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## **Macromycetes in Mediterranean and submediterranean plant communities of Bulgaria: a checklist**

### **Abstract**

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A literature-based checklist is presented, enumerating the 60 taxa of macromycetes (58 basidiomycetes, 2 ascomycetes) so far known to occur in Mediterranean and submediterranean plant communities in Bulgaria, i.e. in stands of *Castanea sativa*, *Juniperus excelsa*, *Paliurus spina-christi*, *Phillyrea latifolia*, *Pinus heldreichii*, *Platanus orientalis*, and *Quercus pubescens* with *J. oxycedrus*.

### **Introduction**

In Bulgaria, Mediterranean and submediterranean vegetation is mainly found in the southern and Black-Sea regions of the country. The communities dominated by *Quercus coccifera* L., *Phillyrea latifolia* L., *Juniperus excelsa* M. Bieb., *J. oxycedrus* L., and *Pinus heldreichii* H. Christ are the country's most characteristic vegetation units of this type. They may exceptionally occur also in the northern parts, and in the mountains of the Mediterranean portions (Velčev 1982).

The Mediterranean and submediterranean plant communities of Bulgaria have not so far been subject to a thorough mycological search. Only 60 taxa of macromycetes have been reported as occurring in these communities: 58 of the *Basidiomycetes* (8 *Aphylophorales*, 36 *Agaricales*, 7 *Russulales*, 5 *Gasteromycetes*, 1 *Tremellales* and 1 *Dacrymycetales*) and 2 of the *Ascomycetes*. Macromycetes have been collected and recorded from the following plant communities:

- I. Communities of *Pinus heldreichii* on Mt Pirin: 10 species (Barzakov 1932, Kreisel 1959, Kuthan & Kotlaba 1988, Stojčev & Dimčeva 1988).
- II. Communities of *Juniperus excelsa* in the southern Struma valley: 3 species (Dimčeva & al. 1992, Stojčev 1982).
- III. Communities of *Quercus pubescens* Willd. and *Juniperus oxycedrus* in the eastern Rodopi mountains: 16 species (Hinkova & al. 1979, Stojčev & Drumeva 1987).

- IV. Communities of *Paliurus spina-christi* Mill. in south-eastern Bulgaria (southern Black-Sea coast, Strandža mountains, Mt Aitoska and the eastern Rodopi mountains): 12 species and 1 subspecies (Kuthan & Kotlaba 1981, 1988).
- V. Communities of *Phillyrea latifolia* on the southern Mt Pirin and the eastern Rodopi mountains: 5 species (Hinkova 1961, Stojčev & Dimčeva 1988).
- VI. Communities with *Jasminum fruticans* L. along the southern Black-Sea coast and in the central Rodopi mountains: 2 species (Kuthan & Kotlaba 1981, Stojčev 1982).
- VII. Communities of *Platanus orientalis* L. in the southern Struma valley and on Mt Belasica: 7 species (Dimčeva & al. 1992, Hinkova 1961, Stojčev & Dimčeva 1982).
- VIII. Communities of *Castanea sativa* L. in the southern Struma valley and on Mt Belasica: 7 species (Dimčeva & al. 1992, Hinkova 1961, Hinkova & Stojčev 1983, Stojčev & Dimčeva 1982, Stojčev & Drumeva 1987).

The macromycetes reported as occurring in the above types of communities are listed alphabetically below. The vegetation formations are indicated by their serial numbers (I-VIII), which are followed by the appropriate references.

### **Check-list**

#### *Ascomycetes*

- Gyromitra esculenta* (Pers. : Fr.) Fr. – VII, VIII (Hinkova 1961).  
*Rutstroemia echinophila* (Bull. : Fr.) Höhn. – VIII (Hinkova & Stojčev 1983).

#### *Basidiomycetes*

- Agaricus haemorrhoideus* Kalchbr. & Schulzer – III (Hinkova & al. 1979).  
*Amanita caesarea* (Scop. : Fr.) Pers. – V (Hinkova 1961).  
*A. citrina* (Schaeff.) Gray – VIII (Stojčev & Dimčeva 1982).  
*A. ovoides* (Bull. : Fr.) Link [sub 'A. ovoidea'] – III (Hinkova & al. 1979); IV (Kuthan & Kotlaba 1988).  
*A. pantherina* (DC. : Fr.) Krombh. – III (Hinkova & al. 1979).  
*Clitocybe phaeopthalma* (Pers.) Kuyper – VII (Dimčeva & al. 1992).  
*Collybia dryophila* (Bull. : Fr.) P. Kumm. – III (Hinkova & al. 1979).  
*C. peronata* (Bolton : Fr.) Singer – III (Hinkova & al. 1979).  
*Conocybe battaria* (Bolton : Fr.) P. Kumm. [sub *Pholiotina battaria* (Fr.) Fayod] – I (Stojčev & Dimčeva 1988).  
*Cortinarius bivelus* Fr. : Fr. – III (Hinkova & al. 1979).  
*C. bovinus* (Pers. : Fr.) Fr. – III (Stojčev & Drumeva 1987).  
*C. coerulescens* (Schaeff.) Fr. – III (Hinkova & al. 1979).  
*C. infractus* (Pers. : Fr.) Fr. – III (Hinkova & al. 1979).  
*C. trivialis* Lange – III (Hinkova & al. 1979).  
*Dacrymyces chrysocomus* (Bull. : Fr.) Tul. – I (Barzakov 1932).  
*Entoloma hirtipes* (Schum. : Fr.) M. Moser – I (Stojčev & Dimčeva 1988).  
*E. rhodopolium* (Fr. : Fr.) P. Kumm. – III (Hinkova & al. 1979).  
*Exidia plana* (F. H. Wigg.) Donk – IV (Kuthan & Kotlaba 1981).  
*Geastrum corollinum* (Batsch) Holl. – IV (Kuthan & Kotlaba 1988).

- G. fimbriatum* Fr. – I (Kreisel 1959).
- G. minimum* Schwein. – IV (Kuthan & Kotlaba 1988).
- G. triplex* Jungh. – IV (Kuthan & Kotlaba 1981).
- Hebeloma fusipes* Bres. – III (Hinkova & al. 1979).
- Hohenbuechelia geogenia* (DC. : Fr.) Singer – VII (Dimčeva & al. 1992).
- Hydnnum repandum* L. : Fr. – VIII (Stojčev & Drumeva 1987).
- Hygrocybe acutoconica* (Clem.) Singer – V (Stojčev & Dimčeva 1988).
- Hymenochaete cinnamomea* (Pers. : Fr.) Bres. – IV (Kuthan & Kotlaba 1988).
- Hyphoderma radula* (Fr. : Fr.) Donk – IV (Kuthan & Kotlaba 1988).
- Inocybe asterospora* Quél. – IV (Kuthan & Kotlaba 1988).
- I. bresadolae* A. Massal. – I (Kuthan & Kotlaba 1988).
- I. fastigiata* (Schaeff. : Fr.) Quél. [subsp. *curreyi* (Berk.) Dermek & J. Veselský] – IV (Kuthan & Kotlaba 1988).
- I. praetervisa* Quél. – V (Stojčev & Dimčeva 1988).
- Lactarius chrysorrheus* Fr. – VIII (Stojčev & Dimčeva 1982).
- L. pterosporus* Romagn. – IV (Kuthan & Kotlaba 1988).
- L. uvidus* (Fr. : Fr.) Fr. – VIII (Stojčev & Dimčeva 1982).
- Lepiota ventriospora* Reid – II (Dimčeva & al. 1992).
- Lepista flaccida* (Sowerby : Fr.) Pat. [sub *Clitocybe flaccida* (Sowerby : Fr.) P. Kumm.] – III (Hinkova & al. 1979).
- Leptoglossum muscigenum* (Bull. : Fr.) H. Karst. – II (Dimčeva & al. 1992).
- Leucopaxillus gentianeus* (Quél.) Kotl. [sub "L. amarus"] – VII (Stojčev & Dimčeva 1982).
- Macrolepiota gracilenta* (Fr.) M. Moser – III (Hinkova & al. 1979).
- Melanoleuca cognata* (Fr.) Konrad & Maubl. – I (Kuthan & Kotlaba 1988).
- Mycena tintinnabulum* (Fr.) Quél. – VII, VIII (Dimčeva & al. 1992).
- M. vitilis* (Fr.) Quél. – V (Stojčev & Dimčeva 1988).
- Myriostoma coliforme* (With. : Pers.) Corda – VI (Kuthan & Kotlaba 1981).
- Omphalina ericetorum* (Pers. : Fr.) M. Lange – VII (Dimčeva & al. 1992).
- O. rosella* (Lange) M. Moser – V (Stojčev & Dimčeva 1988).
- Peniophora lycii* (Pers.) Höhn. & Litsch. – IV (Kuthan & Kotlaba 1981, 1988).
- Phellinus demidoffii* (Levier) Bondartseva & Singer – II (Stojčev 1982).
- P. rhamni* (Bondartseva) H. Jahn – IV (Kuthan & Kotlaba 1981).
- P. ribis* (Schumach. : Fr.) Quél. [f. *jasmini* Quél.] – VI (Stojčev 1982).
- Pholiota carbonaria* (Fr. : Fr.) Singer – I (Kuthan & Kotlaba 1988).
- P. lucifera* (Lasch) Quél. – III (Stojčev & Drumeva 1987).
- Psathyrella pennata* (Fr.) A. Pearson & Dennis – I (Stojčev & Dimčeva 1988).
- Rigidoporus ulmarius* (Sowerby : Fr.) Imazeki [sub *Fomitopsis ulmaria* (Sowerby : Fr.) Bondartseva & Singer] – VII (Stojčev & Dimčeva 1982).
- Russula amethystina* Quél. – I (Stojčev & Dimčeva 1988).
- R. fellea* (Fr. : Fr.) Fr. -IV (Kuthan & Kotlaba 1988).
- R. integra* (L.) Fr. – I (Stojčev & Dimčeva 1988).
- R. olivacea* (Schaeff.) Fr. – III (Hinkova & al. 1979).

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