

Preliminary Angiosperm Checklist in an Area South of the Madeira River, Manicoré, Amazonas, Brazil

Caroliny Almeida Coelho^{a*}, Marta Regina da Silva Pereira^b, Bruno Sampaio Amorim^{c,d}

^a Universidade do Estado do Amazonas, Manicoré, 69280-000, Amazonas, Brazil.* caarolinyalmeida07@gmail.com

^b Instituto Nacional de Pesquisas da Amazônia, Manaus, 69067-375, Amazonas, Brazil.

^c Programa de Pós-Graduação em Biotecnologia e Recursos Naturais, Universidade do Estado do Amazonas, Manaus, 69058-807, Amazonas, Brazil.

^d Museu da Amazônia, Manaus, 69099-415, Amazonas, Brazil.

Received: September 14, 2019 / Accepted: November 21, 2019 / Published online: January 20, 2020

Abstract

Due to the large extent of the Amazon rainforest, research has historically focused on easily accessible locations. Thus, much of this region has little information available about its richness and plant distribution. Located south of the Madeira river, Municipality of Manicoré has a high number of phytophysiognomies, which may indicate the existence of a greater diversity of plant species. Therefore, from the compilation of previously collected records and based on botanical expeditions, this study evaluated the diversity and richness of angiosperms in Manicoré. We found 801 species, 409 genera and 106 families. Our data record 47 new occurrences for Amazonas State. Of these new occurrences, 12 are also the first record for the northern region. In addition, we have identified a new vine species of the genus *Mandevilla* Lindl. Given the well-known sample deficiency of the Amazon region, and considering the countless anthropogenic pressures that cities south of the Madeira river have been facing, knowledge of flora becomes increasingly urgent.

Keywords: Brazilian Flora, Amazon Rainforest, Collection Gaps, Taxonomic novelties, Anthropogenic Pressures.

Checklist preliminar de angiospermas em uma área ao sul do rio Madeira, Manicoré, Amazonas, Brasil

Resumo

Devido a grande extensão da Floresta Amazônica, historicamente as pesquisas tem se concentrado em locais de fácil acesso. Sendo assim, grande parte desta região apresenta poucas informações disponíveis sobre sua riqueza e distribuição de plantas. Localizado ao sul do rio Madeira, o município de Manicoré apresenta um elevado número de fitofisionomias, o que pode indicar a existência de uma maior diversidade de espécies vegetais. Diante disso, o objetivo deste trabalho é avaliar a diversidade e riqueza de angiospermas do município de Manicoré, a partir da compilação de registros coletados anteriormente e da realização de expedições botânicas. Foram listadas 801 espécies, 409 gêneros e 106 famílias. Nossos dados registram 47 novas ocorrências para o Estado do Amazonas, sendo que destas novas ocorrências, 12 são também o primeiro registro para a Região Norte. Além disso, identificamos uma nova espécie de trepadeira do gênero *Mandevilla* Lindl. Diante da conhecida deficiência amostral da região Amazônica, e considerando as inúmeras pressões antrópicas que os municípios da região sul do rio Madeira vem enfrentando, o conhecimento da flora se torna cada vez mais urgente.

Palavras-chave: Flora brasileira, Floresta Amazônica, Lacunas de coletas, Novidades taxonômicas, Pressões antrópicas.

Introduction

The Amazon rainforest is an extensive cluster of landscapes and ecosystems that form an exuberant mosaic of vegetation and hydrography. Its area covers 8 million km², distributed in nine South American countries (Araújo, 2008; Porto-Gonçalves, 2015). It is the largest tropical rainforest in the world, being considered the largest reservoir of biodiversity on the planet (Porto-Gonçalves, 2015), besides being the main source of all biodiversity in the neotropical region (Antonelli *et al.*, 2018).

Despite containing all this biodiversity, much of the Amazon rainforest is still unknown and for many reasons the most of its area remain undersampled (Hopkins, 2007; ter Steege *et al.*, 2016). Approximately 33,300 angiosperm species are listed for Brazil, of which more than 12,000 occur in the Amazon and more than 8,500 in Amazonas State (Flora do Brasil 2020, under construction). However, estimates of the total number of species are much higher (BFG, 2015; ter Steege *et al.*, 2016; Domingos *et al.*, 2017). Due to the large extent of the Amazon rainforest, research

has focused on easily accessible locations such as forest areas near the urban centers of large cities (Hopkins, 2007; BFG, 2015). Thus, much of the Amazon basin, in hard-to-reach areas, has little available information about its richness and plant distribution (Hopkins, 2007, 2019; Forzza *et al.*, 2010).

The Madeira river, which makes up the Amazon basin, has a total length of approximately 3,240 km, of which about 1,425 km are located in Brazil (Siqueira, 2013). Located on the south side of the river, the municipality of Manicoré has a high number of plant typologies, which may indicate a great diversity of plant species (Silva & Pereira, 2005). Nevertheless, Manicoré is inserted in an area of little botanical research, with a high proportion of unidentified species, and is likely to contain many species not yet described (Hopkins, 2007; Forzza *et al.*, 2010; BFG, 2015; ter Steege *et al.*, 2016).

Considering anthropogenic actions aimed at economic interests, such as illegal logging and timber processing (Fearnside, 2006), land grabs (Silva & Pereira, 2005; Carvalho, 2010), and the existence of countless gold rafts that cause siltation of rivers and can destroy vegetation even before it is known (Siqueira, 2013), it is essential to draw up a floristic list for the municipality.

Therefore, this study evaluated the diversity and richness of angiosperms in Manicoré and recorded new species for the Amazon.

Materials and Methods

Study area characterization

The municipality of Manicoré (05° 48'33" S, 61° 18' 01" W) covers an area of approximately 48,315 km² and is located in northern Brazil, south of Amazonas State, on the banks of the Madeira river (IBGE, 2017; Figure 1).

According to the Köppen classification, the climate of the region is type Am, monsoon, with annual rainfall ranging from

2,250 mm to 2,750 mm. The highest rainfall rates occur from January to March, with a short dry season in July (Brasil, 1978). The average annual temperature ranges from 24 °C to 26 °C, and the relative humidity is very high, ranging from 85 to 90% (Brasil, 1978). The topography is flat, with well-drained soil, predominantly classified as Alic Yellow Latosol - A, originated from sediments of the Solimões Formation. The litter layer reaches approximately 10 cm in height (Brasil, 1978).

The vegetation cover of the area is predominantly classified as Lowland Dense Ombrophilous Forest in association with other plant typologies, accounting for approximately 65.4% of the existing natural vegetation (Silva & Pereira, 2005; Figure 2). Other registered vegetation types are Submontane Dense Ombrophilous Forests and, along the main rivers, Open Alluvial Ombrophilous Forests and Dense Alluvial Ombrophilous Forests occur to a lesser extent (IBGE, 2004).

Data collection

Records of angiosperm collections in Manicoré were obtained from the database of the Herbarium Collection of the National Institute for Amazonian Research - INPA and from the digital collection of the Environmental Information Reference Center - CRIA (2018), via consultation in the collections of the following herbaria: ASU, BHCB, CEN, CGMS, EAFM, HRCB, HUEFS, HUFJSJ, NYBG, MBM, MO, RON, SP, SPF, UB, UEC, UFG, UNOP, UPCB, and US, from May to August 2018 (herbarium acronyms according to Thiers, continuously updated).

With the purpose of collecting new samples for the region, 28 botanical expeditions were carried out from May 2018 to February 2019 through random walks in forest areas of different phytophysognomies. These expeditions prioritized 'terra firme' forests, meadows, and campinaranas, totaling approximately 90h of field sampling in these areas.

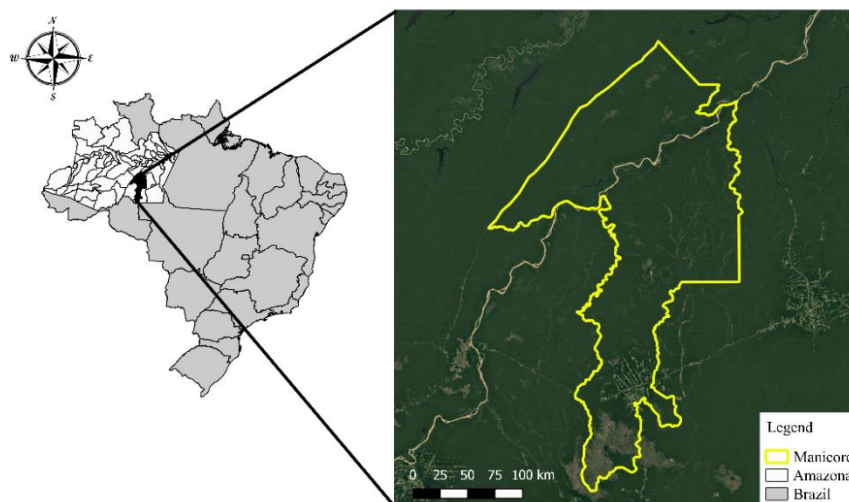


Figure 1. Municipality of Manicoré, Amazonas State, Brazil.

The botanical material was collected according to guidelines for herbarium collection (Peixoto & Maia, 2013).

To classify species habit, the definitions presented by Gonçalves and Lorenzi (2007) were considered. For the

samples obtained from the herbarium database, the habits described by the collectors were considered.

To identify the species, we used specialized bibliographies and comparisons between images available in

the digital herbarium of the Botanical Garden of Rio de Janeiro - JABOT (2018), CRIA (2018), and Flora do Brasil 2020 (under construction), in addition to consultations with experts. After identification, the material was incorporated into the

INPA herbarium, with duplicates in the HUEFS, RB, and UPF herbariums (herbarium acronyms according to Thiers, continuously updated).



Figure 2. Phytophysionomies. A. Lowland Dense Ombrophilous Forest. B. Lowland Dense Ombrophilous Forest associated with Palm Trees. C. Open Alluvial Ombrophilous Forest. D. Dense Alluvial Ombrophilous Forest. (Photos by Carolyn Almeida Coelho).

Flora do Brasil 2020 (under construction) was consulted to verify species nomenclature and confirm the records for Amazonas State and by phytogeographic domain. When this was unavailable, the synonyms and spellings of the taxa were updated by consulting The Plant List (2010) database.

Specimens unidentified at the species level were not included in the checklist, which contains only one voucher per species occurring in Manicoré.

The map of the location of the studied municipality (Figure 1) was generated in ArcGIS 10.3. The map of the distribution of angiosperm collections in the municipality was generated in Quantum GIS 1.7. For the elaboration of this map, geographic coordinates available in the INPA and CRIA databases (2018) were used. However, 313 species were not included because records did not have geographic coordinates or because species were incorrectly georeferenced. The map of angiosperm records for cities south of the Madeira river was also generated in Quantum GIS 1.7, using data obtained from the CRIA digital archive (2018), which were manually analyzed and filtered.

Results and Discussion

A total of 106 families, 409 genera, and 801 species were listed for the municipality of Manicoré (Table 1). The richest family was Fabaceae (117 spp.), followed by Euphorbiaceae (35 spp.), Rubiaceae (34 spp.), Apocynaceae (30 spp.), Melastomataceae (29 spp.), Moraceae (27 spp.), Arecaceae (24 spp.), Myrtaceae (20 spp.), Malvaceae (19 spp.), Annonaceae, and Burseraceae (18 spp. each), accounting for 46.3% of the listed species.

For Brazil (2,756 spp.), as well as for the Amazon biome (1,119 spp.) and Amazonas State (825 spp), Fabaceae is the family with the highest species richness (BFG, 2015; Fabaceae

in Flora do Brasil 2020, under construction). In the Ducke Reserve Flora Project, which is the best studied area of the Brazilian Amazon, Fabaceae (still considered in the circumscription of subfamilies Mimosoideae - 68 spp., Papilionoideae - 66 spp., and Caesalpinioideae - 54 spp.) is also the best represented botanical family (Ribeiro, Nelson, Silva, Martins & Hopkins, 1994; Hopkins, 2005). In addition to this family, all the other richest families in our study (except Malvaceae) are in the ranking of the thirty richest families in number of taxa, being also found in the Ducke Reserve (Ribeiro *et al.*, 1994; Hopkins, 2005).

Other studies also conducted in the Amazon showed that Fabaceae has been consistently cited as one of the families with the largest number of species (Amaral, Matos & Lima, 2000; Oliveira *et al.*, 2008; Silva, Matos & Ferreira, 2008; Pinheiro *et al.*, 2010). The presence of representatives of Fabaceae, Euphorbiaceae, Moraceae, and Malvaceae among the richest families is a common point among the floristic surveys conducted in the Amazon Forest (Gonçalves & Santos, 2008; Sardinha, Freitas, Santos, Cruz-Junior & Santos, 2017).

Of the 409 genera, the most representative are *Inga* and *Miconia* (16 spp. each), *Protium* (13 spp.), *Byrsonima*, *Myrcia*, *Palicourea*, and *Swartzia* (10 spp. each), *Bactris* and *Eugenia* (8 spp. each), *Annona*, *Piper*, and *Senna* (7 spp. each), accounting for 29.8% of the angiosperm richness of Manicoré. This composition is similar to that pointed out by Ribeiro *et al.* (1994), who cite *Miconia* (27 spp.), *Protium* (24 spp.), *Inga* (21 spp.), and *Swartzia* (19 spp.) among the ten most representative genera in the Ducke Reserve Flora Project. Oliveira *et al.* (2008) and Pinheiro *et al.* (2010) also cite *Protium* and *Swartzia* among the most representative genera in other studies conducted in the Amazon.

Also corroborating our findings, a study of a forest fragment in southwestern Amazonia mentions *Inga*, *Miconia*, and *Byrsonima* as the richest genera (Oliveira, Nagy, Barros, Martins & Murta-Junior, 2015).

Of the remaining genera, 256 are represented by only one species, 68 by two species, and 30 by three species, which together amount to 44.2% of the municipality richness. The large number of genera represented by few species may reflect the high number of plant typologies (44) found in Manicoré, as already mentioned by Silva & Pereira (2005). Notwithstanding, other factors may also be considered, such as the absence of dispersers, nutrient-poor soils, among other factors, indicating that further studies should be carried out.

Distributed among these distinct phytophysiognomies, 45.7% (366 spp.) of the species are trees, 27.5% (220 spp.) are shrubs, 13.2% (106 spp.) are herbs, 4.7% (38 spp.) are lianas, 3.5% (28 spp.) are herbaceous vines, 3.2% (26 spp.) are subshrubs, and 2.2% (17 spp.) are palms.

In Manicoré, there is a ratio of four woody species (tree, shrub, liana, and subshrub) to one herbaceous species (herb, herbaceous vine, and palms). The predominance of trees over other types of habits has already been observed in another study conducted in the Amazon Forest (Garcia, Silva, Zonetti & Romagnolo, 2011) and follows the general pattern recorded for the Amazon phytogeographic domain (BFG, 2015). In turn, the herbaceous habit is better represented in open areas, as already reported by Mota *et al.* (2018).

Regarding distribution, 49.2% (394 spp.) of the registered species are exclusive to the Amazon domain and 48.4% (388 spp.) occur in the Amazon and other Brazilian domains, especially Cerrado (10.2% - 82 spp.), Atlantic Forest (5% - 40 spp.), Pantanal (0.5% - 4 spp.), and Caatinga (0.4% - 3 spp.). Moreover, 29% (232 spp.) of species share between three to five domains and 3.4% (27 spp.) are cited for six Brazilian biomes. It is noteworthy that 1.5% (12 spp.) of the total species had no association with the Amazon phytogeographic domain so far (BFG, 2015). Therefore, *Asystasia gangetica* (L.) T. Anderson, *Bauhinia rufa* (Bong.) Steud., *Byrsonima laxiflora* Griseb., *Citrus x aurantium* L., *Connarus suberosus* Planch., *Dioscorea hassleriana* Chodat, *Hibiscus sabdariffa*, *Libidibia ferrea* (Mart. ex Tul.) L.P. Queiroz, *Mandevilla* sp. Nova, *Ouratea spectabilis* (Mart.) Engl., *Paepalanthus guaraiensis* Moldenke, and *Persea americana* Millare are considered new occurrences for the Amazon and 0.9% (7 spp.) lack information.

Species dispersal and exchange among different phytogeographic domains are related to numerous evolutionary processes and historical geological events (Fiaschi & Pirani, 2009; Batalha-Filho & Miyaki, 2014). Thus, the occurrence of species with disjoint distribution patterns between the Amazon and the Atlantic Forest shows a possible connection between the floras of these regions through the Cerrado in the past (Fiaschi & Pirani, 2009). In this sense, gallery forests were responsible for the connection between the two largest neotropical rainforests: the Amazon Rainforest and the Atlantic Forest (Méo *et al.*, 2013).

Regarding origin, 96% (769 spp.) of the species are native and 4% (32 spp.) exotic. During floristic-phytosociological surveys or taxonomic reviews, it is common to find exotic

plants in the study areas (Moro *et al.*, 2012). In this regard, *Althernanthera tenella* Colla (Amaranthaceae), *Jatropha gossypifolia* L. (Euphorbiaceae), *Lantana camara* L. (Verbenaceae), *Lippia alba* (Mill.) N.E.Br. ex P. Wilson (Verbenaceae), *Merremia umbellata* L. Hallier f. (Convolvulaceae), *Mimosa invisa* Mart. ex Colla (Fabaceae), and *Ricinus communis* L. (Euphorbiaceae) are found in disturbed areas of Manicoré. These plants are typical of secondary succession, are able to grow in adverse conditions, and are an integral part of the urbanized landscape (Souza, Machado-Filho & Andrade, 2012). Exotic plants are more likely to be found in these areas, with only a small fraction of them being naturalized, such as *L. camara* and *R. communis* for example. Thus, the presence of naturalized species in the study area is a strong evidence of the anthropogenic influence on the environment (Schneider, 2007).

The degree of aggressiveness that an exotic species can present to the natural environment is not always known (Schneider, 2007). Considering that botanical surveys are the basis for establishing criteria for the prevention and control of possible damage to the natural environment, it is recommended that all naturalized or invasive exotic species be clearly named as such and recorded for the study area (Schneider, 2007; Moro *et al.*, 2012).

In this checklist, as well as in Flora do Brasil 2020 (under construction), *Asystasia gangetica* (L.) T. Anderson (Acanthaceae), *Cenchrus purpureus* (Schumach.) Morrone (Poaceae), *Citrus x aurantium* L. (Rutaceae), and *Gossypium barbadense* L. (Malvaceae) are labeled as naturalized. In Cuba, these species are considered invasive, with high capacity for growth, proliferation, and dispersal, and are often able to compete aggressively for dominance of the environment. In this sense, *C. purpureus* and *G. barbadense* are examples of species that still behave as transformers of natural and agricultural ecosystems in Cuba (Prieto & González-Oliva, 2015).

For floristic and phytosociological studies, it is only interesting to report the occurrence of exotic species merely cultivated to the site if they are clearly labeled in the study description (Moro *et al.*, 2012). Thus, of the exotic species recorded here, 68.7% (22 spp.) are naturalized and 31.3% (10 spp.) cultivated. Among exotic species, eight had not been cited for Amazonas State in Flora do Brazil 2020 (under construction) and four occur in other northern states.

Hence, *Combretum indicum* (L.) Jongkind [Combretaceae] (Cultivated), *Cymbopogon citratus* (DC.) Stapf [Poaceae], *Gymnanthemum amygdalinum* (Delile) Sch. Bip. ex Walp [Asteraceae] (Cultivated), and *Petiveria alliacea* L. [Phytolaccaceae] are recorded as new occurrences for Amazonas State. Moreover, *Asystasia gangetica* [Acanthaceae], *Citrus x aurantium* [Rutaceae], *Panicum capillare* L. [Poaceae], and *Persea americana* Mill. [Lauraceae] are recorded as new occurrences for Amazonas State and the northern region.

During field expeditions for this work, material from *Hibiscus sabdariffa* L. was collected from a disturbed area of secondary forest (Figure 3a-b). Coelho and Amorim (2019) found that this fact corresponds to an indication of naturalization of this species in the Brazilian Amazon.

Prior to the study by Coelho and Amorim (2019), *Hibiscus sabdariffa* was only recorded as cultivated (Esteves, Duarte & Takeuchi, 2014), being absent from the records of Brazilian angiosperms (BFG, 2015; *Hibiscus* in Flora do Brasil 2020, under construction).

In this checklist, as in the study by Coelho and Amorim (2019), this species is labeled as naturalized and recorded as new occurrence for Brazil (Table 1). In addition to the new occurrences of exotic species, 39 new occurrences of native

species were recorded for Amazonas State, eight of which are also new occurrences for the northern region (Table 1). It is noteworthy that of the new occurrences for Amazonas State, 20.5% (8 spp.) do not occur in the Amazon phytogeographic domain. However, they used to occur exclusively in the Cerrado or associated with this domain, showing great floristic heterogeneity for the study area.

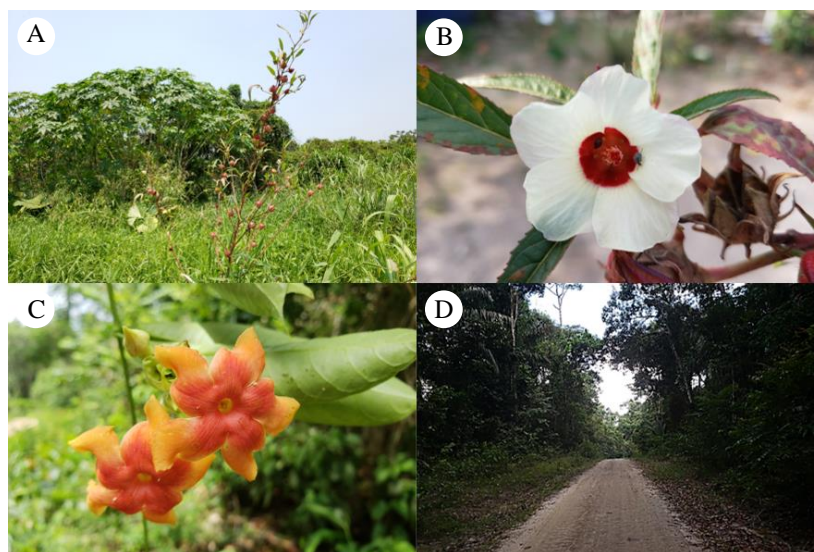


Figure 3. Photographic records of the sampling region: a. Naturalized occurrence of *Hibiscus sabdariffa* L. in a disturbed area; b. *Hibiscus sabdariffa* L. flower with white petals, fleshy calyx involving the fruit, and leaves (Almeida, C. *et al.*, p. 97); c. *Mandevilla* sp. nov. axillary, puberulent inflorescence (Almeida, C. & Castro, A. 205 (INPA)); d. Place of collection of the new species of *Mandevilla* Lindl. (05° 53' 17'' S, 61° 16' 53'' W). Photos by Carolyn Almeida Coelho.

In the southern area of the Amazon, fields or scrublands are supposedly growing due to a shift in a 200-kilometer-long segment of the Madeira river to the east. This shift occurred a few years ago from a rearrangement of tectonic faults, changing the location of many of the right bank tributaries (Pivetta, 2011). A new type of vegetation emerges over the old beds of these rivers that were buried with sandy sediments, forming fields and scrublands in the Amazon (Pivetta, 2011).

Our data indicate that the first botanical collections in Manicoré were performed in the early twentieth century, precisely in 1923 (n = 1 collection). By 1970, only 32 species had been collected. In this sense, collection expeditions were amplified from the 70's (n = 47) and 80's (n = 152), decreased in the 90's (n = 1), and expanded again in 2007 (n = 209) and 2018 (n = 176). Although the 1980s accounted for the largest collection peak of the last century, no study addressed the floristic composition of the municipality. However, these collections constituted works of greater geographical scope, such as the RADAMBRASIL Project.

Despite collection efforts made in the last century, about 70% of the species presented in this study were collected in the 21st century, with two major collection peaks in 2007 and 2018. Botanical collections performed in 2007 are part of an ethnobotanical survey (Junqueira, 2008). Collection peaks between 2018 and 2019 are the result of 28 botanical expeditions made for this checklist, which accounted for 25.2% of the total species listed for Manicoré, making the sites of

these collections become the areas with the highest record of angiosperm species for the municipality (Figure 4).

Collection gaps, mainly in the central region of Manicoré, indicate the lack of research in much of the municipality. For botanical collections, forest areas with easier access are generally better researched (Hopkins, 2007). Collection records for Manicoré, are concentrated near the urban area, on the banks of the Madeira river and on part of the BR 319 Highway, where the main communities of the municipality are located (Figure 4).

In the expeditions carried out in this study, we collected 240 individuals from 63 families, 145 genera, and 202 species (Figure 4). In just 90 h of field sampling, besides finding evidence to prove the naturalization of *Hibiscus sabdariffa* (Coelho & Amorim, 2019), it was also possible to identify a new species of *Mandevilla* Lindl. (Apocynaceae) endemic to the southern Amazon region (Coelho *et al.*, in press) (Figure 3c). Therefore, we estimate that the areas that have collection gaps in Manicoré also have the potential to harbor new taxa for science.

During floristic surveys, it is common to discover new occurrences (Ivanauskas, Monteiro & Rodrigues, 2004; Lopes, Ribeiro, Rodrigues, Cabral & Silva, 2014) and occasionally new taxa for science (Baitello, Arzolla & Vilela, 2017). This shows part of the advances made in recent years, but mainly indicates how much the Brazilian flora still needs to be known (Peixoto & Morim, 2013).

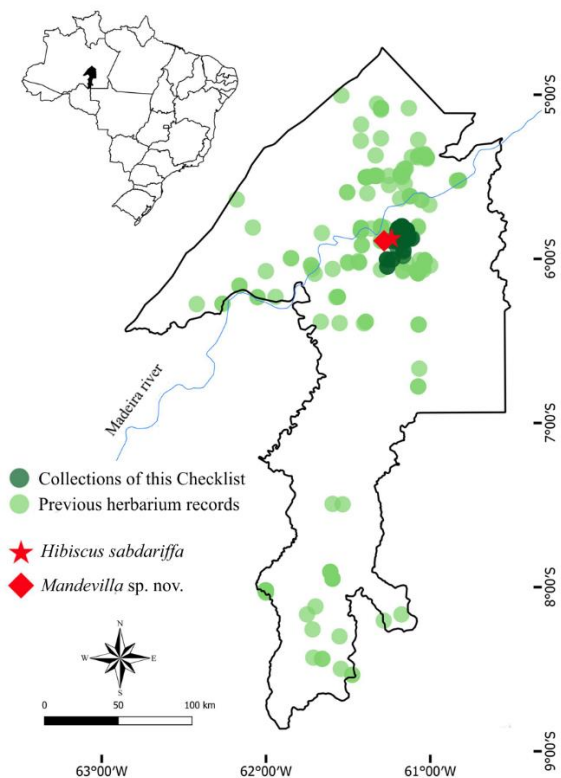


Figure 4. Distribution of angiosperm species collections in Manicoré-AM.

The new species of *Mandevilla* was found on the edge of a newly opened road in a primary forest fragment located in the municipality countryside (Figure 3d). This new species is described as *Mandevilla manicorensis* C.A. Coelho, B.S. Amorim & J.F. Morales (Coelho *et al.*, in press.). The species shows foliate bracts and hypocrateriform corolla and is part of the *Exothostemon* group. In this group, twelve species have hypocrateriform corolla and only four species have foliate

bracts. Easier road access contributed to this botanical discovery. However, ease of access may compromise local flora in the future, with the expansion of the municipality urban center (Salles, Grigio & Silva, 2013).

Among the cities south of the Madeira river, Beruri, Tapauá, Apuí, Novo Aripuanã, and Manicoré are, respectively, those with the largest gaps in angiosperm collections (Coelho & Amorim, unpublished data), which could be indicative of low richness (Figure 5). Nonetheless, collection gaps in these cities are due to low sampling effort rather than absence of species, as we can find a large number of species in neighboring areas of similar forests. Thus, we can affirm that these areas are subsampled and consequently prone to contain species not yet identified or described (Hopkins, 2007; ter Steege *et al.*, 2016).

Comparing Manicoré to neighboring municipalities, some factors help to understand why Humaitá is less subsampled. The municipality of Humaitá has access roads through Amazonas State and Rondônia. In addition, it houses a larger number of higher education institutions, which facilitates research in ‘terra firme’ and floodplain areas (Campos, Ribeiro, Souza-Junior, Ribeiro-Filho & Almeida, 2012), Cerrado fields (Martins, Ferreira, Curi, Vitorino & Silva, 2006), and meadows (Kubitski, 1979). Notwithstanding, although Humaitá and Borba have the largest number of species records among the cities south of the Madeira river, subsampling may occur due to the low proportion of angiosperm species per 10 km² (Figure 5).

Collection gaps are large for angiosperms, but much larger for other groups such as bryophytes, ferns, lycophytes, gymnosperms, and fungi (Coelho & Amorim, unpublished data). In this sense, it is necessary to continuously create intensive projects to make local floras (Hopkins, 2007, 2019; Forzza *et al.*, 2010; Lopes *et al.*, 2014). These projects should ensure that new collection data are incorporated into herbariums so that the true biological diversity of these areas can be known and rare species unknown to science can be found (Ribeiro *et al.*, 1994; Hopkins, 2007, 2019; Forzza *et al.*, 2010).

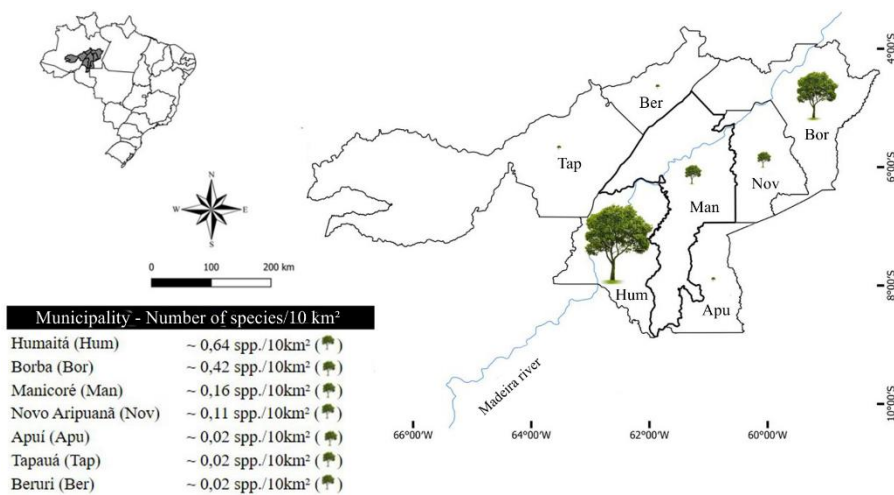


Figure 5: Representation of angiosperm collection records in the cities south of the Madeira river. Tree sizes correspond to the proportion of number of species recorded for each municipality (number of species per ten square kilometers of the municipality).

Tabela 1: Preliminary angiosperm checklist in an area south of the Madeira River (Manicoré, Amazonas, Brazil). (*) Species not mentioned for Amazonas in Brazil 2020 Flora under construction. (**) Species not mentioned in the Northern region of Brazil 2020 Flora under construction. (***) Species not cited for Brazil in Flora do Brasil 2020 under construction. (#) Naturalized species for a Brazilian flora. (##) Species cultivated in the Brazilian flora. (!) New species for Brazilian flora. Habit: shrub (ARB), tree (ARV), weed (ERV), liana (LIA), palm tree (PAL), shrub (SUB) and creeper (TRE). Phytogeographic domain: Anthropic Area (AA) Amazon (AM), Caatinga (CAA), Cerrado (CE), Atlantic Forest (MA), Pampas (PAM), Pantanal (PAT) and Unknown (DES).

Scientific name	Habit	Phytogeographic domain	Voucher
Acanthaceae			
<i>Asystasia gangetica</i> (L.) T.Anderson***	ARB	MA	Almeida, C. & Castro, A. 133 (INPA)
<i>Justicia comata</i> (L.)	ARB	AM, CE, MA	Mendes, R.F. <i>et al.</i> 2 (EAFM)
<i>Justicia pectoralis</i> Jacq	ARB	AM, CE	Mendes, R.F. <i>et al.</i> 15 (EAFM)
<i>Mendoncia velloziana</i> Mart.	TRE	AM, MA	Almeida, C. & Castro, A. 246 (INPA)
<i>Pachystachys coccinea</i> (Aubl.) Nees	ARB	AM	Almeida, C. & Castro, A. 145 (INPA)
<i>Pranceacanthus coccineus</i> Wassh	ERV	AM, CE	Almeida, C. & Castro, A.109 (INPA)
Achariaceae			
<i>Lindackeria paludosa</i> (Benth.) Gilg.	ARV	AM	Junqueira, A.B. & Barros, R.N.S. 353 (EAFM)
Amaranthaceae			
<i>Achyranthes aspera</i> L.	ERV	AM, CAA, CE, MA	Almeida, C. & Castro, A. 241 (INPA)
<i>Alternanthera dentata</i> (Moench) Stuchlik ex R. E. Fr.	SUB	AM, CAA, CE, MA AM, CAA, CE, MA,	Mendes, R.F. <i>et al.</i> 49 (EAFM)
<i>Alternanthera tenella</i> Colla	ERV	PAM, PAT	Almeida, C. & Castro, A. 22 (INPA)
<i>Celosia argentea</i> L. #	ARB	AM, CAA, CE, MA	Almeida, C. & Castro, A. 40 (INPA)
<i>Dysphania ambrosioides</i> (L.) Mosyakin & Clemants	SUB	AM, CAA, CE, MA	Mendes, R.F. <i>et al.</i> 29 (EAFM)
Amaryllidaceae			
<i>Hippeastrum puniceum</i> (Lam.) Kuntze	ERV	AM, CAA, CE, MA, PAM, PAT	Almeida, C.& Castro, A. 144 (INPA)
Anacardiaceae			
<i>Anacardium giganteum</i> W.Hancock ex Engl.	ARV	AM AM, CAA, CE, MA,	Amoêdo, S.C. <i>et al.</i> 57 (EAFM)
<i>Anacardium occidentale</i> L.	ARB	PAM, PAT	Almeida, C. <i>et al.</i> 93 (INPA) Junqueira, A.B. & Souza, S.A. 696 (EAFM)
<i>Astronium lecointei</i> Ducke.	ARV	AM AM, CAA, CE, MA,	Junqueira, A.B. & Souza, S.A. 615 (EAFM)
<i>Mangifera indica</i> Wall. ##	ARV	PAM, PAT	Junqueira, A.B. & Neto, R.F. 430 (EAFM)
<i>Spondias mombin</i> L.	ARV	AM, CE, MA AM, CAA, CE, MA,	Junqueira, A.B. & Neto, R.F. 430 (EAFM)
<i>Tapirira guianensis</i> Aubl.	ARV	PAT	Junqueira, A.B. 441 (INPA) Junqueira, A.B. & Barros, R.N.S. 373 (INPA)
<i>Thyrsodium spruceanum</i> Benth.	ARV	AM, MA	
Annonaceae			
<i>Anaxagorea brevipes</i> Benth.	ARV	AM	Ferreira, C.A.C. 5763 (INPA)
<i>Annonaannonoides</i> (R.E.Fr.) Maas & Westra	ARV	AM	Junqueira, A.B. 468 (INPA)
<i>Annona cuspidata</i> (Mart.) H.Rainer	ARV	AM	Junqueira, A.B. 248 (INPA)
<i>Annona excellens</i> R.E.Fr.	ARV	AM	Ferreira, C.A.C. 5511 (INPA)
<i>Annona exsucca</i> DC.	ARV	AM	Junqueira, A.B. 215 (INPA) Junqueira, A.B. & Souza, S.A. 667 (EAFM)
<i>Annona foetida</i> Mart.	ARV	AM	
<i>Annona montana</i> Macfad.	ARV	AM, CE, MA, PAT	Viana, G.P. 92 (INPA)
<i>Annona muricata</i> L. ##	ARB	DESC	Mendes, R.F. <i>et al.</i> 48 (EAFM) Junqueira, A.B. & Neto, R.F. 564 (EAFM)
<i>Diclinanona calycina</i> (Diels) R.E.Fr.	ARV	AM	Junqueira, A.B. & Souza, S.A. 669 (EAFM)
<i>Ephedranthus amazonicus</i> R.E.Fr.	ARV	AM	Junqueira, A.B. & Neto, R.F. 516 (EAFM)
<i>Guatteria foliosa</i> Benth.	ARV	AM	
<i>Guatteria punctata</i> (Aubl.) R.A.Howard	ARB	AM	Almeida, C. & Castro, A. 239 (INPA)

Table 1: *continuation.*

Scientific name	Habit	Phytogeographic domain	Voucher
<i>Guatteria scytophylla</i> Diels.	ARV	AM	Junqueira, A.B. & Barros, R.N.S. 352 (EAFM)
<i>Oxandra riedeliana</i> R.E.Fr.	ARB	AM	Albernaz, A.L.K.M. 180 (INPA)
<i>Pseudoxandra lucida</i> R.E.Fr.	ARV	AM	Ferreira, C.A.C. 5538 (INPA)
<i>Unonopsis stipitata</i> Diels	ARV	AM	Ferreira, C.A.C. 5768 (INPA)
<i>Xylopia aromatica</i> (Lam.) Mart.	ARB	AM, CE	Ferreira, C.A.C. 5606 (INPA)
<i>Xylopia nitida</i> Dunal	ARV	AM	Albernaz, A.L.K.M. 176 (INPA)
Apocynaceae			
<i>Allamanda carthatica</i> L.	TRE	AM, CE, MA	Almeida, C. <i>et al.</i> 44 (INPA)
<i>Allamanda nobilis</i> T.Moore	TRE	AM	Almeida, C. & Castro, A. 73 (INPA)
<i>Ambelania acida</i> Aubl.	ARV	AM	Almeida, C. <i>et al.</i> 86 (INPA)
<i>Aspidosperma excelsum</i> Benth.	ARB	AM, CE	Ferreira, C.A.C. 5566 (INPA)
<i>Barjonia cymosa</i> E.Fourn. **	SUB	AM, CE	Lima, L.C.P. 655 (HUEFS)
<i>Ditassa franciscoi</i> (Morillo) Liede	SUB	AM	Ferreira, C.A.C. 5577 (INPA)
<i>Galactophora calycina</i> (Huber) Woodson	ARB	AM	Ferreira, C.A.C. 5798 (INPA)
<i>Hancornia speciosa</i> Gomes	ARB	AM, CAA, CE, MA	Silveira, A.L.P. 289 (UEC)
<i>Himatanthus articulatus</i> (Vahl) Woodson.	ARV	AM, CE	Almeida, C. <i>et al.</i> 99 (INPA)
<i>Himatanthus obovatus</i> (Müll.Arg.) Woodson	ARV	AM, CAA, CE	Lima, L.C.P. 653 (HUEFS)
<i>Himatanthus semilunatus</i> Markgr.	ARB	AM	Ferreira, C.A.C. 5514 (INPA)
<i>Himatanthus revolutus</i> (Huber) Spina & Kinoshita	ARV	AM	Junqueira, A.B.; Souza, S.A 593 (EAFM)
<i>Lacmellea gracilis</i> (Müll.Arg.) Markgr	ARV	AM	Almeida, C. <i>et al.</i> 96 (INPA)
<i>Malouetia duckei</i> Markgr.	ARB	AM	Ferreira, C.A.C. 5542 (INPA)
<i>Malouetia tamaquarina</i> (Aubl.) A.DC.	ARB	AM	Ferreira, C.A.C. 5559 (INPA)
<i>Mandevilla</i> sp. nov.!	TRE		Almeida, C. & Castro, A. 205 (INPA)
<i>Mandevilla hirsuta</i> (A.Rich.) K.Schum.	TRE	AM, CAA, CE, MA	Almeida, C. & Castro, A. 231 (INPA)
<i>Mandevilla scabra</i> (Hoffmanns.ex Roem.& Schult.) K.Schum.	TRE	AM, CAA, CE, MA	Lima, L.C.P. 651 (HUEFS)
<i>Mandevilla tenuifolia</i> (J.C.Mikan) Woodson	ERV	AM, CAA, CE, MA	Ferreira, C.A.C. 5580 (INPA)
<i>Mesechites trifidus</i> (Jacq.) Müll.Arg.	ARB	AM, CE, PAT	Ferreira, C.A.C. 5779 (INPA)
<i>Nephradenia linearis</i> Benth. ex E.Fourn.	ERV	AM, CE	Ferreira, C.A.C. 5807 (INPA)
<i>Nephradenia reflexa</i> Malme. **	ERV	AM	Ferreira, C.A.C. 5577 (HRCB)
<i>Odontadenia nitida</i> (Vahl) Müll.Arg.	TRE	AM, CE	Almeida, C. & Castro, A. 151 (INPA)
<i>Rauvolfia sprucei</i> Müll.Arg.	ARV	AM	Junqueira, A.B. & Souza, S.A. 678 (EAFM)
<i>Spongiosperma grandiflorum</i> (Huber) Zarucchi*	ARB	AM	Ferreira, C.A.C. 5556 (INPA)
<i>Tabernaemontana cymosa</i> Jacq.*	ARV	AM	Junqueira, A.B. & Souza, S.A. 631 (EAFM)
<i>Tabernaemontana heterophylla</i> Vahl	ARB	AM	Almeida, C. & Castro, A. 219 (INPA)
<i>Tabernaemontana linkii</i> A.DC.	ARB	AM	Almeida, C. & Castro, A. 138 (INPA)
<i>Tabernaemontana muricata</i> Link ex. Roem. & Schult.	ARV	AM	Krukoff, B.A 6067 (Usw)
<i>Tabernaemontana siphilitica</i> (L.) Leeuwenb.	ARB	AM, CE	Viana, G.P. 60 (INPA)
Araceae			
<i>Anthurium gracile</i> (Rudge) Lindl.	ERV	AM, CAA, CE	Carvalho, F.A. de 1918 (INPA)
<i>Anthurium gracile</i> (Rudge) Lindl.	ERV	AM, CAA, CE	Almeida, C & Castro, A. 250 (INPA)
<i>Heteropsis linearis</i> A.C. Sm.	TRE	AM	Mota, C.D.A. da 61600 (INPA)
<i>Philodendron wittianum</i> Engl.	ERV	AM	Almeida, C & Castro, A. 227 (INPA)
<i>Xanthosoma striatipes</i> (Kunth & Bouche) Madison	ERV	AM, CE	Ferreira, C.A.C. 5573 (INPA)
Araliaceae			
<i>Schefflera morototoni</i> (Aubl.) Maguire, Steyerf. & Frodin.	ARV	AM, CAA, CE, MA, PAT	Junqueira, A.B. & Souza, S.A. 610 (EAFM)
Arecaceae			
<i>Astrocaryum acaule</i> Mart.	ERV	AM	Almeida, C. & Castro, A. 200 (INPA)
<i>Astrocaryum aculeatum</i> G.Mey.	ERV	AM, CE	Almeida, C. & Castro, A. 209 (INPA)

Table 1: *continuation.*

Scientific name	Habit	Phytogeographic domain	Voucher
<i>Attalea attaleoides</i> (Barb.Rodr.) Wess.Boer.	PAL	AM	Junqueira, A.B. & Neto, R.F. 572 (EAFM)
<i>Attalea phalerata</i> Mart. ex Spreng.	PAL	AM, CE	Junqueira, A.B.; Neto, R.F. 578 (EAFM)
<i>Bactris acanthocarpa</i> Mart. var. <i>triliana</i> (Barb.Rodr.) A.J.Hend.	ERV	AM	Henderson, A.J. 298 (INPA)
<i>Bactris bifida</i> Mart.	PAL	AM	Junqueira, A.B. & Barros, R.N.S. 377 (EAFM)
<i>Bactris concinna</i> Mart.	PAL	AM	Junqueira, A.B. 253 (INPA)
<i>Bactris hirta</i> Mart.	ERV	AM, MA	Emilio, T. 634 (INPA)
<i>Bactris killipii</i> Burret	ERV	AM	Emilio, T. 518 (INPA)
<i>Bactris maraja</i> Mart.	PAL	AM	Junqueira, A.B. 571 (INPA)
<i>Bactris simplicifrons</i> Mart.	PAL	AM	Junqueira, A.B. 568 (INPA)
<i>Bactris tomentosa</i> Mart.	PAL	AM	Junqueira, A.B. 700 (INPA)
<i>Desmoncus mitis</i> subsp. <i>leptospadix</i> (Martius) Henderson	PAL	AM	Junqueira, A.B. & Barros, R.N.S. 340 (EAFM)
<i>Desmoncus parvulus</i> L.H.Bailey	PAL	AM	Junqueira, A. B. 216 (NYBG)
<i>Desmoncus polyacanthos</i> Mart.	ERV	AM, CE, MA	Almeida, C. & Castro, A. 206 (INPA)
<i>Elaeis oleifera</i> (Kunth) Cortés	ERV	AM	Silva, G. P. 337 (CEN)
<i>Euterpe oleracea</i> Mart.*	PAL	AM, CE	Mendes, R.F. <i>et al.</i> 7 (EAFM)
<i>Geonoma deversa</i> (Poit.) Kunth	PAL	AM	Junqueira, A.B. 285 (INPA)
<i>Geonoma leptospadix</i> Trail	PAL	AM	Viana, G.P. 76 (INPA)
<i>Geonoma macrostachys</i> Mart.	PAL	AM	Viana, G.P. 69 (INPA)
<i>Geonoma maxima</i> (Poit.) Kunth	PAL	AM	Almeida, C. <i>et al.</i> 14 (INPA)
<i>Oenocarpus minor</i> Mart.	PAL	AM	Almeida, C. <i>et al.</i> 81 (INPA)
<i>Oenocarpus minor</i> Mart.	PAL	AM	Junqueira, A.B. & Souza, J.R. 252 (EAFM)
<i>Socratea exorrhiza</i> (Mart.) H.Wendl.	PAL	AM	Henderson, A.J. 297 (NY)
Aristolochiaceae			
<i>Aristolochia sprucei</i> Mast.	TRE	AM	Almeida, C. & Castro, A. 158 (INPA)
Asteraceae			
<i>Acmella oleracea</i> (L.) R.K.Jansen#	ERV	AM, MA	Mendes, R.F. <i>et al.</i> 1 (EAFM)
<i>Ayapana amygdalina</i> (Lam.) R.M. King & H. Rob.	ERV	AM, CAA, CE, MA	Giacomin, L.L. <i>et al.</i> 1917 (UNOP)
<i>Bidens cynapiifolia</i> Kunth.	ARB	AM, CE, MA	Mendes, R.F. <i>et al.</i> 35 (EAFM)
<i>Chromolaena laevigata</i> (Lam.) R.M. King & H. Rob.	ARB	AM, CAA, CE, MA, PAM	Giacomin, L.L. <i>et al.</i> 1927 (UNOP)
<i>Eclipta prostrata</i> (L.) L.	ERV	AM, CAA, CE, MA, PAM, PAT	Almeida, C. & Castro, A. 191 (INPA)
<i>Emilia fosbergii</i> Nicolson Paratype.	ERV	AM, CAA, CE, MA, PAM, PAT	Krukoff, B.A. 6066 (MO)
<i>Ichthyothere terminalis</i> (Spreng.) S.F.Blake	SUB	AM, CAA, CE	Almeida, C. <i>et al.</i> 60 (INPA)
<i>Mikania psilostachya</i> DC.	LIA	AM, CAA, CE, MA	Ferreira, C.A.C. 5521 (INPA)
<i>Gymnanthemum amygdalinum</i> (Delile) Sch.Bip. ex Walp.*##	ARB	AM, CE, MA	Mendes, R.F. <i>et al.</i> 13 (EAFM)
<i>Tithonia diversifolia</i> (Hemsl.) A.Gray#	ERV	AM, CE, MA	Almeida, C. & Castro, A. 27 (INPA)
<i>Vernonanthura brasiliiana</i> (L.) H.Rob.*	ARB	AM, CAA, CE	Junqueira, A.B. & Barros, R.N.S. 288 (EAFM)
<i>Vernonanthura patens</i> (Kunth) H.Rob	ARB	AM, MA	Almeida, C. & Castro, A. 103 (INPA)
<i>Wedelia rudis</i> (Baker) H.Rob.	SUB	AM	Almeida, C. & Castro, A. 193 (INPA)
Bignoniaceae			
<i>Amphilophium laeve</i> (Sandwith) L.G.Lohmann	ARB	AM	Ferreira, C.A.C. 5808 (INPA)
<i>Amphilophium magnoliifolium</i> (Kunth) L.G.Lohmann	LIA	AM	Ferreira, C.A.C. 5539 (NYBG)
<i>Amphilophium paniculatum</i> (L.) Kunth	LIA	AM, CAA, CE, MA, PAT	Almeida, C. & Castro, A. 173 (INPA)
<i>Anemopaegma foetidum</i> Bureau & K.Schum.	TRE	AM	Almeida, C. & Turma CB15_ME01 185 (INPA)
<i>Bignonia cf lilacina</i> (A.H.Gentry) L.G.Lohmann	TRE	AM	Almeida, C. & Castro, A. 89 (INPA)

Table 1: continuation.

Scientific name	Habit	Phytogeographic domain	Voucher
<i>Crescentia cujete</i> L. ##	ARV	AM, MA	Krukoff, B. A. 6036 (NYBG)
<i>Fridericia bracteolata</i> (DC.) L.G.Lohmann	LIA	AM	Albernaz, A.L.K.M. 178 (INPA)
<i>Fridericia chica</i> (Bonpl.) L.G.Lohmann	LIA	AM, CAA, CE, MA, PAM, PAT	Junqueira, A.B. & Souza, S.A. 707 (EAFM)
<i>Fridericia florida</i> (DC.) L.G.Lohmann	LIA	AM, CE, MA	Almeida C. & Castro, A. 161 (INPA)
<i>Fridericia platyphylla</i> (Cham.) L.G.Lohmann	ARB	AM, CAA, CE, MA, PAT	Almeida C. & Castro, A. 167 (INPA)
<i>Handroanthus impetiginosus</i> (Mart. ex DC.) Mattos*	ARV	AM, CAA, CE, MA, PAT	Amoêdo, S.C. <i>et al.</i> 39 (EAFM)
<i>Jacaranda campinae</i> A.H.Gentry & Morawetz	ARB	AM	Ferreira, C.A.C. 5816 (NY)
<i>Lundia densiflora</i> DC.	LIA	AM, CAA, CE, MA	Junqueira, A.B. & Souza, S.A. 595 (EAFM)
<i>Pleonotoma melioides</i> (S.Moore) A.H.Gentry	ARB	AM, CE, MA	Almeida, C. & Castro, A. 118 (INPA)
<i>Pleonotoma pavettiflora</i> Sandwith*	LIA	AM, CE, PAT	Lombardi, J.A. 10095 (INPA)
<i>Pyrostegia venusta</i> (Ker Gawl.) Miers	ARB	AM, CAA, CE, MA, PAM, PAT	Almeida, C. & Castro, A. 53 (INPA)
<i>Sparattosperma leucanthum</i> (Vell.) K.Schum.	ARB	AM, CAA, CE, MA, PAT	Almeida, C. & Castro, A. 234 (INPA)
Bixaceae			
<i>Bixa orellana</i> L.	ARB	AM, CE, MA	Almeida, C. <i>et al.</i> 82 (INPA)
<i>Cochlospermum orinocense</i> (Kunth) Steud.	ARB	AM	Almeida, C. & Castro, A. 100 (INPA)
Boraginaceae			
<i>Cordia decipiens</i> I.M.Johnst.	LIA	AM	Krukoff, B. A. 6048 (NYBG)
<i>Cordia scabrifolia</i> A.DC.	ARV	AM	Junqueira, A.B. & Barros, R.N.S. 347 (EAFM)
<i>Cordia sellowiana</i> Cham.*	ARB	AM, CAA, CE, MA	Almeida, C. & Castro, A. 221 (INPA)
<i>Cordia sprucei</i> Mez.	ARV	AM	Junqueira, A.B. & Barros, R.N.S. 374 (EAFM)
Bromeliaceae			
<i>Aechmea cf angustifolia</i> Poepp. & Endl.	ERV	AM	Almeida, C. & Castro, A. 126 (INPA)
<i>Aechmea melinonii</i> Hook.	ERV	AM	Ferreira, C.A.C. 5787 (INPA)
<i>Aechmea mertensii</i> (G.Mey.) Schult. & Schult.f.	ERV	AM, MA	Almeida, C. & Castro, A. 110 (INPA)
<i>Ananas ananassoides</i> (Baker) L.B.Sm.	ERV	AM, CAA, CE, MA	Almeida, C. <i>et al.</i> 94 (INPA)
<i>Ananas lucidus</i> Mill.	ERV	AM, MA	Almeida, C. <i>et al.</i> 95 (INPA)
<i>Araeococcus micranthus</i> Brongn.	ERV	AM, MA	Carvalho, F.A. de 1951 (INPA)
Burseraceae			
<i>Dacryodes paraensis</i> Cuatrec*	ARV	AM, CE	Carvalho, F.A. 1927 (INPA)
<i>Protium giganteum</i> Engl. var. <i>giganteum</i>	ARV	AM	Mota, C.D.A. da 616006 (INPA)
<i>Protium glabrescens</i> Swart	ARV	AM	Viana, G.P. 93 (INPA)
<i>Protium goudotianum</i> (Tul.) Byng & Christenh.	ARV	DESC	Krukoff, B.A. 6066 (MO)
<i>Protium grandifolium</i> Engl.	ARV	AM	Mota, C.D.A. da 61462 (INPA)
<i>Protium heptaphyllum</i> (Aubl.) Marchand	ARV	AM, CAA, CE, MA	Amoêdo, S.C. <i>et al.</i> 38 (EAFM)
<i>Protium heptaphyllum</i> (Aubl.) Marchand ssp. <i>ulei</i> (Swart) Daly	ARV	AM	Carvalho, F.A. de 1915 (INPA)
<i>Protium nitidifolium</i> (Cuatrec.) Daly.	ARV	AM	Junqueira, A.B. & Neto, R.F. 482 (EAFM)
<i>Protium paniculatum</i> Engl. var. <i>riedelianum</i> (Engl.) Daly	ARB	AM	Mota, C.D.A. da 61664 (INPA)
<i>Protium picramnioides</i> Byng & Christenh.	ARV	AM	Junqueira, A.B. & Neto, R.F. 399 (EAFM)
<i>Protium rhoifolium</i> (Benth.) Byng & Christenh.	ARV	AM	Junqueira, A.B. & Souza, S.A. 682 (EAFM)
<i>Protium robustum</i> (Swart) D.M.Porter.	ARV	AM	Junqueira, A.B. & Barros, R.N.S. 332 (EAFM)
<i>Protium sagotianum</i> Marchand	ARV	AM	Mota, C.D.A. da 61667 (INPA)
<i>Protium cf spruceanum</i> (Benth.) Engl.	ARB	AM, CE, MA	Almeida, C. & Castro, A. 208 (INPA)
<i>Trattinnickia burserifolia</i> Mart.	ARB	AM	Ferreira, C.A.C. 5571 (INPA)

Table 1: continuation.

Scientific name	Habit	Phytogeographic domain	Voucher
<i>Trattinnickia glaziovii</i> Swart.	ARV	AM	Junqueira, A.B. & Neto, R.F. 524 (EAFM)
<i>Trattinnickia peruviana</i> Loes.	ARV	AM	Junqueira, A.B. & Souza, S.A. 602 (EAFM)
<i>Trattinnickia rhoifolia</i> Willd.	ARV	AM	Junqueira, A.B. & Souza, S.A. 591 (EAFM)
Calophyllaceae			
<i>Caraipa densifolia</i> subsp. <i>rondoniana</i> Kubitzki	ARV	AM, CE	Silveira, A.L.P. 291 (RON)
<i>Caraipa grandifolia</i> Mart.	ARV	AM	Almeida, T.E. 3611 (INPA)
<i>Caraipa savannarum</i> Kubitzki	ARB	AM	Mota, C.D.A. da 61616 (INPA)
Cannabaceae			
<i>Celtis iguanaea</i> (Jacq.) Schult.	ARV	AM, CAA, CE, MA, PAM, PAT	Junqueira, A.B. & Barros, R.N.S. 327 (EAFM)
<i>Trema micrantha</i> (L.) Blume	ARV	AM, CAA, CE, MA, PAM, PAT	Junqueira, A.B. 414 (INPA)
Capparaceae			
<i>Crateva tapia</i> L.	ARV	AM, CAA, CE, MA, PAT	Viana, G.P. 111 (INPA)
Caricaceae			
<i>Carica papaya</i> L.#	ARB	AM, CAA, CE, MA, PAT	Mendes, R.F. <i>et al.</i> 28 (EAFM)
<i>Jacaratia digitata</i> (Poepp. & Endl.) Solms	ARV	AM	Junqueira, A.B. & Barros, R.N.S. 225 (EAFM)
Caryocaraceae			
<i>Caryocar glabrum</i> (Aubl.) Pers.	ARV	AM	Amoêdo, S.C. <i>et al.</i> 37 (EAFM)
<i>Caryocar villosum</i> (Aubl.) Pers.	ARV	AM	Junqueira, A.B. & Neto, R.F. 582 (EAFM)
Celastraceae			
<i>Cheiloclinium cognatum</i> (Miers) A.C.Sm.	ARV	AM, CE, MA, PAT	Junqueira, A.B. & Souza, J.R. 255 (EAFM)
<i>Cheiloclinium obtusum</i> A.C.Sm.	LIA	AM	Mota, C.D.A. da 61604 (INPA)
<i>Hippocratea volubilis</i> L.	TRE	AM, CAA, CE, MA, PAT	Ferreira, C.A.C. 5785 (INPA)
Chrysobalanaceae			
<i>Acioa guianensis</i> Aubl.	ARV	AM	Mota, C.D.A. da 61659 (INPA)
<i>Couepia chrysocalyx</i> (Poepp. & Endl.) Benth. ex Hook. f.	ARV	AM	Viana, G.P. 84 (INPA)
<i>Couepia latifolia</i> Standl.	ARV	AM	Krukoff, B. A. 6005 (NYBG)
<i>Couepia paraensis</i> (Mart. & Zucc.) Benth. ssp. <i>Paraenses</i>	ARV	AM, CE	Mota, C.D.A. da 61672 (INPA)
<i>Hirtella bullata</i> Benth.	ARB	AM	Mota, C.D.A. da 61558 (INPA)
<i>Hirtella burchellii</i> (Britton)	ARB	AM, CE	Lombardi, J.A. 10100 (HRCB)
<i>Hirtella elongata</i> Mart. & Zucc.	ARV	AM	Junqueira, A.B. & Neto, R.F. 428 (EAFM)
<i>Hirtella glandulosa</i> Spreng.	ARV	AM, CE, MA	Silveira, A.L.P. 325 (UEC)
<i>Hirtella racemosa</i> Lam.	ARB	AM, CAA, CE, MA	Almeida, C. & Castro, A. 169 (INPA)
<i>Hirtella sprucei</i> Benth. ex Hook.f. **	ARB	AM	Mota, C.D.A. da 61613 (INPA)
<i>Licania gracilipes</i> Taub.	ARV	AM, CE, MA	Junqueira, A.B. & Souza, S.A. 654 (EAFM)
<i>Licania micrantha</i> Miq.	ARV	AM, CE, MA	Junqueira, A.B. & Neto, R.F. 549 (EAFM)
<i>Licania oblongifolia</i> Standl.	ARB	AM	Almeida, C. & Castro, A. 148 (INPA)
<i>Licania octandra</i> (Hoffmanns. ex Roem. & Schult.) Kuntze ssp. <i>pallida</i> (Hook.f.) Prance	ARV	AM, CAA, CE, MA	Ferreira, C.A.C. 5732 (INPA)
<i>Licania parvifructa</i> Fanshawe & Maguire	ARV	AM	Ferreira, C.A.C. 5589 (INPA)
<i>Parinari excelsa</i> Sabine	ARV	AM, CE, MA	Viana, G.P. 87 (INPA)
Clusiaceae			
<i>Clusia candelabrum</i> Planch. & Triana	ARV	AM	Silveira, A.L.P. 12 (UEC)
<i>Clusia columnaris</i> Engl.	ARB	AM	Mota, C.D.A. da 61557 (INPA)

Table 1: *continuation.*

Scientific name	Habit	Phytogeographic domain	Voucher
<i>Clusia nigrolineata</i> P.F.Stevens*	TRE	AM	Viana, G.P. 94 (INPA)
<i>Clusia panapanari</i> (Aubl.) Choisy	ARB	AM, CAA, MA	Ferreira, C. A.C. 5837 (NYBG)
<i>Garcinia benthamiana</i> (Planch. & Triana) Pipoly	ARB	AM	Almeida, C; Castro, A. 240 (INPA)
<i>Garcinia gardneriana</i> (Planch. & Triana) Zappi	ARV	AM, CAA, CE, MA	Ferreira, C.A.C. 5778 (NYBG) Junqueira, A.B. & Souza, J.R. 249 (EAFM)
<i>Garcinia macrophylla</i> Mart.	ARV	AM, CE, MA	Ferreira, C.A.C. 5778 (INPA)
<i>Garcinia madruno</i> (Kunth) Hammel	ARV	AM, CE, MA	Mota, C.D.A. da 61461 (INPA)
<i>Symphonia globulifera</i> L.	ARV	AM, CE, MA	
Combretaceae			
<i>Combretum indicum</i> (L.) Jongkind*##	ARV	DESC	Almeida, C. & Castro, A. 174 (INPA)
<i>Combretum laxum</i> Jacq.	LIA	AM, CAA, CE, MA	Almeida, C. & Castro, A. 212 (INPA)
<i>Combretum rotundifolium</i> Rich.	ARB	AM	Almeida, C & Castro, A. 123 (INPA)
Connaraceae			
<i>Connarus coriaceus</i> G. Schellenb	ARB	AM	Cid Ferreira, C.A. 5567 (HRCB)
<i>Connarus erianthus</i> Benth. ex Baker	ARB	AM	Almeida, C & Castro, A. 117 (INPA)
<i>Connarus erianthus</i> var. <i>stipitatus</i> Forero	ARB	AM	Krukoff, B. A. 6042 (NYBG)
<i>Connarus ruber</i> Planch.	ARB	AM	Almeida, C. & Castro, A. 88 (INPA)
<i>Connarus ruber</i> (Poepp.) Planch. var. <i>sprucei</i> (Baker) Forero	ARB	AM	Ferreira, C.A.C. 5572 (INPA)
<i>Connarus suberosus</i> Planch*	ARV	CE, PAT	Silveira, A.L.P. 290 (UEC)
<i>Rourea amazonica</i> (Baker) Radlk.	LIA	AM	Viana, G.P. 99 (INPA)
<i>Rourea krukovii</i> Steyerem.	ARB	AM	Albernaz, A.L.K.M. 177 (INPA)
Convolvulaceae			
<i>Calycobolus lanulosus</i> D.F.Austin*	TRE	AM, CAA, CE AM, CAA, CE, MA,	Giacomin, L.L. <i>et al.</i> 1918 (INPA)
<i>Distimake aegyptius</i> (L.) A.R. Simões & Staples	TRE	PAM, PAT	Almeida, C. & Castro, A. 52 (INPA)
<i>Ipomoea tiliacea</i> (Willd.) Choisy	TRE	AM, MA	Almeida, C. <i>et al.</i> 33 (INPA)
<i>Jacquemontia guyanensis</i> (Aubl.) Meisn.	TRE	AM AM, CAA, CE, MA,	Almeida, C. & Castro, A. 238 (INPA)
<i>Merremia dissecta</i> (Jacq.) Hallier f.	TRE	PAM, PAT	Almeida, C. & Castro, A. 150 (INPA)
<i>Merremia umbellata</i> (L.) Hallier f.	TRE	AM, CAA, CE, MA	Almeida, C. & Castro, A. 104 (INPA)
Costaceae			
<i>Chamaecostus lanceolatus</i> (Petersen) C.D.Specht & D.W.Stev. ssp. <i>Lanceolatus</i>	ERV	AM	Ferreira, C.A.C. 5617 (INPA)
<i>Costus arabicus</i> L.	ERV	AM, CE, MA, PAT	Ferreira, C.A.C. 5832 (INPA)
<i>Costus spiralis</i> (Jacq.) Roscoe	ERV	AM, CE, MA, PAT	Almeida, C. & Castro, A. 68 (INPA)
Cucurbitaceae			
<i>Cucumis anguria</i> L.	ERV	AM, CAA, CE, MA	Almeida, C. <i>et al.</i> 90 (INPA)
<i>Cucurbita maxima</i> Duchesne ex Lam. ##	ERV	AM, CE	Almeida, C. & Castro, A. 42 (INPA)
<i>Gurania bignoniacea</i> (Poepp. & Endl.) C. Jeffrey.	ERV	AM, CE, MA, PAT	Krukoff, B. A. 6054 (MO)
<i>Gurania eriantha</i> (Poepp. & Endl.) Cogn.	LIA	AM, CE, MA	Viana, G.P. 103 (INPA)
<i>Gurania insolita</i> Cogn.	TRE	AM	Mota, C.D.A. da 61677 (INPA)
<i>Gurania lobata</i> (L.) Pruski	TRE	AM, CE, MA	Almeida, C.& Castro, A. 106 (INPA)
<i>Gurania sinuata</i> (Benth.) Cogn.	TRE	AM	Almeida, C. & Castro, A. 236 (INPA)
Cyperaceae			
<i>Cyperus brevifolius</i> (Rottb) Endl. ex Hassk.	SUB	AM, CAA, CE, MA, PAM, PAT	Almeida, C. & Castro, A. 56 (INPA)
<i>Cyperus luzulae</i> (L.) Retz.	ERV	AM, CAA, CE, MA, PAM, PAT	Almeida, C. <i>et al.</i> 43 (INPA)
<i>Exochogyne amazonica</i> C.B.Clarke	ERV	AM, CE	Ferreira, C.A.C. 5803 (INPA)
<i>Hypolytrum pulchrum</i> (Rudge) H.Pfeiff.*	ARB	AM, MA	Mota, C.D.A. da 61567 (INPA)
<i>Lagenocarpus glomerulatus</i> Gilly	ARB	AM	Mota, C.D.A. da 61562 (INPA)
<i>Scleria cyperina</i> Willd. ex Kunth	ERV	AM, CAA, CE, MA, PAT	Almeida, C. & Castro, A. 55 (INPA)

Table 1: continuation.

Scientific name	Habit	Phytogeographic domain	Voucher
Dichapetalaceae			
<i>Dichapetalum pedunculatum</i> (DC) Baill.	LIA	AM	Almeida, C. & Castro, A. 210 (INPA)
Dilleniaceae			
<i>Davilla lanosa</i> Fraga & Stehmann	TRE	AM	Almeida, C. & Castro, A. 112 (INPA)
<i>Davilla nitida</i> (Vahl) Kubitzki	ARB	AM, CE, MA	Almeida, C. & Castro, A. 152 (INPA)
<i>Doliocarpus brevipedicellatus</i> Garcke	ARB	AM, CE	Almeida, C. & Castro, A. 135 (INPA)
Dioscoreaceae			
<i>Dioscorea amaranthoides</i> Presl.	TRE	AM, CAA, CE	Ferreira, CID. 5585 (UB)
<i>Dioscorea dodecaneura</i> Vell.	LIA	AM, CAA, CE, MA	Silva, G.P. <i>et al.</i> 341 (TEPB)
<i>Dioscorea hassleriana</i> Chodat. **	LIA	CAA, CE	Glocimar P.S. 332 (CEN)
<i>Dioscorea piperifolia</i> Humb. & Bonpl. ex Willd.	LIA	AM, CAA, CE, MA	Glocimar P.S. 343 (CEN)
Eriocaulaceae			
<i>Comanthera reflexa</i> (Gleason) L.R.Parra & Giul.	ERV	AM	Carvalho, F.A. de 1908 (INPA)
<i>Comanthera xeranthemoides</i> (Bong.) L.R.Parra & Giul.	ERV	AM, CE, MA	Almeida, T.E. <i>et al.</i> 3317 (BHCB)
<i>Comanthera xeranthemoides</i> (Bong.) L.R.Parra & Giul. var. <i>xeranthemoides</i>	ERV	AM, CE, MA	C. A. Cid Ferreira <i>et al.</i> 5805 (US)
<i>Paepalanthus chiquitensis</i> Herzog	SUB	AM	Lima, L.C.P. 640 (HUEFS)
<i>Paepalanthus fasciculatus</i> (Rottb.) Kunth	ERV	AM, CE	Carvalho, F.A. de 1906 (INPA)
<i>Paepalanthus guaraiensis</i> Moldenke**	ERV	CE	Almeida, T.E. 3312 (HRCB)
<i>Paepalanthus polytrichoides</i> Kunth	ERV	AM	Ferreira, C.A.C. 5500 (NY)
<i>Syngonanthus allenii</i> var. <i>brasiliensis</i> Moldenke*	ERV	AM	Almeida, TE <i>et al.</i> 3316 (BHCB)
<i>Syngonanthus humboldtii</i> (Kunth) Ruhland	ERV	AM, CE	Lima, L.C.P. 646 (HUEFS)
<i>Syngonanthus nitens</i> Ruhland	ERV	AM, CAA, CE, MA	Almeida, C. & Turma CB15_ME01 184 (INPA)
<i>Syngonanthus setifolius</i> Hensold	ERV	AM	Almeida, C. & Turma CB15_ME01 183 (INPA)
<i>Syngonanthus tenuis</i> (Kunth) Ruhland	ERV	AM, CE	Carvalho, F.A. de 2007 (INPA)
Euphorbiaceae			
<i>Acalypha brasiliensis</i> Mull.Arg. **	ARB	AM, CAA, CE, MA	Junqueira, A.B. 218 (INPA)
<i>Acalypha cuneata</i> Poepp	ARB	AM, MA	Almeida, C. & Castro, A. 176 (INPA)
<i>Acalypha macrostachya</i> Jacq.*	ARV	AM, CE	Junqueira, A.B. 380 (EAFM)
<i>Alchornea discolor</i> Poepp.	ARB	AM, CEE, MA	Almeida, C. & Castro, A. 199 (INPA)
<i>Alchorneopsis floribunda</i> (Benth.) Müll.Arg.	ARV	AM	Junqueira, A.B. 518 (INPA)
<i>Aparisthium cordatum</i> (A.Juss.) Baill.	ARB	AM, MA	Almeida, C. & Castro, A. 211 (INPA)
<i>Conceveiba guianensis</i> Aubl.	ARV	AM	Junqueira, A.B. & Neto, R.F. 504 (EAFM)
<i>Conceveiba martiana</i> Baill.	ARV	AM	Mota, C.D.A. da 61463 (INPA)
<i>Croton glandulosus</i> L.	ARB	AM, CAA, CE, MA, PAM, PAT	Almeida, C. & Castro, A. 141 (INPA)
<i>Croton krukoffianus</i> Croizat	ARB	AM, CE	Ferreira, CID. 5813 (UB)
<i>Croton palanostigma</i> Klotzsch.	ARV	AM	Junqueira, A.B. & Souza, S.A. 626 (EAFM)
<i>Croton sampatik</i> Mull.Arg.	ARB	AM	Ferreira, C.A.C. 5813 (INPA)
<i>Dendrothrix wurdackii</i> Esser	ARB	AM	Ferreira, C.A.C. 5797 (INPA)
<i>Dodecastigma amazonicum</i> Ducke	ARV	AM	Ferreira, C.A.C. 5613 (INPA)
<i>Hevea spruceana</i> (Benth.) Mull.Arg.	ARV	AM	Albernaz, A.L.K.M. 179 (INPA)
<i>Jatropha curcas</i> L. #	ARB	AM, CAA, CE, MA, PAT	Mendes, R.F. <i>et al.</i> 24 (EAFM)
<i>Jatropha gossypifolia</i> L.	ARB	AM, CAA, MA	Almeida, C. & Castro, A. 41 (INPA)
<i>Mabea angustifolia</i> Spruce ex Benth.	ARV	AM	Almeida, C. & Castro, A. 64 (INPA)
<i>Mabea longibracteata</i> Esser	ARB	AM	Mota, C.D.A. da (INPA)
<i>Mabea nitida</i> Spruce ex Benth.	ARV	AM, CE	Viana, G.P. 98 (INPA)
<i>Mabea piriri</i> Aubl.	ARV	AM, CE, MA	Mota, C.D.A. da (INPA)
<i>Mabea speciosa</i> Müll. Arg.	ARB	AM	Almeida, C. & Castro, A. 204 (INPA)

Table 1: *continuation.*

Scientific name	Habit	Phytogeographic domain	Voucher
<i>Manihot esculenta</i> Crantz	ARB	AM, CE	Ferreira, C.A.C. 5822 (INPA)
<i>Manihot quinquepartita</i> Huber ex D.J.Rogers & Appan	ARB	AM, CAA, CE	Almeida, C. & Castro, A. 251 (INPA)
<i>Maprounea guianensis</i> Aubl.	ARB	AM, CE, MA	Silveira, A.L.P. 232 (UEC)
<i>Microstachys bidentata</i> (Mart.& Zucc.) Esser	LIA	AM, CAA, CE, MA	Ferreira, C.A.C. 5801 (NY)
<i>Microstachys corniculata</i> (Vahl) Griseb.	SUB	AM, CAA, CE, MA	Almeida, C. & Castro, A. 207 (INPA)
<i>Pausandra hirsuta</i> Lanj.	ARB	AM	Ferreira, C.A.C. 5843 (INPA)
<i>Pausandra macropetala</i> Ducke	ARV	AM	Ferreira, C.A.C. 5764 (INPA)
<i>Piranhea trifoliata</i> Baill.	ARV	AM	Viana, G.P. 78 (INPA)
<i>Ricinus communis</i> L.#	ARB	AM, CAA, CE, MT, PAM, PAT	Almeida, C. & Castro, A. 223 (INPA)
<i>Rhodothyrus macrophyllus</i> (Ducke) Esser	ARB	AM	Almeida, C. & Castro, A. 247 (INPA)
<i>Sagotia racemosa</i> Baill.	ARB	AM	Ferreira, C.A.C. 5759 (NY)
<i>Sandwithia guyanensis</i> Lanj.	ARV	AM	Ferreira, C.A.C. 5759 (INPA)
Fabaceae			
<i>Abarema adenophora</i> (Ducke) Barneby & J.W.Grimes	ARB	AM	Almeida, C. & Castro, A. 124 (INPA)
<i>Abarema campestris</i> (Spruce ex Benth.) Barneby & J.W.Grimes	ARB	AM	Mota, C.D.A. da 61607 (INPA)
<i>Abarema laeta</i> (Benth.) Barneby & J.W.Grimes	ARB	AM	Mota, C.D.A. da (INPA) Junqueira, A.B. & Souza, S.A. 617 (INPA)
<i>Alexa grandiflora</i> Ducke	ARV	AM	Junqueira, A.B. & Souza, S.A. 679 (INPA)
<i>Amphiodon effusus</i> Huber	ARV	AM, CAA, CE, MA	(INPA)
<i>Apuleia leiocarpa</i> (Vogel) J.F.Macbr.	ARV	AM, CAA, CE, MA	Amoêdo, S.C. <i>et al.</i> 44 (EAFM)
<i>Bauhinia longicuspis</i> Benth.	ARV	AM	Junqueira, A.B. 213 (INPA)
<i>Bauhinia rufa</i> (Bong.) Steud.**	ARB	CE	Ferreira, C.A.C. 5818 (INPA)
<i>Cassia fastuosa</i> Willd. ex Benth.	ARV	AM	Ferreira, C.A.C. 5505 (INPA)
<i>Cassia fastuosa</i> Willd. ex Benth. var. <i>fastuosa</i>	ARV	AM	Ferreira, C.A.C. 5505 (NY)
<i>Cassia leiandra</i> Benth.	ARV	AM	Almeida, C. & Castro, A. 101 (INPA)
<i>Centrosema vexillatum</i> Benth.	TRE	AM, CAA, CE, PAT	Ferreira, C.A.C. 5802 (INPA)
<i>Chamaecrista desvauxii</i> (Collad.) Killip	ARB	AM, CAA, CE, MA, PAT	Almeida, C. <i>et al.</i> 34 (INPA)
<i>Chamaecrista langsdorffii</i> (Kunth ex Vogel) Britton ex Pittier	ERV	AM, CAA, CE, MA	Lima, L.C.P. 652 (HUEFS)
<i>Chamaecrista flexuosa</i> (L.) Greene	ERV	AM, CAA, CE, MA, PAM, PAT	Giacomin, L.L. 1919 (BHCB)
<i>Clathrotropis nitida</i> (Benth.) Harms	ARV	AM	Viana, G.P. 217 (INPA)
<i>Copaifera multijuga</i> Hayne	ARV	AM	Viana, G.P. 219 (INPA)
<i>Crotalaria micans</i> Link	ARB	AM, CAA, CE, MA, PAM, PAT	Almeida, C. & Castro, A. 232 (INPA)
<i>Crudia amazonica</i> Spruce ex Benth.	ARV	AM	Ferreira, C.A.C. 5777 (INPA)
<i>Dalbergia inundata</i> Spruce ex Benth.	ARB	AM	Ferreira, C.A.C. 5543 (INPA)
<i>Dalbergia riparia</i> (Mart. ex Benth.) Benth.	LIA	AM	Viana, G.P. 90 (INPA)
<i>Deguelia angulata</i> (Ducke) A.M.G.Azevedo & R.A.Camargo	LIA	AM	Krukoff, B.A. 7766 (NY)
<i>Deguelia rariflora</i> (Mart. ex Benth.) G.P.Lewis & Acev.-Rodr.	LIA	AM	Krukoff, B.A. 7760 (NY)
<i>Deguelia spruceana</i> (Benth.) A.M.G.Azevedo & R.A.Camargo	LIA	AM	Albernaz, A.L.K.M. 173 (INPA)
<i>Deguelia utilis</i> (A.C.Sm.) A.M.G.Azevedo	TRE	AM	Krukoff, B.A. 7772 (NYBG)
<i>Desmodium adscendens</i> (Sw.) DC#	SUB	AM, CAA, CE, MA, PAM	Silva, G.P. 334 (HUEFS)
<i>Desmodium barbatum</i> (L.) Benth.	SUB	AM, CAA, CE, MA, PAM, PAT	Lima, L.C.P. <i>et al.</i> 654 (UEC)
<i>Desmodium distortum</i> (Aubl.) J.F.Macbr.	ARB	AM, CAA, CE, MA, PAT	Lima, L.C.P. <i>et al.</i> 630 (UEC)
<i>Desmodium juruenense</i> Hoehne	SUB	AM, CE	Lima, L.C.P. 631 (HUEFS)

Table 1: continuation.

Scientific name	Habit	Phytogeographic domain	Voucher
<i>Dialium guianense</i> (Aubl.) Sandwith.	ARV	AM, MA	Junqueira, A.B. & Barros, R.N.S. 391 (EAFM)
<i>Dinizia excelsa</i> Ducke	ARV	AM	Amoêdo, S.C. <i>et al.</i> 43 (EAFM)
<i>Dioclea coriacea</i> Benth	TRE	AM, CE	Almeida, C. & Castro, A. 125 (INPA)
<i>Dioclea scabra</i> (Rich.) Maxwell	ARB	AM	Ferreira, C.A.C. 5826 (INPA)
<i>Diploptropis triloba</i> Gleason.	ARV	AM	Junqueira, A.B. & Neto, R.F. 529 (EAFM)
<i>Dipteryx magnifica</i> (Ducke) Ducke	ARV	AM	Amoêdo, S.C. <i>et al.</i> 51 (EAFM)
<i>Dipteryx odorata</i> (Aubl.) Willd.	ARV	AM	Viana, G.P. 96 (INPA)
<i>Dipteryx punctata</i> (Blake) Amshoff.	ARV	AM	Ferreira, C.A.C. 5570 (INPA)
<i>Enterolobium schomburgkii</i> (Benth.) Benth.	ARV	AM, CE	Junqueira, A.B. & Neto, R.F. 440 (EAFM)
<i>Eperua oleifera</i> Ducke	ARV	AM	Ferreira, C.A.C. 5791 (US)
<i>Eperua oleifera</i> Ducke var. <i>campestris</i> Ducke	ARB	AM	Ferreira, C.A.C. 5791 (INPA)
<i>Hymenaea courbaril</i> L.	ARV	AM, CAA, CE, MA, PAT	Mendes, R.F. <i>et al.</i> 14 (EAFM)
<i>Hymenaea reticulata</i> Ducke	ARV	AM	Amoêdo, S.C. <i>et al.</i> 45 (EAFM)
<i>Inga alba</i> (Sw.) Willd.	ARV	AM, CE	Junqueira, A.B. & Neto, R.F. 462 (EAFM)
<i>Inga cylindrica</i> (Vell.) Mart.	ARB	AM, CE, MA	Almeida, C. & Castro, A. 147 (INPA)
<i>Inga disticha</i> Benth.	ARV	AM, CE	Junqueira, A.B. & Souza, S.A. 588 (INPA)
<i>Inga edulis</i> Mart.	ARB	AM, CAA, CE, MA	Almeida, C. <i>et al.</i> 35 (INPA)
<i>Inga grandiflora</i> Ducke.	ARV	AM	Junqueira, A.B. & Souza, S.A. 582 (EAFM)
<i>Inga heterophylla</i> Willd	ARV	AM, CE	Junqueira, A.B. & Souza, S.A. 690 (EAFM)
<i>Inga ingoides</i> (Rich.) Willd.	ARV	AM, CE, MA	Junqueira, A.B. & Neto, R.F. 448 (EAFM)
<i>Inga lateriflora</i> Miq.	ARV	AM, CE	Ferreira, C.A.C. 5804 (INPA)
<i>Inga lomatophylla</i> (Benth.) Pittier	ARV	AM	Junqueira, A.B. & Neto, R.F. 464 (EAFM)
<i>Inga longiflora</i> Spruce ex Benth.	ARV	AM	Junqueira, A.B. & Barros, R.N.S. 302 (EAFM)
<i>Inga macrophylla</i> Kunth ex Willd.	ARV	AM	Junqueira, A.B. 389 (INPA)
<i>Inga marginata</i> Willd	ARV	AM, CE, MA	Junqueira, A.B. & Souza, J.R. 251 (EAFM)
<i>Inga obidensis</i> Ducke	ARV	AM	Junqueira, A.B. & Barros, R.N.S. 326 (EAFM)
<i>Inga panurensis</i> Spruce ex Benth.	ARV	AM	Ferreira, C.A.C. 5804 (NY)
<i>Inga rubiginosa</i> (Rich.) DC.	ARV	AM	Almeida, C. & Castro, A. 67 (INPA)
<i>Inga umbellifera</i> (Vahl) DC.	ARV	AM	Junqueira, A.B. & Neto, R.F. 421 (EAFM)
<i>Lecointea amazonica</i> Ducke	ARV	AM	Viana, G.P. 110 (INPA)
<i>Libidibia ferrea</i> (Mart. ex Tul.) L.P. Queiroz. **	ARB	CAA, CE, MA	Mendes, R.F. <i>et al.</i> 30 (EAFM)
<i>Limadendron amazonica</i> (Ducke) J.E. Meireles & A.M.G. Azevedo	ARV	AM	Ferreira, C. A.C. 5829 (NY)
<i>Limadendron hostmannii</i> (Benth.) Meireles & A.M.G. Azevedo*	ARV	AM	Ferreira, C.A.C. 5829 (INPA)
<i>Machaerium floribundum</i> Benth.	LIA	AM	Junqueira, A.B. & Barros, R.N.S. 301 (EAFM)
<i>Machaerium hoehneanum</i> Ducke.	ARV	AM	Junqueira, A.B. & Barros, R.N.S. 385 (EAFM)
<i>Machaerium leiophyllum</i> (DC.) Benth.	LIA	AM	Viana, G.P. 59 (INPA)
<i>Macrolobium arenarium</i> Ducke	ARB	AM	Ferreira, C.A.C. 5789 (INPA)
<i>Macrolobium limbatum</i> Spruce ex Benth.	ARV	AM	Junqueira, A.B. & Barros, R.N.S. 359 (EAFM)
<i>Macrolobium microcalyx</i> Ducke	ARV	AM	Ferreira, C.A.C. 5558 (INPA)

Table 1: *continuation.*

Scientific name	Habit	Phytogeographic domain	Voucher
<i>Mimosa guilandinae</i> (DC.) Barneby	LIA	AM	Ferreira, C.A.C. 5526 (NY)
<i>Mimosa guilandinae</i> var. <i>spruceana</i> (Benth.) Barneby	ARB	AM	Almeida, C. & Castro, A. 129 (INPA)
<i>Mimosa invisa</i> Mart. ex Colla	ARB	AM, CAA, CE, MA	Almeida, C. & Castro, A. 198 (INPA)
<i>Mimosa myriadenia</i> (Benth.) Benth. var. <i>dispersa</i> Barneby	ARB	AM	Ferreira, C.A.C. 5823 (INPA)
<i>Mimosa pudica</i> L.	SUB	AM, CAA, CE, MA	Almeida, C. <i>et al.</i> 5823 (INPA)
<i>Mimosa sensitiva</i> L.	ERV	AM, CAA, CE, MA	Almeida, C. <i>et al.</i> 57 (INPA)
<i>Ormosia macrocalyx</i> Ducke	ARV	AM	Almeida, C. 83 (INPA) Junqueira, A.B. & Souza, S.A. 583 (EAFM)
<i>Ormosia grossa</i> Rudd	ARV	AM	Almeida, C. <i>et al.</i> 32 (INPA)
<i>Pachyrhizus erosus</i> (L.) Urb.#	TRE	AM, CE	Ferreira, C.A.C. 5562 (INPA)
<i>Parkia discolor</i> Spruce ex Benth.	ARV	AM	Junqueira, A.B. & Neto, R.F. 539 (EAFM)
<i>Parkia nitida</i> Miq.	ARV	AM	Junqueira, A.B. & Neto, R.F. 474 (EAFM)
<i>Parkia pendula</i> (Willd.) Benth. ex Walp	ARV	AM, MA	Ferreira, C.A.C. 5510 (INPA)
<i>Parkia ulei</i> (Harms) Kuhlme.	ARV	AM	Ferreira, C.A.C. 5771 (US)
<i>Peltogyne paniculata</i> Benth. subsp. <i>Paniculata</i>	ARB	AM	Ferreira, C.A.C. 5771 (INPA)
<i>Peltogyne venosa</i> (Vahl) Benth. ssp. <i>densiflora</i> (Spruce ex Benth.) M.F.Silva	ARB	AM	Almeida, C. & Castro, A. 114 (INPA)
<i>Piptadenia minutiflora</i> Ducke	TRE	AM	Almeida, T.E. (HRCB)
<i>Plathymenia reticulata</i> Benth.*	ARV	AM	Viana, G.P. 88 (INPA)
<i>Pterocarpus amazonum</i> (Benth.) Amshoff	ARV	AM	Junqueira, A.B. & Souza, S.A. 698 (EAFM)
<i>Pterocarpus rohrii</i> Vahl.	ARV	AM, CAA, CE, MA	Junqueira, A.B. 240 (INPA)
<i>Samanea saman</i> (Jacq.) Merr. ##	ARV	AA	Junqueira, A.B. & Souza, S.A. 673 (EAFM)
<i>Schnella splendens</i> (Kunth) Benth.	LIA	AM	Almeida, C. & Castro, A. 38 (INPA)
<i>Senna alata</i> (L.) Roxb.	ARB	AM, CAA, CE, MA, PAT	Almeida, C. & Castro, A. 214 (INPA)
<i>Senna cf macrophylla</i> (Kunth) H.S.Irwin & Barneby	LIA	AM	Ferreira, C. A.C. 5505 (UB)
<i>Senna multijuga</i> (Rich.) Irwin & Barneby	ARV	AM, CAA, CE, MA	Almeida, C. & Castro, A. 569 (INPA)
<i>Senna occidentalis</i> (L.) Link	ARB	AM, CAA, CE, MA, PAT	Junqueira, A.B. 311 (INPA)
<i>Senna silvestris</i> (Vell.) H.S.Irwin & Barneby	ARV	PAT	Almeida, C. & Castro, A. 51 (INPA)
<i>Senna tapajozensis</i> (Ducke) H.S.Irwin & Barneby	SUB	AM, CE	Almeida, C. & Castro, A. 102 (INPA)
<i>Senna undulata</i> (Benth.) H.S.Irwin & Barneby	ARB	AM	Junqueira, A.B.; Barros, R.N.S. 350 (EAFM)
<i>Stryphnodendron guianense</i> (Aubl.) Benth.	ARV	AM, CAA	Almeida, C. & Castro, A. 179 (INPA)
<i>Stryphnodendron pulcherrimum</i> (Willd.) Hochr.	ARB	AM, MA	Ferreira, C.A.C. 5838 (INPA)
<i>Swartzia arborescens</i> (Aubl.) Pittier	ARV	AM	Junqueira, A.B. & Neto, R.F. 536 (EAFM)
<i>Swartzia cuspidata</i> Spruce ex Benth	ARV	AM	Almeida, C. & Castro, A. 146 (INPA)
<i>Swartzia ingifolia</i> Ducke	ARB	AM	Ferreira, C.A.C. 5568 (INPA)
<i>Swartzia laevicarpa</i> Amshoff	ARV	AM	Junqueira, A.B. & Neto, R.F. 551 (EAFM)
<i>Swartzia laurifolia</i> Benth.	ARV	AM	Junqueira, A.B. & Barros, R.N.S. 315 (EAFM)
<i>Swartzia laxiflora</i> Bong. ex Benth.	ARV	AM	Krukoff, B.A. 7879 (NY)
<i>Swartzia lucida</i> R.S.Cowan	ARV	AM	Almeida, C. & Castro, A. 149 (INPA)
<i>Swartzia oraria</i> R.S.Cowan*	ARB	AM	Junqueira, A.B. & Barros, R.N.S. 393 (EAFM)
<i>Swartzia polyphylla</i> DC.	ARV	AM	Junqueira, A.B. & Souza, S.A. 641 (EAFM)
<i>Swartzia tessmannii</i> Harms.	ARV	AM	Ferreira, C.A.C. 5780 (INPA)
<i>Tachigali candelabrum</i> van der Werff	ARV	AM	Ferreira, C.A.C. 5512 (INPA)
<i>Tachigali eriopetala</i> (Ducke) L.G.Silva & H.C.Lima	ARV	AM	

Table 1: continuation.

Scientific name	Habit	Phytogeographic domain	Voucher
<i>Tachigali paniculata</i> Aubl.	ARV	AM	Silveira, A.L.P. 28 (UEC)
<i>Tachigali vulgaris</i> L.G.Silva & H.C.Lima	ARV	AM, CAA, CE	Silveira, A.L.P. 28 (RON)
<i>Tephrosia nitens</i> Benth.	ARV	AM, CE	Krukoff, B.A. 7889 (NY)
<i>Vatairea sericea</i> (Ducke) Ducke	ARV	AM	Amoêdo, S.C. <i>et al.</i> 53 (EAFM)
<i>Vigna lasiocarpa</i> (Mart. ex Benth.) Verdc.	ERV	AM, CE, MA, PAT AM, CAA, CE, MA,	Junqueira, A.B. 244 (INPA)
<i>Zornia latifolia</i> Sm.	ERV	PAM, PAT	Glocimar P.S. 333 (CEN)
<i>Zygia racemosa</i> (Ducke) Barneby & J.W.Grimes.	ARV	AM	Amoêdo, S.C. <i>et al.</i> 56 (EAFM)
Gentianaceae			
<i>Chelonanthus albus</i> (Spruce ex Progel) V.M.Badillo	ERV	AM	Carvalho, F.A. de 2004 (INPA)
<i>Chelonanthus acutangulus</i> (Ruiz & Pav.) Gilg	ERV	AM	Almeida, C. <i>et al.</i> 58 (INPA)
<i>Schultesia brachyptera</i> Cham.	ERV	AM, CAA, CE, MA	Ferreira, C.A.C. 5520 (INPA)
<i>Tachia grandiflora</i> Maguire & Weaver	ARV	AM	Almeida, C. & Castro, A. 71 (INPA)
<i>Voyria tenella</i> Hook.	ERV	AM	Ferreira, C.A.C. 5621 (INPA)
<i>Voyriella parviflora</i> (Miq.) Miq.	ERV	AM, CE, MA	Ferreira, C.A.C. 5620 (INPA)
Gesneriaceae			
<i>Codonanthopsis ulei</i> Mansf.	SUB	AM	Almeida, T.E. 3625 (INPA)
<i>Drymonia coccinea</i> (Aubl.) Wiehler	TRE	AM, MA	Almeida, C. & Castro, A. 172 (INPA)
<i>Drymonia serrulata</i> (Jacq.) Mart.	LIA	AM, CAA, CE, MA	Almeida, C. & Castro, A. 244 (INPA)
Goupiaceae			
<i>Goupia glabra</i> Aubl.	ARV	AM, CE	Junqueira, A.B. & Neto, R.F. 423 (EAFM)
Heliconiaceae			
<i>Heliconia acuminata</i> L. C. Rich	ERV	AM	Almeida, C. <i>et al.</i> 20 (INPA)
<i>Heliconia chartacea</i> Lane ex Barreiros	ERV	AM	Almeida, C. & Castro, A. 115 (INPA)
<i>Heliconia densiflora</i> Verl	ERV	AM	Almeida, C. & Castro, A. 165 (INPA)
<i>Heliconia psittacorum</i> L.f.	ERV	AM, CAA, CE, MA, PAT	Almeida, C. & Castro, A. 76 (INPA)
Humiriaceae			
<i>Humiria balsamifera</i> (Aubl.) J.St.-Hil.	ARV	AM, CAA, CE, MA	Ferreira, C.A.C. 5810 (INPA)
Hypericaceae			
<i>Vismia cayennensis</i> (Jacq.) Pers.	ARB	AM, CE	Almeida, C. & Castro, A. 157 (INPA)
<i>Vismia guianensis</i> (Aubl.) Choisy	ARB	AM, CAA, CE, MA	Almeida, C. & Castro, A. 137 (INPA)
<i>Vismia gracilis</i> Hieron.	ARV	AM, CE	Junqueira, A.B. & Neto, R.F. 498 (EAFM)
<i>Vismia japurensis</i> Reichardt.	ARV	AM, CE	Junqueira, A.B. & Souza, S.A. 636 (EAFM)
<i>Vismia macrophylla</i> Kunth	ARB	AM	Almeida, C. & Castro, A. 218 (INPA)
<i>Vismia sandwithii</i> Ewan.	ARV	AM, CE	Junqueira, A.B. & Neto, R.F. 420 (EAFM)
Icacinaeae			
<i>Emmotum nitens</i> (Benth.) Miers	ARV	AM, CAA, CE, MA, PAT	Silveira, A.L.P. 247 (RON)
Ixonanthaceae			
<i>Ochthocosmus barrae</i> Hallier f.	ARV	AM, CE	Silveira, A.L.P. 248 (RON)
Lacistemataceae			
<i>Lacistema aggregatum</i> (Berg) Rusby.	ARB	AM, CE	Almeida, C. & Turma CB15_ME01 186 (INPA)
<i>Lacistema polystachyum</i> Schnizl.	ARB	AM	Silveira, A.L.P. 255 (RON)
Lamiaceae			
<i>Amasonia angustifolia</i> Mart. & Schauer ex Schauer	ARB	AM, CE AM, CE, MA,	Ferreira, C.A.C. 5579 (INPA)
<i>Hyptis brevipes</i> Poit.	ARB	PAM, PAT AM, CAA, CE, MA,	Almeida, C. & Castro, A. 194 (INPA)
<i>Leonotis nepetifolia</i> (L.) R.Br.	ERV	PAT	Almeida, C. & Castro, A. 245 (INPA)

Table 1: *continuation.*

Scientific name	Habit	Phytogeographic domain	Voucher
<i>Ocimum campechianum</i> Mill.	ARB	AM, CAA, CE, MA	Mendes, R.F. <i>et al.</i> 5 (EAFM)
<i>Scutellaria agrestis</i> A.St.-Hil. ex Benth*	ERV	AM, MA	Mendes, R.F. <i>et al.</i> 56 (EAFM)
<i>Vitex triflora</i> Vahl	ARV	AM, CAA, CE	Albuquerque, B.W.P. de 366 (INPA)
Lauraceae			
<i>Endlicheria formosa</i> A.C.Sm	ARV	AM	Junqueira, A.B. & Neto, R.F. 515 (EAFM)
<i>Endlicheria glomerata</i> Mez*	ARV	AM, CE, MA	Ferreira, C.A.C. 5563 (MBM)
<i>Endlicheria macrophylla</i> (Meisn.) Mez	ARV	AM	Ferreira, C.A.C. 5563 (INPA)
<i>Mezilaurus itauba</i> (Meisn.) Taub. ex Mez.	ARB	AM	Almeida, C. <i>et al.</i> 15 (INPA)
<i>Nectandra cuspidata</i> Nees	ARV	AM, CAA, CE	Krukoff, B.A. 6064 (US)
<i>Ocotea cernua</i> (Nees) Mez	ARV	AM, CE, MA	Albuquerque, B.W.P. de 364 (INPA)
<i>Ocotea guianensis</i> Aubl.	ARV	AM, CE	Junqueira, A.B. & Neto, R.F. 528 (EAFM)
<i>Ocotea longifolia</i> Kunth.	ARV	AM	Junqueira, A.B. & Souza, J.R. 261 (INPA)
<i>Ocotea oblonga</i> (Meisn.) Mez	ARV	AM, MA	Junqueira, A.B. 471 (INPA)
<i>Ocotea splendens</i> (Meisn.) Baill.	ARV	AM	Junqueira, A.B. & Neto, R.F. 517 (EAFM)
<i>Persea americana</i> Mill. **#	ARV	MA	Junqueira, A.B. & Souza, S.A. 622 (EAFM)
Lecythidaceae			
<i>Allantoma decandra</i> (Ducke) S.A.Mori, Y.-Y.Huang & Prance	ARV	AM	Amoêdo, S.C. <i>et al.</i> 5 (EAFM)
<i>Bertholletia excelsa</i> Bonpl.	ARV	AM	Junqueira, A.B. & Souza, S. A. 676 (EAFM)
<i>Couratari stellata</i> A.C.Sm.	ARV	AM	Junqueira, A.B. & Souza, S.A. 646 (EAFM)
<i>Couratari tenuicarpa</i> A.C.Sm.	ARV	AM	Ferreira, C.A.C. 5544 (INPA)
<i>Eschweilera atropetiolata</i> S.A.Mori	ARV	AM	Junqueira, A.B. & Barros, R.N.S. 370 (EAFM)
<i>Eschweilera chartaceifolia</i> S.A.Mori.	ARV	AM	Junqueira, A.B. & Souza, S.A. 663 (EAFM)
<i>Eschweilera coriacea</i> (DC.) S.A.Mori	ARB	AM	Almeida, C. <i>et al.</i> 98 (INPA)
<i>Eschweilera micrantha</i> (O.Berg) Miers	ARB	AM	Mota, C.D.A. da 61662 (INPA)
<i>Eschweilera ovalifolia</i> (DC.) Nied.	ARV	AM	Viana, G.P. 65 (INPA)
<i>Eschweilera truncata</i> A.C.Sm.	ARV	AM	Junqueira, A.B. & Neto, R.F. 514 (EAFM)
<i>Gustavia augusta</i> L.	ARV	AM, MA	Junqueira, A.B. & Souza, J.R. 245 (EAFM)
<i>Gustavia hexapetala</i> (Aubl.) Sm.	ARB	AM	Viana, G.P. 86 (INPA)
<i>Gustavia poeppigiana</i> O.Berg	ARV	AM	Almeida, T.E. 3641 (INPA)
Lentibulariaceae			
<i>Utricularia amethystina</i> Salzm. ex A.St.-Hil. & Girard	ERV	AM, CAA, CE, MA	Ferreira, C.A.C. 5522 (INPA)
<i>Utricularia simulans</i> Pilg.	ERV	AM, CAA, CE, MA	Lima, L.C.P. 650 (HUEFS)
<i>Utricularia triloba</i> Benj.	ERV	AM, CAA, CE, MA	Lima, L.C.P. 637 (HUEFS)
Loganiaceae			
<i>Antonia ovata</i> Pohl.	ARV	AM, CE, MA	Silveira, A.L.P. 328 (UEC)
<i>Bonyunia antoniiifolia</i> Progel	ARB	AM, CE	Giacomin, L.L. <i>et al.</i> 1915 (INPA)
<i>Bonyunia minor</i> N.E.Br*	ARV	AM	Silveira, A.L.P. 15 (UEC)
<i>Strychnos hirsuta</i> Spruce	ARB	AM	Mota, C.D.A. da 61573 (INPA)
Loranthaceae			
<i>Passovia brasiliiana</i> Kuijt	ERV	AM, CAA, CE, MA	Ferreira, C.A.C. 5504 (INPA)
<i>Passovia pedunculata</i> (Jacq.) Kuijt	ERV	AM, CE	Ferreira, C.A.C. 5783 (INPA)
<i>Struthanthus marginatus</i> (Desr.) Blume	ERV	AM, CAA, CE, MA	Almeida, C. & Castro, A. 171 (INPA)

Table 1: continuation.

Scientific name	Habit	Phytogeographic domain	Voucher
Lythraceae			
<i>Cuphea antisiphilitica</i> Kunth.	SUB	AM, CAA, CE, MA, PAM, PAT	Ferreira, C.A.C. 5523 (INPA)
<i>Cuphea sabulosa</i> S.A.Graham	ARB	AM	Ferreira, C.A.C. 5811 (INPA)
<i>Physocalymma scaberrimum</i> Pohl	ARV	AM, CE	Viana, G.P. 216 (INPA)
Malpighiaceae			
<i>Blepharandra heteropetala</i> W.R.Anderson	ARB	AM	Ferreira, C.A.C. 5790 (NYBG)
<i>Byrsonima arthropoda</i> A.Juss.	ARV	AM, CE	Krukoff, B.A. 6035 (NY)
<i>Byrsonima chrysophylla</i> Kunth	ARV	AM, CE, MA	Silveira, A.L.P. 41 (UEC)
<i>Byrsonima coccolobifolia</i> Kunth	ARV	AM, CE, MA	Silveira, A.L.P. 229 (UEC)
<i>Byrsonima crassifolia</i> (L.) Kunth	ARB	AM, CAA, CE, MA, PAT	Almeida, C. <i>et al.</i> 92 (INPA) Junqueira, A.B. & Neto, R.F. 573 (EAFM)
<i>Byrsonima crispa</i> A.Juss.	ARV	AM, MA	Viana, G.P. 102 (INPA)
<i>Byrsonima japurensis</i> A.Juss.	ARV	AM, MA	Viana, G.P. 102 (INPA)
<i>Byrsonima laxiflora</i> Griseb.*	ARV	CE, MA, PAT	Silveira, A.L.P. 300 (RON)
<i>Byrsonima linguifera</i> Cuatrec.	ARB	AM	Ferreira, C.A.C. 5503 (INPA)
<i>Byrsonima poeppigiana</i> A.Juss.	ARV	AM	Silveira, A.L.P. 24 (RON)
<i>Byrsonima umbellata</i> Mart. ex A.Juss.*	ARB	AM, CE	Ferreira, C.A.C. 5800 (INPA)
<i>Excentradenia primaeva</i> (W.R.Anderson) W.R.Anderson	TRE	AM	Almeida, C. & Castro, A. 63 (INPA)
<i>Lophanthera longifolia</i> (Kunth) Griseb.	ARB	AM	Almeida, C. & Castro, A. 154 (INPA)
<i>Niedenzuella stannea</i> (Griseb.) W.R.Anderson	LIA	AM, PAT	Ferreira, C.A.C. 5507 (INPA)
<i>Pterandra arborea</i> Ducke	ARV	AM, CE	Silveira, A.L.P. 24 (UEC)
<i>Stigmaphyllon sinuatum</i> (DC.) A.Juss.	LIA	AM	Krukoff, B.A. 6038 (NY)
Malvaceae			
<i>Apeiba membranacea</i> Spruce ex Benth.	ARV	AM	Junqueira, A.B. & Neto, R.F. 460 (EAFM)
<i>Apeiba tibourbou</i> Aubl.	ARB	AM, CAA, CE, MA	Almeida, C. & Castro, A. 87 (INPA) Junqueira, A.B. & Barros, R.N.S. 291 (EAFM)
<i>Ceiba pentandra</i> (L.) Gaertn.*	ARV	AM	Junqueira, A.B. & Barros, R.N.S. 386 (EAFM)
<i>Eriotheca globosa</i> (Aubl.) A.Robyns.	ARV	AM, CE	Junqueira, A.B. & Neto, R.F. 520 (EAFM)
<i>Eriotheca longitubulosa</i> A.Robyns.	ARV	AM	Junqueira, A.B. & Barros, R.N.S. 328 (EAFM)
<i>Gossypium barbadense</i> L.#	ARB	AM, CAA, MA	Almeida, C. & Castro, A. 140 (INPA)
<i>Guazuma ulmifolia</i> Lam.	ARV	AM, CAA, CE, MA	Mendes, R.F. <i>et al.</i> 57 (EAFM)
<i>Heliocarpus americanus</i> L.**	ARV	DESC	Junqueira, A.B. 300 (INPA)
<i>Hibiscus furcellatus</i> Lam.	ARB	AM, CE, MA	Lima, L.C.P. 641 (HUEFS)
<i>Hibiscus sabdariffa</i> L.***#	ARB	DESC	Almeida, C. & Castro, A. 97 (INPA)
<i>Huberodendron swietenoides</i> (Gleason) Ducke	ARV	AM	Lemos F.R. 20541 (NY) Junqueira, A.B. & Barros, R.N.S. 328 (EAFM)
<i>Sterculia frondosa</i> Rich	ARV	AM	Junqueira, A.B. & Barros, R.N.S. 328 (EAFM)
<i>Pachira insignis</i> (Sw.) Savigny	ARV	AM	Viana, G.P. 221 (INPA)
<i>Pachira nitida</i> Kunth	ARV	AM	Ferreira, C.A.C. 5554 (INPA)
<i>Scleronema micranthum</i> (Ducke) Ducke	ARV	AM	Mota, C.D.A. da 61658 (INPA) Junqueira, A.B. & Souza, J.R. 268 (EAFM)
<i>Theobroma cacao</i> L. #	ARV	AM, MA	Junqueira, A.B. & Neto, R.F. 400 (EAFM)
<i>Theobroma obovatum</i> Klotzsch ex Benth.	ARV	AM	Junqueira, A.B. & Neto, R.F. 400 (EAFM)
<i>Theobroma speciosum</i> Spreng.	ARV	AM	Junqueira, A.B.; Barros, R.N.S. 396 (EAFM)
<i>Vasivaea podocarpa</i> Kuhlman.	ARV	AM	Albernaz, A.L.K.M. 183 (INPA)
Marantaceae			
<i>Goepfertia picturata</i> (K.Koch & Linden) Borchs. & S.Suárez	ERV	AM, CE, MA	Viana, G.P. (INPA)
<i>Ischnosiphon obliquus</i> (Rudge) Körn.	ERV	AM	Almeida, C. & Castro, A. 202 (INPA)

Table 1: continuation.

Scientific name	Habit	Phytogeographic domain	Voucher
<i>Monotagma densiflorum</i> (Körn.) K.Schum.	ERV	AM, CE	Almeida, C. & Castro, A. 170 (INPA)
<i>Monotagma floribundum</i> Hagberg & R. Erikss.	ARB	AM	Mota, C.D.A. da 61578 (INPA)
Marcgraviaceae			
<i>Souroubea guianensis</i> Aubl.	LIA	AM, MA	Viana, G.P. 101 (INPA)
Melastomataceae			
<i>Adelobotrys microcarpus</i> Schulman	SUB	AM	Almeida, C. <i>et al.</i> 16 (INPA)
<i>Bellucia acutata</i> Pilger	ARV	AM, CE	Junqueira, A.B. 580 (INPA)
<i>Bellucia dichotoma</i> Cogn	ARB	AM	Almeida, C. & Castro, A. 49 (INPA)
<i>Bellucia grossularioides</i> (L.) Triana.	ARV	AM, CE	Lombardi, J.A. <i>et al.</i> 10105 (UNOP)
<i>Clidemia capitellata</i> (Bonpl.) D.Don	SUB	AM, CAA, CE, MA	Almeida, C. <i>et al.</i> 47 (INPA)
<i>Clidemia hirta</i> (L.) D.Don	ARV	AM, CAA, CE, MA	Krukoff, B.A. 6012 (NY)
<i>Clidemia rubra</i> (Aubl.) Mart.	ARB	AM, CE	Almeida, C. & Castro, A. 229 (INPA)
<i>Macairea multinervia</i> Benth.	ARB	AM	Ferreira, C.A.C. 5516 (INPA)
<i>Macairea thyriflora</i> DC.	ARB	AM, CE	Mota, C.D.A. da 61553 (INPA) Junqueira, A.B. & Souza, J.R. 222 (EAFM)
<i>Miconia affinis</i> DC.	ARV	AM, CE, MA	
<i>Miconia ciliata</i> (Rich.) DC.	ARB	AM, CAA, CE, MA	Silveira, A.L.P. 324 (UEC) Junqueira, A.B. & Neto, R.F. 495 (EAFM)
<i>Miconia cuspidata</i> Naudin	ARV	AM, CE, MA	Junqueira, A.B. & Neto, R.F. 503 (EAFM)
<i>Miconia dolichorrhyncha</i> Naudin	ARV	AM, CE	
<i>Miconia dispar</i> Benth.	ARB	AM	Almeida, C. & Castro, A. 77 (INPA)
<i>Miconia fallax</i> DC.	ARB	AM	Silveira, A.L.P. 32 (UEC)
<i>Miconia ibaguensis</i> (Bonpl.) Triana.	ARB	AM, CAA, CE, MA	Silveira, A.L.P. 36 (UEC)
<i>Miconia minutiflora</i> (Bonpl.) DC.	ARV	AM, CAA, CE, MA	Junqueira, A.B. 211 (INPA)
<i>Miconia nervosa</i> (Sm.) Triana	ARB	AM, CAA, CE, MA	Ferreira, C.A.C. 5532 (INPA)
<i>Miconia poeppigii</i> Triana	ARV	AM	Almeida, C.; Castro, A. 120 (INPA)
<i>Miconia prasina</i> (Sw.) DC.	ARV	AM, CAA, CE, MA	Junqueira, A.B. 521 (INPA)
<i>Miconia rhytidophylla</i> Naudin	ARB	AM	Mota, C.D.A. da 61669 (INPA)
<i>Miconia rubiginosa</i> (Bonpl.) DC.	ARB	AM, CE	Silveira, A.L.P. 305 (RON)
<i>Miconia stenostachya</i> DC.	ARB	AM, CAA, CE, MA	Almeida, C. & Castro, A. 180 (INPA)
<i>Miconia tillettii</i> Wurdack	ARV	AM	Junqueira, A.B. 558 (INPA)
<i>Miconia tomentosa</i> (Rich.) D.Don	ARB	AM, CE, MA	Almeida, C.; Castro, A. 153 (INPA)
<i>Mouriri acutiflora</i> Naudin	ARB	AM, CE	Albernaz, A.L.K.M. 169 (INPA)
<i>Siphanthera subtilis</i> Pohl ex DC.	ERV	AM, CE	Ferreira, C.A.C. 5793 (US)
<i>Tococa bullifera</i> DC.	ARB	AM	Almeida, C. & Castro, A. 230 (INPA)
<i>Tococa guianensis</i> Aubl.	ARB	AM, CE, PAT	Almeida, C. & Castro, A. 134 (INPA)
Meliaceae			
<i>Cedrela odorata</i> L.	ARV	AM, CAA, CE, MA	Viana, G.P. 105 (INPA) Junqueira, A.B. & Souza, J.R. 283 (EAFM)
<i>Guarea humaitensis</i> T.D.Penn	ARV	AM	
<i>Guarea cf kunthiana</i> A.Juss.	ARB	AM, CE, MA	Almeida, C. & Castro, A. 228 (INPA)
<i>Guarea silvatica</i> C.DC.	ARV	AM	Ferreira, C.A.C. 5612 (INPA)
<i>Trichilia fasciculata</i> T.D.Penn.	ARV	AM	Ferreira, C.A.C. 5529 (INPA)
<i>Trichilia micrantha</i> Benth.	ARV	AM, CE	Ferreira, C.A.C. 5555 (INPA) Junqueira, A.B. & Neto, R.F. 469 (EAFM)
<i>Trichilia rubra</i> C.DC.	ARV	AM	
Menispermaceae			
<i>Abuta grandifolia</i> (Mart.) Sandwith	ARB	AM, CAA, CE, PAT	Ferreira, C.A.C. 5534 (INPA)
Moraceae			
<i>Brosimum acutifolium</i> Huber	ARV	AM, PAT	Junqueira, A.B. & Souza, S.A. 693 (EAFM)
<i>Brosimum acutifolium</i> subsp. <i>interjectum</i> C.C.Berg	ARV	AM	Moreira, L.P. (INPA)

Table 1: continuation.

Scientific name	Habit	Phytogeographic domain	Voucher
<i>Brosimum guianense</i> (Aubl.) Huber	ARV	AM, CAA, CE, MA	Junqueira, A.B. & Souza, S.A. 644 (EAFM)
<i>Brosimum lactescens</i> (S.Moore) C.C.Berg.	ARV	AM, CE, MA	Junqueira, A.B. & Barros, R.N.S. 318 (EAFM)
<i>Brosimum rubescens</i> Taub.	ARV	AM, CE, MA	Amoêdo, S.C. <i>et al.</i> 52 (EAFM)
<i>Castilla ulei</i> Warb.	ARV	AM	Junqueira, A.B. & Barros, R.N.S. 333 (EAFM)
<i>Clarisia biflora</i> Ruiz & Pav.	ARV	AM	Junqueira, A.B. & Souza, J.R. 278 (EAFM)
<i>Clarisia ilicifolia</i> (Spreng.) Lanj. & Rossberg.	ARV	AM, MA	Junqueira, A.B. & Barros, R.N.S. 322 (EAFM)
<i>Clarisia racemosa</i> Ruiz & Pav.	ARV	AM, MA	Amoêdo, S.C. <i>et al.</i> 36 (EAFM)
<i>Ficus amazonica</i> (Miq.) Miq.	ARV	AM	Albernaz, A.L.K.M. 170 (INPA)
<i>Ficus eximia</i> Schott	ARV	AM, CE, MA	Viana, G.P. 63 (INPA)
<i>Ficus maxima</i> Mill.	ARV	AM	Junqueira, A.B. & Souza, J.R. 273 (EAFM)
<i>Ficus obtusiuscula</i> (Miq.) Miq.	ARB	AM, CAA, CE, MA	Ferreira, C.A.C. 5774 (INPA)
<i>Helianthostylis sprucei</i> Baill.	ARV	AM	Junqueira, A.B. & Souza, J.R. 279 (EAFM)
<i>Maclura tinctoria</i> (L.) D. Don ex Steud.	ARV	AM, CAA, CE, MA, PAM, PAT	Junqueira, A.B. & Barros, R.N.S. 287 (EAFM)
<i>Maquira calophylla</i> (Poepp. & Endl.) C.C.Berg	ARV	AM, CE	Junqueira, A.B. & Barros, R.N.S. 358 (EAFM)
<i>Maquira coriacea</i> (H.Karst.) C.C.Berg	ARV	AM, CE	Viana, G.P. 100 (INPA)
<i>Maquira sclerophylla</i> (Ducke) C.C.Berg	ARV	AM	Junqueira, A.B. & Barros, R.N.S. 325 (EAFM)
<i>Naucleopsis stipularis</i> Ducke	ARV	AM	Ferreira, C.A.C. 5584 (INPA)
<i>Perebea guianensis</i> Aubl.	ARV	AM, CAA, CE	Mota, C.D.A. da 61602 (INPA)
<i>Perebea mollis</i> (Poepp. & Endl.) Huber.	ARV	AM, CAA, CE	Junqueira, A.B. & Neto, R.F. 451 (EAFM)
<i>Pseudolmedia laevis</i> (Ruiz & Pav.) J.F.Macbr.	ARV	AM	Junqueira, A.B. & Souza, J.R. 257 (EAFM)
<i>Sorocea muriculata</i> Miq.	ARV	AM, PAT	Almeida, T.E. 3618 (INPA)
<i>Sorocea muriculata</i> Miq. subsp. <i>muriculata</i>	ARV	AM, PAT	Almeida, T.E. 3623 (INPA)
<i>Sorocea pubivena</i> Hemsl.	ARV	AM	Junqueira, A.B. 256 (INPA)
<i>Sorocea muriculata</i> subsp. <i>uaupensis</i> (Baill.) C.C.Berg	ARV	AM	Junqueira, A.B. & Neto, R.F. 508 (EAFM)
<i>Trymatococcus amazonicus</i> Poepp. & Endl.	ARB	AM	Viana, G.P. 85 (INPA)
Muntingiaceae			
<i>Muntingia calabura</i> L.	ARB	AM	Krukoff, B.A. 6016 (US)
Myristicaceae			
<i>Iryanthera lancifolia</i> Ducke	ARV	AM	Ferreira, C.A.C. 5588 (UPCB)
<i>Iryanthera macrophylla</i> (Benth.) Warb.	ARV	AM	Mota, C.D.A. da 61603 (INPA)
<i>Iryanthera tessmannii</i> Markgr.	ARV	AM	Ferreira, C.A.C. 5614 (NY)
<i>Iryanthera tricornis</i> Ducke	ARV	AM	Mota, C.D.A. da 61663 (INPA)
<i>Iryanthera ulei</i> Warb.	ARV	AM	Ferreira, C.A.C. 58 (EAFM)
<i>Osteophloeum platyspermum</i> (Spruce ex A.DC.) Warb.	ARV	AM	Amoêdo, S.C. <i>et al.</i> 58 (EAFM)
<i>Virola calophylla</i> Warb.	ARV	AM	Viana, G.P. 77 (INPA)
<i>Virola elongata</i> (Benth.) Warb.	ARV	AM	Ferreira, C.A.C. 5557 (INPA)
<i>Virola obovata</i> Ducke	ARV	AM	Albernaz, A.L.K.M. 172 (INPA)
<i>Virola pavonis</i> (A.DC.) A.C.Sm.	ARV	AM	Mota, C.D.A. da 61619 (INPA)
<i>Virola sebifera</i> Aubl.	ARV	AM, CE, MA	Lombardi, J.A. 60664 (HECB)
<i>Virola surinamensis</i> (Rol. ex Rottb.) Warb.	ARV	AM, CAA	Albernaz, A.L.K.M. 181 (INPA)
Myrsinaceae			
<i>Cybianthus fulvopulverulentus</i> subsp. <i>magnoliifolius</i> (Mez)			
Pipoly	ARB	AM	Mota, C.D.A. da 61552 (INPA)

Table 1: *continuation.*

Scientific name	Habit	Phytogeographic domain	Voucher
Myrtaceae			
<i>Eugenia caducibracteata</i> Mazine	ARV	AM	Junqueira, A.B. 527 (INPA)
<i>Eugenia citrifolia</i> Poir	ARV	AM	Junqueira, A.B. & Neto, R.F. 531 (EAFM)
<i>Eugenia cf. cuspidifolia</i> DC.	ARB	AM	Almeida, C. & Castro, A. 216 (INPA)
<i>Eugenia ferreiraeana</i> O.Berg	ARB	AM	Ferreira, C.A.C. 5537 (INPA)
<i>Eugenia gomesiana</i> O.Berg	ARV	AM	Viana, G.P. 97 (INPA)
<i>Eugenia lambertiana</i> DC.	ARB	AM, CAA, CE, MA, PAT	Ferreira, C.A.C. 5775 (INPA)
<i>Eugenia omissa</i> McVaugh	ARV	AM	Junqueira, A.B. & Neto, R.F. 427 (EAFM)
<i>Eugenia patens</i> Poir.	ARV	AM	Krukoff, B. A. 6021 (US)
<i>Myrcia aliena</i> McVaugh.	ARV	AM	Junqueira, A.B.; Souza, S.A. 692 (EAFM)
<i>Myrcia bracteata</i> (Rich.) DC.	ARV	AM, CE	Albuquerque, B.W.P. de 365 (INPA)
<i>Myrcia gigas</i> McVaugh	ARV	AM	Junqueira, A.B.; Souza, J.R. 276 (INPA)
<i>Myrcia guianensis</i> (Aubl.) DC.	ARB	AM, CAA, CE, MA	Almeida, C. & Castro, A. 196 (INPA)
<i>Myrcia inaequiloba</i> (DC.) Lemée	ARV	AM, MA	Krukoff, B.A. 5997 (SP)
<i>Myrcia multiflora</i> (Lam.) DC.	ARV	AM, CAA, CE, MA	Almeida, C. & Castro, A. 195 (INPA)
<i>Myrcia paivae</i> O.Berg.	ARB	AM	Junqueira, A.B. & Souza, J.R. 247 (EAFM)
<i>Myrcia splendens</i> (Sw.) DC.	ARV	AM, CAA, CE, MA, PAT	Silveira, A.L.P. 318 (UEC)
<i>Myrcia sylvatica</i> (G.Mey.) DC.	ARV	AM, CAA, CE	Junqueira, A.B. 507 (INPA)
<i>Myrcia umbraticola</i> (Kunth) E.Lucas & C.E.Wilson	ARB	AM	Krukoff, B.A. 5997 (NY)
<i>Psidium guineense</i> Sw.	ARV	AM, CAA, CE, MA	Junqueira, A.B. & Souza, S.A. 586 (EAFM)
<i>Syzygium cumini</i> (L.) Skeels.#	ARV	AM, CE, MA, PAT	Krukoff, B.A. 6014 (SP)
Nyctaginaceae			
<i>Guapira opposita</i> (Vell.) Reitz	ARV	AM, CAA, CE, MA	Junqueira, A.B. & Souza, J.R. 250 (EAFM)
<i>Neea filipes</i> Huber.	ARV	DESC	Junqueira, A.B. & Souza, J.R. 281 (EAFM)
<i>Neea madeirana</i> Standl.	ARV	AM	Mota, C.D.A. da 61460 (INPA)
<i>Neea oppositifolia</i> Ruiz & Pav.	ARV	AM, CE	Krukoff, B.A. 6058 (NYBG)
<i>Neea virens</i> Poepp. ex Heimerl	ARB	DESC	Viana, G.P. 67 (INPA)
Nymphaeaceae			
<i>Nymphaea glandulifera</i> Rodschied	ERV	AM, CE	Almeida, C. & Bacuri, J. 48 (INPA)
Ochnaceae			
<i>Ouratea castaneifolia</i> (DC.) Engl.	ARV	AM, CAA, CE, MA	Junqueira, A.B. & Souza, J.R. 260 (EAFM)
<i>Ouratea spectabilis</i> (Mart.) Engl.*	ARV	CE	Silveira, A.L.P. 241 (RON)
<i>Sauvagesia longifolia</i> Eichler	ARV	AM, MA	Giacomin, L.L. <i>et al.</i> 1928 (BHCB)
<i>Sauvagesia racemosa</i> A.St.-Hil.	ARB	AM, CAA, CE, MA	Ferreira, C.A.C. 5796 (INPA)
<i>Wallacea insignis</i> Spruce ex Benth. & Hook.f.	ARV	AM	Ferreira, C.A.C. 5536 (INPA)
Olacaceae			
<i>Aptandra tubicina</i> (Poepp.) Benth. ex Miers.	ARV	AM, MA	Junqueira, A.B. & Barros, R.N.S. 299 (EAFM)
<i>Heisteria densifrons</i> Engl.	ARV	AM	Junqueira, A.B. & Neto, R.F. 398 (EAFM)
Onagraceae			
<i>Ludwigia hyssopifolia</i> (G.Don) Exell	ARB	AM, MA, PAT	Almeida, C. & Castro, A. 192 (INPA)
<i>Ludwigia octovalvis</i> (Jacq.) P.H. Raven.	SUB	AM, CAA, CE, MA, PAT	Lima, L.C.P. 643 (CGMS)
Orchidaceae			
<i>Coryanthes macrantha</i> (Hook.) Hook.	ERV	AM	Garcia, K. (INPA)
<i>Habenaria glazioviana</i> Kraenzl.	ERV	AM, CAA, CE	Ferreira, C.A.C. 5575 (INPA)
<i>Ionopsis satyrioides</i> (Sw.) Lindl.	ERV	AM	Krukoff, B.A. 6062 (NY)

Table 1: continuation.

Scientific name	Habit	Phytogeographic domain	Voucher
<i>Liparis nervosa</i> (Thumb.) Lindl.	ERV	AM, CAA, CE, MA	Ferreira, C.A.C. 5574 (INPA)
Passifloraceae			
<i>Passiflora coccinea</i> Aubl.	LIA	AM, CAA	Almeida, C. <i>et al.</i> 21 (INPA)
<i>Passiflora glandulosa</i> Cav.	TRE	AM	Almeida, C. & Castro, A. 107 (INPA)
<i>Passiflora misera</i> Kunth	TRE	AM, CAA, CE, MA, PAT	Almeida, C. & Castro, A. 142 (INPA)
<i>Passiflora nitida</i> Kunth	TRE	AM, CAA, CE	Almeida, C. & Castro, A. 233 (INPA)
Pentaphragaceae			
<i>Ternstroemia cf. krukoffiana</i> Kobuski	ARV	AM	Almeida, C. <i>et al.</i> 91 (INPA)
Peraceae			
<i>Chaetocarpus echinocarpus</i> (Baill.) Ducke.	ARV	AM, CAA, CE	Lombardi 10090 (HRBC) Junqueira, A.B. & Neto, R.F. 544 (EAFM)
<i>Chaetocarpus schomburgkianus</i> (Kuntze) Pax & K.Hoffm.	ARV	AM	
<i>Pera bicolor</i> (Klotzsch) Müll.Arg.	ARV	AM	Ferreira, C.A.C. 5564 (INPA)
<i>Pera decipiens</i> (Müll.Arg.) Müll.Arg.	ARB	AM	Silveira, A.L.P. 16 (UEC)
Phyllanthaceae			
<i>Phyllanthus stipulatus</i> (Raf.) G.L.Webster	SUB	AM, CE, MA	Lima, L.C.P. 642 (HUEFS)
Phytolaccaceae			
<i>Petiveria alliacea</i> L.*#	ARB	AM, CAA, MA, PAM	Mendes, R.F. <i>et al.</i> 32 (EAFM)
<i>Phytolacca rivinoides</i> Kunth & Bouché	ARB	AM, CAA, MA, PAT	Almeida, C. & Castro, A. 159 (INPA)
Picramniaceae			
<i>Picramnia sellowii</i> G.Planch.*	LIA	AM, CAA, CE, MA	Almeida, T.E. 3639 (INPA)
Piperaceae			
<i>Piper aduncum</i> L.	ARV	AM, CAA, CE, MA, PAM, PAT	Junqueira, A.B. 210 (INPA)
<i>Piper cyrtopodon</i> (Miq.) C.DC.	ARB	AM	Almeida, C. <i>et al.</i> 18 (INPA)
<i>Piper erectipilum</i> Yunck.	ARB	AM	Almeida, T.E. 3613 (INPA)
<i>Piper hispidum</i> S.w	ARB	AM, CE, MA	Almeida, C. & Castro, A. 72 (INPA)
<i>Piper macapaense</i> Yunck.*	ARB	AM	Mota, C.D.A. da 61674 (INPA)
<i>Piper mollicomum</i> Kunth	ARB	AM, CAA, CE, MA	Almeida, C. & Castro, A. 74 (INPA)
<i>Piper peltatum</i> L.	ARB	AM, CE	Almeida, C. <i>et al.</i> 84 (INPA)
Poaceae			
<i>Andropogon leucostachyus</i> Kunth	ERV	AM, CAA, CE, MA, PAM, PAT	Almeida, C. <i>et al.</i> 31 (INPA)
<i>Anthraenantia lanata</i> (Kunth) Benth.	ERV	AM, CAA, CE, MA,	Almeida, TE <i>et al.</i> 3314 (BHCB)
<i>Cenchrus purpureus</i> (Schumach.) Morrone#	ERV	AM, CAA, CE, MA	Almeida, C. <i>et al.</i> 30 (INPA)
<i>Coleataenia stenodes</i> (Griseb.) Sorong	ERV	AM, CE	Carvalho, F.A. de 2008 (INPA)
<i>Cymbopogon citratus</i> (DC.) Stapf*#	ERV	AM, CAA, CE, MA	Mendes, R.F. <i>et al.</i> 11 (EAFM)
<i>Eragrostis hypnoides</i> (Lam.) Britton, Sterns & Poggenb.	ERV	AM, CAA, CE, MA, PAM	Silva, G.P. 339 (CEN)
<i>Homolepis cf. aturensis</i> (Kunth) Chase	ERV	AM, CAA, CE	Almeida, C. & Castro, A. 213 (INPA)
<i>Ichnanthus calvescens</i> (Nees ex Trin.) Döll	ERV	AM, CAA, CE, MA, PAT	Almeida, C. & Castro, A. 25 (INPA)
<i>Olyra latifolia</i> L.	ERV	AM, CAA, CE, MA	Almeida, C. & Castro, A. 132 (INPA)
<i>Panicum capillare</i> L.**#	ERV	PAM	Almeida, C. <i>et al.</i> 46 (INPA)
<i>Pariana ulei</i> Pilg.	ERV	AM	Ferreira, C.A.C. 5616 (INPA)
<i>Paspalum gardnerianum</i> Nees	ERV	AM, CAA, CE	Almeida, C. & Castro, A. 105 (INPA)
<i>Urochloa fusca</i> (Sw.) B.F.Hansen & Wunderlin#	ERV	AM, CAA, CE, MA, PAT	Almeida, C. & Castro, A. 39 (INPA)
Polygalaceae			
<i>Bredemeyera myrtifolia</i> (A.W.Benn.) Marques	ARB	AM	Ferreira, C.A.C. 5583 (INPA)
<i>Caamembeca spectabilis</i> (DC.) J.F.B.Pastore	ARB	AM, CAA, MA	Almeida, C. & Castro, A. 127 (INPA)
<i>Polygala adenophora</i> DC.	SUB	AM, CE, MA	Ferreira, C.A.C. 5524 (INPA)

Table 1: *continuation.*

Scientific name	Habit	Phytogeographic domain	Voucher
Pontederiaceae			
<i>Eichhornia crassipes</i> (Mart.) Solms	ERV	AM, CAA, CE, MA, PAM, PAT	Almeida, C. & Castro, A. 189 (INPA)
Proteaceae			
<i>Panopsis rubescens</i> (Pohl) Rusby	ARB	AM, CE, MA	Ferreira, C.A.C. 5540 (INPA)
Rapateaceae			
<i>Cephalostemon gracilis</i> (Poepp. & Endl.) R.H.Schomb.	ERV	AM	Ferreira, C.A.C. 5794 (INPA)
<i>Rapatea paludosa</i> Aubl.	ERV	AM, MA	Ferreira, C.A.C. 5587 (INPA)
<i>Rapatea spectabilis</i> Pilg.	ERV	AM	Mota, C.D.A. da 61675 (INPA)
Rhamnaceae			
<i>Ampelozizyphus amazonicus</i> Ducke.	LIA	AM	Mendes, R.F. <i>et al.</i> 25 (EAFM)
Rubiaceae			
<i>Alibertia edulis</i> (Rich.) A.Rich.	ARB	AM, CE	Silveira, A.L.P. 266 (UEC)
<i>Alibertia edulis</i> (Rich.) A.Rich. var. <i>edulis</i>	ARB	AM, CE	Ferreira, C.A.C. 5605 (INPA)
<i>Coffea liberica</i> Hiern#	ARB	AM, MA	Almeida, C. <i>et al.</i> 79 (INPA)
<i>Cordia myrciifolia</i> (K.Schum.) C.H.Perss. & Delprete.	ARB	AM, CAA, CE, MA	Silveira, A.L.P. 261 (RON)
<i>Faramea capillipes</i> Müll.Arg.	ARB	AM	Ferreira, C.A.C. 5770 (INPA)
<i>Faramea occidentalis</i> (L.) A.Rich.	ARB	AM	Ferreira, C.A.C. 5607 (INPA) Junqueira, A.B. & Neto, R.F. 543 (EAFM)
<i>Ferdinandusa rudgeoides</i> (Benth.) Wedd.	ARV	AM, CE	Almeida, C. & Castro, A. 23 (INPA)
<i>Isertia hypoleuca</i> Benth.	ARV	AM	Ferreira, C.A.C. 5609 (INPA)
<i>Kutchubaea insignis</i> Fisch. ex DC.	ARB	AM	Almeida, C. & Castro, A. 188 (INPA)
<i>Mussaenda erythrophylla</i> Schumach & Thonn. ##	ARB	AM, CE, MA	Vicentini, A. 2211 (INPA)
<i>Pagamea coriacea</i> Spruce ex Benth.	ARV	AM	Ferreira, C.A.C. 5760 (INPA)
<i>Palicourea amapaensis</i> Steyerem.	ARB	AM	Mota, C.D.A. da 61550 (INPA)
<i>Palicourea bracteosa</i> Standl.	ARB	AM	Almeida, C. & Castro, A. 163 (INPA)
<i>Palicourea charianthema</i> Standl.	ARB	AM	Almeida, C. & Castro, A. 166 (INPA)
<i>Palicourea corymbifera</i> (Müll.Arg.) Standl.	ARB	AM	Viana, G.P. 62 (INPA)
<i>Palicourea fastigiata</i> Kunth	ARB	AM	Junqueira, A.B. 224 (INPA)
<i>Palicourea grandifolia</i> (Willd. ex Roem. & Schult.) Standl.	ARB	AM	Junqueira, A.B. 305 (INPA)
<i>Palicourea guianensis</i> Aubl.	ARB	AM	Almeida, C. & Castro, A. 168 (INPA)
<i>Palicourea lasiantha</i> K.Krause	ARB	AM, CAA, CE, MA	Almeida, C. & Castro, A. 139 (INPA)
<i>Palicourea marcgravii</i> A.St.-Hil*	ARB	AM, CE, MA	Almeida, C. & Castro, A. 164 (INPA)
<i>Palicourea racemosa</i> (Aubl.) Borhidi	ARB	AM, CE, MA	Ferreira, C.A.C. 5528 (INPA)
<i>Perama hirsuta</i> Aubl.	SUB	AM	Almeida, C. & Castro, A. 70 (INPA)
<i>Psychotria apoda</i> Steyerem.	SUB	AM	Almeida, C. & Castro, A. 70 (INPA) Almeida, C & Turma CB15_ME01 187 (INPA)
<i>Psychotria bracteocardia</i> (DC.) Müll.Arg.	ARB	AM, CAA, CE, MA	Almeida, C. <i>et al.</i> 19 (INPA)
<i>Psychotria iodotricha</i> Müll.Arg.	ARB	AM, CAA, MA	Mota, C.D.A. da 61574 (INPA)
<i>Psychotria platypoda</i> DC.	ARB	AM	Ferreira, C.A.C. 5840 (INPA)
<i>Psychotria rosea</i> (Benth.) Müll.Arg.	ARB	AM, CE	Viana, G.P. 66 (INPA)
<i>Psychotria subundulata</i> Benth.	ARB	AM	Ferreira, C.A.C. 5815 (MO)
<i>Psyllocarpus campinorum</i> (Krause) J.H. Kirkbr.	ARB	AM	Ferreira, C.A.C. 5615 (INPA)
<i>Rudgea lanceifolia</i> Salisb.	TRE	AM	Almeida, C. & Castro, A. 156 (INPA)
<i>Sabicea cf. velutina</i> Benth	ARB	AM	Almeida, C. & Castro, A. 243 (INPA)
<i>Tocoyena guianensis</i> K.Schum.	ARB	AM, CE	Ferreira, C.A.C. 5825 (INPA)
<i>Uncaria guianensis</i> (Aubl.) J.F.Gmel.*	ARB	AM, CAA	Almeida, C. & Castro, A. 136 (INPA)
<i>Warszewiczia coccinea</i> (Vahl) Klotzsch	ARB	AM, CAA	Almeida, C. & Castro, A. 136 (INPA)
Rutaceae			
<i>Citrus x aurantium</i> L. **#	ARB	CE, MA	Mendes, R.F. <i>et al.</i> 51 (EAFM)
<i>Conchocarpus grandis</i> Kallunki	ARB	AM	Mota, C.D.A. da 61661 (INPA)
<i>Raputia ulei</i> (K.Krause) Kallunki	ARV	AM	Ferreira, C.A.C. 5767 (INPA)

Table 1: continuation.

Scientific name	Habit	Phytogeographic domain	Voucher
Santalaceae			
<i>Phoradendron poeppigii</i> (Tiegh.) Kuijt	ERV	AM	Krukoff, B.A. 6011 (NY)
Salicaceae			
<i>Casearia arborea</i> (Rich.) Urb.	ARB	AM, CE, MA	Almeida, C. & Castro, A. 225 (INPA) Junqueira, A.B. & Barros, R.N.S. 383 (EAFM)
<i>Casearia duckeana</i> Sleumer.	ARV	AM	Junqueira, A.B. 627 (INPA)
<i>Casearia grandiflora</i> Cambess.	ARV	AM, CAA, CE, MA	Junqueira, A.B. 638 (INPA)
<i>Casearia javitensis</i> Kunth	ARV	AM, CAA, CE, MA	Junqueira, A.B. 638 (INPA)
<i>Casearia pitumba</i> Sleumer	ARB	AM, CE	Albuquerque, B.W.P. de 367 (INPA)
<i>Casearia ulmifolia</i> Vahl ex Vent.	ARV	AM, CAA, CE	Junqueira, A.B. 655 (INPA) Junqueira, A.B. & Neto, R.F. 411 (EAFM)
<i>Laetia procera</i> (Poepp.) Eichler	ARV	AM, CE	
<i>Hasseltia floribunda</i> Kunth	ARB	AM	Viana, G.P. 75 (INPA)
Sapindaceae			
<i>Allophylus pilosus</i> (J.F.Macbr.) A.H.Gentry	ARB	AM	Albernaz, A.L.K.M. 174 (INPA)
<i>Allophylus punctatus</i> (Poepp.) Radlk.	ARB	AM, CE	Ferreira, C.A.C. 5611 (INPA) Junqueira, A.B. & Barros, R.N.S. 334 (EAFM)
<i>Cupania rubiginosa</i> (Poir.) Radlk.	ARV	AM, CE	Junqueira, A.B. & Souza, S.A. 683 (EAFM)
<i>Cupania scrobiculata</i> Hook. & Arn.	ARV	AM, MA	
<i>Matayba purgans</i> Radlk.	ARV	AM, CE	Krukoff, B. A. 6059 (US)
<i>Paullinia caloptera</i> Radlk.	TRE	AM	Ferreira, C.A.C. 5775 (INPA)
<i>Paullinia dasygonia</i> Radlk.	TRE	AM	Almeida, C. & Castro, A. 113 (INPA)
<i>Paullinia dasystachya</i> Radlk.	LIA	AM	Almeida, C. & Castro, A. 217 (INPA)
<i>Paullinia elegans</i> Cambess.	ARB	AM, CAA, CE, MA, PAT	Almeida, C. & Castro, A. 160 (INPA) Junqueira, A.B. & Barros, R.N.S. 336 (EAFM)
<i>Pseudima frutescens</i> Radlk.	ARV	AM, MA	
<i>Talisia cerasina</i> (Benth.) Radlk.	ARV	AM, CE, MA	Krukoff, B. A. 6000 (NY) Junqueira, A.B. & Barros, R.N.S. 343 (EAFM)
<i>Talisia guianensis</i> Aubl.	ARV	AM	
Sapotaceae			
<i>Ecclinusa lanceolata</i> (Mart. & Eichler) Pierre.	ARV	AM	Junqueira, A.B. & Souza, S.A. 651 (EAFM)
<i>Elaeoluma schomburgkiana</i> (Miq.) Baill.	ARB	AM	Mota, C.D.A. da 61556 (INPA)
<i>Manilkara elata</i> (Allemão ex Miq.) Monach.	ARV	AM, MA	Amoêdo, S.C. <i>et al.</i> 42 (EAFM)
<i>Manilkara inundata</i> (Ducke) Ducke	ARV	AM	Viana, G.P. 82 (INPA)
<i>Micropholis egensis</i> (A.DC.) Pierre	ARV	AM	Viana, G.P. 81 (INPA)
<i>Micropholis guyanensis</i> (A.DC.) Pierre	ARV	AM, CE, MA	Mota, C.D.A. da 61459 (INPA)
<i>Micropholis guyanensis</i> (A.DC.) Pierre subsp. <i>Guyanensis</i>	ARV	AM, CE, MA	Mota, C.D.A. da 61660 (INPA)
<i>Micropholis melinoniana</i> Pierre	ARV	AM	Viana, G.P. 61 (INPA)
<i>Micropholis venulosa</i> (Mart. & Eichler) Pierre	ARB	AM, CE, MA	Viana, G.P. 72 (INPA) Junqueira, A.B. & Neto, R.F. 562 (EAFM)
<i>Pouteria caimito</i> (Ruiz & Pav.) Radlk.	ARV	AM, CE MA	
<i>Pouteria elegans</i> (A.DC.) Baehni	ARV	AM	Viana, G.P. 404 (INPA)
<i>Pouteria glomerata</i> (Miq.) Radlk.	ARV	AM, CE, MA	Ferreira, C.A.C. 5769 (INPA) Junqueira, A.B. & Neto, R.F. 540 (EAFM)
<i>Pouteria macrophylla</i> (Lam.) Eyma.	ARV	AM, CE, MA	
<i>Pouteria opposita</i> (Ducke) T.D.Penn.	ARV	AM	Mota, C.D.A. da 61605 (INPA)
<i>Sarcaulus brasiliensis</i> (A.DC.) Eyma subsp. <i>Brasiliensis</i>	ARV	AM, MA	Krukoff, B. A. 6009 (NY)
Scrophulariaceae			
<i>Lindernia crustacea</i> (L.) F.Muell.	TRE	AM, CAA, CE, MA, PAM, PAT	Ferreira, C.A.C. 5792 (INPA)
Simaroubaceae			
<i>Homalolepis cedron</i> (Planch.) Devecchi & Pirani	ARV	AM	Junqueira, A.B. & Neto, R.F. 579 (EAFM)
<i>Simaba polyphylla</i> (Cavalcante) W.W.Thomas	ARV	AM, MA	Junqueira, A.B. & Souza, S.A. 633

Table 1: *continuation.*

Scientific name	Habit	Phytogeographic domain	Voucher
<i>Simarouba amara</i> Aubl.	ARV	AM, CAA, CE, MA	Silveira, A.L.P. 27 (RON)
Siparunaceae			
<i>Siparuna cymosa</i> Tolm.	ARV	AM, MA	Junqueira, A.B. & Neto, R.F. 3280 (EAFM)
<i>Siparuna guianensis</i> Aubl.	ARB	AM, CAA, CE, MA, PAT	Almeida, C. & Castro, A. 203 (INPA)
<i>Siparuna sarmentosa</i> Perkins	ARV	AM	Junqueira, A.B. & Barros, R.N.S. 329 (EAFM)
Solanaceae			
<i>Brunfelsia amazonica</i> Morton	ARB	AM	Ferreira, C.A.C. 5608 (INPA)
<i>Solanum leucocarpon</i> Dunal	ARB	AM, CE, MA	Almeida, C. & Turma CB15_ME01 181 (INPA)
<i>Solanum crinitum</i> Lam.	ARB	AM, CAA, CE, MA	Almeida, C. & Castro, A. 26 (INPA)
<i>Solanum quaesitum</i> C.V.Morton	ARV	AM	Junqueira, A.B. & Barros, R.N.S. 294 (EAFM)
<i>Solanum rugosum</i> Dunal	ARB	AM, CE, MA	Almeida, C. & Castro, A. 119 (INPA)
<i>Solanum sessiliflorum</i> Dunal	ARB	AM	Almeida, C. <i>et al.</i> 85 (INPA)
<i>Solanum thelopodium</i> Sendtn.	ARB	AM	Krukoff, B.A. 6020 (NY)
Sphenocleaceae			
<i>Sphenoclea zeylanica</i> Gaertn.#	ARB	AM, CAA, MA, PAT	Almeida, C. & Castro, A. 190 (INPA)
Theophrastaceae			
<i>Clavija umbrosa</i> (Linden) Regel	ARB	AM	Viana, G.P. 71 (INPA)
Trigoniaceae			
<i>Trigonia spruceana</i> Benth. ex Warm.	TRE	AM	Ferreira, C.A.C. 5553 (INPA)
Turneraceae			
<i>Piriqueta cistoides</i> (L.) Griseb.	ERV	AM, CAA, CE, MA, PAT	Almeida, C. & Castro, A. 45 (INPA)
<i>Turnera subulata</i> Sm.	SUB	AM, CAA, CE, MA	Almeida, C. & Castro, A. 50 (INPA)
Ulmaceae			
<i>Ampelocera edentula</i> Kuhlm.	ARV	AM	Junqueira, A.B. & Barros, R.N.S. 323 (EAFM)
Urticaceae			
<i>Cecropia ficifolia</i> Warb. ex Snethl.	ARV	AM	Junqueira, A.B. & Souza, J.R. 236 (EAFM)
<i>Cecropia purpurascens</i> C.C.Berg	ARV	AM	Junqueira, A.B. & Souza, J.R. 243 (EAFM)
<i>Cecropia sciadophylla</i> Mart.	ARV	AM	Junqueira, A.B. & Souza, S.A. 647 (EAFM)
<i>Cecropia ulei</i> Snethl.	ARV	AM	Junqueira, A.B. & Souza, S.A. 703 (EAFM)
<i>Coussapoa orthoneura</i> Standl.	ARV	AM	Junqueira, A.B. 490 (INPA)
<i>Pourouma apiculata</i> Spruce ex Benoist.	ARV	AM	Kuhlmann, J.G. 255 (INPA)
<i>Pourouma guianensis</i> Aubl.	ARV	AM, MA	Junqueira, A.B. & Barros, R.N.S. 362 (EAFM)
<i>Pourouma minor</i> Benoist.	ARV	AM	Junqueira, A.B. & Souza, J.R. 269 (EAFM)
<i>Pourouma villosa</i> Trécul	ARV	AM	Junqueira, A.B. & Neto, R.F. 483 (EAFM)
Verbenaceae			
<i>Lantana camara</i> L.#	SUB	AM, CAA, CE, MA	Almeida, C. <i>et al.</i> 37 (INPA)
<i>Lippia alba</i> (Mill.) N.E.Br. ex P. Wilson.	ERV	AM, CAA, CE, MA	Mendes, R.F. <i>et al.</i> 22 (EAFM)
<i>Lippia origanoides</i> Kunth.	ARB	AM, CAA, CE, MA	Mendes, R.F. <i>et al.</i> 12 (EAFM)
<i>Petrea volubilis</i> L.	LIA	AM, MA	Almeida, C. & Castro, A. 215 (INPA)
<i>Stachytarpheta cayennensis</i> (Rich.) Vahl	ARB	AM, CAA, CE, MA, PAM, PAT	Almeida, C. & Castro, A. 143 (INPA)
Violaceae			

Table 1: *continuation.*

Scientific name	Habit	Phytogeographic domain	Voucher
<i>Leonia crassa</i> L.B.Sm. & A.Fernández	ARV	AM	Junqueira, A.B. & Souza, J.R. 246 (EAFM)
<i>Leonia cymosa</i> Mart.	ARV	AM	Ferreira, C.A.C. 5610 (INPA)
<i>Paypayrola grandiflora</i> Tul.	ARV	AM, MA	Junqueira, A.B. & Souza, S.A. 665 (EAFM)
<i>Rinorea neglecta</i> Sandwith	ARB	AM	Mota, C.D.A. da 61577 (INPA)
<i>Rinoreocarpus ulei</i> (Melch.) Ducke	ARB	AM	Viana, G.P. 70 (INPA)
Vitaceae			
<i>Cissus erosa</i> Rich.	TRE	AM, CAA, CE, MA	Almeida, C. <i>et al.</i> 29 (INPA)
<i>Cissus paraensis</i> Lombardi	LIA	AM	Ferreira, C.A.C. 5531 (INPA)
Vochysiaceae			
<i>Qualea dinizii</i> Ducke*	ARV	AM	Amoêdo, S.C. <i>et al.</i> 40 (EAFM)
<i>Qualea grandiflora</i> Mart.	ARV	AM, CAA, CE, MA	Almeida, T.E. 3322 (BHCB)
<i>Qualea parviflora</i> Mart.	ARB	AM, CAA, CE, MA	Silveira, A.L.P. 227 (UEC)
<i>Ruizterania retusa</i> (Spruce ex Warm.) Marc.-Berti	ARB	AM	Ferreira, C.A.C. 5517 (INPA)
<i>Salvertia convallariodora</i> A.St.-Hil.	ARV	AM, CAA, CE, MA	Silveira, A.L.P. 44 (RON)
<i>Vochysia haenkeana</i> Mart.	ARB	AM, CE	Ferreira, C.A.C. 5513 (INPA) Junqueira, A.B. & Neto, R.F. 466 (EAFM)
<i>Vochysia maxima</i> Ducke.*	ARV	AM	Ferreira, C.A.C. 5561 (INPA)
<i>Vochysia obscura</i> Warm.	ARV	AM	
Xyridaceae			
<i>Abolboda grandis</i> Griseb.	ERV	AM	Carvalho, F.A. de 1986 (INPA)
<i>Abolboda macrostachya</i> Spruce ex Malme	ARB	AM	Mota, C.D.A. da 61564 (INPA)
<i>Xyris ferreirae</i> Kral	ERV	AM	Ferreira, C.A.C. 5506 (INPA)
<i>Xyris lanulobracteata</i> Steyerl.	ARB	AM	Mota, C.D.A. da 61561 (INPA)
<i>Xyris pallidula</i> Kral & Wand.	ARB	AM	Mota, C.D.A. da 61565 (INPA)
<i>Xyris stenocephala</i> Malme	ERV	AM, CE, MA	Ferreira, C.A.C. 5788 (INPA)
<i>Xyris uleana</i> Malme	ERV	AM, CE	Ferreira, C.A.C. 5809 (INPA)
Zingiberaceae			
<i>Alpinia zerumbet</i> (Pers.) B.L.Burtt & R.M.Sm##	ERV	AM, CAA, CE, MA	Almeida, C. <i>et al.</i> 80 (INPA)
<i>Renealmia breviscapa</i> Poepp. & Endl.	ERV	AM	Ferreira, C.A.C. 5618 (INPA)
<i>Zingiber officinale</i> Roscoe##	ERV	DESC	Mendes, R.F. <i>et al.</i> 4 (EAFM)

Conclusion

This study highlights the importance of floristic studies in the Brazilian Amazon. Given the well-known sample deficiency of the Amazon region, and considering the countless anthropogenic pressures that cities south of the Madeira river have been facing, this preliminary angiosperm checklist provides the first tool for further botanical studies in this region. The survey highlights the record of 47 new occurrences for Amazonas State. Of these new occurrences, 12 are also the first record for the northern region. In addition, a new species of vine of the genus *Mandevilla* Lindl was identified.

Acknowledgements

The first author thanks the University of Amazonas State for providing opportunity for the development of this project. To Amauri Castro, Arnaldo Azevedo, Ellen Passos, Lucy Laura, Jeimiciane Coutinho, Jone Bitencourt, Neiza Paixão, Nilson Pinheiro, and Raimunda Albertina for the company and support during botanical expeditions. The authors thank Cassio Toledo for identifying Connaraceae species, and anonymous

experts for their contribution in identifying some species. To Michael Hopkins and Mariana Mosque for access to the INPA Herbarium collection and for their attention and support. To Jefferson R. Maciel for preparing the distribution map of angiosperms in Manicoré city, and to Fernanda Cabral for reviewing the abstract. The last author thanks CAPES for the postdoctoral scholarship granted.

References

- Amaral, I. L. do.; Matos, F. D. A. & Lima, J. (2000). *Composição florística e parâmetros estruturais de um hectare de floresta densa de terra firme no rio Uatumã, Amazônia, Brasil. Acta Amazônica*, 30(3), 377-377. doi: 10.1590/1809-43922000303392.
- Antonelli, A.; Zizka, A.; Carvalho, F. A.; Scham, R.; Bacon, C.D.; Silvestro, D. & Condamine, F. L. (2018). *Amazonia is the primary source of Neotropical biodiversity. Proceedings of the National Academy of Sciences of the United States of America*, 115(23), 6034-6039. doi: 10.1073/pnas.1713819115.
- Araújo, R. A. (2011). *Florística e estrutura da comunidade arbórea em fragmento florestal urbano no município de Sinop, Mato Grosso*. (Dissertação de Mestrado). Universidade Federal de Mato Grosso, Cuiabá, Mato Grosso. Recuperado de http://www.dominiopublico.gov.br/pesquisa/DetalheObraForm.do?select_action=&co_obra=127174.
- Baitello, J. B.; Arzolla, F.A. R. dal P. & Vilela, F. E. S. P. (2017). *Nova*

- espécie de Lauraceae da Floresta Ombrófila Densa Alto Montana, Serra da Mantiqueira, Pindamonhangaba, SP, Brasil. *Rodriguésia*, 68(2) 481-488. doi: 10.1590/2175-7860201768212.
- Batalha-Filho, H. & Miyaki, C. Y. (2014). Processos evolutivos na Amazônia e na Mata Atlântica. *FRONTEIRAS: Journal of Social, Technological and Environmental Science*, 3(2), 34-44. doi: 10.21664/2238-8869.2014v3i2.p34-44.
- BFG (the Brazil Flora Group) (2015). Growing knowledge: an overview of Seed Plant diversity in Brazil. *Rodriguésia*, 66(4), 1085-1113. doi: 10.1590/2175-7860201566411.
- Brasil (1978). Ministério das Minas e Energia Departamento Nacional da Produção Mineral: Projeto Radam Brasil - folha SB. 20 – Purus (Levantamento de recursos naturais, v. 17). Rio de Janeiro: DNPM. Recuperado de <https://www.bdpa.cnptia.embrapa.br/consulta/busca?b=ad&id=295969&biblioteca=vazio&busca=autoria:%22PROJETO%20RADAMBRASIL.%22&qFacets=autoria:%22PROJETO%20RADAMBRASIL.%22&sort=&paginaAtual=3>.
- Campos, M. C. C.; Ribeiro, M. R.; Souza-Júnior, V. S.; Ribeiro-Filho, M. R. & Almeida, M. C. (2012). Relações Solo-Superfície Geomórfica em uma Topossequência Várzea-Terra Firme na Região de Humaitá (AM). *Revista Brasileira de Ciência do Solo*, 36, 325-336. doi: 10.1590/S0100-06832012000200002.
- Carvalho, J.B. de (2010). Desmatamentos, grilagens e conflitos agrários no Amazonas (1ª ed.). Manaus: Editora Valer.
- Chaves, A. C. G.; Santos, R. M. S.; Santos, J. O.; Fernandes, A. A. & Maracajá, P. B. (2013). A importância dos levantamentos florístico e fitossociológico para a conservação e preservação das florestas. *Agropecuária Científica no Semiárido (ACSA)*, 9(2), 43-48. doi: 10.30969/acsa.v9i2.449.
- Coelho, C. A. & Amorim, B. S. (2019). Expandindo a distribuição geográfica de *Hibiscus sabdariffa* L. (Malvaceae): uma espécie naturalizada negligenciada para a flora brasileira. *Hoehnea*, 46(1), 1-7. doi: 10.1590/2236-8906-101/2018.
- Coelho, C. A.; Amorim, B. S.; Pereira, M. R. S.; Cabral, F.N.; Albuquerque, P.M. & Morales, J. F. (in press) An overview of the *Mandevilla rugelosa* complex (Apocynaceae) in the Brazilian Amazonia, with a new species.
- Centro de Referência e Informação Ambiental – CRIA (2018). *Specieslink – simple search*. 2018. Recuperado de <http://inct.splink.org.br/>.
- Domingos, C.; Särkinen, T.; Alexander, S.; Amorim, A. M.; Bittrich, V.; Celis, M.; Daly, D. C.; Fiaschi, P.; Funk, V. A.; Giacomini, L. L.; Goldenberg, R.; Heiden, G.; Iganci, J.; Kelloff, C. L.; Knapp, S. K.; Lima, H. C.; Machado, A. F. P.; Santos, R. M.; Mello-Silva, R.; Michelangeli, F. A.; Mitchell, J.; Luar, P. L.; Moraes, P. L. R.; Mori, S. A.; Nunes, T. S.; Pennington, T. D.; Pirani, J. R.; Prance, G.T.; Queiroz, L. P.; Rapini, A.; Riina, R.; Rincon, C. A. V.; Roque, N.; Shimizu, G.; Sobral, M.; Stehmann, J. R.; Stevens, W.D.; Taylor, C.M.; Trovó, M.; Berg, C. van der.; Werff, H. van der.; Viana, P.L.; Zartman, C.E. & Forzza, R. C. (2017). Amazon plant diversity revealed by a taxonomically verified species list. *Proceedings of the National Academy of Sciences of the United States of America*, 114(40), 10695-10700. doi: 10.1073/pnas.1706756114.
- Esteves, G. L.; Duarte, M. C. & Takeuchi, C. (2014). Sinopse de *Hibiscus* L. (Malvoideae, Malvaceae) do Estado de São Paulo, Brasil: espécies nativas e cultivadas ornamentais. *Hoehnea*, 41(4), 529-539. doi: 10.1590/2236-8906-10/2014.
- Fabaceae in Flora do Brasil 2020 em construção (2018). Jardim Botânico do Rio de Janeiro. Recuperado de <http://floradobrasil.jbrj.gov.br/>.
- Fearnside, P. M. (2006). Desmatamento na Amazônia: dinâmica, impactos e controle. *Acta Amazônica*, 36(3), 395-400. doi: 10.1590/S0044-59672006000300018.
- Ferreira, L. V.; Chaves, P. P.; Cunha, D. de A.; Rosário, A. S. do & Parolin, P. (2013). A extração ilegal de areia como causa do desaparecimento de campinas e campinaranas no estado do Pará, Brasil. *Pesquisas Botânicas*, 64, 157-173. Recuperado de http://www.anchietano.unisinos.br/publicacoes/botanica/botanica64/10_ferreira%20e%20parolin.pdf.
- Fiaschi, P. & Pirani, J. R. (2009). Review of plant biogeographic studies in Brazil. *Journal of Systematics and Evolution*, 47(5), 477-496. doi: 10.1111/j.1759-6831.2009.00046.x.
- Flora do Brasil 2020 em construção (2018). Jardim Botânico do Rio de Janeiro. Recuperado de <http://floradobrasil.jbrj.gov.br/>.
- Forzza, R. C.; Baumgratz, J. F.; Costa, A.; Hopkins, M.; Leitman, P.M.; Lohmann, L. G.; Martinelli, G.; Morim, M. P.; Coelho, M. A. N.; Peixoto, A. I.; Pirani, J. R.; Queiroz, L. P.; Stehmann, J. R.; Walter, B. M. T. & Zappi, D. (2010). Introdução aos Angiospermas do Brasil. Catálogo de plantas e fungos do Brasil [online]. Rio de Janeiro. Recuperado de <http://reflora.jbrj.gov.br/downloads/vol1.pdf>.
- Garcia, L. M.; Silva, R. F.; Zonetti, P. C. & Romagnolo, M. B. (2011). Levantamento florístico e fitossociológico de um remanescente de mata ciliar na região norte do estado do Paraná, Brasil. *Anais eletrônicos. VII EPCC Encontro Internacional de Produção Científica Cesumar*. Recuperado de http://www.cesumar.br/prppge/pesquisa/epcc2011/anais/leticia_monica_garcia.pdf.
- Gonçalves, E. G. & Lorenzi, H. Morfologia Vegetal: Organografia e Dicionário Ilustrado de Morfologia das Plantas Vasculares (1ª ed.). São Paulo: Instituto Plantarum de Estudos da Flora.
- Gonçalves, F. G. & Santos, J. R. (2008). Composição florística e estrutura de uma unidade de manejo florestal sustentável na Floresta Nacional do Tapajós, Pará. *Acta Amazônica*, 38(2), 229-244. doi: 10.1590/S0044-59672008000200006
- Google Earth. (2019). V 7.3.2.5776 (64-bit). Manicoré, Amazonas, Brasil. 28 maio 2019. Imagem Landsat/Copernicus 2019.
- Hibiscus* in Flora do Brasil 2020 em construção. (2019). Jardim Botânico do Rio de Janeiro. Recuperado de <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB9079>.
- Hopkins, M. J. G. (2005). Flora da Reserva Ducke, Amazonas, Brasil. *Rodriguésia*, 56(86), 9-25. doi: 10.1590/1809-43921994242030.
- Hopkins, M. J. G. (2007). Modelling the known and unknown plant biodiversity of the Amazon Basin. *Journal of Biogeography*, 34(8), 1400-1411. doi: 10.1111/j.1365-2699.2007.01737.x
- Hopkins, M. J. G. (2019). *Are we close to knowing the plant diversity of the Amazon? Anais da Academia Brasileira de Ciências*. 91(3), 1-7. doi: 10.1590/0001-3765201920190396.
- IBGE - Instituto Brasileiro de Geografia e Estatística. (2004). *Mapa de vegetação do Brasil*. Recuperado de <https://www.ibge.gov.br>.
- IBGE - Instituto Brasileiro de Geografia e Estatística. (2017). Mapa de localização do município de Manicoré. Recuperado de <https://cidades.ibge.gov.br/brasil/am/manicore/panorama>.
- Ivanaukas, N. M.; Monteiro, R. & Rodrigues, R. R. (2004). Composição florística de trechos florestais na borda sul-amazônica. *Acta Amazônica*, 34(3), 399-413. doi: 10.1590/S0044-59672004000300006.
- Jardim Botânico do Rio de Janeiro – JABOT. (2019). Banco de Dados da Flora Brasileira: Consulta, 2018. Recuperado de <http://rb.jbrj.gov.br/v2/consulta.php>.
- Junqueira, A.B. (2008). *Uso e manejo da vegetação secundária sobre terra preta por comunidades tradicionais na região do médio rio Madeira, Amazonas, Brasil*. (Dissertação de mestrado). Instituto Nacional de Pesquisas da Amazônia/ Universidade Federal do Estado do Amazonas, Manaus, Amazonas. Recuperado de <https://bdtd.inpa.gov.br/handle/tede/953#preview-link0>.
- Kubitski, K. (1979). Ocorrência de *Kielmeyera* nos "campos de Humaitá" e a natureza dos "campos" - Flora da Amazônia. *Acta amazônica*, 9(2), 401-404. doi: 10.1590/1809-43921979092401.
- Lopes, C. R. A. S.; Ribeiro, R. da S.; Rodrigues, L.; Cabral, F.F. & Silva, D. R. (2014). Checklist de angiospermas da região de influência da Uhe Sinop, médio Teles Pires, Mato Grosso. *Enciclopédia Biosfera, Centro Científico Conhecer*, 10(19), 2036-2048. doi: 10.13140/RG.2.1.3774.8323.
- Martins, G. C.; Ferreira, M.M.; Curi, N.; Vitorino, A. C. T. & Silva, M. L. N. (2006). Campos nativos e matas adjacentes da região de Humaitá (AM): atributos diferenciais dos solos. *Ciência e Agrotecnologia*, 30(2), 221-227. doi: 10.1590/S1413-70542006000200005.
- Méio, B. B.; Freitas, C. V.; Jatobá, L.; Silva, M. E. F.; Ribeiro, J. F. & Henriques, R. P. B. (2003). Influência da flora das florestas Amazônica e Atlântica na vegetação do cerrado *sensu stricto*. *Revista Brasileira de Botânica*, 26(4), 437-444. doi: 10.1590/S0100-84042003000400002.
- Moro, M. F.; Araújo, F. S.; Souza, V. C.; Oliveira-Filho, A. T.; Queiroz, L. P.; Fraga, C. N.; Rodal, M. J. N. & Martins, F. R. (2012). Alienígenas na sala: o que fazer com espécies exóticas em trabalhos de taxonomia, florística e fitossociologia? *Acta Botânica Brasílica*, 26(4), 991-999. doi: 10.1590/S0102-33062012000400029.
- Mota, N. F. O.; Watanabe, M. T. C.; Zappi, D. C.; Hiura, A. L.; Pallos, J.; Viveros, R. S.; Giuletti, A. M. & Viana, P. L. (2018). Cangas da Amazônia: a vegetação única de Carajás evidenciada pela lista de fanerógamas. *Rodriguésia*, 69(3), 1435-1488. doi: 10.1590/2175-7860201869336.
- Oliveira, A. N.; Amaral, I. L.; Ramos, M. B. P.; Nobre, A.D.; Couto, L. B. & Sahdo, R. M. (2008). Composição e diversidade florístico-estrutural de um hectare de floresta densa de terra firme na Amazônia Central, Amazonas, Brasil. *Acta Amazônica*, 38(4), 627-642. doi:

- 10.1590/S0044-59672008000400005.
- Oliveira, E. K. B.; Nagy, A. C. G.; Barros, Q. S.; Martins, B. C. & Murta-Junior, L. S. (2015). *Composição florística e fitossociológica de fragmento florestal no sudoeste da Amazônia. Enciclopédia Biosfera, Centro Científico Conhecer*, 11(21), 2126-2146. Recuperado de <http://www.conhecer.org.br/enciclop/2015b/biologicas/composicao%20floristica.pdf>.
- Peixoto, A.L. & Morim, M.P. (2003). Coleções botânicas: documentação da biodiversidade brasileira. *Ciência e cultura*, 55(3), 21-24. Recuperado de <http://cienciaecultura.bvs.br/pdf/cic/v55n3/a16v55n3.pdf>.
- Peixoto, A. L. & Maia, L. C. (2013). *Manual de Procedimentos para Herbários. INCT-Herbário virtual para a Flora e os Fungos*. Recife: Editora Universitária. Recuperado de http://inct.florabrasil.net/wp-content/uploads/2013/11/Manual_Herbario.pdf.
- Pinheiro, E. S.; Martinot, J. F.; Cavalcante, D. G. C.; Macedo, M. A.; Nascimento, A. Z. A. & Marques, J. P. C. (2010). *Paisagem, estrutura e composição florística de um parque urbano em Manaus, Amazonas, Brasil. Rodriguésia*, 61(3), 531-549. doi: 10.1590/2175-7860201061313.
- Pivetta, M. (2011). *Ilhas de Savana. Pesquisa FAPESP*, 179, 46-49. Recuperado de <https://revistapesquisa.fapesp.br/wp-content/uploads/2011/01/046-049-179.pdf>.
- Porto-Gonçalves, C. W. (2015). *Amazônia enquanto acumulação desigual de tempos: Uma contribuição para a ecologia política da região. Revista Crítica de Ciências Sociais*, 107, 63-90. doi:10.4000/rccs.6018.
- Prieto, R. O. & González-Oliva, L. (2015). Lista nacional de plantas invasoras y potencialmente invasoras en la república de Cuba. *Bisbea*, 9(2), 1-88. Recuperado de https://www.researchgate.net/publication/284545720_LISTA_NACIONAL_DE_PLANTAS_INVASORAS_Y_POTENCIALMENTE_INVASORAS_EN_LA_REPUBLICA_DE_CUBA_-_2015.
- Rapp Py-Daniel, L. (2007). Contextualização do projeto e financiamento. In: Rapp Py-Daniel, L.; Deus, C. P.; Henriques, A. L.; Pimpão, D. M.; Ribeiro, O. M. (orgs.). *Biodiversidade do Médio Madeira: Bases científicas para propostas de conservação* (Cap. 1, pp. 19-23). Manaus: INPA.
- Ribeiro, J. E. L. S.; Nelson, B. W.; Silva, M. F.; Martins, L. S. S. & Hopkins, M. (1994). Reserva florestal Ducke: diversidade e composição da flora vascular. *Acta Amazônica*, 24(1-2), 19-30. doi: 10.1590/1809-43921994242030.
- Salles, M. C. T.; Griggio, A. M. & Silva, M. R. F. (2013). *Expansão urbana e conflito ambiental: uma descrição da problemática do município de Mossoró, RN – Brasil. Sociedade & Natureza*, 25(2), 281-290. Recuperado de <http://www.seer.ufu.br/index.php/sociedadennatureza/article/view/14389/pdf>.
- Sardinha, M. A.; Freitas, J. L.; Santos, A. C.; Junior, F. de O. C. & Santos, E. S. (2017). *Florística e utilização de espécies florestais em assentamento agroextrativista, Amapá, Amazônia Oriental. Enciclopédia Biosfera, Centro Científico Conhecer*, 14(26), 595-610. doi: 10.18677/EnciBio_2017B33.
- Schneide, A. A. (2007). A flora naturalizada no estado do Rio Grande do Sul, Brasil: herbáceas subspontâneas. *Biociências*, 15(2), 257-268. Recuperado de <http://revistaseletronicas.pucrs.br/ojs/index.php/fabio/article/view/254/3005>.
- Silva, K. E. & Pereira, K. P. (2005). *Alterações na cobertura vegetal natural dos municípios do Sul do Amazonas. Anais XII Simpósio Brasileiro de Sensoriamento Remoto*, 16-21. Recuperado de <http://marte.sid.inpe.br/col/ltid.inpe.br/sbsr/2004/11.22.09.51/doc/1667.pdf>.
- Silva, K. E.; Matos, F. D. A. & Ferreira, M. M. (2008). *Composição florística e fitossociologia de espécies arbóreas do Parque Fenológico da Embrapa Amazônia Ocidental. Acta Amazônica*, 38(2), 213-222. doi: 10.1590/S0044-59672008000200004.
- Silvério, D.; Silva, S.; Alencar, A. & Moutinho, P. (2019). *Amazônia em chamas. Nota técnica do Instituto de Pesquisa Ambiental da Amazônia – IPAM*. Recuperado de: <https://ipam.org.br/wp-content/uploads/2019/08/NT-Fogo-Amazo%CC%82nia-2019.pdf>.
- Siqueira, A. G. (2013). *Características e avaliação dos níveis basais de mercúrio do sedimento na área de influência do aproveitamento hidrelétrico Jirau – Rio Madeira – Rondônia – Brasil*. (Dissertação de mestrado). Universidade de Brasília, Planaltina, Distrito Federal. Recuperado de http://repositorio.unb.br/bitstream/10482/13908/1/2013_AlineGon%ca7alvesdeSiqueira.pdf.
- Sousa, V. S.; Machado-Filho, H. O. & Andrade, T. M. (2012). *Similaridade de vegetação ruderal entre regiões do Brasil. Revista Geonorte*, 3(4), 274-283. Recuperado de <http://www.periodicos.ufam.edu.br/revista-geonorte/article/view/1825>.
- Ter Steege, H.; Vaessen, R. W.; López, D. C.; Sabatier, D.; Antonelli, A.; Oliveira, S. M.; Pitman, N.; Jorgensen, P. M.; Salomão, R. P. & Gomes, V. H. F. (2016) *A descoberta da flora arbórea da Amazônia com uma lista atualizada de todos os taxa arbóreos conhecidos. Boletim do Museu Paraense Emílio Goeldi*, 11(2), 231-261. doi: 10.1038/srep29549.
- The plant list. (2010). *Version 1. Published on the Internet*. Recuperado de <http://www.theplantlist.org/>.
- Vieira, I. C. G.; Toledo, P. M. & Higuchi, H. (2018). *A Amazônia no Antropoceno. Ciência e Cultura*, 70(1), 56-59. doi: 10.21800/2317-66602018000100015

License: Creative Commons CC BY 4.0

This article was published with open access for distribution under the terms of the Creative Commons Attribution License, which allows unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.