

Small Mammal Communities: Diversities, Seasonal and Temporal Distribution in Each Forest Type, University of Phayao Plant Genetic Conservation Area, Thailand

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ABSTRACT

*Small mammal communities were studied over 12 months in three dry tropical forest habitats in the University of Phayao Plant Genetic Conservation Area, Phayao Province, Thailand. Traps were set for three days each month, and trapped animals were marked and released. Data were collected on species, age, body mass, and trap location, allowing for the determination of population age structure through time, minimum home-range sizes, biomass, and community diversity indices. Six species of Rodentia and one each of Scandentia, Lagomorpha and Carnivora were recorded in 1,047 captures of 371 individuals over 3,528 trap nights (a 29.7% capture rate). The four most common species caught from all sites were *Maxomys surifer*, *Tupaia glis*, *Rattus rattus* and *Leopoldamys sabanus*, with *M. surifer* the most common species in all forest types. There was significant variation across forest type and season in the age of animals caught, their density, and their mass, but not in community structure or sex ratios. In all forest types, minimum home range sizes were larger in the cold and hot seasons than in the rainy season. The dry dipterocarp forest supported the highest diversity of small mammals. Small-mammal community diversity was positively correlated with forest heterogeneity.*

Key Words: Small mammals, Dry dipterocarp, Ecotone, Dry evergreen forests, University of Phayao Plant Genetic Conservation Area.

INTRODUCTION

The composition of small mammal communities in Northern Thailand is not fully understood (Walker and Rabinowitz, 1992), because most studies in Asia have focused on India and Malaysia (Lim, 1970; Rao and Sunquist, 1996; Shanker and Sukuma, 1999; Shanker, 2001; Wells et al., 2004, 2006, 2007). Little is known of the effects that habitat and seasonality have on the dynamics of these communities.

Seasonally dry tropical forest represents 42% of the tropical vegetation worldwide and is characterised by a relatively high number of tree species with small, dry, wind-dispersed seeds (Murphy and Lugo, 1995). This type of forest is