

Incidence of Extra-Floral Nectaries and their Effect on the Growth and Survival of Lowland Tropical Rain Forest Trees

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# Incidence of Extra-Floral Nectaries and their Effect on the Growth and Survival of Lowland Tropical Rain Forest Trees

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## Summary

Mutualistic relationships between organisms have long captivated biologists, and extra-floral nectaries (EFNs), or nectar-producing glands, found on many plants are a good example. The nectar produced from these glands serves as food for ants which attack intruders that may threaten their free meal, preventing herbivory. However, relatively little is known about their impact on the long-term growth and survival of plants. To better understand the ecological significance of EFNs, I examined their incidence on lowland tropical rain forest trees in Yasuni National Park in Amazonian Ecuador.

Of those 896 species that were observed in the field, EFNs were found on 96 species (11.2%), widely distributed between different angiosperm families. This rate of incidence is high but consistent with other locations in tropical regions. Furthermore, this study adds 13 new genera and 2 new families (Urticaceae and Caricaceae) to the list of taxa exhibiting EFNs.

Using demographic data from a long-term forest dynamics plot at the same site, I compared the growth and survival rates of species that have EFNs with those that do not. This same analysis was also done with data from two other sites with EFN surveys, Barro Colorado Island, Panama and Pasoh Forest Reserve, Malaysia. Results showed that while species with EFNs have generally higher diameter growth rates, they also have higher mortality rates than species without, suggesting a cost to this ecological strategy.

**Keywords:** extra-floral nectaries, tropical forest, growth rate, mortality rate

## Introduction

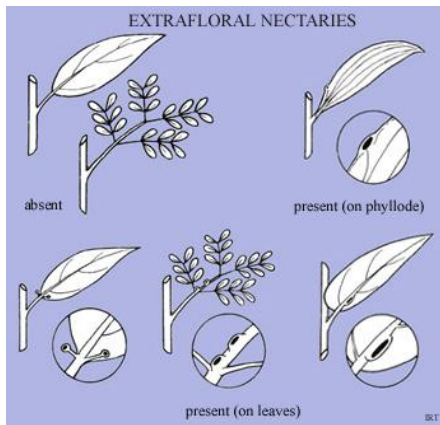
Tropical forests represent a fascinating yet incredibly complex web of interactions, the ecology of which, in many cases, is still largely enigmatic, and the mechanisms that generate and maintain the remarkable diversity of plants and animals found within them remain a fundamental question in biology (Palmer 1994, Hubbell 2001, Wright 2002). While one suite of mechanisms are purely stochastic in nature (e.g. Hubbell 2001) many other mechanisms depend on niche differences between species to permit coexistence (Chesson 2000, Silvertown 2004). Niche differences are driven primarily in response to selection pressures, which in tropical forests include competition with neighbors for (often low levels of) light, nutrients and water (Chapin et al. 1986, Denslow et al. 1987, Chazdon & Pearcy 1988), as well as intense predation pressure from pests, pathogens and herbivores (Barone 2000, Novotny et al. 2010).

Herbivory represents a particularly selective force,

as up to 20% of plant net primary production may be consumed each year (Agrawal 2011). In response, tropical rain forest trees have developed a myriad of defense mechanisms, from physical (e.g. spines, hairs; Hanley et al. 2007) to chemical (e.g. low nutrition, toxic compounds; Feeny 1976, Levin & York 1978, Coley & Barone 1996). Further, many plants have evolved mutualistic relationships with animals in an effort to deter herbivores. A common mutualism is with ants and such ant-plant relationships offer a considerable measure of defense from herbivory, and can have a positive impact on plant performance (Beattie 1985).

One such example of ant-plant mutualisms are extra-floral nectaries (EFNs), which are nectar-producing glands found outside of a plant's flower, typically at the base of the leaf or on the petiole, although their location can vary considerably on the plant (Figure 1). EFNs vary in morphology, ranging from raised bowls or bulbs to very small hairs and tissues (Elias 1983). The nectar produced by these

glands serves as a food source, primarily for ants, which are believed to provide protection to the plant in return, by way of aggression toward intruding organisms including herbivores (Bentley 1977a, Keeler 1977, 1989, Koptur 1992). This form of ant protectionism can result in reduced damage to both vegetative and reproductive parts, improving plant performance and fitness (Koptur 1992, Oliveira 1997). However, relatively little is known about their overall ecological impact at the population and community levels as well as on the long-term performance of individual plants.



**Fig. 1** Example structure and locations of extra-floral nectaries on plants. Source: Australia Biological Resources Study ([environment.gov.au/biodiversity/abrs](http://environment.gov.au/biodiversity/abrs))

Previous intensive surveys have determined the incidence of EFNs on Barro Colorado Island, Panama (Schupp & Feener 1991) and in the Pasoh Forest Reserve, Malaysia (Fiala & Linsenmair 1995). These studies provided an excellent picture of the distribution of EFNs at these sites, and until last year were the best data available on the phylogenetic distribution of EFNs. However, new work has drawn together all available data on EFN incidence currently known, to examine the phylogenetic distribution of EFNs throughout the plant phylogeny (Weber & Keeler 2012). This study found 1.0-1.8% of plant species had EFNs, distributed in 108 families, although the authors suggest that the unknown incidence of EFNs

may be as great as their currently known incidence (Weber & Keeler 2012), requiring further in-depth studies of EFN incidence within and between plant communities.

In this study, I expand upon our prior understanding by undertaking an intensive survey of EFN incidence of tree species in an old growth Neotropical aseasonal lowland rain forest, an environment that has not yet been studied for EFNs. I analyze the long-term demographic rates of trees with and without EFNs to elucidate the ecological significance of this defensive strategy. In a large permanent forest plot in Yasuni National Park, Ecuador, I examined 896 species of tree for the presence or absence of EFNs. I used published census data to compare abundance, and growth and mortality rates of trees with and without EFNs. Finally, I also used the results of surveys in BCI and Pasoh to examine how plant performance is related to EFN incidence there, such that a comparison of the phylogenetic distribution and demographic rates related to EFN can be made between three study sites. If mutualism with ants, and EFNs in particular, provide a benefit, I predict higher abundance and greater performance in species with EFNs.

## QUESTIONS

1. What is the incidence and phylogenetic distribution of extra-floral nectaries on trees in a lowland Neotropical rain forest?
2. Do trees with extra-floral nectaries have different abundances, and growth and mortality rates than trees without extra-floral nectaries?
3. How do findings from our study site compare with other locations in which the incidence of extra-floral nectaries have been studied?

## Methods

### STUDY SITES

I carried out fieldwork in Yasuni National Park, Ecuador, and used published data from Barro Colorado Island, Panama (Feener & Schupp 1991) and

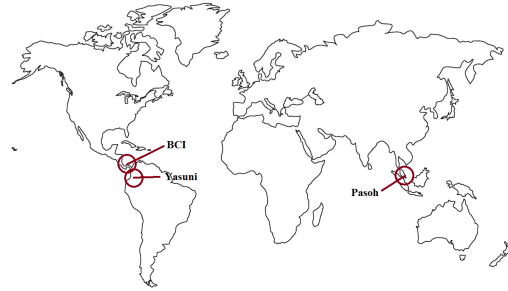
Pasoh Forest Reserve, Malaysia (Fiala & Linsenmair 1995) on the incidence of EFN (Figure 2).

Yasuni National Park and adjacent Huaorani territory comprise 1,600,000 ha of largely pristine tropical lowland aseasonal rain forest in eastern Ecuador (Finer et al. 2009, Bass et al. 2010). Yasuni Scientific Research Station, established and maintained by the Pontificia Universidad Catolica del Ecuador, is located in the north-western corner of the park, in terra-firme, mature forest bordering the Tiputini River. The research station maintains a 25 ha Forest Dynamics Plot (FDP, 0°41'S, 76°24'W), which lies along two smaller ridges dominated by red clays and separated by a valley characterized by brown or grey alluvium (Valencia et al. 2004). The plot is extremely biologically diverse, with a described tree species count of 1,104 (Valencia et al. 2004). The climate at Yasuni is aseasonal, with an average annual rainfall of 2,826 mm, with no month receiving less than 100 mm of rainfall (Valencia et al. 2004).

Barro Colorado Island (BCI), Panama is a 1,560 ha island located in Gatun Lake, formed when the Panama Canal was developed. The 50 ha Forest Dynamics Plot was established in 1980 and is maintained by the Smithsonian Tropical Research Institute (STRI). The FDP is located near the center of BCI (9°9'S, 79°50'W) and consists primarily of lowland moist tropical forest, about half of which is mature growth. There is a relatively high diversity of trees at the FDP, with 321 different species of tree recorded. The climate at BCI is seasonal, with a dry season lasting roughly from December to April or May and an average annual rainfall of 2,551 mm (Leigh et al. 2004).

Pasoh Forest Reserve, Malaysia is a 11,000 ha reserve situated in peninsular Malaysia. The 50 ha Forest Dynamics Plot situated within the reserve (2°58'N, 102°18'E) was established in 1986 and is maintained by the Forest Research Institute Malaysia. The forest consists primarily of lowland mixed dipterocarp forest, and is surrounded by roughly 1,000 ha of previously logged forest. The FDP at Pasoh has a tree diversity of around 824 species. The climate at Pasoh is seasonal, with dips in precipitation

in January-February and June-July, and an average annual rainfall of 1,571mm (Manokaran et al. 2004).



**Fig. 2** Locations of Yasuni National Park, Barro Colorado Island and Pasoh Forest Reserve

#### FIELD SURVEYS

I undertook a survey for incidence of extra-floral nectararies on woody species at Yasuni in June-August 2012. Species were censused in three ways. In the field, I searched along trails within and around the FDP and found 787 species. A further 109 rare species were found by searching for specific individuals within the FDP. In this way, I examined a total of 896 species in the field (81% of the total 1,104 species in the FDP). The remaining 208 species that I could not find in the field were checked from dried specimens in the field station herbarium. This method was effective for those plants with obvious nectary structures (e.g. Fabaceae), although dried structures are much more difficult to identify than living structures. Therefore, species with EFNs determined in the herbarium were included only in demographic analysis.

Data on the incidence of extra-floral nectararies for species from the other two sites were obtained from Schupp & Feener (1991, BCI) and Fiala & Linsenmair (1995, Pasoh). I added to these data with new data from Croat (1978) and Garwood (2009), for species located in the BCI FDP.

## DEMOGRAPHIC DATA

At all three sites, identical methodology was followed to establish large forest plots. All plots were professionally surveyed, and within them every shrub and tree stem >1 cm diameter at breast height (DBH, 1.3m) are mapped, marked, measured and identified every 5 years (Condit 1998). To date, three censuses have been carried out at Yasuni, four at BCI and three at Pasoh. All demographic data can be found at the Center for Tropical Forest Science website ([www.ctfs.si.edu](http://www.ctfs.si.edu), for a summary, see Table 1).

From these census data, demographic rates have been calculated (Condit et al. 2006). Annual mortality (survival from one census to the next) and growth rates (diameter increment) were determined using Bayesian hierarchical models. Abundance and demographic rates were calculated for each species for individuals in two size classes: 1-10 cm DBH and >10 cm DBH. For consistency, census years leading up to or closest to the year 2000 were used. For each species, I also assigned growth form (shrub, treelet, understory tree, canopy tree or emergent tree). Finally, the higher-level taxonomy for each site was updated to reflect the Angiosperm Phylogeny Group III (APG III) system (The Angiosperm Phylogeny Group 2009).

## DATA ANALYSIS

To examine the taxonomic distribution of extra-floral nectararies, I compared the proportions of individuals, species, genera, families, and orders with EFNs at each site using a proportion test. To test whether species with EFNs were more abundant than species without, and also whether species with EFN had higher growth rates and higher mortality rates, I used linear regression. All data analysis was completed in the statistics package R version 2.15.1.

## Results

I surveyed shrub and tree species at three tropical forest sites for extra-floral nectararies. At Yasuni, I

censused 896 species out of 1,104 species on the FDP. At BCI, Schupp & Feener (1991) surveyed 173 species, though only 150 of these are present on the FDP (of 321 total). Using additional references, I added another 24 species with EFNs. At Pasoh, Fiala & Linsenmair (1995) surveyed 741 out of 824 species. Thus, I have a good sample of the species at each site, and most of the unsurveyed species are rare and thus non-representative of the community as a whole. Details of species from each site with EFN can be found in Appendix 2.

## TAXONOMIC DISTRIBUTION

At Yasuni, I found 96 species with extra-floral nectararies (11.2% of the total 896 species, Figure 3a). These were distributed among 41 genera and 17 families. Over half (58) of the species with EFNs were in the family Fabaceae, largely thanks to the diversity of *Inga* (44 species) at Yasuni, all of which have EFNs. Seventy-nine percent of all species with EFNs were found within either the Fabales or Malpighiales orders. In addition, I documented 13 new genera and 2 new families (Caricaceae and Urticaceae) to the global list of taxon exhibiting EFNs (Keeler 2013).

At BCI, 49 (32.7%) of 150 species of tree were found to have EFNs (Schupp & Feener 1991, Figure 3b). They were distributed among 31 genera and 19 families (Figure 2b). Eighteen species with EFNs were in the family Fabaceae, also due largely to the diversity of *Inga* (15 species). Similar to Yasuni, 61% percent of all species with EFNs were found within either the Fabales or Malpighiales orders.

At Pasoh, 80 (9.7%) of 824 species were found to have EFNs (Fiala & Linsenmair 1995, Figure 3c). They were distributed among 47 genera and 16 families. Unlike Yasuni and BCI, Pasoh exhibited a more even distribution of EFN bearing trees across different taxa. Euphorbiaceae, rather than Fabaceae, exhibited the most species with EFNs (21 species). Forty percent of all species with EFNs were in the order Malpighiales, while the next most important order was Malvales containing 17.5% of species with EFNs.

Across all study sites, Yasuni and Pasoh were

**Table 1** Demographic rates and abundances for all tree species per hectare across all three sites. Growth is measured in mm per year, mortality in % per year and abundance in individuals per ha.

		1-10 cm DBH			>10 cm DBH		
		Yasuni	Pasoh	BCI	Yasuni	Pasoh	BCI
Growth	Min	0.79	1.02	0.90	0.22	0.27	0.27
	Max	6.25	3.13	8.69	3.01	1.66	4.22
	Mean	1.76	1.57	2.53	0.74	0.60	1.04
	SD	0.62	0.26	1.30	0.39	0.20	0.60
Mortality	Min	0.27	0.43	0.23	0.36	0.51	0.33
	Max	20.41	19.21	30.90	16.68	7.58	17.70
	Mean	2.04	1.99	4.31	1.49	1.87	2.72
	SD	2.27	1.67	4.66	1.02	0.75	2.20
Abundance	Min	0.00	0.00	0.00	0.00	0.00	0.00
	Max	184.60	159.88	638.56	71.96	11.16	36.56
	Mean	5.64	6.51	21.10	0.72	0.69	1.99
	SD	13.10	14.71	70.45	2.91	1.33	4.31

most similar in their proportion of species with EFNs (11.2% in Yasuni, 32.7% in BCI, and 9.7% in Pasoh). BCI exhibited an incidence of species with EFNs up to three times greater than Yasuni and Pasoh, and at all taxon levels, BCI showed greater proportions of plants with EFNs than both Yasuni and Pasoh. However, BCI exhibited a much lower incidence of EFNs at the individual level compared with other study sites. The distribution of species with EFNs in each family for each site can be seen in Figure 4.

#### ABUNDANCE, AND GROWTH AND MORTALITY RATES

Species varied widely in their abundances, growth and mortality rates (Table 1). Species at BCI were on average three times more abundant than species from Yasuni and Pasoh, which reflects the lower species richness found at BCI. Both growth and mortality rates were also much higher at BCI than those found at Yasuni or Pasoh.

In accordance with my prediction, species with EFN had higher mean abundance than species without EFNs at Yasuni and Pasoh, but this was not

the case at BCI (Figure 5 a, b, c). At Yasuni, species abundances for trees with EFNs were 25-30% greater than those without. At Pasoh, these differences were even greater, where those species with EFNs were 114-117% more abundant than those without. In contrast, at BCI trees in the small size class without EFNs were almost 170% more abundant, and abundances were lower for those individuals >10 cm DBH.

Significantly greater growth rates were found in trees with EFNs in each plot, although this differed with size class between sites. At Yasuni, trees with EFNs in both size classes had higher growth rates, growing about 0.28 mm extra per year than species without EFNs. At BCI only trees in the small size class had significantly higher growth rates, and at Pasoh only trees in the large size class (Figure 5e, f).

Significantly higher mortality rates were found for species with EFN in the large size class (trees >10 cm DBH) at all three sites (Figure 5g, h, i), and in Pasoh trees 1-10 cm DBH also had significantly higher mortality rates. In all cases growth and mortality rates were found to be either greater or the same in trees with EFNs.

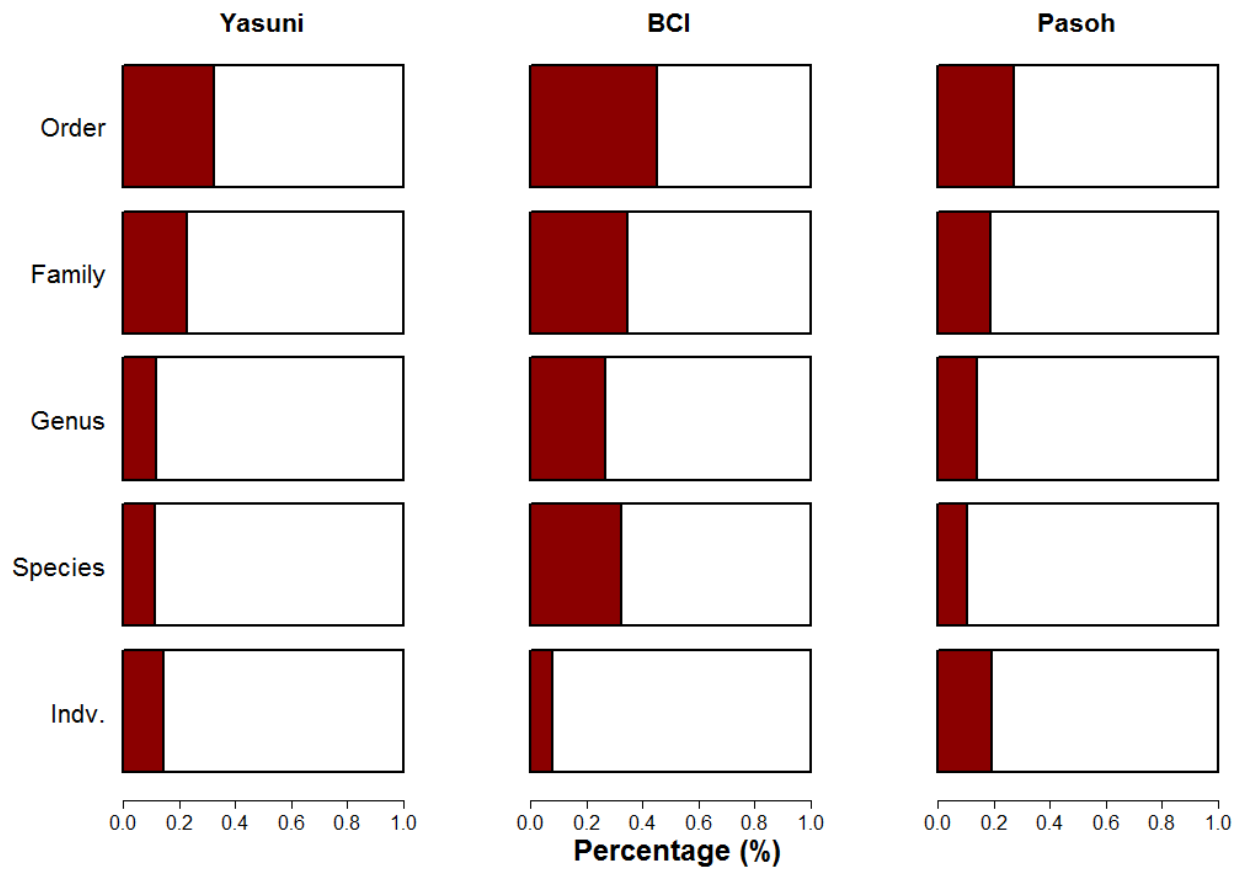


Fig. 3 Proportion of trees that exhibit EFNs at the individual and varying taxonomic levels, by location.

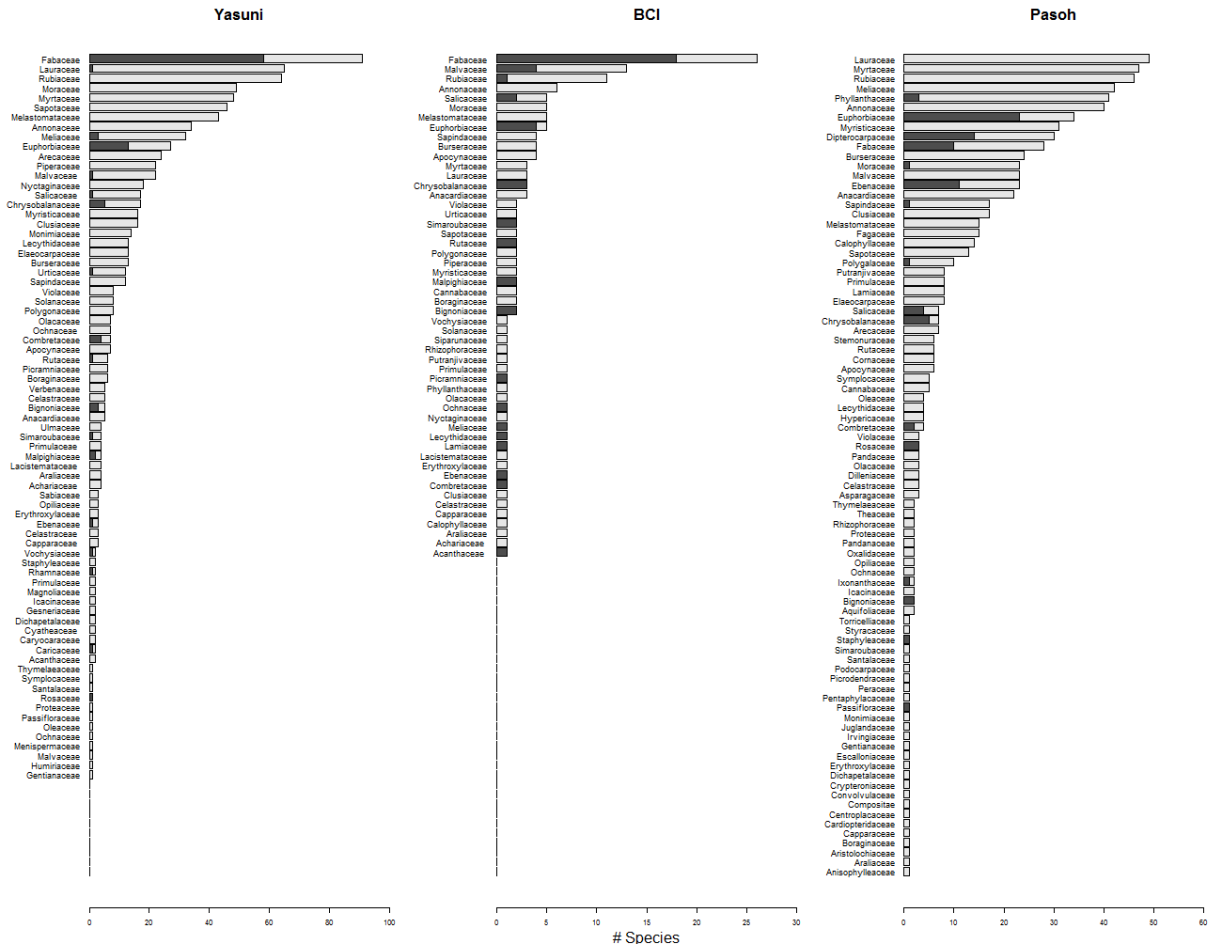
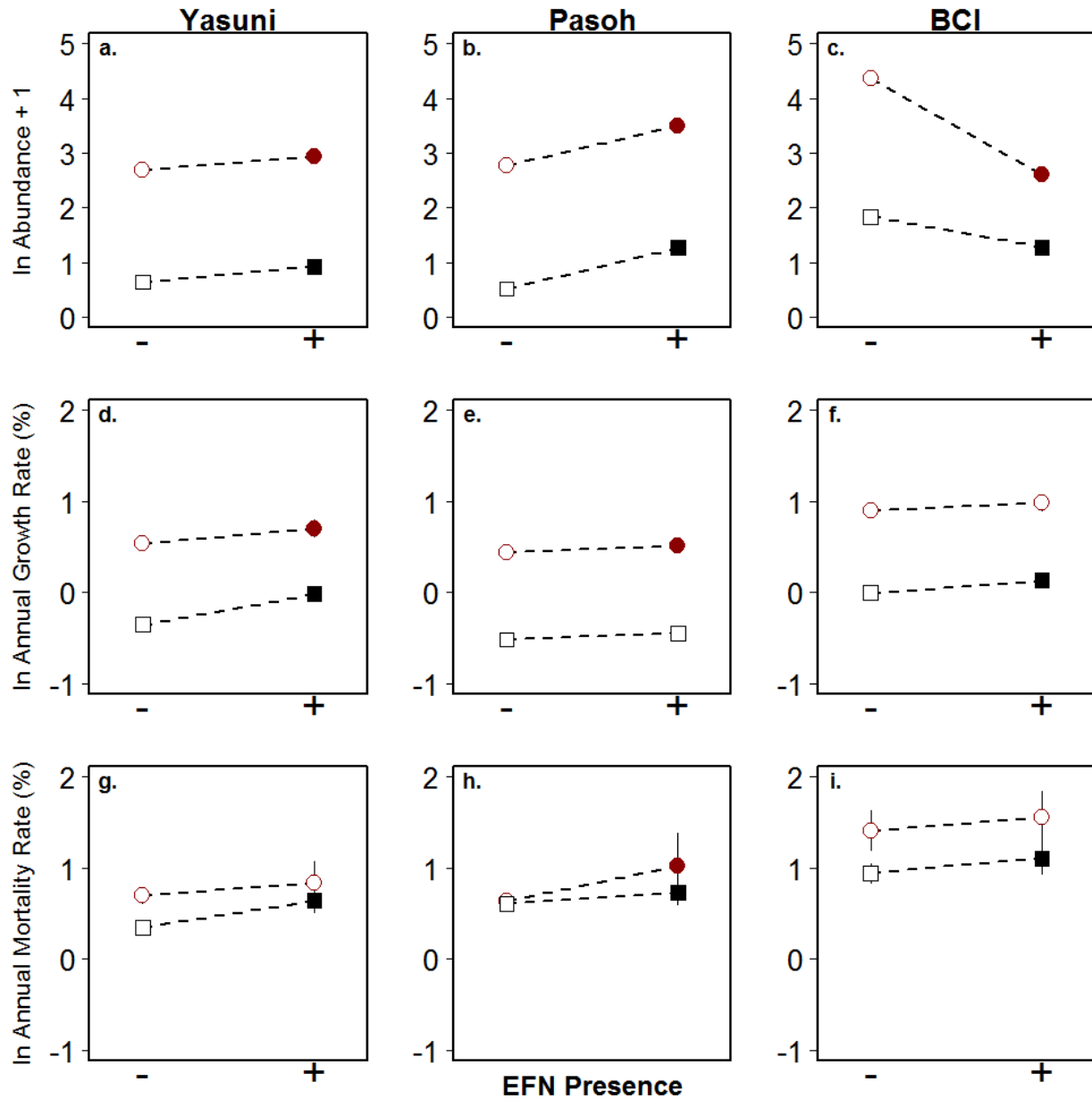


Fig. 4 Number of species examined in each family at each site, with dark bars representing species with extra-floral nectaries.





**Fig. 5** Abundance (a,b,c), and growth (d,e,f) and mortality (g,h,i) rates as a function of EFN presence in shrub and tree species in three tropical forest sites. Points are mean values per EFN group, split into two size classes: trees  $\leq 10$  cm DBH (red circles), trees  $> 10$  cm DBH (black squares). Points connected by dashed lines that are filled indicate statistical difference at  $P < 0.05$ . Error bars show 95% confidence intervals.

## Discussion

From an intensive field survey of 896 tree and shrub species in an Amazonian lowland tropical rain forest, I documented 96 species with extra-floral nectaries, 64 of which had not previously been recorded as possessing EFNs. Comparing Yasuni with two other intensive survey sites, I found that the distribution of EFNs across taxa was consistent between Yasuni and Pasoh, and broader at BCI. The reverse was found to be true in terms of total EFN presence on individuals at each plot. Species with EFNs appeared to be more successful ecologically at Yasuni and Pasoh, having higher abundance than species without EFNs, while at BCI the opposite was true. Further, I found a significant effect of EFN incidence on long-term plant performance. Tree species with EFNs showed higher growth and mortality rates compared to those without EFNs at all three sites in at least one size class.

### TAXONOMIC DISTRIBUTION AT YASUNI

This study adds 13 new genera and 2 new families (Caricaceae and Urticaceae, Appendix 1) to the list of taxon exhibiting EFNs. This increases the global number of families with EFNs to 110, 17 of which are found at Yasuni. The family with the most number of EFNs at Yasuni was Fabaceae, which is also true globally. However, the family Euphorbiaceae had the second highest incidence of EFNs at Yasuni, which stands in contrast to global patterns which show Passifloraceae and Malvaceae as second and third, respectively. Only one species from Malvaceae had nectaries at Yasuni, while there were none from Passifloraceae, although I did not survey any vines and lianas, the predominant growth form of Passifloraceae. The presence of EFNs at Yasuni was much greater than the currently known worldwide incidence (11.2% at Yasuni, to 1.5% worldwide, Weber & Keeler 2012).

### TAXONOMIC DISTRIBUTION BETWEEN SITES

All three locations exhibited fairly equivalent distribution of EFNs across taxon, with BCI representing the greatest breadth of distribution. Oddly, BCI also exhibited the lowest total number of individuals with EFNs, despite the wide taxonomic distribution and greater number of species relative to Pasoh and Yasuni. Pasoh, which overall had the smallest phylogenetic distribution and species count of those trees with EFNs, had the greatest number of individuals with nectaries. It is not certain what might cause this trend, though care should be taken labeling this a trend from only three plots. This relationship could be examined in other plots to determine whether a trend truly exists.

In Yasuni, BCI and Pasoh the orders Fabales and Malpighiales are well represented by species with EFNs, with at least 10 species being found in each order with EFNs. Unlike in BCI and Yasuni, the orders Ericales and Malvales were also found to have at least 10 species with EFNs in Malaysia, according to Fiala & Linsenmair (1995). EFNs were found in both of these families in BCI and Yasuni, but not to the extent that they were found in Pasoh. As such, despite an overall smaller distribution of EFNs across orders in Pasoh (27% in Pasoh, as opposed to 33% and 36% in Yasuni and BCI, respectively), more families were well represented by species with EFNs. BCI and Yasuni, then, have a thinner distribution of EFNs across orders. This is generally the case for families as well, as those orders with many EFN bearing species in Pasoh are this way due to particularly well-represented families (Dipterocarpaceae, Ebenaceae, Euphorbiaceae and Fabaceae). This, in large part, reflects the different floristic composition of Paleo vs Neotropical forests (Gentry 1993).

### GEOGRAPHIC DISTRIBUTION

An increase in EFN presence as latitude decreases has been noted previously (Pemberton 1998), but it is also informative to examine how EFN distribution changes across different habitat types at similar latitudes. Yasuni and Pasoh, which are two lowland

tropical rainforests at comparable latitudes, are very similar in their incidence of EFNs (11.2% and 9.7%, respectively) suggesting little difference in distribution between the Neotropics and Paleotropics, as represented by these two sites. The slightly higher incidence in the Neotropics may be attributed to the greater diversity of Fabaceae found there (Gentry 1993).

Within the Neotropics, the Brazilian cerrado has also been surveyed for the presence of EFNs. An incidence of about 17% of woody plants with EFNs was found in the cerrados, which are considerably drier than rain forest (Oliveira & Leitao-Filho 1987). Perhaps the greater presence of EFNs found in the cerrado indicates that ant-plant interactions are stronger in this type of habitat. Further work in understanding the differences in ant diversity and presence between these two habitats may better inform our understanding of this mutualism across geographically similar habitats.

#### ECOLOGICAL SIGNIFICANCE OF EXTRA-FLORAL NECTARIES

Differences found in growth, mortality and abundance rates in those trees with EFNs and those without are surprising, given the large and significant differences in performance I found contingent on the presence of a single character. Nonetheless, greater growth and mortality rates were characteristic of tree species with EFNs across all three sites. This consistency suggests that species with EFNs grow faster and die younger than species without EFNs. Why, then, is a higher mortality rate associated with a defense trait that is assumed to improve plant performance? This general lifestyle is informative in that it may suggest that many of those trees with EFNs are pioneer species. Pioneer species generally exhibit faster growth rates and higher mortality rates compared with more slower growing but persistent shade-tolerant species (Brokaw 1985). Additionally, pioneer species undergo intense competition following the formation and colonization of a gap (Denslow 1980, Denslow et al. 1985), lending increased importance to adaptive strategies such as EFNs. In this sense, pioneer species may exhibit EFNs more commonly than shade-

tolerant species, and explain this observed difference in demographic rates.

Abundances were also significantly different, though those at BCI showed the reverse trend in abundance compared with Pasoh and Yasuni. The higher abundances observed at Yasuni and Pasoh suggest that this defensive strategy has a positive impact on the plant's ability to out-perform species without this adaptation, and also counteracts the suggestion that differences in performance are driven by pioneer species, because these light-demanders tend to be rare (Wright 2002).

#### Conclusions

I found similar phylogenetic distributions of extra-floral nectaries in comprehensive surveys of tree species of an aseasonal lowland rain forest in Ecuador, and then compared to the previously determined distribution of trees with EFNs lowland semi-deciduous moist forest in Panama and lowland rain forest in Malaysia. Additionally, I found evidence of a significant effect of EFN presence on individual performance. Trees with EFNs had higher growth but also higher mortality rates than those without EFNs, consistent across all three sites. These results suggest a significant role for extra-floral nectaries and plant defense mechanisms in general for determining forest structure and composition.

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**Appendix 1: List of taxa from Yasuni not previously recorded with EFN**

Genus	Species	Family	Order
Lauraceae	miniopacangulo	Lauraceae	Lurales
Abarema	laeta	Fabaceae	Fabales
Alchornea	glandulosa	Euphorbiaceae	Malpighiales
Alchornea	schomburkii_cf.	Euphorbiaceae	Malpighiales
Aparisthmium	cordatum	Euphorbiaceae	Malpighiales
Buchenavia	congesta	Combretaceae	Myrtales
Buchenavia	grandis	Combretaceae	Myrtales
Bunchosia	argentea	Malpighiaceae	Malpighiales
Bunchosia	argentea(granpanosa)	Malpighiaceae	Malpighiales
Caryodendron	orinocense	Euphorbiaceae	Malpighiales
Cedrelinga	catenaeformis	Fabaceae	Fabales
Colubrina	arbol	Rhamnaceae	Rosales
Conceveiba	rhytidocarpa	Euphorbiaceae	Malpighiales
Enterolobium	barnebianum	Fabaceae	Fabales
Glycydendron	amazonicum	Euphorbiaceae	Malpighiales
Hirtella	excelsa	Chrysobalanaceae	Malpighiales
Inga	3crasa	Fabaceae	Fabales
Inga	3oscura	Fabaceae	Fabales
Inga	4alitarco	Fabaceae	Fabales
Inga	6cuadra	Fabaceae	Fabales
Inga	acreana	Fabaceae	Fabales
Inga	alata	Fabaceae	Fabales
Inga	alba	Fabaceae	Fabales
Inga	auristellae	Fabaceae	Fabales
Inga	bourgonii	Fabaceae	Fabales
Inga	brachyrhachis	Fabaceae	Fabales
Inga	cayennensis	Fabaceae	Fabales
Inga	chartacea	Fabaceae	Fabales
Inga	ciliata_ssp.subcapita	Fabaceae	Fabales
Inga	cinnamomea	Fabaceae	Fabales
Inga	cordatoalata	Fabaceae	Fabales
Inga	falsacre	Fabaceae	Fabales
Inga	leiocalycina	Fabaceae	Fabales
Inga	microcoma	Fabaceae	Fabales
Inga	multinervis	Fabaceae	Fabales
Inga	poepigiana	Fabaceae	Fabales
Inga	rusbyi	Fabaceae	Fabales
Inga	sarayacuensis	Fabaceae	Fabales
Inga	spectabilis	Fabaceae	Fabales
Inga	stellaeglabra	Fabaceae	Fabales
Inga	stipulacea	Fabaceae	Fabales
Inga	striata	Fabaceae	Fabales

Inga	tenuistipula	Fabaceae	Fabales
Inga	thibaudiana	Fabaceae	Fabales
Inga	thibaudiana_ssp.peltadenia	Fabaceae	Fabales
Inga	tocacheana	Fabaceae	Fabales
Inga	umbratica	Fabaceae	Fabales
Inga	velutina	Fabaceae	Fabales
Inga	vismiifolia	Fabaceae	Fabales
Inga	yacoana	Fabaceae	Fabales
Jacaratia	digitata	Caricaceae	Brassicales
Licania	caudata	Chrysobalanaceae	Malpighiales
Licania	longistyla	Chrysobalanaceae	Malpighiales
Licania	nervifina	Chrysobalanaceae	Malpighiales
Marmaroxylon	basijugum	Fabaceae	Fabales
Pausandra	trianae	Euphorbiaceae	Malpighiales
Pourouma	minor	Urticaceae	Rosales
Prunus	debilis	Rosaceae	Rosales
Qualea	paraensis	Vochysiaceae	Myrtales
Sapium	largident	Euphorbiaceae	Malpighiales
Terminalia	ob	Combretaceae	Myrtales
Tetrorchidium	macrophyllum	Euphorbiaceae	Malpighiales
Zygia	heteroneura	Fabaceae	Fabales
Zygia	mediana	Fabaceae	Fabales

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## Appendix 2: Species list and EFN incidence for each plot

Yasuni				BCI				Pasoh			
Genus	species	EFN	Source	Genus	species	EFN	Source	Genus	species	EFN	
(combretaceae)	ovni			Abarema	macradenia	n		Acronychia	porteri	n	
(fabaceae)	20-25oblong			Acacia	melanoceras	y	keeler	Actinodaphne	macrophylla	n	
(fabaceae)	brillafuzzy	n	Field	Acalypha	diversifolia	n	study	Actinodaphne	pruinosa	n	
(fabaceae)	diploglauco			Acalypha	macrostachya	n		Actinodaphne	sesquipedalis	n	
(hippocrateaceae)	atenumembra	n	Field	Adelia	triloba	n		Adenanthera	bicolor	n	
(hippocrateaceae)	cheiloancho			Aegiphila	panamensis	y	keeler	Aglaia	aspera	n	
(hippocrateaceae)	ovalo	n	Field	Alchornea	costaricensis	y	study	Aglaia	cordata	n	
(lauraceae)	bals	n	Field	Alchornea	latifolia	y	study	Aglaia	exstipulata	n	
(lauraceae)	chiquita	n	Field	Alibertia	edulis	n	study	Aglaia	forbesii	n	
(lauraceae)	chorong			Allophylus	psilospermus	n	study	Aglaia	ganggo	n	
(lauraceae)	furrycanela	n	Field	Alseis	blackiana	n	study	Aglaia	glabriflora	n	
(lauraceae)	furrymen			Amaloua	corymbosa	n		Aglaia	grandis	n	
(lauraceae)	granbrillacuspi	n	Field	Anacardium	excelsum	n	study	Aglaia	melosmoides	n	
(lauraceae)	granverde	n	Field	Anaxagorea	panamensis	n		Aglaia	odoratissima	n	
(lauraceae)	impresofalso	n	Field	Andira	inermis	n	study	Aglaia	oligophylla	n	
(lauraceae)	largoarco			Annona	acuminata	n	study	Aglaia	oligophylla	n	
(lauraceae)	licar	n	Field	Annona	hayesii	n	study	Aglaia	palembanica	n	
(lauraceae)	lisagroovy	n	Field	Annona	spraguei	n	study	Aglaia	ridleyi	n	
(lauraceae)	medpubinervi	n	Field	Apeiba	hybrid	n		Aglaia	rubescens	n	
(lauraceae)	miniopacangulo	y	Field	Apeiba	membranacea	n	study	Aglaia	rufa	n	
(lauraceae)	pelonegro			Apeiba	tibourbou	n	study	Aglaia	species_1	n	
(lauraceae)	subopo	n	Field	Aphelandra	sinclairiana	y	keeler	Aglaia	species_2	n	
(lauraceae)	tallorojo			Ardisia	bartlettii	n	study	Aglaia	species_3	n	
(malpighiaceae)	bulondu			Ardisia	fendleri	n		Aglaia	species_4	n	
(malpighiaceae)	granoscuro			Ardisia	guianensis	n		Aglaia	species_5	n	
(malpighiaceae)	myrtosco			Aspidosperma	spruceanum	n	study	Aglaia	species_7	n	
(melastomataceae)	dienteblanca			Astrocaryum	standleyanum	n		Aglaia	tenuicaulis	n	
(meliaceae)	alarganervi			Astronium	graveolens	n		Aidia	wallichiana	n	
(moraceae)	pequecillo	n	Field	Attalea	butyracea	n		Alangium	ebenaceum	n	
(myrtaceae)	cortezapeq	n	Field	Bactris	barronis	n		Alangium	griffithii	n	
(myrtaceae)	falsasalas			Bactris	coloriata	n		Alangium	nobile	n	
(myrtaceae)	membrapelos			Bactris	coloradonis	n		Alangium	ridleyi	n	
(myrtaceae)	platatomen			Bactris	mujor	n		Albizia	pedicellata	y	
(myrtaceae)	prominsuave	n	Field	Banara	guianensis	y	keeler	Alchornea	rugosa	y	
(myrtaceae)	smedcheilo			Beilschmiedia	pendula	n	study	Allophylus	cobbe	n	
(myrtaceae)	smedcomun	n	Seed	Bertiera	guianensis	n		Alphonsea	elliptica	n	
(myrtaceae)	smedhipocrat	n	Field	Borojoa	panamensis	n		Alphonsea	maingayi	n	
(myrtaceae)	smedpubicost	n	Field	Brosimum	alicastrum	n	study	Alseodaphne	nigrescens	n	
(picramniaceae)	sp.nov.	n	Field	Brosimum	guianense	n		Alseodaphne	peduncularis	n	
(rubiaceae)	amarillapub			Calophyllum	longifolium	n	study	Alseodaphne	perakensis	n	
(rubiaceae)	ampliouvada	n	Field	Capparis	frondosa	n	study	Alseodaphne	species_1	n	
(rubiaceae)	neoide			Casearia	aculeata	n		Alseodaphne	species_2	n	
(rubiaceae)	renato	n	Field	Casearia	arbores	n	study	Alstonia	angustiloba	n	
(rubiaceae)	retidomatia			Casearia	commersoniana	n		Anaccolosa	heplatandra	n	
(rubiaceae)	viveca			Casearia	guianensis	n		Anaxagorea	javanica	n	
(rubiaceae)	wilson	n	Field	Casearia	sylvestris	n		Anisophyllea	corneri	n	
(sapindaceae)	amarillasper			Cassipourea	elliptica	n	study	Anisoptera	costata	n	
(sapindaceae)	rua	n	Field	Cavanillesia	platanifolia	n	study	Anisoptera	laevis	n	
(solanaceae)	plata			Cecropia	insignis	n		Anisoptera	megistocarpa	n	
Abarema	jupunba	y	Field/Keeler	Cecropia	longipes	n		Antidesma	coriaceum	n	
Abarema	laeta	y	Field	Cecropia	obtusifolia	n		Antidesma	cuspidata	n	
Abuta	grandifolia	n	Field	Cedrela	odorata	y	study	Antidesma	velutinosum	n	
Acalypha	cuneata	n	Field	Ceiba	pentandra	y	study	Antidesma	polystachya	n	
Acalypha	pub			Celtis	schippii	n	study	Aphanamixis	sumatrana	n	
Acalypha	sharpdent			Cespedesia	spatulata	n		Aphanamixis	sumatrana	n	
Acalypha	sharpub			Cestrum	megalophyllum	n		Aporusa	aura	y	
Acanthosyris	annonagustata	n	Field	Chamaedorea	tepejilote	n		Aporusa	bracteosa	n	
Acidoton	nicaraguensis	n	Field	Chamguava	schippii	n		Aporusa	confusa	n	
Aegiphila	cordifolia_var.villos	n	Field	Chimarrhis	parviflora	n		Aporusa	falcifera	n	
Aegiphila	elegans			Chrysochlamys	eclipses	n		Aporusa	globifera	n	
Aegiphila	haughtii	n	Field	Chrysochlamys	argenteum	n		Aporusa	lunata	n	
Aegiphila	integrifolia			Chrysochlamys	cainito	n	study	Aporusa	microstachya	n	
Aegiphila	membosc	n	Field	Cinnamomum	triplinerve	n		Aporusa	miqueliana	n	
Agonandra	peruviana	n	Field	Clidemia	dentata	n		Aporusa	nervosa	n	
Agonandra	silvatica	n	Field	Clidemia	octona	n		Aporusa	nigricans	n	
Aiouea	grandifolia_aff.			Clidemia	septuflinervia	n		Aporusa	nigropunctata	n	
Aiouea	sp.nov.	n	Field	Coccoloba	coronata	n	study	Aporusa	prainiana	n	
Aiphanes	ulei	n		Coccoloba	manzinellensis	n	study	Aporusa	symplocoides	n	
Albizia	niopoides			Cojoba	rufescens	n		Aquilaria	malaccensis	n	
Alchornea	glandulosa	y	Field	Colubrina	glandulosa	n		Aralidium	pinnatifidum	n	
Alchornea	schomburkii_cf.	y	Field	Conostegia	bracteata	n	study	Archidendron	bulbanium	y	
Alchornea	triplinervia	y	Field/Keeler	Conostegia	cinnamomea	n		Archidendron	clypearia	y	
Alchorneopsis	floribunda	y	Keeler	Cordia	alliodora	n		Archidendron	contortum	y	
Alibertia	isermii	n	Field	Cordia	bicolor	n	study	Archidendron	globosum	y	
Alibertia	jorge			Cordia	lasioalyx	n	study	Archidendron	microcarpum	y	
Alibertia	lance	n	Field	Coussarea	curvigemma	n	study	Ardisia	colorata	n	
Alibertia	pelitos	n	Field	Coutarea	hexandra	n		Ardisia	crassa	n	
Alibertia	pilosa			Croton	billbergianus	y	study	Ardisia	kunstleri	n	
Allophylus	amazonicus	n	Field	Cupania	cinerea	n		Ardisia	lanceolata	n	
Allophylus	divaricatus	n	Field	Cupania	latifolia	n		Ardisia	pachysandra	n	
Allophylus	glabra	n	Field	Cupania	rufescens	n	study	Ardisia	ridleyi	n	
Allophylus	pilosus	n	Field	Cupania	seemannii	n		Ardisia	species_2	n	
Allophylus	puctatus			Cyathia	petiolata	n		Aromadendron	elegans	n	
Alseis	lugonis			Dendropanax	arbores	n	study	Arthrophyllum	diversifolium	n	

Alseis	lugonis_cf.	n	Field	Desmopsis	panamensis	n	study	Artocarpus	anisophyllus	n
Alsophila	cuspidata			Diospyros	artanthifolia	y	study	Artocarpus	dadak	n
Ampelocera	edentula	n	Field	Dipteryx	oleifera	n		Artocarpus	fulvicortex	n
Ampelocera	longissima	n	Field	Drypetes	standleyi	n	study	Artocarpus	integer	n
Amyris	macrocarpa	n	Field	Elaeis	oleifera	n		Artocarpus	kemando	n
Anaxagorea	brevipes			Enterlobium	schomburgkii	y	keeler	Artocarpus	lowii	n
Andira	inermis	n	Field	Erythrina	costaricensis	n	study	Artocarpus	maingayi	n
Andira	macrothyrsa			Erythroxylum	macrophyllum	n		Artocarpus	nitidus_var.griffithii	n
Andira	multistipula			Erythroxylum	panamense	n	study	Artocarpus	rigida	n
Andira	sp.nov.	n	Field	Eugenia	coloradoensis	n	study	Artocarpus	scortechinii	n
Aniba	angulopepper	n	Field	Eugenia	galalensis	n		Atuna	elata	n
Aniba	guianensis	n	Field	Eugenia	nesiotica	n		Atuna	excelsa	n
Aniba	hostmanniana	n	Field	Eugenia	oerstediana	n	study	Austrobuscus	nitidus	n
Aniba	riparia	n	Field	Faramea	occidentalis	n	study	Baccaurea	griffithii	n
Aniba	taubertiana			Ficus	bullenei	n		Baccaurea	kunstleri	n
Annona	ambotay_aff.	n	Field	Ficus	citrifolia	n		Baccaurea	maingayi	n
Annona	duckei	n	Field	Ficus	colubrinae	n		Baccaurea	minor	n
Annona	mosaic			Ficus	costaricana	n		Baccaurea	parviflora	n
Anthodiscus	amazonicus	n	Field	Ficus	insipida	n	study	Baccaurea	pyriformis	n
Aparisthium	cordatum	y	Field	Ficus	maxima	n		Baccaurea	racemosa	n
Apeiba	membranacea	n	Field	Ficus	obtusifolia	n		Baccaurea	ramiflora	y
Apeiba	tiboubou			Ficus	perthusa	n		Baccaurea	reticulata	n
Aphelandra	crispata	n	Field	Ficus	popenoei	n		Baccaurea	species_1	n
Aptandra	tubicina			Ficus	tonduzii	n		Baccaurea	sumatrana	y
Apuleia	leiocarpa	n	Field	Ficus	trigonata	n		Barringtonia	fusiformis	n
Ardisia	densapunta	n	Field	Ficus	yoponensis	n		Barringtonia	macrostachya	n
Ardisia	semibulada	n	Field	Garcinia	intermedia	n		Barringtonia	pendula	n
Aspidosperma	blancipreso	n	Field	Garcinia	madruna	n		Beilschmiedia	calophylla	n
Aspidosperma	megalocarpum	n	Field	Genipa	americana	n		Beilschmiedia	kunstleri	n
Aspidosperma	rigidum			Geonoma	interrupta	n		Beilschmiedia	lucidula	n
Aspidosperma	spruceanum			Guapira	standleyana	n		Beilschmiedia	madang	n
Astrocaryum	chambira	n		Guarea	fuzzy	n		Beilschmiedia	palembanica	n
Astrocaryum	murumuru	n		Guarea	grandifolia	n		Beilschmiedia	species_1	n
Astronium	graveolens	n	Field	Guarea	guidonia	n		Beilschmiedia	species_2	n
Attalea	maripa	n		Guatteria	dumetorum	n	study	Bhesa	paniculata	n
Bactris	corossilla	n		Guazuma	ulmifolia	n	study	Blumeodendron	calophyllum	y
Bactris	marajas_sp.juruensis	n		Guettarda	foliacea	n		Blumeodendron	subrotundifolium	n
Bactris	marajas_sp.maraja	n		Gustavia	superba	y	study	Blumeodendron	tokbrai	n
Bactris	simplicifrons	n		Hamelia	axillaris	n		Bouea	macrophylla	n
Banara	nitida			Hamelia	patens	y	keeler	Bouea	oppositifolia	n
Batocarpus	amazonica	n	Field	Hampea	appendiculata	y	study	Brackenridgea	hookeri	n
Batocarpus	costaricensis	n	Field	Hasselia	floribunda	y	study	Bridelia	subulata	n
Batocarpus	orinocensis	n	Field	Heisteria	acuminata	n		Buchanania	sessilifolia	n
Bauhinia	brachycalyx	n	Field	Heisteria	concinna	n	study	Callicarpa	maingayi	n
Bauhinia	lisagroovy			Hieraria	purpurea	n	study	Calophyllum	depressinervosum	n
Beilschmiedia	pendula			Hieronyma	alchorneoides	n		Calophyllum	dioscurii	n
Bellucia	pentamera	n	Field	Hirtella	americana	y	study	Calophyllum	macrocarpum	n
Bertiera	guianensis	n	Field	Hirtella	triandra	y	study	Calophyllum	rupicola	n
Besleria	quadrangulata	n	Field	Hura	crepitans	y	study	Calophyllum	soulatieri	n
Besleria	stricta	n	Field	Hura	prunifolius	n	study	Calophyllum	tetramerum	n
Blakea	puberula			Hybanthus	acuminata	y	keeler	Calophyllum	wallichianum	n
Blakea	rosea	n	Field	Inga	cocleensis	y	keeler	Calophyllum	wallichianum_var.incrassatum	n
Borojoa	axiglab	n	Field	Inga	goldmanii	y	keeler	Canarium	auriculata	n
Borojoa	claviflora	n	Field	Inga	laurina	y	keeler	Canarium	apertum	n
Brosimum	acutifolium	n	Field	Inga	marginata	y	study	Canarium	littorale_var.littorale	n
Brosimum	guianense	n	Field	Inga	micuna	y	keeler	Canarium	littorale_var.purpurescens	n
Brosimum	lactescens	n	Field	Inga	nobilis	y	keeler	Canarium	littorale_var.rufum	n
Brosimum	potabile			Inga	oerstediana	y	keeler	Canarium	littorale_var.tomentosum	n
Brosimum	utile	n	Field	Inga	pezizifera	y	keeler	Canarium	megalanthum	n
Brownea	grandiceps	y	Keeler	Inga	punctata	y	keeler	Canarium	pateninervium	n
Brownea	rosada			Inga	ruiziana	y	keeler	Canarium	pilosum	n
Brownea	sp.nov.	n	Field	Inga	sapindoides	y	study	Carallia	brachiata	n
Brunfelsia	chiricaspi			Inga	spectabilis	y	study	Caryota	mitis	n
Buchenavia	congesta	y	Field	Inga	thibaudiana	y	keeler	Casearia	clarkei	n
Buchenavia	grandis	y	Field	Inga	umbellifera	y	keeler	Casearia	species_2	n
Buchenavia	macrophylla			Jacaranda	copaia	y	study	Cassia	nodosa	n
Buchenavia	parvifolia	n	Field	Koanophyllon	wetmorei	n		Castanopsis	curtisii	n
Buchenavia	punctata			Lacistema	aggregatum	n	study	Castanopsis	inermis	n
Bunchosia	argentea	y	Field	Lacmellea	panamensis	n	study	Castanopsis	megacarpa	n
Bunchosia	argentea(granpanosa)	y	Field	Laetia	procera	n		Castanopsis	nephelioides	n
Bunchosia	blanquita			Laetia	thamnia	n	study	Castanopsis	schefferiana	n
Bunchosia	myrt	n	Field	Lafoesia	punicifolia	n		Celtis	rigescens	n
Byrsonima	juanito			Leandra	dichotoma	n		Champereia	manillana	n
Byrsonima	putumayensis	n	Field	Licania	hypoleuca	n		Chasalia	longifolia	n
Cabralea	canjerana	n	Field	Licania	platypus	y	study	Chasalia	curviflora	n
Calliandra	carbonaria	n	Field	Lindackeria	laurina	n	study	Cheilosa	malayana	n
Calophyllum	brasiliense	n	Field	Lonchocarpus	heptaphyllum	n		Chionanthus	calophylla	n
Calycophyllum	megistocatum	n	Field	Lozania	pittieri	n		Chionanthus	macrocarpa	n
Calyptanthus	bipennis	n	Field	Luehea	seemannii	n	study	Chionanthus	ramiflorus	n
Calyptanthus	gigante			Lycianthes	maxonii	n		Chionanthus	species_1	n
Calyptanthus	grancauli			Maclura	tinctoria	n		Chisocheton	ceramicus	n
Calyptanthus	graneschweil			Macronemum	roseum	n	study	Chisocheton	erythrocarpus	n
Calyptanthus	loraine	n	Field	Malpighia	romerona	y	keeler	Chisocheton	glomeratus	n
Calyptanthus	pelopalida	n	Field	Maquira	guianensis	n	study	Chisocheton	patens	n
Calyptanthus	plicata	n	Field	Margaritaria	nobilis	n	study	Chisocheton	sarawakanus	n
Calyptanthus	pseudospeciosa			Marla	laxiflora	n		Chisocheton	tomentosum	n
Calyptanthus	punctote	n	Field	Maytenus	schippii	n	study	Chrysophyllum	lanceolatum	n
Calyptanthus	punteada			Miconia	affinis	n		Cinnamomum	iners	n
Calyptanthus	ruiziana	n	Field	Miconia	argentea	n	study	Cinnamomum	javanicum	n
Calyptanthus	sedosa	n	Field	Miconia	dorsiloba	n		Cinnamomum	mollissimum	n
Calyptanthus	speciosa	n	Field	Miconia	elata	n		Cinnamomum	porrectum	n

Campomanesia	lineatifolia	n	Field	Miconia	hondurensis	n		Cinnamomum	sintoc	n
Capirona	decorticans	n	Field	Miconia	impetiolaris	n	study	Cleistanthus	maingayi	n
Capparis	detonsa	n	Field	Miconia	nervosa	n		Cleistanthus	malaccensis	n
Capparis	osmantha	n	Field	Miconia	prasina	n	study	Cleistanthus	myrianthus	n
Capparis	sola	n	Field	Mosannonna	garwoodii	n		Cleistanthus	sumatranus	n
Caraipa	myricoides_aff.	n	Field	Mouriri	myrtilloides	n	study	Clerodendrum	deflexum	n
Carica	brillante	n		Myrcia	gatunensis	n	study	Clerodendrum	laevifolium	n
Carica	microcarpa	n	Field	Myrospermum	frutescens	n		Clerodendrum	nutans	n
Carpotroche	longifolia	n	Field	Nectandra	cissiflora	n		Coleostegia	griffithii	n
Caryocar	glabrum	n	Field	Nectandra	fuzzy	n		Crateva	religiosa	n
Caryodaphnopsis	chica	n	Field	Nectandra	lineata	n		Cratoxylum	arborescens	n
Caryodaphnopsis	fosteri	n		Nectandra	purpurea	n	study	Cratoxylum	cochinchinense	n
Caryodaphnopsis	tomentosa	n	Field	Nectandra	sp_4_(tiny_leaf)	n		Cratoxylum	formosum	n
Caryodendron	orinocense	y	Field	Neea	amplifolia	n	study	Cratoxylum	maingayi	n
Casearia	aculeata	n	Field	Ochroma	pyramidale	y	study	Croton	argyratus	y
Casearia	arborea	n	Field	Ocotea	cernua	n		Croton	laevifolius	y
Casearia	argut	n		Ocotea	oblonga	n		Crudia	curtisii	n
Casearia	bracteifera	n	Field	Ocotea	puberula	n		Crypteronia	griffithii	n
Casearia	javitensis	n	Field	Ocotea	whitei	n	study	Cryptocarya	ferrea	n
Casearia	nigricans	n	Field	Oenocarpus	mapora	n		Cryptocarya	griffithiana	n
Casearia	pitumba	n	Field	Ormosia	amazonica	n		Cryptocarya	infectoria	n
Casearia	prunicerob	n	Field	Ormosia	coccinea	n		Cryptocarya	kurzii	n
Casearia	prunifolia	n	Field	Ormosia	macrocalyx	n		Cryptocarya	rugulosa	n
Casearia	sp.nov.	n		Ouratea	lucens	y	study	Cryptocarya	scortechinii	n
Casearia	sylvep	n	Field	Pachira	quinata	n		Ctenolophon	parvifolius	n
Casearia	sylvestris	n	Field	Pachira	sessilis	n		Cyathocalyx	pruniferus	n
Casearia	ulmifolia	n	Field	Palicourea	guianensis	n	study	Cyathocalyx	ramuliferus	n
Cassia	cowanii	n	Field	Pavonia	dasyptala	n		Cynometra	malaccensis	n
Castilla	ulei	n	Field	Pentagonia	macrophylla	n	study	Dacryodes	costata	n
Cathedra	acuminata	n	Field	Perbeba	xanthochyma	n		Dacryodes	incurvata	n
Cecropia	acer	n		Picramnia	latifolia	y	keeler	Dacryodes	laxa	n
Cecropia	engleriana	n	Field	Piper	aequale	n	study	Dacryodes	longifolia	n
Cecropia	ficifolia	n	Field	Piper	arboresum	n		Dacryodes	nervosa	n
Cecropia	herthae	n		Piper	colonense	n		Dacryodes	puberula	n
Cecropia	marginalis	n		Piper	cordulatum	n	study	Dacryodes	rostrata	n
Cecropia	membranacea	n		Piper	imperialis	n		Dacryodes	rubiginosa	n
Cecropia	putumayonis	n		Piper	perlasense	n		Dacryodes	rugosa	n
Cecropia	sciadophylla	n	Field	Piper	reticulatum	n		Decaspermum	fruticosum	n
Cedrela	fissilis	y	Field	Piper	schiedeanum	n		Dehaasia	cuneata	n
Cedrela	odorata	y	Keeler	Platymiscium	pinnatum	n		Dehaasia	incrassata	n
Cedrelinga	catenaeformis	y	Field	Platypodium	elegans	n	study	Dehaasia	longipetiolata	n
Celba	pentandra	y	Keeler	Posoqueria	latifolia	n	study	Dehaasia	polyneura	n
Celtis	schippii	n	Seed/Field	Poulsenia	armata	n	study	Deplanchea	bancana	y
Centropogon	lorentensis	n		Pourouma	bicolor	n	study	Dialium	maingayi	n
Cestrum	megalophyllum	n	Field	Pouteria	fossicola	n		Dialium	platysepalum	n
Cestrum	silvaticum	n	Field	Pouteria	reticulata	n	study	Dialium	procerrum	n
Cestrum	tomentosum	n		Pouteria	stipitata	n		Dialium	wallichii	n
Chamaedorea	pauciflora	n		Prioria	copaifera	n	study	Dichapetalum	gelonioides	n
Chamaedorea	pinnatifrons	n		Protium	confusum	n		Dillenia	grandifolia	n
Cheiloclinium	cognatum	n	Seed/Field	Protium	costaricense	n		Dillenia	reticulata	n
Chimarrhis	glabriflora	n		Protium	panamense	n	study	Dillenia	sumatrana	n
Chimarrhis	jacob	n	Field	Protium	tenuifolium	n	study	Diospyros	adenophora	y
Chionanthus	opipulv	n	Field	Pseudobombax	septenatum	y	study	Diospyros	andamanica	y
Chlorocardium	2subopo	n		Psidium	friedrichsthalianum	n		Diospyros	apiculata	y
Chomelia	comun	n	Field	Psychotria	acuminata	n		Diospyros	areolata	n
Chrysochlamys	fragil	n		Psychotria	brachiaata	n		Diospyros	argentea	y
Chrysochlamys	hugo	n	Field	Psychotria	chagrensis	n		Diospyros	buxifolia	y
Chrysochlamys	membranacea_cf.	n	Field	Psychotria	deflexa	n	study	Diospyros	cauliflora	n
Chrysochlamys	tenuifolia	n		Psychotria	graciliflora	n		Diospyros	demona	n
Chrysophyllum	amazonicum	n	Field	Psychotria	grandis	n		Diospyros	diepenhorstii	y
Chrysophyllum	argenteum_ssp.argente	n	Field	Psychotria	hoffmannseggiana	n		Diospyros	lancifolia	n
Chrysophyllum	baeo	n		Psychotria	horizontalis	n	study	Diospyros	latisepala	n
Chrysophyllum	cuneifolium	n	Field	Psychotria	limonensis	n		Diospyros	maingayi	n
Chrysophyllum	manaosense	n	Field	Psychotria	marginata	n		Diospyros	nutans	y
Chrysophyllum	minor	n		Psychotria	pittieri	n		Diospyros	penangiana	n
Chrysophyllum	ovale	n	Field	Psychotria	psychotriifolia	n		Diospyros	pendula	y
Chrysophyllum	tremi	n	Field	Psychotria	racemosa	n		Diospyros	pyrrhocarpa	y
Chrysophyllum	venezuelanense	n		Psychotria	tenuifolia	n		Diospyros	rufa	n
Cinnamomum	napoense	n	Field	Pterocarpus	belizensis	n		Diospyros	scortechinii	y
Cinnamomum	oppreic	n	Field	Pterocarpus	rohrii	n	study	Diospyros	singaporensis	n
Cinnamomum	peloipreso	n		Quararibea	asterolepis	n	study	Diospyros	species_1	n
Cinnamomum	triplinerve	n	Field	Quassia	amara	y	study	Diospyros	sumatrana	n
Citharexylum	poepigii	n		Randia	armata	n		Diospyros	venosa	n
Clarisia	biflora	n	Field	Rauwolfia	littoralis	n		Diospyros	wallichii	y
Clarisia	racemosa	n	Field	Rinorea	sylvatica	n	study	Diplospora	lasiantha	n
Clavija	delgada	n		Rosenbergiodendron	formosum	n		Diplospora	malaccense	n
Clavija	procera	n	Field	Sapium	broadleaf	n		Dipterocarpus	cornutus	n
Clavija	weberbaueri	n	Field	Sapium	glandulosum	n		Dipterocarpus	costulatus	n
Clidemia	dimorpha	n	Field	Scheffera	morotoni	n		Dipterocarpus	crinitus	n
Coccoloba	cordi	n	Field	Schizolobium	parahyba	n		Dipterocarpus	kunstleri	n
Coccoloba	densifrons	n	Field	Sema	dariensis	y	keeler	Dipterocarpus	sublammellatus	n
Coccoloba	gigante	n	Field	Simarouba	amara	y	study	Dracaena	brachystachys	n
Coccoloba	jill	n		Siparuna	guianensis	n		Dracaena	elliptica	n
Coccoloba	lancifuzz	n	Field	Siparuna	pauciflora	n	study	Dracaena	tetrastachys	n
Coccoloba	mollis	n		Sloanea	terniflora	n		Dracaenamelon	dao	n
Coccoloba	ninfi	n	Field	Socratea	exorrhiza	n		Drimycarpus	luridus	n
Coccoloba	papel	n	Field	Solanum	arboresum	n		Drypetes	kikir	n
Coccoloba	puntoblanco	n	Field	Solanum	asperum	n		Drypetes	laevis	n
Coccoloba	puntonegro	n	Field	Solanum	circinatum	n		Drypetes	longifolia	n
Coccoloba	subscab	n		Solanum	hayesii	n	study	Drypetes	microphylla	n
Colubrina	arbol	y	Field	Solanum	steyermarkii	n		Drypetes	pendula	n

Compsoeura	capitellata	n	Field	Sorocea	affinis	n	study	Drypetes	polyneura	n
Compsoeura	ulei	n	Field	Spahea	membranacea	y	keeler	Drypetes	rhakodiskos	n
Conceveiba	rhytidocarpa	y	Field	Spondias	mombin	n	study	Drypetes	species_1	n
Cordia	buladent			Spondias	radlkoferi	n	study	Durio	griffithii	n
Cordia	chamissoniana	n	Field	Stemmadenia	grandiflora	n		Durio	oxleyanus	n
Cordia	collococca	n	Field	Sterculia	apetala	n	study	Durio	singaporensis	n
Cordia	hebelada	n	Field	Stylogyne	turbacensis	n		Dyera	costulata	n
Cordia	joli			Swartzia	simplex_var.grandiflora	n	study	Dysoxylum	acutangulum	n
Cordia	kingstonina	n	Field	Swartzia	simplex_var.ochracea	n	study	Dysoxylum	alliaceum	n
Cordia	nodosa	n	Field	Symphonia	globulifera	n	study	Dysoxylum	carolinae	n
Cordia	ucayalensis	n	Field	Tabebuia	guayacan	n		Dysoxylum	cauliflorum	n
Costus	chica			Tabebuia	rosea	y	study	Dysoxylum	costulatum	n
Costus	gigante			Tabernaemontana	arborea	n	study	Dysoxylum	flavescens	n
Costus	glabra			Tachigali	versicolor	n	study	Dysoxylum	species_1	n
Costus	hairy			Talisia	nervosa	n	study	Ehretia	timorensis	n
Costus	mediana			Talisia	princeps	n	study	Elaeocarpus	ferrugineus	n
Costus	pablo			Terminalia	amazonia	y	study	Elaeocarpus	griffithii	n
Couepia	obovata	n	Field	Terminalia	oblonga	n		Elaeocarpus	nitidus	n
Couepia	parillo	n	Field	Terstroemia	tepezapote	n		Elaeocarpus	palebancicus	n
Couratari	guianensis	n	Field	Tetragastris	panamensis	n	study	Elaeocarpus	petiolatus	n
Couroupita	guianensis	n	Field	Tetrathylacium	johansenii	n		Elaeocarpus	rugosus	n
Coussapoa	orthoneura	n	Field	Theobroma	cacao	n		Elaeocarpus	stipularis	n
Coussarea	brevi	n	Field	Thevetia	ahouai	n	study	Elaterospermum	tapos	y
Coussarea	cephaloide	n	Field	Tocoyena	pittieri	n		Endiandra	kingiana	n
Coussarea	dulcifolia	n	Field	Trattinnickia	aspera	n	study	Endiandra	maingayi	n
Coussarea	klugii	n	Field	Trema	micrantha	n	study	Endocodia	canarioides	n
Coussarea	multiflora			Trichanthera	gigantea	n		Endospermum	malacense	y
Crematosperma	cauliflorum	n	Field	Trichilia	pallida	n		Engelhardtia	serrata	n
Crematosperma	gracilipes	n	Field	Trichilia	tuberculata	n		Enicosanthum	fuscum	n
Crepidosperrum	goudotianum	n	Field	Trichospermum	galeottii	n	study	Epiprinus	malayanus	y
Crepidosperrum	rhoifolium	n	Field	Triplaris	cumingiana	n		Erycibe	albida	n
Cryptocarya	aschersoniana_cf.	n	Field	Trophis	caucana	n		Erythroxylum	cuneatum	n
Cuatresia	glabra	n	Field	Trophis	racemosa	n		Eugenia	castanea	n
Cupania	cinerea	n	Field	Turpinia	occidentalis	n		Eugenia	ceraina	n
Cupania	livida	n	Seed/Field	Unonopsis	pittieri	n		Eugenia	cerasiformis	n
Cupania	verde			Urera	baccifera	n	study	Eugenia	chlorantha	n
Cyathea	lasiosora	n	Field	Verbesina	gigantea	n		Eugenia	claviflora	n
Cyathea	pungens	n	Field	Viola	multiflora	n		Eugenia	cumingiana	n
Cybianthus	perseon	n	Field	Viola	sebifera	n	study	Eugenia	densiflora	n
Cymbopetalum	coriaceum	n	Field	Viola	surinamensis	n	study	Eugenia	duthieana	n
Cyptomandra	glabra	n	Field	Vismia	baccifera	n		Eugenia	dyeriana	n
Cyptomandra	membra			Vismia	billbergiana	n		Eugenia	fastigiata	n
Cyptomandra	pilosa			Vismia	macrophylla	n		Eugenia	filiformis	n
Dacryodes		n	Field	Vochysia	ferruginea	n	study	Eugenia	foscullifera	n
Dacryodes	peruviana	n	Field	Xylopia	macrantha	n	study	Eugenia	glauca_var.pseudoglauca	n
Dalbergia	nigrescens_cf.	n	Field	Xylosma	chlorantha	n		Eugenia	griffithii	n
Dendrobanxia	boliviana	n	Field	Xylosma	oligandra	n		Eugenia	inophylla	n
Dendropanax	arborescens	n	Field	Zanthoxylum	acuminatum	n		Eugenia	inophylla_var.barnardi	n
Dendropanax	caucanus_cf.	n	Field	Zanthoxylum	ekmanii	n		Eugenia	koordersiana	n
Dendropanax	caucanus_cf.(grande)	n	Field	Zanthoxylum	panamense	y	study	Eugenia	leptospermum	n
Dendropanax	querecti	n	Field	Zanthoxylum	setulosum	y	study	Eugenia	napiformis	n
Dialium	guianense	n	Field	Zuelania	guidonia	n	study	Eugenia	nigricans	n
Dilkea	parviflora	n	Field					Eugenia	oblongifolia	n
Dilkea	pasillo							Eugenia	pachyphylla	n
Diospyros	artanthifolia	y	Keeler					Eugenia	polita	n
Diospyros	ekodul							Eugenia	polyantha	n
Diospyros	pseudoxypolia	n	Field					Eugenia	prainiana	n
Diospyros	subrotata	n	Field					Eugenia	pseudocrenulata	n
Diploon	cuspidatum							Eugenia	pseudosubtilis	n
Diploptropis	pterochic	n	Field					Eugenia	pustulata	n
Diploptropis	purpurea_cf.	n	Field					Eugenia	ridleyi	n
Discophora	guianensis	n	Field					Eugenia	rugosa	n
Dracontium	longipes							Eugenia	scortechinii	n
Drypetes	amazonica	n	Field					Eugenia	species_10	n
Drypetes	papilosa							Eugenia	species_16	n
Drypetes	variabilis	n	Field					Eugenia	species_4	n
Duguetia	cortant	n	Field					Eugenia	species_8	n
Duguetia	hadrantha	n	Field					Eugenia	species_a	n
Duguetia	quitarensis	n	Field					Eugenia	species_b	n
Duguetia	spixiana	n	Field					Eugenia	species_d	n
Duguetia	surinamensis							Eugenia	spicata	n
Dulacia	candida	n	Field					Eugenia	subdecussata	n
Duroia	eriopila	n	Field					Eugenia	syzygioides	n
Duroia	hirsuta	n	Field					Eugenia	tumida	n
Dussia	delgada	n	Field					Eugenia	valdevenosa	n
Dussia	pelosblancos							Eugenia	variolosa	n
Dussia	tessmannii							Eugenia	virens	n
Ecclinusa	angostaestipul	n	Field					Euodia	glabra	n
Ecclinusa	guianensis	n	Field					Euodia	roxburghiana	n
Elaeoluma	glabrescens							Eutonumus	javanicus	n
Endlicheria	bracteata	n	Field					Eurycoma	longifolia	n
Endlicheria	burbuas	n	Field					Fagraea	racemosa	n
Endlicheria	canescens							Fahrenheitia	pendula	y
Endlicheria	falsadiso	n	Field					Ficus	chartacea	n
Endlicheria	formosa	n	Field					Ficus	fitulosa	n
Endlicheria	formosa	n	Field					Ficus	fulva	n
Endlicheria	krukovii							Ficus	glandulifera	n
Endlicheria	metalica	n	Field					Ficus	grossularioides	n
Endlicheria	sericea							Ficus	lamponga	n
Endlicheria	sericea_aff.	n	Field					Ficus	obscura	y
								Ficus	schwarzii	n

Endlicheria	sp.nov.	n	Field	Ficus	scortechinii	n
Endlicheria	taubertiana			Ficus	sinuata	n
Endlicheria	tessmannii	n	Field	Ficus	variegata	n
Endlicheria	tshudyana	n	Seed/Field	Ficus	vasculosa	n
Enterolobium	barnebianum	y	Field	Flacourtia	rukam	n
Eriotheca	globosa			Gaerthera	oblanceolata	n
Erisma	uncinatum			Galearia	fulva	n
Erythrina	amazonica	n	Field	Galearia	maingayi	n
Erythrochiton	margot			Ganua	mottleyana	n
Erythroxylum	gracilipes	n	Field	Ganua	species_1	n
Erythroxylum	macrophyllum_var.ecuadorensis	n	Field	Garcinia	atroviridis	n
Erythroxylum	macrophyllum_var.macr	n	Field	Garcinia	bancana	n
Erythroxylum	squamatum			Garcinia	eugenifolia	n
Eschweilera	andina	n	Field	Garcinia	forbesii	n
Eschweilera	bracteosa	n	Field	Garcinia	griffithii	n
Eschweilera	coriacea	n	Field	Garcinia	malaccensis	n
Eschweilera	giga	n	Field	Garcinia	nervosa	n
Eschweilera	gigandin	n	Field	Garcinia	nigrolineata	n
Eschweilera	gigantea	n	Field	Garcinia	parvifolia	n
Eschweilera	gigarco	n	Field	Garcinia	prainiana	n
Eschweilera	juvuensis			Garcinia	pyrifera	n
Eschweilera	ruffifolia	n	Seed/Field	Garcinia	rostrata	n
Esenbeckia	amazonica	n	Field	Garcinia	scortechinii	n
Esenbeckia	lisa			Garcinia	species_1	n
Eugenia	coffeifolia_aff.			Garcinia	species_2	n
Eugenia	deltocrespis_aff.	n	Field	Garcinia	species_4	n
Eugenia	egensis			Garcinia	species_5	n
Eugenia	fejoi	n	Field	Gardenia	tubifera	n
Eugenia	florida	n	Field	Gardeniopsis	longifolia	n
Eugenia	graneschweil	n	Field	Gironniera	nervosa	n
Eugenia	granvariable	n	Field	Gironniera	parvifolia	n
Eugenia	lambertiana	n	Seed	Gironniera	subaequalis	n
Eugenia	leo			Glochidion	hypoleucum	n
Eugenia	macrocalyx	n	Field	Glochidion	obscurum	n
Eugenia	margot	n	Field	Glochidion	sericeum	n
Eugenia	membranegra	n	Field	Glochidion	species_1	n
Eugenia	mimus_aff_rojo	n	Field	Glochidion	superbum	n
Eugenia	mimus_aff_verde	n	Field	Glochidion	wallichianum	n
Eugenia	minicomun	n	Field	Gluta	malayana	n
Eugenia	multiramosa	n	Field	Glycosmis	chlorosperma	n
Eugenia	myrobalana_aff.	n	Field	Glycosmis	sapindoides	n
Eugenia	panosodorada	n	Field	Glyptopetalum	quadrangulare	n
Eugenia	puntote			Gnetum	gnemon	n
Eugenia	ramamarilla	n	Field	Gomphandra	capitulata	n
Eugenia	schunkei	n	Field	Gomphandra	quadrifida	n
Eugenia	smedcomun	n	Field	Gomphandra	species_1	n
Eugenia	smedcostacrasa	n	Field	Gomphia	serrata	n
Eugenia	smedcostadorada	n	Field	Goniothalamus	macrophyllum	n
Euplassa	occidentalis_cf.	n	Field	Goniothalamus	tortilipetalus	n
Euterpe	precatoria	n		Conocaryum	gracile	n
Exostema	maynense	n	Field	Gonystylus	maingayi	n
Faramea	capillipes	n	Field	Gordonia	singaporiana	n
Faramea	crassa	n	Field	Grewia	antidesmaefolia	n
Faramea	glandulosa	n	Field	Grewia	blattifolia	n
Faramea	multiflora	n	Field	Grewia	fibrocarpa	n
Faramea	quinqueflora	n	Field	Grewia	laurifolia	n
Faramea	torquata	n	Field	Grewia	miqueliana	n
Faramea	uncinata	n	Field	Guioa	species_1	n
Faramea	vaina			Gymnocranthera	eugenifolia	n
Ficus	bajjo	n		Gymnocranthera	forbesii	n
Ficus	brevibracteata	n		Gynotroches	axillaris	n
Ficus	casapi	n		Harmandia	kunstleri	n
Ficus	gomelleira	n		Harpullia	cupanioides	n
Ficus	maxima	n		Hedyotis	species	n
Ficus	minimax	n		Helicia	attenuata	n
Ficus	nymphaeifolia_cf.	n	Field	Heliciopsis	velutina	n
Ficus	ovejá	n		Heritiera	elata	n
Ficus	perez-arbelaezii	n		Heritiera	javanica	n
Ficus	priesiana	n		Heritiera	simplicifolia	n
Ficus	tonduzii	n		Homalium	caryophyllaceum	y
Ficus	trigona	n		Homalium	dictyonurum	y
Ficus	trigonata_cf.	n		Homalium	longifolium	y
Ficus	trigonhirsuta	n		Hopea	dryobalanoides	n
Ficus	ursina	n		Hopea	mengarawan	y
Froesia	diffusa	n	Field	Hopea	sangal	y
Garcinia	brasiliensis	n	Field	Horsfieldia	brachiata	n
Garcinia	macrophylla			Horsfieldia	crassifolia	n
Garcinia	madruno	n	Field	Horsfieldia	flocculosa	n
Gen.nov.	subopo	n	Field	Horsfieldia	fulva	n
Genipa	americana			Horsfieldia	polyspherula	n
Geonoma	aspidifolia_cf.	n		Horsfieldia	polyspherula_var.sumatrana	n
Geonoma	maxima	n		Horsfieldia	punctatifolia	n
Geonoma	stricta_var.piscicauda	n		Horsfieldia	suosa	n
Geonoma	stricta_var.stricta	n		Horsfieldia	superba	n
Geonoma	trigloch	n		Horsfieldia	tomentosa	n
Gloeospermum	equatoriense	n	Field	Horsfieldia	wallichii	n
Gloeospermum	longifolium	n	Field	Hunteria	zeylanica	n
Gloeospermum	sphaerocarpum_cf.			Hypobathrum	venulosum	n
Glycydendron	amazonicum	y	Field	Hypobathrum	racemosum	n
Gordonia	fruticosa			Iguanura	wallichiana	n
Grias	neuberthii	n	Field	Ilex	macrophylla	n

Guapira	clasica	n	Field	Ilex	species_1	n
Guapira	granclasica			Intsia	palembanica	n
Guarea	carinata	n	Field	Irvingia	malayana	n
Guarea	ecuadoriensis			Ixonanthes	icosandra	y
Guarea	falsakunth	n	Field	Ixonanthes	reticulata	n
Guarea	fistulosa	n	Field	Ixora	concinna	n
Guarea	gigakunth	n	Field	Ixora	congesta	n
Guarea	glabra	y	Keeler	Ixora	grandifolia_var.grandifolia	n
Guarea	gomma	n	Field	Ixora	grandifolia_var.lanceolata	n
Guarea	grandifolia	n	Seed/Field	Ixora	kingstoni	n
Guarea	guentheri	n	Seed	Ixora	lobbii	n
Guarea	guenthfuzzy	n	Field	Ixora	nigricans	n
Guarea	guidonia			Ixora	pendula	n
Guarea	kunthiana	n	Field	Jackiopsis	ornata	n
Guarea	macrophylla_2	n	Field	Kibara	coriacea	n
Guarea	macrophylla_3			Kibatalia	maingayi	n
Guarea	macrophylla_ssp_pac	n	Field	Kingstonia	nervosa	n
Guarea	patricio			Knema	conferta	n
Guarea	pterorhachis	n	Field	Knema	curtisii	n
Guarea	pubescens	n	Field	Knema	furfuracea	n
Guarea	purusana	n	Field	Knema	hookeriana	n
Guarea	silvatica	n	Field	Knema	intermedia	n
Guaetaria	asplundiana_cf.	n	Field	Knema	kunstleri	n
Guaetaria	brevicuspid_cf.	n	Field	Knema	laurina	n
Guaetaria	citriodora	n	Field	Knema	malayana	n
Guaetaria	gigante	n	Field	Knema	patentinnervia	n
Guaetaria	glaberrima	n	Field	Knema	pseudolaurina	n
Guaetaria	gransmoothie	n	Field	Knema	scortechinii	n
Guaetaria	multivenia	n	Field	Knema	stenophylla	n
Guaetaria	planerdorita	n	Field	Knema	sumatrana	n
Guaetaria	punctomarron	n	Field	Koilodepas	longifolium	y
Guaetaria	recurvisepala	n	Field	Kokoona	reflexa	n
Guettarda	acreana	n	Field	Koompassia	malaccensis	n
Gustavia	hexapelata	n	Field	Lanstium	domesticum	n
Gustavia	longifolia	n	Field	Lasianthus	lowianus	n
Hasseltia	floribunda	y	Keeler	Lasianthus	species_1	n
Hasseltia	hasseltomen			Lepisanthes	fruticosa	n
Heisteria	acuminata	n	Field	Lepisanthes	senegalensis	n
Heisteria	flacarco	n	Field	Lepisanthes	tetraphylla	n
Heisteria	grande	n	Field	Lepisanthes	tetraphylla_var.hirta	n
Heisteria	multiglan			Leptonychia	glabra	n
Heisteria	nitida	n	Field	Licania	splendens	y
Helicostylis	tomentosa	n	Field	Lindera	oxyphylla	n
Herrania	cuatrecasana	n	Field	Lithocarpus	conocarpa	n
Herrania	nitida	n	Field	Lithocarpus	curtisii	n
Hieronyma	alchorneoides_var.sti	y	Keeler	Lithocarpus	cyclophorus	n
Hieronyma	oblonga	n	Field	Lithocarpus	ewyckii	n
Himatanthus	sucubua	n	Field	Lithocarpus	lucida	n
Hirtella	excelsa	y	Field	Lithocarpus	rassa	n
Hirtella	racemosa_var.hexandra	y	Keeler	Lithocarpus	wallichiana	n
Huertea	glandulosa	y?	Field	Lithocarpus	wrayi	n
Hymenaea	oblongifolia	n	Field	Lisea	castanea	n
Hymenolobium	stipsenicea			Lisea	costalis	n
Hyospathe	elegans	n		Lisea	elliptica	n
Inga	3crasa	y	Herb	Lisea	erectinnervia	n
Inga	3oscuroa	y	Herb	Lisea	ferruginea	n
Inga	4alitarco	y	Herb	Lisea	firma	n
Inga	6cuadra	y	Herb	Lisea	grandis	n
Inga	acreana	y	Herb	Lisea	machilifolia	n
Inga	alata	y	Herb	Lisea	magnifica	n
Inga	alba	y	Herb	Lisea	nidularis	n
Inga	auristellae	y	Herb	Lisea	resinosa	n
Inga	bourgonii	y	Herb	Lisea	tomentosa	n
Inga	brachyrhachis	y	Herb	Lisea	umbellata_var.fuscotomto	n
Inga	capitata	y	Herb/Keeler	Lisea	wrayi	n
Inga	cayennensis	y	Herb	Lophopetalum	floribundum	n
Inga	chartacea	y	Herb	Macaranga	conifera	y
Inga	ciliata_ssp.subcapita	y	Herb	Macaranga	gigantea	y
Inga	cinnamomea	y	Herb	Macaranga	hosei	y
Inga	cordatoalata	y	Herb	Macaranga	hypoleuca	y
Inga	falsacre	y	Herb	Macaranga	lowii	y
Inga	heterophylla	y	Herb/Keeler	Macaranga	recurvata	y
Inga	leiocalycina	y	Herb	Madhuca	laurifolia	n
Inga	marginata	y	Herb/Keeler	Madhuca	malaccensis	n
Inga	microcoma	y	Herb	Mallotus	griffithianus	n
Inga	multinervis	y	Herb	Mallotus	leucodermis	y
Inga	nobilis	y	Herb/Keeler	Mallotus	penangensis	y
Inga	oerstediana	y	Herb/Keeler	Mangifera	foetida	n
Inga	poepigiana	y	Herb	Mangifera	gracilipes	n
Inga	punctata	y	Herb/Keeler	Mangifera	griffithii	n
Inga	ruiziana	y	Herb/Keeler	Mangifera	indica	n
Inga	rusbyi	y	Herb	Mangifera	lagenifera	n
Inga	sapindoides	y	Herb/Keeler	Mangifera	macrocarpa	n
Inga	sarayacuensis	y	Herb	Mangifera	magnifica	n
Inga	sertulifera_ssp.lepto	y	Herb/Keeler	Mangifera	quadrifida	n
Inga	spectabilis	y	Herb	Mangifera	quadrifida_var.longipetiolata	n
Inga	stellaeglabra	y	Herb	Mangifera	rufocostata	n
Inga	stipulacea	y	Herb	Mangifera	species_1	n
Inga	striata	y	Herb	Mangifera	superba	n
Inga	tenuistipula	y	Herb	Mangifera	swintonioides	n
Inga	thibaudiana	y	Herb	Mastixia	pentandra	n

Inga	thibaudiana_ssp.peltadenia	y	Herb	Mastixia	trichotoma	n
Inga	tocacheana	y	Herb	Medusanthera	gracilis	n
Inga	umbellifera	y	Herb/Keeler	Melanochyla	angustifolia	n
Inga	umbriatica	y	Herb	Melanochyla	auriculata	n
Inga	velutina	y	Herb	Melanochyla	caesia	n
Inga	vismifolia	y	Herb	Melanochyla	fulvinervia	n
Inga	yacoana	y	Herb	Melanochyla	species_1	n
Iriarte	delloidea	n		Melanochyla	tomentosa	n
Iryanthera	grandis	n	Field	Melastoma	malabathricum	n
Iryanthera	hostmanniana	n	Field	Melientha	suavis	n
Iryanthera	hostmannii	n		Memecylon	amplexicaule	n
Iryanthera	juruensis	n	Field	Memecylon	cantleyi	n
Iryanthera	paraensis	n	Field	Memecylon	dichotomum	n
Ixora	acuminatissima	n	Field	Memecylon	excelsum	n
Ixora	killipii	n	Field	Memecylon	lilacinum	n
Ixora	panurensis	n	Field	Memecylon	megacarpum	n
Jacaranda	copala	y	Keeler	Memecylon	minutiflorum	n
Jacaranda	glabra	n	Field	Memecylon	oleifolium	n
Jacaratta	digitata	y	Field	Memecylon	oligoneurum	n
Justicia	sanchezioides	n	Field	Memecylon	paniculatum	n
Klarobelia	napoensis	n		Memecylon	pubescens	n
Kotchubaea	semisericea	n		Memecylon	wallichii	n
Lacistema	aggregatum	n	Field	Mesua	cornerii	n
Lacistema	med	n	Field	Mesua	ferrea	n
Lacmellea	lactescens	n	Field	Mesua	grandis	n
Lacmellea	oblongata	n	Field	Mesua	kunstleri	n
Lacunaria	crenada	n	Field	Mesua	lepidota	n
Lacunaria	jenmanii	n	Field	Mesua	racemosa	n
Laetia	procera	n	Field	Metadina	trichotoma	n
Laxoplumeria	tessmannii	n		Mezzettia	leptopoda	n
Leandra	aristigera	n		Micrododermis	casearitifolia	n
Leandra	blanca	n	Field	Micromelum	minutum	n
Lecointea	peruviana	n	Field	Microtropis	valida	n
Leonia	crassa	n	Field	Millettia	longipes	n
Leonia	glycyarpa_varglycyc	n	Field	Millettia	atropurpurea	n
Leonia	glycyarpa_varracemo	n	Field	Millettia	species_1	n
Leonia	occidentalis	n		Mischocarpus	pentapetalus	n
Licania	arbores	n	Field	Mitrephora	maingayi	n
Licania	aubreuillei_cf.	n		Monocarpia	marginalis	n
Licania	caudata	y	Field	Mussaendopsis	beccariana	n
Licania	harlingii	n	Field	Myristica	cinnamomea	n
Licania	hipofuzzy	n	Field	Myristica	maingayi	n
Licania	longipedicellata	n	Field	Myristica	malaccensis	n
Licania	longistyla	y	Field	Myristica	maxima	n
Licania	macrocarpa	n	Field	Nauclera	officinalis	n
Licania	nerviflora	y	Field	Neesia	synandra	n
Licania	reticulata	n	Field	Neobalanocarpus	heimii	y
Licania	silvae_cf.	n	Field	Neolamarckia	cadamba	n
Licania	ursoleolaris	n	Field	Neolisea	zeylarica	n
Licania	zigzag	n	Field	Neoscortechinia	kingii	n
Licaria	brilliacuspi	n		Neoscortechinia	nicobarica	y
Licaria	cannella	n	Field	Neoscortechinia	sumatrensis	n
Licaria	guanensis	n		Neouvaria	foetida	n
Lindackeria	paludosa	n	Field	Nephrilium	costatum	n
Lonchocarpus	seorsus_cf.	n	Field	Nephrilium	criopetalum	n
Loreya	spruceana	n		Nephrilium	hamulatum	n
Lozania	klugii	n	Field	Nephrilium	maingayi	n
Lozania	mediana	n	Field	Nephrilium	ophiodes	n
Lunania	parviflora	n		Nephrilium	pallens	n
Mabea	comun	n	Field	Nothaphoebe	umbelliflora	n
Mabea	superbrundu	n	Field	Ochanostachys	amentacea	n
Machaerium	aristulatum	n	Field	Oncodostigma	monosperma	n
Machaerium	finiparalel	n	Field	Oncosperma	horridum	n
Macrocneum	roseum	n		Orania	sylvicola	n
Macrolobium	angustifolium	n	Field	Ormosia	penangensis	n
Macrolobium	colombianum_cf.	n		Ormosia	venosa	n
Macrolobium	sp.nov.	n	Field	Osmelia	maingayi	n
Macrolobium	stenocladum	n	Field	Palaquium	clarkeanum	n
Maquira	calophylla	n	Field	Palaquium	gutta	n
Maquira	guanensis	n	Field	Palaquium	hexandrum	n
Margaritaria	nobilis	n	Field	Palaquium	maingayi	n
Margaritaria	sp.nov.	n	Field	Palaquium	obovatum	n
Marila	pluricostata_cf.	n	Field	Palaquium	stellatum	n
Marila	puntorojo	n	Field	Pandanus	monotheca	n
Marmaroxylon	basijugum	y	Field	Pandanus	yvanii	n
Matayba	ocho	n	Field	Paranephrilium	sexstophyllum	n
Matisia	bracteolosa	n	Field	Pararotocarpus	bracteata	n
Matisia	cordata	n	Field	Parashorea	densiflora	n
Matisia	longiflora	n	Field	Parastemon	urophyllum	y
Matisia	malacocalyx	n	Field	Parinari	costata	y
Matisia	obliquifolia	n	Field	Parinari	elmeri	y
Matisia	oblongifolia	n	Field	Parinari	oblongifolia	y
Mayna	anelio	n	Field	Parishia	insignis	n
Mayna	odorata	n	Field	Parishia	paucijuga	n
Maytenus	ala	n	Field	Parkia	speciosa	y
Maytenus	ebenifolia_cf.	n	Field	Paropsia	vareciformis	y
Maytenus	macrocarpa_s.l.	n	Field	Pavetta	graciliflora	n
Melicoccus	novagranatensis	n	Field	Pavetta	species_1	n
Meliosma	doly	n	Field	Payena	lucida	n
Meliosma	vasquezii	n	Field	Payena	maingayi	n
Memora	cladotricha	n	Field	Pentace	strychnoidea	n

Mezilaurus	extendido			Pentace	triptera	n
Mezilaurus	triunca	n	Field	Pentaspadon	motleyi	n
Miconia	abbreviata	n	Field	Pentaspadon	velutinus	n
Miconia	acutipetala	n	Field	Pertusadina	eurhyncha	n
Miconia	ampla			Phaeanthus	crassipetalus	n
Miconia	atenuodu			Phaeanthus	ophthalmicus	n
Miconia	aurea_cf.	n	Field	Pholidocarpus	macrocarpus	n
Miconia	bubalina	n	Field	Phyllanthus	emblica	n
Miconia	cazaletii			Pimelodendron	griffithianum	y
Miconia	centrodesma			Pimelodendron	macrocarpum	n
Miconia	chocofres	n	Field	Pinanga	malaiana	n
Miconia	corine	n	Field	Pinanga	riparia	n
Miconia	crasarb			Pithecellobium	splendens	y
Miconia	decurrens	n	Field	Planchonella	maingayi	n
Miconia	elata	n	Field	Planchonia	grandis	n
Miconia	elatita	n	Seed/Field	Platea	latifolia	n
Miconia	falsarug			Platea	species_1	n
Miconia	fosteri	n	Field	Podocarpus	motleyi	n
Miconia	grancordata	n	Field	Polyalthia	cinnamomea	n
Miconia	grandifolia	n	Field	Polyalthia	clavigera	n
Miconia	juanito			Polyalthia	glauca	n
Miconia	karina	n	Field	Polyalthia	hypoleuca	n
Miconia	klugii	n	Field	Polyalthia	jenkinsii	n
Miconia	lamprophylla	n	Field	Polyalthia	lateriflora	n
Miconia	lugonis			Polyalthia	obliqua	n
Miconia	medglauca	n	Field	Polyalthia	rumpii	n
Miconia	multispicata	n	Field	Polyalthia	sclerophylla	n
Miconia	napoana	n	Field	Polyalthia	stenopetala	n
Miconia	nerviblanco	n	Field	Polyalthia	sumatrana	n
Miconia	nervosa	n	Field	Polyosma	laete-virens	n
Miconia	pablo			Pometia	pinnata_var.alnifolia	y
Miconia	pegdorada	n	Field	Popowia	pisocarpa	n
Miconia	pilgeriana	n	Field	Popowia	tomentosa	n
Miconia	poepigii	n	Field	Porterandia	anisophylla	n
Miconia	prasina	n	Field	Pouteria	malaccensis	n
Miconia	pterocaulon	n	Seed	Prainea	limpato	n
Miconia	punctata			Prismatomeris	glabra	n
Miconia	purpono	n	Field	Prismatomeris	species_1	n
Miconia	roselegante			Prunus	arborea	y
Miconia	rugosa			Prunus	arborea_var.stipulaceum	y
Miconia	sachapurp			Prunus	grisea	y
Miconia	schunkei	n	Field	Pseudoeugenia	singaporensis	n
Miconia	smaragdina	n	Field	Pseudovaria	macrophylla	n
Miconia	tipica	n	Field	Psychotria	griffithii	n
Miconia	tomentosa	n	Field	Psychotria	rostrata	n
Miconia	trinervis	n	Field	Psychotria	maingayi	n
Miconia	tripinervis	n	Field	Psychotria	species_10	n
Miconia	zubenatana	n	Field	Psychotria	species_8	n
Micropolis	brochidodroma	n	Field	Pteleocarpa	lamponga	n
Micropolis	dorada	n	Field	Pternandra	coeruleascens	n
Micropolis	egensis	n	Field	Pternandra	echinata	n
Micropolis	guyanensis_ssp.duckea	n	Field	Pterocymbium	tubulatum	n
Micropolis	venulosa	n	Field	Ptychopyxis	caput-medusae	n
Miquartia	guyanensis	n	Field	Ptychopyxis	costata	y
Mollia	gracilis			Pyrenaria	acuminata	n
Mollinedia	killipii	n	Field	Quercus	argentea	n
Mollinedia	rojimpreso			Quercus	gemelliflora	n
Mollinedia	spinilarga	n?	Field	Radermachera	pinnata	y
Mollinedia	tomentosa	n	Field	Reinwardtiendendron	cinereum	n
Mollinedia	tridentata	n?	Field	Rhodamnia	cinerea	n
Moronobea	pablo			Rinorea	anguifera	n
Mouriri	acutiflora_cf.			Rinorea	horneri	n
Mouriri	grancoala	n	Field	Rinorea	sclerocarpa	n
Mouriri	grandiflora	n	Field	Rothmannia	macrophylla	n
Mouriri	intermedia	n	Field	Ryparosa	acuminata	n
Mouriri	myrtilloides	n	Field	Ryparosa	fasciculata	n
Myrcia	blancanueva	n	Field	Ryparosa	kunstleri	n
Myrcia	nitida	n	Field	Sandoricum	becarianum	n
Myrcia	pielizard	n	Field	Sandoricum	koetjape	n
Myrcia	platatomen	n	Field	Santiria	apiculata	n
Myrcia	pseudonitida	n	Field	Santiria	conferta	n
Myrcia	splendens	n	Field	Santiria	griffithii	n
Myrcia	vertipub	n	Field	Santiria	laevigata	n
Myrciaria	amazonica	n	Field	Santiria	oblongifolia	n
Myrciaria	floribunda	n	Field	Santiria	rubiginosa	n
Myrciaria	intermed	n	Field	Santiria	tomentosa	n
Myroxylon	balsamum	n	Field	Sapium	baccatum	y
Naucleopsis	glabra	n	Field	Sapium	discolor	y
Naucleopsis	imitans_cf.	n	Field	Saprosma	scortechini	n
Naucleopsis	krukovii	n	Field	Saraca	declinata	y
Naucleopsis	krukovii_cf.	n	Seed	Saraca	thapingensis	y
Naucleopsis	ulei	n	Field	Sarcotheca	griffithii	n
Nectandra	largibrachi	n	Field	Sarcotheca	monophylla	n
Nectandra	lineata	n	Field	Sauropus	androgynus	n
Nectandra	membranacea	n	Field	Scaphium	linearicarpum	n
Nectandra	microcarpa	n	Field	Scaphium	macropodium	n
Nectandra	oppositifolia	n	Seed/Field	Scaphocalyx	spathea	n
Nectandra	skinny2			Schoutenia	acrescens	n
Nectandra	skinnyret			Scleropyrum	wallichianum	n
Nectandra	viburnoides	n	Field	Scolopia	spinosa	y
Nectandra	yarinensis_cf.	n	Field	Semecarpus	curtisii	n



Neea	altomini			Semecarpus	rufovelutinus	n
Neea	angostintersec	n	Field	Shorea	acuminata	y
Neea	aniboid	n	Field	Shorea	bracteolata	y
Neea	bajo	n	Field	Shorea	dasyphylla	y
Neea	claudia	n	Field	Shorea	guiso	y
Neea	comun	n	Field	Shorea	hopeifolia	n
Neea	daniela			Shorea	lepidota	y
Neea	fuzzy	n	Field	Shorea	leprosula	y
Neea	garci	n	Field	Shorea	macroptera	y
Neea	gigante	n	Field	Shorea	maxwelliana	n
Neea	granredonda	n	Field	Shorea	multiflora	n
Neea	micro	n	Seed	Shorea	ochrophloia	y
Neea	mini	n	Field	Shorea	ovalis	y
Neea	paty	n	Field	Shorea	parvifolia	n
Neea	popular	n	Field	Shorea	pauciflora	y
Neea	supercrasa	n	Field	Sindora	coriacea	n
Neea	tela	n	Field	Sindora	echinocalyx	n
Neea	verdeclara	n	Field	Sindora	velutina	n
Neea	verdeseca	n	Field	Sindora	wallichii	n
Neosprucea	grandiflora	y?	Field	Sloanea	javanica	n
Ochroma	pyramidale	n	Field	Stelechocarpus	cauliflorus	n
Ocotea	alamembra	n	Field	Stemonurus	malaccensis	n
Ocotea	argyrophylla	n	Field	Stemonurus	umbellatus	n
Ocotea	bayelshmi	n	Field	Sterculia	coccinea	n
Ocotea	bofo_cf.	n	Field	Sterculia	cordata	n
Ocotea	cernua	n	Field	Sterculia	hispidissima	n
Ocotea	cujumari_cf.			Sterculia	macrophylla	n
Ocotea	floribunda	n	Field	Sterculia	parviflora	n
Ocotea	javitensis	n	Field	Sterculia	rubiginosa	n
Ocotea	laurita	n	Field	Sterculia	species_1	n
Ocotea	leucoxydon			Streblus	elongatus	n
Ocotea	longifolia	n	Field	Strombosia	javanica	n
Ocotea	luis	n	Field	Strombosia	maingayi	n
Ocotea	nervijens	n	Field	Styrax	benzoin	n
Ocotea	oblonga	n	Field	Suregada	multiflora	n
Ocotea	scalariformis			Symplocos	cerasifolia	n
Ocotea	tessmannii_cf.	n	Field	Symplocos	cochinchinensis	n
Ocotea	ucayalensis			Symplocos	crassipes	n
Oenocarpus	batata	n		Symplocos	ophirensis	n
Oenocarpus	mapora	n		Symplocos	rubiginosa	n
Ophiocaryon	heterophyllum	n	Field	Tabernaemontana	corymbosa	n
Ormosia	amazonica			Tabernaemontana	malaccensis	n
Ormosia	elata	n	Field	Talauma	candollii	n
Ormosia	paraensis	n	Field	Tarenna	costata	n
Ossaea	boliviensis			Tarenna	maingayi	n
Otoba	glycyarpa	n	Field	Tarenna	mollis	n
Ouratea	flaquita	n	Field	Tarenna	species_11	n
Oxandra	mediocris	n	Field	Tarenna	species_8	n
Oxandra	riedeliana_aff.	n	Field	Teijsmanniodendron	coriaceum	n
Pachira	insignis	n	Field	Teijsmanniodendron	simplicifolium	n
Pachira	punga-schunkei	n	Field	Terminalia	bellirica	n
Palicourea	grandiflora	n	Field	Terminalia	citrina	y
Palicourea	guanensis	n	Field	Terminalia	phellocarpa	y
Palicourea	lasiantha			Terminalia	subspatulata	n
Palicourea	nigricans	n	Field	Terstroemia	corneri	n
Paradrypeites	subintegrifolia	n	Field	Tetradisia	porosa	n
Parinari	klugii	n	Field	Thottea	grandiflora	n
Parkia	balslevii			Timonius	species_1	n
Parkia	multijuga	y		Timonius	wallichianus	n
Parkia	nitida	y	Keeler	Trema	tomentosa	n
Parkia	velutina	y		Trigonachras	acuta	n
Patinoa	paraensis	n	Field	Trigonastrium	hypoleucum	n
Paullinia	xestophylla	n	Field	Trigonachras	species_1	n
Pausandra	trianae	y	Field	Trigonopleura	malayana	n
Pentagonia	parvifolia	n	Field	Trigonostemon	laevigatus	n
Pentagonia	williamsii_cf.	n	Field	Trigonostemon	longifolius	n
Pentagonia	wurdackii	n	Field	Trigonostemon	malaccanus	n
Pentaplaris	huaronica			Triomma	malaccensis	n
Pera	bicolor			Trivalvaria	macrophylla	n
Pera	duguet	n	Field	Trivalvaria	nervosa	n
Perebea	angustifolia	n	Field	Trivalvaria	pumila	n
Perebea	guanensis_cf.	n	Field	Turpinia	ovalifolia	y
Perebea	guanensis_ssp_acan			Unknown	sp.	n
Perebea	mollis	n	Field	Urophyllum	glabrum	n
Perebea	tessmannii	n	Field	Urophyllum	hirsutum	n
Perebea	xanthochyma	n	Field	Vatica	bella	y
Persea	areolatosatae	n	Field	Vatica	maingayi	n
Persea	persemid	n	Field	Vatica	pauciflora	y
Persea	pseudofasciculata	n	Field	Vernonia	arborea	n
Phyllanthus	attenuatus	n	Field	Vitex	pinnata	n
Phyllanthus	micro			Vitex	quinata	n
Phytelephas	tenuicaulis	n		Walsura	chrysoyne	n
Picramnia	juniniana	n	Field	Walsura	pinnata	n
Picramnia	magnifolia	n	Field	Xanthophyllum	affine	y
Picramnia	mini	n	Field	Xanthophyllum	amoenum	n
Picramnia	pubibul	n	Field	Xanthophyllum	chartaceum	n
Picramnia	pubirecta			Xanthophyllum	ellipticum	n
Picramnia	sellowii_ssp_sprucean	n	Field	Xanthophyllum	euryhynchum	n
Piper	aequale			Xanthophyllum	griffithii	n
Piper	albertsmithii			Xanthophyllum	rufum	n
Piper	arboresum	n	Field	Xanthophyllum	scortechinii	n

Piper	augustum	n	Field	Xanthophyllum	stipitatum	n
Piper	bellidi	n	Field	Xanthophyllum	wrayi	n
Piper	bellidifolium	n	Field	Xerospermum	species_1	n
Piper	bulada	n	Field	Xerospermum	noronhianum	y
Piper	cordipub	n	Field	Xylopia	caudata	n
Piper	crassinervium	n	Field	Xylopia	elliptica	n
Piper	darkcrasa	n	Field	Xylopia	ferruginea_var.ferruginea	n
Piper	falsafuzzy	n	Field	Xylopia	ferruginea_var.oxyantha	n
Piper	fuzicort	n	Field	Xylopia	fusca	n
Piper	granmini			Xylopia	magna	n
Piper	macrophyllum			Xylopia	malayana	n
Piper	maranyonense	n	Field			
Piper	minibroqui	n	Field			
Piper	minicord					
Piper	nervi					
Piper	obchic	n	Field			
Piper	obglab	n	Field			
Piper	obnervi	n	Field			
Piper	obtomen	n	Field			
Piper	obvil	n	Field			
Piper	peltatum					
Piper	pubescens	n	Field			
Piper	redonda					
Piper	renato	n	Field			
Piper	reticulatum	n	Field			
Piper	scab	n	Field			
Piper	sesivil	n	Field			
Piptadenia	pteroclada					
Platymiscium	pinnatum					
Platymiscium	stipulare					
Pleurothyrium	bifidum	n	Field			
Pleurothyrium	cinereum					
Pleurothyrium	cuneifolium	n	Field			
Pleurothyrium	glabrifolium	n	Field			
Pleurothyrium	insigne	n	Field			
Pleurothyrium	willamsii_cf.	n	Field			
Plinia	caulimpresso	n	Seed/Field			
Plinia	cortezablanca	n	Field			
Plinia	pseudomouriri	n	Field			
Plinia	unop	n	Field			
Posoqueria	latifolia	n	Field			
Posoqueria	longiflora	n	Field			
Potalia	resinifera	n	Field			
Poulsenia	armata	n	Field			
Pourouma	bicolor	n	Field			
Pourouma	deeplob	n	Field			
Pourouma	guianensis_ssp.guiane	n	Field			
Pourouma	medioarco	n	Field			
Pourouma	minor	y	Field			
Pourouma	napoensis					
Pourouma	persecta	n	Field			
Pourouma	tomentosa	n	Field			
Pouteria	anchalisa	n	Field			
Pouteria	angostalooopy	n	Field			
Pouteria	baehiana	n	Field			
Pouteria	bilocularis	n	Field			
Pouteria	caimito					
Pouteria	cuspidata_ssp.dura					
Pouteria	cuspidata_ssp.robusta					
Pouteria	doradagrande	n	Field			
Pouteria	durlandii	n	Field			
Pouteria	durlandii_ssp.pubicar	n	Field			
Pouteria	glomerata	n	Field			
Pouteria	gracilis	n	Field			
Pouteria	granopaca	n	Field			
Pouteria	guianensis	n	Field			
Pouteria	hispida_cf.	n	Field			
Pouteria	krukovii	n	Field			
Pouteria	largamembra	n	Field			
Pouteria	multiflora	n	Field			
Pouteria	nudipetala	n	Field			
Pouteria	peciolote	n	Field			
Pouteria	platyphylla	n	Field			
Pouteria	procera	n	Field			
Pouteria	redondita	n	Field			
Pouteria	reticulata	n	Field			
Pouteria	rostrata	n	Seed/Field			
Pouteria	smedobov	n	Field			
Pouteria	torta_ssp.glabra	n	Field			
Pouteria	torta_ssp.tuberculata	n	Field			
Pouteria	tortachica	n	Field			
Pouteria	tortachicorden					
Pouteria	trilocularis	n	Field			
Pouteria	vernicaosa	n	Field			
Pradosia	atroviolacea	n	Field			
Prestoea	schultzeana	n				
Protium	amazonicum	n	Seed/Field			
Protium	aracouchini	n	Field			
Protium	brillanodu	n	Field			
Protium	glabrescens	n	Field			
Protium	grannodu	n	Field			

Protium	guianense	n	Field
Protium	nodulosum	n	Field
Protium	sagotianum	n	Field
Protium	trifoliolatum		
Protium	unifoliolatum		
Prunus	debilis	y	Field
Pseudolmedia	laevigata	n	Field
Pseudolmedia	laevis	n	Field
Pseudolmedia	macrophylla	n	Field
Pseudolmedia	rigida_ssp.eggersii	n	Field
Pseudomalmea	diclina	n	Field
Pseudopiptadenia	suaveolens	y	Keeler
Psychotria	borjensis	n	Field
Psychotria	brachybotrya		
Psychotria	caerulea	n	Field
Psychotria	deflexa	n	Field
Psychotria	dracula	n	Field
Psychotria	huampamiensis	n	Field
Psychotria	membradomat	n	Field
Psychotria	officinalis		
Psychotria	ondulada	n	Field
Psychotria	ostreophora	n	Field
Psychotria	poeppigiana	n	Field
Psychotria	remota	n	Field
Psychotria	robin	n	Seed
Psychotria	stenostachya	n	Field
Psychotria	viridis	n	Field
Pterocarpus	rhorii_cf.	n	Field
Qualea	paraensis	y	Field
Quararibea	amazonica	n	Field
Quararibea	bilobata_cf.	n	Field
Quararibea	wittii	n	Field
Quiina	amazonica		
Quiina	florida	n	Field
Quiina	grandifolia_cf.	n	Field
Quiina	macrophylla_cf.	n	Field
Quiina	mediana	n	Field
Randia	bigfuzzy	n	Field
Randia	gorky	n	Field
Randia	manolo	n	Field
Ratuvolfia	praecox		
Rhamnidium	elaecarpum	n	Field
Rhodostemonodaphne	grandis		
Rhodostemonodaphne	juruenis	n	Field
Rhodostemonodaphne	kunthiana	n	Field
Rhodostemonodaphne	licanoides		
Rhodostemonodaphne	sordida		
Richeria	racemosa	n	Field
Rinorea	apiculata	n	Field
Rinorea	lindemiana	n	Field
Rinorea	viridifolia	n	Field
Rollinia	chrysoarpa	n	Field
Rollinia	cuspidata	n	Field
Rollinia	dolichopetala	n	Field
Rollinia	flacaglabra	n	Field
Rollinia	glomerulifera	n	Field
Rollinia	palida		
Rollinia	pittieri	n	Field
Roupala	montana		
Ruagea	insignis	n	Field
Rudgea	bracteata	n	Field
Rudgea	fina	n	Field
Rudgea	japurensis		
Rudgea	nodincho	n	Field
Rudgea	ovale	n	Field
Ruizodendron	speciosa	n	Field
Ryania	speciosa_var_toment	n	Field
Sagotia	racemosa	n	Field
Salacia	atenucrasa	n	Field
Salacia	macrantha_cf.	n	Field
Sapium	glandulosum_cf.	y	Field/Keeler
Sapium	largident	y	Field
Sapium	redonda		
Sarcaulus	brasiliensis	n	Field
Sarcaulus	peloscostimp	n	Field
Sarcaulus	romolerouxii	n	Field
Sarcaulus	vestitus	n	Field
Schefflera	morototoni	n	Field
Schizolobium	parahyba		
Schoenobiblus	perubianus_cf.	n	Field
Schoepfia	lucida	n	Field
Senna	bacillaris		
Senna	macrophylla_var.gigan	y	Keeler
Senna	trolliflora	y	Keeler
Simaba	orinocensis	n	Field
Simaba	paraensis	n	Field
Simaba	polyphylla	n	Field
Simarouba	amara	y	Keeler
Simira	cordifolia	n	Field
Simira	rubescens_cf.	n	Field
Siparuna	angostadiante	n	Field

Siparuna	bigli3	n	Field
Siparuna	cervicornis	n	Field
Siparuna	cuspidata	n	Field
Siparuna	decipiens	n	Field
Siparuna	ges		
Siparuna	macrotepala	n	Field
Siparuna	poeppigii	n	Field
Siparuna	thecaphora(1)	n	Field
Siparuna	thecaphora(2)	n	Field
Siparuna	thecaphora(3)	n	Field
Sloanea	fragans	n	Field
Sloanea	gigapulvi	n	Field
Sloanea	granredonda	n	Field
Sloanea	guia	n	Field
Sloanea	membramini		
Sloanea	nervi		
Sloanea	oak	n	Field
Sloanea	obtusidolia	n	Field
Sloanea	oppd		
Sloanea	pequurva	n	Field
Sloanea	polvorojo	n	Field
Sloanea	pubescens_cf.	n	Field
Sloanea	robusta_cf.	n	Field
Sloanea	robustipeq	n	Field
Sloanea	rufissesi	n	Field
Sloanea	synandra	n	Field
Smilax	nervi		
Socratea	exorrhiza	n	
Solanum	altissimum	n	Field
Solanum	grandiflorum	n	Field
Solanum	granmini	n	Field
Solanum	lepidotum		
Solanum	leptopodum		
Solanum	malletii	n	Field
Solanum	scabrosa		
Solanum	sessile		
Solanum	silvaticum		
Sorocea	muriculata	n	Field
Sorocea	pubivena_ssp.hirtella	n	Field
Sorocea	pubivena_ssp.oligotricha	n	Field
Sorocea	sarcocarpa_cf.		
Sorocea	steinbachii	n	Field
Spondias	mombin	n	Field
Sterculia	apeibophylla	n	Field
Sterculia	apetala		
Sterculia	colombiana	n	Field
Sterculia	frondosa	n	Field
Sterculia	tessmannii	n	Field
Strychnos	dariensis_cf.		
Stryphnodendron	porcatum		
Stylogyne	cauliflora		
Stylogyne	longifolia	n	Field
Styrax	cordatus		
Styrax	guyanensis		
Swartzia	arborescens	n	Field
Swartzia	benthamiana	n	Field
Swartzia	bombycina	n	Field
Swartzia	cardiosperma	n	Field
Swartzia	multijuga	n	Field
Swartzia	simplex	n	Field
Symphonia	globulifera	n	Field
Symplocos	arechea	n?	Field
Tabebuia	ochracea	y	Keeeler
Tabebuia	serratifolia	y	Keeeler
Tabernaemontana	pequea	n	Field
Tabernaemontana	sananho	n	Field
Tachigali	formicarum	n	Field
Tachigali	paniculata		
Tachigali	paraensis		
Talauma	ovata_cf.	n	Field
Talauma	tyana	n	Field
Talisia	2-retic		
Talisia	cerasina		
Talisia	gigapulvi	n	Field
Talisia	pulvinote		
Tapirira	guianensis	n	Field
Tapirira	myriantha_cf.	n	Field
Tapirira	obtusa	n	Field
Tapura	juvuana	n	Field
Tapura	peruviana	n	Field
Terminalia	amazonia	y	Keeeler
Terminalia	axilpub	n	Field
Terminalia	ob	y	Field
Terminalia	oblonga	n	Field
Tessmannianthus	heterostemon	n	Field
Tetragastris	panamensis	n	Field
Tetrathylacium	macrophyllum	n	Field
Tetrorchidium	macrophyllum	y	Field
Theobroma	speciosum	n	Field
Theobroma	subincanum	n	Field
Thyrsodium	paraense_cf.		

Tococa	guianensis		
Tocoyena	burnham	n	Field
Tovomita	alargada	n	Field
Tovomita	arbol		
Tovomita	granocrasa	n	Field
Tovomita	grande	n	Field
Tovomita	tyana	n	Field
Toxiphon	trifoliolatum		
Trattinnickia	glaziovii_cf.		
Trattinnickia	lancifolia		
Trattinnickia	lawrencei_ssp_boliv		
Trema	micrantha	n	Field
Trichilia	adolphi		
Trichilia	cip	y	Keeler
Trichilia	densapunta		
Trichilia	elsae	n	Field
Trichilia	laxipaniculata		
Trichilia	maynasiana	n	Field
Trichilia	micrantha	n	Field
Trichilia	obovata	n	Field
Trichilia	pallida	n	Field
Trichilia	pleeana_cf.	n	Field
Trichilia	poeppligii	n	Field
Trichilia	quadrijuga	n	Field
Trichilia	rubra	n	Field
Trichilia	septentrionalis	n	Field
Trichilia	solitudinis	n	Field
Trigynaea	triplinervia	n	Field
Triplaris	dugandii		
Trymatococcus	amazonicus	n	Field
Turpinia	occidentalis	n	Field
Unonopsis	floribunda	n	Field
Unonopsis	veneficiorum	n	Field
Urera	baccifera	n	Field
Vantanea	guianensis	n	Field
Virola	dixonii	n	Field
Virola	duckei	n	Field
Virola	elongata	n	Field
Virola	flexuosa	n	Field
Virola	fuzzy		
Virola	microfuzzy	n	Field
Virola	mollis	n	Field
Virola	multinervia	n	Field
Virola	obovata	n	Field
Virola	pavo	n	Field
Virola	surinamensis		
Virola	theiodora		
Vismia	baccifera	n	Field
Vismia	bosque	n	
Vismia	floribunda	n	Field
Vismia	macrophylla		
Vismia	sprucei		
Vitex	schunkei	n	Field
Vitex	triflora	n	Field
Vochysia	braeceliniae	n	Field
Vourana	anomala	n	Field
Warszewiczia	cordata	n	Field
Wettinia	maynensis	n	
Wittmackanthus	stanleyanus	n	Field
Xylopia	aromatica_cf.	n	Field
Xylopia	cuspidata	n	Field
Xylopia	hierna		
Xyloema	tessmannii_cf.		
Zanthoxylum	glanredonda	n	Field
Zanthoxylum	margland	n	Field
Zanthoxylum	nervi		
Zanthoxylum	pendiente		
Zanthoxylum	perp		
Zanthoxylum	setulosum	y	Keeler
Zanthoxylum	sprucei_aff.	n	Field
Zanthoxylum	suave		
Zizyphus	cinnamomum		
Zygia	heteroneura	y	Field
Zygia	mediana	y	Field
zz	zz		