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BUNTIKA AREEKUL : INSECT SUCCESSION AND DIVERSITY ON CARRION IN DIFFERENT HABITATS AT KHAO YAI NATIONAL PARK. THESIS ADVISOR: VACHAROBN THIRAKHUPT, Ph.D., SOMPOAD SRIKOSAMATARA, Ph.D., SURAPIMPASALEE, M.Sc. 96 P. ISBN 974-664-493-9

A field study of insect succession on the carcasses of exposed household chicken and laboratory mice (*Mus musculus*) was carried out in two different habitats—grassland and forest area at Khao Yai National Park, Thailand. The purposes of the study are to trace the insect succession pattern on the carcass, the rate of biomass removal during the decomposition process, the species diversity of carrion beetles on the carcass, and the impacts of physical environmental factors on the decomposition process. Six experiments, each lasting 35-40 days, were conducted at two-month intervals from January 1999 until December 1999.

In summer, during the first week of the experiment, the carcasses of both household chicken and laboratory mice decayed at a much faster rate than in the rainy season and winter (more than 70% of total biomass of both animal carcasses was removed in summer, 40% in rainy season and 20% in winter). Diptera and Coleoptera were the dominant groups of insects found on the carcasses. Dipteran larvae of the Family Calliphoridae were responsible at the beginning of the carrion degradation process followed by coleopterans. Twenty-one species of Coleoptera were found on carcasses. The diversity of Coleoptera was greater on carcasses in the forest area ($H' = 2.261$) than those in the grassland ($H' = 2.114$). In grassland, the diversity of Coleoptera was highest in summer followed by that in the rainy season and winter. Whereas in the forest, Coleoptera has the greatest diversity in the rainy season followed by that in the summer and during winter. The similarity coefficient between Coleoptera found on the mice carcasses in the grassland and that in the forest area was 0.83. Approximately 50 insect species were found on carcasses throughout the study.