



TAXONOMIC REVISION OF *AMANITA* SECTION *VAGINATAE* IN HUNGARY

Selyemgombák (*Amanita* nemzetség, *Vaginatae* szekció)
taxonómiai revíziója Magyarországon

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A frequent taxonomic problem is that many fungi previously treated as one species relying on morphology-based species identification, turned out to actually belong to multiple species. Due to their often highly similar morphological characteristics, species delimitation and identification are often problematic in the globally distributed, ecologically and economically important basidiomycetous genus *Amanita*, section *Vaginatae* which is represented by several species also in Hungary. Our work aimed to investigate the molecular phylogenetic relationships and the species diversity within the *Vaginatae* section in Hungary. Molecular phylogenetic data obtained from nrDNA ITS, LSU and *rpb1* regions along with morphological characters were applied to classify more than 100 specimens collected from Hungary. In addition to the macromorphology, spore characteristics can be useful in species delimitations, therefore spore sizes and shapes were also examined under a light microscope. Based on the maximum likelihood phylogenetic tree derived from multi-locus sequence data, we verified the presence of 21 lineages ("phylogenetic species") in *Amanita* section *Vaginatae* in Hungary. Furthermore, our study indicated that the name „*Amanita vaginata*” in fact covers at least six distinct cryptic species in Hungary. The shape of the basidiospores did not prove to be a reliable distinctive feature, but the spore size varied between the species. Our results also support that DNA-based species delimitation methods could often change the classical taxonomic concepts based on morphological traits.