



A floristic survey of angiosperm species occurring at three landscapes of the Central Amazon *várzea*, Brazil

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Abstract: The Amazonian floodplains harbor highly diverse wetland forests, with angiosperms adapted to survive extreme floods and droughts. About 14% of the Amazon Basin is covered by floodplains, which are fundamental to river productivity, biogeochemical cycling and trophic flow, and have been subject to human occupation since Pre-Colombian times. The botanical knowledge about these forests is still incomplete, and current forest degradation rates are much higher than the rate of new botanical surveys. Herein we report the results of three years of botanical surveys in floodplain forests of the Central Amazon. This checklist contains 432 tree species comprising 193 genera and 57 families. The most represented families are Fabaceae, Myrtaceae, Lauraceae, Sapotaceae, Annonaceae, and Moraceae representing 53% of the identified species. This checklist also documents the occurrence of approximately 236 species that have been rarely recorded as occurring in white-water floodplain forests.

Key words: white-water floodplain forests; angiosperms; floristic survey; Amazonian wetlands; Brazil

INTRODUCTION

The floodplains of major Amazonian rivers cover about 400,000 km², and *várzea* (white-water floodplain) forests are the most prevalent floodplain habitat in the Amazon Basin (Melack and Hess 2011; Junk et al. 2011). *Várzea* forests have fewer plant species than the better-known upland Amazonian forests, but are still the most diverse floodable forests in the world (Wittmann et al. 2006). Still, only about 200 plots (ter

Steege et al. 2013), comprising 90 ha of *várzea* forests, have been inventoried to date (Wittmann et al. 2011). From these inventories, about 100 to 200 thousand trees have been tagged, measured and identified, resulting in the identification of approximately 1000 tree species (Wittmann et al. 2006; Wittmann et al. 2011). Although most of these species are shared with upland environments (Wittmann et al. 2013), there are noticeable differences between upland and *várzea* populations, arising from the morphological, physiological and ecological adaptations needed to survive flood-prone environments (Parolin et al. 2004).

The annual flood pulse of major Amazonian rivers imposes a strong seasonality to the floodplain (Junk et al. 1989), and *várzea* forests remain flooded for up to half of the year (Ferreira-Ferreira et al. 2014). From at least 10 million years BP to the present (Latrubesse and Franzinelli 2002), the flood pulse has provided, in synergy with fluvial processes (Salo et al. 1986; Kalliola et al. 1991; Ward et al. 2002), the dynamic characteristic of the floodplain landscape, contributing to environmental heterogeneity among localities (Irion and Kalliola 2010). The result is a complex mosaic of herbaceous-dominated vegetation (i.e., wet grasslands), shrub/tree-dominated vegetation (i.e., *chavascal*) and dense forests (Ferreira-Ferreira et al. 2014), with trees up to 45 m high and a large variety of life forms.

Herein we provide a checklist of tree species occurring at three *várzea* landscapes of the Central Amazon, and compare this list with the two most complete lists available for *várzea* forests in the literature (Albernaz et al. 2012; Wittmann et al. 2013), emphasizing the knowledge gaps in species occurrence and distribution for this environment.

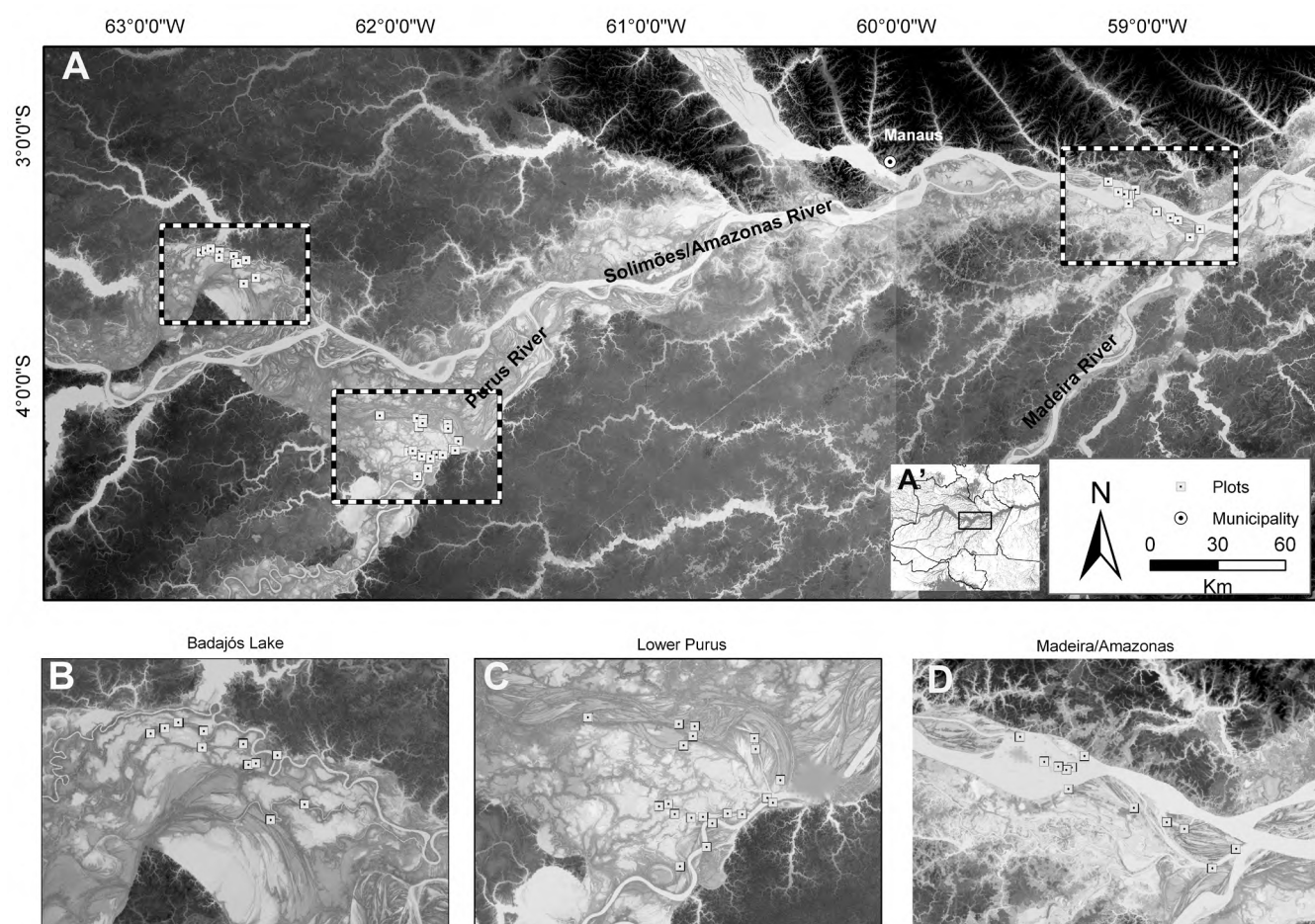


Figure 1. (A) Distribution of three study landscapes within the Central Amazon region, (A') between the town of Coari and the Madeira River mouth, Amazonas state, Brazil. Details of the three landscapes of *várzea* forest where botanical collections were done: (B) Badajós Lake; (C) Lower Purus; and (D) Madeira/Amazonas confluence.

MATERIALS AND METHODS

Study site

We studied three landscapes along the Solimões-Amazonas River floodplain, in the Central Amazon basin, each comprising approximately 900 km² (30 × 30 km; Figure 1). The Central Amazon has a tropical equatorial climate, with total annual precipitation ranging from 2,000 to 2,600 mm, averaging 200 mm during the wettest month (usually occurring in the first quarter of the year). Mean annual temperature is approximately 27°C, while minimum and maximum daily temperatures vary between 22 and 33°C (INMET 2014).

The Badajós Lake landscape is located at the northern margin of the Solimões River, close to the towns of Codajás and Coari, Amazonas State (Figure 1B). This landscape is characterized by two major *ria* lakes, connected to the Solimões mainstream through channels draining an extensive floodplain area. The hydrological regime in this floodplain is influenced by the Solimões River stage, except for relatively high sites that do not flood every year. Data from the Codajás hydrological station at the Solimões River shows water levels rising between December and April, peaking between May and August, receding during September and October

and usually reaching the lowest levels during November (Figure 2A).

The lower Purus River landscape includes a protected area of approximately 8,000 km², the Piagaçu-Purus Sustainable Development Reserve (PP-SDR), located approximately 60 km above the confluence of the Purus and Solimões Rivers (Figure 1C). This landscape has originated from the avulsion of the Solimões River channel circa 1,000 years BP (Latrubesse and Franzinelli 2002), and is characterized by a network of channels connecting the numerous lakes to the Purus River. The Lower Purus River hydrological regime measured at the Beruri hydrological station is well correlated with the Negro River regime (Figures 2B and 2C; ANA 2014), with water levels rising between February and May, peaking between June and July, and receding during August and September, reaching the lowest levels between October and November (Figure 2B; ANA 2014).

The Madeira River landscape is located at the southern margin of the Amazonas River, near the towns of Itacoatiara and Autazes, Amazonas state (Figure 1D). This landscape consists mostly of open water bodies, large channels and relatively few lakes. The hydrological regime is correlated with water levels

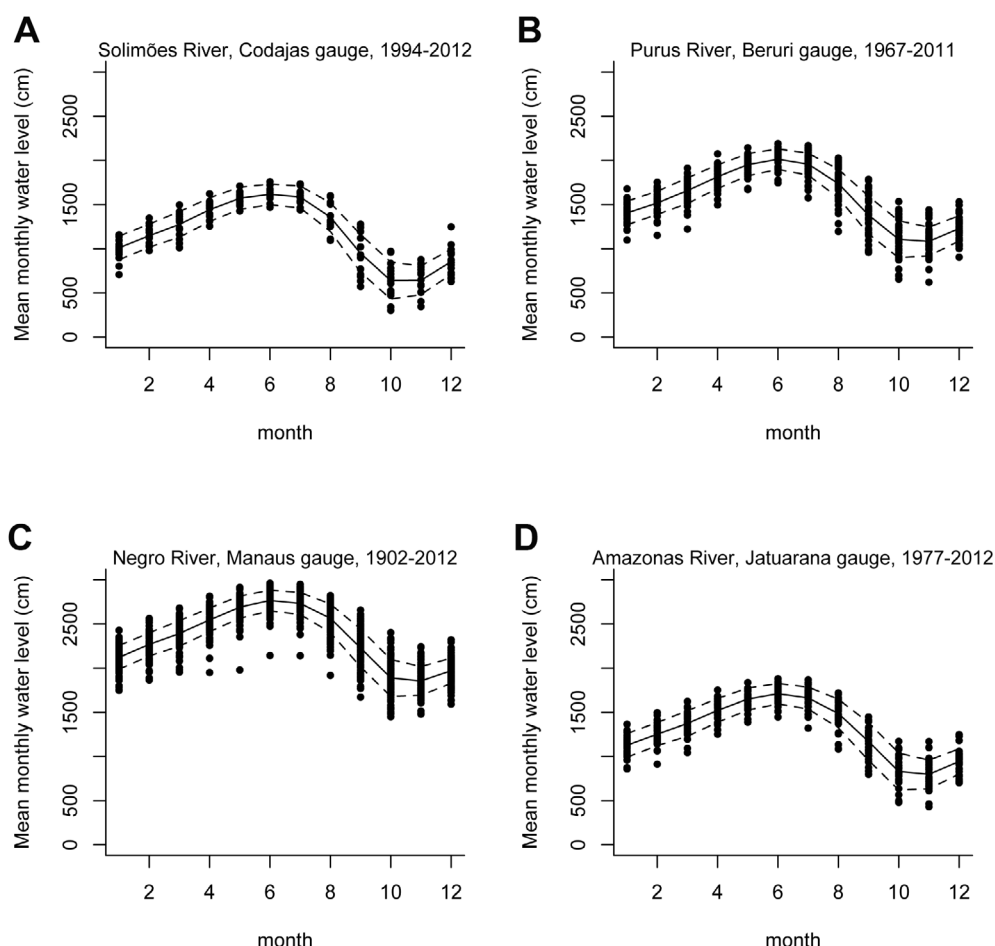


Figure 2. Hydrological regime measured by hydrological stations in the (A) Solimões; (B) Purus; (C) Negro and (D) Amazonas rivers, Central Amazon, Brazil. Months were ordered from 1–12 (January to December); black dots show the average river levels for each year; continuous line shows the average trend of the hydrological regime over multiple years and dashed lines show confidence intervals. Source: ANA (2013).

measured at the Jatuarana hydrological station, about 150 km upstream of the Madeira confluence, and is influenced by both the Amazonas and the Madeira River hydrological regimes. Flood amplitudes are close to 10 m between high and low water seasons (Figure 2D), and the timing of the hydrological stages are similar to those measured at Codajás, Beruri and Manaus river hydrological stations.

Data collection

We made all botanical collections in floodplain forests, following two separate methods: opportunistic surveys and traditional forest inventories. The two methods had different collection efforts in each landscape, so we standardized effort in terms of voucher specimens produced (number of exsiccates). The Lower Purus River was the landscape with the highest collection effort (1,123 exsiccates), 1.5 times higher than the Badajós landscape (777 exsiccates), and three times higher than the Madeira landscape (378 exsiccates).

We made opportunistic surveys on various fieldwork expeditions, differing in the number of days and timing of the surveys in each landscape. These surveys were carried out prior to the forest plot inventories establishment to

provide a baseline for landscape and species recognition. Given that most species are flowering and fruiting during the high and receding water seasons, we carried out all opportunistic surveys in this period, strictly collecting species with fertile structures for which we had no previous collections. Forest inventories were then made in all three landscapes, comprising 15.8 ha distributed in 43 plots of 150 × 25 m (0.375 ha); 11 plots in the Badajós landscape, 20 plots in the Lower Purus River, and 12 plots in the Madeira landscape (see Figure 1 for plot distribution). We placed plots in different forest patches to account for local vegetation variability and to obtain a comprehensive representation of the flooding gradient among sample plots (for a more detailed description of sampling design see Luize et al. 2015). We recorded the geographical coordinates and flooding status of each collected specimen, and provided this information in their respective voucher labels.

We identified plants to the species level by (1) using field guides (Ribeiro et al. 1999; Wittmann et al. 2010), (2) comparing with vouchers from the INPA (Instituto Nacional de Pesquisas da Amazônia) herbarium and from digital databases of the Missouri Botanical Garden (Tropicos 2014) and New York Botanical Garden (NYBG

2014) and (3) consulting botanists and field technicians from INPA with extensive expertise in Amazon flora identification.

We deposited all voucher species at the INPA or EAFM (Instituto Federal de Educação, Ciência e Tecnologia do Amazonas) herbaria; vouchers from opportunistic surveys with fertile structures were deposited mainly at INPA, while vouchers collected in the inventory plots, most of them without fertile structures, were deposited at the EAFM herbarium. The present checklist follows the APG-III classification. We cross-checked all species names with the Missouri Botanical Garden (Tropicos 2014), New York Botanical Garden (NYBG 2014), and The Plant List (The Plant List 2013) databases, maintaining accepted names and excluding synonyms from the final list.

RESULTS

A total of 2,478 voucher specimens were collected, of which 222 could not be identified at the species level and were excluded from this checklist. The 2,256 voucher specimens identified comprised 19 orders, 57 families, 193 genera and 432 species (Table 1). Families with the largest representation were (percent of voucher specimens identified): Fabaceae (15%); Myrtaceae (10%); Lauraceae (8%); Annonaceae (6%); Sapotaceae (6%); and Chrysobalanaceae (5%), which together represent 86% of all identified voucher specimens. Regarding the number of species in each family, Fabaceae (73 spp.); Myrtaceae (39 spp.); Lauraceae (33 spp.); Sapotaceae (23 spp.); Annonaceae (22 spp.); Moraceae (22 spp.); and Rubiaceae (20 spp.) comprised 53% (232 species) of the 432 species identified.

We found 159, 53 and 31 species occurring exclusively at the Lower Purus, Badajós, and Madeira landscapes, respectively. Lower Purus and Badajós shared 150 species; Lower Purus and Madeira shared 72 species; Badajós and Madeira shared 48 species; and all three landscapes shared only 40 species. In terms of frequency of collection, 33% of the species were collected only once, 17% were collected twice, and 50% were collected three or more times. *Oxandra riedeliana* R.E. Fr. was the species with the largest number of voucher specimens collected (59 vouchers).

DISCUSSION

We have produced a comprehensive checklist of trees occurring in white-water várzea floodplain forests of the Central Amazon. This checklist increases our knowledge of flood-tolerant species that can live in these seasonal forests, but we still have large knowledge gaps for tree species occurring in Amazonian forests. As an example, approximately one third of the species collected in our study is likely to be represented by fewer than five voucher specimens deposited in herbarium collections

(Hopkins 2007; Feeley 2015). This scarcity of records limits species distribution modeling, which could help understand the present and future distributions of these species according to changes in land use and regional climate. As an example, 33% of the species listed by us have been recorded only once, preventing an analysis of their ecological preferences or geographical distribution. We collected 10 species classified as endemic to white-water floodplain forests, according to the classification by Wittmann et al. (2013).

Despite the increasing availability of worldwide biodiversity data, there are still many regional “data voids” where species and habitats remain poorly represented in herbarium collections (Feeley 2015). Furthermore, most botanical collections lack fertile structure records, making it difficult for specialists to confirm taxonomical identification. During the effort to generate the present checklist we collected the *holotypus* of *Calypttranthes irregularis* Sobral, M.A.D. Souza & B. Luize (Sobral et al. 2015). We also collected a *Glandonia* species with uncertain identification, currently under examination by expert authorities (I. Reis, personal communication). It is therefore fundamental that Amazonian researchers focus on the collection of reproductive voucher specimens, to increase the number of records in reference botanical database and facilitate botanical identification of angiosperms. It is also necessary that herbarium collections send duplicates of deposited voucher specimens to specialists in each genus and family, to guarantee that species identification is accurate and updated.

The two most recent and comprehensive lists of várzea tree species for the Amazon were reported by Albernaz et al. (2012), listing 542 taxa (species and morphospecies), and by Wittmann et al. (2013), listing 658 species. The present checklist adds 236 species to these previous lists which have probably been rarely sampled in várzea forests elsewhere. In comparison to the list by Albernaz et al. (2012), 101 species are common to both lists, while the present checklist adds 331 species. In regard to the study by Wittmann et al. (2013), 170 species are common to both lists, 488 were present only in Wittmann et al. (2013), and 262 species are added by the present list. These differences are not limitations of the previous studies, given the methodological differences. Wittmann et al. (2013) listed only species that have occurred in at least two distinct floristic inventories performed by at least two distinct authors, thereby excluding less sampled species. Albernaz et al. (2012) sampled especially high várzea forests along the Solimões-Amazonas River during the Pró-Várzea Project.

Methodological differences may also explain why botanical families previously reported by Wittmann et al. (2011), as the most important for várzea forests do not match the most represented families in the present

checklist (e.g., Myrtaceae, Lauraceae and Annonaceae). For the present work, we heavily focused our collection effort on taxonomic groups that are highly diversified and relatively hard to recognize and identify during fieldwork (e.g., Fabaceae, Myrtaceae and Sapotaceae). Many of the most representative families in *várzea* forests have species that are easily recognized in the field and/or have few species per genus (e.g., Malvaceae, Euphorbiaceae and Salicaceae). Although we have observed these species during inventories (Luize et al. 2015), we did not make vouchers for many of them, preventing their inclusion in the present work. Even so, our checklist still confirms the occurrence of approximately 236 tree species that have not been reported by the major *várzea* species lists currently available in the literature, suggesting that these species are still poorly sampled. Although the present study only reports voucher species, we recommend that researchers make an effort to regularly collect and georeference the records of all species, including common and easily recognizable species, as these observations are paramount to support species distribution modeling and improve our understanding of the relationship between species occurrence and environmental conditions. Improving our knowledge about the *várzea* flora is the first necessary step to formalize management strategies for the sustainable use of these wetland forests, while preserving the functioning of the Amazonian ecosystem.

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Table 1. Checklist of angiosperms collected by B.G. Luize in várzea forests of three floodplain landscapes in the Central Amazon, Brazil. The landscapes were: (B) Badajós Lake; (P) Lower Purus River; and (M) Madeira/Amazonas. Lack of records are denoted as (-). Total refers to the number of voucher specimens deposited. *Species listed by Albernaz et al. (2012) can be found in Supporting Information Appendix S1 (Table S2) of the referred publication; species also found by us are denoted as (1) in the appropriate column. **Species listed by Wittmann et al. (2013) can be found in Appendix 3 of Supplementary material E7723 of the referred publication; species also found by us are denoted as (1) on the appropriate column; (VE) refers to “Amazonian white-water-floodplain endemics, defined as tree species ecologically restricted to white-water forests and geographically restricted to the Amazon basin. This class excludes all species that had at least one occurrence in non-Amazonian white-water floodplains” (Wittmann et al. 2013). Family and species are alphabetically ordered for each order.

| Order/Family | Species | Landscapes | | | | Voucher number INPA-Herbarium | Voucher number EAFM-Herbarium | Albernaz et al. 2012* | Wittmann et al. 2013** |
|--------------|--------------------------------------------|------------|---|---|-------|-------------------------------|-------------------------------|-----------------------|------------------------|
| | | B | P | M | Total | | | | |
| Asterales | | | | | | | | | |
| Asteraceae | | | | | | | | | |
| | 1 <i>Tessaria integrifolia</i> Ruiz & Pav. | - | - | 1 | 3 | | 8936 | | 1 |
| Boraginales | | | | | | | | | |
| Boraginaceae | | | | | | | | | |
| | 1 <i>Cordia lanciloba</i> Killip | 1 | 1 | - | 5 | 231717; 234448 | 8192; 9540 | | |
| | 2 <i>Cordia multispicata</i> Cham. | - | - | 1 | 6 | | 8918 | | |
| | 3 <i>Cordia nodosa</i> Lam. | - | 1 | - | 1 | 231726 | | 1 | 1 |
| | 4 <i>Cordia sellowiana</i> Cham. | 1 | - | - | 2 | | 9659 | | |

Continued

Table 1. Continued.

| Order/Family | Species | Landscapes | | | | Voucher number INPA-Herbarium | Voucher number EAFM-Herbarium | Albernaz et al. 2012* | Wittmann et al. 2013** |
|------------------|------------------------------------------------------|------------|---|---|-------|-------------------------------|-------------------------------|-----------------------|------------------------|
| | | B | P | M | Total | | | | |
| Brassicales | | | | | | | | | |
| Capparaceae | 1 <i>Crateva benthamii</i> Eichler | 1 | 1 | 1 | 7 | 231671; 242960 | 8716; 8912 | 1 | 1 |
| Caricaceae | 1 <i>Jacaratia spinosa</i> (Aubl.) A. DC. | 1 | - | - | 2 | 243030; 243055 | | | |
| Caryophyllales | | | | | | | | | |
| Nyctaginaceae | 1 <i>Guapira opposita</i> (Vell.) Reitz | - | 1 | - | 2 | 231605 | | | |
| | 2 <i>Neea floribunda</i> Poepp. & Endl. | 1 | 1 | - | 3 | 231628; 242988 | | | 1 |
| | 3 <i>Neea oppositifolia</i> Ruiz & Pav | 1 | - | 1 | 20 | | 9028; 9516 | | 1 |
| | 4 <i>Neea spruceana</i> Heimerl | 1 | 1 | 1 | 23 | | 8168; 8963; 9347 | | 1 |
| Polygonaceae | 1 <i>Coccoloba densifrons</i> Mart. ex Meisn. | - | 1 | - | 1 | 240116 | | | 1 |
| | 2 <i>Coccoloba mollis</i> Casar. | - | 1 | - | 1 | 231629 | | | 1 |
| | 3 <i>Coccoloba ovata</i> Benth. | 1 | 1 | - | 4 | | 8126; 9710 | | 1 |
| | 4 <i>Coccoloba parimensis</i> Benth. | 1 | 1 | - | 4 | | 8689; 9877 | | |
| | 5 <i>Symmeria paniculata</i> Benth. | 1 | 1 | - | 7 | 240139 | 8421 | 1 | 1 |
| | 6 <i>Triplaris americana</i> L. | - | - | 1 | 1 | | 9107 | | 1 |
| | 7 <i>Triplaris pachau</i> Mart. | - | 1 | - | 3 | | 8242 | | |
| | 8 <i>Triplaris surinamensis</i> Cham. | 1 | 1 | 1 | 6 | 231702 | 9000; 9430 | 1 | VE |
| Proteaceae | 1 <i>Panopsis sessilifolia</i> (Rich.) Rich. | - | 1 | - | 1 | | 8618 | | |
| Celastrales | | | | | | | | | |
| Celastraceae | 1 <i>Hippocratea volubilis</i> L. | - | 1 | - | 1 | 231578 | | | |
| | 2 <i>Salacia cordata</i> (Miers) Mennega | - | 1 | - | 1 | 231654 | | | |
| | 3 <i>Salacia elliptica</i> (Mart. ex Schult.) G. Don | - | 1 | - | 1 | 240142 | | | |
| | 4 <i>Salacia impressifolia</i> (Miers) A.C. Sm. | - | 1 | - | 4 | | 8009 | 1 | |
| | 5 <i>Tontelea fluminensis</i> (Peyr.) A.C. Sm. | 1 | - | - | 2 | | 9684 | | |
| Ericales | | | | | | | | | |
| Ebenaceae | 1 <i>Diospyros guianensis</i> (Aubl.) Gürke | - | 1 | - | 1 | 231678 | | 1 | 1 |
| | 2 <i>Diospyros poeppigiana</i> A. DC. | - | 1 | - | 2 | 234430 | | | 1 |
| | 3 <i>Diospyrus bullata</i> A.C. Sm. | 1 | 1 | - | 4 | | 8042; 9767 | | |
| | 4 <i>Diospyrus carbonaria</i> Benoist | - | 1 | - | 2 | | 8644 | | |
| | 5 <i>Diospyrus cavalcantei</i> Sothers | 1 | 1 | - | 19 | | 8465; 9511 | | |
| Lecythidaceae | 1 <i>Couroupita subsessilis</i> Pilg. | - | 1 | 1 | 3 | 231724 | 9035 | 1 | VE |
| | 2 <i>Eschweilera albiflora</i> (DC.) Miers | 1 | 1 | - | 18 | 231618; 242932 | 8901; 9316 | 1 | 1 |
| | 3 <i>Eschweilera gigantea</i> (R. Knuth) J.F. Macbr. | - | - | 1 | 21 | | 8915 | | |
| | 4 <i>Eschweilera ovalifolia</i> (DC.) Nied. | 1 | 1 | 1 | 11 | 231709 | 8476; 8945; 9332 | | 1 |
| | 5 <i>Eschweilera parviflora</i> (Aubl.) Miers | 1 | 1 | - | 7 | | 8251; 9561 | | 1 |
| | 6 <i>Eschweilera pedicellata</i> (Rich.) S.A. Mori | 1 | 1 | - | 3 | | 8606; 9955 | | |
| | 7 <i>Eschweilera wachenheimii</i> (Benoist) Sandwith | - | 1 | - | 3 | | 8143 | | |
| | 8 <i>Gustavia augusta</i> L. | 1 | 1 | 1 | 11 | 231582 | 8617; 9140; 9503 | 1 | 1 |
| | 9 <i>Gustavia hexapetala</i> (Aubl.) Sm. | 1 | 1 | - | 4 | 242989 | 8503; 9393 | 1 | 1 |
| | 10 <i>Gustavia poeppigiana</i> O. Berg | 1 | 1 | - | 11 | | 8154; 9409 | | |
| Pentaphylacaceae | 1 <i>Ternstroemia dentata</i> (Aubl.) Sw. | - | 1 | - | 5 | 231620 | 8215 | | |
| Primulaceae | 1 <i>Cybianthus guyanensis</i> (A. DC.) Miq. | - | 1 | - | 1 | 231713 | | | |
| Sapotaceae | 1 <i>Chrysophyllum argenteum</i> Jacq. | - | 1 | - | 1 | 240109 | | 1 | 1 |
| | 2 <i>Chrysophyllum cainito</i> L. | - | 1 | - | 1 | 231732 | | | |
| | 3 <i>Chrysophyllum sparsiflorum</i> Klotzsch ex Miq. | 1 | 1 | - | 2 | 231585; 243000 | | | |
| | 4 <i>Ecclinusa guianensis</i> Eyma | - | 1 | 1 | 2 | | 8654 | | |
| | 5 <i>Manilkara inundata</i> (Ducke) Ducke | 1 | 1 | - | 6 | 234432 | 8041; 9380 | | |

Continued

Table 1. Continued.

| Order/Family | Species | Landscapes | | | | Voucher number INPA-Herbarium | Voucher number EAFM-Herbarium | Albernaz et al. 2012* | Wittmann et al. 2013** |
|-----------------|----------------------------------------------------------------------|------------|---|---|-------|-------------------------------|-------------------------------|-----------------------|------------------------|
| | | B | P | M | Total | | | | |
| | 6 <i>Micropholis egensis</i> (A. DC.) Pierre | 1 | 1 | 1 | 17 | 231738; 243054 | 8239; 9716; 9943 | 1 | 1 |
| | 7 <i>Micropholis splendens</i> Gilly ex Aubrév. | 1 | 1 | - | 15 | | 8033 | | |
| | 8 <i>Pouteria ambelaniifolia</i> (Sandwith) T.D. Penn. | - | 1 | - | 3 | | 8752 | | |
| | 9 <i>Pouteria anomala</i> (Pires) T.D. Penn. | - | 1 | - | 1 | | 8077 | 1 | |
| | 10 <i>Pouteria bilocularis</i> (H.J.P. Winkl.) Baehni | - | - | 1 | 2 | | 9085 | | |
| | 11 <i>Pouteria cuspidata</i> (A. DC.) Baehni | 1 | 1 | - | 7 | | 8096; 9335 | 1 | 1 |
| | 12 <i>Pouteria elegans</i> (A. DC.) Baehni | 1 | 1 | 1 | 36 | 231667; 243023 | 8065; 9371 | | 1 |
| | 13 <i>Pouteria filipes</i> Eyma | 1 | 1 | - | 5 | | 8026; 9387 | | |
| | 14 <i>Pouteria fimbriata</i> Baehni | 1 | - | - | 1 | | 9377 | | |
| | 15 <i>Pouteria glomerata</i> (Miq.) Radkl. | - | 1 | - | 2 | 231750 | 8145 | 1 | 1 |
| | 16 <i>Pouteria hispida</i> Eyma | - | 1 | - | 1 | | 8489 | | |
| | 17 <i>Pouteria macrophylla</i> (Lam.) Eyma | 1 | 1 | - | 7 | | 9702; 8454 | | 1 |
| | 18 <i>Pouteria minima</i> T.D. Penn. | - | 1 | - | 3 | | 8018 | | |
| | 19 <i>Pouteria pallens</i> T.D. Penn. | - | 1 | 1 | 3 | | 9100 | | |
| | 20 <i>Pouteria reticulata</i> (Engl.) Eyma | - | 1 | - | 3 | | 8032 | | 1 |
| | 21 <i>Pouteria stipulifera</i> T.D. Penn. | 1 | 1 | - | 16 | | 8005; 9353 | | |
| | 22 <i>Pradosia decipiens</i> Ducke | - | 1 | - | 1 | | 8148 | | |
| | 23 <i>Sarcaulus brasiliensis</i> (A. DC.) Eyma | - | 1 | - | 4 | 234441 | | | 1 |
| Fabales | | | | | | | | | |
| Fabaceae | | | | | | | | | |
| | 1 <i>Abarema longipedunculata</i> (H.S. Irwin) Barneby & J.W. Grimes | 1 | 1 | 1 | 10 | 231663 | 8269; 9084 | | |
| | 2 <i>Acacia lorentensis</i> J.F. Macbr. | - | - | 1 | 1 | | 9135 | | |
| | 3 <i>Acacia riparia</i> Kunth | - | 1 | - | 1 | 231599 | | | |
| | 4 <i>Acosmium nitens</i> (Vogel) Yakovlev | 1 | 1 | - | 4 | 231637 | 8663 | 1 | 1 |
| | 5 <i>Albizia subdimidiata</i> (Splitg.) Barneby & J.W. Grimes | - | 1 | - | 2 | 231737 | | | 1 |
| | 6 <i>Alexa grandiflora</i> Ducke | - | 1 | 1 | 4 | | 8252; 9092 | | |
| | 7 <i>Andira unifoliolata</i> Ducke | 1 | 1 | - | 4 | | 8458 | | |
| | 8 <i>Batesia floribunda</i> Spruce ex Benth. | 1 | 1 | 1 | 20 | | 8114; 8959; 9071; 9273 | | |
| | 9 <i>Campsiandra comosa</i> Benth. | 1 | 1 | 1 | 5 | 231625; 243038 | | | 1 |
| | 10 <i>Campsiandra laurifolia</i> Benth. | 1 | 1 | - | 4 | | 8254 | | 1 |
| | 11 <i>Cassia leiandra</i> Benth. | 1 | 1 | - | 2 | 231565; 243036 | | 1 | VE |
| | 12 <i>Cassia spruceana</i> Benth. | 1 | 1 | 1 | 31 | | 8012; 8188; 9020 | | |
| | 13 <i>Chamaecrista negrensis</i> (H.S. Irwin) H.S. Irwin & Barneby | 1 | - | - | 4 | | 9620 | | |
| | 14 <i>Clitoria amazonum</i> Mart. ex Benth. | - | 1 | - | 4 | 231598 | 8720 | | VE |
| | 15 <i>Crudia amazonica</i> Spruce ex Benth. | - | 1 | - | 1 | 231596 | | 1 | 1 |
| | 16 <i>Crudia glaberrima</i> (Steud.) J.F. Macbr. | - | 1 | - | 1 | 231655 | | | |
| | 17 <i>Cynometra bauhiniifolia</i> Benth. | 1 | 1 | - | 8 | 242961 | 8209 | 1 | 1 |
| | 18 <i>Dalbergia multiflora</i> B. Heyne & Wall. | - | 1 | - | 2 | | 8146 | 1 | |
| | 19 <i>Derris denudata</i> (Benth.) Ducke | 1 | 1 | 1 | 17 | | 8175 | | |
| | 20 <i>Dialium guianense</i> (Aubl.) Sandwith | 1 | - | - | 1 | | 9360 | 1 | 1 |
| | 21 <i>Dioclea huberi</i> Ducke | 1 | - | - | 1 | 243009 | | | |
| | 22 <i>Erythrina fusca</i> Lour. | - | - | 1 | 3 | | 9015; 9260 | | |
| | 23 <i>Hydrochorea corymbosa</i> (Rich.) Barneby & J.W. Grimes | 1 | 1 | 1 | 15 | 231647 | 8561; 8933; 9146 | 1 | 1 |
| | 24 <i>Inga capitata</i> Desv. | 1 | 1 | - | 2 | 243002 | 8174 | | 1 |
| | 25 <i>Inga cayennensis</i> Sagot ex Benth. | 1 | 1 | 1 | 17 | | 8375 | 1 | |
| | 26 <i>Inga cinnamomea</i> Spruce ex Benth. | - | 1 | - | 1 | 231617 | | | 1 |
| | 27 <i>Inga gracilifolia</i> Ducke | - | - | 1 | 2 | | 9307 | 1 | 1 |
| | 28 <i>Inga grandiflora</i> Ducke | 1 | 1 | - | 11 | 242971 | 8784 | 1 | |
| | 29 <i>Inga laurina</i> (Sw.) Willd. | - | 1 | - | 1 | | 8754 | 1 | |
| | 30 <i>Inga longiflora</i> Spruce ex Benth. | - | - | 1 | 1 | | 8974 | 1 | 1 |
| | 31 <i>Inga macrophylla</i> Humb. & Bonpl. ex Willd. | - | 1 | - | 2 | | 8522 | | |
| | 32 <i>Inga marginata</i> Willd. | - | 1 | - | 1 | | 8878 | 1 | 1 |
| | 33 <i>Inga melinonis</i> Sagot | - | 1 | - | 1 | | 8788 | | 1 |
| | 34 <i>Inga paraensis</i> Ducke | - | 1 | - | 1 | | 8070 | 1 | |
| | 35 <i>Inga pezizifera</i> Benth. | 1 | 1 | - | 2 | | 8471; 9639 | | |
| | 36 <i>Inga rhynchocalyx</i> Sandwith | 1 | 1 | - | 2 | | 8076 | | |
| | 37 <i>Inga rubiginosa</i> (Rich.) DC. | 1 | 1 | - | 8 | | 8545 | | 1 |

Continued

Table 1. Continued.

| Order/Family | Species | Landscapes | | | | Voucher number INPA-Herbarium | Voucher number EAFM-Herbarium | Albernaz et al. 2012* | Wittmann et al. 2013** |
|--------------------|------------------------------------------------------------------|------------|---|---|-------|-------------------------------|-------------------------------|-----------------------|------------------------|
| | | B | P | M | Total | | | | |
| | 38 <i>Inga sertulifera</i> DC. | - | 1 | - | 1 | 231579 | | | |
| | 39 <i>Inga splendens</i> Willd. | - | 1 | - | 2 | | 8815 | | 1 |
| | 40 <i>Inga suberosa</i> T.D. Penn. | - | 1 | - | 1 | | 8100 | | |
| | 41 <i>Inga thibaudiana</i> DC. | 1 | 1 | - | 6 | | 8804 | | 1 |
| | 42 <i>Inga umbellifera</i> (Vahl) Steud. | 1 | 1 | 1 | 6 | | 9105 | | |
| | 43 <i>Inga umbratica</i> Poepp. & Endl. | - | 1 | 1 | 8 | | 9106 | 1 | |
| | 44 <i>Inga velutina</i> Willd. | - | 1 | - | 1 | 231604 | | | 1 |
| | 45 <i>Inga vera</i> subsp. <i>eriocarpa</i> (Benth.) J. León | 1 | - | - | 1 | 242998 | | | |
| | 46 <i>Lecointea amazonica</i> Ducke | 1 | 1 | - | 3 | | 8060 | 1 | 1 |
| | 47 <i>Machaerium aristulatum</i> (Spruce ex Benth.) Ducke | 1 | - | - | 1 | 242983 | | | |
| | 48 <i>Machaerium leiophyllum</i> (DC.) Benth. | 1 | - | - | 1 | 243039 | | | |
| | 49 <i>Macrolobium acaciifolium</i> (Benth.) Benth. | 1 | 1 | 1 | 6 | 231688 | 9022; 9116 | 1 | 1 |
| | 50 <i>Macrolobium bifolium</i> (Aubl.) Pers. | 1 | 1 | - | 3 | | 8806 | 1 | 1 |
| | 51 <i>Ormosia macrocalyx</i> Ducke | 1 | 1 | - | 9 | 231566 | 8196 | 1 | 1 |
| | 52 <i>Paramachaerium ormosioides</i> (Ducke) Ducke | - | 1 | - | 1 | 231690 | | 1 | 1 |
| | 53 <i>Platymiscium ulei</i> Harms | - | - | 1 | 2 | | 8957 | 1 | VE |
| | 54 <i>Pterocarpus amazonicus</i> Huber | 1 | - | - | 1 | 242944 | 8093 | 1 | |
| | 55 <i>Pterocarpus amazonum</i> (Mart. ex Benth.) Amshoff | 1 | 1 | 1 | 27 | 231571; 243007 | | | 1 |
| | 56 <i>Senegalia loretensis</i> (J.F. Macbr.) Seigler & Ebinger | 1 | - | - | 1 | 243004 | | | |
| | 57 <i>Stryphnodendron guianense</i> (Aubl.) Benth. | - | 1 | 1 | 3 | | 8770; 9208 | 1 | |
| | 58 <i>Swartzia acuminata</i> Willd. ex Vogel | 1 | - | - | 1 | 243037 | | | 1 |
| | 59 <i>Swartzia auriculata</i> Poepp. | - | 1 | - | 2 | 231581 | | | |
| | 60 <i>Swartzia cuspidata</i> Spruce ex Benth. | 1 | - | - | 1 | 242992 | | | |
| | 61 <i>Swartzia ingifolia</i> Ducke | 1 | - | 1 | 8 | | 8940; 9099 | 1 | |
| | 62 <i>Swartzia oblanceolata</i> Sandwith | - | - | 1 | 1 | | 9313 | | |
| | 63 <i>Swartzia tomentifera</i> (Ducke) Ducke | - | - | 1 | 1 | | 9149 | | |
| | 64 <i>Tachigali physophora</i> (Huber) Zarucchi & Herend. | 1 | 1 | - | 7 | 240112 | | | |
| | 65 <i>Tachigali venusta</i> Dwyer | 1 | - | - | 1 | | 9322 | | 1 |
| | 66 <i>Vatairea guianensis</i> Aubl. | 1 | 1 | 1 | 6 | | 8374; 9006 | 1 | 1 |
| | 67 <i>Vouacapoua pallidior</i> Ducke | - | 1 | - | 3 | | 8446 | | |
| | 68 <i>Zygia cataractae</i> (Kunth) L. Rico | - | 1 | - | 1 | | 8348 | | 1 |
| | 69 <i>Zygia cauliflora</i> (Willd.) Killip | - | 1 | 1 | 12 | | 8201; 9240 | 1 | 1 |
| | 70 <i>Zygia inaequalis</i> (Humb. & Bonpl. ex Willd.) Pittier | 1 | 1 | - | 13 | 243052 | 8177 | | 1 |
| | 71 <i>Zygia juruana</i> (Harms) L. Rico | 1 | 1 | 1 | 18 | | 8008; 9197 | | 1 |
| | 72 <i>Zygia latifolia</i> (L.) Fawc. & Rendle | 1 | - | - | 1 | | 9788 | | 1 |
| | 73 <i>Zygia ramiflora</i> (F. Muell.) Kosterm. | - | - | 1 | 1 | | 8989 | | |
| Gentianales | | | | | | | | | |
| Apocynaceae | | | | | | | | | |
| | 1 <i>Himatanthus sucuuba</i> (Spruce ex Müll. Arg.) Woodson | 1 | - | - | 1 | 243014 | | | 1 |
| | 2 <i>Malouetia tamaquarina</i> var. <i>lancifolia</i> Müll. Arg. | - | 1 | - | 2 | 231577 | | | 1 |
| | 3 <i>Rhabdadenia macrostoma</i> (Benth.) Müll. Arg. | 1 | - | - | 1 | 243012 | | | |
| | 4 <i>Tabernaemontana markgrafiana</i> J.F. Macbr. | 1 | 1 | 1 | 13 | | 8062; 9372; 9403 | | |
| Rubiaceae | | | | | | | | | |
| | 1 <i>Amaioua guianensis</i> Aubl. | 1 | 1 | - | 3 | | 8318; 9513 | 1 | |
| | 2 <i>Borojoa claviflora</i> (K. Schum.) Cuatrec. | - | - | 1 | 1 | | 8965 | | |
| | 3 <i>Bothriospira corymbosa</i> (Benth.) Hook. f. | - | 1 | 1 | 5 | | 8323 | | 1 |
| | 4 <i>Calycophyllum spruceanum</i> (Benth.) Hook. f. ex K. Schum. | - | - | 1 | 1 | | 8952 | 1 | 1 |
| | 5 <i>Chomelia malaneoides</i> Müll. Arg. | - | - | 1 | 1 | | 9216 | | |
| | 6 <i>Chomelia tenuiflora</i> Benth. | - | 1 | - | 3 | 234434 | 8181 | | |
| | 7 <i>Coussarea ampla</i> Müll. Arg. | - | 1 | - | 1 | | 8791 | | |
| | 8 <i>Coussarea hirticalyx</i> Standl. | - | 1 | - | 2 | 231601 | | | |
| | 9 <i>Coussarea revoluta</i> Steyererm. | - | 1 | - | 1 | | 8684 | | |
| | 10 <i>Duroia genipoides</i> Hook. f. ex K. Schum. | 1 | 1 | - | 3 | 231570; 243053 | | | |
| | 11 <i>Duroia gransabanensis</i> Steyererm. | 1 | 1 | 1 | 10 | | 8080; 9213; 9655 | | |
| | 12 <i>Faramea sessiliflora</i> Aubl. | - | 1 | - | 1 | 240125 | | | |
| | 13 <i>Ferdinandusa goudotiana</i> K. Schum. | - | 1 | - | 2 | | 8190 | | |
| | 14 <i>Ferdinandusa speciosa</i> (Pohl) Pohl | - | 1 | - | 2 | | 8585 | | |
| | 15 <i>Genipa spruceana</i> Steyererm. | - | 1 | - | 1 | 240145 | | | |

Continued

Table 1. Continued.

| Order/Family | Species | Landscapes | | | Voucher number INPA-Herbarium | Voucher number EAFM-Herbarium | Albermar et al. 2012* | Wittmann et al. 2013** |
|--------------------|---------------------------------------------------------------------|------------|---|---|-------------------------------|-------------------------------|-----------------------|------------------------|
| | | B | P | M | Total | | | |
| | 16 <i>Kutchubaea sericantha</i> Standl. | - | - | 1 | 1 | | | |
| | 17 <i>Psychotria hoffmannseggiana</i> (Willd. ex Schult.) Müll.Arg. | - | 1 | - | 1 | 240110 | | |
| | 18 <i>Psychotria capillacea</i> (Müll. Arg.) Standl. | 1 | - | - | 1 | 243035 | | |
| | 19 <i>Rudgea lanceifolia</i> Salisb. | 1 | 1 | - | 2 | 231627 | 9449 | |
| | 20 <i>Sickingia tinctoria</i> (Kunth) K. Schum. | 1 | 1 | 1 | 10 | | 8010; 9211; 9359 | 1 1 |
| Lamiales | | | | | | | | |
| Bignoniaceae | | | | | | | | |
| | 1 <i>Crescentia amazonica</i> Ducke | - | - | 1 | 2 | | 9262 | 1 1 |
| | 2 <i>Tabebuia ochracea</i> (Cham.) St | - | 1 | - | 1 | | 8513 | |
| Verbenaceae | | | | | | | | |
| | 1 <i>Vitex cymosa</i> Bertero ex Spreng. | 1 | - | - | 1 | 242957 | | 1 1 |
| Laurales | | | | | | | | |
| Lauraceae | | | | | | | | |
| | 1 <i>Aniba burchelli</i> Koesterm. | - | - | 1 | 2 | | 9231 | |
| | 2 <i>Aniba ferrea</i> Kubitzki | - | 1 | - | 1 | | 8820 | |
| | 3 <i>Aniba guianensis</i> Aubl. | - | 1 | - | 1 | 231630 | | 1 1 |
| | 4 <i>Aniba jenmanii</i> Mez | - | 1 | - | 1 | | 8305 | |
| | 5 <i>Aniba riparia</i> (Nees) Mez | - | 1 | 1 | 18 | | 8748; 8924 | |
| | 6 <i>Aniba santalodora</i> Ducke | - | 1 | 1 | 3 | | 8210; 9207 | |
| | 7 <i>Aniba terminalis</i> Ducke | 1 | 1 | - | 8 | | 8257 | |
| | 8 <i>Dicypellium manausense</i> W.A. Rodrigues | 1 | 1 | - | 6 | | 8296 | |
| | 9 <i>Endlicheria anomala</i> (Nees) Mez | 1 | 1 | - | 24 | 231624; 243010 | 8363 | 1 |
| | 10 <i>Endlicheria punctulata</i> (Mez) C.K. Allen | - | - | 1 | 1 | | 9267 | |
| | 11 <i>Licaria cannella</i> (Meisn.) Kosterm. | - | 1 | - | 3 | | 8214 | 1 |
| | 12 <i>Licaria martiniana</i> (Mez) Kosterm. | 1 | 1 | 1 | 10 | | 8390; 9057; 9507 | |
| | 13 <i>Licaria rodriguesii</i> H.W. Kurz | - | 1 | - | 5 | | 8108 | |
| | 14 <i>Nectandra amazonum</i> Nees | 1 | 1 | - | 5 | 234429; 242987 | | 1 1 |
| | 15 <i>Nectandra cuspidata</i> Nees & Mart. | - | - | 1 | 3 | | 8931 | |
| | 16 <i>Nectandra hihua</i> (Ruiz & Pav.) Rohwer | - | - | 1 | 5 | | 9268 | 1 |
| | 17 <i>Ocotea aciphylla</i> (Nees & Mart.) Mez | - | 1 | - | 1 | | 8575 | 1 |
| | 18 <i>Ocotea amazonica</i> (Meisn.) Mez | 1 | - | - | 4 | | 9367 | |
| | 19 <i>Ocotea cernua</i> (Nees) Mez | 1 | 1 | - | 9 | 231632; 243022 | 8068; 9342 | 1 |
| | 20 <i>Ocotea cinerea</i> van der Werff | 1 | 1 | - | 35 | | 8006; 9421 | |
| | 21 <i>Ocotea cujumary</i> Mart. | 1 | 1 | - | 2 | | 8696; 9450 | 1 |
| | 22 <i>Ocotea cymbarum</i> Kunth | - | 1 | - | 3 | | 8004 | 1 1 |
| | 23 <i>Ocotea floribunda</i> (Sw.) Mez | - | 1 | - | 5 | | 8085 | |
| | 24 <i>Ocotea leucoxydon</i> (Sw.) Laness. | - | 1 | - | 2 | | 8538 | |
| | 25 <i>Ocotea longifolia</i> Kunth | - | 1 | - | 7 | | 8086 | |
| | 26 <i>Ocotea marginata</i> (Nees) Palacky | - | 1 | - | 1 | | 8075 | |
| | 27 <i>Ocotea neblinae</i> C.K. Allen | 1 | 1 | - | 4 | | 8637; 9568 | 1 |
| | 28 <i>Ocotea nigrescens</i> Vicent. | 1 | - | - | 1 | | 9839 | |
| | 29 <i>Ocotea olivacea</i> A. C. Sm. | 1 | - | - | 1 | | 9817 | |
| | 30 <i>Ocotea percurrans</i> Vicent. | 1 | - | - | 1 | | 9664 | |
| | 31 <i>Ocotea puberula</i> (Rich.) Nees | - | 1 | 1 | 10 | | 8029; 8983 | |
| | 32 <i>Ocotea scabrella</i> van der Werff | - | 1 | 1 | 2 | | 8669; 9265 | |
| | 33 <i>Paraia bracteata</i> Rohwer, H.G. Richt. & van der Werff | 1 | 1 | - | 2 | | 8552; 9785 | |
| Magnoliales | | | | | | | | |
| Annonaceae | | | | | | | | |
| | 1 <i>Annona hypoglauca</i> Mart. | 1 | 1 | - | 7 | 231756 | 8275; 9869 | 1 1 |
| | 2 <i>Diclinanona calycina</i> (Diels) R.E. Fr. | 1 | 1 | - | 6 | | 8123; 9992 | |
| | 3 <i>Duguetia chrysea</i> Mass | - | 1 | - | 2 | 231722 | | |
| | 4 <i>Duguetia riparia</i> Huber | - | 1 | - | 1 | | 8020 | |
| | 5 <i>Duguetia spixiana</i> Mart. | - | 1 | - | 2 | 231665 | | 1 |
| | 6 <i>Duguetia stelechantha</i> (Diels) R.E. Fr. | - | 1 | - | 1 | | 8180 | |
| | 7 <i>Duguetia ulei</i> (Diels) R.E. Fr. | - | 1 | - | 1 | | 8457 | |
| | 8 <i>Fusaea longifolia</i> (Aubl.) Saff. | - | 1 | - | 5 | | 8685 | 1 |
| | 9 <i>Guatteria decurrens</i> R. E. Fr. | - | - | 1 | 1 | | 9082 | |

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Table 1. Continued.

| Order/Family | Species | Landscapes | | | | Voucher number INPA-Herbarium | Voucher number EAFM-Herbarium | Albernaz et al. 2012* | Wittmann et al. 2013** |
|---------------------|---------------------------------------------------------------|------------|---|---|-------|-------------------------------|-------------------------------|-----------------------|------------------------|
| | | B | P | M | Total | | | | |
| Myristicaceae | 10 <i>Guatteria foliosa</i> Benth. | - | 1 | 1 | 8 | 240108 | 8059; 9200 | | |
| | 11 <i>Guatteria inundata</i> Mart. | - | 1 | - | 4 | 231697 | | | 1 |
| | 12 <i>Guatteria olivacea</i> R.E.Fr. | - | 1 | - | 11 | 234458 | 8027 | 1 | |
| | 13 <i>Guatteria procera</i> R.E.Fr. | - | 1 | - | 6 | | 8069 | | |
| | 14 <i>Guatteria scytophylla</i> Diels | 1 | 1 | - | 3 | | 8067 | | |
| | 15 <i>Oxandra espintana</i> (Spruce ex Benth.) Baill. | - | 1 | - | 1 | 231707 | | | |
| | 16 <i>Oxandra riedeliana</i> R.E. Fr. | 1 | 1 | 1 | 59 | 234451 | 8412; 9281; 9453 | | 1 |
| | 17 <i>Pseudoxandra lucida</i> R.E. Fr. | - | 1 | - | 1 | 234478 | | | |
| | 18 <i>Tetrameranthus duckei</i> R.E. Fr. | 1 | - | - | 1 | | 10006 | | |
| | 19 <i>Unonopsis guatterioides</i> (A. DC.) R.E. Fr. | 1 | 1 | - | 5 | 231694; 242995 | | | 1 |
| | 20 <i>Unonopsis williamsii</i> R.E. Fr. | 1 | 1 | - | 13 | | 8023 | | |
| | 21 <i>Xylopia calophylla</i> R.E. Fr. | - | 1 | 1 | 6 | | 8030; 9002 | 1 | 1 |
| | 22 <i>Xylopia spruceana</i> Benth. ex Spruce | - | 1 | - | 1 | | 8889 | | 1 |
| Myristicaceae | 1 <i>Iryanthera juruensis</i> Warb. | 1 | 1 | - | 16 | 231656 | 9771 | | 1 |
| | 2 <i>Iryanthera laevis</i> Markgr. | 1 | - | - | 2 | | 9425 | | |
| | 3 <i>Virola calophylla</i> (Spruce) Warb. | 1 | 1 | 1 | 10 | 234464 | 8053; 8994; 9567 | 1 | |
| | 4 <i>Virola elongata</i> (Benth.) Warb. | - | 1 | - | 4 | 231639 | | 1 | 1 |
| | 5 <i>Virola pavonis</i> (A. DC.) A.C. Sm. | 1 | - | - | 1 | | 9385 | | 1 |
| | 6 <i>Virola surinamensis</i> (Rol. ex Rottb.) Warb. | - | 1 | - | 3 | | 8138 | 1 | 1 |
| Malpighiales | | | | | | | | | |
| Calophyllaceae | | | | | | | | | |
| Calophyllaceae | 1 <i>Calophyllum brasiliense</i> Cambess. | - | 1 | 1 | 5 | | 8800; 9019 | 1 | 1 |
| | 2 <i>Caraipa grandifolia</i> Mart. | 1 | 1 | - | 9 | 231666 | 9337 | | 1 |
| | 3 <i>Caraipa heterocarpa</i> Ducke | - | 1 | - | 3 | | 8300 | | |
| | 4 <i>Haplocalthra paniculata</i> (Mart.) Benth. | 1 | - | - | 2 | | 9967 | | |
| Caryocaraceae | | | | | | | | | |
| Caryocaraceae | 1 <i>Caryocar edule</i> Casar. | - | 1 | 1 | 4 | | 8554; 8978 | | |
| | 2 <i>Caryocar microcarpum</i> Ducke | - | 1 | - | 1 | 234474 | | | 1 |
| Chrysobalanaceae | | | | | | | | | |
| Chrysobalanaceae | 1 <i>Couepia guianensis</i> Aubl. | 1 | 1 | - | 3 | | 8016; 9903 | | |
| | 2 <i>Couepia paraensis</i> (Mart. & Zucc.) Benth. ex Hook. f. | 1 | 1 | - | 19 | 231619; 243042 | 8222 | | |
| | 3 <i>Hirtella hispidula</i> Miq. | 1 | 1 | - | 6 | | 8449; 9465 | | |
| | 4 <i>Licania caudata</i> Prance | 1 | - | - | 1 | | 9723 | | |
| | 5 <i>Licania coriacea</i> Benth. | - | 1 | - | 1 | | 8366 | | |
| | 6 <i>Licania heteromorpha</i> Benth. | 1 | 1 | - | 26 | 231661; 243032 | | | 1 |
| | 7 <i>Licania hypoleuca</i> Benth. | 1 | 1 | - | 13 | | 8248; 9649 | | |
| | 8 <i>Licania lata</i> J.F. Macbr | 1 | 1 | - | 17 | | 8258; 9650 | | |
| | 9 <i>Licania laxiflora</i> Fritsch | - | 1 | - | 3 | | 8495 | | |
| | 10 <i>Licania longistyla</i> (Hook. f.) Fritsch | - | 1 | - | 1 | | 8309 | 1 | 1 |
| | 11 <i>Licania macrophylla</i> Benth. | - | 1 | - | 2 | | 8007 | 1 | 1 |
| | 12 <i>Licania micrantha</i> Miq. | - | 1 | - | 1 | 231616 | | | |
| | 13 <i>Licania niloi</i> Prance | 1 | - | - | 2 | | 9957 | | |
| | 14 <i>Licania pallida</i> Spruce ex Sagot | 1 | 1 | - | 8 | 231586; 242935 | | | |
| | 15 <i>Licania sprucei</i> (Hook. f.) Fritsch | 1 | 1 | - | 5 | | 8706; 9924 | | |
| | 16 <i>Licania unguiculata</i> Prance | - | 1 | - | 1 | | 8894 | | |
| | 17 <i>Parinari excelsa</i> Sabine | 1 | 1 | - | 3 | 234444; 243047 | | 1 | 1 |
| | 18 <i>Parinari montana</i> Aubl. | 1 | - | - | 2 | | 9433 | | |
| | 19 <i>Parinari parvifolia</i> Sandwith | 1 | 1 | - | 3 | | 8751; 10000 | | |
| Clusiaceae | | | | | | | | | |
| Clusiaceae | 1 <i>Garcinia acuminata</i> Planch. & Triana | 1 | 1 | 1 | 8 | | 8055; 9080; 9384 | | |
| | 2 <i>Garcinia gardneriana</i> (Planch. & Triana) Zappi | 1 | 1 | - | 4 | 243028 | 8090 | | |
| | 3 <i>Garcinia madruno</i> (Kunth) Hammel | - | 1 | - | 1 | 234469 | | | 1 |
| | 4 <i>Rhedia floribunda</i> (Miq.) Planch. & Triana | - | 1 | - | 3 | 231653 | | | |
| | 5 <i>Tovomitia acutiflora</i> M. S. Barros & G. Mariz | 1 | 1 | - | 4 | 231589; 242982 | | | |
| | 6 <i>Tovomitia choisyana</i> Planch. & Triana | 1 | 1 | - | 7 | 231651; 242994 | 9330 | | |
| | 7 <i>Tovomitia grata</i> Sandwith | 1 | - | - | 1 | | 9705 | | |

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Table 1. Continued.

| Order/Family | Species | Landscapes | | | | Voucher number INPA-Herbarium | Voucher number EAFM-Herbarium | Albernaz et al. 2012* | Wittmann et al. 2013** |
|-----------------|----------------------------------------------------|------------|---|---|-------|-------------------------------|-------------------------------|-----------------------|------------------------|
| | | B | P | M | Total | | | | |
| Dichapetalaceae | 8 <i>Tovomita humilis</i> Ducke | - | 1 | - | 2 | 231747 | | | |
| | 9 <i>Tovomita umbellata</i> Benth. | 1 | - | - | 1 | | 9950 | | 1 |
| | 1 <i>Tapura juruana</i> (Ule) Rizzini | - | 1 | - | 15 | 234433 | 8487 | | 1 |
| Erythroxylaceae | 1 <i>Erythroxylum kapplerianum</i> Peyr. | 1 | 1 | - | 6 | 240137; 242942 | 8829 | | 1 |
| Euphorbiaceae | 1 <i>Alchornea discolor</i> Poepp. | 1 | 1 | - | 5 | | 8672; 9514 | | 1 |
| | 2 <i>Conceveiba guianensis</i> Aubl. | 1 | - | 1 | 2 | 243017 | | | |
| | 3 <i>Croton lanjouwiansis</i> Jabl. | - | 1 | - | 3 | | 8624 | | |
| | 4 <i>Glycydendron amazonicum</i> Ducke | - | 1 | - | 3 | | 8127 | 1 | 1 |
| | 5 <i>Hevea spruceana</i> (Benth.) Müll. Arg. | 1 | 1 | 1 | 6 | 231594; 242956 | 9104; 9641 | 1 | 1 |
| | 6 <i>Hura crepitans</i> L. | 1 | 1 | - | 2 | | 8139; 9358 | 1 | 1 |
| | 7 <i>Mabea nitida</i> Spruce ex Benth. | - | 1 | 1 | 3 | 231753 | 9214 | | 1 |
| | 8 <i>Mabea occidentalis</i> Benth. | - | 1 | - | 1 | 231613 | | | |
| | 9 <i>Mabea paniculata</i> Spruce ex Benth. | 1 | 1 | - | 2 | 240131 | | | |
| | 10 <i>Mabea speciosa</i> Müll. Arg. | 1 | - | 1 | 4 | | 9418 | | |
| | 11 <i>Mabea subsessilis</i> Pax & K. Hoffm. | - | 1 | - | 4 | | 8715 | 1 | |
| | 12 <i>Mabea taquari</i> Aubl. | - | 1 | - | 2 | 231635 | | | |
| | 13 <i>Pera glabrata</i> (Schott) Poepp. ex Baill. | - | 1 | 1 | 9 | | 8467; 9229 | | |
| | 14 <i>Sapium glandulosum</i> (L.) Morong | 1 | 1 | 1 | 7 | | 8039; 9234; 9820 | 1 | 1 |
| | 15 <i>Sapium marmieri</i> Huber | - | 1 | - | 2 | | 8046 | 1 | 1 |
| | 16 <i>Sapium obovatum</i> Klotzsch ex Müll. Arg. | - | 1 | - | 1 | 234445 | | | |
| Humiriaceae | 1 <i>Sacoglottis ceratocarpa</i> Ducke | - | 1 | - | 6 | | 8904 | | |
| | 2 <i>Sacoglottis guianensis</i> Benth. | - | 1 | - | 2 | 240129 | | | 1 |
| Hypericaceae | 1 <i>Vismia gracilis</i> Hieron. | 1 | 1 | - | 4 | | 8808; 9762 | | |
| | 2 <i>Vismia japurensis</i> Reichardt | - | 1 | - | 1 | 240141 | | | |
| | 3 <i>Vismia macrophylla</i> Kunth | 1 | 1 | 1 | 5 | | 8137; 9014; 9761 | | 1 |
| Ixonanthaceae | 1 <i>Cyrtolopsis paraensis</i> Kuhlm. | - | 1 | - | 1 | | 8796 | | |
| Lacistemataceae | 1 <i>Lacistema aggregatum</i> (P.J. Bergius) Rusby | - | 1 | - | 5 | 231731 | 8183 | | 1 |
| | 2 <i>Lacistema grandifolium</i> Schnizl. | 1 | - | - | 9 | | 9376 | | |
| Malpighiaceae | 1 <i>Byrsonima densa</i> (Poir.) DC. | - | 1 | - | 1 | 231563 | | | |
| | 2 <i>Byrsonima japurensis</i> A. Juss. | 1 | 1 | - | 14 | 231708; 242962 | | 1 | |
| | 3 <i>Glandonia macrocarpa</i> Griseb. | 1 | 1 | 1 | 8 | 240114 | 8948; 9612 | | |
| | 4 <i>Heteropterys orinocensis</i> (Kunth) A. Juss. | 1 | - | - | 3 | 242966 | | | |
| Ochnaceae | 1 <i>Ouratea castaneifolia</i> (DC.) Engl. | - | 1 | - | 1 | | 8144 | | |
| | 2 <i>Ouratea cearensis</i> (Tiegh.) Sastre | 1 | 1 | - | 5 | 231562; 242970 | | | |
| | 3 <i>Ouratea discophora</i> Ducke | - | 1 | - | 1 | 231574 | | | |
| | 4 <i>Ouratea odora</i> Poepp. ex Engl. | - | 1 | - | 2 | | 8667 | | |
| | 5 <i>Quiina rhytidopus</i> Tul. | 1 | 1 | - | 10 | | 8620; 9644 | 1 | 1 |
| Picrodendraceae | 1 <i>Piranhea trifoliata</i> Baill. | 1 | 1 | - | 5 | 231677; 243048 | | 1 | 1 |
| Phyllantaceae | 1 <i>Amanoa oblongifolia</i> Müll. Arg. | - | 1 | - | 2 | 234457 | | 1 | 1 |
| | 1 <i>Discocarpus brasiliensis</i> Klotzsch | 1 | 1 | - | 57 | 234449 | 9530 | | VE |
| Putranjivaceae | 1 <i>Drypetes amazonica</i> Steyerl. | - | 1 | - | 1 | 231710 | | 1 | 1 |
| | 2 <i>Drypetes variabilis</i> Uittien | 1 | 1 | 1 | 34 | | 8200; 9095; 9666 | | 1 |
| Salicaceae | 1 <i>Banara arguta</i> Briq. | - | 1 | - | 2 | 231745 | | 1 | |
| | 2 <i>Banara guianensis</i> Aubl. | 1 | 1 | 1 | 6 | | 8563; 9254; 9628 | | 1 |

Continued

Table 1. Continued.

| Order/Family | Species | Landscapes | | | | Voucher number INPA-Herbarium | Voucher number EAFM-Herbarium | Albernaz et al. 2012* | Wittmann et al. 2013** |
|-----------------|-------------------------------------------------------------------|------------|---|---|-------|-------------------------------|-------------------------------|-----------------------|------------------------|
| | | B | P | M | Total | | | | |
| Violaceae | 3 <i>Banara nitida</i> Spruce ex Benth. | - | 1 | - | 2 | 234453 | | | 1 |
| | 4 <i>Casearia aculeata</i> Jacq. | - | 1 | - | 2 | 231597 | | 1 | 1 |
| | 5 <i>Homalium guianense</i> (Aubl.) Oken | 1 | 1 | - | 7 | | 8447; 9629 | | 1 |
| | 6 <i>Homalium racemosum</i> Jacq. | 1 | 1 | - | 14 | 231557; 242950 | 8344 | | |
| | 7 <i>Laetia corymbulosa</i> Spruce ex Benth. | 1 | 1 | 1 | 23 | 231657; 243051 | | 1 | VE |
| | 8 <i>Laetia cupulata</i> Spruce ex Benth. | - | 1 | 1 | 8 | | 8646; 9114 | | |
| | 9 <i>Salix martiana</i> Leyb. | - | - | 1 | 1 | | 9293 | | VE |
| | 10 <i>Xylosma benthamii</i> (Tul.) Triana & Planch. | 1 | - | 1 | 3 | | 9138; 9676 | | 1 |
| | 1 <i>Amphirrhox surinamensis</i> Eichler | - | 1 | - | 4 | | 8608 | 1 | |
| | 2 <i>Leonia crassa</i> L.B. Sm. & A. Fernández | - | 1 | - | 1 | 231686 | | | 1 |
| Malvales | 3 <i>Leonia glycyarpa</i> Ruiz & Pav. | 1 | 1 | 1 | 11 | 231584 | 9192; 9388 | | 1 |
| | 4 <i>Rinorea macrocarpa</i> L.B. Sm. & A. Fernández | - | 1 | - | 1 | 231712 | | | |
| Malvaceae | 1 <i>Guazuma ulmifolia</i> Lam. | - | - | 1 | 8 | | 8955 | 1 | 1 |
| | 2 <i>Luehea cymulosa</i> Spruce ex Benth. | 1 | 1 | 1 | 10 | 231560; 243026 | | 1 | 1 |
| | 3 <i>Pachira insignis</i> (Sw.) Sw. ex Savigny | - | - | 1 | 3 | | 8990 | | 1 |
| | 4 <i>Pseudobombax munguba</i> (Mart.) Dugand | - | 1 | 1 | 2 | | 9063 | | 1 |
| | 5 <i>Quararibea ochrocalyx</i> (K. Schum.) Vischer | - | 1 | - | 2 | | 8104 | 1 | 1 |
| | 6 <i>Sterculia apetala</i> (Jacq.) H. Karst. | - | 1 | - | 1 | | 8142 | | 1 |
| Thymelaeaceae | 1 <i>Schoenobiblus daphnoides</i> Mart. | - | 1 | - | 1 | | 8826 | | |
| Myrtales | | | | | | | | | |
| Combretaceae | | | | | | | | | |
| | 1 <i>Buchenavia grandis</i> Ducke | 1 | 1 | - | 5 | | 8671; 9604 | | |
| | 2 <i>Buchenavia guianensis</i> (Aubl.) Alwan & Stace | 1 | - | - | 2 | | 9722 | | |
| | 3 <i>Buchenavia oxycarpa</i> (Mart.) Eichler | - | 1 | - | 2 | 231762 | | 1 | |
| | 4 <i>Buchenavia tetraphylla</i> (Aubl.) R.A. Howard | 1 | 1 | - | 2 | | 8734 | | |
| | 5 <i>Terminalia amazonia</i> (J.F. Gmel.) Exell | 1 | 1 | - | 3 | | 8151; 9317 | | 1 |
| Melastomataceae | | | | | | | | | |
| | 1 <i>Miconia spichigeri</i> Wurdack | - | 1 | - | 1 | | 8849 | | |
| | 2 <i>Mouriri acutiflora</i> Naudim | 1 | - | - | 1 | | 9778 | 1 | 1 |
| | 3 <i>Mouriri collocarpa</i> Ducke | 1 | - | - | 1 | | 9674 | | |
| | 4 <i>Mouriri duckeana</i> Morley | 1 | 1 | - | 2 | | 8582; 9851 | | |
| | 5 <i>Mouriri ficoides</i> Morley | 1 | 1 | - | 7 | | 8355; 9334 | | |
| | 6 <i>Mouriri grandiflora</i> DC. | - | 1 | - | 5 | | 8112 | | 1 |
| | 7 <i>Mouriri guianensis</i> Aubl. | 1 | 1 | - | 2 | 234479; 243050 | | | 1 |
| | 8 <i>Mouriri nigra</i> (DC.) Morley | - | 1 | - | 4 | | 8266 | | 1 |
| | 9 <i>Mouriri trunciflora</i> Ducke | 1 | 1 | - | 10 | | 8171; 9416 | | |
| Myrtaceae | | | | | | | | | |
| | 1 <i>Calyptanthes bipennis</i> O. Berg | 1 | - | - | 1 | 242939 | | | |
| | 2 <i>Calyptanthes crebra</i> McVaugh | 1 | 1 | - | 4 | 231564; 242964 | | | 1 |
| | 3 <i>Calyptanthes cuspidata</i> DC. | - | 1 | - | 1 | | 8652 | | |
| | 4 <i>Calyptanthes forsteri</i> O.Berg | 1 | - | - | 1 | | 9818 | | 1 |
| | 5 <i>Calyptanthes irregularis</i> Sobral, M.A.D. Souza & B. Luize | 1 | 1 | - | 3 | 231676; 242940; 243025 | | | |
| | 6 <i>Calyptanthes macrophylla</i> O. Berg | - | 1 | - | 3 | 234446 | | | |
| | 7 <i>Calyptanthes paniculata</i> Ruiz & Pav. | - | 1 | - | 1 | 231729 | | | |
| | 8 <i>Calyptanthes polyantha</i> O. Berg | 1 | 1 | - | 6 | 231631; 242963 | | | |
| | 9 <i>Calyptanthes spruceana</i> O.Berg | 1 | 1 | - | 2 | 231607 | | | |
| | 10 <i>Eugenia agathopoda</i> Diels | - | 1 | - | 1 | | 8792 | | |
| | 11 <i>Eugenia biflora</i> (L.) DC. | 1 | 1 | - | 47 | | 8740; 9345 | | |
| | 12 <i>Eugenia citrifolia</i> Poir. | 1 | 1 | - | 5 | | 8019 | | |
| | 13 <i>Eugenia cupulata</i> Amshoff | - | 1 | - | 1 | | 8802 | | |
| | 14 <i>Eugenia cuspidifolia</i> DC. | - | 1 | 1 | 11 | | 8389; 9206 | | |
| | 15 <i>Eugenia diplocampta</i> Diels | - | 1 | - | 5 | | 8649 | | |
| | 16 <i>Eugenia ferreiraeana</i> O. Berg | - | 1 | - | 6 | | 8588 | | |

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| Order/Family | Species | Landscapes | | | | Voucher number INPA-Herbarium | Voucher number EAFM-Herbarium | Albernaz et al. 2012* | Wittmann et al. 2013** |
|---------------------|-------------------------------------------------------------|------------|---|---|-------|-------------------------------|-------------------------------|-----------------------|------------------------|
| | | B | P | M | Total | | | | |
| | 17 <i>Eugenia florida</i> DC. | 1 | 1 | 1 | 14 | | 9346 | 1 | |
| | 18 <i>Eugenia illepida</i> McVaugh | - | 1 | - | 2 | | 8907 | | |
| | 19 <i>Eugenia inundata</i> DC. | - | 1 | - | 1 | 234483 | | | |
| | 20 <i>Eugenia longiracemosa</i> Kiaersk. | - | 1 | - | 1 | | 8362 | | |
| | 21 <i>Eugenia marowynensis</i> Miq. | - | 1 | - | 1 | 234459 | | 1 | |
| | 22 <i>Eugenia omissa</i> Mc Vaugh | - | 1 | - | 2 | | 8727 | | |
| | 23 <i>Eugenia pseudopsidium</i> Jacq. | 1 | 1 | - | 29 | | 8186; 9375 | | |
| | 24 <i>Eugenia punicifolia</i> (Kunth) DC. | - | 1 | - | 2 | | 8707 | | |
| | 25 <i>Eugenia stylaris</i> McVaugh | - | 1 | - | 4 | | 8529 | | |
| | 26 <i>Eugenia tapacumensis</i> O. Berg | 1 | 1 | 1 | 7 | | 8217; 9204; 9707 | | |
| | 27 <i>Myrcia aliena</i> McVaugh | 1 | - | - | 1 | | 9390 | | |
| | 28 <i>Myrcia amazonica</i> DC. | - | 1 | - | 2 | | 8660 | | |
| | 29 <i>Myrcia citrifolia</i> (Aubl.) Urb. | 1 | - | - | 1 | | 9913 | | |
| | 30 <i>Myrcia floribunda</i> Miq. | - | 1 | - | 1 | | 8597 | | |
| | 31 <i>Myrcia gigas</i> McVaugh | - | - | 1 | 1 | | 9162 | | |
| | 32 <i>Myrcia paivae</i> O. Berg | - | 1 | 1 | 5 | | 8022; 9191 | | |
| | 33 <i>Myrcia rufipila</i> McVaugh | 1 | 1 | - | 10 | | 8178; 9475 | | |
| | 34 <i>Myrcia servata</i> McVaugh | 1 | - | - | 2 | | 9373; 9872; 9442 | | |
| | 35 <i>Myrcia splendens</i> (Sw.) DC. | 1 | 1 | - | 12 | | 8071 | | |
| | 36 <i>Myrcia subsericea</i> A. Gray | - | - | 1 | 1 | | 9067 | | |
| | 37 <i>Plinia involucrata</i> (O. Berg) McVaugh | - | 1 | - | 1 | 240127 | | | |
| | 38 <i>Psidium acutangulum</i> DC. | 1 | 1 | - | 17 | 240144 | | 1 | 1 |
| | 39 <i>Syzygium cumini</i> (L.) Skeels | 1 | - | - | 3 | | 10048 | | |
| Oxalidales | | | | | | | | | |
| Connaraceae | | | | | | | | | |
| | 1 <i>Rourea amazonica</i> (Baker) Radlk. | 1 | 1 | - | 13 | 231569; 242959 | 8326 | | |
| Elaeocarpaceae | | | | | | | | | |
| | 1 <i>Sloanea fendleriana</i> Benth. | 1 | - | - | 1 | 243019 | | | |
| | 2 <i>Sloanea floribunda</i> Spruce ex Benth. | - | 1 | - | 2 | 231736 | | | 1 |
| | 3 <i>Sloanea garckeana</i> K. Schum. | - | 1 | - | 1 | 234484 | | 1 | |
| | 4 <i>Sloanea guianensis</i> (Aubl.) Benth. | - | 1 | - | 7 | 231719 | | | 1 |
| | 5 <i>Sloanea latifolia</i> (Rich.) K. Schum. | 1 | 1 | 1 | 15 | | 8220; 9190; 10026 | | |
| | 6 <i>Sloanea pubescens</i> Benth. | - | 1 | 1 | 7 | | 8860; 8946 | | |
| | 7 <i>Sloanea rufa</i> Planch. ex Benth. | - | 1 | - | 2 | | 8453 | | |
| | 8 <i>Sloanea schomburgkii</i> Spruce ex Benth. | 1 | 1 | - | 10 | | 8263; 10019 | | |
| Picramniales | | | | | | | | | |
| Picramniaceae | | | | | | | | | |
| | 1 <i>Picramnia latifolia</i> Tul. | - | 1 | - | 1 | 231727 | | | |
| Rosales | | | | | | | | | |
| Moraceae | | | | | | | | | |
| | 1 <i>Brosimum guianense</i> (Aubl.) Huber | - | 1 | - | 3 | 231767 | | 1 | 1 |
| | 2 <i>Brosimum lactescens</i> (S. Moore) C.C. Berg | 1 | 1 | - | 19 | 231767 | | | 1 |
| | 3 <i>Ficus catappifolia</i> Kunth & Bouché | 1 | - | - | 1 | 231649 | | | |
| | 4 <i>Ficus insipida</i> Willd. | - | - | 1 | 5 | | 8972 | | |
| | 5 <i>Ficus maxima</i> Mill. | - | 1 | 1 | 3 | | 8769; 9075 | | 1 |
| | 6 <i>Ficus obtusifolia</i> Kunth | 1 | - | - | 1 | | 9981 | | |
| | 7 <i>Ficus pakkensis</i> Standl. | - | 1 | 1 | 2 | | 8427; 9227 | | |
| | 8 <i>Ficus popenoei</i> Standl. | 1 | - | - | 1 | | 9392 | | |
| | 9 <i>Ficus subapiculata</i> (Miq.) Miq | 1 | 1 | 1 | 3 | | 8900; 9964 | | |
| | 10 <i>Ficus trigona</i> L.f. | 1 | 1 | - | 4 | | 8343; 9965 | 1 | 1 |
| | 11 <i>Ficus trigonata</i> L. | - | 1 | - | 1 | 231716 | | | |
| | 12 <i>Helicostylis scabra</i> (J.F. Macbr.) C.C. Berg | 1 | 1 | - | 6 | | 8634; 9844 | | 1 |
| | 13 <i>Helicostylis tomentosa</i> (Poepp. & Endl.) Rusby | 1 | - | - | 1 | | 9427 | | |
| | 14 <i>Maclura tinctoria</i> (L.) D. Don ex Steud. | - | 1 | 1 | 4 | | 9126 | 1 | 1 |
| | 15 <i>Maquira coriacea</i> (H. Karst.) C.C. Berg | 1 | 1 | - | 11 | | 8850; 9389 | 1 | 1 |
| | 16 <i>Naucleopsis ternstroemiiflora</i> (Mildbr.) C.C. Berg | - | 1 | 1 | 7 | | 8015; 9027 | | 1 |
| | 17 <i>Pseudolmedia laevigata</i> Trécul | 1 | 1 | - | 4 | | 8044; 10022 | | 1 |
| | 18 <i>Sorocea duckei</i> W.C. Burger | 1 | - | 1 | 2 | 242931 | | 1 | VE |
| | 19 <i>Sorocea guilleminiana</i> Gaudich. | 1 | 1 | - | 8 | | 8549; 10034 | 1 | |

Continued

Table 1. Continued.

| Order/Family | Species | Landscapes | | | Voucher number INPA-Herbarium | Voucher number EAFM-Herbarium | Albernaz et al. 2012* | Wittmann et al. 2013** |
|-------------------|----------------------------------------------------------------|------------|---|---|-------------------------------|-------------------------------|-----------------------|------------------------|
| | | B | P | M | Total | | | |
| Rhamnaceae | 20 <i>Sorocea muriculata</i> Miq. | - | - | 1 | 1 | 9074 | 1 | |
| | 21 <i>Sorocea pubivena</i> Hemsl. | 1 | - | 1 | 4 | 9305 | | |
| | 22 <i>Trymatococcus amazonicus</i> Poepp. & Endl. | - | 1 | 1 | 3 | 8387 | 1 | |
| | 1 <i>Colubrina glandulosa</i> Perkins | 1 | 1 | - | 8 | 8182; 9490 | | |
| Urticaceae | 1 <i>Cecropia latiloba</i> Miq. | - | - | 1 | 1 | 9013 | 1 | 1 |
| Santalales | | | | | | | | |
| Olacaceae | | | | | | | | |
| | 1 <i>Aptandra tubicina</i> (Poepp.) Benth. ex Miers | - | 1 | - | 2 | 8084 | | 1 |
| | 2 <i>Chaunochiton kappleri</i> (Sagot ex Engl.) Ducke | - | 1 | - | 1 | 8496 | | |
| | 3 <i>Heisteria acuminata</i> (Bonpl.) Engl. | 1 | 1 | - | 8 | 231623; 242943 | 1 | 1 |
| | 4 <i>Minquartia guianensis</i> Aubl. | - | 1 | - | 1 | 8161 | 1 | 1 |
| Sapindales | | | | | | | | |
| Anacardiaceae | | | | | | | | |
| | 1 <i>Spondias mombin</i> L. | - | 1 | 1 | 5 | 231728 | 1 | 1 |
| | 2 <i>Tapirira guianensis</i> Aubl. | - | 1 | - | 1 | 8797 | | 1 |
| | 3 <i>Tapirira retusa</i> Ducke | - | 1 | - | 1 | 8811 | | |
| Burseraceae | 1 <i>Protium strumosum</i> D.C. Daly | 1 | - | - | 2 | 9975 | | |
| Meliaceae | | | | | | | | |
| | 1 <i>Guarea guidonia</i> (L.) Sleumer | - | 1 | 1 | 9 | 8092; 9251 | 1 | 1 |
| | 2 <i>Guarea pubescens</i> (Rich.) A. Juss. | 1 | - | - | 1 | 243003 | | |
| | 3 <i>Trichilia cipo</i> (A. Juss.) C. DC. | 1 | - | 1 | 2 | 9243 | 1 | 1 |
| | 4 <i>Trichilia guianensis</i> Klotzsch ex C. DC. | - | 1 | - | 2 | 234439 | | |
| | 5 <i>Trichilia martiana</i> C. DC. | - | 1 | - | 2 | 234436 | | |
| | 6 <i>Trichilia pleeana</i> (A. Juss.) C. DC. | - | 1 | 1 | 5 | 8054; 9096 | | 1 |
| | 7 <i>Trichilia poeppigii</i> C. DC. | - | 1 | - | 1 | 234438 | | |
| | 8 <i>Trichilia rubra</i> C. DC. | 1 | 1 | - | 4 | 8028; 9926 | | 1 |
| Rutaceae | 1 <i>Zanthoxylum compactum</i> (Huber ex Albuq.) P.G. Waterman | - | 1 | - | 5 | 231608 | 8701 | 1 |
| Sapindaceae | | | | | | | | |
| | 1 <i>Allophylus amazonicus</i> (Mart.) Radlk. | 1 | 1 | - | 5 | 231572 | 1 | 1 |
| | 2 <i>Cupania scrobiculata</i> Rich. | - | 1 | 1 | 19 | 231593 | | |
| | 3 <i>Matayba macrostylis</i> Radlk. | 1 | 1 | - | 5 | 231698; 243046 | 1 | |
| | 4 <i>Matayba purgans</i> (Poepp.) Radlk. | 1 | 1 | 1 | 30 | 8233; 9032; 9731 | | |
| | 5 <i>Paullinia alata</i> G. Don | 1 | - | - | 1 | 243024 | | |
| | 6 <i>Talisia firma</i> Radlk. | - | 1 | - | 1 | 8763 | | |
| Simaroubaceae | 1 <i>Simaba guianensis</i> Aubl. | 1 | 1 | - | 4 | 8674; 9443 | | 1 |