map of Bozyazı (1/400000).

In the study area, the leathery leaved 2-3 m high, dense scrub of evergreen shrubs is common that of true macchie. The area extends from the coast up to the altitude of 800m. The forest vegetation consists of deciduous and coniferous forests, which are represented by *Pinus brutia* Ten at 0-900m, *Pinus nigra* J.F. Arn. subsp. *nigra* var. *caramanica* (Loudon) Rehder at 900-1900m, *Abies cilicica* (Ant. & Kotschy) Carr. subsp. *isaurica* Coode & Cullen, *Cedrus libani* A.Rich. at 1200-1800m, *Juniperus excelsa* M.Bieb. and *J. foetidissima* Willd.. The vegetation of these localities can be pure or mixed with deciduous trees, *Quercus* spp. *Phyllirea latifolia* L., *Laurus nobilis* L., *Crateagus monogyna* Jacq., *Myrtus communis* L., *Pistacia terebinthus* L., *P. lentiscus* L. and *Nerium oleander* L.. *Salix alba* L., and *Populus* L. spp. which can be also found in forests near the stream.

2. THE METHODOLOGY

Fungal specimens were searched and collected between 2005 and 2007. The field studies for the search and collection of the fungal specimens were conducted mostly in the autumn and spring seasons of 2005 – 2007 periods, considering the most suitable climatic conditions for carpophore formation.

A microscope and reagents (Melzer reagent, 5 % KOH, cotton blue, sulphovanilin etc) were used for the identification of fungi. The determination of the recorded species was accomplished during the field trips or afterwards, in the Mycological Laboratory. The species

were identified with the help of the data and information in the literature [13-23]. All specimens are kept at Selçuk University Mushroom and Application Centre (KONYA).

3. FINDINGS

Taxa, family and author citations are listed according to the sources [24-26]. Family and species names are given as alphabetical orders in the text. Localities, collection dates, fungarium registration numbers (K: Küçük; D: Doğan) of the taxa are also given.

Ascomycota Caval.-Sm.

Pezizales J. Schröt.

Caloscyphaceae Harmaja

Caloscypha fulgens (Pers.) Boud.

Sariekinlik plateau, in mixed cedar and fir forest, 1200m, 11.05.2005, K&D.90; 28.04.2007, K&D.383.

Helvellaceae Fr.

Helvella atra J. König

Azı Dağı, in mixed red pine and *Quercus* forest, 150m, 04.02.2005, K&D.38.

Morchellaceae Rchb.

Morchella deliciosa Fr.

Sariekinlik plateau, in cedar and fir forest, 1200m, 16.05.2006, K&D.204; Kozağacı plateau, in

cedar and fir forest, 1250m, 06.05.2006, K&D.117.

Morchella esculenta (L.) Pers.

Sarıkinlik plateau, in cedar and fir forest, 1200m, 11.05.2006, K&D.80.

Morchella esculenta (L.) Pers. var. *rigida* (Krombh.) I.R. Hall, P.K. Buchanan, Y. Wang & Cole

Sarıkinlik plateau, Ağız Boğazi district, in cedar and fir forest, 1200m, 06.05.2006, K&D.150; 16.05.2006, K&D.203; Kozağacı plateau, in cedar and fir forest, 1250m, 24.05.2006, K&D.358.

Morchella esculenta (L.) Pers. var. *umbrina* (Boud.) S. Imai

Sarıkinlik plateau, in cedar and fir forest, 1200m, 16.05.2006, K&D.208.

Morchella vulgaris (Pers.) Boud.

Kabağaç plateau, in black pine forest, 1300m, 06.05.2006, K&D.165.

Pezizaceae Dumort.

Peziza granulosa Schumach.

Beyreli district, in red pine forest, 150m, 18.01.2005, K&D.28.

Sarcosphaera coronaria (Jacq.) J. Schröt.

Sarıkinlik plateau, in cedar and fir forest, 1200m, 06.05.2005, K&D.132, 138, 16.05.2006, K&D.194; Sarıkinlik plateau, Ağız Boğazi district, in cedar and fir forest, 1200m, 11.05.2005, K&D.149; Kozağacı plateau, in cedar and fir forest, 1250m, 06.05.2006, K&D.108; Kabağaç plateau, in *Juniper* forest, 1300m, 16.05.2006, K&D.175.

Pyronemataceae Corda

Geopora sumneriana (Cooke) M. Torre

Kozağacı plateau, in cedar and fir forest, 1250m, 11.05.2005, K&D.71; Sarıkinlik plateau, in cedar and fir forest, 1200m, 06.05.2006, K&D.136, 139.

Rhiziniaceae Bonord

Rhizina undulata Fr.

Sarıkinlik plateau, in cedar and fir forest, 1200m, 06.05.2006, K&D.134.

Basidiomycota Whittaker ex Moore

Agaricales Underw.

Agaricaceae Chevall

Agaricus bisporus (J.E. Lange) Imbach

Kozağacı plateau, in cedar and fir forest, 1250m, 06.05.2006, K&D.107; 17.05.2006, K&D.216; Sarıkinlik plateau, Ağız Boğazi district in cedar and fir forest, 1200m, 06.05.2006, K&D.151, 193; Kabağaç plateau, in *Juniper* forest, 1300m, 06.05.2006, K&D.176; 16.05.2006, K&D.186

Lepiota erminea (Fr.) Gillet

Azı Dağı, in red pine and *Quercus* forest, 150m, 04.02.2005, K&D.38.

Leucoagaricus leucothites (Vittad.) Wasser

Azı Dağı, in red pine and *Quercus* forest, 150m, 10.11.2004, K&D.14; Beyreli district, in red pine and *Quercus* forest, 50m, 16.11.2005, K&D.94; 150m, 16.11.2006, K&D.287.

Lycoperdon caudatum J. Schröt.

Derebaşı, in red pine forest, 200m, 16.11.2005, K&D.101.

Lycoperdon lividum Pers.

Kabağaç plateau, in *Juniper* forest, 1300m, 16.05.2006, K&D.183.

Lycoperdon molle Pers.

Sülmen district, in red pine forest, 650m, 16.11.2006, K&D.308; Sarıkinlik plateau, in cedar and fir forest, 1200m, 24.11.2006, K&D.347; Azı Dağı, in red pine forest, 150m, 10.11.2004, K&D.13.

Macrolepiota excoriata (Schaeff.) Wasser

Azı Dağı, on grass in red pine and *Quercus* forest, 150m, 12.11.2006, K&D.262; Sülmen district, in red pine forest, 650m, 16.11.2006, K&D.304.

Macrolepiota mastoidea (Fr.) Singer

Sülmen district, in red pine forest, 650m, 16.11.2006, K&D.309; Beyreli district, in red pine and *Quercus* forest, 150m, 09.12.2006, K&D.387.

Amanitaceae R. Heim ex Pouzar

Amanita argentea Huijsman

Azı Dağı, in red pine forest, 150m, 12.11.2006, K&D.252, 271; Sülmen district, in red pine forest, 650m, 16.11.2006, K&D.288, 294.

Amanita ovoidea (Bull.) Link

Azı Dağı, in red pine forest, 150m, 10.11.2004, K&D.02; Sülmen district, in red pine and *Quercus* forest, 650m, 16.11.2006, K&D.267.

Amanita vaginata (Bull.) Lam.

Azı Dağı, in red pine forest, 150m, 12.11.2006, K&D.252, 263, 265.

Hydnangiaceae Gäum. & C.W. Dodge

Laccaria laccata (Scop.) Cooke

Sülmen district, in red pine forest, 650m, 16.11.2006, K&D.312.

Hygrophoraceae Lotsy

Ampulloclitocybe clavipes (Pers.) Redhead, Lutzoni, Moncalvo & Vilgalys

Azı Dağı, in red pine forest, 150m, 16.11.2005, K&D.96; Sarıkinlik plateau, in cedar and fir forest, 1200m, 24.11.2006, K&D.367.

Hygrocybe persistens (Britzelm.) Singer var. *persistens*

Azı Dağı, in red pine forest, 150m, 12.11.2006, K&D.268.

Hygrophorus agathosmus (Fr.) Fr.

Azı Dağı, in mixed red pine and *Quercus* forest, 150m, 10.11.2004, K&D.21, 23; Kabağağ plateau, in *Juniper* forest, 1300m, 11.05.2005, K&D.58, 64, 66.

Inocybaceae Jülich

Inocybe geophylla (Pers.) P. Kumm var. *geophylla*

Sarıkinlik plateau, in cedar and fir forest, 1200m, 06.05.2006, K&D.123, 126, 135; Kabağağ plateau, in *Juniper* forest, 1300m, 16.05.2006, K&D.73; Kozağacı plateau, in cedar and fir forest, 1250m, 17.05.2006, K&D.222; 17.11.2006, K&D.217, 227, 228, 229, 231, 232; Azı Dağı, in red pine forest, 150m, 12.11.2006, K&D.278.

Inocybe perlata (Cooke) Sacc.

Azı Dağı, in red pine forest, 150m, 10.11.2004, K&D.22.

Inocybe posterula (Britzelm.) Sacc.

Kozağacı plateau, in cedar and fir forest, 1250m, 17.05.2006, K&D.215.

Inocybe rimosa (Bull.) P. Kumm var. *rimosa*

Sarıkinlik plateau, in cedar and fir forest, 1200m, 06.05.2006, K&D.154, 207; Kabağağ plateau, in *Juniper* forest, 1300m, 06.05.2006, K&D.173; Kozağacı plateau, in cedar and fir forest, 1250m, 17.05.2006, K&D.214; Azı Dağı, in red pine forest, 150m, 12.11.2006, K&D.250.

Marasmiaceae Roze ex Kühner

Gymnopus perforans (Hoffm.) Antonín & Noordel.

Sarıkinlik plateau, in needle litter of cedar and fir forest, 1200m, 06.05.2006, K&D.133.

Omphalotus illudens (Schwein.) Bresinsky & Besl

Azı Dağı, on stump of red pine, 150m, 12.11.2006, K&D.241.

Mycenaceae Overeem

Mycena haematopus (Pers.) P.Kumm

Kabağağ plateau, on rotten wood of fir tree, 1300m, 11.05.2005, K&D.35.

Xeromphalina campanella (Batsch) Maire

Azı Dağı, on rotten wood of red pine, 150m, 16.11.2006, K&D.153.

Physalacriaceae Corner

Oudemansiella melanotricha (Dörfelt) M.M. Moser

Sarıkinlik plateau, under fir tree, 1200m, 24.11.2006, K&D.354.

Pleurotaceae Kühner

Hohenbuehelia petaloides (Bull.) Schulzer

Kozağacı plateau, on rotten wood of fir tree, 1250m, 01.05.2005, K&D.374.

Hohenbuehelia tremula (Schaeff.) Thorn & G.L. Barron

Sarıkinlik plateau, in cedar and fir forest, 1200m, 24.11.2006, K&D.339.

Pleurotus eryngii (DC.) Quél.

Sarıkinlik plateau, under *Eryngium* sp. in *Juniper* forest, 1200m, 06.05.2006, K&D.166.

Pleurotus ostreatus (Jacq.) P. Kumm.

Beyreli district, on poplar, 50m, 23.02.2005, K&D.56; 12.11.2006, K&D.273.

Pleurotus pulmonarius (Fr.) Quél.

Beyreli district, on *Ficus carica*, 50m, 02.04.2005, K&D.30.

Pluteaceae Kotl. & Pouzar

Volvariella gloiocephala (DC.) Boekhout & Enderle

Azı Dağı, in red pine forest, 150m, 10.12.2004, K&D.15; Kabağağ plateau, in *Juniper* forest, 1300m, 11.05.2005, K&D.59; Sarıkinlik plateau, in cedar and fir forest, 1200m, 24.11.2006, K&D.338; Beyreli district, on grass, 50m, 29.12.2007 K&D.388, 389.

Psathyrellaceae Vilgalys, Moncalvo & Redhead

Panaeolus papilionaceus (Bull.) Quél. var. *papilionaceus*

Azı Dağı, in red pine forest, 150m, 12.11.2006, K&D.270.

Psathyrella multipedata (Peck) A.H.Sm.

Kabağağ plateau, in fir forest, 1300m, 06.05.2006, K&D.153.

Psathyrella tephrophylla (Romagn.) M. M. Moser

Azı Dağı, on damp soil, in red pine and *Quercus* forest, 150m, 10.11.2004, K&D.25; 04.02.2005, K&D.40.

Schizophyllaceae Quél.

Schizophyllum commune Fr.

Beyreli district, on *Quercus* stump, 50m, 18.07.2007, K&D.386.

Strophariaceae Singer & A.H. Sm.

Agrocybe cylindracea (DC.) Maire

Kozağacı plateau, on fir trunk, 1250m, 24.11.2006, K&D.362.

Agrocybe pediades (Fr.) Fayod

Azı Dağı, in red pine forest, 150m, 04.02.2005, K&D.47.

Agrocybe vervacti (Fr.) Singer

Azı Dağı, in red pine forest, 150m, 16.11.2005, K&D.97, 102.

Galerina paludosa (Fr.) Kühner

Azı Dağı, on damp mooses in red pine forest, 150m, 16.11.2006, K&D.285.

Hebeloma mesophaeum (Pers.) Quél.

Azı Dağı, in red pine forest, 150m, 16.11.2006, K&D.254.

Tricholomataceae R. Heim ex Pouzar

Clitocybe fragrans (With.) P. Kumm.

Azı Dağı, in red pine forest, 150m, 16.11.2005, K&D.98.

Lepista nuda (Bull.) Cooke

Azı Dağı, in red pine forest, 150m, 16.11.2006, K&D.284.

Leucopaxillus gentianeus (Quél.) Kotl.

Sarıkinlik plateau, in cedar and fir forest, 1200m, 06.05.2006, K&D.122; Kabaağaç plateau, in *Juniper* forest, 1300m, 11.05.2005, K&D.184; Kozağacı plateau, in cedar and fir forest, 1250m, 17.05.2005, K&D.233.

Melanoleuca cognata (Fr.) Konr. & Maubl. var. *cognata*

Kabaağaç plateau, in *Juniper* forest, 1300m, 11.05.2005, K&D.30, 189; Sarıkinlik plateau, in cedar and fir forest, 1200m, 06.05.2006, K&D.114.

Melanoleuca excissa (Fr.) Singer var. *excissa*

Sarıkinlik plateau, in cedar and fir forest, 1200m, 06.05.2006, K&D.116, 199.

Melanoleuca graminicola (Velen.) Kühner & Maire

Sarıkinlik plateau, in cedar and fir forest, 1200m, 11.05.2005, K&D.72.

Melanoleuca stridula (Fr.) Singer

Kozağacı plateau, in cedar and fir forest, 1250m, 01.05.2005, K&D.43; 24.11.2006, K&D.378.

Melanoleuca nivea Métrod ex Boekhout

Kabaağaç plateau, in *Juniper* forest, 1300m, 06.05.2006, K&D.160; Sarıkinlik plateau, in cedar and fir forest, 1200m, 28.04.2007, K&D.82.

Phyllotopsis nidulans (Pers.) Singer

Azı Dağı, in red pine forest, 150m, 12.11.2006, K&D.239.

Tricholoma albobrunneum (Pers.) P. Kumm.

Azı Dağı, in red pine forest, 150m, 12.11.2006, K&D.236, 255; Sarıkinlik plateau, in cedar and fir forest, 1200m, 24.11.2006, K&D.352.

Tricholoma argyraceum (Bull.) Gillet

Kozağacı plateau, in cedar and fir forest, 1250m, 24.11.2006, K&D.373.

Tricholoma scalpturatum (Fr.) Quél.

Azı Dağı, in red pine forest, 150m, 12.11.2006, K&D.249.

Tricholoma myomyces (Pers.) J.E. Lange

Azı Dağı, in red pine forest, 150m, 10.11.2004, K&D.10, 11, 19.

Auriculariales J. Schröt.

Auriculariaceae Fr.

Auricularia auricula-judae (Bull.) Quél.

Beyreli district, on stump of *Ceratonia siliqua*, 50m, 10.11.2004, K&D.01.

Boletales E.-J. Gilbert

Gomphidiaceae Maire ex Jülich

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

Derebaşı, in red pine forest, 170m, 04.02.2005, K&D.33; Azı Dağı, in red pine forest, 150m, 12.11.2006, K&D.238, 253; 16.11.2006, K&D.279; Sülmen district, in red pine forest, 650m, 16.11.2006, K&D.298.

Paxillaceae Lotsy

Paxillus involutus (Batsch) Fr.

Beyreli district, on *Olea europea*, 50m, 12.11.2006, K&D.251.

Rhizopogonaceae Gäum. & C.W. Dodge

Rhizopogon luteolus Fr. & Nordholm

Azı Dağı, in red pine forest, 150m, 04.02.2005, K&D.32; 16.11.2005, K&D.92; 29.12.2007, K&D.391; Kabaağaç plateau, in *Juniper* forest, 1300m, 06.05.2006, K&D.140; 24.11.2006, K&D.322.

Rhizopogon roseolus (Corda.) Th.Fr.

Sülmen district, in red pine forest, 650m, 16.11.2006, K&D.313.

Suillaceae Besl & Bresinsky

Suillus grevillei (Klotzsch) Singer

Azı Dağı, in red pine forest, 150m, 16.11.2005, K&D.100; Sarıkinlik plateau, in cedar and fir forest, 1200m, 24.11.2006, K&D.351, 365.

Tapinellaceae C. Hahn

Tapinella atrotomentosa (Batsch) Šutara

Beyreli district, on root of *Olea europea*, 50m, 10.11.2004, K&D.12.

Cantharellales Gäum.

Clavulinaceae Donk

Membranomyces spurius (Bourdot) Jülich

Sarıkinlik plateau, in rotten wood of fir tree, 1200m, 11.05.2005, K&D.85.

Dacrymycetales Lindau

Dacrymycetaceae J. Schröt

Dacrymyces variisporus Mc Nabb

Sarıkinlik plateau, on rotten wood of cedar, 1200m, 11.05.2005, K&D.87.

Geastrales K. Hosaka & Castellano

Geastraceae Corda

Geastrum fimbriatum Fr.

Sarıkinlik plateau, in cedar and fir forest, 1200m, 16.05.2006, K&D.144, 384; Azı Dağı, in red pine forest, 150m, 12.11.2006, K&D.245.

Geastrum pectinatum Pers.

Sarıkinlik plateau, in cedar and fir forest, 1200m, 11.05.2005, K&D.89; Kabaağaç plateau, in *Juniper* forest, 1300m, 24.11.2006, K&D.323.

Gloeophyllales Thorn**Gloeophyllaceae** Jülich*Gloeophyllum abietinum* (Bull.) P. Karst.

Kozagaç plateau, on fallen trunk of fir, 1250m, 06.05.2005, K&D.106.

Gloeophyllum odoratum (Wulfen) İmazeki

Sarëkinlik plateau, on decaying wood of cedar, 1200m, 06.05.2006, K&D.145.

Gloeophyllum trabeum (Pers.) Murrill

Sarëkinlik plateau, on decaying wood of black pine, 1200m, 06.05.2006, K&D.121.

Gomphales Jülich**Gomphaceae** Donk*Ramaria flava* (Schaeff.) Quël.Sarëkinlik plateau, in cedar and fir forest, 1200m, 01.05.2006, K&D.111; 06.05.2006, K&D.172; Kozagaç plateau, in cedar and fir forest, 1250m, 16.05.2006, K&D.185; Kabaagaç plateau, in *Juniper* forest, 1300m, 17.05.2006, K&D.213.**Hymenochaetales** Oberw.**Hymenochaetaceae** İmazeki & Toki*Phellinus pomaceus* (Pers.) MaireAzı Dağı, on stump of *Prunus* sp., 150m, 12.11.2006, K&D.248.*Porodaedalea pini* (Brot.) Murrill

Azı Dağı, on stump of red pine tree, 150m, 29.12.2007, K&D.393.

Schizoporaceae Jülich*Hyphodontia arguta* (Fr.) J. Erikss.

Kozagaç plateau, on wood debris of fir, 1250m, 06.05.2005, K&D.113, 119.

Hyphodontia juniperi (Bourdot & Galzin) J. Erikss. & HjortstamKabaagaç plateau, on bark of *Juniper excelsa*, 1300m, 06.05.2006, K&D.164.**Phallales** E. Fisch.**Phallaceae** Corda*Phallus impudicus* L. var. *impudicus*Azı Dağı, in mixed red pine and *Quercus* forest, 150m, 12.11.2006, K&D.275.**Polyporales** Gäum.**Fomitopsidaceae** Jülich*Antrodia juniperina* (Murrill) Niemela & RyvardenKabaagaç plateau, on living trunk of *Juniperus excelsa*, 1300m, 06.05.2006, K&D.161.**Ganodermataceae** Donk*Ganoderma applanatum* (Pers.) Pat.Beyreli district, on stump of *Quercus* sp., 50m, 22.05.2007, K&D.385.**Meruliaceae** Rea*Hyphoderma occidentale* (D.P. Rogers) Boidin & Gilles

Sarëkinlik plateau, on wood debris of fir, 1200m, 11.05.2005, K&D.84.

Abortiporus biennis (Bull.) Singer

Beyreli district, on wood remnant of red pine, 150m, 15.02.2005 K&D.55.

Polyporaceae Fr. ex Corda*Coriolopsis gallica* (Fr.) RyvardenBeyreli district, on stump of *Armeniaca vulgaris*, 50m, 03.01.2005, K&D.27; on stump of poplar, 50m, 04.01.2006, K&D.53; Azı Dağı, on stump of *Quercus*, 150m, 05.05.2005, K&D.38; Kozagaç plateau, on stump of poplar, 50m, 24.11.2006, K&D.360.*Pyrofomes demidoffii* (Lév.) Kotl. & PouzarKabaagaç plateau, on living trunk of *Juniperus excelsa*, 1300m, 06.05.2006, K&D.305.*Trametes versicolor* (L.) LloydAzı Dağı, on stump of *Quercus*, 150m, 10.11.2004, K&D.18.*Trichaptum abietinum* (Dicks.) Ryvarden

Sarëkinlik plateau, on stump an bark of fir, 1200m, 06.05.2006, K&D.148; 16.05.2006, K&D.206.

Xenasmataceae Oberw.*Xenasmatella vaga* (Fr.) Stalpers

Sarëkinlik plateau, on rotten wood of fir, 1200m, 06.05.2006, K&D.142.

Russulales Kreisel ex P.M. Kirk, P.F. Cannon & J.C. David**Russulaceae** Lotsy*Lactarius deliciosus* (L.) Gray

Azı Dağı, in red pine forest, 150m, 10.11.2004, K&D.03; 12.11.2007, K&D.235; Sülmen district, in red pine forest, 650m, 16.11.2007, K&D.300.

Lactarius deterrimus Gröger

Azı Dağı, in red pine forest, 150m, 16.11.2005, K&D.103.

Lactarius sanguifluus (Paulet) Fr.

Azı Dağı, in red pine forest, 150m, 04.02.2004, K&D.35; Sülmen district in red pine forest, 650m, 16.11.2007, K&D.288.

Stereaceae Pilát*Stereum rameale* (Schwein.) BurtSarëkinlik plateau, on stump of *Quercus*, 1200m, 06.05.2006, K&D.140.

4. DISCUSSION

The total numbers of registered macrofungi in the research area are 96. These taxa belong to Ascomycota 11, and Basidiomycota 85 with 12 order and 41 families.

The common families are *Tricholomataceae* with 13 taxa, *Agaricaceae* with 7 taxa, *Strophariaceae* with 6 taxa, *Morchellaceae* and *Pleurotaceae* with 5 taxa each. The numbers of the other Families are less than 5 species.

The study area supports an abundantly rich macrofungi biota growing in different habitats, such as red pine, fir,

cedar, oak and juniper forests. In these substrates, especially cedar and fir stands are very suitable for the growth of macrofungi [27, 28].

The most common habitats for macrofungi taxa are cedar and fir forest with 45 samples, red pine forest with 43 samples, juniper forest with 17, red pine and oak forest with 14 samples; other different substrates with 12 samples were fir forest with 11 and oak forest with 5 samples (Fig 2).

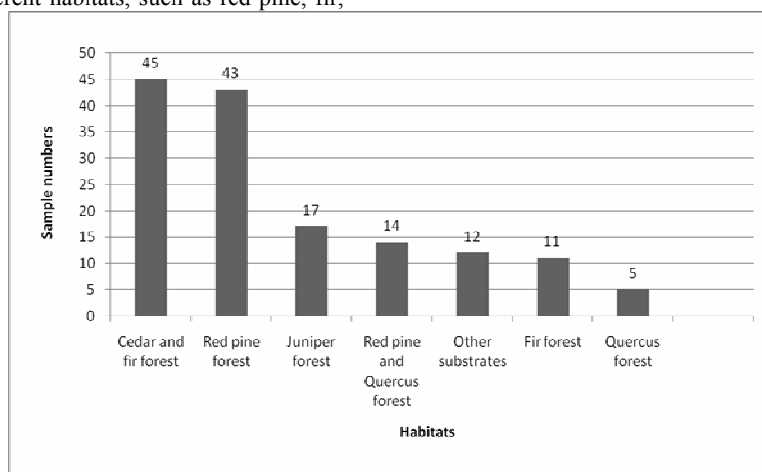


Figure 2. The distribution of the habitats.

There are 67 terricolous taxa and the numbers of lignicolous taxa are 29. In numbers, the proportion of the lignicolous macromycetes species to the substrates is as follows: Fir 6, oak 5, juniper 3, poplar 3, black pine 2, red pine 2, cedar 2, *Olea europea* 2, *Armeniaca vulgaris* 1, *Prunus sp.* 1, *Ceratonia ciliqua* 1 and *Ficus carica* 1. Some of them live as parasites on living trees, which cause organic product loss and structural damage in the host trees.

The important parasite taxa are *Omphalotus illudens*, *Pleurotus ostreatus*, *P. pulmonarius*, *Schizophyllum commune*, *Paxillus involutus*, *Phellinus pini*, *P. pomaceus*, *Antrodia juniperina*, *Pyrofomes demidoffii*, *Corioloopsis gallica*, *Trametes versicolor* and *Stereum rameale*.

Two taxa, *Antrodia juniperina* and *Pyrofomes demidoffii* are special and dangerous parasite on *Juniper spp.* and causes considerable damage on juniper associations. Like this, *Phellinus pini* is also very harmful on pine trees.

The investigations reported on the closest regions to the research area are: Karaman [28], Alanya [29], Hadim-Taşkent [30] and Mediterranean region of Turkey [31, 32]. Comparison of the macrofungi of Bozyazı with the relevant literature shows similarities with the findings of studies conducted in these neighbouring regions as expected, considering the similarities in plant flora, vegetation and climate.

ACKNOWLEDGEMENTS

Selçuk University, Scientific Research Project (BAP 06201010, Konya/Turkey) supported this work. We would like to thank for their financial aids.

REFERENCES

- [1] Doğan, H.H., Öztürk C., Kaşık, G, Aktaş, S., “A Checklist of Aphyllophorales of Turkey”, *Pak J Bot*, 37(2): 459-485, (2005).
- [2] Sesli, E., Denchev, C.M., “Checklist of the Myxomycetes and Macromycetes of Turkey”, *Mycologia Balcanica*, 2 (2): 119-160 (2005).
- [3] Solak, M.H., Işıloğlu, M., Kalmış, E., Allı, H., “Macrofungi of Turkey, Checklist”, Volume- I, *Üniversiteliler Ofset*, Bornova-İzmir, 1-254 (2007).
- [4] Sesli, E., Denchev, C.M., “Checklists of the Myxomycetes, larger Ascomycetes, and larger Basidiomycetes in Turkey”, *Mycotaxon* 106 [2008]: 65-67 + on-line version: 1-133, (2010). (<http://www.mycotaxon.com/resources/checklists/sesli-v106-checklist.pdf>).
- [5] Akata, I., Çetin, B., “Türkiye Makrofungus Florası İçin Yeni Bir Xerocomus Kaydı”, *Türkiye VIII. Yemeklik Mantar Kongresi*, Kocaeli, 219-225 (2008).
- [6] Akata, I., Çetin, B., “İlgaz Dağlarından Türkiye mikotası için yeni bir kayıt”, *Ot Sistematik Botanik Dergisi*, 16 (1): 159-164 (2009).
- [7] Akata, I., Doğan, H.H., Çetin, B., Işıloğlu, M., “*Onnia tomentosa* (Fr.) P. Karst., a new genus record for Turkey”, *Biological Diversity and Conservation*, 2(1): 78-81 (2009).

- [8] Akata, I., Doğan, H.H., Çetin, B., “A New Record for *Otidea* Genus From Turkey”, **Kafkas Üniversitesi Fen Bilimleri Enstitüsü Dergisi**, 2 (1): 21-24 (2009).
- [9] Akata, I., Çetin, B., Işıloğlu, M., “Türkiye mikotasi için yeni bir tomentelloyit fungus kaydı”, **Ot Sistematik Botanik Dergisi**, 16 (1): 49-154 (2009).
- [10] Akata, I., Çetin, B., Doğan, H.H., “Türkiye mikotasi için yeni bir odun çürüklüğü mantarı, *Inonotus triquetus* (Hymenochaetaceae)”, **Ot Sistematik Botanik Dergisi**, 16 (2): 159-164 (2009).
- [11] Işıloğlu, M., Ali, H., Spooner, B.M., Solak, M.H., “*Morchella anatolica* (Ascomycota), a new species from southwestern Anatolia, Turkey ”, **Mycologia**, 102: 455-458 (2010).
- [12] Uzun, Y., Demirel, K., Kaya, A., Gücin, F., “Two new genus records for Turkish mycota”, **Mycotaxon**, 111: 477-480 (2010).
- [13] Breitenbach, J., Kränzlin, F., “Fungi of Switzerland, Vol: 1, *Ascomycetes*”, **Verlag Mykologia**, CH-6000 Luzern 9, Switzerland, 1-310 (1984).
- [14] Breitenbach, J., Kränzlin, F., “Fungi of Switzerland, Vol: 2, *Heterobasidiomycetes* (Jelly fungi), *Aphylliphorales* (non-gilled fungi), *Gasteromycetes* (puffballs)”, **Verlag Mykologia** CH-6000 Luzern 9, Switzerland, 1- 412 (1986).
- [15] Breitenbach, J., Kränzlin, F., “Fungi of Switzerland, Vol: 3, *Boletes and Agarics* 1. Part”, **Verlag Mykologia**, CH-6000 Luzern 9, Switzerland, 1- 361 (1991).
- [16] Breitenbach, J., Kränzlin, F., “Fungi of Switzerland, Vol: 4, *Agarics* 2. Part”, **Verlag Mykologia**, CH-6000 Luzern 9, Switzerland, 1-368 (1995).
- [17] Breitenbach, J., Kränzlin, F., “Fungi of Switzerland, Vol: 5, *Agarics* 3. Part”, **Verlag Mykologia**, CH-6000 Luzern 9, Switzerland, 1-338 (2000).
- [18] Horak, E., “Röhrlinge und Blätterpilze in Europa”, **Elsevier GmbH**, München, 1-555 (2005).
- [19] Julich, W., “Die nichtblätterpilze, gallertpilze und bauchpilze (Aphylliphorales, Heterobasidiomycetes, Gasteromycetes)”, **Gustav Fischer Verlag**, Stuttgart, 1-626 (1984).
- [20] Kränzlin, F., “Fungi of Switzerland. Volume 6. Russulaceae”, **Verlag Mykologia**, CH-6000 Luzern 9, Switzerland, 1-319 (2005).
- [21] Moser, M., “Keys to Agarics and Boleti”, **Gustav Fischer**, Stuttgart, 1-535, (1983).
- [22] Ryvarden, L., Gilbertson, R.L., “European Polypores, Part 1”, Synopsis Fungorum 6, **Fungiflora**, Oslo, Norway, 1-387 (1993).
- [23] Ryvarden, L., Gilbertson, R.L., “European Polypores, Part 2”, Synopsis Fungorum 7, **Fungiflora**, Oslo, Norway, 395-743 (1994).
- [24] Cannon, P.F., Kirk, P.F., “Fungal families of the world”, **CAB International**, Wallingford, UK, 1-456 (2007).
- [25] Kirk, P.F., Cannon, P.F., Minter, D.W., Stalpers, J.A., “Dictionary of the fungi, 10th ed.”, **CAB International**, Wallingford, UK, 1-784 (2008).
- [26] Internet: In index fungorum Online <http://www.indexfungorum.org>, (2010).
- [27] Roberts, C., Ceska, O., Kroege, P., Kendrick, B., “Macrofungi from six habitats over five years in Clayoquot Sound, Vancouver Island”, **Can. J. Bot.**, 82(10): 1518-1538 (2004).
- [28] Doğan, H.H., Öztürk, C., “Macrofungi and their distribution in Karaman province, Turkey”, **Turk J Bot**, 30: 193-207 (2006).
- [29] Öztürk, C., Kaşık, G., Doğan, H.H., Aktaş, S., “Macrofungi of Alanya district”, **Turk J Bot**, 27: 303-312 (2003).
- [30] Kaşık, G., Öztürk, C., “Macrofungi of Hadim and Taşkent (Konya) district”, **S.Ü. Fen Edebiyat Fakültesi Fen Dergisi**, 17:1-6 (2000).
- [31] Işıloğlu, M., Watling, R., “Macromycetes of mediterranean Turkey”, **Edinburgh J of Bot**, 49(1): 99-121 (1992).
- [32] Işıloğlu, M., Öder, N., “Contributions to the macrofungi of Mediterranean Turkey”, **Turk J Bot**, 19: 603-609 (1995).