Diversity of Vascular Plants in Spring Water Swamp Areas of Thong Pha Phum District, Kanchanaburi Province, Thailand

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Abstract: A Taxonomic survey of vascular plants was carried out in three spring water swamp areas in Thong Pha Phum District namely Pong Phu Ron, Phu Poo Rachinee, and Phu Chumchon Ban Tha Maduea from December 2001 to November 2003. A total of 493 specimens were collected. They were identified into 273 species, 205 genera and 87 families. These can be categorized into pteridophytes and flowering plants. Among these, 24 species in 17 genera and 12 families are pteridophytes, of which Polypodiaceae is the richest family of 8 species. The remaining species were angiosperms which comprised 170 species of the dicots, and 79 species of the monocots. Among the flowering plants, Orchidaceae was the richest family with 56 species. The second was Labiatae with 11 species in 6 genera while the third was Leguminosae-Caesalpinioideae with 10 species in 5 genera. In addition, six endemic species to Thailand were recorded, i.e., *Ardisia ficifolia* K.Larsen & C.M.Hu, *Ardisia confusa* K.Larsen & C.M.Hu, *Morinda scabrida* Craib, *Boesenbergia siamensis* (Gagnep.) P.Sirirugsa, *Aristolochia kerrii* Craib and *Magnolia siamensis*, Dandy var. *siamensis*; the latter two species are very rare. The other 4 species, viz. *Clematis smilacifolia* Wall., *Malleola penangiana* (Hook.f.) J.J.Sm. & Schltr., *Phalaenopsis parishii* Rchb.f., and *Renanthera coccinea* Lour. were also rarely found in this natural habitat. Moreover, there are a number of species which are said to be threatened in Thailand. They are *Acer oblongum* Wall. ex DC., *Mitrephora keithii* Ridl., *Aristolochia kerrii* Craib, *Thottea sumatrana* (Merr.) Ding Hou, *Epithema carnosum* Benth., *Chiloschista lunifera* (Rchb.f.) J.J.Sm., *Cleisostoma aspersum* (Rchb.f.) Garay, *Phalaenopsis parishii* Rchb.f., *Renanthera coccinea* Lour., *Calamus arborescens* Griff. and *Tacca chantrieri* Andre.

Key words: diversity, endemic, rare species, threatened plant, vascular plant

Introduction

'Phu' and 'Phru' forest

The words 'Phu' and 'Phru' in Thai carry distinctly different meanings. According to the Royal Institute Thai dictionary (2003), the word 'Phu' has 2 definitions. As a verb, 'Phu' means 'to appear by emerging out of something'. It is commonly used with the nouns 'water' and 'gas' to express their action of coming out of the ground. When used as a noun, however, 'Phu' refers to the water emerging out of the earth's surface or the water spring. As for the word 'Phru', it is a noun and signifies "a low-lying wetland with the accumulation of decayed vegetation matter."

Accordingly, it can be said that the word 'Phu' in 'Pong Phu Ron', "Phu Poo Rachinee" and "Phu Chumchon" refers to an area inundated by water from natural springs that keeps the soils wet throughout the year or seasonally. Thus, the forests in these spring water areas can be called 'Phu forest', in the same way as 'beach forest'.

The Ramsar Convention, an international treaty for the conservation and sustainable utilization of wetlands, defined 'wetlands' as areas, whether natural or human-made, where water is the primary factor controlling the environment and the associated plant and animal life. They occur where the water table is at or near the surface of the land, or where the land is covered by shallow water. The water may flood the land throughout or only during some parts of the year. From this definition, it can be seen that wetlands can occur in a wide variety of places such as, lakes, swamps, marshes, fens, coastal lagoons, mangroves, and even coral reefs can all be classified as 'wetlands'.

The afore-mentioned three spring water areas share a major characteristic of having subterranean water emerging. Additionally, these areas can become flooded by rainfall, the streams flowing into the area from outside, and the water overflowing from the surrounding area. This main physical

feature makes these three areas fit the definition of 'wetlands.'

Apart from being unique in their physical features, the 3 spring water forests are also home to a rich diversity of plant species, including rare ones. It is, therefore, necessary that these three areas and their resources be preserved and protected by the authorities and villagers alike in order to retain the benefits that accrue from these wetlands for as long as possible.

Study Site

The first study site, Pong Phu Ron (N 14° 38 ′51.9 ″E 98° 31 ′39.5″), is located in the village of Ban Huai Pak Khok, Huai Khayeng Subdistrict, Thong Pha Phum District (Fig. 1). It is a small swampy area, with at least two hot springs flowing with subterranean water. As it emerges from the springs, the water has an approximate temperature of 55 °C and emitsa strong smell of sulphur into the air. No rivers or streams flow into or out of the area either during the wet or dry season. A large part of the area is inundated in the rainy season, with a water depth of 50 cm on average. Almost all of the water, however, runs dry in the dry season. The streams of the remaining waters from the 2 springs merge together and form a small stream of hot water that flows into the adjacent areas. Although Pong Phu Ron is flooded only during the rainy season, the heavy clay soils here remain muddy for most of the year. Plentiful in this area are aquatic and herbaceous plants, while in the outer regions of the swamp, trees and shrubs are common, with bamboo clearly comprising 60 percent of those plants present (Fig. 2A-B).

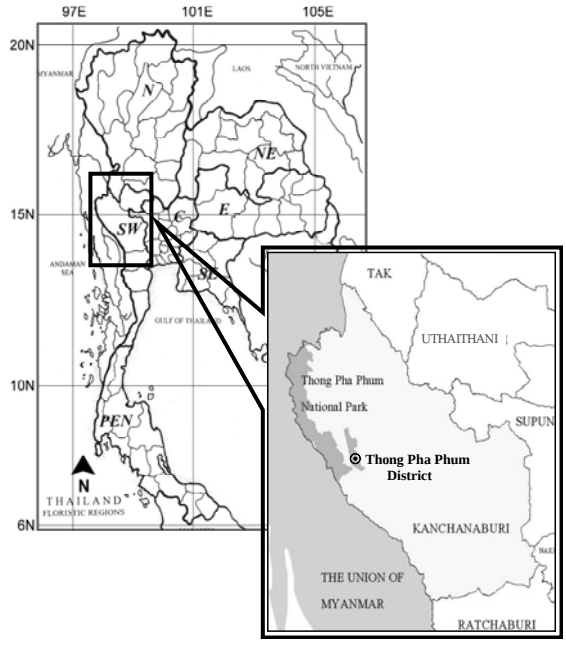

Figure 1. Map of studied sites in Thong Pha Phum District, Western Thailand.

Phu Poo Rachinee (N 14° 33 ′14 ″E 98° 37 ′27″), the second study site, is situated in the village of Ban Rai Pa, Huai Khayeng Subdistrict, Thong Pha Phum District. This spring water area is covered by water throughout the year, with a high amount of water during the rainy season and lower in the dry season. Where within the area the subterranean water emerges, however, is yet to be located. Moreover, a stream approximately 1 metre in width runs through this area. In the rainy season, a large portion of Phu Poo Rachinee is inundated. Over the dry season when the area is no longer flooded, the soils here still retain a relatively high amount of moisture. Densely populated by trees, this spring water area also contains a variety of epiphytes, climbers, shrubs and herbaceous species. Phu Poo Rachinee is divided into 3 sections by a 10-metre wide pipeline and 4-metre wide road. Despite the disturbance, Phu Poo Rachinee has not lost its characteristics of a spring water area due to the stream of water that keeps flowing through and fertilizing this piece of land throughout the year. As bamboo forest is dominant along the periphery of this area, it is rather easy to determine the extent of the Phu Poo Rachinee area in the dry season (Fig. 2C-D).

Like Phu Poo Rachinee, Phu Chumchon (N 14° 38 ′14.2 ″E 98° 35 ′20″), the third study site situated in the village of Ban Tha Maduea, Huai Khayeng Subdistrict, Thong Pha Phum District, is inundated all year long, with the volume of water increasing over the rainy season and decreasing during the dry one. Field observations suggest that there are at least 2 water springs in this area. Phu Chumchon, thickly populated by trees, is evidently lower in elevation than the surrounding area. Down one side of this spring water area runs a 50-centimetre wide stream flowing with water all year round. On the other side, however, the stream runs dry in the dry season. Furthermore, a 4-metre wide road cut through the area diverted the previously existing flow of water, resulting in a decline of fertility in the part of the area through which the stream of water cannot flow. Presence of Toei yai (*Pandanus unicornutus*) (Fig. 3A-B) suggests that this

infertile portion was once part of the bigger area of Phu Chumchon. The spring water area on the other side of the road, on the other hand, is divided into a large and small part, with the area in the middle made into an agricultural ground by villagers. Nevertheless, in the wet season,

Figure 2. Views of studies sites: A-B: Pong Phu Ron; C-D: Phu Poo Rachinee; E-F: Phu Chumchon; G: Prop root; H: pneumatophores

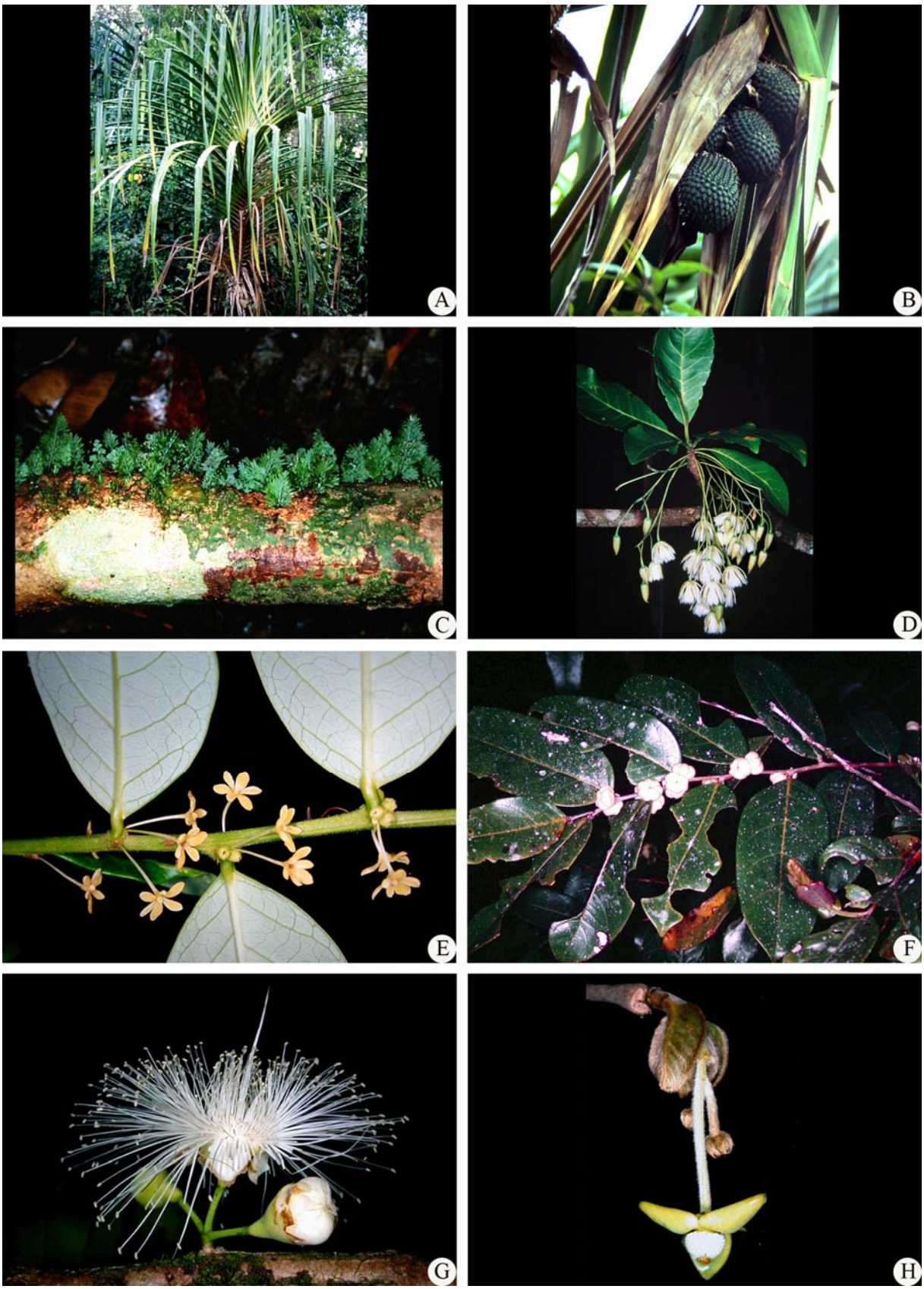

Figure 3. A-B: *Pandanus unicornutus* St.John; C: *Crepidomanes christii* (Copel.) Copel.; D: *Elaeocarpus grandiflorus* Sm.; E: *Glochidion lanceolarium* (Roxb.) Voigt, male flower; F: *Glochidion lanceolarium* (Roxb.) Voigt, fruit; G: *Syzygium diospyrifolium* (Wall. Ex Duthie) S.N. Mitra.; H: *Miliusa velutina* (Dunal) Hook.f. & Thomson.

this area is heavily flooded and cannot be cultivated. As its name may suggest, the spring water area of Phu Chumchon is allocated to villagers displaced by the construction of Wachiralongkorn reservoir and there have been attempts to preserve this area by establishing it as a community forest (Fig. 2E-F).

In terms of size, Phu Poo Rachinee area is the largest, while Phu Chumchon and Pong Phu Ron cover almost the same amount of land. However, in other aspects, the areas of Phu Poo Rachinee and Phu Chumchon share many similarities in their physical and biological features: the vegetation, dominant species, and the surface water. These characteristics differ greatly from those of Pong Phu Ron.

Methodology

Area expeditions and vascular plant collections were conducted using a plot-less method. Plant specimens were gathered along the existing forest trails, extending about 10 m on both sides. A monthly collection schedule was implemented for the field trips during December 2001 through November 2003. Fertile specimens were collected and notes on ecological data and some diagnostic characters of each species were taken for aiding plant identification in the laboratory.

Voucher specimens were prepared as described in Boonkerd et al. (1987) and deposited at the Kasin Suvatabhandhu Herbarium, Department of Botany, Faculty of Science, Chulalongkorn University (BCU), Bangkok. External morphological characters were studied. Then, identification to species was made for all specimens using the Flora of Thailand, Floras from neighboring countries and other taxonomic literature. Specimens were compared to voucher herbarium specimens deposited at BCU, BKF, and BK.

Results

Our field expedition surveying vascular plants in spring water areas of Pong Phu Ron, Phu Poo Rajinee and Phu Chumchon, Thong Pha Phum District, Kanchanaburi Province from December 2001 through November 2003 yielded 493 specimens. They were determined and classified into 273 species, 205 genera and 87 families (Appendix). The collection included pteridophytes and flowering plants. There were 24 species, 17 genera and 12 families that belonged to the former group, of which the family Polypodiaceae is the richest in terms of species number, 8 species in 5 genera. The latter, group, the flowering plants comprised 170 species in 132 genera and 60 families of the dicots, and 79 species in 55 genera and 15 families of the monocots. Among the flowering plants, the family Orchidaceae was the richest with 56 species in 33 genera. The second was Labiatae with 11 species in 6 genera while the third is Leguminosae-Caesalpinioideae with 10 species in 5 genera. It should be noted that there were many rare and endemic species of Thailand in this spring water areas. In addition, 11 species that occurred in this area were threatened plants of Thailand.

Vascular Plants Habitat

The vascular plants in the study areas included terrestrial, epiphytic, saprophytic, parasitic and aquatic plants (Table 1). Among the species collected, terrestrial plants were the richest in number (203 species), whilst saprophytes were represented by two species; i) *Cotylanthera caerulea* Lace (Gentianaceae) (Figure 4D), a small saprophytic herb growing on leaf litter, humus-rich rocks or rotten logs; ii) *Epirixanthes elongata* Blume (Polygalaceae) (Figure 4E), a small slender erect herb growing in leaf litter under bamboo shade. Parasitic plant were represented only by *Aeginetia indica* Roxb. (Orobanchaceae), a parasitic herb growing in mixed deciduous or bamboo forest.

Common Species among the three study sites

It was observed that both spring water areas, Phu Poo Rajinee and Phu Chumchon, have rather similar physical and biological environment characteristics, that is, they are both 'wetlands' and flooded throughout the

Table 1. Number of vascular plants in each habitat.

Group of vascular plants	Mode of Nutrition				
	Autotrophic (270)			Heterotrophic (3)	
	Habitat				
	Terrestrial	Epiphytic	Aquatic	Saprophytic	Parasitic
Pteridophytes (24)	10	13	1	-	-
Flowering Plants (249)	194	50	2	2	1
Total (273)	**204**	**63**	**3**	**2**	**1**

year with trees growing very densely in the area and there are some epiphytes, climbers, shrubs and herbaceous plants scattering all over the area. These make the spring water areas always shaded and cooled with consistently high humidity. That one species of filmy fern, *Crepidomanes christii* (Copel.) Copel. (Figure 3C), was found growing very densely on tree trunks in these areas indicates the high air humidity and fertility of the areas since this epiphytic fern is a hygrophilous species and restricted to such habitat (Piggott, 1988).

The diversity of plants found in these two spring water areas were quite similar. The common species of trees were Khrai yoi [*Elaeocarpus grandiflorus* Sm.] (Fig. 3D), Daeng nam [*Glochidion lanceolarium* (Roxb.) Voigt] (Fig. 3E-F), Tang hon bai yai [*Calophyllum soulattri* Burm.f.], Khoi nam [*Streblus ilicifolius* (Vidal) Corner], Bong khwan [*Syzygium diospyrifolium* (Wall. ex Duthie) S.N.Mitra] (Fig. 3G), Wa nam [*Syzygium oblatum* (Roxb.) Wall. ex A.M.Cowan & Cowan var. *oblatum*], and Toei yai [*Pandanus unicornutus* St.John]. We also found many species of palms and rattans, such as, Ra kam [*Salacca wallichiana* C.Mart], Tao rang daeng [*Caryota mitis* Lour.], Wai ton [*Calamus arborescens* Griff.], and *Plectocomia* cf. *muelleri* Blume. Khuang luk daeng [*Smilax megacarpa* A.DC.] was the most common climber in the area. The common herbaceous plants scattering on the forest ground were Phak nam [*Lasia spinosa* (L.) Thw.] which were present in flooded areas, Khon ma khao [*Dracaena angustifolia* Roxb.], Khla [*Schumannianthus dichotomus* (Roxb.) Gagnep.], Ne-ra-phu-si-thai [*Tacca chantrieri* Andre.].

In contrast, Pong Phu Ron possessed physical and biological characteristics factors that were very different from Phu Poo Rachinee and Phu Chumchon. This area has been divided into 2 parts: a small pond with muddy soil with two hot water springs and an area with mixed deciduous forest around Pong Phu Ron. In the former, most of the plants found in the pond and at the edge of the pond were aquatic and hydrophilous plants such as Phak bung [*Ipomoea aquatica* Forssk.], Phaya rak dam [*Ludwigia octovalvis* (Jacq.) P.H.Raven], Phak plap chang [*Floscopa scandens* Lour.], and Sanun [*Salix tetrasperma* Roxb.]. The second part, the area around Pong Phu Ron was a kind of mixed deciduous forest. There were trees, shrubs and bamboos scattered all over the area. The common trees were Khang hua mu [*Miliusa velutina* (Dunal) Hook.f. & Thomson] (Fig. 3H), Chum saeng daeng [*Homalium grandiflorum* Benth.], Ta khro [*Schleichera oleosa* (Lour.) Oken]. The common climbers in the forest around Pong Phu Ron were Yan khon [*Lepistemon binectariferum* (Wall.) O.K.] (Fig. 4A), Ching cho khao [*Merremia umbellata* (L.) Hallier.f.], Buri phra ram [*Neoalsomitra sarcophylla* (Wall.) Hutch.]. In the rainy season, particularly in September and October, Tien thai [*Impatiens siamensis* T.Shimizu] (Fig. 4B), a member of Balsaminaceae was blooming everywhere on the forest ground. It is interesting that we found many species of orchids, 26 species, in the Pong Phu Ron area; especially, Khem daeng [*Ascocentrum curvifolium* (Lindl.) Schltr.] (Fig. 4C) was the outstanding orchid of this area. In March we saw the beautiful reddish flowers blooming on every fork of the trees. In addition, Ueang phuang malai [*Aerides multiflora* Roxb.] and Ueang nguang chang [*Dendrobium aphyllum* (Roxb.) C.E.C.Fisch.] were also found in great numbers in the area.

Interestingly, however, only 12 species were found in all three spring water areas, for example, Kha luang lang lai (*Asplenium nidus* L.), Klet nakarat (*Pyrrosia piloselloides* (L.) M.G.Price), Nom pichit (*Hoya parasitica* (Roxb.) Wall. ex Traill), Chum het thet (*Senna alata* (L.) Roxb.), Ueang mai na (*Costus speciosus* (Koen.) Sm.), Dok din daeng (*Aeginetia indica* Roxb.), and Karekaron (*Cymbidium aloifolium* (L.) Sw.). The reason for this observation could be that most of these species are able to grow in all type of habitats or vegetation types and are widely distributed. An other reason could be that plants found in Pong Phu Ron were not the same as those in other Phu's except for only a few species as mentioned earlier.

Orchid diversity

These phu areas harbored quite high numbers of orchids; 56 species in 34 genera. Of these, 6 were terrestrial and 50 were epiphytic. The genus *Dendrobium* was represented by 13 species whilst only 1 to 2 species were found of the rest. Among 56 species identified, some inhabited all phu whereas and few were only in one locality. For example, *Cymbidium aloifolium* (L.) Sw., *Dendrobium aphyllum* (Roxb.) C.E.C. Fisch., *Eria lasiopetala* (Willd.) Ormerod and others were found in all three

phu's. In contrast, *Ascocentrum curvifolium* (Lindl.) Schltr. was only found at Pong Phu Ron, and occupied nearly every tree around the pond. In addition, many species were abundant in terms of number of individuals, e.g. *Pholidota imbricata* W. J. Hook, *Pomatocalpa andamanica* (Hk.f.) J. J. Sm., *Rhynchostylis retusa* (L.) Blume. Only a few orchids were

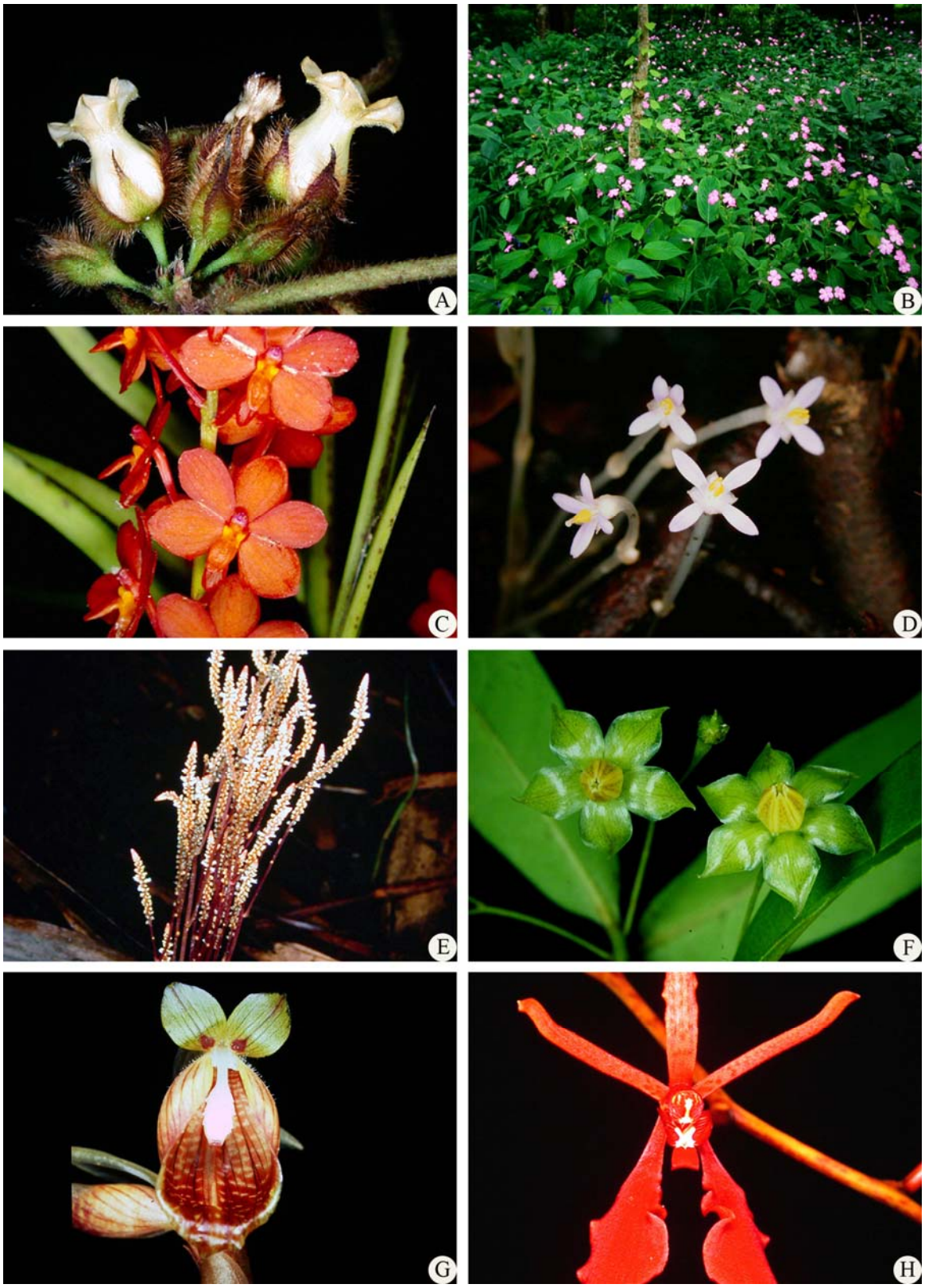

Figure 4. A: *Lepistemon binectariferum* (Wall.) O.K.; B: *Impatiens siamensis* T. Shimizu; C: *Ascocentrum curvifolium* (Lindl.); D: *Cotylanthera caerulea* Lace; E: *Epirixanthes elongate* Blume; F: *Ardisia ficifolia* K. Larsen & C.M.Hu; G: *Boesenbergia siamensis* (Gagnep.) P. Sirirugsa; H: *Renanthera coccinea* Lour.

considered of rare occurrence in these phu's, namely *Acanthephipium sylhetense* Lindl. (Fig. 5B), *Dendrobium ciliatilabellum* Seidenf., and *Palaenopsis parishii* Rchb. f. (Fig. 5A), of which only a few pseudobulbs or only one plant was found.

According to Thaithong (1999), knowledge of the geographic distribution in Thailand of a few orchid species has been expanded by our research. However, more fieldwork is needed to verify if these species occur elsewhere in southwest Thailand. At present, one such work is underway (Sittisatjathum and Sookchaloem, 2002).

Although this area is in its distribution range (Seidenfaden, 1988), only one plant of *Phalaenopsis parishii* was found at Phu Poo Rachinee. This emphasizes the rarity of this species, thus preserving this area is recommended.

It is noteworthy to mention that many orchid species found are not restricted to just one Thai floristic region. Rather, these species were distributed in two or more Thai floristic regions, or widely distributed throughout Thailand. More work is needed to determine the ecological factors that may contribute to such a high number of species/genera inhabiting these habitats.

Endemic Species

Of the 273 species of vascular plants found in the spring water areas, 4 species are endemic to Thailand: *Ardisia confusa* K.Larsen & C.M.Hu, and *Ardisia ficifolia* K.Larsen & C.M.Hu (Myrsinaceae) (Fig. 4F), which are shrubs found in moist and shaded area beside the stream in Phu Poo Rachinee, known only from the type locality of Sangkhlaburi and Sai Yok, Kanchanaburi province (Larsen and Hu, 1996), *Morinda scabrida* Craib (Rubiaceae), which is a small shrub commonly scattered in open places of bamboo forest at the edge of Phu Poo Rachinee, also known only from 2 pieces of type specimens collected from Kanchanaburi province and deposited at BK, and *Boesenbergia siamensis* (Gagnep.) P.Sirirugsa (Fig. 4G), a small herbaceous plant found in moist and shaded areas at Pong Phu Ron and Phu Chumchon, with a restricted distribution range in the Southwestern floristic region of Thailand.

Rare Species

Most colleted vascular plants in the spring water areas were found commonly or abundantly throughout the area, except for 6 species, namely, *Dendrobium trinervium* Ridl., *Acanthephippium sylhetense* Lindl., *Malleola penangiana* (Hook.f.) J.J.Sm. & Schltr., *Phalaenopsis parishii* Rchb.f., *Renanthera coccinea* Lour. (Fig. 4H), and *Clematis smilacifolia* Wall (Fig. 5C-D). They were found only once, each with the number of 1 or 2.

Two species, i.e. *Aristolochia kerrii* Craib and *Magnolia siamensis* Dandy var. *siamensis* were reported as rare endemic species of Thailand (The National Identity Board, 2000).

In addition, from the literature and the results from this study, 11 species of vascular plants found in the study area were listed as threatened plants in Thailand (Pooma, 2005). These include:

1. *Acer oblongum* Wall. ex DC. (Aceraceae) (Fig. 5E-F), a large tree found at the edge of Phu Poo Rajinee.
2. *Mitrephora keithii* Ridl. (Annonaceae), a small tree found in Phu Chumchon at Ban Thamadua.
3. *Aristolochia kerrii* Craib (Aristolochiaceae), a climber found in open places at Pong Phu Ron.
4. *Thottea sumatrana* (Merr.) Ding Hou (Aristolochiaceae) (Fig. 5G), a small shrub that occurredas a very few plants at the edge of Phu Poo Rachinee.
5. *Epithema carnosum* Benth. (Gesneriaceae), a herbaceous plant growing on the rock in Pong Phu Ron.
6. *Chiloschista lunifera* (Rchb.f.) J.J.Sm. (Orchidaceae), an aphyllous epiphytic orchid found in Pong Phu Ron.
7. *Cleisostoma aspersum* (Rchb.f.) Garay (Orchidaceae), an epiphytic orchid found in Phu Poo Rachinee and Phu Chumchon.
8. *Phalaenopsis parishii* Rchb.f. (Orchidaceae), an epiphytic orchid on tree trunks of which only 2 plants were found in Phu Poo Rachinee.
9. *Renanthera coccinea* Lour. (Orchidaceae), an epiphytic orchid found only once in open places of Phu Chumchon.
10. *Calamus arborescens* Griff. (Palmae), a rattan with a trunk

found in moist and shaded places in Phu Chumchon.

11. *Tacca chantrieri* Andre (Taccaceae), a locally abundant herbaceous plant found in moist and shaded places in Phu Poo Rachinee and Phu Chumchon.

Wetlands Comparison

The vascular plant diversity found in the spring water areas of Thong Pha Phum,

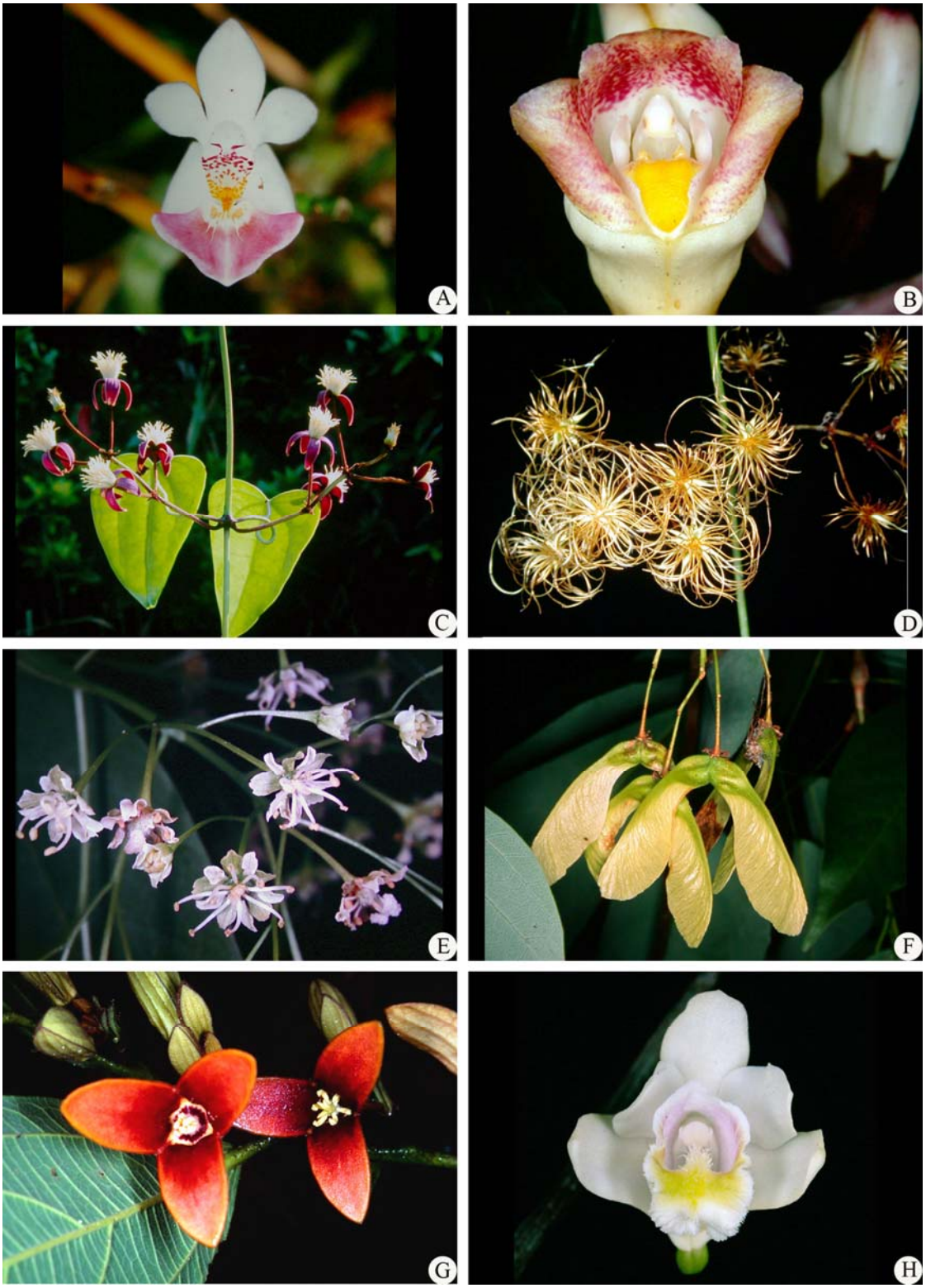

Figure 5. A: *Phalaenopsis parishii* Rchb.f.; B: *Acanthephippium sylhetense* Lindl; C-D: *Clematis smilacifolia* Wall.; E-F: *Acer oblongum* Wall. Ex DC; G: *Thottea sumatrana* (Merr.) Ding Hou; H: *Dendrobium ciliatilabellum* Seidenf.

Table 2. Summary of vascular plant diversity in spring water areas, Kanchanaburi and Toh Daeng peat swamp forest, Narathiwat, including the number of the overlapping species, genera and families.

Area	average rainfall (mm)	raining days	relative humidity (%)	Pteridophytes			Flowering Plants		
				sp.	gen.	fam.	sp.	gen.	fam.
Peat Swamp Forest[1] (Narathiwat)	2,560.2[1]	171[1]	77-83[1]	33	24	15	437	302	109
Spring Water Areas (Kanchanaburi)	1,845.0[2]	133[2]	80[2]	24	17	12	249	187	75
Species in common				**7**	**10**	**10**	**22**	**54**	**56**

Note: [1]Phengklai, C. and Niyomdham, C. (1991), [2]Srapratet, S. (2002)

Kanchanaburi can be compared with that recorded in Toh Daeng peat swamp forest of Narathiwat Province (Table 2).

Table 2 suggests that there were few common species of vascular plants found in the peat swamp forest and in these three spring water areas. Twenty-nine species found in both areas, for example, *Combretum acuminatum* Roxb., *Syzygium oblatum* (Roxb.) Wall. ex A.M. Cowan & Cowan, *Ludwigia octovalvis* (Jacq.) Raven, *Lasia spinosa* (L.) Thw., *Flagellaria indica* L., *Schumannianthus dichotomus* (Roxb.) Gagnep., *Caryota mitis* Lour., *Ceratopteris thalictroides* (L.) Brongn., *Asplenium nidus* L., were widely distributed species that often grow in wetlands. The unique species of the peat swamp forest and spring water area were not the same, even though they were in the same genera. For instance, Toei yai (*Pandanus unicornutus* St.John), a large Pandanus with a tall trunk, and a dominant species of spring water areas, is not encountered in the peat swamp forest where Toei nu (*Pandanus humilis* Lour.), Toei nam (*Pandanus immersus* Ridl.), and Toei pru (*Pandanus militaris* Balf.f.) which were shrubs with short trunk, are present.

These differences may result from the physical and biological features and the restricted distributional ranges of the plants.

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Appendix. Diversity of vascular plants in spring water swamp areas of Thong Pha Phum District, Kanchanaburi Province. 1: Pong Phu Ron; 2: Phu Poo Rachinee; 3: Phu Chumchon (E: epiphyte, EF: epiphytic fern, EO: epiphytic orchid, TerF: terrestrial fern; TerO: terrestrial orchid; T: tree, ST: small tree, S: shrub, US: undershrub, H: herb, C: climber, Sc: scandent, PaH: parasitic herb, PaS: parasitic shrub, SaH: saprophytic herb, P: palm; Abundance: ∗ = very rare, ∗∗ = rare, ∗∗∗ = quite common, ∗∗∗∗ = abundant)

Botanical Name	Vernacular Name	Habit	Areas	Abundance
Ferns and Fern Allies				
Aspleniaceae				
Asplenium nidus L.	Kha luang lang lai	EF	1, 2, 3	∗∗∗
Dryopteridaceae				
Tectaria impressa (Fee) Holttum	Kud kwang	TerF	3	∗∗
Hymenophyllaceae				
Crepidomanes christii (Copel.) Copel.	-	EF	2, 3	∗∗∗∗
Lindsaeaceae				
Lindsaea ensifolia Sw.	Hang nok kaling	TerF	3	∗∗∗
Lycopodiaceae				
Lycopodium squarrosum J.R. Forst.	Yom doei	EF	2	∗
Oleandraceae				
Nephrolepis biserrata (Sw.) Schott	Kud soi	TerF	3	∗∗∗
Parkeriaceae				
Ceratopteris thalictroides (L.) Brongn.	Phak kud nam	TerF	1, 3	∗∗
Cheilanthes tenuifolia (Burm.f.) Sw.	Chon Phi	TerF	3	∗∗
Polypodiaceae				
Colysis pedunculata (Hook. & Grev.) Ching	Ka prok nom maew	EF	3	∗∗
Drynaria quercifolia (L.) J.Sm.	Kra tae tai mai	EF	3	∗∗∗
Drynaria sparsisora (Desv.) S. Moore	Kud hog	EF	3	∗∗
Microsorum punctatum (L.) Copel.	Kra prok sing	EF	3	∗∗∗
Platycerium holttumii de Jonch. & Hennipman	Chai pha sida	EF	1	∗∗∗
Pyrrosia adnascens (G.Forst.) Ching	Phak pik kai	EF	1	∗∗∗∗
Pyrrosia piloselloides (L.) M.G. Price	Klet nakkarat	EF	1, 2, 3	∗∗∗∗
Pyrrosia stigmosa (Sw.) Ching	Kha kai	EF	1	∗∗∗
Pyrrosia varia (Kaulf.) Farw.	-	EF	3	∗∗
Pteridaceae				
Pteris biaurita L.	Kud hang khang	TerF	2	∗∗∗
Pteris vittata L.	Kud mak	TerF	2, 3	∗∗∗
Schizaeaceae				
Lygodium salicifolium C. Presl.	Ya yai pao	EF	2, 3	∗∗∗∗
Thelypteridaceae				
Thelypteris mbrica (Blume) Ching	Kud mer	TerF	3	∗∗∗
Thelypteris papilio (Hope.) K. Iwats.	-	TerF	3	∗∗
Thelypteris mbricat (Poir.) K. Iwats	Kud kan daeng	TerF	3	∗∗
Vittariaceae				
Antrophyum callifolium Blume	Wan hang nokyung	EF	2, 3	∗∗
Angiosperms				
Acanthaceae				
Andrographis laxiflora (Blume) Lindau	Ya bang phrai	H	3	∗∗∗
Lepidagathis fasiculata Nees	Sang korani dong	H	3	∗∗∗
Phlogacanthus curviflorus Nees	Hom chang	S	2	∗∗∗∗
Thunbergia fragrans Roxb. Var. *fragrans*	Hu pak ka	C	3	∗∗

Botanical Name	Vernacular Name	Habit	Areas	Abundance
Thunbergia laurifolia Lindl.	Rang chuet	C	2, 3	***
Aceraceae				
Acer oblongum Wall. ex DC.	Kuam	T	2	*
Annonaceae				
Anaxagorea luzonensis A. Gray	Kamlang wua talerng	S	3	**
Anomianthus dulcis (Dunal) J. Sinclair	Nom wua	Sc	1	**
Artabotrys burmanicus A. DC.	Nom chanee	Sc	1, 2	**
Cananga latifolia (J.D. Hooker & Thomson) Finet. & Gagnep.	Sa kae saeng	T	1	**
Desmos cochinchinensis Lour.	Sa lao	S	3	**
Enicosanthum sp.	-	T	3	*
Miliusa velutina (Dunal) Hook.f. & Thomson	Khang hua mu, Hang rok	T	1	****
Mitrephora keithii Ridley	Maha prom	T	3	*
Apocynaceae				
Aganosma marginata (Roxb.) G. Don	Mok khrua	C	1, 3	**
Holarrhena pubescens Wall. ex G.Don	Mok yai	ST	1	**
Ichnocarpus frutescens (L.) W.T. Aiton.	Khrua pla song daeng	C	1, 3	***
Rauvolfia mbricate (L.) Benth. Ex Kurz	Ra yom	S	1, 2	**
Rauvolfia verticillata (Lour.) Baillon	Kha yom yai	S	2	**
Tabernaemontana pauciflora Blume	Prik pa	S	2, 3	*
Willughbeia edulis Roxb.	Khui	C	3	**
Araceae				
Lasia spinosa (L.) Thw.	Phak nam	H	2, 3	****
Aristolochiaceae				
Aristolochia kerrii Craib	Kra chao pak pet	C	1	*
Thottea sumatrana (Merr.) Ding Hou	-	S	2	*
Asclepiadaceae				
Asclepias curassavica L.	Fai duan ha	H	1	**
Dischidia hirsute (Blume) Decne.	Thao I pae	E	2	***
Dischidia mbricate (Blume) Steud.	Klet nakkharat	E	3	***
Dischidia major (Vahl) Merr.	Chuk rohinee	E	2, 3	***
Hoya erythrostemma Kerr	-	E	2, 3	*
Hoya micrantha Hook.f.	Nom mia	E	3	**
Hoya parasitica (Roxb.) Wall. ex Traill	Nom pichit	E	1, 2, 3	***
Hoya parviflora Wight	-	E	3	*
Raphistemma pulchellum (Roxb.) Wall.	Khao san dok yai	C	2	*
Balsaminaceae				
Impatiens siamensis T. Shimizu	Tien thai	H	1	****
Begoniaceae				
Begonia sp.	-	H	1	*
Boraginaceae				
Ehretia timorensis Decne.	Kai kom	T	1	*
Heliotropium indicum L.	Ya nguang chang	H	1	**
Tournefortia sarmentosa Lam.	-	H	2	**
Bignoniaceae				
Pajanelia longifolia (Willd.) K. Schum.	I pong	T	3	*
Stereospermum fimbriatum (Wall. ex G.Don) DC.	Kae yod dam, Kae foi	T	2	*

Botanical Name	Vernacular Name	Habit	Areas	Abundance
Bombacaceae				
Bombax ceiba L.	Ngio, Ngio daeng	T	1	*
Caprifoliaceae				
Viburnum punctatum Buch.-Ham.	Cha on	ST	2, 3	**
Cardiopteridaceae				
Cardiopteris quinqueloba (Hassk.) Hassk.	Khao san khang	C	2	***
Cecropiaceae				
Poikilospermum suaveolens Merr.	Kha man	C	2, 3	**
Celastraceae				
Euonymus glaber Roxb.	-	ST	3	**
Loeseneriella pauciflora (DC.) A.C. Smith	Rat nun hin	C	3	*
Combretaceae				
Anogeissus mbricate (Roxb. Ex DC.) Guill. & Perr. Var. *lanceolata* Clarke	Ta khian nuu	T	1	**
Combretum acuminatum Roxb.	Khamin khruea	C	2	**
Combretum latifolium Blume	Uat chueak	C	1	***
Getonia floribunda (Roxb.) Lam.	Ting tang	C	1, 3	**
Commelinaceae				
Commelina diffusa N.L. Burman	Phak plap	H	2	***
Floscopa scandens Lour.	Phak plap chang	H	1	****
Compositae				
Mikania micrantha H.B.K.	Khi lek yan	C	1	****
Convallariaceae				
Peliosanthes teta Andr. subsp. *humilis* (Andr.) Jessop.	Not din	C	3	**
Convolvulaceae				
Argyreia capitiformis (Poir.) Ooststr.	Ching cho luang	C	2, 3	***
Hewittia scandens (Milne) Mabberley	Ching cho lek	C	1	**
Ipomoea aquatica Forssk.	Phak bung	C	1	****
Ipomoea hederifolia L.	Ching cho daeng	C	2	*
Ipomoea mbric Kerr	Thao phan en	C	1	**
Lepistemon binectariferum (Wall.) O.K.	Yaan khon	C	1, 2	****
Merremia mbricate (L.) Hallier.f.	Ching cho khao	C	1, 2, 3	***
Merremia vitifolia (Burm.f.) Hallier.f.	Ching cho luang	C	1, 3	***
Costaceae				
Costus speciosus (Koen.) Sm.	Ueang mai na	H	1, 2, 3	***
Cucurbitaceae				
Neoalsomitra sarcophylla (Wall.) Hutch.	Buri phra ram	C	1	***
Dilleniaceae				
Dillenia obovata (Blume) Hoogland	San yai	T	2	**
Dillenia parviflora Griff.	San hing	T	1	**
Dioscoreaceae				
Dioscorea bulbifera L.	Wan phra chim	C	2, 3	***
Dracaenaceae				
Dracaena angustifolia Roxb.	Khon ma khao	H	2, 3	****
Dracaena gracilis Wall.	-	H	3	**
Ebenaceae				
Diospyros ehretioides Wall. ex G.Don	Taptap ton	T	1	**
Diospyros mbrica Roxb.	Tan dam	T	1	**

Botanical Name	Vernacular Name	Habit	Areas	Abundance
Diospyros rubra Lec.	Phaya rak dam	T	1	*
Elaeocarpaceae				
Elaeocarpus grandiflorus Sm.	Khrai yoi	T	2, 3	****
Sloanea sigun (Blume) K.Schum.	Sati ton	T	2, 3	**
Euphorbiaceae				
Baliospermum solanifolium (Burm.) Suresh	Tong taek	S	1	**
Bischofia javensis Blume	Toem	T	2, 3	**
Chaetocarpus castanocarpus (Roxb.) Thw.	Khi non	ST	3	*
Croton roxburghii N.P. Balakr.	Plao yai, Plao luang	ST	1	***
Flueggea virosa (Roxb. Ex Willd.) Voigt	Kang pla khao	S/ST	1	**
Glochidion lanceolarium (Roxb.) Voigt	Daeng nam	ST	2, 3	****
Mallotus peltatus (Geisel.) Muell. Arg.	Salad	S/ST	3	**
Phyllanthus emblica L.	Makham pom	T	1, 2, 3	***
Flacourtiaceae				
Homalium grandiflorum Benth.	Chum saeng daeng	T	1, 3	***
Flagellariaceae				
Flagellaria indica L.	Wai ling	C	2, 3	***
Gentianaceae				
Cotylanthera caerulea Lace	-	SaH	2, 3	*
Gesneriaceae				
Epithema carnosum Benth.	Hu mi	H	1	**
Guttiferae				
Calophyllum soulattri Burm.f.	Tang hon bai yai	T	2, 3	****
Garcinia merguensis Wight	Nuan	ST	3	***
Hydrophyllaceae				
Hydrolea zeylanica (L.) Vahl.	Po phi	H	1, 2	***
Hypoxidaceae				
Molineria latifolia Herb. ex Kurz	Wan sak lek	H	2, 3	***
Labiatae				
Clerodendrum colebrookianum Walp.	Ping khao	S	1	***
Clerodendrum viscosum Vent.	Nang yaem pa	S	2, 3	****
Clerodendrum wallichii Merr.	Raya kaew	S	3	**
Gmelina arborea Roxb.	So	T	2, 3	**
Gmelina elliptica Sm.	Thong maew	Sc	1	**
Hyptis capitata Jacq.	-	H	1, 2	***
Hyptis suaveolens (L.) Poit.	Maeng lak kha	H	3	***
Pogostemon auricularis (L.) Hassk.	Sap raeng sap ka	H	1	***
Premna collinsiae Craib	Kha pia	C	3	**
Premna latifolia Roxb. var. *cuneata* Clarke	-	T	1	**
Vitex scabra Wall. ex Schauer	I pae	T	1	**
Lauraceae				
Litsea glutinosa (Lour.) C.B.Rob.	Mi men	T	3	**
Lecythidaceae				
Careya sphaerica Roxb.	Kra don	T	1	*
Leeaceae				
Leea aequata L.	-	S	2, 3	***
Leea indica (Burm.f.) Merr.	Ka tang bai	S	1	***

Botanical Name	Vernacular Name	Habit	Areas	Abundance
Leguminosae-Caesalpinioideae				
Afzelia xylocarpa (Kurz) Craib	Ma kha mong	T	1	*
Bauhinia malabarica Roxb.	Siao yai	T	1	**
Bauhinia mbric Kurz var. *burmanica* K. & S.S. Larsen	Po kien	Sc	2	**
Bauhinia viridescens Desv. Var. *viridescens*	Siao fom, Som siao noi	S	2	**
Caesalpinia digyna Rottler	Kamchai	C	2	**
Caesalpinia hymenocarpa (Prain)Hattink	-	C	1	***
Chamaecrista pumila (Lam.) K.Larsen	Ma kham bia	US	1	***
Senna alata (L.) Roxb.	Chum het thet	S	1, 2, 3	****
Senna timoriensis (DC.)Irwin & Barneby	Khi lek lueat	T	2, 3	**
Senna tora (L.) Roxb.	Chum het thai	H	2, 3	***
Leguminosae-Mimosoideae				
Adenanthera pavonina L.	Ma klam ton	T	3	*
Xylia xylocarpa (Roxb.) Taub.	Daeng	T	3	*
Leguminosae-Papilionoideae				
Abrus pulchellus Wall. ex Thwaites subsp. *Pulchellus*	Ma klam phueak	C	3	**
Butea superba Roxb.	Thong khrua	C	1	***
Flemingia sootepensis Craib	Ka sam pik	S	3	***
Millettia brandisiana Kurz	Krapi chan	T	3	**
Pueraria phaseoloides (Roxb.) Benth. Var. *phaseoloides*	Thua sian pa	C	3	***
Uraria crinita (L.) Desv. Ex DC.	Hang ma chok	H	3	***
Liliaceae				
Disporum calcaratum D.Don		H		2, UC
Loganiaceae				
Gardneria ovata Wall.	-	C	2	*
Lythraceae				
Lagerstroemia speciosa (L.) Pers.	Inthanin nam	T	1	***
Lagerstroemia tomentosa C.Presl	Salao khao	T	1	***
Magnoliaceae				
Magnolia siamensis Dandy var. *siamensis*	Yihup pri	T	3	*
Malvaceae				
Abelmoschus moschatus Medik. Subsp. *Moschatus*	Chamod ton	S	1, 3	***
Thespesia lampas (Cav.) Dalzell & A.Gibson	Po lom pom	S	1	**
Marantaceae				
Schumannianthus dichotomus (Roxb.) Gagnep.	Khla	H	2, 3	****
Melastomataceae				
Melastoma malabathricum L. subsp. *Malabathricum*	Khlong khleng	S	2	***
Melastoma orientale Guillaumin	Khlong khleng tua phu	S	3	**
Moraceae				
Ficus pyriformis Hook. & Arn.	Luk khlai	S	3	****
Ficus sagittata Vahl	-	S	3	***
Streblus ilicifolius (Vidal) Corner	Khoi nam	S/ST	2, 3	****
Myrsinaceae				
Ardisia mbrica K.Larsen & C.M.Hu	Ta kai sangkhla	S	2	***
Ardisia ficifolia K.Larsen & C.M.Hu	-	S	2	**
Ardisia fulva King & Gamble var. *fulva*	Hua khwan	S	3	**

Botanical Name	Vernacular Name	Habit	Areas	Abundance
Myrtaceae				
Cleistocalyx nervosum (DC.) Kosterm. Var. *nervosum*	Wa som, Wa khao	T	3	***
Syzygium cumini (L.) Skeels	Wa, Ha khi pae	T	1	**
Syzygium diospyrifolium (Wall. ex Duthie) S.N. Mitra	Bong khwan	T	2, 3	****
Syzygium oblatum (Roxb.) Wall. ex A.M. Cowan & Cowan var. *oblatum*	mbric, Maha	T	2, 3	****
Oleaceae				
Jasminum decussatum Wall. ex G.Don	Khiao ngu	C	2	**
Jasminum nervosum Lour.	Mali sai kai	C	2, 3	***
Ligustrum confusum Decne	Khi khom	T	2	**
Onagraceae				
Ludwigia octovalvis (Jacq.) Raven	Ya rak na, Tien nam	H	1	****
Orchidaceae				
Acanthephippium sylhetense Lindl.	-	TerO	3	*
Aerides multiflora Roxb.	Ueang phuang malai	EO	1	****
Aerides odorata Lour.	Ueang kulap dueai kai	EO	3	***
Appendicula cornuta Blume	Hang maeng ngao	EO	3	***
Ascocentrum curvifolium (Lindl.) Schltr.	Khem daeng	EO	1	****
Bulbophyllum auricomum Lindl.	-	EO	1	**
Chiloschista lunifera (Rchb.f.) J.J.Sm.	Ueang phaya rai bai	EO	1	**
Cleisomeria lanatum (Lindl.) Lindl.	Kho khwang	EO	2	**
Cleisostoma aspersum (Rchb.f.) Garay	-	EO	2, 3	**
Cleisostoma fuerstenbergianum F.Kranzl	Kang pla	EO	1	**
Cymbidium aloifolium (L.) Sw.	Kare karon	EO	1, 2, 3	***
Dendrobium anceps Sw.	-	EO	3	*
Dendrobium aphyllum (Roxb.) C.E.C.Fisch.	Ueang nguang chang	EO	1, 2, 3	****
Dendrobium calicopsis Ridl.	-	EO	3	**
Dendrobium ciliatilabellum Seidenf..	-	EO	2, 3	*
Dendrobium chrysotoxum Lindl.	Ueang kham	EO	1	***
Dendrobium crepidatum Lindl. & Paxton	Ueang sai nam khieo	EO	1	***
Dendrobium dixanthum Rchb.f.	Ueang bai phai	EO	1	**
Dendrobium fimbriatum Hook.	Ueang kham noi	EO	3	***
Dendrobium lindleyi Steud.	Ueang phueng	EO	2, 3	***
Dendrobium mannii Ridl.	-	EO	1, 3	**
Dendrobium pulchellum Roxb. ex Lindl.	Ueang chang nao	EO	1, 2	***
Dendrobium tortile Lindl.	Ueang mai teung	EO	2	**
Dendrobium trinervium Ridl.	Tien ling	EO	3	*
Eria lasiopetala (Willd.) Omerod	Ueang bai si	EO	1, 2, 3	***
Eria tomentosa (J.Konig) Hook.f.	Ueang tan mon	EO	1	*
Flickingeria fimbriata (Blume) A.D.Hawkes	Kut hin	EO	3	***
Gastrochilus obliquus (Lindl.) Kuntze	Suea lueang	EO	3	**
Geodorum citrinum Jacks	Wan chung nang	TerO	1	***
Geodorum pulchellum Ridl.	Wan chung nang	TerO	1, 2	***
Grosourdya appendiculata (Blume) Rchb.f.	Ueang len lom	EO	3	***
Hetaeria oblongifolia (Blume) Blume	-	TerO	3	**
Kingidium deliciosum (Rchb.f.) Sw.	Ka ta cho	EO	3	***
Malleola dentifera J.J.Sm.	-	EO	2	**
Malleola penangiana (Hook.f.) J.J.Sm. & Schltr.	-	EO	2, 3	*

Botanical Name	Vernacular Name	Habit	Areas	Abundance
Micropera pallida (Roxb.) Lindl.	Ueang malaeng po thong	EO	2	**
Micropera thailandica (Seidenf. & Smitin.) Garay	-	EO	3	**
Panisea uniflora (Lindl.) Lindl.	Ueang rong rong	EO	3	***
Papilionanthe teres (Roxb.) Schltr.	Ueang mok	EO	1, 2	**
Peristylus goodyeroides (D.Don) Lindl.	Wan khao pae	EO	1	**
Phalaenopsis cornucervi (Breda) Blume & Rchb.f.	Khao khwang on	EO	1, 2	***
Phalaenopsis parishii Rchb.f.	Phi suea noi	EO	2	*
Pholidota articulata Lindl.	Ueang lam to	EO	1, 2	***
Pholidota imbricata W.J. Hook.	Ueang kap dok	EO	2, 3	****
Pomatocalpa andamanica (Hook.f.) J.J.Sm.	-	EO	1, 2, 3	***
Pomatocalpa latifolia (Lindl.) J.J. Sm.	-	EO	2, 3	***
Porpax ustulata (Parish & Rchb.f.) Rolfe	Ueang rang nok	EO	1	**
Renanthera coccinea Lour.	Wai daeng	EO	3	*
Rhynchostylis retusa (L.) Blume	Ueang aiyaret	EO	1, 2, 3	***
Robiquetia spathulata (Blume) J.J. Sm.	Ueang luk suea	EO	3	**
Smitinandia micrantha (Lindl.) Holttum	Khem nu	EO	1	**
Stereochilus erinaceus (Rchb.f.) Garay	Kulap hin	EO	1	**
Thelasis pygmaea (Griff.) Blume	Krasun phra in	EO	1	***
Tropidia angulosa (Lindl.) Blume	-	TerO	3	**
Tropidia pedunculata Blume	-	TerO	2	**
Vrydagzynea albida (Blume) Blume	-	EO	3	***
Orobanchaceae				
Aeginetia indica Roxb.	Dok din daeng	PaH	1, 2, 3	***
Palmae				
Calamus arborescens Griff.	Lam pang, Wai ton	P	3	**
Caryota mitis Lour.	Tao rang daeng	P	2	***
Plectocomia cf. *muelleri* Blume	-	P	2	*
Salacca wallichiana C.Mart	Ra kam	P	2, 3	***
Pandanaceae				
Pandanus unicornutus St. John	Toei yai, Toei ho	T	2, 3	****
Polygalaceae				
Epirixanthes elongata Blume	-	SaH	2	*
Ranunculaceae				
Clematis smilacifolia Wall.	Phuang kaeo kudan	C	2, 3	*
Rubiaceae				
Canthium glabrum Blume	Khang ten	ST	2	**
Ixora kerrii Craib	Khem son kan	S	2, 3	***
Morinda scabrida Craib	-	US	2	****
Mussaenda sanderiana Ridl.	Kam khao	ScS	2, 3	***
Nauclea orientalis (L.) L.	Kan lueang, Krathum nam	T	2	***
Ophiorrhiza sp.	-	H	3	***
Paederia calycina Kurz	Ka rang tang khwang	C	1	**
Paederia thorelii Pitard var. *hirsuta* (Craib) N.Fukuoka	Thao tod mu	C	2, 3	***
Wendlandia tinctoria (Roxb.) DC.	Khaeng khwang	S/ST	3	****

Botanical Name	Vernacular Name	Habit	Areas	Abundance
Rutaceae				
Clausena excavata Burm.f.	Mo noi	S	3	∗∗∗
Euodia viticina Wall.	Ma pin dam	S	3	∗∗∗
Glycosmis pentaphylla (Retz.) DC.	Khoei tai	S	1	∗∗
Salicaceae				
Salix tetrasperma Roxb.	Sanun	ST	1, 2, 3	∗∗∗∗
Sapindaceae				
Lepisanthes tetraphylla (Vahl) Radlk.	Ma fueang chang	T	1	∗∗
Schleichera oleosa (Lour.) Oken	Ta khro	T	1	∗∗∗∗
Scrophulariaceae				
Lindenbergia philippensis (Cham.) Benth.	Ya nam dap fai	H	3	∗∗∗
Torenia fournieri Lind. ex E.Fourn.	Waeo mayura	H	3	∗∗∗
Smilacaceae				
Smilax megacarpa A.DC.	Khueang luk daeng	C	2, 3	∗∗∗∗
Sonneratiaceae				
Duabanga grandiflora (Roxb. ex DC.) Walp.	Lampu pa	T	2	∗∗
Sterculiaceae				
Helicteres elongata Wall. ex Boj.	Khi on	S	1	∗∗∗
Helicteres viscida Blume	Po khi on	S	2	∗∗
Sterculia lanceolata Cav.	Po pha sam	S	3	∗∗∗
Sterculia villosa Roxb.	Po daeng	T	1	∗∗
Taccaceae				
Tacca chantrieri Andre.	Nera phusi thai	H	2, 3	∗∗∗∗
Tiliaceae				
Corchorus aestuans L.	Krachao na	US	1	∗∗∗
Grewia hirsuta Vahl	Khao tak	S	3	∗∗∗
Grewia laevigata Vahl.	Yap khi kai	S/ST	1	∗∗∗
Microcos paniculata L.	Lai, Pla	T	1	∗∗∗
Triumfetta bartramia L.	Seng	US	1	∗∗∗∗
Verbenaceae				
Congea tomentosa Roxb.	Khruea on	C	2, 3	∗∗∗
Sphenodesme involucrata (C.Presl) B.L.Rob.	Thao wan pun	C	1	∗
Viscaceae				
Viscum ovalifolium Wall. ex DC.	Kafak mai tatum	PaS	1	∗∗
Vitaceae				
Cissus hastata Miq.	Som san dan	C	1, 3	∗∗∗
Zingiberaceae				
Alpinia galanga (L.) Willd.	Kha	H	2	∗∗
Boesenbergia siamensis (Gagnep.) P.Sirirugsa	Krachai siam	H	1, 3	∗∗
Gagnepainia godefroyi (Baill.) K.Schum	-	H	1	∗∗
Hemiorchis rhodorrhachis K.Schum	-	H	1	∗
Kaempferia parviflora Wall. ex Baker	Krachai dam	H	1, 2	∗∗