

# Rapport d'avancement botanique de l'expédition Opération Canopée (ex Radeau des Cimes) au Laos: Inventaire de la biodiversité des canopées forestières du Laos (IBCFL)

## Partie 1: premières identifications

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L'expédition d'exploration des canopées forestières a été menée dans la région karstique de la province de Khammouane, dans la réserve nationale de conservation de la biodiversité Phou Hin Poun (National Biodiversity Conservation Area NBCA PHP, 17.746° N, 104.8° E).

Les collectes botaniques ont été effectuées en 2012 au cours de deux missions de terrain de deux semaines chacune, en janvier pendant la saison sèche et en mai au début de la saison des pluies.

Au total 804 spécimens ont été récoltés au cours de ces deux périodes. Les collections de plantes (environ 2 500 échantillons, ayant trois duplicata pour la plupart d'entre eux) représentent environ 500 espèces. Le travail d'identification est toujours en cours.

À ce jour, 642 spécimens ont été identifiés au niveau du genre et 52% (334 spécimens) identifiés au niveau de l'espèce. Ils représentent 261 espèces et 185 genres, listés dans ce rapport. (Tableaux 1 et 2). 35 espèces sont des ajouts aux dernières checklists du pays (Prospero *et al.* 2018).

# Botanical progress report of the Canopy Raft (ex Radeau des Cimes) expedition in Laos: Inventory of the biodiversity in forest canopies in Laos (IBFCL)

## First contribution

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The Canopy Raft expedition was conducted at the Phou Hin Poun National Biodiversity Conservation Area (PHP NBCA, 17.746° N, 104.8° E), also known as Khammouane Limestone of Laos.

Botanical collections were carried out in 2012 during two field trips of two weeks each, in January during the dry season, and in May at the onset of the rainy season.

A total of 804 specimens have been collected during these two periods. The plant collections (some 2,500 samples, having three duplicates of most numbers) represent about 500 species. The identification work is still in progress.

To date, 642 specimens have been identified at the genus level and 52% (334 specimens) identified at the species level. They represent 261 species and 185 genera, listed in this report. (Tables 1 and 2). 35 species are additions to the most recent country checklists (Prospero *et al.* 2018).

**Table 1.** Plant diversity found at the Phou Hin Poun NBCA.

	Number of families	Number of genera	Number of species
Ferns	2	2	2
Gymnosperms	1	1	1
Angiosperms	69	182	258
<b>Total</b>	<b>72</b>	<b>185</b>	<b>261</b>



Forests on the karst cliffs at the Phou Hin Poun NBCA.



Students and botanist of Faculty of Sciences (National University of Laos) at the field work.





Canopy view from the “cinébulle”, crown in bloom.



*Mallotus barbatus* fruits.

**Table 2.** List of species collected in the Phou Hin Poun NBCA.

+ : Additions to the botanical checklists of Laos (Prosperi *et al.*, 2018). All herbarium numbers are labelled FH (Francis Hallé). Vouchers were deposited at the National Herbarium of Laos (HNL), the Faculty of Sciences of the National University of Laos (NUoL) in Vientiane and the Muséum National d'Histoire Naturelle of Paris (P).

Taxa	Additions	Habit	Habitat	Voucher number(s) (FH)
<b>Ferns</b>				
<b>Lycopodiaceae</b>				
<i>Lycopodium squarrosum</i> G.Forst.		Herb	Karst	4913
<b>Marattiaceae</b>				
<i>Angiopteris erecta</i> (G.Forst.) Hoffm.		Herb	Forest	4928
<b>Gymnosperms</b>				
<b>Podocarpaceae</b>				
<i>Podocarpus nerifolius</i> D.Don		Tree	Forest	5316
<b>Angiosperms</b>				
<b>Acanthaceae</b>				
<i>Asystasia gangetica</i> (L.) T. Anderson		Herb	Forest	4779
<i>Lepidagathis formosensis</i> C.B. Clarke ex Hayata		Herb	Secondary growth	5021
<i>Lepidagathis incurva</i> Buch.-Ham. ex D.Don		Herb	Forest	4882, 4946
<i>Nelsonia canescens</i> Spreng.		Herb	Secondary growth	5020
<i>Phlogacanthus turgidus</i> (Fua ex Hook. f.) Lindau	+	Shrub	Forest	4763
<i>Rungia pectinata</i> (L.) Nees		Herb	Secondary growth	4947
<i>Sericocalyx chinensis</i> (Nees) Bremek.		Herb	Secondary growth	5019
<i>Thunbergia coccinea</i> Wall. ex D.Don		Climber	Forest	4778
<i>Thunbergia eberhardtii</i> Benoist		Climber	Forest	4898
<b>Achariaceae</b>				
<i>Hydnocarpus anthelminthicus</i> Pierre ex Laness.		Tree	Karst	5547
<b>Amaranthaceae</b>				
<i>Cyathula prostrata</i> (L.) Blume		Herb	Secondary growth	4894
<b>Anacardiaceae</b>				
<i>Mangifera macrocarpa</i> Blume	+	Tree	Forest	4897
<i>Semecarpus reticulatus</i> Lecomte		Tree	Forest	5523
<i>Allospondias lakonensis</i> (Pierre) Stapf		Tree	Forest	5510
<b>Annonaceae</b>				
<i>Anomianthus dulcis</i> (Dunal) J.Sinclair		Treelet	Forest	5205
<i>Cananga latifolia</i> Finet & Gagnep.		Tree	Forest	5210, 5226, 5494
<i>Cyathostemma longipes</i> Craib		Treelet	Karst	5187
<i>Desmos chinensis</i> Lour.		Climber	Forest	5525
<i>Mitrephora cf calcarea</i> Diels	+	Treelet	Forest	5243
<i>Polyalthia suberosa</i> (Roxb.) Thwaites		Treelet	Forest	5482

**Table 2. Continued**

<b>Taxa</b>	<b>Additions</b>	<b>Habit</b>	<b>Habitat</b>	<b>Voucher number(s) (FH)</b>
<i>Pseuduvaria rugosa</i> (Blume) Merr.	+	Tree	Forest	5457
<i>Uvaria cordata</i> (Dunal) Wall. ex Alston		Tree	Forest	5122
<i>Uvaria rufa</i> Blume		Shrub	Secondary growth	5392
<b>Apocynaceae</b>				
<i>Alstonia cf curtisii</i> King & Gamble	+	Treelet or shrub	Karst	5310
<i>Dischidia nummularia</i> R.Br.		Epiphyte	Karst	4992
<i>Hunteria zeylanica</i> (Retz) Gardner ex Thwaites		Tree	Karst	5294, 5305
<i>Wrightia annamensis</i> Eberhardt & Dubard		Treelet	Karst	5175
<i>Wrightia arborea</i> (Dennst.) Mabb.		Tree	Karst	5450
<i>Wrightia laevis</i> Hook.f.		Tree	Karst	5242
<b>Aquifoliaceae</b>				
<i>Ilex umbellulata</i> (Wall.) Loes.		Treelet	Karst	5387
<b>Araceae</b>				
<i>Ariopsis peltata</i> Nimmo		Herb	Karst, Forest	5170, 5247, 5277, 5335
<i>Cryptocoryne crispatula</i> Engl.		Herb	Rheophyte	4744
<i>Lasia spinosa</i> (L.) Thwaites		Herb	Forest	4968
<i>Pothos cylindricus</i> C.Presl		Climber	Secondary growth	5014
<i>Pothos gigantipes</i> Buchet ex P.C.Boyce	+	Climber	Secondary growth	5032
<i>Pothos scandens</i> L.		Climber	Forest	4970, 4976
<i>Remusatia cf. vivipara</i> (Roxb.) Schott		Epiphyte	Forest	5341
<i>Scindapsus officinalis</i> (Roxb.) Schott		Climber	Secondary growth	(no V)
<b>Areceaceae</b>				
<i>Areca triandra</i> Roxb. ex Buch.-Ham.		Treelet	Forest	5245
<i>Arenga caudata</i> (Lour.) H.E.Moore		Shrub	Forest	4785
<i>Arenga westerhoutii</i> Griff.		Shrub	Forest	4783, 4784
<i>Caryota mitis</i> Lour.		Treelet	Forest	5001
<i>Rhapis cochinchinensis</i> (Lour.) Mart.		Shrub	Forest	4782
<b>Asparagaceae</b>				
<i>Dracaena cochinchinensis</i> (Lour.) S.C.Chen		Tree	Forest	4996
<i>Dracaena elliptica</i> Thunb.		Tree	Karst	5188
<i>Peliosanthes gracilipes</i> (Craib) N.Tanaka		Herb	Riparian	4756
<i>Peliosanthes teta</i> subsp. <i>humilis</i> (Andrews) Jessop		Herb	Forest	4864
<b>Asteraceae</b>				
<i>Centipeda minima</i> A.Braun & Asch.		Herb	Secondary growth	4948
<b>Bignoniaceae</b>				
<i>Fernandoa adenophylla</i> (G.Don) Steenis		Tree	Forest	4902

**Table 2. Continued**

<b>Taxa</b>	<b>Additions</b>	<b>Habit</b>	<b>Habitat</b>	<b>Voucher number(s) (FH)</b>
<i>Oroxylum indicum</i> (L.) Kurz		Tree	Forest	5106
<b>Boraginaceae</b>				
<i>Rotula aquatica</i> Lour.		Shrub	Rheophyte	4800
<b>Cannabaceae</b>				
<i>Celtis philippensis</i> Blanco	+	Tree	Forest	5519
<b>Capparaceae</b>				
<i>Capparis micracantha</i> DC.		Treelet	Secondary growth	5013, 5025
<i>Crateva adansonii</i> subsp. <i>trifoliata</i> (Roxb.) M.Jacobs		Treelet	Riparian	5067
<b>Cardiopteridaceae</b>				
<i>Gonocaryum lobbianum</i> (Miers) Kurz		Tree	Forest	4957, 5099, 5216, 5367
<b>Celastraceae</b>				
<i>Euonymus indicus</i> B.Heyne ex Wall.		Treelet	Forest	5460
<i>Microtropis discolor</i> Wall.		Treelet	Forest	5056
<i>Salacia verrucosa</i> Wight		Climber	Forest	5218
<b>Clusiaceae</b>				
<i>Cratoxylum cochinchinense</i> Blume		Tree	Forest	5402
<i>Garcinia cochinchinensis</i> (Lour.) Choisy		Tree	Karst	5447
<i>Garcinia cowa</i> Roxb.		Tree	Forest	5540
<i>Garcinia gracilis</i> Pierre		Tree	Karst	5412
<i>Garcinia cf merguensis</i> Wight		Tree	Forest	5149
<i>Garcinia oliveri</i> Pierre		Tree	Forest	5360
<i>Garcinia cf speciosa</i> Wall.		Tree	Forest	4822
<b>Combretaceae</b>				
<i>Getonia floribunda</i> Roxb.		Climber	Forest	5008
<i>Combretum latifolium</i> Blume		Tree	Forest	4910
<b>Commelinaceae</b>				
<i>Amischotolype mollissima</i> Hassk.		Herb	Forest	4926
<i>Pollia condensata</i> C.B.Clarke		Herb	Forest	4912
<b>Convolvulaceae</b>				
<i>Argyreia capitiformis</i> (Poir.) Ooststr.		Climber	Secondary growth	4765
<i>Merremia bambusetorum</i> Kerr	+	Climber	Forest	4944
<i>Merremia vitifolia</i> (Blume) Hallier f.		Climber	Secondary growth	4764
<b>Cornaceae</b>				
<i>Alangium kurzii</i> Craib		Tree	Forest	5250
<b>Daphniphyllaceae</b>				
<i>Daphniphyllum majus</i> var. <i>pierrei</i> (Hance) T.C.Huang		Tree	Forest	5375

**Table 2. Continued**

<b>Taxa</b>	<b>Additions</b>	<b>Habit</b>	<b>Habitat</b>	<b>Voucher number(s) (FH)</b>
<b>Dichapetalaceae</b>				
<i>Dichapetalum gelonioides</i> (Roxb.) Engl.	+	Tree	Forest	5517
<b>Dipterocarpaceae</b>				
<i>Anisoptera costata</i> Korth.		Tree	Forest	4923
<i>Dipterocarpus costatus</i> C.F.Gaertn.		Tree	Forest	4922
<i>Dipterocarpus retusus</i> Blume		Tree	Forest	5509
<i>Dipterocarpus turbinatus</i> C.F.Gaertn.		Tree	Forest	5094
<i>Hopea cf ferrea</i> Pierre		Tree	Forest	5327
<i>Hopea cf odorata</i> Roxb.		Tree	Forest	5005, 5438, 5356, 5366
<i>Shorea obtusa</i> Wall. ex Blume		Tree	Forest	5422
<b>Ebenaceae</b>				
<i>Diospyros apiculata</i> Hiern		Tree	Secondary growth	4749
<i>Diospyros hasseltii</i> Zoll.	+	Tree	Forest	5472
<i>Diospyros malabarica</i> (Desr.) Kostel.		Tree	Forest	5452
<i>Diospyros pilosiuscula</i> G.Don	+	Tree	Forest	5418
<i>Diospyros cf sumatrana</i> Miq.	+	Tree	Forest	5433
<b>Elaeocarpaceae</b>				
<i>Elaeocarpus grandiflorus</i> Sm.		Tree	Forest	5239
<i>Elaeocarpus hainanensis</i> Oliv.		Tree	Forest	5115
<i>Elaeocarpus petiolatus</i> (Jack) Wall.		Tree	Forest	5351
<b>Euphorbiaceae</b>				
<i>Aporosa villosa</i> (Lindl.) Baill.		Tree	Forest	4883, 5405
<i>Aporosa wallichii</i> Hook.f.		Tree	Forest	5146, 5229
<i>Balakata baccata</i> (Roxb.) H.-J. Esser		Tree	Forest	5463
<i>Claoxylon indicum</i> (Reinw. ex Blume) Hassk.		Tree	Forest	5481
<i>Cleidion spiciflorum</i> (Burm.f.) Merr.		Tree	Forest	5471
<i>Croton kongensis</i> Gagnep.		Treelet	Forest	5484
<i>Endospermum chinense</i> Benth.	+	Tree	Forest	5511, 5530, 5353, 5308
<i>Excoecaria oppositifolia</i> Griff.	+	Tree	Forest	5069, 5086, 5469
<i>Homonoia riparia</i> Lour.		Shrub	Rheophyte	4745, 5036, 5037, 5493
<i>Macaranga denticulata</i> (Blume) Müll.Arg.		Tree	Forest	5492
<i>Mallotus barbatus</i> Müll.Arg.		Tree	Forest	4889, 5408, 5499, 5536, 5537
<i>Mallotus peltatus</i> (Geiseler) Müll.Arg.		Tree	Forest	5502



**Table 2. Continued**

<b>Taxa</b>	<b>Additions</b>	<b>Habit</b>	<b>Habitat</b>	<b>Voucher number(s) (FH)</b>
<i>Sumbaviopsis albicans</i> (Blume) J.J.Sm.	+	Tree	Forest	5079, 5117, 5413
<i>Suregada multiflora</i> (A. Juss.) Baill.		Tree	Forest	5362
<i>Trigonostemon flavidus</i> Gagnep.		Treelet	Forest	5437
<b>Fabaceae</b>				
<i>Adenanthera pavonina</i> var. <i>microsperma</i> (Teijsm. & Binn.) I.C.Nielsen		Tree	Secondary growth	4988
<i>Afzelia xylocarpa</i> (Kurz) Craib		Tree	Forest	5110
<i>Cassia timoriensis</i> DC.		Treelet	Secondary growth	4951, 5031
<i>Cynometra dongnaiensis</i> Pierre	+	Treelet	Forest	4993, 5236
<i>Dalbergia cochinchinensis</i> Pierre		Climber	Forest	5017
<i>Dalbergia tonkinensis</i> Prain		Tree	Secondary growth	4753
<i>Ormosia laosensis</i> Niyomdham		Tree	Forest	5365
<i>Phyllodium cf longipes</i> (Craib) Schindl.		Shrub	Secondary growth	4754
<i>Phyllodium pulchellum</i> (L.) Desv.		Shrub	Secondary growth	4768
<i>Pterocarpus macrocarpus</i> Kurz		Tree	Forest	5423
<i>Sesbania grandiflora</i> (L.) Poir.		Treelet	Secondary growth	5024
<i>Sindora laotica</i> Gagnep.		Tree	Forest	5513
<b>Fagaceae</b>				
<i>Quercus oxyodon</i> Miq.	+	Tree	Forest	5420
<i>Lithocarpus dealbatus</i> (Miq.) Rehder		Tree	Karst	5185, 5538
<i>Lithocarpus elegans</i> (Blume) Hatus. ex Soepadmo		Tree	Forest	5539
<b>Gentianaceae</b>				
<i>Fagraea ceilanica</i> Thunb.		Hemi- Epiphyte	Secondary growth	4766
<b>Lamiaceae</b>				
<i>Callicarpa arborea</i> Roxb.		Tree	Forest	5207
<i>Clerodendrum garrettianum</i> Craib		Treelet	Secondary growth	5053
<i>Clerodendrum paniculatum</i> L.		Shrub	Secondary growth	4760, 5058
<i>Gmelina racemosa</i> (Lour.) Merr.		Tree	Forest	5533
<i>Premna coriacea</i> C.B.Clarke	+	Tree	Forest	5475
<i>Vitex peduncularis</i> Wall. ex Schauer		Tree	Forest	5283, 5441
<i>Vitex quinata</i> (Lour.) F.N.Williams		Tree	Forest	5373
<i>Vitex vestita</i> Wall. ex Schauer		Tree	Forest	5112
<b>Lauraceae</b>				
<i>Cassytha filiformis</i> L.		Climber parasitic	Secondary growth	4943
<i>Litsea glutinosa</i> (Lour.) C.B.Rob.		Tree	Forest	5221

**Table 2. Continued**

<b>Taxa</b>	<b>Additions</b>	<b>Habit</b>	<b>Habitat</b>	<b>Voucher number(s) (FH)</b>
<i>Litsea pierrei</i> Lecomte	+	Tree	Forest	5317
<b>Lecythidaceae</b>				
<i>Barringtonia longipes</i> Gagnep.		Tree	Forest	5142, 5189, 5473
<i>Barringtonia racemosa</i> (L.) Spreng	+	Tree	Secondary growth	5434
<b>Loganiaceae</b>				
<i>Strychnos nux-blanda</i> A.W.Hill		Tree	Forest	5400
<b>Loranthaceae</b>				
<i>Taxillus chinensis</i> (DC.) Danser		Shrub parasitic	Secondary growth	5044
<b>Lythraceae</b>				
<i>Duabanga grandiflora</i> (DC.) Walp.		Tree	Forest	5370
<i>Lagerstroemia calyculata</i> Kurz		Tree	Forest	5157, 5217
<i>Lagerstroemia speciosa</i> (L.) Pers.		Tree	Forest	5426
<i>Lagerstroemia tomentosa</i> C.Presl		Tree	Forest	5358, 5512
<b>Malvaceae</b>				
<i>Bombax ceiba</i> L.		Tree	Forest	5010
<i>Helicteres angustifolia</i> L.		Shrub	Secondary growth	4940
<i>Helicteres lanceolata</i> A.DC.		Shrub	Secondary growth	4780
<i>Microcos paniculata</i> L.		Tree	Forest	5479
<i>Pterospermum cf cinnamomeum</i> Kurz		Tree	Forest	5011
<i>Pterospermum lanceaefolium</i> Roxb.		Tree	Forest	5227
<i>Pterospermum semisagittatum</i> Buch.-Ham.		Tree	Forest	5033, 5419
<i>Sterculia balanghas</i> L.		Tree	Forest	5371
<i>Sterculia lanceolata</i> Cav.		Treelet	Forest	4773, 5125
<b>Melastomataceae</b>				
<i>Melastoma malabathricum</i> L.		Shrub	Secondary growth	4876, 5313
<i>Memecylon chevalieri</i> Guillaumin	+	Tree	Forest	5459
<i>Memecylon edule</i> Roxb.		Treelet	Forest	5424
<b>Meliaceae</b>				
<i>Aglaia spectabilis</i> (Miq.) S.S. Jain & Bennet		Tree	Forest	5518
<i>Aglaia tomentosa</i> Teijsm. & Binn.		Tree	Karst	5416
<i>Dysoxylum grande</i> Hiern	+	Tree	Forest	5151
<i>Sandoricum koetjape</i> (Burm.f.) Merr.		Tree	Forest	5004
<i>Toona ciliata</i> M.Roem.		Tree	Karst	5192
<i>Walsura robusta</i> Roxb.		Tree	Forest	5030
<b>Menispermaceae</b>				
<i>Cyclea tonkinensis</i> Gagnep.		Climber	Secondary growth	4860

**Table 2. Continued**

<b>Taxa</b>	<b>Additions</b>	<b>Habit</b>	<b>Habitat</b>	<b>Voucher number(s) (FH)</b>
<b>Moraceae</b>				
<i>Artocarpus lacucha</i> Buch.-Ham.		Tree	Forest	5368
<i>Broussonetia papyrifera</i> (L.) L'Hér. ex Vent.		Tree	Forest	5483
<i>Ficus altissima</i> Blume		Tree	Forest	5120
<i>Ficus callophylla</i> Blume		Hemi- Epiphyte	Forest	5023, 5156
<i>Ficus callosa</i> Willd.		Tree	Forest	5436, 5462
<i>Ficus heterophylla</i> L.f.		Shrub	Forest	4979
<i>Ficus hirta</i> Vahl		Tree	Forest	5498
<i>Ficus lamponga</i> Miq.		Tree	Forest	5514
<i>Ficus nervosa</i> B.Heyne ex Roth		Tree	Forest	5432
<i>Ficus sundaica</i> Blume	+	Tree	Karst	5301, 5520
<i>Streblus macrophyllus</i> Blume	+	Tree	Forest	5435
<i>Streblus taxoides</i> (Roth) Kurz		Shrub	Forest	5158
<b>Musaceae</b>				
<i>Musa itinerans</i> Cheesman	+	Herb	Karst	4935
<b>Myristicaceae</b>				
<i>Knema erratica</i> (Hook.f. & Thomson) J.Sinclair		Tree	Forest	5224
<i>Knema furfuracea</i> (Hook.f. & Thomson) Warb.	+	Tree	Forest	5103, 5470
<i>Knema globularia</i> (Lam.) Warb.		Tree	Forest	5527
<b>Myrtaceae</b>				
<i>Syzygium cf balsameum</i> (Wight) Wall. ex Walp.	+	Tree	Rheophyte	4872
<i>Syzygium cumini</i> (L.) Skeels		Tree	Forest	5399, 5427
<i>Syzygium megacarpum</i> (Craib) Rathakr. & N.C.Nair	+	Tree	Forest	5464
<i>Syzygium cf oblatum</i> (Roxb.) Wall. ex Steudel	+	Tree	Forest	5465
<b>Ochnaceae</b>				
<i>Gomphia serrata</i> (Gaertn.) Kanis.V		Treelet	Forest	5328, 5374
<b>Olacaceae</b>				
<i>Olax scandens</i> Roxb. - <i>Olax obtusa</i> Blume		Climber	Forest	5389
<b>Oleaceae</b>				
<i>Jasminum elongatum</i> (Bergius) Willd.		Climber	Secondary growth	4938
<i>Jasminum scandens</i> Vahl		Climber	Secondary growth	4746
<i>Jasminum vidalii</i> P.S.Green	+	Climber	Secondary growth	5009
<b>Opiliaceae</b>				
<i>Melientha suavis</i> Pierre		Treelet	Forest	5215

**Table 2. Continued**

<b>Taxa</b>	<b>Additions</b>	<b>Habit</b>	<b>Habitat</b>	<b>Voucher number(s) (FH)</b>
<b>Pentaphragaceae</b>				
<i>Anneslea fragans</i> Wall.		Tree	Karst	4936, 5504
<b>Phyllanthaceae</b>				
<i>Antidesma acidum</i> Retz		Tree	Forest	5364, 5401
<i>Antidesma buniis</i> (L.) Spreng.		Tree	Forest	5114
<i>Antidesma velutinum</i> Tulasne	+	Tree	Forest	5363
<i>Phyllanthus emblica</i> L.		Treelet	Forest	5390
<i>Phyllanthus cf harmandii</i> Beille	+	Treelet	Karst	5476
<i>Sauropus quadrangularis</i> Müll.Arg.		Shrub	Secondary growth	5034
<b>Piperaceae</b>				
<i>Piper laosanum</i> DC.		Shrub	Karst	4769
<b>Plantaginaceae</b>				
<i>Limnophila aromatica</i> (Lam.) Merr.		Herb	Riparian	4905
<b>Plumbaginaceae</b>				
<i>Plumbago indica</i> L.		Herb	Secondary growth	5035
<b>Poaceae</b>				
<i>Thysanolaena latifolia</i> (Hornem.) Honda.		Herb	Forest	4908
<b>Polygonaceae</b>				
<i>Polygonum posumbu</i> Buch.-Ham. ex D.Don		Herb	Secondary growth	5038
<b>Primulaceae</b>				
<i>Ardisia helferiana</i> Kurz		Shrub	Forest	4886
<i>Maesa paniculata</i> A.DC.		Shrub	Riparian	5066
<i>Maesa ramentacea</i> (Roxb.) A.DC.		Treelet	Forest	4877, 4971
<b>Putranjivaceae</b>				
<i>Drypetes harmandii</i> Pierre ex Gagnep.		Tree	Forest	5455, 5526
<b>Rhamnaceae</b>				
<i>Ziziphus cf angustifolia</i> (Miq.) Hatus. ex Steenis	+	Tree	Forest	5458
<i>Ziziphus oenoplia</i> (L.) Mill.		Climber	Secondary growth	4750
<i>Ziziphus cf pubinervis</i> Rehder	+	Tree	Forest	5123
<b>Rubiaceae</b>				
<i>Canthium coffeoides</i> Pierre ex Pit.		Tree	Forest	5516
<i>Dioecrescis erythroclada</i> (Kurz) Tirveng.		Tree	Forest	5398
<i>Duperrea pavettifolia</i> (Kurz) Pit.		Shrub	Forest	5075
<i>Fagerlindia fasciculata</i> (Roxb.) Tirveng.		Treelet	Forest	5501
<i>Gardenia sootepensis</i> Hutch.		Tree	Forest	5393
<i>Hymenodictyon orixense</i> (Roxb.) Mabb.		Tree	Karst	5181, 5280, 5372, 5440
<i>Ixora nigricans</i> R.Br. ex Wight & Arn.		Treelet	Karst	5260
<i>Meyna spinosa</i> Roxb. ex Link		Tree	Forest	5394

**Table 2. Continued**

<b>Taxa</b>	<b>Additions</b>	<b>Habit</b>	<b>Habitat</b>	<b>Voucher number(s) (FH)</b>
<i>Mitragyna diversifolia</i> (G.Don) Havil.		Tree	Forest	4958
<i>Mitragyna rotundifolia</i> (Roxb.) Kuntze		Tree	Forest	5524
<i>Mussaenda bonii</i> Pit.		Shrub	Secondary growth	4888
<i>Neonauclea purpurea</i> (Roxb.) Merr.		Tree	Forest	5369
<i>Paederia foetida</i> L.		Climber	Forest	4949
<i>Psychotria adenophylla</i> Wall.		Shrub	Karst	5312
<i>Psychotria asiatica</i> L.		Shrub	Forest	4954
<i>Psychotria sarmentosa</i> Blume		Climber	Forest	5331
<i>Rothmannia sootepensis</i> (Craib) Bremek.	+	Treelet	Forest	4982, 5467
<i>Rothmannia vietnamensis</i> Tirveng.		Tree	Forest	5505
<i>Spermacoce latifolia</i> Aubl.		Herb	Forest	4866, 4900
<i>Spermacoce roxburghii</i> Spreng.		Climber	Secondary growth	4875
<i>Tarenna asiatica</i> (L.) Kuntze ex K.Schum.		Treelet	Karst	5380
<i>Tarenna quocensis</i> Pit.		Treelet	Forest	5089, 5361, 5515
<i>Uncaria laevigata</i> Wall. ex G.Don		Climber	Secondary growth	5027
<b>Rutaceae</b>				
<i>Clausena excavata</i> Burm.f.		Tree	Forest	5429
<i>Harrisonia perforata</i> (Blanco) Merr.		Shrub	Forest	5487
<i>Micromelum hirsutum</i> Oliv.		Treelet	Karst	5306
<i>Micromelum integerrimum</i> (Buch.-Ham.) Roem.		Treelet	Forest	5144
<i>Micromelum minutum</i> (J.Forst.) Wight & Arn.		Treelet	Secondary growth	4752, 5006, 5143, 5359
<b>Sapindaceae</b>				
<i>Arytera littoralis</i> Blume		Tree	Forest	5388, 5428
<i>Lepisanthes rubiginosa</i> (Roxb.) Leenh.		Treelet	Secondary growth	4755
<i>Pometia pinnata</i> J.R.Forst. & G.Forst.		Tree	Forest	5174, 5461
<i>Schleichera oleosa</i> (Lour.) Oken.		Tree	Forest	5425
<i>Xerospermum noronhianum</i> (Blume) Blume		Tree	Karst	5348, 5500, 5546
<b>Sapotaceae</b>				
<i>Palaquium annamense</i> Lecomte		Tree	Forest	5159
<b>Scrophulariaceae</b>				
<i>Buddleja asiatica</i> Lour.		Shrub	Secondary growth	4759
<b>Smilacaceae</b>				
<i>Smilax glabra</i> Wall. ex Roxb.		Climber	Forest	4909
<b>Staphyleaceae</b>				
<i>Turpinia pomifera</i> (Roxb.) DC.		Tree	Forest	5543



**Table 2. Continued**

<b>Taxa</b>	<b>Additions</b>	<b>Habit</b>	<b>Habitat</b>	<b>Voucher number(s) (FH)</b>
<b>Urticaceae</b>				
	<i>Oreocnide integrifolia</i> (Gaudich.) Miq.	Tree	Karst	5414
<b>Vitaceae</b>				
	<i>Cissus discolor</i> Blume	Climber	Karst	5445
	<i>Leea guineensis</i> G.Don	Shrub	Forest	5495
	<i>Tetrastigma erubescens</i> Planch.	Climber	Forest	4929
	<i>Tetrastigma harmandii</i> Planch.	Climber	Secondary growth	4751, 4914, 5016, 5179
<b>Zingiberaceae</b>				
	<i>Amomum glabrifolium</i> Lamxay & M.F.Newman	Herb	Karst	5211, 5490
	<i>Amomum plicatum</i> Lamxay & M.F.Newman	Herb	Forest	5088, 5321
	<i>Amomum uliginosum</i> J.König	Herb	Forest	5139
	<i>Amomum villosum</i> Lour.	Herb	Forest	5489