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CONCLUSION

This study found that forest habitats support a diverse and rich community of small mammal species (volant and non-volant) in contrast to the species assemblages found in the oil palm plantation. Oil palm plantations had reduced species richness compared with secondary forests and the composition of species assemblages changed significantly after forest was converted to oil palm plantation. The characteristics of the habitat structure have influenced the richness and composition of small mammal species. Forest habitat had more complex vegetation structure due to evergreen canopy and resources.

Non-volant small mammals tend to inhabit the adjacent forest than in the intermediate and adjacent forests. Adjacent forest provide a wide range of micro-habitats for non-volant small mammals. However for volant small mammal, this study showed no significant different in species richness between adjacent, intermediate and interior forests.

This study showed no significant differences in species richness of small mammal species between young, mature and old oil palm plantations. Results of this study proved that oil palm plantations were dominated by common species that have less conservation value. For non-volant small mammal, *Rattus tiomanicus* dominated the oil palm plantation. This species is a fast reproducing animal thus become a pest to oil palm. This species cause a serious damage to the plantation because they feed on fruits brunch and falling fruits. *Cynopterus horsefieldi* and *Cynopterus brachyotis* dominated oil palm plantation. It is belived that these species roost in the oil palm fronds and feed on oil palm fruits.

The rapid expansion of oil palm plantation poses a huge threat to the biodiversity. This study showed that oil palm plantation only capable of supporting low number of small mammal species than forest habitat. Based on this study, adjacent forest near the oil palm plantation is very important for the small mammal species. Many small mammal species inhabit the adjacent forest, suggesting the area can provide valuable habitat for several species. Biodiversity in oil palm landscape can be promoted by retaining any remaining patches of forest within and around the oil palm plantation.