

Abstract

Dong Phayayen – Khao Yai Forest Complex is the second natural world heritage site of Thailand. There is high biodiversity of flora and fauna, including many insects that are part of the natural resources in the area. However, at present, there are less studies information about insects. A large number of insects play an important role in various ecosystems such as pollinators, decomposers, and food resources for other organisms. Dung beetles play an important role in decomposing. And seed dispersal in the ecosystem functioning of forests and pastures. Moreover, species diversity and community of dung beetle inhabiting tropical forests can be used to assess changes in forest ecosystems and indicate the use of forest areas by the wildlife. Therefore, the study on species diversity and occurrence of dung beetles is one of the methodologies to monitor forest recovery. the aim of this study was to study on species diversity and occurrence of dung beetles in the Dong Phayayen – Khao Yai Forest Complex, All 5 areas namely, khao Yai National Park, Thap Lab National Park, Pang Srida National Park, Ta Phraya National Park and Dong Yai Wildlife Sanctuary. Dung beetle collection was done by pitfall traps using pig feces as a food bait. Fifteen traps were set along the nature study trail in 9 types of forest, namely. dry evergreen forest, tropical rain forest, hill evergreen forest, dry deciduous dipterocarp forest, planted forest, bamboo forest, secondary forest, degraded conservation forest and grassland forest. Each trap is 50 meters apart from each other.

The results showed that there were 26,757 dung beetles in the Coleoptera order, 98 species, 11 genera, 2 families, 97 species of Scarabaeidae, and 1 species in the Aphodiidae family. were found dung beetles are the most with highest number of specimens in Genus, *Onthophagus* (74.48 %), followed by *Copris* (8 %), *Sisyphus* (4 %), *Oniticellus* and *Caccobius* (3 %), *Eodrepanus* (2 %) and *Aphodius*, *Paragymnopleurus*, *Synopsis*, *Tibiodrepanus* and *Catharsius* (1%). The Shannon – Weiner Diversity Index ($H' = 3.42$), and Evenness ($J' = 0.31$). When considering by area and rank in descending diversity index values, it was found that the areas with the highest diversity index were, Thap Lab National Park, ($H' = 3.228$, $J' = 0.388$), Dong Yai Wildlife Sanctuary, ($H' = 3.107$, $J' = 0.366$), khao Yai National Park, ($H' = 2.762$, $J' = 0.277$), Ta Phraya National Park, ($H' = 2.627$, $J' = 0.494$) and Pang Srida National Park, ($H' = 1.894$, $J' = 0.179$). The dung beetles

appear in all areas at Dong Phayayen – Khao Yai, (Frequency of Occurrence = 100%) There are 10 species in total: *Catharsius molossus*, *Copris* sp.1, *Onthophagus crassicollis*, *Onthophagus kleinei*, *Onthophagus* sp.13, *Onthophagus* sp.15, *Onthophagus* sp.17, *Onthophagus* sp.3, *Onthophagus* sp.4 and *Onthophagus taurinus*. The result of this study can be applied to the management plan for conservation in the protected forest areas. and can be used to planning the biodiversity conservation of dung beetles, which they plays a role important in forest areas. In addition, further data collection on species diversity and occurrence of dung beetles in Thailand beside from this study is still required for biodiversity monitoring and conservation plan. and report data and provide a database for the forest management in the future

Keywords Dung Beetles, National Park, Dong Phayayen – Khao Yai Forest Complex, Diversity, Occurrence.

ระยะเวลาโครงการ ปีงบประมาณ 2562 – 2564

เริ่ม เดือนตุลาคม พ.ศ. 2561 ถึง 30 กันยายน พ.ศ. 2564