

Channarong Wangthaisong 2013: Amphibian Diversity and Stream Environmental Variation in Pristine Tropical Forest of Khao Yai National Park. Master of Science (Environmental Technology and Management), Major Field: Environmental Technology and Management, Department of Environmental Technology and Management. Thesis Advisor: Mr. Wirong Chanthorn, Ph.D. 100 pages.

Environmental variation influences directly amphibian diversity. A stream in tropical forest is habitat which supports forest amphibian diversity. Destruction and environmental change of stream strongly affect stream amphibian population. Thus this research aimed to study diversity of stream amphibian and relation with environmental variation. I compared species richness, abundance and environmental factors which may affect to distribution and assemblage of amphibian in stream of Khao Yai National Park. I selected three stream characteristics; cascade, rocky and sediment substrate and three landscape characteristics; higher slope area, lower slope area and hill near grassland. I encountered 6, 10 and 10 species in cascade, rocky and sediment substrate respectively and 7, 8 and 11 species in higher slope area, hill near grassland and lower slope area respectively. *Microhyla berdmorei* and *Hylarana nigrovittata* were the most number of individuals in dry season and rainy season respectively and shown tendency to be the dominant species since the distribution of these species influenced diversity. The Simpson's diversity and similarity indices revealed that the amphibian diversity and similarity was higher in the dry season, but the rainy season abundance was higher. NMDS revealed that some stream variables were the important factors to the assemblage of amphibian but did not tend to bear similar assemblage between both seasons. Species accumulation curves and diversity index indicated that the assemblage of many species was supported by some stream characteristic and habitat pattern, these were the rocky substrate and the lower slope area and these habitats indicated support to be beta diversity.

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