

## CONTRIBUTIONS TO THE KNOWLEDGE DIVERSITY OF LIGNICOLOUS MACROMYCETES (BASIDIOMYCETES) FROM CĂPĂȚĂNI MOUNTAINS

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**Abstract.** This paper presents partial results of research conducted between 2005 and 2009 in different forests (beech forests, mixed forests of beech with spruce, pure spruce) in Căpățâni Mountains (Romania). 123 species of wood inhabiting *Basidiomycetes* are reported from the Căpățâni Mountains, both saprotrophs and parasites, as identified by various species of trees.

**Keywords:** diversity, macromycetes, *Basidiomycetes*, ecology, substrate, saprotroph, parasite, lignicolous

### INTRODUCTION

The data presented are part of an extensive study, which will complete the PhD thesis. The Căpățâni Mountains are a mountain group of the Șureanu-Parâng-Lotru Mountains, belonging to the mountain chain of the Southern Carpathians. They are situated in the SE part of the Parâng Mountain, between Olteț River in the west, Olt River in the east, Lotru and Larorița Rivers in the north. Our area is 900 Km<sup>2</sup> large (Fig. 1). The vegetation presents typical levers: major associations characteristic of each lever are present in this massif. Nemoral level is represented in the territory taken in the study, the sublevel of mixed forests of beech and beech with conifers, located between 600-1200 (1300) m altitude. The characteristic and dominant specie is beech (*Fagus sylvatica*), cool climate species, with subatlantic touch. In that sublevel forests meet and many other broad-leaved species: *Carpinus betulus*, *Acer pseudoplatanus*, *Acer platanoides*, *Acer campestre*, *Tilia platyphyllos*, *Tilia cordata*, *Fraxinus excelsior*, *Ulmus montana*, *Quercus polycarpa*, *Alnus incana*, *Salix caprea*, *Betula pendula* etc. Shrub layer is poorly developed. Isolated specimens can meet: *Evonymus verrucosa*, *Daphne mezereum*, *Sambucus nigra*, *S. racemosa*, *Crataegus monogyna*, and *Rubus idaeus*. Of lianas, those found here are: *Clematis vitalba*, *Hedera helix*. Boreal level is located in the middle and upper mountain, between 1.200-1.700 (1850) m altitude. The main element of the floor is spruce (*Picea abies*), boreal and boreal mountain species. Very rarely meet *Sorbus aucuparia*, *Acer pseudoplatanus*, *Alnus incana* (which entering in the level), *Fagus sylvatica*, often at the bottom of the level and *Abies alba*. Shrub layer is extremely poor, as represented by *Sambucus racemosa*, *Lonicera nigra* L. *xylosteum*, *Ribes alpinum*, *Daphne mezereum*, *Spiraea ulmifolia*, *Vaccinium myrtillus*, etc.

Forest ecosystems occupy large areas in the territory. Lignicolous macromycetes are main agents that break down lignin and cellulose (the primary components of wood) in these ecosystems. Among them are effective in breaking down wood basidiomycetes with hymenophoral fruiting bodies.

### MATERIALS AND METHODS

The research was conducted using transects and setting fixed locations in some vegetable formations, which were visited several times a year beginning with the months April-May until October-November.

Fungi were identified on the basis of both morphological and anatomical properties of fruiting bodies and according to specific chemical reactions using the bibliography [1-8, 10-13]. Special presentation was made in phylogenetic order, the system of classification used was that adopted by Kirk PM et al., 2001 [5]. The nomenclature is that used by Kirk P.M. [15]. Biological forms was used for the proposed system Anișoara Sălăgeanu and Sălăgeanu Gh. [13]: EPx - mycetoepixilophyta (mushrooms in the life cycle is carried out only on dead wood); Ex - mycetoendoxylophyta (mushrooms in the life cycle takes place inside the timber plants) Gs - mycetogeophyta saprophytica (saprophytic fungi, which mycelium is ground in soil or in places with abundant decomposition of plant debris, fallen fruit and leaves), Th - mycototrophyta (mushrooms with short-lived, sometimes for only a few hours). For the ecological groups are used abbreviations: P1 - parasitic lignicolous, growing on living trees, S1 - saprotroph lignicolous, living on dead branches and trunks, P1-S1 - parasitic lignicolous, then living as saprotroph (optional) lignicolous; S1-Sh - humicolous-lignicolous, S1-P1 - saprotroph lignicolous can live and live trees.

All the species are conserved in the CRAI (abbreviated as Index Herbariorum).

### RESULTS

A total of 123 species of lignocellulolytic fungi (*Basidiomycetes*) identified in forests from Căpățâni Mountains between the years 2005-2009 is presented in Table 1.

Macromycetes are now part of orders *Agaricales*, *Auriculariales*, *Boletales*, *Dacrymycetales*, *Hymenochaetales*, *Tremellales*, *Phallales*, *Polyporales*, *Russulales* and *Tremellales*. Most of them fungi can be found during the whole year, regardless of the season,

Table 1. Diversity of lignocellulolytic macromycetes species.

Species	Taxonomic classification	Bioform	Ec. gr.	Substrate	Fenofasis
0	1	2	3	4	5
<i>Agroclybe cylindracea</i> (DC.: Fr.) Maire	<i>Agaricomycetidae</i> <i>Agaricales</i> <i>Bolbitiaceae</i>	Ex-EPx	Pl-Sl	on roots and logs of <i>Salix caprea</i> and <i>Populus alba</i>	V-X
<i>Ramariopsis kunzei</i> (Fr.) Corner	<i>Clavariaceae</i>	Gs-EPx	Sh-Sl	on soil or on decayed wood, in deciduous and coniferous forests	IX-X
<i>Coprinellus domesticus</i> (Bolton) Vilgalys, Hoppé & Jacq. Johnson	<i>Coprinaceae</i>	Th-EPx	Sh, Sl	on soil or on decayed wood, in deciduous forests	IV-VIII
<i>Coprinus disseminatus</i> (Pers.) Gray		Th-EPx	Sh, Sl	on soil or on decayed wood, in deciduous and coniferous forests	V-X
<i>Galerina marginata</i> (Batsch) Kühner		EPx	Sl	on wood of <i>Picea abies</i> , <i>Abies alba</i>	VIII-X
<i>Pleurotellus chioneus</i> (Pers.) Kühner		EPx-Gs	Sl-Sh	on twigs of <i>Fagus sylvatica</i>	VIII-IX
<i>Psathyrella candolleana</i> (Fr.) Maire		Gs-EPx	Sh-Sl	fasciculated or solitary growth, in small groups, grinders decayed, chips, twigs, rotten logs in forests, shrubs, lawns, gardens	IV-X
<i>Crepidotus cesatii</i> (Rabenh.) Sacc.	<i>Cortinariaceae</i>	EPx	Sl	on dead twigs	VII-XI
<i>Pleurotellus chioneus</i> (Pers.) Kühner		EPx-Gs	Sl-Sh	on twigs of <i>Fagus sylvatica</i>	VIII-IX
<i>Fistulina hepatica</i> (Schaeff.) With.	<i>Fistulinaceae</i>	Ex-EPx	Pl-Sl	on trunk of <i>Quercus polycarpa</i>	VIII-X
<i>Lycoperdon pyriforme</i> Schaeff.	<i>Lycoperdaceae</i>	EPx	Sl	common on decayed stumps of broad-leaved tree or of rotting wood	VIII-IX
<i>Armillaria mellea</i> (Vahl) P. Kumm.	<i>Marasmiaceae</i>	Ex-EPx	Pl-Sl	on the roots of <i>Fagus sylvatica</i>	VIII-XII
<i>Flammulina velutipes</i> (Curtis) Singer		Ex-EPx	Pl-Sl	on wood of <i>Fagus sylvatica</i> , <i>Ulmus glabra</i>	X-IV
<i>Marasmiellus ramealis</i> (Bull.) Singer		EPx	Sl	on <i>Fagus sylvatica</i> branches	Vl-X
<i>Marasmius alliaceus</i> (Jacq.) Fr.		Gs, EPx	Sh-Sl	common on dead leaves, pieces of rotten wood, even death in the rotting trunks in deciduous and coniferous forests	VIII-X
<i>Marasmius rotula</i> (Scop.) Fr.		Gs, EPx	Sh, Sl	common on the soil, leaves and twigs in a state of decay in beech forests	V-X
<i>Micromphale foetidum</i> (Sowerby) Singer		EPx	Sl	common of <i>Fagus sylvatica</i> twigs	VI-VIII
<i>Oudemansiella mucida</i> (Serad.) Höhn.		EPx	Pl	increases in small groups on dead trunks and branches of <i>Fagus sylvatica</i>	VIII-XI
<i>Xerula longipes</i> (P. Kumm.) Maire		Ex-EPx	Pl-Sl	near the trunk of <i>Fagus sylvatica</i>	VIII-X
<i>Xerula radicata</i> (Relhan) Dörfelt		Gp, EPx	Sh, Sl	on the roots and stumps of <i>Fagus sylvatica</i>	Vl-X
<i>Crucibulum laeve</i> (Huds.) Kambly.	<i>Nidulariaceae</i>	EPx	Sl	increases in rich groups, on rotten wood, especially coniferous	VII-X
<i>Cyathus striatus</i> (Hudson ex Pers.) Willdenow ex Pers.		EPx-Gs	Sl-Sh	on chips, stumps, logs, branches decomposing deciduous trees and shrubs	VIII-XI
<i>Pleurotus ostreatus</i> (Jacq.) P. Kumm.	<i>Pleurotaceae</i>	Ex-EPx	Pl-Sl	of <i>Fagus sylvatica</i> , <i>Alnus incana</i> , <i>Salix caprea</i> stumps	IX-XII
<i>Pleurotus pulmonarius</i> (Fr.) Quéf.		Ex-EPx	Pl-Sl	on trunks of <i>Fagus sylvatica</i>	VII-XII
<i>Pluteus cervinus</i> (Schaeff.) P. Kumm.	<i>Pluteaceae</i>	EPx	Sl	on <i>Fagus sylvatica</i> trunks, in decaying wood, fallen branches	V-XI
<i>Pluteus petasatus</i> (Fr.) Gillet		EPx	Sl	on rotten wood of <i>Fagus sylvatica</i>	V-VIII
<i>Volvarella bombycina</i> (Schaeff.) Singer		Ex-EPx	Pl-Sl	on trunk of <i>Acer pseudoplatanus</i>	VI-X
<i>Kuehneromyces mutabilis</i> (Schaeff.) Singer & A. H. Sm.	<i>Strophariaceae</i>	Ex-EPx	Pl-Sl	on trunks of <i>Fagus sylvatica</i>	IV-XII
<i>Hypholoma capnoides</i> (Fr.) P. Kumm.		EPx	Sl	on the decaying trunks of <i>Fagus sylvatica</i> and <i>Picea abies</i>	VIII-X
<i>Hypholoma fasciculare</i> (Huds.) Quéf.		EPx	Sl	of <i>Fagus sylvatica</i> and <i>Acer pseudoplatanus</i> stumps	IV-XII
<i>Hypholoma sublateritium</i> (Schaeff.) Quéf.		EPx	Sl	of <i>Fagus sylvatica</i> stumps	VIII-XI
<i>Pholiotia squarrosa</i> (Weigel) P. Kumm.		Ex-EPx	Pl-Sl	of <i>Fagus sylvatica</i> stumps	IX-XI

0	1	2	3	4	5
<i>Gymnopus fusipes</i> (Bull.) Gray	<i>Tricholomataceae</i>	EPx-Ex	Sl-Pl	on trunk of <i>Fagus sylvatica</i>	Vl-Xl
<i>Megacollybia platyphylla</i> (Pers.) Kotl & Pouzar.		EPx	Sl	on stumps and rotten wood of <i>Picea abies</i>	Vl-X
<i>Mycena arcangeliana</i> Bres.		EPx	Sl	on bark of <i>Alnus incana</i> and fallen branches of <i>Fagus sylvatica</i> and <i>Picea abies</i>	VIII-Xl
<i>Mycena corticola</i> (Pers.) Gray		EPx	Sl	on branches of <i>Fagus sylvatica</i>	Xl-III
<i>Mycena epipterygia</i> (Scop.) Gray		EPx	Sl	increase in groups, in rotting wood; in the deciduous and coniferous forests	IX-Xl
<i>Mycena galericulata</i> (Scop.) Gray		EPx, Gs	Sl, Sh	of <i>Fagus sylvatica</i> and <i>Picea abies</i> rotten stumps	IV-XII
<i>Mycena haematopus</i> (Pers.) P. Kumm.		EPx	Sl	on trunk of <i>Alnus incana</i>	Vl-Xl
<i>Mycena inclinata</i> (Fr.) Quéf.		Ex-EPx	Pl-Sl	on <i>Fagus sylvatica</i> death branches	IX-XII
<i>Mycena polygramma</i> (Bull.) Gray		Gs, EPx	Sh, Sl	on the soil or buried wood, deciduous and coniferous woods	VIII-Xl
<i>Mycena renati</i> Quéf.		EPx	Sl	the trunk of <i>Alnus incana</i> , <i>Fagus sylvatica</i>	VIII-X
<i>Panellus stipticus</i> (Bull.) P. Karst.		EPx-Ex	Sl-Pl	on stumps, rotten logs, fallen twigs of deciduous and coniferous trees	I-XII
<i>Tricholomopsis rutilans</i> (Schaeff.) Singer		EPx	Sl	on the trunks, roots, or in the immediate vicinity, re death of <i>Fagus sylvatica</i> and <i>Picea abies</i>	VII-Xl
<i>Xeromphalina campanella</i> (Batsch) Maire		EPx	Sl	on logs, mossy coniferous logs or are in a state of decay; on wood of <i>Picea abies</i>	VII-X
<i>Auricularia auricula-judae</i> (Fr.) Quéf.	<b>Auriculariales</b> <i>Auriculariaceae</i>	Ex-EPx	Pl-Sl	on <i>Fagus sylvatica</i> , branches	I-XII
<i>Auricularia mesenterica</i> (Dicks.) Pers.		Ex-EPx	Pl-Sl	on fallen trunks of <i>Fagus sylvatica</i>	I-XII
<i>Hygrophoropsis aurantiaca</i> (Wulfen) Maire	<b>Boletales</b> <i>Hygrophoropsidaceae</i>	EPx	Sl	on highly degraded wood debris in coniferous forests	IX-Xl
<i>Tapinella pannuoides</i> (Batsch) E.-J. Gilbert		EPx	Sl	on dead trunks, stumps and branches of <i>Picea abies</i>	VII-XII
<i>Calocera cornea</i> (Batsch) Fr.	<b>Dacrymycetales</b> <i>Dacrymycetaceae</i>	EPx	Sl	of <i>Fagus sylvatica</i> , <i>Alnus incana</i> , <i>Acer pseudoplatanus</i> wood	I-XII
<i>Calocera viscosa</i> (Pers.: Fr.) Fr.		EPx	Sl	on wood of <i>Picea abies</i>	I-XII
<i>Dacrymyces chrysospermus</i> Berk. & M.A. Curtis		EPx	Sl	on wood of <i>Picea abies</i>	I-XII
<i>Hymenochaete mougeotii</i> (Fr.) Cooke	<b>Hymenochaetales</b> <i>Hymenochataceae</i>	EPx	Sl	on fallen trunk of <i>Abies alba</i>	X-IV
<i>Hymenochaete rubiginosa</i> (Dicks.) Lév.		EPx	Sl	of <i>Fagus sylvatica</i> wood	I-XII
<i>Inonotus cuticularis</i> (Bull.: Fr.) Karsten		Ex	Pl	on trunk of <i>Quercus polycarpa</i>	VIII-X
<i>Inonotus dryophilus</i> (Berk.) Murrill		Ex	Pl	on the trunk of <i>Quercus polycarpa</i>	IV-Xl
<i>Inonotus hispidus</i> (Bolton) P. Karst.		Ex	Pl	on trunk of <i>Ulmus glabra</i>	VII-X
<i>Inonotus nodulosus</i> (Fr.) Pilat		Ex	Pl	on trunks of <i>Fagus sylvatica</i>	VII-X
<i>Inonotus radiatus</i> (Sowbery) P. Karst.		Ex-EPx	Pl-Sl	on wood of <i>Acer pseudoplatanus</i>	VIII-IX
<i>Phellinus igniarius</i> (L.) Quéf.		Ex	Pl	on trunk of <i>Salix caprea</i> and <i>Fraxinus excelsior</i>	I-XII
<i>Phellinus pomaceus</i> (Pers.) Maire		Ex	Pl	on trunk of <i>Prunus cerasifera</i>	I-XII
<i>Phellinus robustus</i> (Karst.) Bourd. et Galz.		Ex	Pl	on trunk of <i>Quercus polycarpa</i>	I-XII
<i>Pseudoinonotus dryadeus</i> (Pers.) T. Wagner & M. Fisch.		Ex	Pl	on trunk of <i>Quercus polycarpa</i>	I-XII
<i>Schizophyllum commune</i> Fr.	<i>Schizophyllaceae</i>	Ex-EPx	Pl-Sl	very common species that grow in groups on rotten deciduous wood, bark, even on wood construction; it can sometimes be seen on the wood of conifers	I-XII

0	1	2	3	4	5
<i>Phallus impudicus</i> L.	<b>Phallales</b> <i>Phallaceae</i>	Ex-Gs	Pl	species that grow in groups on rotten deciduous wood, bark, even on wood construction, the common vegetable soil, sandy or clayey, highly decomposed woody debris on the damp beech forests, parks, gardens, sometimes live as parasite facultativ, sometimes it can be seen on the wood of conifers on deciduous wood (oak, hornbeam, beech) and coniferous on wood in decay of <i>Fagus sylvatica</i>	V-XII
<i>Schizopora paradoxa</i> (Schrad.) Donk	<i>Schizoporaceae</i>	Ex-EPx	Pl-Sl		Vl-XII
<i>Plicaturopsis crispa</i> (Pers.) D.A. Reid	<b>Polyporales</b> <i>Athelaceae</i>	EPx	Sl		IX-XII
<i>Vuilleminia comedens</i> (Nees) Maire	<i>Corticaceae</i>	Ex, EPx	Pl-Sl	on wood of <i>Fagus sylvatica</i> and <i>Quercus polycarpa</i>	I-XII
<i>Radulomyces confluens</i> (Fr.) M.P. Christ.	<i>Cyphellaceae</i>	EPx	Sl	on wood of <i>Fagus sylvatica</i>	I-XII
<i>Fomitopsis pinicola</i> (Sw.) P. Karst.	<i>Fomitopsidaceae</i>	Ex-EPx	Pl-Sl	on trunks of <i>Picea abies</i> , <i>Alnus incana</i> , <i>Fagus sylvatica</i>	I-XII
<i>Fomitopsis rosea</i> (Alb. & Schwein.) P. Karst.		Ex-EPx	Pl-Sl	on trunk of <i>Picea abies</i>	I-XII
<i>Laricifomes officinalis</i> (Vill.) Kotl. & Pouzar		Ex	Pl	on trunk of <i>Larix decidua</i>	I-XII
<i>Piptoporus betulinus</i> (Bull.) P. Karst.		Ex	Pl	on the trunks sick, feeble of <i>Betula pendula</i> , which quickly kills	VII-X
<i>Postia caesia</i> (Schrad.) P. Karst.		EPx	Sl	produces a red rot, on fallen trunks of <i>Abies alba</i>	VIII-XI
<i>Postia stipitica</i> (Pers.) Jülich		Ex-EPx	Pl-Sl	on branches and trunks of <i>Abies alba</i> , <i>Picea abies</i>	VII-XII
<i>Ganoderma appplanatum</i> (Pers.) Pat.	<i>Ganodermataceae</i>	Ex-EPx	Pl-Sl	on trunks of <i>Quercus polycarpa</i> , <i>Acer pseudoplatanus</i> , <i>Fraxinus excelsior</i>	I-X
<i>Ganoderma australe</i> (Fr.) Pat.		Ex-EPx	Pl-Sl	on wood of <i>Acer pseudoplatanus</i>	I-XII
<i>Ganoderma lucidum</i> (Curtis) P. Karst.		Ex-EPx	Pl-Sl	on wood of <i>Quercus polycarpa</i> , <i>Ulmus glabra</i>	I-XII
<i>Gloeophyllum odoratum</i> (Wulfen) Imazeki	<i>Gloeophyllaceae</i>	Ex-EPx	Pl-Sl	on roots of <i>Picea abies</i>	I-XII
<i>Gloeophyllum sepiarium</i> (Wulfen) P. Karst.		EPx	Sl	on stumps of <i>Picea abies</i>	I-XII
<i>Bjerkandera adusta</i> (Willd.) P. Karst.	<i>Hapalopilaceae</i>	EPx	Sl	frequent of <i>Fagus sylvatica</i> stumps	I-XII
<i>Bjerkandera fumosa</i> (Pers.) P. Karst.		Ex-EPx	Pl-Sl	common on trunks of deciduous trees ( <i>Alnus</i> , <i>Acer</i> , <i>Fagus</i> )	VII-III
<i>Climacocystis borealis</i> (Fr.) Kotl. & Pouzar		Ex-EPx	Pl-Sl	on trunks of <i>Picea abies</i>	VI-XII
<i>Hapalopilus nidulans</i> (Fr.) P. Karst.		EPx	Sl	on wood of <i>Betula</i> , <i>Populus</i> , <i>Alnus</i>	
<i>Abortiporus biennis</i> (Bull.) Singer	<i>Meripilaceae</i>	Ex-EPx	Pl-Sl	on roots of <i>Fagus sylvatica</i>	VII-XI
<i>Meripilus giganteus</i> (Pers.) P. Karst.		Ex-EPx	Pl-Sl	on trunks of <i>Fagus sylvatica</i> stumps	VII-X
<i>Byssomerulius corium</i> (Pers.) Parmasto	<i>Meruliaceae</i>	EPx	Sl	on fallen branches of <i>Fagus sylvatica</i> on their lower face	I-XII
<i>Aurantiporus fissilis</i> (Berk. & M.A. Curtis) H. Jahn ex Ryvarden	<i>Polyporaceae</i>	Ex	Pl	on trunk of <i>Prunus cerasifera</i>	VII-XI
<i>Cerrena unicolor</i> (Bull.) Murrill		Ex-EPx	Pl-Sl	on branches and dead trunks of <i>Fagus sylvatica</i>	I-XII
<i>Daedaleopsis confragosa</i> (Bolton) J. Schrött.		Ex-EPx	Pl-Sl	on wood of <i>Alnus incana</i> , <i>Alnus viridis</i> , <i>Corylus avellana</i>	I-XII
<i>Datronia mollis</i> (Sommerf.) Donk		EPx	Sl	common on dead trunks or branches of deciduous trees	I-XII
<i>Fomes fomentarius</i> (L.) J.K. Kickx		Ex	Pl	on deciduous wood, especially <i>Fagus sylvatica</i> , <i>Fraxinus excelsior</i> , <i>Carpinus betulus</i>	I-XII
<i>Laetiporus sulphureus</i> (Bull.) Murrill		Ex	Pl	on trunks of <i>Fagus sylvatica</i> , <i>Salix alba</i> and <i>Robinia pseudoacacia</i>	IV-X
<i>Lentinus strigosus</i> (Schwein.) Fr.		EPx	Sl	on fallen trunks of <i>Juglans regia</i> and <i>Fagus sylvatica</i>	IX-IV
<i>Lentinus tigrinus</i> (Bull.) Fr.		EPx	Sl	on trunks and stumps of <i>Salix caprea</i>	V-IX
<i>Lenzites betulina</i> (L.) Fr.		EPx	Sl	on stumps and branches of <i>Fagus sylvatica</i>	IV-XII
<i>Polyporus alveolaris</i> (DC.) Bondartsev et Singer		Ex	Pl	on wood of <i>Fagus sylvatica</i> , <i>Fraxinus excelsior</i>	V-VIII
<i>Polyporus arcularius</i> (Batsch) Fr.		EPx	Sl	on branches of <i>Alnus incana</i> , <i>Fagus sylvatica</i>	I-XII

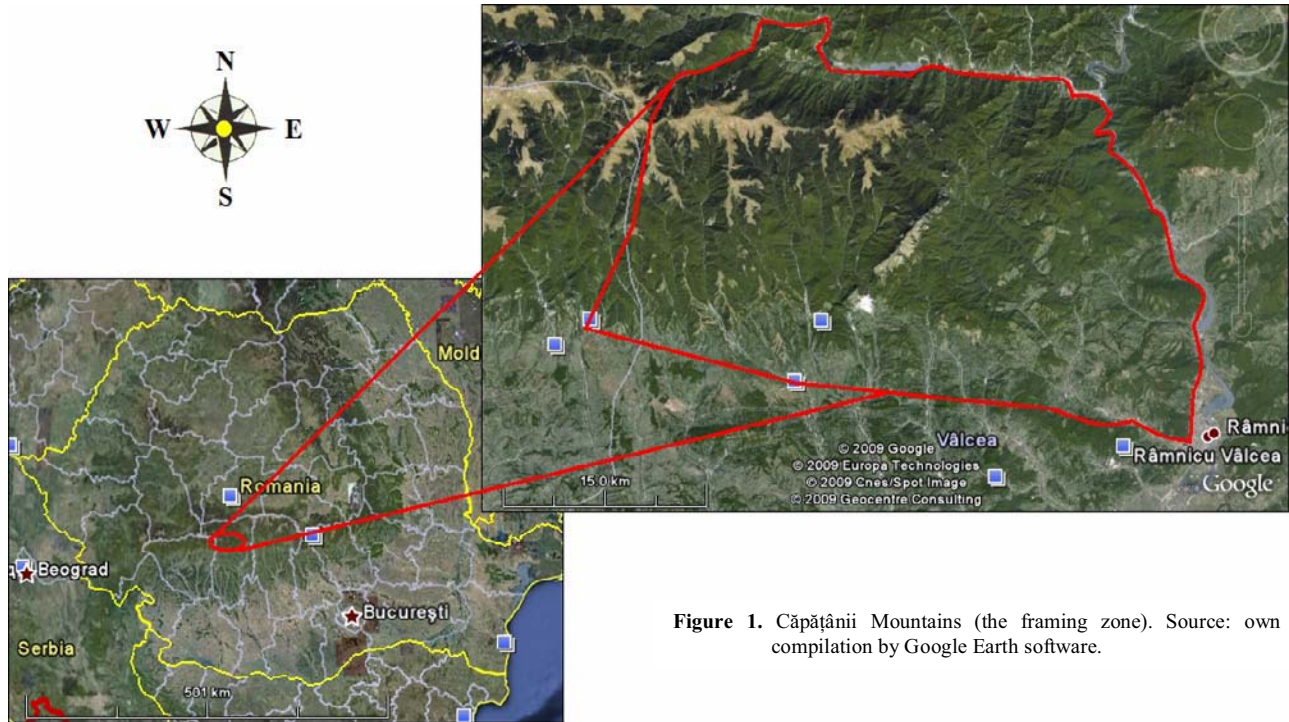
0	1	2	3	4	5
<i>Polyporus durus</i> (Timm) Kreisel		Ex	Pl	on the trunks and roots of <i>Fagus sylvatica</i> , <i>Alnus viridis</i> , <i>Salix caprea</i>	IV-IX
<i>Polyporus leptocephalus</i> (Jacq.) Fr.		Ex-EPx	Pl-Sl	on the trunks and roots of <i>Fagus sylvatica</i> , <i>Alnus incana</i>	VI-XI
<i>Polyporus squamosus</i> (Huds.) Fr.		Ex-EPx	Pl-Sl	on stumps and roots of <i>Juglans nigra</i> and <i>Ulmus glabra</i>	IV-VI
<i>Polyporus umbellatus</i> (Pers.) Fr.		Ex-EPx	Pl-Sl	on branches and trunks of <i>Fagus sylvatica</i>	VII-X
<i>Pycnoporus varius</i> (Pers.) Fr.		Ex-EPx	Pl-Sl	on wood and branches of <i>Fagus sylvatica</i>	VI-XI
<i>Pycnoporus cinnabarinus</i> (Jacq.) Fr.		Ex-EPx	Pl-Sl	on branches and trunks of <i>Fagus sylvatica</i>	I-XII
<i>Trametes gibbosa</i> (Pers.) Fr.		EPx	Sl	on trunks of <i>Fagus sylvatica</i>	I-XII
<i>Trametes hirsuta</i> (Wulfen) Pilát		EPx	Sl	on fallen trunks, stumps of <i>Fagus sylvatica</i> , <i>Alnus incana</i>	I-XII
<i>Trametes ochracea</i> (Pers.) Gilb. & Ryvarden		EPx	Sl	on fallen trunks of <i>Alnus incana</i>	I-XII
<i>Trametes suaveolens</i> (L.) Fr.		Ex-EPx	Pl-Sl	on logs of <i>Fagus sylvatica</i> , <i>Salix caprea</i>	I-XII
<i>Trametes versicolor</i> (L.) Lloyd		EPx	Sl	on the decaying wood, dead branches of <i>Fagus sylvatica</i> , <i>Alnus viridis</i>	I-XII
<i>Trichaptum abietinum</i> (Dieks.) Ryvarden		EPx	Sl	common on trunks, stumps, branches of <i>Abies alba</i>	I-XII
<i>Trichaptum bifforme</i> (Fr.) Ryvarden		Ex-EPx	Pl-Sl	on dead trunks of <i>Fagus sylvatica</i>	I-XII
<i>Lentinellus cochleatus</i> (Pers.) P. Karst.	<b>Russulales</b>	Ex-EPx	Pl-Sl	on dead trunks of <i>Fagus sylvatica</i>	VIII-X
<i>Lentinellus vulpinus</i> (Sowerby) Kühner & Maire	<i>Auriscalpiaceae</i>	EPx	Sl	on dead trunk of <i>Picea abies</i>	VIII-XI
<i>Heterobasidium annosum</i> (Fr.) Bref.	<i>Bondarzewiaceae</i>	Ex-EPx	Pl-Sl	on wood of <i>Picea abies</i>	I-XII
<i>Peniophora quercina</i> (Pers.) Cooke	<i>Peniophoraceae</i>	EPx	Sl	on twigs of <i>Quercus polycarpa</i>	I-XII
<i>Stereum gausapatum</i> (Fr.) Fr.	<i>Stereaceae</i>	Ex-EPx	Pl-Sl	very common in the territory on trunks, stumps, branches of <i>Quercus polycarpa</i> , <i>Fagus sylvatica</i> , <i>Alnus incana</i> , <i>Carpinus betulus</i>	I-XII
<i>Stereum hirsutum</i> (Willd.) Pers.		Ex-EPx	Pl-Sl	very common in the territory on trunks, stumps, branches of <i>Quercus polycarpa</i> , <i>Fagus sylvatica</i> , <i>Alnus incana</i> , <i>Carpinus betulus</i>	I-XII
<i>Stereum rameale</i> (Schwein.) Burt		Ex-EPx	Pl-Sl	common species on twigs of <i>Fagus sylvatica</i> , <i>Alnus incana</i>	I-XII
<i>Stereum rugosum</i> Pers.		Ex	Sl	on trunks of <i>Fagus sylvatica</i>	I-XII
<i>Stereum subtomentosum</i> Pouzar		Ex-EPx	Pl-Sl	on fallen trunks and branches of <i>Fagus sylvatica</i> and <i>Alnus incana</i>	I-XII
<i>Xylobolus frustulatus</i> (Pers.) Boidin		Ex-EPx	Pl-Sl	on twigs of <i>Quercus polycarpa</i>	I-XII
<i>Pseudohydnum gelatinosum</i> (Scop.) P. Karst.	<b>Tremellomycetidae</b>	EPx	Sl	on rotten wood of <i>Abies alba</i> and <i>Picea abies</i>	IX-IV
	<b>Tremellales</b>				
	<i>Exidiaceae</i>				
<i>Tremella mesenterica</i> Retz.	<i>Tremellaceae</i>	EPx	Sl	on wood of deciduous trees, from beech forests	I-XII

except *Flammulina velutipes* appearing usually during the late winter and early spring seasons, *Coprinus micaceus* and *Coprinus disseminatus*, which do not grow during the winter.

**DISCUSSIONS**

Forest ecosystems occupy large areas in the Căpățâni Mountains territory (Fig. 1): mixed forests of beech, forests beech with conifers and coniferous forests.

Studies of lignicolous macromycetes from Căpățâni Mountains were never made. In the world, the researches of wood inhabiting fungi were made by numerous mycologists (Gilbertson 1980, 1981; Gilbertson and Ryvarden 1986; Lindsey and Gilbertson 1978, Chapela 1989; Chapela and Boddy 1988; Burdsall and Nakasone 1981; Gilbertson and Blackwell 1984, 1985, 1987 in Nakasone, 1996 [9]; Worrall, Anagnost, Zabel, 1997 [14]).

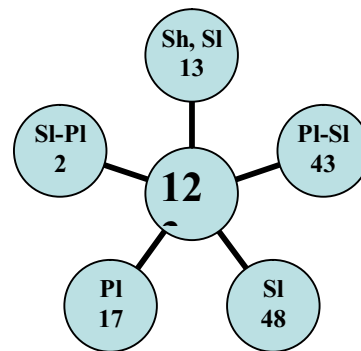


**Figure 1.** Căpățâni Mountains (the framing zone). Source: own compilation by Google Earth software.

Between the two forms of nutrition (saprotroph and parasite) there is a clear distinction. Thus, some parasitic basidiomycetes under certain conditions can become real saprotrophic (saprotrophic optional). These fungi shortly determine host plant death and then use death as debris saprotrophs. Parasites species may be occasionally or optional (enter the living body due to a favorable lesions) and parasitic required, very often there are a close adaptation between host and fungus. Saprotroph is species bound are unable to attack living tissue.

In the Fig. 2 we see that saprotrophic species are more numerous than parasitic species, them belonging to families: *Clavariaceae*, *Coprinaceae*, *Cortinariaceae*, *Lycoperdaceae*, *Marasmiaceae*, *Nidulariaceae*, *Pluteaceae*, *Strophariaceae*, *Tricholomataceae*, *Boletaceae* and *Dacrymycetaceae*.

The analysis of Table 1 shows that a total of 22 lignicolous basidiomycete's species were identified in coniferous forests, 88 species in deciduous forests and 13 species common two habitats. This specialization depending of lignicolous substrate represented in this area the following wood species: *Carpinus betulus*, *Alnus incana*, *A. viridis*, *Ulmus glabra*, *Fagus sylvatica*, *Salix caprea*, *Corylus avellana*, *Quercus polycarpa*, *Acer pseudoplatanus*, *Fraxinus excelsior*, *Betula pendula*, *Abies alba*, *Picea abies*.



**Figure 2.** Numeric representation of the ecological groups (Ec.gr.) of macromycetes.

Small number of lignicolous basidiomycete's species of coniferous forests is the fact that the characteristic species is *Picea abies* and *Abies alba*, and other woody species are rare, unlike beech forests, where he meets a greater number of them. Between these, the most dominant in the coniferous forest were: *Calocera viscosa*, *Climatocystis borealis*, *Fomitopsis pinicola*, *Galerina marginata*, *Gloeophyllum sepiarium*, *Hymenochaeta mougeotii*, *Trichaptum abietinum*, *Xeromphalina campanella*.

The most dominant in the beech forests were the species: *Armillaria mellea*, *Fomes fomentarius*,

*Inonotus nodulosus*, *Lenzites betulina*, *Marasmius alliaceus*, *Marasmius rotula*, *Mycena galericulata*, *Oudemansiella mucida*, *Polyporus varius*, *Meripilus giganteus* and *Xerula radicata*. *Schizophyllum commune*, *Trametes hirsuta*, *Trametes gibbosa* and *Trametes versicolor* were the species with the highest abundance and occurrence frequency on dead beech wood.

The most common pathogens, species which attack living trees, were *Armillaria mellea*, *Fomitopsis pinicola*, *Fomes fomentarius*, and *Phellinus igniarius*.

The numerical analysis of the taxon's we see in the Fig. 3.

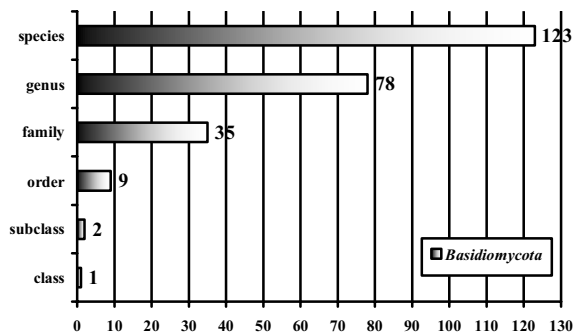


Figure 3. The numerical analysis of the taxon's.

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