



Baramee Sakolrak 2006: Diversity of Mushrooms at Royal Agricultural Station, Angkhang, Chiang Mai Province. Master of Science (Forestry), Major Field: Forest Biology, Department of Forest Biology.

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The study of diversity of mushrooms at Royal Agricultural Station, Angkhang, was carried out by surveying the mushrooms in the permanent plots which set along both sides of the nature trails passing through the natural pine forest at Ban Kob Dong village, *Acacia confusa* plantation, *Liquidambar formosana* plantation and bamboo plantation. The permanent plots in each area were 15 circular plots with 5 meters in radius and their centers were 10 meters perpendicular to both sides of the trail. The distance between each plot on the same side of the trail was 50 meters. The survey was done once a month during May 2004 to April 2005.

Results of the survey revealed 140 mushroom species in total, which only 105 species could be identified. The identified mushrooms were classified to 54 genera, 31 families, 18 orders, 2 subclasses and 1 class. There were 5 new record species in Thailand, namely *Cortinarius purpureus* (Fr.) Fr., *Craterellus cinereus* (Pers. & Fr.) Pers., *Crinipellis stipitaris* (Fr.) Pat., *Hygrocybe flavescens* (Karff.) Sm. & Hes. and *Mycena holoporphyrata* (Berk. & Curt.) Singer. The amount of mushroom species found in the natural pine forest, bamboo plantation, *Liquidambar formosana* plantation and *Acacia confusa* plantation were 46, 45, 44 and 39, respectively. All of them were divided into 4 groups according to their roles and functions in the forest ecosystem, namely, saprophytic mushrooms 78 species (55.71%), ectomycorrhizal mushrooms 44 species (31.43%), plant parasitic mushrooms 2 species (1.43%) and unknown roles and functions 16 species (11.43%). The other usefulness of these mushrooms were edible mushrooms (19 species), medicinal mushrooms (11 species) and handicraft decoration mushroom (1 species).

The monthly diversity index of mushrooms in every forest type showed high positive relationship with the monthly rainfall. In addition, during rainy season, the soft, fleshy and easily rotten mushrooms were found more than the hard and durable ones. In term of the similarity index of mushroom species in these 4 forest types, it was considered as low since the values range from 4.65 – 33.33 %.

Results of the study are useful for preparing the field guide to mushrooms of the Royal Agricultural Station, Angkhang and recommending the suitable periods to study mushrooms in the station. The edible and other useful mushrooms should be cultivated or maintained by conserving natural conditions in order to increase the quantity and generate incomes in the future.

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Thesis Advisor's signature

