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## **Preliminary checklist of macromycetes of the East and Middle Black Sea Regions of Turkey**

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**Abstract** – This study was based on macromycete specimens collected from the East and Middle Black Sea Regions of Turkey in 2002-2005. As a result of field and laboratory studies, 213 taxa were identified and classified. The complete checklist is available on: <http://www.mycotaxon.com/resources/weblists.html>.

**Key words** – fungal diversity, mushrooms

### **Introduction**

Turkey is divided into seven geographic regions and each region has different types of landscape and climate. The Black Sea Region extends from the border of Georgia in the east to the eastern edge of the Adapazari plain in the west. The region is divided into east, middle and west sections based on their geographical characteristics.

Turkey displays a great variation in topography and special land-forms. In the north, the East-West oriented, parallel ranges of the Northern Anatolian Mountains run in the southern part of the Black Sea. These coastal mountain ranges are the broadest and the highest in their eastern section, attaining elevations of over 3000 m. In the middle and west only a few peaks exceed 2500 m. The lower parts of the northern regions of Turkey are under the mild and humid climatic conditions. Cold and humid-per humid climate is dominant in the higher parts of this region. Northern Anatolian mountains form a barrier between the Black Sea and inland part of Central Anatolia. Yearly precipitation of the north-facing slopes of Eastern Black Sea Mountains is above 2000 mm (Atalay 1994).

Many studies on the mycota of Turkey have been carried out. Contemporary knowledge of the diversity of Turkish macromycetes is based on 90 years of investigations. The total number of macrofungal species recorded from Turkey is 1601 (Sesli & Denchev 2005). Sesli & Baydar (1995, 1996) presented the first macromycete checklists, including the *Russulaceae* and *Agaricales*. Wood decaying macrofungi of the western Black Sea Region of Turkey were studied by Afyon et al. (2005).

The present study was based on specimens collected from the East and Middle Black Sea Regions of Turkey (Fig. 1). The aim of the present study is to examine the mycobiota of these regions of Turkey.

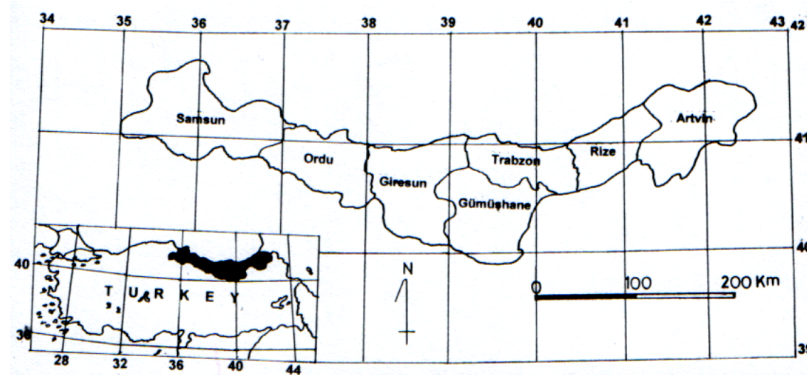


Fig.1. Location of the sampling area.

### Materials and Methods

The material for this study was collected during field trips to the East and Middle Black Sea Regions of Turkey between 2002 and 2005. The color, odor and other apparent properties of the macrofungi and vegetation were noted in the field. Photographs of specimens were taken using Fujicolor negative film and a macroobjective of normal focal length with an extension tube. The macrofungi collected from the study area were kept completely separate and were examined in the laboratory as soon as possible after collection. Spore prints were made to determine the color of the spores and spores from the prints were then used for the measurements. All spore measurements and length/width ratios were calculated from at least 20 spores. Microscopical examinations were performed using Nikon research microscopes. All the instruments were equipped with low voltage illumination. Excised pieces of pilei were moistened by adding a few drops of Clémenton's solution and placed in a damp chamber to soften completely. After being given some time to dry, they were sectioned. The sections were made with a previously unused razor blade under a binocular loupe. The sections were then transferred to a 3 % KOH solution to induce expansion. They were subsequently stained with ammoniated Congo red. The drawings were made using an apparatus that facilitated work according to precisely fixed magnifications (Sesli et al. 2000).

The specimens were identified using Corner (1966, 1968), Phillips (1981), Moser (1983), Breitenbach & Kränzlin (1984-2000), Singer (1986), Bresinsky & Besl (1990), Stamets (1996), Bessette et al. (1997), Læssøe (2000) and McKenny et al., (2002) and deposited at Fatih Education Faculty Herbarium at Karadeniz Technical University in Trabzon (SES), Turkey.

## Results

213 taxa belonging to 55 families of the Ascomycota and Basidiomycota were identified and are listed on the following web page: <http://www.mycotaxon.com/resources/weblists.html>. Habitats, collecting sites, dates and herbarium accession numbers at SES are also given. Abbreviations of authors of fungal names are given according to Kirk & Ansell (1992). The systematics of the taxa are in accordance with Index Fungorum (as seen on the address URL 1: [www.speciesfungorum.org/Names/Names.asp](http://www.speciesfungorum.org/Names/Names.asp)).

### Fungi

#### Ascomycota

#### Ascomycetes

#### Pezizomycetidae

#### Pezizales

#### Discinaceae

*Gyromitra infula* (Schaeff.) Quél.: Under *Picea orientalis* in Gümüşhane-Kürtün-Tozlu, 20.09.2002, SES 2368.

#### Helvellaceae

*Helvella acetabulum* (L.) Quél.: Under *Carpinus orientalis* in Trabzon-Salpazari-Kabasakal, 15.05.2004, SES 2404.

*Helvella atra* J. Koenig: In park grounds in Rize-Kalkandere, 31.08.2004, SES 2419.

*Helvella leucopus* Pers.: In mixed woodland in Trabzon-Vakfikebir-Yildiz, 18.08.2004, SES 2418.

#### Morchellaceae

*Mitrophora semilibera* (DC.) Lév.: Among grass in Trabzon-Of-Ziga, 29.05.2004, SES 2350.

*Morchella esculenta* (L.) Pers.: In meadows in Trabzon-Of-Ballica, 28.05.2004, SES 2351.

*Verpa conica* (O.F. Müll.) Sw.: Along forest edges in Giresun-Tirebolu-Fatih, 02.05.2004, SES 2355.

#### Pezizaceae

*Peziza applanata* (Hedw.) Fr.: In woodland in Trabzon-Macka, 05.10.2002, SES 2352.

#### Pyronemataceae

*Aleuria aurantia* (Pers.) Fuckel: On bare soil in Rize-Kalkandere-Seyrantepe, 26.10.2002, SES 2403.

*Flavoscypha cantharella* (Fr.) Harmaja: In soil roadside in Trabzon-Macka-Altindere, 05.10.2002, SES 2136. In mixed wood in Rize-Kalkandere-Gökyıldız, 21.08.2004, SES 2311.

*Humaria hemisphaerica* (F.H. Wigg.) Fuckel: On damp ground in Gümüşhane-Torul-Bahcecik, 23.08.23, SES 2420.

**Leotiomycetidae**

**Helotiales**

**Bulgariaceae**

*Bulgaria inquinans* (Pers.) Fr.: On dead wood of oak in Giresun-Kesap-Ceylanpinar, 10.08.2003, SES 2398.

**Cudoniaceae**

*Spathularia flavida* Pers.: In *Picea* forest on ground in Gümüşhane-Torul-Bahcecik, 23.08.2003, SES 2369.

**Helotiaceae**

*Bisporella citrina* (Batsch) Korf & S.E. Carp.: On dead branch of *Fagus* in Trabzon-Tonya-Sebelek, 10.10.2002, SES 2417.

**Sordariomycetidae**

**Hypocreales**

**Nectriaceae**

*Nectria cinnabarina* (Tode) Fr.: On dead branch of *Carpinus orientalis* in Giresun-Bulancak-Ahirli, 26.07.2003, SES 2416.

**Xylariales**

**Xylariaceae**

*Xylaria hypoxylon* (L.) Grev.: On dead wood of *Carpinus betulus* in Rize-Güneysu-Celaloglu, 29.10.2002, SES 2356.

*Xylaria polymorpha* (Pers.) Grev.: On stump of *Fagus* in Trabzon-Vakfikebir-Ortaköy, 02.11.2002, SES 2421.

**Basidiomycota**

**Ustilaginomycetes**

**Exobasidiomycetidae**

**Exobasidiales**

**Exobasidiaceae**

*Exobasidium rhododendri* (Fuckel) C.E. Cramer: On *Rhododendron luteum* in Giresun-Eynesil-Kabakiran, 21.05.2004, SES 2015.

**Basidiomycetes**

**Tremellomycetidae**

**Auriculariales**

**Auriculariaceae**

*Auricularia auricula-judae* (Bull.) Qué!.: On dead wood of *Sambucus* sp. in Gümüşhane-Alemdar, 17.11.2002, SES 2425.

*Auricularia mesenterica* (Dicks.) Pers.: On *Fagus* in Giresun-Görece-Dikmen, 03.08.2003, SES 2082.

**Tremellales**

**Exidiaceae**

*Sebacina epigaea* (Berk. & Broome) Bourdot & Galzin: On the ground in Trabzon-Tonya-Karagözü, 24.10.2004, SES 2354.

**Tremellaceae**

*Tremella foliacea* Pers.: On dead wood of *Picea orientalis* in Trabzon-Arakli-Ayvadere, 17.10.2004, SES 2283.

**Agaricomycetidae**

**Phallales**

**Geastraceae**

*Geastrum fimbriatum* Fr.: In *Picea* forest in Trabzon-Caykara-Egrisu, 25.08.2002, SES 2055.

*Geastrum schmidelii* Vittad.: Under *Fagus orientalis* in Trabzon-Akcaabat-Hidirnebi, 13.10.2002, SES 2184.

**Gomphaceae**

*Clavariadelphus pistillaris* (L.) Donk: On soil in beech forest in Trabzon-Vakfikebir-Güneyköy, 30.10.2004, SES 2427.

*Clavariadelphus truncatus* (Quél) Donk: On soil in *Picea* forest in Giresun-Dogankent, 06.10.2005, SES 2308.

*Gomphus clavatus* (Pers.) Gray: On soil under *Picea* in Trabzon-Hayrat-Gecitli, 29.07.2002, SES 2367.

*Gomphus stereoides* Corner: Under *Picea* sp. in Trabzon-Of-Güney, 09.09.2002, SES 2353.

#### **Phallaceae**

*Mutinus caninus* (Huds.) Fr.: In woods in Trabzon-Macka-Kulindagi, 19.10.2002, SES 2043.

*Phallus hadriani* Vent.: In garden in Giresun-Görece-Sarayköy, 31.08.2002, SES 2074.

*Phallus impudicus* L.: In *Picea orientalis*+*Fagus orientalis* forest in Gümüşhane-Torul-Sena, 22.08.2002, SES 2023, Under *Picea orientalis* in Gümüşhane-Torul-Aksüt, 25.09.2004, SES 2274.

#### **Ramariaceae**

*Ramaria aurea* (Schaeff.) Quél.: In *Fagus-Carpinus* forest in Trabzon-Tonya-Gökçeköy, 23.10.2004, SES 2429.

*Ramaria botrytis* (Pers.) Ricken: In *Fagus-Carpinus* forest in Trabzon-Köprübasi-Besköy, SES 2329.

*Ramaria flava* (Schaeff.) Quél.: In *Fagus-Carpinus* forest in Ordu-Ünye, 19.10.2005, SES 2100, Under *Carpinus orientalis* in Trabzon-Macka-Kulindagi, SES 2331.

*Ramaria formosa* (Pers.) Quél.: In wood in Trabzon-Akcaabat-Sertkaya, 13.10.2002, SES 2330.

*Ramaria pallida* Maire: In *Picea orientalis* forest in Gümüşhane-Kürtün-Uluköy, 28.09.2002, SES 2054.

*Ramaria stricta* (Pers.) Quél.: Under *Fagus orientalis* in Trabzon-Macka-Sevinc, 07.09.2002, SES 2412.

#### **Hymenochaetales**

##### **Hymenochaetaceae**

*Inonotus dryadeus* (Pers.) Murrill: On *Quercus* in Giresun-Maden, 19.07.2002, SES 2018.

*Inonotus hispidus* (Bull.) P. Karst.: On *Malus* in Rize-Güneysu-Basköy, 05.08.2002, SES 2378.

*Phellinus igniarius* (L.) Quél.: On *Alnus* in Ordu-Persembe-Hacilar, 17.07.2003, SES 2044.

*Phellinus vorax* (Harkn.) \_ern\_: On *Picea orientalis* in Giresun-Espiye-Capkinli, 31.05.2004, SES 2361.

##### **Thelephorales**

##### **Bankeraceae**

*Hydnellum peckii* Banker: Under *Picea* sp. in Giresun Cavusoglu, 01.08.2004, SES 2318.

*Phellodon tomentosus* (L.) Banker: In *Fagus-Picea* forest in Giresun-Tirebolu-Köseler, 17.09.2004, SES 2070.

*Sarcodon squamosus* (Schaeff.) Quél.: Under *Picea orientalis* in Trabzon-Arakli-Degirmencik, 16.10.2004, SES 2316.

##### **Thelephoraceae**

*Thelephora palmata* (Scop.) Fr.: Under *Picea orientalis* in Giresun-Tirebolu-Toptas in 10.10.2004, SES 2365.

*Thelephora penicillata* (Pers.) Fr.: Under *Carpinus orientalis* in Samsun-Salipazari-Yesilköy, 10.08.2002, SES 2040.

##### **Dacrymycetales**

##### **Dacrymycetaceae**

*Calocera viscosa* (Pers.) Fr.: On *Picea orientalis* wood in Gümüşhane-Kurtoglu, 14.08.2002, SES 2405.

##### **Cantharellales**

##### **Cantharellaceae**

*Cantharellus aurora* (Batsch) Kuypers: Under *Carpinus orientalis* in Giresun-Kesap-Kayabasi, 25.07.2004, SES 2381.

*Cantharellus cibarius* Fr. var. *cibarius*: Under *Carpinus orientalis* in Rize-Kalkandere-Zeyno, 30.08.2004, SES 2020. Under *Rhododendron* in Trabzon-Vakfikebir-Fethiye,

17.08.2004, SES 2160. Under *Picea* in Trabzon-Macka-Kulindagi, 11.06.2004, SES 2312.

*Cantharellus cinereus* Pers.: Under *Fagus orientalis* in Trabzon-Macka-Liser, 13.06.2004, SES 2155.

*Cantharellus tubaeformis* (Bull.) Fr.: Under *Picea orientalis* in Artvin-Yusufeli-Hadozar, 07.09.2005, SES 2110. Under *Carpinus betulus* in Trabzon-Sürmene-Camburnu, 02.10.2004, SES 2111.

*Craterellus cornucopioides* (L.) Pers.: Under *Fagus* in Trabzon-Akcaabat-Hidirnebi, 15.08.2003, SES 2309.

*Pseudocraterellus sinuosus* (Fr.) Corner: Under *Carpinus betulus* in Trabzon-Tonya-Üst, 09.11.2002, SES 2380.

#### **Clavulinaceae**

*Clavulina cinerea* (Bull.) J. Schröt. f. *cinerea*: Under *Picea orientalis* in Trabzon-Vakfikebir-Senocak, 03.11.2002, SES 2428.

*Clavulina rugosa* (Bull.) J. Schröt.: Under *Picea orientalis* in Giresun-Kesap-Dokuztepe, 09.08.2003, SES 2107. In *Picea orientalis* forest in Trabzon-Akcaabat-Hidirnebi, 16.08.2003, SES 2157. Under *Fagus-Picea* forest in Trabzon-Vakfikebir-Ridvanli, 28.10.2004, SES 2106. Under *Picea orientalis* in Artvin-Ardanuc-Ciralalar, 15.09.2005, SES 2097.

#### **Hydnaceae**

*Hydnum repandum* L.: Under *Picea orientalis* in Ordu-Aybasti, 26.10.2005, SES 2021. In *Picea-Fagus* forest in Gümüşhane-Torul-Güllü, 27.09.2004, SES 2208. Under *Picea orientalis* in Giresun-Tirebolu-Karaahmetli, 09.10.2004, SES 2159. Under *Fagus* in Giresun-Kesap-Cakirli, 27.07.2004, SES 2126. Under *Picea* in Trabzon-Arsin-Gölcük, SES 2310.

#### **Polyporales**

##### **Fomitopsidaceae**

*Daedalea quercina* (L.) Pers.: On *Platanus* in Giresun-Eynesil-Fidanbasi, 23.05.2004, SES 2362.

*Fomitopsis pinicola* (Sw.) P. Karst.: On *Picea* in Gümüşhane-Avsarbeyli, 04.09.2005, SES 2093.

##### **Ganodermataceae**

*Ganoderma applanatum* (Pers.) Pat.: On *Fagus orientalis* in Ordu-Persembe-Imecli, 17.09.2005, SES 2086.

*Ganoderma lucidum* (Curtis) P. Karst.: On *Fagus* in Giresun-Tirebolu-Inköyü, 19.09.2004, SES 2377.

##### **Gloeophyllaceae**

*Gloeophyllum odoratum* (Wulfen) Imazeki: On *Picea orientalis* in Ordu-Ulubey, 21.10.2005, SES 2207.

##### **Hapalopilaceae**

*Climacocystis borealis* (Fr.) Kotl. & Pouzar: On *Picea orientalis* in Ordu-Aybasti, 26.10.2005, SES 2307.

##### **Meripilaceae**

*Meripilus giganteus* (Pers.) P. Karst.: On *Fagus* in Trabzon-Tonya-Karacoban, SES 2407.

##### **Polyporaceae**

*Coriolus fibula* (Fr.) Quél.: On *Carpinus* in Samsun-Salipazari-Caglayan, 24.08.2005, SES 2019.

*Daedaleopsis confragosa* (Bolton) J. Schröt.: On *Alnus glutinosa* in Giresun-Kesap-Armutdüzü, 21.07.2002, SES 2078.

*Fomes fomentarius* (L.) J. Kickx f.: On *Fagus* in Giresun-Kesap-Karadere, 21.07.2002, SES 2210.

*Laetiporus sulphureus* (Bull.) Murrill: On *Alnus* in Giresun-Bulancak-Gültepe, 20.07.2002, SES 2220.

*Polyporus badius* (Pers.) Schwein.: On *Alnus glutinosa* ssp. *barbata* in Samsun-Terme-Ormanköy, 12.08.2002, SES 2024.

- Polyporus squamosus* (Huds.) Fr.: On *Ulmus* in Giresun-Görece-Kale, 01.09.2002, SES 2076.  
*Polyporus umbellatus* (Pers.) Fr.: Under *Quercus* in Gümüşhane-Kuzey, 15.08.2002, SES 2363.  
*Trametes gibbosa* (Pers.) Fr.: On *Fagus* in Ordu-Persembe-Orta, 20.07.2003, SES 2411.  
*Trametes versicolor* (L.) Lloyd: On *Corylus* in Giresun-Görece-Gülpinar, 01.08.2003, SES 2035.  
On *Carpinus orientalis* in Giresun-Eynesil-Dereköy, SES 2033. On *Alnus* in Giresun-Espiye-Yazlık, 02.06.2004, SES 2048.

#### **Boletales**

##### **Boletaceae**

- Boletus chrysenteron* Bull.: Under *Quercus* in Trabzon-Vakfikebir-Ishakli, SES 2414.  
*Boletus edulis* Bull.: Under *Picea* in Trabzon-Stürmene-Perdos, 03.10.2004, SES 2141. Under *Rhododendron ponticum* in Artvin-Yusufeli-Büyükdag, 16.09.2005, SES 2193. Under *Abies nordmanniana* in Trabzon-Akcaabat-Kayabasi, 16.07.2004, SES 2065.  
*Boletus luridus* Schaeff.: Under *Quercus* in Trabzon-Arsin-Harmanli, 13.08.2004, SES 2162. Under *Fagus* in Trabzon-Vakfikebir-Ortaköy, 16.08.2004, SES 2017.  
*Boletus queletii* Schulzer: Under *Quercus* in Trabzon-Köprübasi-Günesli, 03.10.2004, SES 2384.  
*Boletus satanas* Lenz: Under *Quercus* in Giresun-Espiye-Ibrahimseyh, 01.06.2004, SES 2426.  
*Leccinum pseudoscabrum* (Kallenb.) \_utara: Under *Corylus* in Giresun-Bulancak-Kusluhan, 25.07.2003, SES 2383.

##### **Gomphidiaceae**

- Chroogomphus rutilus* (Schaeff.) O.K. Mill.: Under *Picea* in Giresun-Dereli, 27.09.2005, SES 2382.  
*Gomphidius glutinosus* (Schaeff.) Fr.: Under *Pinus* in Ordu-Fatsa-Büyüköç, 26.09.2005, SES 2258.  
*Gomphidius gracilis* Berk.: Under *Picea* in Giresun-Kesap-Halkali, 08.08.2003, SES 2281.

##### **Hygrophoropsidaceae**

- Tapinella atrotomentosa* (Batsch) \_utara: On *Picea orientalis* in Giresun-Canakci-Ciftegürgen, 02.08.2003, SES 2120.  
*Tapinella panuoides* (Batsch) E.-J. Gilbert: Under *Pinus* in Trabzon-Akcaabat-Isiklar, 18.08.2003, SES 2181.

##### **Paxillaceae**

- Paxillus leptopus* Fr.: Under *Picea orientalis* in Ordu-Gölköy-Balcik, 15.09.2004, SES 2266.

##### **Sclerodermataceae**

- Astraeus hygrometricus* (Pers.) Morgan: In wood in Samsun-Ulucayir, 30.08.2005, SES 2431.  
*Scleroderma areolatum* Ehrenb.: On ground in Samsun-Carsamba-Abazalar, 25.08.2005, SES 2077.  
*Scleroderma citrinum* Pers.: On mossy ground in Ordu-Persembe-Tepeköy, 19.09.2005, SES 2432.  
*Scleroderma verrucosum* (Bull.) Pers.: In wood in Gümüşhane-Torul-Balahor, 25.09.2004, SES 2413.

##### **Suillaceae**

- Suillus granulatus* (L.) Roussel: In forest in Gümüşhane-Isikdere, SES 2254.

#### **Agaricales**

##### **Agaricaceae**

- Agaricus arvensis* Schaeff.: Amongst grass in pasture in Trabzon-Akcaabat-Hidirnebi, 12.10.2002, SES 2222.  
*Agaricus augustus* Fr.: In *Picea-Fagus* forest in Gümüşhane-Bas, 16.11.2002, SES 2409.  
*Agaricus bisporus* (J.E. Lange) Imbach: On roadsides in Ordu-Persembe-Yazlık, 16.07.2003, SES 2397.  
*Agaricus porphyizon* P.D. Orton: In park in Giresun-Sebinkarahisar, 03.10.2005, SES 2249.  
*Agaricus silvicola* (Vittad.) Peck: In *Picea* wood in Trabzon-Akcaabat-Hidirnebi, 15.08.2003, SES 2335.  
*Agaricus xanthodermus* Genev.: In wood in Artvin-Ardanuc-Düz, 12.09.2005, SES 2396.  
*Lepiota alba* (Bres.) Sacc.: In meadow in Artvin-Yusufeli-Abanoz, 03.09.2003, SES 2084.

*Lepiota clypeolaria* (Bull.) P. Kumm.: In hardwood forest in Ordu-Persembek-Kocboynuzu, 20.07.2003, SES 2045.

*Lepiota cristata* (Bolton) P. Kumm.: Under *Populus* in Giresun-Cicekli, 02.08.2004, SES 2395.

*Lepiota ignivolvata* Bousset & Joss.: In *Picea-Fagus-Carpinus* forest in Trabzon-Arsin-Güneyce, 14.08.2004, SES 2250. Under *Picea* in Gümüşhane-Torul-Hidirlez, 25.09.2004, SES 2256.

*Leucoagaricus leucothites* (Vittad.) M.M. Moser ex Bon: In park in Giresun-Canakci, 02.08.2003, SES 2286.

*Leucoagaricus nymphaeum* (Kalchbr.) Bon: In *Picea* forest in Gümüşhane-Kürtün-Kuzugöl, 29.09.2002, SES 2229.

*Macrolepiota excoriata* (Schaeff.) M.M. Moser: In meadow in Giresun-Görel-Gülpinar, 01.08.2003, SES 2337.

*Macrolepiota mastoidea* (Fr.) Singer: Among grasses in Giresun-Görel-Ardic, 01.09.2002, SES 2282.

*Macrolepiota procera* (Scop.) Singer var. *procera*: In mixed hardwood forest in Giresun-Görel-Canakci, 30.08.2002, SES 2161. Under *Carpinus* in Giresun-Görel-Dikmen, 03.08.2003, SES 2170.

#### **Bolbitiaceae**

*Panaeolus acuminatus* (Schaeff.) Quél.: In meadows in Artvin-Ardanuc-Ciralur, 15.09.2005, SES 2264.

#### **Coprinaceae**

*Coprinus atramentarius* (Bull.) Fr.: In garden in Rize-Caybasi, 28.07.2002, SES 2357.

*Coprinus comatus* (O.F. Müll.) Gray: In pasture in Giresun-Görel-Kusköy, SES 2408.

*Coprinus disseminatus* (Pers.) Gray: In park in Samsun-Tekkeköy-Pelitoglu, SES 2358.

*Coprinus truncorum* (Schaeff.) Fr.: In forest in Artvin-Yusufeli-Hadozar, 28.08.2003, SES 2359.

*Coprinus xanthothrix* Romagn.: In forest in Gümüşhane-Torul-Balahor, 22.08.2003, SES 2423.

#### **Cortinariaceae**

*Cortinarius caesiocanescens* M.M. Moser: Under *Picea orientalis* in Gümüşhane-Torul, 25.08.2002, SES 5056.

*Cortinarius corrosus* Fr.: Under *Picea orientalis* in Gümüşhane-Kürtün, 22.09.2002, SES 2109.

*Cortinarius glaucopus* (Schaeff.) Fr.: Near *Picea orientalis* in Gümüşhane-Dölek, 04.09.2005, SES 2114.

*Cortinarius moenne-loccozii* Bidaud: Under *Populus* in Gümüşhane-Aktutan, 06.09.2005, SES 2227.

*Cortinarius subtorvus* Lamoure: Near *Picea* in Giresun-Akinci, 20.07.2002, SES 2223.

*Inocybe sindonia* (Fr.) P. Karst.: Under *Ulmus* in Rize-Güneysu-Camlıca, SES 2179.

#### **Entolomataceae**

*Clitopilus prunulus* (Scop.) P. Kumm.: In grass in Ordu-Persembek-Tepeköy, 20.09.2005, SES 2072.

*Entoloma chalybaeum* var. *lazulinum* (Fr.) Noordel.: In pastures in Gümüşhane-Torul-Tokcam, 27.09.2004, SES 2253.

*Entoloma sinuatum* (Bull.) P. Kumm.: In woodland in Ordu-Gölköy-Kiran, 14.09.2004, SES 2297.

#### **Hydnangiaceae**

*Laccaria amethystina* Cooke: In wood in Gümüşhane-Torul-Hidirlez, 25.09.2004, SES 2188. Under *Pinus* in Trabzon-Tonya- Kovanlık, 10.10.2002, SES 2099. Under *Abies* in Trabzon-Macka-Liser, 20.10.2002, SES 2290.

*Laccaria bicolor* (Maire) P.D. Orton: In *Picea-Fagus* forest in Trabzon-Tonya-Camlı, 09.11.2002, SES 2112.

*Laccaria laccata* (Scop.) Cooke: In mixed wood in Giresun-Kesap-Alatas, 10.08.2003, SES 2238. Under *Populus* in Trabzon-Köprübasi-Kücükdere, 03.10.2004, SES 2192.

#### **Lycoperdaceae**

*Bovista plumbea* Pers.: On lawn in Trabzon-Arsin-Karaca, 15.08.2004, SES 2081.



*Handkea excipuliformis* (Scop.) Kreisel: In woodland in Gümüşhane-Tekke, 06.09.2005, SES 2180.

*Lycoperdon perlatum* Pers.: In woodland in Trabzon-Tonya-Kovanlik, 24.10.2004, SES 2091. Under *Pinus* in Artvin-Ardanuc-Düz, 15.09.2005, SES 2085.

*Lycoperdon pyriforme* Schaeff.: On buried wood in Trabzon-Tonya-Pamuklu, 23.10.2004, SES 2094.

#### **Nidulariaceae**

*Crucibulum laeve* (Huds.) Kambly: On wood in Gümüşhane-Ayranli, 16.11.2002, SES 2262.

*Cyathus olla* (Batsch) Pers.: On soil in Rize-Cayeli, 12.10.2005, SES 2430.

#### **Marasmiaceae**

*Armillaria mellea* (Vahl) P. Kumm.: On *Corylus* in Giresun-Canakci-Calikli, 18.09.2004, SES 2090.

*Flammulina velutipes* (Curtis) Singer: On *Alnus* in Giresun-Tirebolu-Sayca, 30.04.2004, SES 2360.

*Marasmius oreades* (Bolton) Fr.: In pasture in Giresun-Tirebolu-Doganci, 02.05.2004, SES 2167.

*Marasmius rotula* (Scop.) Fr.: On dead twig in Artvin-Yusufeli-Kalayci, 10.09.2003, SES 2424.

*Oudemansiella mucida* (Schröd.) Höhn.: On *Fagus* in Gümüşhane-Torul-Aksüt, 23.08.2003, SES 2394.

*Xerula radicata* (Rehhan) Dörfelt: Under *Fagus* in Giresun-Hamidiye, 31.07.2004, SES 2053. Under *Carpinus* in Gümüşhane-Yitirmez, 01.09.2005, SES 2296.

#### **Pleurotaceae**

*Pleurotus cornucopiae* (Paulet) Rolland: On *Ulmus* in Artvin-Ardanuc-Ciralar, 09.09.2005, SES 2360.

#### **Pluteaceae**

*Amanita caesarea* (Scop.) Pers.: Under *Carpinus* in Giresun-Yaglidere-Tepeköy, 21.07.2002, SES 2393.

*Amanita franchetii* (Boud.) Fayod: In hardwood forest in Giresun-Dag, 19.07.2002, SES 2203.

*Amanita muscaria* (L.) Lam. var. *muscaria*: Under *Picea orientalis* in Trabzon-Macka-Sevinc, 08.08.2004, SES 2124. Under *Fagus* in Trabzon-Caykara-Uzungöl, 23.08.2002, SES 2123.

*Amanita pantherina* (DC.) Krombh.: In woodland in Trabzon-Düzköy-Gürgendag, 06.09.2002, SES 2007.

*Amanita phalloides* (Fr.) Link: In mixed woodland in Trabzon-Akcaabat-Hackalibaba, 16.07.2004, SES 2392.

*Amanita rubescens* Pers. var. *rubescens*: Under *Picea* in Trabzon-Arsin-Alancik, 13.08.2004, SES 2391.

*Amanita strobiliformis* (Paulet) Bertill.: In hardwood forest in Trabzon-Hayrat, 30.07.2002, SES 2422.

*Amanita submembranacea* (Bon) Gröger var. *submembranacea*: Under *Picea* in Trabzon-Caykara-Taskiran, 24.08.2002, SES 2320.

*Amanita vaginata* (Bull.) Lam. var. *vaginata*: In hardwood forest in Trabzon-Of-Lavat, 09.09.2002, SES 2390.

*Pluteus cervinus* (Schaeff.) P. Kumm. var. *cervinus*: On dead wood on the ground in Giresun-Görelle-Yesilköy, 31.08.2002, SES 2270.

#### **Schizophyllaceae**

*Schizophyllum commune* Fr.: On dead wood in Trabzon-Of-Agacbasi, 30.05.2004, SES 2389.

#### **Strophariaceae**

*Hypholoma fasciculare* (Huds.) P. Kumm.: On *Prunus* in Rize-Camlihemsin, 17.10.2005, SES 2102. On *Alnus* in Rize-Güneysu, 10.10.2005, SES 2108. On *Cydonia* in Giresun-Sebinkarahisar, 29.10.2005, SES 2200. On *Pinus* in Ordu-Fatsa-Büyükkoc, SES 2321.

*Kuehneromyces mutabilis* (Schaeff.) Singer & A.H. Sm.: On *Laurocerasus officinalis* in Ordu-Mesudiye, 10.09.2004, SES 2406.

**Tricholomataceae**

*Clitocybe gibba* (Pers.) P. Kumm.: In *Picea* forest in Gümüşhane-Torul-Yurtköy, 24.09.2004, SES 2041. In mixed forest in Trabzon-Macka-Ormanüstü, SES 2142. Under *Picea orientalis* in Trabzon-Macka-Liser, 18.07.2004, SES 2232.

*Clitocybe metachroa* (Fr.) P. Kumm.: In mixed forest in Giresun-Cüce-Alioglu, 17.09.2004, SES 2057.

*Cystoderma amianthinum* (Scop.) Fayod: On heath in Rize-Kalkandere-Yumurtatepe, 31.08.2004, SES 2388.

*Cystoderma cinnabarinum* (Alb. & Schwein.) Fayod: In mixed forest in Trabzon-Arsin-Sirt, 14.08.2004, SES 2182.

*Gymnopus dryophilus* (Bull.) Murrill: In wood in Trabzon-Of-Yatak, 30.05.2004, SES 2058.

*Hygrocybe conica* (Scop.) P. Kumm. var. *conica*: Amongst grass in Gümüşhane-Kürtün-Kizilot, 30.09.2002, SES 2172.

*Hygrocybe intermedia* (Pass.) Fayod: In grassland in Trabzon-Akcaabat-Gümüslü, 12.10.2002, SES 2251.

*Hygrocybe psittacina* (Schaeff.) P. Kumm. var. *psittacina*: On lawns in Giresun-Görece-Ardic, 01.09.2002, SES 2366.

*Hygrocybe virginea* (Wulfen) P.D. Orton & Watling var. *virginea*: In pasture in Trabzon-Macka-Karakaban, 06.10.2002, SES 2387.

*Hygrophorus chrysodon* (Batsch) Fr.: Under *Quercus* in Gümüşhane-Torul-Molla, 27.09.2002, SES 2386.

*Hygrophorus hedrychii* (Velen.) K. Kult: Under *Carpinus* in Rize Karayemis, 25.10.2002, SES 2370.

*Hygrophorus ligatus* Fr.: Under *Pinus* in Rize-Kalkandere-Yukari, 27.10.2002, SES 2148.

*Hygrophorus piceae* Kühner: Under *Picea* in Trabzon-Caykara-Vartan, 25.08.2002, SES 2137.

*Hygrophorus pudorinus* (Fr.) Fr.: Under *Abies nordmanniana* in Trabzon-Macka-Liser, 19.10.2002, SES 2133.

*Lepista flaccida* (Sowerby) Pat.: In forest in Trabzon-Of-Cay, 08.09.2002, SES 2385.

*Lepista nuda* (Bull.) Cooke: In garden in Trabzon-Of-Saracli, 08.09.2002, SES 2145.

*Lyophyllum multiforme* (Peck) H.E. Bigelow: From roadside in *Picea orientalis* forest in Giresun-Görece-Deregözü, 03.08.2003, SES 2121. Under *Rhododendron* in Giresun-Kesap-Tokuc, 09.08.2003, SES 2122.

*Melanoleuca subalpina* (Britzelm.) Bresinsky & Stangl: Among grass in Ordu-Persembe-Kelesoglu, 17.07.2003, SES 2285.

*Melanoleuca substrictipes* Kühner: In pasture in Giresun-Kesap-Alatas, 08.08.2003, SES 2265.

*Mycena acicula* (Schaeff.) P. Kumm.: In forest in Giresun-Bulancak-Gültepe, 27.07.2003, SES 2243. On wood in Gümüşhane-Torul-Kücükcit, 24.08.2003, SES 2288.

*Mycena aetites* (Fr.) Quél.: Among grasses in Giresun-Canakci-Akköy, 01.08.2003, SES 2234.

*Mycena cinerella* (P. Karst.) P. Karst.: In forest in Trabzon-Tonya-Aga, 08.11.2002, SES 2242.

*Mycena epipterygia* (Scop.) Gray var. *epipterygia*: In forest in Trabzon-Akcaabat-Kayabasi, 19.07.2004, SES 2267.

*Mycena laevigata* (Lasch) Gillet: On mossy stump of *Picea* in Giresun-Beyazit, 01.08.2004, SES 2248.

*Mycena latifolia* (Peck) A.H. Sm.: In mossy meadow in Giresun-Kesap-Unaca, 24.07.2004, SES 2241.

*Mycena maculata* P. Karst.: On dead wood of *Carpinus* in Giresun-Kesap-Tokuc, 24.07.2004, SES 2245.

*Mycena subviscosa* G. Stev.: In forest in Ordu-Gölköy-Cihadiye, 15.09.2004, SES 2244.

*Panellus stipticus* (Bull.) P. Karst.: On *Quercus* in Gümüşhane-Kelkit-Kilictasi, 30.07.2002, SES 2168.

- Pleurocybella porrigens* (Pers.) Singer: On rotten wood of *Picea orientalis* in Gümüşhane-Bas, 14.08.2002, SES 2135.
- Rhodocollybia butyracea* (Bull.) Lennox f. *butyracea*: In hardwood forest in Gümüşhane-Hanlar, 15.08.2002, SES 2117.
- Tricholoma basirubens* (Bon) A. Riva & Bon: Under *Fagus orientalis* in Trabzon-Caykara-Cambasi, 23.08.2002, SES 2324.
- Tricholoma imbricatum* (Fr.) P. Kumm.: Under *Pinus* in Samsun-Terme-Uzungazi, 12.08.2002, SES 2205.
- Tricholoma saponaceum* (Fr.) P. Kumm. var. *saponaceum*: In hardwood forest in Gümüşhane-Yitirmez, 13.08.2002, SES 2291.
- Tricholoma sejunctum* (Sowerby) Quéf.: Under *Quercus* in Samsun-Carsamba-Alibeyli, 08.08.2002, SES 2415.
- Tricholoma terreum* (Schaeff.) P. Kumm.: Under *Picea orientalis* in Trabzon-Vakfikebir-Karasu, 02.11.2002, SES 2323. Under *Pinus* in Trabzon-Vakfikebir-Kirandüz, 03.11.2002, SES 2235.
- Tricholoma vaccinum* (Schaeff.) P. Kumm.: Under *Picea orientalis* in Trabzon-Macka-Mataraci, SES 2118.
- Tricholoma virgatum* (Fr.) P. Kumm.: In hardwood forest in Rize-Cayeli-Yazicilar, 05.08.2002, SES 2332.
- Tricholomopsis rutilans* (Schaeff.) Singer: On *Picea* in Gümüşhane-Yesildere, 01.08.2002, SES 2204.

#### **Tulostomataceae**

- Tulostoma brumale* Pers.: On soil in Trabzon-Sürmene-Aksu, 03.10.2004, SES 2185.

#### **Russulales**

##### **Auriscalpiaceae**

- Lentinellus cochleatus* (Pers.) P. Karst.: On *Corylus* in Giresun-Bulancak-Muratli, 27.07.2003, SES 2206.

##### **Russulaceae**

- Lactarius acerrimus* Britzelm.: Under *Quercus* in Rize-Ikizdere-Gürdere, 08.06.2004, SES 2402.
- Lactarius affinis* Peck: Under *Picea* in Ordu-Persembe-Tepeköy, 20.09.2005, SES 2410.
- Lactarius camphoratus* (Bull.) Fr.: Under *Pinus* in Artvin-Ardanuc-Düz, 10.09.2005, SES 2376.
- Lactarius circellatus* Fr.: Under *Carpinus* in Giresun-Dereli, 27.09.2005, SES 2088.
- Lactarius deliciosus* (L.) Gray: Under *Pinus pinea* in Trabzon-Akcaabat-Kemaliye, 11.10.2004, SES 2300.
- Lactarius evosmus* Kühner & Romagn.: In mixed forest in Ordu-Gölköy-Cihadiye, 15.09.2004, SES 2400.
- Lactarius flavidus* Boud.: Under *Quercus* in Trabzon-Caykara-Arpadere, 24.08.2002, SES 2083.
- Lactarius luteolus* Peck: Under *Carpinus* in Giresun-Dereli, 19.07.2002, SES 2401.
- Lactarius piperatus* (L.) Pers.: In hardwood forest in Trabzon-Akcaabat-Hidimebi, SES 2050. Under *Quercus* in Trabzon-Macka-Sevinc, 10.09.2002, SES 2027.
- Lactarius rufus* (Scop.) Fr.: Under *Picea orientalis* in Trabzon-Macka-Mataraci, 25.08.2003, SES 2315.
- Lactarius scrobiculatus* (Scop.) Fr.: Under *Carpinus orientalis* in Trabzon-Macka-Mataraci, 20.08.2004, SES 2375.
- Lactarius vellereus* (Fr.) Fr. var. *vellereus*: Under *Carpinus* in Trabzon-Macka-Örnekealan, 07.10.2004, SES 2026.
- Lactarius volemus* (Fr.) Fr.: Under *Corylus* in Trabzon-Arsin, 08.09.2002, SES 2063. Under *Picea* in Trabzon-Caglayan, 07.09.2002, SES 2046.
- Russula anthracina* Romagn.: Under *Picea* in Giresun-Görece-Kale, 01.09.2002, SES 2399.
- Russula aurea* Pers.: Under *Fagus* in Giresun-Dogankent, 06.10.2005, SES 2374.
- Russula cyanoxantha* (Schaeff.) Fr.: Under *Alnus* in Rize-Cayeli, 13.10.2005, SES 2195.

- Russula delica* Fr.: Under *Picea orientalis* in Trabzon-Macka-Sevinc, 25.10.2004, SES 2153.  
Under *Quercus* in Trabzon-Macka-Altindere, 04.10.2002, SES 2005. Under *Pinus* in Trabzon-Akcaabat-Isiklar, 18.08.2003, SES 2328.
- Russula foetens* Pers.: Under *Carpinus* in Artvin-Ardanuc-Düz, SES 2049.
- Russula grata* Britzelm.: In mixed woodland in Giresun-Sebinkarahisar, 02.10.2005, SES 2014.
- Russula luteotacta* Rea: Under *Carpinus* in Ordu-Ulubey, 21.10.2005, SES 2373.
- Russula nobilis* Velen.: In mixed woodland in Giresun-Kesap-Ceylanpinar, 10.08.2003, SES 2028.
- Russula parazurea* Jul. Schäff.: Under *Carpinus* in Trabzon-Akcaabat-Hidirnebi, 16.08.2003, SES 2372.
- Russula rosea* Pers.: Under *Carpinus orientalis* in Trabzon-Macka-Sevinc, 26.10.2004, SES 2257. Under *Quercus* in Gümüşhane-Torul, 27.09.2002, SES 2239.
- Russula xerampelina* (Schaeff.) Fr. var. *xerampelina*: Under *Quercus* in Trabzon-Arakli-Ayvadere, SES 2104.
- Stereaceae**
- Stereum hirsutum* (Willd.) Pers.: On *Carpinus* in Trabzon-Salpazari-Kozluca, 14.05.2004, SES 2364.

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