

Pimpika Thumcharoen 2008: Seasonal Changes in Ant Communities among Different Landuses, Amphoe Phanomtuan, Changwat Kanchanaburi. Master of Science (Forestry), Major Field: Forest Biology, Department of Forest Biology. Thesis Advisor: Associate Professor Decha Wiwatwitaya, D.Agr. 84 pages.

The seasonal changes of ant communities among different landuses were carried out at the Eucalyptus plantation with aged of 1, 3 and 6 years old, agroforestry (Eucalyptus and cassava), cassava plantation, *Alstonia scholaris* plantation and in the mature forest, dry dipterocarp forest, Amphoe Phanomtuan, Changwat Kanchanaburi during May 2004 to April 2005. The objectives were to clarify the abundance, community structure and species composition of ants and activities according to the seasonal changes among the different landuses. Ants were collected by 3 methods as 1) soil samples, 2) plant litter sifting and 3) pitfall traps.

The results showed that the species diversity of ants both the landuse areas and DDF were not different, being 25 and 26 species, respectively. While the abundance of ants was clearly lower in the landuses than in DDF, being 557.04 and 1,321.75 individual/m². The diversity indices in each month were lower in the landuse areas than in DDF. Ant similarity was divided into 3 groups, including 1) Eucalyptus plantation 1, 3 years old, agroforestry (Eucalyptus and cassava) and cassava plantation 2) Eucalyptus plantation 6 years old and 3) *Alstonia scholaris* and DDF. The similarity indices between the rainy and dry seasons in both landuse areas and DDF were high, being 86.36 and 83.72, respectively. The dominant species of ants in landuse areas was *Meranoplus bicolor*, *Tetramorium walshi*, *Solenopsis geminata* and *T. smithii* while *Monomorium destructor*, *Meranoplus bicolor*, *T. sp.1* of AMK, *T. sp.6* of AMK and *Pheidole parva* were found in DDF. Species diversity, abundance and diversity indices were larger in undisturbed landuse area than disturbed landuse areas.

Ant activities in the landuse areas and DDF were found 6 subfamilies 16 genera 26 species 24,586 individuals and 5 subfamilies 15 genera 24 species, 6914 individuals, respectively. *Meranoplus bicolor*, *Monomorium destructor*, *Paratrechina longicornis*, *Plagiolepis sp.1* of AMK and *Tetramorium smithii* were common species which distributed in all landuse areas and also in DDF, while *Iridomyrmex anceps* and *T. walshi* could found just landuse areas.

The results of this study can apply to evaluate recolonization of the landuses area.

Student's signature

Thesis Advisor's signature

