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PIYATHIP PIYAPAN: RESOURCE PARTITIONING OF SYMPATRIC UNGULATES IN A DRY TROPICAL FOREST OF WESTERN THAILAND. THESIS ADVISORS: SOMPOAD SRIKOSAMATARA, Ph.D., WARREN Y. BROCKELMAN, Ph.D., PAUL J. GROTE, Ph.D., KONGKANDA CHAYAMARIT, Ph.D., 83 p. ISBN 974-664-980-9.

This study was conducted to examine food habits and food resource partitioning of four sympatric ungulates including barking deer, sambar deer, gaur and banteng in a highly seasonal and mosaic dry tropical forest within Huai Kha Khaeng Wildlife Sanctuary of western Thailand. In this study food plants eaten by each ungulate were identified and quantified by fecal analysis to assess food diversity and food overlap among these sympatric species in both dry and wet seasons and in two adjacent areas.

These ungulates fed on 74 plant species (52 browsed and 22 grazed species) belonging to 24 plant families. However, only 11 plant species (10 browsed and one grazed species) were heavily fed. These eleven plant species were available in both dry and wet seasons and contributed more than 50% of these ungulates' diets in the dry season and about 40% of their diets in the wet season.

These sympatric ungulates were mainly browsers in the dry season. Although they fed more on grass in the wet season, only gaur and banteng could be classified as grazers in the wet season. In general the food overlaps among these sympatric ungulates were very high, but it was higher both in the dry season and in the drier area where food is limited.

This study concludes that although the differences in body size of these sympatric ungulates should allow them to select different food in order to minimize food overlap, the food overlaps are still very high. Food overlaps are higher in the dry season and in the drier area and they rely only on a few plant species. This indicates that there is minor food segregation and they are forced more to compete when and where food is limited. The results indicate that food partitioning may not be a major mechanism that allows these sympatric ungulates to coexist in this highly and mosaic area.