Aroon Sinbumroong 2009: Structure and Floristic Composition of Wet Seasonal Evergreen Forest at Khao Ban Thad Wildlife Sanctuary, Trang Province. Master of Science (Forestry), Major Field: Forest Biology, Department of Forest Biology. Thesis Advisor:
Mr. Sarayudh Bunyavejchewin, Ph.D. 140 pages.

Structure and floristic composition of wet seasonal evergreen forest at Khao Ban Thad Wildlife Sanctuary, and its relation to topographic features and soil properties were determined, by using the Khaochong 24-hectare forest dynamics plot data set, based on a census of all trees ≥1 cm dbh. A soil sample, 0-15 cm depth (top soil), was collected from the center of each 1 hectare sup-plot. Altitude and topographic features were also recorded.

The plot consists of 594 species from 260 genera and 83 families, 100,944 individuals, Total basal area was 804.6 $m.^2$ Mean densities were 4,206 trees/ha (≥ 1 cm dbh), 479.1 trees/ha (≥ 10 cm dbh), 18 trees/ha (≥ 60 cm dbh), and 3.1 trees/ha (≥ 100 cm dbh). The Annonaceae had the highest stem number (13,857 individuals), *Streblus ilicifolius* had the highest stem number (9,320 individuals). Mean basal area was 33.5 $m.^2$/ha (≥ 1 cm dbh), 29.1 $m.^2$/ha (≥ 10 cm dbh), 10.1 $m.^2$/ha (≥ 60 cm dbh), and 3.5 $m.^2$/ha (≥ 100 cm dbh). The Dipterocarpaceae dominated the forest with 15.81 % of the total basal area. *Shorea* had the highest basal area (57.63 $m.^2$). Euphorbiaceae (56 species) was the most species-rich family. *Ficus* was the richest genus with 30 species. Diameter distribution pattern of the tree species exhibited negative exponential or similar.*Anthocephalus chinensis* and *Duabanga grandiflora* exhibited normal distribution. The cluster analysis of Relative Sorensen Distance and Ward's Linkage Method can be classified wet seasonal evergreen forest at Khaochong 24-hectare plot into 4 types, *Cynometra malaccensis-Streblus ilicifolius* subcommunity type (A), *Shorea gratissima-Parashorea stellata-Cynometra malaccensis* subcommunity type (B), *Shorea gratissima-Alstonia angustiloba* subcommunity type (C) and *Anthocephalus chinensis-Duabanga grandiflora* subcommunity type (D). Type C found in lowland area, sandy soil. Type B usually found on steeped slope, where the soil were silty. Type A and type D were the most similar interm of floristic, due to the two types were adjacent. Many of shade tolerant species in type A were dispersed into type D, and they will dominate over the type D canopy in the future.

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