ISSN 1809-127X (online edition)

Open Access | Freely available at *www.checklist.org.br*

Check List
Journal of species lists and distribution

Lists of Species

Arboreal Eudicotyledons, Universidade Federal Rural do Rio de Janeiro Botanical Garden, state of Rio de Janeiro, Brazil

Vinícius Costa Cysneiros [1], Maria Verônica Leite Pereira-Moura [2], Eduardo de Paiva Paula [1] and Denise Monte Braz [2*]

1 Universidade Federal Rural do Rio de Janeiro, Instituto de Florestas, Graduação em Engenharia Florestal. BR 465, Km 7. CEP 23890-000. Seropédica, RJ, Brasil.
2 Universidade Federal Rural do Rio de Janeiro, Instituto de Biologia, Departamento de Botânica. BR 465, Km 7. CEP 23890-000. Seropédica, RJ, Brasil.
* Corresponding author. E-mail: *dmbraz@ufrrj.br*

Abstract: The Universidade Federal Rural do Rio de Janeiro (Federal Rural University of Rio de Janeiro) Botanical Garden (JB/UFRRJ) has a green area occupied mostly by sparsely planted arboreal species, in addition to a small area of regenerating forest and plantations. In consideration of the Brazilian federal rules for botanical gardens, the collection of the Arboretum was studied systematically: collection of complete samples, herborization and identification of the species by accepted botanical methods. The occurrence of native species from different Brazilian phytogeographic domains and common names were verified. A total of 125 species of arboreal Eudicotyledons, belonging to 30 families were registered, of which Fabaceae, Bignoniaceae, Malvaceae, Myrtaceae and Anacardiaceae were the richest ones. Species in danger of extinction and others with biological, ecological or economic value are represented, demonstrating the importance of the area to flora conservation.

Introduction

Botanical collections, living or preserved, are essential to our knowledge of biodiversity (Barbosa and Peixoto 2003) as those found in botanical gardens, which maintain registered collections of living plants used in scientific research, conservation, exhibition and education (Wyse-Jackson 1999). Because of their access to a great number of professionals in training, botanical gardens associated with universities have a fundamental function in the education and training of students, especially in the areas of floristic knowledge and conservation (Peixoto 1991).

The Universidade Federal Rural do Rio de Janeiro Botanical Garden (JB/UFRRJ) was created three decades ago especially to provide education and research opportunities (Guimarães 1982). Today, its expanded mission includes environmental education, extension activities to diffuse scientific understanding to the local community and leisure (Miranda and Colombini 2009). Student training in different activities including plant collection, cultivation or other kinds of floristic knowledge has been fundamental to their formation and is one of the priority actions.

In the JB/UFRRJ native tree species, especially of the Atlantic Rain Forest, and other rare, ornamental or biologically important species are represented (Peixoto 1991). Past unpublished studies have catalogued about 546 arboreal specimens, belonging to 32 families, of which Fabaceae (Leguminosae) was the richest in species number.

Brazilian botanical gardens are regulated by specific federal legislation that obligates them to maintain a local live plant collection that has been scientifically identified, organized and registered. The purpose of this work was to update the identification of the arboreal eudicotiledonous trees represented in the Botanical Garden, their occurrence in Brazilian phytogeographic domains and their common names.

Materials and Methods

The UFRRJ Botanical Garden is located on the university campus, in the municipality district of Seropédica, in the West Zone of Rio de Janeiro state. Its area comprises 16.5 ha, at the coordinates 22°55'41" S and 42°58'54" W (Miranda and Colombini 2009), at a mean elevation 27 m. Most of its grounds is occupied by sparsely planted arboreal species, but aditionally, there is a small forest fragment undergoing natural regeneration, areas of different plant cultures, greenhouses, administration facilities and a lake.

The fieldwork was done monthly during the period of August 2006 to September 2008, when arboreal specimens with a "CAP" (CBH, circumference at breast high) equal or greater than 15 cm were sampled and properly preserved with the usual herborization techniques and included in the Botanical Garden Herbaria (RBE), with duplicates in the Botanical Department (RBR), both from this university. The preparation of taxonomic identification material, the observation of species phenology and the elaboration of a data bank are other activities in development and that are also important to establish a possible conservation collection, as recommended to Botanic Gardens (CONAMA, 2000).

Taxonomic classification follows APG (2003) and species identification was done by reference to the specialized bibliography, comparison with material of

the RBE and RBR Herbaria and, eventually, consultation by specialists. Species were recognized in a wide sense, without subspecies or varieties, with the names and authors verified by electronic consultation with the Missouri Botanical Garden (2010) and The International Plant Name Index (2010) data banks. Common names are those used locally.

The distribution of the species in Brazilian phytogeographic domains (Amazon Forest, "Caatinga", "Cerrado" or Atlantic Rain Forest) follows Oliveira-Filho and Scolforo (2008); for the species not included in this reference, Carvalho (2003; 2006), Oliveira-Filho (2006) and Lorenzi (1999; 2002; 2009) were consulted in that order. Other relevant references about the species were also listed.

Results and Discussion

The UFRRJ's Botanical Garden eudicotiledonous trees are listed by family in Table 1, including their common names, RBE Herbarium register number, their occurrence in Brazilian phytogeographic domains, or their indication as exotic, and other relevant references for the species.

In the local arboretum, 125 species, belonging to 105 genera and 30 botanical families are represented. The richest families are Fabaceae (Leguminosae), with *ca.* 35 % of the total species (43), followed by Bignoniaceae (12), Malvaceae (10), Myrtaceae (8) and Anacardiaceae (7) (Figure 1). In regard to the Fabaceae, species like "pau-brasil" (*Caesalpinia echinata*), "sibipiruna" (*Caesalpinia pluviosa*), "copaiba" (*Copaifera langsdorffii*), "guapuruvu" (*Schizolobium parahyba*), "cássia-rosa" (*Cassia grandis*) and "jatobá" (*Hymenaea courbaril*), among others, are notable for their economic or biological significance.

Among all the species, 94 (*ca.* 75 %) are native to Brazil. Most of them have wide distribution, occurring in more than one Brazilian phytogeographic domain and 14 (*ca.* 11 %) occur in the four major ones (Amazon Forest, "Caatinga", "Cerrado" and Atlantic Rain Forest), like "ipê-roxo" (*Handroanthus impetiginosus*), "pitangueira" (*Eugenia uniflora*) and "pau-d'alho" (*Gallesia integrifolia*). Regarding native species, 79 (*ca.* 85 %) occur in the Atlantic Rain Forest and 17 (*ca.* 14 %) are limited to this phytogeographic domain, like "pau-ferro" (*Caesalpinia ferrea*), "chichá" (*Sterculia chicha*), "araçá" (*Psidium cattleianum*) and "oiti" (*Licania tomentosa*).

Exotic species are represented especially by economically or ornamentally important ones, like "flamboyant" (*Delonix regia*), "cinamomo" (*Melia azedarach*), "mogno-africano" (*Khaya grandifoliola*), "amoreira" (*Morus alba*) and others.

"Pau-brasil", the national tree of Brazil, called "ibirapitanga" (red wood) by the native people (Ormindo 2008), is in danger of extinction in its natural habitat (MMA 2008). This species is locally represented by many individuals in different phases of development. The "jacarandá" or "jacarandá-caviúna" (*Dalbergia nigra*), is another species of the Atlantic Rain Forest in danger of extinction (MMA 2008) and is also represented. Other notable species are those with rare occurrence, like "maçaranduba" (*Manilkara subsericea*) (Oliveira-Filho and Scolforo 2008) and "oiticica" (*Licania rigida*) (Lorenzi 2009), species with restricted distribution, like "pau-rei" (*Pterygota brasiliensis*) (Ormindo 2008) and "peroba" (*Aspidosperma parvifolium*) (Oliveira-Filho and Scolforo 2008), or climax species like "jequitibá-branco" (*Cariniana estrellensis*), "jeniparana" (*Gustavia augusta*) and "mogno" (*Swietenia macrophylla*) (Oliveira-Filho and Scolforo 2008), among others with ecological importance. These data demonstrate that the UFRRJ Botanical Garden has an important function in the conservation of native species, especially from the Atlantic Rain Forest.

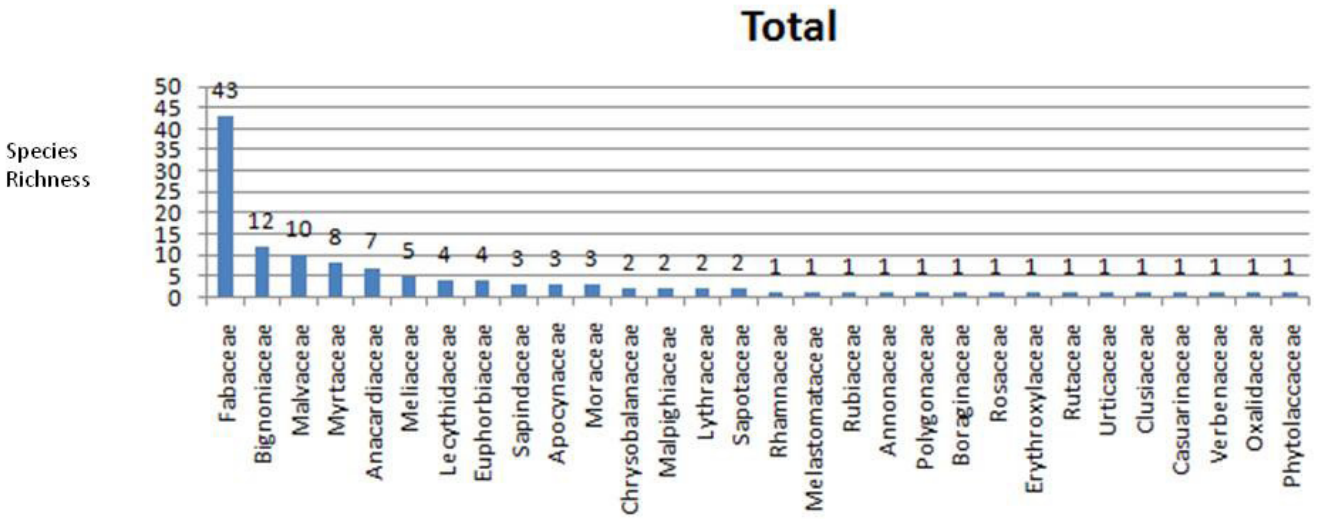

Figure 1. Species-rich families of Eudicotyledonous trees in the "Universidade Federal Rural do Rio de Janeiro" Botanical Garden, Seropédica, RJ, Brazil.

Table 1. Eudicotyledonous trees of the Universidade Federal Rural do Rio de Janeiro Botanical Garden, Seropédica, RJ, Brazil. (AM= Amazon Forest; CA= "Caatinga"; CE= "Cerrado"; MA= Atlantic Rain Forest; EX= exotic species. Additional references: 1= Carvalho 2003; 2006; 2008; 2= Carvalho 2007; 3= Guimarães *et al.* 1993; 4= IBGE 2002; 5= Koch and Kinoshita 2005; 6= Lorenzi 1999; 2002; 2009; 7= Lorenzi *et al.* 2003; 8= Louppe 2008; 9= Mansano and Lima 2007; 10= Marchiori 1997; 11= Neves and Carauta 2004; 12= Oliveira-Filho 2006; 13= Oliveira-Filho and Scolforo 2008; 14= Ormindo 2008; 15= Prance 1972; 16= Rossi 1994; 17= Siqueira 1992.

Family and Species	Common Name	Nº RBE	Phytogeographic Domain	References
Anacardiaceae				
Anacardium occidentale L.	cajueiro	2605	CE	4,6,13
Astronium graveolens Jacq.	gonçalo-alves	2249	AM,CE,MA	6,12,13
Mangifera indica L.	mangueira	59	EX	7,14
Myracrodruon urundeuva Allemao	aroeira-do-sertão	2248	CA,CE,MA	4,6,12,13
Schinopsis brasiliensis Engl.	braúna-parda	2251	AM,CA,CE,MA	6,13
Schinus terebinthifolius Raddi	aroeira	2599	CE,MA	6,12,13,16
Spondias venulosa Mart. *ex* Engl.	cajá-grande	2247	CE,MA	6,13
Annonaceae				
Annona montana Macfad.	araticum-açu	2252	AM,CA,CE,MA	4,12,13
Apocynaceae				
Aspidosperma parvifolium A.DC.	peroba	85	CE,MA	6,13
Tabernaemontana hystrix (Steud) A .DC.	leiteira	2254	CE,MA	5,12,13
Thevetia peruviana (Pers.) K.Schum.	chapéu-de-napoleão	2253	EX	17
Bignoniaceae				
Cybistax antisyphilitica (Mart.) Mart.	ipê-verde	2256	AM,CA,CE,MA	6,12,13
Kigelia pinnata (Jacq.) DC.	boca-de-sapo	2257	EX	7
Jacaranda brasiliana (Lam.) Pers.	árvore-talismã	2255	AM,CA,CE,MA	6,13
Sparattosperma leucanthum (Vell.) K. Schum.	cinco-chagas	353	AM,CE,MA	6,13
Spathodea nilotica Seem	espatódea	2261	EX	7
Handroanthus chrysotrichus (Mart. *ex* DC.) Mattos	ipê-amarelo	2259	CE,MA	6,12,13,14
Handroanthus heptaphyllus (Mart.) Mattos	ipê-rosa	2260	CE,MA	6,13,14
Handroanthus impetiginosus (Mart. *ex* DC.) Mattos	ipê-roxo	358	AM,CA,CE,MA	6,12,13
Handroanthus ochraceus (Cham.) Mattos	ipê	2617	AM,CA,CE,MA	6,13
Tabebuia avellenadae Lorentz *ex* Griseb.	ipê-roxo	2607	CE,MA	6
Tabebuia roseo-alba (Ridl.) Sandwith	ipê-branco	2258	AM,CA,CE,MA	6,12,13
Tecoma stans (L.) Juss. *ex* Kunth.	ipê-de-jardim	2608	EX	7
Boraginaceae				
Cordia superba Cham.	babosa-branca	2262	CA,CE,MA	6,13,14
Casuarinaceae				
Casuarina equisetifolia J.R. & G.Forst.	casuarina	973	EX	7
Chrysobalanaceae				
Licania rigida Bentham	oiticica	2263	CA,MA	6,15
Licania tomentosa (Benth.) Fritsch	oiti	2264	MA	6,12,13,14
Clusiaceae				
Calophyllum inophyllum L.	tamanu	2270	EX	7
Erythroxylaceae				
Erythroxylum pulchrum A.St.-Hil.	arco-de-pipa	2269	CA,CE,MA	12,13
Euphorbiaceae				
Aleurites moluccana (L.) Willd.	nogueira-do-iguapi	2267	EX	7
Hevea brasiliensis (Willd. *ex* A . Juss.) Mull. Arg.	seringueira	2268	AM	6,14
Hura crepitans L.	açacu	2265	AM	3,6,14
Joannesia princeps Vell.	boleira	2266	CE,MA	6,12,13
Lecythidaceae				
Cariniana estrellensis (Raddi) Kuntze	jequitibá-branco	2272	CA,CE,MA	6,12,13,14
Couroupita guianensis Aubl.	abricó-de-macaco	2274	AM	6,14
Gustavia augusta L.	jeniparana	2271	AM,MA	6,13,14
Lecythis pisonis Cambess.	sapucaia	2273	AM,CE,MA	6,12,13,14
Fabaceae				
Acacia auriculiformis A. Cunn. *ex* Benth.	acácia-australiana	1349	EX	7
Acacia mangium Willd.	acácia-australiana	1351	EX	7
Albizia lebbeck (L.) Benth.	coração-de-negro	1342	EX	7,1

Table 1. ***Continued.***

Family and Species	Common Name	Nº RBE	Phytogeographic Domain	References
Amburana cearensis (Allemao) A.C. Sm.	cerejeira	2609	CA,CE,MA	6,13
Anadenanthera colubrina (Vell.) Brenan	angico-branco	1347	AM,CA,CE,MA	6,12,13
Anadenanthera macrocarpa (Benth.) Brenan	angico-vermelho	1350	CA,MA	1,6
Bauhinia variegata L.	pata-de-vaca	1358	EX	7
Caesalpinia echinata Lam.	pau-brasil	1361	MA	1,6,13,14
Caesalpinia ferrea Mart. *ex* Tul.	pau-ferro	1533	MA	6,12,14
Caesalpinia pluviosa D.C.	sibipiruna	1534	MA	6,12
Cassia fistula L.	canafístula	1363	EX	7,1
Cassia grandis L. f.	cassia-rosa	1362	AM,CA,MA	1,6
Cassia leptophylla Vog.	canafístula	1535	MA	6,1
Cassia renigera Wall. *ex* Benth	cassia-rosa	1084	EX	7
Centrolobium tomentosum Guillemin *ex* Benth.	araribá-rosa	1385	AM,CA,CE,MA	6,12,13,14,16
Clitoria fairchildiana R.A . Howard	sombreiro	1392	AM	6,10,14
*Choroleucom tortum (*Mart.) Pittier	tataré	2611	MA	6
Copaifera langsdorffii Desf.	copaíba	1364	CE,MA	6,12,13,16
Dalbergia nigra (Vell.) Allemao *ex* Benth	jacarandá-caviúna	1453	CE,MA	6,12,13,14
Delonix regia (Bojer *ex* Hook.) Raf	flamboyant	1365	EX	7
Enterolobium contortisiliquum (Vell.) Morong	orelha-de-negro	1346	CA,CE,MA	6,12,13
Erythrina speciosa Andrews	mulungu	1455	MA	6,12,13,14
Gliricidia sepium (Jacq.) Steud.	gliricidia	2582	EX	7
Hymenaea courbaril L.	jatobá	1366	CA,CE,MA	1,6,12,13,14
Inga cylindrica (Vell.) Mart.	ingá-feijão	1352	AM,CE,MA	6,12,13
Inga laurina (Sw.) Willd.	ingá	1353	CE,MA	6,12,13
Inga sessilis (Vell.) Mart.	Ingá-macaco	1343	CE,MA	6,12,13,16
Leucaena leucocephala (Lam.) R. de Wit	leucena	1354	EX	7
Machaerium hirtum (Vell.) Stellfeld	jacarandá-bico-de-pato	1476	CE,MA	6,12,13
Machaerium paraguariense Hassl.		2610	CA,CE	6,12,13
Mimosa caesalpiniifolia Benth.	sabiá	1348	AM,CE	6,13
Peltophorum dubium (Spreng.) Taub.	ciafístula	2592	CA,CE,MA	1,6,12,13,14
Piptadenia paniculata Benth.	marmeleiro	1355	CE,MA	1,12,13
Pithecellobium dulce (Roxb.) Benth.	ingá-doce	1344	EX	7
Platypodium elegans Vogel	jacarandá-branco	1496	AM,CA,CE,MA	6,12
Pterocarpus violaceus Vogel.	aldrago	1697	MA	6,12
Pterogyne nitens Tul.	amendoim-bravo	1356	CA,CE,MA	6,12,13
Samanea tubulosa (Benth.) Barneby & J.W. Grimes	sete-cascas	1345	AM,CA,MA	2,6
Schizolobium parahyba (Vell.) S.F.Blake	guapuruvu	1369	AM,MA	1,6,12,13,14
Senna siamea (Lam.) H.S. Irwin & R.C. Barneby	cássia-siâmica	1367	EX	7
Senna spectabilis (W. Schrad.) H.S. Irwin & Barneby	são-joão	1357	AM,CE,MA	6,12,13
Swartzia langsdorffii Raddi.	pacová-de-macaco	1536	MA	6,14
Swartzia oblata Cowan	sangue-de-burro	1538	CE,MA	6,9,12,13,16
Lythraceae				
Lafoensia glyptocarpa Koehne	mirindiba-rosa	2276	MA	6,12,13
Lagerstroemia speciosa Pers.	resedá	2275	EX	7
Malpighiaceae				
Byrsonima sericea DC.	murici	2337	AM,CE,MA	6,12,13
Malpighia glabra L.	acerola	2338	EX	7
Malvaceae				
Bombacopsis glabra (Pasq.) A . Robyns	castanha-do-maranhão	2326	MA	6,12
Ceiba speciosa (A . St.-Hil.) Ravenna	paineira	2328	CA,CE,MA	6,12,13,16
Guazuma ulmifolia Lam.	mutamba	2329	CA,CE,MA	6,12,13
Hibiscus tiliaceus L.	algodão-da-praia	2330	EX	7
Luehea divaricata Mart.	açoita-cavalo	2331	AM,CA,CE,MA	6,12,13
Pachira aquatica Aubl.	monguba	2332	AM	6,12,14
Pseudobombax grandiflorum (Cav.) A . Robyns	embiruçu	2333	CA,CE,MA	6,12,13,16
Pterygota brasiliensis Allemao	pau-rei	2334	MA	6,12,13

Table 1. ***Continued.***

Family and Species	Common Name	Nº RBE	Phytogeographic Domain	References
Sterculia chicha A .St.-Hil. *ex* Turpin	chichá	2335	MA	6,12,13,14
Theobroma cacao L.	cacau	2336	AM	6
Melastomataceae				
Tibouchina granulosa (Desr.) Cogn.	quaresmeira	2603	MA	6,12
Meliaceae				
Cedrela odorata L.	cedro	2369	CA,CE,MA	6,12,13,14
Guarea guidonia (L.) Sleumer	carrapeta	2370	CE,MA	4,6,12,13
Khaya grandifoliola C.DC.	mogno-africano	2612	EX	8
Melia azedarach L.	cinamomo	2371	EX	7
Swietenia macrophylla R.A.King	mogno	2613	AM	6,17
Moraceae				
Artocarpus heterophyllus Lam.	jaca-manteiga	2368	EX	7,14
Ficus benjamina L.	ficus-benjamina	2614	EX	7
Morus alba L.	amoreira	1903	EX	7
Myrtaceae				
Callistemon viminalis (Sol. *ex* Gaertn) G. Don *ex*.Loud	rabo-de-cotia	2362	EX	7
Campomanesia xanthocarpa O. Berg	gabiroba	1905	CA,CE,MA	6,13
Eugenia brasiliensis Lam.	grumixama	2366	CA,MA	6,12,13
Eugenia uniflora L.	pitanga	2364	AM,CA,CE,MA	6,12,13,16
Psidium guajava L.	goiabeira	2365	CA,CE,MA	6,12,13
Psidium cattleianum Sabine.	araçá	2361	MA	6,13
Syzygium cumini (L.) Skeels	jamelão	2367	EX	7
Syzygium malaccense (L.) Merr. & L. M. Perry	jambo	2363	EX	7,14
Oxalidaceae				
Averrhoa carambola L.	carambola	2360	EX	7
Phytolaccaceae				
Gallesia integrifólia (Spreng.) Harms.	pau-d'alho	2356	AM,CA,CE,MA	3,4,6,13
Polygonaceae				
Triplaris americana L.	pau-formiga	2027	CA,CE,MA	6,13
Rhamnaceae				
Colubrina glandulosa Perkins	sobrasil	2602	AM,CE,MA	6,12,13,16
Rosaceae				
Eriobotrya japonica (Thunb.) Lindl.	nêspera	2354	EX	7
Rubiaceae				
Genipa americana L.	jenipapo	2352	AM,CA,CE,MA	6,12,13,14
Rutaceae				
Metrodorea nigra A.St.- Hil.		2615	CE,MA	6,13
Sapindaceae				
Cupania oblongifolia Mart.	camboatã	2349	CE,MA	6,12,13,16
Sapindus saponaria L.	saboneteiro	2350	CE	4,6,13
Talisia esculenta Radlk.	pitombeira	2351	CE,MA	4,6,13
Sapotaceae				
Manilkara subsericea (Mart.) Dubard	maçaranduba	2616	MA	6,13,14
Syderoxylum obtusifolium (Roem. & Schult.) T.D.Penn	quixaba	2618	AM,CE	6,12,13
Urticaceae				
Cecropia lyratiloba Miq.	embaúba	2358	MA	11
Verbenaceae				
Gmelina arborea Roxb. *ex* Sm.	guimelina	2359	EX	7

Acknowledgments: The authors are grateful to the UFRRJ Botanical Garden employees for help during the study; to Prof. Dr. Áurea Echevarria and to the UFRRJ "Decanato de Pesquisa e Pós-Graduação" for financial support; to Dr. Haroldo Cavalcante Lima and Dr. Rejane Gomes for species identification; to Pollyanna Rodrigues and Joaquim Mendonça Junior for helping in the field work.

Literature Cited

APG (Angiosperm Phylogeny Group) II. 2003. An update of the Angiosperm Phylogeny Group classification for the orders and families of flowering plants: APG II. *Botanical Journal of the Linnean Society* 141: 399-436.

Barbosa, M.R.V and A. Peixoto. 2003. Coleções botânicas brasileiras: situação atual e perspectivas; p. 113-140 *In*A. Peixoto (org.). *Coleções Biológicas de Apoio ao Inventário, Uso Sustentável e Conservação da Biodiversidade*. Rio de Janeiro: Instituto de Pesquisas Jardim Botânico do Rio de Janeiro.

Carvalho, P.E.R. 2003. *Espécies Arbóreas Brasileiras. Vol. 1*. Brasília / Colombo: Embrapa Informação Tecnológica / Embrapa Floresta. 1039 p.

Carvalho, P.E.R. 2006. *Espécies Arbóreas Brasileiras. Vol. 2*. Brasília / Colombo: Embrapa Informação Tecnológica / Embrapa Floresta. 627 p.

Carvalho, P.E.R. 2007. Bordão-de-velho – *Samanea tubulosa*. *Circular Técnica* 132: 1-6.

Carvalho, P.E.R. 2008. *Espécies Arbóreas Brasileiras. Vol. 3*. Brasília / Colombo: Embrapa Informação Tecnológica / Embrapa Floresta. 593 p.

CONAMA. 2000. *Resolução nº 266, de 3 de agosto de 2000*. Electronic Database accessible at http://www.cetesb.sp.gov.br/licenciamentoo/legislacao/federal/resolucoes/2000_Res_CONAMA_266.pdf. Ministério do Meio Ambiente. Captured on 20 November 2010.

Guimarães, E.F., L. Mautone, C.T. Rizzini and A. Mattos-Filho. 1993. *Árvores do Jardim Botânico do Rio de Janeiro*. Rio de Janeiro: Instituto de Pesquisa Jardim Botânico do Rio de Janeiro. 198 p.

Guimarães, J.L. 1982. O Jardim Botânico da Universidade Federal Rural do Rio de Janeiro, suas origens, sua implantação e seu desenvolvimento; p. 37-48 *In Anais do XXXIII Congresso Nacional de Botânica, Maceió*. Brasília: EMBRAPA - DDT.

IBGE. 2002. *Árvores do Brasil Central: espécies da região geoeconômica de Brasília*. Rio de Janeiro: IBGE, Diretoria de Geociências. 417 p.

Koch, I. and L.S. Kinoshita. 2005. *Tabernaemontana* L; p. 83-86 *In* M.G.L. Wanderley, G.J. Shepherd, T.S.A. Melhem and A.M. Giulietti, (ed.). *Flora Fanerogâmica do Estado de São Paulo, Vol. 4*. São Paulo: FAPESP, Rima.

Lorenzi, H. 1999. *Árvores Brasileiras, Manual de identificação e cultivo de plantas arbóreas do Brasil, Vol. 1*. São Paulo: Instituto Plantarum. 352 p.

Lorenzi, H. 2002. *Árvores Brasileiras, Manual de identificação e cultivo de plantas arbóreas do Brasil, Vol. 2*. São Paulo: Instituto Plantarum. 352 p.

Lorenzi, H. 2009. *Árvores Brasileiras, Manual de identificação e cultivo de plantas arbóreas do Brasil, Vol. 3*. São Paulo: Instituto Plantarum. 384 p.

Lorenzi, H., H. M. Souza, M. A. V. Torres and L. B. Bacher. 2003. *Árvores exóticas no Brasil: madeireiras, ornamentais e aromáticas*. São Paulo: Instituto Plantarum. 368 p.

Louppe, D. 2008. Meliaceae; p. 329-333 *In* D. Louppe, A.A. Oteng-Amoako and M. Brink (ed.). *Plant Resource of tropical Africa (Series) 7(1)*. Wageningen: Prota Foundation.

Mansano, V.F. and J.R. Lima. 2007. O gênero *Swartzia* Schreb. (Leguminosae, Papilionoideae) no Estado do Rio de Janeiro. *Rodriguésia* 58: 469-483.

Marchiori, J. N. C. 1997. *Dendrologia das Angiospermas: Leguminosas*. Santa Maria: Universidade Federal de Santa Maria. 199 p.

Miranda, E.E. and F. Colombini. 2009. *Jardins Botânicos do Brasil*. São Paulo: Metalivros. 173 p.

Missouri Botanical Garden. 2010. *Tropicos*. Electronic database accessible at http://www.tropicos.org. Captured on 05 August 2010.

MMA (Ministério do Meio Ambiente). 2008. *Lista oficial das espécies da flora brasileira ameaçadas de extinção*. Electronic database accessible at http://www.ibama.gov.br/sisbio/legislacao. Ministério do Meio Ambiente. Captured on 24 January 2010.

Neves, L.J. and J.P.P. Carauta. 2004. Moraceae do Horto do Museu Nacional, Rio de Janeiro. *Albertoa, série Urticineae (Urticales)*18: 113-140.

Oliveira, R.R. and A.S. Zaú. 1995. Método alternativo de subida em árvore. *Bromélia* 2(11): 6-11.

Oliveira-Filho, A. T. 2006. *Catálogo das Árvores Nativas de Minas Gerais: Mapeamento e Inventário da Flora Nativa e dos Reflorestamentos de Minas Gerais*. Lavras: Universidade Federal de Lavras. 423 p.

Oliveira-Filho, A.T. and J.R. Scolforo (coord.). 2008. *Inventário Florestal de Minas Gerais: Espécies Arbóreas da Flora Nativa*. Lavras: Universidade Federal de Lavras. 619 p.

Ormindo, P. 2008. *Árvores notáveis: 200 anos do Jardim Botânico do Rio de Janeiro*. Rio de Janeiro: Andréa Jakobson Estúdio. 295 p.

Peixoto, A.L. 1991. The Development of a University Botanic Garden in Brazil; p. 119-125 *In* W.H. Heywood and P. Wyse-Jackson (ed.). *Tropical Botanical Gardens: their role in conservation and development. 1ª ed*. London: Academic Press.

Prance, G. 1972. *Chrysobalanaecae. Flora Neotropica. Monograph. N. 9*. New York: New York Botanical Garden. 409 p.

Rossi, L. 1994. A flora arbóreo-arbustiva da mata da Reserva da Cidade Universitária "Armando de Salles Oliveira" (São Paulo, Brasil). *Boletim do Instituto de Botânica* 9: 1-105.

Siqueira, J.C. (coord.). 1992. *A Flora do Campus PUC-Rio*. Rio de Janeiro: Expressão e Cultura. 86 p.

The International Plant Name Index (2010). *The International Plant Name Index*. Electronic database accessible at http://www.ipni.org/. Captured on 05 August 2010.

Wyse-Jackson, P. S. 1999. Experimentation on a large scale – an analysis of the holdings and resources of botanic gardens. *Botanic Gardens Conservation News* 3(3): 27-30.

Received: October 2010
Last Revised: November 2010
Accepted: November 2010
Published online: January 2011
Editorial responsibility: Frederico Augusto Guimarães Guilherme