

Ecology of Long-tailed porcupines in tropical rainforests of Borneo, Malaysia: burrow use and behavior in the nighttime

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In Borneo, three species of porcupine live in tropical rain forests. However, we have almost no reports on their ecology and behavior. In this study, we studied Long-tailed porcupines (*Trichys fasciculata*) in tropical rain forests of Kabili-sepilok Forest Reserve, Sabah, Malaysia, from July 2012 to February 2013. In the burrow census, 11 burrow sites were found in the study area of about 1 km². In each burrow sites, 3 - 5 entrance holes (15- 25 cm in diameter) were found in the area of about 20m x20m. Some of these holes were connected each other with underground tunnels. We captured 3 individuals including 2 adults (a male and a female) and 1 juvenile (male) at the same burrow site. These animals were estimated to be a family group because they always used a same burrow site. Radio-tracking and direct observation of these animals revealed that they stayed in their burrow together in the daytime and came out of the burrow only in the night time during the hours of darkness (19:00-5:00). During the nighttime, the adult male and the adult female traveled 800 – 2000 m/night but the juvenile was only observed within about 50 m from the burrow. They traveled separately in most cases except a few encounters at resting sites and the burrow entrances. Home ranges of the adult male and the adult female were largely overlapped. All 11 burrow sites found in the study area were included in their home ranges. During the study period of 8 months, they changed their burrow site at least 3 times and used at least 4 different burrow sites. Direct observation at night revealed that they foraged fallen fruits including Fabaceae on the forest floor, and frequently showed scent marking behavior during their night trips.