MYCOPHILIC OF EPIXYL-FUNGUS OF FÉNYI-ERDŐ

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Abstract: *In Hungary Bátorliget (Fényi-erdő) is an unique region, where subalpine plant species live ont he plane, as the survivals of the flora of some cold, glacial-post-glacial age. The surviving was due to the local microclimatic relations.*

On the area of the Fényi-erdő we registered 668 species of basidium and ascu large fungus species in 2000-2004 years.

We declared, that Daedalea quercina, D. confragosa, Diatripe disciformis, Fomes fomentarius, Fomitopsis pinicola, Ganoderma applanatum, G. lucidum, Piptoporus betulinus, Polyporus varius, Trametes suaveolens, as well a sin wider phrasing Hirneola auricula-judae and Xylaria polymorpha are infected by mycophilic fungus.

Key words*: Bátorliget, Fényi-erdő, macro-fungus, mycophilic, glacial-postglacial, oak-ash-elm gallery forests.*

Introduction

Fényi-erdő, the most beautiful and the most diverse remnant fragment of the former woodland areas of the Nyírség (Hungary) is located 2 km SW of Bátorliget along the border. The part of the forest – 285 ha of the total area of more than 1000 ha – is protected. In the 1950s some parts of the protected area were rivaled int he protected values of the Bátorligeti-Ősláp Natural Reserve. On the low-lying parts there are several types of the oak-ash-elm gallery forests (Fraxino pannonicae-Ulmetum) with a lot of monwillow swamps (*Calamagrosti-Salicetum cinereae*) and at the spring of Károlyi-folyás fragments of birch swamp (*Salici pentandrae-Batuletum*) and wet meadows (*Molinietum coeruleae caricetosum nigrae*) . The protected rare species of the later areas, e.g. *Angelica palustris, Betula pubescens, Orchis militaris, Trollius europaeus* and *Iris sibirica* could be found even in the last years, too (Papp et al. 1985, 1986; Simon 1991).

The gentle dune slopes area covered by hundred-year-old stands of the sandy pedunculate oak-silver lime forest (*Convallario-Quercetum roboris*), whereas on the top of the dunes remnant fragments of *Fescuto-Quercetum roboris* are found (Papp et al. 2002).

János Tuzson (1914) directed the attention of scientific world to the Bátorliget in 1913-1914. The discovering botanical and zoological investigations started on the region in 1928.

Since 1937 Ubrizsy investigated the fungus world of the Nyírség (Ubrizsy 1940, 1941, 1943, 1947 and 1953).

The fungus-vegetation of it nearly escaped the attention of the micologists. There was not found useful data for the scientists, except some short publications. The latest announcement about the floristical and faunistical research work (Mahunka 1991) also left the criptogam flora out of consideration, although the lichens and mosses were mentioned in a from of tables, but the fungus were handled adversely.

Lenti, Rimóczi and Máté (1997, 1998) served never information about the mostly unrevealed fungus flora of the Bátorliget – according to the advives of the late professor József Vörös -, continuing in spirit of inheritance of the academically Ubrizsy.

Material and Methods

In 2000-2004, from January to the end of December we have done surveying of large and micro-fungus 120 times int he area of the Fényi-erdő. The species were determined ont he spot, or laboratory, later we made preparatum from them.

For determination, respectively to solve the naming questions we use the literature of the following authors: Moser (1983), Jülich (1984), Kits van Waveran (1985), Breitenbach and Kränzlin (1981-1995), Moser and Jülich (1985-1996), Krieglsteiner (1991-1993), Arnolds et al. (1995), Igmándy (1991).

Igmándy (1991) described the home tinder fungus. Helfer's (1991) work helped in the identification of mycophilic fungus. In the course of philogenesis funghi have conquered large quantity substratum of quite different qualities.

The data are stored and evaluated by the „Pilzkartierung 2000" PC program of the German Micological Society (Seilt 1991, Rimóczi 1994). The categories of the fungus taxonomy are used according to Ainsworth and Webster (Rimóczi 1995).

Results and Discussion

Some species funghi chose a whole range of food from macrofunghi. Those funghi, which live on other species of funghi, and are in a physiological relationship with them, are named mycophilic species.

This kind of fungus relationship is very common int he touched of Fényi-erdő (Table 1).

Table 1. The list of the species mycophilic-fungus of Fényi-erdő

Macrofunghi-species	**Mycophilic-species**
Daedalea quercina (L.) Pers.	Mucor hiemalis f. hiemalis
Daedaleopsis confragosa (Bolt.: Fr.) Schroet	Bisporella citrina
Diatrype disciformis (Hoffm.) Fr.	Capronia parasitica
Fomes fomentarius (L.) Fr.	Cladobotryum varium Trichoderma koningii Trichoderma polysporum Trichoderma viride
Fomitopsis pinicola (Sw.: Fr.) Karst.	Acremonium domschii Gliocladium roseum Verticillium funghicola
Ganoderma applanatum (Pers.) Pat.	Hypocrea lactea Verticillium incurvum
Ganoderma lucidum (Curt.: Fr.) Karst.	Verticillium incurvum Trichoderma viride Penicillium expansum Botrytis cinerea
Piptoporus betulinus (Bull.: Fr.) Karst.	Cladosporium cladosporioides Helminthophora sphaerocephala Cladobotryum varium Trichoderma viride
Polyporus varius	Phialophora rhodogena Trichoderma koningii
Trametes suaveolens Fr.	Cladosporium herbarum Trichoderma polysporum Verticillium lamellicola
Hirneola auricula-judae (Bull.: Fr.) Berk.	Aphanocladium album Arnoldiomyces clavisporum Verticillium lamellicola
Xylaria polymorpha (Pers.: Fr.) Grev.	Acremonium berkeleyanum Fusarium aquaeductuum

Summary

We declared, that *Deadalea quercina*, *D. confragosa, Diatrype disciformis, Fomes fomentarius, Fomitopsis pinicola, Ganoderma applanatum, G. lucidum, Piptoporus betulinus, Polyporus varius, Trametes suaveolens,* as well a sin wider phrasing *Hirneola auricula-judae* and *Xylaria polymorpha* are infected by mycophilic fungus.

Such mycophilic fungus parasited as *Mucor hiemalis* Wehmer f. *hiemalis, Bisporella citrina* (Batsch) Korf & Carpenter, *Capronia parasitica* (Ell. & Everh.) Müller & al., *Cladobotryum varium* Nees : Fr., *Trichoderma koningii* Oudem., *Trichoderma polysporum* (Link: Fr.) Rifai, *Trichoderma viride* Pers.: Fr., *Acremonium domschii* W. Gams, *Acremonium berkeleyanum* (Karst.) W. Gams, *Gliocladium roseum* Bain., *Verticillium funghicola* (Preuss) Hassebr., *Verticillium incurvum* W. Helfer sp. Nov., *Verticillium lamellicola* (F.E.V. Smith) W. Gams, *Hypocrea lactea* (Fr.: Fr.) Fr., *Penicillium expansum* Link, *Botrytis cinerea* Pers., *Cladosporium cladosporioides* (Fres.) de Vries, *Helminthophora sphaerocephala* (Berk.) de Hoog, *Phialophora rhodogena* (Mangenot) W. Gams, *Arnoldiomyces clavisporum* (Gray & Morgan-Jones) Morgan-Jones, *Fusarium aquaeductuum* (Radlkofer & Rabenh.) Lagerh.

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