

Report

Vegetation and vascular flora of the Mekong River, Kratie and Steung Treng Provinces, Cambodia

James F. Maxwell

CMU Herbarium, Department of Biology, Faculty of Science, Chiang Mai University, Chiang Mai 50200, Thailand

E-mail: scopplrn@chiangmai.ac.th

Received: 15 September 2008 / Accepted: 10 March 2009 / Published: 7 April 2009

Abstract: A preliminary and detailed botanical survey of the islands in the Mekong River between Kratie and Steung Treng was done. This area includes the most biologically intact and threatened riparian and terrestrial ecosystems along the river in Cambodia. The vegetation includes six riverine zones and four terrestrial facies. Riverine habitats are mostly intact while the terrestrial vegetation ranges from destroyed to degraded. Effective conservation measures are required to stop further habitat destruction and loss of biodiversity. One new species, 23 records for the Cambodian flora, and a total of 690 species were collected. Detailed descriptions of all habitats, a database, and photographs are included. Increased exploitative human settlement in the area has caused drastic environmental changes with extensive deforestation and hunting. The forests are grazed, burned, logged, and often cleared for agricultural use without effective control. Sustainable management and scientifically acceptable development must be implemented before the area is totally ruined. Properly conceived reforestation is urgently required as well as a conservation education project aimed directly at the people living in the area. Unless effective restraints are implemented the area will become biologically destitute and will not be able to provide the natural resources that people require--in short, the area will become uninhabitable. Restoration of degraded or destroyed places will be impossible or far more difficult than conservation and intelligent management of presently endangered places. The potential for profitable eco-tourism should also be considered since tourists will certainly want to visit natural ecosystems on some of the islands. Only if local people are directly involved in eco-tourism and understand the necessity of conservation can this activity be successful. It is strongly recommended that continued botanical research be conducted in the area in order to more fully understand the distribution and abundance of the plants there.

Keywords: botanical survey, vascular flora, Mekong River, Cambodia

Introduction

Background

Gagnepain [1] provides detailed information concerning the itineraries and biographies of pioneer French plant collecting in Indochina. Four people are known to have collected along the Mekong River between Kratie, Cambodia and Khone Island, Lao PDR. Their specimens are in the Paris Herbarium.

Clovis Thorel (1833-1911) [1] a physician-botanist, collected the first plant specimens along the Mekong River in Cambodia and Laos during 1866-1868. J.B.L. Pierre (1833-1905) [1], director of the Botanic Gardens, Saigon (1865-1877), collected extensively in Cambodia and especially along the Mekong River from Phnom Penh to Khone Island, Lao PDR. Pierre produced the 5-volume *Flore Forestière de Cochinchine* (1879-1907). François Harmand (1845-1921) [1] collected in Indochina during 1875-1877, including along the Mekong River at Kratie. Eugene Poilane (1887-1964) [1], from the Paris Herbarium, made collections in Indochina during 1917-1936 and along the Mekong River from Kratie to Khone Island.

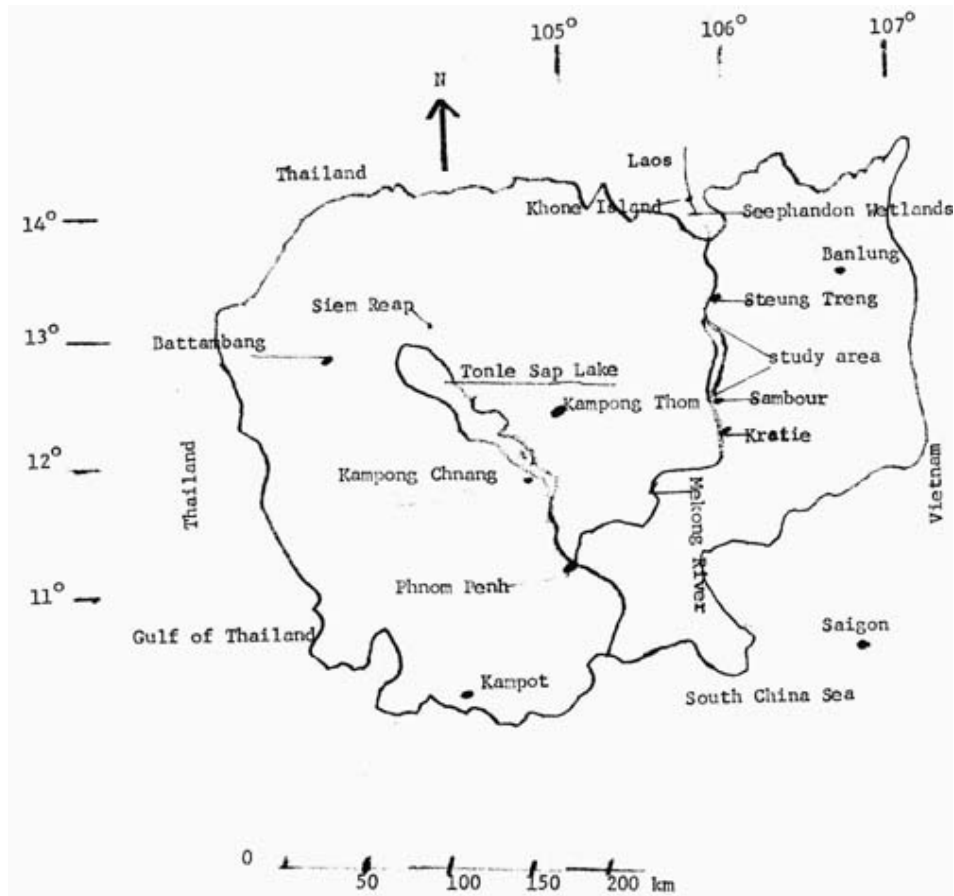
Maxwell [2,3] compiled a flora for the Seephandon area, southern Lao PDR during 1997-1998. His survey resulted in 131 families and 731 species of vascular plants along with a detailed plant database and vegetation map [3]. An unpublished and quite incomplete report by Meng Monyrak for IUCN listed 102 vascular plants in a Ramsar conservation site above Steung Treng. The material was identified by Maxwell and is deposited in CMU Herbarium. R. Timmins (2007), a zoologist, surveyed this Ramsar site and included a chapter on vegetation and wildlife habitats. His comprehension of the vegetation there was rudimentary while his terminology was totally unacceptable and should be ignored.

Our plant team found 120 families and 683 species of vascular plants as well as 7 bryophytes during this survey. An extensive plant database, a vegetation map, profiles of the vegetation, and photographs of the various habitats and plants are included.

Location

A section *c.* 55 km long of the Mekong River from Sambour in the northern part of Kratie Province to the southern part of Siem Bok District, Steung Treng Province was studied (13° 17' 55''- 13° 4' 47'' N latitude and 105° 56' 49''- 106° 13' 47'' E longitude, see Map 1). This part of the river is braided and has over 40 'permanent' islands, 18 being over 3 km long, with Rongnieu Island being the largest at 37 km long and 5 km wide. The islands are long, narrow, and have channels between them, the most extensive being 11 km wide. Other islands are seasonally submerged and can only be visited during the cool/dry and hot/dry seasons when the river level is low.

Within the study area there are 9 permanent villages with an estimated population of 5,553 in 2005 [2]. The overall population density of the area is low (0-70 people per km²), but improved access has encouraged more outsiders to exploit the area, especially when the river level is low.



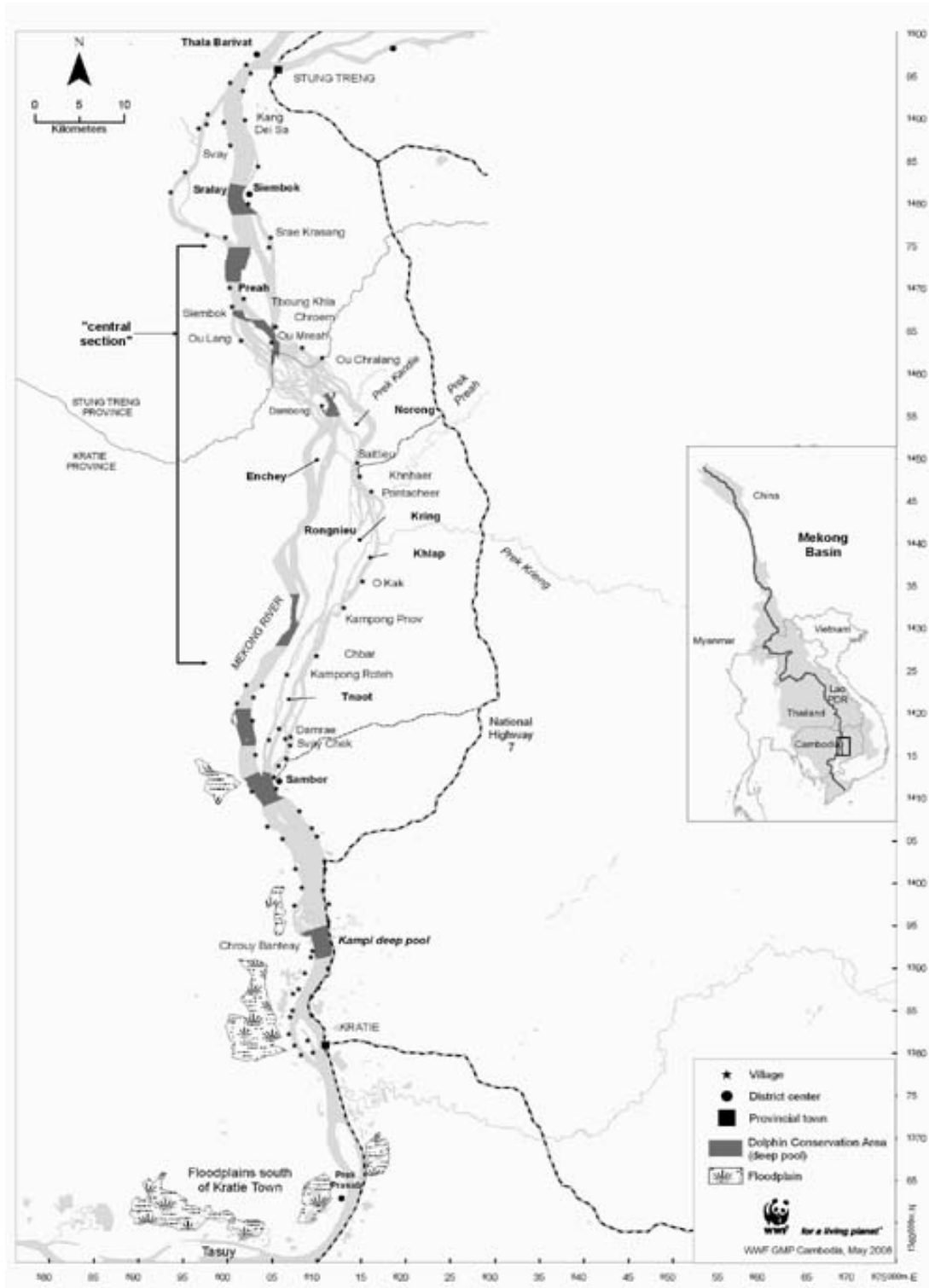
Map 1. Map of Cambodia showing the Mekong River and the study area between Kratie and Steung Treng

Geology

The bedrock is mostly metamorphic sandstone (paragneiss) which was originally from sand deposits in the sea and compressed to form sandstone and more recently metamorphosed. The age of the rocks is Upper Triassic-Lower Jurassic, *c.* 180-200 million years [2]. Shale of similar age is also found in some areas. Riverine deposits of silt, clay, sand, and gravel are recent Quaternary deposits. Thin layers of fresh water limestone (tufa), of recent origin, were also infrequently seen. The elevation of land exposed during the lowest levels of the river was *c.* 20 m, while the islands, all flat, were *c.* 30 m elevation.

Climate

The climate of Cambodia is distinctly seasonal with three basic seasons, viz. dry/cool, dry/hot, and rainy. The NE monsoon results in dryness from November to April. The first part of this period is cool, while the latter two months are the hottest time of the year. The SW monsoon causes the rainy season from May to October.



Map 2. Details of the study area shoeing some of the islands surveyed (central section). Source: WWF Cambodia

The mean annual temperature at Steung Treng during 2003-2004 was 23.5-34° C (lowest 11.5° C, highest 40° C). Annual rainfall at Steung Treng from 1994-2000 ranged from 1441-2600 (average 1966) mm. During 1997-2000 there was an average of 2050 mm of rainfall at Kratie, ranging from 1743-2549 mm per year. In general the lowest amount of rain is in January (0.0-0.9 mm) and the most in September (333-469 mm).

The river level directly corresponds to the amount of rainfall and has an average monthly discharge of 2200 m³/second (April) to 36,700 m³/second (September) at Kratie.

Research trips and fieldwork

Three trips were made to the study area which corresponded to the three different seasons affecting the area, viz.

1. 10-23 November 2006, dry/cool season, river level receding;
2. 10-25 March 2007, dry/hot season, river level nearly the lowest; and
3. 29 July-13 August 2007, rainy season, river level almost maximum.

This research was organised by World Wildlife Fund (WWF) Cambodia and included four research teams, viz. plant, fish, amphibians + reptiles, and birds + mammals. The overall result of this work has been compiled by Bezuijen et al. [2].

Considering the size of the study area an opportunistic approach of collecting specimens was pursued in which as many islands were visited as possible, including the mainland. Basically every flowering and fruiting species was collected, while non-reproducing plants were identified in the field and recorded, and notes on vegetation types were made.

Well over 700 specimens were collected and identified in Chiang Mai University Herbarium (CMU). An enumeration of all recorded vascular plants and bryophytes is shown in Appendix 1. The following section gives a detailed description of the vegetation types present in the study area.

Vegetation Types

There are two main kinds of vegetation in the study area, viz. riverine (riparian) and terrestrial, i.e. on land above the flood level of the river. The riverine vegetation includes all vegetation in the river to the highest water level attained in August-September. This area is controlled by the Fisheries Department, while terrestrial areas are regulated by the Forestry Department (Figures 1 and 2).

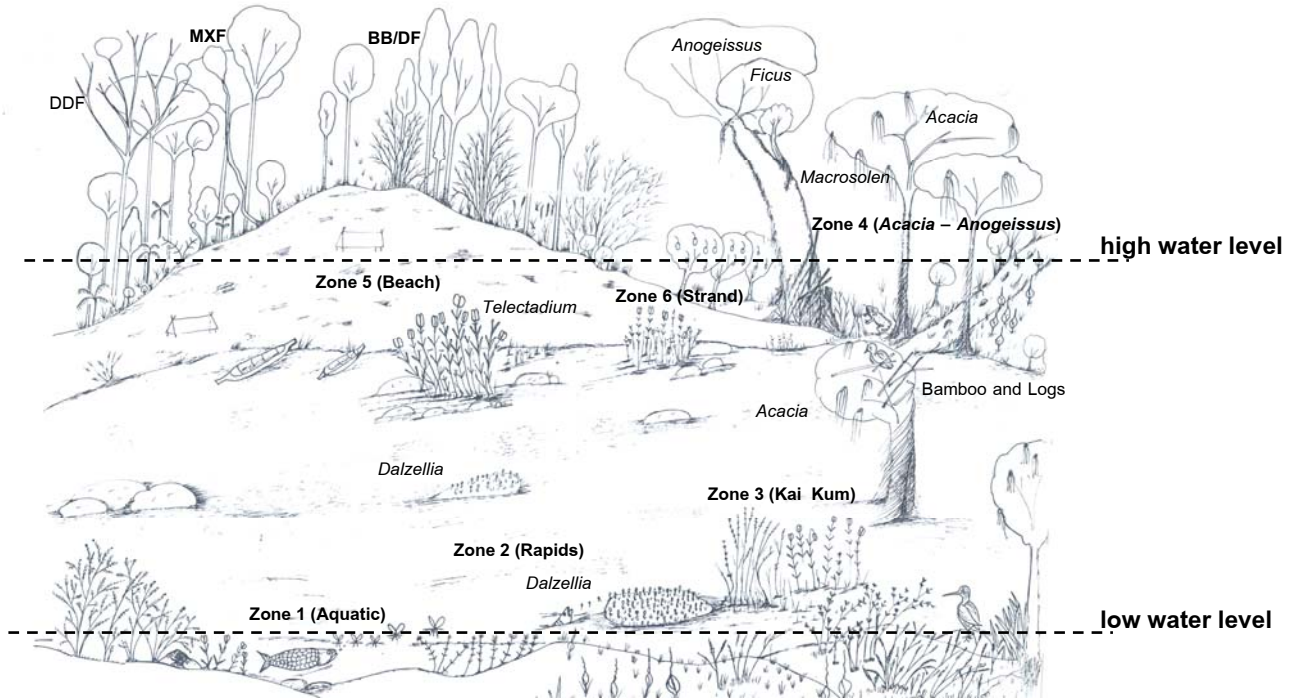


Figure 1. Riparian vegetation zones and forests in the study area (Drawing by P. Palee).

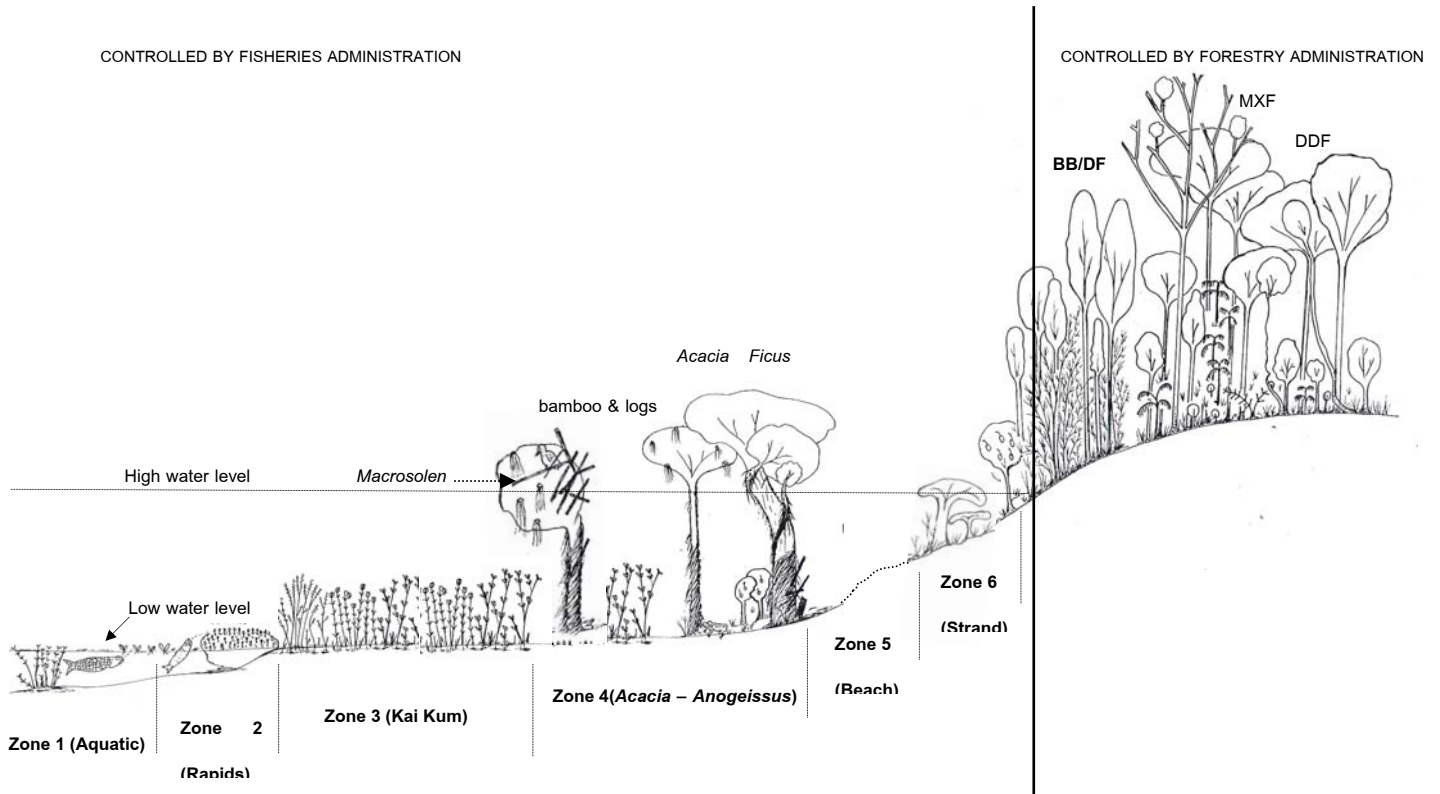


Figure 2. Riparian vegetation zones and forests in the study area Drawing by P. Palee

Riverine (Riparian) Vegetation

The Mekong River, due to its immense size, great fluctuations of water (up to 10 m in the study area), and particular geomorphology, has developed a distinct and very diverse riverine vegetation in the area between Kratie and Stung Treng. Six vegetation zones have been distinguished in this system. All of these zones are exposed during the lowest level of the river during February-May and only the uppermost zone can be seen, in part, during August-September when the water level is the highest. These six zones are not always apparent in many areas due to the absence of bedrock which is vital for the development and stability of some zones. Shifting sandbars and ephemeral beach formations also tend to cause variation in the extent of some zones. Erosion of the margins of some islands has resulted in a steep drawdown area in which the upper riverine zones are often not present. Bedrock, essential for Zones 2-4, is often absent, thus these places usually have sand extending to the terrestrial vegetation (Photo 1, Appendix 1).

The five zones above the aquatic (river) zone include species which are both amphibious and seasonally rheophytic. The vegetation ranges from delicate annual aquatic herbs to trees up to 15 m tall. Many species found in the riverine vegetation are only known from the Mekong River. The vegetation tends to increase in height, density, and diversity from the lowest level of the river (c. 20 m elevation) to the terrestrial vegetation (c. 30 m).

Zone 1: Aquatic

The aquatic plants here are all herbs and are readily found in the river during the dry season when the water level is lowest, the flow slowest, and quality clearest. These plants are either floating or submerged and attached to the bottom, often on rocks. All are obligate aquatics and cannot survive without water. *Potamogeton crispus* L. (Potamogetonaceae), *Najas indica* (Willd.) Cham. (Najadaceae), *Hydrilla verticillata* (L.) Roy., and *Vallisneria gigantea* Greab. (both Hydrocharitaceae), all monocots, are prevalent. *Ceratophyllum demersum* L. (Ceratophyllaceae) was the only dicot found. Algae were not collected during this project.

Zone 2: Rapids (“Boong”)

I referred to this zone in the Seephandon wetlands, Laos, which is c. 90 km north along the Mekong River, as “Boong”, which is the Lao name for this open, rocky, sparsely vegetated habitat [3,4]. This is the rocky to sandy area immediately above the aquatic zone with vegetation that is the first to be submerged and last to be exposed in the annual cycle of the river (Photo 2, 3). It consists of several deciduous herbs and shrubs, often scattered, with a general lack of trees. Herbs are common with *Fimbristylis cymosa* R. Br. (Cyperaceae), *Cryptocoryne crispatula* Engl. var. *crispatula* (Araceae), which is a new record for the Cambodian flora; and the edible Pteridophyte *Diplazium esculentum* (Retz.) Sw. (Athyriaceae). Shrubs, all deciduous, amphibious rheophytes, are mostly epilithic and grow in dense clusters in rocky places. *Telectadium edule* H. Baill. (Asclepiadaceae),

Homonoia riparia Lour. and *Phyllanthus jullienii* Beille (both Euphorbiaceae), and *Xantonnea parviflora* (O. K.) Craib var. *salicifolia* (Pierre ex Pit.) Craib (Rubiaceae) are common shrubs. *Crateva magna* (Lour.) DC. (Capparaceae), a shrub or treelet, is also found here, but of lesser stature and frequency as in Zones 4 and 5. *Dalzellia carinata* (Lec.) C. Cuss. (Tristichaceae) is a tiny, epilithic, moss-like herb which grows in dense clusters on rocks in areas with a fast current close to the water level. This species was found in flower in March and is remarkable due its ability to survive in such an extreme habitat.

Zone 3: “Kai Kum”

“Kai Kum” is the Lao name for *Phyllanthus jullienii*, which dominates this zone in the Seephandon wetlands [3,4]. Places above Zone 2, which generally have more plant diversity and abundance, as well as more vigorous growth, are included here. Water flow is less rapid here and in some instances Zone 2 merges with Zone 3—a clear distinction being difficult to make. This zone has several shrubs which are usually found in Zone 2, e.g. *Morinda pandurifolia* O.K. var. *oblonga* (Pit.) Craib (Rubiaceae), *Blachia siamensis* Gagnep. (Euphorbiaceae), and *Paravitex* sp. (Verbenaceae). *Homonoia riparia* is common, but *Telectadium edule* is mostly absent. *Oxystelma esculentum* (L. f.) R. Br. (Asclepiadaceae), a vine, as well as most of the herbs found in Zone 2 are also present. The first trees are found here and include *Barringtonia acutangula* (L.) Gaertn. (Lecythidaceae), *Eugenia mekongensis* Gagnep. (Myrtaceae), and an occasional *Crateva magna*.

Zone 4: Acacia- Anogeissus

This zone is characterised by two seasonally rheophytic, deciduous trees which only grow in rocky places above Zone 3, viz. *Acacia harmandiana* (Pierre) Gagnep. (Leguminosae, Mimosoideae), and *Anogeissus rivularis* (Gagnep.) Lec. (Combretaceae)—both of which can grow up to 15 m tall and become partly to completely submerged during August-September. Their crowns are frequently bent downstream by the strong river current and collect various debris (logs, bamboo, trash, etc.) which remain in place during the dry season (Photo 4). Both species develop thick mats of fibrous, black adventitious roots in the lower 2-4 m of the trunk which are also bent downstream. These two species are hosts for *Macrosolen cochinchinensis* (Lour.) Tiegh. (Loranthaceae), a common epiphytic, hemiparasitic shrub on the upper branches. Several species of *Ficus* (Moraceae), e.g. *F. benjamina* L., *F. rumphii* Bl., and *F. virens* Ait. (Photo 5) also grow as epiphytic trees on both of the dominating trees. Figs (synconia) produced by these and other species of *Ficus* are an important food source for many birds, various mammals, and fish.

This zone, often isolated or directly merging with terrestrial vegetation, also has some woody climbers that are absent from the lower zones. Some of these include: *Dalbergia volubilis* Roxb., *Paraderris elliptica* (Wall.) Adema, *Derris scandens* (Roxb.) Bth. (all Leguminosae, Papilionoideae), and *Hiptage triacantha* Pierre (Malpighiaceae). Herbs are common in this zone and often include some of those found in Zones 2 and 3. *Dichanthium caricosum* (L.) A. Camus (Gramineae); *Fimbristylis*

brunneoides Kern and *F. jucunda* (Cl.) Kern (Cyperaceae)—monocots; *Hemigraphis modesta* R. Ben. (Acanthaceae), *Rotula aquatica* Lour. (Boraginaceae), and *Paravitex* sp. (Verbenaceae), both shrubs, and *Microcos sinuata* (Wall. ex Mast.) Burr. (Tiliaceae), a treelet, are also found here.

Mimosa pigra L. (Leguminosae, Mimosoideae), an invasive, naturalised, spiny, vigorous, herb-shrub from tropical America is rapidly becoming established from Zone 4 to the terrestrial areas. It is a noxious weed that develops dense growth at the expense of native vegetation and tolerates flooding, fire, and hacking. This species will become a very serious environmental problem in the future unless an effective eradication programme is established [5].

Zone 5: Beach

All open, sandy, seasonally inundated areas have been included in this zone. Sandbars, often isolated in the riverine area, as well as sandy areas above Zone 4, are common throughout the study area. Due to the lack of bedrock and sufficient organic nutrients, these sandy areas lack perennial, especially woody vegetation as found in Zones 2-4. Annual herbs, which germinate and produce seeds during October-July, are numerous, but usually very sparse in abundance. Many of these plants also colonise disturbed and agricultural areas and are considered as weeds. None are unique to this zone, but most of them do not inhabit the other riverine zones.

Both dicots and monocots are well-represented, but Pteridophytes (ferns) are absent. Some common dicots include: *Cleome viscosa* L. (Capparaceae), *Dentella repens* (L.) J. R. & G. Forst., and *Hedyotis pinifolia* Wall. ex G. Don (both Rubiaceae); *Eclipta prostrata* (L.) L. and *Grangea maderaspatana* (L.) Poir. (both Compositae); *Lindernia antipoda* (L.) Alst., *L. crustacea* (L.) F. Muell. var. *crustacea*, and *Scoparia dulcis* L. (all Scrophulariaceae); *Polygonum plebium* R. Br. (Polygonaceae), and *Phyla nodiflora* (L.) Greene (Verbenaceae). Monocots, especially Cyperaceae (sedges) and Gramineae (grasses) are also common. *Cyperus cuspidatus* Kunth, *Fimbristylis aestivalis* (Retz.) Vahl var. *aestivalis*, *F. dipascea* (Rottb.) Cl., and *F. jucunda* (Cl.) Kern (Cyperaceae) are frequently found. Some common Gramineae include: *Digitaria bicornis* (Lmk.) Roem. & Schult., *D. radicata* (Presl) Miq., *Dactyloctenium aegyptium* (L.) P. Beauv., *Echinochloa colona* (L.) Link, *Leptochloa chinensis* (L.) Nees, and *Hemisorghum mekongense* (A. Camus) C.E. Hubb ex Bor—the latter being restricted to this zone and is a new record for the Cambodian flora.

Saccharum arundinaceum Retz. and to a lesser extent *S. spontaneum* L., both robust evergreen Gramineae, often form dense colonies on beaches close to the margins of terrestrial vegetation. These areas provide essential habitats for many animals and also help reduce erosion.

Zone 6: Strand

This is the highest riverine zone which is the last to be flooded and first to be exposed. It consists mainly of woody dicots and directly abuts terrestrial vegetation, sometimes without a distinct beach below it. In most instances, the vegetation here is dense, evergreen, and quite diverse. *Ficus heterophylla* L. f. (Moraceae) is a common creeping vine/woody climber found in this zone.

Polyalthia modesta (Pierre) Fin. & Gagnep. (Annonaceae), a shrub, *Fluggea virosa* (Roxb. ex Willd.) Voigt (Euphorbiaceae), a treelet, and *Crateva magna*, a small tree, are common. Woody climbers include: *Ventilago harmandiana* Pierre (Rhamnaceae), *Derris scandens*, *Bauhinia bracteata* (Grah. ex Bth.) Baker ssp. *bracteata* (Leguminosae, Caesalpinioideae), *Combretum trifoliatum* Vent. (Combretaceae), and *Glossocarya siamensis* Craib (Verbenaceae). Trees are plentiful and form a closed, single canopy in most places. Many of these trees are restricted to this zone. Some common examples are: *Homalium brevidens* Gagnep. and *H. caryophyllaceum* (Zoll. & Mor.) Bth. (Flacourtiaceae), *Pterospermum diversifolium* Bl. (Sterculiaceae, Photo 6), *Quassia harmandiana* (Pierre) Noot. (Simaroubaceae), *Crudia chrysantha* (Pierre) K. Sch. (Leguminosae, Caesalpinioideae), *Combretum quadrangulare* Kurz (Combretaceae), *Cordia dichotoma* Forst. f. (Boraginaceae), *Mallotus (Trewia) nudiflorus* (L.) Kul. & Welz. (Euphorbiaceae), *Nauclea orientalis* (L.) L. (Rubiaceae), and *Salix tetrasperma* Roxb. (Salicaceae).

Terrestrial Vegetation

Mainland areas adjacent to the Mekong River and all the islands in the river have vegetation which is totally different from riverine facies. All terrestrial areas are flat and lack relief. Some larger islands have seasonal ponds, exposed bedrock, and narrow, shallow flood/rain runoff channels. Due to centuries of human abuse, the original (i.e. before humans arrived) vegetation now ranges from degraded to destroyed. There is no place in the study area that has not been disturbed by people with their associated settlements, cattle, annual fires, agriculture, and continuous logging. There are four basic forest types, none pristine, which often merge together.

Mixed evergreen + deciduous, seasonal, hardwood forest (mxf)

The original, pre-human impact, forest facies in much of the area was mxf, most of which has been obliterated or transformed into other facies. Only a few islands, e.g. Norong and Rongnieu, have vestiges of this kind of forest, which as the name indicates, is a mixture of evergreen + deciduous species [3,4,6]. The understory and ground flora are mostly more evergreen than in other forest types, while the trees, up to 25 m tall, are a mixture of evergreen and deciduous species.

Frequently seen herbs in mxf are: *Desmodium heterocarpon* (L.) DC. ssp. *angustifolium* Oha. (Leguminosae, Papilionoideae), *Justicia ventricosa* Wall. (Acanthaceae), *Calcareoboa bonii* (Pell.) Burt. (Gesneriaceae)—all dicots; *Carex indica* L. var. *indica* (Cyperaceae), a monocot; and several Pteridophytes, viz. *Selaginella roxburghii* (Hk. & Grev.) Spring var. *roxburghii* (Selaginellaceae), and Polypodiaceae epiphytes *Drynaria quercifolia* (L.) J. Sm., *Pyrrosia lanceolata* (L.) Farw., and *P. stigmosa* (Sw.) Ching.

An understory of mostly evergreen shrubs and treelets, many spiny, consists of *Polyalthia evecta* (Pierre) Fin. & Gagnep. and *Desmos chinensis* L. (both Annonaceae), *Atalantia monophylla* (L.) DC. (Rutaceae), *Memecylon lilacinum* Zoll. & Mor. (Melastomataceae), *Ixora finlaysoniana* Wall.

ex G. Don and *I. nigricans* R. Br. ex Wight & Arn. (Rubiaceae), and *Streblus asper* Lour. var. *asper* (Moraceae).

Evergreen trees, formerly common and now sparse and scattered, include: *Xylopia pierrei* Hance (Annonaceae), *Mammea siamensis* (Miq.) T. And. (Guttiferae, Photo 48), *Acronychia pedunculata* (L.) Miq. (Rutaceae), *Irvingia malayana* Oliv. ex Benn. (Irvingiaceae), *Lepisanthes tetraphylla* (Vahl) Radlk. (Sapindaceae), *Carallia brachiata* (Lour.) Merr. (Rhizophoraceae), *Eugenia fruticosa* (DC.) Roxb. and *E. grandis* Wight var. *grandis* (Myrtaceae), *Diospyros bejaudii* Lec. (Ebenaceae), *Chaetocarpus castanocarpus* (Roxb.) Thw., and *Drypetes roxburghii* (Wall.) Huru. (both Euphorbiaceae). Dicot woody climbers are frequent with: *Artabotrys hexapetalus* (L.f.) Bhar. (Annonaceae), *Celastrus paniculatus* Willd. (Celastraceae), *Tetrastigma harmandii* Pl. (Vitaceae), and *Dalbergia entadoides* Pierre ex Gagnep. (Leguminosae, Papilionoideae). The most obvious indicators of mxf are three species of *Calamus* (Palmae, rattans), viz. *C. rudentum* Lour., *C. siamensis* Becc. var. *siamensis* (the most common species), and *C. viminalis* Willd.

Bamboo + deciduous, seasonal, hardwood forest (bb/df)

This is the most prevalent and persistent forest type in the area. Severely degraded to destroyed mxf areas are replaced with bb/df, thus many forested areas are a mixture of declining mxf and rapidly developing bb/df—the absence of bamboo and lack of *Calamus* in bb/df being a good indicator of the actual forest facies. The bamboo component of bb/df consists almost entirely of *Bambusa bambos* (L.) Voss. ex Vilm. (Gramineae, Bambusoideae). This species, which is densely clumped, fire-resistant, and severely thorny, varies from dominating bb/df to absent, which depends on the extent of logging and fire on each island. In general, bb/df is more open, irregular and predominantly deciduous than mxf. Many bb/df areas include much secondary growth, thus there is great variation in the composition of bb/df on the islands.

The ground flora includes many annual and deciduous dicots and monocots, most of which flower and fruit during the rainy season. Typical annual dicots are: *Crotolaria acicularis* Ham. ex Bth., *C. montana* Hey. ex Roth, and *Mecopus nidulans* Benn. (all Leguminosae, Papilionoideae); *Borreria brachystema* (R. Br. ex Bth.) Val. and *Hedyotis verticillata* (L.) Lmk. (both Rubiaceae), *Lindernia ciliata* (Colsm.) Penn. and *Torenia violacea* (Aza. ex Blanco) Penn. (both Scrophulariaceae), *Dipteracanthus repens* (L.) Hassk. and *Justicia ventricosa* Wall. (both Acanthaceae).

Deciduous monocots are very diverse and provide most of the ground cover during the rainy season, which is best developed during July-September. Typical representatives are: *Murdannia edulis* (Stokes) Faden (Commelinaceae), *Halopogon brachystachys* Craib (Marantaceae), and Zingiberaceae with *Curcuma aurantiaca* van Zijp, *Globba schomburgkii* Hk. f. var. *schomburgkii*, and *Zingiber zerumbet* (L.) Sm. var. *zerumbet*. Orchidaceae are very prominent in bb/df with: *Brachycorythis helferi* (Rchb. f.) Summ., *B. laotica* (Gagnep.) Summ., *Habenaria lucida* Wall. ex Lindl., *Liparis rheedii* (Bl.) Lindl. and *L. siamensis* Rol. ex Dow., *Carex tricephala* Boeck. and *Fimbristylus dichotoma* (L.)

Vahl ssp. *dichotoma* (both Cyperaceae) with *Aristida setacea* Retz., *Panicum notatum* Retz., and sometimes *Chrysopogon nemoralis* (Balan.) Holtt. (all Gramineae) also providing much cover.

Woody climbers in bb/df are all deciduous with: *Uvaria hahnii* (Fin. & Gagnep.) Sincl. (Annonaceae), *Capparis micracantha* DC. ssp. *micracantha* (Capparaceae), *Harrisonia perforata* (Blanco) Merr. (Simaroubaceae, Photo 7), *Calycopteris floribunda* (Roxb.) Lmk. and *Combretum latifolium* Bl. (both Combretaceae), *Ziziphus cambodiana* Pierre var. *cambodiana* and *Z. oenoplia* Mill. var. *oenoplia* (Rhamnaceae).

Trees in bb/df are mostly deciduous, the tallest ones being 20-25 m tall. Selected logging has resulted in significant decreases in many tall trees with valuable wood which has been used to build houses and boats. This extensive timber extraction has resulted in the extirpation of all tall trees on many islands and their depletion on a few islands where some of these trees still exist. The most exploited trees are *Dipterocarpus alatus* Roxb. ex G. Don and *Hopea odorata* Roxb. (both Dipterocarpaceae), *Xylia xylocarpa* (Roxb.) Taub. var. *kerrii* (Craib & Hutch.) I. Niels (Leguminosae, Mimosoideae), *Sindora siamensis* Teysm. ex Miq. var. *siamensis* (Leguminosae, Caesalpinioideae), *Anogeissus acuminata* (Roxb. ex DC.) Guill. & Perr. and *Terminalia bellirica* (Gaertn.) Roxb. (both Combretaceae)—all deciduous, and *Irvingia malayana* Oliv. ex Benn. (Irvingiaceae), an evergreen species. As a result of the loss of forest integrity, erosion of organic material in the soil, fires, and depletion of wildlife, the forest facies has changed and is now dominated by trees which are not cut due to their inferior wood value, and most of which produce small, wind-dispersed seeds and do not require animals for distribution. *Lagerstroemia cochinchinensis* Pierre var. *ovalifolia* Furt. & Mont.—the most common component and *L. lecomtei* Gagnep. (Lythraceae), *Cratoxylum cochinchinense* (Lour.) Bl. and *C. formosum* (Jack) Dyer ssp. *pruniflorum* (Kurz) Gog. (Guttiferae), and *Terminalia triptera* Stapf (Combretaceae) are typical examples. *Canarium subulatum* Guill. (Burseraceae), *Schleichera oleosa* (Lour.) Oken (Sapindaceae), *Spondias pinnata* (L. f.) Kurz (Anacardiaceae), and *Vitex peduncularis* Wall. ex Schauer (Verbenaceae) are deciduous trees with animal-dispersed fruits that have not been extensively selected for logging. Many of these surviving trees have been damaged by fire or cutting and have coppicing trunks, irregular boles, and burned interiors. Annual fires during January-May, grazing, and continuous cutting of vegetation by encroachers have caused the elimination of seedlings and saplings of the tall, valuable tree species as well as deformed or otherwise damaged the growth of the remaining species.

Many secondary growth (sg) trees have become established in bb/df, especially with *Grewia eriocarpa* Juss. and *Microcos paniculata* L. (both Tiliaceae), *Markhamia stipulata* (Wall.) Seem. ex K. Sch. var. *stipulata* (Bignoniaceae), and *Trewia orientalis* (L.) Bl. (Ulmaceae). This aspect will be discussed in the section about secondary growth.

Deciduous, dipterocarp, seasonal, hardwood forest (ddf)

Throughout many areas in the lower elevations of northern Thailand and extending to the Seephandon wetlands, this kind of forest normally has an oak (Fagaceae) component, especially

Quercus kerrii Craib [3,4,6]. No Fagaceae was found in the study area, although it is strongly suspected that this species of *Quercus* used to be there. This species is exploited for its hard wood, which makes an excellent charcoal and construction wood, as well as a source of tannins. The nuts (acorns) require animals for distribution, thus reestablishment of this species may also have been retarded by loss of wildlife throughout the region. This kind of forest is also known as savanna and is a fire-climax facies with a very distinct flora that is most extensive on the eastern mainland in the vicinity of Ou Chralang (village) as well as on Norong and Rongnieu islands. The general vegetation structure is open and single-storied, while in the rainy season the often dense ground flora 1-2 m tall is present (Photo 8). Typically bamboos are absent and most woody climbers are found on termite hills (termitaria). During the dry season the trees are leafless and the ground flora is bare and usually burned, exposing the poor, rocky soil. Ponds are scattered throughout ddf and are dry from November to June. Due to disturbance, ddf and bb/df often merge forming irregular boundaries which often contain a mixture of their respective species. In most instances the flora in bb/df and ddf is different.

The ground flora in ddf is mostly deciduous with a peak of development and flowering during July-September, providing a valuable habitat to many recently extirpated animal species. Domestic cows and water buffalo now roam freely in these places. As in bb/df the ground flora in ddf is very diverse and most luxurious in the rainy season, although the flora in these two kinds of forests is mostly different. Annual herbs include some common dicots, viz. *Salomonioia cantoniensis* Lour. (Polygalaceae), *Polycarpaea corymbosa* (L.) Lmk. (Caryophyllaceae), *Osbeckia setoso-annulata* Gedd. (Melastomataceae), and *Heliotropium strigosum* Willd. (Boraginaceae). Scrophulariaceae are very abundant with: *Lindernia spathacea* (Bon.) Bon., *L. viscosa* (Horn.) Bold., *Pierranthus capitatus* (Bon.) Bon., and *Pseudostriga cambodiana* Bon. Some annual monocots, also diverse, are: *Eriocaulon sexangulare* L. (Eriocaulaceae), *Murdannia gigantea* (Vahl) Bruck. (Commelinaceae); *Cyperus castaneus* Willd., *Fimbristylis adenolepus* Kern, *Liphocarpa microcephala* (R. Br.) Kunth and *L. hemisphaerica* (Roth) Goet.—all Cyperaceae. Gramineae compose the bulk of the ground flora and often form dense clusters. Examples of annual grasses are: *Andropogon chinensis* (Nees) Merr., *Capillipedium cinctum* (Steud.) A. Camus, *Enteropogon dolichostachya* (Lag.) Keng ex Laza., *Eragrostis bipinnata* (L.) Musc., *E. uniolooides* (Retz.) Nees ex Steud., *Gymnopogon delicatulus* (Cl.) Bor, and *Microchloa indica* (L. f.) P. Beauv.

Deciduous dicot herbs are represented by *Eriosema chinense* Vogel (Leguminosae, Papilionoideae), *Knoxia brachycarpa* R. Br. ex Hk. f. (Rubiaceae), and *Euphorbia parviflora* L. (Euphorbiaceae). Deciduous monocots are far more abundant, with *Costus speciosus* (Koen.) J. E. Sm., *Curcuma gracillima* Gagnep., and *Kaempferia siamensis* Siri. (all Zingiberaceae, Photo 9); *Habenaria acuiifera* Wall. ex Lindl., *H. mandersii* Coll. & Hemsl., and *H. rumphii* (Brogn.) Lindl. (Orchidaceae). Cyperaceae are well-represented with *Cyperus leucocephalus* Retz., *Rhynchospora rubra* (Lour.) Mak., and *R. longisetis* R. Br. Robust, deciduous Gramineae are the most conspicuous component of ddf ground flora. Some common examples are: *Aristida chinensis* Munro, *Capillipedium annamense* A. Camus, *C. assimile* (Steud.) A. Camus, *Chrysopogon nemoralis* (Balan.) Holtt., *Ischaemum indicum* (Houtt.) Merr., and *Polytocha digitata* (L. f.) Druce.

Deciduous shrubs, scattered and mostly below 1 m tall, include: *Dillenia suffruticosa* (Griff.) Mart. (Dilleniaceae), *Ellipeltopsis cherrevensis* (Pierre ex Fin. & Gagnep.) R. E. Fr. (Annonaceae), *Desmodium pulchellum* (L.) Bth. and *Lespedeza henryi* Schindl. (both Leguminosae, Papilionoideae), and *Bridelia harmandiana* Gagnep. (Euphorbiaceae).

The ddf also includes several, mostly evergreen, epiphytes, e.g. *Hoya diversifolia* Bl. and *H. kerrii* Craib (Asclepiadaceae), vines; *Dendrophthoe pentandra* (L.) Miq. and *D. curvata* (Bl.) Miq. (Loranthaceae, Photo 10), hemi-parasitic shrubs; and several Orchidaceae, *Cleisomeria pilosulum* (Gagnep.) Seid. & Garay being the only one found with flowers. *Clitoria mariana* L. (Leguminosae, Papilionoideae), *Thunbergia similis* Craib (Acanthaceae)—both dicots; and *Smilax verticalis* Gagnep. (Smilacaceae), a monocot, are the most common deciduous vines.

Seasonal ponds are scattered in ddf and have mostly annual, aquatic to amphibious herbs growing there. This will be discussed in the following section on ponds.

Trees in ddf are typically scattered, the species well-distributed, and almost all deciduous. Dipterocarpaceae are most abundant, hence the name for this forest type. The dominant dipterocarps are: *Dipterocarpus intricatus* Dyer (Photo 11) and *D. tuberculatus* Roxb. var. *tuberculatus*, *Shorea obtusa* Wall. ex Bl. and *S. siamensis* Miq. var. *siamensis*. Other common trees in ddf are: *Dillenia pentagyna* Roxb. (Dilleniaceae), *Bombax anceps* Pierre var. *anceps* (Bombacaceae), *Berrya mollis* Wall. ex Kurz Tiliaceae), *Buchanania glabra* Wall. ex Hk. f. and *B. lanzan* Spreng. (Anacardiaceae), *Pterocarpus macrocarpus* Kurz (Leguminosae, Papilionoideae), *Terminalia alata* Hey. ex Roth (Combretaceae), *Careya arborea* Roxb. (Lecythidaceae), *Mitragyna rotundifolia* (Roxb.) O.K. and *Morinda tomentosa* Hey. ex Roth (both Rubiaceae), *Diospyros ehretioides* Wall. ex G. Don (Ebenaceae), and *Aporosa octandra* (B.-H. ex D. Don) Vick. var. *yunnanensis* (Pax & Hoffm.) Schot (Euphorbiaceae).

Ponds

Shallow, rain-fed, ephemeral ponds are found scattered in all terrestrial forest types, especially ddf, during July to October (Photo 12). These habitats are totally dry during November to May. The amphibious to aquatic vegetation in ponds differs from riverine Zone 1 facies in being much more abundant, diverse, and with many more dicots. Almost all vascular plants found in ponds are rooted in mud, have an annual cycle from May to November, and include many more annuals than deciduous perennials.

Typical examples of dicots, all annuals, found in ponds are: *Nymphoides (Limnantherum tonkinense* Dop, Gentianaceae); many Scrophulariaceae, viz. *Dopatrium micrantha* (Bth.) Bth., *Lindernia cambodgiana* (Bon.) Phil. and *L. viatica* (Kerr ex Barn.) Phil. Annual monocots include Hydrocharitaceae with *Hydrilla verticillata* (L. f.) Roy., *Lagarosiphon roxburghii* Bth. and *Ottellia lanceolata* (Gagnep.) Dandy; *Sagittaria guaynensis* Humb. ssp. *lappula* (D. Don) Bogin and *S. trifolia* L. (Alismataceae, Photo 13), *Monochoria vaginalis* (Burm. f.) Presl (Pontederiaceae), and some *Typhonium flagelliforme* (Lodd.) Bl. (Araceae). Cyperaceae are well-represented with: *Cyperus*

compactus Retz., *C. iria* L., *C. pilosus* Vahl; *Eleocharis acutangula* (Roxb.) Schult., *Fimbristylis miliacea* (L.) Vahl, and *F. tetragona* R. Br. *Echinochloa colona* (L.) Link (Gramineae) is also common.

No perennial dicots were found and only two deciduous, perennial monocots were seen, viz. *Cyperus brevifolius* (Rottb.) Hassk. (Cyperaceae) and *Ceratopteris thalictroides* (L.) Brongn. (Parkeriaceae, a pteridophyte).

Secondary growth (sg) and disturbed areas (da)

Because of extensive disturbance and destruction of the terrestrial vegetation, much of the initial (primary) vegetation in the study area has not regenerated. Secondary growth species have successfully invaded and matured in disturbed areas. For convenience, herbaceous plants, i.e. weeds, are included here since these plants are the initial colonisers of open land and are succeeded by woody species that are different from the plants they have replaced.

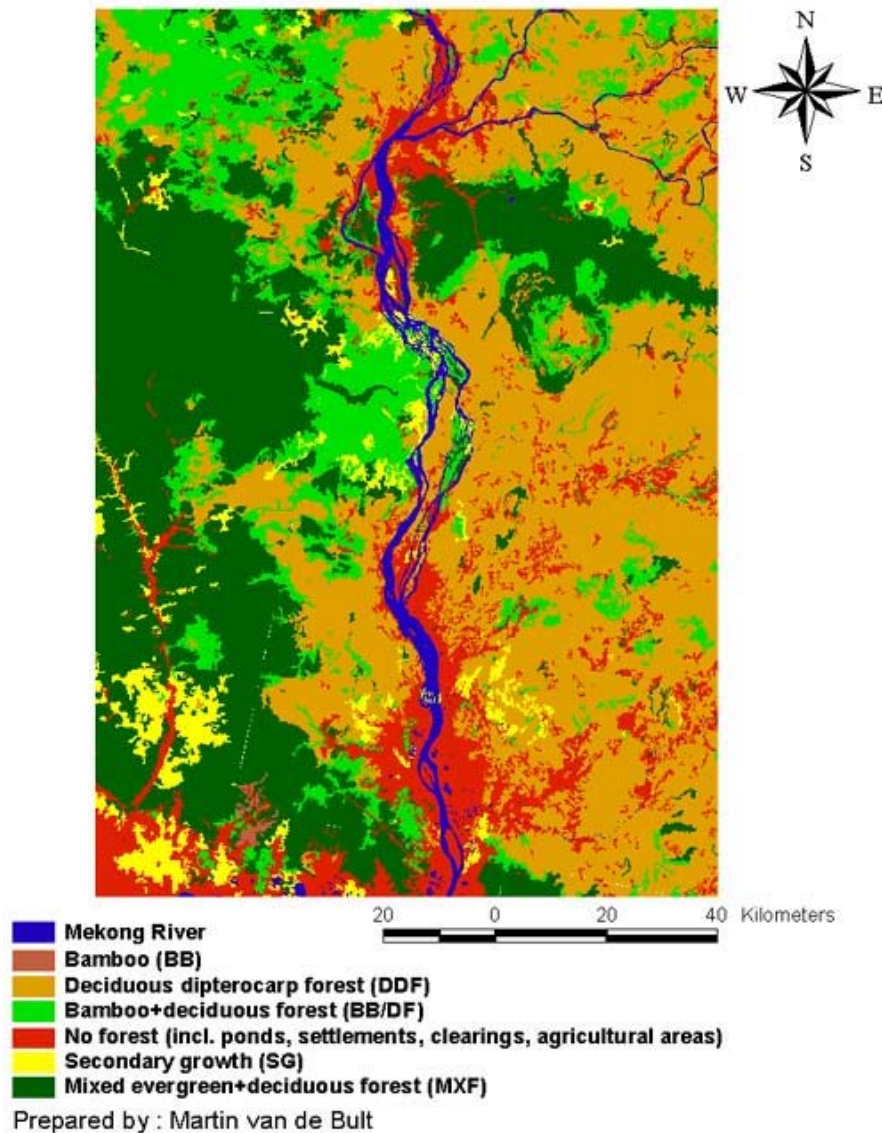
Many of the first herbaceous invaders found in gaps, clearings, or fields are the same as found on sandbars and beaches (riverine Zone 5), but in far more abundance and most being rapidly growing, annual herbs. Some of the more widespread dicot weeds are: *Mimosa diplotricha* C. Wright ex Sauv. var. *diplotricha* (a scrambling vine) and *M. pudica* L. (Leguminosae, Mimosoideae), *Ludwigia hyssopifolia* (G. Don) Exell (Onagraceae), *Mollugo pentaphylla* L. (Aizoaceae), *Ageratum conyzoides* L. and *Eupatorium odoratum* L. (both Compositae), *Heliotropium indicum* L. (Boraginaceae), *Solanum nigrum* L. (Solanaceae), *Alternanthera sessilis* L. var. *sessilis* (Amaranthaceae), *Phyllanthus amarus* Schum. & Thonn. and *Phyllanthus urinaria* L. (Euphorbiaceae). The most common monocot weeds are perennial Gramineae, viz. *Eleusine indica* (L.) Gaertn., *Imperata cylindrica* (L.) P. Beauv. var. *major* (Nees) C. E. Hubb. ex Hubb. & Vaugh., *Phragmites vallatoria* (Pluk. ex L.) Veld., and *Thysanolaena latifolia* (Roxb. ex Horn.) Honda—the latter three species being very robust and gregarious.

Woody secondary growth species are fast-growing, weak-wooded, and short-lived. Trees predominate many da/sg places with *Polyalthia cerasoides* (Roxb.) Bth. ex Bedd. (Annonaceae), *Grewia eriocarpa* Juss. and *Microcos paniculata* L. (both Tiliaceae), *Markhamia stipulata* (Wall.) Seem. ex K. Sch. var. *stipulata* (Bignoniaceae), *Antidesma ghaesembilla* Gaertn. (Euphorbiaceae), and *Trema orientalis* (L.) Bl. (Ulmaceae). *Harrisonia perforata* (Blanco) Merr. (Simaroubaceae), *Ziziphus cambodiana* Pierre var. *cambodiana* and *Z. oenoplia* Mill. var. *oenoplia* (Rhamnaceae)—all wickedly spiny; and *Anomianthus dulcis* (Dun.) Sincl. (Annonaceae) are common deciduous woody climbers present in degraded bb/df and da/sg.

Vegetation Map

A preliminary vegetation map of the Mekong River basin, Cambodia, was produced by the GIS section, WWF Cambodia in 2006. A satellite image map, Landsat7etm (February 2002) was used to

produce this map. A more accurate vegetation map of the study area (Map 3) was produced by Martin van de Bult after incorporating ground truthing data and GPS data points from all survey teams with information on vegetation types. Vegetation classification follows the terminology used in this report.



Map 3. Vegetation Map of the Mekong River, Cambodia

Rare Species

From this preliminary survey it is apparent that several species are rare to uncommon, some of them as result of exploitation (trees) and others naturally so. Rare trees include *Hopea odorata* Roxb. (Dipterocarpaceae), *Cynometra dongnaiensis* Pierre (Leguminosae, Caesalpinioideae), *Duabanga grandiflora* (Roxb. ex DC.) Walp. (Sonneratiaceae), *Pouteria obovata* (R. Br.) Baeh. (Sapotaceae)—

all dicots, and *Caryota maxima* Bl. (Palmae), a monocot. *Brachystelma kerrii* Craib and *Ceropegia thorelii* Cost. (both Asclepiadaceae, Photo 14), *Aeginetia acaulis* (Roxb.) Walp. (Orobanchaceae), a leafless ground parasite; and *Burmannia wallichii* (Miers) Hk. f. (Burmanniaceae), a monocot and very delicate ground saprophyte; *Typhonium laoticum* Gagnep., in bb/df, and *T. flagelliforme* (Lodd.) Bl. (Araceae), in bb/df ponds are also rare. Several pteridophytes are also in this category with *Helminthostachys zeylanica* (L.) Hk. and *Ophioglossum petiolatum* Hk. (both Ophioglossaceae), terrestrial and deciduous; and *Platyserium wallichii* Hk. (Polypodiaceae), a massive evergreen epiphyte.

New Records

As far as it can be determined, 23 new records have been found for the Cambodian flora. Notes on distribution, forest type, and voucher specimens are provided.

1. *Acacia leucophloea* (Roxb.) Willd. (Leguminosae, Mimosoideae); India, Burma, Thailand, southern Viet Nam, Java-Timor; bb/df; observed only
2. *Desmodium flexuosum* Wall. ex Bth. (Leguminosae, Papilionoideae); Burma, Thailand ddf; 06-874 (Photo 15)
3. *Indigofera zollingeriana* Miq. (Leguminosae, Papilionoideae); China, Taiwan, Laos, Viet Nam, Indonesia; da/sg; 07-123 (fruits)
4. *Rhodamnia cinerea* Jack var. *cinerea* (Myrtaceae); Thailand, Malay Peninsula, Borneo, Sumatra, Java; bb/df-mxf; 07-600
5. *Brachystelma kerrii* Craib (Asclepiadaceae); southern China, Thailand, Viet Nam; ddf; 07-5
6. *Diospyros oblonga* Wall. ex G. Don (Ebenaceae); India, Burma, Thailand, Malay Peninsula, Indonesia; bb/df; 07-598 (fruits)
7. *Ardisia attenuata* Wall. ex DC. (Myrsinaceae); China, Burma, Thailand, Viet Nam; mxf; Palee 1083 (Photo 16)
8. *Calcareoboea bonii* (Pell.) Burt (Gesneriaceae); Thailand, Laos Viet Nam; mxf; 07-441
9. *Kaempferia siamensis* Siri. (Zingiberaceae); Thailand, ddf, 07-522
10. *Typhonium laoticum* Gagnep. (Araceae); Thailand, Laos; ponds in ddf; 07-483
11. *Brachycorythis helferi* (Rchb. f.) Summ. (Orchidaceae); Assam (E. India), Burma, Laos, Thailand; bb/df, 07-450
12. *Habenaria viridiflora* (Rottl. ex Sw.) R. Br. (Orchidaceae); Sri Lanka, India, Thailand; ddf, 07-607
13. *Liparis rheedii* (Bl.) Lindl. (Orchidaceae); Viet Nam, Thailand, Malay Peninsula, Sumatra; bb/df, 07-438
14. *Liparia siamensis* Rol. ex Dow. (Orchidaceae); Burma, Thailand, Laos; mxf, 07-440
15. *Nervilia punctata* (Bl.) Schltr. (Orchidaceae); Malay Peninsula, peninsular Thailand, Sumatra, Java; bb/df, 07-601 (leaves)
16. *Nervilia calcicola* Kerr (Orchidaceae); Malay Penisular, Thailand, Laos; bb/df, observed

17. *Vandopsis gigantea* (Lindl.) Pfitz. (Orchidaceae); China, Laos, Thailand, Burma, Malay Peninsula; mxf, 07-155
18. *Fimbristylis brunneoides* Kern (Cyperaceae); Thailand, rv 2 & 3, 07-121
19. *Fimbristylis jucunda* (Cl.) Kern (Cyperaceae); Thailand, Laos, Viet Nam; rv 2 & 3, 07-122
20. *Murdannia discreta* (Craib) Thit. & Faden (Commelinaceae); northern Thailand; ddf; 07-417
21. *Amorphophallus koratensis* Gagnep. (Araceae); Thailand and Laos, bb/df; 07-145 (inflorescences), 07-425 (leaves)
22. *Cryptocoryne crispatula* Engl. var. *crispatula* (Araceae); Thailand and Laos, rv 2 & 3, 06-811
23. *Hemisorghum mekongense* (A. Camus) C.E. Hubb. ex Bor (Gramineae); Laos, Thailand, Burma; rv 5, 07-459; Photo 17

New Species

One new species, *Amorphophallus hemicryptus* Hett., (Araceae, Maxwell 06-896) was found on the west side of Kring Island on 16 November 2006 in bb/df (Photo 18). According to Dr. Wilbert Hetterscheid at Wageningen University, Netherlands, there are 8 species of *Amorphophallus* in Cambodia, *Amorphophallus hemicryptus* Hett. being the only one endemic to the country. Some of the unidentified species collected may perhaps be new, but taxonomic expertise for them is presently lacking.

Conservation

In recent years the islands in the study area have experienced an accelerated rate of encroachment and devastation by settlers moving into the region. All aspects of biodiversity have suffered because of these rampant, uncontrolled, and very destructive assaults on natural systems. Zones 1-5 of the riparian vegetation are not in any imminent danger, but Zone 6 and the terrestrial forests are in a deplorable condition and require immediate action to prevent further, essentially irreparable, degradation (Photos 19-26). Those islands which have been settled and/or deforested, e.g. Thaan, Khlee-ay, Dambong, Kondul, and Koh Tongdaeng can be sacrificed for settlement while several other islands, totally or in part, should be protected. Norong, Rongnieu, and Kring islands are recommended for protection because they have the most extensive and relatively intact forests. The ddf on Norong and Rongnieu islands should be protected since it is a vital habitat for wildlife as well as the most extensive and intact forest of this kind in the study area. Remnant mxf and bb/df areas on Kring, Norong, Rongnieu, and Veng Thom islands are also important since they still have viable populations of many plants which are now absent on other islands.

Being familiar with the ability of the Cambodian Government to implement official conservation action in the study area, it is suggested that some policies, which have become effective in northern Thailand, be considered for the Mekong River. A friendly relation must exist between

conservation authorities and people on the islands. This can be initiated by having participatory discussions between the government representatives, WWF Cambodia, villagers and district leaders, school teachers, and interested outsiders. Discussions and training on the need for protection and effective conservation of all natural resources in the area should be explained, discussed, and agreed on along with official policies being implemented by the Cambodian Government. Migration, both seasonal and permanent, must be controlled since this is the basic reason that the area has been so severely degraded. Land and grazing rights, settlement locations and boundaries, as well as detailed regulations concerning land use must also be established. Some policies should be immediately implemented, viz. logging must be forbidden and all chain saws banned for use, hunting must stop, especially cutting trees to catch monkeys; burning forests must also cease. Islands which are presently settled and those which have been deforested should be replanted with indigenous vegetation. An important factor for both government officials and villagers to realise is that once the remaining forests disappear on the islands, it will take many decades (centuries?) for similar vegetation to develop. Recent destruction of the forest vegetation in many places is proof of this since the valuable trees that have been cut do not immediately reappear; da/sg comes first and the slow process of forest succession ensues. If people want to live on the islands they must not destroy the forest since if they do their future there will be short. Assistance in actually how to live in harmony with nature, modern agriculture methods which reduce soil erosion/degradation, prohibiting burning, and less destructive grazing by cattle can all be taught and practiced by the villagers. The problem with most local people is that they prefer not to abandon an established tradition, e.g. burning fields and exploiting all forest resources, until alternatives are proven to be better. This is exactly what must be done in the study area. Although strict conservation regulations are required, social contact must be made with villagers to convince them that destructive exploitation of the forest is not a sustainable way to live with presently very limited resources. If these people are concerned about their families in the future, they should be aware that continued devastation of the forests will certainly make life there more difficult to impossible in the near future. Dictatorial policies and militaristic enforcement, as in Thailand, are not recommended and will surely fail in Cambodia.

Future Botanical Work

This report can only be considered a preliminary study since not all the islands were surveyed throughout the year. A complete flora of the study area will require frequent and extensive collecting. Further collections, studies on forest dynamics, plant distributions, and observations on phenology will certainly add more vital information to the database as well as the vegetation map. Future reforestation and conservation will require more precise information of the location of seed sources, planting sites, and habitat requirements.

Specimen Distribution

When possible, at least 4 specimens were collected of each species. One set was left at WWF Cambodia in Phnom Penh for donation to a future herbarium in Cambodia. CMU Herbarium maintains one set while duplicates will be sent to the National Herbarium Netherlands at Leiden and Harvard University Herbarium, USA. A complete set of all photographs taken are at CMU Herbarium and with Mr. Hourt at WWF Cambodia, Phom Penh.

Flora and Species Richness

A total of 683 species of vascular plants and 7 species of Bryophyta (mosses) were collected and recorded during the study (Table 1). The vascular flora and Bryophyta are also enumerated in an extensive database (Appendix 2). The database includes data on habit, habitat, abundance, elevation, life mode and leafing, flowering, and fruiting phenology.

Table 1. Summary of collecting and survey results

Division	Families	Species, ssp., var.
Angiospermae, Dicotyledonae	92	488
Angiospermae, Monocotyledonae	24	178
Pteridophyta	7	17
Bryophyta	7	7
Total	127	690

This report can only be considered a preliminary study since not all the islands were surveyed throughout the year. A complete flora of the study area will require frequent and extensive collecting. Further collection studies on forest dynamics, plant distributions, and observations on phenology will certainly add more vital information to the database as well as the vegetation map. Future reforestation and conservation will require more precise information of the location of seed sources, planting sites, and habitat requirements.

Acknowledgements

Funding for this project was provided by three generous donors, viz. Coca-Cola Company, Wetlands Alliance Programme, and WWF Greater Mekong Programme; for which I am very grateful. WWF Cambodia, organiser and facilitator of this research project, is congratulated for their vision in developing this project, complete support, and efficient planning. Mr. T. Seng (WWF Cambodia, Country Director) and Mr. R. Zanre (WWF Dolphin project) are especially thanked. Mr. N. Narith (first trip) and Mr. Eanghourt Khou (second and third trips) served as Cambodian counterparts and

provided essential assistance. Dr. P. Palee (first and second trips), Mr. M. van de Bult (third trip), and Mrs. Sai Jai (all trips) gave me valuable field assistance. The Cambodian boatmen and guides/helpers were a vital part of the project. I thank U. Bon, U. Kheng, and S. Channy—boatmen, and U. Soh Khon and S. Nin, guides/helpers for their cooperation, expertise, and friendship during all three trips. Mr. R. Timmins gave me some samples of riverine aquatic plants which were most appreciated. Dr. W. Hettterscheid at Wageningen University, Netherlands provided taxonomic advice on some Araceae, for which I am grateful. Dr. Jan Bastmeijer (Emmen, Netherlands) kindly gave me some information on *Cryptocoryne* (Araceae) which I needed. Dr. R. B. Faden (US) and Dr. T. Thitimetharoch (KKU) confirmed Commelinaceae for me as well as indicated that *Murdannia discreta* (Craib) Thit. & Faden (Commelinaceae) was new for the Cambodian flora. Bryophytes were identified in the CMU Herbarium Bryology Section by Miss G. Wonggunah and Miss S. Kornchalert.

P. Palee and M. van de Bult also helped in preparing the database, photography, GIS operation, computerised typing, and production of the report. Mr. M. Bezuijen, WWF Laos, is thanked for efficiently coordinating the project. Dr. E. L Webb (Asian Institute of Technology, Bangkok) kindly made some useful comments on the manuscript. Final corrections on the manuscript were added by my colleagues Dutsadee Nilubol and David Moore.

References

1. F. Gagnepain, "Introduction. Flore Generale de L'Indo-Chine, tome preliminaire", Masson, Paris, **1943**, pp.1-49 and Map I.
2. M. R. Bezuijen, R. J. Timmins, and T. Seng, "Biological Surveys of the Mekong River between Kratie and Steung Treng Towns, Northeast Cambodia, 2006-2007", WWF Greater Mekong Programme, Phnom Penh, Cambodia, **2008**.
3. J. F. Maxwell, "Vegetation in the Seephandon Wetland, Lao PDR", *Nat. Hist. Bull. Siam Soc.*, **2000**, 48, 47-93.
4. J. F. Maxwell, "Vegetation in the Siphandon Wetlands", CESVI, Bergamo (Italy), **2001**, pp.47-54, 166-184.
5. J. F. Maxwell, "The Invasion of *Mimosa pigra*", *Watershed*, **2001a**, 8, 49-50.
6. J. F. Maxwell, "A synopsis of the vegetation of Thailand", *Nat. Hist. J. Chulalongkorn Univ.*, **2004**, 4, 19-29.

Appendix 1: Photos

Photo 1. Many riverine areas do not have all zones clearly represented. This is a view of the SE side of Rongnieu Island during the hot, dry season where Zones 2-4 are absent. Zones 5 and 6 (beach and strand) as well as degraded terrestrial vegetation are distinct. 11 March 2007, photo P. Palee.



Photo 2. Zones 1 and 2 at the height of the dry season with the lowest water level of the Mekong River, showing exposed rocks and terrestrial vegetation in the background. Real Island, 10 March 2007, photo P. Palee.



Photo 3. Zone 2 showing *Telectadium edule* H. Baill. (Asclepiadaceae) clustered in rocky places. Norong Island, 17 March, photo P. Palee.



Photo 4. Zone 4 showing *Anogeissus rivularis* (Gagnep.) Lec. (Combretaceae) and *Acacia harmandiana* (Pierre) Gagnep. (Leguminosae, Mimosoideae) with canopies bent by the river current and trapping various debris (logs, bamboo, trash, etc.) when the water level is the highest. Kring Island, 1 August 2007, photo M. v.d. Bult.



Photo 5. Zone 6 with dense adventitious roots of *Ficus virens* Ait. (Moraceae) which aid in soil stability. Svan Island, 1 August 2007, photo Eanghourt Khou.



Photo 6. *Pterospermum diversifolium* Bl. (Sterculiaceae), a common evergreen tree often found in Zone 6 produces large, woody, 5-angled (-valved) capsules with many winged seeds from October to March. Sompong Thom Island, 19 November 2006, photo P. Palee; Maxwell 06-927.



Photo 7. *Harrisonia perforata* (Blanco) Merr. (Simaroubaceae) is a common, deciduous scandent-treelet species found in bb/df, da, and sg. It is easily recognized by the spine-tipped, mammiform tubercles covering the stems. Flowers are produced in May-June and fruits, which are eaten by animals, during June-August. Kring Island, photo M. v.d. Bult 937.



Photo 8. The general aspect of ddf is open, single-storied, with a dense 1-1.5 m tall herbaceous ground flora. Annual fire damage in the dry season has prevented woody species from regenerating. Rongnieu Island, 6 August 2007, photo Eanghourt Khou.



Photo 9. *Kaempferia siamensis* Siri. (Zingiberaceae) is a common, deciduous, ground herb in ddf. The flowers have 3 sepals (not visible), 3 linear corolla lobes, 2 oblong staminodes, and a colourful, bifid lip. The paired leaves are flat on the ground. This is a new record for the Cambodian flora. Rongnieu Island, 7 August 2007, photo M. v.d. Bult, Maxwell 07-522.



Photo 10. *Dendrophthoe curvata* (Bl.) Miq. (Loranthaceae) is one of the three evergreen, epiphytic, hemiparasitic shrubs found on the islands. They infect various tree branches in all forests and produce berries eaten by birds. Rongnieu Island, 12 March 2007, photo P. Palee 1242.



Photo 11. *Dipterocarpus intricatus* Dyer (Dipterocarpaceae), a common, deciduous tree in ddf, displays showy flowers during February-March and develops ripe 2-winged fruits in April along with new leaves. These fruits, with the bark of the tree in the background, are still immature. Rongnieu Island, 13 March 2007, photo Eanghourt Khou, Maxwell 07-75.



Photo 12. Seasonal ponds are common on many islands, especially in ddf. They are typically shallow, of various sizes, have mud substrate, and have water from about June to October. From November to May they are dry and lack vegetation. Rongnieu Island, 8 August 2007, photo M. v.d. Bult.



Photo 13. *Sagittaria trifolia* L. (Alismataceae) is an uncommon, annual, aquatic herb found in ponds, on beaches and forests. One of the last flowering individuals was found in a nearly dry pond on Norong Island on 17 March 2007. Photo Eanghourt Khou, Palee 1249.



Photo 14. *Ceropegia thorelii* Cost. (Asclepiadaceae), a rare deciduous vine, is found in bb/df. Kring Island, 31 July 2007, photo Eanghourt Khou, Maxwell 07-444.



Photo 15. *Desmodium flexuosum* Wall. ex Bth. (Leguminosae, Papilionoideae), the only vine in this genus found on the islands, is a rare deciduous species found in ddf and bb/df. It is a new record for the Cambodian flora. Rongnieu Island, 15 November 2006, photo P. Palee, Maxwell 06-874.



Photo 16. *Ardisia attenuata* Wall. ex DC. (Myrsinaceae), a new record for the Cambodian flora, is an evergreen treelet found in da and mx. It produces fruits which people and animals eat. Kring Island, 11 November 2006, photo P. Palee 1083.



Photo 17. *Heteropogon mekongense* (A. Camus) C.E. Hubb. ex Bor (Gramineae), a robust annual grass, is restricted to beaches (Zone 5). Ten days later the river water had submerged this plant. On a sandbar NW and opposite Svan Island, 1 August 2007, photo Eanghourt Khou; Maxwell 07-459. It is a new record for the Cambodian flora.

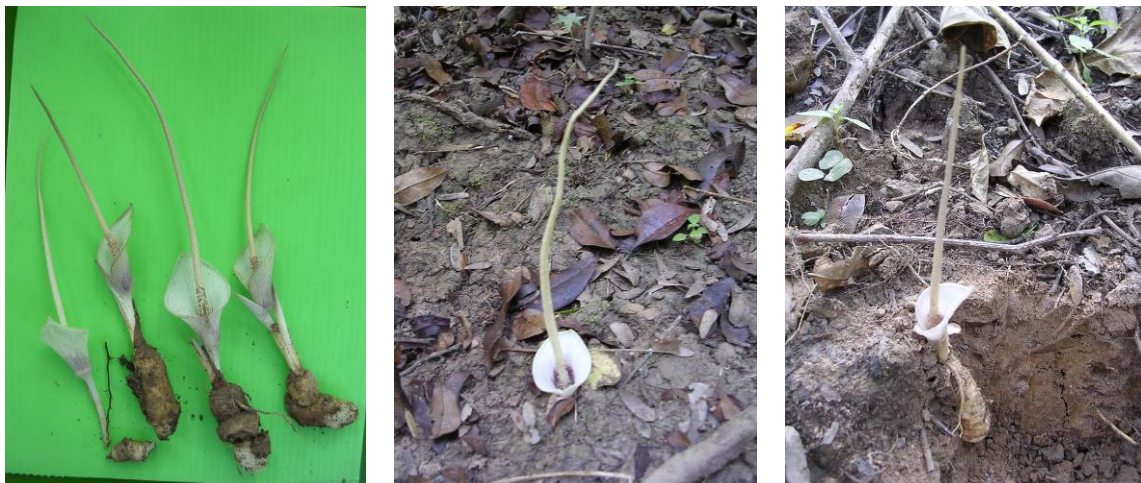


Photo 18. One confirmed new species, *Amorphophallus hemicryptus* Hett. (Araceae), was found during this project. It is a deciduous ground herb in bb/df which has the smallest inflorescence for the genus on the islands. Leaves are produced during the rainy season. Kring Island, 16 November 2006, photo P. Palee, Maxwell 06-896.

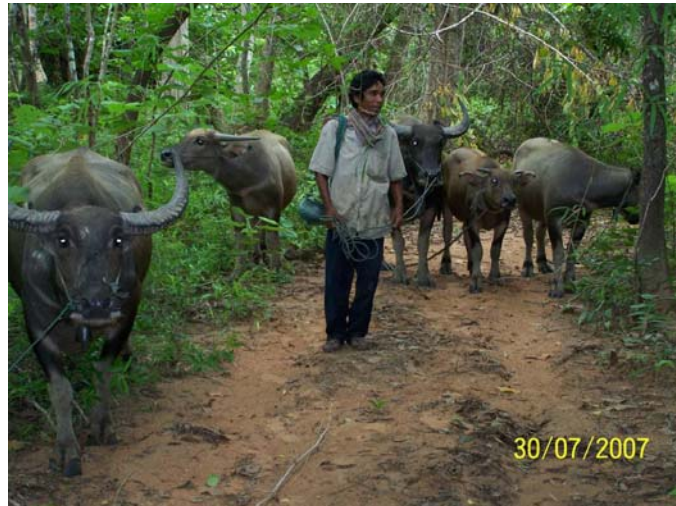


Photo 19. Uncontrolled grazing, trampling of sensitive habitats, and fires, especially in the dry season, have caused extensive damage to the terrestrial vegetation. Kring Island, 30 July 2007, photo M.v.d. Bult.



Photo 20. The effects of unrestricted logging have been disastrous for biodiversity on the islands and adjacent mainland. Removal of trees vital for seed production and fires have effectively retarded or prevented regeneration of forests. The stump and boards are from *Dipterocarpus intricatus* Dyer (Dipterocarpaceae), an extensively exploited species in ddf. Norong Island, 17 March 2007, photo P. Palee.



Photo 21. *Sindora siamensis* Teysm. ex Miq. var. *siamensis* (Leguminosae, Caesalpinioideae) cut by a logger the previous day (left) who is returning to his camp after another day of illegal handiwork (right). Norong Island, 16-17 March 2007, photo P. Palee.



Photo 22. As the most desired trees on the islands have been largely extirpated, logging of trees with lesser quality, such as *Lagerstroemia cochinchinensis* Pierre var. *ovalifolia* Furt. & Mont. (Lythraceae), is increasing. Removal of this tree will render bb/df even more degraded than it presently is. Norong Island, 2 August 2007, photo M. v.d. Bult (logging supervisor).



Photo 23. Recently cut and soon to be burned land intended for rice cultivation at O Thmei (mainland); 17 March 2007, photo P. Palee.



Photo 24. As more people settle on the islands the integrity and quality of the vegetation declines. Scenes of recent destruction, such as this on the east side of Rongnieu Island, are increasing. Removal of strand vegetation and forest cover adjacent to it will result in the collapse of the land. 10 March 2007, photo P. Palee.



Photo 25. Removal of stabilizing vegetation plus fires enable soil erosion to increase and island and mainland margins to collapse. This photo, from the north tip of Praeh-trabeik Island, shows how *Ficus benamina* L. (Moraceae) and *Bambusa bambos* (L.) Voss. ex Vilm. (Gramineae, Bambusoideae) are unable to restrain extensive soil erosion due to the loss of forest integrity. These plants will eventually fall as the embankment continues to disappear. 14 November 2006, photo P. Palee.



Photo 26. Resin collection from *Dipterocarpus intricatus* Dyer (Dipterocarpaceae) is very destructive to the trees tapped plus the environment. Fire is used to stimulate resin flow, which is used for lighting, and often spreads to the forest. Trees damaged in this manner are frequently killed by infection or collapse. Rongnieu Island, 7 August 2007, photo M. v.d. Bult.

Appendix 2

Database of vascular flora and Bryophyta resulting from this botanical survey

Key to abbreviations used in the database

	*	new record			
Habit	cr	creeper	Month	ja	January
	h	herb		fb	February
	l	treelet		mr	March
	s	shrub		ap	April
	sc	scandent		my	May
	t	tree		jn	June
	v	vine		jl	July
	wc	woody climber		ag	August
Phenology	a	annual	sp	September	
	pe	perennial evergreen	oc	October	
	pd	perennial deciduous	nv	November	
			dc	December	
Life mode	aqu	aquatic	Bedrock	ms	metamorphic sandstone
	car	carnivorous		sh	shale
	cul	cultivated			
	epi	epiphyte			
	epl	epilithic			
	gro	ground			
	hyp	hyperparasite			
	int	introduced, not native			
	nat	naturalized			
	par	parasite			
	rhe	rheophyte			
	sap	saprophyte			
	str	“strangler”			
	wee	weed			

Abundance	0	probably extirpated
	1	down to a few individuals, in danger of extirpation
	2	rare
	3	medium abundance
	4	common, but not dominant
	5	abundant

Habitat	mx	mixed evergreen + deciduous forest
	bb/df	deciduous forest with bamboo
	ddf	deciduous dipterocarp forest
	sg	secondary growth
	da	degraded areas
	rv 1	riverine zone 1, aquatic
	rv 2	riverine zone 2, rapids (“boong”)
	rv 3	riverine zone 3, “kai kum”
	rv 4	riverine zone 4, <i>Acacia-Anogeissus</i>
	rv 5	riverine zone 5, beach
	rv 6	riverine zone 6, strand

Mekong River Cambodia database

Species	Family	Habit	Aped	Life-mode	Abundance	Habitat	Bedrock	Lower Elevation (m)	Upper Elevation (m)	Flowering Month	Fruiting Month	Leafing Month	Collected
Angiospermae, Dicotyledoneae													
<i>Naravellia laurifolia</i> Wall. ex Hk f. & Th.	Ranunculaceae	v	a	gro	2	bb/df	ms	25	30		oc-nv	my-dc	fruits
<i>Dillenia ovata</i> Wall. ex Hk. f. & Th.	Dilleniaceae	t	pd	gro	3	bb/df	ms	25	30	ja-fb	mr-ap	my-dc	
<i>Dillenia parviflora</i> Griff. var. <i>kerrii</i> (Criab) Hoogl.	Dilleniaceae	t	pd	gro	3	bb/df	ms	25	30	mr	ap	my-ja	flowers
<i>Dillenia pentagyna</i> Roxb.	Dilleniaceae	t	pd	gro	3	ddf	ms	25	30	fb-mr	mr-ap	my-nv	flowers
<i>Dillenia suffruticosa</i> (Griff.) Mart.	Dilleniaceae	s	pd	gro	3	ddf	ms	30	30	jl-ag		my-nv	flowers
<i>Tetracera loureiri</i> (Fin. & Gagnep.) Pierre ex Craib	Dilleniaceae	v	pe	gro	2	bb/df,rv 6	ms	25	30	ag-oc	ag-dc	ja-dc	fruits
<i>Anomianthus dulcis</i> (Dun.) Sincl.	Annonaceae	wc	pd	gro	3	bb/df,mxf,rv 6	ms	25	30	ap-my	jl-ag	ap-nv	fruits
<i>Artabotrys hexapetalus</i> (L.f.) Bhar.	Annonaceae	wc	pe	gro	3	mxf,ddf,sg	ms	25	30	fb-mr	mr-my	ja-dc	flowers,fruits
<i>Desmos chinensis</i> Lour.	Annonaceae	l	pe	gro	2	mxf	ms	25	30	ag-oc	nv-fb	ja-dc	fruits
<i>Desmos velutinus</i> (Hance) Ast	Annonaceae	l	pd	gro	2	bb/df,mxf	ms	25	30	ap-my	nv-dc	my-dc	fruits
<i>Ellipelopsis cherrevensis</i> (Pierre ex Fin. & Gagnep.) R.E. Fr.	Annonaceae	s	pd	gro	3	ddf	ms	30	30	jn-jl	ag-sp	my-nv	fruits
<i>Goniothalamus marcanii</i> Craib	Annonaceae	l	pe	gro	2	bb/df,mxf	ms	30	30	jl-ag	ag-sp	ja-dc	flowers
<i>Melodorum fruticosum</i> Lour.	Annonaceae	t	pe	gro	2	mxf	ms	25	30	mr-ap		ja-dc	flowers
<i>Milusa velutina</i> (Dun.) Hk. f. & Th.	Annonaceae	t	pd	gro	3	ddf	ms	25	30	ap	jl	my-dc	
<i>Polyalthia cerasoides</i> (Roxb.) Bth. ex Bedd.	Annonaceae	t	pd	gro	3	ddf,bb/df	ms	25	30	ja-mr	mr-ap	mr-nv	flowers, fruits
<i>Polyalthia evecta</i> (Pierre) Fin. & Gagnep.	Annonaceae	t,l	pe	gro	3	mxf, rv 6	ms	25	30	oc-dc(mr)	oc-nv	ja-dc	flowers, fruits
<i>Polyalthia modesta</i> (Pierre) Fin. & Gagnep.	Annonaceae	s	pd	gro	3	rv 5-6	ms	20	25	dc	mr-ap	nv-jn	fruits
<i>Polyalthia simiarum</i> (Ham. ex Hk. f. & Th.) Bth. ex Hk. f. & Th.	Annonaceae	t	pe	gro	2	mxf	ms	25	30	fb-mr	jl	ja-dc	flowers
<i>Polyalthia suberosa</i> (Roxb.) Thw.	Annonaceae	t,l	pe	gro	2	mxf, rv 6	ms	25	30	oc-dc(mr)	oc-nv	ja-dc	flowers, fruits
<i>Uvaria cordata</i> (Dun.) Alst.	Annonaceae	wc	pe	gro	2	bb/df,da	ms	25	30	ag-oc	nv-fb	ja-dc	fruits
<i>Uvaria hahnii</i> (Fin. & Gagnep.) Sincl.	Annonaceae	wc	pd	gro	3	bb/df	ms	30	30	mr-ap	jl-ag	my-nv	fruits

Species	Family	Habit	Aped	Life-mode	Abundance	Habitat	Bedrock	Lower Elevation (m)	Upper Elevation (m)	Flowering Month	Fruiting Month	Leafing Month	Collected
<i>Tiliacora triandra</i> (Colebr.) Diels	Menispermaceae	v	pd	gro	3	da, sg	ms	25	30	jn-jl	ag-sp	my-ja	
<i>Tinospora crispa</i> (L.) Hk. f. & Th.	Menispermaceae	v	pd	gro	2	da	ms	25	30	fb-mr	my-jn	jn-ja	
<i>Ceratophyllum demersum</i> L.	Ceratophyllaceae	h	a	aqu	3	rv 1	ms	20	20	mr-my	ap-jn	nv-jn	
<i>Rorippa indica</i> (L.) Hiern	Cruciferae	h	a	gro	3	rv 5	ms	20	25	fb-mr	mr-ap	nv-jn	flowers
<i>Capparis flavicans</i> Kurz	Capparaceae	l,wc	pd	gro	2	bb/df	ms	30	30		ag-sp	my-dc	fruits
<i>Capparis micracantha</i> DC. ssp. <i>micracantha</i>	Capparaceae	wc	pd	gro	3	bb/df	sh, ms	25	30	sp-mr	ap-jn	my-fb	flowers
<i>Cleome viscosa</i> L.	Capparaceae	h	a	gro, wee	3	da, rv 5	ms	20	30	fb-ag	ap-ag	oc-sp	flowers, fruits
<i>Crateva magna</i> (Lour) DC.	Capparaceae	t,l	pd	gro	4	rv 2-6	ms	20	25	ag-nv(mr)	jl-ag	nv-oc	flowers
<i>Stixis obtusifolia</i> (Hk. f. & Th.) Pierre	Capparaceae	wc	pd	gro	2	da	ms	25	30	nv-mr	ja-ap	mr-ja	flowers
<i>Scyphellandra pierrei</i> Boiss.	Violaceae	s,l	pe	gro	2	bb/df	ms	25	30	oc-ja	dc-mr	ja-dc	flowers
<i>Polygala chinensis</i> L.	Polygalaceae	h	a	gro	2	ddf	ms	25	30	jl-sp	ag-oc	my-dc	flowers, fruits
<i>Salomonioia cantoniensis</i> Lour.	Polygalaceae	h	a	gro	3	ddf	ms	30	30	jn-sp	jl-oc	my-dc	flowers, fruits
<i>Xanthophyllum lanceatum</i> (Miq.) J. J. Sm.	Polygalaceae	t	pe	gro	2	rv 6	ms	20	25	fb-mr		ja-dc	flowers
<i>Polycarpaea corymbosa</i> (L.) Lmk.	Caryophyllaceae	h	a	gro	3	ddf	ms	25	30	sp-nv	nv-dc	my-dc	flowers
<i>Portulaca oleracea</i> L.	Portulacaceae	h	pe	gro, wee	3	da, rv 5	ms	25	30	oc-ja	ag-ja	ja-dc	flowers
<i>Calophyllum</i> sp.	Guttiferae	t	pe	gro	2	bb/df,mxf	ms	30	30			ja-dc	
<i>Cratoxylum cochinchinense</i> (Lour.) Bl.	Guttiferae	t	pd	gro	3	bb/df	ms	25	30	dc-ja	jl-ag	my-ja	fruits
<i>Garcinia cowa</i> Roxb.	Guttiferae	t	pe	gro	3	bb/df, mxf	ms	25	30	fb-ap (ag)	mr-my	ja-dc	♂
<i>Garcinia</i> sp.	Guttiferae	t	pe	gro	2	mxf	ms	25	30			ja-dc	
<i>Mammea siamensis</i> (Miq.) T. And.	Guttiferae	t	pe	gro	2	bb/df, mxf	ms	25	30	oc-dc	mr-ap	ja-dc	flowers, fruits
<i>Casearia grewiifolia</i> Vent. var. <i>grewiifolia</i>	Flacourtiaceae	l,t	pd	gro	3	bb/df,mxf,sg	ms	25	30	fb-mr	jl-ag	my-ja	flowers, fruits
<i>Flacourtia indica</i> (Burm. f.) Merr.	Flacourtiaceae	t	pd	gro	2	da,sg	ms	30	30	fb-ap	jl-sp	my-dc	
<i>Homalium brevidens</i> Gagnep.	Flacourtiaceae	t	pe	gro	3	rv 6	ms	25	30	jn-jl	sp-oc	ja-dc	flowers
<i>Homalium caryophyllaceum</i> (Zoll. & Mor.) Bth.	Flacourtiaceae	t	pe	gro	3	rv 6	ms	25	30	jl		ja-dc	flowers
<i>Hydnocarpus anthelminthica</i> Pierre ex Lanes.	Flacourtiaceae	t	pe	gro	3	rv 6, mxf	ms	25	30	nv-dc	ap-my	ja-dc	♀♂

Species	Family	Habit	Aped	Life-mode	Abundance	Habitat	Bedrock	Lower Elevation (m)	Upper Elevation (m)	Flowering Month	Fruiting Month	Leafing Month	Collected
<i>Dipterocarpus alatus</i> Roxb. ex G. Don	Dipterocarpaceae	t	pd	gro	2	bb/df	ms	25	30	ja-fb	mr-ap	my-fb	
<i>Dipterocarpus intricatus</i> Dyer	Dipterocarpaceae	t	pd	gro	3	ddf	ms	25	30	fr-mr	ap	my-fb	flowers, imm. fruits
<i>Dipterocarpus tuberculatus</i> Roxb. var. <i>tuberculatus</i>	Dipterocarpaceae	t	pd	gro	3	ddf	ms	30	30	mr-ap	ap-my	ap-dc	
<i>Hopea odorata</i> Roxb.	Dipterocarpaceae	t	pd	gro	1	bb/df	ms	25	30	mr		my-fb	flowers
<i>Shorea obtusa</i> Wall. ex Bl.	Dipterocarpaceae	t	pd	gro	3	ddf	ms	25	30	mr-my	ap-jn	ap-fb	
<i>Shorea roxburghii</i> G. Don	Dipterocarpaceae	t	pd	gro	3	ddf	ms	25	30	ja-fb	mr-ap	mr-dc	fruits
<i>Shorea siamensis</i> Miq. var. <i>siamensis</i>	Dipterocarpaceae	t	pd	gro	3	ddf	ms	25	30	fb-mr	mr-ap	ap-dc	fruits
<i>Ancistrocladus wallichii</i> Pl.	Ancistrocladaceae	sc	pe	gro	2	streams,mxf	sh,ms	25	30	mr-my	jn-jl	ja-dc	flowers
<i>Sida rhombifolia</i> L. ssp. <i>rhombifolia</i>	Malvaceae	h	pe	gro,wee	3	da,sg	sh,ms	25	30	sp-mr	nv-ap	ja-dc	
<i>Thespesia lampas</i> (Cav.) Dalz. & Gibs. ssp. <i>lampas</i> var. <i>lampas</i>	Malvaceae	h	pd	gro	2	mxf,da	ms	25	30	sp-nv	nv-ja	my-dc	fruits
<i>Urena lobata</i> L. ssp. <i>lobata</i> var. <i>lobata</i>	Malvaceae	h	pe	gro, wee	3	da,rv 5	ms	25	30	sp-ja	oc-fb	ja-dc	
<i>Bombax anceps</i> Pierre var. <i>anceps</i>	Bombacaceae	t	pd	gro	3	ddf,bb/df	ms	25	30	ja-fb	mr	jn-dc	flowers,fruits
<i>Ceiba pentandra</i> (L.) Gaertn.	Bombacaceae	t	pd	gro, int, cul, nat	3	da	ms	30	30	ja-ap	my-jl	my-dc	
<i>Byttneria echinata</i> Wall. ex Kurz	Sterculiaceae	wc	pd	gro	3	wet areas in sg	ms	25	30	jn-jl	oc-dc	my-dc	fruits
<i>Helicteres angustifolia</i> L.	Sterculiaceae	s	pd	gro	3	ddf,bb/df	ms	25	30	jl-ag	nv-dc	my-dc	flowers
<i>Helicteres elongata</i> Wall. ex Boj.	Sterculiaceae	h	pd	gro	3	bb/df,da	ms	25	30	jl-dc	nv-dc	my-dc	flowers
<i>Helicteres hirsuta</i> Lour.	Sterculiaceae	s	pd	gro	3	bb/df,sg	ms	25	30	jl-dc	nv-fb	my-dc	flowers,fruits
<i>Pterospermum cinnamomum</i> Kurz	Sterculiaceae	t	pe	gro	3	mxf	ms	25	30	oc-ap	my-jn	ja-dc	
<i>Pterospermum diversifolium</i> Bl.	Sterculiaceae	t	pe	gro	3	rv 6,bb/df,mxf	ms	25	30	mr-ap (ag)	sp-nv	ja-dc	fruits
<i>Sterculia balanghas</i> L.	Sterculiaceae	t	pd	gro	3	ddf,bb/df	ms	25	30	mr-ap	oc-nv	ap-ja	
<i>Sterculia foetida</i> L.	Sterculiaceae	t	pd	gro	2	bb/df,mxf	ms	25	30		nv-dc	ap-dc	
<i>Sterculia urena</i> Roxb. var. <i>thorelii</i> (Pierre) Pheng.	Sterculiaceae	t	pd	gro	2	bb/df,ddf	ms	25	30	nv-dc	ja-mr	my-nv	flowers
<i>Berrya mollis</i> Wall. ex Kurz	Tiliaceae	t	pd	gro	3	ddf	ms	25	30	jn-jl	ag-nv	my-dc	fruits

Species	Family	Habit	Aped	Life-mode	Abundance	Habitat	Bedrock	Lower Elevation (m)	Upper Elevation (m)	Flowering Month	Fruiting Month	Leafing Month	Collected
<i>Colona auriculata</i> (Desf.) Craib	Tiliaceae	s	pd	gro	3	bb/df,da	ms	25	30	ag-nv	nv-ja	my-dc	flowers, fruits
<i>Corchorus aestuans</i> L.	Tiliaceae	h	a	gro	2	mx,da	ms	25	30	ag-oc	nv-fb	my-dc	fruits
<i>Grewia eriocarpa</i> Juss.	Tiliaceae	t	pd	gro	3	bb/df,da,sg	ms	25	30	mr-ap	jl-sp	mr-nv	flowers
<i>Grewia hirsuta</i> Vahl	Tiliaceae	s	pd	gro	4	wet areas in sg	ms	25	30	jl-sp	oc-dc	my-fb	fruits
<i>Microcos paniculata</i> L.	Tiliaceae	t	pe	gro	4	bb/df,da/sg	ms	25	30	oc-nv	nv-ja	ja-dc	flowers,fruits
<i>Microcos sinuata</i> (Wall. ex Mast.) Burr.	Tiliaceae	l	pd	gro	2	rv 4	ms	20	25	mr-ap		nv-jn	flowers
<i>Muntingia calabura</i> L.	Tiliaceae	l	pe	gro,int,nat	2	da,sg	sh,ms	25	30	ja-dc	ja-dc	ja-dc	
<i>Schoutenia ovata</i> Korth.	Tiliaceae	t	pd	gro	3	rv 6, ddf	ms	25	30	jl	sp-nv	my-dc	flowers, fruits
<i>Elaeocarpus sphaericus</i> (Gaertn.) K. Sch.	Elaeocarpaceae	t	pd	gro	2	bb/df	ms	25	30	oc-nv	oc-nv	my-fb	flowers
<i>Hiptage triacantha</i> Pierre	Malpighiaceae	wc	pd	gro	2	rv 3-4	ms	20	25	jl-ag	oc-nv	my-nv	flowers
<i>Biophytum reinwardtii</i> (Zucc.) Klot.	Oxalidaceae	h	a	gro	2	ddf	ms	30	30	jl-sp	ag-oc	my-nv	
<i>Biophytum sensitivum</i> (L.) DC.	Oxalidaceae	h	a	gro	2	bb/df	ms	25	30	ag-oc	nv-ja	my-ja	flowers, fruits
<i>Oxalis barrelieri</i> L.	Oxalidaceae	h	a	gro,int,nat	2	bb/df,da	ms	30	30	jl-ag	ag-sp	my-nv	flowers, fruits
<i>Acronychia pedunculata</i> (L.) Miq.	Rutaceae	t	pe	gro	3	mx,da	ms	25	30	jl-sp	nv-dc	ja-dc	flowers
<i>Atalantia monophylla</i> (L.) DC.	Rutaceae	l	pe	gro	2	mx,da	sh,ms	25	30	oc-dc	my-ja	ja-dc	
<i>Clausena excavata</i> Burm. f. var. <i>excavata</i>	Rutaceae	l	pd	gro	3	ddf,bb/df,mx,da	ms	25	30	fb-mr	jl-ag	fb-nv	flowers, fruits
<i>Clausena wallichii</i> Oliv. var. <i>wallichii</i>	Rutaceae	t	pd	gro	2	bb/df	ms	30	30		jl-ag	my-dc	fruits
<i>Glycosmis pentaphylla</i> (Retz.) DC. var. <i>pentaphylla</i>	Rutaceae	l,s	pe	gro	3	bb/df,mx,da	ms	25	30	nv-dc	mr-ap	ja-dc	flowers,fruits
<i>Murraya paniculata</i> (L.) Jack	Rutaceae	l	pe	gro	2	mx,da	ms	25	30	ap-my	sp-oc	ja-dc	
<i>Paramignya scandens</i> (Griff.) Craib var. <i>scandens</i>	Rutaceae	wc	pe	gro	2	mx,da	ms	25	30	fb-mr	ag-nv	ja-dc	
<i>Zanthoxylum rhetsa</i> (Roxb.) DC.	Rutaceae	t	pd	gro	3	bb/df	ms	25	30	my-jn	sp-oc	my-dc	
<i>Harrisonia perforata</i> (Blanco) Merr.	Simaroubaceae	wc	pd	gro	3	bb/df,da,sg	ms	25	30	my-jn	jl-ag	my-fb	fruits
<i>Quassia harmandiana</i> (Pierre) Noot.	Simaroubaceae	t,l	pe	gro	3	rv 6, mx,da	ms	25	30	ap-my	jn-ag	ja-dc	fruits
<i>Irvingia malayana</i> Oliv. ex Benn.	Irvingiaceae	t	pe	gro	2	bb/df,mx,da	sh,ms	25	30	mr-my	jl	ja-dc	
<i>Gomphia serrata</i> (Gaertn.) Kanis	Ochnaceae	l	pe	gro	2	mx,da	sh,ms	25	30	ja-mr	fb-mr	my-mr	flowers,fruits

Species	Family	Habit	Aped	Life-mode	Abundance	Habitat	Bedrock	Lower Elevation (m)	Upper Elevation (m)	Flowering Month	Fruiting Month	Leafing Month	Collected
<i>Canarium subulatum</i> Guill.	Burseraceae	t	pd	gro	3	bb/df	ms	30	30	mr-ap	jl-ag	my-dc	fruits
<i>Aglaiia odorata</i> Lour.	Meliaceae	l	pe	gro	2	bb/df,mxf	ms	25	30	sp-nv	dc-fb	ja-dc	flowers
<i>Azadiracta indica</i> A. Juss.	Meliaceae	t	pd	gro	2	bb/df	ms	25	30	ja-fb	ap-my	mr-dc	imm. fruits
<i>Chukrasia tabularis</i> A. Juss.	Meliaceae	t	pd	gro	3	bb/df	ms	30	30	jl-ag	dc-ja	my-dc	
<i>Walsura pinnata</i> Hassk.	Meliaceae	l	pe	gro	2	bb/df,mxf	ms	25	30	nv-ja	nv-fb	ja-dc	flowers
<i>Olax psittacorum</i> (Willd.) Vahl	Olacaceae	wc	pe	gro	3	ddf	ms	30	30	ap-my	jl-ag	ja-dc	fruits
<i>Celastrus paniculatus</i> Willd.	Celastraceae	wc	pd	gro	3	ddf,bb/df	ms	30	30	mr-my	ag-sp	my-dc	fruits
<i>Maytenus</i> sp.	Celastraceae	l	pe	gro	2	bb/df,mxf	ms	25	30		oc-nv	ja-dc	fruits
<i>Salacia macrophylla</i> Bl.	Celastraceae	wc	pe	gro	3	mxf	ms	25	30	ja-ap	ap-my	ja-dc	flowers, imm. fruits
<i>Siphonodon celastrineus</i> Griff.	Celastraceae	t	pd	gro	2	bb/df	ms	30	30	ja-fb	dc-fb	ap-dc	
<i>Colubrina pubescens</i> Kurz	Rhamnaceae	s	pe	gro	3	bb/df,da	ms	25	30	sp-nv	nv-dc	ja-dc	flowers,fruits
<i>Ventilago harmandiana</i> Pierre	Rhamnaceae	wc	pd	gro	3	rv 6,mxf,bb/df	ms	25	30		jl-ag	my-mr	fruits
<i>Ziziphus cambodiana</i> Pierre var. <i>cambodiana</i>	Rhamnaceae	wc	pd	gro	3	bb/df	ms	25	30	ap-my	oc-dc	my-dc	fruits
<i>Ziziphus oenoplia</i> (L.) Mill. var. <i>oenoplia</i>	Rhamnaceae	sc	pd	gro	3	da,sg,ddf, bb/df,	ms	25	30	mr-ap	oc-dc	my-dc	flowers,fruits
<i>Ampelocissus martinii</i> Pl.	Vitaceae	wc	pd	gro	3	bb/df,da	ms	25	30	jl-ag	sp-oc	my-nv	flowers, fruits
<i>Cayratia trifolia</i> (L.) Dom. var. <i>trifolia</i>	Vitaceae	v	pe	gro	3	rv 6, bb/df,da	ms	25	30	ag-dc	jl-ja	ja-dc	flowers
<i>Cissus modeccoides</i> Pl. var. <i>modeccoides</i>	Vitaceae	v	a	gro	3	bb/df,da	ms	25	30	sp-oc	nv-dc	my-dc	fruits
<i>Cissus quadrangularis</i> L.	Vitaceae	v	pe	gro	2	bb/df,da	ms	25	30	nv-fb	dc-mr	ja-dc	flowers
<i>Tetrastigma harmandii</i> Pl.	Vitaceae	wc	pe	gro	3	mxf	ms	25	30	dc-mr	nv-ja	ja-dc	♀, fruits
<i>Leea aequata</i> L.	Leeaceae	h	pd	gro	3	ddf	ms	30	30	jl-ag	oc-nv	my-nv	flowers
<i>Leea indica</i> (Burm. f.) Merr.	Leeaceae	h/s	pe	gro	3	da,sg	ms	25	30	jl-oc	sp-nv	ja-dc	
<i>Leea rubra</i> Bl. ex Spreng.	Leeaceae	l	pd	gro	3	da,sg	ms	25	30	jl-ag	ag-oc	my-nv	flowers, fruits
<i>Allophylus cobbe</i> (L.) Raeus.	Sapindaceae	t	pe	gro	3	da, sg	ms	25	30	jn-jl	jl-ag	ja-nv	fruits
<i>Cardiospermum halicacabum</i> L. var. <i>halicacabum</i>	Sapindaceae	v	a	gro,wee	3	rv 5, da	ms	20	25	fb-ag		ag-jn	flowers,fruits

Species	Family	Habit	Aped	Life-mode	Abundance	Habitat	Bedrock	Lower Elevation (m)	Upper Elevation (m)	Flowering Month	Fruiting Month	Leafing Month	Collected
<i>Dimocarpus longan</i> Lour. ssp. <i>longan</i> var. <i>longan</i>	Sapindaceae	t	pe	gro	3	bb/df	ms	25	30	mr-ap	ag-sp	ja-dc	fruits
<i>Lepisanthes rubiginosa</i> (Roxb.) Leenh.	Sapindaceae	l,t	ped	gro	3	bb/df,mxf	ms	25	30	fb-mr	mr-ap	mr-ja(dc)	flowers,fruits
<i>Lepisanthes senegalensis</i> (Poir.) Leenh.	Sapindaceae	l	ped	gro	3	bb/df,rv	ms	25	30	nv-mr	fb-ap	ja-dc	flowers,fruits
<i>Lepisanthes tetraphylla</i> (Vahl) Radlk.	Sapindaceae	t	pe	gro	3	mxf	ms	25	30	ja-mr	fb-mr	ja-dc	flowers,fruits
<i>Schleichera oleosa</i> (Lour.) Oken	Sapindaceae	t	pd	gro	3	bb/df	ms	25	30	fb-ap	jl	mr-dc	flowers, fruits
<i>Buchanania glabra</i> Wall. ex Hk f.	Anacardiaceae	l,t	pe	gro	3	ddf	ms	25	30	oc-ja	mr-ap	ja-dc	flowers,fruits
<i>Buchanania lanzan</i> Spreng.	Anacardiaceae	t	pd	gro	3	ddf	ms	25	30	ja-fb	mr-ap	mr-nv	fruits
<i>Buchanania reticulata</i> Hance	Anacardiaceae	t	pe	gro	3	bb/df	ms	25	30	oc-nv	mr-ap	ja-dc	flowers,fruits
<i>Lanea coromandelica</i> (Houtt.) Merr.	Anacardiaceae	t	pd	gro	3	ddf	ms	30	30	ja-mr	ap-my	ap-dc	
<i>Mangifera camptosperea</i> Pierre	Anacardiaceae	t	pe	gro	2	mxf	ms	25	30	ap-my	mr-ap	ja-dc	fruits
<i>Semecarpus cochinchinensis</i> Engl.	Anacardiaceae	t	pe	gro	2	mxf,bb/df	ms	25	30	dc-mr	mr-my	ja-dc	
<i>Spondias pinnata</i> (L. f.) Kurz	Anacardiaceae	t	pd	gro	3	bb/df	ms	25	30	ja-fb	dc-mr	my-ja	
<i>Connarus cochinchinensis</i> (Baill.) Pierre	Connaraceae	wc	pe	gro	2	mxf,da	ms	25	30	nv-mr	sp-oc	ja-dc	flowers,fruits
<i>Acacia harmandiana</i> (Pierre) Gagnep.	Leguminosae, Mimosoideae	t	pd	gro,epl	5	rv 4	ms	20	25	nv-dc	mr	oc-ag	flowers,fruits
* <i>Acacia leucopholea</i> (Roxb.) Willd.	Leguminosae, Mimosoideae	t	pd	gro	2	bb/df	ms	25	30	ag-sp	ap-my	mr-nv	
<i>Acacia pennata</i> (L.) Willd. ssp. <i>kerrii</i> I. Niels.	Leguminosae, Mimosoideae	wc	pd	gro	3	da,sg	ms	25	30	fb-ag	sp-oc	mr-nv	flowers
<i>Albizia lebbeckoides</i> (DC.) Bth.	Leguminosae, Mimosoideae	t	pd	gro	3	streams,rv 6	ms	25	30	nv-dc	mr	my-dc	flowers,fruits
<i>Entada rheedei</i> Spreng.	Leguminosae, Mimosoideae	wc	pd	gro	3	bb/df,mxf	ms	25	30	mr-ap	oc-mr	mr-nv	flowers
<i>Mimosa diplotricha</i> C. Wright ex Sauv. var. <i>diplotricha</i>	Leguminosae, Mimosoideae	v	a	gro,int, nat, wee	3	da	ms	30	30	sp-nv	nv-ja	my-ja	
<i>Mimosa pigra</i> L.	Leguminosae, Mimosoideae	h	pe	gro,int, nat, wee	3	rv 5-6,da,sg	sh,ms	20	30	fb-ag	ja-sp	ja-dc	

Species	Family	Habit	Aped	Life-mode	Abundance	Habitat	Bedrock	Lower Elevation (m)	Upper Elevation (m)	Flowering Month	Fruiting Month	Leafing Month	Collected
<i>Mimosa pudica</i> L.	Leguminosae, Mimosoideae	h	a	gro,int, nat, wee	3	da,sg	sh,ms	25	30	ag-mr	dc-ap	jl-ap	
<i>Xylocarpus xylocarpa</i> (Roxb.) Taub. var. <i>kerrii</i> (Craib & Hutch.) I. Niels.	Leguminosae, Mimosoideae	t	pd	gro	1	bb/df	ms	25	30	ja-fb	oc-nv	my-dc	
<i>Bauhinia bracteata</i> (Grah. ex Bth.) Baker ssp. <i>bracteata</i>	Leguminosae, Caesalpinioideae	sc, wc	pe	gro	3	rv 5-6, bb/df, mx	ms	25	30	ag-nv	jl-ag	ja-dc	flowers
<i>Bauhinia championii</i> (Bth.) Bth. var. <i>championii</i>	Leguminosae, Caesalpinioideae	wc	pd	gro	2	bb/df,mx	ms	25	30	oc-nv		my-fb	flowers
<i>Bauhinia racemosa</i> Lmk.	Leguminosae, Caesalpinioideae	t	pd	gro	3	bb/df	ms	25	30	ag-oc	fb-mr	my-ja	fruits
<i>Cassia fistula</i> L.	Leguminosae, Caesalpinioideae	t	pd	gro	2	ddf,bb/df	sh,ms	25	30	fb-mr	nv-ja	my-ja	
<i>Caesalpinia digyna</i> Rottl.	Leguminosae, Caesalpinioideae	wc	pe	gro	3	bb/df	ms	25	30	jl-ag	fb-mr	ja-dc	flowers
<i>Caesalpinia mimosoides</i> Lmk.	Leguminosae, Caesalpinioideae	wc	pd	gro	3	da,sg	ms	25	30	oc-nv	fb-ap	my-dc	flowers
<i>Crudia chrysantha</i> (Pierre) K. Sch.	Leguminosae, Caesalpinioideae	t	pe	gro	3	rv 6	ms	25	30		jl-sp	ja-dc	fruits
<i>Cynometra dongnaiensis</i> Pierre	Leguminosae, Caesalpinioideae	t	pd	gro	1	bb/df	ms	25	30			my-dc	
<i>Peltophorum pterocarpum</i> (DC.) Back. ex K. Heyne	Leguminosae, Caesalpinioideae	t	pd	gro	2	mx,ddf	ms	25	30	fb-mr	jn-jl	mr-dc	flowers
<i>Senna tora</i> (L.) Roxb.	Leguminosae, Caesalpinioideae	h	a	gro	2	ddf,bb/df,da	ms	25	30	sp-nv	nv-fb	my-dc	flowers,fruits
<i>Sindora siamensis</i> Teysm. ex Miq. var. <i>siamensis</i>	Leguminosae, Caesalpinioideae	t	pd	gro	2	bb/df,ddf	ms	25	30	ap-jn	ag-oc	mr-dc	
<i>Aeschynomene americana</i> L.	Leguminosae, Papilionoideae	h	a	gro,int, nat, wee	3	da	ms	25	30	sp-nv	dc-ja	jn-ja	flowers
<i>Aganope thyrsiflora</i> (Bth.) Polh.	Leguminosae, Papilionoideae	wc	pe	gro	3	bb/df	ms	30	30	jl-ag		ja-dc	flowers
<i>Butea monosperma</i> (Lmk.) Taub.	Leguminosae, Papilionoideae	t	pd	gro	3	da,sg,bb/df	ms	25	30	ja-fb	jn-jl	my-fb	

Species	Family	Habit	Aped	Life-mode	Abundance	Habitat	Bedrock	Lower Elevation (m)	Upper Elevation (m)	Flowering Month	Fruiting Month	Leafing Month	Collected
<i>Canavalia ensiformis</i> (L.) A. DC.	Leguminosae, Papilionoideae	v	pd	gro	2	bb/df,da	ms	25	30	nv-dc	ja-mr	jn-mr	flowers
<i>Centrosema pubescens</i> Bth.	Leguminosae, Papilionoideae	v	a	gro	3	da,sg	ms	25	30	nv-ja	nv-ja	my-ja	flowers
<i>Clitoria mariana</i> L.	Leguminosae, Papilionoideae	v	pd	gro	3	ddf	ms	30	30	jl-ag	sp-oc	my-nv	flowers
<i>Crotalaria acicularis</i> Ham. ex Bth.	Leguminosae, Papilionoideae	h	a	gro	3	bb/df,da	ms	25	30	nv-fb	nv-fb	my-ja	flowers
<i>Crotalaria bracteata</i> Roxb. ex DC.	Leguminosae, Papilionoideae	h	a	gro	4	ddf,da	ms	25	30	oc-dc	oc-ja	my-ja	flowers
<i>Crotalaria montana</i> Hey. ex Roth	Leguminosae, Papilionoideae	h	a	gro	2	ddf	ms	30	30	jl-ag		my-nv	flowers
<i>Crotalaria verrucosa</i> L.	Leguminosae, Papilionoideae	h	a	gro	3	bb/df,da	ms	25	30	sp-nv	nv-ja	my-dc	flowers
<i>Dalbergia cultrata</i> Grah. ex Bth.	Leguminosae, Papilionoideae	t	pd	gro	3	ddf	ms	30	30	fb-mr	jn-jl	my-nv	
<i>Dalbergia entadoides</i> Pierre ex Gagnep.	Leguminosae, Papilionoideae	wc	pe	gro	3	mxf	ms	25	30	mr-ap		ja-dc	flowers
<i>Dalbergia oliveri</i> Gamb. ex Prain	Leguminosae, Papilionoideae	t	pd	gro	2	ddf	ms	25	30	jn-fb	fb-jn	my-dc	fruits
<i>Dalbergia volubilis</i> Roxb.	Leguminosae, Papilionoideae	wc	pd	gro	3	rv 4, 6	ms	20	25	mr-ap	jl-ag	mr-nv	flowers
<i>Derris scandens</i> (Roxb.) Bth.	Leguminosae, Papilionoideae	wc	pd	gro	3	rv 4, 6	ms	25	30	jl-sp	nv-dc	my-fb	flowers, fruits
<i>Derris trifoliata</i> Lour.	Leguminosae, Papilionoideae	wc	pe	gro	2	rv 6	ms	30	30	jl-ag		ja-dc	
<i>Desmodium baccatum</i> Schindl.	Leguminosae, Papilionoideae	l,s	pd	gro	3	bb/df,mxf	ms	25	30	oc-nv	dc-ja	ja-dc	flowers,fruits
* <i>Desmodium flexuosum</i> Wall. ex Bth.	Leguminosae, Papilionoideae	v	pd	gro	2	ddf,bb/df	ms	25	30	sp-oc	nv-dc	ap-dc	fruits
<i>Desmodium heterocarpon</i> (L.) DC. ssp. <i>angustifolium</i> Oha.	Leguminosae, Papilionoideae	h	pd	gro	3	mxf,da	ms	25	30	nv-fb	nv-fb	jn-fb	flowers,fruits
<i>Desmodium pulchelum</i> (L.) Bth.	Leguminosae, Papilionoideae	s	pd	gro	3	ddf,bb/df	ms	25	30	ag-sp	nv-dc	my-dc	fruits

Species	Family	Habit	Aped	Life-mode	Abundance	Habitat	Bedrock	Lower Elevation (m)	Upper Elevation (m)	Flowering Month	Fruiting Month	Leafing Month	Collected
<i>Desmodium triangulare</i> (Retz.) Merr. ssp. <i>triangulare</i>	Leguminosae, Papilionoideae	h	pd	gro	3	bb/df	sh,ms	25	30	jl-nv	nv-ja	my-dc	flowers
<i>Desmodium triflorum</i> (L.) DC.	Leguminosae, Papilionoideae	h,cr	pe	gro,wee	3	ddf,da	ms	30	30	oc-ja	nv-fb	ja-dc	
<i>Desmodium velutinum</i> (Willd.) DC. ssp. <i>velutinum</i> var. <i>velutinum</i>	Leguminosae, Papilionoideae	h	pd	gro	3	mx,da,sg	ms	25	30	oc-dc	nv-fb	my-dc	flowers
<i>Eriosema chinense</i> Vogel	Leguminosae, Papilionoideae	h	pd	gro	3	ddf	ms	30	30	jl-ag	sp-oc	my-nv	flowers, fruits
<i>Flemingia strobilifera</i> (L.) R. Br. ex Ait. f. var. <i>strobilifera</i>	Leguminosae, Papilionoideae	l,s	pd	gro	2	da,sg	ms	25	30	oc-nv	ja-fb	my-fb	
<i>Indigofera cassioides</i> Rottl. ex DC.	Leguminosae, Papilionoideae	s	pd	gro	3	ddf	ms	30	30	jl-ag	nv-dc	my-nv	flowers
<i>Indigofera galeoides</i> DC.	Leguminosae, Papilionoideae	s	pd	gro	2	bb/df	ms	25	30	sp-oc	nv-ja	my-dc	fruits
* <i>Indigofera zollingeriana</i> Miq.	Leguminosae, Papilionoideae	t	pd	gro	2	da,sg	ms	25	30		ja-mr	mr-nv	fruits
<i>Lespedeza henryi</i> Schindl.	Leguminosae, Papilionoideae	l,s	pd	gro	3	ddf, bb/df	ms	25	30	ag-nv	nv-dc	my-dc	flowers
<i>Mecopus nidulans</i> Benn.	Leguminosae, Papilionoideae	h	a	gro	3	bb/df,da	ms	25	30	sp-nv	nv-dc	my-dc	flowers,imm. fruits
<i>Mucuna pruriens</i> (L.) DC. var. <i>pruriens</i>	Leguminosae, Papilionoideae	v	a	gro	2	bb/df,da	ms	25	30	oc-nv	fb-mr	my-dc	flowers
<i>Paraderis elliptica</i> (Wall.) Adema	Leguminosae, Papilionoideae	wc	pd	gro	3	rv 4, 6	ms	25	30	mr		mr-nv	flowers
<i>Pterocarpus macrocarpus</i> Kurz	Leguminosae, Papilionoideae	t	pd	gro	2	ddf,da	ms	25	30	jn-ag	sp-dc	my-dc	fruits
<i>Rhynchosia bracteata</i> Bth. ex Baker	Leguminosae, Papilionoideae	v	a	gro	3	da,sg	ms	25	30	nv-mr	dc-ap	nv-my	flowers,fruits
<i>Spatholobus parviflorus</i> (Roxb.) O.K.	Leguminosae, Papilionoideae	wc	pd	gro	3	ddf, bb/df	ms	25	30	jl-ag	nv-dc	my-ja	flowers
<i>Teramnus labialis</i> (L.f.) Spreng.	Leguminosae, Papilionoideae	v	a	gro	3	bb/df,da	ms	25	30	oc-nv	dc-ja	jn-ja	flowers
<i>Uraria campanulata</i> (Wall. ex DC.) Gagnep.	Leguminosae, Papilionoideae	h	pd	gro	3	bb/df,da	ms	25	30	sp-nv	nv-dc	my-dc	flowers,fruits

Species	Family	Habit	Aped	Life-mode	Abundance	Habitat	Bedrock	Lower Elevation (m)	Upper Elevation (m)	Flowering Month	Fruiting Month	Leafing Month	Collected
<i>Uraria cordifolia</i> Wall.	Leguminosae, Papilionoideae	h	pd	gro	2	ddf,bb/df	ms	25	30	oc-nv	nv-dc	my-dc	flowers,fruits
<i>Uraria lagopodioides</i> (L.) Desv. ex DC.	Leguminosae, Papilionoideae	h	pd	gro	3	ddf, bb/df	ms	25	30	ag-nv	nv-dc	my-dc	flowers,fruits
<i>Uraria pierrei</i> Schindl.	Leguminosae, Papilionoideae	h	pd	gro	3	ddf	ms	30	30	jn-ag	ag-oc	my-dc	flowers,fruits
<i>Parinari anamensis</i> Hance	Rosaceae	t	pe	gro	3	ddf,bb/df	ms	25	30	mr-ap	mr-my	ja-dc	flowers
<i>Drosera burmannii</i> Vahl	Droseraceae	h	a	gro	2	ddf	ms	30	30	ap-my	my-jn	jn-nv	
<i>Drosera indica</i> L.	Droseraceae	h	a	gro	2	ddf	ms	30	30	jn-ag	ag-oc	my-nv	flowers
<i>Carallia brachiata</i> (Lour.) Merr.	Rhizophoraceae	t	pe	gro	2	mxf	ms	25	30	dc-ja	my-jn	ja-dc	flowers
<i>Anogeissus acuminata</i> (Roxb. ex DC.) Guill. & Perr.	Combretaceae	t	pd	gro	3	bb/df	ms	25	30	oc-nv	nv-dc	my-dc	flowers,fruits
<i>Anogeissus rivularis</i> (Gagnep.) Lec.	Combretaceae	t	pd	gro,rhe	4	rv 4	sh,ms	20	25	jl-ag	sp	ag-jl	flowers
<i>Calycopteris floribunda</i> (Roxb.) Lmk.	Combretaceae	wc	pd	gro	4	bb/df	ms	25	30	ja-fb	mr-ap	mr-nv	fruits
<i>Combretum latifolium</i> Bl.	Combretaceae	wc	pd	gro	4	bb/df,mxf	sh,ms	25	30	dc-ja	mr	ap-dc	
<i>Combretum quadrangulare</i> Kurz	Combretaceae	t	pe	gro,rhe	2	wet areas in da, rv 6	ms	25	30	mr-my	oc-dc	ja-dc	flowers,fruits
<i>Combretum trifoliatum</i> Vent.	Combretaceae	sc	pd	gro,rhe	3	rv 5-6	ms	20	30	nv-mr	mr-ag	oc-jl	flowers,fruits
<i>Terminalia alata</i> Hey. ex Roth	Combretaceae	t	pd	gro	3	ddf	ms	25	30	my-jn	mr	my-dc	
<i>Terminalia bellirica</i> (Gaertn.) Roxb.	Combretaceae	t	pd	gro	2	ddf,bb/df	ms	25	30	jl-ag	oc-dc	mr-dc	flowers
<i>Terminalia chebula</i> Retz. var. <i>chebula</i>	Combretaceae	t	pd	gro	3	ddf,bb/df	ms	25	30	mr-ap	nv-fb	mr-dc	
<i>Terminalia mucronata</i> Craib & Hutch.	Combretaceae	t	pd	gro	3	ddf	ms	30	30	ap	jl-sp	my-dc	
<i>Terminalia triptera</i> Stapf	Combretaceae	t	pd	gro	2	bb/df	ms	25	30	sp-oc	dc-ja	my-dc	flowers
<i>Eugenia cumini</i> (L.) Druce	Myrtaceae	t	pd	gro	3	ddf	ms	30	30	mr-ap	jl-ag	ap-dc	
<i>Eugenia fruticosa</i> (DC.) Roxb.	Myrtaceae	t	pe	gro	3	mxf	ms	25	30	mr-ap	jn	ja-dc	flowers
<i>Eugenia grandis</i> Wight var. <i>grandis</i>	Myrtaceae	t	pe	gro	2	mxf	ms	25	30	nv-mr	jl-ag	ja-dc	flowers
<i>Eugenia grata</i> Wight	Myrtaceae	t	pe	gro	2	mxf	sh,ms	25	30	ap-my	jl-ag	ja-dc	
<i>Eugenia mekongensis</i> Gagnep.	Myrtaceae	t	pd	gro,rhe	3	rv 3-6	ms	20	25	mr-ap	ap-my	nv-jn	flowers, imm. fruits
* <i>Rhodamnia cinerea</i> Jack var. <i>cinerea</i>	Myrtaceae	l	pe	gro	2	bb/df, mxf	ms	25	30	my-jn	sp-oc	ja-dc	imm.fruits

Species	Family	Habit	Aped	Life-mode	Abundance	Habitat	Bedrock	Lower Elevation (m)	Upper Elevation (m)	Flowering Month	Fruiting Month	Leafing Month	Collected
<i>Barringtonia acutangula</i> (L.) Gaertn.	Lecythidaceae	t	pd	gro,rhe	3	rv 4-6	ms	20	25	ag-mr	oc-my	nv-jl	flowers,fruits
<i>Careya arborea</i> Roxb.	Lecythidaceae	t	pd	gro	3	ddf	ms	25	30	mr-ap	my-jn	my-fb	flowers
<i>Memecylon caeruleum</i> Jack	Melastomataceae	t,l	pe	gro	3	rv 6,bb/df,mxf	ms,sh	25	30	fb-mr	oc-dc	ja-dc	fruits
<i>Memecylon lilacinum</i> Zoll. & Mor.	Melastomataceae	t	pe	gro	3	mxf	ms	25	30	jl	oc-my	ja-dc	fruits
<i>Memecylon scutellatum</i> (Lour.) Naud.	Melastomataceae	l	pe	gro	3	ddf, streams in mxf	ms	25	30	ap-my	mr-ap	ja-dc	fruits
<i>Memecylon umbellatum</i> Burm. f.	Melastomataceae	t,l	pe	gro	3	rv 6,bb/df,mxf	ms	25	30	ja-fb	nv-dc	ja-dc	fruits
<i>Osbeckia setoso-annulata</i> Gedd.	Melastomataceae	h	a	gro	3	ddf	ms	25	30	oc-nv	nv-dc	my-dc	flowers
<i>Ammannia baccifera</i> L.	Lythraceae	h	a	gro	3	wet areas in bb/df	ms	25	30	jl-sp	oc-nv	my-nv	fruits
<i>Lagerstroemia cochinchinensis</i> Pierre var. <i>ovalifolia</i> Furt. & Mont.	Lythraceae	t	pd	gro	4	bb/df	ms	25	30	jl-sp	fb-ap	my-dc	flowers
<i>Lagerstroemia floribunda</i> Jack var. <i>sublaevis</i> Craib	Lythraceae	t	pd	gro	3	bb/df	ms	25	30	sp-oc	oc-dc	my-dc	fruits
<i>Lagerstroemia lecomtei</i> Gagnep.	Lythraceae	t,l	pd	gro	4	bb/dfd, wet areas in sg	ms	25	30	jl-ag	nv-dc	my-ja	flowers, fruits
<i>Lagerstroemia macrocarpa</i> Kurz var. <i>macrocarpa</i>	Lythraceae	t	pd	gro	3	ddf,bb/df	ms	25	30	ap-my	jl-ag	my-dc	fruits
<i>Lagerstroemia tomentosa</i> Presl	Lythraceae	t	pd	gro	3	bb/df	ms	25	30	ap-my	ag-oc	my-nv	
<i>Lagerstroemia villosa</i> Wall. ex Kurz	Lythraceae	t	pd	gro	3	bb/df	ms	25	30	mr-my	ag-oc	my-nv	
<i>Rotala indica</i> (Willd.) Koeh.	Lythraceae	h	a	gro	3	wet areas in ddf	ms	25	30	jl-ag	oc-nv	my-dc	fruits
<i>Duabanga grandiflora</i> (Roxb. ex DC.) Walp.	Sonneratiaceae	t	pe	gro	1	mxf,da,sg	ms	30	30	ja-fb	ap-my	ja-dc	
<i>Ludwigia hyssopifolia</i> (G. Don) Exell	Onagraceae	h	a	gro,wee	3	rv 5, da	ms	20	25	ja-dc	ja-dc	ja-dc	flowers
<i>Passiflora foetida</i> L.	Passifloraceae	v	a	gro, int, nat, wee	3	da,sg	sh,ms	25	30	jl-mr	ag-ap	jl-my	
<i>Coccinia grandis</i> (L.) Voigt	Cucurbitaceae	v	a	gro	3	da,sg	ms	20	30	jl-mr	nv-mr	jl-ap	
<i>Gymnopetalum integrifolium</i> (Roxb.) Kurz var. <i>integrifolium</i>	Cucurbitaceae	v	a	gro	3	rv 5, da	ms	25	30	mr-ag	jn-oc	ja-oc	♂, fruits
<i>Luffa cylindrica</i> (L.) M. J. Roem.	Cucurbitaceae	v	a	gro	3	bb/df,da	ms	25	30	nv-mr	nv-ap	my-ap	flowers,fruits
<i>Momordica charantina</i> L.	Cucurbitaceae	v	a	gro,wee	3	da	ms	25	30	jn-oc	ag-nv	my-dc	

Species	Family	Habit	Aped	Life-mode	Abundance	Habitat	Bedrock	Lower Elevation (m)	Upper Elevation (m)	Flowering Month	Fruiting Month	Leafing Month	Collected
<i>Mukia maderaspatana</i> (L.) M. J. Roem.	Cucurbitaceae	v	a	gro	2	bb/df,da	ms	25	30	oc-dc	oc-ja	my-dc	flowers,fruits
<i>Scopella marginata</i> (Bl.) Wilde & Duy. var. <i>marginata</i>	Cucurbitaceae	v	a	gro	2	bb/df,da	ms	30	30	jl-ag	ag-sp	my-nv	flowers, fruits
<i>Solena heterophylla</i> Lour. ssp. <i>heterophylla</i>	Cucurbitaceae	v	pd	gro	2	ddf	ms	30	30	jl-sp	sp-oc	my-dc	♂
<i>Trichosanthes kirilowii</i> Maxim.	Cucurbitaceae	v	a	gro	3	rv 5	ms	20	25			ja-jn	
<i>Trichosanthes pubera</i> Bl. ssp. <i>rubriflos</i> (Thor. ex Cay.) Duy. & Prue. var. <i>rubiflos</i>	Cucurbitaceae	v	a	gro	3	rv 6, da, sg	ms	25	30	jn-ag	jl-oc	my-dc	fruits
<i>Zehneria marginata</i> (Bl.) Kera.	Cucurbitaceae	v	a	gro	3	ddf,da	ms	25	30	ag-oc	nv-dc	my-dc	fruits
<i>Tetrameles nudiflora</i> R. Br. ex Benn.	Datisceae	t	pd	gro	3	bb/df	ms	25	30	mr-ap	ap-my	my-dc	
<i>Glinus lotoides</i> L.	Aizoaceae	h	a	gro	3	bb/df,da	ms	25	30	fb-ap	mr-my	nv-jn	flowers
<i>Mollugo pentaphylla</i> L.	Aizoaceae	h	a	gro,wee	3	bb/df,da	ms	25	30	nv-ag	ja-ag	sp-ap	flowers,fruits
<i>Oenanthe javanica</i> (Bl.) DC.	Umbelliferae	h	a	gro	3	rv 5	ms	20	25	mr-my	my-jn	nv-jn	flowers
<i>Alangium salvifolium</i> (L. f.) Wang. ssp. <i>hexapetalum</i> (Lmk.) Wang.	Alangiaceae	t	pd	gro	3	bb/df,da,sg	ms	25	30	ja-mr	ap-jn	ap-dc	fruits
<i>Aphaenandra uniflora</i> (Wall. ex G. Don) Brem.	Rubiaceae	h,cr	pd	gro	3	bb/df	ms	25	30	jl-ag	sp-oc	my-nv	flowers, imm. fruits
<i>Borreria brachystema</i> (R. Br. ex Bth.) Val.	Rubiaceae	h	a	gro	3	bb/df	ms	25	30	jl-ag	oc-nv	my-dc	fruits
<i>Canthium berberidifolium</i> Gedd.	Rubiaceae	l	pd	gro	2	ddf	ms	30	30		oc-nv	my-dc	
<i>Catunaregam spathulifolia</i> Tirv.	Rubiaceae	l	pd	gro	3	ddf,bb/df	ms	30	30	my-jn	sp-oc	my-dc	
<i>Catunaregam tomentosum</i> (Bl. ex DC.) Tirv.	Rubiaceae	l	pd	gro	3	ddf	ms	25	30	my-jn	jl-sp	my-dc	fruits
<i>Dentella repens</i> (L.) J. R. & G. Forst.	Rubiaceae	h	a	gro	3	rv 5	ms	20	25	ja-my	fb-jn	ja-jn	flowers
<i>Fagerlindia</i> (<i>Randia griffithii</i> Hk. f.)	Rubiaceae	sc	pe	gro	3	mxf,bb/df	ms	25	30		nv-dc	ja-dc	fruits
<i>Gardenia cambodiana</i> Pit.	Rubiaceae	l	pd	gro	2	bb/df	ms	30	30	my-jn	ag-sp	my-dc	imm. fruits
<i>Haldina cordifolia</i> (Roxb.) Rids.	Rubiaceae	t	pd	gro	3	bb/df	ms	25	30	ap-my	dc-df	my-dc	
<i>Hedyotis chereevensis</i> (Pierre ex Pit.) Fuku.	Rubiaceae	h	a	gro	3	rv 5-6	ms	25	30	jl-ag	ag-sp	ja-ag	flowers
<i>Hedyotis kerwanhensis</i> (Pierre ex Pit.) Maxw.	Rubiaceae	h	a	gro	3	bb/df,sg	ms	25	30	jl-ag	ag-nv	my-dc	flowers, fruits

Species	Family	Habit	Aped	Life-mode	Abundance	Habitat	Bedrock	Lower Elevation (m)	Upper Elevation (m)	Flowering Month	Fruiting Month	Leafing Month	Collected
<i>Hedyotis nodiflora</i> Wall. ex G. Don	Rubiaceae	t	pd	gro	2	ddf, bb/df	ms	25	30	jl-ag	oc-nv	my-dc	fruits
<i>Hedyotis ovatifolia</i> Cav.	Rubiaceae	h	a	gro	3	rv 5-6, ddf,bb/df	ms	25	30	jn-sp	ag-oc	ja-sp	flowers,fruits
<i>Hedyotis pinifolia</i> Wall. ex G. Don	Rubiaceae	h	a	gro	3	rv 5	ms	20	25	ja-mr	mr-ap	nv-jn	flowers
<i>Hedyotis verticillata</i> (L.) Lmk.	Rubiaceae	h	a	gro	3	wet areas in bb/df	ms	25	30	jl-ag	oc-nv	my-dc	flowers, fruits
<i>Hymenodictyon orixense</i> (Roxb.) Mabb.	Rubiaceae	t	pd	gro	3	bb/df	ms	25	30	jl-ag	oc-fb	my-dc	flowers
<i>Ixora cibdela</i> Craib	Rubiaceae	l	pe	gro	3	bb/df,mxf	sh,ms	25	30	ja-mr	mr-ap	ja-dc	fruits
<i>Ixora finlaysoniana</i> Wall. ex G. Don	Rubiaceae	l,s	pe	gro	3	bb/df,mxf	ms	25	30	mr-my	nv-dc	ja-dc	flowers,fruits
<i>Ixora nigricans</i> R. Br. ex Wight & Arn.	Rubiaceae	l	pe	gro	3	mxf	ms	25	30	fb-mr		ja-dc	flowers
<i>Ixora</i> sp.	Rubiaceae	l,s	pe	gro	3	bb/df,mxf	ms	25	30	ag-oc	nv-fb	ja-dc	fruits
<i>Knoxia brachycarpa</i> R. Br. ex Hk. f.	Rubiaceae	h	pd	gro	3	ddf	ms	25	30	jn-ag	jl-sp	my-nv	flowers,fruits
<i>Mitragyna hirsuta</i> Hav.	Rubiaceae	t	pd	gro	3	ddf	ms	30	30	jl-ag	fb-mr	my-fb	flowers
<i>Mitragyna rotundifolia</i> (Roxb.) O.K.	Rubiaceae	t	pd	gro	4	ddf,sg	ms	25	30	ap-my	sp-nv	my-ja	flowers, fruits
<i>Morinda pandurifolia</i> O. K. var. <i>oblonga</i> (Pit.) Craib	Rubiaceae	s,l	pd	gro,rhe	3	rv 3-5	sh,ms	20	30	nv-mr (my)	mr-ag	oc-my	flowers,fruits
<i>Morinda tomentosa</i> Hey. ex Roth	Rubiaceae	t	pd	gro	3	ddf	ms	25	30	mr-ap	jl-sp	mr-oc	flowers, fruits
<i>Nauclea orientalis</i> (L.) L.	Rubiaceae	t	pe	gro	3	rv 6	ms	25	30	mr-ap	jl-dc	ja-dc	fruits
<i>Ophiorrhiza trichocarpon</i> Bl. var. <i>trichocarpon</i>	Rubiaceae	h	pd	gro	3	bb/df	ms	30	30	jl-sp	sp-oc	my-nv	flowers
<i>Oxyceros horrida</i> Lour.	Rubiaceae	wc	pe	gro	3	bb/df	ms	25	30	ap-my	ag-sp	ja-dc	fruits
<i>Psychotria montana</i> Bl.	Rubiaceae	l	pe	gro	2	mxf	ms	25	30	ag-nv	nv-fb	ja-dc	fruits
<i>Tamilnadia uliginosa</i> (Retz.) Tirv. & Sastre	Rubiaceae	l	pd	gro	2	bb/df	ms	30	30	mr	jl-ag	my-dc	fruits
<i>Xantonnea parviflora</i> (O. K.) Craib var. <i>salicifolia</i> (Pierre ex Pit.) Craib	Rubiaceae	s	pd	gro,rhe	4	rv 2-5	ms	20	25	ja-my	ag	nv-jn	flowers, fruits
<i>Ageratum conyzoides</i> L.	Compositae	h	a	gro,nat, wee	4	rv 5, da,sg	sh,ms	20	30	jn-mr	ag-ap	oc-jn	
<i>Blumea glandulosa</i> DC.	Compositae	h	a	gro,wee	3	da,sg	ms	25	30	ja-mr	mr-ap	nv-jn	flowers
<i>Blumea napifolia</i> DC.	Compositae	h	a	gro,wee	3	da	sh,ms	25	30	ja-mr	mr-ap	nv-jn	flowers
<i>Eclipta prostrata</i> (L.) L.	Compositae	h	a	gro,wee	3	rv 5,da,sg	sh,ms	20	30	dc-mr	ja-ap	nv-jn	

Species	Family	Habit	Aped	Life-mode	Abundance	Habitat	Bedrock	Lower Elevation (m)	Upper Elevation (m)	Flowering Month	Fruiting Month	Leafing Month	Collected
<i>Elephantopus scaber</i> L. ssp. <i>scaber</i> var. <i>scaber</i>	Compositae	h	pe	gro	3	bb/df,da	ms	25	30	oc-fb	oc-fb	ja-dc	flowers,fruits
<i>Eupatorium odoratum</i> L.	Compositae	h	pe	nat,wee	4	da,sg	sh,ms	25	30	ja-mr	mr-ap	ja-dc	
<i>Grangea maderaspatana</i> (L.) Poir.	Compositae	h	a	gro,wee	3	rv 5	ms	20	30	fb-ap	mr-my	nv-jn	flowers
<i>Spilanthes paniculata</i> Wall. ex DC.	Compositae	h	a	gro,wee	3	rv 5,da	ms	25	30	jn-sp	jl-oc	my-nv	flowers
<i>Lobelia alsinoides</i> Lmk.	Campanulaceae	h	a	gro	3	wet areas in ddf	ms	30	30	jn-ag	ag-sp	my-nv	flowers, fruits
<i>Plumbago indica</i> L.	Plumbaginaceae	h	pd	gro	2	bb/df	ms	25	30	oc-nv	ja-dc	my-dc	flowers
* <i>Ardisia attenuata</i> Wall. ex DC.	Myrsinaceae	l	pe	gro	3	mxf,sg	ms	25	30	nv-ja	nv-fb	ja-dc	flowers,fruits
<i>Ardisia villosa</i> Roxb.	Myrsinaceae	l	pe	gro	2	mxf	ms	30	30	ap-jn	sp-nv	ja-dc	
<i>Pouteria obovata</i> (R. Br.) Baeh.	Sapotaceae	t	pd	gro	2	mxf	ms	25	30	mr-ap		mr-dc	
<i>Diospyros bejaudii</i> Lec.	Ebenaceae	t	pe	gro	3	bb/df	ms	30	30	jl-ag	jl-sp	ja-dc	fruits
<i>Diospyros castanea</i> (Craib) Flet.	Ebenaceae	t	pe	gro	2	ddf,sg	ms	30	30	mr-ap	jl-ag	ja-dc	fruits
<i>Diospyros ehretoides</i> Wall. ex G. Don	Ebenaceae	t	pd	gro	3	ddf	ms	25	30	mr-ap	oc-dc	my-dc	♂,fruits
* <i>Diospyros filipendula</i> Pierre ex Pit.	Ebenaceae	t	pe	gro	2	ddf	ms	25	30		fb-ap	ja-dc	fruits
<i>Diospyros malabarica</i> (Desr.) Kostel. var. <i>siamensis</i> (Hochr.) Pheng.	Ebenaceae	t	pe	gro	3	rv 6, mxf	ms	25	30	mr-ap	oc-dc	ja-dc	♂,♀,fruits
<i>Diospyros mollis</i> Griff.	Ebenaceae	t	pd	gro	3	bb/df	ms	25	30	mr-ap	oc-dc	my-dc	♂,fruits
<i>Diospyros montana</i> Roxb.	Ebenaceae	t	pe	gro	3	rv 6	ms	25	30	mr-ap	jl-sp	ja-dc	fruits
* <i>Diospyros oblonga</i> Wall. ex G. Don	Ebenaceae	t	pe	gro	2	bb/df	ms	30	30		jl-sp	ja-dc	fruits
<i>Diospyros scalariformis</i> Flet.	Ebenaceae	t	pe	gro	3	mxf	ms	25	30	mr-ap		ja-dc	♂
<i>Diospyros venosa</i> Wall. ex A. DC. var. <i>venosa</i>	Ebenaceae	t	pe	gro	3	bb/df,mxf	ms	25	30	fb-mr		ja-dc	♂
<i>Jasminum siamensis</i> Craib	Oleaceae	s	pd	gro	2	bb/df	ms	25	30	sp-nv	nv-ja	my-ja	fruits
<i>Jasminum</i> sp.	Oleaceae	wc	pd	gro	2	bb/df	ms	30	30	jl-ag		my-dc	
<i>Myxopyrum smilacifolium</i> (Wall.) Bl. ssp. <i>smilacifolium</i>	Oleaceae	wc	pe	gro	2	mxf	ms	30	30	fb-mr		ja-dc	flowers
<i>Aganoneiron polymorphum</i> Pierre ex Spire	Apocynaceae	v	pd	gro	2	da,sg	ms	25	30	jl-ag		my-nv	flowers
<i>Aganosma marginata</i> (Roxb.) DC.	Apocynaceae	wc	pd	gro	3	bb/df	ms	25	30	ap-my	dc-mr	my-fb	

Species	Family	Habit	Aped	Life-mode	Abundance	Habitat	Bedrock	Lower Elevation (m)	Upper Elevation (m)	Flowering Month	Fruiting Month	Leafing Month	Collected
<i>Holarrhena curtisii</i> King & Gamb.	Apocynaceae	s	pd	gro	3	ddf	ms	30	30	my-ag	ag-oc	my-dc	flowers, fruits
<i>Holarrhena pubescens</i> Wall. ex G. Don	Apocynaceae	t	pd	gro	3	bb/df	ms	25	30	mr-my	ag-dc	mr-dc	flowers,fruits
<i>Ichnocarpus frutescens</i> (L.) W. T. Ait.	Apocynaceae	wc,v	pe	gro	2	mxf,da,sg	ms	25	30	nv-ja	dc-fb	ja-dc	flowers
<i>Parameria laevigata</i> (Juss.) Mold.	Apocynaceae	wc	pe	gro	3	bb/df,mxf	ms	25	30	oc-nv	fb-mr	ja-dc	flowers
<i>Rauwolfia micrantha</i> Hk. f.	Apocynaceae	h	pd	gro	2	bb/df	ms	30	30		jl-ag	my-dc	fruits
<i>Wrightia arborea</i> (Denn.) Mabb.	Apocynaceae	t	pd	gro	3	bb/df	ms	25	30	my-jn	jl-sp	my-dc	
* <i>Brachystelma kerrii</i> Craib	Asclepiadaceae	h	pd	gro	2	ddf	ms	30	30	jl-ag		my-nv	flowers
<i>Ceropegia thorelii</i> Craib	Asclepiadaceae	v	pd	gro	2	bb/df	ms	30	30	jl-ag		my-nv	flowers
<i>Hoya diversifolia</i> Bl.	Asclepiadaceae	v	pe	epi	3	dof,bb/df	ms	25	30	mr-ap		ja-dc	flowers
<i>Hoya kerrii</i> Craib	Asclepiadaceae	v	pe	epi	2	ddf	ms	25	30	my-yl	yl-sp	ja-dc	
<i>Hoya verticillata</i> (Vahl) G. Don var. <i>verticillata</i>	Asclepiadaceae	v	pe	epi	2	ddf	ms	25	30	fb-mr	jn-ag	ja-dc	
<i>Oxystelma esculentum</i> (L. f.) R. Br.	Asclepiadaceae	v	pe	gro,rhe	3	rv 2-6	ms	20	30	ag-nv(mr)	ja-fb	ja-dc	flowers
<i>Streptocaulon juvenas</i> (Lour.) Merr.	Asclepiadaceae	v	pe	gro	2	ddf, mxf,da	ms	25	30	ag-dc	sp-fb	ja-dc	flowers,fruits
<i>Telectadium edule</i> H. Baill.	Asclepiadaceae	sh	pd	epl	5	rv 2-3	ms	20	25	nv-dc(mr)	fb-mr	oc-ap	fruits
<i>Toxocarpus villosus</i> (Bl.) Dcne.	Asclepiadaceae	v	pe	gro	2	mxf,da	ms	25	30	oc-dc	dc-fb	ja-dc	flowers
<i>Tylophora harmandii</i> Cost.	Asclepiadaceae	v	a	gro	2	bb/df,da	ms	25	30	sp-nv	nv-dc	my-dc	fruits
<i>Zygostelma benthamii</i> Baill.	Asclepiadaceae	v	pe	gro	2	bb/df	ms	30	30	oc-nv		ja-dc	
<i>Mirteola petiolata</i> (Gmel.) Torr. & A. Gray	Loganiaceae	h	a	gro	2	bb/df,da	ms	25	30	oc-dc	nv-ja	my-ja	flowers,fruits
<i>Mitrasacme pygmaea</i> R. Br. var. <i>pygmaea</i>	Loganiaceae	h	a	gro	3	ddf	ms	30	30	yl-sp	ag-oc	my-nv	flowers, fruits
<i>Strychnos nux-vomica</i> L.	Loganiaceae	t	pd	gro	3	ddf,bb/df	ms	25	30	mr-ap	dc-my	mr-ja	flowers
<i>Strychnos rupicula</i> Pierre ex Dop	Loganiaceae	wc	pe	gro	2	bb/df	ms	30	30		yl-ag	ja-dc	fruits
<i>Canscora decussata</i> (Roxb.) Schult.	Gentianaceae	h	a	gro	2	wet areas in ddf	ms	30	30	jn-ag	ag-sp	my-nv	flowers,fruits
<i>Nymphoides</i> (<i>Limnanthemum tonkinense</i> Dop)	Gentianaceae	h	a	aqu, gro	3	ponds in ddf	ms	30	30	yl-sp	ag-oc	my-nv	flowers
<i>Hydrolea zeylanica</i> (L.) Vahl	Hydrophyllaceae	h	a	gro	3	ddf,bb/df	ms	25	30	sp-nv	nv-dc	my-dc	flowers

Species	Family	Habit	Aped	Life-mode	Abundance	Habitat	Bedrock	Lower Elevation (m)	Upper Elevation (m)	Flowering Month	Fruiting Month	Leafing Month	Collected
<i>Cordia dichotoma</i> Forst. f.	Boraginaceae	t	pe	gro	3	rv 6	sh,ms	25	30	nv-dc(mr)	jl-nv	ja-dc	flowers,fruits
<i>Heliotropium indicum</i> L.	Boraginaceae	h	a	gro,wee	3	rv 5,da	ms	20	25	ja-dc	ja-dc	ja-dc	flowers
<i>Heliotropium strigosum</i> Willd.	Boraginaceae	h	a	gro	3	ddf	ms	30	30	jn-ag	jl-sp	my-dc	flowers, fruits
<i>Rotula aquatica</i> Lour.	Boraginaceae	s	pd	gro	3	rv 2-4	ms	25	30	fb-mr	mr-ap	nv-jl	flowers
<i>Argyreia</i> sp.	Convolvulaceae	v	pd	gro	2	ddf	ms	30	30	jn		my-dc	
<i>Erycibe subspicata</i> Wall. ex G. Don	Convolvulaceae	wc	pe	gro	3	rv 6	ms	25	30	ag-oc	nv-fb	ja-dc	fruits
<i>Ipomoea mauritiana</i> Jacq.	Convolvulaceae	v	a	gro	3	bb/df,da	ms	25	30	ag-sp	oc-nv	ja-dc	fruits
<i>Jacquemontia paniculata</i> (Burm. f.) Hall. f. var. <i>paniculata</i>	Convolvulaceae	v	a	gro	2	ddf,da	ms	25	30	nv-dc	ja-ap	jn-mr	flowers
<i>Merremia hederacea</i> (Burm. f.) Hall. f.	Convolvulaceae	v	a	gro	4	mxf.,sg	ms	25	30	oc-dc	oc-fb	jn-fb	flowers
<i>Merremia hirta</i> (L.) Merr. var. <i>hirta</i>	Convolvulaceae	v	a	gro	3	bb/df,da	ms	25	30	oc-dc	nv-fb	my-fb	flowers
<i>Merremia vitifolia</i> (Burm. f.) Hall. f.	Convolvulaceae	v	a	gro	3	da/sg	ms	25	30	ja-fb	mr-my	jn-dc	
<i>Operculina turpethum</i> (L.) S. Manso	Convolvulaceae	v	a	gro	3	rv 5,da,sg	ms	25	30	nv-dc	fb-mr	nv-jn	fruits
<i>Capsicum annum</i> L.	Solanaceae	h	a	gro,int, nat,wee	3	da,sg	sh,ms	25	30	ja-dc	ja-dc	ja-dc	
<i>Physalis angulata</i> L.	Solanaceae	h	a	gro	3	rv 5, da	ms	20	25	ja-sp	ap-oc	nv-jn	flowers
<i>Solanum nigrum</i> L.	Solanaceae	h	a	gro,wee	3	rv 5, da	ms	20	30	nv-mr	dc-mr	oc-my	flowers,fruits
<i>Solanum torvum</i> Sw.	Solanaceae	h	a	gro, cul, int, nat	3	da, sg	ms	25	30	ag-ja	sp-mr	jn-ap	
<i>Adenosma bracteosa</i> Bon.	Scrophulariaceae	h	a	gro	3	ddf	ms	25	30	oc-nv	nv-dc	my-dc	flowers
<i>Dopatrium acutifolium</i> Bon.	Scrophulariaceae	h	a	aqu, gro	2	ponds in ddf	ms	30	30	jl-sp	ag-oc	my-dc	flowers
<i>Linnophila laxa</i> Bth.	Scrophulariaceae	h	a	gro	3	ddf	ms	25	30	oc-nv	dc-ja	my-dc	flowers
<i>Linnophila micrantha</i> (Bth.) Bth.	Scrophulariaceae	h	a	aqu, gro	3	ponds in ddf	ms	30	30	jl-sp	ag-oc	my-dc	flowers
<i>Linnophila repens</i> (Bth.) Bth.	Scrophulariaceae	h	a	gro	3	wet areas in ddf	ms	25	30	sp-nv	nv-dc	my-dc	flowers
<i>Lindenbergia muraria</i> (Roxb. ex D. Don) R. Br.	Scrophulariaceae	h	a	gro	3	rv 5,da	ms	20	25	fb-mr	mr-ap	oc-jn	flowers
<i>Lindenbergia philippensis</i> (Cham.) Bth.	Scrophulariaceae	h	a	gro	3	rv 5,da	ms	20	25	mr-ag	mr-ag	oc-jn	flowers
<i>Lindernia antipoda</i> (L.) Alst.	Scrophulariaceae	h	a	gro,wee	3	rv 5,da	ms	20	30	ja-sp	mr-oc	nv-jn	flowers

Species	Family	Habit	Aped	Life-mode	Abundance	Habitat	Bedrock	Lower Elevation (m)	Upper Elevation (m)	Flowering Month	Fruiting Month	Leafing Month	Collected
<i>Lindernia cambodgiana</i> (Bon.) Phil.	Scrophulariaceae	h	a	aqu, gro	3	ponds in ddf	ms	30	30	jl-sp	ag-oc	my-nv	flowers, imm. fruits
<i>Lindernia ciliata</i> (Colsm.) Penn.	Scrophulariaceae	h	a	gro	3	ddf	ms	30	30	jl-ag	ag-oc	my-nv	flowers, fruits
<i>Lindernia crustacea</i> (L.) F. Muell. var. <i>crustacea</i>	Scrophulariaceae	h	a	gro, wee	3	rv 5, da	ms	20	30	ja-sp	mr-oc	nv-jn	flowers
<i>Lindernia spathacea</i> (Bon.) Bon.	Scrophulariaceae	h	a	gro	3	ddf	ms	25	30	oc-nv	dc-ja	my-dc	flowers
<i>Lindernia viatica</i> (Kerr ex Barn.) Phil.	Scrophulariaceae	h	a	aqu, gro	3	ponds in ddf	ms	30	30	jl-sp	ag-oc	my-nv	flowers
<i>Lindernia viscosa</i> (Horn.) Bold.	Scrophulariaceae	h	a	gro	3	wet areas in ddf	ms	30	30	jl-sp	ag-oc	my-nv	flowers
<i>Pierranthus capitatus</i> (Bon.) Bon.	Scrophulariaceae	h	a	gro	3	ddf	ms	25	30	oc-nv	nv-dc	jn-dc	flowers
<i>Pseudostriga cambodiana</i> Bon.	Scrophulariaceae	h	a	gro	3	ddf	ms	30	30	jl-ag	sp-oc	my-nv	flowers
<i>Scoparia dulcis</i> L.	Scrophulariaceae	h	a	gro, nat, wee	3	rv 5, da	ms	25	30	mr-ag	ap-sp	oc-jn	flowers
<i>Striga asiatica</i> Lour.	Scrophulariaceae	h	a	gro	2	ddf	ms	25	30	jn-ag	ag-sp	my-nv	flowers, fruits
<i>Torenia flava</i> B.-H. ex Bth.	Scrophulariaceae	h	a	gro	3	bb/df	ms	30	30	jl-sp	ag-oc	my-dc	flowers, fruits
<i>Torenia laotica</i> Bon.	Scrophulariaceae	h	a	gro	3	bb/df	ms	30	30	jn-ag	jl-sp	my-nv	flowers
<i>Torenia thorelii</i> Bon.	Scrophulariaceae	h	a	gro	3	bb/df, da	ms	25	30	oc-nv	nv-dc	my-dc	flowers
<i>Torenia violacea</i> (Aza. ex Blanco) Penn.	Scrophulariaceae	h	a	gro	3	bb/df, da	ms	25	30	jl-mr	nv-fb	my-mr	flowers, fruits
<i>Verbascum chinense</i> (L.) Sant.	Scrophulariaceae	h	a	gro	3	rv 5	ms	20	25	fb-mr	mr-ap	nv-jn	flowers, fruits
<i>Aeginetia acaulis</i> (Roxb.) Walp.	Orobanchaeae	h	pd	gro, par	2	ddf	ms	30	30	jl-ag		leafless	flowers
<i>Aeginetia indica</i> Roxb.	Orobanchaeae	h	pd	gro, par	2	bb/df	ms	25	30	jl-sp	sp-oc	leafless	flowers
<i>Utricularia bifida</i> L.	Lentibulariaceae	h	a	aqu, gro	2	ponds in ddf	ms	30	30	jl-sp	ag-oc	jl-nv	
<i>Utricularia pierrei</i> Pell.	Lentibulariaceae	h	a	gro	2	wet areas in ddf	ms	30	30	jl-ag		my-oc	flowers
<i>Utricularia striatula</i> Sm.	Lentibulariaceae	h	a	gro	2	wet areas in ddf	ms	25	30	ag-nv	nv-dc	jl-dc	flowers
* <i>Calcareoboea bonii</i> (Pell.) Burt	Gesneriaceae	h	pd	gro	3	bb/df, mx	ms	30	30	jl-ag	sp-oc	my-nv	flowers, imm. fruits
<i>Markhamia stipulata</i> (Wall.) Seem. ex K. Sch. var. <i>stipulata</i>	Bignoniaceae	t	pd	gro	3	da, sg	ms	25	30	nv-ag	sp-ap	my-ja	
<i>Millingtonia hortensis</i> L. f.	Bignoniaceae	t	pd	gro	3	bb/df	ms	25	30	ap-sp	oc-nv	my-oc	

Species	Family	Habit	Aped	Life-mode	Abundance	Habitat	Bedrock	Lower Elevation (m)	Upper Elevation (m)	Flowering Month	Fruiting Month	Leafing Month	Collected
<i>Oroxylum indicum</i> (L.) Kurz	Bignoniaceae	t	pd	gro	2	da, sg	ms	25	30	jn-jl	jl-ag	my-dc	
<i>Stereospermum cylindricum</i> Pierre ex Dop	Bignoniaceae	t	pd	gro	3	bb/df	ms	30	30	jl-ag	sp-oc	my-dc	flowers, imm. fruits
<i>Barleria strigosa</i> Willd.	Acanthaceae	h	pd	gro	3	ddf,da	ms	25	30	jl-oc	nv-fb	jn-ja	flowers, fruits
<i>Dipteracanthus repens</i> (L.) Hassk.	Acanthaceae	h	a	gro	3	bb/df	ms	25	30	jl-nv	fb	my-fb	flowers,fruits
<i>Dyschoriste depressa</i> Nees	Acanthaceae	h	a	gro	3	bb/df	ms	25	30	nv-dc	nv-fb	my-fb	flowers
<i>Hemigraphis modesta</i> R. Ben.	Acanthaceae	h	pd	gro	2	rv 4,6	ms	20	25	fb-mr	ap-my	nv-jn	flowers
<i>Hydrophila phlomoides</i> Nees	Acanthaceae	h	a	gro	3	wet areas in ddf,bb/df	ms	25	30	oc-nv	dc-mr	my-mr	flowers,fruits
<i>Justicia ventricosa</i> Wall.	Acanthaceae	h	pe	gro	3	bb/df,mxf	ms	25	30	nv-dc		ja-dc	flowers
<i>Justicia</i> sp.	Acanthaceae	h	a	gro	2	wet areas in ddf	ms	30	30	jl-ag		my-nv	flowers
<i>Lepidagathis incurva</i> Ham. ex D. Don	Acanthaceae	h	pe	gro	3	bb/df	sh,ms	25	30	oc-mr	dc-ap	ja-dc	flowers
<i>Nelsonia canescens</i> (Lmk.) Spreng.	Acanthaceae	h	pe	gro	3	bb/df,da	ms	25	30	ja-mr	mr-ap	ja-dc	flowers
<i>Neuracanthus tetragonostachyus</i> Nees ssp. <i>tetragonostachyus</i>	Acanthaceae	a	a	gro	3	bb/df	ms	25	30	oc-nv	dc-ja	jn-ja	flowers
<i>Peristrophe acuminata</i> Nees	Acanthaceae	h	pe	gro	3	bb/df	ms	25	30	oc-nv(mr)	dc-ja	ja-dc	flowers
<i>Pseuderanthemum poilanei</i> R. Ben.	Acanthaceae	h	pe	gro	3	bb/df,mxf	ms	25	30	oc-nv	dc-ja	ja-dc	flowers
<i>Prysiglotis kunthiana</i> (Nees) B. Han.	Acanthaceae	h	a	gro	3	bb/df	ms	25	30	oc-dc	fb-mr	my-mr	flowers,fruits
<i>Rungia parviflora</i> (Retz.) Nees var. <i>parviflora</i>	Acanthaceae	h	a	gro	3	bb/df	ms	25	30	sp-nv	nv-dc	my-dc	flowers
<i>Strobilanthes schomburgkii</i> (Craib) J. R. I. Wood	Acanthaceae	h	a	gro	3	bb/df	ms	30	30	ja		jn-fb	
<i>Thunbergia similis</i> Craib	Acanthaceae	v	pd	gro	3	ddf	ms	25	30	jl-sp	oc-nv	my-nv	flowers
<i>Clerodendrum godefroyi</i> O. K.	Verbenaceae	l	pe	gro	2	bb/df,mxf	ms	25	30	oc-nv	dc-ja	ja-dc	flowers
<i>Clerodendrum paniculatum</i> L.	Verbenaceae	l,h	pd	gro	2	bb/df	ms	30	30	ag-oc	nv-dc	my-dc	
<i>Clerodendrum serratum</i> (L.) Moon var. <i>wallichii</i> Cl.	Verbenaceae	h	pd	gro	2	ddf	ms	30	30	jl-sp	sp-oc	my-dc	flowers, imm. fruits
<i>Congea tomentosa</i> Roxb. var. <i>tomentosa</i>	Verbenaceae	wc	pd	gro	3	bb/df	ms	25	30	fb-ap	ap-jn	ap-fb	
<i>Glossocarya siamensis</i> Craib	Verbenaceae	wc	pe	gro	3	rv 6	ms	25	30	jl-ag	oc-nv	ja-dc	flowers

Species	Family	Habit	Aped	Life-mode	Abundance	Habitat	Bedrock	Lower Elevation (m)	Upper Elevation (m)	Flowering Month	Fruiting Month	Leafing Month	Collected
<i>Gmelina philippensis</i> Cham.	Verbenaceae	sc	pd	gro	2	bb/df, da	ms	25	30	ag-fb	nv-fb	my-fb	flowers,fruits
<i>Paravitex</i> sp.	Verbenaceae	s	pd	gro,rhe	3	rv 3-5	ms	20	25	mr-ap(ag)	ap-jl	oc-jn	flowers,fruits
<i>Phyla nodiflora</i> (L.) Greene	Verbenaceae	h	a	gro	3	rv 5	ms	20	25	mr-ag	ap-sp	oc-jl	flowers
<i>Premna coriacea</i> Cl. var. <i>coriacea</i>	Verbenaceae	wc	pe	gro	2	rv 6	ms	25	30	jl-ag	sp	ja-dc	flowers
<i>Premna nana</i> Coll. & Hemsl.	Verbenaceae	l,h	pd	gro	2	ddf	ms	30	30	ap-my	jl-ag	my-dc	fruits
<i>Vitex limoniifolia</i> Wall. ex Kurz	Verbenaceae	t	pd	gro	3	ddf,bb/df	ms	25	30	jl-sp	oc-dc	my-dc	
<i>Vitex peduncularis</i> Wall. ex Schauer	Verbenaceae	t	pd	gro	3	ddf,bb/df	ms	25	30	jl-ag	my-jl	ap-dc	flowers
<i>Hyptis brevipes</i> Poir.	Labiatae	h	a	gro	3	rv 5,da,sg	ms	25	30	jl-sp	sp-oc	my-nv	flowers, fruits
<i>Leonotis nepetaefolia</i> (L.) R. Br.	Labiatae	h	a	gro,wee,nat	3	rv 5, da	ms	25	30	ja-mr	mr-ap	nv-jn	flowers,fruits
<i>Leucas decemdentata</i> (Willd.) J. Sm.	Labiatae	h	a	gro,wee	3	bb/df,da	ms	25	30	sp-mr	nv-ap	my-ap	flowers
<i>Orthosiphon spiralis</i> (Lour.) Merr.	Labiatae	h	a	gro	2	bb/df	ms	30	30	jl-ag	ag-sp	my-dc	flowers,fruits
<i>Platostoma hispidum</i> (L.) Pat.	Labiatae	h	a	gro	2	ddf,bb/df	ms	25	30	oc-nv	dc-ja	my-dc	flowers
<i>Chenopodium ficifolium</i> Sm.	Chenopodiaceae	h	a	gro,wee	3	rv 5	ms	20	25	mr-my	ap-jn	nv-jn	
<i>Alternanthera sessilis</i> (L.) DC. var. <i>sessilis</i>	Amaranthaceae	h	a	gro,wee	2	bb/df,da	ms	25	30	jl-dc	ag-fb	jn-fb	flowers
<i>Amaranthus spinosus</i> L.	Amaranthaceae	h	a	gro, wee	3	rv 5, da	ms	25	30	my-nv	jn-dc	my-dc	
<i>Celosia argentea</i> L.	Amaranthaceae	h	a	gro, wee	3	rv 5, da	ms	25	30	jn-sp	jl-oc	my-nv	flowers, fruits
<i>Psilotrichum ferrugineum</i> (Roxb.) Moq.-Tand.	Amaranthaceae	h	a	gro	3	rv 5,ddf,bb/df	ms	25	30	jl-nv	sp-dc	my-dc	flowers
<i>Polygonum plebium</i> R. Br.	Polygonaceae	h	a	gro,wee	3	rv 5, da	ms	20	30	dc-ap	ja-my	nv-jn	flowers
<i>Polygonum pubescens</i> Bl.	Polygonaceae	h	a	gro	3	rv 3-5, streams, wet areas	ms	20	25	dc-mr	ja-ap	nv-jn	
<i>Dalzellia carinata</i> (Lec.) C. Cuss.	Tristichaceae	h	pd	aqu,epl, rhe	3	rv 2	ms	20	20	fb-mr	mr	mr-my	flowers
<i>Piper retrofractum</i> Vahl	Piperaceae	v	pe	gro	2	bb/df	ms	25	30	my-jn	nv-dc	ja-dc	fruits
<i>Beilschmiedia aff. glomerata</i> Elm.	Lauraceae	t	pe	gro	3	rv 6	ms	25	30		jl-ag	ja-dc	fruits
<i>Cryptocarya oblongifolia</i> Bl.	Lauraceae	t	pe	gro	3	bb/df,mxf	ms	25	30	jn	nv-mr	ja-dc	fruits
<i>Litsea glutinosa</i> (Lour.) C.B. Rob. var. <i>glutinosa</i>	Lauraceae	t	pd	gro	3	bb/df	ms	25	30	ag-sp	jl-ag	my-ja	fruits

Species	Family	Habit	Aped	Life-mode	Abundance	Habitat	Bedrock	Lower Elevation (m)	Upper Elevation (m)	Flowering Month	Fruiting Month	Leafing Month	Collected
<i>Illigera thorelii</i> Gagnep.	Hernandiaceae	wc	pd	gro	3	bb/df,da	ms	25	30	sp-oc	ja-fb	my-fb	imm. fruits
<i>Dendrophthoe curvata</i> (Bl.) Miq.	Loranthaceae	s	pe	epi,par	3	ddf,mxf	ms	25	30	jl-ap	oc-my	ja-dc	flowers
<i>Dendrophthoe pentandra</i> (L.) Miq.	Loranthaceae	s	pe	epi,par	3	ddf	ms	25	30	mr-ap	mr-my	ja-dc	flowers
<i>Macrosolen cochinchinensis</i> (Lour.) Tiegh.	Loranthaceae	s	pe	epi,par	4	rv 4	ms	20	30	mr-ap	my	ja-dc	flowers
<i>Viscum articulatum</i> Burm. f.	Viscaceae	h	pe	hyp,epi	3	rv 4	ms	20	30	nv-ap	ja-ap	leafless	flowers
<i>Scleropyrum pentandrum</i> (Denn.) Mabb.	Santalaceae	t,l	pe	gro	2	mxf	sh,ms	25	30	fb-mr	jl-sp	ja-dc	
<i>Acalypha brachystachya</i> Horn.	Euphorbiaceae	h	a	gro	2	ddf	ms	30	30	jl-sp	ag-oc	my-nv	flowers, fruits
<i>Acalypha indica</i> L.	Euphorbiaceae	h	a	gro,wee	3	rv 5, da	ms	20	30	fb-sp	ap-oc	nv-oc	flowers
<i>Alchornia tiliifolia</i> (Bth.) M.-A.	Euphorbiaceae	l	pe	gro	3	da, sg	ms	30	30	jn-jl	oc-nv	ja-dc	
<i>Antidesma acidum</i> Retz.	Euphorbiaceae	l	pd	gro	3	ddf,bb/df	ms	30	30	ap-jn	jl-sp	my-dc	fruits
<i>Antidesma ghaesembilla</i> Gaertn.	Euphorbiaceae	t,l	pd	gro	3	bb/df	ms	30	30	my-jn	jl-ag	my-ja	fruits
<i>Antidesma japonicum</i> Sieb. & Zucc. var. <i>japonicum</i>	Euphorbiaceae	l,s	pd	gro	3	rv 6	ms	30	30	jl-ag		nv-ag	♂
<i>Antidesma montanum</i> Bl. var. <i>montanum</i>	Euphorbiaceae	l,s	pe	gro	3	bb/df,mxf	ms	30	30	ap-my	jl-ag	ja-dc	fruits
<i>Aporosa ficifolia</i> Baill.	Euphorbiaceae	l	pe	gro	2	mxf	ms	25	30	sp-oc	ap-my	ja-dc	
<i>Aporosa octandra</i> (B. -H. ex D. Don) Vick. var. <i>yunnanensis</i> (Pax & Hoffm.) Schot	Euphorbiaceae	t	pd	gro	3	ddf,da,sg	ms	25	30	ja-fb	ap-my	fb-nv	fruits
<i>Aporosa villosa</i> (Lindl.) Baill.	Euphorbiaceae	t,l	pd	gro	3	ddf	ms	30	30	ja-mr	my-jn	ap-dc	
<i>Baliospermum solanifolium</i> (Burm.f.) Sur.	Euphorbiaceae	s,h	pd	gro	2	da, sg	ms	30	30	jn-nv	ag-dc	jn-dc	
<i>Blachia andamanica</i> (Kurz) Hk. f.	Euphorbiaceae	s	pe	gro	3	mxf,da	ms	25	30	nv-dc	dc-fb	ja-dc	flowers
<i>Blachia siamensis</i> Gagnep.	Euphorbiaceae	s	pd	gro,rhe	3	rv 3-6	ms	20	25	jl-nv	fb-mr	nv-ag	♀,♂, fruits
<i>Breynia vitis-ideae</i> (Burm. f.) C.E.C. Fisch.	Euphorbiaceae	s	pd	gro	3	ddf	ms	25	30	jl-ag	oc-nv	my-nv	flowers
<i>Bridelia harmandii</i> Gagnep.	Euphorbiaceae	s	pd	gro	3	ddf	ms	30	30	jn-ag	ag-sp	my-nv	♂ flowers, fruits
<i>Bridelia stipularis</i> Bl.	Euphorbiaceae	wc,sc	pd	gro	3	bb/df,sg	ms	25	30	sp-nv	dc-fb	my-fb	
<i>Bridelia tomentosa</i> Bl.	Euphorbiaceae	wc	pd	gro	3	da,sg	ms	25	30	ag-nv	fb-mr	my-ja	fruits
<i>Chaetocarpus castanocarpus</i> (Roxb.) Thw.	Euphorbiaceae	t	pe	gro	3	mxf	ms	25	30	dc-ja	mr-ap	ja-dc	fruits

Species	Family	Habit	Aped	Life-mode	Abundance	Habitat	Bedrock	Lower Elevation (m)	Upper Elevation (m)	Flowering Month	Fruiting Month	Leafing Month	Collected
<i>Dalechampia falcata</i> Gagnep.	Euphorbiaceae	v	pd	gro	3	ddf	ms	30	30	jn-ag	ag-sp	my-nv	flowers, fruits
<i>Drypetes assamica</i> (Hk. f.) Pax & Hoffm.	Euphorbiaceae	t	pe	gro	3	bb/df,mxf	ms	25	30	nv-dc	ja-dc	ja-dc	♀,♂
<i>Drypetes roxburghii</i> (Wall.) Huru.	Euphorbiaceae	t	pe	gro	3	bb/df,mxf	ms	25	30	fb-mr	oc-dc	ja-dc	♂,fruits
<i>Drypetes thorelii</i> Gagnep.	Euphorbiaceae	t	pe	gro	3	rv 6	ms	25	30		jl-sp	ja-ag	fruits
<i>Euphorbia parviflora</i> L.	Euphorbiaceae	h	a	gro	3	rv 5,ddf	ms	20	30	jl-mr	ag-ap	jn-dc	flowers,fruits
<i>Euphorbia thymifolia</i> L.	Euphorbiaceae	h	pe	gro,wee	2	da	ms	25	30	ja-dc	ja-dc	ja-dc	flowers,fruits
<i>Fluggea virosa</i> (Roxb. ex Willd.) Voigt	Euphorbiaceae	l,s	pd	gro	3	rv 5-6, bb/df, da, sg	ms	25	30	mr-ag	jn-sp	my-fb	♀,♂, fruits
<i>Homonoia riparia</i> Lour.	Euphorbiaceae	s	pd	gro,rhe	5	rv 2-5	ms	20	25	mr-ap	jl-dc	ja-jn	♀,♂, fruits
<i>Hymenocardia punctata</i> Wall. ex Lindl.	Euphorbiaceae	l,s	pd	gro	3	bb/df,mxf,sg	ms	25	30	mr-my	ag-sp	my-fb	♂,♀
<i>Mallotus cuneatus</i> Ridl.	Euphorbiaceae	l	pe	gro	3	bb/df,mxf	ms,ry	25	30	mr-my	jl-nv	ja-dc	♂,fruits
<i>Mallotus nudiflorus</i> (L.) Kul. & Welz. (<i>Trewia nudiflora</i> L.)	Euphorbiaceae	t	pd	gro	3	rv 6	ms	25	30	fb-ap	sp-oc	my-nv	
<i>Mallotus philippensis</i> (Lmk.) M.-A.	Euphorbiaceae	t	pd	gro	2	bb/df	ms	30	30	nv-dc	ja-mr	my-mr	
<i>Mallotus repandus</i> (Willd.) M.-A.	Euphorbiaceae	wc	pe	gro	3	da,sg,bb/df	ms	25	30	ja-fb	ap-my	ja-dc	
<i>Pantadenia adenanthera</i> Gagnep.	Euphorbiaceae	s	pd	gro	3	bb/df,da	ms	25	30	jl-ja	nv-mr	my-ap	♂,fruits
<i>Phyllanthus amarus</i> Schum. & Thonn.	Euphorbiaceae	h	a	gro,wee	3	da	sh,ms	25	30	ja-dc	ja-dc	ja-dc	flowers,fruits
<i>Phyllanthus emblica</i> L.	Euphorbiaceae	t	pd	gro	3	ddf,bb/df	sh,ms	25	30	fb-mr	sp-dc	mr-dc	
<i>Phyllanthus jullienii</i> Beille	Euphorbiaceae	s	pd	gro,rhe	4	rv 2-4	ms	20	25	nv-dc	mr-my	oc-ap	flowers
<i>Phyllanthus pulcher</i> Wall. ex M.-A.	Euphorbiaceae	l	pd	gro	2	bb/df,mxf	ms	25	30	sp-nv	nv-dc	nv-ja	♂,fruits
<i>Phyllanthus reticulatus</i> Poit.	Euphorbiaceae	sc,wc	pd	gro	3	rv 5,da,sg	ms	20	30	jl-ag	sp-nv	my-dc	
<i>Phyllanthus urinaria</i> L.													
<i>Ricinus communis</i> L.	Euphorbiaceae	h	a	gro,int,nat	3	da	ms	25	30	jn-sp	jl-oc	my-dc	
<i>Sauropus androgynus</i> (L.) Merr.	Euphorbiaceae	l	pd	gro	2	bb/df,da	ms	25	30	ag-sp	oc-dc	my-dc	fruits
<i>Suregada multiflora</i> (A. Juss.) Baill. var. <i>multiflora</i>	Euphorbiaceae	t	pe	gro	2	mxf	ms	25	30	mr-my	ap-jn	ja-dc	♂,♀
<i>Thysanthera suborbicularis</i> Pierre ex Gagnep.	Euphorbiaceae	h	pd	gro	3	ddf	ms	25	30	mr-ap	ap-jn	my-dc	♂,♀
<i>Trema orientalis</i> (L.) Bl.	Ulmaceae	t	pe	gro	3	da,sg	sh,ms	25	30	mr-ap	my-jl	ja-dc	flowers

Euph

Species	Family	Habit	Aped	Life-mode	Abundance	Habitat	Bedrock	Lower Elevation (m)	Upper Elevation (m)	Flowering Month	Fruiting Month	Leafing Month	Collected
<i>Artocarpus ?lakoocha</i> Roxb.	Moraceae	t	pe	gro	2	bb/df, mxf	ms	30	30			ja-dc	
<i>Ficus alongensis</i> Gagnep.	Moraceae	t	pe	gro,epi,str	3	rv 6, mxf	ms	20	30	ap-ag	my-sp	ja-dc	figs
<i>Ficus benjamina</i> L.	Moraceae	t	pe	gro,epi,str	3	rv 4, 6, mxf	ms	25	30	fb-mr	mr-ap	ja-dc	figs
<i>Ficus fistulosa</i> Reinw. ex Bl.	Moraceae	t	pd	gro	3	da,sg	sh,ms	25	30	ja-dc	ja-dc	my-fb	
<i>Ficus heterophylla</i> L. f.	Moraceae	cr,wc	pe	gro	3	rv 5-6,mxf,da	ms	25	30	ja-dc	ja-dc	ja-dc	figs
<i>Ficus hispida</i> L. f.	Moraceae	l,t	pe	gro	3	da,sg	ms	25	30	ja-dc	ja-dc	ja-dc	figs
<i>Ficus kurzii</i> King	Moraceae	t	pe	gro,epi,str	3	rv 6, mxf	ms	25	30	ja-ap	ja-ap	ja-dc	figs
<i>Ficus racemosa</i> L.	Moraceae	t	pd	gro	3	da,sg	ms	25	30	ja-dc	ja-dc	oc-ag	figs
<i>Ficus rumphii</i> Bl.	Moraceae	t	pd	gro,epi,str	3	rv 4, 6	ms	20	25	mr-ap(ag)	ap-my	mr-dc	figs
<i>Ficus subpisocarpa</i> Gagnep.	Moraceae	t	pd	gro,epi,str	3	ddf	ms	25	30	fb-mr	mr-ap	my-nv	figs
<i>Ficus virens</i> Ait	Moraceae	t	pe	epi,str	3	rv 4,6,streams	sh,ms	25	30	sp-mr	sp-ap	ja-dc	figs
<i>Streptlus asper</i> Lour. var. <i>asper</i>	Moraceae	l,t	pe	gro	3	rv 6, mxf	ms	25	30	ja-mr	de-mr	ja-dc	flowers,fruits
<i>Laportea interrupta</i> (L.) Chew	Urticaceae	h	a	gro,wee	3	bb/df,da	ms	25	30	jn-nv	ag-dc	my-dc	fruits
<i>Pouzoulzia zeylanica</i> (L.) Benn.	Urticaceae	h	a	gro	2	rv 4-6	ms	25	30	jl-ag	sp-oc	ja-ag	flowers
<i>Salix tetrasperma</i> Roxb.	Salicaceae	t	pd	gro,rhe	2	rv 6	ms	20	25	nv-dc	dc-ja	nv-ag	
Angiospermae, Monocotyledoneae													
<i>Hydrilla verticillata</i> (L. f.) Roy.	Hydrocharitaceae	h	a	aqu	2	ponds in ddf	ms	30	30			jn-nv	
<i>Lagarosiphon roxburghii</i> Bth.	Hydrocharitaceae	h	a	aqu,gro	2	ponds in bb/df	ms	20	25	fb-mr	mr-ap	jl-ap	flowers,fruits
<i>Ottellia lanceolata</i> (Gagnep.) Dandy	Hydrocharitaceae	h	a	aqu,gro	2	ponds in bb/df	ms	25	30	ag-oc	dc-nv	my-dc	flowers,fruits
<i>Vallisneria gigantea</i> Greab.	Hydrocharitaceae	h	a	aqu	3	rv 1	ms	20	20	mr-my	ap-jn	nv-jn	
<i>Sagittaria guayanensis</i> Humb. ssp. <i>lappula</i> (D. Don) Bogin	Alismataceae	h	a	aqu,gro	3	ponds in ddf	ms	30	30	jl-sp	ag-oc	my-nv	flowers, fruits
<i>Sagittaria trifolia</i> L.	Alismataceae	h	a	aqu,gro	2	ponds in bb/df, rv 5	ms	20	25	fb-mr	mr-ap	ja-dc	flowers,fruits
<i>Potamogeton crispus</i> L.	Potamogetonaceae	h	a	aqu	3	rv 1	ms	20	20	dc-ja	mr	ja-dc	fruits
<i>Najas indica</i> (Willd.) Cham.	Najadaceae	h	pe	aqu	3	rv 1	ms	20	20	ja-fb	mr-ap	ja-dc	fruits
<i>Belosynapsis ciliata</i> (Bl.) R. Rao	Commelinaceae	h	a	gro	2	bb/df,da	ms	25	30	ag-nv	nv-ja	my-ja	flowers

Species	Family	Habit	Aped	Life-mode	Abundance	Habitat	Bedrock	Lower Elevation (m)	Upper Elevation (m)	Flowering Month	Fruiting Month	Leafing Month	Collected
<i>Commelina diffusa</i> Burm. f.	Commelinaceae	h	a	gro	3	bb/df,da	ms	25	30	jn-ag	ag-oc	ja-dc	flowers
<i>Cyanotis axillaris</i> (L.) D. Don	Commelinaceae	h	a	gro	2	bb/df,da	ms	25	30	jl-oc	ag-nv	my-dc	flowers
* <i>Murdannia discreta</i> (Craib) Thit. & Faden	Commelinaceae	h	pd	gro	3	ddf	ms	30	30	jl-ag	ag-sp	my-dc	fruits
<i>Murdannia edulis</i> (Stokes) Faden	Commelinaceae	h	pd	gro	3	ddf, bb/df	ms	30	30	jl-ag	ag-sp	my-nv	flowers, fruits
<i>Murdannia gigantea</i> (Vahl) Bruck.	Commelinaceae	h	pd	gro	3	ddf	ms	30	30	jn-ag	jl-sp	my-nv	flowers, fruits
<i>Murdannia nudiflora</i> (L.) Bren.	Commelinaceae	h	pd	gro	3	ddf	ms	30	30	jn-ag	ag-sp	my-nv	flowers, fruits
<i>Eriocaulon sexangulare</i> L.	Eriocaulaceae	h	a	gro	3	ddf,bb/df	ms	25	30	sp-nv	oc-dc	my-dc	flowers
<i>Eriocaulon sieboldianum</i> Sieb. & Zucc. ex Steud.	Eriocaulaceae	h	a	gro	3	ddf,bb/df	ms	25	30	sp-nv	oc-dc	my-dc	flowers
<i>Alpinia malaccensis</i> (Burm. f.) Rosc.	Zingiberaceae	h	pe	gro	2	da, sg	ms	30	30	mr-my	sp-oc	ja-dc	
<i>Costus speciosus</i> (Koen.) J. E. Sm.	Zingiberaceae	h	pd	gro	3	ddf,bb/df	ms	25	30	jl-sp	oc-nv	my-dc	flowers, fruits
<i>Curcuma aurantiaca</i> van Zijp	Zingiberaceae	h	pd	gro	3	bb/df	ms	25	30	jl-ag		my-nv	flowers
<i>Curcuma gracillima</i> Gagnep.	Zingiberaceae	h	pd	gro	3	ddf	ms	30	30	jl-ag		my-nv	flowers
<i>Curcuma zedoaria</i> (Christm.) Rosc.	Zingiberaceae	h	pd	gro	3	ddf	ms	30	30	ap-my	jl-ag	my-nv	
<i>Curcuma</i> (07-431)	Zingiberaceae	h	pd	gro	3	ddf,bb/df	ms	30	30	jl-ag	sp-oc	my-nv	flowers
<i>Curcuma</i> (07-443)	Zingiberaceae	h	pd	gro	2	bb/df	ms	30	30	jl-ag		my-nv	flowers
<i>Globba schomburgkii</i> Hk. f. var. <i>schomburgkii</i>	Zingiberaceae	h	pd	gro	3	ddf,bb/df	ms	25	30	jl-dc	oc-nv	my-dc	flowers
<i>Kaempferia angustifolia</i> Rosc.	Zingiberaceae	h	pd	gro	3	ddf,bb/df	ms	30	30	jl-ag	oc-nv	my-nv	flowers
<i>Kaempferia siamensis</i> Siri.	Zingiberaceae	h	pd	gro	3	ddf	ms	30	30	jl-ag	sp-oc	my-nv	flowers
<i>Stahlianthus thorelii</i> Gagnep.	Zingiberaceae	h	pd	gro	2	ddf	ms	30	30	ap-my	jl-ag	my-nv	fruits
<i>Zingiber montanum</i> (Koen.) Link ex Dietr.	Zingiberaceae	h	pd	gro,cul,int	2	bb/df	ms	30	30	ag-sp		my-dc	
<i>Zingiber pellitum</i> Gagnep.	Zingiberaceae	h	pd	gro	2	bb/df	ms	30	30	jl-ag		my-nv	flowers
<i>Zingiber zerumbet</i> (L.) Sm. var. <i>zerumbet</i>	Zingiberaceae	h	pd	gro	3	ddf,bb/df	ms	30	30	jl-ag	sp-oc	my-nv	flowers
<i>Halopogon brachystachys</i> Craib	Marantaceae	h	pd	gro	4	ddf,bb/df	ms	30	30	jl-ag	sp-oc	my-nv	flowers
<i>Chloropytum intermedium</i> Craib var. <i>intermedium</i>	Liliaceae	h	pd	gro	3	ddf	ms	30	30	jl-sp	oc-nv	my-nv	
<i>Gloriosa superba</i> L.	Liliaceae	v	pd	gro,int,nat	2	bb/df	ms	30	30	jl-ag		my-dc	flowers

Species	Family	Habit	Aped	Life-mode	Abundance	Habitat	Bedrock	Lower Elevation (m)	Upper Elevation (m)	Flowering Month	Fruiting Month	Leafing Month	Collected
<i>Liriope spicata</i> Lour.	Liliaceae	h	pd	gro	3	bb/df	ms	30	30	jl-ag	ag-sp	my-nv	flowers, fruits
<i>Hypoxis aurea</i> Lour.	Amaryllidaceae	h	pd,ped	gro	2	ddf,bb/df	ms	30	30	jn-ag	jl-sp	my-nv	flowers
<i>Monochoria vaginalis</i> (Burm. f.) Presl	Pontederiaceae	h	a	aqu,gro	3	ponds,wet areas	ms	20	25	ja-ag	mr-sp	nv-oc	flowers,fruits
<i>Smilax cambodiana</i> Gagnep.	Smilacaceae	v	pe	gro	3	da	ms	30	30		jl-ag	ja-dc	fruits
<i>Smilax verticalis</i> Gagnep.	Smilacaceae	v	pd	gro	3	ddf	ms	30	30	ap-my	jl-ag	my-nv	fruits
<i>Alocasia odora</i> C. Koch	Araceae	h	pd	gro	2	bb/df	ms	25	30	ag-sp	nv-dc	my-dc	fruits
<i>Amorphophallus coudercii</i> (Bogn.) Bogn.	Araceae	h	pd	gro	1	bb/df	ms	25	30	mr		my-nv	flowers
<i>Amorphophallus harmandii</i> Engl. & Gehrm.	Araceae	h	pd	gro	3	bb/df	ms	30	30	jl		jn-oc	leaves
<i>Amorphophallus hemicyptus</i> Hett.	Araceae	h	pd	gro	2	bb/df	sh,ms	25	30	nv		jn-oc	flowers, leaves
* <i>Amorphophallus koratensis</i> Gagnep.	Araceae	h	pd	gro	2	bb/df	ms	25	30	mr-ap		my-oc	flowers, leaves
* <i>Cryptocoryne crispatula</i> Engl. var. <i>crispatula</i>	Araceae	h	pd	gro,rhe, rarely epl	4	rv 2-3	ms	20	25	nv		sp-ap	flowers
<i>Pothos scandens</i> L.	Araceae	v,cr	pe	gro	2	mxf	ms	25	30	oc-dc	ja-fb	ja-dc	flowers
<i>Rhaphidophora peepla</i> (Roxb.) Schott	Araceae	v,cr	pe	epi	3	bb/df	ms	25	30	jl-sp	oc-mr	ja-dc	fruits
<i>Typhonium flagelliforme</i> (Lodd.) Bl.	Araceae	h	pd	aqu, gro	2	ponds in ddf	ms	30	30	jl-sp	ag-oc	my-nv	flowers
* <i>Typhonium laoticum</i> Gagnep.	Araceae	h	pd	gro	2	bb/df	ms	30	30	jl-ag	ag-sp	my-nv	flowers, fruits
<i>Lemna aequinoctalis</i> Welw.	Lemnaceae	h	a	aqu	3	ponds	ms	25	30			sp-mr	
<i>Stemona tuberosa</i> Lour. var. <i>tuberosa</i>	Stemonaceae	v	pd	gro	3	ddf, bb/df	ms	25	30	ap-jl	jn-sp	my-dc	flowers
<i>Dioscorea alata</i> L.	Dioscoreaceae	v	pd	gro	3	da,sg	ms	25	30	sp-nv	nv-fb	my-dc	flowers,fruits
<i>Dioscorea glabra</i> L. var. <i>glabra</i>	Dioscoreaceae	v	pd	gro	3	bb/df,da,sg	ms	25	30	sp-dc	nv-dc	my-dc	fruits
<i>Dioscorea hispida</i> Denn. var. <i>hispida</i>	Dioscoreaceae	v	pd	gro	3	bb/df	ms	25	30	mr-ap	oc-nv	my-dc	fruits
<i>Calamus rudentum</i> Lour.	Palmae	wc	pe	gro	3	bb/df,mxf	ms	25	30	sp-oc	mr-ap	ja-dc	fruits
<i>Calamus siamensis</i> Becc. var. <i>siamensis</i>	Palmae	wc	pe	gro	4	mxf	sh,ms	25	30			ja-dc	
<i>Calamus viminalis</i> Willd.	Palmae	wc	pe	gro	2	bb/df,mxf	ms	25	30	sp-oc	nv-dc	ja-dc	
<i>Caryota maxima</i> Bl.	Palmae	t	pe	gro	1	da	ms	30	30	ja-dc	ja-dc	ja-dc	
<i>Caryota mitis</i> Lour.	Palmae	t	pe	gro	2	mxf	ms	25	30	ja-dc	ja-dc	ja-dc	

Species	Family	Habit	Aped	Life-mode	Abundance	Habitat	Bedrock	Lower Elevation (m)	Upper Elevation (m)	Flowering Month	Fruiting Month	Leafing Month	Collected
<i>Licuala spinosa</i> Thunb.	Palmae	l	pe	gro	2	mxf	ms	25	30	ja-fb	my-jn	ja-dc	imm. fruits
<i>Burmanna coelestis</i> D. Don	Burmanniaceae	h	a	gro	3	wet areas in ddf	ms	25	30	sp-nv	nv-dc	jl-dc	flowers
<i>Burmanna wallichii</i> (Miers) Hk. f.	Burmanniaceae	h	a	gro,sap	2	bb/df	ms	25	30	oc-nv	nv-dc	leafless	flowers
<i>Apostasia wallichii</i> R. Br.	Orchidaceae	h	pe	gro	2	bb/df	ms	25	30	jl-ag	nv-dc	ja-dc	fruits
* <i>Brachycorythis helferi</i> (Rchb. f.) Summ.	Orchidaceae	h	pd	gro	3	ddf,bb/df	ms	30	30	jl-ag		my-nv	flowers
<i>Brachycorythis laotica</i> (Gagnep.) Summ.	Orchidaceae	h	pd	gro	3	ddf,bb/df	ms	30	30	jl-ag		my-nv	flowers
<i>Bulbophyllum</i>	Orchidaceae	h	pe	epi	3	mxf	ms	25	30			ja-dc	
<i>Cleisomeria pilosulum</i> (Gagnep.) Seid. & Garay	Orchidaceae	h	pe	epi	3	ddf	ms	30	30	jl-ag		ja-dc	flowers
<i>Dendrobium venustum</i> Teijs. & Binn.	Orchidaceae	h	pd	epi	2	bb/df	ms	25	30	oc-dc	nv-fb	my-fb	flowers
<i>Habenaria dentata</i> (Sw.) Schltr.	Orchidaceae	h	pd	gro	2	mxf,da	ms	25	30	oc-dc	jn-dc	my-dc	flowers
<i>Habenaria khasiana</i> Hk. f.	Orchidaceae	h	pd	gro	3	ddf	ms	30	30	jn-ag		my-nv	flowers
<i>Habenaria lucida</i> Wall. ex Lindl.	Orchidaceae	h	pd	gro	3	ddf,bb/df	ms	30	30	jl-ag		my-nv	flowers
<i>Habenaria mandersii</i> Coll. & Hemsl.	Orchidaceae	h	pd	gro	3	ddf	ms	30	30	jl-ag		my-nv	flowers
<i>Habenaria rostellifera</i> Rchb. f.	Orchidaceae	h	pd	gro	3	ddf	ms	30	30	jl-ag		my-nv	flowers
<i>Habenaria rumphii</i> (Brogm.) Lindl.	Orchidaceae	h	pd	gro	3	ddf	ms	30	30	jl-ag		my-nv	flowers
* <i>Habenaria viridiflora</i> (Rottl. ex Sw.) R. Br.	Orchidaceae	h	pd	gro	3	ddf	ms	30	30	jl-ag		my-nv	flowers
<i>Liparis campylostalex</i> Rchb. f.	Orchidaceae	h	pd	gro	2	bb/df	ms	25	30	ag-oc	nv-fb	my-dc	fruits
* <i>Liparis rheedii</i> (Bl.) Lindl.	Orchidaceae	h	pd	gro	3	bb/df	ms	30	30	jl-ag		my-nv	flowers
* <i>Liparis siamensis</i> Rol. ex Dow.	Orchidaceae	h	pd	gro	3	mxf	ms	30	30	jl-ag		my-nv	flowers
<i>Luisia thailandica</i> Seid.	Orchidaceae	h	pe	epi	2	bb/df	ms	25	30	mr-ap	my-jl	ja-dc	flowers
<i>Nervilia aragoana</i> Gaud.	Orchidaceae	h	pd	gro	2	ddf, bb/df	ms	25	30	ar-my		my-dc	
* <i>Nervilia calcicola</i> Kerr	Orchidaceae	h	pd	gro	2	bb/df	ms	30	30			my-nv	
<i>Nervilia punctata</i> (Bl.) Schltr.	Orchidaceae	h	pd	gro	2	bb/df	ms	30	30	ap-my		my-nv	leaves
<i>Peristylus constrictus</i> (Lindl.) Lindl.	Orchidaceae	h	pd	gro	2	bb/df	ms	25	30	jl-ag	oc-nv	my-nv	flowers
* <i>Vandopsis gigantea</i> (Lindl.) Pfitz.	Orchidaceae	h	pe	epi	2	mxf	ms	25	30	mr-ap		ja-dc	flowers

Species	Family	Habit	Aped	Life-mode	Abundance	Habitat	Bedrock	Lower Elevation (m)	Upper Elevation (m)	Flowering Month	Fruiting Month	Leafing Month	Collected
<i>Carex indica</i> L. var. <i>indica</i>	Cyperaceae	h	pd	gro	3	mx	ms	25	30	mr-ap	jn-sp	mr-dc	flowers
<i>Carex tricephala</i> Boeck.	Cyperaceae	h	pd	gro	3	ddf,bb/df	ms	30	30	jl-ag	ag-sp	my-nv	flowers, fruits
<i>Cyperus brevifolius</i> (Rottb.) Hassk.	Cyperaceae	h	pd	gro	3	ponds in ddf wet areas in ddf	ms	30	30	jl-sp	ag-oc	my-nv	flowers, fruits
<i>Cyperus castaneus</i> Willd.	Cyperaceae	h	a	gro	3	ponds in ddf	ms	30	30	jn-ag	jl-sp	my-nv	flowers, fruits
<i>Cyperus compactus</i> Retz.	Cyperaceae	h	a	aqu, gro	3	rv 5	ms	20	25	jn-ag	jl-sp	ja-ag	flowers, fruits
<i>Cyperus cuspidatus</i> Kunth.	Cyperaceae	h	a	aqu, gro, wee	3	rv 5, ponds in ddf, da	ms	25	30	jl-oc	ag-nv	jn-nv	
<i>Cyperus iria</i> L.	Cyperaceae	h	pe	gro, wee	3	da, sg	ms	25	30	my-dc	jn-ja	ja-dc	
<i>Cyperus laxus</i> Lmk. var. <i>laxus</i>	Cyperaceae	h	pe	gro	3	bb/df,da	ms	25	30	jl-dc	sp-dc	ja-dc	flowers
<i>Cyperus leucocephalus</i> Retz.	Cyperaceae	h	pd	gro	3	ddf	ms	30	30	jl-sp	ag-oc	my-dc	flowers, fruits
<i>Cyperus pilosus</i> Vahl	Cyperaceae	h	a	aqu, gro	3	ponds in ddf	ms	30	30	jn-sp	jl-oc	my-nv	flowers, fruits
<i>Cyperus pygmaeus</i> Rottb.	Cyperaceae	h	a	gro	2	ddf,da	ms	25	30	oc-dc	nv-dc	ja-dc	flowers
<i>Cyperus tenuispica</i> Steud.	Cyperaceae	h	a	gro	3	bb/df	ms	30	30	jl-sp	ag-oc	my-nv	flowers, fruits
<i>Cyperus triceps</i> (Rottb.) Engl.	Cyperaceae	h	pd	gro	3	wet areas in ddf	ms	30	30	jn-ag	jl-sp	my-nv	flowers, fruits
<i>Diplacrum caricinum</i> R. Br.	Cyperaceae	h	a	gro	3	wet areas in ddf	ms	30	30	jn-sp	jn-sp	my-nv	flowers, fruits
<i>Eleocharis acutangula</i> (Roxb.) Schult.	Cyperaceae	h	a	aqu, gro	3	ponds in ddf	ms	30	30	jl-sp	ag-oc	my-nv	flowers, fruits
<i>Eleocharis dulcis</i> (Burm. f.) Hensch. var. <i>dulcis</i>	Cyperaceae	h	a	aqu, gro	2	ponds in ddf	ms	30	30			my-nv	
<i>Fimbristylis adenolepis</i> Kern	Cyperaceae	h	a	gro	3	ddf	ms	30	30	jl-sp	ag-oc	my-nv	flowers, fruits
<i>Fimbristylis aestivalis</i> (Retz.) Vahl var. <i>aestivalis</i>	Cyperaceae	h	a	gro	3	rv 5	ms	20	25	ja-my	fb-jn	ja-jn	flowers
<i>Fimbristylis bisumbellata</i> (Forssk.) Bub.	Cyperaceae	h	a	gro	3	bb/df	ms	30	30	jn-ag	jl-sp	my-nv	flowers, fruits
* <i>Fimbristylis brunneoides</i> Kern	Cyperaceae	h	a	gro	3	rv 4-5	ms	20	30	ja-ap	fb-my	nv-jn	flowers
<i>Fimbristylis cymosa</i> R. Br.	Cyperaceae	h	pd	gro,rhe	3	rv 2-3	ms	20	25	fb-ap	oc-nv	nv-jn	flowers,fruits
<i>Fimbristylis dichotoma</i> (L.) Vahl ssp. <i>dichotoma</i>	Cyperaceae	h	pd	gro	3	ddf,bb/df	ms	30	30	jl-sp	ag-oc	my-nv	flowers, fruits
<i>Fimbristylis dipascea</i> (Rottb.) Cl.	Cyperaceae	h	a	gro	3	rv 5	ms	20	25	ja-my	fb-jn	ja-jn	flowers

Species	Family	Habit	Aped	Life-mode	Abundance	Habitat	Bedrock	Lower Elevation (m)	Upper Elevation (m)	Flowering Month	Fruiting Month	Leafing Month	Collected
<i>Fimbristylis gracilentata</i> Hance	Cyperaceae	h	a	gro	3	bb/df	ms	30	30	jl-sp	ag-oc	my-nv	flowers, fruits
* <i>Fimbristylis jucunda</i> (Cl.) Kern	Cyperaceae	h	a	gro	3	rv 2-4	ms	20	25	ja-mr	fb-ap	nv-jn	flowers
<i>Fimbristylis miliacea</i> (L.) Vahl	Cyperaceae	h	a	aqu, gro	3	ponds in ddf	ms	30	30	jl-sp	ag-oc	my-nv	flowers, fruits
<i>Fimbristylis schoenoides</i> (Retz.) Vahl	Cyperaceae	h	pd	gro	3	wet areas in ddf	ms	30	30	jn-sp	jl-oc	my-nv	flowers, fruits
<i>Fimbristylis tetragona</i> R. Br.	Cyperaceae	h	a	aqu, gro	3	ponds in ddf	ms	30	30	jn-sp	jl-oc	my-nv	flowers, fruits
<i>Lipocarpa hemisphaerica</i> (Roth) Goet.	Cyperaceae	h	a	gro	3	wet areas in ddf	ms	30	30	jn-sp	jl-oc	my-nv	flowers, fruits
<i>Lipocarpa microcephala</i> (R. Br.) Kunth	Cyperaceae	h	a	gro	3	wet areas in ddf	ms	30	30	jn-ag	jl-sp	my-nv	flowers, fruits
<i>Rhynchospora longisetis</i> R. Br.	Cyperaceae	h	a	gro	3	ddf	ms	25	30	oc-nv	nv-dc	my-dc	flowers, fruits
<i>Rhynchospora rubra</i> (Lour.) Mak.	Cyperaceae	h	pd	gro	3	wet areas in ddf	ms	30	30	jn-sp	jl-oc	my-dc	flowers, fruits
<i>Scleria levis</i> Retz.	Cyperaceae	h	pd	gro	3	ddf, bb/df, mxf, da	ms	25	30	jn-oc	jl-nv	my-nv	flowers, fruits
<i>Scleria lithosperma</i> (L.) Sw. var. <i>lithosperma</i>	Cyperaceae	h	pe	gro	2	bb/df	ms	25	30	sp-nv	nv-ja	ja-dc	fruits
<i>Scleria neesii</i> Kunth	Cyperaceae	h	a	gro	3	wet areas in ddf	ms	30	30	jl-sp	ag-oc	my-nv	flowers, fruits
<i>Scleria psilorrhiza</i> Cl.	Cyperaceae	h	pd	gro		wet areas in ddf	ms	30	30	jn-sp	ag-oc	my-nv	flowers, fruits
<i>Alloteropsis cimicina</i> (L.) Stapf	Gramineae	h	a	gro	3	ddf, da	ms	30	30	jn-ag	jl-sp	my-nv	flowers, fruits
<i>Andropogon chinensis</i> (Nees) Merr.	Gramineae	h	a	gro	3	ddf	ms	25	30	oc-nv	nv-dc	my-dc	flowers
<i>Apocopsis cochinchinensis</i> A. Camus	Gramineae	h	a	gro	3	wet areas in ddf	ms	30	30	jn-sp	jl-oc	my-nv	flowers
<i>Aristida chinensis</i> Munro	Gramineae	h	pd	gro	3	ddf	ms	25	30	oc-nv	dc-ja	my-dc	flowers
<i>Aristida setacea</i> Retz.	Gramineae	h	pd	gro	3	bb/df	ms	25	30	oc-nv	nv-dc	my-dc	flowers
<i>Arundinella setosa</i> Trin. var. <i>setosa</i>	Gramineae	h	pd	gro	3	ddf	ms	30	30	jn-ag	ag-sp	my-nv	flowers, fruits
<i>Capillipedium annamense</i> A. Camus	Gramineae	h	pd	gro	3	ddf	ms	25	30	oc-nv	nv-dc	my-dc	flowers
<i>Capillipedium assimile</i> (Steud.) A. Camus	Gramineae	h	pd	gro	3	ddf	ms	25	30	sp-nv	nv-dc	my-dc	flowers
<i>Capillipedium cinctum</i> (Steud.) A. Camus	Gramineae	h	a	gro	3	ddf	ms	25	30	oc-nv	nv-dc	my-dc	flowers

Species	Family	Habit	Aped	Life-mode	Abundance	Habitat	Bedrock	Lower Elevation (m)	Upper Elevation (m)	Flowering Month	Fruiting Month	Leafing Month	Collected
<i>Chrysopogon nemoralis</i> (Balan.) Holtt.	Gramineae	h	pd	gro	4	ddf, bb/df	ms	25	30	jl-sp	sp-oc	jn-fb	flowers
<i>Cyrtococcum accrescens</i> (Trin.) Stapf	Gramineae	h	a	gro	3	bb/df,da	ms	25	30	sp-nv	nv-dc	my-dc	flowers
<i>Dactyloctenium aegyptium</i> (L.) P. Beauv.	Gramineae	h	a	gro, wee	3	rv 5, da	ms	25	30	jn-oc	jl-nv	my-nv	flowers
<i>Dichanthium caricosum</i> (L.) A. Camus	Gramineae	h	a	gro	3	rv 5	ms	20	25	ja-fb	fb-mr	nv-jn	flowers
<i>Digitaria bicornis</i> (Lmk.) Roem. & Schult.	Gramineae	h	a	gro	3	rv 5	ms	20	25	ja-ag	ja-ag	ja-ag	flowers
<i>Digitaria radicata</i> (Presl) Miq.	Gramineae	h	a	gro	3	rv 5, ddf, da	ms	20	30	ja-ag	fb-sp	nv-ag	flowers
<i>Digitaria violascens</i> Link	Gramineae	h	a	gro	2	ddf	ms	25	30	oc-nv	nv-dc	my-dc	flowers
<i>Echinochloa colona</i> (L.) Link	Gramineae	h	a	aqu, gro	3	rv 5, ponds in ddf	ms	25	30	jn-ag	jl-sp	ja-sp	flowers, fruits
<i>Eleusine indica</i> (L.) Gaertn.	Gramineae	h	a	gro,wee	3	rv 5, da	ms	20	30	nv-ap	dc-my	nv-jn	
<i>Enteropogon dolichostachya</i> (Lag.) Keng ex Laza.	Gramineae	h	a	gro	3	ddf	ms	25	30	oc-nv	nv-dc	my-dc	flowers
<i>Eragrostis bipinnata</i> (L.) Musc.	Gramineae	h	a	gro	3	wet areas in ddf	ms	30	30	jn-sp	jl-oc	my-nv	flowers, fruits
<i>Eragrostis pilosa</i> (L.) P. Beauv.	Gramineae	h	a	gro	3	ddf, bb/df,da	ms	25	30	jl-nv	ag-nv	my-dc	flowers
<i>Eragrostis uniolooides</i> (Retz.) Nees ex Steud.	Gramineae	h	a	gro	3	ddf	ms	25	30	sp-nv	nv-dc	my-dc	flowers
<i>Eremochloa ciliaris</i> (L.) Merr.	Gramineae	h	pd	gro	3	ddf	ms	30	30	jl-sp	ag-oc	my-nv	flowers
<i>Eulalia velutina</i> (Munro) O.K.	Gramineae	h	pd	gro	3	ddf	ms	25	30	sp-nv	nv-dc	my-dc	flowers
<i>Eulaliopsis binata</i> (Retz.) C. E. Hubb.	Gramineae	h	a	gro	3	ddf	ms	25	30	oc-nv	nv-dc	my-dc	flowers
<i>Gymnopogon delicatulus</i> (Cl.) Bor	Gramineae	h	a	gro	3	ddf	ms	25	30	oc-nv	nv-dc	my-dc	flowers
<i>Hemisorghum mekongense</i> (A. Camus) C.E. Hubb. ex Bor	Gramineae	h	a	gro	3	rv 5	ms	25	30	jl-ag	ag-sp	ja-ag	flowers
<i>Heteropogon contortus</i> (L.) P. Beauv. ex Roem. & Schult.	Gramineae	h	a	gro	3	ddf	ms	25	30	oc-nv	nv-dc	my-dc	flowers
<i>Hyparrhena hirta</i> (L.) Stapf	Gramineae	h	a	gro	3	ddf	ms	25	30	oc-nv	dc	my-dc	flowers
<i>Imperata cylindrica</i> (L.) P. Beauv. var. <i>major</i> (Nees) C. E. Hubb. ex Hubb. & Vaugh.	Gramineae	h	pd	gro	3	da, sg	ms	30	30	jl-oc	ag-nv	my-dc	
<i>Ischaemum indicum</i> (Houtt.) Merr.	Gramineae	h	pd	gro	3	ddf	ms	25	30	oc-nv	nv-dc	my-dc	flowers

Species	Family	Habit	Aped	Life-mode	Abundance	Habitat	Bedrock	Lower Elevation (m)	Upper Elevation (m)	Flowering Month	Fruiting Month	Leafing Month	Collected
<i>Leptochloa chinensis</i> (L.) Nees	Gramineae	h	a	gro	3	rv 5, bb/df	ms	20	30	ja-dc	ja-dc	ja-dc	flowers
<i>Lophaterum gracile</i> Brongn. var. <i>gracile</i>	Gramineae	h	a	gro	3	bb/df,mxf	ms	25	30	sp-nv	nv-dc	my-dc	flowers
<i>Microchloa indica</i> (L. f.) P. Beauv.	Gramineae	h	a	gro	3	ddf	ms	30	30	jl-ag	ag-sp	my-nv	flowers
<i>Mnestithea laevis</i> (Retz.) Kunth var. <i>cochinchinensis</i> (Lour.) Kon. & Sos.	Gramineae	h	pd	gro	3	ddf	ms	30	30	jn-ag	jl-sp	my-nv	flowers, fruits
<i>Mnesithea striata</i> (Nees ex Steud.) Kon. & Sos.	Gramineae	h	pd	gro	3	bb/df,da	ms	25	30	jl-nv	ag-dc	my-dc	flowers
<i>Oplismenus compositus</i> (L.) P. Beauv.	Gramineae	h	a	gro	3	bb/df,da	ms	25	30	sp-nv	oc-dc	my-dc	flowers
<i>Oryza sativa</i> L.	Gramineae	h	a	aqu, gro	3	wet areas in ddf	ms	30	30	jl-ag	ag-sp	my-nv	flowers, fruits
<i>Panicum luzonense</i> Presl	Gramineae	h	a	gro	3	bb/df	ms	30	30	jl-sp	ag-oc	my-nv	flowers, fruits
<i>Panicum notatum</i> Retz.	Gramineae	h	pd	gro	3	bb/df,da	ms	25	30	sp-nv	oc-dc	my-dc	flowers
<i>Panicum trachyrhachis</i> Bth.	Gramineae	h	a	gro	3	ddf	ms	25	30	sp-nv	nv-dc	mydc	flowers
<i>Paspalum scrobiculatum</i> L.	Gramineae	h	a	gro	3	bb/df,da	ms	25	30	jl-nv	ag-dc	my-dc	flowers
<i>Phragmites vallatoria</i> (Pluk. ex L.) Veldk.	Gramineae	h	pe	gro,wee	3	da,sg	sh,ms	25	30	nv-fb	dc-mr	ja-dc	
<i>Polytoca digitata</i> (L. f.) Druce	Gramineae	h	pd	gro	3	ddf	ms	25	30	oc-nv	dc	my-dc	flowers
<i>Rottboellia exalata</i> L. f.	Gramineae	h	a	gro	3	ddf	ms	25	30	oc-nv	nv-dc	my-dc	flowers
<i>Saccharum arundinaceum</i> Retz.	Gramineae	h	pe	gro	4	streams, wet areas, rv 5, da	ms	25	30	sp-nv	nv-dc	ja-dc	flowers
<i>Saccharum spontaneum</i> L.	Gramineae	h	pd	gro	3	streams, wet areas, rv 5, da	ms	20	30	dc-mr	fb-ap	nv-jn	flowers
<i>Sacciolepis indica</i> (L.) A. Chase	Gramineae	h	a	gro	3	ddf	ms	30	30	jn-sp	jl-oc	my-dc	flowers, fruits
<i>Schizachyrium brevifolium</i> (Sw.) Nees	Gramineae	h	a	gro	3	ddf	ms	25	30	oc-nv	nv-dc	my-dc	flowers
<i>Sclerostachya fusca</i> (Roxb.) A. Camus	Gramineae	h	pd	gro	4	wet areas,sg	ms	25	30	oc-nv	nv-dc	my-dc	flowers
<i>Setaria parviflora</i> (Poir.) Kerg.	Gramineae	h	a	gro	4	ddf, bb/df	ms	25	30	jl-nv	ag-dc	my-dc	flowers
<i>Sorghum propinquum</i> (Kunth) Hitch.	Gramineae	h	a	gro	3	wet areas,sg	ms	25	30	oc-nv	nv-dc	my-dc	flowers
<i>Themeda arundinacea</i> (Roxb.) Ridl.	Gramineae	h	a	gro	3	ddf	ms	25	30	oc-nv	nv-dc	my-dc	flowers

Species	Family	Habit	Aped	Life-mode	Abundance	Habitat	Bedrock	Lower Elevation (m)	Upper Elevation (m)	Flowering Month	Fruiting Month	Leafing Month	Collected
<i>Thysanolaena latifolia</i> (Roxb. ex Horn.) Honda	Gramineae	h	pe	gro,wee	4	da,sg	ms	25	30	ag-oc	sp-nv	ja-dc	
<i>Bambusa bambos</i> (L.) Voss. ex Vilm.	Gramineae, Bambusoideae	h	pe	gro	5	bb/df,da	ms	25	30	fb-mr	mr-ap	ja-dc	
<i>Dendrocalamus</i> sp.	Gramineae, Bambusoideae	h	pe	gro	2	bb/df	ms	25	30			my-dc	
<i>Thyrsostachys siamensis</i> (Kurz ex Munro) Gamb.	Gramineae, Bambusoideae	h	pd	gro	3	bb/df	ms	30	30	mr-ap		my-dc	
<i>Vietnamosasa ciliata</i> (A. Camus) Nguyen	Gramineae, Bambusoideae	h	pd	gro	4	ddf	ms	25	30	sp-oc		my-dc	
Pteridophyta													
<i>Selaginella roxburghii</i> (Hk. & Grev.) Spring var. <i>roxburghii</i>	Selaginellaceae	h	a	gro	2	bb/df, mxf,sg	ms	25	30	ag-nv	ag-nv	my-dc	sporangia
<i>Helminthostachys zeylanica</i> (L.) Hk.	Ophioglossaceae	h	pd	gro	2	bb/df	ms	30	30	jl-ag	jl-ag	my-nv	sori
<i>Ophioglossum gramineum</i> Willd. var. <i>gramineum</i>	Ophioglossaceae	h	pd	gro	2	ddf	ms	30	30	jl-sp	jl-sp	jn-sp	
<i>Ophioglossum petiolatum</i> Hk.	Ophioglossaceae	h	pd	gro	2	bb/df,da	ms	25	30	jl-dc	jl-nv	jn-dc	sori
<i>Lygodium flexuosum</i> (L.) Sw.	Schizaeaceae	v	pd	gro	3	ddf, bb/df	ms	25	30	jl-nv	jl-nv	my-dc	sori
<i>Adiantum philippense</i> L.	Parkeriaceae	h	pd	gro	3	bb/df,ddf	ms	25	30	ag-nv	ag-nv	my-dc	sori
<i>Adiantum zollingeri</i> Mett. ex Kuhn	Parkeriaceae	h	pd	gro	3	bb/df,ddf	sh,ms	25	30	sp-dc	sp-dc	my-dc	sori
<i>Ceratopteris thalictroides</i> (L.) Brongn.	Parkeriaceae	h	pd	aqu,gro	3	ponds in bb/df	ms	25	30	sp-nv	sp-nv	jn-dc	sori
<i>Cheilanthes belangeri</i> (Bory) C. Chr.	Parkeriaceae	h	pd	gro	3	bb/df	ms	25	30	ag-nv	ag-nv	my-dc	sori
<i>Hemionitis arifolia</i> (Burm. f.) Moore	Parkeriaceae	h	pd	gro	2	bb/df,mxf	ms	25	30	sp-nv	sp-nv	my-dc	sori
<i>Pteris heteromorpha</i> Fee	Pteridaceae	h	pe	gro	3	bb/df	ms	25	30	sp-nv	sp-nv	ja-dc	sori
<i>Diplazium esculentum</i> (Retz.) Sw.	Athyriaceae	h	pd	gro	4	rv 2-3	ms	20	25	ap-my	ap-my	nv-jn	sori
<i>Drynaria bonii</i> Christ	Polypodiaceae	h	pd	gro,epi,epl	2	rocks in bb/df	ms	25	30	sp-nv	sp-nv	my-dc	sori
<i>Drynaria quercifolia</i> (L.) J. Sm.	Polypodiaceae	h	pd	epl	3	rv 6,bb/df,mxf	ms	25	30	ag-oc	ag-oc	my-ja	
<i>Platyterium wallichii</i> Hk.	Polypodiaceae	h	pe	epl	1	mxf	ms	30	30	oc-ap	oc-ap	ja-dc	
<i>Pyrrosia lanceolata</i> (L.) Farw.	Polypodiaceae	h,cr	pe	epl	3	bb/df, mxf	sh,ms	25	30	jl-dc	jl-dc	ja-dc	sori
<i>Pyrrosia stigmosa</i> (Sw.) Ching	Polypodiaceae	h	pe	epl	3	rv 6, mxf	ms	25	30	mr-nv	mr-nv	ja-dc	sori

Species	Family	Habit	Aped	Life-mode	Abundance	Habitat	Bedrock	Lower Elevation (m)	Upper Elevation (m)	Flowering Month	Fruiting Month	Leafing Month	Collected
Bryophyta													
<i>Bryum coronatum</i> Schwaegr.	Bryaceae	h	pe	epi	3	bb/df	ms	25	30	ag-nv	ag-nv	ja-dc	capsules
<i>Fissidens zollingeri</i> Mont.	Fissidentaceae	h	pe	gro	2	wet areas in bb/df	ms	25	30	sp-nv	sp-nv	ja-dc	capsules
<i>Ochrobryum</i> sp.	Leucobryaceae	h	pe	epi	3	bb/df	ms	25	30	nv-mr	nv-mr	ja-dc	capsules
<i>Octoblepharum albidum</i> Hedw.	Octoblepharaceae	h	pe	epi	3	bb/df	ms	30	30	jn-sp	jn-sp	ja-dc	capsules
<i>Macromitrium zollingeri</i> Mitt. ex Dozy & Molk.	Orthotrichaceae	h	pe	epi	3	streams in bb/df,mxf	ms	25	30	sp-nv	sp-nv	ja-dc	capsules
<i>Riccia</i> sp.	Ricciaceae	h	a	gro	2	rv 6,streams, wet areas	ms	20	25	nv-dc	jn-mr	nv-jn	capsules
<i>Taxithelium nepalense</i> (Schwaegr.) Broth.	Sematophyllaceae	h	pe	epi	3	bb/df	ms	25	30	ag-nv	ag-nv	ja-dc	capsules