

Foraging activities of four open-air foraging termites in Lambir Hills National Park

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Termites (Isoptera: Insecta) are important insects as decomposers on forest ecosystem. To quantify the role of termites for forest decomposition system, it is very important to measure the ability of decomposition and transportation of materials by each termite species.

In this study, we focused on the ability of transportation of materials, especially at short period by the processional termites foraging in the open-air, like ants, in column.

There are three genera of the processional termites in Southeast Asia; *Hospitalitermes*, *Laccessititermes* and *Longipeditermes*. They are characterized by the dark body color and long legs. They contribute to transport the materials among forest, because they forage to the wide area of forest and bring the wood materials (including wood, leaf litter, lichens etc) to their nest. There are four species of processional termites in Lambir Hills National Park, Sarawak, Malaysia; three species of *Hospitalitermes*, *H. hospitalis*, *H. bicolor*, *H. umbrinus* and *Longipeditermes longipes*. Miura *et al.* (1998a, 1998b) reported the foraging activities of *Hospitalitermes* and *Longipeditermes* from Lambir Hills. In these studies, column organization and chemical composition of diet were analyzed. In the present study, we need to investigate the interaction among these four processional termites species.

We measured the foraging trail length, height, and also recorded the materials that processional termites walked, such as wood trunk, ground and leaves of each species.

From these results, we suggest that processional termites show the different range of foraging area among species. The foraging area of genus *Hospitalitermes* ranged from forest floor to canopy, walking on soil, tree trunk, branch and leaf litter. On the other hand, *Longipeditermes longipes* foraged only on the forest floor.

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