

THE VASCULAR PLANTS OF A FOREST FRAGMENT IN SOUTHERN BAHIA, BRAZIL

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ABSTRACT

The Serra do Teimoso, in southern Bahia, Brazil, is a mountain reaching 850 m at the transition from tropical moist forest to tropical semideciduous forest. A floristic survey of a 200 ha reserve established on the mountain was carried out and a checklist of the vascular flora produced. The survey was conducted by random collecting efforts and the sampling of all specimens ≥ 5 cm diameter within a one hectare plot. The flora of the Serra do Teimoso Reserve (STR) comprised 727 species in 400 genera and 119 families. The angiosperms comprised 667 species in 363 genera and 100 families and the pteridophytes included 60 species in 37 genera and 19 families. Floristic relationships of the STR flora were discussed with regard to some forest types of eastern Brazil, especially those found at southern Bahia.

RESUMEN

La Serra do Teimoso, en el sur de Bahia, Brasil, es una montaña alcanzando 850 m en la transición de los bosques tropicales húmedos hacia los bosques tropicales semideciduales. Un inventario florístico de una reserva forestal con ca. 200 ha establecida en la montaña fue hecho y un checklist producido. El levantamiento fue conducido por medio de esfuerzos de coleta aleatorios y el muestro de todos los especímenes ≥ 5 cm DAP dentro de un plot de una hectárea. La flora de plantas vasculares de la Reserva Serra do Teimoso (STR) incluyó 727 especies en 400 géneros y 119 familias. Las angiospermas incluyeron 667 especies en 363 géneros y 100 familias, y las pteridofitas incluyeron 60 especies en 37 géneros y 19 familias. Relaciones florísticas de la flora de STR fueran discutidos con base en algunos tipos de bosques del este de Brasil, en especial aquellos localizados en el sur de Bahia.

INTRODUCTION

Brazil's Atlantic coastal forest originally stretched some 3,500 kilometers from the state of Rio Grande do Norte to Rio Grande do Sul. In southern Bahia, the coastal forests occupied a zone approximately 100–200 km wide along the Atlantic coast. The forests gradually become drier inland, changing from tropical moist forest (“mata higrófila”) to tropical semideciduous forest (“mata mesófila”) to tropical deciduous forest (“mata de cipó”). Each of these forest types occupies a narrow zone up to 50 km wide within the coastal forest belt and varies in floristic composition depending on elevation, soils, and drainage (Gouvêa et al. 1976).

Only about 7.6 percent of the original coastal forest remains standing (Morellato & Haddad 2000; Myers et al. 2000). In southern Bahia, for example, the forest has been reduced to 3.5 percent of its original extent (Thomas et al. 1998) with most of the deforestation due to logging, clearing for pastures, or planting of cocoa.

The few existing floristic or ecological studies of southern Bahian forests are of moist forest and confirm the uniqueness of these forests (Mori et al. 1983; Sambuichi 2002; Amorim et al. in press; Thomas et al. 1998, in press). Recent collections continue to reveal new species and augment the known distributions of many species.

In the Neotropics, seasonal, dry forests are comparatively more threatened, less studied, and less conserved than evergreen, moist forests (Janzen 1988; Gentry 1997; Pennington et al. 2000). In Bahia, the dry forests were cleared earlier and more completely than the moist forests (Mendonça et al. 1994) and now support large areas of pasture and coffee plantations (Vinha et al. 1976; Mori & Mattos Silva 1979). There are no federal protected areas in Bahia's coastal dry forests.

The Serra do Teimoso Reserve (STR) is situated in the transition between the moist forest and the semideciduous forest. The study of its flora offered us the opportunity to learn about the species of this transitional zone and their affinities.

Study Site

The Serra do Teimoso, in Jussari, Bahia (Fig. 1), is one of the easternmost ridges of the Serra da Ouricana and reaches ca. 850 m elevation (Fig. 2). At 15°12'S, 39°29'W, it is the source of the Água Preta River, an important component of the Rio Cachoeira Basin (CEI 1993).

As the Portuguese colonists moved into the interior of Bahia in the region of Jussari, they displaced members of the indigenous Botocudo tribe (Maximiliano 1940). The Berbert family moved to the Jussari region and acquired the Serra do Teimoso. The persistence of the squatters who were living on the mountain in returning after they had been forcibly removed led to the mountain being called the Serra do Teimoso (“teimoso” means stubborn in Portuguese). In 1997, 200 ha, or 40 percent of the Berbert farm was officially recognized by Brazil as a private reserve, here called the Serra do Teimoso Reserve (STR), offi-

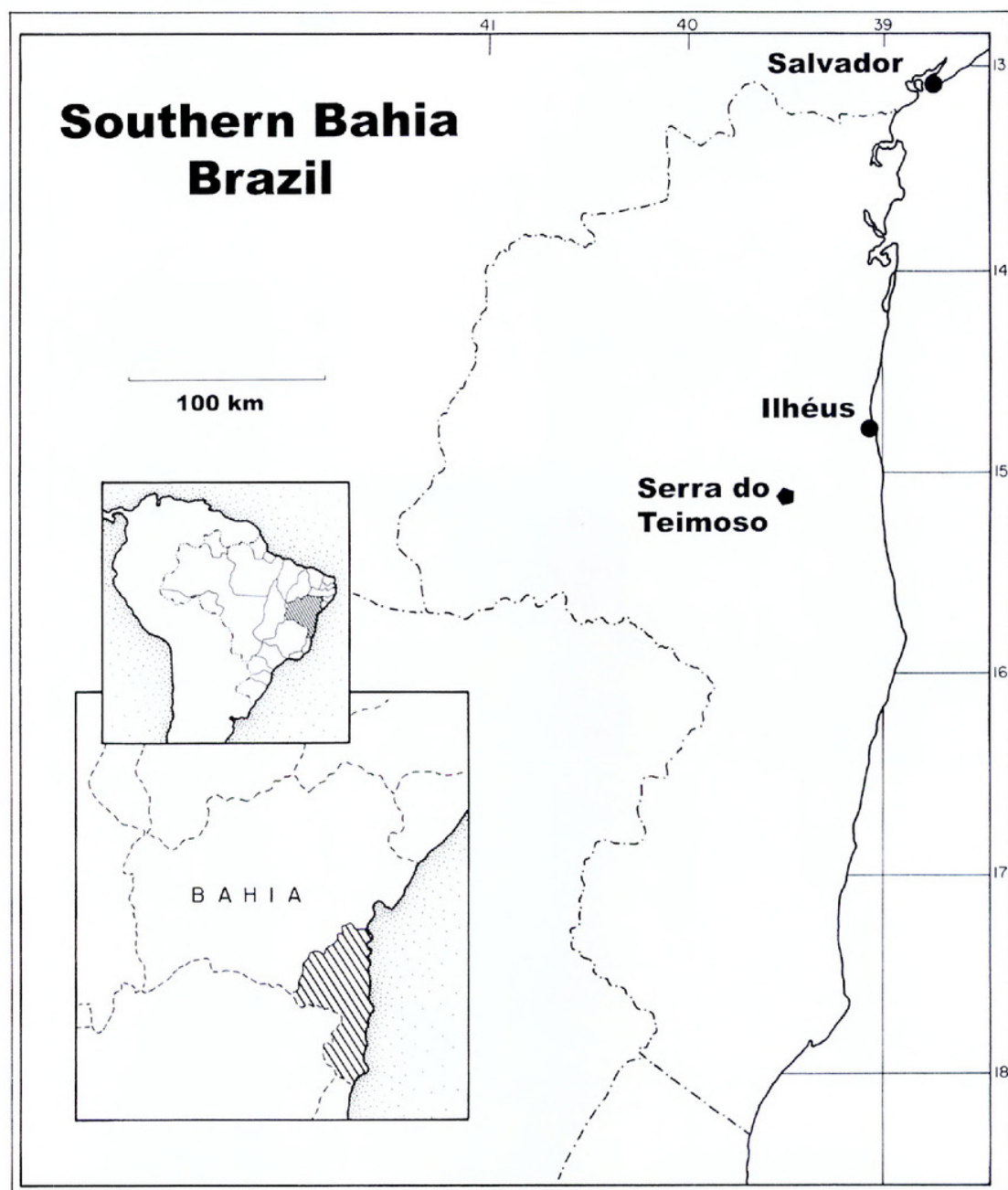


FIG. 1. Serra do Teimoso Reserve and its location in southern Bahia, Brazil and South America.

cially known as the “Reserva Particular do Patrimônio Natural Serra do Teimoso” established by IBAMA decree n° 93/97-N.

As a consequence of Teimoso’s geological basement of granites and moderate rains, the soils of the STR are fertile and have low acidity (Gonçalves 1975). In the higher regions the soils are red-yellow laterites and on the mid-slopes they are shallow lithosols with gneiss outcrops (Carvalho Filho et al. 1987).

The median annual temperature of the STR varies from 23–24°C and the

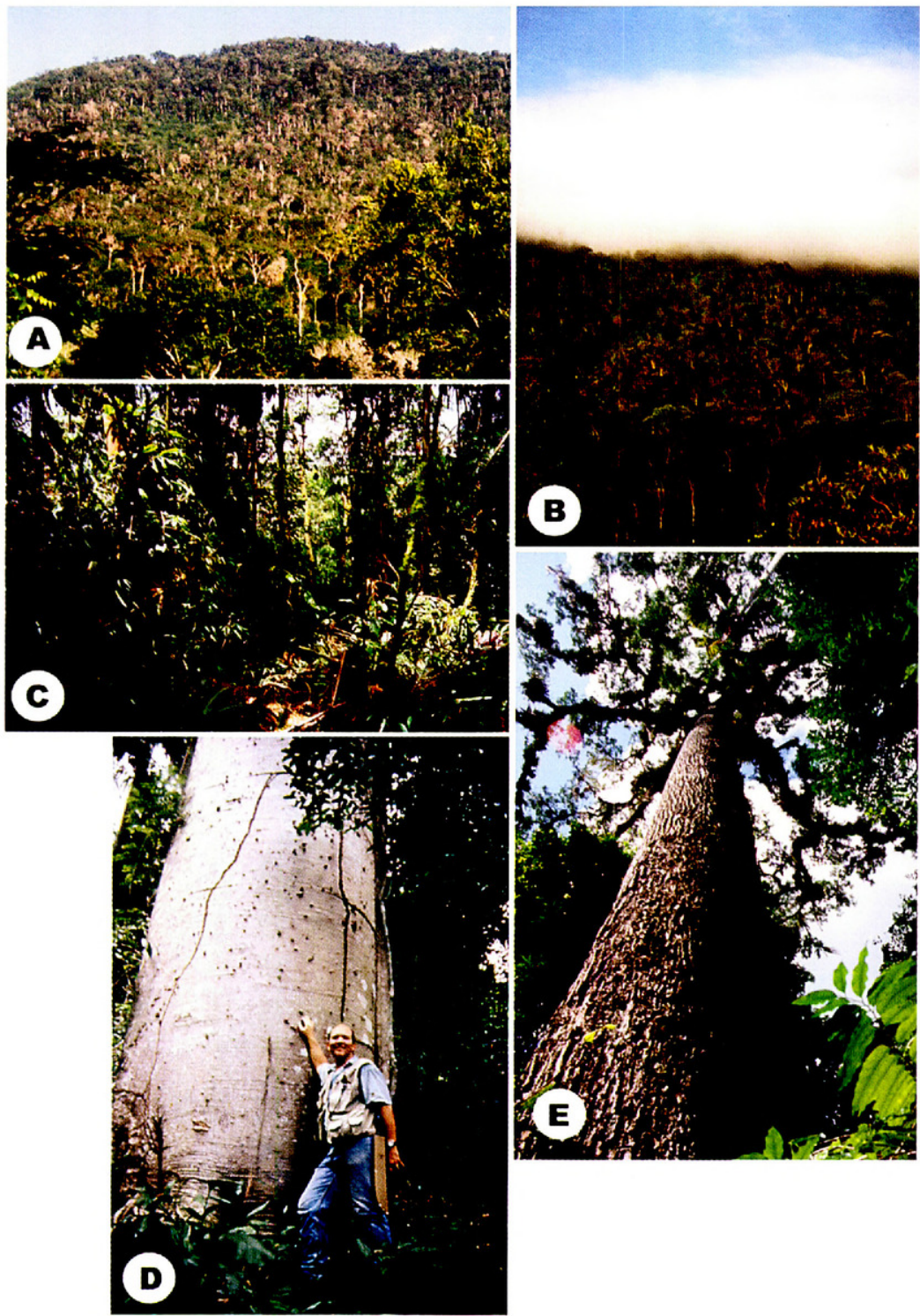


FIG. 2. Vegetation of the Serra do Teimoso Reserve. **A.** View of the forested mountainside. **B.** View of the mountainside with the uppermost forest hidden by the clouds. **C.** Interior of montane forest at the top of the mountain. **D.** Trunk of a large *Cavanillesia arborea*, one of the species characteristic of semideciduous forests. **E.** *Cariniana legalis*, one of the emergent species, with 45 m tall. All photos by W.W. Thomas.

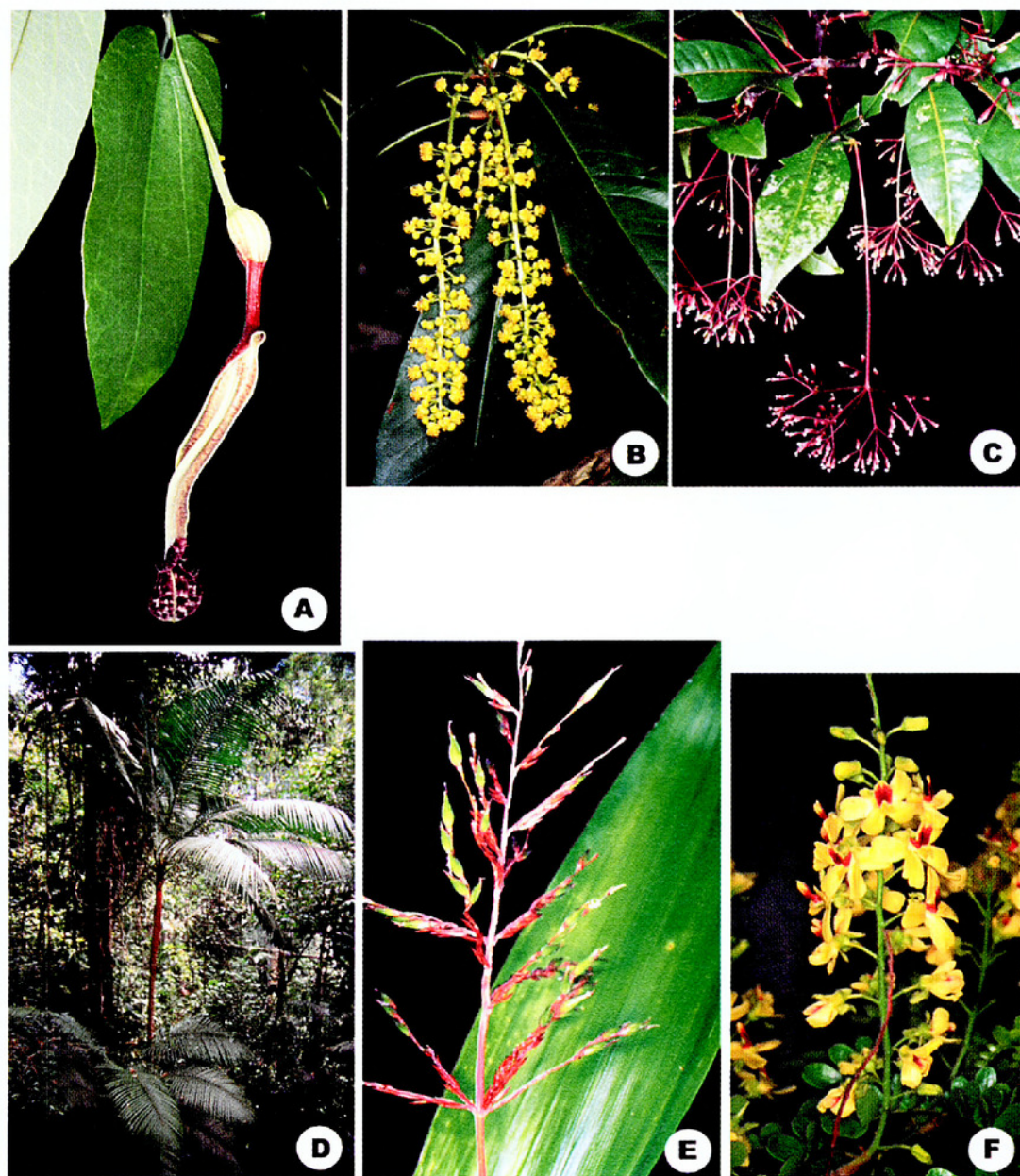


FIG. 3. Some plants characteristic of the Serra do Teimoso Reserve. **A.** *Aristolochia longispathulata* (WT 11741), a species recently described from this forest. **B.** *Quiina glaziovii* (WT 11727), a tree species endemic to the Atlantic coastal forest. **C.** *Guapira laxiflora* (WT 11885), a shrub endemic to the Atlantic coastal forest. **D.** *Euterpe edulis* (JJ 3902), from which Palm Hearts are harvested, is an Atlantic coastal forest endemic and is an indicator of humid forests. **E.** *Sucrea monophylla* (AC 6821), an herbaceous bamboo and is one of many bamboos endemic to southern Bahia. **F.** The inflorescence of *Caesalpinia echinata* (JP 343), the Brazil-wood, another Atlantic coastal forest endemic, and the tree that gave rise to the name of the country. All photos by W.W. Thomas.

annual precipitation averages 1250–1500 mm with two to three dry months a year (Roeder 1975). Thus, the climate can be categorized as Am (a transitional type between Af and Aw) in Köppen's (1948) classification.

Edaphic and climatic factors present a gradient from warmer and drier at the base of the mountain (about 350 m elevation) to cooler and moister at the summit. This difference is expressed in the vegetation, which changes from a forest with elements of semideciduous forest at the base to submontane moist forest near the summit (Gouvêa et al. 1976; Vinha et al. 1976; Mori & Silva 1979; Brazão & Araújo 1981).

Because of the efforts of its owners, the STR still has a remarkable number of striking species (Fig. 3). In this forest fragment, we found mature trees of species sought-after for their valuable wood, such as *Brosimum guianense* ("oiticica"), *Caesalpinia echinata* ("pau-brasil"), *Cariniana legalis* ("jequitibá"), *Cedrela odorata* ("cedro-rosa"), *Copaifera lucens* ("pau-óleo"), *Hymenaea* spp. ("jatobá"), *Lecythis pisonis* ("sapucaia"), *Tabebuia billbergii* ("pau-d'arco"), *Plathymenia reticulata* ("vinhático"), *Peltogyne pauciflora* ("pau-roxo"), *Pouteria procera* ("mucuri"), and *Virola gardneri* ("bicuíba-vermelha"). Some individuals are very large, reaching over 50 m in height. These emergents include *Cariniana* spp. (Lecythidaceae), *Cavanillesia arborea* and *Sterculia curiosa* (Malvaceae), *Goniorrhachis marginata* and *Hymenaea* spp. (Fabaceae), and *Virola gardneri* (Myristicaceae).

Research on the diversity of the fauna of the STR has revealed two endangered primates, *Callicebus melanochir* ("guigó") and *Leontopithecus chrysomelas* ("mico-leão-de-cara-dourada") (Oliver & Santos 1991); 243 species of birds (J.F. Pacheco, pers. comm.); 123 species of arachnids (A. B. Brescovit & R. Bertani, pers. comm.); and 79 species of ants, including several species new to science (J. H. Delabie, pers. comm.).

METHODS

The floristic inventory was generated by repeated visits between 1997 and 2004 to the STR during which fertile plants were collected, both on and off the Reserve's trails. In addition, a quantitative inventory of woody plants ≥ 5 cm diameter at breast height was carried out, during which many vouchers (mostly sterile) were collected and identified. Also, collections made in the 1980's in an adjacent property whose forest is contiguous with the STR were included resulting in a total of 2028 voucher collections.

Vouchers of the collections are stored at CEPEC and NY with all unicates at CEPEC. Exceptions to this are some pteridophytes which are found only at BHCB and some Orchidaceae which are stored only at HUEFS. While duplicates of some collections were sent to specialists for identification, the majority of the collections were identified by the authors using the well-documented collections at CEPEC and specific bibliography.

All of the species documented through collections were included in a checklist of the whole Reserve. In the checklist, the angiosperms are arranged alphabetically by family, genus, and species, with the families circumscribed according to the system proposed by the Angiosperm Phylogeny Group (2003). The pteridophytes are organized according to Moran (1995). Authors of species are abbreviated according to Brummit and Powell (1992). Occasionally a specimen was identifiable only to genus or family, but was clearly distinct from all other members of that taxon. These were included in the list as "sp." or where there were more than one, "sp. 1," "sp. 2" and so on.

RESULTS

The vascular plant flora of the STR is represented by 727 species in 400 genera and 119 families (Appendix 1). The angiosperms comprised 667 species in 363 genera and 100 families and the pteridophytes included 60 species in 37 genera and 19 families. Of the total number of species, 571 were identified to species, 132 identified to genus (but distinct from all other species of the genus) and 24 only to family (but differing from all other species in the family).

Several species collected during this study were or are being described as new by specialists. These include: *Aristolochia longispathulata* (Aristolochiaceae), *Discocarpus pedicellatus* (Phyllanthaceae), *Heteropterys nordestina* (Malpighiaceae), and *Lymania spiculata* (Bromeliaceae). Ten others have been indicated by specialists as being new, but have not yet been described, including species of: *Daphnopsis* (Thymelaeaceae—L. Rossi, pers. comm.), *Heteropterys* (Malpighiaceae—A. Amorim, pers. comm.), *Hiraea* (Malpighiaceae—W. Anderson, pers. comm.), *Nematanthus* (Gesneriaceae—A. Chautems, pers. comm.), *Neoraputia* (Rutaceae—J. Kallunki, pers. comm.), *Pleurostachys* (Cyperaceae—W. Thomas & M. Alves, pers. comm.), *Pleiochiton* (Melastomataceae—R. Goldenberg, pers. comm.), *Rosenbergiodendron* (Rubiaceae—J. Jardim, pers. comm.), and *Thelypteris* (Thelypteridaceae—A. Salino, pers. comm.).

Some genera and species are the first known collections from northeastern Brazil or just from state of Bahia. For northeastern Brazil, these include: *Ampelocera glabra* (Cannabaceae), *Casearia melliodora* (Salicaceae), *Edmundoa lindenii* (Bromeliaceae), *Faramea oligantha* and *F. rivularis* (Rubiaceae), *Heteropterys bicolor* and *Tetrapteryx crispa* (Malpighiaceae), and *Pleiochiton* sp. nov. (Melastomataceae). For the state of Bahia, they include: *Agonandra excelsa* (Opiliaceae), *Mandevilla permixta* (Apocynaceae), *Picrasma crenata* (Simaroubaceae), and *Rosenbergiodendron* sp. nov. (Rubiaceae).

Species occurring in the STR that are rarely collected in Bahia include *Andradea floribunda* and *Ramisia brasiliensis* (Nyctaginaceae), *Banisteriopsis patula* and *Byrsonima cacaophila* (Malpighiaceae), *Bracteanthus atlanticus* (Siparunaceae), *Chrysophyllum subespinosum* (Sapotaceae), *Citronella paniculata* (Icacinaceae), *Coussapoa curranii* (Urticaceae), *Licania naviculistipula*

(Chrysobalanaceae), *Naucleopsis oblongifolia* and *Pseudolmedia macrophylla* (Moraceae), *Meriania tetramera* (Melastomataceae), and *Porcelia macrocarpa* (Annonaceae).

The most diverse families were Fabaceae (52 species), Myrtaceae (39), Rubiaceae (31), Orchidaceae (25), Sapotaceae and Solanaceae (24), Bromeliaceae (23), and Araceae, Rutaceae and Sapindaceae (19). These ten families comprised 37.8 percent of the Teimoso Reserve flora. The most species-rich genera were *Eugenia* (20), *Solanum* (16), *Pouteria*, *Trichilia* (12), and *Peperomia* (10).

As mentioned above, the forest of STR becomes more and more humid as one goes up the slope. At the bottom, the forest includes species characteristic of semideciduous forest. Some of the species commonly found and characteristic of this zone are *Averrhoidium gardnerianum* (Sapindaceae), *Byrsonima cacaophylla* and *Mascagnia sepium* (Malpighiaceae), *Cavanillesia arborea* (Malvaceae), *Celtis iguanaea* (Cannabaceae), *Chrysophyllum subspinosum* (Sapotaceae), *Discocarpus pedicellatus* (Phyllanthaceae), and *Raddia* spp. and *Sucrea monophylla* (Poaceae). Near the top of the slope, the forest is characterized by elements of montane tropical moist forest (Veloso 1992) and includes *Bathysa cuspidata* and *Simira glaziovii* (Rubiaceae), *Bertolonia carmoi* (Melastomataceae), *Cyathea* spp. (Cyatheaceae), *Dalbergaria sanguinea* and *Sinningia barbata* (Gesneriaceae), *Diplazium* spp. (Woodsiaceae), *Euterpe edulis* (Arecaceae), *Huperzia mandiocana* (Lycopodiaceae), and *Prunus sellowii* (Rosaceae).

At all elevations, the subcanopy is dominated by Rubiaceae, Rutaceae, and Solanaceae. Among the herbs, the most diverse families are the Bromeliaceae, Marantaceae, Orchidaceae, and Piperaceae, as well as the pteridophytes—these groups together comprise 18.8 percent of the flora. The most diverse families of lianas include Bignoniaceae, Fabaceae and Malpighiaceae.

Along the forest edges, disturbed areas and areas under cultivation (e.g. areas where *Theobroma cacao* L. is grown, as well as pastures), weedy species such as *Centropogon cornutus* (Campanulaceae), *Euphorbia heterophylla* (Euphorbiaceae), *Lablab purpureus* (Fabaceae), *Lantana camara* (Verbenaceae), *Maclura tinctoria* (Moraceae), *Momordica charantia* (Cucurbitaceae), *Thunbergia alata* (Acanthaceae), and *Triumfetta semitriloba* (Malvaceae) can be found.

DISCUSSION

Endemism

Of the 515 species of angiosperms identified at the STR, 7.3 percent are endemic to southern Bahia and northern Espírito Santo according with Thomas et al. (2003). This percentage is much lower than the estimates made by Thomas et al. (1998) for the tropical moist forests of the Una Biological Reserve (28.1%) and the Serra Grande forest (26.5%). Nevertheless, the STR is home to *Aristolochia longispathulata* (Aristolochiaceae), *Bracteanthus atlanticus* (Siparunaceae), *Byrsonima cacaophylla* (Malpighiaceae), *Chrysophyllum subspinosum*

(Sapotaceae), *Conchocarpus diadematus* (Rutaceae), *Discocarpus pedicellatus* (Phyllanthaceae), *Licania naviculistipula* (Chrysobalanaceae), *Sucrea monophylla* (Poaceae), and *Trichilia florbranca* (Meliaceae), all of these being examples of local endemics not found in either of the two forests studied by Thomas et al. (1998).

Floristic Relationships

A comparison of the STR checklist with lists from other tropical moist forests in southern Bahia reveals a high number of genera and species in common. One hundred ninety-three genera are shared with the flora of the Una Biological Reserve (Amorim et al. in press) and 214 with that of the Serra do Conduru State Park (Martini et al. 2004).

Nevertheless, 122 genera found in the STR have not been encountered at either the Una Reserve or the Serra do Conduru. Some of these (e.g. *Allophylus*, *Bougainvillea*, *Clavija*, *Diplazium*, *Huperzia*, *Pachystroma*, *Pseudolmedia*, *Sarcaulus*, *Scyphonychium*, and *Sucrea*) are quite common in the Teimoso Reserve in the lower elevation, drier portion of the forest and may be genera characteristic of southern Bahian seasonal submontane semideciduous forests (Veloso 1992; Thomas & Barbosa, In press).

The STR has both moist and semideciduous forests, the moist forests being found at higher elevations where orographic effects augment rainfall, especially during the dry season. The juxtaposition and gradual transition from moist to seasonal dry forests in southern Bahia can be explained by the region's varied topography and elevational gradients. In contrast, to the south, the abrupt change from flat, lowland forest to very steep mountainside moist forests in the mountains of Serra do Mar clearly delimit these formations (Oliveira-Filho & Fontes 2000).

Oliveira-Filho & Fontes (2000) analyzed the relationship between climate and species composition in the Atlantic coastal forest. They compared submontane and lowland forests, as well moist and semideciduous forests using TWINSPLAN analysis. Their results are discussed in the following floristic comparisons with the STR.

Comparison with Tropical Moist Forests.—Some of the indicator tree species associated with “eastern low-altitude semideciduous coastal forests” of Oliveira-Filho & Fontes (2000) are present in the STR: *Acacia polyphylla*, *Chrysophyllum gonocarpum*, *Eugenia moraviana*, *Guarea guidonia*, *G. kunthiana*, *Maytenus aquifolium*, *Ocotea puberula*, *Prunus sellowii*, *Trichilia casaretti*, and *T. elegans*. In addition, some of their indicator species for “northern low-altitude rain forests” (tropical moist lowland and submontane forests) are found at STR: *Brosimum guianense*, *Campomanesia guaviroba*, *Carpotroche brasiliensis*, *Cedrela odorata*, *Chrysophyllum lucentifolium*, *Ecclinusa ramiflora*, *Gallesia integrifolia*, *Inga edulis*, *I. striata*, *Jacaranda puberula*, *Jacaratia heptaphylla*, *Lecythis pisonis*, *Metrodorea*

nigra, *Mouriri chamissoana*, *Ocotea elegans*, *O. indecora*, *O. puberula*, *Protium warm-ingianum*, *Pterocarpus rohrii*, *Schizolobium parahyba*, *Solanum swartzianum*, *Tabebuia roseo-alba*, *Tetrastylidium grandifolium*, and *Virola gardneri*.

Comparison with Seasonal Dry Forests.—The seasonal dry forests of South America have been suggested as a new phytogeographic unit based on a distinct floristic composition (Prado 2000). These forests are found in areas subjected to a distinct seasonality, like the Chaco and Cerrado (Prado 1993a, 1993b; Ratter et al. 1996). On the other hand, Oliveira-Filho & Fontes (2000) demonstrated that the seasonal semideciduous forests of southeastern Brazil are a part of the same floristic block as the coastal forests, even though these are subjected to a well-defined dry season.

The flora of the STR is composed of species clearly distinct from those mentioned as characteristic of the Seasonal Dry Tropical Forests (SDTF) by Pennington et al. (2000). Indeed, out of the 33 genera endemic from SDTF (Prado 2000), only *Brasiliopuntia* was documented at STR, this one being also very common in the Restinga Forests of Southern Bahia and Espírito Santo (Taylor & Zappi 2004).

The floristic similarity of the STR forest with the moist forests from southeastern Brazil and those from southern Bahia corroborates the widely accepted view that the Atlantic forests should encompass all forest physiognomies east of the dry corridor (Prado & Gibbs 1993, Prado 2000). As stated by Oliveira-Filho & Fontes (2000), these semideciduous forests should be viewed simply as a “physionomic and floristic expression of a single great Atlantic Forest domain”, and not as an evidence of floristic connection with the Seasonal Dry Tropical Forests.

Disturbed Areas.—The forest margins and tree fall gaps in the STR are characterized by species quite different from those in the gaps and margins of the lowland moist forest of many areas in southern Bahia (Amorim et al. in press; Martini et al. in press), where species characteristic of disturbed areas include *Baccharis calvescens* DC., *Cyrtocymura scorpioides* (Lam.) H. Rob. and *Vernonanthura diffusa* (Less.) H. Rob. (Asteraceae), *Henriettea succosa* (Aubl.) DC. and *Miconia mirabilis* (Aubl.) L.O. Williams (Melastomataceae), *Schefflera morototoni* (Aubl.) Maguire, Steyermark & Frodin (Araliaceae), *Scleria secans* (L.) Urban (Cyperaceae), and *Tapiriraguianensis* Aubl. (Anacardiaceae). In contrast, *Caesalpinia pluviosa* var. *paraensis* (Fabaceae), *Dicella bracteosa* and *Heteropterys bicolor* (Malpighiaceae), *Celtis iguanaea* and *Trema micrantha* (Cannabaceae), and *Maclura tinctoria* (Moraceae) are not found in the disturbed areas of the Una Biological Reserve or adjacent areas.

Taxonomic Difficulties

A high number of collections were not identifiable to species. This is a result of the high diversity of the region's flora and the difficulty of identifying Neotro-

pical plants in general. Identification is particularly problematic in diverse or poorly studied families such as Fabaceae, Lauraceae, Meliaceae, Myrtaceae, Sapindaceae and Sapotaceae—over 37.6 percent of the unidentified species belonged to one of these six families. The high number of sterile samples of trees also limited identification to species. The collection of sterile specimens of unusual plants, however, documents potentially new species or new distribution records. These can be re-collected at a later date in flower or fruit for more precise identification.

APPENDIX 1

Checklist of the vascular plants in the Serra do Teimoso Reserve, Jussari, Bahia, Brazil. Voucher collections are listed for each species using the initials of the primary collector and the collector's number. Voucher collections are deposited at CEPEC with a second set at NY. Full name of collectors are as follows: **AA** = André M. Amorim, **AC** = André M. de Carvalho, **AS** = Alexandre Salino, **EL** = Elton Leme, **ES** = Eric C. Smidt, **FJ** = Fabrício S. Juchum, **FF** = Flávio França, **FN** = Fabiana R. Nonato, **HP** = Harvey Pengel, **IF** = Irene Fernandes, **JJ** = Jomar G. Jardim, **JK** = Jacquelyn Kallunki, **LM** = Luiz Alberto Mattos Silva, **MS** = Milene M. Silva, **PF** = Pedro Fiaschi, **RF** = Rafaela C. Forzza, **RO** = Reyjane P. Oliveira, **SS** = Sérgio C. Sant'Ana, and **WT** = Wm. Wayt Thomas. A collection number followed by an asterisk (*) is one that is a voucher for a forest inventory plot in the Teimoso Reserve.

ANGIOSPERMS

ACANTHACEAE

- Aphelandra blanchetiana* (Nees) Hook.—WT 11815, 13353
Aphelandra nitida Nees & Mart.—AA 2584; PF 1091; WT 11926
Jacobinia paniculata (Nees) Oerst.—AA 2291; AC 6825; JJ 1729
Justicia clauseniana (Nees) Profice—AA 2474; JJ 3915; PF 1578
Lophostachys nemoralis Mart.ex Nees—AA 2899; JJ 1707, 1757
Mendoncia sp.—JJ 2346*
Pseuderanthemum sp.—JJ 3168
Pseuderanthemum verbenaceum (Nees & Mart.) Radlk.—JJ 1751, 1854
Ruellia affinis (Nees) Lindau—HP 15; JJ 1528, 3734
Ruellia cearensis Lindau—JJ 3928; PF 1583
Ruellia curviflora Nees & Mart.—AC 6823; JJ 1859; WT 11746
Schaueria gonyostachya Nees—AA 2589; JJ 1511; PF 1094

Thunbergia alata Bojer ex Sims—AA 4142

ACHARIACEAE

- Carpotroche brasiliensis* (Raddi) A. Gray—WT 13395

AMARANTHACEAE

- Alternanthera* cf. *ramosissima* (Mart.) Chodat—AA 2481
Amaranthus spinosus L.—AA 3751
Celosia grandifolia Moq.—AA 3778; HP 21; WT 13359
Celosia longifolia Mart.—AA 3789; HP 19; WT 11811
Chamissoa acuminata Mart.—AA 4129; WT 11795
Chamissoa altissima (Jacq.) H.B.K.—AA 2894
Hebanthe sp.—AA 2451

AMARYLLIDACEAE

- Griffinia* sp.—JJ 1531

ANACARDIACEAE

- Spondias macrocarpa* Engl.—AA 2279*; JJ 2440*, 3778*

ANNONACEAE

- Duguetia* sp.—JJ 1900*
Duguetia bahiensis Maas—AA 2896; JJ 1484
Guatteria sp.—PF 1095
Hornschuchia sp.—WT 13393
Porcelia macrocarpa (Warm.) R.E. Fr.—JJ 1657*;
 PF 1196
Rollinia sp.—JJ 3811*
Xylopia aff. *laevigata* (Mart.) R.E. Fr.—JJ 1551*,
 1650*, 1661*

APIACEAE

- Hydrocotyle callicephala* Cham.—JP 202; WT
 11737

APOCYNACEAE

- Apocynaceae sp.—AA 2196*
Aspidosperma parvifolium A.DC.—AA 2254*
Mandevilla permixta Woodson—AA 4134
Marsdenia sp.—AC 6854
Prestonia sp.—JJ 2486
Rauvolfia sp.—AA 3730*
Tabernaemontana laeta Mart.—AC 6870; JJ
 3747*; WT 12142

ARACEAE

- Anthurium bellum* Schott—AA 3741; JJ 1741
Anthurium blanchetianum Engl.—AC 6826; AA
 2446, 2597
Anthurium ianthinopodium Schott—AC 6830; JJ
 1750; WT 11721
Anthurium illepidum Schott—JJ 1871, 3731; PF
 1218
Anthurium jilekii Schott—PF 1087
Anthurium pentaphyllum (Aubl.) G. Don—AA
 2377, 3708; WT 11734
Anthurium scandens (Aubl.) Engl.—AA 2322,
 3719; WT 11822
Asterostigma riedelianum (Schott) Kuntze—AA
 2333; JJ 1736, 2699
Monstera adansonii Schott var. *adansonii*—AA
 2369; PF 1929
Monstera adansonii Schott var. *klotzschiana*
 (Schott) Madison—WT 11801
Philodendron sp.—AA 3795
Philodendron longilaminatum Schott—PF 1935
Philodendron ornatum Schott—AA 3788; PF
 1978; WT 11813
Philodendron pedatum (Hook.) H.B.K.—PF 1934
Philodendron propinquum Schott—WT 11819
Philodendron scandens C. Koch. & Sello—AA
 3794

- Rhodspatha latifolia* Poepp.—WT 11812
Syngonium podophyllum Schott var. *vellozianum*
 (Schott) Croat—AA 3742; PF 1097; WT 11814
Xanthosoma maximanii Schott—HP 17; WT
 13321

ARECACEAE

- Bactris ferruginea* Burret—JJ 1666*; JP 176; PF
 1925
Bactris pickelli Burret—AA 2702; JJ 1863; PF 1939
Desmoncus polyacanthos Mart. var.
polyacanthos—JJ 1538; WT 11738, 12143
Euterpe edulis Mart.—JJ 3902; JP 192
Geonoma pauciflora Mart.—PF 1585
Geonoma pohliana Mart.—AA 3787
Syagrus botryophora (Mart.) Mart.—PF 1646

ARISTOLOCHIACEAE

- Aristolochia gigantea* Mart. & Zucc.—WT 11904
Aristolochia longispathulata F. González—WT
 11741

ASTERACEAE

- Asteraceae sp.—JP 205
Cephalopappus sonchifolius Nees & Mart.—WT
 11910
Heterocondylus vitalbae (DC.) R.M. King & H.
 Rob.—AA 2480, 3749; JJ 3729
Piptocarpha ramiflora (Spreng.) Baker—AA 2449

BALANOPHORACEAE

- Helosis cayennensis* (Sw.) Spreng.—JJ 3735
Langsdorffia sp.—WT 11741
Lophophytum mirabile Schott & Endl. subsp.
mirabile—JJ 3736, 3923; PF 1221

BEGONIACEAE

- Begonia bahiensis* A.DC.—AA 6840; JJ 1752; WT
 11947
Begonia besleriaefolia Schott var. *sthuriana*
 Brade—AA 2473; AC 6698
Begonia convolvulacea (Klotzsch) A. DC.—AA
 2460
Begonia itaguassuensis Brade—AC 6704; JJ 1497,
 1733
Begonia subacida Irmsch.—AA 2370; LM 2152

BIGNONIACEAE

- Bignoniaceae sp. 1—AA 2452
 Bignoniaceae sp. 2—AA 2287; FJ 4
 Bignoniaceae sp. 3—WT 11878
Adenocalymna sp.—AA 2705; HP 8; JJ 1877
Arrabidaea sp.—WT 11920

Glaziovina bauhinoides Bureau ex Baill.—JJ 2377*; JP 213; WT 11916
Jacaranda puberula Cham.—AA 2673*
Mansoa difficilis (Cham.) Bureau & K. Schum.—JJ 2478*; JP 218
Stizophyllum riparium (Kunth) Sandwith—PF 1864
Tabebuia sp.—AA 2455*; JJ 2417*
Tabebuia billbergii (Bureau & K. Schum.) Standl.—AA 2630
Tabebuia roseo-alba (Ridl.) Sandwith—AA 1641*, 2340*; PF 1652

BORAGINACEAE

Cordia sp.—JJ 2405*, 3849*
Cordia aberrans I.M. Johnst.—AA 2693; PF 1669
Cordia alliodora (Ruiz & Pav.) Oken—JJ 3834*
Cordia curassavica (Jacq.) Roem. & Schult.—AA 3797
Cordia longifolia A. DC.—WT 13360
Cordia magnoliaefolia Cham.—AA 3789, 3892
Cordia superba Cham.—AA 2620, 2696; JJ 1502
Tournefortia bicolor Sw.—WT 11915
Tournefortia breviflora DC.—AA 2349; PF 1969

BROMELIACEAE

Aechmea sp.—AA 4139
Aechmea curranii (L.B. Sm.) L.B. Sm. & M. A. Spencer—AA 2613; JJ 2085
Aechmea lingulata (L.) Baker—AA 2343, 2629
Aechmea perforata L.B. Sm.—AA 2344
Araeococcus parviflorus (Mart. ex Schult. f.) Lindman—AA 2617
Billbergia morelii Brong.—AA 2097; PF 1202; WT 11918
Canistropsis billbergioides (Schult. f.) Leme—AA 2340; AC 6695; RF 1275
Cryptanthus beuckeri E. Morren—AA 2371; WT 11909, 13397
Edmundoa lindenii (Regel) Leme—JJ 2485; WT 11805
Hohenbergia augusta (Vell.) E. Morren—AA 2479
Hohenbergia disjuncta L.B. Sm.—AA 4126
Lymania alvimii (L.B. Sm. & Read) Read—WT 10871
Lymania azurea Leme—LM 406
Lymania smithii Read—LM 407
Lymania spiculata Leme & Forzza—EL 4638
Nidularium innocentii Lem.—AA 2342
Nidularium procerum Lindman—WT 11808, 11809

Tillandsia geminiflora Brong.—AA 2341, 2464; WT 13358
Tillandsia stricta Sol.—AA 2339; JP 193
Tillandsia tenuifolia L. var. *vaginata* (Wawra) L.B. Sm.—AA 2458; JP 49; PF 1581
Tillandsia usneoides (L.) L.—JJ 1704
Vriesea duvaliana E. Morren—AA 2345
Vriesea psittacina (Hook.) Lindl.—LM 2404; WT 11818, 13348

BURSERACEAE

Protium aracouchini (Aubl.) Marchand—JJ 3756*, 3833*, 3851*
Protium warmingianum Marchand—JJ 1619*, 1649*, 3932

CACTACEAE

Brasiliopuntia brasiliensis (Willd.) A. Berger—AA 2616; JJ 1888; PF 1214
Epiphyllum phyllanthus (L.) Haw.—JJ 1701
Hatiora salicornioides (Haw.) Britton & Rose—WT 13356
Rhipsalis baccifera (J. S. Muell.) Stearn. subsp. *hileiabahiana* N.P. Taylor & Barthlott—AA 3697; JJ 3737; WT 11876
Rhipsalis floccosa Salm-Dyck ex Pfeiff.—AA 3717; JJ 1758

CAMPANULACEAE

Centropogon cornutus (L.) Druce—AA 2917

CANNABACEAE

Ampelocera glabra Kuhl.—AA 2619, 2690; JJ 1485
Celtis iguanaea (Jacq.) Sarg.—AA 2688; HP 10; PF 1980
Trema micrantha (L.) Blume—JJ 1582

CAPPARACEAE

Capparis frondosa Jacq.—LM 2385
Crataeva tapia L.—JJ 1505; PF 1868

CARICACEAE

Jacaratia dodecaphylla A. DC.—JJ 1573*, 1914*, 2339*
Jacaratia heptaphylla (Vell.) A. DC.—JJ 3767*

CELASTRACEAE

Cheiloclinium cognatum (Miers) A. C. Sm.—AA 2304, 2332; PF 1192
Hippocratea volubilis L.—AA 2232*
Maytenus sp.—JJ 3871*
Maytenus aff. *aquifolium* Mart.—AA 2245*
Maytenus cf. *macrodonata* Reissek—AA 2627, 2712; WT 11898

Maytenus brasiliensis Mart.—AA 2255*; JJ 4048; PF 1866

CHRYSOBALANACEAE

Couepia sp.—AA 2198*, 2205*; JJ 3898*

Hirtella triandra Sw. subsp. *triandra*—AA 2256*; JJ 1556*, 1933*

Licania naviculistipula Prance—JJ 1500, 1548*, 2382*

CLUSIACEAE

Garcinia gardneriana (Planch. & Triana) D. C. Zappi—JJ 2338*; PF 1215; WT 12188

COMBRETACEAE

Bucihenavia sp.—JJ 2458*

Terminalia oblonga (Ruiz & Pav.) Steud.—AA 2272*; JJ 1936*, 2416*

COMMELINACEAE

Commelina rufipes Seubert—WT 13350

Dichorisandra sp.—JJ 2328

Dichorisandra acaulis Cogn.—JJ 1472, 2083; SS 1019

Dichorisandra hexandra (Aubl.) Standl.—WT 11923

Dichorisandra leucophthalmos Hook.—JJ 2087; PF 1992; WT 13398

Dichorisandra cf. *thyrsiflora* J.C. Mikan—AA 2586, 3782; PF 1675

CONNARACEAE

Connarus blanchetii Planch. var. *laurifolius* (Baker) Forero—AC 6837; JJ 1864, 3930

Rourea discolor Baker—AA 4135

COSTACEAE

Costus subsessilis (Nees & Mart.) Maas—AA 2365; WT 11937, 13401

Costus spiralis (Jacq.) Roscoe—HP 01; JJ 1744; WT 10860

CUCURBITACEAE

Fevillea sp.—WT 11768

Fevillea trilobata L.—PF 1660; WT 13357

Gurania cf. *spinulosa* (Poepp. & Endl.) Cogn.—HP 22; WT 11743, 13367

Melothria pendula L.—PF 1077

Melothrianthus smilacifolius (Cogn.) Mart. Crov.—PF 1982

Momordica charantia L.—LM 2372

Psiguria sp.—AA 2457

Psiguria cf. *grandiflora* Cogn.—AC 6688; WT 11882

Sicydium cf. *giracile* Cogn.—AA 2346; HP 31; JJ 3726

Wilbrandia verticillata (Vell.) Cogn.—AA 2582; JP 194

CUNONIACEAE

Lamanonia sp.—JJ 3897*, 3914*

CYCLANTHACEAE

Evodianthus funifer (Poit.) Lindman—WT 13320

CYPERACEAE

Cyperus laxus Lam.—PF 1962

Hypolytrum schraderianum Nees—WT 11803

Pleurostachys sp. nov. 1—JJ 3922; PF 1579; WT 13370

Pleurostachys sp. nov. 2—PF 1219, 1220; WT 13388

Pleurostachys tenuiflora Brongn.—WT 13365

Rhynchospora comata (Link) Roem. & Schult.—JJ 1477

Scleria sp.—AA 4264

DICHAPETALACEAE

Stephanopodium blanchetianum Baill.—AA 2687; JJ 1947*; WT 11897

DIOSCOREACEAE

Dioscorea sp. 1—AA 2923

Dioscorea sp. 2—WT 13140

EBENACEAE

Diospyros sp.—PF 1078

Diospyros ebenaster Retz.—JJ 1953*; PF 1195*, 1861

ELAEOCARPACEAE

Sloanea garckeana K. Schum.—PF 1083; WT 11728, 13379

Sloanea monosperma Vell.—AA 2257*; AC 6822; JP 169

ERYTHROXYLACEAE

Erythroxylum columbinum Mart.—AA 2363; LM 2391; WT 11928

Erythroxylum cf. *compressum* Peyr.—JJ 1488

Erythroxylum cf. *petrae-caballi* Plowman—FJ 3; JJ 3749*

EUPHORBIACEAE

Acalypha brasiliensis Müll. Arg.—JJ 1885

Acalypha villosa Jacq.—AA 2361; PF 1673

Actinostemon appendiculatus Jabl.—AA 2612; LM 2408; WT 13378

Actinostemon klotzschii (Didr.) Pax—WT 12531

Alchornea iricurana Casar.—JJ 2398*
Argythamnia triccoca Müell. Arg.—AA 2456, 2593; JJ 1498
Cnidoscolus oligandrus (Müell. Arg.) Pax—WT 11756*, 12201
Dalechampia sp.—AA 2466
Dalechampia brasiliensis Lam.—PF 1181
Euphorbia comosa Vell.—WT 11949
Euphorbia heterophylla L.—LM 2376
Manihot pilosa Pohl—AA 2711
Omphalea brasiliensis Müell. Arg.—AA 2193*, 2214*; JJ 3774*
Pachystroma longifolium (Nees) I.M. Johnst.—AC 6861; JJ 1742; LM 2401
Pera sp.—WT 11788*
Sapium sp.—AA 3766*; JJ 2434*
Sebastiania brasiliensis Spreng.—AA 2694; JJ 1879; PF 1074

FABACEAE

Fabaceae sp. 1—JJ 1671*
 Fabaceae sp. 2—JJ 1926*
 Fabaceae sp. 3—JJ 1583a*
Acacia adhaerans Benth.—JJ 1519, 1585*
Acacia polyphylla DC. var. *giganticarpa* G.P. Lewis—AA 3784; JJ 1530; JP 209
Albizia polycephala (Benth.) Killip—JJ 1584*, 1615*
Andira sp.—AA 2213*, 2220*
Andira fraxinifolia Benth.—AA 2296
Andira lewisii R.T. Penn.—JJ 1637*, 1920*
Bauhinia sp.—WT 13361
Bauhinia aff. *forficata* Link subsp. *forficata*—AA 2462; PF 1096; WT 13141
Bauhinia grandifolia (Bong.) Steud.—JJ 1580*
Bauhinia integerrima Mart. ex Benth.—AA 2592; AC 6838; JJ 1533
Caesalpinia echinata Lam.—AA 2228*; JP 343
Caesalpinia ferrea Mart.—AA 4269
Caesalpinia pluviosa DC. var. *paraensis* (Ducke) G.P. Lewis—AA 4136; JP 215; WT 12134
Caesalpinia pluviosa DC. var. *peltophoroides* (Benth.) G.P. Lewis—JP 201
Canavalia sp.—AA 2450; AC 6852; JP 347
Centrolobium tomentosum Guillem. ex Benth.—LM 2377; WT 11906
Chamaecrista sp.—JJ 1509
Copaifera lucens Dwyer—JJ 1672*, 2393*, 2449*
Cratylia hypargyrea Mart. ex Benth.—AA 2925; AC 6865

Crotalaria retusa L.—MS 533
Exostyles venusta Schott—AA 2248*; JJ 2399*
Goniorrhachis marginata Taub. var. *bahiana* Cowan—AA 2288; JJ 1540; PF 1931
Hymenaea sp.—JJ 1544*, 2375*, 3786*
Hymenaea oblongifolia Huber var. *latifolia* Lee & Langenheim—JJ 1645*, 1911*; PF 1933
Inga sp.—JJ 3829*, 3886*
Inga capitata Desv.—JJ 1610*, 2388*, 3853*
Inga edulis Mart.—JJ 3893*
Inga marginata Willd.—JJ 1521, 1954*, 3839*
Inga striata Benth.—AA 3760; JJ 1590*, 1938*
Inga tenuis (Vell.) Mart.—JJ 3899*
Lablab purpureus (L.) Sweet—WT 12391
Lonchocarpus cultratus (Vell.) H. C. Lima—WT 11790*
Machaerium sp. 1—JP 217; LM 2382
Machaerium sp. 2—WT 11775*, 11778*
Machaerium angustifolium Vog.—AC 6706
Mucuna urens (L.) DC.—PF 1641
Peltogyne pauciflora Benth.—AA 2231*; JJ 1595*
Piptadenia sp.—JJ 3828*, 3865*
Piptadenia killipi J.F. Macbr. var. *cacaophila* G.P. Lewis—JJ 3802*
Piptadenia moniliformis Benth.—JJ 1682*
Platycyamus regnellii Benth.—AA 3718; JJ 1644*, 2372*
Pterocarpus rohrii Vahl—JJ 1679*, 3785*, 3793*
Plathymenia reticulata Benth.—AA 4270
Pseudopiptadenia bahiana G.P. Lewis & M. P. Lima—JJ 3741*, 3753*
Schizolobium parahyba (Vell.) Blake—JJ 2333*
Senna macranthera (Collad.) H. S. Irwin & Barneby—AA 2911; JJ 3907*; JP 340
Swartzia macrostachya Benth. var. *riedelii* R.S. Cowan—AA 2210*, 2924; JJ 3727
Swartzia simplex (Sw.) Spreng. var. *ochracea* (DC.) R.S. Cowan—AA 3713; JJ 2448*; PF 1205
Zollernia sp.—AA 2227*; JJ 3804*

GESNERIACEAE

Codonanthe sp.—PF 1644
Dalbergaria sanguinea (Pers.) Steud.—AA 2308, 2912
Nematanthus sp. nov.—AA 2913
Sinningia barbata (Nees & Mart.) Nichols—AA 2352; JJ 2091; WT 11747

HELICONIACEAE

Heliconia aemygdiana Burle-Marx subsp. *aemygdiana*—HP 27; SS 1018; WT 13364

Heliconia episcopalis Vell.—AC 6847; WT 11899, 12138

Heliconia psittacorum L.f.—AA 3721

Heliconia spathocircinata Aristeg.—HP 02; JJ 3924; WT 12136

ICACINACEAE

Citronella paniculata (Mart.) R. A. Howard—AA 2892; LM 2396; PF 1206

LAMIACEAE

Lamiaceae sp.—AA 2576

Ocimum gratissimum L.—AA 3750; LM 2398

Vitex orinocensis H.B.K.—JJ 1593*, 2446*

LAURACEAE

Lauraceae sp. 1—JJ 3906*

Lauraceae sp. 2—JJ 3769*

Lauraceae sp. 3—JJ 2473*

Aniba firmula (Nees & Mart.) Mez—AA 2347; JJ 1945*, 2336*

Cryptocarya aschersoniana Mez—AA 2226*; JJ 2104, 2351*

Ocotea sp. 1—JJ 1694*

Ocotea sp. 2—AA 2887; JJ 3824*

Ocotea sp. 3—JJ 2466*

Ocotea divaricata (Nees) Mez—LM 2378

Ocotea elegans Mez—JJ 1668*, 3808*

Ocotea indecora (Schott) Mez—JJ 1935*, 3789*; WT 11884

Ocotea macrophylla (Meisn.) Mez—JJ 2392*

Ocotea puberula (Rich.) Nees—JJ 2454*

LECYTHIDACEAE

Cariniana sp.—PF 1182

Cariniana legalis (Mart.) Kuntze—JJ 1630*, 1527, 2421*

Lecythis pisonis Cambess.—JJ 1622*

LILIACEAE

Hagenbachia brasiliensis (Nees & Mart.) Ravenna—JJ 2094

LOASACEAE

Loasa parviflora Schrad.—JJ 3931; WT 11820, 11913

LOGANIACEAE

Strychnos sp.—PF 1649

LORANTHACEAE

Struthanthus sp.—AA 2632

LYTHRACEAE

Cuphea sp.—AA 4146

MALPIGHIACEAE

Malpighiaceae sp. 1—JJ 1687*

Malpighiaceae sp. 2—AA 2215*

Banisteriopsis patula B.Gates—AA 3722; JJ 3934; JP 189

Byrsonima cacaophila W.R. Anderson—AA 2286; JJ 1499; PF 1217

Dicella bracteosa (A. Juss.) Griseb.—AA 2703, 3217; PF 1989

Heteropterys sp. nov.—AA 3218; JJ 1893

Heteropterys bicolor A. Juss.—AA 2710; JJ 1883, 3978

Heteropterys coleoptera A. Juss.—JJ 1560*; PF 1932

Heteropterys leschenaultiana A. Juss.—WT 12199

Heteropterys nordestina Amorim—AA 2199*

Hiraea sp. nov.—JJ 3878*; PF 1668

Mascagnia rigida (A. Juss.) Griseb.—AA 4127; WT 11954

Mascagnia sepium (A. Juss.) Griseb.—PF 1869

Stigmaphyllon cavernulosum C. Anderson—AA 2469, 2921; PF 1930

Tetrapteryx acutifolia Cav.—AA 2699; JJ 1880; PF 1963

Tetrapteryx crispa A. Juss.—AA 2919

MALVACEAE

Byttneria catalpaefolia Jacq.—JP 341; PF 1948

Cavanillesia arborea (Willd.) K. Schum.—AA 2467; JJ 1653*

Ceiba ventricosa (Nees & Mart.) Ravenna—AA 2373; JJ 2472*, 3740*

Eriotheca macrophylla (K. Schum.) A. Robyns—AA 3765*; JJ 3809*, 3831*

Guazuma ulmifolia Lam.—JJ 1508

Luehea cymulosa Spruce ex Benth.—AA 3768*; JJ 3838*, 3882*

Quararibea penduliflora K. Schum.—AA 2908; HP 23; JJ 2443*

Sterculia curiosa (Vell.) Taroda—AA 2222*, 2229*

Triumfetta semitriloba Jacq.—JP 344

Urena lobata L.—AA 4140; PF 1867

MARANTACEAE

Calathea sp. 1—WT 13336

Calathea sp. 2—PF 1952

Calathea brasiliensis Körn.—AA 2897; PF 1959

Calathea oblonga (Mart.) Körn.—AA 3745; JJ 4047; PF 1093

Calathea cf. *rotundifolia* Poepp. & Endl.—AA 3705

Calathea cf. *rufibarba* Fenzl—AA 2470; JJ 3921; PF 1582

Calathea zebrina Lindl.—PF 1986; WT 11810

Ctenanthe sp.—AC 7139

Maranta arundinacea L.—AA 4145; JJ 1739, 2088

Maranta bicolor Ker Gawl.—AA 2356, 2895; WT 11880

Stromanthe portiana Griseb.—JJ 1700; WT 13373

Stromanthe schottiana (Körn.) Eichler—AA 2293; PF 1085, 1993

MELASTOMATACEAE

Bertolonia carmoi Baumgratz—AA 2318; JK 439; WT 10232

Leandra ionopogon (Mart.) Cogn.—AA 2325; WT 11824, 13325

Leandra reversa (DC.) Cogn.—AA 2324; WT 13344

Miconia sp.—JJ 3885*

Miconia calvescens DC.—JJ 2457*, 3912*

Miconia centrodesma Naudin—AA 2889

Miconia nervosa (Sm.) Triana—JJ 1495

Meriania cf. *tetramera* Wurdack—JJ 3929

Mouriri chamissoana Cogn.—AA 2891

Pleiochiton sp. nov.—JJ 3916

MELIACEAE

Meliaceae sp.—JJ 1669*, 3751*

Cedrela odorata L.—JJ 2475*

Guarea guidonia (L.) Sleumer—JJ 3909*

Guarea kunthiana A. Juss.—AA 2247*; JJ 1572, 2337*

Guarea macrophylla Vahl subsp. *pachycarpa* (C. DC.) T. D. Penn.—AA 2681*; JJ 1732; JP 188

Trichilia sp. 1—JJ 1692*, 3783*; JP 199

Trichilia sp. 2—JJ 3817*, 3864*

Trichilia sp. 3—JJ 1640*, 3813*

Trichilia sp. 4—PF 1216

Trichilia blanchetii C. DC.—WT 11964

Trichilia casaretti C. DC.—JJ 1865; WT 11875, 13133

Trichilia elegans A. Juss. subsp. *richardiana* (A. Juss.) T. D. Penn.—JP 350; PF 1973; WT 11912

Trichilia florbranca T. D. Penn.—AA 2583; PF 1666, 1927

Trichilia martiana C. DC.—JP 349; WT 11952, 11732

Trichilia pleeana (A. Juss.) D. DC.—AA 2295; JJ 2401*; JP 167

Trichilia pseudostipularis (A. Juss.) C. DC.—AA 2241*, 2372; HP 09

Trichilia silvatica C. DC.—AA 2674*; JJ 3742*; WT 11733

MENISPERMACEAE

Menispermaceae sp.—PF 1587

Chondodendron microphyllum (Eichler) Moldenke—AA 2888; PF 1090, 1662

Odontocarya sp.—PF 1089

Orthomene schomburgkii (Miers) Barneby & Krukoff—WT 12197

MOLLUGINACEAE

Mollugo verticillata L.—WT 11883

MONIMIACEAE

Mollinedia sp.—PF 1200

Mollinedia seloi (Spreng.) A. DC.—WT 13333

MORACEAE

Brosimum cf. *glaziovii* Taub.—WT 11752*

Brosimum guianense (Aubl.) Huber—JJ 1627*, 1946*

Clarisia ilicifolia (Spreng.) Lanj. & Rossberg—JJ 1479, 3891*; PF 1204

Clarisia racemosa Ruiz & Pav.—JJ 1589*, 1609*; WT 11794a*

Dorstenia bahiensis Fisch. & C. A. Mey.—JJ 1537; PF 1657; WT 11739

Dorstenia cayapia Vell. subsp. *cayapia*—AC 6710; WT 11957

Dorstenia contensis Carauta & C. C. Berg—WT 11908

Dorstenia turneraefolia Fisch. & C. A. Mey.—AC 6851; JJ 1706; PF 1648

Ficus sp.—JJ 2341*

Ficus gomelleira Kunth & Bouché—AA 2280*; JJ 1534

Ficus mexiae Standl.—JJ 3870*

Ficus nymphaeifolia Mill.—JJ 3760*

Maclura tinctoria (L.) Steud.—JJ 1887; JP 214; PF 1645

Naucleopsis oblongifolia (Kuhl.) Carauta—JJ 1555*, 1658*, 2432*

Pseudolmedia macrophylla Trécul—JJ 1899*, 1941*, 2389*

Sorocea guilleminiana Gaudich.—JP 212; LM 2141; PF 1577

MYRISTICACEAE

Virola gardneri (A. DC.) Warb.—AA 3786; JP 170, 203

MYRSINACEAE

Ardisia semicrenata Mart.—LM 2136

Cybianthus sp.—AA 2317

Myrsine umbellata Mart.—JJ 2381*, 2397*, 2470*

MYRTACEAE

Myrtaceae sp. 1—AA 2665*

Myrtaceae sp. 2—JJ 2438*

Calyptanthus sp.—JJ 1586*, 3764*; PF 1076

Campomanesia guaviroba (DC.) Kiaersk.—JP 208

Eugenia sp. 1—JJ 1673*, 1907*, 2436*

Eugenia sp. 2—JJ 3745*, 3788*; PF 1075

Eugenia sp. 3—AA 2281*, 3736*, 2704

Eugenia sp. 4—JJ 1614*, 2367*; WT 11776*

Eugenia sp. 5—JJ 3762*, 3895*; WT 13394

Eugenia sp. 6—JJ 1616*, 3884*

Eugenia sp. 7—JJ 1520, 3768*, 3840*

Eugenia sp. 8—AA 2208*; PF 1937; WT 11757*

Eugenia sp. 9—JJ 1588*, 1943*, 3799*

Eugenia sp. 10—AA 3724*; WT 13331

Eugenia sp. 11—WT 11879

Eugenia cf. *beaurepaireana* (Kiaersk.) D. Legrand—JJ 2411*, 3872*

Eugenia cf. *candolleana* DC.—AA 2190*, 2250*; JJ 2355*

Eugenia cf. *flamingensis* O. Berg—AA 2907; AC 6701; JJ 2387*

Eugenia itapemirimensis Cambess.—AA 2331; WT 11828, 13335

Eugenia mandioocensis O. Berg—JJ 3819*; PF 1102; WT 13329

Eugenia cf. *moraviana* O. Berg—JJ 1697*, 2352*; JP 175

Eugenia platyphylla O. Berg—AA 2590, 2689; AC 6686

Eugenia pruniiformis Cambess.—JJ 3863*, 3900*

Eugenia aff. *stricta* Kiaersk.—PF 1943

Marlierea sp.—JJ 1675*, 1688*, 2465*

Marlierea cf. *regeliana* O. Berg—AA 2218*, 2251*; JJ 2462*

Marlierea cf. *strigipes* O. Berg—JJ 3847*, 3848*, 3859*

Marlierea cf. *tomentosa* Cambess.—JJ 2442*, 2467*

Myrcia sp. 1—AA 3793; PF 1588

Myrcia sp. 2—AC 6829; PF 1088

Myrcia sp. 3—WT 11758*

Myrcia acuminatissima O. Berg—AC 6850; JJ 1922*; PF 1186

Myrcia bicolor Kiaersk.—AC 6829; JJ 1617*, 2409*

Myrcia fallax (Rich.) DC.—JJ 3795*, 3815*, 3845*

Myrciaria sp.—AA 2211*; JJ 3758*; LM 2149

Myrciaria floribunda (Willd.) O. Berg—AA 2237*, 3855*; JJ 3772*

Plinia sp.—JJ 1491, 1869; WT 13135

Plinia grandifolia (Mattos) Sobral—JJ 2361*, 3752*, 3854*

Plinia rivularis (Cambess.) Rotman—AA 2626

NYCTAGINACEAE

Andradea floribunda Allemao—AA 2294; JJ 1686*

Bougainvillea spectabilis Willd.—PF 1655

Guapira laxiflora (Choisy) Lundell—AA 2311; WT 11885, 13323

Guapira opposita (Vell.) Reitz—AA 2253*; JJ 1674*, 3777*

Guapira venosa (Choisy) Lundell—JJ 1567*, 1611*, 3823*

Ramisia brasiliensis Oliv.—JJ 1507; JP 216; WT 6822

OCHNACEAE

Ouratea decipiens Tiegh.—HP 33; PF 1966

OLACACEAE

Heisteria perianthomega (Vell.) Sleumer—AA 2675*; JJ 2464*; PF 1185

Tetrastylidium grandifolium (Baill.) Sleumer—JJ 1516; JP 168; PF 1072

OLEACEAE

Chionanthus sp.—JJ 1652*, 2459*

OPILIACEAE

Agonandra excelsa Griseb.—AA 2598; JJ 2476*; PF 1647

ORCHIDACEAE

Acianthera sp.—ES 307

Anathallis rubens (Lindl.) Pridgeon & M. W. Chase—ES 303

Bulbophyllum sp. 1—ES 309

Bulbophyllum aff. *ipanemense* Hoehne—JJ 1480

Catasetum luridum (Link) Lindl.—PF 1988

Cattleya warneri T. Moore ex Warner—PF 1870

Chytroglossa marileoniae Rchb. f.—PF 1656

Cyclopogon congestus (Vell.) Hoehne—AA 3698

Lockhartia aff. *lunifera* (Lindl.) Rchb. f.—PF 1212

Gongora quinquenervis Ruiz & Pav.—JJ 4051

Microchilus lamprophyllus (Linden & Rchb. f.) Ormerod—JJ 3733, 4044; PF 1580

Miltonia flavescens Lindl.—AA 4137; JP 68

Notylia hemitricha Barb. Rodr.—AA 2609

Ocotmeria sp.—JP 50

Oeceoclades maculata (Lindl.) Lindl.—AA 2357; AC 6824
Oncidium barbatum Lindl.—JJ 3738
Phymatidium tillandsioides Barb. Rodr.—WT 11804
Pleurothallis sp.—PF 1865
Pleurothallis hypnicola Lindl.—JJ 1703, 1747; WT 11896
Prosthechea aemula (Lindl.) W.E. Higgins—AA 4138
Prosthechea fragrans (Sw.) W.E. Higgins—JJ 1482, 1740
Sarcoglottis grandiflora Klotzsch—PF 1661; RO 743
Schomburgkia crispa Lindl.—JJ 4262
Stanhopea sp.—WT 13349
Xylobium variegatum (Ruiz & Pav.) Garay & Dunst.—JJ 1524

OXALIDACEAE

Oxalis alata Mart. ex Zucc.—AA 2303; JJ 1857; PF 1081
Oxalis debilis Kunth—AA 4144

PASSIFLORACEAE

Passiflora sp.—JJ 2106
Passiflora contracta Vitta—JP 174; WT 11720, 13351

PHYLLANTHACEAE

Discocarpus pedicellatus Fiaschi & Cordeiro—AA 2682*; PF 1672; WT 11750*
Margaritaria nobilis L. f.—AA 3699; WT 10852, 11914

PHYTOLACCACEAE

Gallesia integrifolia (Spreng.) Harms—JJ 3877*; LM 2402; WT 11770*
Hillieria latifolia (Lam.) H. Walter—AA 3780; HP 11; PF 1101
Petiveria alliacea L.—HP 04; JJ 1749
Phytolacca dioica L.—JP 206; JJ 1665*, 1693*
Rivina humilis L.—AA 2289

PICRAMNIACEAE

Picramnia glazioviana Engl.—WT 11902
Picramnia ramiflora Planch.—AC 6690; JJ 1515, 1705

PIPERACEAE

Peperomia sp. 1—JJ 1761
Peperomia sp. 2—JJ 1760; PF 1210
Peperomia alata Ruiz & Pav.—AA 2623; PF 1965

Peperomia gardneriana Miq.—AA 2290; AC 6857; PF 1983
Peperomia glabella (Sw.) A. Dietr.—JJ 1730; WT 13347
Peperomia magnoliifolia (Jacq.) A. Dietr.—JJ 1754
Peperomia rhombea Ruiz & Pav.—AA 2465, 3746; JJ 1875
Peperomia serpens (Sw.) Loudon—JJ 1763
Peperomia trichocarpa Miq.—AA 2445
Peperomia urocarpa Fisch. & C.A. Mey.—AA 2355, 2448; PF 1183
Piper amalago L.—PF 1946; WT 13372
Piper amplum Kunth—AA 2302; HP 25; JP 166
Piper caldense C. DC.—WT 11827; 13345
Piper dilatatum Rich.—PF 1651
Piper miquelianum C. DC.—AA 2591, 4123; PF 1922
Piper obliquum Ruiz & Pav.—WT 11826, 13324
Piper umbellatum L.—AA 2376; PF 1658; WT 11725

POACEAE

Atractantha sp. 1—WT 11903
Atractantha sp. 2—WT 13334
Digitaria ciliaris (Retz.) Koeler—WT 11951
Eremitis sp.—JJ 4041
Ichnanthus hirtus (Raddi) Chase—WT 11901, 13380
Ichnanthus umbraphilus Renvoize—WT 11726, 11905, 13376
Lasiacis ligulata Hitchc. & Chase—AA 2607
Merostachys sp. 1—WT 11800
Merostachys sp. 2—WT 13330
Olyra latifolia L.—JJ 1860; WT 11744, 12394
Oplismenus hirtellus (L.) P. Beauv.—JJ 3730
Pharus latifolius L.—AA 2893
Pharus lappulaceus Aubl.—WT 11907
Raddia brasiliensis Bertol.—JJ 2089
Raddia portoi Kuhlman.—WT 11942
Sucrea monophylla Soderstr.—AC 6821; JJ 1487

POLYGONACEAE

Coccoloba sp.—AA 2263*
Coccoloba declinata (Vell.) Mart.—AA 2709, 3747; JJ 2453*
Coccoloba oblonga Lindau—JJ 1489
Ruprechtia sp. 1—JJ 3759*, 3820*, 3825*
Ruprechtia sp. 2—AA 2618

PROTEACEAE

Roupala sp.—JJ 3911*

PUTRANJIVACEAE

Drypetes sessiliflora Allemão—AA 2292, 2581; JJ 1955

QUIINACEAE

Quiina glaziovii Engl.—WT 11727

RAFFLESACEAE

Pilostyles sp.—AA 2898

ROSACEAE

Prunus sellowii Koehne—AA 2274*; JJ 3910*; PF 1586

RUBIACEAE

Alseis floribunda Schott—AA 2605; LM 2394

Amaioua sp.—JJ 3888*

Amaioua guianensis Aubl.—WT 11816

Bathysa cuspidata (A. St.-Hil.) Hook. f.—AA 2886; JP 191; WT 13366

Borreria pulchripila (Bremek.) Bacigalupo & E. L. Cabral—JJ 3933

Coussarea bahiensis Müll. Arg.—AA 2329, 2350; JJ 3919, 4046

Faremea hyacinthina Mart.—AA 3711; JJ 3977; PF 1991

Faremea oligantha Müll. Arg.—AA 3735; JJ 4049; PF 1863

Faremea rivularis Gardner—AA 2906; JJ 4043

Guettarda viburnoides Cham. & Schltdl.—JJ 3830*

Hamelia patens Jacq.—AC 6699; HP 28; JP 196

Hoffmannia peckii K. Schum.—AA 2453

Ixora sp.—WT 13132

Posoqueria latifolia (Rudge) Roem. & Schult.—AA 2461; AC 6864; JJ 3732

Psychotria sp.—PF 1979

Psychotria colorata (Roem. & Schult.) Müll. Arg.—AA 2330, 2900; AC 6697

Psychotria deflexa DC.—WT 13327

Psychotria ostreophora (Wernham) C.M. Taylor—AC 6697

Psychotria phyllocalymnoides Müll. Arg.—WT 13326

Psychotria platypoda DC.—AA 2338; WT 13319

Psychotria racemosa (Aubl.) Raeusch.—AA 2353; JJ 2371*

Psychotria tenuifolia Sw.—AA 2884; JP 200; PF 1976

Randia armata (Sw.) DC.—AA 2905; PF 1193; WT 11724

Randia spinosa (Jacq.) Karst.—AA 2587; JJ 1501; PF 1199

Rosenbergiodendron sp. nov.—JJ 4042

Rudgea sp. 1—JJ 3875*, 3935

Rudgea sp. 2—AA 3704, 3743

Rudgea aff. *crassifolia* Zappi & E. Lucas—PF 1985; WT 11917

Rudgea jasminoides (Cham.) Müll. Arg.—AA 2316; JJ 4045; WT 11825

Simira glaziovii (K. Schum.) Steyererm.—JJ 3846*, 3883*

Simira viridiflora (Allem. & Saldanha) Steyererm.—AA 2217*; JJ 1684*, 2376*

RUTACEAE

Almeidea rubra A. St.-Hil.—AA 3744; JK 763; WT 11893

Angostura bracteata (Nees & Mart.) Kallunki—AA 2374; JK 758

Conchocarpus sp.—AC 6835; LM 2399; WT 13390

Conchocarpus adenantherus (Rizzini) Kallunki & Pirani—AA 2603, 2624; JK 764

Conchocarpus cuneifolius Nees & Mart.—JK 752; PF 1977; WT 11890

Conchocarpus diadematus Pirani—AA 2601

Conchocarpus fontanesianus (A. St.-Hil.) Kallunki & Pirani—AC 6708

Conchocarpus macrophyllus (J.C. Mikan) Kallunki & Pirani—AA 2602, 2708; AC 6692

Erythrochiton brasiliensis Nees & Mart.—AA 2692; JJ 1702, 1873

Metrodorea nigra A. St.-Hil.—JJ 1481; WT 10851, 11729

Neoraputia sp. nov.—AC 6855; JJ 1478; LM 2395

Pilocarpus sp.—PF 1974

Pilocarpus riedelianus Engl.—WT 6818, 11894

Rauia resinosa Nees & Mart.—WT 11886, 11888, 13371

Zanthoxylum acuminatum (Sw.) Sw.—JJ 2390*, 2484, 3784*

Zanthoxylum fagara (L.) Sarg.—JK 438; LM 2383

Zanthoxylum gardneri Engl.—WT 13382

Zanthoxylum nemorale Mart.—JJ 1655*

Zanthoxylum rhoifolium Lam.—JJ 2105; WT 10865

SALICACEAE

Banara sp.—JJ 1618*, 2330*; WT 11763*

Banara kuhlmannii (Sleumer) Sleumer—AA 6689; JJ 1606*; WT 12530

Casearia sp. 1—AA 2321; JJ 3818*

Casearia sp. 2—JJ 1506; PF 1944

Casearia decandra Jacq.—JJ 3901*, 3908*

Casearia melliodora Eichler—JJ 1594*, 2342*; JP 197

SAPINDACEAE

Sapindaceae sp.—AA 3707; JJ 1908

Allophylus leucoclados Radlk.—WT 13328

Allophylus cf. *leucophloeus* Radlk.—AA 2625; AC 6848; WT 13387

Allophylus sericeus (Cambess.) Radlk.—PF 1211

Averrhoidium gardnerianum Baill.—HP 05; WT 11922

Cardiospermum integerrimum Radlk.—AA 2297; WT 13396

Cupania bracteosa Radlk.—JJ 3841*

Matayba sp.—JJ 1662*, 2365*, 2400*

Melicoccus sp.—AA 2223*; JJ 1553*, 1908

Paullinia sp.—AA 2201*

Paullinia revoluta Radlk.—AA 2482

Scyphonychium multiflorum (Mart.) Radlk.—AA 2261*; JJ 1583*, 1932*

Serjania sp.—AA 3732*

Serjania caracasana (Jacq.) Willd.—AA 2666*; AC 6814

Serjania clematidifolia Cambess.—AC 6813; WT 12198

Serjania faveolata Radlk.—JJ 2099; LM 2373

Talisia cerasina (Benth.) Radlk.—JJ 2095, 2482; PF 1187

Thinouia sp.—JP 211

Urvillea laevis Radlk.—AC 6833; JJ 2101

SAPOTACEAE

Sapotaceae sp. 1—AA 2265*, 2335; JJ 1654*

Sapotaceae sp. 2—PF 1928

Chrysophyllum sp.—JJ 1574*

Chrysophyllum flexuosum Mart.—JJ 2384*, 3807*

Chrysophyllum gonocarpum (Mart. & Eichler) Engler—JJ 1529; PF 1198; WT 12190

Chrysophyllum lucentifolium Cronq.—JJ 2410*, 2480*; WT 11755*

Chrysophyllum subspinosum Monach.—JJ 2428*

Diploön cuspidatum (Hoehne) Cronq.—JJ 1631*, 2423*, 3856*

Ecclinusa ramiflora Mart.—JJ 3913*

Manilkara longifolia (A. DC.) Dubard—AA 2269*

Pouteria sp. 1—JJ 3797*

Pouteria sp. 2—JJ 1587*, 1620*, 2415*

Pouteria sp. 3—JJ 2331*; WT 13340

Pouteria sp. 4—JJ 1561*, 2461*

Pouteria sp. 5—JJ 1597*, 2463*

Pouteria aff. *bangii* (Rusby) T. D. Penn.—JJ 1514, 3765*

Pouteria bapeba T. D. Penn.—JJ 2362*; WT 11785*, 11789*

Pouteria butyrocarpa (Kuhl.) T. D. Penn.—AA 2224*, 2275*; JP 165

Pouteria aff. *hispida* Eyma—JJ 2364*, 2414*

Pouteria aff. *macrophylla* (Lam.) Eyma—JJ 3837*; PF 1924

Pouteria procera (Mart.) T. D. Penn.—JJ 1676*, 1918*; JP 198

Pouteria reticulata (Engl.) Eyma—AA 2700*; JJ 1598*, 1629*

Pradosia lactescens (Vell.) Radlk.—JJ 1648*, 2396*; WT 11730

Sarcaulus brasiliensis (A. DC.) Eyma—JJ 1939*, 2350*, 2483

SIMAROUBACEAE

Picrasma crenata (Vell.) Engl.—WT 11919

SIPARUNACEAE

Bracteanthus atlanticus Jangoux—JJ 1930*, 2427*; JP 164

SMILACACEAE

Smilax sp. 1—WT 13384

Smilax sp. 2—PF 1926

Smilax sp. 3—PF 1957

SOLANACEAE

Acnistus arborescens (L.) Schltdl.—AA 3798; JJ 2100

Aureliana fasciculata (Vell.) Sendtn. var. *longifolia* (Sendtn.) Hunz. & Barboza—JJ 1512, 1731, 1868

Capsicum frutescens L.—AC 6863

Cestrum sp. 1—JJ 2378; WT 11924

Cestrum sp. 2—WT 13392

Cestrum laevigatum Schltdl.—AA 2477, 3748; AC 6815

Datura suaveolans Humb. & Bonpl. ex Willd.—AA 2336

Solandra longiflora Tussac—JJ 1535; WT 11877

Solanum sp. 1—JJ 2407*; WT 13381

Solanum sp. 2—JJ 1486

Solanum sp. 3—AA 2621

Solanum alternato-pinnatum Steud.—AA 2915

Solanum bahianum S. Knapp—AA 2351

Solanum caavurana Vell.—WT 11911

Solanum depauperatum Dunal—AA 2468; AC 6818

Solanum hexandrum Vell.—AA 2706; JJ 1743; PF 1987

Solanum melissarum Bohs—JJ 3890*

Solanum megalonyx Sendtn.—AA 2475; AC 6834; PF 1990

Solanum ovum-fringillae (Dunal) L. Bohs—JJ 1492, 1892, 2391*

Solanum paniculatum L.—AA 2579

Solanum cf. paralum Bohs—JJ 4050; SS 1002; WT 13322

Solanum pensile Sendtn.—AA 2249*, 2326, 2914

Solanum robustum H.L. Wendl.—WT 11821

Solanum swartzianum Roem. & Schult.—HP 24

STYRACACEAE

Styrax sp.—JJ 1559*

THEOPHRASTACEAE

Clavija caloneura Mart. & Miq.—AC 6702; LM 2405; WT 13138

THYMELAEACEAE

Daphnopsis sp. nov.—AA 2334

Daphnopsis racemosa Griseb.—LM 2397

URTICACEAE

Boehmeria sp.—WT 13341

Cecropia glaziovii Snethl.—JJ 1913*

Cecropia hololeuca Miq.—JJ 1579*

Cecropia lyratiloba Miq.—AA 3769*; JJ 2335*, 2374*

Coussapoa curranii Blake—JJ 1931*; WT 11766*, 11769*

Myriocarpa cordifolia Liebm.—JJ 1493, 3827

Pilea pubescens Liebm.—JJ 1735; JP 345; WT 13375

Pilea rhizobola Miq.—AA 2314; HP 20; WT 13355

Urera baccifera (L.) Gaudich.—JJ 1753; JP 56; WT 12392

Urera caracasana (Jacq.) Griseb.—AA 2298; JJ 1504; JP 346

Urera mitis (Vell.) Miq.—JP 187

VERBENACEAE

Aegiphila cf. *sellowiana* Cham.—LM 2381

Aegiphila vitelliniflora Klotzsch ex Walp.—AA 2920; FF 3404; JJ 1884

Casselia sp.—AA 2594

Casselia veronicaefolia Cham.—JJ 1756, 1855; PF 1954

Lantana camara L.—MS 536

VIOLACEAE

Amphirrhox latifolia Mart.—AA 2614; JJ 1621*, 1891

Hybanthus cf. *brevicaulis* (Mart.) Baill.—AA 2301

Noissetia orchidiflora (Rudge) Ging.—SS 1021; WT 13343

VITACEAE

Cissus nobilis Kuhlmann.—JJ 2700; JP 195

Cissus verticillata (L.) Nicolson & C. E. Jarvis—AA 2926; PF 1860

ZINGIBERACEAE

Renealmia alpinia (Rottb.) Maas—JJ 1490

PTERIDOPHYTA

ASPLENIACEAE

Antigramma balansae (Baker) Sylvestre & P.G. Windisch—AA 2615; AS 8171; JJ 1881

Asplenium auritum Sw.—WT 11900

Asplenium kunzeanum Klotzsch—AA 2320; AS 8201; FN 1036

Asplenium serratum L.—AS 8165; FN 1040; WT 11748

Asplenium scandicinum Kaulf.—WT 13363

BLECHNACEAE

Blechnum binervatum (Poir.) C. V. Morton & Lellinger subsp. *acutum* (Desv.) R.M. Tryon & Stolze—AS 8182

Blechnum occidentale L.—AS 8168; FN 1034

CYATHEACEAE

Alsophila setosa Kaulf.—IF 1491

Cyathea sp.—AA 2882

Cyathea phalerata Mart.—IF 1493, 1494

DAVALLIACEAE

Nephrolepis cf. *pectinata* (Willd.) Schott—AS 8174

DENNSTAEDTIACEAE

Dennstaedtia globulifera (Poir.) Hieron—AS 8189

Saccoloma elegans Kaulf.—AS 8180

Saccoloma inaequale (Kunze) Mett.—AS 8183

DRYOPTERIDACEAE

Didymochlaena truncatula (Sw.) J.Sm.—AA 2313, 2368; FN 1043

Stigmatopteris prionites (Kunze) C. Chr.—AS 8194

Tectaria incisa Cav.—AA 2360, 2903, 3716

HYMENOPHYLLACEAE

Hymenophyllum cf. *hirsutum* (L.) Sw.—AS 8214

Trichomanes collaratum Bosch—WT 11804

Trichomanes radicans Sw.—AS 8159; FN 1046, 1047

LOMARIOPSIDACEAE

Elaphoglossum sp.—AS 8199

Lomariopsis marginata (Schrad.) Kuhn—AA 2367

LYCOPODIACEAE

Huperzia mandiocana (Raddi) Trevis.—AA 2306

MARATTIACEAE

Danaea elliptica J. Sm.—AS 8181; FN 1039

Marattia laevis J. Sm.—AS 8187

POLYPODIACEAE

Campyloneurum phyllitidis (L.) C. Presl.—AA 2909; PF 1099; WT 11722

Dicranoglossum furcatum J. Sm.—AA 3706; AS 8176

Microgramma percuta (Cav.) E. R. de la Sota—AA 2472; JJ 1746

Microgramma vacciniifolia (Langsd. & Fisch.) Copel.—AA 2358, 2459; WT 13346

Pecluma dispersa (Evans) M.G. Price—AA 3720

Pecluma plumula (Humb. & Bonpl. ex Willd.) M.G. Price—AS 8190; WT 12193

Pleopeltis sp.—FN 1045

Pleopeltis angusta H.B.K. ex Willd.—WT 13362

Polypodium bombycinum Maxon—WT 12190

Polypodium chnoophorum Kunze—AA 3785

Polypodium monoides Weath.—AA 2471, 3714; WT 13337

PTERIDACEAE

Adiantopsis radiata (L.) Fée—AS 8153

Adiantum cf. *abscissum* Schrad.—AA 2364; AC 6868; FN 1033

Doryopteris sagittifolia (Raddi) J. Sm.—AS 8205

Hemionitis tomentosa (Lam.) Raddi—FN 1031

Pteris denticulata Sw.—WT 13374

Pteris dissimilis (Fée) H. Christ—AA 3700; FN 1037; JJ 1870

Pteris propinqua J. Agardh.—AC 6867; FN 1035

SALVINIACEAE

Azolla caroliniana Willd.—AS 8211

SCHIZAEACEAE

Anemia hirta (L.) Sw.—AS 8169

Anemia phyllitidis (L.) Sw.—AA 3796

SELAGINELLACEAE

Selaginella muscosa Spring—AS 8195

Selaginella sulcata (Desv.) Spring—AA 2312; AS 8184; WT 11797

TECTARIACEAE

Ctenitis distans (Brack.) Ching—AS 8162

Ctenitis falciculata (Raddi) Ching—AS 8173

Ctenitis submarginalis (Langsd. & Fisch.) Ching—AA 2362; FN 1038; WT 13369

Megalastrum sp.—AS 8193, 8203

THELYPTERIDACEAE

Thelypteris sp. nov.—AA 2366, 3715; AS 8160

Thelypteris opposita (Vahl) Ching—AC 6869; FN 1032

VITTARIACEAE

Polytaenium lineatum (Sw.) J. Sm.—AS 8207

WOODSIACEAE

Diplazium expansum Willd.—AS 8150

Diplazium moccenianum (Sodiolo) C. Chr.—AS 8185

Diplazium plantaginifolium (L.) Urban—AA 2902; AS 8206

Diplazium roemerianum (Kunze) C. Presl.—AA 2359; AS 8192

Diplazium turgidum Rosenst.—AS 8198

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