

## 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  $\geq 5$  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 espécimens  $\geq 5$  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 higrofila”) 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-

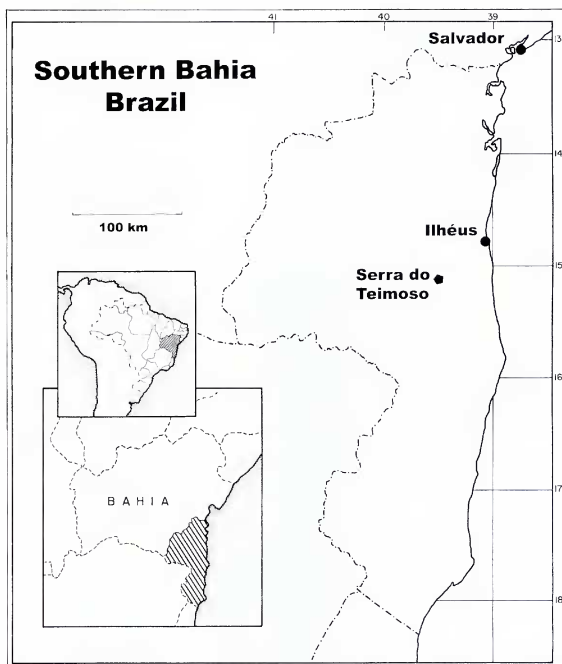


FIG. 1. Serra do Teimoso Reserve and its location in southern Bahia, Brazil and South America.

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

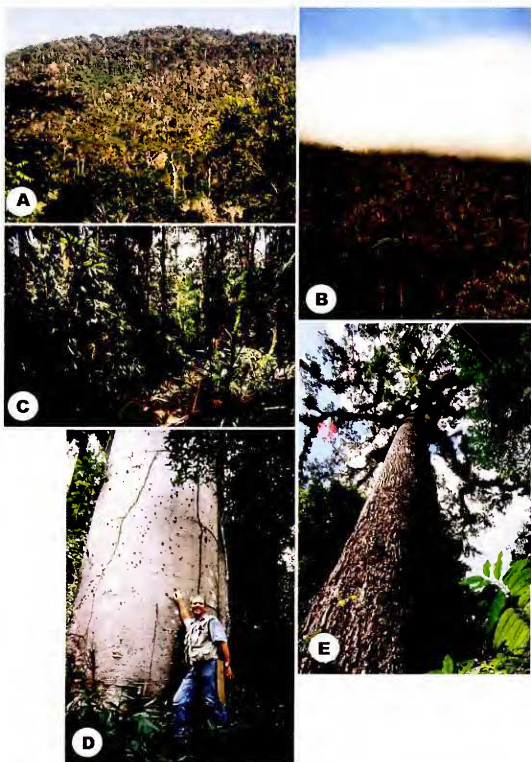


FIG. 2. Vegetation of the Serra do Teimoso Reserve. **A.** View of the forested mountainside. **B.** View of the mountainside with the uppermost forest hidden by the clouds. **C.** Interior of montane forest at the top of the mountain. **D.** Trunk of a large *Cavanillesia arborea*, one of the species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



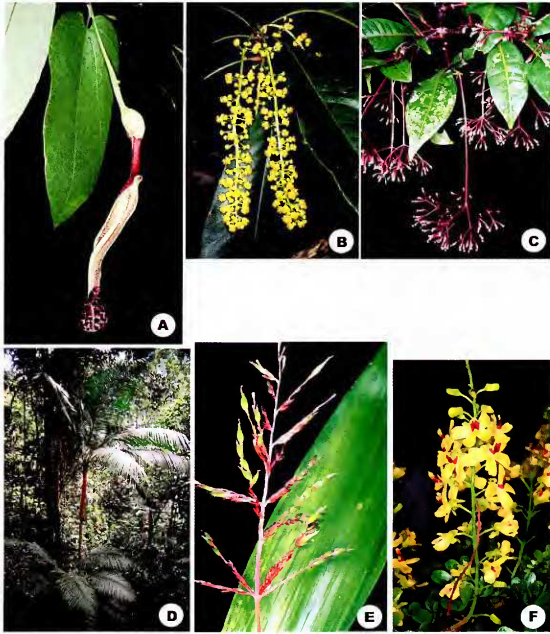


FIG. 3. Some plants characteristic of the Serra do Teimoso Reserve. **A.** *Aristolochia longispathulata* (WT 11741), a species recently described from this forest. **B.** *Quiina glaziovii* (WT 11727), a tree species endemic to the Atlantic coastal forest. **C.** *Guapira laxiflora* (WT 11885), a shrub 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* ("oiticeira"), *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* ("bicuiba-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  $\geq 5$  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* (Thymelacaceae—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: *Ampelocraglabra* (Cannabaceae), *Cascaria melliodora* (Salicaceae), *Edundoa lindenii* (Bromeliaceae), *Faramea oligantha* and *F. rivularis* (Rubiaceae), *Heteropterys bicolor* and *Tetrapterys 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 subspinosum* (Sapotaceae), *Citronella paniculata* (Icacinaeae), *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 *Piperomia* (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*, *Scyphonchium*, 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 (Velooso 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 TWINSpan 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 warmingianum*, *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** = Fabricio 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) Proffice—AA 2474; JJ 3915; PF 1578  
*Lophostachys nemoralis* Mart. ex Nees—AA 2899; JJ 1707, 1757  
*Mendocinia* 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  
*Hornschurchia* 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 callicephalo* 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 ianthinopodum* 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

- Rhodospatha 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  
*Desmancus 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

**ARISTOLOCHACEAE**

- 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 besleriæfolia* 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 bauhinioides* 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. Spen-  
cer—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

*Edmondia 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 innocenti* 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. *macrodonta* 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. *thyriflora* 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* (Poepf. & 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

*I. amanonia* sp.—JJ 3897\*, 3914\*

### CYCLANTHACEAE

*Evodianthus funifer* (Poit.) Lindman—WT 13320

### CYPERACEAE

*Cyperus laxus* Lam.—PF 1962

*Hypolytrum schradenianum* 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\*  
*Argemone tricoeca* Müell. Arg.—AA 2456, 2593;  
 JJ 1498  
*Cnidocolus 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\*  
*Labiab 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\*  
*Platycamus regnellii* Benth.—AA 3718; JJ 1644\*,  
 2372\*  
*Pterocarpus rohrii* Vahl—JJ 1679\*, 3785\*, 3793\*  
*Plathymeria 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 ascheroniana* 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

*Tetrapterys acutifolia* Cav.—AA 2699; JJ 1880; PF 1963

*Tetrapterys 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 porteaana* 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 centrosdesma* Naudin—AA 2889

*Miconia nervosa* (Sm.) Triana—JJ 1495

*Meriania* cf. *tetrameria* 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 selloi* (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 mandiocensis* 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 pruniformis* Cambess.—JJ 3863\*, 3900\*

*Eugenia* aff. *stricta* Kiaersk.—PF 1943

*Marlierea* sp.—JJ 1675\*, 1688\*, 2465\*

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

*Marlierea* cf. *striipes* 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 lailax* (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. *panemense* 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

*Octomeria* 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**

- Gallsia integrifolia* (Spreng.) Harms—JJ 3877\*; LM 2402; WT 11770\*  
*Hillera 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  
*Eremis* 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

**RAFFLESIACEAE**

*Ptilostyles* 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 pulchripetala* (Bremek.) Bacigalupo & E. L. Cabral—JJ 3933

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

*Faramea hyacinthina* Mart.—AA 3711; JJ 3977; PF 1991

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

*Faramea 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 leucocladus* 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\*

*Melicococcus* sp.—AA 2223\*; JJ 1553\*, 1908

*Paullinia* sp.—AA 2201\*

*Paullinia revoluta* Radlk.—AA 2482

*Scyphochyrium 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* (Kuhlm.) 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

*Sarcocaulus 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.) Schltl.—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* Schltl.—AA 2477, 3748; AC 6815

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

*Solanum 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* Kuhl.—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 collarium* Bosch—WT 11804

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

### LOMARIOPSISACEAE

*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 percussa* (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

*Megalasium* 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 mocceanium* (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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#### REFERENCES

- AMORIM, A.M., W.W. THOMAS, A.M.V. CARVALHO, and J.G. JARDIM. (In press). Floristic of the Una Biological Reserve, Bahia, Brazil. In: Thomas, W., ed. The Atlantic Coastal forests of north-eastern Brazil. Mem. New York Bot. Gard.
- ANGIOSPERM PHYLOGENY GROUP. 2003. An updated classification for the families of flowering plants. *Bot. J. Linn. Soc.* 141:399–436.
- BRAZÃO, J.E.M. and A.P. DE ARAUJO. 1981. Vegetação. In: Projeto RadamBrasil: Programa de Integração Nacional, vol. 24:405–456. Ministério das Minas e Energia, Rio de Janeiro.
- BRUMMIT, R.K. and C.E. POWELL. 1992. Authors of plant names. London: Royal Botanic Gardens, Kew.
- CARVALHO FILHO, R., A.A.O. DE MELO, S.O. DE SANTANA, and A.C. LEÃO. 1987. Solos do Município de Ilhéus. *Bol. Técnico* 147. Ilhéus, Bahia, Brasil: Comissão Executiva do Plano da Lavoura Cacaueira.
- CEI (CENTRO DE ESTATÍSTICA E INFORMAÇÕES). 1993. In: Informações básicas dos municípios baianos—Jussari, 5 (II):722–740. Salvador, Bahia.
- GENTRY, A.H. 1997. Regional Overview: South America. In: Davis, S.D., Heywood, V.H., Herrera-MacBryde, O., Villa-Lobos, J. and A.C. Hamilton, eds. Centers of plant diversity, Volume 3: The Americas. IUCN Publications Unit, Cambridge, U.K. Pp. 269–307.
- GONÇALVES, E. 1975. Diagnóstico Socioeconômico da Região Cacaueira, vol. 6: Geologia Econômica e Recursos Minerais. Comissão Executiva do Plano da Lavoura Cacaueira and Instituto Interamericano de Ciências Agrícolas—OEA. Ilhéus, Bahia, Brasil.
- GOUVEIA, J.B.S., L.A. MATTOS SILVA, and M. HORI. 1976. Fitogeografia. In: Diagnóstico Socioeconômico da Região Cacaueira, vol. 7: Recursos Florestais. Comissão Executiva do Plano da Lavoura Cacaueira and Instituto Interamericano de Ciências Agrícolas—OEA. Ilhéus, Bahia, Brasil. Pp. 1–7.
- JANZEN, D.H. 1988. Tropical dry forests: the most endangered major tropical ecosystem. In: Wilson, E.O., ed. Biodiversity. National Academy Press, Washington, D.C. Pp. 130–137.
- KOPPEN, W. 1948. *Climatología con un estudio de los climas de la tierra*. Fondo de Cultura Economica, Mexico, Buenos Aires.
- MAXIMILIANO, PRINCEPE DE WIED-NEUWIED. 1940. Viagem ao Brasil nos anos 1815 a 1817. Tradução de Ed. Sussekind de Mendonça e Flávio Poppe de Figueredo. Companhia Editora Nacional, São Paulo.
- MARTINI, A.M.Z., J.G. JARDIM, and F.A.M. SANTOS. (in press). Natural Regeneration in the forest understory, clearings, and burned areas in the Reserva Biológica de Una, Bahia, Brazil. In: Thomas, W., ed. The Atlantic Coastal forests of northeastern Brazil. Mem. New York Bot. Gard.

- MARTINI, A.M.Z., A.M. AMORIM, and P. FIASCHI. 2004. Vegetação. In: SEMARH, Plano de Manejo do Parque Estadual da Serra do Conduru, Bahia, Brasil. Banco Mundial/UCE/IESB.
- MENDONÇA, J.R., A.M. DE CARVALHO, L.A. MATTOS SILVA, and W.W. THOMAS. 1994. 45 Anos de Desmatamento no Sul da Bahia, Remanescentes da Mata Atlântica—1945, 1960, 1974, 1990. Projeto Mata Atlântica Nordeste, CEPEC, Ilhéus, Bahia, Brasil.
- MORAN, R.C. 1995. Clave para las familias de pteridofitas. In: Davidse, G., Sosa, M.S. and S. Knapp, eds. Flora Mesoamericana, vol. 1. Universidad Nacional Autónoma de México, México, D.F. Pp. 1–2.
- MORELLATO, L.P. and C.F.B. HADDAD. 2000. The Brazilian Atlantic Forest. *Biotropica* 32:786–792.
- MORI, S.A. and L.A. MATTOS SILVA. 1979. The herbarium of the “Centro de Pesquisas do Cacau” at Itabuna, Brazil. *Brittonia* 31: 177–196.
- MORI, S.A., B.M. BOOM, A.M. CARVALHO, and T.S. SANTOS. 1983. A southern Bahian moist forests. *Bot. Rev.* 49:155–232.
- MYERS, N., R. MITTERMEIER, C.G. MITTERMEIER, G.A.B. FONSECA, and J. KENT. 2000. Biodiversity hotspots for conservation priorities. *Nature* 403:853–858.
- OLIVER, W.L.R. and I.B. SANTOS. 1991. Threatened endemic mammals of the Atlantic Forest region of south-east Brazil. Wildlife Preservation Trust, Special Scientific report n°. 4.
- OLIVEIRA-FILHO, A. T. and M.A.L. FONTES. 2000. Patterns of Floristic Differentiation among Atlantic Forests in Southeastern Brazil and the Influence of Climate. *Biotropica* 32: 793–810.
- PENNINGTON, R.T., D.E. PRADO, and C.A. PENDRY. 2000. Neotropical seasonally dry forests and Quaternary vegetation changes. *J. Biogeogr.* 27:261–273.
- PRADO, D.E. 1993a. What is the Gran Chaco vegetation in South America? I. A review. Contribution to the study of flora and vegetation of the Chaco V. *Candollea* 48:145–172.
- PRADO, D.E. 1993b. What is the Gran Chaco vegetation in South America? II. A redefinition. Contribution to the study of flora and vegetation of the Chaco VII. *Candollea* 48: 615–629.
- PRADO, D.E. 2000. Seasonally dry forests of tropical South America: from forgotten ecosystems to a new phytogeographic unit. *Edin. J. Bot.* 57:437–461.
- PRADO, D.E. and P.E. GIBBS. 1993. Patterns of species distribution in the dry seasonal forests of South America. *Ann. Missouri Bot. Gard.* 80:902–927.
- RAITER, J.A., S. BRIDGEWATER, R. ATKINSON, and J.F. RIBEIRO. 1996. Analysis of the floristic composition of the Brazilian cerrado vegetation II: comparison of the woody vegetation of 98 areas. *Edinburgh J. Bot.* 53:153–180.
- ROEDER, M. 1975. Diagnóstico Socioeconômico da Região Cacaueira, vol. 4: Reconhecimento climatológico. Comissão Executiva do Plano da Lavoura Cacaueira and Instituto Interamericano de Ciências Agrícolas—OEA. Ilhéus, Bahia, Brasil.
- SAMBUICHI, R.H.R. 2002. Fitossociologia e diversidade de espécies arbóreas em cabruca (Mata Atlântica raleada sobre plantação de cacau) na região sul da Bahia, Brasil. *Acta Bot. Bras.* 16:89–101.
- TAYLOR, N.P. and D.C. ZAPPI. 2004. Cacti of Eastern Brazil, vol. 1. Ed. Kew: Royal Botanic Gardens.

- THOMAS, W.W. and M.R.V. BARBOSA. (In press). Natural vegetation types in the Brazilian Atlantic Coastal Forest Biome north of the Rio Doce. In: Thomas, W., ed. *The Atlantic Coastal forests of northeastern Brazil*. Mem. New York Bot. Gard.
- THOMAS, W.W., A.M.V. CARVALHO, A.M. AMORIM, J. GARRISON, and A.L. ARBELAEZ. 1998. Plant endemism in two forests in southern Bahia, Brazil. *Biodiversity and Conservation* 7:311–322.
- THOMAS, W.W., J.G. JARDIM, P. FIASCHI, and A.M. AMORIM. 2003. Lista preliminar de angiospermas endêmicas do sul da Bahia e norte do Espírito Santo, Brasil. In: Prado, P.I., E.C. Landau, R.T. Moura, L.P.S. Pinto, G.A.B. Fonseca and K. Alger (orgs.). *Corredor de Biodiversidade da Mata Atlântica do Sul da Bahia*. Publicação em CD-ROOM, Ilhéus, IESB/CI/CABS/UFMG/UNICAMP. ISBN 85 8931-X.
- THOMAS, W.W., A.M.V. CARVALHO, A.M. AMORIM, J. GARRISON, and T.S. SANTOS. (In press). Diversity of woody plants in the Atlantic coastal forest of southern Bahia, Brazil. In: Thomas, W., ed. *The Atlantic Coastal forests of northeastern Brazil*. Mem. New York Bot. Gard.
- VELOSO, H. P. 1992. Sistema Fitogeográfico. In: *Manual Técnico da Vegetação Brasileira*. Fundação Instituto Brasileiro de Geografia e Estatística. IBGE, Rio de Janeiro. Pp. 9–38.
- VINHA, S.G. DA, T.J.S. RAMOS, and M. HORI. 1976. Inventário Florestal. In: *Diagnóstico Socioeconômico da Região Cacaueira*, vol. 7: Recursos Florestais. Comissão Executiva do Plano da Lavoura Cacaueira and Instituto Interamericano de Ciências Agrícolas—OEA. Ilhéus, Bahia, Brasil. Pp. 10–212.