A302 Taxonomical Discussion of Coprinus section Comati in Coprinoid group based on the sequences of ITS regions.

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Phylogenetic relationships were investigated on Coprinoid and its closely related taxa using sequences of ITS regions partially including 17S, 5.8S, and 25S. Our analysis reflects a broad sampling across eight segregate genera classified by singer : *Coprinus, Psathyrella, Stropharia, Podaxis, Conocybe, Bolbitius, Agaricus, Lepiota* (Coprinaceae, Agricaceae, Agricales, Basidiomycetes).

Results from parsimony analysis indicated that subsection Comati in *Coprinus* is more closely related to the Agaricaceae than to other species of Coprinaceae, and Podaxaceae which is believed to be derived from ancestors of the Bobitiaceae belongs to lepiotoid taxa.

A303 Genetic Diversity of Thermophilic Actinomycetes in Mushroom Composts

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To assess the diversity of thermophilic actinomycetes in mushroom composts, seventy three thermophilic actinomycetes isolated from 24 samples of mushroom composts and 13 standard strains were examined by analyses of fatty acid composition, PCR-RFLP of 16S rDNA, and nucleic acid fingerprint by URP primers. Thermophilic actinomycetes isolated from mushroom composts included various genera such as *Thermonospora, Thermoactinomyces, Saccharomonospora, Saccharopolyspora,* and thermophilic streptomyces. A half of isolates was identified to genus *Thermonospora* and *Thermoactinomyces.*