

Orporn Phueakhlai 2011: Diversity of Orchids in Thung Salaeng Luang National Park. Master of Science (Botany), Major Field: Botany, Department of Botany. Thesis Advisor: Assistant Professor Chatchai Ngernsaengsarua, Ph.D. 367 pages.

Study on diversity of orchids in Thung Salaeng Luang National Park was conducted from January to December 2007. Field surveys and specimen collections were made along 6 routes representing 5 vegetation types at 500-950 m.s.l. of savanna, deciduous dipterocarp forest, dry evergreen forest, pine-deciduous dipterocarp forest and lower montane rain forest. Seventy nine species with 43 genera and 3 subfamilies were identified. Subfamily Epidendroideae, Orchidoideae and Apostasioideae are found 69, 9 and 1 species, respectively. *Dendrobium* is the most common genus with 16 species. Epiphytic orchid has the highest number of species (53), followed by terrestrial orchid (21), both epiphytic orchid and lithophytic orchid (3), lithophytic orchid (1) and saprophytic orchid (1). Three species are threatened as rare plants namely *Calanthe cardioglossa* Schltr., *Pecteilis susannae* (L.) Raf. and *Pennilabium struthio* Carr. The highest concentration of species (58) is confined to dry evergreen forest. The lowest concentration of species (1) is confined to deciduous dipterocarp forest. Four species are found in both deciduous dipterocarp forest and dry evergreen forest. Four species are found in both dry evergreen forest and lower montane rain forest. Three species are found in both dry evergreen forest and pine-deciduous dipterocarp forest. One species is found in both savanna and dry evergreen forest. Four species have the highest population number *i.e.* *Dendrobium lindleyi* Steud., *Eria lasiopetala* (Willd.) Ormerod, *Apostasia wallichii* R. Br. and *Pholidota imbricata* Lindl. Nine species have the lowest population number *i.e.* *Dendrobium hercoglossum* Rchb. f., *Acampe rigida* (Buch.-Ham. ex Sm.) P. F. Hunt, *Peristylus lacertiferus* (Lindl.) J. J. Sm., *Thrixspermum acuminatissimum* (Blume) Rchb. f., *Cleisostoma subulatum* Blume, *Pennilabium struthio* Carr, *Pomatocalpa maculosum* (Lindl.) J. J. Sm., *Agrostophyllum planicaule* (Wall. ex Lindl.) Rchb. f. and *Oberonia gammiei* King & Pantl.

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Thesis Advisor's signature