

A301 A phylogenetic assessment of *Amanita* species based on ribosomal DNA internal transcribed spacers

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The genus *Amanita* is divided into two subgenera, *Amanita* and *Lepidella*, largely based in the amyloidity of spores and then the striation of pileal margins. And also there are annulate and non-annulate species in the genus, the latter group of which used to be called *Amanitopsis* depending authors. To infer phylogenetic assessment and to see the phylogenetic relationships of major taxonomic characters of *Amanita*, the internal transcribed spacers and the 5.8S ribosomal RNA gene were sequenced from 16 recognized *Amanita* species and 3 close related species. The internal transcribed spacers showed great dissimilarities in sequence alignment and the analysed sequence data by distance and parsimony methods revealed that *Amanita* species were clustering in two major subgroups, which result correspond to the present classification of *Amanita*, but all defined taxonomic or chemical characters do not necessarily correlate with phylogenetically inferred evidences.

A302 Phylogenetic Relationships among *Stereaceae* and Related *Aphylllophorales* Taxa Inferred from 18S Ribosomal DNA Sequence Analysis

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The family *Stereaceae* Pilat(Aphylllophorales) is considered as an artificial group and distinguished from its related family *Corticaceae* Herter(Cor.) in part by capability of producing caps and dimitic hyphal system. Nucleotide sequences of 18S nuclear ribosomal DNA were used to determine relationships between this group and related groups, monophyly of the *Stereaceae*, and phylogenetic relatedness among species of the *Stereaceae*. Sequence data from 13 stereoid species and other aphylllophoroid ones were analyzed using parsimony and neighbor-joining method. The results showed that the family *Stereaceae* and *Corticaceae* were not monophyletic. Species used in this analysis formed three clades. Each group has few morphological or biochemical characters shared. Thus, traditional systematics within *Aphylllophorales* including the family *Stereaceae* were not confirmed by molecular data. More studies are needed for the solution of these problems.