

Wanwipa Kongjaroen 2007: Species Diversity and Altitudinal Distribution of Amphibians along Lam Ta Klong Watershed Area in Khao Yai National Park. Master of Science (Forestry), Major Field: Forest Biology, Department of Forest Biology. Thesis Advisor: Mr. Jarujin Nabhitabhata, Ph.D. 99 pages.

Species diversity of amphibian fauna was carried out at 7 elevations along the Lam Ta Klong stream in Khao Yai National Park at 400, 500, 600, 700, 800, 900 and 1,000 MSL. From October 2004 to October 2005 by stream transect survey It revealed the existence of 19 amphibian species, 17 of these were found in the studied stream. *Rana nigrovittata* was the most abundance. There were 3 amphibian species found to be a new record of occurrence of this area including *Rana cubitalis*, *Philautus parvulus* and *Kaloula pulcha*. The distribution along elevation gradient from 400–1,000 MSL. There were found 6 amphibian species at all elevation gradient and 11 amphibian species were found in a limited range of elevation gradient.

The comparison of individuals, species numbers and diversity indices at all elevations. It was found that the 700 MSL site had the highest individuals, the 400 MSL site the highest species numbers and the 1,000 MSL site the highest diversity index. Comparison of the similarity indices of amphibian at all elevation, it was found that the indices were close to one another. The statistical analyses of individuals, species numbers and diversity indices of amphibian against the seasons, revealed that the individual numbers of amphibian in dry season significantly differing from those of wet season at .01; while species numbers and the diversity index were non significant. Dealing with the relationship between amphibians and environmental factors, it was found that the individuals showed positive relationship to precipitations, temperatures and the relative humidities at .01, species numbers showed positive relationship to precipitations and temperatures at .01, but negative relationship to the relative humidities. The diversity indices showed negative relationship to precipitations, temperatures and the relative humidities.

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