Rawadee Kaewkaw 2007: Floral Species Diversity from Pollen Load of Ventralis Stingless Bee (*Trigona ventralis* Smith) in Lower Montane Evergreen Forest at Doi Mon Long, Queen Sirikit Botanic Garden, Chiang Mai Province. Master of Science (Botany), Major Field: Botany, Department of Botany. Thesis Avisor: Associate Professor Niran Juntawong, Dr.nat.tech. 227 pages.

Stingless bee is important for forests and crop pollinations. However, due to an increase of population, modernization and deforestation, number of the stingless bee colony is dramatically decreased. Hill evergreen forest at Queen Sirikit Botanic Garden (QSBG), a protected national park with tremendous availability of pollen and nectar sources in Chiangmai province was used as a representative area for the study. Aim of the study was to survey pollen plant species and its distribution for Ventralis stingless bee during April 2003 – March 2004. For the study, 5 sampling plots, 20x50 m^2 in size were established in the area. Plant specimens including pollen from blooming species in the sampling plots and in the surrounding areas and from Ventralis stingless bee's pollen loads were collected for the study. Pollen samples were acetolysed, and then observed under either light microscope or scanning electron microscope. The result showed that 61 from 165 flowering species were visited by the stingless bee. Twenty eight of them were identified, 33 species were unidentified. Among these 28 species, 7 species came from the sampling plots, 8 species were collected outside the sampling plots but in the study area and 13 species were collected outside the study area. Most Ventralis stingless bee florae were in the family Fagaceae, Rubiaceae and Euphorbiaceae, respectively. Maximum numbers of collected pollen were found in August 2003, May 2003, March 2004, September 2003 and October 2003, respectively. Through year, large amount of bee florae were Ma fo (*Trewia nudiflora* L.) – like species and Ko khao (*Lihocarpus thomsonii* (Miq.) Rehder.). Maximum collecting frequency time was at 13.00 h and 11.00-12.00 h, respectively. Most pollen floral species were diversely found in February 2004, September 2003 and May 2003, respectively. Moreover, it was found that the Ventralis stingless bee florae did not correlate to the Importance Value Index (IVI) of plant species in the community. This is because the bee did not collect pollen plant species with the high IVI from the sampling plots, indicating the preference behavior of the bee. This indicated that there was not enough pollen plant species in the study area. The average foraging distance measured from the bee nest to pollen-source plants, was ca. 930 m. These informations will be useful for the conservation of forest and stingless bee in the future.

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