

3. Preliminary inventorial study of two plots of dry Dipterocarp forests near Bo Luang (Chiang Mai) Thailand

The manager of the Thai-Danish Pine Cultivation Station near Bo Luang, Mr. Knud Bryndum, was interested in the regeneration of the forests, surrounding his Station (elev. c. 1000 m). When the author and two botanists from the Forest Herbarium (Bangkok) stayed in his Station, he asked them to make an inventorial study of two plots. The first one was a rather undisturbed (unregularly burnt) open forest, and the second one a plot, which was cleared about one year before this study was made. Here a list is given with phanerogamous species with a rough indication of their frequency.

Families	Species	Frequency undisturbed plot	Frequency disturbed plot
	TREES		
Dipterocarpaceae	<i>Dipterocarpus tuberculatus</i>	3	3 (rootshoots)
	<i>Dipterocarpus obtusifolius</i>	3	3 (rootshoots)
	<i>Pentacme siamensis</i>	2	1
	<i>Shorea obtusa</i>	3	2
Fagaceae	<i>Quercus kerrii</i>	1	—
Verbenaceae	<i>Vitex limonifolia</i>	1	—
Coniferae	<i>Pinus merkusii</i>	3	1
	<i>Pinus kesiya</i>	3	—
Rubiaceae	<i>Gardenia sutepensis</i>	2	—
	<i>Gardenia erythroclada</i>	1	1
	? <i>Pavetta</i> sp.	1	1
	<i>Wendlandia</i> sp.	1	1
	<i>Borreria</i> sp.	—	3
Euphorbiaceae	<i>Aporosa villosa</i>	3	3
	<i>Phyllanthus emblica</i>	1	2-3
Anacardiaceae	? <i>Melanorrhoea usitata</i>	1	1
Loganiaceae	<i>Strychnos nux-vomica</i>	1	1
Bignoniaceae	<i>Stereospermum neuranthum</i>	1	—
Ericaceae	<i>Vaccinium sprengelii</i>	1	—
Tiliaceae	<i>Grewia</i> sp.	1	1
Dilleniaceae	<i>Dillenia obovata</i>	3	3
Connaraceae	<i>Ellipanthus</i> sp.	1	1
?Flacourtiaceae	? <i>Casearea</i> sp.	1	—

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Ochnaceae	<i>Ochna integerrima</i>	2	2
Vitaceae	<i>Leea</i> sp.	1	1
Euphorbiaceae	<i>Sauropus</i> ? <i>orbicularis</i>	3	3
	? <i>Sauropus</i> sp.	—	1
	<i>Macaranga</i> sp.	1	1
Liliaceae	<i>Asparagus filicifolius</i>	2	2
	<i>Chlorophytum orchidastrum</i>	1	—
	<i>Smilax</i> sp.	1	1
Iridaceae	<i>Iris</i> sp.	2	1
Zingiberaceae	<i>Globba</i> sp.	2	1
	indet. (sterile) 2 spp.	1	1
Acanthaceae	<i>Strobilanthus</i> sp.	3	3
Leguminosae	<i>Desmodium triquetrum</i>	3	3
	<i>Desmodium gyroides</i>	3	3
	<i>Indigofera sootepensis</i>	1	3
Palmae	<i>Phoenix</i> sp.	3	1
Tiliaceae	<i>Grewia lacei</i>	1	3
Melastomaceae	<i>Memecylon</i> ? <i>caerulea</i>	1	—
Sterculiaceae	<i>Helicteres</i> sp.	1	1
Labiatae	<i>Leucas</i> sp.	1	2
	<i>Scutellaria</i> sp.	—	3
Compositae	? <i>Blumea</i> , ? <i>Pluchea</i> sp.	1	3
	<i>Eupatorium odoratum</i>	—	3
Cyperaceae	<i>Scleria</i> sp.	3	2
	<i>Cyperus cyperoides</i>	2	3
	<i>Cyperus</i> sp.	1	3
Lauraceae	<i>Cassytha</i> ? <i>filiformis</i>	1	—
Rutaceae	<i>Clausena</i> sp.	1	2-3
Gramineae	3 spp. (? <i>Imperata</i> , <i>Themeda</i>), sterile	2	3
Umbelliferae	<i>Seseli siamicum</i>	—	2
	<i>Pimpinella cambodgiana</i>	—	1
Convolvulaceae	<i>Argyreia</i> sp.	—	1
Cucurbitaceae	<i>Melothria heterophylla</i>	—	1
Verbenaceae	<i>Clerodendrum serratum</i>	1	1
	<i>Premna herbacea</i>	2	1
Erythroxylaceae	<i>Erythroxylum cuneatum</i>	1	—

The identifications have been made by Dr. Tem Smitinand, Drs. R. Geesink, and Thawatchai Santisuk M.A.

The symbols indicate the following frequencies: 1 = scattered, not common; 2 = scattered, common; 3 = many, very common.

This list shows distinctly that the cleared plot mainly consists of the same species as the rather undisturbed plot. Besides some differences in frequency the following aliens were found in the cleared plot: *Eupatorium odoratum*, the two Umbelliferae, the *Argyreia*, *Melothria*, *Scutellaria* and the *Sauropus*. In the rather undisturbed plot the following plants were found, which we did not find in the cleared plot: *Quercus kerrii*, *Gardenia sutepensis*, *Vitex limonifolia* (but this species occurs undoubtedly also in the cleared plots), *Stereospermum neuranthum*, *Vaccinium sprengelii*, ?*Casearea sp.*, *Chlorophytum orchidastrum*, *Iris sp.*, *Memecylon ?caerulea*, *Cassytha filiformis* (which we expect also in the cleared plots), *Erythroxylum cuneatum*. Generally speaking the dry dipterocarp forest regenerates after clearing or burning directly without manifestly different succession stages. At least on the hill slopes this kind of forest is not considered a climax vegetation. It may be a climax vegetation on the hill summits, due to the regular destructive influence of the winter climate (e.g. typhoon up to c. 125 km/h). The studied plots are regarded as antropogenous so-called fire-climax vegetation. The expected climax vegetation here is hill mixed deciduous forest.

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