Biodiversity and Taxonomy of the Russulaceae in Northeastern Thailand

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Purpose: The family Russulaceae contains two important genera including Lactarius and Russula. These mushrooms are easily recognized by fairly large basidiocarps, brightly coloured upper cap surface and the gills are straight, arranged in a regular pattern. These ectomycorizhal mushrooms are widely distributed in nature which some are edible but some are poisonous. Therefore taxonomic study and identification of these genera are extremely important.

Methods: The objectives of this study were (1) To collect and document mushrooms of the Russulaceae from different parts of Northeastern Thailand and (2) To clarify the taxonomic position of the Russulaceous fungi.

Results: A total of 45 specimens were collected from four locations in Northeast of Thailand. Morphological characteristics of these mushrooms are microscopically studied. Based on types of fruiting bodies, there were two different groups. To confirm their identity, their genomic DNA was extracted and two genes (ITS and LSU) were amplified. The phylogenetic relationship of these mushrooms were discussed.

Conclusions: This shows that Thailand has great diversity of the Russulaceae and various species of Lactarius and Russula are reported.