



Floristic checklist from an Atlantic Forest vegetation mosaic in Reserva Particular do Patrimônio Natural Fazenda Tabatinga, Pernambuco, Brazil

Débora Maria Cavalcanti Ferreira^{1,3}, Bruno S. Amorim¹, Jefferson R. Maciel^{1,2} & Marccus Alves¹

¹Programa de Pós-Graduação em Biologia Vegetal (PPGBV), Departamento de Botânica, Universidade Federal de Pernambuco (UFPE), Rua Professor Moraes Rego, s/n, Cidade Universitária, CEP 50670-901, Recife, Pernambuco, PE, Brazil

²Jardim Botânico do Recife, Km 7,5 da BR-232, s/n, Curado, CEP 50000-230, Recife, Pernambuco, PE, Brazil

³Corresponding author. E-mail: deboracavalcantif@hotmail.com

Abstract: A floristic inventory was made in the Reserva Particular do Patrimônio Natural Fazenda Tabatinga to show the importance of small forest fragments for conservation of the biodiversity of the Atlantic Forest. The reserve protects a vegetation mosaic typical of coastal habitats in an area of ca. 20 ha, located in the northern part of the Brazilian Atlantic Forest. Samples of vascular plants were collected between January 2010 and November 2011, and altogether 329 species were recorded. These are classified in 230 genera and 79 families of angiosperms and two genera and two families of ferns. Among the species found, 28 are endemic to the Atlantic Forest, while others are rare and restricted to the Pernambuco Endemism Center. In addition, three threatened species were detected. The presence of endemic, rare, and threatened species, along with floristic patterns typical of coastal areas of Brazil, reinforce the importance of the area for the conservation.

Key words: conservation; endemism; floristic inventory; Mangrove; Restinga; rare species

INTRODUCTION

The Atlantic Forest holds up to about 8% of the world's biodiversity (SILVA & CASTELETTI 2005). Within the Brazilian area of Atlantic Forest, 15,001 angiosperm species are recorded and almost 50% of them are considered endemic to this biome (LISTA DE ESPÉCIES DA FLORA DO BRASIL 2015). Extremely heterogeneous in composition (TABARELLI et al. 2005), the Atlantic Forest is considered a mosaic of vegetation types and includes forest formations and associated ecosystems, such as mangroves, and restingas (STEHMANN et al. 2009).

The Atlantic Forest is recognized as a global hotspot of biodiversity because of the high levels of richness and

endemism, associated with the deforestation suffered in the past (MITTERMEIER et al. 2004; STEHMANN et al. 2009). The forest has been reduced to 11.4–16% of its original area (RIBEIRO et al. 2009), and its remaining remnants are highly fragmented (SILVA & CASTELETTI 2005).

The remnants of Atlantic Forest in Pernambuco state are mostly small and irregular in shape (RANTA et al. 1998; TRINDADE et al. 2007). RANTA et al. (1998) observed that most of the forest fragments in southern Pernambuco are smaller than 10 ha, while only about 10% are larger than 100 ha. These small fragments of Atlantic Forest are surrounded by agricultural areas with low chance of a long-term persistence (SILVA & CASTELETTI 2005; GALINDO-LEAL 2005).

The current conservation paradigm views all fragments, regardless of size, as important for building a conservation mosaic and a regional landscape of connections among Atlantic Forest fragments (SILVA & TABARELLI 2000). However, the biological relevance of small fragments has seldom been tested in terms of species richness and importance for preservation of endemic or endangered taxa.

The main goal of this study is to show how small forest fragments can be valuable for the conservation of angiosperms in northeastern Brazil. A survey of vascular plant species occurring in an Atlantic Forest remnant within the Reserva Particular do Patrimônio Natural (RPPN) Fazenda Tabatinga is presented. Included as well are occurrences of several endemic, rare, threatened, and exotic species.

MATERIALS AND METHODS

Study site

The RPPN Fazenda Tabatinga (07°36'22"S, 034°49'14" W) is located in the municipality of Goiana, Pernambuco state, Brazil, and has an area of ca. 20 ha. According to MMA

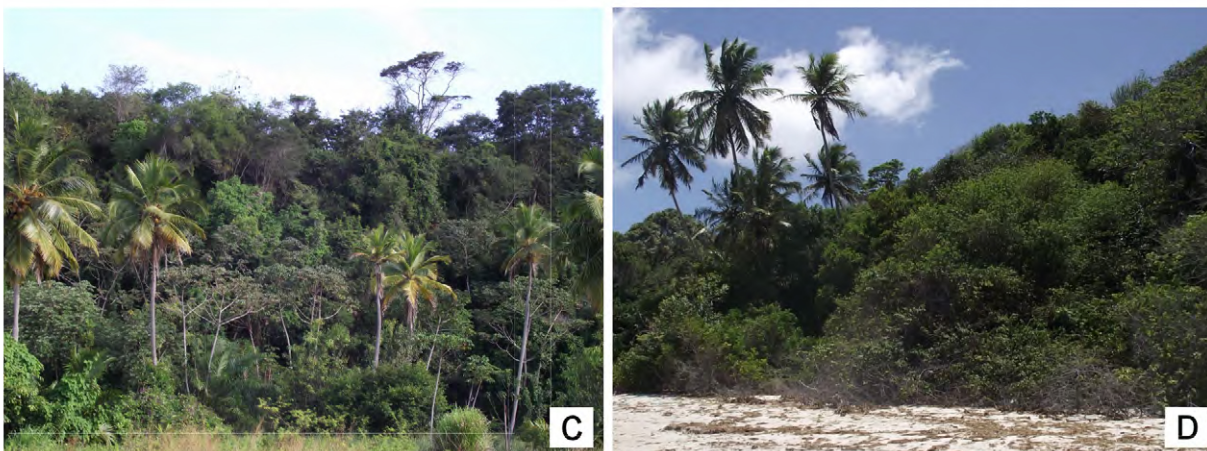
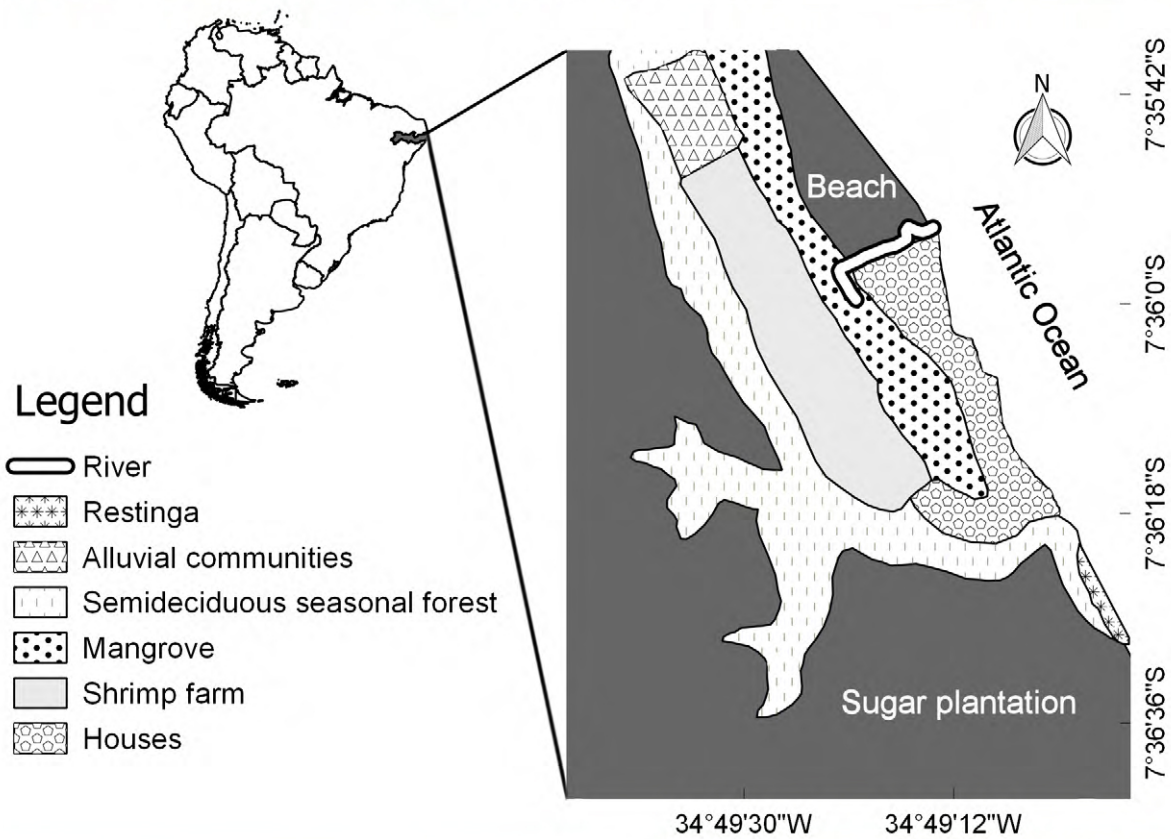
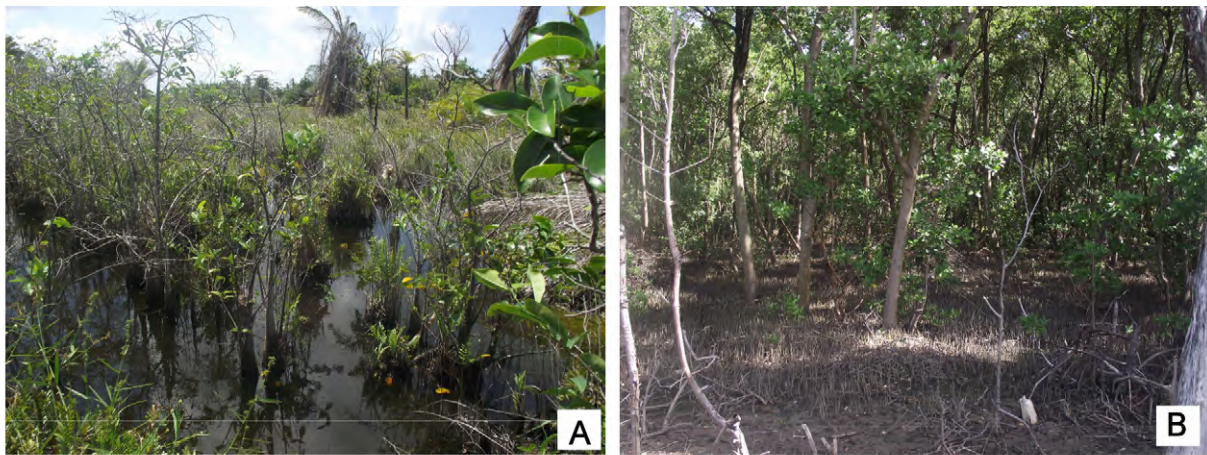


Figure 1. Map of study area with your vegetation types. **A.** Alluvial communities. **B.** Mangrove. **C.** Semideciduous seasonal forest. **D.** Restinga. Photos by D. Ferreira and B. Amorim.

(2000), the region where the area is located is of extreme biological importance and one of the priority areas for biodiversity conservation in the Atlantic Forest biome. The RPPN Fazenda Tabatinga was recognized by the Agência Estadual de Meio Ambiente (CPRH) of Pernambuco state by Decree 19,815 on 2 June 1997. The only information previously available about the plants of the area is an image guide by CAVALCANTI et al. (2012).

The RPPN Fazenda Tabatinga has distinct vegetation types. Based on VELOSO et al. (1991) and IBGE (1992), these vegetation types can be classified as “alluvial communities” on the flooded depressions with swamp vegetation communities (34°49'33" S, 007°35'46" W), mangrove with influences of fresh- and saltwater (34°49'15" S, 007°36'09" W), semideciduous seasonal forest on clay soil (34°49'26" S, 007°36'19" W), and restinga, which is shrubby forest vegetation on sandy soil with marine influence (34°49'01" S, 007°36'22" W) (Figure 1).

Data collection

Botanical samples were collected monthly during both dry and rainy seasons from January 2010 to November 2011. There were 13 days of collection, which represent 72 hours of sampling effort (6 hours per day). The collections were made randomly along the entire area and the different vegetation types. Fertile plant material was dried using the usual methodology (MORI et al. 1985) and incorporated into the UFP herbarium collection with duplicates at JPB, NY, HRCB, UFRN, MAC, and MOBOT herbaria.

The plants were identified using literature and expertise of several taxonomists, as well as collections at UFP, JPB, and IPA herbaria. Families are organized based on SMITH et al. (2006, 2008) for ferns and APG IV (2016) for angiosperms. The species names, abbreviations of authors, as well as information about geographical distribution, endemism, and new records for Pernambuco are based on the BRAZILIAN FLORA GROUP [BFG] (2015).

RESULTS

The RPPN Fazenda Tabatinga supports 329 species, belonging to 230 genera and 79 families of angiosperms and two genera and two families (Blechnaceae and Lygodiaceae) of ferns (Table 1). The richest families are Fabaceae (37 spp.: 23 Papilionoideae, 7 Caesalpinioideae and 7 Mimosoideae), Poaceae (25), Cyperaceae (23), Rubiaceae (15) and Asteraceae (12) and together these represent 34% of the local diversity (Table 1). About 43% of the families are represented by only one species (Table 1).

There are 89 species of trees, treelets or arborescent plants such as palms (27%), 92 species of subshrub and shrubs (28%), 92 species of herbs (28%), and 56 species of climbers (17%).

The RPPN Fazenda Tabatinga fragment is small, highly irregular in shape, and supports several species often found in secondary forests, such as *Miconia albicans* (Sw.) Triana and *Sapium glandulosum* (L.) Morong (Figure 2).

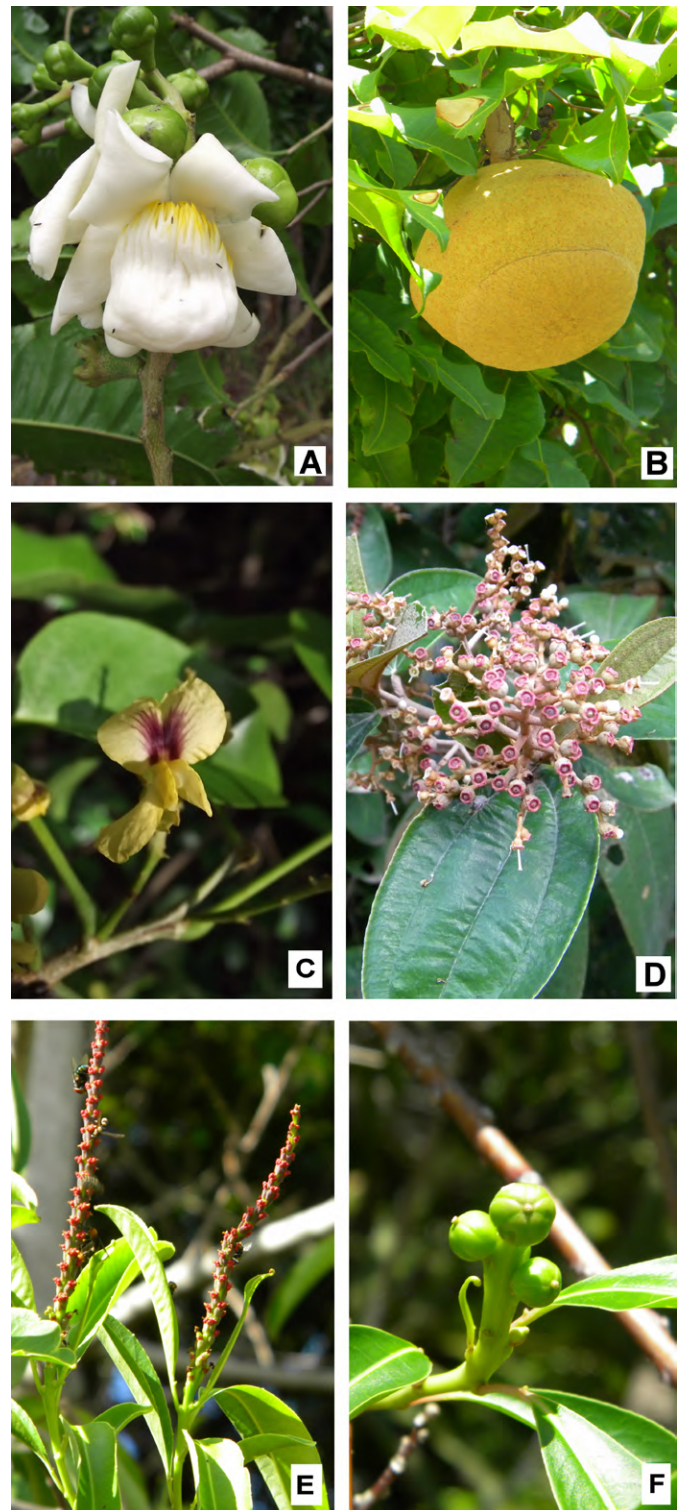


Figure 2. Emergent trees and species of secondary forests found in the RPPN Fazenda Tabatinga, Pernambuco, Brazil. **A-B.** *Lecythis pisonis* (A, flower; B, fruit). **C.** *Pterocarpus rohrii*. **D.** *Miconia albicans*. **E-F.** *Sapium glandulosum* (E, flowers; F, immature fruits). Photos by D. Ferreira and B. Amorim.

Despite the size and shape, emergent trees are found, such as *Lecythis pisonis* Cambess., *Eriotheca macrophylla* (K.Schum.) A. Robyns, and *Pterocarpus rohrii* Vahl (Figure 2), as well as herbaceous plants in the understory, such as *Cryptanthus alagoanus* Leme & J.A.Siqueira, which is the only Bromeliaceae in the area.

These species have the following morphological characters: *Miconia albicans* is a shrub, easily distinguished from other species of Melastomataceae in the area by its leaves with lanulose trichomes abaxially (Figure 2); *Sapium glandulosum* is a treelet with a pair of glands at the leaf base and as such it can be recognized among the other species of Euphorbiaceae in the area (Figure 2); *Lecythis pisonis* is a tree with circumsessile capsules which can be distinguished from other local species of Lecythidaceae by its larger and woody fruit (Figure 2); *Eriotheca macrophylla* (Malvaceae) is a tree with fissured bark, alternate leaves, white flowers with a short staminal tube and schizocarpic fruits with hairy endocarp; *Pterocarpus rohrii* can be differentiated from other species of Fabaceae by its tree habit, red exudate and the orange flowers with a vinaceous standard (Figure 2); and finally, *Cryptanthus alagoanus*, is a terrestrial herb in the Bromeliaceae which has leaves in rosettes and white flowers.

The most visually abundant species in the alluvial communities are *Montrichardia linifera* (Arruda) Schott and *Blechnum serrulatum* Rich., while those in the mangrove are *Avicennia schaueriana* Stapf & Leechm. ex Moldenke, *Conocarpus erectus* L., *Laguncularia racemosa* (L.) C.F.Gartn., and *Rhizophora mangle* L. In the semideciduous seasonal forest, *Eschweilera ovata* (Cambess.) Mart. ex Miers, *Tapirira guianensis* Aubl., *Hirtella racemosa* Lam., and *Vismia guianensis* (Aubl.) Pers. are the most common, and in the restinga, *Sesuvium portulacastrum* (L.) L. and *Dalbergia ecastaphyllum* (L.) Taub. are visually dominant (Figures 3 and 4).

Among these species, *Montrichardia linifera* is distinguished from other species of Araceae by its arborescent habit and sagittate leaves. *Blechnum serrulatum* is a terrestrial herbaceous fern with pinnate leaf blades and sessile or shortly petiolate pinnae which are oblong, linear, lanceolate, and with serrate margins. Among the mangrove species, *Avicennia schaueriana* is recognized by its opposite leaves and tetramerous, zygomorphic flowers; *Conocarpus erectus* is recognizable by its alternate leaves and two glands at the leaf base; *Laguncularia racemosa* by its glands on the petiole apex, opposite leaves, and pentamerous, actinomorphic flowers; and *Rhizophora mangle* by its tetramerous, actinomorphic flowers, rhizophores and black dots on the leaves (Figure 3).

Among the semideciduous seasonal forest species, *Eschweilera ovata* is distinguishable from other species of Lecythidaceae by its smaller fruits (Figure 4). *Tapirira guianensis* can be recognized by its imparipinnate leaves, pentamerous flowers with 10 stamens and ovary with four styles (Figure 4). *Hirtella racemosa* can be distinguished from other species of Chrysobalanaceae by its shrubby habit and pink flowers, while *Vismia guianensis* is a shrub with yellow flowers and ferruginous trichomes on the stems and branches and orange exudate (Figure 4). Among the species most common in the restinga, *Sesuvium portulacastrum* is recognizable due to its succulent leaves and pink flowers, and *Dalbergia ecastaphyllum* by its unifoliolate leaves, white flowers and samaroid fruits (Figure 4).

Bambusa vulgaris Schrad. ex J.C.Wendl., *Catharanthus roseus* (L.) Don, *Elaeis guineensis* Jacq., *Mangifera indica* L., *Terminalia catappa* L., and *Thespesia populnea* (L.) Sol. ex Corrêa are invasive species generally found along the edges of the forest fragment (Figure 5). However, *Elaeis guineensis* is growing in the interior and forms dense agglomerations that aggressively replaces native species (Figure 5).

Invasive species found in the reserve have the following morphological characters: *Bambusa vulgaris* is arborescent with agglomerated culms; *Catharanthus roseus* is distinguished locally by its sub shrubby habit and pink flowers; and *Elaeis guineensis* is an arborescent palm with pinnate leaf blade, and orange to reddish, fleshy fruits (Figure 5). *Terminalia catappa* is a tree with obovate leaves, pentamerous and white flowers, and fleshy fruits (Figure 5), while *Thespesia populnea* is a shrub with alternate leaves, yellow flowers with a long staminal tube and schizocarpic fruits.

Species endemic to the Northeast Region and found in the reserve have the following morphological characters: *Alseis pickelii* is a tree with obovate leaves, glabrous adaxially and pilose abaxially at the axils of the secondary venation and capsular fruit (Figure 6); *Annona pickelii* is a treelet with simple and ferruginous trichomes on the branches and elliptical to ovate leaves (Figure 7); *Aphelandra nuda* is differentiated by its climbing, woody habit and pink corolla (Figure 7); *Calyptanthus dardanoi* is a shrub to treelet and can be recognized by its opposite leaves, paniculate inflorescence, flowers with calyx fused in bud which opens or falls as a calyptra and drupaceous fruits; and *Dalechampia coriacea* is a woody climber with cordate leaves and flowers involved by two bracts (Figure 6). *Duguetia gardneriana* is a treelet easily distinguished from other species of Annonaceae by its branches with scaly trichomes (Figure 6). *Licania tomentosa* is a tree differentiated from other species of Chrysobalanaceae by its floccose trichomes (Figure 6). *Mimosa pseudosepiaria* is a shrub with aculeate branches, simple, glandular trichomes and white flowers (Figure 6). *Salzmannia nitida* is a treelet with opposite leaves, inflorescences axillary glomerules, flowers tetramerous and yellow, with a bifid style (Figure 6). *Swartzia pickelii* is a tree with alternate, pinnate leaves, flowers with only one petal, dimorphic anthers, rachis and floral bud with ferruginous trichomes (Figure 7).

DISCUSSION

Although the small size when compared to most of forest fragments in the region, the RPPN Fazenda Tabatinga keeps the general floristic pattern found on lowland forests and restingas in northeastern Brazil (FREIRE 1990; ALMEIDA-JR. et al. 2007, 2009; SACRAMENTO et al. 2007; BARBOSA et al. 2011; CANTARELLI et al. 2012; ALVES et al. 2013). This evidence suggests the great conservation value of the area in the region, despite the intense anthropic pressure that typically affects small fragments with similar dimensions (GIRÃO et al. 2007; RIBEIRO et al. 2009; LÔBO et al. 2011).

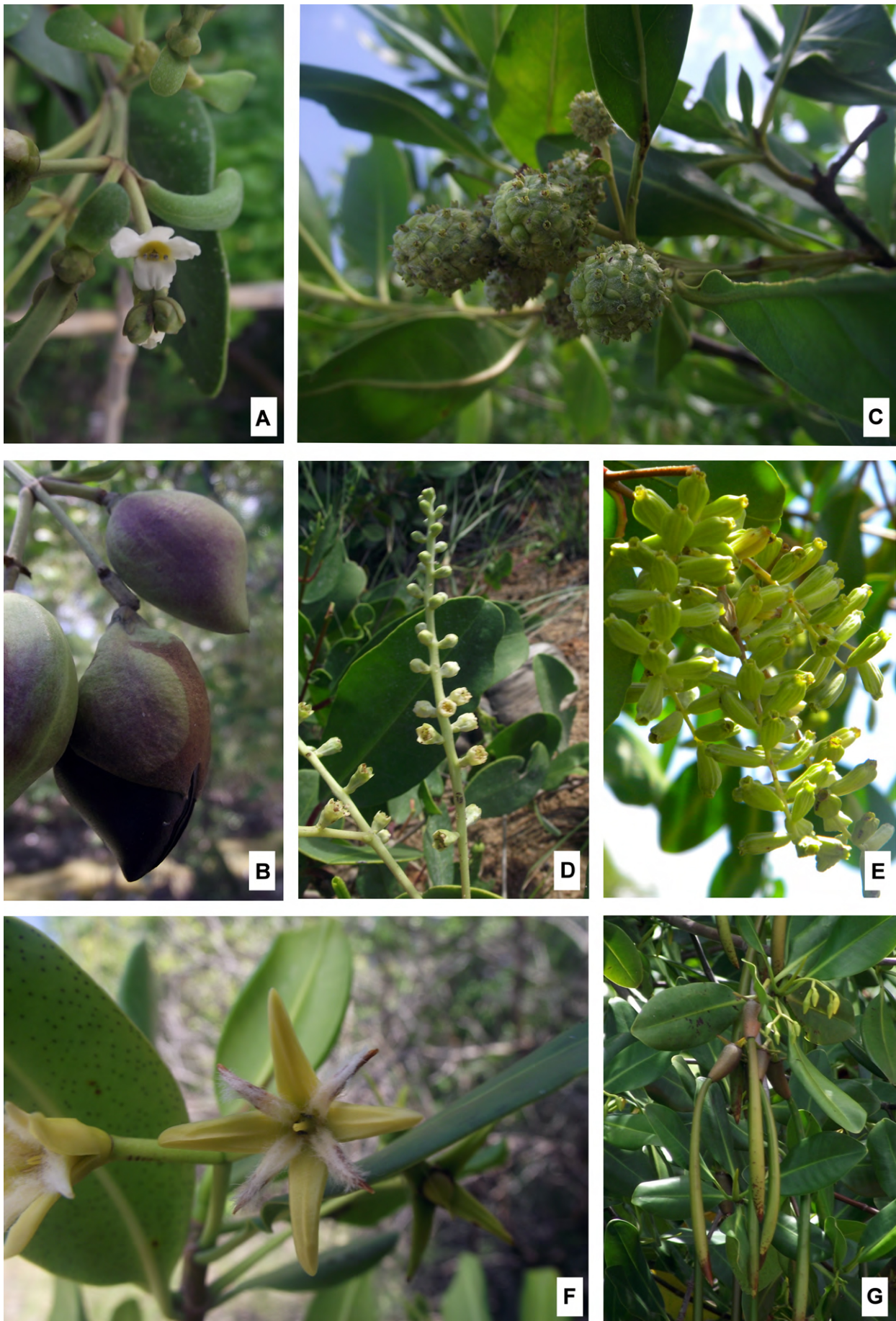


Figure 3. Plants species found in mangrove of the RPPN Fazenda Tabatinga, Pernambuco, Brazil. **A–B.** *Avicennia schaueriana* (**A**, flower; **B**, fruits). **C.** *Conocarpus erectus*. **D–E.** *Laguncularia racemosa* (**D**, flowers; **E**, fruits). **F–G.** *Rhizophora mangle* (**F**, flower; **G**, vegetative propagation). Photos by D. Ferreira and B. Amorim.



Figure 4. Common plant species found in restinga and semideciduous seasonal forest, RPPN Fazenda Tabatinga, Pernambuco, Brazil. **A.** *Dalbergia ecastaphyllum*. **B.** *Eschweilera ovata*. **C.** *Hirtella racemosa* (flowers). **D.** *Hirtella racemosa* (fruit). **E.** *Sesuvium portulacastrum*. **F.** *Tapirira guianensis*. **G.** *Vismia guianensis*. Photos by D. Ferreira and B. Amorim.

A comparative analysis with other floristic studies in the Atlantic Forest of Pernambuco state shows that even with its small area, the species richness of the RPPN Fazenda



Figure 5. Exotic species found in RPPN Fazenda Tabatinga, Pernambuco, Brazil. **A.** *Elaeis guineensis*. **B.** *Terminalia catappa*. Photos by D. Ferreira and B. Amorim.

Tabatinga is considerable and exceeds the number of species found in other areas (RODAL et al. 2005; ALMEIDA JR. et al. 2007, 2009; SACRAMENTO et al. 2007; SILVA et al. 2008). The high richness may be due, among other factors, to the diversity of vegetation types found and the greater collection effort of the herbaceous component; some previous studies prioritized sampling of the tree layer (ALMEIDA-JR. & ZICKEL 2012; SANTOS-FILHO et al. 2013; MEDEIROS et al. 2014).

The similar scope and collection effort applied to the various habits and vegetation formations confirm that herbs and shrubs play a greater role than is commonly indicated in the general model of floristic composition of the Atlantic Forest (RODAL et al. 2005; ALMEIDA JR. et al. 2007, 2009; SACRAMENTO et al. 2007; SILVA et al. 2008; ALVES et al. 2013).

The heterogeneity of vegetation formations has a direct bearing on high species richness (SMITH et al. 1997; WALKER et al. 2003; DURIGAN et al. 2008) as evidenced in areas of Atlantic Forest (DUFOUR 2006; PEREIRA et al. 2007; CARVALHO et al. 2008; DURIGAN et al. 2008; SANTOS-FILHO et al. 2013). In addition, areas of ecotones tend to have higher species richness because of the coexistence of floristic elements from various biomes or ecosystems and the intense process of speciation (SMITH et al. 1997; WALKER et al. 2003).

Fabaceae was the most species-rich family, as found in other inventories in areas of Atlantic Forest (RODAL et al. 2005; BARBOSA et al. 2011; MELO et al. 2011; VALADARES et al. 2011). Poaceae and Cyperaceae also showed high species richness in the reserve and are commonly found in restingas and lowland Atlantic Forest of the region (ALMEIDA JR. et al. 2007, 2009; SACRAMENTO et al. 2007; BARBOSA et al. 2011; MELO et al. 2011; CANTARELLI et al. 2012). Combined, these two families account for ca. 56% of the herbaceous species of the reserve.

In addition to the high species richness, another factor that denotes the importance of the area is the presence of endemic, rare and threatened species. Among the species found, 66 are considered endemic to Brazil and 28 to the Atlantic Forest (LISTA DE ESPÉCIES DA FLORA DO BRASIL 2015). The following 12 species are distributed exclusively in the states of the Northeast Region: *Alseis pickelii* Pilg. & Schmale, *Annona pickelii* (Diels) H. Rainer, *Aphelandra nuda* Nees, *Calyptrotrichum dardanoi* Mattos, *Cryptanthus alagoanus* Leme & J.A. Siqueira, *Cupania impressinervis* Acev.-Rodr., *Dalechampia coriacea* Klotzsch ex Müll.Arg., *Duguetia gardneriana* Mart., *Licania tomentosa* (Benth.) Fritsch, *Mimosa pseudosepiaria* Harms, *Salzmannia nitida* DC., and *Swartzia pickelii* Killip ex Ducke (Figure 6). Some endemic species totally or partially follow the patterns of the Pernambuco Endemism Center (*sensu* Prance 1982), such as *Aphelandra nuda* Nees (BFG 2015) and *Swartzia pickelii* Killip ex Ducke (COWAN 1967; BFG 2015).

Aphelandra nuda Nees is rare, according to Kameyama et al. (2009). This species was known only from the type material and a collection of mid-19th century but recently

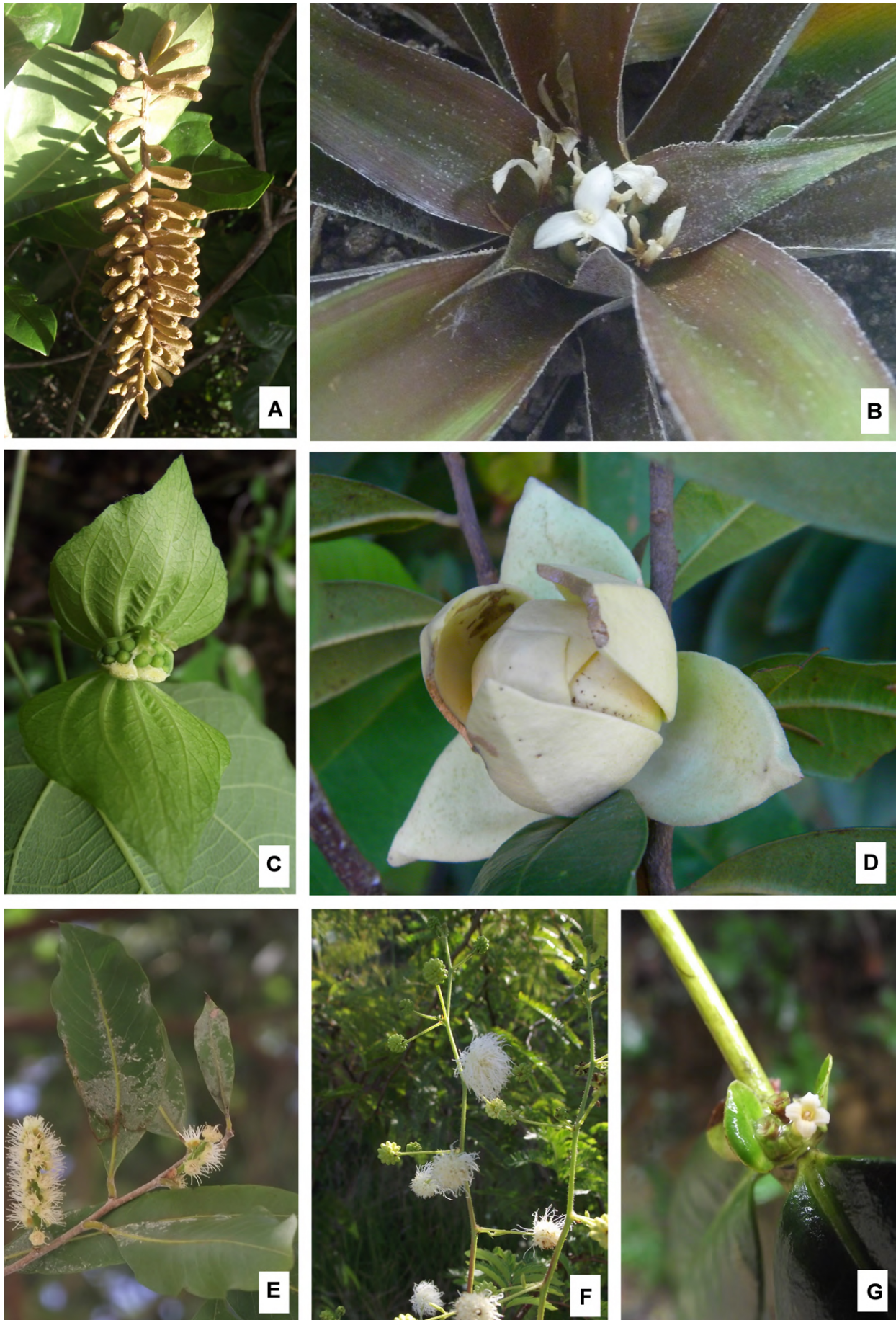


Figure 6. Endemic species of the Northeast Region found in the RPPN Fazenda Tabatinga, Pernambuco, Brazil. **A.** *Aseis pickelii*. **B.** *Cryptanthus alagoanus*. **C.** *Dalechampia coriacea*. **D.** *Duguetia gardneriana*. **E.** *Licania tomentosa*. **F.** *Mimosa pseudosepiaria*. **G.** *Salzmannia nitida*. Photos by D. Ferreira and B. Amorim.

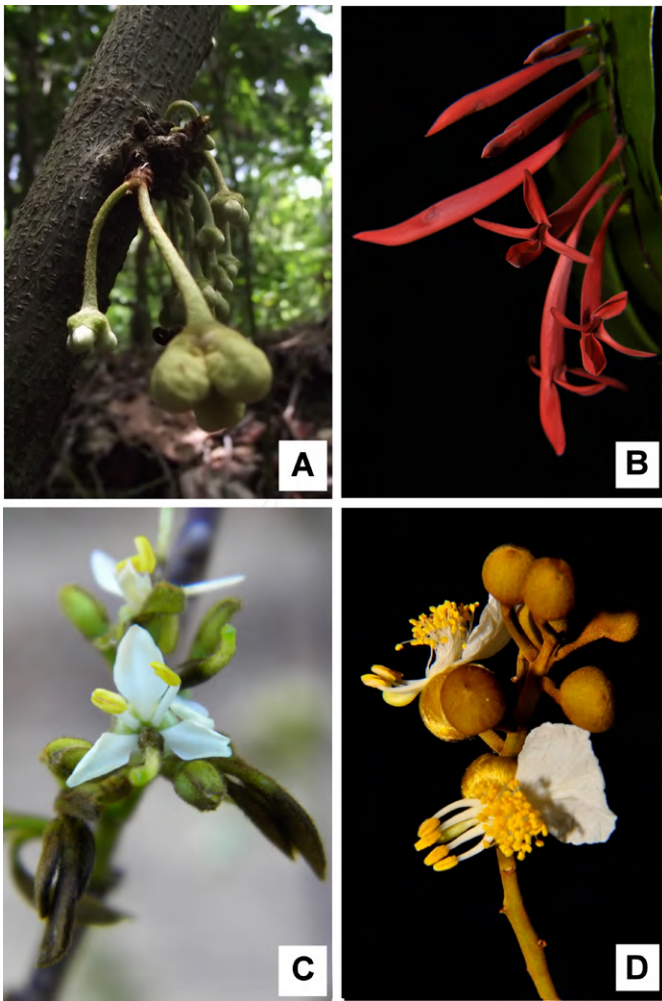


Figure 7. Threatened and rare species of the RPPN Fazenda Tabatinga, Pernambuco, Brazil. **A.** *Annona pickelii*. **B.** *Aphelandra nuda*. **C.** *Apuleia leiocarpa*. **D.** *Swartzia pickelii*. Photos by D. Ferreira, D. Araújo and B. Amorim.

found in the states of Alagoas and Rio Grande do Norte (Figure 7).

Three species of the area are considered threatened (Figure 7), *Annona pickelii* (Diels) H. Rainer (= *Rollinia pickelii* Diels) is classified as Vulnerable by LOBÃO et al. (2013) and IUCN (2015). *Apuleia leiocarpa* (Vogel) J.F. Macbr. is classified as Vulnerable by LIMA et al. (2013). *Swartzia pickelii* is indicated as threatened by MMA (2008) and as Endangered by FUNDAÇÃO BIODIVERSITAS (2005).

Despite the relevance of the area for its species diversity and endemism, the flora of the RPPN Fazenda Tabatinga shows signs of biological infiltration by exotic species common to forest fragments north of the São Francisco River, which indicates the human pressure it faces (SACRAMENTO et al. 2007; ZICKEL et al. 2007; BARBOSA et al. 2011; MELO et al. 2011). In addition, species that are typical of secondary forests are also found in the reserve. This study also corroborates *Sapium glandulosum* and *Miconia albicans*, as typical species from secondary forests fragments and coastal vegetation (GOLDENBERG 2004; RODAL et al. 2005).

The results show that RPPN Fazenda Tabatinga retains a vegetation formations typical of coastal areas of

northeastern Brazil, and the flora is as expected for restingas and associated ecosystems of the east coast of Brazil. In addition, the reserve supports threatened and endemic species, reinforcing its importance for the conservation of the flora of Pernambuco, despite being a small fragment. Thus, there is a need for a management plan that includes, among other aspects, the eradication of exotic species to ensure the protection and maintenance of the biodiversity of the site.

ACKNOWLEDGEMENTS

The first author thanks CNPq for the undergraduate research scholarship granted. The authors thank the project “Sustainability of Atlantic Forest fragments of Pernambuco, and its implications for local conservation and development”, funded by BMBF-Germany and CNPq-Brazil and the “Atlantic Forest Project”, funded by CNPq, NSF (DEB-0946618), Velux Stiftung and Beneficia Foundation which funded the collection trips. We are grateful to Rabelo Family for the collecting permission in the RPPN Fazenda Tabatinga. The authors also thank the curators of the herbaria visited, the collectors involved in the work, especially to the field assistant, Marcos Chagas, and all the taxonomists who helped in the identification of plant samples: Anderson Geyson Alves Araújo (Sapotaceae), Universidade Federal do Espírito Santo (UFES); Ariclendes de Almeida Mélo Araújo (Aristolochiaceae), Universidade Federal de Pernambuco (UFPE); Anna Flora de Novaes Pereira, (Blechnaceae and Lygodiaceae), Universidade Federal do Vale do São Francisco (UNIVASF); Aline Vieira de Melo Silva (Burmanniaceae, Gentianaceae and Lentibulariaceae), UFPE; Diogo Amorim de Araújo (Dioscoreaceae and Passifloraceae), Universidade Estadual Paulista Júlio de Mesquita Filho (UNESP); Daianely da Silva Correia (Acanthaceae), Universidade Federal de Alagoas (UFAL); Elisabeth Cabral Córdula (Fabaceae), Instituto de Pesquisa Jardim Botânico do Rio de Janeiro; Earl Celestino de Oliveira Chagas (Melastomataceae), Universidade Federal da Paraíba (UFPB); Edlley Max Pessoa da Silva (Orchidaceae), UFPE; Fernanda Oliveira Silva (Ochnaceae), UFPB; Julio Antonio Lombardi (Vitaceae), UNESP; Juan Diego García-González (Polygonaceae), UFPE; José Iranildo Miranda de Melo (Boraginaceae), Universidade Estadual da Paraíba (UEPB); Jomar Jardim (Rubiaceae), Universidade Federal do Rio Grande do Norte (UFRN); James Lucas da Costa-Lima (Erythroxylaceae), Universidade Estadual de Feira de Santana (UEFS); Maurício Carnaúba da Silva Mota (Bignoniaceae), UFAL; Maria do Céu Rodrigues Pessoa (Rubiaceae), UFPB; Maria de Fátima Agra (Lamiaceae; Solanaceae and Verbenaceae), UFPB; Maria de Fátima de Araújo Lucena (Euphorbiaceae), Universidade Federal de Campina Grande (UFCG); Maria das Graças Lapa Wanderley (Bromeliaceae and Xyridaceae), Instituto de Botânica de São Paulo; Maria Iracema Bezerra Loiola (Combretaceae and Erythroxylaceae), Universidade Federal do Ceará (UFC); Maria Regina de Vasconcellos Barbosa (Rubiaceae), UFPB; Maria do Socorro Pereira (Rubiaceae), UFCG; Maria

Teresa Aureliano Buril Vital (Convolvulaceae), Universidade Federal Rural de Pernambuco (UFRPE); Renato Goldenberg (Melastomataceae), Universidade Federal do Paraná (UFPR) and Suellen de Oliveira Santos (Asteraceae and Lauraceae), UFPE.

LITERATURE CITED

- ALMEIDA JR., E.B. & C.S. ZICKEL. 2012. Análise fitossociológica do estrato arbustivo-arbóreo de uma floresta de restinga no Rio Grande do Norte. *Revista Brasileira de Ciências Agrárias* 7: 286–291. doi: [10.5039/agraria.v7i2a1218](https://doi.org/10.5039/agraria.v7i2a1218)
- ALMEIDA JR., E.B., M.A. OLIVO, E.L. ARAÚJO & C.S. ZICKEL. 2009. Caracterização da vegetação de restinga da RPPN de Maracáipe, PE, Brasil, com base na fisionomia, flora, nutrientes do solo e lençol freático. *Acta Botanica Brasilica* 23: 36–48. doi: [10.1590/S0102-33062009000100005](https://doi.org/10.1590/S0102-33062009000100005)
- ALMEIDA JR., E.B., R.M.M. PIMENTEL & C.S. ZICKEL. 2007. Flora e formas de vida de uma área de restinga no Litoral Norte de Pernambuco, Brasil. *Revista de Geografia* 24: 19–34. <http://www.revista.ufpe.br/revistageografia/index.php/revista/article/view/110/51>
- ALVES, M., A. ALVES-ARAÚJO, B. AMORIM, A. ARAÚJO, D. ARAÚJO, M.F. ARAÚJO, et al. 2013. Inventário de angiospermas dos fragmentos de Mata Atlântica da usina São José, Igarassu, Pernambuco; pp. 133–158, in: M.T. BURIL, A. MELO, A. ALVES-ARAÚJO & M. ALVES (eds.). *Plantas da Mata Atlântica: guia de árvores e arbustos da usina São José (Pernambuco)*. Olinda: Editora Livro Rápido.
- APG IV (THE ANGIOSPERM PHYLOGENY GROUP). 2016. An update of the Angiosperm Phylogeny Group classification for the orders and families of flowering plants: APG IV. *Botanical Journal of the Linnean Society* 181(1): 1–20. doi: [10.1111/boj.12385](https://doi.org/10.1111/boj.12385)
- BARBOSA, M.R.V., W.W. THOMAS, E.L.P. ZÁRATE, R.B. LIMA, M.F. AGRA, et al. 2011. Checklist of vascular plants of the Guaribas Biological Reserve, Paraíba, Brazil. *Revista Nordestina de Biologia* 20: 79–106. <http://periodicos.ufpb.br/ojs/index.php/revnebio/article/view/11912>
- BFG (BRAZILIAN FLORA GROUP). 2015. Growing knowledge: an overview of seed plant diversity in Brazil. *Rodriguésia* 66(4): 1085–1113. doi: [10.1590/2175-7860201566411](https://doi.org/10.1590/2175-7860201566411)
- CANTARELLI, J.R.R., E.B. ALMEIDA JR., F.S. SANTOS-FILHO & C.S. ZICKEL. 2012. Tipos fitofisionômicos e florística da restinga da APA de Guadalupe, Pernambuco, Brasil. *Insula* 41: 95–117. doi: [10.5007/2178-4574.2012n41p95](https://doi.org/10.5007/2178-4574.2012n41p95)
- CARVALHO, F.A., M.T. NASCIMENTO & A.T. OLIVEIRA FILHO. 2008. Composição, riqueza e heterogeneidade da flora arbórea da bacia do rio São João, RJ, Brasil. *Acta Botanica Brasilica* 22: 929–940. doi: [10.1590/S0102-33062008000400004](https://doi.org/10.1590/S0102-33062008000400004)
- CAVALCANTI, D., B.S. AMORIM & M. ALVES. 2012. Plants of the Atlantic Rainforest, Goiana, Pernambuco, Brazil. *Plantas da Mata Atlântica, RPPN Fazenda Tabatinga. Rapid Color Guide* 459. Chicago: The Field Museum. 10 pp.
- COWAN, R.S. 1967. *Swartzia* (Leguminosae, Caesalpinioideae, Swartzieae). *Flora Neotropica* 1: 1–228.
- DUFOUR, A., F. GADALLAH, H.H. WAGNER, A. GUISAN & A. BUTTLER. 2006. Plant species richness and environmental heterogeneity in a mountain landscape: effects of variability and spatial configuration. *Ecography* 29(4): 573–584. doi: [10.1111/j.0906-7590.2006.04605.x](https://doi.org/10.1111/j.0906-7590.2006.04605.x)
- DURIGAN, G., L.C. BERNACCI, G.A.D.C. FRANCO, G.F. ARBOCZ, J.P. METZGER & E.L.M. CATHARINO. 2008. Estádio sucessional e fatores geográficos como determinantes da similaridade florística entre comunidades florestais no Planalto Atlântico, Estado de São Paulo, Brasil. *Acta Botanica Brasilica* 22 (1): 51–62. doi: [10.1590/S0102-33062008000100007](https://doi.org/10.1590/S0102-33062008000100007)
- FREIRE, M.S.B. 1990. Levantamento florístico do Parque Estadual das Dunas do Natal. *Acta Botanica Brasilica* 4(2): 41–59. doi: [10.1590/S0102-33061990000300006](https://doi.org/10.1590/S0102-33061990000300006)
- FUNDAÇÃO BIODIVERSITAS. 2005. Lista da flora brasileira ameaçada de extinção. Fundação Biodiversitas. Accessed at http://www.biodiversitas.org.br/floraBr/consulta_fim.asp, 4 August 2015.
- GALINDO-LEAL, C. 2005. Reunindo as peças: a fragmentação e a conservação da paisagem; pp. 372–380, in: C. GALINDO-LEAL & I.G. CÂMARA (eds.). *Mata Atlântica: biodiversidade, ameaças e perspectivas*, c. 1. São Paulo: Fundação SOS Mata Atlântica / Belo Horizonte: Conservação Internacional.
- GIRÃO, L.C., A.V. LOPES, M. TABARELLI & E.M. BRUNA. 2007. Changes in tree reproductive traits reduce functional diversity in a fragmented Atlantic Forest landscape. *PLoS ONE* 2(9): e908. doi: [10.1371/journal.pone.0000908](https://doi.org/10.1371/journal.pone.0000908)
- GOLDENBERG, R. 2004. O gênero *Miconia* (Melastomataceae) no Estado do Paraná, Brasil. *Acta Botanica Brasilica* 18(4): 927–947. doi: [10.1590/S0102-33062004000400024](https://doi.org/10.1590/S0102-33062004000400024)
- IBGE (INSTITUTO BRASILEIRO DE GEOGRAFIA E ESTATÍSTICA). 1992. Manual técnico da vegetação brasileira. Rio de Janeiro: IBGE. 92 pp.
- IUCN (INTERNATIONAL UNION FOR CONSERVATION OF NATURE). 2015. The IUCN Red List of threatened species. Version 2015.2. Accessed at <http://www.iucnredlist.org>, 4 August 2015.
- KAMEYAMA, C., A.L.A. CÔRTEZ, S.R. PROFICE, D.M. BRAZ & D.C. DALY. 2009. Acanthaceae; pp. 39–43, in: A.M. GIULIETTI, A. RAPINI, M.J.G. ANDRADE, L.P. QUEIROZ & J.M.C. SILVA (orgs.). *Plantas raras do Brasil*. Belo Horizonte: Conservação Internacional.
- LIMA, H.C., É.R. SOUZA, A.M.G.A. TOZZI, A.P.F. PEREZ, A.S. FLORES, et al. 2013. Fabaceae/Leguminosae; pp. 516–548, in: G. MARTINELLI & M.A. MORAES (eds.). *Livro vermelho da flora do Brasil*. Rio de Janeiro: Andrea Jakobsson Estúdio.
- LISTA DE ESPÉCIES DA FLORA DO BRASIL. 2015. Jardim Botânico do Rio de Janeiro. Accessed at <http://floradobrasil.jbrj.gov.br>, 4 August 2015.
- LOBÃO, A.Q., D.C. KUTSCHENKO, F.S.M. BARROS & T. MESSINA. 2013. Annonaceae; pp. 144–150, in: G. Martinelli and M.A. Moraes (eds.). *Livro vermelho da flora do Brasil*. Rio de Janeiro: Andrea Jakobsson Estúdio.
- LÔBO, D., T. LEÃO, F.P.L. MELO, A.M.M. SANTOS & M. TABARELLI. 2011. Forest fragmentation drives Atlantic forest of northeastern Brazil to biotic homogenization. *Diversity and Distributions* 17(2): 287–296. doi: [10.1111/j.1472-4642.2010.00739.x](https://doi.org/10.1111/j.1472-4642.2010.00739.x)
- MEDEIROS, D.P.W., E.B. ALMEIDA JR., M.C. ABREU, F.S. SANTOS-FILHO & C.S. ZICKEL. 2014. Riqueza e caracterização da estrutura lenhosa da vegetação de restinga de Baía Formosa, RN, Brasil. *Pesquisas, Botânica* 65: 183–199. <http://www.anchietano.unisinos.br/publicacoes/botanica/botanica65/BOTANICA%2065.pdf>
- MELO, A., B.S. AMORIM, J. GARCÍA-GONZÁLEZ, J.A.N. DE SOUZA, E.M. PESSOA, et al. 2011. Updated floristic inventory of the angiosperms of the Usina São José, Igarassu, Pernambuco, Brazil. *Revista Nordestina de Biologia* 20(2): 3–26. <http://periodicos.ufpb.br/ojs/index.php/revnebio/article/view/10647/6967>
- MITTERMEIER, R.A., P.R. GIL, M. HOFFMANN, J. PILGRIM, T. BROOKS, et al. 2004. *Hotspots revisited*. Mexico City: CEMEX. 392 pp.
- MMA (MINISTÉRIO DO MEIO AMBIENTE, dos Recursos Hídricos e da Amazônia Legal). 2000. Avaliação e ações prioritárias para a conservação da biodiversidade da Mata Atlântica e Campos Sulinos. Brasília: Conservation International do Brasil, Fundação SOS Mata Atlântica and Fundação Biodiversitas. 46 pp.
- MMA (MINISTÉRIO DO MEIO AMBIENTE). 2008. Instrução Normativa nº 6, 23 de setembro de 2008. Ministério do Meio Ambiente. Accessed at http://www.mma.gov.br/estruturas/179/_arquivos/179_05122008033615.pdf, 4 August 2015.
- MORI, S.A., L.A. MATTOS-SILVA, G. LISBOA & L. CORADIN. 1985. *Manual de manejo do herbário fanerogâmico*. Ilhéus: Centro de Pesquisas do Cacau. 97pp.

- PEREIRA, J.A.A., A.T. OLIVEIRA-FILHO & J.P. LEMOS-FILHO. 2007. Environmental heterogeneity and disturbance by humans control much of the tree species diversity of Atlantic montane forest fragments in SE Brazil. *Biodiversity and Conservation* 16(6): 1761–1784. doi: [10.1007/s10531-006-9063-4](https://doi.org/10.1007/s10531-006-9063-4)
- PRANCE, G.T. 1982. Forest refuges: evidence from woody angiosperms; pp. 137–158, in: G.T. PRANCE (ed.). *Biological Diversification in the Tropics*. New York: Columbia University Press.
- RANTA, P., T. BLOM, J. NIEMELÄ, E. JOENSUU & M. SITONEN. 1998. The fragmented Atlantic rain forest of Brazil: size, shape and distribution of forest fragments. *Biodiversity and Conservation* 7: 385–403.
- RIBEIRO, M.C., J.P. METZGER, A.C. MARTENSEN, F.J. PONZONI & M.M. HIROTA. 2009. The Brazilian Atlantic Forest: How much is left, and how is the remaining forest distributed? Implications for conservation. *Biological Conservation* 142(6): 1141–1153. doi: [10.1016/j.biocon.2009.02.021](https://doi.org/10.1016/j.biocon.2009.02.021)
- RODAL, M.J.N., M.F.A. LUCENA, K.V.S.A. ANDRADE & A.L. MELO. 2005. Mata do Toró: uma floresta estacional semidecidual de terras baixas no nordeste do Brasil. *Hoehnea* 32(2): 283–294. <http://www.ambiente.sp.gov.br/institutodebotanica/files/2011/11/hoehnea32n2a08.pdf>
- SACRAMENTO, A.C., C.S. ZICKEL & E.B. ALMEIDA JR. 2007. Aspectos Florísticos da Vegetação de Restinga no Litoral de Pernambuco. *Revista Árvore* 31(6): 1121–1130. doi: [10.1590/S0100-67622007000600017](https://doi.org/10.1590/S0100-67622007000600017)
- SANTOS-FILHO, F.S., E.B. ALMEIDA JR & C.S. ZICKEL. 2013. Do edaphic aspects alter vegetation structures in the Brazilian restinga? *Acta Botanica Brasilica* 27(3): 613–623. doi: [10.1590/S0102-33062013000300019](https://doi.org/10.1590/S0102-33062013000300019)
- SILVA, J.M.C. & M. TABARELLI. 2000. Tree species impoverishment and the future flora of the Atlantic forest of northeast Brazil. *Nature* 404: 72–74. doi: [10.1038/35003563](https://doi.org/10.1038/35003563)
- SILVA, J.M.C. & C.H. CASTELETTI. 2005. Estado da biodiversidade da Mata Atlântica brasileira; pp. 43–59, in: C. GALINDO-LEAL & I.G. CÂMARA (eds.). *Mata Atlântica: diversidade, ameaças e perspectivas*, c. 5. São Paulo: Fundação SOS Mata Atlântica / Belo Horizonte: Conservação Internacional.
- SILVA, S.S.L., C.S. ZICKEL & L.A. CESTARO. 2008. Flora vascular e perfil fisionômico de uma restinga no litoral sul de Pernambuco, Brasil. *Acta Botanica Brasilica* 22(4): 1123–1135. doi: [10.1590/S0102-33062008000400023](https://doi.org/10.1590/S0102-33062008000400023)
- SMITH, A.R., K.M. PRYER, E. SCHUETTPELZ, P. KORALL, H. SCHNEIDER & P.G. WOLF. 2006. A classification for extant ferns. *Taxon* 55(3): 705–731. doi: [10.2307/25065646](https://doi.org/10.2307/25065646)
- SMITH, A.R., K.M. PRYER, E. SCHUETTPELZ, P. KORALL, H. SCHNEIDER & P.G. WOLF. 2008. Fern classification; pp. 417–467, in: T.A. RANKER & C.H. HAUFLER (eds.). *Biology and evolution ferns and lycophytes*. New York: Cambridge University Press.
- SMITH, T.B., R.K. WAYNE, D.J. GIRMAN & M.W. BRUFORD. 1997. A role for ecotones in generating rainforest biodiversity. *Science* 276(5320): 1855–1857. doi: [10.1126/science.276.5320.1855](https://doi.org/10.1126/science.276.5320.1855)
- STEHMANN, J.R., R.C. FORZZA, A. SALINO, M. SOBRAL, D.P. COSTA & Y. KAMINO. 2009. *Plantas da Floresta Atlântica*. Rio de Janeiro: Jardim Botânico do Rio de Janeiro. 516pp.
- TABARELLI, M., L.P. PINTO, J.M.C. SILVA, M. HIROTA & L. BEDÊ. 2005. Challenges and opportunities for biodiversity conservation in the Brazilian Atlantic Forest. *Conservation Biology* 19(3): 695–700. doi: [10.1111/j.1523-1739.2005.00694.x](https://doi.org/10.1111/j.1523-1739.2005.00694.x)
- TRINDADE, M.B., H.P. SILVA, A.C.B. LINS-E-SILVA & M. SCHESSL. 2007. Utilização de sensoriamento remoto na análise de fragmentação da Mata Atlântica no litoral Norte de Pernambuco, Brasil; pp. 1907–1917, in: *Anais do XIII Simpósio Brasileiro de sensoriamento remoto*. Florianópolis: Instituto Nacional de Pesquisas Espaciais.
- VALADARES, R.T., F.F.C. SOUZA, N.G.D. CASTRO, A.L.S. PERES, S.Z. SCHNEIDER & M.L.L. MARTINS. 2011. Levantamento florístico de um brejo-herbáceo localizado na restinga de Morada do Sol, município de Vila Velha, Espírito Santo, Brasil. *Rodriguesia* 62 (4): 827–834. <http://rodriguesia-seer.jbrj.gov.br/index.php/rodriguesia/article/view/258/130>
- VELOSO, H.P., A.L. RANGEL-FILHO & J.C.A. LIMA. 1991. *Classificação da vegetação brasileira, adaptada a um sistema universal*. Rio de Janeiro: IBGE. 124pp.
- WALKER, S., J.B. WILSON, J.B. STEEL, G.L. RAPSON, B. SMITH, et al. 2003. Properties of ecotones: evidence from five ecotones objectively determined from a coastal vegetation gradient. *Journal of Vegetation Science* 14(4): 579–590. doi: [10.1111/j.1654-1103.2003.tb02185.x](https://doi.org/10.1111/j.1654-1103.2003.tb02185.x)
- ZICKEL, C.S., E.B. ALMEIDA JR., D.P.W. MEDEIROS, P.B. LIMA, T.M.S. SOUZA & A.B. LIMA. 2007. Magnoliophyta species of restinga, state of Pernambuco, Brazil. *Check List* 3(3): 224–241. doi: [10.15560/3.3.224](https://doi.org/10.15560/3.3.224)

Authors' contributions: All authors collected the data, identified the specimens, wrote the text and made the analysis.

Received: 1 October 2015

Accepted: 17 September 2016

Academic editor: Juliana de Paula-Souza

Table 1. List of plant species occurring in the RPPN Fazenda Tabatinga, Goiana, Pernambuco, Brazil with their families, habits, vegetation types where the species were found and voucher. Legend: Habits: climber (H.) = herbaceous climber; climber (W.) = woody climber. Vegetation types: ACO = alluvial communities, SSF = semideciduous seasonal forest, MAN = mangrove, RES = restinga. Voucher: AM = Aline Melo et al.; BSA = Bruno Sampaio Amorim et al.; DAA = Diogo Amorim de Araújo et al.; DC = Débora Cavalcanti et al.; EDM = Emanuel Deodato de Mendonça et al.; PR = Photographic record; *Sterile sample.

Family/species	Habit	Vegetation type	Voucher
Acanthaceae			
<i>Aphelandra nuda</i> Nees ¹²³⁴⁶	Climber (W.)	SSF	DC 606
<i>Avicennia schaueriana</i> Stapf & Leechm. ex Moldenke	Tree	MAN	DC 452
Aizoaceae			
<i>Sesuvium portulacastrum</i> (L.) L.	Herb	RES	DC 165
Amaranthaceae			
<i>Amaranthus blitum</i> L.	Herb	MAN	DC 451
<i>Blutaparon portulacoides</i> (A.St.-Hil.) Mears	Herb	MAN	DC 554
Indet.	Herb	RES	AM 724

Continued

Table 1. Continued.

Family/species	Habit	Vegetation type	Voucher
Anacardiaceae			
<i>Anacardium occidentale</i> L.	Tree	SSF	DC 251
<i>Mangifera indica</i> L. ⁸	Tree	SSF	DC 347
<i>Schinus terebinthifolius</i> Raddi	Tree	RES	DC 322
<i>Tapirira guianensis</i> Aubl.	Tree	SSF	DC 127
<i>Thyrsodium spruceanum</i> Benth.	Treelet	SSF	DC 634*
Annonaceae			
<i>Annona pickelii</i> (Diels) H.Rainer ¹²³⁷	Treelet	SSF	DC 444
<i>Annona</i> sp.	Treelet	ACO	DC 584
<i>Duguetia gardneriana</i> Mart. ¹³	Treelet	SSF	DC 490
<i>Gutteria schomburgkiana</i> Mart.	Tree	SSF	DC 147
Apocynaceae			
<i>Blepharodon pictum</i> (Vahl) W.D.Stevens	Climber (H.)	SSF	DC 627
<i>Catharanthus roseus</i> (L.) Don ⁸	Subshrub	MAN	DC 546
<i>Hancornia speciosa</i> Gomes	Tree	SSF	DC 516
<i>Himatanthus cf. bracteatus</i> (A. DC.) Woodson ¹²	Treelet	SSF	DC 105
<i>Mandevilla hirsuta</i> (A. Rich.) K.Schum.	Climber (H.)	SSF	DAA 1682
<i>Mandevilla scabra</i> (Hoffmanns. ex Roem. & Schult.) K.Schum.	Climber (H.)	SSF	DC 562
<i>Mateleia maritima</i> (Vell.) Fontella ⁵	Climber (H.)	SSF	DC 587
<i>Mateleia orthosioides</i> (E.Fourn.) Fontella	Climber (H.)	SSF	DC 577
<i>Odontadenia</i> sp.	Climber (H.)	SSF	DC 609
<i>Tabernaemontana flavicans</i> Willd. ex Roem & Schult.	Treelet	SSF	DC 447
<i>Temnadenia odorifera</i> (Vell.) J.F.Morales ¹²	Climber (W.)	SSF	DC 488
Araceae			
<i>Montrichardia linifera</i> (Arruda) Schott	Climber (H.)	ACO	DC 172*
<i>Philodendron cf. acutatum</i> Schott	Herb	SSF	DC 96*
Indet.	Herb	SSF	DC 398
Areaceae			
<i>Bactris cf. ferruginea</i> Burret ¹²	Arborescent	SSF	DC 481
<i>Cocos nucifera</i> L.	Arborescent	RES, SSF	PR
<i>Elaeis guineensis</i> Jacq. ⁸	Arborescent	SSF	DC 517
Aristolochiaceae			
<i>Aristolochia cf. papillaris</i> Mast. ¹	Climber (H.)	SSF	DAA 1663
Asteraceae			
<i>Bidens pilosa</i> L.	Subshrub	SSF	DC 75
<i>Cyanthillium cinereum</i> (L.) H.Rob.	Subshrub	SSF	DC 106
<i>Cyrtocymura scorpioides</i> (Lam.) H.Rob. ¹	Climber (H.)	SSF	DAA 1666
<i>Eclipta prostrata</i> (L.) L.	Herb	SSF	DC 89
<i>Emilia sonchifolia</i> (L.) DC. ex Wight	Herb	SSF	DC 224
<i>Melampodium divaricatum</i> (Rich. ex Pers.) DC. ⁵	Shrub	SSF	DC 114
<i>Rolandra fruticosa</i> (L.) Kuntze ¹	Subshrub	SSF	DC 525
<i>Sphagneticola trilobata</i> (L.) Pruski	Herb	SSF	DC 82
<i>Tridax procumbens</i> L.	Herb	SSF	DC 87
Indet.	Herb	MAN	DC 153
Indet.	Herb	SSF	DC 249
Indet.	Herb	RES	DC 378
Bignoniaceae			
<i>Adenocalymma comosum</i> (Cham.) DC. ¹²	Climber (W.)	SSF	DC 226
<i>Anemopaegma parkeri</i> Sprage ⁹	Climber (W.)	SSF	DC 468
<i>Bignonia corymbosa</i> (Vent.) L.G.Lohmann	Climber (W.)	SSF	DC 441
<i>Fridericia conjugata</i> (Vell.) L.G.Lohmann	Climber (W.)	RES	DC 107
<i>Lundia cordata</i> (Vell.) A.DC.	Climber (W.)	SSF	DC 232
Blechnaceae			
<i>Blechnum serrulatum</i> Rich.	Herb	ACO	DC 366
Boraginaceae			
<i>Cordia superba</i> Cham. ¹	Treelet	SSF	DC 130
<i>Tournefortia candidula</i> (Miers) Johnst.	Climber (W.)	SSF	DC 133
<i>Varronia multispicata</i> (Cham.) Borhidi	Subshrub	SSF	DC 560
Bromeliaceae			
<i>Cryptanthus alagoanus</i> Leme & J.A.Siqueira ¹²³	Herb	SSF	DC 536*

Continued

Table 1. Continued.

Family/species	Habit	Vegetation type	Voucher
Burmanniaceae			
<i>Burmannia capitata</i> (Walter ex J.F.Gmel.) Mart.	Herb	SSF	DC 566
Burseraceae			
<i>Protium heptaphyllum</i> (Aubl.) Marchand	Tree	SSF	DC 314
<i>Protium</i> sp.	Tree	SSF	DC 466
Cannabaceae			
<i>Trema micrantha</i> (L.) Blume	Shrub	SSF	DC 446
Capparaceae			
<i>Cynophalla flexuosa</i> (L.) J.Presl	Tree	RES	DC 331
Celastraceae			
<i>Maytenus distichophylla</i> Mart. ex Reissek ¹²	Treelet	SSF	DC 445
<i>Prionostemma aspera</i> (Lam.) Miers	Climber (W.)	SSF	DC 104
Chrysobalanaceae			
<i>Hirtella racemosa</i> Lam.	Shrub	SSF	DC 113
<i>Licania tomentosa</i> (Benth.) Fritsch ¹²³	Tree	SSF	DC 339
<i>Licania</i> sp.	Tree	RES	DC 309
Combretaceae			
<i>Buchenavia tetraphylla</i> (Aubl.) R.A.Howard	Tree	SSF	DC 260
<i>Combretum</i> sp.	Climber (W.)	SSF	DC 608
<i>Conocarpus erectus</i> L.	Tree	MAN	DC 540
<i>Laguncularia racemosa</i> (L.) C.F.Gaertn.	Treelet	MAN	DC 157
<i>Terminalia catappa</i> L. ⁸	Tree	RES	DC 323
Commelinaceae			
<i>Commelina</i> sp.	Herb	SSF	DC 454
Connaraceae			
<i>Connarus</i> sp.	Climber (W.)	SSF	DC 640
Convolvulaceae			
<i>Bonamia maripoides</i> Hallier f.	Climber (H.)	SSF	DC 464
<i>Ipomoea alba</i> L.	Climber (H.)	RES	DC 521
<i>Ipomoea asarifolia</i> (Desr.) Roem. & Schult.	Subshrub	SSF	DC 250
<i>Ipomoea bahiensis</i> Willd. ex Roem. & Schult. ¹	Climber (H.)	SSF	DC 572
<i>Jacquemontia glaucescens</i> Choisy ¹²	Climber (H.)	SSF	DC 220
<i>Merremia macrocalyx</i> (Ruiz & Pav.) O'Donell	Climber (H.)	SSF	DC 610
<i>Operculina hamiltonii</i> (G.Don) D.F.Austin & Staples	Climber (H.)	MAN	DC 453
Cyperaceae			
<i>Bolboschoenus robustus</i> (Pursh) Soják ²	Herb	SSF	AM 728
<i>Cyperus haspan</i> L.	Herb	SSF	DAA 1690
<i>Cyperus ligularis</i> L.	Herb	SSF	BSA 579
<i>Cyperus luzulae</i> (L.) Retz.	Herb	SSF	BSA 536
<i>Cyperus sphacelatus</i> Rottb.	Herb	SSF	BSA 537
<i>Cyperus surinamensis</i> Rottb.	Herb	SSF	BSA 583
<i>Eleocharis acutangula</i> (Roxb.) Schult.	Herb	MAN	DC 559
<i>Eleocharis geniculata</i> (L.) Roem. & Schult.	Herb	SSF	DC 177
<i>Eleocharis maculosa</i> (Vahl) Roem. & Schult. ¹	Herb	MAN	DC 555
<i>Fimbristylis cymosa</i> R.Br.	Herb	SSF	DC 557
<i>Fimbristylis miliacea</i> (L.) Vahl	Herb	SSF	BSA 539
<i>Fuirena umbellata</i> Rottb.	Herb	SSF	DC 727
<i>Pycneus polystachyos</i> (Rottb.) P.Beauv.	Herb	SSF	DAA 1695
<i>Remirea maritima</i> Aubl. ²	Herb	RES	DC 520
<i>Rhynchospora cephalotes</i> (L.) Vahl	Herb	RES, SSF	DC 325
<i>Rhynchospora ciliata</i> (Vahl) Kük.	Herb	SSF	BSA 535
<i>Rhynchospora comata</i> (Link) Roem. & Schult.	Herb	SSF	AM 474
<i>Rhynchospora emaciata</i> (Nees) Boeckeler ⁵	Herb	SSF	BSA 581
<i>Rhynchospora holoschoenoides</i> (Rich.) Herter	Herb	SSF	BSA 587a
<i>Scleria bracteata</i> Cav.	Herb	SSF	BSA 589
<i>Scleria hirtella</i> Sw.	Herb	SSF	DAA 1692
<i>Scleria mitis</i> P.J.Bergius	Herb	RES	DC 320
<i>Scleria secans</i> (L.) Urb.	Herb	SSF	DC 533

Continued

Table 1. Continued.

Family/species	Habit	Vegetation type	Voucher
Dilleniaceae			
<i>Curatella americana</i> L.	Tree	SSF	DC 367
<i>Davilla nitida</i> (Vahl) Kubitzki	Climber (W.)	SSF	DC 168
<i>Tetracera breyniana</i> Schlttdl. ¹²	Climber (W.)	SSF	DC 132
<i>Tetracera</i> sp.	Climber (W.)	SSF	DC 166
Dioscoreaceae			
<i>Dioscorea marginata</i> Griseb.	Herb	SSF	DC 612*
Elaeocarpaceae			
<i>Sloanea</i> sp.	Tree	SSF	DC 498
Erythroxylaceae			
<i>Erythroxylum affine</i> A.St.-Hil. ¹²	Treelet	SSF	DC 509
<i>Erythroxylum citrifolium</i> A.St.-Hil.	Treelet	SSF	DC 505
<i>Erythroxylum passerinum</i> Mart. ¹²	Tree	SSF	DC 332
Euphorbiaceae			
<i>Astraea lobata</i> (L.) Klotzsch	Herb	SSF	DC 119
<i>Cnidocolus urens</i> (L.) Arthur	Subshrub	RES	DC 318
<i>Dalechampia coriacea</i> Klotzsch ex Müll. Arg. ¹³⁵	Climber (W.)	SSF	DC 473
<i>Dalechampia scandens</i> L.	Climber (W.)	SSF	DC 350
<i>Euphorbia hirta</i> L.	Herb	SSF	DC 395
<i>Euphorbia hyssopifolia</i> L.	Subshrub	SSF	BSA 548
<i>Euphorbia prostrata</i> Aiton	Herb	SSF	BSA 549
<i>Microstachys corniculata</i> (Vahl) Griseb.	Herb	SSF	BSA 531
<i>Sapium glandulosum</i> (L.) Morong	Treelet	SSF	DC 545
Fabaceae			
<i>Abarema cochliacarpus</i> (Gomes) Barneby & J.W.Grimes ¹	Tree	SSF	DC 514
<i>Andira fraxinifolia</i> Benth. ¹	Tree	SSF	DC 374
<i>Apuleia leiocarpa</i> (Vogel) J.F. Macbr. ⁷	Tree	SSF	DC 375
<i>Bowdichia virgilioides</i> Kunth	Tree	SSF	DC 369
<i>Centrosema arenarium</i> Benth. ¹	Subshrub	SSF	DC 154
<i>Centrosema virgininum</i> (L.) Benth.	Climber (H.)	SSF	EDM 12
<i>Chamaecrista desvauxii</i> (Collad.) Killip	Subshrub	SSF	DC 602
<i>Chamaecrista eitenorum</i> (H.S.Irwin & Barneby) H.S.Irwin & Barneby ⁵	Tree	SSF	DAA 1660
<i>Chamaecrista flexuosa</i> (L.) Greene	Subshrub	SSF	DC 600
<i>Chamaecrista nictitans</i> (L.) Moench	Shrub	SSF	DC 110
<i>Crotalaria retusa</i> L. ⁵	Subshrub	SSF	DC 120
<i>Dalbergia ecastaphyllum</i> (L.) Taub.	Shrub	RES	DC 354
<i>Desmodium barbatum</i> (L.) Benth.	Subshrub	SSF	DC 135
<i>Dioclea violacea</i> Mart. ex Benth.	Climber (W.)	SSF	EDM 05
<i>Dioclea virgata</i> (Rich.) Amshoff	Climber (W.)	SSF	DC 384
<i>Hymenaea courbaril</i> L.	Shrub	SSF	DC 225
<i>Indigofera blanchetiana</i> Benth. ¹⁵	Subshrub	SSF	DC 449
<i>Indigofera microcarpa</i> Desv. ¹	Subshrub	MAN	DC 558
<i>Indigofera suffruticosa</i> Mill.	Shrub	RES	DC 330
<i>Inga ingoides</i> (Rich.) Willd.	Treelet	SSF	DC 581
<i>Inga laurina</i> (Sw.) Willd.	Treelet	SSF	DC 149
<i>Inga striata</i> Benth.	Tree	SSF	DC 586
<i>Macroptilium lathyroides</i> (L.) Urb.	Subshrub	MAN	DC 553
<i>Mimosa pseudosepiaria</i> Harms ¹³	Shrub	SSF	AM 715
<i>Mimosa sensitiva</i> L.	Climber (W.)	SSF	DC 635
<i>Mimosa somnians</i> Humb. & Bonpl. ex Willd.	Shrub	SSF	DC 152
<i>Muelleria obtusa</i> (Benth.) M.J. Silva & A.M.G.Azevedo ¹⁵	Tree	RES	DC 363
<i>Pterocarpus rohrii</i> Vahl	Tree	SSF	DC 463
<i>Senna macranthera</i> (DC. ex Collad.) H.S.Irwin & Barneby	Climber (W.)	RES, SSF	DC 118
<i>Sophora tomentosa</i> L.	Treelet	MAN	DC 539
<i>Stylosanthes viscosa</i> (L.) Sw.	Shrub	SSF	DC 99
<i>Swartzia pickelii</i> Killip ex Ducke ¹³⁴⁷	Tree	SSF	DAA 1667
<i>Swartzia</i> sp.	Tree	SSF	DC 522
<i>Tephrosia purpurea</i> (L.) Pers.	Subshrub	SSF	DC 465
<i>Vigna luteola</i> (Jacq.) Benth. ⁵	Climber (H.)	SSF	DC 570
<i>Vigna peduncularis</i> (Kunth) Fawc. & Rendle	Climber (H.)	SSF	DC 492
<i>Zornia brasiliensis</i> Vogel	Subshrub	SSF	DC 576

Continued

Table 1. Continued.

Family/species	Habit	Vegetation type	Voucher
Gentianaceae			
<i>Schultesia guianensis</i> (Aubl.) Malme	Subshrub	SSF	DC 174
Heliconiaceae			
<i>Heliconia psittacorum</i> L.f.	Herb	SSF	DC 85
Hernandiaceae			
<i>Sparattanthelium tupiniquorum</i> Mart.	Shrub	SSF	DC 223
Humiriaceae			
<i>Sacoglottis mattogrossensis</i> Malme	Tree	SSF	DC 254
Hypericaceae			
<i>Vismia guianensis</i> (Aubl.) Choisy	Shrub	SSF	DC 98
Iridaceae			
<i>Cipura paludosa</i> Aubl.	Herb	SSF	DC 248
Lamiaceae			
<i>Mesosphaerum suaveolens</i> (L.) Kuntze	Subshrub	SSF	DC 256
<i>Rhaphiodon echinus</i> Schauer ¹	Subshrub	RES	DC 548
<i>Vitex rufescens</i> A.Juss.	Tree	SSF	DC 595
Lauraceae			
<i>Cassytha filiformis</i> L.	Herb	SSF	DC 167
<i>Ocotea canaliculata</i> (Rich.) Mez	Tree	SSF	DC 501
<i>Ocotea fasciculata</i> (Nees) Mez	Tree	SSF	DC 306
<i>Ocotea cf. indecora</i> (Schott) Mez ²⁵	Tree	SSF	DC 357
<i>Ocotea puberula</i> (Rich.) Nees ⁵	Tree	SSF	DC 529
Lecythidaceae			
<i>Eschweilera ovata</i> (Cambess.) Mart. ex Miers ¹	Tree	SSF	DC 92
<i>Lecythis pisonis</i> Cambess. ¹	Tree	SSF	DC 131
Lentibulariaceae			
<i>Utricularia cf. pusilla</i> Vahl	Herb	SSF	DC 247
Loganiaceae			
<i>Spigelia anthelmia</i> L.	Herb	SSF	DC 78
<i>Strychnos parvifolia</i> A.DC. ¹	Climber (W.)	SSF	DC 579
Loranthaceae			
<i>Psittacanthus dichroos</i> (Mart.) Mart. ¹	Herb	SSF	DC 628
<i>Struthanthus</i> sp.	Herb	SSF	DC 621
Lygodiaceae			
<i>Lygodium venustum</i> Sw.	Herb	RES	DC 319
Lythraceae			
<i>Cuphea</i> sp.	Subshrub	SSF	DC 146
<i>Cuphea</i> sp.	Subshrub	SSF	DAA 1687
Malpighiaceae			
<i>Byrsonima sericea</i> DC.	Tree	SSF	DC 310
<i>Hiraea</i> sp.	Climber (W.)	SSF	DC 462
<i>Stigmaphyllon blanchetii</i> C.E.Anderson ¹	Climber (W.)	SSF	DC 100
Malvaceae			
<i>Eriotheca macrophylla</i> (K.Schum.) A.Robyns ¹²	Tree	SSF	PR
<i>Guazuma ulmifolia</i> Lam.	Tree	SSF	DC 333
<i>Luehea paniculata</i> Mart. & Zucc.	Tree	SSF	BSA 547
<i>Pavonia cancellata</i> (L.) Cav.	Subshrub	SSF	BSA 586
<i>Sida cerradoensis</i> Krapov. ¹⁵	Subshrub	SSF	BSA 585
<i>Sida ciliaris</i> L.	Subshrub	SSF	DC 623
<i>Sida linifolia</i> Cav.	Subshrub	SSF	BSA 578
<i>Sida glomerata</i> Cav.	Subshrub	SSF	EDM 06
<i>Sida urens</i> L.	Subshrub	SSF	DC 573
<i>Sida</i> sp.	Herb	SSF	EDM 02
<i>Thespesia populnea</i> (L.) Sol. ex Corrêa ⁸	Tree	MAN	DC 538
<i>Waltheria indica</i> L.	Subshrub	SSF	BSA 551
Melastomataceae			
<i>Clidemia bisserata</i> DC.	Shrub	SSF	AM 726
<i>Clidemia hirta</i> (L.) D.Don	Subshrub	SSF	DC 582
<i>Miconia albicans</i> (Sw.) Triana	Shrub	SSF	DC 79
<i>Miconia ciliata</i> (Rich.) DC.	Shrub	SSF	DC 238
<i>Nepsera aquatica</i> (Aubl.) Naudin	Subshrub	SSF	DAA 1691
<i>Pterolepis glomerata</i> (Rottb.) Miq. ¹	Subshrub	SSF	DC 95

Continued

Table 1. Continued.

Family/species	Habit	Vegetation type	Voucher
Menispermaceae			
<i>Cissampelos</i> sp.	Climber (W.)	SSF	DC 563
Myrtaceae			
<i>Calyptanthes dardanoi</i> Mattos ¹²³	Shrub	SSF	DC 589*
<i>Campomanesia dichotoma</i> (O.Berg) Mattos ¹²	Shrub	SSF	DC 632
<i>Eugenia astringens</i> Cambess. ¹²⁵	Shrub	SSF	DC 574
<i>Eugenia hirta</i> O. Berg ¹²	Shrub	SSF	DC 321
<i>Eugenia puniceifolia</i> (Kunth) DC. ¹	Shrub	SSF	DC 342
<i>Eugenia uniflora</i> L. ⁵	Shrub	SSF	DC 338
<i>Myrcia racemosa</i> (O. Berg) Kiaersk. ¹	Shrub	SSF	AM 732*
<i>Myrcia sylvatica</i> (G. Mey.) DC.	Shrub	SSF	DC 352
<i>Myrcia tomentosa</i> (Aubl.) DC.	Shrub	SSF	DC 625
<i>Myrciaria ferruginea</i> O.Berg ¹²	Shrub	SSF	BSA 456
<i>Psidium guineense</i> Sw.	Shrub	SSF	DC 456
<i>Psidium oligospermum</i> Mart. ex DC. ¹	Shrub	SSF	DC 458*
Nyctaginaceae			
<i>Boerhavia</i> sp.	Herb	SSF	DC 450
<i>Guapira</i> cf. <i>nitida</i> (Mart. ex J.A.Schmidt) Lundell ¹²⁵	Treelet	SSF	DC 116
<i>Guapira</i> cf. <i>opposita</i> (Vell.) Reitz	Treelet	SSF	DC 334
<i>Guapira</i> sp.	Shrub	MAN, RES, SSF	DC 537
Ochnaceae			
<i>Ouratea castaneifolia</i> (DC.) Engl. ⁵	Treelet	RES, SSF	DC 328
<i>Ouratea hexasperma</i> (A.St.-Hil.) Baill.	Shrub	SSF	DC 469
<i>Sauvagesia erecta</i> L.	Subshrub	SSF	DC 245
Olaceae			
<i>Heisteria</i> sp.	Tree	SSF	DC 619
<i>Ximenia americana</i> L.	Shrub	SSF	DC 637
Onagraceae			
<i>Ludwigia</i> sp.	Subshrub	SSF	DC 569
<i>Ludwigia</i> sp.	Subshrub	SSF	DC 571
Orchidaceae			
<i>Habenaria trifida</i> Kunth	Herb	SSF	EM 04
<i>Oeceoclades maculata</i> (Lindl.) Lindl.	Herb	SSF	DC 261
<i>Polystachya concreta</i> (Jacq.) Garay & Sweet	Herb	SSF	DC 382
<i>Vanilla bahiana</i> Hoehne ¹	Herb	SSF	DC 394
Passifloraceae			
<i>Passiflora cincinnata</i> Mast.	Climber (H.)	SSF	DC 475
<i>Passiflora foetida</i> L.	Climber (H.)	MA	DC 542
<i>Passiflora misera</i> Kunth	Climber (H.)	RES	DC 440
<i>Passiflora silvestris</i> Vell. ¹	Climber (H.)	SSF	DC 489
<i>Passiflora watsoniana</i> Mast. ¹²	Climber (H.)	RES, SSF	DC 381*
<i>Piriqueta racemosa</i> (Jacq.) Sweet	Subshrub	SSF	BA 532
<i>Piriqueta</i> sp.	Subshrub	SSF	BA 587b
<i>Turnera subulata</i> Sm.	Subshrub	SSF	DC 73
Peraceae			
<i>Chaetocarpus myrsinites</i> Baill.	Tree	SSF	DC 358
<i>Pera glabrata</i> (Schott.) Poepp. ex Baill.	Tree	SSF	DC 311
<i>Pogonophora schomburgkiana</i> Miers ex Benth.	Tree	SSF	DC 455
Phyllanthaceae			
<i>Phyllanthus</i> sp.	Herb	SSF	DC 551
Plantaginaceae			
<i>Achetaria scutellarioides</i> (Benth.) Wettst.	Herb	SSF	DC 83
<i>Scoparia dulcis</i> L.	Subshrub	SSF	DC 74
Indet.	Subshrub	SSF	DC 156
Poaceae			
<i>Andropogon selloanus</i> (Hack.) Hack.	Herb	SSF	DC 510
<i>Aristida longifolia</i> Trin.	Herb	SSF	AM 722
<i>Bambusa vulgaris</i> Schrad. ex J.C.Wendl. ⁸	Herb	SSF	RF
<i>Cenchrus echinatus</i> L. ⁵	Herb	SSF	DC 77
<i>Chloris virgata</i> Sw.	Herb	SSF	AM 723

Continued

Table 1. Continued.

Family/species	Habit	Vegetation type	Voucher
Poaceae, continued			
<i>Dactyloctenium aegyptium</i> (L.) Willd.	Herb	SSF	DC 506
<i>Echinolaena inflexa</i> (Poir.) Chase	Herb	SSF	DC 402
<i>Eragrostis prolifera</i> (Sw.) Steud.	Herb	RES	DC 550
<i>Eustachys</i> cf. <i>bahiensis</i> (Steud.) Herter	Herb	SSF	BSA 584
<i>Ichnanthus calvescens</i> (Nees ex Trin.) Döll	Herb	SSF	AM 720
<i>Ichnanthus nemoralis</i> (Schrad. ex Schult.) Hitchc. & Chase	Herb	SSF	AM 721
<i>Lasiacis sorghoidea</i> (Desv. ex Ham.) Hitchc. & Chase	Herb	RES	DC 326
<i>Ocellochloa</i> sp.	Herb	SSF	BSA 542
<i>Olyra</i> sp.	Herb	SSF	DC 616
<i>Panicum aquaticum</i> Poir.	Herb	SSF	DC 401
<i>Panicum condensatum</i> Bertol. ¹⁵	Herb	SSF	DC 400
<i>Panicum</i> sp.	Herb	SSF	BSA 582
<i>Pappophorum pappiferum</i> (Lam.) Kuntze	Herb	SSF	BSA 543
<i>Paspalum maritimum</i> Trin.	Herb	SSF	BSA 541
<i>Paspalum millegrana</i> Schrad. ex Schult.	Herb	SSF	BSA 544
<i>Paspalum plicatum</i> Michx.	Herb	SSF	DC 403
<i>Paspalum</i> sp.	Herb	RES	DC 312*
<i>Setaria vulpiseta</i> (Lam.) Roem. & Schult.	Herb	SSF	BSA 574
<i>Streptostachys asperifolia</i> Desv.	Herb	SSF	AM 718
<i>Urochloa plantaginea</i> (Link) R.D.Webster	Herb	MAN	BSA 576
Polygalaceae			
<i>Asemeia martiana</i> (A.W.Benn.) J.F.B.Pastore & J.R.Abbott ¹	Subshrub	SSF	DC 257
<i>Asemeia violacea</i> (Aubl.) J.F.B.Pastore & J.R.Abbott	Subshrub	SSF	DC 253
<i>Bredemeyera laurifolia</i> (A.St.-Hil. & Moq.) Klotzsch ex A.W.Benn. ¹	Shrub	SSF	BSA 984
<i>Securidaca diversifolia</i> (L.) S.F.Blake	Climber (W.)	SSF	DC 626
Polygonaceae			
<i>Coccoloba lucidula</i> Benth.	Climber (W.)	SSF	DC 336
<i>Coccoloba parimensis</i> Benth.	Climber (W.)	SSF	DC 483
<i>Coccoloba</i> sp.	Treelet	SSF	DC 393
Portulacaceae			
<i>Portulaca</i> cf. <i>oleracea</i> L.	Herb	SSF	DC 605
Proteaceae			
<i>Roupala montana</i> Aubl.	Treelet	SSF	DC 351
Putranjivaceae			
<i>Drypetes</i> cf. <i>sessiliflora</i> Allemão ¹²⁵	Tree	SSF	DC 377
Rhizophoraceae			
<i>Rhizophora mangle</i> L.	Treelet	MAN	DC 337
Rubiaceae			
<i>Alseis pickelii</i> Pilg. & Schmale ¹³	Tree	SSF	DC 348
<i>Borreria verticillata</i> (L.) G.Mey.	Subshrub	SSF	DC 79
<i>Cordia myrciifolia</i> (K.Schum.) C.H.Perss. & Delprete	Shrub	SSF	DC 129
<i>Diodella apiculata</i> (Willd. ex Roem. & Schult.) Delprete	Subshrub	SSF	DC 231
<i>Genipa americana</i> L.	Tree	SSF	DC 397
<i>Guettarda platypoda</i> DC.	Shrub	SSF	DC 228
<i>Guettarda viburnoides</i> Cham. & Schltdl.	Shrub	SSF	DC 479
<i>Margaritopsis chaenotricha</i> (DC.) C.M.Taylor ²	Subshrub	SSF	DC 535
<i>Palicourea crocea</i> (Sw.) Roem. & Schult. ⁵	Shrub	SSF	DC 491
<i>Posoqueria longiflora</i> Aubl.	Treelet	SSF	DC 472
<i>Psychotria capitata</i> Ruiz & Pav.	Shrub	SSF	DC 499
<i>Sabicea grisea</i> Cham. & Schltdl.	Climber (W.)	SSF	DC 237
<i>Salzmannia nitida</i> DC. ¹²³	Treelet	SSF	DC 235
<i>Tocoyena formosa</i> (Cham. & Schltdl.) K.Schum.	Tree	SSF	DAA 1661
<i>Tocoyena sellowiana</i> (Cham. & Schltdl.) K.Schum. ¹	Tree	SSF	DC 513
Rutaceae			
<i>Ertela trifolia</i> (L.) Kuntze	Subshrub	SSF	DC 583
Salicaceae			
<i>Casearia arborea</i> (Rich.) Urb.	Treelet	SSF	DC 122

Continued

Table 1. Continued.

Family/species	Habit	Vegetation type	Voucher
Sapindaceae			
<i>Cupania impressinervia</i> Acev.-Rodr. ^{1,2,3}	Treelet	SSF	DC 638*
<i>Cupania racemosa</i> (Vell.) Radlk. ¹	Tree	SSF	DC 596
<i>Matayba guianensis</i> Aubl.	Tree	SSF	DC 244
<i>Serjania paucidentata</i> DC.	Climber (W.)	SSF	DC 93
<i>Serjania salzmanniana</i> Schlttdl. ¹	Climber (W.)	SSF	DC 316
Sapotaceae			
<i>Manilkara salzmannii</i> (A.DC.) H.J. Lam ¹	Treelet	SSF	DC 515*
<i>Manilkara zapota</i> (L.) P.Royen	Tree	SSF	DC 399
<i>Pouteria durlandii</i> (Standl.) Baehni	Treelet	RES	DC 315*
<i>Pouteria venosa</i> (Mart.) Baehni ssp. <i>amazonica</i> T.D.Penn.	Tree	SSF	DC 478
<i>Pouteria</i> sp.	Tree	SSF	DC 477
Schoepfiaceae			
<i>Schoepfia brasiliensis</i> A.DC.	Shrub	SSF	DC 585
Simaroubaceae			
<i>Simaba ferruginea</i> A.St.-Hil. ¹	Tree	SSF	DC 324
Solanaceae			
<i>Schwenckia americana</i> Rooyen ex L.	Subshrub	SSF	DC 162
<i>Solanum asperum</i> Rich.	Subshrub	SSF	DC 171
<i>Solanum americanum</i> Mill.	Subshrub	SSF	DC 236
<i>Solanum paludosum</i> Moric.	Shrub	SSF	DC 91
Indet.	Herb	SSF	DC 239
Trigoniaceae			
<i>Trigonia nivea</i> Cambess.	Climber (W.)	SSF	DC 233
Typhaceae			
<i>Typha domingensis</i> Pers.	Herb	ACO	DC 599
Urticaceae			
<i>Cecropia pachystachya</i> Trécul	Treelet	SSF	DC 124
Verbenaceae			
<i>Lantana camara</i> L.	Shrub	SSF	DC 86
<i>Lantana</i> sp.	Shrub	SSF	DC 349
<i>Stachytarpheta</i> sp.	Herb	SSF	DC 84
<i>Stachytarpheta</i> sp.	Subshrub	SSF	DC 524
Violaceae			
<i>Pombalia calceolaria</i> (L.) Paula-Souza	Herb	SSF	BSA 550
Vitaceae			
<i>Cissus blanchetiana</i> Planch. ¹	Climber (W.)	SSF	DC 482*
<i>Cissus erosa</i> Rich. ¹	Climber (W.)	SSF	DC 142
<i>Cissus verticillata</i> (L.) Nicolson & C.E.Jarvis	Climber (W.)	RES	DC 313
Xyridaceae			
<i>Xyris jupicai</i> Rich.	Herb	SSF	DC 90
Undetermined			
Indet.	Subshrub	SSF	DC 601
Indet.	Tree	SSF	DC 361

¹ Endemic to Brazil² Endemic to the Atlantic Forest³ Endemic to the Brazilian Northeast⁴ Endemic to the Pernambuco Endemism Center⁵ New record of occurrence for the state of Pernambuco⁶ Rare species⁷ Threatened species⁸ Exotic species