



## EFFECT OF SILVICULTURAL TREATMENTS ON THE COMPOSITION OF ANIMAL PARASITIC FUNGAL COMMUNITIES

Az erdőművelési kezelések hatása az állatparazita gombaközösségek összetételére

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The Pilis Forestry Systems Experiment, ongoing since 2016, compares five different forest management methods (four different modes and controls) in terms of their impact on abiotic environmental variables, vegetation and mesofauna. The above experiment, led by the Centre for Ecological Research, was launched in 2020 by the ELKH-EKKE Lendület Environmental Microbiome Research Group, which provides the first insight in Hungary into the impact of silvicultural practices on fungal community composition based on soil DNA data. In this study we investigated animal parasitic fungal communities in the above context. A total of 4480 fungi genotypes DNA sequences were determined in the 30 plots sampled in October 2020, more than half of which could be identified at the genus level or higher. Of these, animal parasitic fungi species were represented by 113 genotypes of 21 genera. As with other fungi functional groups, silvicultural practices also affected the composition of animal parasitic fungi communities, explaining 26.6% of the compositional changes. E.g. *Cutaneotrichosporon* species were most abundant in the retention tree group, while *Tolypocladium* species were most abundant in the non-disturbed control plots. Moreover, spatial structure was also observed: each experimental block explained 24.5% of the differences between samples. A thorough understanding of the environmental factors influencing the dynamics of the forest microbiome is essential for the sustainable management of Pannonian forests so that our forests continue to provide us with ecosystem functions and services that are key to sustainable development.