



NEW DATA ON THE MACROFUNGI OF THE BOTANICAL GARDEN OF SOPRON

Új adatok a Soproni Botanikus Kert nagygomba-világához

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Botanical gardens, parks and other urban territories can serve as habitat for fungal communities, but soil disturbances, pollution, fragmentation and vegetation simplification reduce the number of symbiotic fungi and increase the number of disturbance-tolerant saprotrophs and pathogens. As for parks, besides park management work (parasite fungi monitoring), fungi monitoring can also give information about the level of mycorrhiza networks that highly increase drought and diseases resistance of trees, and about saprotrophs, which are crucial in replenishing soil with nutrients.

Construction of the Sopron Botanical Garden started after the relocation of the College of Mining and Forestry to Sopron. Initially, it was designed as practical facility for teaching dendrology to forest engineers and the garden provided foliage, buds and seeds for lectures and practical classes. After that, the new planting was done according to phytogeographical groups, so now there are geographical groups with woody plants of East Asia and North America.

Mycological surveys started in the 2000s; previously, 171 species were characterized based on observations conducted from 2011 to 2013. This work concentrates on the subsequent observations. In recent years, about 110 new species were found in addition to some unidentifiable species (76 genera), which was observed during the last 10 years. Among fungi, 56 species (51%) are saprotrophs, 44 species (40%) are symbionts, 9 species (8%) are obligate or facultative parasites, and 1 has a mixture life strategy. Saprotrophic fungi include 20 wood-decomposing species (both white-rot and brown-rot fungi), 20 decomposers of leaves, needles, and other plant litter, 19 decomposers of soil organic matter, and 6 specialist species (e.g., cone decomposers, cup-shaped structure decomposers, grassland endophytes; in total more than 56 species because they can belong to more than one group). Symbiotic fungi are temporally stable as compared with decomposer fungi (their temporal average frequency and median frequency are higher). Both symbiotic and decomposer fungi are present on average in about 1.5 sites of the botanical garden; 68.2% of symbiotic fungi and 66.1% of decomposer fungi are represented in one specific location only.