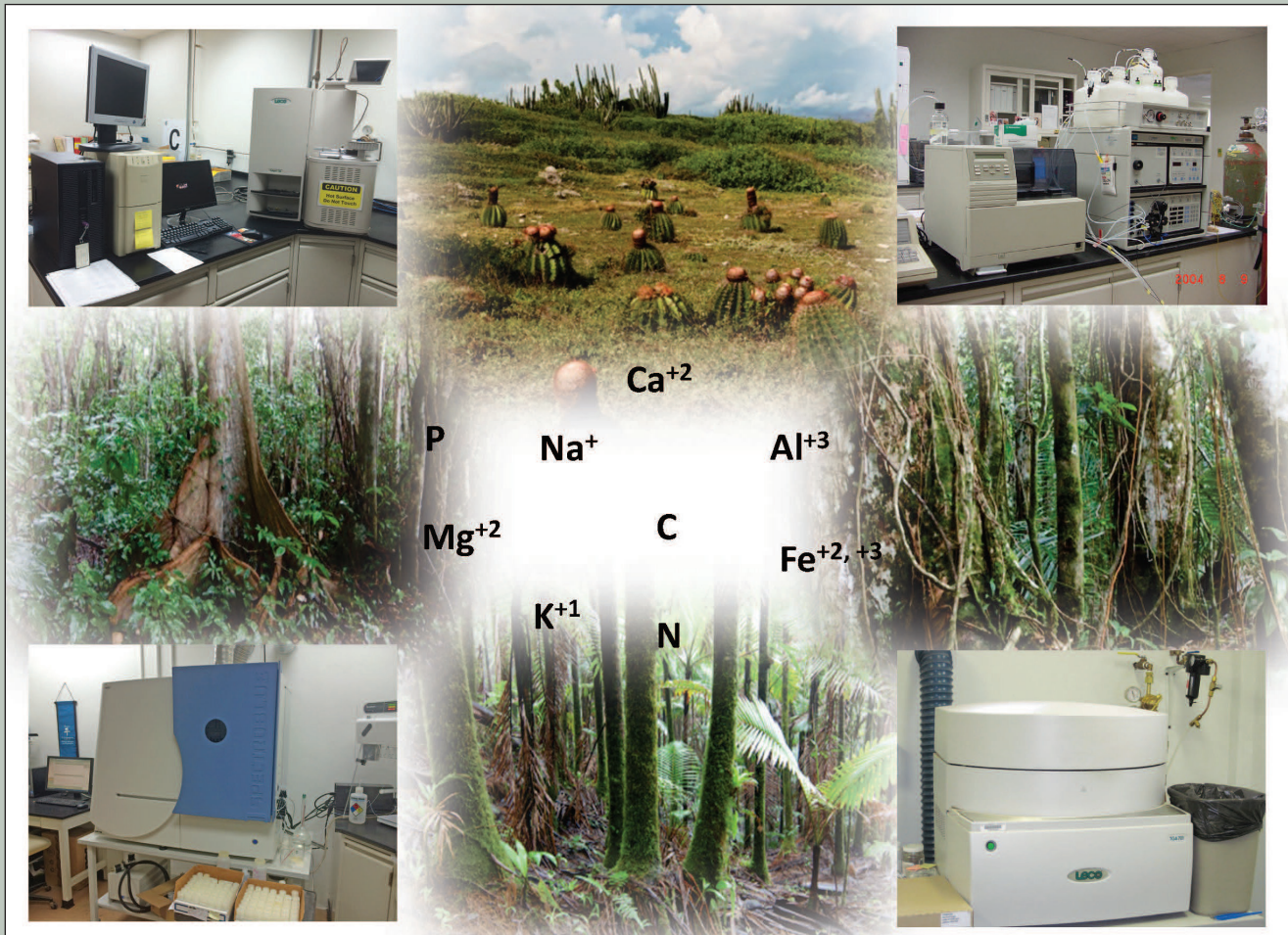


# Chemical and Physical Analyses of Selected Plants and Soils From Puerto Rico (1981–2000)



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# **Chemical and Physical Analyses of Selected Plants and Soils From Puerto Rico (1981–2000)**

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## **Abstract**

**Sánchez, Mary Jeane; Lopez, Edwin; Lugo, Ariel E., comps. 2015.** Chemical and physical analyses of selected plants and soils of Puerto Rico (1981–2000). Gen. Tech. Rep. GTR-IITF-45. Rio Piedras, PR: U.S. Department of Agriculture, Forest Service, International Institute of Tropical Forestry. 85 p.

This report contains the results of analyses conducted at the chemistry laboratory of the International Institute of Tropical Forestry in Puerto Rico from 1981 to 2000. The data set includes 109,177 plant analyses and 70,729 soil analyses. We report vegetation chemical data by plant part, species, life zone, soil order, geology, or parent material. Soil data are reported by depth, soil order, geology or parent material, and life zone. These data are summarized to facilitate interpretation and highlight the mean and range of values obtained.

Keywords: Plant, soil, chemical, element, tropical.

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*Ernesto Medina*



## Introduction

The International Institute of Tropical Forestry's chemistry laboratory, established in 1981 in Puerto Rico, has the capacity to analyze total and available elements in soil and plant parts, including aluminum, calcium, carbon, chromium, iron, manganese, magnesium, nickel, nitrogen, phosphorus, potassium, and sulfur as well as ash, loss on ignition, and organic matter. In 1981 the laboratory conducted 93 analyses for two investigators; in 1990, it analyzed samples in 10 projects for 8 investigators for a total of 14,840 analyses. By 2000, the laboratory analyzed samples in 21 projects for 16 investigators, for a total of 47, 614 analyses.

This document contains the results of most analyses conducted at the laboratory from 1981 to 2000. Sanchez et al. (1997) reported results up to 1990, and here we update that report to the year 2000. Our objective continues to be making available in one place all the chemical and physical data that we develop in our laboratory. With the increased importance of the field of ecological stoichiometry (Sturner and Elser 2002), the relevance of data compendia such as this one increases. Most of these data are for vegetation (mostly forests) and soils of Puerto Rico. Not included here (but available in the laboratory) are data for other parts of the world, particularly from Argentina. The chemical composition of plant parts or soil is summarized by plant species, soil order, and geology, or parent material.

## Description of the Contents

The elemental concentration is described in terms of mean, standard deviation, and median, maximum, and minimum values. Codes used for the life zones and types of plant parts (tissues) are defined in tables 1 and 2, respectively. The results of the analyses are not discussed in this report. However, we summarize the data to facilitate interpretation and to synthesize the range of values obtained for tropical ecosystems. The range of values for elements in plants and soils are summarized in table 3 (plants) and tables 4 to 6 (soils). Methods of analysis are described in table 7. Table 8 contains the bulk of the vegetation data and table 9 contains the bulk of the soil data, both based on individual studies. Data sources for table 8 and 9 are listed in appendix 1, Tables 8 and 9 are published on the CD.

Study species and identification numbers are listed in appendix 2. Appendices 3 to 5 consist of graphs that show elemental concentration in various plant parts by species. Appendix 6 contains graphs with data about soil samples. The figures show data on mean concentration of elements and other constituents in different types of soil. Data on other characteristics, such as bulk density and effective cation exchange capacity, are also shown. Appendix 7 contains an analysis of leaf chemistry data from different environments.

The next and third version of this report will include analyses from 1981 to 2010, and we welcome comments for improving the presentation of data. We ask for acknowledgment of any use of this information and for copies of reports, articles, or documents resulting from the use of this information.

**Table 1—Ecological life zone codes**

Code	Ecological region
Lmrf	Subtropical lower montane rain forest
Lmwf	Subtropical lower montane wet forest
Sdf	Subtropical dry forest
Smf	Subtropical moist forest
Srf	Subtropical rain forest
Swf	Subtropical wet forest

**Table 2—Codes for the identification of plant part samples (continued)**

I. Soil						
II. Vegetation						
1. Trees	A. Leaves	i. Canopy	a. Young	b. Mature	c. Other	
		ii. Shade	a. Young	b. Mature		
		iii. Other				
	B. Branches					
	C. Main bole, stem, trunk	i. Bark				
		ii. Heartwood				
		iii. Sapwood				
	D. Twigs					
	E. Roots					
	F. Flowers, fruits					
	G. Miscellaneous					
	H. Leaves, stems					
	2. Shrubs	A. Leaves				
		B. Branches				
C. Main bole, stem, trunk		i. Bark				
D. Twigs						
E. Roots						
F. Flowers, fruits						
G. Miscellaneous						
H. Leaves, stems						

**Table 2—Codes for the identification of plant part samples (continued)**

3. Herbs	A. Leaves	i. Canopy	
		ii. Shade	
	B. Branches		
	C. Main bole, stem, trunk	i. Bark	
	D. Twigs		
	E. Roots		
	F. Flowers, fruits		
	G. Miscellaneous		
4. Climber	H. Leaves, stems		
	A. Leaves		
	B. Branches		
	C. Main bole, stem, trunk	i. Bark	
	D. Twigs		
	E. Roots		
5. Moss	F. Flowers, fruits		
	A. Leaves		
	6. Other	B. Branches	
		C. Main bole, stem, trunk	
		D. Twigs	
		E. Roots	
F. Flowers, fruits			
7. Coarse woody debris	A. Bark		
	B. Heartwood		
	C. Sapwood		
8. Loose litter	A. Leaves		
	B. Wood		
	C. Flowers, fruits		
	D. Miscellaneous		
9. Litter fall	A. Leaves		
	B. Wood		
	C. Flowers, fruits		
	D. Miscellaneous		



Table 3—Range of chemical concentration data for plants parts

Plant part	Aluminum (mg/g)	Ash (%)	Calcium (mg/g)	Carbon (%)	Cobalt ( $\mu$ g/g)	Copper ( $\mu$ g/g)	Chromium ( $\mu$ g/g)	Iron (mg/g)	Magnesium (mg/g)	Manganese (mg/g)	Nickel ( $\mu$ g/g)	Nitrogen (%)	Phosphorus (mg/g)	Potassium (mg/g)	Sodium (mg/g)	Sulfur (%)	Zinc ( $\mu$ g/g)
Bark	3.52-0.01	15.86-0.14	63.48-0.29	54.80-40.00					1.40-0.65	0.24-0.08			0.35-0.17	2.66-0.98			
Bole	13.61-0.01	11.48-0.44	41.60-0.47	54.16-48.12				1.48-0.01	7.00-0.06	0.37-0.01		3.32-0.22	2.00-0.02	31.00-0.42	12.49-10.43	0.54-0.01	
Branches	6.98-0.01	4.53	22.26-0.91	49-41	0.30			0.28-0.01	5.53-0.26	1.36-0.01		1.53-0.03	1.59-0.01	16.20-0.27		0.28-0.01	
Climber								8.85-0.01	14.80-0.43	2.55-0.05	69.75	7.03-0.37	4.47-0.21	89.46-1.12		0.57-0.07	
Coarse woody debris:	0.25-0.05	11.86-2.82	13.79-1.18	51.20-43.96					1.17-0.33			0.31-0.08	0.18-0.08	2.14-0.20			
Bark	4.35-0.09		13.50-6.72					1.40-0.07	2.38-0.36	0.79-0.05			0.47-0.05	3.06-0.58			
Heartwood	0.14-0.01	14.01-1.75						0.15-0.01	1.17-0.25	0.13-0.02		0.31-0.08	0.22-0.04	2.23-0.23			
Sapwood	0.75-0.02		25.37-2.60					1.18-0.02	1.01-0.22	0.97-0.03			0.49-0.07	3.47-0.57			
Flowers and fruits	0.07-0.02		10.05-2.65					21.00-0.04	4.86-0.77	1.01-0.01		2.92-0.36	3.80-0.37	34.34-2.68			
Heartwood	34.80-0.01	21.94-1.15	71.55-0.71	57.24-42.00	5.80-0.30	32.20-1.88		0.08-0.02	1.13-0.32	0.13-0.03		0.24-0.11	0.15-0.03	1.64-0.37			
Leaves:	34.80-0.01	57.55-0.50	49.90-0.36	61-16	4.13-0.10	7.55-2.00	178.00-1.00	5.97-0.01	35.05-0.35	2.10-0.01	181.45-2.35	4.57-0.21	13.87-0.01	61.15-0.43	185.41-0.28	1.67-0.04	52.43-4.84
Canopy	0.03	19.97-0.53	80.02-32.04	52				0.04	1.42	0.04		4.57-0.51	0.84-0.21	10.49-0.80	0.72	0.13	
Mature-canopy	0.17-0.12		15.58-10.16					3.84-2.93	3.84-2.93	0.06-0.04		1.80-0.48	5.61-0.21	23.99-0.80			
Mature-shade		17.55-11.83						4.50-3.45	4.50-3.45	0.15-0.04		1.71-1.42	0.88-0.60	8.73-4.99			
Leaves-other:	0.08-0.03	5.65-4.19	12.13-5.65	54-41				0.21-0.05	4.45-2.04	0.15-0.04		5.08-0.65	1.50-0.86	12.79-6.95	0.66-0.21	0.52-0.31	
Shade	2.07-0.09	17.55-14.28	97.98-46.54					5.94-3.36	5.94-3.36			1.59-0.93	3.64-0.77	26.38-4.99			
Leaves and stems	7.89-0.06	22.07-4.02	44.95-2.72	55.80-37.80				0.39-0.11	5.67-1.19	0.72-0.05		1.92-1.36	1.98-0.66	41.35-7.25			
Miscellaneous	33.37-2.68	14.57-5.51						7.39-0.09	2.84-1.11	0.40-0.05		2.80-0.87	1.51-0.22	12.42-0.93		0.74-0.28	
Moss			17.07-2.09					27.47-1.82	3.09-0.53	1.42-0.04		1.43-0.24	1.79-0.20	1.79-0.20			
Other	13.73-0.01	16.46-2.10	9.77-1.21	54.82-39.85					8.25-0.64			1.65-0.78	1.15-0.22	20.68-2.25			
Roots	2.7-0.01	31.82-0.14	41.92-0.21					17.62-0.09	17.71-0.44	0.69-0.01		2.07-0.14	2.00-0.11	15.75-1.56	48.24-11.52	0.78-0.04	
Shrubs			63.48-10.47					0.27-0.01	4.53-0.05	0.33-0.01		0.70-0.52	0.22-0.14	5.90-3.00			
Trunk:			16.19-3.24									2.43-0.06	2.48-0.01	44.13-0.30			
Bark	0.46-0.18		22.42-0.77					0.50-0.13	1.53-0.039	0.45-0.05		3.39-2.59	0.28-0.12	2.38-0.99			
Sapwood									4.33-0.21				1.18-0.02	8.53-4.44			
Twigs																	
Loose litter:																	
Flowers and fruits	9.46-0.33	9.59-0.71	18.75-1.97	55.23-43.62				4.57-1.11	7.12-0.77	0.77-0.06		2.36-0.44	2.18-0.25	4.45-0.99	2.27-1.32	0.40-0.13	
Leaves	15.09-0.07	22.66-3.14	36.69-1.38	57.14-37.86				6.01-0.09	6.77-1.10	1.69-0.03		3.96-0.50	1.18-0.01	12.84-1.09		1.55-0.11	
Miscellaneous	20.90-0.15	43.13-5.94	103.03-1.81	46.39-30.71				22.02-0.26	4.87-1.42	1.56-0.05		8.80-0.91	0.95-0.05	9.14-0.23		0.38-0.15	
Wood	6.63-0.13	9.82-1.98	26.99-2.10	54.07-42.23				2.16-0.03	5.05-0.70	1.05-0.03		1.45-0.32	0.85-0.10	7.57-0.46		0.35-0.11	
Litter fall:																	
Flowers and fruits	2.17-0.10	6.01-3.80	8.73-1.13	54.21-43.50				3.32-0.25	3.56-0.09	0.46-0.02		2.33-0.41	5.63-0.27	11.62-0.68	9.77-6.72	0.57-0.21	
Leaves	4.97-0.35	16.46-4.80	38.71-0.28	57.55-41.20				6.26-0.13	6.13-0.37	1.22-0.11		1.96-0.48	0.82-0.15	8.76-0.68	23.93-0.19	0.59-0.15	
Miscellaneous	9.49-0.34	21.90-5.49	15.87-4.43	50.40-36.00				11.59-0.27	4.74-1.25	0.56-0.17		2.44-0.58	1.32-0.31	8.48-2.28		0.46-0.21	
Wood	2.79-0.13	10.43-3.42	25.47-2.52	52.23-44.13				0.55-0.08	3.09-0.81	0.80-0.09		1.14-0.26	0.40-0.07	6.25-0.81		0.37-0.16	

**Table 4—Chemical and physical characteristics of alfisols, entisols, and histosols by soil order or parent material**

Element	Alfisols		Entisols		Histosols	
	Depth	Value	Depth	Value	Depth	Value
	<i>cm</i>		<i>cm</i>		<i>cm</i>	
Aluminum (cmol/kg <sup>-1</sup> )	0-30	0.12-0.05			0-40	0.39-0.01
Aluminum (mg/g)			0-30	0.16-0.03	0-20	3.24-0.01
			100-150	0.13-0.05		
Aluminum-total (mg/g)			0-30	23.07-12.44		
			100-150	18.25-9.17		
Bulk density (g/cc)	0-18	1.96-0.45	0-18	1.32-1.11		
Carbon/nitrogen	0-15	747-21			0-40	307-1
Calcium (cmol/kg <sup>-1</sup> )	0-15	49.13-1.24			0-40	19.66-2.56
	15-80	4.99-0.67				
Calcium (mg/g)	0-80	9.83-0.13	0-30	7.53-1.72	0-30	3.93-0.34
Calcium-total (mg/g)			0-150	7.01-4.06		
Carbon (%)	0-15	45.17-28.58	0-30	32.16-7.15	0-30	28.06-0.40
Clay (%)	0-30	26-3	0-30	27-5		
Cobalt-total (mg/g)						
Copper-total (mg/g)						
Chromium-total (mg/g)						
ECEC (cmol/kg <sup>-1</sup> )	0-30	65.79-4.00			0-30	23.95-4.09
Iron (mg/g)	0-30	0.20-0.01	0-20	0.07-0.01	0-40	0.19-0.01
Iron-total (%)			0-150	2.21-1.13		
LOI (%)			0-30	74.90-33.39	0-40	55.91-1.42
Magnesium (mg/g)	0-30	1.85-0.05	0-30	13.19-0.28	0-40	1.82-0.01
Magnesium (cmol/kg <sup>-1</sup> )	0-80	15.44-0.58			0-40	3.34-0.11
Magnesium-total (mg/g)	0-30	14.01-1.63				
Manganese (mg/kg)	0-30	350-16	0-30	250-6	0-30	84-1
Manganese-total (mg/g)			0-150	0.17-0.05		
Nickel-total (mg/g)						
Nitrogen (%)	0-15	1.35-0.06	0-30	1.19-0.28	0-30	3.00-0.01
Organic matter (%)	0-30	20.96-0.35	0-30	3.54-0.60		
pH (H <sub>2</sub> O)	0-30	8.86-4.73	0-30	8.26-3.76	0-30	8.26-4.38
pH (KCl)	0-30	7.26-4.69	0-20	4.50-3.66	0-30	7.83-4.08
Phosphorus (mg/kg)	0-30	39-2	0-30	572-20	0-30	16-2
					30-120	

**Table 4—Chemical and physical characteristics of alfisols, entisols, and histosols by soil order or parent material (continued)**

Element	Alfisols		Entisols		Histosols	
	Depth	Value	Depth	Value	Depth	Value
	<i>cm</i>		<i>cm</i>		<i>cm</i>	
Phosphorus-total (mg/g)			0-30	0.29-0.09		
Potassium (cmol/kg <sup>-1</sup> )	0-80	0.38-0.06			0-40	0.57-0.03
Potassium (mg/kg)	0-30	292-80	0-30	4850-50	0-30	220-11
Potassium-total (mg/g)			0-30	4.06-2.82		
Sand (%)	0-30	97-41	0-30	86-11		
Silt (%)	0-30	35-1	0-30	58-9		
Sodium (cmol/kg <sup>-1</sup> )	0-15	0.76-0.03			0-30	2.28-0.06
Sodium (mg/kg)	0-30	130-7			0-30	830-12
Sodium-total (mg/g)						
Sulfur (mg/g)			0-150	76.90-16.00	0-40	19.00-0.04

ECEC = effective cation exchange capacity. LOI = loss on ignition. KCl = potassium chloride.

**Table 5—Chemical and physical characteristics of inceptisols, limestone, and mollisols by soil order or parent material**

Element	Inceptisols		Limestone		Mollisols	
	Depth	Value	Depth	Value	Depth	Value
	<i>cm</i>		<i>cm</i>		<i>cm</i>	
Aluminum (cmol/kg <sup>-1</sup> )	-50	16.12-0.15	0-24	0.24-0.04	-30	19.42-0.01
	0-30	49.82-7.30			0-10	19.34-1.18
Bulk density (g/cc)	0-30	1.63-0.07	0-23	1.52-0.53	0-30	1.42-0.25
					30-75	1.20-0.65
Carbon/nitrogen	0-30	120-12			0-30	28-11
Calcium (cmol/kg <sup>-1</sup> )	0-25	50.96-0.02			0-30	97.06-0.10
	25-50	6.47-0.01				
Aluminum (mg/g)	0-30	9.70-0.01	0-30	10.99-1.37	0-30	19.41-0.02
	0-30	84.47-0.78	0-23	25.06-7.86	0-23	346.58-1.91
Aluminum-total (mg/g)						
	0-30	19.68-0.32			0-30	46.07-1.41
Clay (%)	0-30	85-5	0-30	77-1	0-30	61-1
Cobalt-total (mg/g)						
Copper-total (mg/g)						
Chromium-total (mg/g)						
ECEC (cmol/kg <sup>-1</sup> )	0-25	62.61-1.52	0-30	59.85-9.00	0-30	117.38-8.00
Iron (mg/g)	0-30	3.370-0.004	0-30	0.39-0.01	0-30	1.590-0.002

**Table 5—Chemical and physical characteristics of inceptisols, limestone, and mollisols by soil order or parent material (continued)**

Element	Inceptisols		Limestone		Mollisols	
	Depth	Value	Depth	Value	Depth	Value
	<i>cm</i>		<i>cm</i>		<i>cm</i>	
Iron-total (%)	0-30	8.02-1.18			0-10	5.88-0.15
LOI (%)	0-30	98.18-1.46	0-30	15.25-8.98	0-30	93.18-0.24
Magnesium (mg/g)	0-30	1.48-0.01	0-30	0.77-0.12	0-30	2.52-0.02
Magnesium (cmol/kg <sup>-1</sup> )	0-30	12.37-0.01			0-30	19.72-0.18
Magnesium-total (mg/g)	0-30	31.57-1.34	0-23	9.99-6.96	0-23	14.06-0.21
Manganese (mg/kg)	0-30	195-1	0-30	310-10	0-30	573-7
Manganese-total (mg/g)	0-30	1.71-0.34			0-10	1.14-0.04
Nickel-total (mg/g)						
Nitrogen (%)	0-30	0.76-0.03	0-23	0.38-0.22	0-30	3.14-0.12
Organic matter (%)	0-30	28.16-0.85	0-30	21.01-0.60	0-30	41.32-2.36
	30-100	3.39-0.12	30-100	1.26-0.25		
pH (H <sub>2</sub> O)	0-30	9.07-3.78	0-30	7.80-4.23	0-30	8.42-3.45
pH (KCl)	0-30	8.02-3.18	0-30	7.13-4.65	0-30	7.48-3.13
Phosphorus (mg/kg)	0-30	36-1	0-30	95-29	0-30	1010-8
Phosphorus total (mg/g)	0-30	7.22-0.09	0-30	1.12-0.13	0-23	1.42-0.03
	30-100	0.40-0.06	30-100	0.29-0.09		
Potassium (cmol/kg <sup>-1</sup> )	0-30	1.60-0.01			0-30	18.93-0.10
Potassium (mg/kg)	0-30	609-16	0-30	371-90	0-30	7194-36
Potassium-total (mg/g)	0-30	7.96-1.28	0-23	3.72-2.63	0-23	13.89-0.76
Sand (%)	0-30	89-1	0-30	91-3	0-30	80-7
Silt (%)	0-30	64-4	0-30	77-3	0-30	68-11
Sodium (cmol/kg <sup>-1</sup> )	0-25	1.34-0.08			0-30	5.22-0.01
Sodium (mg/kg)	0-25	310-5	0-30	210-21	0-30	1201-4
Sodium-total (mg/g)	0-43	0.47-0.33	0-23	0.99-0.77		
Sulfur (mg/g)	0-30	16.97-0.05			0-30	4.45-0.08

ECEC = effective cation exchange capacity. LOI = loss on ignition. KCl = potassium chloride.

**Table 6—Chemical and physical characteristics of oxisols, ultisols, and vertisols by soil order or parent material**

Element	Oxisols		Ultisols		Vertisols	
	Depth	Value	Depth	Value	Depth	Value
	<i>cm</i>		<i>cm</i>		<i>cm</i>	
Aluminum (cmol/kg <sup>-1</sup> )	0-15	0.23-0.09	0-50	53.01-0.01	0-30	0.06
			50-680	15.42-0.01		
Aluminum (mg/g)			0-40	0.81-0.01		
Aluminum-total (mg/g)			0-30	180.20-6.57		
			50-120	228.20-98.90		
Bulk density (g/cc)	0-18	1.25-0.57	0-30	1.76-0.08		
Carbon/nitrogen	0-15	148-42	0-35	37-6		
			25-120	62-9		
Calcium (cmol/kg <sup>-1</sup> )	0-15	36.75-13.05	0-40	80.75-0.01		
			100-680	14.23-0.37		
Calcium (mg/g)	0-15	7.35-2.61	0-50	62.000-0.003	0-30	4.16
Calcium-total (mg/g)			0-30	16.93-0.03		
			50-120	9.80-0.90		
Carbon (%)	0-30	42.18-34.45	0-35	27.42-0.34		
Clay (%)	0-18	27-25	0-30	89-1	0-30	40-11
Cobalt-total (mg/g)			0-60	0.67-0.38		
Copper-total (mg/g)			0-60	0.04-0.01		
Chromium-total (mg/g)			0-60	8.33-5.10		
ECEC (cmol/kg <sup>-1</sup> )	0-15	40.95-14.66	0-30	90.03-0.16	0-30	38.44
Iron (mg/g)	0-15	0.03-0.01	0-40	13.08-0.002	0-30	0.01
Iron-total (%)			0-30	15.9-0.89		
LOI (%)			0-30	116.41-2.27		
Magnesium (mg/g)	0-15	0.47-0.11	0-30	7.68-0.01	0-30	1.71
Magnesium (cmol/kg <sup>-1</sup> )	0-15	3.95-0.95	0-30	33.9-0.12		
Magnesium-total (mg/g)			0-30	35.03-0.34		
Manganese (mg/kg)	0-15	41-13	0-30	840-1	0-30	40
Manganese-total (mg/g)			0-30	10.22-0.01		
Nickel-total (mg/g)			0-60	3.35-1.51		
Nitrogen (%)	0-15	0.82-0.28	0-30	3.00-0.02		
Organic matter (%)	0-18	14.23-3.34	0-30	44.23-0.25	0-30	3.14
Organic matter (%)						
pH (H <sub>2</sub> O)	0-18	7.89-5.43	0-30	4.45-3.64	0-30	8.05
pH (KCl)	0-15	7.37-6.51	0-30	7.68-3.11	0-30	6.99
Phosphorus (mg/kg)	0-15	97-18	0-30	1793-1	0-30	63
Phosphorus (mg/kg)			30-120	230.00-0.44		



**Table 6—Chemical and physical characteristics of oxisols, ultisols, and vertisols by soil order or parent material (continued)**

Element	Oxisols		Ultisols		Vertisols	
	Depth	Value	Depth	Value	Depth	Value
	<i>cm</i>		<i>cm</i>		<i>cm</i>	
Phosphorus total (mg/g)			0-30	4.32-0.04		
Phosphorus total (mg/g)			30-120	0.59-0.10		
Potassium (cmol/kg <sup>-1</sup> )	0-15	0.81-0.19	0-30	1.65-0.02		
Potassium (mg/kg)	0-15	307-74	0-30	1905-1	0-30	420
Potassium-total (mg/g)			0-30	13.00-0.79		
Sand (%)	0-18	36	0-30	78-1	0-30	11
Silt (%)	0-18	37	0-30	63-6	0-30	38
Sodium (cmol/kg <sup>-1</sup> )	0-15	0.33-0.04	0-30	2.46-0.01		
Sodium (mg/kg)	0-15	76-10	0-30	567-1	0-30	520
Sodium-total (mg/g)						
Sulfur (mg/g)			0-20	1.80-0.01		

ECEC = effective cation exchange capacity. LOI = loss on ignition. KCl = potassium chloride.

**Table 7—Methods of chemical analysis and references<sup>a</sup>**

Sample	Analysis	Reference to method
Soil	Available-aluminium, calcium, magnesium, sodium	Hunter 1974
	Available-iron, manganese, phosphorus, potassium	Hunter 1974
	Total-aluminium, calcium, iron, magnesium manganese, phosphorus, potassium, sodium	Huang and Shulte 1985
	Loss on ignition	Wilde et al. 1979
	Nitrogen (macro Kjeldahl) from Jan 1980–1995	Page 1982b
	Nitrogen (macro dry combustion) from Feb 1995–2000	Leco Corp. 2000b form No. 203-821-165
	Organic matter	Page 1982
	pH (H <sub>2</sub> O-KCl)	Southern Coop. Series 1983
Vegetation	Aluminium, calcium, cobalt, iron, magnesium, manganese, nickel, phosphorus, potassium, sodium	Huang and Shulte 1985 and Chapman and Pratt 1979a
	Ash	Wilde et al. 1979
	Nitrogen (macro Kjeldahl) from Jan 1995–1980	Chapman and Pratt 1979b
	Nitrogen (macro dry combustion) from Feb 1995–2000	Leco Corp. 2000a form No. 203-821-172
	Wood density	ASTM 1968

<sup>a</sup> Details on variations in methodology are available upon request.

## References

- American Society of Testing and Materials [ASTM]. 1968.** Book of ASTM Standard. Part 16. Philadelphia, PA.
- Chapman, H.D.; Pratt, P.F. 1979a.** Métodos de análisis para suelos, plantas y aguas. Métodos de acenización. Capítulo. 2: 47–49.
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## **Appendix 1: Data Sources**

Data sources are arranged by general area of study. The numbers correspond to sources cited in the tables on the characteristics of plant and soil samples. The sources are cross referenced to species in appendix 2.

### **Soils**

1. Nutrient dynamics of a Puerto Rican subtropical dry forest. *Journal of Tropical Ecology*. 2: 55–72, 1986  
Investigators: Ariel E. Lugo and P. Murphy  
Location: Guánica Forest, Guánica, Puerto Rico  
Date of collection: 1981–1983
2. Guánica Study #2508  
Investigator: Vicky Dunevitz (Michigan State University)  
Location: Guánica Forest, Guánica, Puerto Rico  
Date of collection: 1982
3. Guánica Study #2508  
Investigator: Dan Nepstad (Michigan State University)  
Location: Guánica Forest, Guánica, Puerto Rico  
Date of collection: 1983
4. Estudio de la colonización en áreas de derrumbes en el Bosque Experimental de Luquillo. In: Lugo, A.E., ed. *Los Bosques de Puerto Rico*. U.S. Department of Agriculture, Department of Natural Resources; University of Puerto Rico, 110–122, 1983  
Investigators: Carmen Varela, D. Ortiz, A. Berríos, and H.J. Álvarez-Science Teacher Association Investigation  
Location: Landslides along PR 191 in Luquillo Experimental Forest, Puerto Rico  
Date of collection: August 1981
5. Structure and dynamics in the Colorado Forest of the Luquillo Mountains of Puerto Rico  
Investigator: Peter Weaver (Michigan State University, Ph.D. dissertation, 1987)  
Location: Luquillo Experimental Forest, Puerto Rico  
Date of collection: December 1981–July 1982

6. Estudio comparativo de algunas propiedades químicas y físicas de suelos de bosque bajo uso natural y plantación  
Investigador: Mary Jeane Sánchez (M.Sc. thesis University of Puerto Rico, Mayagüez Campus)  
Location: Luquillo Experimental Forest, Puerto Rico  
Date of collection: 1985–1986
7. Landslide disturbance and forest regeneration in the Upper Luquillo Mountains of Puerto Rico. *Journal of Ecology*. 78: 814–832, 1990  
Investigador: Manuel Guariguata  
Location: Luquillo Experimental Forest, Puerto Rico  
Date of collection: June 1988
8. Growth studies of plantations of *Pinus caribaea* var. *hondurensis* in Puerto Rico  
Investigador: Mohammed Zakir Hussain (Yale University, Ph.D. dissertation, 1987)  
Location: Pine plantations, various sites, Puerto Rico  
Date of collection: 1984–1985
9. Studies of ecological and geological factors controlling the pattern of Tabonuco forests in the Luquillo Experimental Forest, Puerto Rico  
Investigador: Khadga Basnet (State University of New Jersey, Ph.D. dissertation, 1990)  
Location: Bisley, Luquillo Experimental Forest, Puerto Rico  
Date of collection: 1988
10. Structure, succession, and soil chemistry of palm forest in the Luquillo Experimental Forest. *Tropical forest: Management and Ecology*: 142–177, 1995  
Investigators: Ariel E. Lugo, A. Bokkestijn, and F.N. Scatena  
Location: Palm Slope Forest, El Verde (PS-2) and Juan Diego (PS-1): Caribbean National Forest, Puerto Rico  
Date of collection: June 1986
11. Land use and organic carbon content of some subtropical soils. *Plant and Soil*. 96: 185–196, 1986  
Investigators: Ariel E. Lugo, M.J. Sánchez, and S. Brown  
Location: Various sites, Puerto Rico  
Date of collection: 1982–1984

12. Revegetation on landslides  
Investigator: Jean Lodge  
Location: Large slide next to El Verde Field Station, Puerto Rico  
Date of collection: December 1988
13. Performance of *Anthocephalus chinensis* in Puerto Rico. Canadian Journal of Forest Research. 15: 577–585, 1985  
Investigators: Ariel E. Lugo and J. Figueroa  
Location: Various sites, Puerto Rico  
Date of collection: May 1983
14. Forest plantings in Puerto Rico and Virgin Islands/small leaf mahogany survey  
Investigator: John Francis  
Location: Various sites, Puerto Rico  
Date of collection: 1990
15. Restoration and rehabilitation of tropical forests.  
Investigator: Ariel E. Lugo (Environmental Sciences Course, University of Puerto Rico, Río Piedras Campus)  
Location: Río Mameyes (river basin), Luquillo Experimental Forest, Puerto Rico  
Date of collection: September–October 1989
16. Fauna oligotológica de suelos de la serie Nipe en el Bosque Estatal de Maricao  
Investigator: Hendriekje Hubers (M.Sc. thesis University of Puerto Rico, Mayagüez Campus, 1993)  
Location: Maricao Forest, Puerto Rico  
Date of collection: August 1990
17. Productivity, nutrient cycling, and succession in single- and mixed-species plantations of *C. equisetifolia*, *E. robusta*, and *L.leucocephala* in Puerto Rico. Forest Ecology and Management. 124: 45–77, 1999  
Investigator: John Parrotta  
Location: Toa Baja Experimental Farm, Toa Baja, Puerto Rico  
Date of collection: 1993



18. Protection and planting to accelerate increases in biodiversity on deforested sites  
Investigators: John Francis and J. Parrotta  
Location: Camp Santiago, Salinas, Puerto Rico  
Date of collection: 2000
19. Productivity, nutrient cycling, and succession in single- and mixed-species plantations of *C. equisetifolia*, *E. robusta*, and *L. leucocephala* in Puerto Rico. *Forest Ecology and Management*. 124: 45–77, 1999  
Investigator: John Parrotta  
Location: Toa Baja Experimental Farm, Toa Baja, Puerto Rico  
Date of collection: December 1996
20. Former land use and tree species affect nitrogen oxide emissions from a tropical dry forest. *Oecologia*. 130: 297–308, 2002  
Investigator: Heather Erickson  
Location: Guánica Forest, Guánica, Puerto Rico  
Date of collection: May–December 1995
21. Nitrogen oxide fluxes and nitrogen cycling during post agricultural succession and forest fertilization in the humid tropics. *Ecosystems*. 4: 67–84, 2001  
Investigators: Heather Erickson, M. Keller, and E.A. Davidson  
Location: El Verde Station, Sabana and Mameyes, Luquillo Experimental Forest, Río Grande, Puerto Rico  
Date of collection: 1995–1996
22. Eco-physiological evaluation of drought stress in montane and lowland forests as a result of an unusual dry spell in June 1994  
Investigators: Ernesto Medina and E. Cuevas  
Location: Bisley and East Peak, Puerto Rico  
Date of collection: June 1994
23. Pterocarpus-Punta Viento  
Investigators: Ernesto Medina, E. Cuevas, and A.E. Lugo  
Location: Pterocarpus Forest, Punta Viento; Patillas, Puerto Rico  
Date of collection: August 1994

24. Dwarf mangrove project  
Investigators: Ernesto Medina, E. Cuevas, and A.E. Lugo  
Location: Ceiba, Puerto Rico (entrance through Marina del Rey, about 2 km in the direction of Roosevelt Roads swamp)  
Date of collection: March 1999
25. Pterocarpus soil collection  
Investigators: Ernesto Medina, E. Cuevas, and M. Aide  
Location: Sabana Seca, Puerto Rico  
Date of collection: February 1997
26. Dwarf mangrove project  
Investigators: Ernesto Medina, E. Cuevas, and A.E. Lugo  
Location: Ceiba, Puerto Rico (entrance through Marina del Rey, about 2 km in the direction of Roosevelt Roads swamp)  
Date of collection: December 1995
27. The effects of small-scale and catastrophic disturbance on carbon and nutrient cycling in a lower subtropical wet forest in Puerto Rico  
Investigator: Whendee Silver  
Location: Bisley Watersheds, Carribbean National Forest, Luquillo Experimental Forest, Puerto Rico  
Date of collection: 1993–1999
28. Bisley Gaps soil phosphorus project  
Investigator: Whendee Silver  
Location: In a lower subtropical wet forest, Puerto Rico  
Date of collection: September 1994
29. The role of biodiversity in biogeochemical cycling in a moist subtropical forest in the Luquillo Experimental Forest, Puerto Rico  
Investigator: Lara Kueppers (M.Sc. thesis Stanford University, Stanford, California, 1996)  
Location: Cubuy, Luquillo Experimental Forest, Puerto Rico  
Date of collection: 1995
30. Archaeological study  
Investigator: Edna Lee Ortiz  
Location: Ensenada Breñas and Cerro Gordo, Vega Alta, Puerto Rico  
Date of collection: November–December 1990

31. Hydrological process in a humid tropical rain forest: a combined experimental and modelling approach  
Investigators: Japp Schellekens (Ph.D. dissertation Vrije University, Amsterdam, 2000)  
Location: Bisley Watersheds, Luquillo Experimental Forest, Puerto Rico  
Date of collection: June 1997
32. Biogeochemical study of a tropical estuarine lagoon: carbon/nitrogen fluxes  
Investigator: Mayra E. Suárez (M.Sc. thesis University of Puerto Rico, Mayagüez Campus)  
Location: Joyuda Lagoon, Cabo Rojo, Puerto Rico  
Date of collection: 1994–1995
33. Distribution and population ecology and reproductive biology of *Goetzea elegans* Wydler  
Investigator: Eugenio Santiago Valentín  
Location: Quebradillas, Isabela, Puerto Rico  
Date of collection: July 1993
34. Controls on spatial and temporal variability in nitrous oxide fluxes across a tropical rain forest ecosystem in the Luquillo Experimental Forest, Puerto Rico  
Investigator: Claire P. McSwiney (Ph.D. dissertation, University of Hampshire May 1999)  
Location: Río Icos basin, Luquillo Experimental Forest, Puerto Rico  
Date of collection: January 1998
35. Long-term ecological research watersheds flood-plain study  
Investigator: Don Durfee  
Location: Río Mameyes, flood plains, Luquillo Experimental Forest, Puerto Rico  
Date of collection: August 1991
36. Estudio de la vegetación en afloraciones de serpentinita en el Bosque Estatal de Maricao, Puerto Rico  
Investigator: Geraldino Caminero (M.Sc. thesis, University of Puerto Rico, Mayagüez Campus)  
Location: Maricao Forest, Maricao, Puerto Rico  
Date of collection: February 1991

37. Forest plantings in Puerto Rico and Virgin Islands. Study #2510 *Prunus occidentalis* (Amendrán)  
Investigator: Salvador Alemañy  
Location: Road 191 Km 19, Caribbean National Forest, Puerto Rico  
Date of collection: January 1992
38. Influence of microenvironment of growth and nutrient dynamics of three herbaceous species in the Bisley Experimental Watersheds of Luquillo Experiment Forest, Puerto Rico  
Investigator: Amy Arnold (M.Sc. thesis Tennessee University)  
Location: Bisley, Luquillo Experimental Forest, Puerto Rico  
Date of collection: December 1995–January 1996
39. Performance of *Hibiscus elatus* in Puerto Rico. Commonwealth Forestry Review. 67: 327–338, 1988  
Investigators: John Francis and P. Weaver  
Location: Puerto Rico  
Date of collection: 1987
40. The performance of *Tectona grandis* in Puerto Rico. Commonwealth Forestry Review. 69: 313–323, 1990  
Investigators: Peter Weaver and J. Francis  
Location: Puerto Rico  
Date of collection: 1987
41. Tabonuco Project (*Dacryodes excelsa* Vahl)  
Investigator: Migdalia Álvarez  
Location: Bisley, Vereda Cristal, Puerto Rico  
Date of collection: 1994
42. Ecological aspects of earthworms from Laguna Cartagena, Puerto Rico. Caribbean Journal of Science. 32: 406–412, 1996  
Investigators: Mónica Alfaro and S. Borges  
Location: Lajas, Puerto Rico  
Date of collection: September 1990
43. A comparison of ten provenances of *Eucalyptus deglupta* and *E. Europhylla* in Puerto Rico: growth and survival over 15 years  
Investigators: Ariel E. Lugo and J. Francis  
Location: Yabucoa and Río Abajo, Puerto Rico  
Date of collection: May–June 1987

44. *Swietenia macrophylla* and *Swietenia macrophylla* x *S. Mahogoni*  
development and growth: the nursery phase and establishment phase  
in line planning in the Caribbean Nacional Forest, Puerto Rico  
Investigator: Gerald P. Bauer (M.Sc. thesis New York State University,  
Syracuse)  
Location: Sabana, Caribbean National Forest, Puerto Rico  
Date of collection: 1985
45. Nutrients and mass in litter and top soil of ten tropical tree plantations.  
Arboretum Study. Plant and Soil. 125: 263–280, 1990  
Investigators: Ariel E. Lugo, E. Cuevas, and M.J. Sánchez  
Location: Arboretum, Cienaga Alta, Luquillo Experimental Forest,  
Puerto Rico  
Date of collection: October 1986
46. Nutrient return accumulation in litter of a secondary forest in the coffee  
region of Puerto Rico. Acta Científica. 13(1-3): 43–74, 1999  
Investigator: Ariel E. Lugo, C. Domínguez, A. Santos, and E. Torres  
Location: Torrecilla secondary forest, Bo. Hincado, Barranquitas,  
Puerto Rico  
Date of collection: May 1991
47. Comparison of two secondary forests in the coffee zone of central Puerto  
Rico. Acta Científica. 13(1-3): 27–41, 1999  
Investigators: Nathaniel Popper, C. Domínguez, A. Santos et al.  
Location: Bo. Caguana, Utuado, Puerto Rico  
Date of collection: 1996
48. Comparative study of nutrient dynamics of two forest types in Luquillo  
Experimental Forest  
Investigators: Fu Sheinglei and A.E. Lugo  
Location: El Verde, Luquillo Experimental Forest, Puerto Rico  
Date of collection: July 1995
49. Soil oxygen availability and biogeochemistry along rainfall and  
topographic gradients in upland wet tropical forest soils  
Biogeochemistry. 44: 301–328, 1999  
Investigator: Whendee Silver, A.E. Lugo and M. Keller  
Location: Bisley, Puerto Rico  
Date of collection: July 1993



50. Contribution of wood to soil organic matter  
Investigators: Jean Lodge and N. Clum  
Location: El Verde, Puerto Rico  
Date of collection: 1999
51. Estudio comparativo de análisis de nutrientes entre una zona tabacalera y una zona cafetalera que actualmente son bosques secundarios en Naranjito  
Investigator: Ángel Santiago (Francisco Morales High School, Naranjito, Puerto Rico)  
Location: Naranjito, Puerto Rico  
Date of collection: August 2000
52. Luquillo Experimental Forest tree-uproots  
Investigators: Melanie Lenart and F. Scatena  
Location: Luquillo Experimental Forest, Puerto Rico  
Date of collection: December 2000
53. Difference in extrametrical hypha in three coffee cultivars in Puerto Rico  
Investigator: Ligia Lebrón  
Location: Adjuntas, Puerto Rico  
Date of collection: June 1998
54. Cerro de La Rosa soil collection  
Investigators: María Rivera and J.L. Ramírez  
Location: Cerro de la Rosa, Toro Negro Forest, Orocovis, Puerto Rico  
Date of collection: August 2000
55. Monito Gecko (*Sphaerodactylus micropithecus*) census  
Investigator: Miguel García  
Location: Monito Island, Puerto Rico  
Date of collection: 1994/1998
56. Soil factors in a coffee plantation and a natural pasture  
Investigators: Randall Myster and L. Lebrón  
Location: El Verde, Sabana, Puerto Rico  
Date of collection: May 1999
57. Assessment for available elements, total elements and pH of soils samples  
Investigator: Pedro Robles  
Location: Reserva Nacional JBNERR, Aguirre, Salinas, Puerto Rico  
Date of collection: December 1999

58. Long-term recovery of a Caribbean dry forest after abandonment of different land uses in Guánica, Puerto Rico  
Investigator: Sandra Molina (Ph.D. dissertation, University of Puerto Rico, 1998)  
Location: El Maniel, Guánica, Puerto Rico  
Date of collection: 1992–1993
59. Nutrient concentration and heavy metal accumulations on different soils over serpentine  
Investigators: Julio Figueroa and M.J. Sánchez  
Location: Maricao Forest, Maricao, Puerto Rico  
Date of collection: October 1989
60. Spatial patterns in forest nutrient pools, growth and disturbance-soil collection  
Investigator: Skip Van Bloem  
Location: Guánica Forest, Guánica, Puerto Rico  
Date of collection: September 1998
61. Earth worm project  
Investigator: Sonia Borges  
Location: Luquillo Experimental Forest, Puerto Rico  
Date of collection: 1991–1992
62. Ecological studies of the termites of Puerto Rico  
Investigator: Susan Jones  
Location: Guánica forest, Guánica, Puerto Rico  
Date of collection: 1992–1993
63. Soil macrofauna and litter nutrients in three tropical tree plantations on a disturbed site in Puerto Rico. *Forest Ecology and Management*. 170: 161–171, 2002  
Investigators: Matthew Warren and X. Zou  
Location: Toa Baja Plantation, Puerto Rico  
Date of collection: February 1998
64. Assessment of productivity and biological nitrogen fixation in mixed-species forest plantation.  
Investigator: John Parrotta  
Location: Toa Baja Plantation, Puerto Rico  
Date of collection: 1989-1992-1993-1996

65. La importancia de los cristales de oxalato de calcio en *Sida rhombifolia* (Malvaceae) como mecanismo de defensa y producto del metabolismo secundario  
Investigator: Brenda Molano (M.Sc. thesis University of Puerto Rico, Rio Piedras Campus)  
Location: Carolina-Canovanas, Puerto Rico  
Date of collection: September 1989
66. Tropic venture  
Investigator: Will Scott  
Location: Patillas, Bo. Muñoz Rivera, adjacent to the Carite Commonwealth Forest, Puerto Rico  
Date of collection: February 1991

## Wood decomposition

67. Wood decomposition of *Cyrilla racemiflora* in a tropical montane forest.  
Biotropica. 26(2): 124–140, 1994  
Investigator: Juan Torres  
Location: Luquillo Experimental Forest, Puerto Rico  
Date of collection: 1989
68. Wood decay in PS-2 and TS-2  
Investigator: Ariel E. Lugo  
Location: El Verde and Juan Diego, Luquillo Experimental Forest, Puerto Rico  
Date of collection: 1982–1986
69. Litter and root dynamics in a tropical pine plantation and an equal age secondary forest-decomposition of woody debris  
Investigator: Sandra Brown  
Location: Guzmán Pine Plantation, Luquillo Experimental Forest, Puerto Rico  
Date of collection: April–October 1988
70. Hydrology, sediment, and nutrient budgets in three humid watersheds in Puerto Rico  
Investigators: Sandra Brown and A.E. Lugo  
Location: Bisley, Luquillo Experimental Forest, Puerto Rico  
Date of collection: September 1991–February 1994

71. Decomposition of leaves from general plant species and the role of fungi in Luquillo Experimental Forest, Puerto Rico  
 Investigators: Jean Lodge and M. Santana  
 Location: El Verde, Sabana and Bisley; Luquillo Experimental Forest, Puerto Rico  
 Date of collection: February 2000

## Mangroves

72. Jobanes mangrove  
 Investigators: José López and M. Álvarez  
 Location: Jobanes Mangrove, Guayama, Puerto Rico  
 Date of collection: 1985
73. Jobanes Study—litter fall collection  
 Investigators: Ariel E. Lugo and G. Cintrón  
 Location: Jobos Bay, Aguirre, Guayama, Puerto Rico  
 Date of collection: May–July 1986
74. Jobos Bay—fresh leaves  
 Investigator: Ariel E. Lugo  
 Location: Jobos Bay, Aguirre, Guayama, Puerto Rico  
 Date of collection: December 1986
75. Características morfológicas y químicas de las hojas del *Rhizophora mangle* en un bosque de franja en Las Mareas, Puerto Rico.  
 Acta Científica. I: 20–24, 1987  
 Investigators: Honora Serrano and I. Monefeldt  
 Location: Santuario Estuarino Jobanes, Las Mareas; Puerto Rico  
 Date of collection: 1983
76. *Pterocarpus officinalis*—litter fall  
 Investigator: Luis Negrón (Humacao College of University of Puerto Rico)  
 Location: Río Antón Ruiz Swamp, Humacao; Puerto Rico  
 Date of collection: 1986
77. Soil salinity, sun exposure, and growth of *Acrostichum aureum*, the mangrove fern. Botanical Gazette. 151(1): 41–49, 1990  
 Investigators: Ernesto Medina, E. Cuevas, M. Popp, and A.E. Lugo  
 Location: Río Grande and Vega Baja, Puerto Rico  
 Date of collection: 1986

78. *Pterocarpus*—Punta Viento Study  
Investigators: Ernesto Medina, E. Cuevas, and A.E. Lugo  
Location: *Pterocarpus* Forest, Punta Viento; Patillas, Puerto Rico  
Date of collection: August 1994
79. Dwarf Mangrove Project—nutrient use efficiency collection  
Investigators: Ernesto Medina, E. Cuevas, and A.E. Lugo  
Location: Ceiba, Puerto Rico (entrance through Marina del Rey, about 2 km in the direction of Roosevelt Roads)  
Date of collection: March 1999
80. Dwarf Mangrove Project—fresh plant tissue collection  
Investigators: Ernesto Medina, E. Cuevas, and A.E. Lugo  
Location: Ceiba, Puerto Rico (entrance through Marina del Rey, about 2 km in the direction of Roosevelt Roads)  
Date of collection: December 1995
81. Dwarf Mangrove Project—nutrient use efficiency leaves collection  
Investigators: Ernesto Medina, E. Cuevas, and A.E. Lugo  
Location: Ceiba, Puerto Rico (entrance through Marina del Rey, about 2 km in the direction of Roosevelt Roads)  
Date of collection: December 1995
82. Dwarf Mangrove Project—biomass collection  
Investigators: Ernesto Medina, E. Cuevas, and A.E. Lugo  
Location: Ceiba, Puerto Rico (entrance through Marina del Rey, about 2 km in the direction of Roosevelt Roads)  
Date of collection: March 1999
83. Salt accumulation by *Pterocarpus officinalis* along a salinity gradient  
Investigators: Ernesto Medina, E. Cuevas, and M. Aide  
Location: Sabana Seca, Puerto Rico  
Date of collection: February 1997
84. Litter nutrients in a *Pterocarpus officinalis* forest  
Investigators: Mitch Aide and F. Scatena  
Location: Sabana Seca, Puerto Rico  
Date of collection: July 1995–July 1997
85. Materia orgánica y nutrientes en la hojarasca de un manglar de franja. *Acta Científica*. I: 25–29, 1987  
Investigators: Carmen Varela and A. Berrios  
Location: Jobos, Las Mareas, Puerto Rico  
Date of collection: 1984

86. Comparison of the nutrient status of dwarf and riverine mangrove and other tropical forest types  
Investigator: Alicia Miñana (M.Sc. thesis Princeton University, New Jersey)  
Location: Roosevelt Road, Ceiba, Puerto Rico  
Date of collection: September 1983
87. Susceptibility of mangrove wood to the arboreal termite (*Nasutitermes costalis*) in the Piñones State Forest  
Investigator: Teresa Carasquillo  
Location: Piñones Forest, Loiza, Puerto Rico  
Date of collection: August–September 1993

## Vegetation

88. Biomass and nutrient accumulation in ten-year-old bryophyte communities inside a flood plain in the Luquillo Experimental Forest, Puerto Rico. *Biotropica*. 24: 106–112, 1992  
Investigators: Jorge Frangi and A.E. Lugo  
Location: Montane Palm Floodplain Forest, Luquillo Experimental Forest, Puerto Rico  
Date of collection: 1990
89. Population dynamics of *Manilkara bidentata* (A.DC.) Cher. In the Luquillo Experimental Forest, Puerto Rico  
Investigator: Chengxia You (Ph.D. dissertation University of Tennessee)  
Location: El Verde, Luquillo Experimental Forest, Puerto Rico  
Date of collection: February 1987
90. Nutrients and mass in litter and top soil of ten tropical tree plantations  
Investigators: Ariel E. Lugo, E. Cuevas, and M.J. Sánchez  
Location: Arboretum, El Verde, Luquillo Experimental Forest, Puerto Rico  
Date of collection: October 1986
91. Plumeria study  
Investigator: Eva Dávila  
Location: Guánica Forest, Maricao Forest, Ponce and Dorado, Puerto Rico  
Date of collection: 1985

92. Porciento de cenizas en la flora epifítica sobre *Prestoea montana*  
Investigator: Carmen L. Báez (University of Puerto Rico High School)  
Location: Luquillo Experimental Forest, Puerto Rico  
Date of collection: 1985
93. Hurricane damage to a flood plain forest in the Luquillo Mountains of Puerto Rico. *Biotropica*. 23(4a): 324–335, 1991  
Investigators: Jorge Frangi and A.E. Lugo  
Location: Montane palm floodplain forest, Luquillo Experimental Forest, Puerto Rico  
Date of collection: 1980/1990
94. Comparison of tropical tree plantations with secondary forest of similar age. *Ecological Monographs*. 62(1): 1–41, 1992 Study 2501-Understory study  
Investigator: Ariel E. Lugo  
Location: Guzmán, Cubuy, Sabana, El Verde, Luquillo Experimental Forest, Puerto Rico  
Date of collection: 1982–1984
95. Decayed roots collection  
Investigators: Patrick Kangas and A.E. Lugo  
Location: El Verde, Luquillo Experimental Forest, Puerto Rico  
Date of collection: August 1986
96. The influence of density on stand development, biomass partitioning and nutrient allocation in *Albizia lebbbeck* (L.) Benth. Plantations in Puerto Rico  
Investigator: John Parrotta (Ph.D. dissertation Yale University)  
Location: Toa Baja Experimental Farm, Puerto Rico  
Date of collection: 1985–1986
97. Wood density. SO-ITF-SM-15,32,35,42,44,45,47,48,58,60,69,75,77 in IITF Silvics Manual  
Investigator: John Francis  
Location: Puerto Rico  
Date of collection: 1985–1990

98. Restoration and rehabilitation of tropical forests. Environmental Sciences Course, University of Puerto Rico, Río Piedras Campus  
Investigator: Ariel E. Lugo  
Location: Río Mameyes (river basin), Luquillo Experimental Forest, Puerto Rico  
Date of collection: September–October 1989
99. Nutrient dynamics of a Puerto Rican subtropical dry forest. *Journal of Tropical Ecology*. 2: 55–72, 1986  
Investigators: Peter Murphy and A.E. Lugo  
Location: Guánica Forest, Guánica, Puerto Rico  
Date of collection: 1981–1983
100. Leaf decomposition study  
Investigator: Yiovani Santiago Molina (Naranjito High School)  
Location: Bisley Watersheds; Luquillo Experimental Forest, Puerto Rico  
Date of collection: 1988
101. Comparison of tropical tree plantations with secondary forest of similar ages. *Ecological Monographs*. 62(1): 1–41, 1992  
Investigator: Ariel E. Lugo  
Location: Guzmán, Cubuy, Sabana, El Verde, Luquillo Experimental Forest, Puerto Rico  
Date of collection: 1982–1984
102. Mineral content of leaves from trees growing on serpentine soils under contrasting rainfall regimes in Puerto Rico. *Plant and Soil*. 158: 13–21, 1994  
Investigators: Ernesto Medina, E. Cuevas, J. Figueroa, and A.E. Lugo  
Location: Maricao Forest, Puerto Rico  
Date of collection: June 1990
103. Comparative analysis of the nutritional status of Mahogany plantations in Puerto Rico. In: Lugo, A. E.; Figueroa, J.; Alayón, M., ed. *Big-leaf mahogany genetics. Ecology and Management*: 129–145  
Investigators: Ernesto Medina and E. Cuevas  
Location: Puerto Rico  
Date of collection: 1986–1987



104. Physiological ecology of dominant woody species in a dry coastal forest on limestone (Guánica) forest  
Investigator: Ernesto Medina  
Location: Guánica Forest, Puerto Rico  
Date of collection: 1986–1987
105. Plasticity of crassulacean acid metabolism (CAM) and biomass allocation of the pantropical *Kalanchoe pinnata* (LAM.) Pers. *Acta Científica*. 12(1-3): 59–66, 1998  
Investigator: Ernesto Medina  
Location: IITF Nursery, Puerto Rico  
Date of collection: 1987
106. Bisley Study—litter fall collection  
Investigator: Fred Scatena  
Location: Bisley, Luquillo Experimental Forest, Puerto Rico  
Date of Collection: 1990–2000
107. MRCE foliar nutrients/fertilizer plots  
Investigator: Heather Erickson  
Location: El Verde and Pico del Este, Puerto Rico  
Date of collection: March–October 1993
108. Nitrogen oxide fluxes and nitrogen cycling during post agricultural succession and forest fertilization in the humid tropics. *Ecosystems*. 4: 67–84, 2001  
Investigators: Michael Keller and H. Erickson  
Location: LTER, Sabana, Mameyes, El Yunque, Puerto Rico  
Date of collection: 1995–1996
109. Former land-use and tree species affect nitrogen oxide emissions from a tropical dry forest. *Oecologia*. 130: 297–308, 2002  
Investigator: Heather Erickson  
Location: Guánica Forest, Guánica, Puerto Rico  
Date of collection: March 1996–March 1997
110. Woods Hole Nasa study/clip plots  
Investigator: Heather Erickson  
Location: Sabana and Mameyes, Puerto Rico  
Date of collection: April 1995–1996

111. Long-term ecological research Hurricane Hugo loose litter collection  
Investigators: Fred Scatena and J. Lodge  
Location: East Peak, Caribbean National Forest, Puerto Rico  
Date of collection: September 19, 1989
112. The metabolism of Río Mameyes, Puerto Rico: carbon fluxes in a tropical rain forest river  
Investigator: Jorge Ortiz (Ph.D. dissertation University of Colorado)  
Location: Río Mameyes Watershed, Luquillo Experimental Forest, Puerto Rico  
Date of collection: February 1995–March 1996
113. Litter fall experiment: Sabana 60 years  
Investigator: Michael Keller  
Location: Sabana, Luquillo Experimental Forest, Puerto Rico  
Date of collection: March–October 1997
114. Roots Sabana forest 60 years  
Investigator: Michael Keller  
Location: Sabana, Luquillo Experimental Forest, Puerto Rico  
Date of collection: July 1998
115. Simple and inexpensive method for extracting wood density samples from tropical hardwoods. *Tree Planter's Notes*. 45(1): 10–12, 1994  
Investigator: John Francis  
Location: Puerto Rico  
Date of collection: 1992–1993
116. *Acromia media* O.F. Cook. SO-ITF-SM-68  
Investigator: John Francis  
Location: Puerto Rico  
Date of collection: 1993
117. *Prunus occidentalis* S.W. SO-ITF-SM-79  
Investigator: Salvador Alemañy  
Location: Puerto Rico  
Date of collection: 1992
118. *Pouteria multiflora* (A.D.C) EYMA. SO-ITF-SM-62  
Investigator: John Francis  
Location: Puerto Rico  
Date of collection: 1993

119. *Roystonea borinquena* O.F. Cook. SO-ITF-SM-55  
Investigator: John Francis  
Location: Puerto Rico  
Date of collection: 1990
120. *Dacryodes excelsa*  
Investigator: John Francis  
Location: El Verde, Luquillo Experimental Forest, Puerto Rico  
Date of collection: October 1991
121. Studies of life history of three herbaceous species in the Bisley Watersheds, Puerto Rico  
Investigator: Amy Arnold (M.Sc. thesis Tennessee University)  
Location: Bisley, Luquillo Experimental Forest, Puerto Rico  
Date of collection: November 1995
122. Effects of nutrient availability and other elevational changes on bromeliad populations and their invertebrate communities in a humid tropical forest in Puerto Rico. *Journal of Tropical Ecology*. 16: 167–188, 2000  
Investigators: Barbara Richardson, M.J. Richardson, F. Scatena, and W.H. McDowell  
Location: Tabonuco, Palo Colorado and Dwarf forests Luquillo Experimental Forest, Puerto Rico  
Date of collection: 1996
123. Bryophyte communities on different stages of decaying wood  
Investigator: Inés Sastre  
Location: Bisley Watersheds, Luquillo Experimental Forest, Puerto Rico  
Date of collection: 1990–1991
124. Tabonuco Project (*Dacryodes excelsa*)  
Investigator: Migdalia Álvarez  
Location: Various sites, Puerto Rico  
Date of collection: 1994
125. Contrasting light environments and response flexibility of trees in the Luquillo Mountains of Puerto Rico  
Investigator: Denny Fernández (Ph.D. dissertation University of Puerto Rico, Rio Piedras Campus)  
Location: El Verde, Luquillo Experimental Station, Puerto Rico  
Date of collection: May 1996

126. Estimating biomass and carbon content of saplings in Puerto Rican secondary forests. *Caribbean Journal of Science*. 26: 346–350, 2000  
Investigator: John Francis  
Location: Various sites, Puerto Rico  
Date of collection: 1999
127. Arboretum root standing stock  
Investigators: Ariel E. Lugo, E. Cuevas, and M.J. Sánchez  
Location: Cienaga Alta, Luquillo Experimental Forest, Puerto Rico  
Date of collection: December 1986
128. *Acrocomia media* O.F. Cook. SO-ITF-SM-68  
Investigator: John Francis  
Location: Punta Salinas, Toa Baja; Puerto Rico  
Date of collection: October 1991
129. Nonindigenous bamboo along headwater streams of the Luquillo Mountains, Puerto Rico: leaf fall, aquatic leaf decay and patterns of invasion. *Journal of Tropical Ecology*. 16: 499–516, 2000  
Investigators: Paul O'Connor, A.P. Covich, F.N. Scatena, and L.L. Loope  
Location: Bisley watershed, Luquillo Experimental Forest, Puerto Rico  
Date of collection: 1997
130. Nutrient return accumulation in litter of a secondary forest in the coffee region of Puerto Rico. *Acta Científica*. 13(1-3): 43–74, 1999  
Investigators: Ariel E. Lugo, C. Domínguez, A. Santos, and E. Torres  
Location: Torrecilla secondary forest, Bo. Hincado, Barranquitas, Puerto Rico  
Date of collection: 1990–1993
131. Biomasa y nutrientes en raíces y brinzales de un bosque secundario en la zona cafetalera de Utuado. *Acta Científica*. 13(1–3): 75–87, 1999  
Investigators: Ariel E. Lugo, C. Domínguez, and N. Méndez  
Location: Bo. Caguana, Utuado, Puerto Rico  
Date of collection: February 1998
132. Ecological study of a secondary forest in Caguana, Utuado  
Investigators: Ariel E. Lugo and N. Méndez  
Location: Bo. Caguana, Utuado, Puerto Rico  
Date of collection: 1998–1999

133. Comparative study of nutrient dynamics of two forest types in Luquillo  
Experimental Forest—loose litter  
Investigators: Fu Sheinglei and A.E. Lugo  
Location: El Verde, Luquillo Experimental Forest, Puerto Rico  
Date of collection: July 1995
134. Seasonal dynamics and succession in a subtropical dry forest  
Investigator: Ariel E. Lugo  
Location: Guánica forest, Guánica, Puerto Rico  
Date of collection: 1992
135. Bisley study—biomass  
Location: Bisley, El Yunque, Puerto Rico  
Investigator: Fred Scatena  
Date of collection: 1989–1999
136. Insects population collection 1999–2000  
Investigator: Barbara Richardson  
Location: El Verde, Puerto Rico  
Date of collection: 1999–2000
137. Nutrients, diversity, and community structure of two phytotelm systems  
in a lower montane forest, Puerto Rico  
Investigators: Barbara Richardson, C. Rogers, and M.J. Richardson  
Location: El Verde, Puerto Rico  
Date of collection: 1998
138. Physiological characteristic of two tree species growing on a pasture  
Investigators: Adisel Montaña and N. Fetcher  
Site location: Sabana, Luquillo, Puerto Rico  
Date of collection: February 1998
139. Dynamics of organic matter and nutrient return from litter fall in stands  
of ten tropical tree plantation species. *Forest Ecology and Management*.  
112: 263–279, 1998  
Investigators: Elvira Cuevas and A.E. Lugo  
Location: Arboretum, Cienaga Alta, Luquillo Experimental Forest,  
Puerto Rico  
Date of collection: 1986–1987

140. Hurricane Georges loose litter  
Investigators: Rebeca Ostertag and F. Scatena  
Location: Cubuy, Bisley and Guánica, Puerto Rico  
Date of collection: 1998–1999
141. Effects of fertilization on plant growth in landslide in the Luquillo Forest  
Investigator: Ned Fetcher  
Location: Palo Hueco, Luquillo Experimental Forest, Puerto Rico  
Date of collection: 1989
142. Changes in necromass and nutrients on the Forest floor of a palm floodplain in forest in the Luquillo mountains of Puerto Rico.  
*Caribbean Journal of Science*. 39: 265–272, 2003  
Investigators: Ariel E. Lugo and J. Frangi  
Location: Montane palm forest, Luquillo Experimental Forest, Puerto Rico  
Date of collection: October 2000
143. Reorganization of the palm forest in the Luquillo Experimental Forest, Puerto Rico, 5 years after Hurricane Hugo  
Investigator: Jorge Frangi  
Location: Montane palm flood plain forest, Luquillo Experimental Forest, Puerto Rico  
Date of collection: June 1995
144. Sabana Seca climate study  
Investigators: Michael Van Der Molen and F. Scatena  
Location: Sabana Seca, Puerto Rico  
Date of collection: 1998
145. Pivotal fungal and plant species and its role influencing the rates of decomposition in a tropical forest  
Investigators: Mirna Santana and J. Lodge  
Location: El Verde, Sabana, Bisley, Luquillo Experimental Forest, Puerto Rico  
Date of collection: August 2000
146. Landslide litter decomposition  
Investigators: Randall Myster and D. Shaffer  
Location: El Verde Field Station, Puerto Rico  
Date of collection: February–October 1996

147. Moon phase influence over palm leaves nutrients  
Investigators: Fred Scatena and S. Moya  
Location: Bisley, El Yunque, Puerto Rico  
Date of collection: July–September 2000
148. Mineral content of leaves from trees growing on serpentine soils in Puerto Rico  
Investigators: Ernesto Medina, E. Cuevas, J. Figueroa, and A.E. Lugo  
Location: Susua Forest, Puerto Rico  
Date of collection: August 1993
149. Comparison of the leaf nutrient composition of trees from contrasting soil environments: Susua Forest and Guánica Forest  
Investigators: Ernesto Medina, E. Cuevas, and J. Figueroa  
Location: Susua forest and Guánica forest  
Date of collection: October 1986–January 1992
150. Ontogenic comparison in leaf morphology and physiology of tropical rainforest tree species  
Investigator: Shiyun Wen  
Location: El Verde, Luquillo Experimental Forest, Puerto Rico  
Date of collection: 1999–2000
151. Spatial patterns in forest nutrient pools, growth and disturbance—plant collection  
Investigator: Skip Van Bloem  
Location: Guánica Forest, Guánica, Puerto Rico  
Date of collection: September 1998
152. Soil macro fauna and litter nutrients in three tropical tree plantations on a disturbed site in Puerto Rico. *Forest Ecology and Management*. 170: 161–171, 2002  
Investigators: Matthew Warren and X. Zou  
Location: Toa Baja Plantation, Puerto Rico  
Date of collection: February 1998
153. Exotic earthworms accelerate plant litter decomposition in a Puerto Rican pasture and a wet Forest. *Ecological Applications*. 12(5): 1406–1417, 2002  
Investigator: Z.G. Liu and X. Zou  
Location: Secondary Forest and pine plantation in Guzmán, Luquillo Experimental forest, Puerto Rico  
Date of collection: May 1996

154. Fine litterfall and related nutrient inputs resulting from Hurricane Hugo in subtropical wet and lower montane rain forests of Puerto Rico. *Biotropica*. 23(4A): 336–342, 1991  
Investigators: Jean Lodge, F.N. Scatena, C.E. Asbury, and M.J. Sánchez  
Location: El Verde, Caribbean National Forest, Puerto Rico  
Date of collection: September 1989
155. *Prescottia oligantha*  
Investigator: Carlos Rodríguez  
Location: Luquillo and Maricao, Puerto Rico  
Date of collection: May 1989
156. Above and below organic matter storage and production in a tropical pine plantation and a paired broadleaf secondary forest  
Investigators: Elvira Cuevas, S. Brown, and A.E. Lugo  
Location: Guzmán, Luquillo Experimental Forest, Puerto Rico  
Date of collection: 1987–1989
157. Study of the termite species *N. costalis* in the Piñones Forest  
Investigator: Verónica Carrasquillo  
Location: Piñones Forest, Loiza, Puerto Rico  
Date of collection: December 23, 1992



## Appendix 2: List of Species

Table 10—Species, family, growth habit, and source

No.	Name	Family	Growth habit	Source	Group
1	<i>Acrocomia media</i>	Areaceae	Tree	116, 128	Monocot
2	<i>Acrostichum aureum</i>	Pteridaceae	Forb/herb	78, 77	Fern
3	<i>Adiantum latifolium</i>	Pteridaceae	Forb/herb	135	Fern
4	<i>Adiantum pyramidale</i>	Pteridaceae	Forb/herb	135	Fern
5	<i>Adiantum</i> spp.	Pteridaceae	Forb/herb	135	Fern
6	<i>Albizia lebbbeck</i>	Fabaceae	Tree	96	Dicot
7	<i>Albizia procera</i>	Fabaceae	Tree	126	Dicot
8	<i>Alchornea latifolia</i>	Euphorbiaceae	Tree	68, 97, 135	Dicot
9	<i>Alchorneopsis floribunda</i>	Euphorbiaceae	Tree	68	Dicot
10	<i>Alchorneopsis portoricensis</i>	Euphorbiaceae	Tree	135	Dicot
11	<i>Aleurites moluccana</i>	Euphorbiaceae	Tree	97	Dicot
12	<i>Allamanda violacea</i>	Apocynaceae	Shrub/vine	91	Dicot
13	<i>Alsophila portoricensis</i>	Cyatheaceae	Tree	135, 143	Fern
14	<i>Amyris elemifera</i>	Rutaceae	Tree/shrub	104, 149, 151	Dicot
15	<i>Andira inermis</i>	Fabaceae	Tree	94, 135	Dicot
16	<i>Anetium citrifolium</i>	Vittariaceae	Forb/herb	135	Fern
17	<i>Anthocephalus chinensis</i>	Rubiaceae	Tree	90, 115, 139	Dicot
18	<i>Ardisia glauciflora</i>	Myrsinaceae	Tree/shrub	102	Dicot
19	<i>Ardisia solanacea</i>	Myrsinaceae	Tree/shrub	126	Dicot
20	<i>Artocarpus altilis</i>	Moraceae	Tree	97	Dicot
21	<i>Asplenium</i> spp.	Aspleniaceae	Herb	135	Fern
22	<i>Avicennia germinans</i>	Verbenaceae	Tree/shrub	74, 78, 80, 87, 157	Dicot
23	<i>Bambusa</i> spp.	Poaceae	Tree/shrub	129	Monocot
24	<i>Bambusa vulgaris</i>	Poaceae	Tree/shrub	94	Monocot
25	<i>Beilschmiedia pendula</i>	Lauraceae	Tree	68	Dicot
26	<i>Blechnum occidentale</i>	Acanthaceae		135	Dicot
27	<i>Bolbitis aliena</i>	Dryopteridaceae	Forb/herb	135	Fern
28	<i>Bolbitis nicotianifolia</i>	Dryopteridaceae	Forb/herb	135	Fern
29	<i>Bourreria succulenta</i>	Boraginaceae	Tree/shrub	104, 149, 151	Dicot
30	<i>Bromeliads</i>	Bromeliaceae		93, 135	Other
31	<i>Bryophytes</i>			88, 123	
32	<i>Buchenavia tetraphylla</i>	Combretaceae	Tree	153	Dicot
33	<i>Bucida buceras</i>	Combretaceae	Tree	104, 126, 149	Dicot
34	<i>Bursera simaruba</i>	Burseraceae	Tree/shrub	97, 102, 104, 149, 151	Dicot
35	<i>Byrsonima lucida</i>	Malpighiaceae	Tree/shrub	102, 149	Dicot

**Table 10—Species, family, growth habit, and source (continued)**

No.	Name	Family	Growth habit	Source	Group
36	<i>Byrsonima spicata</i>	Malpighiaceae	Tree/shrub	131	Dicot
37	<i>Byrsonima wadsworthii</i>	Malpighiaceae	Tree/shrub	93	Dicot
38	<i>Calophyllum antillanum</i>	Clusiaceae	Tree/shrub	59, 94, 101, 126	Dicot
39	<i>Canna glauca</i>	Cannaceae	Forb/herb	135	Monocot
40	<i>Canna</i> spp.	Cannaceae	Forb/herb	135	Monocot
41	<i>Capparis cynophallophora</i>	Capparaceae	Tree/shrub	104, 149	Dicot
42	<i>Casearia arborea</i>	Flacourtiaceae	Tree/shrub	94, 101, 135	Dicot
43	<i>Casearia decandra</i>	Flacourtiaceae	Tree/shrub	126, 148	Dicot
44	<i>Casearia guianensis</i>	Flacourtiaceae	Tree/shrub	126	Dicot
45	<i>Casearia sylvestris</i>	Flacourtiaceae	Tree/shrub	94, 148	Dicot
46	<i>Cassine xylocarpa</i>	Celastraceae	Tree/shrub	102, 104, 149	Dicot
47	<i>Casuarina equisetifolia</i>	Casuarinaceae	Tree	152	Dicot
48	<i>Cecropia schreberiana</i>	Cecropiaceae	Tree	107, 123, 129, 135, 141, 146	Dicot
49	<i>Cecropia</i> sp.	Cecropiaceae	Tree	146	Dicot
50	<i>Cissampelos pareira</i>	Menispermaceae	Shrub/vine	135	Dicot
51	<i>Cissus erosa</i>	Vitaceae	Shrub/vine	135	Dicot
52	<i>Cissus verticillata</i>	Vitaceae	Shrub/vine	135	Dicot
53	<i>Citrus sinensis</i>	Rutaceae	Tree/shrub	97, 101	Dicot
54	<i>Clibadium erosum</i>	Asteraceae	Tree/shrub	135	Dicot
55	<i>Clusia rosea</i>	Clusiaceae	Tree/shrub	71, 97, 102, 104, 149	Dicot
56	<i>Cnemidaria horrida</i>	Cyatheaceae	Shrub/vine	135	Fern
57	<i>Coccoloba microstachya</i>	Polygonaceae	Tree/shrub	102, 104, 149, 151	Dicot
58	<i>Coccoloba diversifolia</i>	Polygonaceae	Tree/shrub	104, 149, 151	Dicot
59	<i>Coffea arabica</i>	Rubiaceae	Tree/shrub	53, 94, 131	Dicot
60	<i>Colubrina arborescens</i>	Rhamnaceae	Tree/shrub	104, 149	Dicot
61	<i>Colubrina elliptica</i>	Rhamnaceae	Tree/shrub	104, 149	Dicot
62	<i>Commelina diffusa</i>	Commelinaceae	Forb/herb	135	Monocot
63	<i>Commelina</i> spp.	Commelinaceae	Forb/herb	135	Monocot
64	<i>Conocarpus erectus</i>	Combretaceae	Tree/shrub	87, 157	Dicot
65	<i>Cordia borinquensis</i>	Boraginaceae	Tree/shrub	68, 135	Dicot
66	<i>Cordia sulcata</i>	Boraginaceae	Tree/shrub	68, 97	Dicot
67	<i>Croton poecilanthus</i>	Euphorbiaceae	Tree	68, 71, 93, 145	Dicot
68	<i>Ctenitis hirta</i>	Dryopteridaceae	Forb/herb	135	Fern
69	<i>Cupania americana</i>	Sapindaceae	Tree	97	Dicot
70	<i>Cyathea arborea</i>	Cyatheaceae	Tree	135	Fern
71	<i>Cyclopogon cranichoides</i>	Orchidaceae	Forb/herb	135	Monocot
72	<i>Cyrilla racemiflora</i>	Cyrillaceae	Tree/shrub	67, 93	Dicot

Table 10—Species, family, growth habit, and source (continued)

No.	Name	Family	Growth habit	Source	Group
73	<i>Dacryodes excelsa</i>	Burseraceae	Tree	68, 71, 94, 100, 101, 107, 120, 123, 124, 135, 153	Dicot
74	<i>Dacryodes</i> sp.	Burseraceae	Tree	146	Dicot
75	<i>Danaea nodosa</i>	Marattiaceae	Forb/herb	129, 135	Fern
76	<i>Daphnopsis philippiana</i>	Thymelaeaceae	Tree/shrub	93	Dicot
77	<i>Delonix regia</i>	Fabaceae	Tree	115	Dicot
78	<i>Dendropanax arboreus</i>	Araliaceae	Tree/shrub	71	Dicot
79	<i>Dennstaedtia bipinnata</i>	Dennstaedtiaceae	Forb/herb	135	Fern
80	<i>Dennstaedtia obtusifolia</i>	Dennstaedtiaceae	Forb/herb	135	Fern
81	<i>Dennstaedtia</i> spp.	Dennstaedtiaceae	Forb/herb	135	Fern
82	<i>Dialium guineense</i>	Fabaceae		115	Dicot
83	<i>Dieffenbachia seguine</i>	Araceae	Forb/herb	121	Monocot
84	<i>Dioscorea polygonoides</i>	Dioscoreaceae	Vine/forb-herb	135	Monocot
85	<i>Dittia myricoides</i>	Euphorbiaceae	Tree/shrub	93	Dicot
86	<i>Drypetes glauca</i>	Euphorbiaceae	Tree/shrub	68	Dicot
87	<i>Enterolobium cyclocarpum</i>	Fabaceae	Tree	97	Dicot
88	<i>Erithalis fruticosa</i>	Rubiaceae	Tree/shrub	104, 149, 151	Dicot
89	<i>Erythrodes plantaginea</i>	Orchidaceae	Forb/herb	135	Monocot
90	<i>Erythroxylum areolatum</i>	Erythroxylaceae	Forb/herb	104, 149	Dicot
91	<i>Erythroxylum rotundifolium</i>	Erythroxylaceae	Tree/shrub	104, 149	Dicot
92	<i>Eucalyptus patentinervis</i>	Myrtaceae	Tree	90, 139	Dicot
93	<i>Eucalyptus robusta</i>	Myrtaceae	Tree	97, 152	Dicot
94	<i>Eucalyptus saligna</i>	Myrtaceae	Tree	90, 139	Dicot
95	<i>Eugenia borinquensis</i>	Myrtaceae	Tree/shrub	93	Dicot
96	<i>Eugenia eggersii</i>	Myrtaceae	Tree/shrub	93, 135	Dicot
97	<i>Eugenia foetida</i>	Myrtaceae	Tree/shrub	149	Dicot
98	<i>Eugenia maleolens</i>	Myrtaceae	Tree/shrub	104	Dicot
99	<i>Eugenia monticola</i>	Myrtaceae	Tree/shrub	126	Dicot
100	<i>Eugenia rhombea</i>	Myrtaceae	Tree/shrub	104, 149	Dicot
101	<i>Eugenia stahlii</i>	Myrtaceae	Tree/shrub	94	Dicot
102	<i>Exostema caribaeum</i>	Rubiaceae	Tree/shrub	102, 104, 149, 151	Dicot
103	<i>Faramea occidentalis</i>	Rubiaceae	Tree/shrub	126	Dicot
104	<i>Ficus citrifolia</i>	Moraceae	Tree/shrub	55, 97	Dicot
105	Forest floor-logs			95	
106	Forest floor-roots			127	
107	<i>Genipa americana</i>	Rubiaceae	Tree	97	Dicot

Table 10—Species, family, growth habit, and source (continued)

No.	Name	Family	Growth habit	Source	Group
108	<i>Gleichenia</i> spp. (has various names)	Gleicheniaceae	Forb/herb	135	Fern
109	<i>Gomidesia lindeniana</i>	Myrtaceae	Tree/shrub	58	Dicot
110	<i>Gonzalagunia spicata</i>	Rubiaceae	Tree/shrub	135, 146	Dicot
111	<i>Guaiacum officinale</i>	Zygophyllaceae	Tree	104, 149	Dicot
112	<i>Guaiacum sanctum</i>	Zygophyllaceae	Tree	104, 149	Dicot
113	<i>Guanica forest</i>			109, 134	
114	<i>Guapira obtusata</i>	Nyctaginaceae	Tree/shrub	102	Dicot
115	<i>Guararibaea turbinata</i>	Bombacaceae	Tree/shrub	68	Dicot
116	<i>Guarea glabra</i>	Meliaceae	Tree/shrub	68, 93, 94, 101	Dicot
117	<i>Guarea guidonia</i>	Meliaceae	Tree/shrub	71, 125, 126, 129, 135	Dicot
118	<i>Guarea ramiflora</i>	Meliaceae	Tree/shrub	125	Dicot
119	<i>Guazuma ulmifolia</i>	Sterculiaceae	Tree/shrub	97	Dicot
120	<i>Guettarda pungens</i>	Rubiaceae	Tree/shrub	149	Dicot
121	<i>Guettarda scabra</i>	Rubiaceae	Tree/shrub	102, 149	Dicot
122	<i>Guzmania berteriana</i>	Bromeliaceae	Forb/herb	135	Monocot
123	<i>Gymnanthes lucida</i>	Euphorbiaceae	Tree/shrub	104, 149, 151	Dicot
124	<i>Heliconia caribaea</i>	Heliconiaceae	Forb/herb	122, 135, 137	Monocot
125	<i>Henriettea squamulosum</i>	Melastomataceae	Tree	93	Dicot
126	<i>Herbaceous</i>			135	
127	<i>Hernandia sonora</i>	Hernandiaceae	Tree/shrub	90, 139	Dicot
128	<i>Heteropteris laurifolia</i>	Malpighiaceae	Tree/shrub/vine	135	Dicot
129	<i>Heterotrichum cymosum</i>	Melastomataceae	Tree/shrub	146	Dicot
130	<i>Hibiscus elatus</i>	Malvaceae	Tree	90, 97, 139	Dicot
131	<i>Hillia parasitica</i>	Rubiaceae	Tree/shrub/vine	135	Dicot
132	<i>Homalium racemosum</i>	Flacourtiaceae	Tree	148	Dicot
133	<i>Hyeronima clusioides</i>	Euphorbiaceae	Tree/shrub	97	Dicot
134	<i>Hypolepsis</i> spp.			135	
135	<i>Ichnanthus pallens</i>	Poaceae	Graminoid	135	Monocot
136	<i>Ichnanthus</i> spp.	Poaceae	graminoid	135	Monocot
137	<i>Ilex sideroxyloides</i>	Aquifoliaceae	Tree	93	Dicot
138	<i>Inga fagifolia</i>	Fabaceae	Tree	145	Dicot
139	<i>Inga laurina</i>	Fabaceae	Tree	70, 71, 126, 135	Dicot
140	<i>Inga vera</i>	Fabaceae	Tree	71, 100, 145, 146	Dicot
141	<i>Jacquinia berteroi</i>	Theophrastaceae	Tree/shrub	104, 149, 151	Dicot
142	<i>Juglans jamaicensis</i>	Juglandaceae	Tree	115	Dicot
143	<i>Kalanchoe pinnata</i>	Crassulaceae	Forb/herb	105	Dicot
144	<i>Khaya grandifolia</i>	Meliaceae	Tree	97	Dicot
145	<i>Khaya nyasica</i>	Meliaceae	Tree	90, 97, 135, 139	Dicot

Table 10—Species, family, growth habit, and source (continued)

No.	Name	Family	Growth habit	Source	Group
146	<i>Khaya senegalensis</i>	Meliaceae	Tree	97	Dicot
147	<i>Krugiodendron ferreum</i>	Rhamnaceae	Tree/shrub	104, 149	Dicot
148	<i>Laguncularia racemosa</i>	Combretaceae	Tree/shrub	72, 73, 74, 78, 83, 87, 157	Dicot
149	<i>Leucaena leucocephala</i>	Fabaceae	Tree/shrub	126, 148, 152	Dicot
150	<i>Lonchitis hirsuta</i>	Dennstaedtiaceae	Forb/herb	135	Fern
151	<i>Maesopsis eminii</i>	Rhamnaceae	Tree	97	Dicot
152	<i>Magnolia portoricensis</i>	Magnoliaceae	Tree	115	Dicot
153	<i>Magnolia splendens</i>	Magnoliaceae	Tree	71, 93	Dicot
154	Mahogany plantation			133	
155	Mangrove			79	
156	<i>Manilkara bidentata</i>	Sapotaceae	Tree	68, 71, 89, 94, 101, 107, 125, 129, 145, 153	Dicot
157	<i>Marcgravia rectiflora</i>	Marcgraviaceae		135	Dicot
158	<i>Marcgravia</i> spp.	Marcgraviaceae		135	Dicot
159	<i>Matayba domingensis</i>	Sapindaceae	Tree	68	Dicot
160	<i>Megalastrum subincisa</i>	Dryopteridaceae	Forb/herb	135	Fern
161	<i>Melicoccus bijugatus</i>	Sapindaceae	Tree	97	Dicot
162	<i>Miconia impetiolaris</i>	Melastomataceae	Tree/shrub	129	Dicot
163	<i>Miconia prasina</i>	Melastomataceae	Tree/shrub	68, 94, 126, 131, 138,	Dicot
164	<i>Miconia racemosa</i>	Melastomataceae	Tree/shrub	129, 146	Dicot
165	<i>Miconia</i> sp.	Melastomataceae	Tree/shrub	146	Dicot
166	<i>Miconia</i> spp.	Melastomataceae	Tree/shrub	143	Dicot
167	<i>Miconia tetrandra</i>	Melastomataceae	Tree/shrub	92, 94	Dicot
168	<i>Micropholis chrysophylloides</i>	Sapotaceae	Tree	92	Dicot
169	<i>Micropholis garciniifolia</i>	Sapotaceae	Tree/shrub	92	Dicot
170	<i>Mikania cordifolia</i>	Asteraceae	Vine/forb/herb	135	Dicot
171	Mixed-species Guanica forest			99	
172	<i>Musa paradisiaca</i>	Musaceae	Tree	135	Monocot
173	<i>Musa</i> spp.	Musaceae	Tree	135	Monocot
174	<i>Myrcia deflexa</i>	Myrtaceae	Tree/shrub	93, 94, 135	Dicot
175	<i>Myrcia splendens</i>	Myrtaceae	Tree/shrub	94, 101, 126	Dicot
176	<i>Neolaugeria resinosa</i>	Rubiaceae	?	102	Dicot
177	<i>Nephrolepis portoricensis</i>			135	
178	<i>Nephrolepis rivularis</i>			135	
179	<i>Nepsera aquatica</i>	Melastomataceae	Shrub-forb/herb	135	Dicot
180	<i>Ocotea leucoxydon</i>	Lauraceae	Tree	93, 94, 126, 135	Dicot
181	<i>Ocotea moschata</i>	Lauraceae	Tree	97	Dicot

**Table 10—Species, family, growth habit, and source (continued)**

No.	Name	Family	Growth habit	Source	Group
182	<i>Ocotea spathulata</i>	Lauraceae	Tree	93	Dicot
183	<i>Odontosoria</i> spp.	Dennstaedtiaceae	Forb/herb	135	Fern
184	<i>Olyra latifolia</i>	Poaceae	Graminoid	135	Monocot
185	<i>Ormosia krugii</i>	Fabaceae	Tree	68, 135	Dicot
186	<i>Ouratea littoralis</i>	Ochnaceae	Tree/shrub	102, 149	Dicot
187	<i>Palicourea crocea</i>	Rubiaceae	Tree/shrub	135	Dicot
188	<i>Palicourea riparia</i>	Rubiaceae	Tree/shrub	94, 135, 146	Dicot
189	<i>Panicum maximum</i>	Poaceae	Graminoid	144	Monocot
190	Pasture			110, 153	
191	<i>Paullinia pinnata</i>	Sapindaceae	Vine	135	Dicot
192	<i>Paullinia</i> spp.	Sapindaceae	Vine	135	Dicot
193	<i>Peperomia</i> spp.	Piperaceae	Forb/herb	135	Dicot
194	<i>Petitia domingensis</i>	Verbenaceae	Tree/shrub	149	Dicot
195	<i>Philodendron angustatum</i>	Araceae	Vine/forb/herb	135	Monocot
196	<i>Philodendron scandens</i>	Araceae	Vine/forb/herb	135	Monocot
197	<i>Philodendron</i> spp.	Araceae	Vine/forb/herb	135	Monocot
198	<i>Phoradendron racemosum</i>	Viscaceae	Shrub	104, 149	Dicot
199	<i>Phytolacca icosandra</i>	Phytolaccaceae	Forb/herb	135, 141	Dicot
200	<i>Phytolacca rivinoides</i>	Phytolaccaceae	Forb/herb	135	Dicot
201	<i>Pictetia aculeata</i>	Fabaceae	Tree/shrub	102, 104, 149, 151	Dicot
202	<i>Pilea inaequalis</i>	Urticaceae	Forb/herb	135	Dicot
203	<i>Pilea krugii</i>	Urticaceae	Forb/herb	135	Dicot
204	<i>Pimenta racemosa</i>	Myrtaceae	Tree/shrub	126	Dicot
205	<i>Pine plantation</i>			153, 156	
206	<i>Pinus caribaea</i>	Pinaceae	Tree	69, 90, 101, 115	Gymnosperm
207	<i>Pinus caribaea hondurensis</i>	Pinaceae	Tree	139	Gymnosperm
208	<i>Pinus elliottii</i>	Pinaceae	Tree	139	Gymnosperm
209	<i>Pinus massoniana</i>	Pinaceae	Tree	68	Gymnosperm
210	<i>Pinus ocarpa</i>	Pinaceae	Tree	115	Gymnosperm
211	<i>Piper aduncum</i>	Piperaceae	Tree/shrub	129	Dicot
212	<i>Piper glabrescens</i>	Piperaceae	Tree/shrub	135, 146	Dicot
213	<i>Piper hispidum</i>	Piperaceae	Tree/shrub	135, 146	Dicot
214	<i>Pisonia albida</i>	Nyctaginaceae	Tree	104, 149	Dicot
215	<i>Pisonia subcordata</i>	Nyctaginaceae	Tree	102	Dicot
216	<i>Pithecellobium dulce</i>	Fabaceae	Tree/shrub	97	Dicot
217	<i>Plumeria alba</i>	Apocynaceae	Tree/shrub	91	Dicot
218	<i>Plumeria obtusa</i>	Apocynaceae	Tree/shrub	91	Dicot
219	<i>Plumeria rubra</i> (red)	Apocynaceae	Tree/shrub	91	Dicot

Table 10—Species, family, growth habit, and source (continued)

No.	Name	Family	Growth habit	Source	Group
220	<i>Plumeria rubra</i> (white)	Apocynaceae	Tree/shrub	91	Dicot
221	<i>Polybotrya cervina</i>	Dryopteridaceae	Forb/herb	135	Fern
222	<i>Polypodium chnoodes</i>	Polypodiaceae	Forb/herb	135	Fern
223	<i>Polypodium crassifolium</i>	Polypodiaceae	Forb/herb	135	Fern
224	<i>Polypodium</i> spp.	Polypodiaceae	Forb/herb	135	Fern
225	<i>Pouteria multiflora</i>	Sapotaceae	Tree	118	Dicot
226	<i>Prescotia oligantha</i>	Orchidaceae	Forb/herb	155	Monocot
227	<i>Prestoea montana</i>	Arecaceae	Tree	68, 69, 92, 93, 107, 135, 147, 150	Monocot
228	<i>Prunus occidentalis</i>	Rosaceae	Tree	117	Dicot
229	<i>Psychotria berteriana</i>	Rubiaceae	Tree/shrub	93, 135, 143, 146	Dicot
230	<i>Psychotria maleolens</i>	Rubiaceae	Tree/shrub	143	Dicot
231	<i>Psychotria</i> sp.	Rubiaceae	Tree/shrub	94	Dicot
232	<i>Pteris altissima</i>	Pteridaceae	Forb/herb	135	Fern
233	<i>Pterocarpus macrocarpus</i>	Fabaceae	Tree	97	Dicot
234	<i>Pterocarpus officinalis</i>	Fabaceae	Tree	76, 78, 83, 84, 97	Dicot
235	<i>Rhizophora mangle</i>	Rhizophoraceae	Tree	72, 73, 74, 75, 77, 78, 80, 81, 82, 85, 86, 87, 157	Dicot
236	<i>Rourea surinamensis</i>	Connaraceae	Vine/shrub	135	Dicot
237	<i>Roystonea borinquena</i>	Arecaceae	Tree	119	Monocot
238	<i>Sabicea hirsuta</i>	Rubiaceae	Vine/shrub	135	Dicot
239	<i>Sapindus saponaria</i>	Sapindaceae	Tree/shrub	129	Dicot
240	<i>Sapium laurocerasus</i>	Euphorbiaceae	Tree	68, 71, 135, 145	Dicot
241	<i>Sauvagesia erecta</i>	Ochnaceae	Shrub-forb/herb	135	Dicot
242	<i>Schefflera morototoni</i>	Araliaceae	Tree	35, 68, 71, 94, 126, 135	Dicot
243	<i>Schizolobium parahybum</i>	Fabaceae	Tree	97	Dicot
244	<i>Schlegelia brachyantha</i>	Bignoniaceae	Vine/shrub	135	Dicot
245	<i>Scleria canescens</i>	Cyperaceae	Graminoid	135	Monocot
246	<i>Scleria</i> spp.	Cyperaceae	Graminoid	135	Monocot
247	Secondary forest			106, 108, 111, 112, 113, 114, 124, 130, 131, 132, 136, 140, 142, 153, 154, 156	
248	<i>Securidaca virgata</i>	Polygalaceae	Vine/shrub	135	Dicot
249	<i>Selaginella krugii</i>	Selaginellaceae	Forb/herb	135	Lycopod



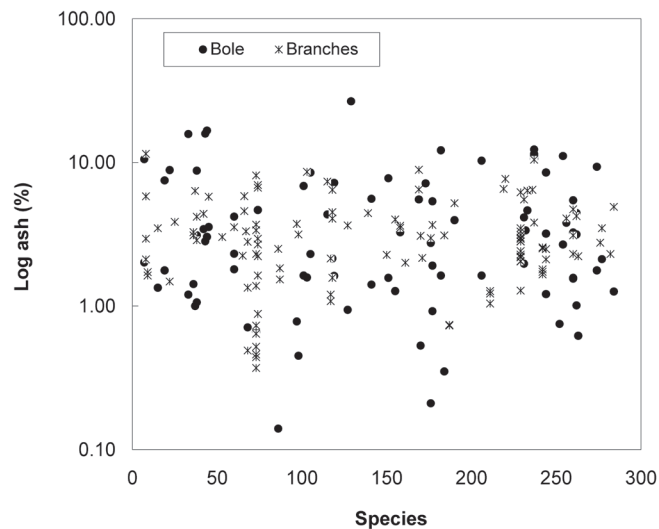
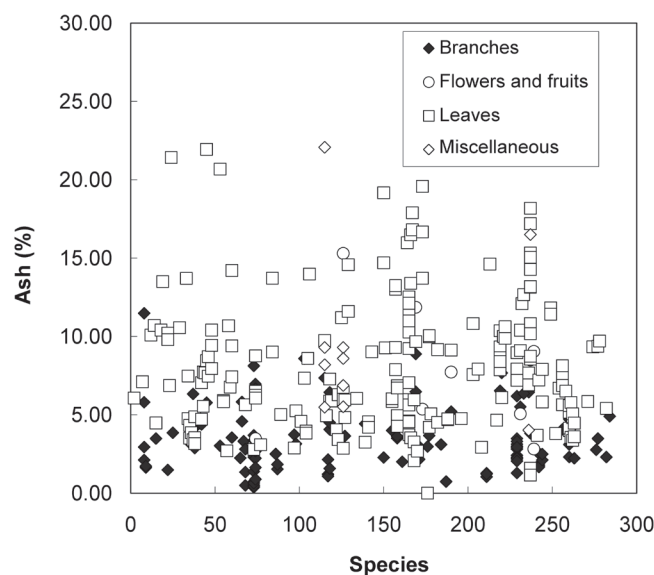
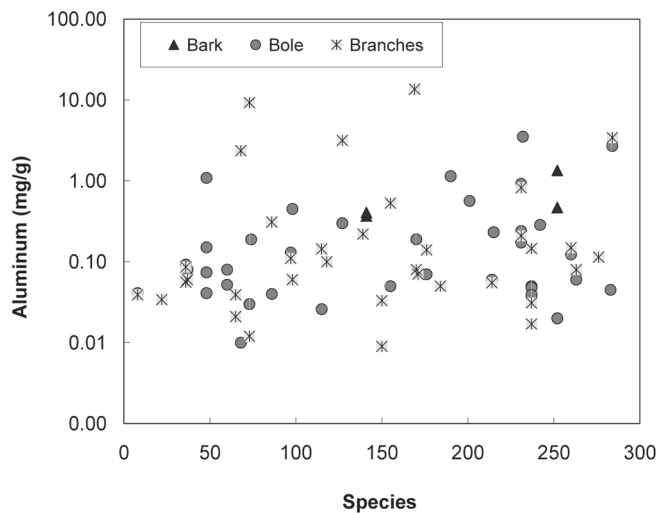
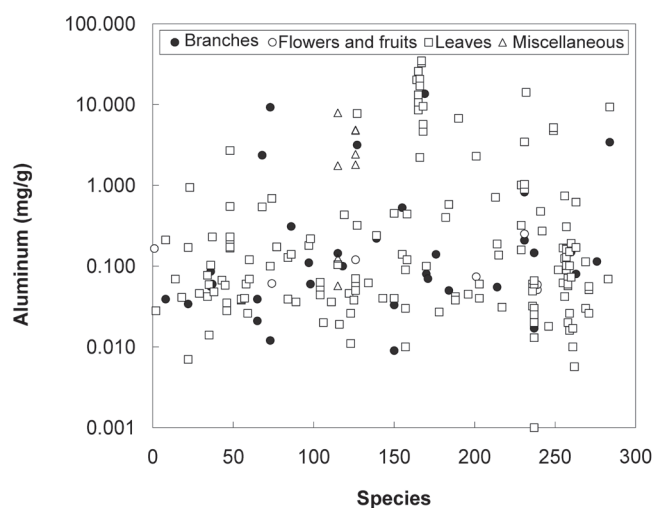
**Table 10—Species, family, growth habit, and source (continued)**

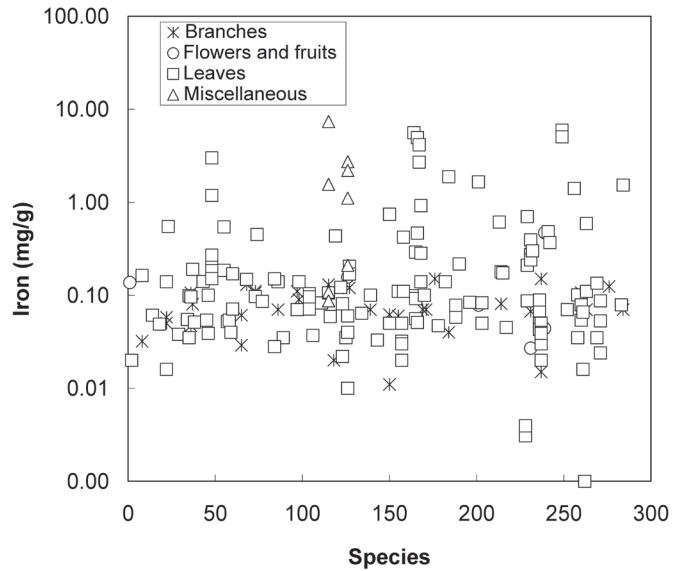
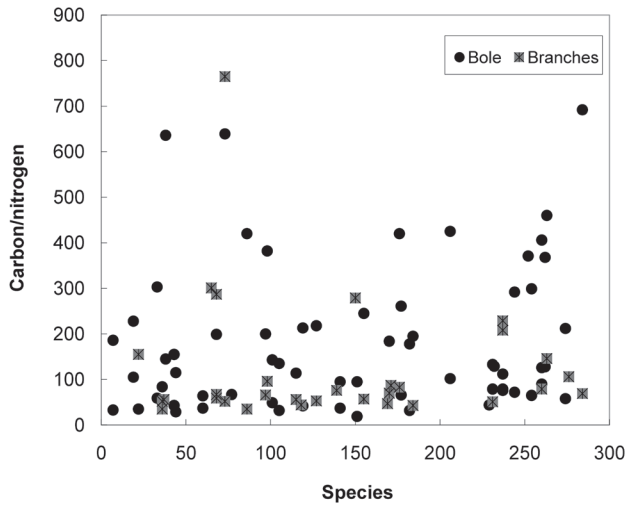
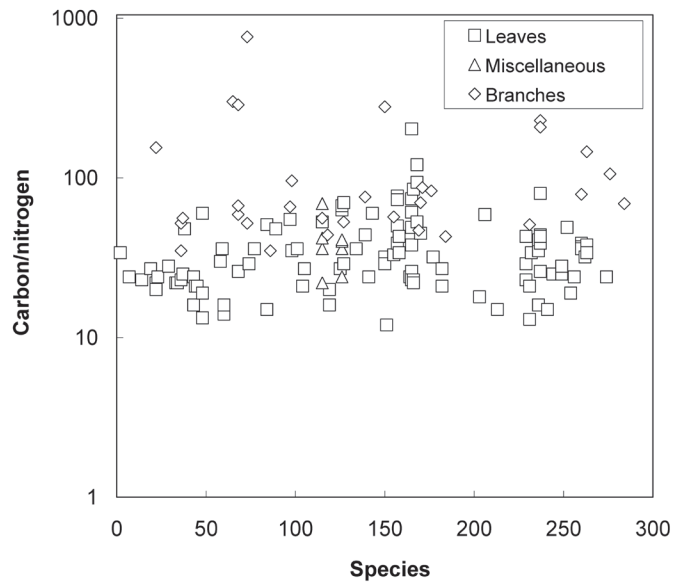
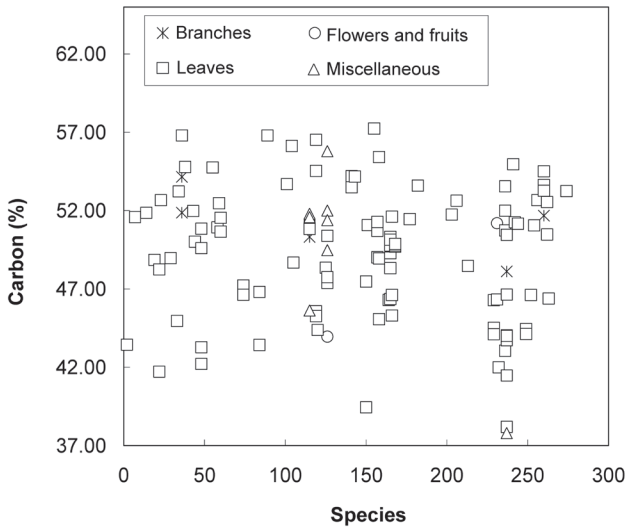
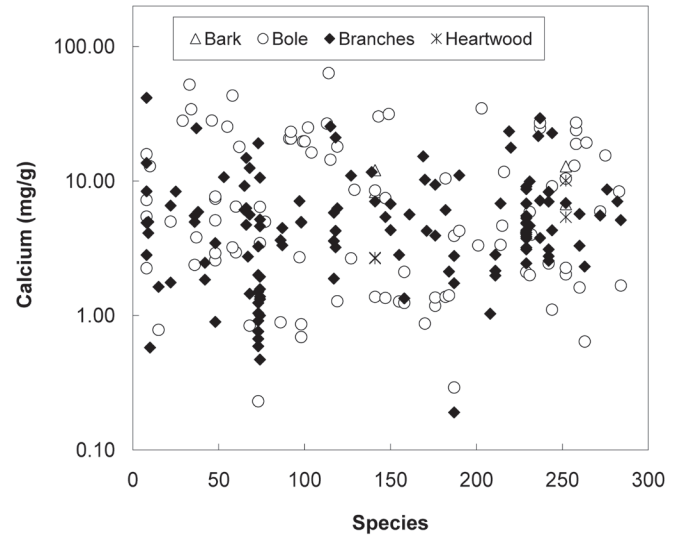
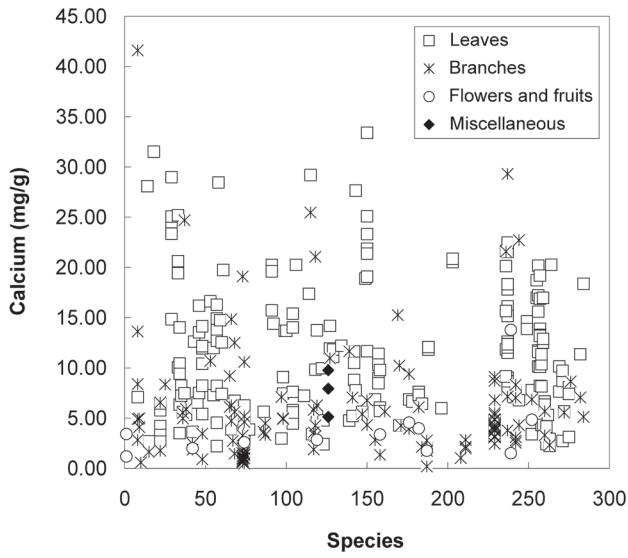
No.	Name	Family	Growth habit	Source	Group
250	<i>Sloanea berteriana</i>	Elaeocarpaceae	Tree	67, 70, 135, 150	Dicot
251	<i>Solanum torvum</i>	Solanaceae	Tree/shrub	146	Dicot
252	<i>Spathodea campanulata</i>	Bignoniaceae	Tree	97, 126	Dicot
253	<i>Swietenia humilis</i>	Meliaceae	Tree	103	Dicot
254	<i>Swietenia macrophylla</i>	Meliaceae	Tree	90, 94, 101, 103, 104, 129, 139	Dicot
255	<i>Swietenia macrophylla x mahagoni</i>	Meliaceae	Tree	103	Dicot
256	<i>Swietenia mahagoni</i>	Meliaceae	Tree	102, 103, 149	Dicot
257	<i>Swietenia</i> sp.	Meliaceae	Tree	103	Dicot
258	<i>Syzygium jambos</i>	Myrtaceae	Tree	94, 101, 126, 129, 131	Dicot
259	<i>Tabebuia haemantha</i>	Bignoniaceae	Tree/shrub	102, 149	Dicot
260	<i>Tabebuia heterophylla</i>	Bignoniaceae	Tree/shrub	58, 94, 101, 115, 126, 138	Dicot
261	<i>Tabebuia rigida</i>	Bignoniaceae	Tree/shrub	93, 107	Dicot
262	<i>Tabebuia</i> spp.	Bignoniaceae	Tree/shrub	149	Dicot
263	Tabonuco forest			153	
264	Tabonuco secondary forest			133	
265	<i>Tectaria trifoliata</i>	Dryopteridaceae	Forb/herb	135	Fern
266	<i>Thelypteris deltoidea</i>	Thelypteridaceae	Forb/herb	135	Fern
267	<i>Terebraria resinosa</i>	Rubiaceae	Shrub	58	Dicot
268	<i>Terminalia ivorensis</i>	Combretaceae	Tree	90, 139	Dicot
269	<i>Ternstroemia stahlia</i>	Theaceae	Tree/shrub	102, 149	Dicot
270	<i>Tetragastris balsamifera</i>	Burseraceae	Tree	135	Dicot
271	<i>Thelypteris deltoidea</i>	Thelypteridaceae	Forb/herb	135	Fern
272	<i>Thespesia grandiflora</i>	Malvaceae	Tree	126	Dicot
273	<i>Thouinia striata</i>	Sapindaceae	Tree/shrub	104, 149	Dicot
274	<i>Torralbasia cuneifolia</i>	Celastraceae	Tree/shrub	93	Dicot
275	<i>Trema micranthum</i>	Ulmaceae	Tree/shrub	94	Dicot
276	<i>Trichilia pallida</i>	Meliaceae	Tree/shrub	71	Dicot
277	<i>Trichipteris borinquena</i>	Cyatheaceae	Shrub	135	Fern
278	<i>Trichipteris procera</i>	Cyatheaceae	Tree	135	Fern
279	<i>Trichostigma octandrum</i>	Phytolaccaceae	Shrub/vine	135	Dicot
280	<i>Turpinia occidentalis</i>	Staphyleaceae	Tree	101	Dicot
281	<i>Urera baccifera</i>	Urticaceae	Tree/shrub	135	Dicot
282	<i>Xylosma schwaneckeanum</i>	Flacourtiaceae	Vine/tree/shrub	93	Dicot
283	Young secondary forest			98	
284	<i>Zanthoxylum flavum</i>	Rutaceae	Tree/shrub	115	Dicot
285	<i>Zanthoxylum martinicense</i>	Rutaceae	Tree/shrub	97	Dicot

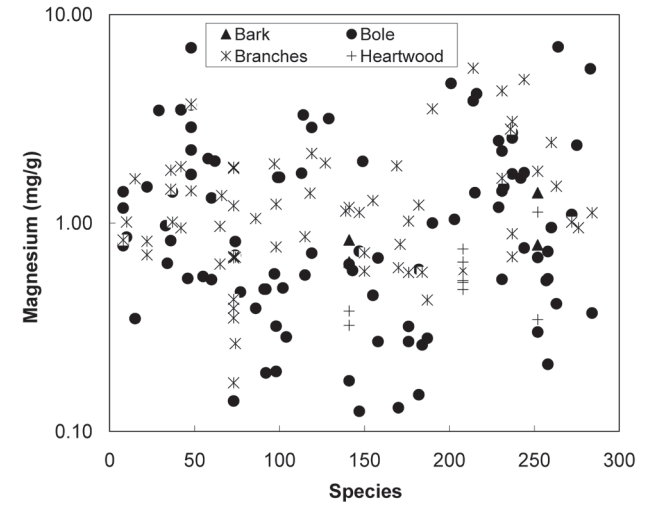
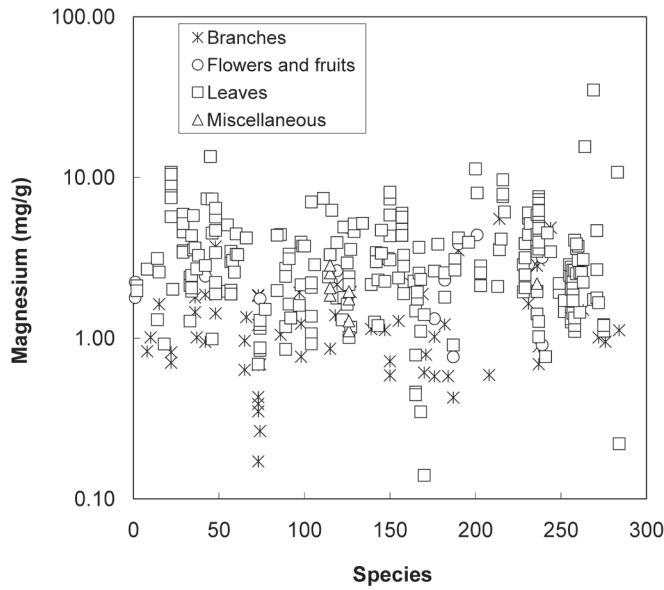
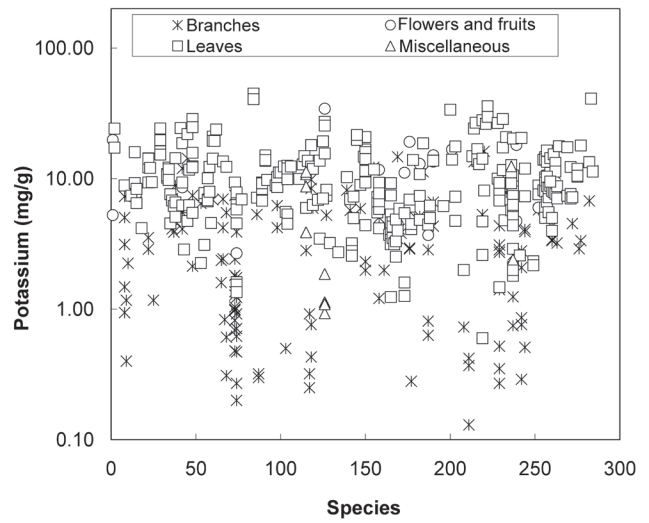
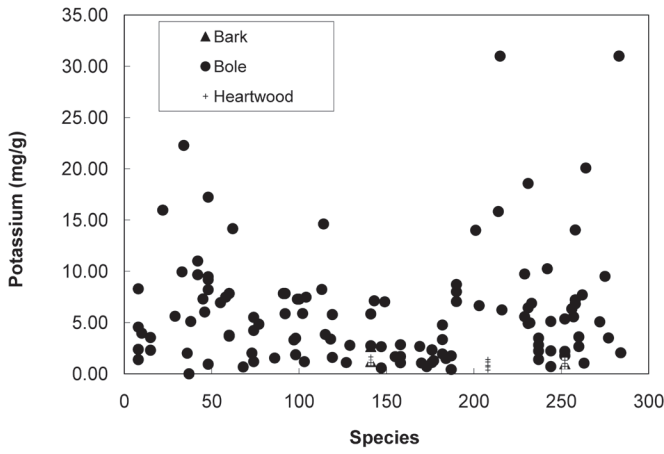
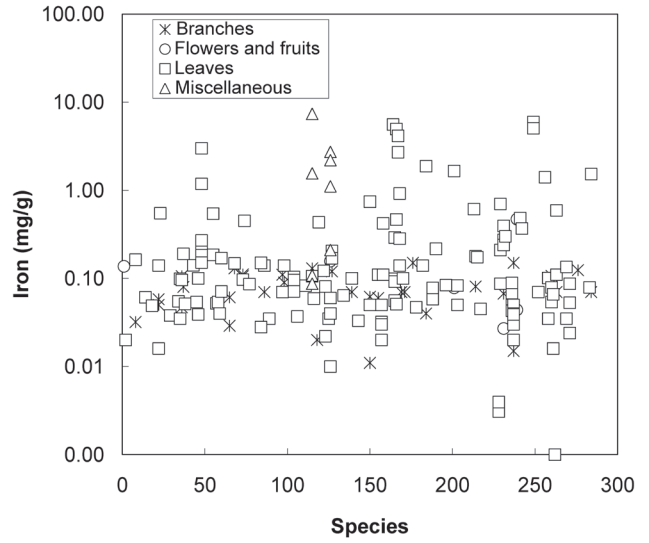
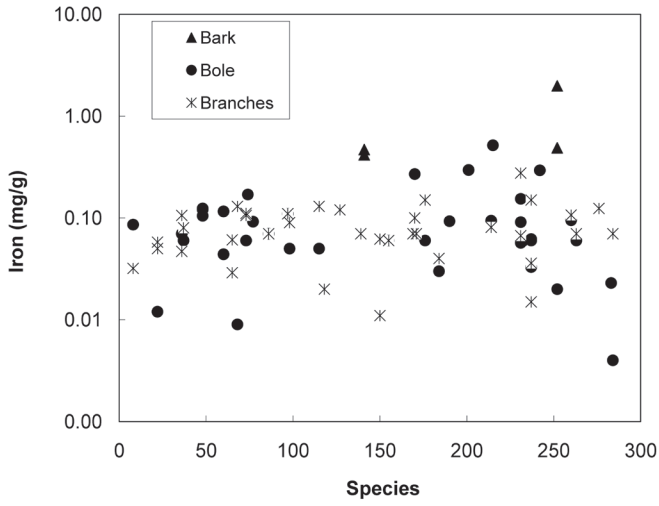


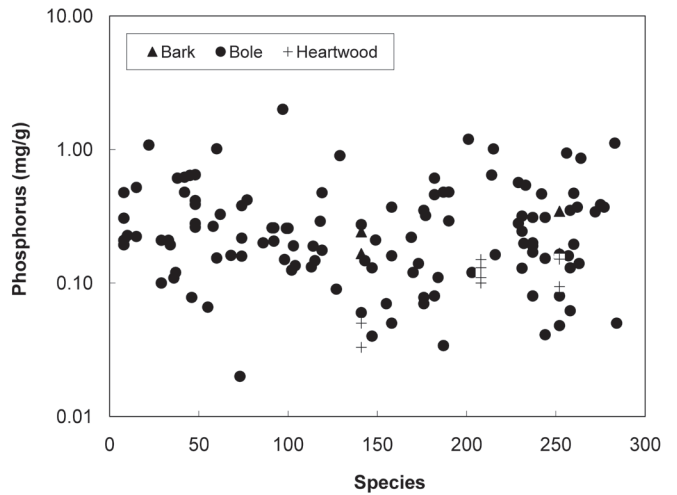
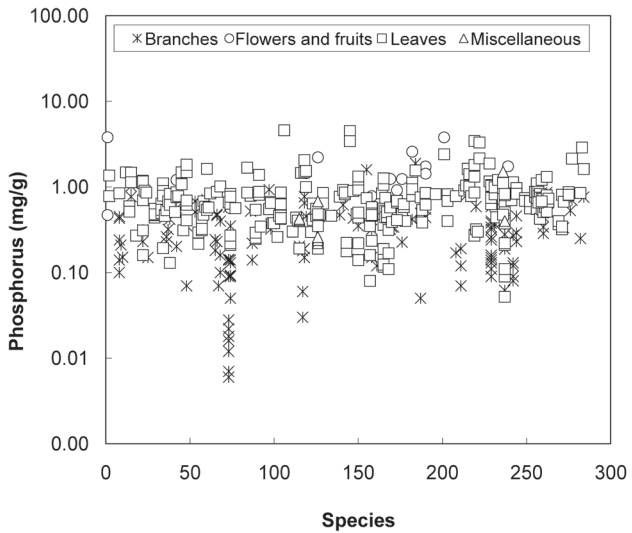
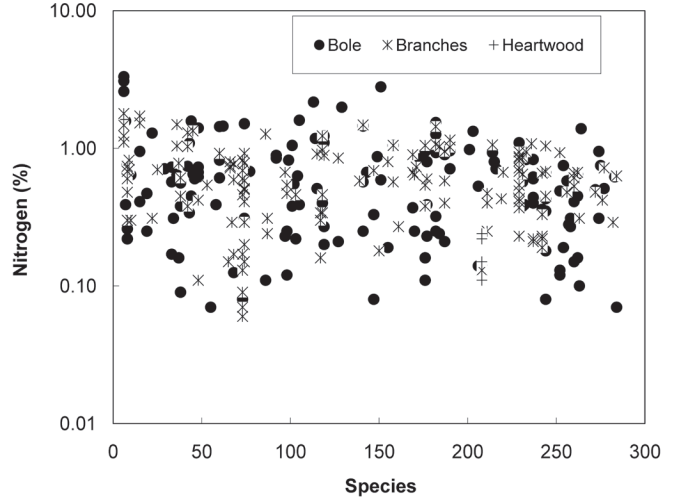
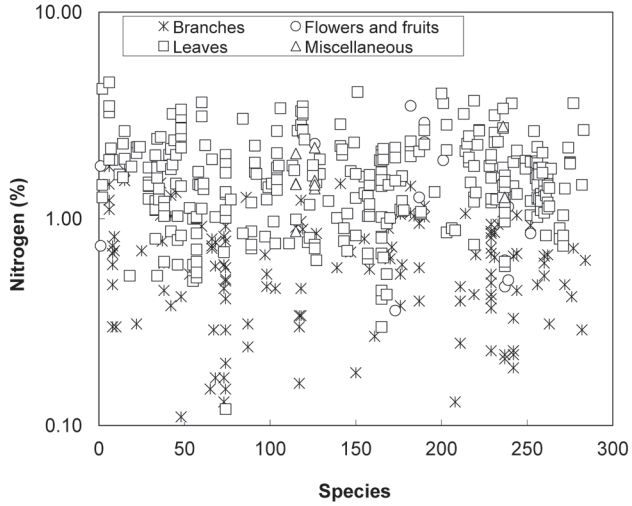
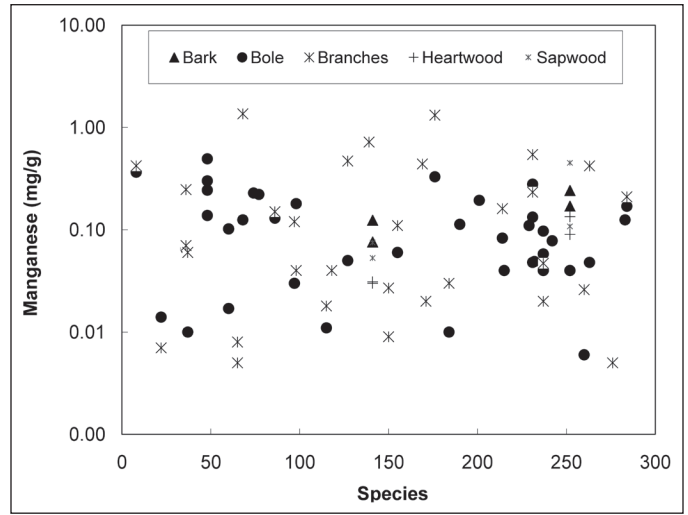
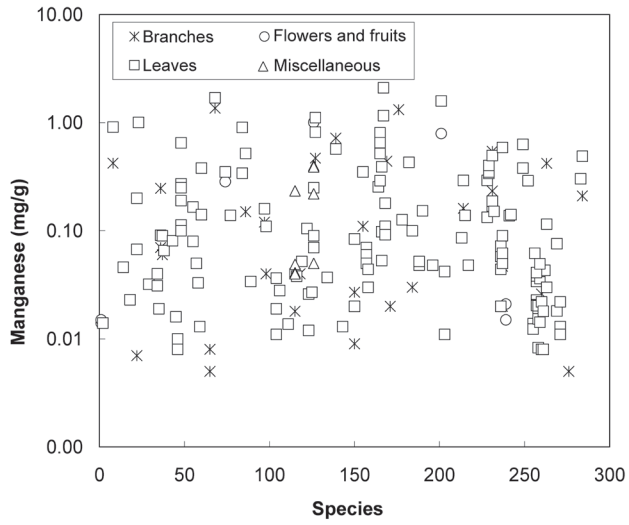
## Appendix 3: Elemental Composition by Species in Live Vegetation

This appendix contains charts of element and ash concentrations, and carbon to nitrogen (C/N) ratios of live vegetation parts by species. Species identification is by code number in appendix 2. The charts are intended to provide a visual idea of the range of element and ash concentration and C/N values and outlier species. Some charts have the Y-axis scale in log scale while others are linear. The charts are arranged in alphabetical order by the Y-axis label.



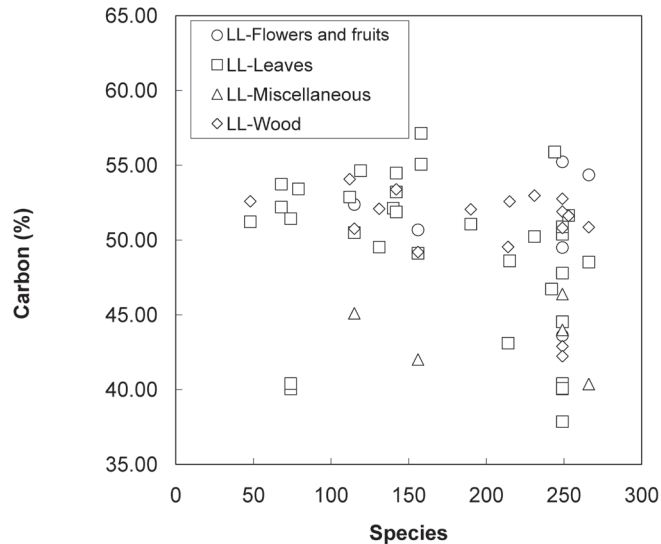
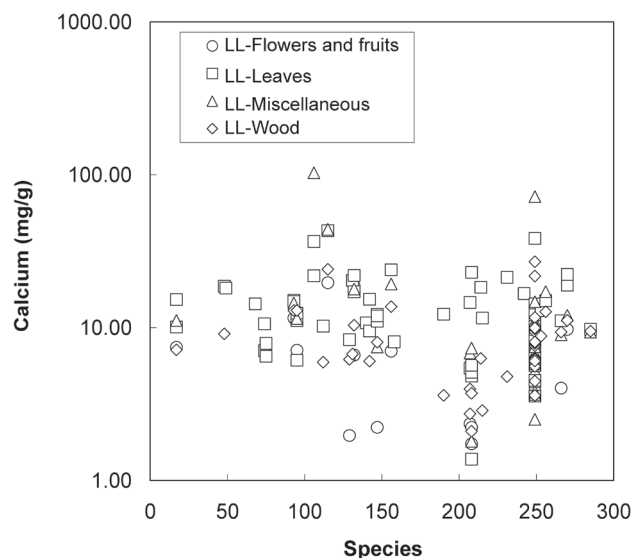
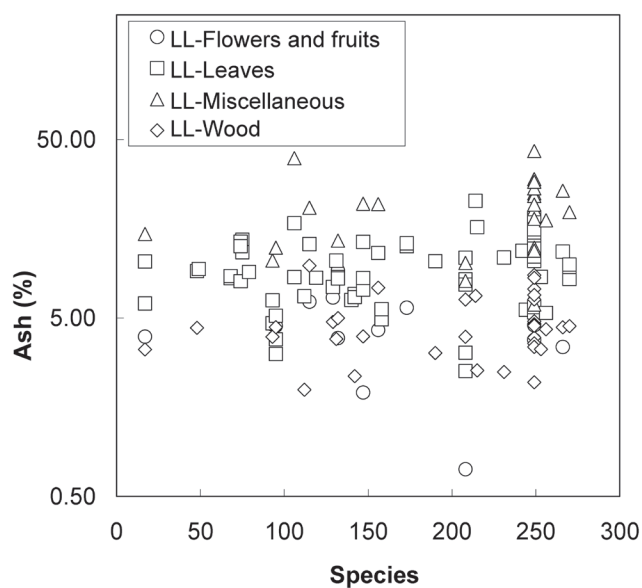
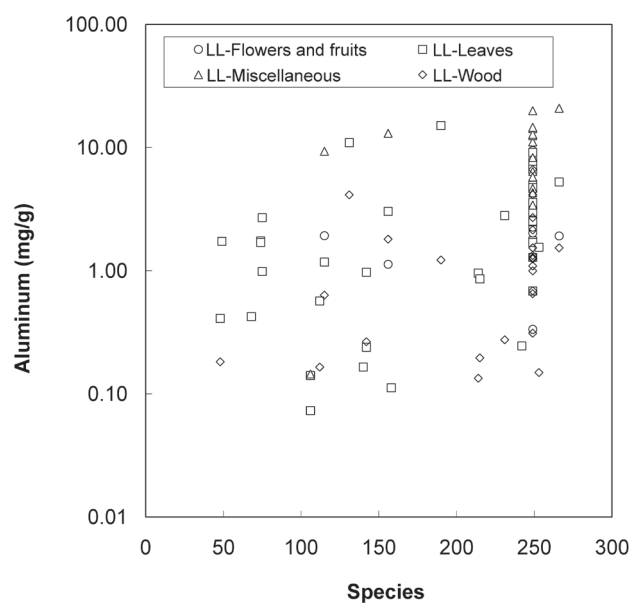


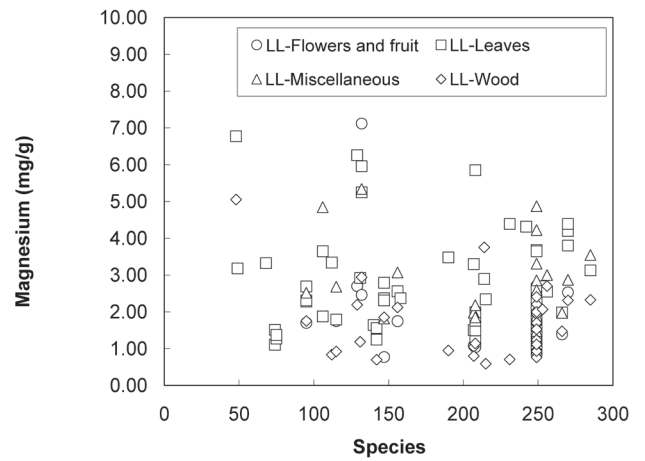
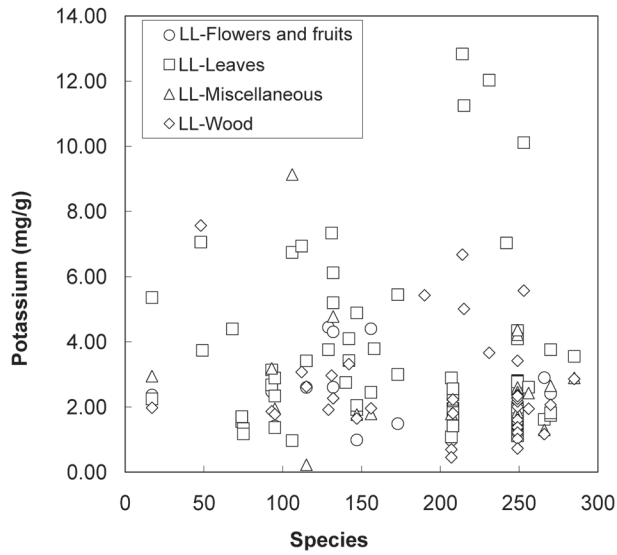
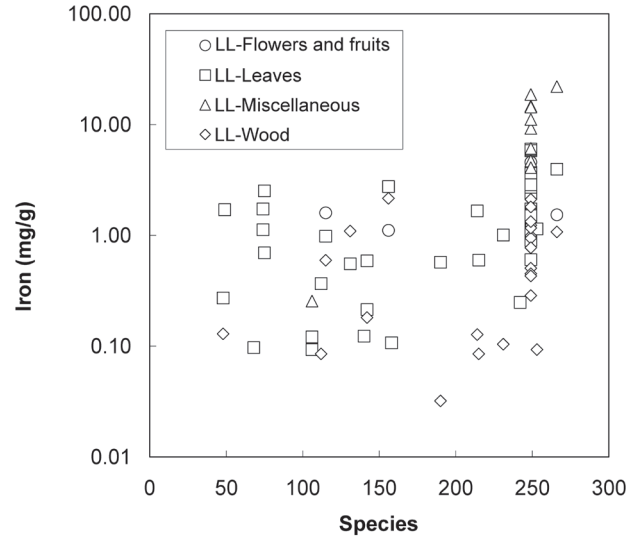
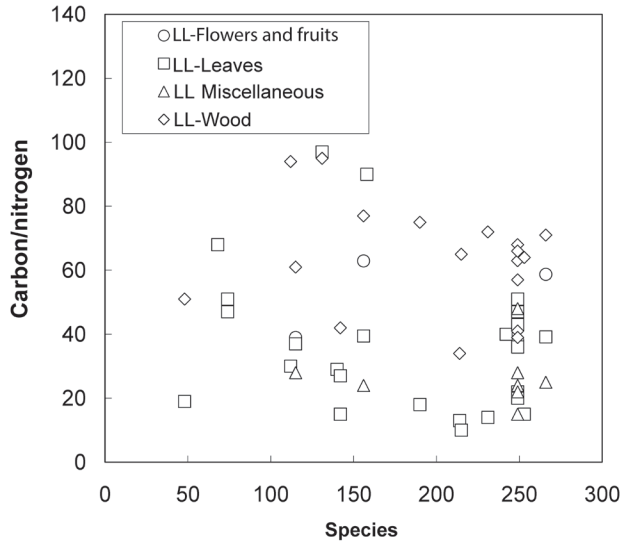


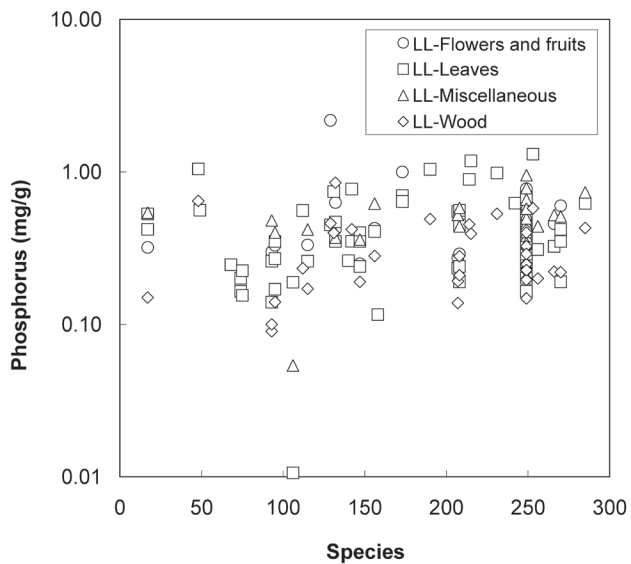
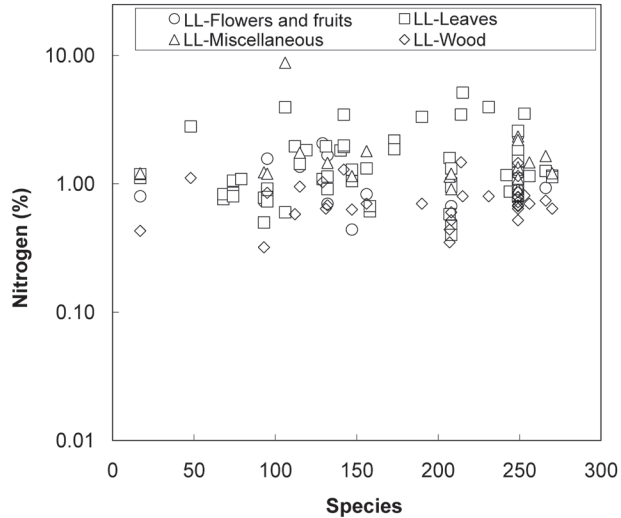
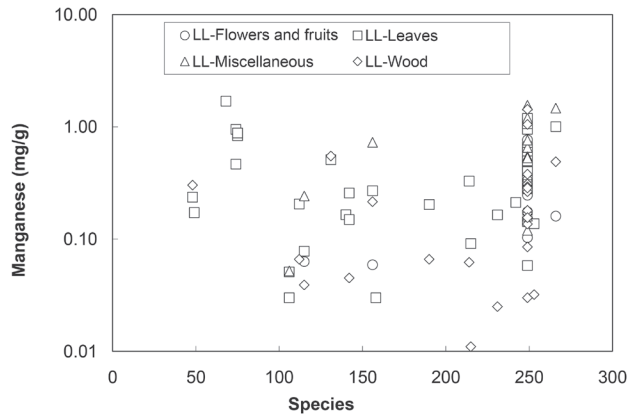


## Appendix 4: Elemental Composition by Species in Loose Litter

This appendix contains charts of element and ash concentrations, and carbon to nitrogen (C/N) ratios of ground or loose litter (LL) by species. Loose litter is sorted by different components. Species identification is by code number in appendix 2. The charts are intended to provide a visual idea of the range of element and ash concentration and C/N values and outlier species. Some charts have the Y-axis scale in log scale while others are linear. The charts are arranged in alphabetical order by the Y-axis label.





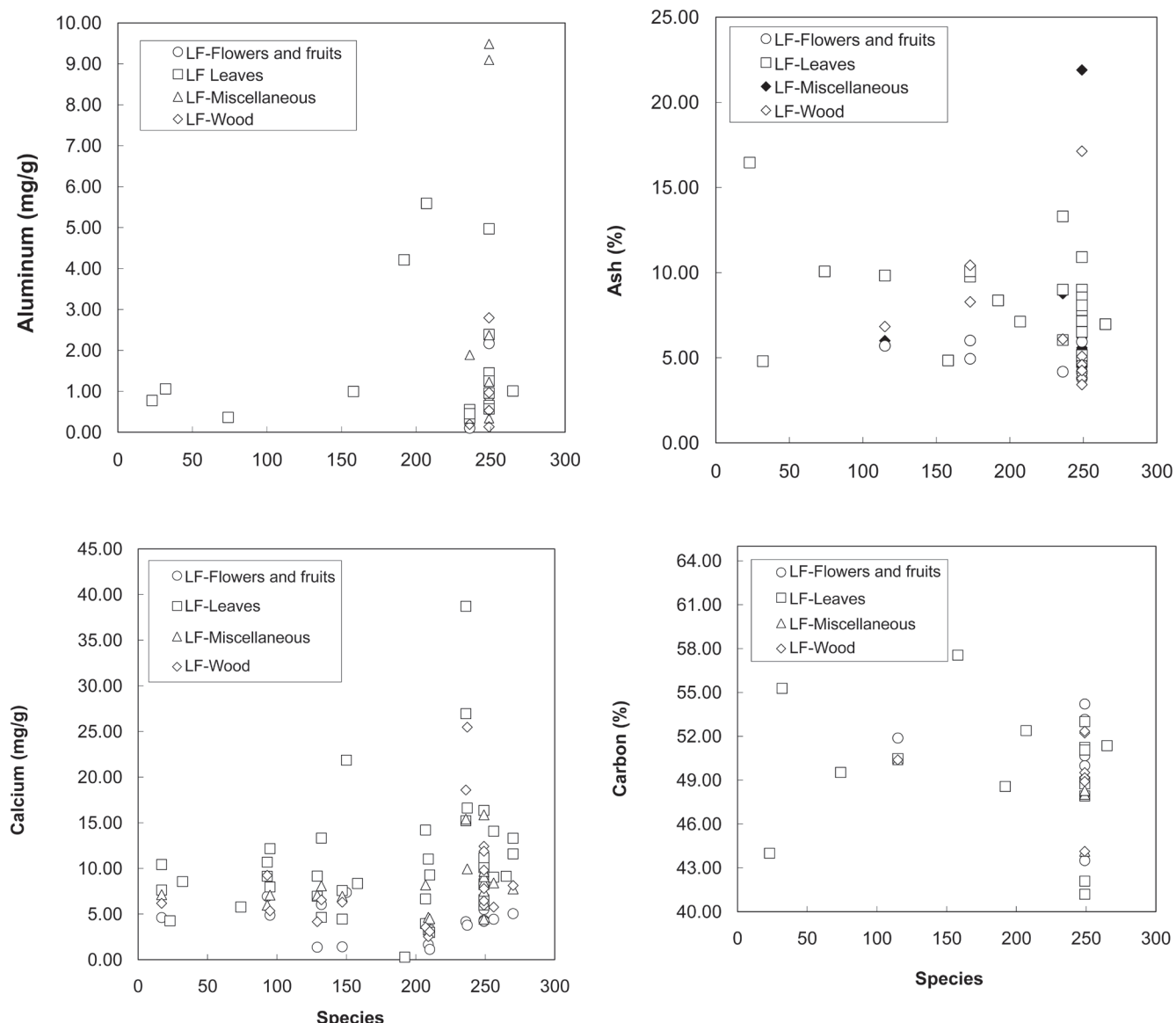


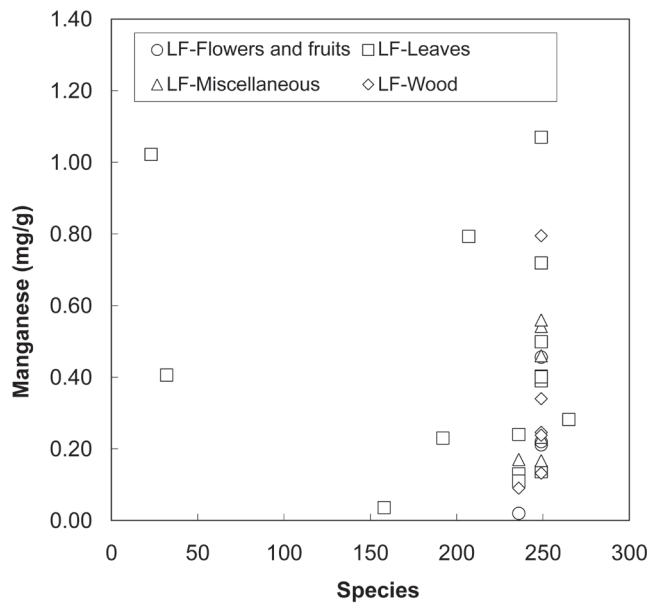
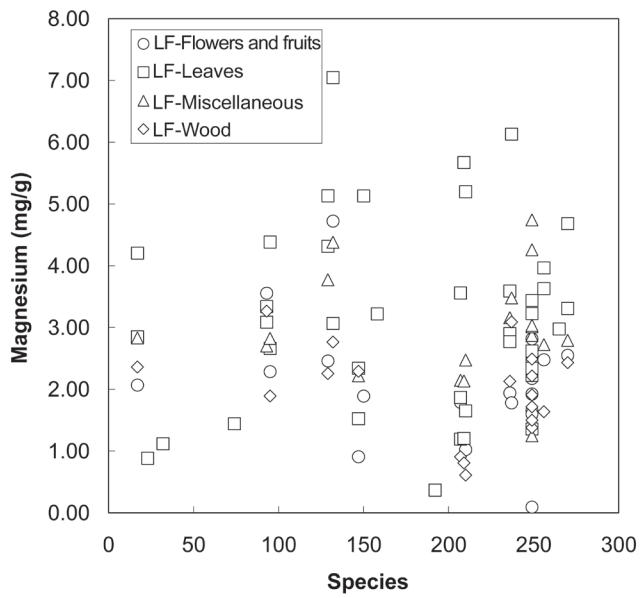
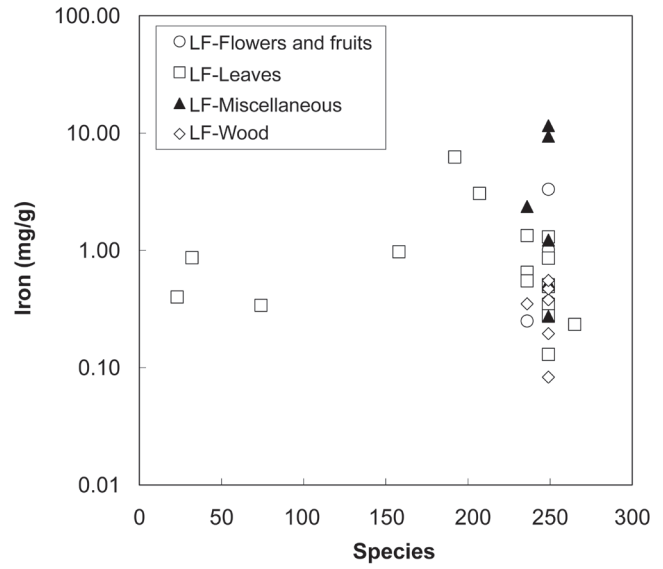
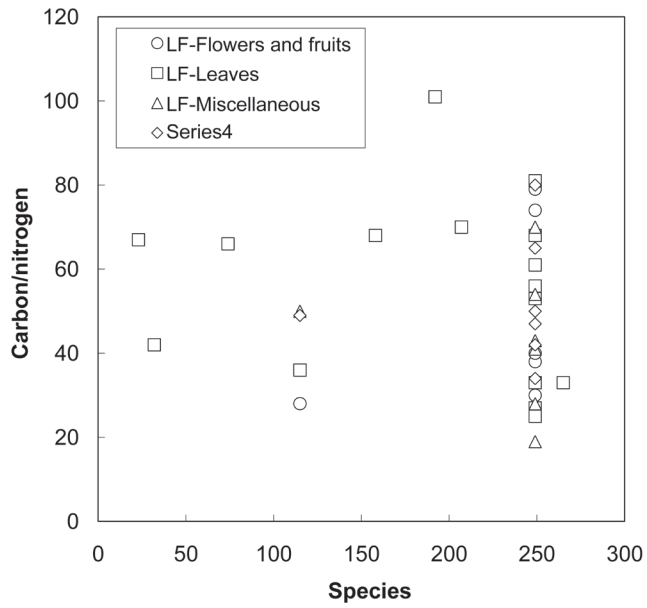


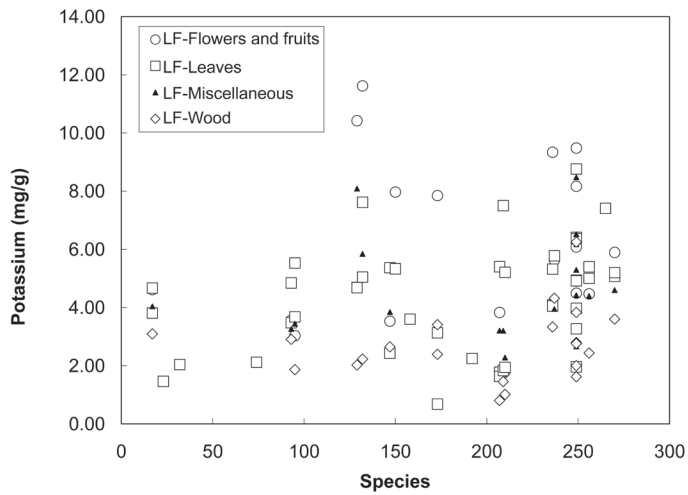
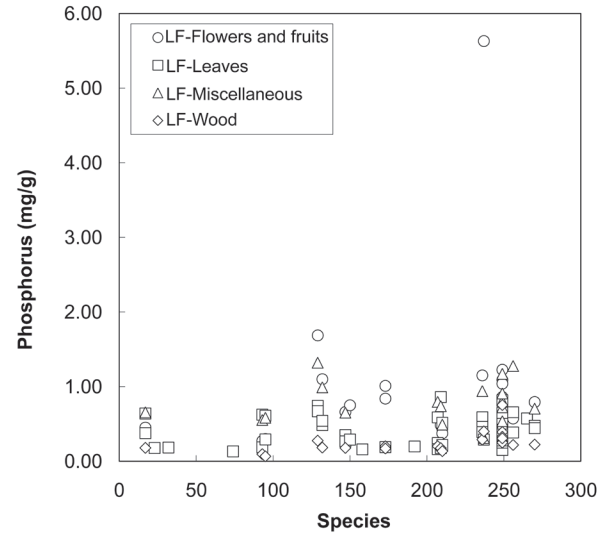
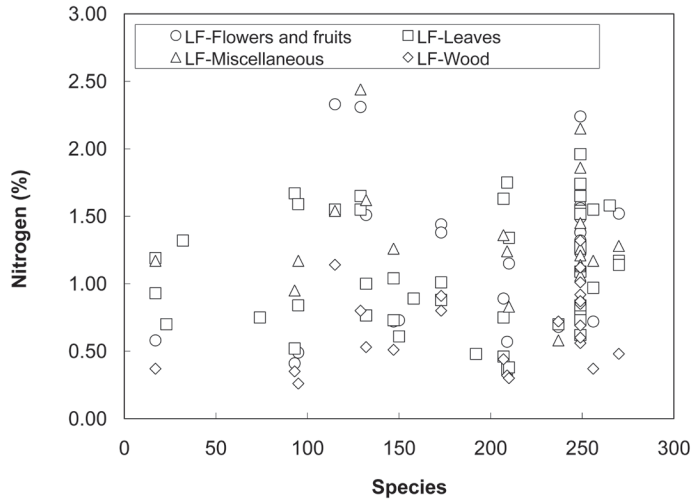


## Appendix 5: Elemental Composition by Species in Litter Fall

This appendix contains charts of element and ash concentrations, and carbon to nitrogen ratios (C/N) of ground or litter fall (LF) by species is sorted by different components. Species identification is by code number in appendix 2. The charts are intended to provide a visual idea of the range of element and ash concentration and C/N values and outlier species. Some charts have the Y-axis scale in log scale while others are linear. The charts are arranged in alphabetical order by the Y-axis label.



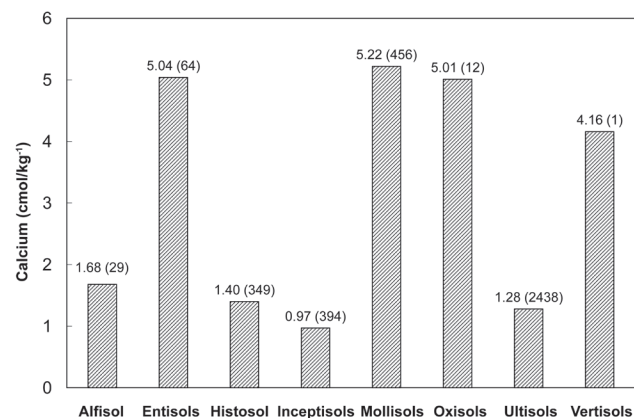
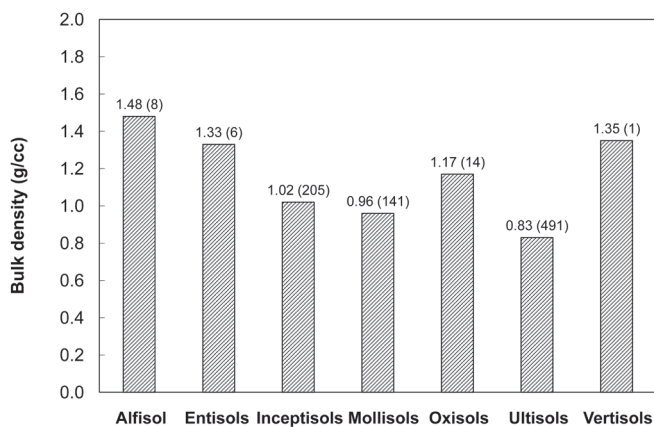
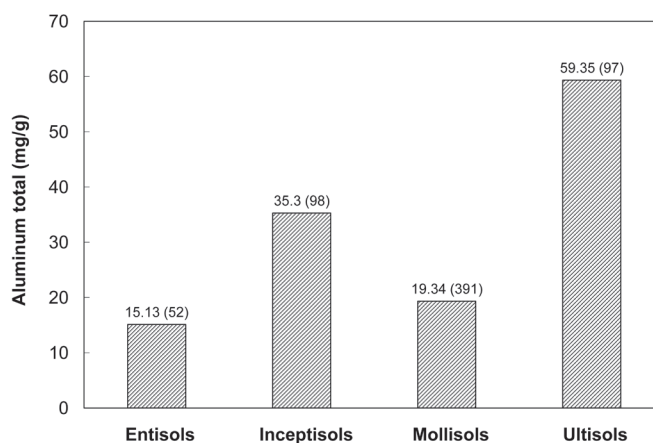
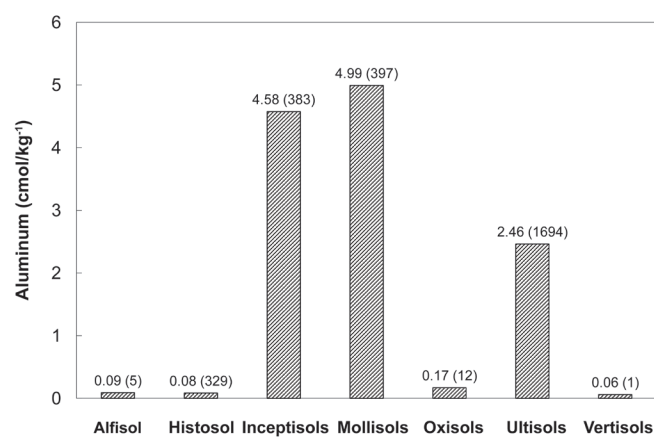


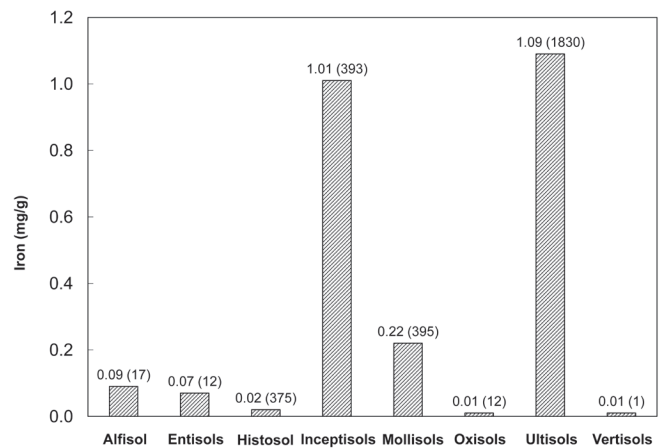
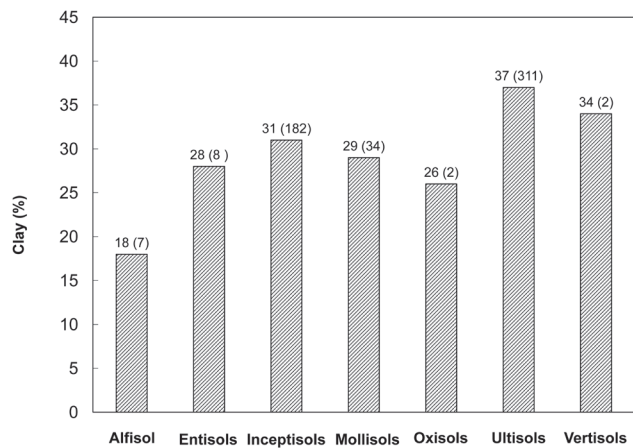
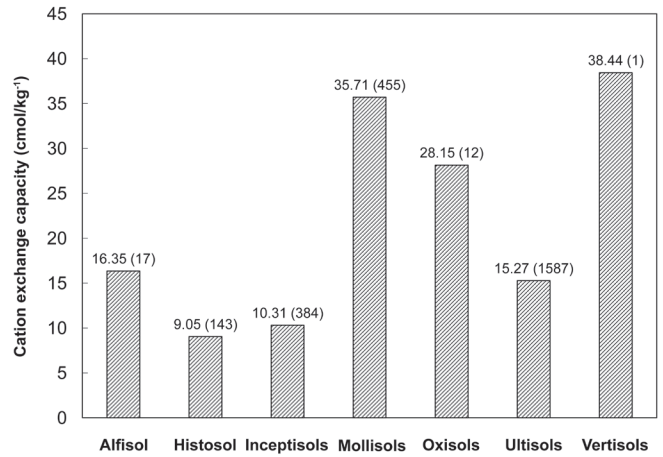
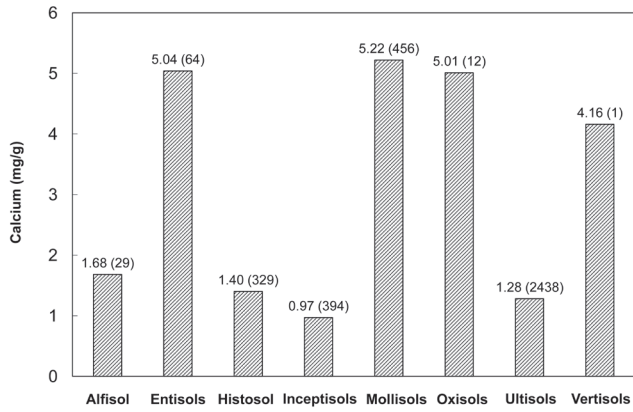
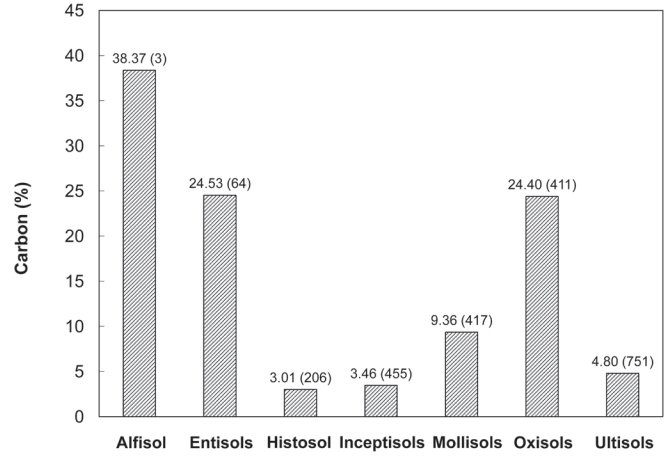
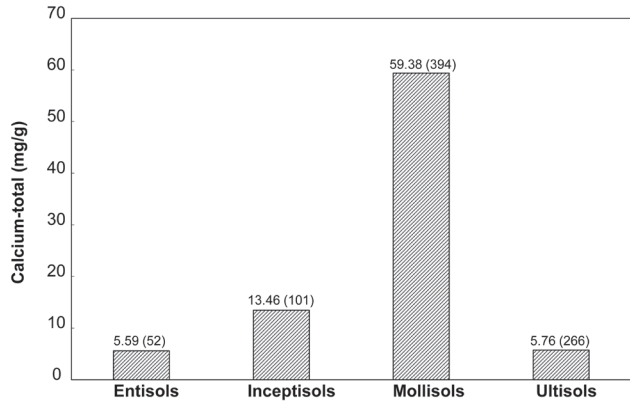


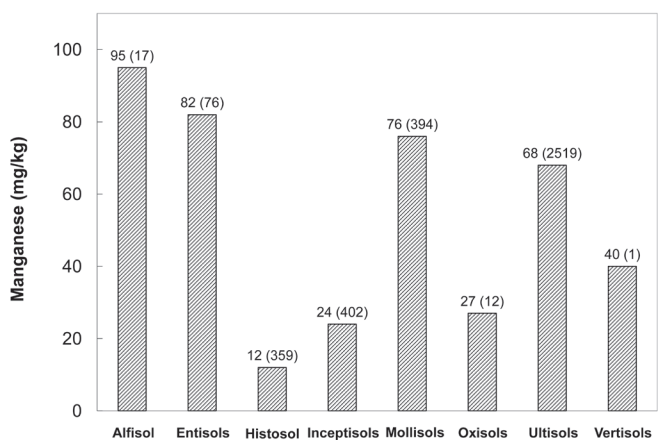
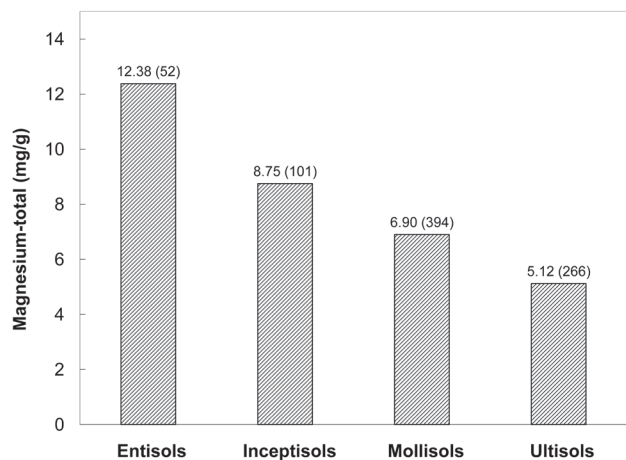
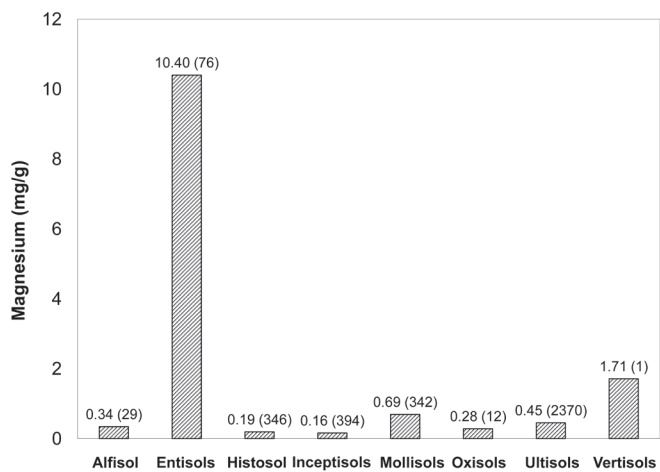
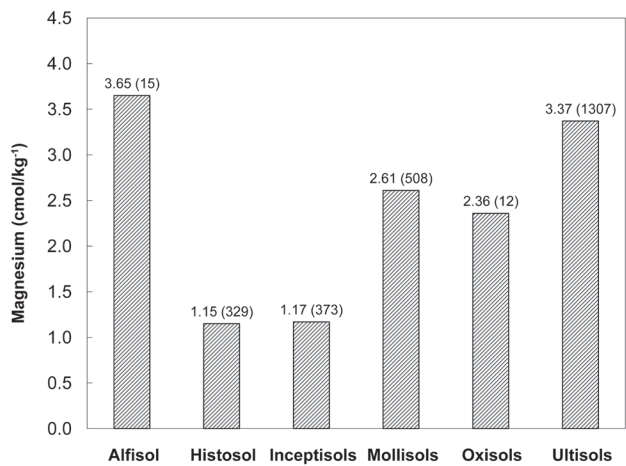
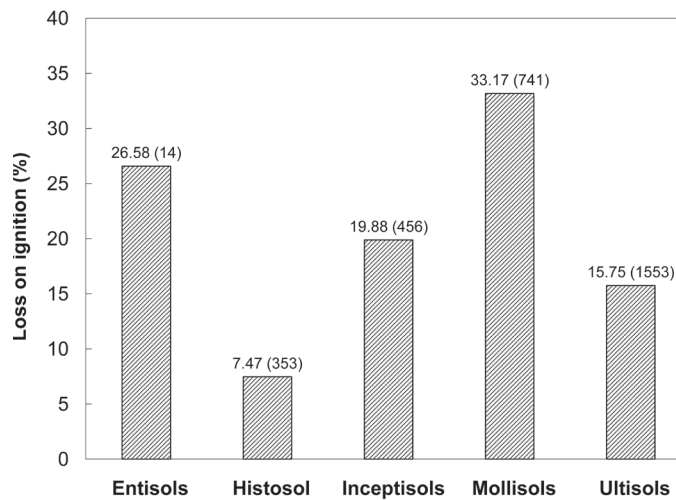
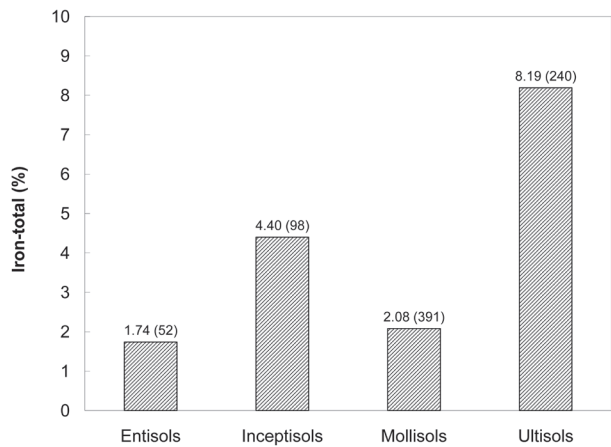


## Appendix 6: Elemental Composition by Soil Order

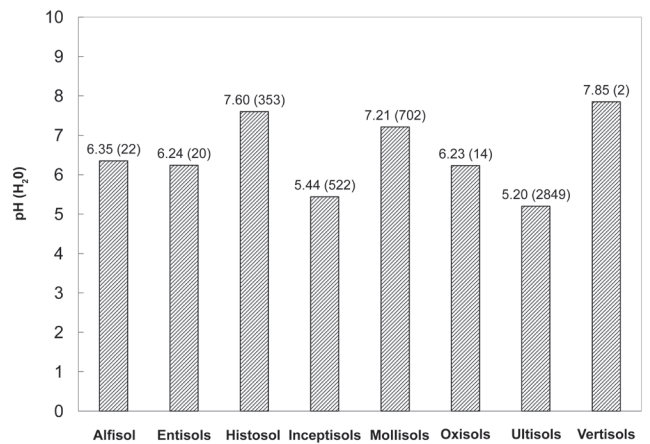
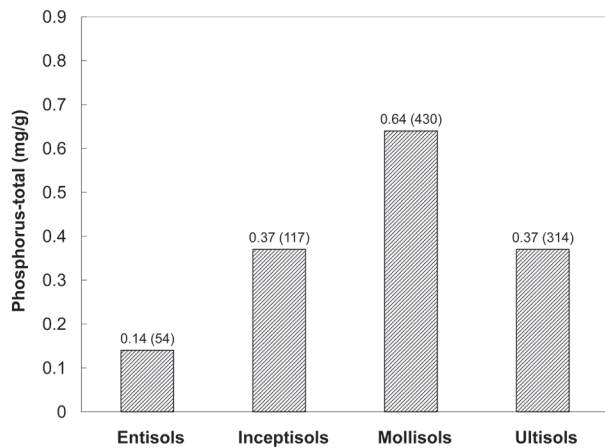
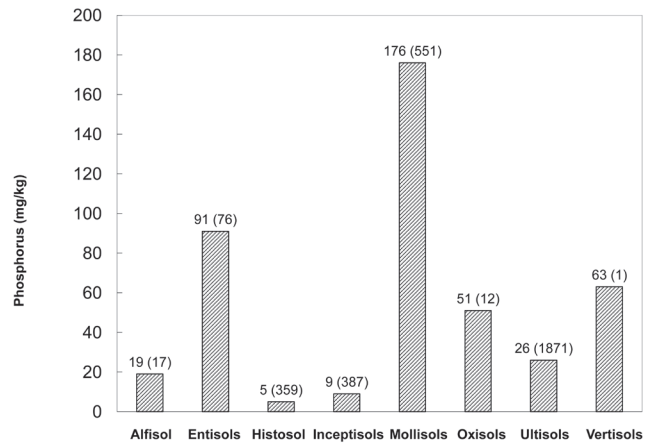
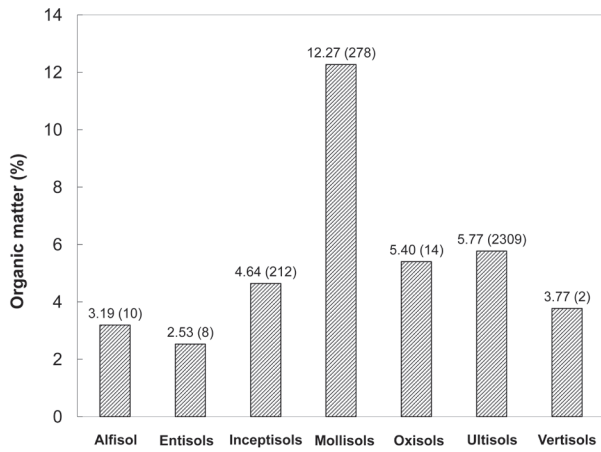
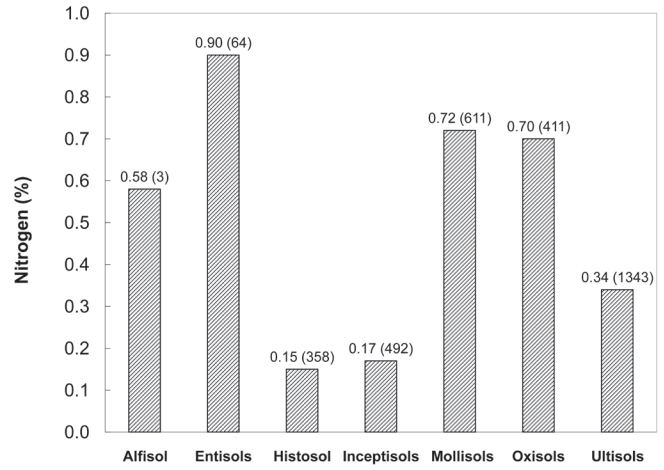
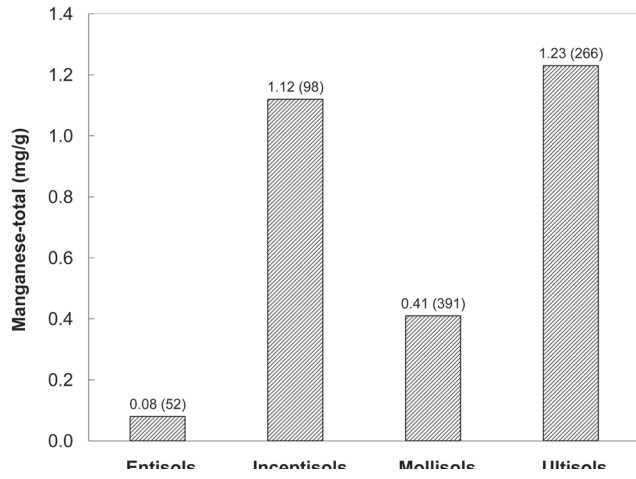
This appendix contains charts of mean values of element concentrations; cation exchange capacity; percentage clay, sand, and silt; loss on ignition; organic matter; and pH of soils by soil order. The number in parenthesis is the number of samples. The charts are intended to provide a visual idea of the range of element and other soil parameters by soil order. The charts are arranged in alphabetical order by the Y-axis label.



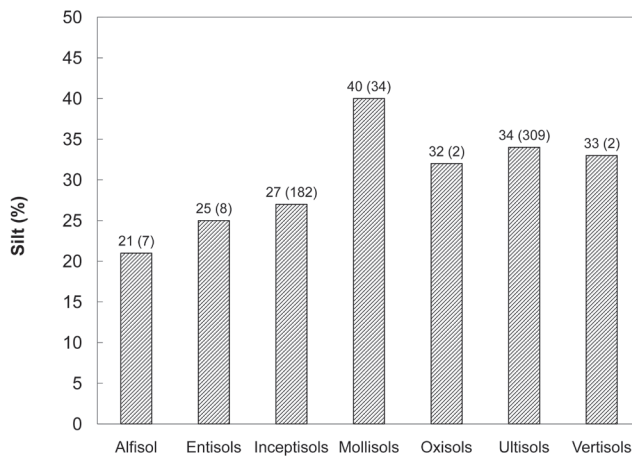
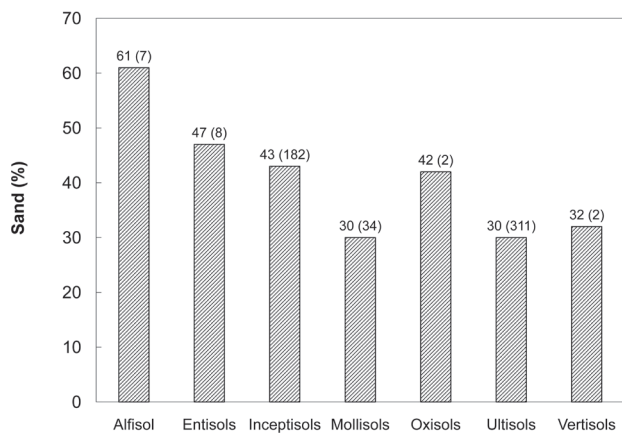
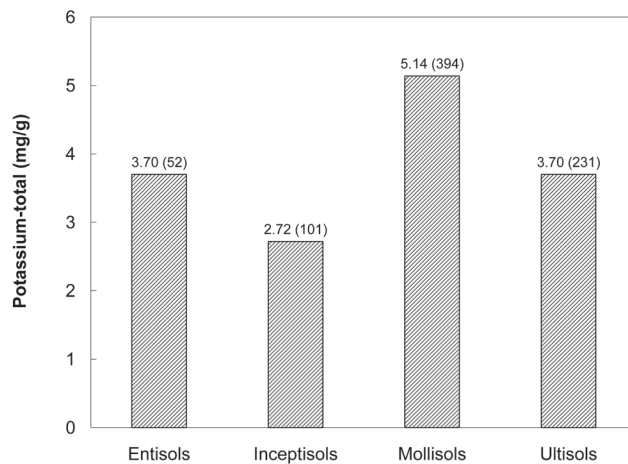
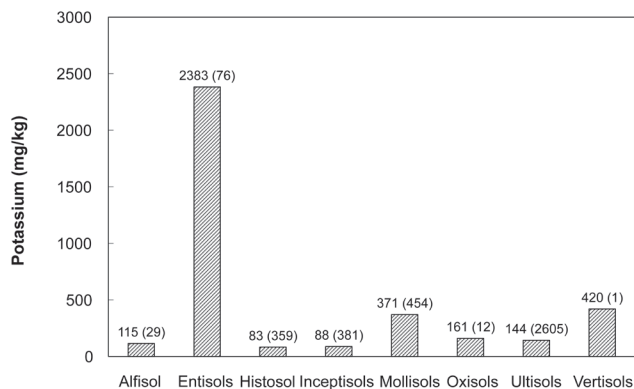
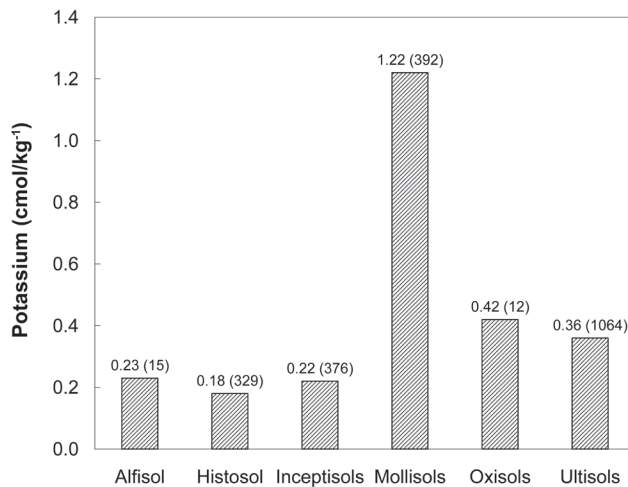
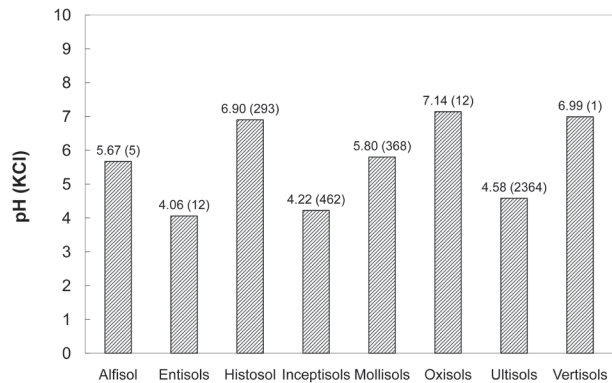


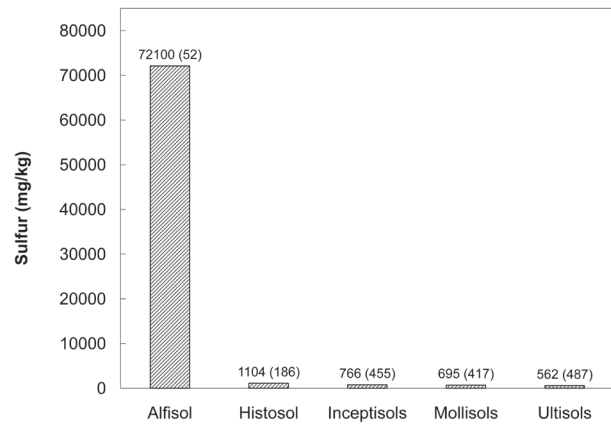
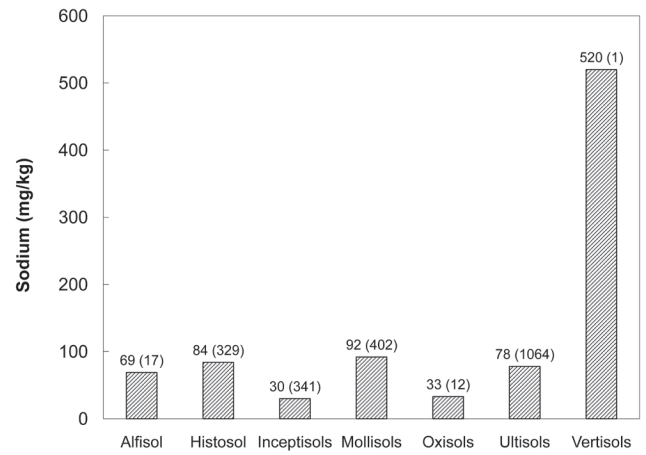
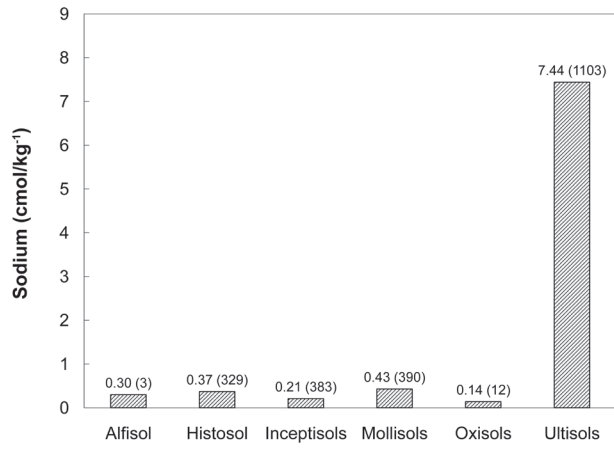












## **Appendix 7: Elemental Composition of Species From Contrasting Environments in Puerto Rico**

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### **Introduction**

The laboratory analyzed leaf samples obtained from a variety of sites in Puerto Rico including karstic areas in Guánica, Caguana, and Monito island; serpentine areas in Susúa and Maricao; several forested sites in the Luquillo mountains (Sabana, Bisley, El Verde); and mangrove and forested swamp sites in Punta Viento (Patillas), Jobos (Salinas), Humacao, and Sabana Seca. Frequently, species were repeatedly sampled within the same project on separate dates or in different projects. The samples were collected to satisfy descriptive requirements of specific projects and researchers, and were not designed to answer explicit questions or to test a priori hypotheses on nutrient relations. Therefore, the leaf data set does not represent a balanced set of families, species, or sites. In addition, there are no precise indications about leaf age, light exposure, or position in the canopy. I assumed that the sample set was constituted by adult leaves, not severely attacked by herbivores, and represented fully functional photosynthetic units. In spite of the obvious limitations, the data set is large enough to allow certain questions to be answered:

1. Are there common distribution patterns of ash and mineral elements in adult leaves obtained from contrasting ecosystems such as karst, serpentine, saline swamps, or wet volcanic sites?
2. Are families, and or species uniform in their patterns of accumulation of ash and mineral elements?
3. Are there significant correlations between element concentrations?
4. How do leaf nutrient ratios such as carbon/nitrogen, C/phosphorus, and N/P ratios compare with those reported from other tropical forests?
5. Are there patterns in the ratios of alkaline and earth alkaline metals?

### **Methods**

The leaf samples were analyzed to determine the concentrations of ash, C, N, sulfur (S), potassium (K), magnesium (mg), calcium (Ca), aluminum (Al), and iron (Fe). However, not all the leaf samples have a complete set of analyses. For the purpose of this statistical analysis, all element concentrations are expressed on a molar basis (mmol/kg dry weight), so that element comparisons can be made on an atom instead

of weight basis. Transformations of the molar units into weight units are simply accomplished multiplying the value by the atomic weight of the element considered. Analytical methods are described in a separate section of this book.

The distribution of each parameter was determined for the leaf samples grouped by families and species, and for each group the sequence of average values was established. I did not attempt to establish if this sequence was statistically significant because there were not enough replicates from each family, species, or sites to do it properly. However, in each case, I tried to identify emerging ecological or phylogenetic patterns that may lead to further indepth research. For each element, I listed the five species with highest (H) and lowest (L) values. I did not attempt to detect patterns by site of collection, as the description of sites was insufficient for that purpose. However, I did select a group of species characteristic of certain forest types, with a complete set of analyses for N, S, P, K, Ca, and Mg, to explore potential relationships with elemental composition.

## Results

The data set contains 143 species distributed among 57 families (table 11). Most species are native to Puerto Rico. Introduced species include trees naturalized in Puerto Rico such as *Spathodea campanulata*, and *Albizia* spp, cultivated for agricultural purposes (*Coffea arabica*, *Citrus sinensis*, and *Syzygium jambos*), and planted for forestry use such as *Swietenia* species and *Khaya nyasica*. *Bambusa* species are planted along many roads of Puerto Rico for border protection. Other species were introduced as garden plants that later escaped and naturalized such as *Kalanchoe pinnata*. The data set used for the following analyses is provided in the addendum.

### Patterns of Element Concentration

#### Ash concentration—

The percentage of ash per species averages 7.8 with a coefficient of variation of nearly 50 percent; the distribution is positively skewed and slightly leptokurtic (fig. 1). The highest percentage of ash values (20 percent) were recorded for *Bambusa vulgaris* and *Citrus sinensis*, and the lowest (<3 percent) was measured in two species of the Colorado forest in the Luquillo mountains (*Cyrilla racemiflora* and *Micropholis chrysophylloides*).

#### Potassium concentration—

The K concentration averages 296  $\mu\text{mol/kg}$  and the variation coefficient is larger than that of percentage of ash, the highest values correspond to species of the families Araceae and Urticaceae (>1000  $\text{mmol/kg}$ ), and the lowest values included

**Table 11—List of species analyzed in the present report, organized according to families**

Family	Species	Family	Species
Apocynaceae	<i>Allamanda violacea</i>	<b>Euphorbiaceae</b>	<i>Alchornea latifolia</i>
	<i>Plumeria alba</i>		<i>Croton poecilanthus</i>
	<i>Plumeria obtusa</i>		<i>Ditta myricoides</i>
	<i>Plumeria rubra</i> (red)*		<i>Gymnanthes lucida</i>
	<i>Plumeria rubra</i> (white)*		<i>Sapium laurocerasus</i>
Aquifoliaceae	<i>Ilex sideroxyloides</i>	<b>Fabaceae</b>	<i>Albizia lebbek*<sup>*</sup></i>
Araceae	<i>Dieffenbachia seguine*</i>		<i>Albizia procera*</i>
Araliaceae	<i>Schefflera morototoni</i>		<i>Andira inermis</i>
Arecaceae	<i>Prestoea montana</i>		<i>Inga laurina</i>
Bignoniaceae	<i>Schlegelia brachyantha</i>		<i>Inga vera</i>
	<i>Spathodea campanulata*</i>	<i>Leucaena leucocephala*</i>	
	<i>Tabebuia haemantha</i>	<i>Ormosia krugii</i>	
	<i>Tabebuia heterophylla</i>	<i>Pictetia aculeata</i>	
	<i>Tabebuia rigida</i>	<i>Pterocarpus officinalis</i>	
	<i>Tabebuia</i> spp.	<b>Flacourtiaceae</b>	<i>Casearia arborea</i>
Boraginaceae	<i>Bourreria succulenta</i>		<i>Casearia decandra</i>
Burseraceae	<i>Cordia borinquensis</i>		<i>Casearia guianensis</i>
	<i>Bursera simaruba</i>		<i>Casearia sylvestris</i>
	<i>Dacryodes excelsa</i>		<i>Homalium racemosum</i>
	<i>Tetragastris balsamifera</i>	<i>Xylosma schwaneckeana</i>	
Capparaceae	<i>Capparis cynophallophora</i>	<b>Heliconiaceae</b>	<i>Heliconia caribaea</i>
Cecropiaceae	<i>Cecropia schreberiana</i>	<b>Hernandiaceae</b>	<i>Hernandia sonora*</i>
Celastraceae	<i>Cassine xylocarpa</i>	<b>Lauraceae</b>	<i>Ocotea leucoxydon</i>
Clusiaceae	<i>Calophyllum antillanum</i>		<i>Ocotea spathulata</i>
		<i>Clusia rosea</i>	<b>Magnoliaceae</b>
Combretaceae	<i>Bucida buceras</i>	<b>Malpighiaceae</b>	<i>Byrsonima lucida</i>
	<i>Laguncularia racemosa</i>		<i>Byrsonima spicata</i>
Crassulaceae	<i>Kalanchoe pinnata*</i>	<b>Malvaceae</b>	<i>Byrsonima wadsworthii</i>
Cyrtillaceae	<i>Cyrtilla racemiflora</i>		<i>Khaya nyasica*</i>
Elaeocarpaceae	<i>Sloanea berteriana</i>		<i>Thespesia grandiflora</i>
Erythroxylaceae	<i>Erythroxylum areolatum</i>	<b>Melastomataceae</b>	<i>Henriettea squamulosum</i>
	<i>Erythroxylum rotundifolium</i>		<i>Miconia impetiolearis</i>
Melastomataceae	<i>Miconia prasina</i>	<b>Nyctaginaceae</b>	<i>Pisonia subcordata</i>
	<i>Miconia racemosa</i>	<b>Ochnaceae</b>	<i>Ouratea littoralis</i>
	<i>Miconia</i> sp.	<b>Orchidaceae</b>	<i>Prescotia oligantha</i>
	<i>Miconia</i> spp.	<b>Phytolaccaceae</b>	<i>Phytolacca icosandra</i>
	<i>Miconia tetrandra</i>	<b>Pinaceae</b>	<i>Pinus caribaea</i>
Meliaceae	<i>Guarea glabra</i>	<b>Piperaceae</b>	<i>Piper aduncum</i>
	<i>Guarea guidonia</i>		<i>Piper glabrescens</i>
	<i>Guarea ramiflora</i>		<i>Piper hispidum</i>

**Table 11—List of species analyzed in the present report, organized according to families (continued)**

Family	Species	Family	Species
	<i>Swietenia humilis</i> *	<b>Poaceae</b>	<i>Bambusa</i> spp.*
	<i>Swietenia macrophylla</i> *		<i>Bambusa vulgaris</i> *
	<i>Swietenia macrophylla x mahagoni</i> *	<b>Polygonaceae</b>	<i>Coccoloba diversifolia</i>
	<i>Swietenia mahagoni</i> *		<i>Coccoloba microstachya</i>
	<i>Swietenia</i> sp.*	<b>Pteridaceae</b>	<i>Acrostichum aureum</i>
	<i>Trichilia palida</i>	<b>Rhamnaceae</b>	<i>Colubrina arborescens</i>
			<i>Colubrina elliptica</i>
Moraceae	<i>Ficus citrifolia</i>		<i>Krugiodendron ferreum</i>
Myrsinaceae	<i>Ardisia glauciflora</i>	<b>Rhizophoraceae</b>	<i>Rhizophora mangle</i>
	<i>Ardisia solanacea</i>	<b>Rubiaceae</b>	<i>Coffea arabica</i> *
Myrtaceae	<i>Eugenia borinquensis</i>		<i>Exostema caribaeum</i>
	<i>Eugenia eggersii</i>		<i>Faramea occidentalis</i>
	<i>Eugenia foetida</i>		<i>Guettarda pungens</i>
	<i>Eugenia maleolens</i>		<i>Guettarda scabra</i>
	<i>Eugenia monticola</i>		<i>Neolaugeria resinosa</i>
	<i>Eugenia rhombea</i>		<i>Palicourea riparia</i>
	<i>Eugenia stahlia</i>		<i>Psychotria berteriana</i>
	<i>Gomidesia lindeniana</i>		<i>Psychotria maleolens</i>
	<i>Myrcia deflexa</i>		<i>Psychotria</i> sp.
	<i>Myrcia splendens</i>	<b>Rutaceae</b>	<i>Amyris elemifera</i>
	<i>Pimenta racemosa</i>		<i>Citrus sinensis</i> *
	<i>Syzygium jambos</i> *	<b>Sapindaceae</b>	<i>Sapindus saponaria</i>
Nyctaginaceae	<i>Guapira obtusata</i>		<i>Thouinia striata</i>
	<i>Pisonia albida</i>		
Sapotaceae	<i>Manilkara bidentata</i>	<b>Families: 57</b>	
	<i>Micropholis chrysophylloides</i>	<b>Species: 143</b>	
Staphyleaceae	<i>Turpinia occidentalis</i>		
Theaceae	<i>Ternstroemia stahlia</i>		
Theophrastaceae	<i>Jacquinia berteroi</i>		
Thymelaeaceae	<i>Daphnopsis philippiana</i>		
	<i>Erithalis fruticosa</i>		
Ulmaceae	<i>Trema micranthum</i>		
Urticaceae	<i>Urera baccifera</i>		
Verbenaceae	<i>Avicennia germinans</i>		
	<i>Petitia domingensis</i>		
Viscaceae	<i>Phoradendron racemosum</i>		
Zygophyllaceae	<i>Guaiacum officinale</i>		
	<i>Guaiacum sanctum</i>		

\* Indicates introduced species.

*C. sinensis*, although this species has one of the highest percentage of ash values (fig. 1).

#### **Calcium concentration—**

Average calcium concentration is similar to that of K, but the levels of asymmetry, kurtosis, and coefficient of variation are considerably higher (fig. 1). *Urera baccifera* (Urticaceae) and *Phoradendron racemosum* (Viscaceae) are within a group of species with the highest Ca concentration (>900 mmol/kg). *Ardisia glauciflora* (Myrsinaceae) lies within the high Ca concentration group (>700 mmol/kg) contrasting with its position regarding K. In the data set, *Kalanchoe pinnata* (Crassulaceae) appears as an outlier regarding Ca concentration. This family is known for its calciotropic character, and most of their Ca is in soluble form (Kinzel 1983).

#### **Magnesium concentration—**

The species of Viscaceae and Urticaceae appear again within the group with the highest element concentration as in the case of K and Ca, although they do not belong to the group with highest ash concentration. *Miconia prasina* (Melastomataceae), *Micropholis chrysophylloides* (Sapotaceae), and *Cyrilla racemiflora* (Cyrillaceae) show very low Mg concentrations (<40 mmol/kg). The distribution of Mg concentrations has similar levels of skewness, kurtosis, and coefficient of variation as those of Ca. Among the species analyzed, it is noteworthy that one Flacourtiaceae, *Casearia sylvestris*, appears in the high group, whereas another, *Xylosma schwaneckeana*, has extremely low concentrations of this element.

#### **Aluminum and Iron concentration—**

Distributions of these elements are highly right-skewed, and strongly leptokurtic, indicating that a few species present rather high concentrations compared to the rest (fig. 2). Average Al concentration is 61 mmol/kg, and the variation coefficient amounts to more than 300 percent with high values well above 500 mmol/kg. The *Miconia* species (Melastomataceae) stand out as Al accumulators, as reported for several tropical plant communities (Jansen et al. 2002) (fig. 2).

In the high Al concentration group the Flacourtiaceae, Rubiaceae, and Phytolaccaceae are also included; families known for containing many metal accumulating species. Rubiaceae species are found both in the high (*P. maleolens*) and low (*Guettarda scabra*) concentration groups.

The *Miconia* species are again within the Fe concentrating species >30 mmol/kg, together with *Ocotea spathulata* (Lauraceae), and *Phytolacca icosandra* (Phytolaccaceae). Species of the latter genus have been reported as accumulators of heavy metals, mainly manganese (Baker and Brooks 1989, Yuan et al. 2007).



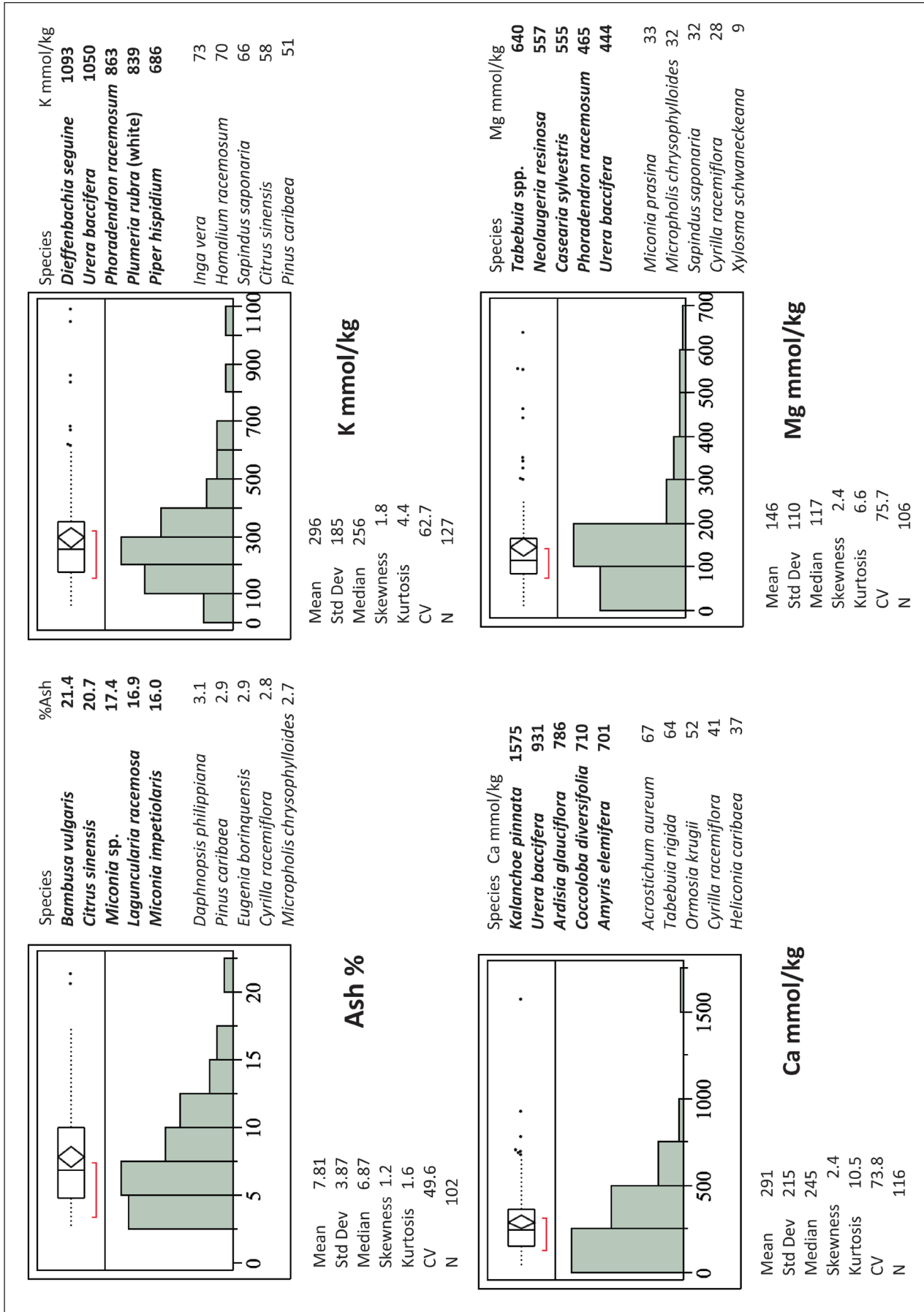


Figure 1—Distribution of concentrations of ash and major alkaline and earth alkaline metals. The species list includes the five highest and lowest values recorded in the data set. Statistical calculations obtained using JMP 8.



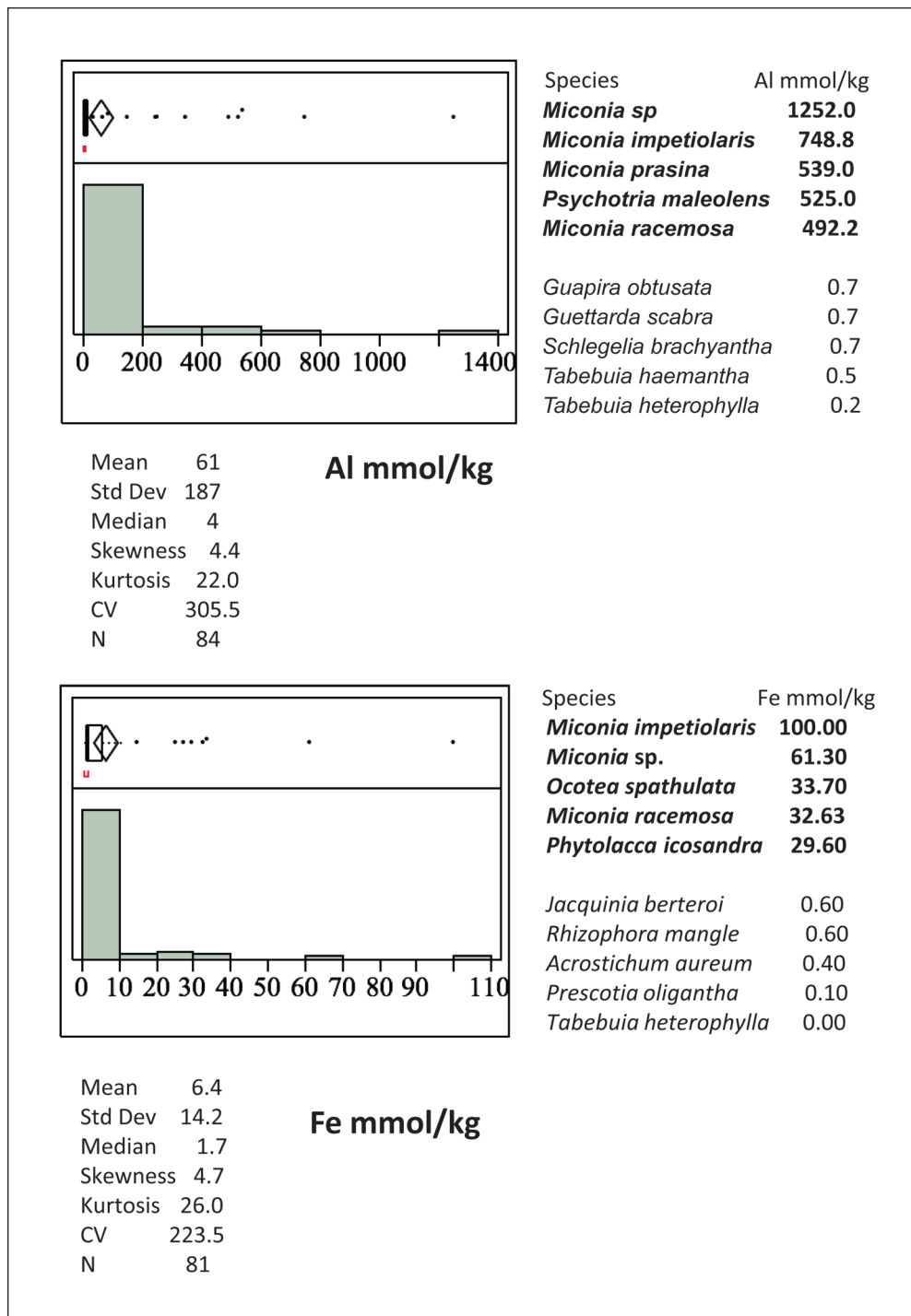


Figure 2—Distributions of concentrations of aluminum (Al) and iron (Fe). The species list includes the five highest and lowest values recorded in the data set. Statistical calculations obtained using JMP 8.

### Nonmetallic elements—

Phosphorus distribution was strongly asymmetric, because a few species have concentrations above the 100 mmol/kg level, resulting therefore in a large coefficient of variation (fig. 3). Among these species, *Ficus citrifolia* (Moraceae) and *Kalanchoe pinnata* (Crassulaceae) have surprisingly high values. The species *A. glauciflora* (Myrsinaceae), *Eugenia rhombea* (Myrtaceae), *Clusia rosea* (Clusiaceae), and *Jacquinia berteroi* (Theophrastaceae) are within the low P concentration group.

Distribution of C concentrations was nearly normal, with a small coefficient of variation, values ranged with narrow limits between 48 to 35 mol/kg (fig. 3). Nitrogen and S were much more variable, with CVs around 45 percent, and levels of skewness and kurtosis departing slightly from normality. The high N concentration group (>2500 mmol/kg) contains one species of Fabaceae (*Leucacena leucocephala*) and species with rather fleshy or thin leaves such as *Phoradendron racemosum* (Viscaceae), *P. icosandra* (Phytolaccaceae), and *Trema micranthum* (Ulmaceae). Again *C. racemiflora* and *C. rosea* appear within the low concentration group.

Average concentration of N (1254 mmol/kg) and S (90 mmol/kg) are above the average concentrations required for normal, healthy growth in cultivated plants, whereas average for P (27 mmol/kg) is about half of that value (see table 4, Epstein 1965).

### Inter-Element Correlations

Pair-wise correlations (Pearson product-moment correlations between each pair of variables) were highly significant ( $p < 0.0001$ ) and positive between percentage of ash and Ca, Al, and Fe, and negative between percentage of ash and C (table 12). Other elements highly correlated are Fe and Al; P with K, Ca, and N. Nitrogen was significantly correlated with K, P and less so with S.

I applied also a test for nonparametric correlations (Spearman  $r$ ) to the data set and obtained somewhat different results. As before, percentage of ash was highly correlated with Ca and C. Other significant correlations were obtained between Fe and Al, N with P and K. However, nonparametric coefficients for Ca and P, Ca and K, percentage of ash and Fe were not significant in contrast to the Pearson coefficients (table 12).

### Element Ratios, Comparisons With Cultivated Plants and Other Tropical Forests

Element ratios calculated from the composition of organisms are useful for estimating functional relationships that relate biological activity with environmental variables (Elser 2006, Elser et al. 2010, Redfield 1958). The study of element

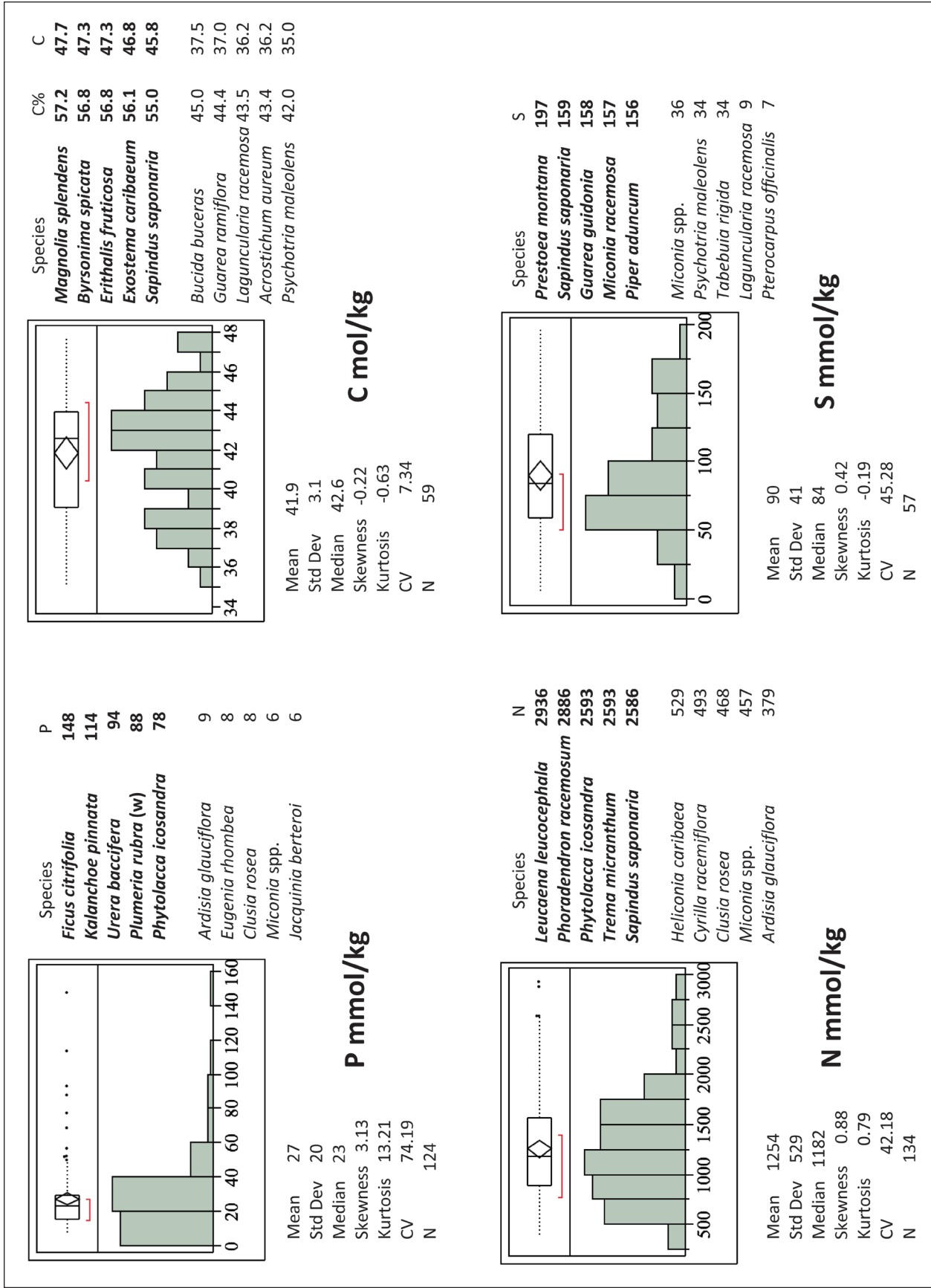


Figure 3—Distribution of concentrations of nonmetallic elements. The species list includes the five highest and lowest values recorded in the data set. Statistical calculations obtained using JMP 8.

**Table 12—Significant ( $p < 0.01$ ) pair-wise (Pearson product-moment) and nonparametric (Spearman  $r$ ) correlations among elements measured in leaf samples**

V1	V2	Correlation	Signif prob	Spearman $\rho$	Prob $>  \rho $	Count
Al	Ash	0.465	<.0001	0.166	0.167	71
C	Ash	-0.558	<.0001	-0.551	<.0001	58
Ca	P	0.337	<b>0.0003</b>	-0.044	<b>0.645</b>	113
Ca	Ash	0.666	<.0001	0.706	<.0001	85
Ca	K	0.296	<b>0.001</b>	0.211	<b>0.023</b>	116
Fe	Al	0.732	<.0001	0.864	<.0001	80
Fe	Ash	0.460	<b>&lt;.0001</b>	0.107	<b>0.377</b>	71
K	P	0.447	<.0001	0.419	<.0001	124
Mg	K	0.373	<.0001	0.328	0.001	106
Mg	Ash	0.268	<b>0.019</b>	0.327	<b>0.004</b>	76
N	S	0.394	0.002	0.367	0.005	57
N	P	0.552	<.0001	0.671	<.0001	119
N	K	0.412	<.0001	0.447	<.0001	122
N	Ash	0.253	<b>0.011</b>	0.344	<b>&lt;0.001</b>	101
N	Mg	0.240	<b>0.015</b>	0.264	<b>0.007</b>	102

Note: Ash in percentage, C in mol/kg, other elements in mmol/kg. In bold correlation coefficients that do not agree with each other at the given  $p$  level.

proportions has been the subject of biological stoichiometry, and their variation associated with the environment is treated as ecological stoichiometry (Sternner and Elser 2002).

For tropical forest the C/N and N/P ratios have been frequently discussed within the framework of P limitation (McGroddy et al. 2004). In addition, the ratios of alkaline and earth alkaline metals have also implications for both functional properties of organisms, and ecological relationships between plants and soils (Horak and Kinzel 1971; Kinzel 1989).

Compared to the averages reported for tropical forests (McGroddy et al. 2004) the C/N, C/P and N/P ratios are within the range of variation expected (Table 13). However, the N/P ratio in the present data set is about 20 percent higher than the average for other tropical forests, with a coefficient of variation above 40 percent implying that a large number of samples are limited by P based on N/P ratio, probably affecting plant production capacity.

Depicting the sequence of N/P ratios of the species in the data set shows that at least 75 of the 120 species in the data set have N/P ratios above the assumed P sufficiency range in wild plants (Mc Groddy et al. 2004) (Figure 4).

**Table 13—Elemental ratios on a molar basis for the species leaf data set**

	C/N x 10 <sup>-3</sup>	C/P	C/S	N/P	N/S	S/P	K/Ca	Mg/Ca
Mean	38.6	2279	700	53.3	20.5	4.7	1.53	0.74
Std dev	18.1	1320	941	22.2	32.6	2.4	1.78	0.70
Std err mean	2.4	190	125	2.0	4.3	0.4	0.17	0.07
Median	35.1	1974	501	49.6	13.8	4.2	1.05	0.53
Skewness	1.5	2.3	5.4	1.6	6.2	1.0	5.12	2.32
Kurtosis	1.9	5.9	31.2	5.7	41.3	1.9	36.33	5.84
CV	46.9	57.9	134.4	41.6	159.1	52.2	115.9	94.7
n	59	48	57	119	57	47	116	106
Mean	35.5	2457		43.4				

McGroddy et al. 2004.

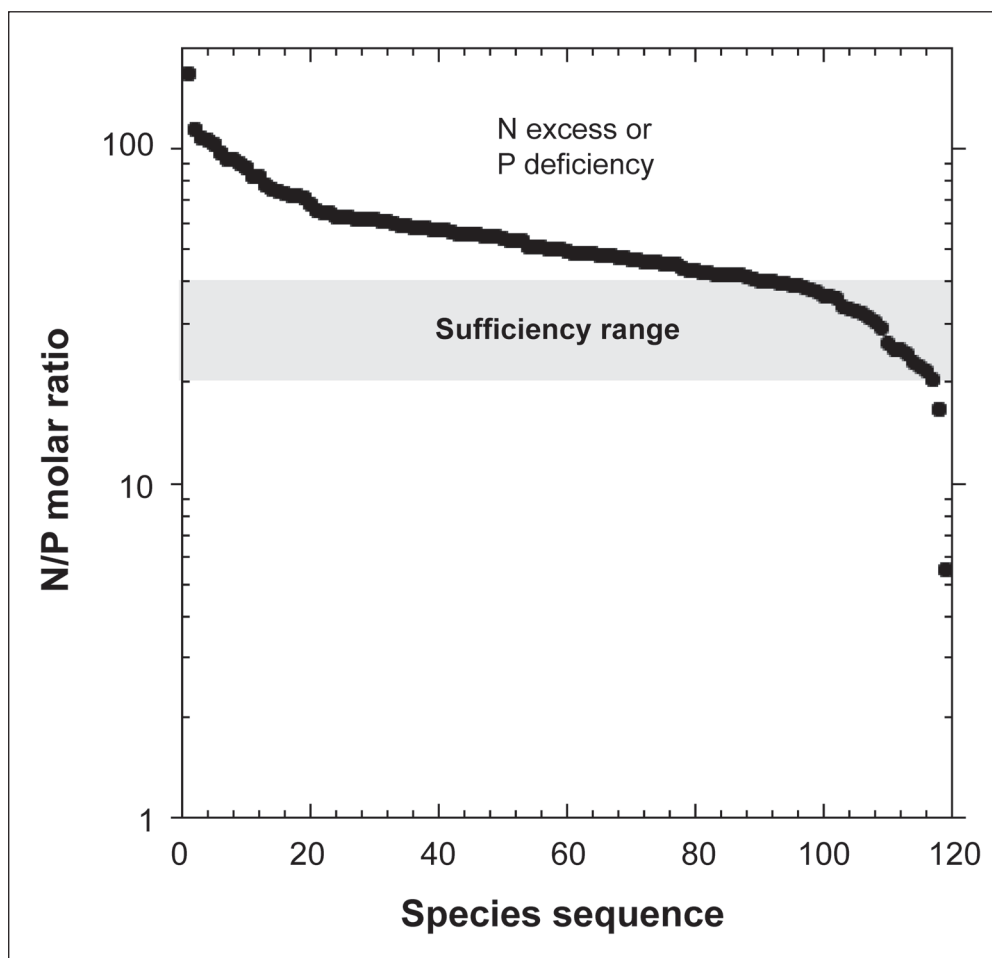


Figure 4—Species in the data set ordered according to their nitrogen/phosphorus (N/P) molar ratio.

I do not have data of C/S and N/S ratios for tropical ecosystems. Based on data from the agronomic literature, I estimate that the average C/S ratio indicates limitations of this element that may reduce its availability during decomposition of leaf litter. The N/S ratios, however, are within the range of sufficiency estimated for normal growth in cultivated plants (Epstein 1965) (table 14). The S/P ratio is about 10 times higher than the agronomic average, indicating high availability of S compared to that of P.

The K/Ca ratio average is very near to the average expected for higher plants ( $\approx 2$ ). However, the variation coefficient is quite large, indicating strong departure from the rule of  $K/Ca > 1$ . Ratios below 1 may indicate the presence of calciotropic plants (*sensu* Horak and Kinzel 1989), or that the samples were obtained from forests on soils with high Ca availability (e.g., calcareous substrates). The potential calciotrophs or Ca accumulators are depicted in figure 5.

Mg/Ca ratios are usually around 0.6, and higher values are to be expected in areas with elevated Mg availability, such as serpentine derived soils. The data set has an average Mg/Ca of 0.7, well within the normal values. However, a number of species have markedly higher values indicating the presence of potential Mg accumulators (fig. 6).

### Species Signatures and Variability Among Species and Ecological Groups.

The amount and proportion of mineral elements that constitute a living organism, or a given organ, is related to their physiology and biochemistry and is influenced by the availability of those elements in the environment. More recently the concept of ionome has been introduced and defined “as the mineral nutrient and trace

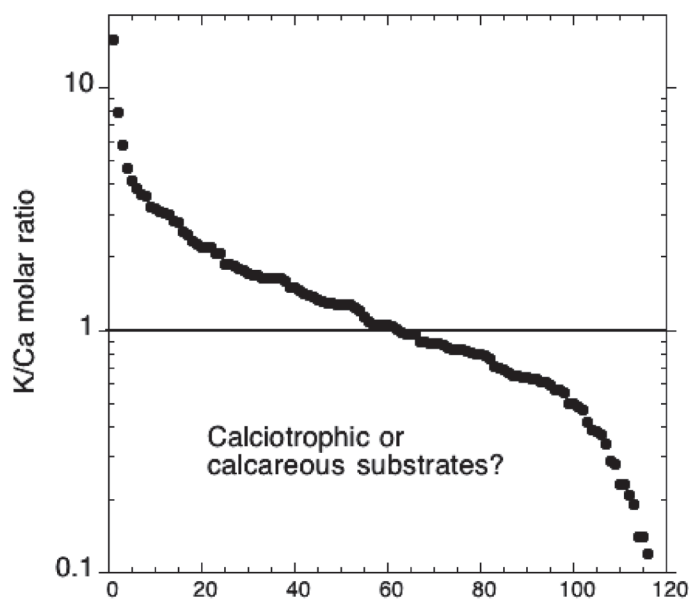
**Table 14—Average mineral concentrations of mineral nutrients in plant shoot dry matter that are sufficient for adequate growth (Epstein 1965)**

Element	Concentrations	
	mmol/kg	mg/kg
Nitrogen	1000	14000
Potassium	250	9970
Calcium	125	5010
Magnesium	80	1944
Phosphorus	60	1858
Sulfur	30	962

Molar ratios

N/K = 4, N/Ca = 8, N/Mg = 12.5, N/P = 17, N/S = 33,

S/P = 0.5, K/Ca = 2, Mg/Ca = 0.6.



		<i>Erythroxylum areolatum</i>	0.79		
<i>Guarea guidonia</i>	0.98	<i>Miconia</i> spp.	0.76	<i>Ouratea littoralis</i>	0.48
<i>Myrcia deflexa</i>	0.97	<i>Guettarda pungens</i>	0.71	<i>Jacquinia berteroi</i>	0.47
<i>Manilkara bidentata</i>	0.97	<i>Erythroxylum rotundifolium</i>	0.70	<i>Psychotria maleolens</i>	0.42
<i>Swietenia</i> sp.	0.96	<i>Clusia rosea</i>	0.69	<i>Coccoloba diversifolia</i>	0.39
<i>Swietenia mahagoni</i>	0.90	<i>Swietenia macrophylla</i>	0.67	<i>Allamanda violacea</i>	0.38
<i>Syzygium jambos</i>	0.90	<i>Plumeria obtusa</i>	0.65	<i>Sapindus saponaria</i>	0.37
<i>Tabebuia</i> spp.	0.89	<i>Coccoloba microstachya</i>	0.65	<i>Kalanchoe pinnata</i>	0.34
<i>Erithalis fruticosa</i>	0.88	<i>Pterocarpus officinalis</i>	0.64	<i>Hernandia sonora</i>	0.29
<i>Guaiacum sanctum</i>	0.88	<i>Swietenia humilis</i>	0.64	<i>Inga vera</i>	0.28
<i>Swietenia macrophylla x mahagoni</i>	0.87	<i>Xylosma schwaneckeanum</i>	0.63	<i>Casearia decandra</i>	0.23
<i>Byrsonima wadsworthii</i>	0.85	<i>Ficus citrifolia</i>	0.63	<i>Homalium racemosum</i>	0.23
<i>Eugenia foetida</i>	0.83	<i>Henriettea squamulosum</i>	0.61	<i>Miconia impatiolaris</i>	0.21
<i>Eugenia maleolens</i>	0.83	<i>Laguncularia racemosa</i>	0.61	<i>Miconia racemosa</i>	0.19
<i>Bourreria succulenta</i>	0.83	<i>Pictetia aculeata</i>	0.59	<i>Citrus sinensis</i>	0.14
<i>Cassine xylocarpa</i>	0.82	<i>Gymnanthes lucida</i>	0.57	<i>Ardisia glauciflora</i>	0.14
<i>Miconia prasina</i>	0.81	<i>Bucida buceras</i>	0.57	<i>Miconia</i> sp.	0.12
<i>Byrsonima lucida</i>	0.80	<i>Rhizophora mangle</i>	0.55		
<i>Krugiodendron ferreum</i>	0.80	<i>Plumeria alba</i>	0.50		
		<i>Amyris elemifera</i>	0.50		

Figure 5—Species in the data set ordered according to their potassium/calcium (K/Ca) molar ratio. The species with ratios <1 are listed.

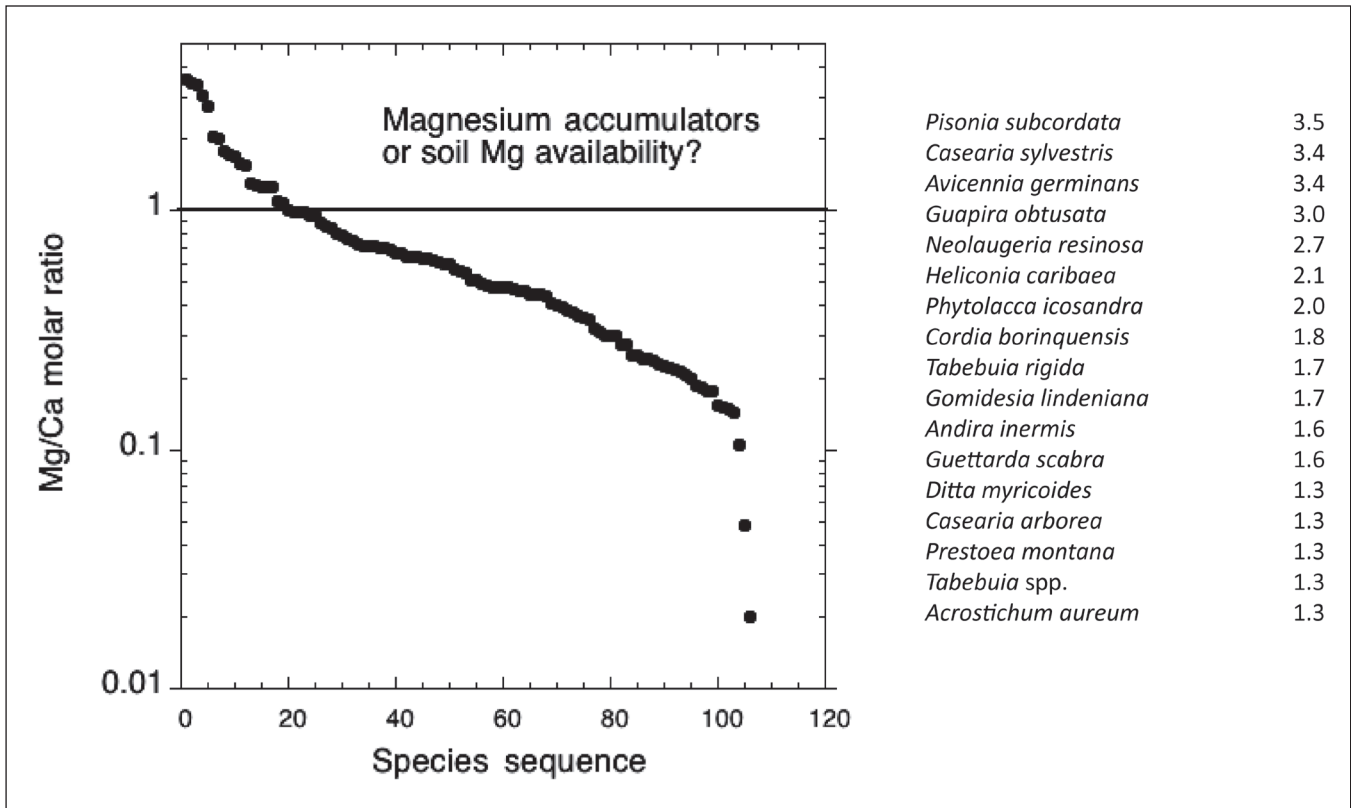


Figure 6—Species in the data set ordered according to their magnesium/calcium (Mg/Ca) molar ratio. The species with ratios >1 are listed.

element composition of an organism and represents the inorganic component of cellular and organismal systems” (Salt et al. 2008). Using elemental composition it may be possible to characterize species, identify metabolic syndromes (e.g., cation accumulators), and gain insight into the influence of substrate mineral availability on the regulation of metabolic pathways of species that grow on them.

In higher plants, the proportion of major elements, (excluding C that constitutes about 50 percent of organic matter by weight) have been well studied in cultivated species. The sequence of major element concentrations may be used as a guideline to assess the interspecific and ecological variability of the data set developed by the International Institute of Tropical Forestry Laboratory (see “Addendum”).

As an example of the potential application of element profiles to characterize species and ecological sites, I selected a number of species that are major components of some forest types in Puerto Rico and put together in a stack column graph the values for the major elements in leaf tissues (fig. 7). Secondary species appear to be particularly rich in N, whereas species from wet forests have a tendency to lower levels of all the elements considered. Species from karst areas appear subdivided in two groups on the basis of Ca concentration. Mangrove swamp species are



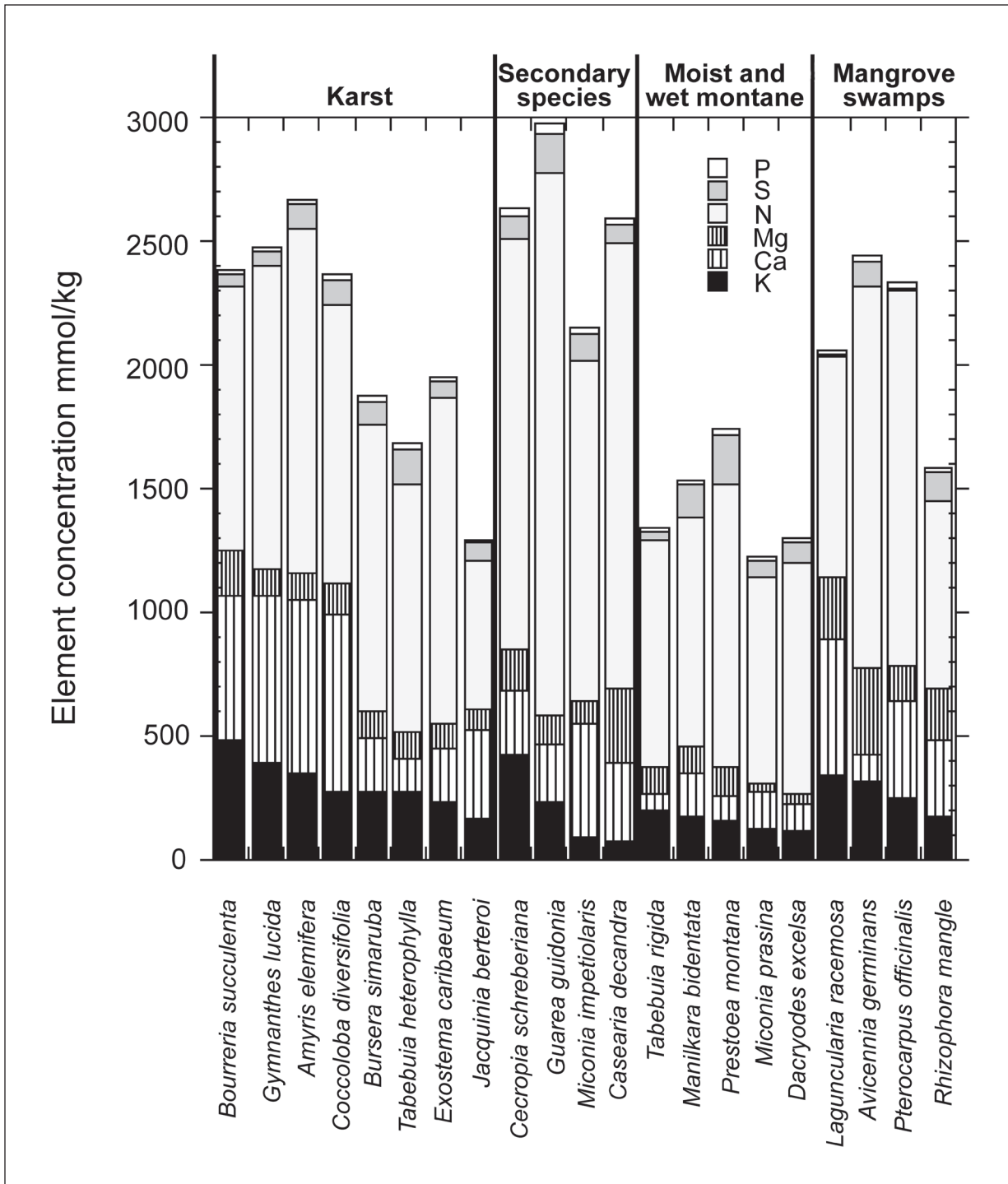


Figure 7—Species element composition “signatures.” Species were separated according to their assumed common occurrence: calcareous soils, moist forests, high montane forest in the Luquillo mountain range, and species from coastal mangroves.

heterogeneous regarding element proportions. In this case, the addition of Na would have separated this group. This representation also allows detection of departure from the general pattern of concentration sequence of plant nutrients (table 14). From the group of species selected, some concentrations stand out: the low concentration of S in *L. racemosa* and *P. officinalis* in spite of their occurrence in S rich soils (mangrove swamps); the small porportion of Mg in *M. prasina* and *D. excelsa*; and the high concentration of Mg relative to Ca in *A. germinans*.

## Concluding Remarks

The analysis of the leaf data set compiled by the International Institute of Tropical Forestry laboratory during the 1980–2000 period has given some relevant results regarding:

1. Average and range of variation in the mineral element composition of species belonging to a wide array of families and from different ecological sites.
2. Confirmation of P limitation in the majority of samples analyzed based on the N/P ratios
3. Determination of the distribution of C/S and N/S ratios, parameters that have not been properly evaluated in the current ecological literature on nutrient cycling. The present data set for example, detects comparatively high levels of S in the majority of species analyzed.
4. Identification of Al and Fe accumulators within certain families such as the Melastomataceae, Flacourtiaceae, and Phytolaccaceae.
5. Detection of species departing strongly from the usual K/Ca and Mg/Ca ratios, revealing the probable existence of calciotrophic species.

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## Addendum

Data set used for the analyses developed in the text. Ash in percentage, carbon in mol/kg, the other elements in mmol/kg

Species	Ash	C	K	Ca	Mg	Al	Fe	P	C	N	S
<i>Acrostichum aureum</i>	6.07	43.4	529	67	84	1	0.4	34.6	36.17	1664	
<i>Alchornea latifolia</i>			226	177	111	7.8	2.9	27.2		1379	
<b><i>Albizia lebbbeck</i></b>										2371	
<b><i>Albizia procera</i></b>	7.11	51.6							43.00	1564	69
<b><i>Allamanda violacea</i></b>	10.09		189	499				47.8		1171	
<i>Amyris elemifera</i>	10.7	51.9	351	701	104	2.6	1.1	18.3	43.25	1393	100
<i>Andira inermis</i>	4.48		189	67	106			42.1		1650	
<i>Ardisia glauciflora</i>	10.41		107	786	38	1.5	0.9	8.7		379	
<i>Ardisia solanacea</i>	13.5	48.9							40.75	1279	59
<i>Avicennia germinans</i>	10	45	320	105	353	3.3	1.4	24.9	37.50	1536	100
<b><i>Bambusa spp.</i></b>	6.87	52.7	309	204	83	35	9.8	29.2	43.92	1593	122
<b><i>Bambusa vulgaris</i></b>	21.42		240					27.8		1593	
<i>Bourreria succulenta</i>	10.56	49	485	583	186	1.7	0.7	15.4	40.83	1057	56
<i>Bucida buceras</i>	13.71	45	267	470	83			17.8	37.50	893	59
<i>Bursera simaruba</i>	6.11	53.2	277	218	106	2.25	1	25.4	44.33	1157	90
<i>Byrsonima lucida</i>	3.92		155	193	192	1.35	1.2	15		943	
<i>Byrsonima spicata</i>	3.86	56.8	174	140	150	3.8	1.7	17.3	47.33	1779	137
<i>Byrsonima wadsworthii</i>	3.4		158	186	111	8.5	3.4	22		1286	
<i>Calophyllum antillanum</i>	3.85	54.8	222	136	135	1.8	0.9	17	45.67	714	62
<i>Capparis cynophallophora</i>			623					16.5		1457	
<i>Casearia arborea</i>	5.88		292	91	116			26.8		1143	
<i>Casearia decandra</i>	6.63	52	73	315	303	2.5	2.5	25.1	43.33	1807	69
<i>Casearia guianensis</i>	7.68	50							41.67	1714	59
<i>Casearia sylvestris</i>	15.2		341	163	555	2.1	1	41.3		1257	
<i>Cassine xylocarpa</i>	8.08		228	279	142	1.15	1.25	10		579	
<i>Cecropia schreberiana</i>	9.26	46.5	423	259	167	24.733	14.88	35.2	38.75	1657	97
<b><i>Citrus sinensis</i></b>	20.68		58	415						807	
<i>Clusia rosea</i>	5.87	54.8	165	240	144	1.4	6.5	7.8	45.67	471	56
<i>Coccoloba diversifolia</i>	10.68	50.9	278	710	126	2.2	1	17.5	42.42	1129	103
<i>Coccoloba microstachya</i>	4.73	52.5	178	273	96	1.25	0.8	15.1	43.75	600	87
<b><i>Coffea arabica</i></b>	10.34	51.1	466	249	160	3.5	2.15	35	42.58	1886	153
<i>Colubrina arborescens</i>			497	493	136			18.6		1029	
<i>Colubrina elliptica</i>			608					27.2		1621	
<i>Cordia borinquensis</i>			346	97	173			28.4		1386	
<i>Croton poecilanthus</i>	5.64		315	168		20.1	2.6	32.8		729	
<i>Cyrilla racemiflora</i>	2.79		239	41	28	3.7	1.7	21.4		493	
<i>Dacryodes excelsa</i>	6.89	46.9	116	112	43	25.6	8.1	16.8	39.08	936	78
<i>Daphnopsis philippiana</i>	3.09		177	96	62	6.4	1.5	18.3		886	

Species	Ash	C	K	Ca	Mg	Al	Fe	P	C	N	S
<i>Dieffenbachia seguine</i>	11.36	45.1	1093	285	131	3.05	1.6	41	37.58	1393	56
<i>Ditita myricoides</i>			183	141	182	5.2	2.5	25.5			
<i>Erithalis fruticosa</i>	5.02	56.8	215	245	74	1.3	0.6	10.8	47.33	636	69
<i>Erythroxyllum areolatum</i>			363	462	111			33		1386	
<i>Erythroxyllum rotundifolium</i>			250	359	55			11.1		1179	
<i>Eugenia borinquensis</i>	2.88		227	74	66	6.7	1.3	17.8		586	
<i>Eugenia eggersii</i>	5.25		263	206	126	8.1	2.5	21		971	
<i>Eugenia foetida</i>			285	342	154			12.2		1014	
<i>Eugenia maleolens</i>			285	342	154			12.2			
<i>Eugenia monticola</i>	4.58	53.7							44.75	1057	50
<i>Eugenia rhombea</i>			317					8.4		693	
<i>Eugenia stahlii</i>	7.34		142					14.9		543	
<i>Exostema caribaeum</i>	3.91	56.1	232	220	101	1.967	1.63	17.7	46.75	1307	72
<i>Faramea occidentalis</i>	8.6	48.7							40.58	1293	81
<i>Ficus citrifolia</i>	13.98		317	505	118	0.7	0.7	148		2450	
<i>Gomidesia lindeniana</i>			255	180	305	1.3	1.5	9.7		543	
<i>Guaiacum officinale</i>			329					14.2		1293	
<i>Guaiacum sanctum</i>			380	434	99			13.1		1229	
<i>Guapira obtusata</i>	4.94		350	85	257	0.7	1.1	47.1		1907	
<i>Guarea glabra</i>	6.58		389	245				57.2		2200	
<i>Guarea guidonia</i>	5.88	50.5	232	236	117	16	7.8	41	42.08	2193	159
<i>Guarea ramiflora</i>		44.4							37.00	1729	
<i>Guettarda pungens</i>	4.05		176	249	54	1.7	2.2	9.6		550	
<i>Guettarda scabra</i>	4.85		220	89	138	0.7	0.95	17		707	
<i>Gymnanthes lucida</i>	11.2	48.4	389	682	103	1.4	0.6	16.9	40.33	1229	59
<i>Heliconia caribaea</i>	5.1	48.5	582	37	76	2.233	0.67	11	40.42	529	75
<i>Henriettea squamulosum</i>	5.39		200	326	97	149.4	3.35	16.3		764	
<b><i>Hernandia sonora</i></b>	13.09		82	286	200			24.1		1286	
<i>Homalium racemosum</i>	6.05		70	304	213	2.3	1.1	14.9		871	
<i>Ilex sideroxyloides</i>	3.25		263	119	89	8.9	1.8	24.9		721	
<i>Inga laurina</i>	4.37	53.9	179	130	52			29.9	44.92	1757	97
<i>Inga vera</i>			73	257	131			27.2		1500	
<i>Jacquinia berteroi</i>	9.02	54.2	167	359	80	1.5	0.6	6.2	45.17	600	81
<b><i>Kalanchoe pinnata</i></b>			530	1575	166			114		629	
<b><i>Khaya nyasica</i></b>			229	140	93			29		1214	
<i>Krugiodendron ferreum</i>			377	471	129			15.6		1671	
<i>Laguncularia racemosa</i>	16.93	43.5	339	555	247	9.1	7.1	22	36.25	893	9
<i>Leucaena leucocephala</i>	9.27	51.1							42.58	2936	137
<i>Magnolia splendens</i>	5.93	57.2	301	171	98	5.2	2	23.9	47.67	1050	69
<i>Manilkara bidentata</i>	5.69	49.8	173	179	110	10.4	4.8	14.4	41.50	921	137

Species	Ash	C	K	Ca	Mg	Al	Fe	P	C	N	S
<i>Miconia impetiolaris</i>	15.98	46.3	95	457	93	748.8	100	27.2	38.58	1371	106
<i>Miconia prasina</i>	7.9	49.3	122	151	33	538.975	2.4	15.3	41.08	836	66
<i>Miconia racemosa</i>	11.13	47.9	106	544	77	492.167	32.63	18.4	39.92	1136	156
<i>Miconia</i> sp.	17.35		81	694	128	1251.95	61.3	15.4			
<i>Miconia</i> spp.	3.76	49.8	91	119	52	245.3	8.03	6.4	41.50	457	37
<i>Miconia tetrandra</i>	9.67		102					18.6		1043	
<i>Micropholis chrysophylloides</i>	2.68		150	107	32	3.7	1.8	12.6		721	
<i>Myrcia deflexa</i>			166	171	108			15.6		943	
<i>Myrcia splendens</i>	8.07	51.5	110					19.5	42.92	936	137
<i>Neolaugeria resinosa</i>	5.06		330	203	557	2.1	1.27	12.5		664	
<i>Ocotea leucoxydon</i>	6.84	53.6	196	186	89	14.8	2.5	30.6	44.67	1543	62
<i>Ocotea spathulata</i>			477	160		21.5	33.7	50.4			
<i>Ormosia krugii</i>			114	52	37			24.4		1514	
<i>Ouratea littoralis</i>	4.71		143	298	118	1.5	1.2	14.9		764	
<i>Palicourea riparia</i>	9.13		351	216	173	250.6	3.9	23.8		1779	
<i>Petitia domingensis</i>	4.76		158	149	163	1.7	1.5	26.6		964	
<i>Phoradendron racemosum</i>			863	651	465					2886	
<i>Phytolacca icosandra</i>			358	163	329	85	29.6	77.8		2593	
<i>Pictetia aculeata</i>	9.19	51.8	302	516	103	1.85	1.2	22.1	43.17	1393	84
<i>Pimenta racemosa</i>	7.92	52.6							43.83	643	50
<b><i>Pinus caribaea</i></b>	2.93		51					25.2		629	
<i>Piper aduncum</i>	14.62	48.5	380	348	86	26.3	11	29.5	40.42	2300	156
<i>Piper glabrescens</i>			619	265	146	7	3.2	33.5		1521	
<i>Piper hispidum</i>			686	302	170	5.1	3.1	52.7		1650	
<i>Pisonia albida</i>			380	362	345			36.3		1521	
<i>Pisonia subcordata</i>	4.66		330	71	251	1.1	0.8	25.2		1071	
<i>Plumeria alba</i>	8.92		256	508				49.7		1250	
<i>Plumeria obtusa</i>	6.1		207	317				10.3		957	
<b><i>Plumeria rubra (red)</i></b>	10		673	531				9.7		1629	
<b><i>Plumeria rubra (white)</i></b>	10.25		839	328				88.3		1914	
<i>Prescotia oligantha</i>			469	276	99		0.1	49.1		1286	
<i>Prestoea montana</i>	7.91	45	161	94	119	18.4	5.97	27.2	37.50	1150	197
<i>Psychotria berteriana</i>	9.75	46.3	491	288	220	66.4	5.43	29.4	38.58	1936	56
<i>Psychotria maleolens</i>	12.1	42	123	294	213	525	5.4	14.3	35.00	886	34
<i>Psychotria</i> sp.	12.67		532					39.1		1686	
<i>Pterocarpus officinalis</i>	7.29	49.8	249	391	141	1.8	1.13	24.4	41.50	1521	6
<i>Rhizophora mangle</i>	11.35	45.9	172	310	206	1.233	0.6	13.7	38.25	764	119
<i>Sapindus saponaria</i>	3.69	55	66	177	32	17.6	8.6	22.6	45.83	2586	159
<i>Sapium laurocerasus</i>	7.22	51.3	525	189	186	10.1	6.6	36.5	42.75	1186	156
<i>Schefflera morototoni</i>	6.86	51.2	246	169	142			29.1	42.67	1321	109

Species	Ash	C	K	Ca	Mg	Al	Fe	P	C	N	S
<i>Schlegelia brachyantha</i>						0.7					
<i>Sloanea berteriana</i>	3.81	46.6	210	139	65	3.3	1.3	20.1	38.83	986	97
<i>Spathodea campanulata</i>	6.7	51.1							42.58	1900	87
<b><i>Swietenia humilis</i></b>			283	445	110	4.25		26.7		1236	
<b><i>Swietenia macrophylla</i></b>	7.01	52.7	242	360	77	11.2	25.2	24.9	43.92	1136	122
<b><i>Swietenia macrophylla x mahagoni</i></b>			295	338	81	5.8		24.1		1179	
<b><i>Swietenia mahagoni</i></b>	6.51		203	225	85	1.9	1.2	21.8		864	
<b><i>Swietenia</i> sp.</b>			280	291	140	2.725		25.6		1307	
<b><i>Syzygium jambos</i></b>	4.72	53.8	145	162	140	4.9	1.2	20.4	44.83	964	72
<i>Tabebuia haemantha</i>	4.67		297	82	83	0.5	0.75	19.1		764	
<i>Tabebuia heterophylla</i>	4.53	51.5	275	133	105	0.2	0	28.3	42.92	1007	143
<i>Tabebuia rigida</i>	4.03	46.4	202	64	109	14.65	6.3	22.6	38.67	914	34
<i>Tabebuia</i> spp.			452	506	640					1250	
<i>Ternstroemia stahlii</i>	5.85		230	176	125	1.667	0.97	15.9		621	
<i>Tetragastris balsamifera</i>			184	142	68			21.7		1000	
<i>Thespesia grandiflora</i>	9.34	53.3							44.42	1579	84
<i>Thouinia striata</i>			279	155	48			26.8		1329	
<i>Trema micrantha</i>	9.37		459					69.1		2593	
<i>Trichilia palida</i>	9.71	51.9							43.25	1014	90
<i>Turpinia occidentalis</i>	5.41		341	283				27.4		1043	
<i>Urera baccifera</i>			1050	931	444	2.6	1.4	93.5		1921	
<i>Xylosma schwaneckeanum</i>			290	458	9	346.2	27.4	52.3			

Species	C/N	C/P	N/P	C/S	N/S	S/P	K/Ca	Ca/g	Mg/Ca
<i>Acrostichum aureum</i>	22	1045	48				7.90	0.80	1.25
<i>Alchornea latifolia</i>			51				1.28	1.59	0.63
<i>Albizia lebbbeck</i>									
<i>Albizia procera</i>	27			627	23				
<i>Allamanda violacea</i>			25				0.38		
<i>Amyris elemifera</i>	31	2363	76	433	14	5.45	0.50	6.74	0.15
<i>Andira inermis</i>			39				2.82	0.63	1.58
<i>Ardisia glauciflora</i>			44				0.14	20.68	0.05
<i>Ardisia solanacea</i>	32			688	22				
<i>Avicennia germinans</i>	24	1506	62	376	15	4.01	3.05	0.30	3.36
<i>Bambusa spp.</i>	28	1504	55	361	13	4.17	1.51	2.46	0.41
<i>Bambusa vulgaris</i>			57						
<i>Bourreria succulenta</i>	39	2652	69	727	19	3.65	0.83	3.13	0.32
<i>Bucida buceras</i>	42	2107	50	633	15	3.33	0.57	5.66	0.18
<i>Bursera simaruba</i>	38	1745	46	490	13	3.56	1.27	2.06	0.49
<i>Byrsonima lucida</i>			63				0.80	1.01	0.99
<i>Byrsonima spicata</i>	27	2736	103	345	13	7.93	1.24	0.93	1.07
<i>Byrsonima wadsworthii</i>			58				0.85	1.68	0.60
<i>Calophyllum antillanum</i>	64	2686	42	732	11	3.67	1.63	1.01	0.99
<i>Capparis cynophallophora</i>			88						
<i>Casearia arborea</i>			43				3.21	0.78	1.27
<i>Casearia decandra</i>	24	1726	72	631	26	2.73	0.23	1.04	0.96
<i>Casearia guianensis</i>	24			703	29				
<i>Casearia sylvestris</i>			30				2.09	0.29	3.40
<i>Cassine xylocarpa</i>			58				0.82	1.96	0.51
<i>Cecropia schreberiana</i>	23	1101	47	401	17	2.75	1.63	1.55	0.64
<i>Citrus sinensis</i>							0.14		
<i>Clusia rosea</i>	97	5855	60	813	8	7.20	0.69	1.67	0.60
<i>Coccoloba diversifolia</i>	38	2424	64	412	11	5.88	0.39	5.63	0.18
<i>Coccoloba microstachya</i>	73	2897	40	501	7	5.78	0.65	2.84	0.35
<i>Coffea arabica</i>	23	1217	54	279	12	4.37	1.87	1.56	0.64
<i>Colubrina arborescens</i>			55				1.01	3.63	0.28
<i>Colubrina elliptica</i>			60						
<i>Cordia borinquensis</i>			49				3.57	0.56	1.78
<i>Croton poecilanthus</i>			22				1.88		
<i>Cyrilla racemiflora</i>			23				5.83	1.46	0.68
<i>Dacryodes excelsa</i>	42	2326	56	501	12	4.64	1.04	2.60	0.38
<i>Daphnopsis philippiana</i>			48				1.84	1.55	0.65
<i>Dieffenbachia seguine</i>	27	917	34	669	25	1.37	3.84	2.18	0.46
<i>Ditita myricoides</i>							1.30	0.77	1.29



Species	C/N	C/P	N/P	C/S	N/S	S/P	K/Ca	Ca/g	Mg/Ca
<i>Erithalis fruticosa</i>	74	4383	59	690	9	6.35	0.88	3.31	0.30
<i>Erythroxyllum areolatum</i>			42				0.79	4.16	0.24
<i>Erythroxyllum rotundifolium</i>			106				0.70	6.53	0.15
<i>Eugenia borinquensis</i>			33				3.07	1.12	0.89
<i>Eugenia eggersii</i>			46				1.28	1.63	0.61
<i>Eugenia foetida</i>			83				0.83	2.22	0.45
<i>Eugenia maleolens</i>							0.83	2.22	0.45
<i>Eugenia monticola</i>	42			897	21				
<i>Eugenia rhombea</i>			82						
<i>Eugenia stahlia</i>			36						
<i>Exostema caribaeum</i>	36	2641	74	652	18	4.05	1.05	2.18	0.46
<i>Faramea occidentalis</i>	31			500	16				
<i>Ficus citrifolia</i>			0				0.63	4.28	0.23
<i>Gomidesia lindeniana</i>			0				1.42	0.59	1.69
<i>Guaiacum officinale</i>			91						
<i>Guaiacum sanctum</i>			94				0.88	4.38	0.23
<i>Guapira obtusata</i>			40				4.12	0.33	3.02
<i>Guarea glabra</i>			38				1.59		
<i>Guarea guidonia</i>	19	1026	53	265	14	3.88	0.98	2.02	0.50
<i>Guarea ramiflora</i>	21								
<i>Guettarda pungens</i>			57				0.71	4.61	0.22
<i>Guettarda scabra</i>			42				2.47	0.64	1.55
<i>Gymnanthes lucida</i>	33	2387	73	681	21	3.51	0.57	6.62	0.15
<i>Heliconia caribaea</i>	76	3674	48	540	7	6.81	15.73	0.49	2.05
<i>Henriettea squamulosum</i>			47				0.61	3.36	0.30
<i>Hernandia sonora</i>			53				0.29	1.43	0.70
<i>Homalium racemosum</i>			58				0.23	1.43	0.70
<i>Ilex sideroxyloides</i>			29				2.21	1.34	0.75
<i>Inga laurina</i>	26	1502	59	465	18	3.23	1.38	2.50	0.40
<i>Inga vera</i>			55				0.28	1.96	0.51
<i>Jacquinia berteroi</i>	75	7285	97	557	7	13.08	0.47	4.49	0.22
<i>Kalanchoe pinnata</i>			0				0.34	9.49	0.11
<i>Khaya nyasica</i>			42				1.64	1.51	0.66
<i>Krugiodendron ferreum</i>			107				0.80	3.65	0.27
<i>Laguncularia racemosa</i>	41	1648	41	3874	95	0.43	0.61	2.25	0.45
<i>Leucaena leucocephala</i>	15			310	21				
<i>Magnolia splendens</i>	45	1994	44	695	15	2.87	1.76	1.74	0.57
<i>Manilkara bidentata</i>	45	2882	64	302	7	9.53	0.97	1.63	0.61
<i>Miconia impetolaris</i>	28	1419	50	364	13	3.90	0.21	4.91	0.20
<i>Miconia prasina</i>	49	2685	55	627	13	4.28	0.81	4.58	0.22

Species	C/N	C/P	N/P	C/S	N/S	S/P	K/Ca	Ca/g	Mg/Ca
<i>Miconia racemosa</i>	35	2169	62	256	7	8.48	0.19	7.06	0.14
<i>Miconia</i> sp.							0.12	5.42	0.18
<i>Miconia</i> spp.	91	6484	71	1109	12	5.85	0.76	2.29	0.44
<i>Miconia tetrandra</i>			56						
<i>Micropholis chrysophylloides</i>			57				1.40	3.34	0.30
<i>Myrcia deflexa</i>			60				0.97	1.58	0.63
<i>Myrcia splendens</i>	46	2201	48	313	7	7.04			
<i>Neolaugeria resinosa</i>			0				1.63	0.36	2.74
<i>Ocotea leucoxydon</i>	29	1460	50	716	25	2.04	1.05	2.09	0.48
<i>Ocotea spathulata</i>							2.98		
<i>Ormosia krugii</i>			62				2.19	1.41	0.71
<i>Ouratea littoralis</i>			51				0.48	2.53	0.40
<i>Palicourea riparia</i>			75				1.63	1.25	0.80
<i>Petitia domingensis</i>			36				1.06	0.91	1.09
<i>Phoradendron racemosum</i>							1.33	1.40	0.71
<i>Phytolacca icosandra</i>			33				2.20	0.50	2.02
<i>Pictetia aculeata</i>	31	1953	63	513	17	3.81	0.59	5.01	0.20
<i>Pimenta racemosa</i>	68			878	13				
<i>Pinus caribaea</i>			25						
<i>Piper aduncum</i>	18	1370	78	259	15	5.29	1.09	4.05	0.25
<i>Piper glabrescens</i>			45				2.34	1.82	0.55
<i>Piper hispidum</i>			31				2.27	1.78	0.56
<i>Pisonia albida</i>			42				1.05	1.05	0.95
<i>Pisonia subcordata</i>			43				4.65	0.28	3.54
<i>Plumeria alba</i>			25				0.50		
<i>Plumeria obtusa</i>			93				0.65		
<i>Plumeria rubra (red)</i>			168				1.27		
<i>Plumeria rubra (white)</i>			22				2.56		
<i>Prescotia oligantha</i>			26				1.70	2.79	0.36
<i>Prestoea montana</i>	33	1379	42	191	6	7.22	1.71	0.79	1.27
<i>Psychotria berteriana</i>	20	1312	66	687	34	1.91	1.70	1.31	0.76
<i>Psychotria maleolens</i>	40	2448	62	1020	26	2.40	0.42	1.38	0.72
<i>Psychotria</i> sp.			43						
<i>Pterocarpus officinalis</i>	27	1701	62	6652	244	0.26	0.64	2.77	0.36
<i>Rhizophora mangle</i>	50	2792	56	323	6	8.65	0.55	1.50	0.66
<i>Sapindus saponaria</i>	18	2028	114	288	16	7.04	0.37	5.53	0.18
<i>Sapium laurocerasus</i>	36	1171	32	274	8	4.27	2.78	1.02	0.98
<i>Schefflera morototoni</i>	32	1466	45	391	12	3.75	1.46	1.19	0.84
<i>Schlegelia brachyantha</i>									
<i>Sloanea berteriana</i>	39	1932	49	402	10	4.81	1.51	2.14	0.47

Species	C/N	C/P	N/P	C/S	N/S	S/P	K/Ca	Ca/g	Mg/Ca
<i>Spathodea campanulata</i>	22			488	22				
<i>Swietenia humilis</i>			46				0.64	4.05	0.25
<i>Swietenia macrophylla</i>	39	1764	46	361	9	4.89	0.67	4.68	0.21
<i>Swietenia macrophylla x mahagoni</i>			49				0.87	4.17	0.24
<i>Swietenia mahagoni</i>			40				0.90	2.65	0.38
<i>Swietenia</i> sp.			51				0.96	2.08	0.48
<i>Syzygium jambos</i>	46	2198	47	625	13	3.52	0.90	1.16	0.86
<i>Tabebuia haemantha</i>			40				3.62	0.99	1.01
<i>Tabebuia heterophylla</i>	43	250	0	299	7	0.83	2.07	1.27	0.79
<i>Tabebuia rigida</i>	42	1711	40	1127	27	1.52	3.16	0.59	1.70
<i>Tabebuia</i> spp.							0.89	0.79	1.26
<i>Ternstroemia stahlii</i>			39				1.31	1.41	0.71
<i>Tetragastris balsamifera</i>			46				1.30	2.09	0.48
<i>Thespesia grandiflora</i>	28			527	19				
<i>Thouinia striata</i>			50				1.80	3.23	0.31
<i>Trema micranthum</i>			38						
<i>Trichilia palida</i>	43			478	11				
<i>Turpinia occidentalis</i>			38				1.20		
<i>Urera baccifera</i>			21				1.13	2.10	0.48
<i>Xylosma schwaneckeanum</i>							0.63	50.89	0.02

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Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
<i>Acrocomia media</i>	Aluminum (mg/kg)	II1F	165	7	2	165	170	160	128	Mfs	Histosol	Alluvial deposits	pulp	1	
		II1F	14	18	2	14	26	1	128	Mfs	Histosol	Alluvial deposits		1	
	Ash (mg/g)	II1F	5.45		1					128	Mfs	Histosol	Alluvial deposits	pulp	1
		II1F	1.95		1					128	Mfs	Histosol	Alluvial deposits		1
	Calcium (mg/g)	II1F	3.42	0.05	2	3.42	3.46	3.38	128	Mfs	Histosol	Alluvial deposits	pulp	1	
		II1F	1.18	0.01	2	1.18	1.18	1.17	128	Mfs	Histosol	Alluvial deposits		1	
	Iron (mg/g)	II1F	0.14	0.17	2	0.14	0.22	0.05	128	Mfs	Histosol	Alluvial deposits	pulp	1	
	Magnesium (mg/g)	II1F	2.23	0.02	2	2.23	2.25	2.22	128	Mfs	Histosol	Alluvial deposits	pulp	1	
		II1F	1.79	0.06	2	1.79	1.83	1.74	128	Mfs	Histosol	Alluvial deposits		1	
	Manganese (mg/kg)	II1F	14	1	2	14	14	13	128	Mfs	Histosol	Alluvial deposits	pulp	1	
		II1F	15	3	2	15	17	13	128	Mfs	Histosol	Alluvial deposits		1	
	Nitrogen (%)	II1F	0.74	0.02	2	0.74	0.75	0.72	128	Mfs	Histosol	Alluvial deposits	pulp	1	
		II1F	1.80	0.03	2	1.80	1.82	1.78	128	Mfs	Histosol	Alluvial deposits		1	
	Phosphorus (mg/g)	II1F	0.47	0.01	2	0.47	0.48	0.46	128	Mfs	Histosol	Alluvial deposits	pulp	1	
		II1F	3.81	0.28	2	3.81	4.01	3.61	128	Mfs	Histosol	Alluvial deposits		1	
	Potassium (mg/g)	II1F	19.81	0.47	2	19.81	20.14	19.48	128	Mfs	Histosol	Alluvial deposits	pulp	1	
		II1F	5.26	0.36	2	5.26	5.51	5.00	128	Mfs	Histosol	Alluvial deposits		1	
Wood density (g/cc)	II1C	0.99	0.03	3	0.98	1.02	0.96	116					1		
<i>Acrostichum aureum</i>	Aluminum (mg/kg)	II6A	28	1	2	28	29	26	78	Mfs	Mangle	Swamp		2	
	Ash (%)	II6A	6.07	0.04	2	6.07	6.10	6.04	78	Mfs	Mangle	Swamp		2	
	C/N	II6A	34	0	2	34	35	34	78	Mfs	Mangle	Swamp		2	
	Calcium (mg/g)	II6A	1.84	0.66	17	1.82	3.16	0.78	77	Mfs	Swamp	Swamp		2	
		II6A	3.49	0.02	2	3.49	3.50	3.48	78	Mfs	Mangle	Swamp		2	
	Carbon (%)	II6A	43	0	2	43	43	43	78	Mfs	Mangle	Swamp		2	
	Iron (mg/kg)	II6A	20	20	2	20	30	10	78	Mfs	Mangle	Swamp		2	
	Magnesium (mg/g)	II6A	2.12	0.56	17	2.14	3.08	1.18	77	Mfs	Mangle	Swamp		2	
		II6A	1.97	0.03	2	1.97	1.99	1.95	78	Mfs	Mangle	Swamp		2	
	Manganese (mg/kg)	II6A	14	1	2	10	20	10	78	Mfs	Mangle	Swamp		2	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Nitrogen (%)	II6A	1.46	0.28	17	1.41	2.25	0.90	77	Mfs	Mangle	Swamp		2
		II6A	4.26	2.11	17	3.82	9.93	2.00	77	Mfs	Mangle	Swamp		2
		II6A	1.27	0.02	2	1.27	1.28	1.26	78	Mfs	Mangle	Swamp		2
	Phosphorus (mg/g)	II6A	1.36	0.41	17	1.45	2.09	0.47	77	Mfs	Mangle	Swamp		2
		II6A	0.78	0.01	2	0.78	0.79	0.78	78	Mfs	Mangle	Swamp		2
	Potassium (mg/g)	II6A	17.26	2.13	17	17.09	21.46	14.18	77	Mfs	Mangle	Swamp		2
		II6A	24.15	0.15	2	24.15	24.25	24.05	78	Mfs	Mangle	Swamp		2
	Sodium (mg/g)	II6A	4.59	0.73	2	4.59	5.11	4.07	78	Mfs	Mangle	Swamp		2
	<i>Adiantum spp.</i>	Aluminum (mg/g)	II6	0.59	0.46	10	0.42	1.79	0.23	135	Lmrf	Ultisols	Tuffac. sandstone	
Calcium (mg/g)		II6	4.15	0.65	10	4.35	4.96	2.91	135	Lmrf	Ultisols	Tuffac. sandstone		5
Iron (mg/g)		II6	0.46	0.37	10	0.31	1.38	0.17	135	Lmrf	Ultisols	Tuffac. sandstone		5
Magnesium (mg/g)		II6	3.48	0.28	5	3.55	3.78	3.07	135	Lmrf	Ultisols	Tuffac. sandstone		5
Manganese (mg/g)		II6	3.60	0.32	10	3.67	4.17	3.07	135	Lmrf	Ultisols	Tuffac. sandstone		5
Nitrogen (%)		II6	1.52	0.18	5	1.58	1.69	1.24	135	Lmrf	Ultisols	Tuffac. sandstone		5
Phosphorus (mg/g)		II6	1.03	0.23	10	0.98	1.50	0.69	135	Lmrf	Ultisols	Tuffac. sandstone		5
Potassium (mg/g)		II6	15.96	4.44	10	15.47	22.51	10.19	135	Lmrf	Ultisols	Tuffac. sandstone		5
<i>Adiantum latifolium</i>	Aluminum (mg/g)	II6	0.65	0.46	4	0.66	1.06	0.22	135	Lmrf	Ultisols	Tuffac. sandstone		3
	C/N	II6	23	2	3	23	24	21	135	Lmrf	Ultisols	Tuffac. sandstone		3
	Calcium (mg/g)	II6	3.61	1.62	4	3.73	5.02	1.98	135	Lmrf	Ultisols	Tuffac. sandstone		3
	Carbon (%)	II6	36	4	3	34	41	34	135	Lmrf	Ultisols	Tuffac. sandstone		3
	Iron (mg/g)	II6	0.38	0.11	4	0.40	0.48	0.25	135	Lmrf	Ultisols	Tuffac. sandstone		3
	Magnesium (mg/g)	II6	2.61	0.12	4	2.57	2.79	2.53	135	Lmrf	Ultisols	Tuffac. sandstone		3
	Manganese (mg/g)	II6	0.14	0.09	4	0.14	0.21	0.04	135	Lmrf	Ultisols	Tuffac. sandstone		3
	Nitrogen (%)	II6	1.51	0.23	5	1.43	1.90	1.34	135	Lmrf	Ultisols	Tuffac. sandstone		3
	Phosphorus (mg/g)	II6	0.71	0.15	4	0.72	0.85	0.56	135	Lmrf	Ultisols	Tuffac. sandstone		3
	Potassium (mg/g)	II6	15.12	4.00	4	16.50	18.21	9.25	135	Lmrf	Ultisols	Tuffac. sandstone		3
Sulfur (%)	II6	0.48	0.14	3	0.53	0.58	0.33	135	Lmrf	Ultisols	Tuffac. sandstone		3	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
<i>Adiantum pyramidale</i>	Aluminum (mg/g)	II6	0.49	0.41	2	0.49	0.77	0.20	135	Lmrf	Ultisols	Tuffac. sandstone		4
	C/N	II6	19	2	4	18	21	17	135	Lmrf	Ultisols	Tuffac. sandstone		4
	Calcium (mg/g)	II6	5.30	0.26	2	5.30	5.48	5.12	135	Lmrf	Ultisols	Tuffac. sandstone		4
	Carbon (%)	II6	38	1	4	39	39	37	135	Lmrf	Ultisols	Tuffac. sandstone		4
	Iron (mg/g)	II6	0.52	0.46	2	0.52	0.85	0.20	135	Lmrf	Ultisols	Tuffac. sandstone		4
	Magnesium (mg/g)	II6	4.37	0.20	2	4.37	4.51	4.23	135	Lmrf	Ultisols	Tuffac. sandstone		4
	Manganese (mg/g)	II6	0.12	0.03	2	0.12	0.14	0.10	135	Lmrf	Ultisols	Tuffac. sandstone		4
	Nitrogen (%)	II6	2.03	0.19	6	2.12	2.18	1.73	135	Lmrf	Ultisols	Tuffac. sandstone		4
	Phosphorus (mg/g)	II6	1.31	0.51	2	1.31	1.67	0.94	135	Lmrf	Ultisols	Tuffac. sandstone		4
	Potassium (mg/g)	II6	17.51	5.56	2	17.51	21.41	13.58	135	Lmrf	Ultisols	Tuffac. sandstone		4
Sulfur (%)	II6	0.35	0.04	4	0.33	0.40	0.32	135	Lmrf	Ultisols	Tuffac. sandstone		4	
<i>Albizia lebbek</i>	Nitrogen (%)	III Aib	1.93		1				96	Smf	Inceptisols	Alluvial deposits	Lower canopy	6
		III Aib	3.27		1				96	Smf	Inceptisols	Alluvial deposits	Mid canopy	6
		III Aib	4.57		1				96	Smf	Inceptisols	Alluvial deposits	Upper canopy	6
		III Aiii	3.51	0.43	17	3.35	4.30	3.05	96	Smf	Inceptisols	Alluvial deposits		6
		III B	1.47	0.41	10	1.61	1.95	0.79	96	Smf	Inceptisols	Alluvial deposits	>50mm	6
		III B	1.23	0.34	7	1.28	1.71	0.77	96	Smf	Inceptisols	Alluvial deposits	25-50mm	6
		III B	1.79	0.57	12	1.75	2.68	1.04	96	Smf	Inceptisols	Alluvial deposits	10mm	6
		III B	1.11	0.46	6	1.07	1.77	0.55	96	Smf	Inceptisols	Alluvial deposits	>50mm	6
		III Ciii	2.59	0.01	2	2.59	2.60	2.59	96	Smf	Inceptisols	Alluvial deposits	<10mm	6
		III Ciii	3.32	0.09	2	3.32	3.39	3.26	96	Smf	Inceptisols	Alluvial deposits	10-50mm	6
		III Ciii	3.08	0.25	2	3.08	3.25	2.90	96	Smf	Inceptisols	Alluvial deposits	>50mm	6
		III E	1.20	0.32	9	1.15	1.65	0.76	96	Smf	Inceptisols	Alluvial deposits	10-25mm	6
		III E	1.64	0.19	8	1.64	1.93	1.33	96	Smf	Inceptisols	Alluvial deposits	2-10mm	6
		III E	1.08	0.24	7	1.15	1.38	0.77	96	Smf	Inceptisols	Alluvial deposits	25-50mm	6
III E	2.07	0.33	9	2.02	2.63	1.68	96	Smf	Inceptisols	Alluvial deposits	<2mm	6		



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
<i>Albizia procera</i>	Ash (%)	II1A	7.11	1.43	5	6.63	9.58	5.86	126		Ultisols	Siltstone,sandstone	Urban forest, RP	7
		II1C	2.01	0.55	5	1.75	2.91	1.51	126		Ultisols	Siltstone,sandstone	Urban forest, RP	7
		II1Ci	10.53	2.31	6	11.53	12.31	6.04	126		Ultisols	Siltstone,sandstone	Urban forest, RP	7
	C/N	II1A	24	3	5	24	28	20	126		Ultisols	Siltstone,sandstone	Urban forest, RP	7
		II1C	186	110	5	186	297	66	126		Ultisols	Siltstone,sandstone	Urban forest, RP	7
		II1Ci	33	10	6	35	42	22	126		Ultisols	Siltstone,sandstone	Urban forest, RP	7
	Carbon (%)	II1A	52	1	5	52	52	51	126		Ultisols	Siltstone,sandstone	Urban forest, RP	7
		II1C	50	0	5	50	51	50	126		Ultisols	Siltstone,sandstone	Urban forest, RP	7
		II1Ci	48	2	6	47	52	46	126		Ultisols	Siltstone,sandstone	Urban forest, RP	7
	Nitrogen (%)	II1A	2.19	0.29	5	2.15	2.60	1.81	126		Ultisols	Siltstone,sandstone	Urban forest, RP	7
		II1C	0.39	0.26	5	0.27	0.76	0.17	126		Ultisols	Siltstone,sandstone	Urban forest, RP	7
		II1Ci	1.58	0.51	6	1.48	2.16	1.12	126		Ultisols	Siltstone,sandstone	Urban forest, RP	7
	Sulfur (%)	II1A	0.22	0.02	5	0.23	0.24	0.20	126		Ultisols	Siltstone,sandstone	Urban forest, RP	7
		II1C	0.08	0.02	5	0.07	0.10	0.06	126		Ultisols	Siltstone,sandstone	Urban forest, RP	7
		II1Ci	0.28	0.13	6	0.22	0.47	0.18	126		Ultisols	Siltstone,sandstone	Urban forest, RP	7
Wood density (g/cc)	II1C	0.40	0.11	5	0.34	0.55	0.30	126		Ultisols	Siltstone,sandstone	Urban forest, RP	7	
<i>Alchornea latifolia</i>	Aluminum (mg/g)	II1A	0.21	0.31	17	0.14	1.39	0.02	135	Lmrf	Ultisols	Tuffac. sandstone		8
		II1B	0.04	0.06	5	0.01	0.14	0.01	135	Lmrf	Ultisols	Tuffac. sandstone		8
		II1C	0.04	0.04	12	0.03	0.10	0.01	135	Lmrf	Ultisols	Tuffac. sandstone		8
		II1E	1.35	1.70	12	0.69	6.35	0.19	135	Lmrf	Ultisols	Tuffac. sandstone		8
		II1H	0.10	0.06	6	0.11	0.19	0.01	135	Lmrf	Ultisols	Tuffac. sandstone		8
	Ash (%)	II1B	2.94	0.95	5	2.83	4.51	1.96	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	8
		II1B	2.11	0.08	2	2.11	2.16	2.05	68	Swf	Ultisols	Tuffac. sandstone	Class 1 SD	8
		II1B	5.80		1				68	Swf	Ultisols	Tuffac. sandstone	Class 3/4 LD	8
		II1B	11.48		1				68	Swf	Ultisols	Tuffac. sandstone	Class 3 ST	8
	Calcium (mg/g)	II1A	7.08	1.93	17	6.54	9.94	4.29	135	Lmrf	Ultisols	Tuffac. sandstone		8
		II1B	8.38	2.82	5	7.50	13.17	5.73	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	8
		II1B	4.90	1.19	2	4.90	5.74	4.06	68	Swf	Ultisols	Tuffac. sandstone	Class 1 SD	8

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1B	13.62		1				68	Swf	Ultisols	Tuffac. sandstone	Class 3/4 LD	8
		II1B	41.60		1				68	Swf	Ultisols	Tuffac. sandstone	Class 3 ST	8
		III1B	2.82	0.84	5	2.41	4.21	2.22	135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1C	15.83		1				135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1C	7.23		1				135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1C	2.25	0.56	12	2.10	3.59	1.52	135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1Ci	5.44	0.05	2	5.44	5.47	5.40	135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1E	2.73	0.88	12	2.71	4.54	1.14	135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1H	5.73	1.19	6	5.64	7.40	4.26	135	Lmrf	Ultisols	Tuffac. sandstone		8
	Iron (mg/g)	III1A	0.16	0.06	17	0.15	0.25	0.09	135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1B	0.03	0.02	5	0.02	0.07	0.01	135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1C	0.09	0.05	12	0.08	0.20	0.03	135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1E	0.09	0.05	12	0.08	0.20	0.03	135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1H	0.12	0.03	6	0.11	0.17	0.09	135	Lmrf	Ultisols	Tuffac. sandstone		8
	Magnesium (mg/g)	III1A	2.69	0.54	17	2.67	3.90	1.83	135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1B	0.83	0.44	5	0.67	1.55	0.37	135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1C	1.41		1				135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1C	0.79		1				135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1C	0.78	0.21	12	0.77	1.39	0.58	135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1Ci	1.18	0.00	2	1.18	1.18	1.18	135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1E	0.74	0.21	12	0.75	1.04	0.38	135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1H	2.19	0.33	6	2.20	2.75	1.81	135	Lmrf	Ultisols	Tuffac. sandstone		8
	Manganese (mg/g)	III1A	0.91	0.36	17	0.77	1.60	0.44	135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1B	0.42	0.31	5	0.29	0.95	0.21	135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1C	0.37	0.14	12	0.38	0.65	0.16	135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1E	0.18	0.10	12	0.16	0.46	0.11	135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1H	0.72	0.34	6	0.62	1.26	0.37	135	Lmrf	Ultisols	Tuffac. sandstone		8
	Nitrogen (%)	III1A	1.93	0.34	17	1.88	2.70	1.35	135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1B	0.48	0.15	5	0.42	0.68	0.31	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	8

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1B	0.30		1				68	Swf	Ultisols	Tuffac. sandstone	Class 1 SD	8
		II1B	0.74		1				68	Swf	Ultisols	Tuffac. sandstone	Class 3/4 LD	8
		III1B	0.60		1				68	Swf	Ultisols	Tuffac. sandstone	Class 3 ST	8
		II1B	0.68	0.18	5	0.78	0.84	0.48	135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1C	0.26		1				135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1C	0.22		1				135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1C	0.76	0.30	12	0.74	1.16	0.35	135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1Ci	0.66	0.02	2	0.66	0.67	0.64	135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1E	0.71	0.24	12	0.73	1.32	0.37	135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1H	1.48	0.26	6	1.47	1.75	1.23	135	Lmrf	Ultisols	Tuffac. sandstone		8
	Phosphorus (mg/g)	III1A	0.84	0.20	17	0.82	1.31	0.51	135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1B	0.10	0.10	5	0.10	0.30	0.09	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	8
		III1B	0.14	0.02	2	0.14	0.16	0.13	68	Swf	Ultisols	Tuffac. sandstone	Class 1 SD	8
		III1B	0.43		1				68	Swf	Ultisols	Tuffac. sandstone	Class 3/4 LD	8
		III1B	0.24		1				68	Swf	Ultisols	Tuffac. sandstone	Class 3 ST	8
		III1B	0.45	0.17	5	0.46	0.63	0.27	135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1C	0.21		1				135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1C	0.19		1				135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1C	0.48	0.13	12	0.48	0.68	0.22	135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1Ci	0.31	0.00	2	0.31	0.31	0.31	135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1E	0.48	0.13	12	0.48	0.68	0.22	135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1H	0.76	0.14	6	0.71	1.03	0.66	135	Lmrf	Ultisols	Tuffac. sandstone		8
	Potassium (mg/g)	III1A	8.85	2.03	17	9.42	12.65	5.67	135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1B	0.94	0.28	5	0.86	1.30	0.86	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	8
		III1B	5.03	0.78	2	5.03	5.58	4.48	68	Swf	Ultisols	Tuffac. sandstone	Class 1 SD	8
		III1B	3.13		1				68	Swf	Ultisols	Tuffac. sandstone	Class 3/4 LD	8
		III1B	1.48		1				68	Swf	Ultisols	Tuffac. sandstone	Class 3 ST	8
		III1B	7.30	2.18	5	6.91	10.98	5.48	135	Lmrf	Ultisols	Tuffac. sandstone		8
		III1C	1.39		1				135	Lmrf	Ultisols	Tuffac. sandstone		8

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
		II1C	2.38		1				135	Lmrf	Ultisols	Tuffac. sandstone		8	
		II1C	8.29	2.05	12	7.84	12.23	4.32	135	Lmrf	Ultisols	Tuffac. sandstone		8	
		II1Ci	4.56	0.23	2	4.56	4.72	4.40	135	Lmrf	Ultisols	Tuffac. sandstone		8	
		II1E	4.78	0.78	12	4.72	6.29	3.60	135	Lmrf	Ultisols	Tuffac. sandstone		8	
		II1H	10.42	3.55	6	10.14	17.05	7.03	135	Lmrf	Ultisols	Tuffac. sandstone		8	
	Wood density (g/cc)	II1B	0.38	0.00	3	0.38	0.38	0.38	97	Wfs	Inceptisols	Tuffac. sandstone		8	
	<i>Alchorneopsis floribunda</i>	Ash (%)	II1B	1.63	0.16	2	1.63	1.74	1.51	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	9
			II1B	1.72	0.57	8	1.57	2.68	1.11	68	Swf	Ultisols	Tuffac. sandstone	Class 3/4LD	9
Calcium (mg/g)		II1B	4.96	0.96	2	4.93	5.61	4.25	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	9	
		II1B	4.10	2.17	8	3.25	7.81	2.20	68	Swf	Ultisols	Tuffac. sandstone	Class 3/4 LD	9	
Nitrogen (%)		II1B	0.70	0.11	2	0.70	0.77	0.62	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	9	
		II1B	0.82	0.10	8	0.79	1.03	0.73	68	Swf	Ultisols	Tuffac. sandstone	Class 3/4 LD	9	
Phosphorus (mg/g)		II1B	0.21	0.06	2	0.21	0.26	0.17	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	9	
		II1B	0.21	0.03	8	0.21	0.27	0.16	68	Swf	Ultisols	Tuffac. sandstone	Class 3/4 LD	9	
Potassium (mg/g)		II1B	0.40	0.34	8	0.30	1.22	0.17	68	Swf	Ultisols	Tuffac. sandstone	Class 3/4 LD	9	
		II1B	1.17	0.17	2	1.12	1.29	1.05	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	9	
<i>Alchorneopsis portoricensis</i>	Calcium (mg/g)	II1B	0.58		1				135	Lmrf	Ultisols	Tuffac. sandstone		10	
		II1Ci	12.88		1				135	Lmrf	Ultisols	Tuffac. sandstone		10	
	Magnesium (mg/g)	II1B	1.01		1				135	Lmrf	Ultisols	Tuffac. sandstone		10	
		II1Ci	0.86		1				135	Lmrf	Ultisols	Tuffac. sandstone		10	
	Nitrogen (%)	II1B	0.30		1				135	Lmrf	Ultisols	Tuffac. sandstone		10	
		II1Ci	0.64		1				135	Lmrf	Ultisols	Tuffac. sandstone		10	
	Phosphorus (mg/g)	II1B	0.15		1				135	Lmrf	Ultisols	Tuffac. sandstone		10	
		II1Ci	0.23		1				135	Lmrf	Ultisols	Tuffac. sandstone		10	
Potassium (mg/g)	II1B	2.25		1				135	Lmrf	Ultisols	Tuffac. sandstone		10		
	II1Ci	3.96		1				135	Lmrf	Ultisols	Tuffac. sandstone		10		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
<i>Aleurites moluccana</i>	Wood density (g/cc)	II1B	0.33	0.01	4		0.33	0.32	97	Wfs	Inceptisols	Tuffac. sandstone		11
<i>Allamanda violacea</i>	Ash (%)	II2A	10.09		1				91	Sdf	Mollisols	Alluvial deposits		12
	Calcium (mg/g)	II2A	20.00		1				91	Sdf	Mollisols	Alluvial deposits		12
	Nitrogen (%)	II2A	1.64		1				91	Sdf	Mollisols	Alluvial deposits		12
	Phosphorus (mg/g)	II2A	1.48		1				91	Sdf	Mollisols	Alluvial deposits		12
	Potassium (mg/g)	II2A	7.40		1				91	Sdf	Mollisols	Alluvial deposits		12
<i>Alsophila portorricensis</i>	Aluminum (mg/g)	II6A	1.85	0.16	2	1.85	1.96	1.74	143	Wflm	Inceptisols	Tuffac. sandstone		13
		II6B	2.75	0.56	2	2.75	3.14	2.35	143	Wflm	Inceptisols	Tuffac. sandstone		13
		II6	1.39	0.34	7	1.49	1.76	1.01	135	Lmrf	Ultisols	Tuffac. sandstone		13
	Ash (%)	II6A	6.63	0.10	2	6.63	6.70	6.56	143	Wflm	Inceptisols	Tuffac. sandstone		13
		II6B	6.50	0.72	2	6.50	7.01	5.99	143	Wflm	Inceptisols	Tuffac. sandstone		13
	C/N	II6A	46	3	2	46	48	44	143	Wflm	Inceptisols	Tuffac. sandstone		13
		II6B	460	551	2	460	849	70	143	Wflm	Inceptisols	Tuffac. sandstone		13
		II6	25	3	13	25	32	21	135	Lmrf	Ultisols	Tuffac. sandstone		13
	Calcium (mg/g)	II6A	1.99	0.03	2	1.99	2.01	1.97	143	Wflm	Inceptisols	Tuffac. sandstone		13
		II6B	1.51	0.11	2	1.51	1.58	1.43	143	Wflm	Inceptisols	Tuffac. sandstone		13
		II6	1.89	0.50	7	1.78	2.61	1.24	135	Lmrf	Ultisols	Tuffac. sandstone		13
	Carbon (%)	II6A	48	0	2	48	48	48	143	Wflm	Inceptisols	Tuffac. sandstone		13
		II6B	49	0	2	49	49	48	143	Wflm	Inceptisols	Tuffac. sandstone		13
		II6	41	3	13	42	45	35	135	Lmrf	Ultisols	Tuffac. sandstone		13
	Iron (mg/g)	II6A	0.54	0.04	2	0.54	0.56	0.51	143	Wflm	Inceptisols	Tuffac. sandstone		13
		II6B	1.00	0.04	2	1.00	1.02	0.97	143	Wflm	Inceptisols	Tuffac. sandstone		13
		II6	0.13	0.03	7	0.12	0.19	0.10	135	Lmrf	Ultisols	Tuffac. sandstone		13
	Magnesium (mg/g)	II6A	3.11	0.26	2	3.11	3.30	2.93	143	Wflm	Inceptisols	Tuffac. sandstone		13
		II6B	1.18	0.07	2	1.18	1.23	1.13	143	Wflm	Inceptisols	Tuffac. sandstone		13
		II6	2.15	0.60	7	2.10	2.97	1.26	135	Lmrf	Ultisols	Tuffac. sandstone		13
	Manganese (mg/g)	II6A	0.10	0.02	2	0.10	0.12	0.09	143	Wflm	Inceptisols	Tuffac. sandstone		13

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
	Nitrogen (%)	II6B	0.06	0.00	2	0.06	0.06	0.06	143	Wflm	Inceptisols	Tuffac. sandstone		13	
		II6	0.05	0.01	7	0.05	0.06	0.02	135	Lmrf	Ultisols	Tuffac. sandstone		13	
		II6A	1.05	0.07	2	1.05	1.10	1.00	143	Wflm	Inceptisols	Tuffac. sandstone		13	
		II6B	0.38	0.45	2	0.38	0.69	0.06	143	Wflm	Inceptisols	Tuffac. sandstone		13	
	Phosphorus (mg/g)	II6	1.47	0.39	20	1.46	2.10	0.87	135	Lmrf	Ultisols	Tuffac. sandstone		13	
		II6A	0.54	0.05	2	0.54	0.57	0.51	143	Wflm	Inceptisols	Tuffac. sandstone		13	
		II6B	0.52	0.11	2	0.52	0.59	0.44	143	Wflm	Inceptisols	Tuffac. sandstone		13	
	Potassium (mg/g)	II6	0.58	0.20	7	0.47	0.94	0.40	135	Lmrf	Ultisols	Tuffac. sandstone		13	
		II6A	11.72	0.15	2	11.72	11.82	11.62	143	Wflm	Inceptisols	Tuffac. sandstone		13	
		II6B	9.45	0.25	2	9.45	9.63	9.27	143	Wflm	Inceptisols	Tuffac. sandstone		13	
	<i>Amyris elemifera</i>	Aluminum (mg/g)	II6	9.82	2.71	7	9.41	14.85	6.75	135	Lmrf	Ultisols	Tuffac. sandstone		13
			II6A	0.07	0.03	13	0.07	0.11	0.03	151	Sdf	Mollisols	Alluvial deposits		14
II6B			10.70	1.93	12	10.53	16.48	9.01	151	Sdf	Mollisols	Alluvial deposits		14	
Ash (%)		II6A	23	2	12	23	25	20	151	Sdf	Mollisols	Alluvial deposits		14	
C/N		II6A	28.08	3.47	13	27.82	35.43	23.25	151	Sdf	Mollisols	Alluvial deposits		14	
Calcium (mg/g)		II6A	52	1	12	52	53	51	151	Sdf	Mollisols	Alluvial deposits		14	
Carbon (%)		II6A	0.06	0.02	13	0.06	0.09	0.04	151	Sdf	Mollisols	Alluvial deposits		14	
Iron (mg/g)		II6A	3.13		1				104	Sdf	Mollisols	Alluvial deposits	Mature	14	
Magnesium (mg/g)		II6A	3.13		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	14	
		II6B	1.30	0.13	13	1.28	1.54	1.14	151	Sdf	Mollisols	Alluvial deposits		14	
Manganese (mg/g)		II6A	0.05	0.01	13	0.04	0.05	0.04	151	Sdf	Mollisols	Alluvial deposits		14	
Nitrogen (%)		II6A	1.59		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	14	
		II6B	2.31	0.19	12	2.27	2.60	2.05	151	Sdf	Mollisols	Alluvial deposits		14	
Phosphorus (mg/g)		II6A	0.59		1				104	Sdf	Mollisols	Alluvial deposits	Mature	14	
		II6B	0.59		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	14	
		II6	0.52	0.05	13	0.49	0.62	0.45	151	Sdf	Mollisols	Alluvial deposits		14	
Potassium (mg/g)		II6A	15.95		1				104	Sdf	Mollisols	Alluvial deposits	Mature	14	
		II6B	15.95		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	14	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Sulfur (%)	II1A	9.25	0.74	13	9.31	10.79	8.12	151	Sdf	Mollisols	Alluvial deposits		14
		II1A	0.32	0.02	12	0.31	0.34	0.28	151	Sdf	Mollisols	Alluvial deposits		14
<i>Andira inermis</i>	Ash (%)	II1A	4.48		1				94	Wfs	Ultisols	Lava		15
		II1B	3.48		1				94	Wfs	Ultisols	Lava		15
		II1C	1.34		1				94	Wfs	Ultisols	Lava		15
	Calcium (mg/g)	II1A	2.70		1				135	Lmrf	Ultisols	Tuffac. sandstone		15
		II1B	1.63		1				135	Lmrf	Ultisols	Tuffac. sandstone		15
		II1C	0.78		1				135	Lmrf	Ultisols	Tuffac. sandstone		15
	Magnesium (mg/g)	II1A	2.58		1				135	Lmrf	Ultisols	Tuffac. sandstone		15
		II1B	1.63		1				135	Lmrf	Ultisols	Tuffac. sandstone		15
		II1C	0.35		1				135	Lmrf	Ultisols	Tuffac. sandstone		15
	Nitrogen (%)	II1A	1.95		1				94	Wfs	Ultisols	Lava		15
		II1A	2.66		1				135	Lmrf	Ultisols	Tuffac. sandstone		15
		II1B	1.72		1				94	Wfs	Ultisols	Lava		15
		II1B	1.53		1				135	Lmrf	Ultisols	Tuffac. sandstone		15
		II1C	0.95		1				94	Wfs	Ultisols	Lava		15
	Phosphorus (mg/g)	II1C	0.41		1				135	Lmrf	Ultisols	Tuffac. sandstone		15
		II1A	1.47		1				94	Wfs	Ultisols	Lava		15
		II1A	1.13		1				135	Lmrf	Ultisols	Tuffac. sandstone		15
		II1B	1.02		1				94	Wfs	Ultisols	Lava		15
		II1B	0.77		1				135	Lmrf	Ultisols	Tuffac. sandstone		15
	Potassium (mg/g)	II1C	0.52		1				94	Wfs	Ultisols	Lava		15
II1C		0.22		1				135	Lmrf	Ultisols	Tuffac. sandstone		15	
II1A		6.48		1				94	Wfs	Ultisols	Lava		15	
II1A		8.34		1				135	Lmrf	Ultisols	Tuffac. sandstone		15	
II1B		6.72		1				94	Wfs	Ultisols	Lava		15	
		II1B	8.26		1			135	Lmrf	Ultisols	Tuffac. sandstone		15	
		II1C	2.30		1			94	Wfs	Ultisols	Lava		15	

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<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1C	3.54		1				135	Lmrf	Ultisols	Tuffac. sandstone		15
<i>Anetium citrifolium</i>	Aluminum (mg/g)	II6	3.26		1				135	Lmrf	Ultisols	Tuffac. sandstone		16
	C/N	II6	19		1				135	Lmrf	Ultisols	Tuffac. sandstone		16
	Calcium (mg/g)	II6	5.17		1				135	Lmrf	Ultisols	Tuffac. sandstone		16
	Carbon (%)	II6	38		1				135	Lmrf	Ultisols	Tuffac. sandstone		16
	Iron (mg/g)	II6	2.08		1				135	Lmrf	Ultisols	Tuffac. sandstone		16
	Magnesium (mg/g)	II6	3.67		1				135	Lmrf	Ultisols	Tuffac. sandstone		16
	Manganese (mg/g)	II6	0.27		1				135	Lmrf	Ultisols	Tuffac. sandstone		16
	Nitrogen (%)	II6	2.04		1				135	Lmrf	Ultisols	Tuffac. sandstone		16
	Phosphorus (mg/g)	II6	1.67		1				135	Lmrf	Ultisols	Tuffac. sandstone		16
	Potassium (mg/g)	II6	30.51		1				135	Lmrf	Ultisols	Tuffac. sandstone		16
	Sulfur (%)	II6	0.66		1				135	Lmrf	Ultisols	Tuffac. sandstone		16
<i>Anthocephalus chinensis</i>	Ash (%)	II8A	6.03	0.15	2	6.03	6.13	5.92	90	Swf	Ultisols	Tuffac. sandstone	Old	17
		II8A	10.36	8.95	3	6.17	20.63	4.27	90	Swf	Ultisols	Tuffac. sandstone		17
		II8B	3.33	0.84	3	3.42	4.12	2.44	90	Swf	Ultiso1s	Tuffac. sandstone		17
		II8C	3.93	0.94	3	4.29	4.64	2.86	90	Swf	Ultisols	Tuffac. sandstone		17
		II8D	14.78	0.20	2	14.78	14.92	14.64	90	Swf	Ultisols	Tuffac. sandstone		17
		II8Bi	2.81	1.25	3	3.07	3.91	1.46	90	Swf	Ultisols	Tuffac. sandstone		17
	Calcium (mg/g)	II8A	15.30	2.14	2	15.30	16.81	13.79	90	Swf	Ultisols	Tuffac. sandstone		17
		II8A	10.10	3.13	3	8.57	13.70	8.02	90	Swf	Ultisols	Tuffac. sandstone		17
		II8B	7.16	0.80	3	6.92	8.05	6.50	90	Swf	Ultisols	Tuffac. sandstone		17
		II8C	7.44	0.48	3	6.94	7.90	6.94	90	Swf	Ultisols	Tuffac. sandstone		17
		II8D	11.16	2.87	2	11.16	13.19	9.13	90	Swf	Ultisols	Tuffac. sandstone		17
		II8Bi	3.57	1.20	3	3.13	4.93	2.66	90	Swf	Ultisols	Tuffac. sandstone		17
		II9A	10.43	2.99	22	10.72	16.64	4.42	139	Wfs	Ultisols	Tuffac. sandstone		17
		II9A	7.63	0.81	22	7.77	8.95	6.21	139	Wfs	Ultisols	Tuffac. sandstone	Other	17
		II9B	6.17	2.07	5	6.89	8.75	3.48	139	Wfs	Ultisols	Tuffac. sandstone		17



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II9C	4.61	0.67	6	4.84	5.20	3.33	139	Wfs	Ultisols	Tuffac. sandstone		17
		II9D	7.12	0.96	5	7.28	8.22	5.57	139	Wfs	Ultisols	Tuffac. sandstone		17
	Magnesium (mg/g)	II9A	4.20	1.03	22	3.97	6.52	2.48	139	Wfs	Ultisols	Tuffac. sandstone		17
		II9A	2.85	0.64	22	2.84	4.56	1.94	139	Wfs	Ultisols	Tuffac. sandstone	Other	17
		II9B	2.36	0.73	5	1.98	3.48	1.81	139	Wfs	Ultisols	Tuffac. sandstone		17
		II9C	2.07	0.53	6	2.07	2.64	1.18	139	Wfs	Ultisols	Tuffac. sandstone		17
		II9D	2.83	0.25	5	2.84	3.18	2.48	139	Wfs	Ultisols	Tuffac. sandstone		17
	Nitrogen (%)	II8A	1.11	0.05	2	1.11	1.14	1.07	90	Swf	Ultisols	Tuffac. sandstone		17
		II8A	1.19	0.15	3	1.15	1.36	1.07	90	Swf	Ultisols	Tuffac. sandstone		17
		II8B	0.43	0.15	3	0.44	0.57	0.28	90	Swf	Ultisols	Tuffac. sandstone		17
		II8C	0.80	0.17	3	0.72	1.00	0.69	90	Swf	Ultisols	Tuffac. sandstone		17
		II8D	1.21	0.02	2	1.21	1.22	1.19	90	Swf	Ultisols	Tuffac. sandstone		17
		II8Bi	0.39	0.15	3	0.37	0.54	0.25	90	Swf	Ultisols	Tuffac. sandstone		17
		II9A	1.19	0.34	22	1.13	1.87	0.19	139	Wfs	Ultisols	Tuffac. sandstone		17
		II9A	0.93	0.26	22	0.93	1.32	0.51	139	Wfs	Ultisols	Tuffac. sandstone	Other	17
		II9B	0.37	0.08	10	0.37	0.50	0.24	139	Wfs	Ultisols	Tuffac. sandstone		17
		II9C	0.58	0.17	11	0.53	0.94	0.35	139	Wfs	Ultisols	Tuffac. sandstone		17
		II9D	1.17	0.24	5	1.18	1.66	0.80	139	Wfs	Ultisols	Tuffac. sandstone		17
	Phosphorus (mg/g)	II8A	0.42	0.04	2	0.42	0.45	0.39	90	Swf	Ultisols	Tuffac. sandstone		17
		II8A	0.53	0.05	3	0.48	0.58	0.48	90	Swf	Ultisols	Tuffac. sandstone		17
		II8B	0.15	0.07	3	0.15	0.21	0.08	90	Swf	Ultisols	Tuffac. sandstone		17
		II8C	0.32	0.12	3	0.34	0.43	0.19	90	Swf	Ultisols	Tuffac. sandstone		17
		II8D	0.54	0.00	2	0.54	0.54	0.54	90	Swf	Ultisols	Tuffac. sandstone		17
		II8Bi	0.12	0.05	3	0.13	0.17	0.07	90	Swf	Ultisols	Tuffac. sandstone		17
		II9A	0.64	0.17	22	0.61	1.03	0.26	139	Wfs	Ultisols	Tuffac. sandstone		17
		II9A	0.38	0.14	22	0.37	0.65	0.17	139	Wfs	Ultisols	Tuffac. sandstone		17
		II9B	0.18	0.05	5	0.17	0.25	0.13	139	Wfs	Ultisols	Tuffac. sandstone		17
		II9C	0.45	0.17	6	0.48	0.61	0.16	139	Wfs	Ultisols	Tuffac. sandstone		17
		II9D	0.66	0.10	5	0.69	0.73	0.49	139	Wfs	Ultisols	Tuffac. sandstone		17

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
	Potassium (mg/g)	II8A	2.25	0.45	2	2.25	2.57	1.93	90	Swf	Ultisols	Tuffac. sandstone		17	
		II8A	5.36	4.50	3	3.46	10.50	2.13	90	Swf	Ultisols	Tuffac. sandstone		17	
		II8B	1.98	0.92	3	1.47	3.04	1.42	90	Swf	Ultisols	Tuffac. sandstone		17	
		II8C	2.37	1.14	3	1.76	3.68	1.66	90	Swf	Ultisols	Tuffac. sandstone		17	
		II8D	2.95	1.96	2	2.95	4.34	1.56	90	Swf	Ultisols	Tuffac. sandstone		17	
		II8Bi	1.47	0.90	3	1.04	2.50	0.86	90	Swf	Ultisols	Tuffac. sandstone		17	
		II9A	4.67	1.16	22	4.72	6.29	2.56	139	Wfs	Ultisols	Tuffac. sandstone		17	
		II9A	3.81	0.62	22	3.77	5.21	2.91	139	Wfs	Ultisols	Tuffac. sandstone	Other	17	
		II9B	3.09	0.97	5	2.82	4.44	1.89	139	Wfs	Ultisols	Tuffac. sandstone		17	
		II9C	4.62	1.18	6	4.65	5.92	3.28	139	Wfs	Ultisols	Tuffac. sandstone		17	
		II9D	4.04	1.52	5	3.73	6.29	2.14	139	Wfs	Ultisols	Tuffac. sandstone		17	
		Wood density (g/cc)	II1C	0.26	0.01	20	0.26	0.28	0.25	115					17
		<i>Ardisia glauciflora</i>	Aluminum (mg/kg)	III1A	41		1				102	Smf	Limestone	Tuffac. sandstone	Adult
Ash (%)	III1A		10.41		1				102	Smf	Limestone	Tuffac. sandstone	Adult	18	
Calcium (mg/g)	III1A		31.52		1				102	Smf	Limestone	Tuffac. sandstone	Adult	18	
Cobalt (µg/g)	III1A		1.70		1				102	Smf	Limestone	Tuffac. sandstone	Adult	18	
Iron (mg/kg)	III1A		49		1				102	Smf	Limestone	Tuffac. sandstone	Adult	18	
Magnesium (mg/g)	III1A		0.92		1				102	Smf	Limestone	Tuffac. sandstone	Adult	18	
Manganese (mg/kg)	III1A		23		1				102	Smf	Limestone	Tuffac. sandstone	Adult	18	
Nickel (µg/g)	III1A		7.50		1				102	Smf	Limestone	Tuffac. sandstone	Adult	18	
Nitrogen (%)	III1A		0.53		1				102	Smf	Limestone	Tuffac. sandstone	Adult	18	
Phosphorus (mg/g)	III1A		0.27		1				102	Smf	Limestone	Tuffac. sandstone	Adult	18	
Potassium (mg/g)	III1A		4.17		1				102	Smf	Limestone	Tuffac. sandstone	Adult	18	
<i>Ardisia solanacea</i>	Ash (%)	III1A	13.50	0.60	6	13.23	14.36	12.86	126		Ultisols	Siltstone,sandstone	Botanical G., RP	19	
		III1C	1.77	0.31	6	1.74	2.21	1.35	126		Ultisols	Siltstone,sandstone	Botanical G., RP	19	
		III1Ci	7.49	1.46	5	7.85	8.81	4.99	126		Ultisols	Siltstone,sandstone	Botanical G., RP	19	
	C/N	III1A	27	1	6	28	28	26	126		Ultisols	Siltstone,sandstone	Botanical G., RP	19	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Carbon (%)	II1C	228	78	6	218	319	134	126		Ultisols	Siltstone,sandstone	Botanical G., RP	19
		II1Ci	105	8	5	102	118	99	126		Ultisols	Siltstone,sandstone	Botanical G., RP	19
		II1A	49	1	6	49	49	48	126		Ultisols	Siltstone,sandstone	Botanical G., RP	19
	Nitrogen (%)	II1C	51	0	6	51	51	50	126		Ultisols	Siltstone,sandstone	Botanical G., RP	19
		II1Ci	49	2	5	49	52	48	126		Ultisols	Siltstone,sandstone	Botanical G., RP	19
		II1A	1.79	0.07	6	1.78	1.90	1.71	126		Ultisols	Siltstone,sandstone	Botanical G., RP	19
	Sulfur (%)	II1C	0.25	0.09	6	0.24	0.38	0.16	126		Ultisols	Siltstone,sandstone	Botanical G., RP	19
		II1Ci	0.47	0.02	5	0.47	0.49	0.44	126		Ultisols	Siltstone,sandstone	Botanical G., RP	19
		II1A	0.19	0.01	6	0.19	0.21	0.18	126		Ultisols	Siltstone,sandstone	Botanical G., RP	19
Wood density (g/cc)	II1C	0.05	0.01	6	0.05	0.05	0.03	126		Ultisols	Siltstone,sandstone	Botanical G., RP	19	
	II1Ci	0.08	0.01	5	0.08	0.09	0.07	126		Ultisols	Siltstone,sandstone	Botanical G., RP	19	
	II1C	0.48	0.03	5	0.49	0.51	0.43	126		Ultisols	Siltstone,sandstone	Botanical G., RP	19	
<i>Artocarpus altilis</i>	Wood density (g/cc)	II1B	0.32	0.01	3	0.32	0.33	0.32	97	Wfs	Inceptisols	Tuffac. sandstone		20
<i>Asplenium spp.</i>	Aluminum (mg/g)	II6	0.16		1				135	Lmrf	Ultisols	Tuffac. sandstone		21
	Calcium (mg/g)	II6	18.22		1				135	Lmrf	Ultisols	Tuffac. sandstone		21
	Iron (mg/g)	II6	0.15		1				135	Lmrf	Ultisols	Tuffac. sandstone		21
	Magnesium (mg/g)	II6	3.52		1				135	Lmrf	Ultisols	Tuffac. sandstone		21
	Manganese (mg/g)	II6	1.16		1				135	Lmrf	Ultisols	Tuffac. sandstone		21
	Nitrogen (%)	II6	1.02		1				135	Lmrf	Ultisols	Tuffac. sandstone		21
	Phosphorus (mg/g)	II6	0.98		1				135	Lmrf	Ultisols	Tuffac. sandstone		21
	Potassium (mg/g)	II6	27.82		1				135	Lmrf	Ultisols	Tuffac. sandstone		21
<i>Avicennia germinans</i>	Aluminum (mg/g)	II1A	0.17	0.02	2	0.17	0.18	0.16	78	Mfs	Mangle	Swamp		22
		II1B	0.03	0.01	4	0.03	0.05	0.03	87	Mfs	Entisols	Compound dunes		22
		II1B	0.03	0.03	3	0.02	0.07	0.02	157	Mfs	Entisols	Compound dunes		22
	Aluminum (mg/kg)	II1A	7	3	4	6	10	4	80	Mfs	Entisols	Swamps		22
	Ash (%)	II1A	10.21	0.14	6	10.21	10.42	10.04	80	Mfs	Entisols	Swamps		22

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1A	9.80	0.07	2	9.80	9.85	9.75	78	Mfs	Mangle	Swamp		22
		II1B	1.48	0.35	4	1.45	1.93	1.08	87	Mfs	Entisols	Compound dunes		22
		II1C	8.84	0.16	4	8.88	8.98	8.62	80	Mfs	Entisols	Swamps		22
	C/N	II1A	22	0	6	22	22	22	80	Mfs	Entisols	Swamps		22
		II1A	20	0	2	20	20	20	78	Mfs	Mangle	Swamp		22
		II1B	155	42	4	157	192	114	87	Mfs	Entisols	Compound dunes		22
		II1C	35	1	4	35	36	34	80	Mfs	Entisols	Swamps		22
	Calcium (mg/g)	II1A	5.77	0.20	6	5.66	6.06	5.60	80	Mfs	Entisols	Swamps		22
		II1A	2.82		1				74	Dfs	Mangle	Dune deposits	Old Mature	22
		II1A	4.21		1				74	Dfs	Mangle	Dune deposits	Senescent	22
		II1A	3.32		1				74	Dfs	Mangle	Dune deposits	Yellow	22
		II1A	2.66		1				74	Dfs	Mangle	Dune deposits	Young Mature	22
		II1A	6.46	0.19	2	6.46	6.60	6.33	78	Mfs	Mangle	Swamp		22
		II1B	1.76	0.31	4	1.63	2.21	1.56	87	Mfs	Entisols	Compound dunes		22
		II1B	6.56	0.60	3	6.37	7.23	6.24	157	Mfs	Entisols	Compound dunes		22
		II1C	4.99	0.42	4	4.93	5.55	4.56	80	Mfs	Entisols	Swamps		22
	Carbon (%)	II1A	48	0	6	48	48	48	80	Mfs	Entisols	Swamps		22
		II1A	42	0	2	42	42	42	78	Mfs	Mangle	Swamp		22
		II1C	45	0	4	45	46	45	80	Mfs	Entisols	Swamps		22
	Iron (mg/g)	II1A	0.14	0.00	2	0.14	0.14	0.14	78	Mfs	Mangle	Swamp		22
		II1B	0.05	0.03	4	0.05	0.09	0.02	87	Mfs	Entisols	Compound dunes		22
		II1B	0.06	0.07	3	0.03	0.01	0.13	157	Mfs	Entisols	Compound dunes		22
		II1A	0.02	0.01	6	0.02	0.03	0.01	80	Mfs	Entisols	Swamps		22
		II1C	0.01	0.00	6	0.01	0.02	0.01	80	Mfs	Entisols	Swamps		22
	Magnesium (mg/g)	II1A	7.97	0.18	6	7.96	8.30	7.79	80	Mfs	Entisols	Swamps		22
		II1A	9.14		1				74	Dfs	Mangle	Dune deposits	Old Mature	22
		II1A	10.77		1				74	Dfs	Mangle	Dune deposits	Senescent	22
		II1A	10.46		1				74	Dfs	Mangle	Dune deposits	Yellow	22
		II1A	5.70		1				74	Dfs	Mangle	Dune deposits	Young Mature	22

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1A	7.48	0.09	2	7.48	7.54	7.41	78	Mfs	Mangle	Swamp		22
		II1B	0.70	0.16	4	0.77	0.80	0.46	78	Mfs	Mangle	Swamp		22
		II1B	0.82	0.09	3	0.81	0.91	0.73	157	Mfs	Entisols	Compound dunes		22
		II1C	1.49	0.12	4	1.48	1.64	1.36	80	Mfs	Entisols	Swamps		22
	Manganese (mg/kg)	II1A	200	10	2	200	210	200	78	Mfs	Mangle	Swamp		22
		II1A	67	2	6	67	71	65	80	Mfs	Entisols	Swamps		22
		II1B	7	2	4	7	10	6	78	Mfs	Mangle	Swamp		22
		II1B	7	2	3	6	6	9	157	Mfs	Entisols	Compound dunes		22
		II1C	14	2	4	14	17	12	80	Mfs	Entisols	Swamps		22
	Nitrogen (%)	II1A	2.22	0.02	6	2.23	2.24	2.19	80	Mfs	Entisols	Swamps		22
		II1A	2.08	0.01	2	2.08	2.09	2.08	78	Mfs	Mangle	Swamp		22
		II1A	1.53		1				74	Dfs	Mangle	Dune deposits	Old Mature	22
		II1A	0.60		1					Dfs	Mangle	Dune deposits	Senescent	22
		II1A	0.57		1					Dfs	Mangle	Dune deposits	Yellow	22
		II1A	1.82		1					Dfs	Mangle	Dune deposits	Young Mature	22
		II1B	0.31	0.09	4	0.31	0.40	0.24	87	Mfs	Entisols	Compound dunes		22
		II1C	1.29	0.02	4	1.29	1.31	1.27	80	Mfs	Entisols	Swamps		22
	Phosphorus (mg/g)	II1A	1.18	0.04	6	1.18	1.22	1.11	80	Mfs	Entisols	Swamps		22
		II1A	0.70		1				74	Dfs	Mangle	Dune deposits	Old Mature	22
		II1A	0.16		1				74	Dfs	Mangle	Dune deposits	Senescent	22
		II1A	0.31		1				74	Dfs	Mangle	Dune deposits	Yellow	22
		II1A	1.11		1				74	Dfs	Mangle	Dune deposits	Young Mature	22
		II1A	1.16	0.01	2	1.16	1.17	1.16	78	Mfs	Mangle	Swamp		22
		II1B	0.32	0.09	4	0.28	0.45	0.25	87	Mfs	Entisols	Compound dunes		22
		II1B	0.23	0.11	3	0.28	0.31	0.11	157	Mfs	Entisols	Compound dunes		22
		II1C	1.08	0.08	4	1.07	1.17	0.99	80	Mfs	Entisols	Swamps		22
	Potassium (mg/g)	II1A	9.35	0.33	6	9.40	9.80	8.84	80	Mfs	Entisols	Swamps		22
		II1A	12.40		1				74	Dfs	Mangle	Dune deposits	Old Mature	22
		II1A	12.61		1				74	Dfs	Mangle	Dune deposits	Senescent	22

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Sodium (mg/g)	II1A	14.31		1				74	Dfs	Mangle	Dune deposits	Yellow	22
		II1A	12.19		1				74	Dfs	Mangle	Dune deposits	Young Mature	22
		III1A	14.23	0.83	2	14.23	14.82	13.64	78	Mfs	Mangle	Swamp		22
		II1B	3.53	0.94	4	3.45	4.75	2.47	87	Mfs	Entisols	Compound dunes		22
		III1B	2.88	1.53	3	3.53	3.97	1.33	157	Mfs	Entisols	Compound dunes		22
		III1C	15.97	1.00	4	16.01	17.07	14.90	80	Mfs	Entisols	Swamps		22
		II1A	16.88	0.43	6	16.74	17.51	16.34	80	Mfs	Entisols	Swamps		22
		II1A	22.46		1				74	Dfs	Mangle	Dune deposits	Old Mature	22
		II1A	22.34		1				74	Dfs	Mangle	Dune deposits	Senescent	22
		II1A	24.87		1				74	Dfs	Mangle	Dune deposits	Yellow	22
		II1A	42.50		1				74	Dfs	Mangle	Dune deposits	Young Mature	22
		II1A	24.70	0.47	2	24.70	25.03	24.36	78	Mfs	Mangle	Swamp		22
		III1C	12.49	1.07	4	12.38	13.82	11.37	80	Mfs	Entisols	Swamps		22
<i>Bambusa spp.</i>	Aluminum (mg/g)	II3A	0.94	0.03	2	0.94	0.96	0.93	129	Lmrf	Ultisols	Tuffac. sandstone		23
		II3	5.96	1.81	21	6.10	9.57	1.96	129	Lmrf	Ultisols	Tuffac. sandstone	Decomp.	23
		II9A	0.78	0.27	34	0.75	2.01	0.33	129	Lmrf	Ultisols	Tuffac. sandstone		23
	Ash (%)	II3A	6.87	0.02	2	6.87	6.88	6.85	129	Lmrf	Ultisols	Tuffac. sandstone		23
		II3	24.98	4.58	21	24.83	37.46	17.08	129	Lmrf	Ultisols	Tuffac. sandstone	Decomp.	23
		II9A	16.46	2.94	34	16.68	21.08	6.15	129	Lmrf	Ultisols	Tuffac. sandstone		23
	C/N	II3A	24	0	2	24	24	24	129	Lmrf	Ultisols	Tuffac. sandstone		23
		II3	24	3	21	25	29	19	129	Lmrf	Ultisols	Tuffac. sandstone	Decomp.	23
		II9A	67	24	34	62	169	42	129	Lmrf	Ultisols	Tuffac. sandstone		23
	Calcium (mg/g)	II3A	8.16	0.05	2	8.16	8.20	8.12	129	Lmrf	Ultisols	Tuffac. sandstone		23
		II3	1.36	0.31	21	1.29	1.98	0.80	129	Lmrf	Ultisols	Tuffac. sandstone	Decomp.	23
		II9A	4.26	1.32	34	4.38	6.63	0.86	129	Lmrf	Ultisols	Tuffac. sandstone		23
Carbon (%)	II3A	53	0	2	53	53	52	129	Lmrf	Ultisols	Tuffac. sandstone		23	
	II3	39	2	21	40	43	33	129	Lmrf	Ultisols	Tuffac. sandstone	Decomp.	23	
	II9A	44	1	34	44	49	42	129	Lmrf	Ultisols	Tuffac. sandstone		23	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
	Iron (mg/g)	II3A	0.55	0.01	2	0.55	0.56	0.54	129	Lmrf	Ultisols	Tuffac. sandstone		23	
		II3	5.07	2.08	21	5.07	10.70	1.00	129	Lmrf	Ultisols	Tuffac. sandstone	Decomp.	23	
		II9A	0.40	0.19	34	0.37	1.39	0.19	129	Lmrf	Ultisols	Tuffac. sandstone		23	
	Magnesium (mg/g)	II3A	2.02	0.17	2	2.02	2.14	1.90	129	Lmrf	Ultisols	Tuffac. sandstone		23	
		II3	0.95	0.44	21	0.77	2.30	0.52	129	Lmrf	Ultisols	Tuffac. sandstone	Decomp.	23	
		II9A	0.88	0.26	34	0.82	1.67	0.38	129	Lmrf	Ultisols	Tuffac. sandstone		23	
	Manganese (mg/g)	II3A	1.01	0.00	2	1.01	1.01	1.00	129	Lmrf	Ultisols	Tuffac. sandstone		23	
		II3	0.12	0.05	21	0.12	0.28	0.05	129	Lmrf	Ultisols	Tuffac. sandstone	Decomp.	23	
		II9A	1.02	0.34	34	0.91	1.65	0.33	129	Lmrf	Ultisols	Tuffac. sandstone		23	
	Nitrogen (%)	II3A	2.23	0.01	2	2.23	2.23	2.22	129	Lmrf	Ultisols	Tuffac. sandstone		23	
		II3	1.63	0.14	21	1.59	1.88	1.39	129	Lmrf	Ultisols	Tuffac. sandstone	Decomp.	23	
		II9A	0.70	0.15	34	0.69	1.02	0.29	129	Lmrf	Ultisols	Tuffac. sandstone		23	
	Phosphorus (mg/g)	II3A	0.90	0.00	2	0.90	0.90	0.90	129	Lmrf	Ultisols	Tuffac. sandstone		23	
		II3	0.26	0.09	21	0.24	0.42	0.11	129	Lmrf	Ultisols	Tuffac. sandstone	Decomp.	23	
		II9A	0.18	0.07	34	0.16	0.36	0.06	129	Lmrf	Ultisols	Tuffac. sandstone		23	
	Potassium (mg/g)	II3A	12.09	0.05	2	12.09	12.12	12.05	129	Lmrf	Ultisols	Tuffac. sandstone		23	
		II3	0.63	0.18	21	0.59	0.93	0.38	129	Lmrf	Ultisols	Tuffac. sandstone	Decomp.	23	
		II9A	1.46	0.41	34	1.44	2.66	0.62	129	Lmrf	Ultisols	Tuffac. sandstone		23	
	Sulfur (%)	II3A	0.39	0.02	2	0.39	0.40	0.38	129	Lmrf	Ultisols	Tuffac. sandstone		23	
		II3	0.17	0.02	21	0.16	0.21	0.14	129	Lmrf	Ultisols	Tuffac. sandstone	Decomp.	23	
		II9A	0.24	0.03	34	0.23	0.31	0.17	129	Lmrf	Ultisols	Tuffac. sandstone		23	
	<i>Bambusa vulgaris</i>	Ash (%)	II3A	21.42		1				94	Wfs	Ultisols	Lava	< 1 cm dbh	24
			II3C	13.33		1				94	Wfs	Ultisols	Lava	< 1 cm dbh	24
		Nitrogen (%)	II3A	2.23		1				94	Wfs	Ultisols	Lava	< 1 cm dbh	24
			II3C	0.65		1				94	Wfs	Ultisols	Lava	< 1 cm dbh	24
		Phosphorus (mg/g)	II3A	0.86		1				94	Wfs	Ultisols	Lava	< 1 cm dbh	24
			II3C	0.26		1				94	Wfs	Ultisols	Lava	< 1 cm dbh	24
Potassium (mg/g)		II3A	9.39		1				94	Wfs	Ultisols	Lava	< 1 cm dbh	24	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II3C	3.95		1				94	Wfs	Ultisols	Lava	< 1 cm dbh	24
<i>Beilschmiedia pendula</i>	Ash (%)	II1B	3.85	2.66	26	2.99	12.35	1.70	68	Swf	Ultisols	Tuffac. sandstone	Decay-class 3/4 LD	25
	Calcium (mg/g)	II1B	8.35	7.34	26	6.09	34.25	2.40	68	Swf	Ultisols	Tuffac. sandstone	Decay-class 3/4 LD	25
	Nitrogen (%)	II1B	0.70	0.27	26	0.65	1.10	0.32	68	Swf	Ultisols	Tuffac. sandstone	Decay-class 3/4 LD	25
	Phosphorus (mg/g)	II1B	0.15	0.12	26	0.13	0.47	0.02	68	Swf	Ultisols	Tuffac. sandstone	Decay-class 3/4 LD	25
	Potassium (mg/g)	II1B	1.17	0.89	26	1.09	4.04	0.12	68	Swf	Ultisols	Tuffac. sandstone	Decay-class 3/4 LD	25
<i>Blenchnum occidentale</i>	Aluminum (mg/g)	II6	0.53		1				135	Lmrf	Ultisols	Tuffac. sandstone		26
	Calcium (mg/g)	II6	6.67		1				135	Lmrf	Ultisols	Tuffac. sandstone		26
	Iron (mg/g)	II6	0.33		1				135	Lmrf	Ultisols	Tuffac. sandstone		26
	Magnesium (mg/g)	II6	4.20		1				135	Lmrf	Ultisols	Tuffac. sandstone		26
	Manganese (mg/g)	II6	0.085		1				135	Lmrf	Ultisols	Tuffac. sandstone		26
	Nitrogen (%)	II6	2.45		1				135	Lmrf	Ultisols	Tuffac. sandstone		26
	Phosphorus (mg/g)	II6	1.41		1				135	Lmrf	Ultisols	Tuffac. sandstone		26
	Potassium (mg/g)	II6	48.62		1				135	Lmrf	Ultisols	Tuffac. sandstone		26
<i>Bolbitis aliena</i>	Aluminum (mg/g)	II6	1.26		1				135	Lmrf	Ultisols	Tuffac. sandstone		27
	Calcium (mg/g)	II6	7.05		1				135	Lmrf	Ultisols	Tuffac. sandstone		27
	Iron (mg/g)	II6	3.03		1				135	Lmrf	Ultisols	Tuffac. sandstone		27
	Magnesium (mg/g)	II6	4.85		1				135	Lmrf	Ultisols	Tuffac. sandstone		27
	Manganese (mg/g)	II6	0.18		1				135	Lmrf	Ultisols	Tuffac. sandstone		27
	Phosphorus (mg/g)	II6	1.11		1				135	Lmrf	Ultisols	Tuffac. sandstone		27
	Potassium (mg/g)	II6	58.54		1				135	Lmrf	Ultisols	Tuffac. sandstone		27
<i>Bolbitis nicotianifolia</i>	Aluminum (mg/g)	II6	2.39	1.70	17	1.98	7.43	0.87	135	Lmrf	Ultisols	Tuffac. sandstone		28
	C/N	II6	16	2	16	15	19	14	135	Lmrf	Ultisols	Tuffac. sandstone		28
	Calcium (mg/g)	II6	6.36	1.33	17	6.14	8.94	4.49	135	Lmrf	Ultisols	Tuffac. sandstone		28
	Carbon (%)	II6	40	2	16	41	43	34	135	Lmrf	Ultisols	Tuffac. sandstone		28



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Iron (mg/g)	II6	1.28	1.61	17	0.58	6.39	0.14	135	Lmrf	Ultisols	Tuffac. sandstone		28
	Magnesium (mg/g)	II6	5.00	1.10	17	4.55	7.37	3.85	135	Lmrf	Ultisols	Tuffac. sandstone		28
	Manganese (mg/g)	II6	0.21	0.17	17	0.15	0.80	0.09	135	Lmrf	Ultisols	Tuffac. sandstone		28
	Nitrogen (%)	II6	2.52	0.36	23	2.55	3.01	1.67	135	Lmrf	Ultisols	Tuffac. sandstone		28
	Phosphorus (mg/g)	II6	1.17	0.22	17	1.12	1.85	0.92	135	Lmrf	Ultisols	Tuffac. sandstone		28
	Potassium (mg/g)	II6	42.00	5.58	17	29.61	42.23	22.18	135	Lmrf	Ultisols	Tuffac. sandstone		28
	Sulfur (%)	II6	0.45	0.12	16	0.43	0.66	0.26	135	Lmrf	Ultisols	Tuffac. sandstone		28
<i>Bourreria succulenta</i>	Aluminum (mg/g)	III A	0.05	0.02	14	0.05	0.07	0.02	151	Sdf	Mollisols	Alluvial deposits		29
	Ash (%)	III A	10.56	2.70	14	11.64	13.16	3.95	151	Sdf	Mollisols	Alluvial deposits		29
	C/N	III A	28	3	14	29	31	23	151	Sdf	Mollisols	Alluvial deposits		29
	Calcium (mg/g)	III A	14.84	1.74	2	14.85	16.67	12.99	104	Sdf	Mollisols	Alluvial deposits	New	29
		III A	24.51	3.07	6	23.03	29.16	20.23	104	Sdf	Mollisols	Alluvial deposits	Mature	29
		III A	28.98	1.39	2	28.96	30.25	27.74	104	Sdf	Mollisols	Alluvial deposits	Old	29
		III A	23.35	5.58	18	23.03	30.25	12.99	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	29
		III A	25.07	3.03	14	25.40	30.72	18.80	151	Sdf	Mollisols	Alluvial deposits		29
		III Ci	28.09	2.11	2	28.09	29.58	26.60	104	Sdf	Mollisols	Alluvial deposits		29
		III Ci	28.09		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	29
	Carbon (%)	III A	49	0	14	49	50	49	151	Sdf	Mollisols	Alluvial deposits		29
	Iron (mg/kg)	III A	38	11	14	34	53	23	151	Sdf	Mollisols	Alluvial deposits		29
	Magnesium (mg/g)	III A	3.50	0.60	2	3.51	4.08	2.90	104	Sdf	Mollisols	Alluvial deposits	New	29
		III A	5.91	1.07	6	5.52	8.04	4.98	104	Sdf	Mollisols	Alluvial deposits	Mature	29
		III A	4.58	0.73	2	4.48	5.41	3.96	104	Sdf	Mollisols	Alluvial deposits	Old	29
		III A	5.17	1.34	20	3.20	8.04	2.90	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	29
		III A	3.42	0.51	14	3.36	4.51	2.75	151	Sdf	Mollisols	Alluvial deposits		29
		III Ci	3.47	0.04	2	3.47	3.50	3.44	104	Sdf	Mollisols	Alluvial deposits		29
		III Ci	3.47		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	29
	Manganese (mg/kg)	III A	32	6	14	33	40	21	151	Sdf	Mollisols	Alluvial deposits		29
	Nitrogen (%)	III A	1.25	0.13	2	1.26	1.38	1.10	104	Sdf	Mollisols	Alluvial deposits	New	29

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1A	1.50	0.09	6	1.47	1.66	1.40	104	Sdf	Mollisols	Alluvial deposits	Mature	29
		II1A	1.44	0.02	2	1.44	1.46	1.41	104	Sdf	Mollisols	Alluvial deposits	Old	29
		III1A	1.45	0.14	20	1.45	1.66	1.10	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	29
		II1A	1.77	0.18	14	1.68	2.17	1.56	151	Sdf	Mollisols	Alluvial deposits		29
		III1Ci	0.71		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	29
	Phosphorus (mg/g)	II1A	0.55	0.16	2	0.55	0.70	0.41	104	Sdf	Mollisols	Alluvial deposits	New	29
		II1A	0.45	0.06	6	0.46	0.56	0.36	104	Sdf	Mollisols	Alluvial deposits	Mature	29
		II1A	0.44	0.01	2	0.44	0.45	0.42	104	Sdf	Mollisols	Alluvial deposits	Old	29
		II1A	0.47	0.09	20	29.96	0.70	0.36	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	29
		II1A	0.48	0.07	14	0.46	0.61	0.37	151	Sdf	Mollisols	Alluvial deposits		29
		III1Ci	0.21	0.05	2	0.21	0.26	0.15	104	Sdf	Mollisols	Alluvial deposits		29
		III1Ci	0.10		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	29
	Potassium (mg/g)	II1A	24.23	1.30	2	24.31	25.43	22.87	104	Sdf	Mollisols	Alluvial deposits	New	29
		II1A	19.40	3.07	6	18.23	26.17	16.94	104	Sdf	Mollisols	Alluvial deposits	Mature	29
		III1A	16.18	0.76	2	16.17	16.95	15.43	104	Sdf	Mollisols	Alluvial deposits	Old	29
		III1A	19.72	3.57	20	30.96	26.17	15.43	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	29
		III1A	15.29	3.53	14	17.71	23.21	9.43	151	Sdf	Mollisols	Alluvial deposits		29
		III1Ci	5.61	0.25	2	5.61	5.79	5.44	104	Sdf	Mollisols	Alluvial deposits		29
		III1Ci	5.61		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	29
	Sulfur (%)	II1A	0.18	0.02	14	0.18	0.21	0.15	151	Sdf	Mollisols	Alluvial deposits		29
<i>Bromeliads</i>	Aluminum (mg/g)	II6	0.81	0.04	2	0.81	0.84	0.79	135	Lmrf	Ultisols	Tuffac. sandstone		30
		II6	0.50		1				93	Wflm	Inceptisols	Tuffac. sandstone		30
	Ash (%)	II6	4.53		1				93	Wflm	Inceptisols	Tuffac. sandstone		30
	C/N	II6	24	0	2	24	24	24	135	Lmrf	Ultisols	Tuffac. sandstone		30
	Calcium (mg/g)	II6	3.61	0.26	2	3.61	3.80	3.43	135	Lmrf	Ultisols	Tuffac. sandstone		30
		II6	1.97		1				93	Wflm	Inceptisols	Tuffac. sandstone		30
	Carbon (%)	II6	46	0	2	46	46	46	135	Lmrf	Ultisols	Tuffac. sandstone		30
	Iron (mg/g)	II6	0.67	0.05	2	0.67	0.71	0.64	135	Lmrf	Ultisols	Tuffac. sandstone		30

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II6	0.33		1				93	Wflm	Inceptisols	Tuffac. sandstone		30
	Magnesium (mg/g)	II6	2.02	0.10	2	2.02	2.09	1.94	135	Lmrf	Ultisols	Tuffac. sandstone		30
		II6	1.66		1				93	Wflm	Inceptisols	Tuffac. sandstone		30
	Manganese (mg/g)	II6	0.18	0.01	2	0.18	0.19	0.17	135	Lmrf	Ultisols	Tuffac. sandstone		30
		II6	0.12		1				93	Wflm	Inceptisols	Tuffac. sandstone		30
	Nitrogen (%)	II6	1.95	0.02	2	1.95	1.96	1.93	135	Lmrf	Ultisols	Tuffac. sandstone		30
		II6	0.39		1				93	Wflm	Inceptisols	Tuffac. sandstone		30
	Phosphorus (mg/g)	II6	1.07	0.06	2	1.07	1.11	1.02	135	Lmrf	Ultisols	Tuffac. sandstone		30
		II6	0.19		1				93	Wflm	Inceptisols	Tuffac. sandstone		30
	Potassium (mg/g)	II6	12.05	0.74	2	12.05	12.57	11.52	135	Lmrf	Ultisols	Tuffac. sandstone		30
		II6	6.33		1				93	Wflm	Inceptisols	Tuffac. sandstone		30
	Sulfur (%)	II6	0.57	0.01	2	0.57	0.58	0.57	135	Lmrf	Ultisols	Tuffac. sandstone		30
<i>Bryophytes</i>	Aluminum (mg/g)	II5	26.73	6.71	6	28.06	33.37	14.64	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31
		II5	19.84	8.85	6	23.95	29.63	2.68	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31
		II5	12.91	3.04	8	12.48	16.84	6.83	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31
		II5	6.28	3.32	10	5.10	12.23	2.69	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31
		II5	0.58	1.28	137	0.15	8.13	0.01	123	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31
		II5	2.93	2.90	88	1.98	12.64	0.41	123	Wflm	Inceptisols	Tuffac. sandstone	Humus	31
		II5	2.60	2.88	51	1.90	18.77	0.22	123	Wflm	Inceptisols	Tuffac. sandstone	Roots	31
		II5	1.55	1.62	45	0.89	8.52	0.25	123	Wflm	Inceptisols	Tuffac. sandstone	Bark and sapwood	31
	Ash (%)	II5	68.38	5.09	4	69.51	73.03	61.47	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31
		II5	60.64	22.85	6	72.62	77.89	13.40	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31
		II5	50.96	20.67	8	51.11	85.86	20.31	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31
		II5	37.28	18.79	8	37.32	66.13	12.98	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31
	Calcium (mg/g)	II5	1.52	1.14	6	1.17	3.72	0.64	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31
		II5	1.02	0.40	6	0.94	1.74	0.59	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31
		II5	1.53	0.81	8	1.29	2.81	0.41	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31
		II5	2.38	1.15	10	2.27	4.44	0.84	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II5	7.66	4.82	137	6.93	23.52	1.21	123	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31
		II5	9.21	3.95	93	9.18	22.05	1.92	123	Wflm	Inceptisols	Tuffac. sandstone	Humus	31
		II5	9.82	4.66	51	8.42	20.12	2.06	123	Wflm	Inceptisols	Tuffac. sandstone	Roots	31
		II5	8.24	5.36	45	6.68	26.63	2.09	123	Wflm	Inceptisols	Tuffac. sandstone	Bark and sapwood	31
	Iron (mg/g)	II5	22.61	3.72	6	22.96	27.47	17.12	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31
		II5	17.63	7.68	6	21.01	23.20	1.96	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31
		II5	11.17	4.39	8	11.20	16.06	4.63	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31
		II5	5.05	3.57	10	4.52	14.51	1.82	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31
		II5	0.68	2.08	137	0.12	14.49	0.01	123	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31
		II5	3.14	4.23	85	1.55	18.59	0.07	123	Wflm	Inceptisols	Tuffac. sandstone	Humus	31
		II5	2.98	4.13	51	1.72	27.31	0.07	123	Wflm	Inceptisols	Tuffac. sandstone	Roots	31
		II5	1.89	1.73	40	1.26	5.87	0.03	123	Wflm	Inceptisols	Tuffac. sandstone	Bark and sapwood	31
	Magnesium (mg/g)	II5	2.51	0.45	6	2.59	3.09	1.72	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31
		II5	2.07	0.35	6	2.17	2.35	1.31	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31
		II5	1.34	0.32	8	1.35	1.71	0.72	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31
		II5	1.30	0.57	10	1.19	2.14	0.53	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31
		II5	1.79	1.38	137	1.41	5.29	0.10	123	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31
		II5	4.33	2.42	90	4.04	9.75	0.28	123	Wflm	Inceptisols	Tuffac. sandstone	Humus	31
		II5	3.06	2.03	51	2.483	9.32	0.42	123	Wflm	Inceptisols	Tuffac. sandstone	Roots	31
		II5	3.68	1.67	45	3.54	8.77	0.77	123	Wflm	Inceptisols	Tuffac. sandstone	Bark and sapwood	31
	Manganese (mg/g)	II5	0.62	0.16	6	0.61	0.86	0.39	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31
		II5	0.49	0.25	6	0.50	0.92	0.08	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31
		II5	0.23	0.09	8	0.24	0.34	0.08	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31
		II5	0.33	0.41	10	0.18	1.42	0.04	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31
		II5	0.25	0.27	137	0.18	1.49	0.01	123	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31
		II5	0.65	0.72	85	0.35	2.84	0.01	123	Wflm	Inceptisols	Tuffac. sandstone	Humus	31
		II5	0.74	0.99	51	0.42	4.88	0.03	123	Wflm	Inceptisols	Tuffac. sandstone	Roots	31
		II5	0.62	0.88	44	0.21	3.59	0.02	123	Wflm	Inceptisols	Tuffac. sandstone	Bark and sapwood	31
	Nitrogen (%)	II5	0.70	0.35	6	0.61	1.31	0.30	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #		
	Phosphorus (mg/g)	II5	0.63	0.32	6	0.57	1.11	0.29	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31		
		II5	0.78	0.40	8	0.85	1.37	0.24	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31		
		II5	1.03	0.23	9	1.00	1.43	0.76	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31		
		II5	1.09	0.54	127	0.98	2.50	0.32	123	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31		
		II5	1.65	0.59	66	1.69	2.83	0.58	123	Wflm	Inceptisols	Tuffac. sandstone	Humus	31		
		II5	1.85	0.58	40	1.78	3.08	0.80	123	Wflm	Inceptisols	Tuffac. sandstone	Roots	31		
		II5	1.73	0.49	35	1.65	2.90	0.60	123	Wflm	Inceptisols	Tuffac. sandstone	Bark and sapwood	31		
		II5	0.47	0.12	6	0.43	0.63	0.32	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31		
		II5	0.36	0.10	6	0.33	0.52	0.24	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31		
		II5	0.48	0.17	8	0.48	0.74	0.20	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31		
		II5	0.52	0.24	10	0.48	1.17	0.30	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31		
		II5	0.28	0.13	137	0.25	0.69	0.05	123	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31		
		II5	1.74	0.98	93	1.55	5.61	0.15	123	Wflm	Inceptisols	Tuffac. sandstone	Humus	31		
		II5	0.94	0.41	51	0.83	2.26	0.28	123	Wflm	Inceptisols	Tuffac. sandstone	Roots	31		
		II5	1.21	0.56	45	1.04	2.91	0.40	123	Wflm	Inceptisols	Tuffac. sandstone	Bark and sapwood	31		
		II5	2.29	0.52	6	2.22	3.16	1.56	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31		
		II5	3.42	1.99	6	2.37	6.31	1.87	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31		
		II5	2.10	0.30	8	2.06	2.57	1.61	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31		
		II5	2.73	1.03	10	2.79	4.16	1.25	88	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31		
			Potassium (mg/g)	II5	1.17	0.91	137	0.86	6.09	0.28	123	Wflm	Inceptisols	Tuffac. sandstone	Bryophytes	31
II5	10.17			4.81	94	9.11	23.13	2.35	123	Wflm	Inceptisols	Tuffac. sandstone	Humus	31		
II5	2.50			1.81	51	1.75	9.09	0.61	123	Wflm	Inceptisols	Tuffac. sandstone	Roots	31		
II5	9.83			6.26	45	9.33	30.16	1.36	123	Wflm	Inceptisols	Tuffac. sandstone		31		
<i>Buchenavia tetraphylla</i>	Aluminum (mg/g)			II9A	1.06	0.41	6	0.94	1.72	0.68	153	Swf	Ultisols	Tuffac. sandstone		32
	Ash (%)			II9A	4.80	0.46	5	4.71	5.46	4.21	153	Swf	Ultisols	Tuffac. sandstone		32
	C/N			II9A	42	2	6	42	45	40	153	Swf	Ultisols	Tuffac. sandstone		32
	Calcium (mg/g)			II9A	8.56	1.17	6	8.34	10.31	7.28	153	Swf	Ultisols	Tuffac. sandstone		32
	Carbon (%)			II9A	55	1	6	56	56	54	153	Swf	Ultisols	Tuffac. sandstone		32

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Iron (mg/g)	II9A	0.87	0.34	6	0.77	1.42	0.56	153	Swf	Ultisols	Tuffac. sandstone		32
	Magnesium (mg/g)	II9A	1.12	0.04	6	1.12	1.18	1.08	153	Swf	Ultisols	Tuffac. sandstone		32
	Manganese (mg/g)	II9A	0.41	0.02	6	0.40	0.44	0.39	153	Swf	Ultisols	Tuffac. sandstone		32
	Nitrogen (%)	II9A	1.32	0.08	6	1.34	1.40	1.21	153	Swf	Ultisols	Tuffac. sandstone		32
	Phosphorus (mg/g)	II9A	0.18	0.02	6	0.18	0.22	0.17	153	Swf	Ultisols	Tuffac. sandstone		32
	Potassium (mg/g)	II9A	2.04	0.07	6	2.01	2.14	1.97	153	Swf	Ultisols	Tuffac. sandstone		32
	Sodium (mg/g)	II9A	0.19	0.04	6	0.20	0.24	0.14	153	Swf	Ultisols	Tuffac. sandstone		32
<i>Bucida buceras</i>	Ash (%)	II1A	13.71	0.68	5	13.49	14.80	13.04	126		Ultisols	Siltstone,sandstone	Urban forest, RP	33
		II1C	1.20	0.06	5	1.18	1.26	1.11	126		Ultisols	Siltstone,sandstone	Urban forest, RP	33
		II1Ci	15.76	0.83	6	15.40	17.38	15.23	126		Ultisols	Siltstone,sandstone	Urban forest, RP	33
	C/N	II1A	22	1	5	22	23	21	126		Ultisols	Siltstone,sandstone	Urban forest, RP	33
		II1C	303	15	5	300	318	282	126		Ultisols	Siltstone,sandstone	Urban forest, RP	33
		II1Ci	59	1	6	59	61	57	126		Ultisols	Siltstone,sandstone	Urban forest, RP	33
	Calcium (mg/g)	II1A	10.05	1.17	2	10.27	11.21	8.42	104	Sdf	Mollisols	Alluvial deposits		33
		II1A	20.62	6.49	7	19.45	33.53	13.18	104	Sdf	Mollisols	Alluvial deposits	New	33
		II1A	25.19	4.82	2	25.07	29.82	20.80	104	Sdf	Mollisols	Alluvial deposits	Mature	33
		II1A	19.42	7.39	20	19.45	33.53	8.42	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	33
		II1Ci	52.11	0.87	2	51.97	53.26	51.25	104	Sdf	Mollisols	Alluvial deposits		33
		II1Ci	52.11	0.87	4	51.97	53.26	51.25	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	33
	Carbon (%)	II1A	45	0	5	45	45	45	126		Ultisols	Siltstone,sandstone	Urban forest, RP	33
		II1C	51	0	5	51	51	51	126		Ultisols	Siltstone,sandstone	Urban forest, RP	33
		II1Ci	43	1	6	43	44	42	126		Ultisols	Siltstone,sandstone	Urban forest, RP	33
	Magnesium (mg/g)	II1A	1.28	0.17	2	1.27	1.47	1.11	104	Sdf	Mollisols	Alluvial deposits		33
		II1A	2.30	0.41	7	2.28	2.95	1.49	104	Sdf	Mollisols	Alluvial deposits	New	33
		II1A	2.39	0.19	2	2.46	2.54	2.12	104	Sdf	Mollisols	Alluvial deposits	Mature	33
II1A		2.13	0.53	22	2.24	2.95	1.11	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	33	
II1Ci		0.97	0.16	2	0.98	1.12	0.80	104	Sdf	Mollisols	Alluvial deposits		33	
II1Ci		0.97	0.16	4	0.98	1.12	0.80	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	33	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
	Nitrogen (%)	III A	2.03	0.05	5	2.02	2.09	1.97	126				Urban forest, RP	33	
		III A	0.80	0.12	2	0.80	0.91	0.68	104	Sdf	Mollisols	Alluvial deposits	New	33	
		III A	1.22	0.10	7	1.24	1.35	1.03	104	Sdf	Mollisols	Alluvial deposits	Mature	33	
		III A	1.10	0.06	2	1.10	1.16	1.03	104	Sdf	Mollisols	Alluvial deposits	Old	33	
		III A	1.11	0.18	22	1.15	1.35	0.68	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	33	
		III C	0.17	0.01	5	0.17	0.18	0.16	126			Ultisols	Siltstone,sandstone	Urban forest, RP	33
		III Ci	0.73	0.02	6	0.73	0.77	0.71	126			Ultisols	Siltstone,sandstone	Urban forest, RP	33
		III Ci	0.57	0.03	4	0.57	0.60	0.54	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	33	
	Phosphorus (mg/g)	III A	0.64	0.16	2	0.64	0.79	0.47	104	Sdf	Mollisols	Alluvial deposits		33	
		III A	0.53	0.12	7	0.54	0.66	0.30	104	Sdf	Mollisols	Alluvial deposits	New	33	
		III A	0.50	0.02	2	0.49	0.52	0.48	104	Sdf	Mollisols	Alluvial deposits	Mature	33	
		III A	0.54	0.12	22	0.53	0.79	0.30	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	33	
		III Ci	0.21	0.05	2	0.21	0.26	0.15	104	Sdf	Mollisols	Alluvial deposits		33	
		III Ci	0.21	0.05	4	0.21	0.26	0.15	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	33	
	Potassium (mg/g)	III A	10.16	1.08	2	10.26	11.21	8.92	104	Sdf	Mollisols	Alluvial deposits		33	
		III A	10.86	2.47	7	10.51	15.45	6.91	104	Sdf	Mollisols	Alluvial deposits	New	33	
		III A	10.16	0.67	2	10.15	10.78	9.57	104	Sdf	Mollisols	Alluvial deposits	Mature	33	
		III A	10.60	2.03	22	10.51	15.45	6.91	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	33	
		III Ci	9.95	2.51	2	9.97	12.33	7.52	104	Sdf	Mollisols	Alluvial deposits		33	
		III Ci	9.95	2.51	4	9.97	12.33	7.52	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	33	
	Sulfur (%)	III A	0.19	0.01	5	0.19	0.20	0.18	126			Ultisols	Siltstone,sandstone	Urban forest, RP	33
III C		0.04	0.06	5	0.04	0.05	0.03	126			Ultisols	Siltstone,sandstone	Urban forest, RP	33	
III Ci		0.09	0.01	6	0.09	0.10	0.08	126			Ultisols	Siltstone,sandstone	Urban forest, RP	33	
Wood density (g/cc)	III C	0.66	0.03	5	0.67	0.69	0.62	126			Ultisols	Siltstone,sandstone	Urban forest, RP	33	
<i>Bursera simaruba</i>	Aluminum (mg/kg)	III A	42	11	10	43	62	29	151	Sdf	Mollisols	Alluvial deposits		34	
		III A	77		1				102	Smf	Limestone	Tuffac. sandstone	New Adult leaves	34	
	Ash (%)	III A	4.76		1				102	Smf	Limestone	Tuffac. sandstone	New Adult leaves	34	
		III A	7.47	0.84	8	7.66	8.60	6.04	151	Sdf	Mollisols	Alluvial deposits		34	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	C/N	II1A	22	1	8	22	24	21	151	Sdf	Mollisols	Alluvial deposits		34
	Calcium (mg/g)	II1A	6.34	0.97	2	6.31	7.27	5.47	104	Sdf	Mollisols	Alluvial deposits		34
		III1A	10.43	3.01	7	10.98	14.77	5.28	104	Sdf	Mollisols	Alluvial deposits		34
		II1A	3.50		1				102	Smf	Limestone	Tuffac. sandstone	New Adult leaves	34
		II1A	9.41	3.19	16	6.80	14.77	5.28	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	34
		II1A	14.02	2.86	11	14.27	17.78	9.06	151	Sdf	Mollisols	Alluvial deposits		34
		II1Ci	34.17	0.90	1	34.17	34.80	33.53	104	Sdf	Mollisols	Alluvial deposits		34
		II1Ci	34.17		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	34
	Carbon (%)	II1A	53	1	8	53	54	52	151	Sdf	Mollisols	Alluvial deposits		34
	Cobalt (µg/g)	II1A	1.00		1				102	Smf	Limestone	Tuffac. sandstone	New Adult leaves	34
	Iron (mg/g)	II1A	0.06	0.02	11	0.06	0.08	0.01	151	Sdf	Mollisols	Alluvial deposits		34
	Magnesium (mg/g)	II1A	1.96	0.29	2	1.98	2.22	1.66	104	Sdf	Mollisols	Alluvial deposits	Mature	34
		II1A	2.09	0.59	7	2.23	2.68	0.80	104	Sdf	Mollisols	Alluvial deposits		34
		II1A	4.35		1				102	Smf	Limestone	Tuffac. sandstone	New Adult leaves	34
		II1A	2.06	0.53	17	2.22	2.68	0.80	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	34
		II1A	2.46	0.29	11	2.44	3.05	1.92	151	Sdf	Mollisols	Alluvial deposits		34
		II1Ci	0.64	0.01	1	0.64	0.65	0.63	104	Sdf	Mollisols	Alluvial deposits		34
		II1Ci	0.64		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	34
	Manganese (mg/kg)	II1A	31	9	10	28	46	16	151	Sdf	Mollisols	Alluvial deposits		34
		II1A	40		1				102	Smf	Limestone	Tuffac. sandstone	New Adult leaves	34
	Nickel (µg/g)	II1A	5.90		1				102	Smf	Limestone	Tuffac. sandstone	New Adult leaves	34
	Nitrogen (%)	II1A	1.58	0.04	2	1.58	1.62	1.53	104	Sdf	Mollisols	Alluvial deposits	Mature	34
		II1A	1.79	0.22	7	1.87	1.96	1.30	104	Sdf	Mollisols	Alluvial deposits		34
		II1A	0.53		1				102	Smf	Limestone	Tuffac. sandstone	New Adult leaves	34
		II1A	1.77	0.22	18	1.84	2.07	1.30	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	34
		II1A	2.44	0.13	8	2.46	2.54	2.14	151	Sdf	Mollisols	Alluvial deposits		34
		II1Ci	0.31		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	34
	Phosphorus (mg/g)	II1A	0.19	0.01	1	0.19	0.20	0.19	104	Sdf	Mollisols	Alluvial deposits	New	34
		II1A	0.82	0.07	2	0.82	0.88	0.76	104	Sdf	Mollisols	Alluvial deposits	Mature	34



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<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
	Potassium (mg/g)	III1A	0.92	0.15	7	0.95	1.20	0.72	104	Sdf	Mollisols	Alluvial deposits		34	
		III1A	1.10		1				102	Lmrf	Ultisols	Serpentinite	New Adult leaves	34	
		III1A	0.90	0.14	17	0.87	1.20	0.72	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	34	
		III1A	0.79	0.12	11	0.74	1.01	0.63	151	Sdf	Mollisols	Alluvial deposits		34	
		III1Ci	0.19		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	34	
		III1A	10.33	0.84	2	10.32	11.07	9.59	104	Sdf	Mollisols	Alluvial deposits	Mature	34	
		III1A	12.15	2.29	7	11.23	17.13	10.11	104	Sdf	Mollisols	Alluvial deposits		34	
		III1A	10.26		1				102	Smf	Limestone	Tuffac. sandstone	New Adult leaves	34	
		III1A	11.75	2.18	18	11.05	17.13	9.59	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	34	
		III1A	9.76	2.30	11	9.07	15.70	7.48	151	Sdf	Mollisols	Alluvial deposits		34	
		III1Ci	22.28	0.46	1	22.28	22.60	21.96	104	Sdf	Mollisols	Alluvial deposits		34	
		III1Ci	22.28		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	34	
		Sulfur (%)	III1A	0.29	0.02	8	0.29	0.31	0.25	151	Sdf	Mollisols	Alluvial deposits		34
		Wood density (g/cc)	III1B	0.25	0.03	3	0.26	0.26	0.22	97	Wfs	Inceptisols	Tuffac. sandstone		34
<i>Byrsonima lucida</i>	Aluminum (mg/kg)	III1A	59		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	35	
		III1A	14		1				102	Smf	Limestone	Tuffac. sandstone	Adult	35	
	Ash (%)	III1A	3.51		1				102	Smf	Limestone	Tuffac. sandstone	Adult	35	
		III1A	4.33		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	35	
	Calcium (mg/g)	III1A	8.22		1				102	Smf	Limestone	Tuffac. sandstone	Adult	35	
		III1A	7.23		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	35	
	Cobalt (µg/g)	III1A	1.00		1				102	Smf	Limestone	Tuffac. sandstone	Adult	35	
	Iron (mg/kg)	III1A	99		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	35	
		III1A	35		1				102	Smf	Limestone	Tuffac. sandstone	Adult	35	
	Magnesium (mg/g)	III1A	3.54		1				102	Smf	Limestone	Tuffac. sandstone	Adult	35	
		III1A	5.80		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	35	
	Manganese (mg/kg)	III1A	19		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	35	
		III1A	19		1				102	Smf	Limestone	Tuffac. sandstone	Adult	35	
	Nickel (µg/g)	III1A	3.15		1				102	Smf	Limestone	Tuffac. sandstone	Adult	35	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Nitrogen (%)	II1A	1.24		1				102	Smf	Limestone	Tuffac. sandstone	Adult	35
		II1A	1.40		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	35
	Phosphorus (mg/g)	II1A	0.47		1				102	Smf	Limestone	Tuffac. sandstone	Adult	35
		II1A	0.46		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	35
	Potassium (mg/g)	II1A	7.59		1				102	Smf	Limestone	Tuffac. sandstone	Adult	35
		II1A	4.54		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	35
Zinc (µg/g)	II1A	4.84		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	35	
<i>Byrsonima spicata</i>	Aluminum (mg/g)	II1A	0.10	0.01	2	0.10	0.11	0.10	131	Wfs	Mollisols	Plutonic rocks		36
		II1B	0.09	0.00	3	0.09	0.84	0.09	131	Wfs	Mollisols	Plutonic rocks		36
		II1B	0.06	0.02	4	0.06	0.07	0.04	131	Wfs	Mollisols	Plutonic rocks		36
		II1C	0.09	0.11	2	0.09	0.17	0.02	131	Wfs	Mollisols	Plutonic rocks		36
		II1E	0.63	0.33	2	0.63	0.87	0.40	131	Wfs	Mollisols	Plutonic rocks		36
	Ash (%)	II1A	3.86	0.35	2	3.86	4.10	3.61	131	Wfs	Mollisols	Plutonic rocks		36
		II1B	3.10	0.46	3	3.25	3.46	2.58	131	Wfs	Mollisols	Plutonic rocks		36
		II1B	3.27	0.09	4	3.30	3.34	3.15	131	Wfs	Mollisols	Plutonic rocks		36
		II1C	1.42	0.35	2	1.42	1.66	1.17	131	Wfs	Mollisols	Plutonic rocks		36
		II1E	2.87	1.58	2	2.87	3.99	1.75	131	Wfs	Mollisols	Plutonic rocks		36
	C/N	II1A	23	1	2	23	23	22	131	Wfs	Mollisols	Plutonic rocks		36
		II1B	52	0	3	52	53	52	131	Wfs	Mollisols	Plutonic rocks		36
		II1B	35	3	4	36	37	31	131	Wfs	Mollisols	Plutonic rocks		36
		II1C	84	8	2	84	90	79	131	Wfs	Mollisols	Plutonic rocks		36
		II1E	88	4	2	88	90	85	131	Wfs	Mollisols	Plutonic rocks		36
	Calcium (mg/g)	II1A	5.62	0.82	2	5.62	6.20	5.04	131	Wfs	Mollisols	Plutonic rocks		36
		II1B	5.52	1.45	3	6.29	6.42	3.85	131	Wfs	Mollisols	Plutonic rocks		36
		II1B	4.96	0.16	4	4.95	5.14	4.79	131	Wfs	Mollisols	Plutonic rocks		36
		II1C	2.38	0.39	2	2.38	2.65	2.10	131	Wfs	Mollisols	Plutonic rocks		36
		II1E	3.88	1.06	2	3.88	4.62	3.13	131	Wfs	Mollisols	Plutonic rocks		36
Carbon (%)	II1A	57	0	2	57	57	57	131	Wfs	Mollisols	Plutonic rocks		36	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1B	54	0	3	54	54	54	131	Wfs	Mollisols	Plutonic rocks		36
		II1B	52	0	4	52	52	52	131	Wfs	Mollisols	Plutonic rocks		36
		II1C	53	0	2	53	53	53	131	Wfs	Mollisols	Plutonic rocks		36
		II1E	53	0	2	53	53	53	131	Wfs	Mollisols	Plutonic rocks		36
	Iron (mg/g)	II1A	0.10	0.01	2	0.10	0.10	0.09	131	Wfs	Mollisols	Plutonic rocks		36
		II1B	0.11	0.01	3	0.10	0.12	0.10	131	Wfs	Mollisols	Plutonic rocks		36
		II1B	0.05	0.02	4	0.04	0.08	0.03	131	Wfs	Mollisols	Plutonic rocks		36
		II1C	0.07	0.04	2	0.07	0.10	0.04	131	Wfs	Mollisols	Plutonic rocks		36
		II1E	0.53	0.22	2	0.53	0.68	0.38	131	Wfs	Mollisols	Plutonic rocks		36
	Magnesium (mg/g)	II1A	3.64	0.61	2	3.64	4.07	3.21	131	Wfs	Mollisols	Plutonic rocks		36
		II1B	1.79	0.34	3	1.64	2.17	1.55	131	Wfs	Mollisols	Plutonic rocks		36
		II1B	1.45	0.22	4	1.51	1.63	1.16	131	Wfs	Mollisols	Plutonic rocks		36
		II1C	0.82	0.04	2	0.82	0.85	0.80	131	Wfs	Mollisols	Plutonic rocks		36
		II1E	0.94	0.12	2	0.94	1.03	0.85	131	Wfs	Mollisols	Plutonic rocks		36
	Manganese (mg/g)	II1A	0.09	0.05	2	0.09	0.13	0.06	131	Wfs	Mollisols	Plutonic rocks		36
		II1B	0.25	0.08	3	0.28	0.30	0.16	131	Wfs	Mollisols	Plutonic rocks		36
		II1B	0.07	0.03	4	0.06	0.11	0.05	131	Wfs	Mollisols	Plutonic rocks		36
		II1C	0.07	0.03	2	0.07	0.09	0.04	131	Wfs	Mollisols	Plutonic rocks		36
		II1E	0.03	0.00	2	0.03	0.03	0.03	131	Wfs	Mollisols	Plutonic rocks		36
	Nitrogen (%)	II1A	2.49	0.06	2	2.49	2.53	2.44	131	Wfs	Mollisols	Plutonic rocks		36
		II1B	1.04	0.01	3	1.03	1.05	1.03	131	Wfs	Mollisols	Plutonic rocks		36
		II1B	1.49	0.11	4	1.46	1.64	1.40	131	Wfs	Mollisols	Plutonic rocks		36
		II1C	0.64	0.06	2	0.64	0.68	0.59	131	Wfs	Mollisols	Plutonic rocks		36
		II1E	0.61	0.02	2	0.61	0.62	0.59	131	Wfs	Mollisols	Plutonic rocks		36
	Phosphorus (mg/g)	II1A	0.54	0.04	2	0.54	0.57	0.51	131	Wfs	Mollisols	Plutonic rocks		36
		II1B	0.26	0.02	3	0.26	0.28	0.25	131	Wfs	Mollisols	Plutonic rocks		36
		II1B	0.23	0.01	4	0.22	0.25	0.22	131	Wfs	Mollisols	Plutonic rocks		36
		II1C	0.11	0.01	2	0.11	0.12	0.10	131	Wfs	Mollisols	Plutonic rocks		36
		II1E	0.11	0.01	2	0.11	0.12	0.10	131	Wfs	Mollisols	Plutonic rocks		36

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
	Potassium (mg/g)	II1A	6.81	0.37	2	6.81	7.07	6.55	131	Wfs	Mollisols	Plutonic rocks		36	
		II1B	4.12	0.12	3	4.13	4.24	4.00	131	Wfs	Mollisols	Plutonic rocks		36	
		II1B	7.01	0.41	4	6.88	7.59	6.68	131	Wfs	Mollisols	Plutonic rocks		36	
		II1C	2.01	0.85	2	2.01	2.61	1.41	131	Wfs	Mollisols	Plutonic rocks		36	
		II1E	2.23	0.58	2	2.23	2.65	1.82	131	Wfs	Mollisols	Plutonic rocks		36	
	Sulfur (%)	II1A	0.44	0.03	2	0.44	0.46	0.42	131	Wfs	Mollisols	Plutonic rocks		36	
		II1B	0.28	0.04	3	0.30	0.31	0.24	131	Wfs	Mollisols	Plutonic rocks		36	
		II1B	0.20	0.02	4	0.20	0.22	0.18	131	Wfs	Mollisols	Plutonic rocks		36	
		II1C	0.09	0.00	2	0.09	0.09	0.09	131	Wfs	Mollisols	Plutonic rocks		36	
		II1E	0.30	0.14	2	0.30	0.40	0.21	131	Wfs	Mollisols	Plutonic rocks		36	
	<i>Byrsonima wadsworthii</i>	Aluminum (mg/g)	II1A	0.23		1				93	Wflm	Inceptisols	Tuffac. sandstone		37
			II1B	0.06		1				93	Wflm	Inceptisols	Tuffac. sandstone		37
			II1C	0.08		1				93	Wflm	Inceptisols	Tuffac. sandstone		37
		Ash (%)	II1A	3.40		1				93	Wflm	Inceptisols	Tuffac. sandstone		37
			II1B	6.33		1				93	Wflm	Inceptisols	Tuffac. sandstone		37
II1C			1.00		1				93	Wflm	Inceptisols	Tuffac. sandstone		37	
C/N		II1A	25		1				93	Wflm	Inceptisols	Tuffac. sandstone		37	
		II1B	56		1				93	Wflm	Inceptisols	Tuffac. sandstone		37	
		II1C	286		1				93	Wflm	Inceptisols	Tuffac. sandstone		37	
Calcium (mg/g)		II1A	7.47		1				93	Wflm	Inceptisols	Tuffac. sandstone		37	
		II1B	24.69		1				93	Wflm	Inceptisols	Tuffac. sandstone		37	
		II1C	3.81		1				93	Wflm	Inceptisols	Tuffac. sandstone		37	
Iron (mg/g)		II1A	0.19		1				93	Wflm	Inceptisols	Tuffac. sandstone		37	
		II1B	0.08		1				93	Wflm	Inceptisols	Tuffac. sandstone		37	
		II1C	0.06		1				93	Wflm	Inceptisols	Tuffac. sandstone		37	
Magnesium (mg/g)		II1A	2.70		1				93	Wflm	Inceptisols	Tuffac. sandstone		37	
		II1B	1.01		1				93	Wflm	Inceptisols	Tuffac. sandstone		37	
		II1C	1.41		1				93	Wflm	Inceptisols	Tuffac. sandstone		37	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Manganese (mg/g)	II1A	0.09		1				93	Wflm	Inceptisols	Tuffac. sandstone		37
		II1B	0.06		1				93	Wflm	Inceptisols	Tuffac. sandstone		37
		II1C	0.01		1				93	Wflm	Inceptisols	Tuffac. sandstone		37
	Nitrogen (%)	II1A	1.80		1				93	Wflm	Inceptisols	Tuffac. sandstone		37
		II1B	0.78		1				93	Wflm	Inceptisols	Tuffac. sandstone		37
		II1C	0.16		1				93	Wflm	Inceptisols	Tuffac. sandstone		37
	Phosphorus (mg/g)	II1A	0.68		1				93	Wflm	Inceptisols	Tuffac. sandstone		37
		II1B	0.32		1				93	Wflm	Inceptisols	Tuffac. sandstone		37
		II1C	0.12		1				93	Wflm	Inceptisols	Tuffac. sandstone		37
Potassium (mg/g)	II1A	6.18		1				93	Wflm	Inceptisols	Tuffac. sandstone		37	
	II1B	3.89		1				93	Wflm	Inceptisols	Tuffac. sandstone		37	
	II1C	1.54		1				93	Wflm	Inceptisols	Tuffac. sandstone		37	
<i>Calophyllum antillanum</i>	Aluminum (µg/g)	II1A	48		1				58	Lmrf	Ultisols	Serpentinite		38
	Ash (%)	II1A	3.54	0.56	5	3.32	4.20	3.03	94	Swf	Ultisols	Tuffac. sandstone	Understory	38
		II1A	4.87	0.22	2	4.87	5.02	4.71	101	Wfs	Ultisols	Lava	Overstory	38
		II1A	3.16	0.11	6	3.17	3.27	3.02	126	Mfs	Alfisol	Alluvial deposits	Vega Alta	38
		II1B	4.18	0.99	3	4.34	5.09	3.12	94	Swf	Ultisols	Tuffac. sandstone		38
		II1B	2.87	0.65	2	2.87	3.33	2.41	101	Wfs	Ultisols	Lava		38
		II1C	3.11	1.08	4	3.41	3.86	1.52	94	Swf	Ultisols	Tuffac. sandstone		38
		II1C	1.06	0.39	6	0.89	1.72	0.68	126	Mfs	Alfisol	Alluvial deposits	Vega Alta	38
		II1Ci	8.76	2.37	5	7.97	12.81	6.77	126	Mfs	Alfisol	Alluvial deposits	Vega Alta	38
		C/N	II1A	48	2	6	48	51	47	126	Mfs	Alfisol	Alluvial deposits	Vega Alta
	II1C		636	199	6	612	870	428	126	Mfs	Alfisol	Alluvial deposits	Vega Alta	38
	II1Ci		145	20	5	152	160	109	126	Mfs	Alfisol	Alluvial deposits	Vega Alta	38
	Calcium (mg/g)	II1A	5.58		1				101	Wfs	Ultisols	Lava	Overstory	38
		II1A	5.32		1				58	Lmrf	Ultisols	Serpentinite		38
		II1B	5.89	2.07	2	5.89	7.36	4.43	101	Wfs	Ultisols	Lava		38
Carbon (%)	II1A	55	0	6	55	55	54	126	Mfs	Alfisol	Alluvial deposits	Vega Alta	38	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		III C	52	0	6	52	52	51	126	Mfs	Alfisol	Alluvial deposits	Vega Alta	38
		III Ci	54	2	5	54	56	52	126	Mfs	Alfisol	Alluvial deposits	Vega Alta	38
	Cobalt (µg/g)	III A	4.13		1				58	Lmrf	Ultisols	Serpentinite		38
	Copper (µg/g)	III A	3.60		1				58	Lmrf	Ultisols	Serpentinite		38
	Chromium (µg/g)	III A	2.33		1				58	Lmrf	Ultisols	Serpentinite		38
	Iron (µg/g)	III A	51.38		1				58	Lmrf	Ultisols	Serpentinite		38
	Magnesium (mg/g)	III A	3.28		1				58	Lmrf	Ultisols	Serpentinite		38
	Manganese (µg/g)	III A	65.63		1				58	Lmrf	Ultisols	Serpentinite		38
	Niquel (µg/g)	III A	24.34		1				58	Lmrf	Ultisols	Serpentinite		38
	Nitrogen (%)	III A	1.21	0.03	2	1.21	1.23	1.19	101	Wfs	Ultisols	Lava	Overstory	38
		III A	0.62	0.07	5	0.64	0.71	0.56	94	Swf	Ultisols	Tuffac. sandstone	Understory	38
		III A	1.13	0.04	6	1.15	1.18	1.06	126	Mfs	Alfisol	Alluvial deposits	Vega Alta	38
		III A	1.03		1				58	Lmrf	Ultisols	Serpentinite		38
		III B	0.61	0.31	3	0.46	0.96	0.40	94	Swf	Ultisols	Tuffac. sandstone		38
		III B	0.45	0.03	2	0.45	0.48	0.41	101	Wfs	Ultisols	Lava		38
		III C	0.56	0.34	4	0.44	1.08	0.14	94	Swf	Ultisols	Tuffac. sandstone		38
		III C	0.09	0.03	6	0.09	0.12	0.06	126	Mfs	Alfisol	Alluvial deposits	Vega Alta	38
		III Ci	0.38	0.06	5	0.35	0.48	0.34	126	Mfs	Alfisol	Alluvial deposits	Vega Alta	38
	Phosphorus (mg/g)	III A	0.83	0.07	2	0.83	0.88	0.78	101	Wfs	Ultisols	Lava	Overstory	38
		III A	0.62	0.07	5	0.64	0.71	0.55	94	Swf	Ultisols	Tuffac. sandstone		38
		III A	12.94		1				58	Lmrf	Ultisols	Serpentinite		38
		III B	0.42	0.10	3	0.38	0.54	0.35	94	Swf	Ultisols	Tuffac. sandstone		38
		III B	0.65	0.46	2	0.65	0.97	0.32	101	Wfs	Ultisols	Lava		38
		III C	0.61	0.44	4	0.48	1.16	0.10	94	Swf	Ultisols	Tuffac. sandstone		38
	Potassium (mg/g)	III A	14.35	4.03	2	14.35	17.21	11.50	101	Wfs	Ultisols	Lava	Overstory	38
		III A	5.10	0.80	5	5.40	6.00	4.30	94	Swf	Ultisols	Tuffac. sandstone	Understory	38
		III A	6.58		1				58	Lmrf	Ultisols	Serpentinite		38
		III B	4.70	0.10	3	4.70	4.80	4.70	94	Swf	Ultisols	Tuffac. sandstone		38
		III B	8.87	1.65	2	8.87	10.04	7.71	101	Wfs	Ultisols	Lava		38

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Sulfur (%)	II1C	5.10	2.10	4	5.30	7.00	2.10	94	Swf	Ultisols	Tuffac. sandstone		38
		II1A	0.20	0.02	6	0.19	0.24	0.18	126	Mfs	Alfisol	Alluvial deposits	Vega Alta	38
		II1C	0.02	0.04	6	0.02	0.03	0.02	126	Mfs	Alfisol	Alluvial deposits	Vega Alta	38
		II1Ci	0.11	0.02	5	0.11	0.13	0.09	126	Mfs	Alfisol	Alluvial deposits	Vega Alta	38
	Wood density (g/cc)	II1C	0.53	0.05	5	0.52	0.61	0.49	126	Mfs	Alfisol	Alluvial deposits	Vega Alta	38
<i>Canna glauca</i>	Aluminum (mg/g)	II3	0.28		1				135	Lmrf	Ultisols	Tuffac. sandstone		39
	Calcium (mg/g)	II3	3.61		1				135	Lmrf	Ultisols	Tuffac. sandstone		39
	Iron (mg/g)	II3	0.19		1				135	Lmrf	Ultisols	Tuffac. sandstone		39
	Magnesium (mg/g)	II3	4.19		1				135	Lmrf	Ultisols	Tuffac. sandstone		39
	Manganese (mg/g)	II3	2.64		1				135	Lmrf	Ultisols	Tuffac. sandstone		39
	Nitrogen (%)	II3	1.86		1				135	Lmrf	Ultisols	Tuffac. sandstone		39
	Phosphorus (mg/g)	II3	1.09		1				135	Lmrf	Ultisols	Tuffac. sandstone		39
	Potassium (mg/g)	II3	18.73		1				135	Lmrf	Ultisols	Tuffac. sandstone		39
<i>Canna spp.</i>	Aluminum (mg/g)	II3	0.17	0.04	2	0.17	0.20	0.14	135	Lmrf	Ultisols	Tuffac. sandstone		40
	Calcium (mg/g)	II3	4.82	0.38	2	4.82	5.09	4.56	135	Lmrf	Ultisols	Tuffac. sandstone		40
	Iron (mg/g)	II3	0.27	0.06	2	0.27	0.31	0.23	135	Lmrf	Ultisols	Tuffac. sandstone		40
	Magnesium (mg/g)	II3	3.32	0.76	2	3.32	3.85	2.78	135	Lmrf	Ultisols	Tuffac. sandstone		40
	Manganese (mg/g)	II3	0.90	0.72	2	0.90	1.41	0.39	135	Lmrf	Ultisols	Tuffac. sandstone		40
	Nitrogen (%)	II3	1.70	0.63	2	1.70	2.14	1.25	135	Lmrf	Ultisols	Tuffac. sandstone		40
	Phosphorus (mg/g)	II3	0.75	0.32	2	0.75	0.98	0.53	135	Lmrf	Ultisols	Tuffac. sandstone		40
	Potassium (mg/g)	II3	15.00	3.28	2	15.00	17.32	12.68	135	Lmrf	Ultisols	Tuffac. sandstone		40
<i>Capparis cynophallophora</i>	Nitrogen (%)	II1A	2.04		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	41
	Phosphorus (mg/g)	II1A	0.51		1				104	Sdf	Mollisols	Alluvial deposits	Mature	41
		II1A	0.51		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	41
	Potassium (mg/g)	II1A	24.37		1				104	Sdf	Mollisols	Alluvial deposits	Mature	41
		II1A	24.37		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	41

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
<i>Casearia arborea</i>	Ash (%)	III1A	7.05	3.31	8	5.68	11.20	3.52	94	Swf	Ultisols	Tuffac. sandstone	Understory	42
		III1A	4.72	0.59	2	4.72	5.13	4.30	101	Wfs	Ultisols	Lava	Overstory	42
		II1B	4.38	1.71	7	4.00	7.06	2.71	94	Swf	Ultisols	Tuffac. sandstone	Understory	42
		III1C	3.43	1.72	7	2.55	6.06	1.74	94	Swf	Ultisols	Tuffac. sandstone	Understory	42
	Calcium (mg/g)	III1A	3.64	1.26	9	3.95	6.06	1.95	135	Lmrf	Ultisols	Tuffac. sandstone		42
		II1B	2.46	1.08	11	2.33	4.25	0.51	135	Lmrf	Ultisols	Tuffac. sandstone		42
		II1B	1.85	2.47	10	0.59	6.89	0.42	135	Lmrf	Ultisols	Tuffac. sandstone		42
		III1F	2.00		1				135	Lmrf	Ultisols	Tuffac. sandstone		42
	Magnesium (mg/g)	III1A	2.83	0.67	9	2.89	3.79	1.74	135	Lmrf	Ultisols	Tuffac. sandstone		42
		II1B	1.86	0.61	11	1.86	2.53	0.50	135	Lmrf	Ultisols	Tuffac. sandstone		42
		II1B	0.95	0.71	10	0.63	2.60	0.48	135	Lmrf	Ultisols	Tuffac. sandstone		42
		III1Ci	3.49	0.26	6	3.49	3.83	3.11	135	Lmrf	Ultisols	Tuffac. sandstone		42
		III1F	2.43		1				135	Lmrf	Ultisols	Tuffac. sandstone		42
	Nitrogen (%)	III1A	2.18	0.14	2	2.18	2.28	2.08	101	Wfs	Ultisols	Lava	Overstory	42
		III1A	0.87	0.46	8	0.95	1.43	0.04	94	Swf	Ultisols	Tuffac. sandstone	Understory	42
		III1A	1.74	0.70	9	1.94	2.40	0.51	135	Lmrf	Ultisols	Tuffac. sandstone		42
		II1B	1.03	0.16	7	1.06	1.26	0.77	94	Swf	Ultisols	Tuffac. sandstone	Understory	42
		II1B	1.30	0.62	11	1.35	2.13	0.41	135	Lmrf	Ultisols	Tuffac. sandstone		42
		II1B	0.38	0.41	10	0.16	1.22	0.16	135	Lmrf	Ultisols	Tuffac. sandstone		42
		II1C	0.74	0.20	7	0.78	0.94	0.33	94	Swf	Ultisols	Tuffac. sandstone	Understory	42
		III1Ci	1.04	1.06	6	1.03	1.13	0.98	135	Lmrf	Ultisols	Tuffac. sandstone		42
		III1F	1.85		1				135	Lmrf	Ultisols	Tuffac. sandstone		42
	Phosphorus (mg/g)	III1A	0.86	0.13	2	0.86	0.95	0.76	101	Wfs	Ultisols	Lava	Overstory	42
		III1A	0.87	0.46	8	0.95	1.43	0.39	94	Swf	Ultisols	Tuffac. sandstone		42
		III1A	0.76	0.36	9	0.68	1.34	0.26	135	Lmrf	Ultisols	Tuffac. sandstone		42
		II1B	0.76	0.20	7	0.73	1.11	0.50	94	Swf	Ultisols	Tuffac. sandstone	Understory	42
		II1B	0.57	0.41	11	0.46	1.30	0.09	135	Lmrf	Ultisols	Tuffac. sandstone		42
		II1B	0.20	0.20	10	0.10	0.67	0.09	135	Lmrf	Ultisols	Tuffac. sandstone		42



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Potassium (mg/g)	III C	0.62	0.21	7	0.56	0.88	0.26	94	Swf	Ultisols	Tuffac. sandstone	Understory	42
		III Ci	0.48	0.03	6	0.49	0.51	0.43	135	Lmrf	Ultisols	Tuffac. sandstone		42
		III F	1.21		1				135	Lmrf	Ultisols	Tuffac. sandstone		42
		III A	9.34	1.61	2	9.34	10.48	8.20	101	Wfs	Ultisols	Lava	Overstory	42
		III A	18.68	12.60	8	16.00	33.49	1.49	94	Swf	Ultisols	Tuffac. sandstone	Understory	42
		III A	6.23	2.56	9	5.598	11.28	3.32	135	Lmrf	Ultisols	Tuffac. sandstone		42
		III B	11.97	8.80	7	9.22	25.30	0.99	94	Swf	Ultisols	Tuffac. sandstone	Understory	42
		III B	5.49	2.09	11	6.04	9.43	2.39	135	Lmrf	Ultisols	Tuffac. sandstone		42
		III B	4.11	2.02	10	3.15	8.42	2.66	135	Lmrf	Ultisols	Tuffac. sandstone		42
		III C	11.00	6.66	7	1.05	21.76	3.96	94	Swf	Ultisols	Tuffac. sandstone	Understory	42
		III Ci	9.67	0.51	6	9.56	10.54	9.21	135	Lmrf	Ultisols	Tuffac. sandstone		42
		III F	8.56		1				135	Lmrf	Ultisols	Tuffac. sandstone		42
<i>Casearia decandra</i>	Aluminum (mg/g)	III A	0.07		1				148	Smf	Ultisols	Tuffac. sandstone		43
	Ash (%)	III A	7.73	0.24	5	7.66	8.12	7.53	126		Ultisols	Siltstone,sandstone	Urban forest, RP	43
		III A	5.54		1				148	Smf	Ultisols	Tuffac. sandstone		43
		III C	2.82	0.88	5	2.76	3.85	1.50	126		Ultisols	Siltstone,sandstone	Urban forest, RP	43
		III Ci	15.86	3.04	6	16.39	20.58	12.34	126		Ultisols	Siltstone,sandstone	Urban forest, RP	43
	C/N	III A	16	1	5	16	17	14	126		Ultisols	Siltstone,sandstone	Urban forest, RP	43
		III A	24		1				148	Smf	Ultisols	Tuffac. sandstone		43
		III C	155	16	5	159	172	129	126		Ultisols	Siltstone,sandstone	Urban forest, RP	43
		III Ci	43	8	6	42	58	36	126		Ultisols	Siltstone,sandstone	Urban forest, RP	43
	Calcium (mg/g)	III A	12.61		1				148	Smf	Ultisols	Tuffac. sandstone		43
	Carbon (%)	III A	52	1	5	52	53	51	126		Ultisols	Siltstone,sandstone	Urban forest, RP	43
		III C	52	1	5	52	53	51	126		Ultisols	Siltstone,sandstone	Urban forest, RP	43
		III Ci	46	2	6	45	49	43	126		Ultisols	Siltstone,sandstone	Urban forest, RP	43
	Cobalt (mg/kg)	III A	4		1				148	Smf	Ultisols	Tuffac. sandstone		43
	Copper (mg/kg)	III A	3		1				148	Smf	Ultisols	Tuffac. sandstone		43
Chromium (mg/kg)	III A	2		1				148	Smf	Ultisols	Tuffac. sandstone		43	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
	Iron (mg/g)	II1A	0.14		1				148	Smf	Ultisols	Tuffac. sandstone		43	
	Magnesium (mg/g)	II1A	7.37		1				148	Smf	Ultisols	Tuffac. sandstone		43	
	Manganese (mg/g)	III1A	0.08		1				148	Smf	Ultisols	Tuffac. sandstone		43	
	Niquel (mg/kg)	III1A	11.02		1				148	Smf	Ultisols	Tuffac. sandstone		43	
	Nitrogen (%)	III1A	3.22	0.20	5	3.19	3.55	3.02	126		Ultisols	Siltstone,sandstone	Urban forest, RP	43	
		III1A	1.83		1				148	Smf	Ultisols	Tuffac. sandstone		43	
		III1C	0.34	0.04	5	0.32	0.40	0.30	126		Ultisols	Siltstone,sandstone	Urban forest, RP	43	
		III1Ci	1.09	0.22	6	1.07	1.36	0.74	126		Ultisols	Siltstone,sandstone	Urban forest, RP	43	
	Phosphorus (mg/g)	III1A	0.78		1				148	Smf	Ultisols	Tuffac. sandstone		43	
	Potassium (mg/g)	III1A	2.86		1				148	Smf	Ultisols	Tuffac. sandstone		43	
	Sodium (mg/g)	III1A	65.23		1				148	Smf	Ultisols	Tuffac. sandstone		43	
	Sulfur (%)	III1A	0.22	0.01	5	0.23	0.24	0.20	126		Ultisols	Siltstone,sandstone	Urban forest, RP	43	
		III1C	0.05	0.01	5	0.05	0.06	0.03	126		Ultisols	Siltstone,sandstone	Urban forest, RP	43	
		III1Ci	0.10	0.02	6	0.09	0.18	0.14	126		Ultisols	Siltstone,sandstone	Urban forest, RP	43	
	Wood density (g/cc)	III1C	0.63	0.07	5	0.62	0.72	0.55	126		Ultisols	Siltstone,sandstone	Urban forest, RP	43	
	Zinc (mg/kg)	III1A	13		1				148	Smf	Ultisols	Tuffac. sandstone		43	
<i>Casearia guianensis</i>	Ash (%)	III1A	7.68	0.24	6	7.67	8.06	7.32	126		Ultisols	Siltstone,sandstone	Urban forest, RP	44	
			III1C	3.03	0.38	6	2.91	3.68	2.66	126		Ultisols	Siltstone,sandstone	Urban forest, RP	44
			III1Ci	16.65	2.57	5	16.23	20.62	13.86	126		Ultisols	Siltstone,sandstone	Urban forest, RP	44
	C/N	III1A	21	1	6	21	22	20	126		Ultisols	Siltstone,sandstone	Urban forest, RP	44	
			III1C	115	9	6	118	123	99	126		Ultisols	Siltstone,sandstone	Urban forest, RP	44
			III1Ci	29	3	5	27	34	27	126		Ultisols	Siltstone,sandstone	Urban forest, RP	44
	Carbon (%)	III1A	50	1	6	50	51	49	126		Ultisols	Siltstone,sandstone	Urban forest, RP	44	
			III1C	51	0	6	51	52	51	126		Ultisols	Siltstone,sandstone	Urban forest, RP	44
			III1Ci	45	1	5	45	47	43	126		Ultisols	Siltstone,sandstone	Urban forest, RP	44
	Nitrogen (%)	III1A	2.40	0.05	6	2.42	2.45	2.31	126		Ultisols	Siltstone,sandstone	Urban forest, RP	44	
			III1C	0.45	0.04	6	0.44	0.52	0.42	126		Ultisols	Siltstone,sandstone	Urban forest, RP	44
			III1Ci	1.58	0.15	5	1.66	1.68	1.32	126		Ultisols	Siltstone,sandstone	Urban forest, RP	44

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Sulfur (%)	II1A	0.19	0.01	6	0.19	0.20	0.18	126		Ultisols	Siltstone,sandstone	Urban forest, RP	44
		II1C	0.07	0.01	6	0.07	0.08	0.06	126		Ultisols	Siltstone,sandstone	Urban forest, RP	44
		II1Ci	0.13	0.01	5	0.13	0.14	0.11	126		Ultisols	Siltstone,sandstone	Urban forest, RP	44
	Wood density (g/cc)	II1C	0.60	0.07	5	0.60	0.70	0.51	126		Ultisols	Siltstone,sandstone	Urban forest, RP	44
<i>Casearia sylvestris</i>	Aluminum (mg/g)	II1A	0.06		1				148	Smf	Ultisols	Tuffac. sandstone		45
	Ash (%)	II1A	21.94	10.94	6	23.52	32.81	4.37	94	Swf	Ultisols	Tuffac. sandstone		45
		II1A	8.46		1				148	Smf	Ultisols	Tuffac. sandstone		45
		II1B	5.77	1.34	7	6.05	7.36	3.48	94	Swf	Ultisols	Tuffac. sandstone		45
		II1C	3.55	1.05	7	3.09	5.22	2.64	94	Swf	Ultisols	Tuffac. sandstone		45
		C/N	II1A	21		1				148	Smf	Ultisols	Tuffac. sandstone	
	Calcium (mg/g)	II1A	6.54		1				148	Smf	Ultisols	Tuffac. sandstone		45
	Cobalt (mg/kg)	II1A	2		1				148	Smf	Ultisols	Tuffac. sandstone		45
	Copper (mg/kg)	II1A	2		1				148	Smf	Ultisols	Tuffac. sandstone		45
	Chromium (mg/kg)	II1A	3		1				148	Smf	Ultisols	Tuffac. sandstone		45
	Iron (mg/kg)	II1A	54		1				148	Smf	Ultisols	Tuffac. sandstone		45
	Magnesium (mg/g)	II1A	13.50		1				148	Smf	Ultisols	Tuffac. sandstone		45
	Manganese (mg/kg)	II1A	16		1				148	Smf	Ultisols	Tuffac. sandstone		45
	Niquel (mg/kg)	II1A	9		1				148	Smf	Ultisols	Tuffac. sandstone		45
	Nitrogen (%)	II1A	1.48	0.47	6	1.39	2.21	0.95	94	Swf	Ultisols	Tuffac. sandstone		45
		II1A	2.04		1				148	Smf	Ultisols	Tuffac. sandstone		45
		II1B	1.34	0.30	7	1.31	1.77	0.89	94	Swf	Ultisols	Tuffac. sandstone		45
		II1C	0.65	0.22	7	0.65	1.08	0.44	94	Swf	Ultisols	Tuffac. sandstone		45
	Phosphorus (mg/g)	II1A	1.48	0.48	6	1.39	2.21	0.95	94	Swf	Ultisols	Tuffac. sandstone		45
		II1A	1.08		1				148	Smf	Ultisols	Tuffac. sandstone		45
II1B		1.09	0.41	7	1.01	1.86	0.68	94	Swf	Ultisols	Tuffac. sandstone		45	
II1C		0.64	0.29	7	0.77	1.05	0.30	94	Swf	Ultisols	Tuffac. sandstone		45	
Potassium (mg/g)	II1A	21.94	10.94	6	23.52	32.81	4.37	94	Swf	Ultisols	Tuffac. sandstone		45	
	II1A	4.73		1				148	Smf	Ultisols	Tuffac. sandstone		45	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Sodium (mg/g)	II1B	14.28	5.46	7	14.62	22.40	7.98	94	Swf	Ultisols	Tuffac. sandstone		45
		II1C	7.30	3.90	7	6.13	15.50	3.98	94	Swf	Ultisols	Tuffac. sandstone		45
		II1A	82.16		1				148	Smf	Ultisols	Tuffac. sandstone		45
		II1A	41		1				148	Smf	Ultisols	Tuffac. sandstone		45
<i>Cassine xylocarpa</i>	Aluminum (mg/kg)	II1A	28		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	46
		II1A	35		1				102	Smf	Limestone	Tuffac. sandstone	Adult	46
	Ash (%)	II1A	7.46		1				102	Smf	Limestone	Tuffac. sandstone	Adult	46
		II1A	8.71		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	46
	Calcium (mg/g)	II1A	7.50		1				104	Sdf	Mollisols	Alluvial deposits		46
		II1A	13.54		1				102	Smf	Limestone	Tuffac. sandstone	Adult	46
		II1A	16.19		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	46
		II1A	7.50		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	46
	Cobalt (µg/g)	II1Ci	28.19		1				104	Sdf	Mollisols	Alluvial deposits		46
		II1Ci	28.19		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	46
		II1A	1.10		1				102	Smf	Limestone	Tuffac. sandstone	Adult	46
		II1A	100		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	46
	Iron (mg/kg)	II1A	39		1				102	Smf	Limestone	Tuffac. sandstone	Adult	46
		II1A	0.99		1				104	Sdf	Mollisols	Alluvial deposits		46
		II1A	7.35		1				102	Smf	Limestone	Tuffac. sandstone	Adult	46
		II1A	4.51		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	46
	Magnesium (mg/g)	II1A	0.99		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	46
		II1Ci	0.54		1				104	Sdf	Mollisols	Alluvial deposits		46
		II1Ci	0.54		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	46
		II1A	10		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	46
Manganese (mg/kg)	II1A	8		1				102	Smf	Limestone	Tuffac. sandstone	Adult	46	
	II1A	4.45		1				102	Smf	Limestone	Tuffac. sandstone	Adult	46	
Nickel (µg/g)	II1A	0.60		1				102	Smf	Limestone	Tuffac. sandstone	Adult	46	
	II1A	0.79		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	46	
Nitrogen (%)	II1A	0.60		1				102	Smf	Limestone	Tuffac. sandstone	Adult	46	
	II1A	0.79		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	46	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Phosphorus (mg/g)	II1A	1.03		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	46
		II1Ci	0.60		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	46
		III1A	0.31		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	46
	Potassium (mg/g)	III1Ci	0.08		1				104	Sdf	Mollisols	Alluvial deposits		46
		III1Ci	78.00		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	46
		III1A	11.70		1				104	Sdf	Mollisols	Alluvial deposits		46
		III1A	6.04		1				102	Smf	Limestone	Tuffac. sandstone	Adult	46
		III1A	6.25		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	46
		III1A	11.70		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	46
		III1Ci	6.03		1				104	Sdf	Mollisols	Alluvial deposits		46
	Zinc (µg/g)	III1Ci	6.03		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	46
III1A		6.51		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	46	
<i>Casuarina equisetifolia</i>	Aluminum (mg/g)	II8	2.88	2.59	20	1.74	7.81	0.49	152	Mfs	Histosol	Alluvial deposits		47
	Ash (%)	II8	23.03	21.02	20	13.90	76.13	5.27	152	Mfs	Histosol	Alluvial deposits		47
	C/N	II8	34	9	20	32	50	21	152	Mfs	Histosol	Alluvial deposits		47
	Calcium (mg/g)	II8	15.92	3.88	20	16.07	21.48	9.80	152	Mfs	Histosol	Alluvial deposits	Organic layer	47
	Carbon (%)	II8	45	13	20	51	54	17	152	Mfs	Histosol	Alluvial deposits		47
	Iron (mg/g)	II8	4.49	4.84	20	2.19	14.17	0.51	152	Mfs	Histosol	Alluvial deposits		47
	Magnesium (mg/g)	II8	2.54	0.91	20	2.27	40.01	1.34	152	Mfs	Histosol	Alluvial deposits		47
	Manganese (mg/g)	II8	0.20	0.12	20	0.14	0.41	0.07	152	Mfs	Histosol	Alluvial deposits		47
	Nitrogen (%)	II8	1.33	0.39	20	1.31	1.99	0.68	152	Mfs	Histosol	Alluvial deposits		47
	Phosphorus (mg/g)	II8	0.23	0.07	20	0.22	0.34	0.11	152	Mfs	Histosol	Alluvial deposits		47
	Potassium (mg/g)	II8	1.46	0.18	20	1.48	1.79	1.03	152	Mfs	Histosol	Alluvial deposits		47
	Sulfur (%)	II8	0.30	0.09	20	0.32	0.45	0.15	152	Mfs	Histosol	Alluvial deposits		47
<i>Cecropia schreberiana</i>	Aluminum (mg/g)	III1A	0.19	0.45	29	0.09	2.52	0.04	135	Lmrf	Ultisols	Tuffac. sandstone		48
		III1A	0.55	0.50	4	0.47	1.11	0.13	141	Wflm	Ultisols	Tuffac. sandstone		48
		III1A	2.69		1				129	Lmrf	Ultisols	Tuffac. sandstone		48

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1A	0.17		1				129	Lmrf	Ultisols	Tuffac. sandstone	Petiole	48
		II1A	0.23	0.33	13	0.13	1.32	0.07	107	Swf	Ultisols	Tuffac. sandstone		48
		II1A	0.17	0.16	11	0.10	0.49	0.03	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II1C	1.09	0.19	49	0.32	8.13	0.02	123	Wflm	Inceptisols	Tuffac. sandstone	Wood decay	48
		II1C	0.07	0.08	30	0.04	0.38	0.02	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II1C	0.15		1				141	Wflm	Ultisols	Tuffac. sandstone		48
		II1C	0.04	0.05	8	0.02	0.14	0.01	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II1E	1.40	0.79	19	1.42	3.31	0.23	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II1E	2.48	2.08	3	1.88	4.80	0.77	141	Wflm	Ultisols	Tuffac. sandstone		48
		II1H	0.13	0.08	2	0.13	0.19	0.08	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II8A	0.41	0.25	2	0.41	0.59	0.23	146	Swf	Ultisols	Tuffac. sandstone		48
		II8B	0.18	0.18	2	0.18	0.31	0.06	146	Swf	Ultisols	Tuffac. sandstone		48
	Ash (%)	II1A	9.43		1				129	Lmrf	Ultisols	Tuffac. sandstone		48
		II1A	7.95		1				129	Lmrf	Ultisols	Tuffac. sandstone	Petiole	48
		II1A	10.41	1.51	9	10.17	13.58	9.12	107	Swf	Ultisols	Tuffac. sandstone		48
		II8A	9.16	2.05	2	9.16	10.61	7.71	146	Swf	Ultisols	Tuffac. sandstone		48
		II8B	4.40	1.93	2	4.40	5.76	3.03	146	Swf	Ultisols	Tuffac. sandstone		48
	C/N	II1A	19		1				129	Lmrf	Ultisols	Tuffac. sandstone		48
		II1A	60		1				129	Lmrf	Ultisols	Tuffac. sandstone	Petiole	48
		II1A	13	4	13	13	21	9	107	Swf	Ultisols	Tuffac. sandstone		48
		II8A	19	6	2	19	23	15	146	Swf	Ultisols	Tuffac. sandstone		48
		II8B	51	16	2	51	62	39	146	Swf	Ultisols	Tuffac. sandstone		48
	Calcium (mg/g)	II1A	8.22	3.13	31	8.22	16.04	2.53	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II1A	11.95	0.88	4	11.74	13.17	11.12	141	Wflm	Ultisols	Tuffac. sandstone		48
		II1A	12.16		1				129	Lmrf	Ultisols	Tuffac. sandstone		48
		II1A	14.15		1				129	Lmrf	Ultisols	Tuffac. sandstone	Petiole	48
		II1A	10.41	2.86	13	9.74	17.21	6.00	107	Swf	Ultisols	Tuffac. sandstone		48
		II1A	5.41	2.69	11	5.83	9.25	2.01	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II1B	3.45	0.00	2	3.45	3.46	3.45	135	Lmrf	Ultisols	Tuffac. sandstone		48

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1B	0.90	0.14	9	0.84	1.15	0.77	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II1C	7.39	3.14	49	7.63	14.68	2.03	123	Wflm	Inceptisols	Tuffac. sandstone	Wood decay	48
		III1C	2.57	0.77	30	2.39	4.35	1.30	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II1C	5.10		1				141	Wflm	Ultisols	Tuffac. sandstone		48
		III1C	2.91	2.28	8	1.98	8.06	0.99	135	Lmrf	Ultisols	Tuffac. sandstone		48
		III1Ci	7.66	1.09	9	7.46	9.15	6.12	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II1E	1.61	0.66	19	1.49	2.89	0.75	135	Lmrf	Ultisols	Tuffac. sandstone		48
		III1E	2.07	1.21	3	1.37	3.47	1.36	141	Wflm	Ultisols	Tuffac. sandstone		48
		II1H	7.56	1.32	2	7.56	8.49	6.62	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II8A	18.68	0.06	2	18.68	18.72	18.64	146	Swf	Ultisols	Tuffac. sandstone		48
		II8B	9.11	0.34	2	9.11	9.35	8.87	146	Swf	Ultisols	Tuffac. sandstone		48
	Carbon (%)	II1A	51		1				129	Lmrf	Ultisols	Tuffac. sandstone		48
		II1A	50		1				129	Lmrf	Ultisols	Tuffac. sandstone	Petiole	48
		II1A	43	1	27	43	46	42	150	Swf	Ultisols	Tuffac. sandstone		48
		II1A	42	3	13	43	46	37	107	Swf	Ultisols	Tuffac. sandstone		48
		II8A	51	4	2	51	54	48	146	Swf	Ultisols	Tuffac. sandstone		48
		II8B	53	2	2	53	54	51	146	Swf	Ultisols	Tuffac. sandstone		48
	Iron (mg/g)	II1A	0.20	0.58	29	0.07	3.19	0.02	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II1A	1.18	1.83	4	0.36	3.91	0.10	141	Wflm	Ultisols	Tuffac. sandstone		48
		II1A	3.00		1				129	Lmrf	Ultisols	Tuffac. sandstone		48
		II1A	0.18		1				129	Lmrf	Ultisols	Tuffac. sandstone	Petiole	48
		II1A	0.27	0.32	13	0.16	1.32	0.12	107	Swf	Ultisols	Tuffac. sandstone		48
		II1A	0.15	0.05	11	0.14	0.27	0.07	135	Lmrf	Ultisols	Tuffac. sandstone		48
		III1C	1.48	3.26	49	0.30	14.49	0.05	123	Wflm	Inceptisols	Tuffac. sandstone	Wood decay	48
		III1C	0.12	0.23	30	0.05	1.08	0.03	135	Lmrf	Ultisols	Tuffac. sandstone		48
		III1C	0.12		1				141	Wflm	Ultisols	Tuffac. sandstone		48
		III1C	0.11	0.05	8	0.10	0.21	0.05	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II1E	1.42	0.86	19	1.37	3.54	0.20	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II1E	1.83	1.38	3	1.49	3.35	0.65	141	Wflm	Ultisols	Tuffac. sandstone		48

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1H	0.12	0.08	2	0.12	0.17	0.06	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II8A	0.27	0.21	2	0.27	0.42	0.12	146	Swf	Ultisols	Tuffac. sandstone		48
		II8B	0.13	0.12	2	0.13	0.21	0.04	146	Swf	Ultisols	Tuffac. sandstone		48
	Magnesium (mg/g)	II1A	4.69	1.33	31	5.00	7.40	1.99	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II1A	5.68	2.04	4	5.92	7.51	3.39	141	Wflm	Ultisols	Tuffac. sandstone		48
		II1A	1.89		1				129	Lmrf	Ultisols	Tuffac. sandstone		48
		II1A	3.41		1				129	Lmrf	Ultisols	Tuffac. sandstone	Petiole	48
		II1A	6.43	1.49	13	6.08	9.55	4.59	107	Swf	Ultisols	Tuffac. sandstone		48
		II1A	2.23	0.95	11	1.85	4.05	0.93	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II1B	3.72	0.03	2	3.72	3.74	3.70	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II1B	1.43	0.19	9	1.39	1.75	1.22	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II1C	2.24	1.20	49	2.76	5.28	1.14	123	Wflm	Inceptisols	Tuffac. sandstone	Wood decay	48
		II1C	2.88	1.18	30	2.57	4.85	1.08	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II1C	6.93		1				141	Wflm	Ultisols	Tuffac. sandstone		48
		II1C	1.71	0.93	8	1.431	3.68	0.64	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II1Ci	3.69	0.41	9	3.67	4.26	3.10	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II1E	3.49	0.90	19	3.33	5.24	1.70	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II1E	5.27	1.16	3	5.71	6.17	3.98	141	Wflm	Ultisols	Tuffac. sandstone		48
		II1H	4.73	1.07	2	4.73	5.49	3.98	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II8A	6.77	0.83	2	6.77	7.36	6.19	146	Swf	Ultisols	Tuffac. sandstone		48
		II8B	5.05	4.28	2	5.05	8.08	2.03	146	Swf	Ultisols	Tuffac. sandstone		48
	Manganese (mg/g)	II1A	0.19	0.10	29	0.18	0.44	0.05	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II1A	0.65	0.14	4	0.67	0.78	0.49	141	Wflm	Ultisols	Tuffac. sandstone		48
		II1A	0.11		1				129	Lmrf	Ultisols	Tuffac. sandstone		48
		II1A	0.27		1				129	Lmrf	Ultisols	Tuffac. sandstone	Petiole	48
		II1A	0.25	0.10	13	0.29	0.40	0.08	107	Swf	Ultisols	Tuffac. sandstone		48
		II1A	0.10	0.03	11	0.10	0.15	0.05	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II1C	0.30	0.20	49	0.24	1.00	0.06	123	Wflm	Inceptisols	Tuffac. sandstone	Wood decay	48
		II1C	0.24	0.11	30	0.24	0.51	0.06	135	Lmrf	Ultisols	Tuffac. sandstone		48



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1C	0.49		1				141	Wflm	Ultisols	Tuffac. sandstone		48
		II1C	0.14	0.11	8	0.11	0.38	0.02	135	Lmrf	Ultisols	Tuffac. sandstone		48
		III1E	0.16	0.08	19	0.18	0.31	0.06	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II1E	0.14	0.07	3	0.10	0.22	0.10	141	Wflm	Ultisols	Tuffac. sandstone		48
		II1H	0.32	0.19	2	0.32	0.46	0.18	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II8A	0.24	0.10	2	0.24	0.31	0.17	146	Swf	Ultisols	Tuffac. sandstone		48
		II8B	0.30	0.11	2	0.30	0.38	0.23	146	Swf	Ultisols	Tuffac. sandstone		48
	Nitrogen (%)	II1A	2.52	0.50	30	2.52	3.44	1.60	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II1A	2.21	0.19	4	2.22	2.42	1.96	141	Wflm	Ultisols	Tuffac. sandstone		48
		II1A	2.74		1				129	Lmrf	Ultisols	Tuffac. sandstone		48
		II1A	0.83		1				129	Lmrf	Ultisols	Tuffac. sandstone	Petiole	48
		II1A	3.11	0.52	27	3.01	4.42	2.43	150	Swf	Ultisols	Tuffac. sandstone		48
		II1A	3.38	0.82	13	3.30	4.72	1.99	107	Swf	Ultisols	Tuffac. sandstone		48
		II1A	1.44	0.87	11	1.72	2.62	0.34	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II1B	0.42	0.02	2	0.42	0.43	0.40	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II1B	0.11	0.02	9	0.11	0.13	0.08	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II1C	1.41	0.51	39	1.29	2.50	0.63	123	Wflm	Inceptisols	Tuffac. sandstone	Wood decay	48
		II1C	0.62	0.21	30	0.61	1.15	0.23	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II1C	0.67		1				141	Wflm	Ultisols	Tuffac. sandstone		48
		II1C	0.67	0.58	8	0.46	2.04	0.21	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II1Ci	0.73	0.06	9	0.70	0.82	0.65	135	Lmrf	Ultisols	Tuffac. sandstone		48
		III1E	0.59	0.13	19	0.56	0.84	0.39	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II1E	0.59	0.11	3	0.54	0.71	0.51	141	Wflm	Ultisols	Tuffac. sandstone		48
		II1H	1.43	0.07	2	1.43	1.48	1.38	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II8A	2.80	1.03	2	2.80	3.52	2.07	146	Swf	Ultisols	Tuffac. sandstone		48
		II8B	1.11	0.41	2	1.11	1.40	0.82	146	Swf	Ultisols	Tuffac. sandstone		48
	Phosphorus (mg/g)	II1A	1.50	0.57	31	1.34	3.04	0.69	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II1A	1.49	0.27	4	1.38	1.90	1.32	141	Wflm	Ultisols	Tuffac. sandstone		48
		II1A	0.62		1				129	Lmrf	Ultisols	Tuffac. sandstone		48

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1A	0.41		1				129	Lmrf	Ultisols	Tuffac. sandstone	Petiole	48
		II1A	1.82	0.84	13	1.77	3.57	0.58	107	Swf	Ultisols	Tuffac. sandstone		48
		III1A	0.69	0.36	11	0.73	1.33	0.22	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II1B	0.35	0.01	2	0.35	0.36	0.34	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II1B	0.07	0.01	9	0.07	0.08	0.06	135	Lmrf	Ultisols	Tuffac. sandstone		48
		III1C	0.26	0.09	49	0.27	0.58	0.14	123	Wflm	Inceptisols	Tuffac. sandstone	Wood decay	48
		III1C	0.39	0.15	30	0.36	0.87	0.18	135	Lmrf	Ultisols	Tuffac. sandstone		48
		III1C	0.65		1				141	Wflm	Ultisols	Tuffac. sandstone		48
		III1C	0.41	0.27	8	0.30	0.93	0.17	135	Lmrf	Ultisols	Tuffac. sandstone		48
		III1Ci	0.28	0.03	9	0.28	0.33	0.24	135	Lmrf	Ultisols	Tuffac. sandstone		48
		III1E	0.44	0.10	19	0.43	0.60	0.27	135	Lmrf	Ultisols	Tuffac. sandstone		48
		III1E	0.69	0.24	3	0.60	0.96	0.50	141	Wflm	Ultisols	Tuffac. sandstone		48
		III1H	0.82	0.16	2	0.83	0.94	0.71	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II8A	1.05	0.14	2	1.05	1.14	0.95	146	Swf	Ultisols	Tuffac. sandstone		48
		II8B	0.65	0.00	2	0.65	0.65	0.64	146	Swf	Ultisols	Tuffac. sandstone		48
	Potassium (mg/g)	III1A	28.60	11.25	31	28.50	61.15	7.96	135	Lmrf	Ultisols	Tuffac. sandstone		48
		III1A	12.44	2.83	4	12.52	15.81	8.90	141	Wflm	Ultisols	Tuffac. sandstone		48
		III1A	5.48		1				129	Lmrf	Ultisols	Tuffac. sandstone		48
		III1A	15.79		1				129	Lmrf	Ultisols	Tuffac. sandstone	Petiole	48
		III1A	24.78	9.68	13	20.75	47.00	9.35	107	Swf	Ultisols	Tuffac. sandstone		48
		III1A	12.20	3.58	11	11.33	17.04	7.42	135	Lmrf	Ultisols	Tuffac. sandstone		48
		III1B	7.43	0.06	2	7.43	7.47	7.38	135	Lmrf	Ultisols	Tuffac. sandstone		48
		III1B	2.13	0.73	9	1.85	3.91	1.60	135	Lmrf	Ultisols	Tuffac. sandstone		48
		III1C	0.94	0.56	49	0.76	3.22	0.28	123	Wflm	Inceptisols	Tuffac. sandstone		48
		III1C	17.24	9.78	30	13.82	49.34	5.87	135	Lmrf	Ultisols	Tuffac. sandstone		48
		III1C	9.19		1				141	Wflm	Ultisols	Tuffac. sandstone		48
		III1C	9.47	3.40	8	8.70	16.92	5.85	135	Lmrf	Ultisols	Tuffac. sandstone		48
		III1Ci	8.21	0.64	9	8.03	9.36	7.44	135	Lmrf	Ultisols	Tuffac. sandstone		48
		III1E	10.89	3.99	19	12.78	16.95	5.03	135	Lmrf	Ultisols	Tuffac. sandstone		48

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Sulfur (%)	II1E	7.15	0.26	3	7.27	7.32	6.85	141	Wflm	Ultisols	Tuffac. sandstone		48
		II1H	33.07	0.72	2	33.07	33.58	32.56	135	Lmrf	Ultisols	Tuffac. sandstone		48
		II8A	7.06	7.24	2	7.06	12.18	1.95	146	Swf	Ultisols	Tuffac. sandstone		48
		II8B	7.57	7.94	2	7.57	13.18	1.96	146	Swf	Ultisols	Tuffac. sandstone		48
		II1A	0.37		1				129	Lmrf	Ultisols	Tuffac. sandstone		48
		II1A	0.29		1				129	Lmrf	Ultisols	Tuffac. sandstone	Petiole	48
		II1A	0.38	0.07	17	0.36	0.52	0.28	150	Swf	Ultisols	Tuffac. sandstone		48
<i>Cecropia sp.</i>	Aluminum (mg/g)	II8A	1.73	3.16	65	0.66	16.87	0.13	146	Swf	Ultisols	Tuffac. sandstone		
	Ash (%)	II8A	9.41	3.14	63	8.69	24.83	4.47	146	Swf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II8A	18.17	4.80	65	17.79	27.89	2.18	146	Swf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II8A	1.71	3.96	65	0.49	24.09	0.08	146	Swf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II8A	3.18	0.75	65	3.08	5.21	1.68	146	Swf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II8A	0.17	0.10	65	0.14	0.48	0.07	146	Swf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II8A	0.56	0.22	65	0.51	1.04	0.23	146	Swf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II8A	3.74	2.20	65	2.87	12.77	1.48	146	Swf	Ultisols	Tuffac. sandstone		
<i>Cissampelos pareira</i>	Aluminum (mg/g)	II4	0.03		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II4	6.39		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II4	0.08		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II4	2.18		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II4	0.04		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II4	0.90		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II4	0.48		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II4	11.63		1				135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Cissus erosa</i>	Aluminum (mg/g)	II4	0.19	0.25	7	0.10	0.75	0.01	135	Lmrf	Ultisols	Tuffac. sandstone		
		II4	0.20	0.10	2	0.20	0.27	0.13	135	Lmrf	Ultisols	Tuffac. sandstone		
	C/N	II4	27	5	2	27	31	23	135	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
	Calcium (mg/g)	II4	13.84	0.10	7	13.54	17.28	10.74	135	Lmrf	Ultisols	Tuffac. sandstone			
		II4	12.56	1.78	2	12.56	13.81	11.30	135	Lmrf	Ultisols	Tuffac. sandstone			
	Carbon (%)	II4	43	1	2	43	44	42	135	Lmrf	Ultisols	Tuffac. sandstone			
	Iron (mg/g)	II4	0.05	0.06	7	0.02	0.16	0.01	135	Lmrf	Ultisols	Tuffac. sandstone			
		II4	0.17	0.05	2	0.17	0.21	0.14	135	Lmrf	Ultisols	Tuffac. sandstone			
	Magnesium (mg/g)	II4	3.69	2.18	7	2.81	8.58	2.55	135	Lmrf	Ultisols	Tuffac. sandstone			
		II4	2.51	0.17	2	2.51	2.63	2.39	135	Lmrf	Ultisols	Tuffac. sandstone			
	Manganese (mg/g)	II4	0.37	0.22	7	0.37	0.61	0.08	135	Lmrf	Ultisols	Tuffac. sandstone			
		II4	0.28	0.13	2	0.28	0.37	0.19	135	Lmrf	Ultisols	Tuffac. sandstone			
	Nitrogen (%)	II4	2.07	0.41	7	2.28	2.39	1.44	135	Lmrf	Ultisols	Tuffac. sandstone			
		II4	1.72	0.49	4	1.66	2.30	1.25	135	Lmrf	Ultisols	Tuffac. sandstone			
	Phosphorus (mg/g)	II4	2.34	0.43	7	2.45	2.81	1.63	135	Lmrf	Ultisols	Tuffac. sandstone			
		II4	1.70	0.02	2	1.70	1.71	1.68	135	Lmrf	Ultisols	Tuffac. sandstone			
	Potassium (mg/g)	II4	25.57	7.65	7	28.48	32.38	13.56	135	Lmrf	Ultisols	Tuffac. sandstone			
		II4	21.20	0.54	2	21.20	21.58	20.82	135	Lmrf	Ultisols	Tuffac. sandstone			
	Sulfur (%)	II4	0.32	0.00	2	0.32	0.32	0.31	135	Lmrf	Ultisols	Tuffac. sandstone			
	<i>Cissus verticillata</i>	Aluminum (mg/g)	II4	0.20	0.10	2	0.20	0.27	0.13	135	Lmrf	Ultisols	Tuffac. sandstone		
		C/N	II4	27	5	2	27	31	23	135	Lmrf	Ultisols	Tuffac. sandstone		
Calcium (mg/g)		II4	12.56	1.78	2	12.56	13.82	11.30	135	Lmrf	Ultisols	Tuffac. sandstone			
Carbon (%)		II4	43	1	2	43	44	42	135	Lmrf	Ultisols	Tuffac. sandstone			
Iron (mg/g)		II4	0.17	0.05	2	0.17	0.21	0.14	135	Lmrf	Ultisols	Tuffac. sandstone			
Magnesium (mg/g)		II4	2.51	0.17	2	2.51	2.63	2.39	135	Lmrf	Ultisols	Tuffac. sandstone			
Manganese (mg/g)		II4	0.28	0.13	2	0.28	0.37	0.19	135	Lmrf	Ultisols	Tuffac. sandstone			
Nitrogen (%)		II4	1.72	0.49	4	1.66	2.30	1.25	135	Lmrf	Ultisols	Tuffac. sandstone			
Phosphorus (mg/g)		II4	1.70	0.02	2	1.70	1.71	1.68	135	Lmrf	Ultisols	Tuffac. sandstone			
Potassium (mg/g)		II4	21.20	0.54	2	21.20	21.58	20.82	135	Lmrf	Ultisols	Tuffac. sandstone			
Sulfur (%)		II4	0.32	0.00	2	0.32	0.32	0.31	135	Lmrf	Ultisols	Tuffac. sandstone			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
<i>Citrus sinensis</i>	Ash (%)	II1A	20.68		1				101	Wfs	Ultisols	Lava	Sabana	
		II1B	3.02	0.58	2	3.02	3.43	2.61	101	Wfs	Ultisols	Lava	Sabana	
	Calcium (mg/g)	II1A	16.63	1.18	2	16.63	17.46	15.79	101	Wfs	Ultisols	Lava	Sabana	
		II1B	10.69	2.20	2	10.69	12.24	9.13	101	Wfs	Ultisols	Lava	Sabana	
	Nitrogen (%)	II1A	1.13	0.34	2	1.13	1.37	0.89	101	Wfs	Ultisols	Lava	Sabana	
		II1B	0.54	0.13	2	0.54	0.64	0.45	101	Wfs	Ultisols	Lava	Sabana	
	Phosphorus (mg/g)	II1B	0.51	0.16	2	0.51	0.62	0.40	101	Wfs	Ultisols	Lava	Sabana	
		II1B	0.68	0.01	3	0.68	0.69	0.67	97	Wfs	Inceptisols	Tuffac. sandstone	Sabana	
Potassium (mg/g)	II1A	2.26	0.17	2	2.26	2.38	2.14	101	Wfs	Ultisols	Lava	Sabana		
	II1B	6.45	0.18	2	6.45	6.58	3.32	101	Wfs	Ultisols	Lava	Sabana		
<i>Clibadium erosum</i>	Aluminum (mg/g)	II2H	0.12		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II2H	11.61		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II2H	0.11		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II2H	2.72		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II2H	0.05		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II2H	1.92		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II2H	1.98		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II2H	41.35		1				135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Clusia rosea</i>	Aluminum (mg/kg)	II1A	38		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		II1A	39		1				102	Smf	Limestone	Tuffac. sandstone	Old	
	Ash (%)	II1A	5.91		1				71	Wfs	Inceptisols	Tuffac. sandstone		
		II1A	5.83		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Calcium (mg/g)	II1A	7.28		1				102	Smf	Limestone	Tuffac. sandstone	Old	
		II1A	11.98		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		II1Ci	25.35		1				104	Sdf	Mollisols	Alluvial deposits		
		II1Ci	25.35		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Carbon (%)	II1A	55		1				71	Wfs	Inceptisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Cobalt (µg/g)	II1A	1.00		1				102	Smf	Limestone	Tuffac. sandstone	Old	
	Iron (mg/g)	II1A	0.54		1				102	Smf	Limestone	Tuffac. sandstone	Old	
		III1A	0.19		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Magnesium (mg/g)	II1A	1.96		1				102	Smf	Limestone	Tuffac. sandstone	Old	
		III1A	5.06		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		III1Ci	0.55		1				104	Sdf	Mollisols	Alluvial deposits		
		III1Ci	0.55		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Manganese (mg/kg)	II1A	166		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		II1A	80		1				102	Smf	Limestone	Tuffac. sandstone	Old	
	Nickel (µg/g)	II1A	7.70		1				102	Smf	Limestone	Tuffac. sandstone	Old	
	Nitrogen (%)	II1A	0.60		1				102	Smf	Limestone	Tuffac. sandstone	Old	
		III1A	1.00		1				71	Wfs	Inceptisols	Tuffac. sandstone		
		III1A	0.52		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		III1A	0.50		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		III1Ci	0.07		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Phosphorus (mg/g)	II1A	0.22		1				104	Sdf	Mollisols	Alluvial deposits	Mature	
		II1A	0.29		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		II1A	0.22		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		III1Ci	0.07		1				104	Sdf	Mollisols	Alluvial deposits		
		III1Ci	0.07		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Potassium (mg/g)	II1A	7.75		1				104	Sdf	Mollisols	Alluvial deposits	Mature	
		II1A	3.11		1				102	Smf	Limestone	Tuffac. sandstone	Old	
		II1A	7.22		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		II1A	7.75		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		III1Ci	6.94		1				104	Sdf	Mollisols	Alluvial deposits		
		III1Ci	6.94		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Sulfur (%)	II1A	0.18		1				71	Wfs	Inceptisols	Tuffac. sandstone		
	Wood density (g/cc)	II1A	0.68	0.01	3	0.68	0.69	0.67	97	Wfs	Inceptisols	Tuffac. sandstone		
	Zinc (µg/g)	II1A	24		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
<i>Cnemidaria horrida</i>	Aluminum (mg/g)	II6	4.67	1.42	11	4.97	6.81	2.22	135	Lmrf	Ultisols	Tuffac. sandstone		
	C/N	II6	23	4	9	23	33	19	135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II6	2.47	1.15	11	2.30	5.59	1.38	135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II6	41	1	9	41	43	39	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II6	0.17	0.09	11	0.17	0.28	0.05	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II6	2.96	0.82	11	3.11	4.26	1.98	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II6	0.10	0.09	11	0.06	0.32	0.02	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II6	1.73	0.30	19	1.68	2.19	1.23	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II6	0.89	0.31	11	0.90	1.33	0.41	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II6	19.79	7.90	11	20.18	31.20	0.68	135	Lmrf	Ultisols	Tuffac. sandstone		
Sulfur (%)	II6	0.34	0.09	9	0.316	0.44	0.20	135	Lmrf	Ultisols	Tuffac. sandstone			
<i>Coccoloba microstachya</i>	Aluminum (mg/kg)	II1A	40		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
	Ash (%)	II1A	2.70		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
		II1A	13.80	1.31	4	13.64	15.26	12.65	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1A	8.21	5.46	18	6.90	16.45	2.05	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1A	14.91		1				104	Sdf	Mollisols	Alluvial deposits		
		II1A	12.69		1				104	Sdf	Mollisols	Alluvial deposits	Mature	
		II1A	4.53	3.72	5	3.77	14.24	2.05	104	Sdf	Mollisols	Alluvial deposits	New	
		II1A	16.29		1				104	Sdf	Mollisols	Alluvial deposits	Old	
		II1A	2.21		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
	Cobalt (µg/g)	II1A	0.60		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
	Iron (mg/kg)	II1A	52		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
	Magnesium (mg/g)	II1A	1.98	0.15	4	1.97	2.16	1.81	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1A	1.88	0.78	18	1.72	3.05	0.57	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1A	1.97		1				104	Sdf	Mollisols	Alluvial deposits		
		II1A	1.99		1				104	Sdf	Mollisols	Alluvial deposits	Mature	
	II1A	1.88	0.92	5	1.67	3.05	0.57	104	Sdf	Mollisols	Alluvial deposits	New		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Manganese (mg/kg)	II1A	3.00		1				104	Sdf	Mollisols	Alluvial deposits	Old	
		II1A	3.47		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
		II1A	50		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
	Nickel (µg/g)	II1A	25		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
		Nitrogen (%)	II1A	0.62	0.11	4	0.63	0.71	0.49	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest
	Phosphorus (mg/g)	II1A	0.85	0.23	18	0.84	1.24	0.54	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1A	0.52		1				104	Sdf	Mollisols	Alluvial deposits		
		II1A	0.71		1				104	Sdf	Mollisols	Alluvial deposits	Mature	
		II1A	1.01	0.20	5	0.95	1.27	0.71	104	Sdf	Mollisols	Alluvial deposits	New	
		II1A	0.55		1				104	Sdf	Mollisols	Alluvial deposits	Old	
		II1A	1.02		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
		II1A	0.37	0.07	4	0.38	0.43	0.30	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1A	0.50	0.17	18	0.42	0.35	0.31	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1A	0.31		1				104	Sdf	Mollisols	Alluvial deposits		
		II1A	0.43		1				104	Sdf	Mollisols	Alluvial deposits	Mature	
		II1A	0.61		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
		II1A	0.61	0.16	5	0.63	0.84	0.40	104	Sdf	Mollisols	Alluvial deposits	New	
		II1A	0.32		1				104	Sdf	Mollisols	Alluvial deposits	Old	
		II1A	6.80	0.15	4	6.78	6.99	6.64	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1A	7	1	18	7	8	6	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
II1A		6.68		1				104	Sdf	Mollisols	Alluvial deposits			
II1A		6.92		1				104	Sdf	Mollisols	Alluvial deposits	Mature		
Potassium (mg/g)		II1A	6.87	0.66	5	6.85	7.90	5.54	104	Sdf	Mollisols	Alluvial deposits	New	
	II1A	6.82		1				104	Sdf	Mollisols	Alluvial deposits	Old		
	II1A	10.06		1				102	Smf	Limestone	Tuffac. sandstone	Adult		
	<i>Coccoloba diversifolia</i>	Aluminum (mg/g)	II1A	0.06	0.01	10	0.07	0.07	0.05	151	Sdf	Mollisols	Alluvial deposits	
		Ash (%)	II1A	10.68	1.01	9	10.84	11.81	8.18	151	Sdf	Mollisols	Alluvial deposits	
		C/N	II1A	30	2	10	31	33	27	151	Sdf	Mollisols	Alluvial deposits	



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Calcium (mg/g)	II1A	28.45	7.26	10	30.61	33.96	8.73	151	Sdf	Mollisols	Alluvial deposits		
		II1Ci	3.21		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1Ci	43.21		1				104	Sdf	Mollisols	Alluvial deposits		
	Carbon (%)	II1A	51	0	10	51	51	50	151	Sdf	Mollisols	Alluvial deposits		
	Iron (mg/g)	II1A	0.05	0.01	10	0.05	0.08	0.04	151	Sdf	Mollisols	Alluvial deposits		
	Magnesium (mg/g)	II1A	3.05	0.44	10	3.13	3.69	2.23	151	Sdf	Mollisols	Alluvial deposits		
		II1Ci	2.04		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1Ci	2.04		1				104	Sdf	Mollisols	Alluvial deposits		
	Manganese (mg/g)	II1A	0.03	0.01	10	0.04	0.04	0.02	151	Sdf	Mollisols	Alluvial deposits		
	Nitrogen (%)	II1A	1.47		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1A	1.69	0.11	10	1.67	1.88	1.55	151	Sdf	Mollisols	Alluvial deposits		
		II1Ci	0.39		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Phosphorus (mg/g)	II1A	0.47		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1A	0.68	0.07	10	0.68	0.79	0.58	151	Sdf	Mollisols	Alluvial deposits		
		II1A	0.47		1				104	Sdf	Mollisols	Alluvial deposits		
		II1Ci	0.27		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1Ci	0.27		1				104	Sdf	Mollisols	Alluvial deposits		
	Potassium (mg/g)	II1A	12.31		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1A	7.94	1.00	10	9.22	9.66	6.12	151	Sdf	Mollisols	Alluvial deposits		
		II1A	12.31		1				104	Sdf	Mollisols	Alluvial deposits		
II1Ci		7.48		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest		
II1Ci		7.48		1				104	Sdf	Mollisols	Alluvial deposits			
Sulfur (%)	II1A	0.33	0.05	10	0.31	0.42	0.27	151	Sdf	Mollisols	Alluvial deposits			
<i>Cocoloba microstachya</i>	Aluminum (mg/g)	II1A	0.03	0.02	15	0.03	0.06	0.01	151	Sdf	Mollisols	Alluvial deposits		
	Ash (%)	II1A	6.76	3.50	15	5.75	19.26	5.13	151	Sdf	Mollisols	Alluvial deposits		
	C/N	II1A	36	2	15	35	40	33	151	Sdf	Mollisols	Alluvial deposits		
	Calcium (mg/g)	II1A	14.74	4.24	15	14.19	29.04	10.11	151	Sdf	Mollisols	Alluvial deposits		
	Carbon (%)	II1A	52	1	15	52	55	51	151	Sdf	Mollisols	Alluvial deposits		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Iron (mg/g)	II1A	0.04	0.01	15	0.04	0.07	0.03	151	Sdf	Mollisols	Alluvial deposits		
	Magnesium (mg/g)	II1A	2.58	0.17	15	2.59	2.84	2.31	151	Sdf	Mollisols	Alluvial deposits		
	Manganese (mg/g)	II1A	0.01	0.01	15	0.01	0.04	0.01	151	Sdf	Mollisols	Alluvial deposits		
	Nitrogen (%)	II1A	1.46	0.11	15	1.47	1.60	1.30	151	Sdf	Mollisols	Alluvial deposits		
	Phosphorus (mg/g)	II1A	0.59	0.05	15	0.58	0.67	0.51	151	Sdf	Mollisols	Alluvial deposits		
	Potassium (mg/g)	II1A	4.57	0.42	15	4.57	5.25	4.02	151	Sdf	Mollisols	Alluvial deposits		
	Sulfur (%)	II1A	0.28	0.03	15	0.29	0.32	0.22	151	Sdf	Mollisols	Alluvial deposits		
<i>Coffea arabica</i>	Aluminum (mg/g)	II1A	0.12	0.08	44	0.10	0.48	0.05	53	Wflm	Ultisols	Tuffac. sandstone		
		II1A	0.07	0.01	3	0.07	0.08	0.06	131	Wfs	Mollisols	Plutonic rocks		
		II1C	0.08	0.08	26	0.06	0.35	0.01	53	Wflm	Ultisols	Tuffac. sandstone		
		II1C	0.05	0.02	3	0.04	0.07	0.04	131	Wfs	Mollisols	Plutonic rocks		
		II1E	0.87	0.47	3	0.63	1.42	0.57	131	Wfs	Mollisols	Plutonic rocks		
	Ash (%)	II1A	14.21	0.37	2	14.21	14.47	13.95	94	Wfs	Ultisols	Lava		
		II1A	9.40	0.71	44	9.55	10.57	7.79	53	Wflm	Ultisols	Tuffac. sandstone		
		II1A	7.42	0.35	3	7.60	7.64	7.02	131	Wfs	Mollisols	Plutonic rocks		
		II1B	3.54	0.28	2	3.54	3.74	3.34	94	Wfs	Ultisols	Lava		
		II1C	2.31		1				94	Wfs	Ultisols	Lava		
		II1C	4.19	0.82	26	4.08	5.62	2.57	53	Wflm	Ultisols	Tuffac. sandstone		
		II1C	1.80	0.10	3	1.76	1.91	1.72	131	Wfs	Mollisols	Plutonic rocks		
		II1E	3.21	1.40	3	2.84	4.75	2.03	131	Wfs	Mollisols	Plutonic rocks		
		C/N	II1A	14	2	44	14	18	10	53	Wflm	Ultisols	Tuffac. sandstone	
	II1A		16	1	3	16	17	16	131	Wfs	Mollisols	Plutonic rocks		
	II1C		37	8	26	36	55	25	53	Wflm	Ultisols	Tuffac. sandstone		
	II1C		64	7	3	62	72	58	131	Wfs	Mollisols	Plutonic rocks		
II1E	47		6	3	49	52	40	131	Wfs	Mollisols	Plutonic rocks			
Calcium (mg/g)	II1A	12.54	3.36	44	11.96	22.25	7.15	53	Wflm	Ultisols	Tuffac. sandstone			
	II1A	7.41	1.58	3	7.07	9.13	6.02	131	Wfs	Mollisols	Plutonic rocks			
	II1C	6.45	0.87	26	6.35	8.29	4.84	53	Wflm	Ultisols	Tuffac. sandstone			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1C	2.95	0.29	3	3.06	3.17	2.62	131	Wfs	Mollisols	Plutonic rocks		
		II1E	1.67	0.30	3	1.77	1.91	1.33	131	Wfs	Mollisols	Plutonic rocks		
	Carbon (%)	II1A	51	1	44	51	53	48	53	Wflm	Ultisols	Tuffac. sandstone		
		II1A	52	1	3	51	57	51	131	Wfs	Mollisols	Plutonic rocks		
		II1C	51	1	26	51	52	49	53	Wflm	Ultisols	Tuffac. sandstone		
		II1C	52	0	3	52	52	51	131	Wfs	Mollisols	Plutonic rocks		
		II1E	53	0	3	53	53	53	131	Wfs	Mollisols	Plutonic rocks		
	Iron (mg/g)	II1A	0.17	0.09	44	0.13	0.45	0.05	53	Wflm	Ultisols	Tuffac. sandstone		
		II1A	0.07	0.01	3	0.07	0.08	0.06	131	Wfs	Mollisols	Plutonic rocks		
		II1C	0.12	0.09	26	0.85	0.49	0.03	53	Wflm	Ultisols	Tuffac. sandstone		
		II1C	0.04	0.02	3	0.03	0.07	0.03	131	Wfs	Mollisols	Plutonic rocks		
		II1E	0.80	0.54	3	0.58	1.41	0.41	131	Wfs	Mollisols	Plutonic rocks		
	Magnesium (mg/g)	II1A	3.33	0.63	4	3.26	4.81	2.30	53	Wflm	Ultisols	Tuffac. sandstone		
		II1A	4.46	1.14	3	4.40	5.63	3.34	131	Wfs	Mollisols	Plutonic rocks		
		II1C	1.32	0.30	26	1.24	2.06	0.87	53	Wflm	Ultisols	Tuffac. sandstone		
		II1C	0.54	0.04	3	0.52	0.58	0.51	131	Wfs	Mollisols	Plutonic rocks		
		II1E	0.87	0.38	3	0.80	1.27	0.53	131	Wfs	Mollisols	Plutonic rocks		
	Manganese (mg/g)	II1A	0.38	0.18	44	0.34	0.89	0.10	53	Wflm	Ultisols	Tuffac. sandstone		
		II1A	0.14	0.05	3	0.12	0.20	0.11	131	Wfs	Mollisols	Plutonic rocks		
	Manganese (mg/g)	II1C	0.10	0.05	6	0.09	0.26	0.04	53	Wflm	Ultisols	Tuffac. sandstone		
		II1C	0.02	0.01	3	0.02	0.02	0.01	131	Wfs	Mollisols	Plutonic rocks		
		II1E	0.02	0.02	3	0.01	0.04	0.01	131	Wfs	Mollisols	Plutonic rocks		
	Nitrogen (%)	II1A	1.12	0.13	2	1.12	1.21	1.03	94	Wfs	Ultisols	Lava		
		II1A	3.66	0.44	44	3.57	4.80	2.87	53	Wflm	Ultisols	Tuffac. sandstone		
		II1A	3.13	0.19	3	3.15	3.31	2.93	131	Wfs	Mollisols	Plutonic rocks		
		II1B	0.92	0.05	2	0.92	0.95	0.88	94	Wfs	Ultisols	Lava		
		II1C	0.61		1				94	Wfs	Ultisols	Lava		
		II1C	1.44	0.28	26	1.44	2.05	0.95	53	Wflm	Ultisols	Tuffac. sandstone		
		II1C	0.82	0.08	3	0.84	0.88	0.73	131	Wfs	Mollisols	Plutonic rocks		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Phosphorus (mg/g)	III E	1.14	0.16	3	1.09	1.32	1.02	131	Wfs	Mollisols	Plutonic rocks		
		III A	1.63	0.32	44	1.61	2.59	1.05	53	Wflm	Ultisols	Tuffac. sandstone		
		III A	0.54	0.06	3	0.54	0.60	0.48	131	Wfs	Mollisols	Plutonic rocks		
		III B	0.71	0.04	2	0.71	0.74	0.68	94	Wfs	Ultisols	Lava		
		III C	1.01	0.45	26	0.86	2.20	0.35	53	Wflm	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	III C	0.15	0.02	3	0.15	0.17	0.14	131	Wfs	Mollisols	Plutonic rocks		
		III E	0.23	0.03	3	0.22	0.26	0.21	131	Wfs	Mollisols	Plutonic rocks		
		III A	14.21	0.37	2	14.21	14.47	13.95	94	Wfs	Ultisols	Lava		
		III A	21.00	6.85	44	19.48	37.45	2.92	53	Wflm	Ultisols	Tuffac. sandstone		
		III A	19.48	2.61	3	20.30	21.57	16.56	131	Wfs	Mollisols	Plutonic rocks		
		III B	6.88	0.06	2	6.88	6.92	6.84	94	Wfs	Ultisols	Lava		
		III C	3.67		1				94	Wfs	Ultisols	Lava		
		III C	7.84	2.74	26	6.98	14.39	3.29	53	Wflm	Ultisols	Tuffac. sandstone		
		III C	3.77	0.28	3	3.66	4.08	3.55	131	Wfs	Mollisols	Plutonic rocks		
		III E	4.38	1.01	3	4.43	5.36	3.34	131	Wfs	Mollisols	Plutonic rocks		
Sulfur (%)	III A	0.51	0.20	44	0.50	0.94	0.26	53	Wflm	Ultisols	Tuffac. sandstone			
	III A	0.47	0.04	3	0.47	0.51	0.43	131	Wfs	Mollisols	Plutonic rocks			
	III C	0.32	0.06	26	0.30	0.48	0.23	53	Wflm	Ultisols	Tuffac. sandstone			
	III C	0.10	0.02	3	0.09	0.12	0.09	131	Wfs	Mollisols	Plutonic rocks			
	III E	0.22	0.08	3	0.19	0.31	0.17	131	Wfs	Mollisols	Plutonic rocks			
<i>Colubrina arborescens</i>	Calcium (mg/g)	III A	19.74	4.22	8	19.62	25.35	13.57	104	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Magnesium (mg/g)	III A	3.31	2.68	8	2.61	10.00	0.92	104	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Nitrogen (%)	III A	1.39	0.44	8	1.40	2.08	0.21	104	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Phosphorus (mg/g)	III A	0.58	0.14	8	0.53	0.83	0.40	104	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Potassium (mg/g)	III A	19.45	3.80	8	18.44	26.06	14.12	104	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
<i>Colubrina elliptica</i>	Calcium (mg/g)	III Ci	17.95	5.12	2	18.06	22.60	13.10	104	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Magnesium (mg/g)	III Ci	1.98	0.56	2	2.00	2.52	1.41	104	Sdf	Mollisols	Alluvial deposits		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

Species	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Nitrogen (%)	III1Ci	1.98	0.56	4	2.00	2.52	1.41	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1A	2.27		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Phosphorus (mg/g)	III1Ci	1.45	0.29	4	1.41	1.79	1.21	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1A	0.84	0.03	2	0.84	0.86	0.82	104	Sdf	Mollisols	Alluvial deposits	Mature	
	Potassium (mg/g)	III1Ci	0.33	0.05	2	0.33	0.38	0.28	104	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1A	23.78	0.28	2	23.78	23.98	23.59	104	Sdf	Mollisols	Alluvial deposits	Mature	
		II1A	23.78		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		III1Ci	14.16	7.30	2	14.16	20.60	7.73	104	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
<i>Commelina diffusa</i>	Aluminum (mg/g)	II3	1.10	1.13	2	1.10	1.90	0.30	135	Lmrf	Ultisols	Tuffac. sandstone		
	C/N	II3	20	4	11	19	28	15	135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II3	6.40	0.73	2	6.40	6.92	5.89	135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II3	40	1	11	40	42	38	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II3	0.78	0.84	2	0.78	1.38	0.19	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II3	3.21	0.28	2	3.21	3.41	3.01	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II3	0.81	0.21	2	0.81	0.96	0.66	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II3	2.00	0.45	12	2.08	2.72	1.38	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II3	2.05	1.79	2	2.05	3.31	0.79	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II3	32.72	8.28	2	32.72	38.57	26.87	135	Lmrf	Ultisols	Tuffac. sandstone		
Sulfur (%)	II3	0.65	0.20	11	0.58	0.96	0.47	135	Lmrf	Ultisols	Tuffac. sandstone			
<i>Commelina spp.</i>	Aluminum (mg/g)	II3	0.88	0.61	19	0.77	2.01	0.84	135	Lmrf	Ultisols	Tuffac. sandstone		
		II3	0.44	0.50	9	0.27	1.67	0.08	135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II3	5.79	0.75	19	5.75	7.56	4.51	135	Lmrf	Ultisols	Tuffac. sandstone		
		II3	6.08	1.18	9	5.67	7.85	4.32	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II3	0.84	0.67	19	0.72	2.30	0.10	135	Lmrf	Ultisols	Tuffac. sandstone		
		II3	0.43	0.49		0.21	1.54	0.09	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II3	3.11	0.39	19	3.03	3.85	2.50	135	Lmrf	Ultisols	Tuffac. sandstone		
		II3	3.33	0.52	9	3.11	4.12	2.61	135	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Manganese (mg/g)	II3	0.85	0.30	19	0.81	1.55	0.46	135	Lmrf	Ultisols	Tuffac. sandstone		
		II3	0.82	0.27	9	0.80	1.13	0.43	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II3	1.56	0.28	19	1.61	2.00	0.93	135	Lmrf	Ultisols	Tuffac. sandstone		
		II3	1.84	0.52	9	1.88	2.51	1.05	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II3	0.90	0.36	19	0.72	1.60	0.51	135	Lmrf	Ultisols	Tuffac. sandstone		
		II3	1.22	0.66	9	1.01	2.87	0.61	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II3	35.73	7.99	19	33.63	51.06	25.22	135	Lmrf	Ultisols	Tuffac. sandstone		
		II3	38.29	3.92	9	39.37	43.46	31.04	135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Conocarpus erectus</i>	Aluminum (mg/kg)	II1B	39	13	4	44	47	20	87	Mfs	Entisols	Compound dunes		
		II1B	21	4	3	20	17	25	157	Mfs	Entisols	Compound dunes		
	Ash (%)	II1B	2.24	0.30	4	2.26	2.53	1.92	87	Mfs	Entisols	Compound dunes		
	C/N	II1B	301	21	4	295	329	285	87	Mfs	Entisols	Compound dunes		
	Calcium (mg/g)	II1B	6.10	1.12	4	5.73	7.75	5.21	87	Mfs	Entisols	Compound dunes		
		II1B	9.20	0.84	3	9.35	8.30	9.95	157	Mfs	Entisols	Compound dunes		
	Iron (mg/g)	II1B	0.06	0.02	4	0.07	0.08	0.03	87	Mfs	Entisols	Compound dunes		
		II1B	0.03	0.02	3	0.03	0.01	0.05	157	Mfs	Entisols	Compound dunes		
	Magnesium (mg/g)	II1B	0.96	0.14	4	0.99	1.10	0.77	87	Mfs	Entisols	Compound dunes		
		II1B	0.64	0.11	3	0.58	0.57	0.76	157	Mfs	Entisols	Compound dunes		
	Manganese (mg/kg)	II1B	8	3	4	8	11	6	87	Mfs	Entisols	Compound dunes		
		II1B	5	2	3	6	2	6	157	Mfs	Entisols	Compound dunes		
	Nitrogen (%)	II1B	0.15	0.01	4	0.15	0.16	0.14	87	Mfs	Entisols	Compound dunes		
	Phosphorus (mg/g)	II1B	0.24	0.07	4	0.26	0.30	0.16	87	Mfs	Entisols	Compound dunes		
		II1B	0.18	0.04	3	0.19	0.14	0.22	157	Mfs	Entisols	Compound dunes		
	Potassium (mg/g)	II1B	2.36	0.49	4	2.32	2.92	1.90	87	Mfs	Entisols	Compound dunes		
II1B		1.60	1.42	3	0.79	0.77	3.23	157	Mfs	Entisols	Compound dunes			
<i>Cordia borinquensis</i>	Ash (%)	II1B	5.82		1				68	Swf	Ultisols	Tuffac. sandstone	Class 1 LD	
		II1B	4.58	3.12	3	3.28	8.14	2.33	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
	Calcium (mg/g)	II1A	3.89		1				135	Lmrf	Ultisols	Tuffac. sandstone			
		II1B	14.85		1				68	Swf	Ultisols	Tuffac. sandstone	Class 1 LD		
		II1B	6.28	0.59	3	5.94	6.97	5.94	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD		
		Magnesium (mg/g)	II1B	4.72	0.51	3	4.49	5.30	4.37	135	Lmrf	Ultisols	Tuffac. sandstone		
			II1A	4.20		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II1B	1.35	0.34	3	1.55	1.55	0.96	135	Lmrf	Ultisols	Tuffac. sandstone			
		II1A	1.94		1				135	Lmrf	Ultisols	Tuffac. sandstone			
		II1B	0.74		1				68	Swf	Ultisols	Tuffac. sandstone	Class 1 LD		
	Phosphorus (mg/g)	II1B	0.72	0.16	3	0.74	0.86	0.55	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD		
		II1B	0.80	0.16	3	0.86	0.91	0.62	135	Lmrf	Ultisols	Tuffac. sandstone			
		II1A	0.88		1				135	Lmrf	Ultisols	Tuffac. sandstone			
		II1B	0.23		1				68	Swf	Ultisols	Tuffac. sandstone	Class 1 LD		
Potassium (mg/g)	II1B	0.48	0.15	3	0.54	0.60	0.31	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD			
	II1B	0.46	0.02	3	0.46	0.48	0.45	135	Lmrf	Ultisols	Tuffac. sandstone				
	II1A	13.54		1				135	Lmrf	Ultisols	Tuffac. sandstone				
	II1B	2.43	0.52	3	2.46	2.94	1.90	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD			
	Potassium (mg/g)	II1B	4.21		1				68	Swf	Ultisols	Tuffac. sandstone	Class 1 LD		
		II1B	6.96	1.22	3	7.59	7.74	5.56	135	Lmrf	Ultisols	Tuffac. sandstone			
<i>Cordia sulcata</i>	Ash (%)	II1B	3.31	1.24	8	3.21	5.13	2.11	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD		
	Calcium (mg/g)	II1B	2.74	1.37	8	2.17	5.42	1.67	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD		
	Nitrogen (%)	II1B	0.29	0.09	8	0.28	0.43	0.22	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD		
	Phosphorus (mg/g)	II1B	0.07	0.03	8	0.08	0.11	0.02	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD		
	Potassium (mg/g)	II1B	0.83	0.30	8	0.74	1.46	0.59	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD		
	Wood density (g/cc)	II1B	0.48	0.00	3	0.48	0.48	0.48	97	Wfs	Inceptisols	Tuffac. sandstone			
<i>Croton poecilanthus</i>	Aluminum (mg/g)	II1A	0.54		1				93	Wflm	Inceptisols	Tuffac. sandstone	New		
		II1B	2.36		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1C	0.01		1				93	Wflm	Inceptisols	Tuffac. sandstone			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Ash (%)	II8A	0.42	0.03	3	0.41	0.45	0.41	145	Wfs	Ultisols	Tuffac. sandstone		
		II1A	5.64		1				93	Wflm	Inceptisols	Tuffac. sandstone	New	
		II1B	1.34		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	0.49	0.12	4	0.46	0.63	0.39	68	Swf	Ultisols	Tuffac. sandstone	Class 2 LD	
		II1B	2.80	0.62	2	2.80	3.24	2.36	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	
		II1C	0.71		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	C/N	II8A	8.35	0.35	3	8.17	8.76	8.13	145	Wfs	Ultisols	Tuffac. sandstone		
		II8A	8.58		1				71	Wfs	Ultisols	Tuffac. sandstone		
		II1A	26		1				93	Wflm	Inceptisols	Tuffac. sandstone	New	
		II1B	59		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	287	65	4	287	327	191	68	Swf	Ultisols	Tuffac. sandstone	Class 2 LD	
		II1B	67	10	2	67	83	70	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	
	Calcium (mg/g)	II1C	199		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II8A	68	1	3	68	69	68	145	Wfs	Ultisols	Tuffac. sandstone		
		II1A	6.72		1				93	Wflm	Inceptisols	Tuffac. sandstone	New	
		II1B	12.50		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	1.45	0.39	4	1.33	2.02	1.12	68	Swf	Ultisols	Tuffac. sandstone	Class 2 LD	
		II1B	5.62	1.87	2	5.62	6.94	4.30	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	
	Carbon (%)	II1C	0.84		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II8A	14.32	0.63	3	14.18	15.01	13.78	145	Wfs	Ultisols	Tuffac. sandstone		
		II8A	52	1	3	52	53	52	145	Wfs	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II8A	54		1				71	Wfs	Ultisols	Tuffac. sandstone		
		II1A	0.15		1				93	Wflm	Inceptisols	Tuffac. sandstone	New	
		II1B	0.13		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Magnesium (mg/g)	II1C	0.01		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II8A	0.10	0.01	3	0.10	0.10	0.09	145	Wfs	Ultisols	Tuffac. sandstone		
		II8A	3.32	0.14	3	3.26	3.49	3.23	145	Wfs	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II1A	1.70		1				93	Wflm	Inceptisols	Tuffac. sandstone	New	
		II1B	1.36		1				93	Wflm	Inceptisols	Tuffac. sandstone		



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Nitrogen (%)	II1C	0.13		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II8A	1.69	0.12	3	1.75	1.76	1.55	145	Wfs	Ultisols	Tuffac. sandstone		
		II1A	1.02		1				93	Wflm	Inceptisols	Tuffac. sandstone	New	
		II1B	0.77		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	0.17	0.05	4	0.15	0.24	0.14	68	Swf	Ultisols	Tuffac. sandstone		
		II1B	0.59	0.07	2	0.59	0.64	0.54	68	Swf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II1C	0.13		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II8A	0.76	0.01	3	0.76	0.77	0.76	145	Wfs	Ultisols	Tuffac. sandstone		
		II8A	0.83		1				71	Wfs	Ultisols	Tuffac. sandstone		
		II1A	1.02		1				93	Wflm	Inceptisols	Tuffac. sandstone	New	
		II1B	0.40		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	0.10	0.05	4	0.09	0.16	0.06	68	Swf	Ultisols	Tuffac. sandstone	Class 2 LD	
	Potassium (mg/g)	II1B	0.16	0.03	2	0.16	0.18	0.14	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	
		II1C	0.16		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II8A	0.25	0.02	3	0.25	0.26	0.23	145	Wfs	Ultisols	Tuffac. sandstone		
		II1A	12.31		1				93	Wflm	Inceptisols	Tuffac. sandstone	New	
		II1B	5.49		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	0.31	0.14	4	0.29	0.50	0.18	68	Swf	Ultisols	Tuffac. sandstone	Class 2 LD	
Sulfur (%)	II1B	0.61	0.04	2	0.61	0.64	0.58	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD		
	II1C	0.67		1				93	Wflm	Inceptisols	Tuffac. sandstone			
	II8A	4.40	0.13	3	4.42	4.52	4.26	145	Wfs	Ultisols	Tuffac. sandstone			
	II8A	0.11	0.01	3	0.11	0.12	0.11	145	Wfs	Ultisols	Tuffac. sandstone			
	II8A	0.15		1				71	Wfs	Ultisols	Tuffac. sandstone			
<i>Ctenitis hirta</i>	C/N	II6	17		1				135	Lmrf	Ultisols	Tuffac. sandstone	Ferms	
	Carbon (%)	II6	43		1				135	Lmrf	Ultisols	Tuffac. sandstone	Ferms	
	Nitrogen (%)	II6	2.56		1				135	Lmrf	Ultisols	Tuffac. sandstone	Ferms	
	Sulfur (%)	II6	0.42		1				135	Lmrf	Ultisols	Tuffac. sandstone	Ferms	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
<i>Cupania americana</i>	Wood density (g/cc)	II1B	0.52		1				97	Wfs	Inceptisols	Tuffac. sandstone		
<i>Cyathea arborea</i>	Aluminum (mg/g)	II6	0.64	0.30	6	0.73	0.88	0.06	135	Lmrf	Ultisols	Tuffac. sandstone		
	C/N	II6	35	6	3	38	39	28	135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II6	1.94	0.39	6	2.04	2.38	1.26	135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II6	47	1	3	46	49	46	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II6	0.37	0.26	6	0.33	0.75	0.13	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II6	2.39	2.60	6	1.39	7.63	0.88	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II6	0.08	0.04	6	0.08	0.13	0.04	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II6	1.08	0.31	8	1.07	1.64	0.76	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II6	0.48	0.12	6	0.46	0.68	0.34	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II6	10.68	6.55	6	9.42	21.78	1.74	135	Lmrf	Ultisols	Tuffac. sandstone		
Sulfur (%)	II6	0.21	0.05	3	0.22	0.25	0.15	135	Lmrf	Ultisols	Tuffac. sandstone			
<i>Cyclopogon cranichoides</i>	Aluminum (mg/g)	II6	0.91		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	C/N	II6	13		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II6	7.61		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II6	43		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II6	0.50		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II6	4.76		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II6	0.34		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II6	3.28		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II6	3.10		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II6	28.80		1				135	Lmrf	Ultisols	Tuffac. sandstone		
Sulfur (%)	II6	0.45		1				135	Lmrf	Ultisols	Tuffac. sandstone			
<i>Cyrilla racemiflora</i>	Aluminum (mg/g)	II1A	0.10		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	9.25		1				93	Wflm	Inceptisols	Tuffac. sandstone	Fresh-1980	
		II1B	0.01		1				93	Wflm	Inceptisols	Tuffac. sandstone	Fresh-1990	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Ash (%)	II1C	0.03	0.01	3	0.03	0.04	0.03	93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	2.79		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	8.12		1				93	Wflm	Inceptisols	Tuffac. sandstone	Fresh-1980	
		II1B	0.73		1				93	Wflm	Inceptisols	Tuffac. sandstone	Fresh-1990	
		II1B	2.30	0.12	65	2.09	6.06	1.06	67	Smf	Ultisols	Tuffac. sandstone	Bark sound	
		II1B	3.37	0.97	22	1.67	20.36	0.31	67	Smf	Ultisols	Tuffac. sandstone	Exposed surface	
		II1B	0.37	0.05	17	0.36	0.76	0.03	67	Smf	Ultisols	Tuffac. sandstone	Sapwood sound	
		II1B	0.52	0.06	19	0.59	1.03	0.01	67	Smf	Ultisols	Tuffac. sandstone	Heartwood sound	
		II1B	0.46	0.04	64	0.43	1.21	0.01	67	Smf	Ultisols	Tuffac. sandstone	Xylem sound	
		II1B	0.44	0.07	32	0.31	1.61	0.02	67	Smf	Ultisols	Tuffac. sandstone	Xylem-cerambycid	
		II1B	0.64	0.12	28	0.38	2.50	0.05	67	Smf	Ultisols	Tuffac. sandstone	Xylem-(hard)	
		II1B	1.38	0.23	9	1.41	2.26	0.41	67	Smf	Ultisols	Tuffac. sandstone	Xylem-(friable)	
		II1B	3.69	1.00	35	1.81	3.22	0.06	67	Smf	Ultisols	Tuffac. sandstone	Humus,soil-like	
	C/N	II1C	0.66	0.73	3	0.24	1.50	0.24	93	Wflm	Inceptisols	Tuffac. sandstone	Fresh	
		II1B	52		1				93	Wflm	Inceptisols	Tuffac. sandstone	Fresh-1980	
		II1B	765		1				93	Wflm	Inceptisols	Tuffac. sandstone	Fresh-1990	
	Calcium (mg/g)	II1C	639	225	3	769	769	378	93	Wflm	Inceptisols	Tuffac. sandstone	Fresh	
		II1A	1.65		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	3.26	0.15	65	3.12	7.21	0.57	67	Smf	Ultisols	Tuffac. sandstone	Bark sound	
		II1B	2.00	0.14	22	1.98	3.28	0.99	67	Smf	Ultisols	Tuffac. sandstone	Exposed surface	
		II1B	0.59	0.09	17	0.51	1.82	0.25	67	Smf	Ultisols	Tuffac. sandstone	Sapwood sound	
		II1B	0.59	0.08	19	0.50	1.62	0.14	67	Smf	Ultisols	Tuffac. sandstone	Heartwood sound	
		II1B	0.67	0.05	64	0.54	2.82	0.16	67	Smf	Ultisols	Tuffac. sandstone	Xylem sound	
		II1B	0.76	0.06	32	0.65	1.76	0.22	67	Smf	Ultisols	Tuffac. sandstone	Xylem with cerambycid	
		II1B	1.04	0.15	28	0.88	3.95	0.01	67	Smf	Ultisols	Tuffac. sandstone	Xylem-(hard)	
		II1B	1.50	0.30	9	1.01	2.62	0.44	67	Smf	Ultisols	Tuffac. sandstone	Xylem-(friable)	
		II1B	1.24	0.23	35	0.73	6.23	0.11	67	Smf	Ultisols	Tuffac. sandstone	Humus,soil-like	
		II1B	19.10		1				93	Wflm	Inceptisols	Tuffac. sandstone	Fresh-1980	
		II1B	0.91		1				93	Wflm	Inceptisols	Tuffac. sandstone	Fresh-1990	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
Iron (mg/g)		II1C	0.23	0.03	3	0.22	0.27	0.21	93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	0.10		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	0.11		1				93	Wflm	Inceptisols	Tuffac. sandstone	Fresh-1980	
		II1B	0.11		1				93	Wflm	Inceptisols	Tuffac. sandstone	Fresh-1990	
Magnesium (mg/g)		II1C	0.06	0.04	3	0.04	0.10	0.04	93	Wflm	Inceptisols	Tuffac. sandstone	Fresh	
		II1A	0.69		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	1.85		1				93	Wflm	Inceptisols	Tuffac. sandstone	Fresh-1980	
		II1B	0.17		1				93	Wflm	Inceptisols	Tuffac. sandstone	Fresh-1990	
		II1B	1.83	0.11	65	1.58	4.20	0.55	67	Smf	Ultisols	Tuffac. sandstone	Bark sound	
		II1B	1.21	0.12	22	1.08	3.01	0.67	67	Smf	Ultisols	Tuffac. sandstone	Exposed surface	
		II1B	0.41	0.04	17	0.37	0.90	0.26	67	Smf	Ultisols	Tuffac. sandstone	Sapwood sound	
		II1B	0.43	0.07	19	0.32	1.31	0.09	67	Smf	Ultisols	Tuffac. sandstone	Heartwood sound	
		II1B	0.35	0.04	64	0.26	1.46	0.06	67	Smf	Ultisols	Tuffac. sandstone	Xylem sound	
		II1B	0.39	0.03	32	0.37	0.90	0.09	67	Smf	Ultisols	Tuffac. sandstone	Xylem-cerambycid	
		II1B	0.69	0.10	28	0.53	2.73	0.13	67	Smf	Ultisols	Tuffac. sandstone	Xylem-(hard)	
		II1B	0.69	0.11	9	0.60	1.26	0.28	67	Smf	Ultisols	Tuffac. sandstone	Xylem-(friable)	
		II1B	0.68	0.06	35	0.61	1.68	0.16	67	Smf	Ultisols	Tuffac. sandstone	Humus,soil-like	
		II1C	0.14	0.08	3	0.10	0.23	0.08	93	Wflm	Inceptisols	Tuffac. sandstone	Fresh	
	Nitrogen (%)		II1A	0.69		1				93	Wflm	Inceptisols	Tuffac. sandstone	
		II1B	0.82		1				93	Wflm	Inceptisols	Tuffac. sandstone	Fresh-1980	
		II1B	0.06		1				93	Wflm	Inceptisols	Tuffac. sandstone	Fresh-1990	
		II1B	0.60	0.02	65	0.58	1.11	0.35	67	Smf	Ultisols	Tuffac. sandstone	Bark sound	
		II1B	0.46	0.05	22	0.44	1.07	0.12	67	Smf	Ultisols	Tuffac. sandstone	Exposed surface	
		II1B	0.09	0.01	17	0.08	0.18	0.05	67	Smf	Ultisols	Tuffac. sandstone	Sapwood sound	
		II1B	0.06	0.01	19	0.06	0.09	0.02	67	Smf	Ultisols	Tuffac. sandstone	Heartwood sound	
		II1B	0.07	0.00	64	0.07	0.18	0.03	67	Smf	Ultisols	Tuffac. sandstone	Xylem sound	
		II1B	0.13	0.01	32	0.12	0.26	0.08	67	Smf	Ultisols	Tuffac. sandstone	Xylem-cerambycid	
		II1B	0.13	0.03	28	0.09	0.83	0.02	67	Smf	Ultisols	Tuffac. sandstone	Xylem-(hard)	
		II1B	0.17	0.03	9	0.16	0.36	0.08	67	Smf	Ultisols	Tuffac. sandstone	Xylem-(friable)	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1B	0.69	0.06	35	0.64	1.69	0.27	67	Smf	Ultisols	Tuffac. sandstone	Humus,soil-like	
		II1C	0.08	0.04	3	0.06	0.12	0.06	93	Wflm	Inceptisols	Tuffac. sandstone	Fresh	
	Phosphorus (mg/kg)	III A	662		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	582		1				93	Wflm	Inceptisols	Tuffac. sandstone	Fresh-1980	
		II1B	12		1				93	Wflm	Inceptisols	Tuffac. sandstone	Fresh-1990	
		II1B	140	10	65	126	360	140	67	Smf	Ultisols	Tuffac. sandstone	Bark sound	
		II1B	90	14	22	82	332	7	67	Smf	Ultisols	Tuffac. sandstone	Exposed surface	
		II1B	16	2	17	19	31	4	67	Smf	Ultisols	Tuffac. sandstone	Sapwood sound	
		II1B	6	1	19	4	17	3	67	Smf	Ultisols	Tuffac. sandstone	Heartwood sound	
		II1B	7	1	64	5	42	2	67	Smf	Ultisols	Tuffac. sandstone	Xylem sound	
		II1B	18	2	32	15	53	5	67	Smf	Ultisols	Tuffac. sandstone	Xylem-cerambycid	
		II1B	22	3	28	20	89	3	67	Smf	Ultisols	Tuffac. sandstone	Xylem-(hard)	
		II1B	28	5	9	27	65	14	67	Smf	Ultisols	Tuffac. sandstone	Xylem-(friable)	
		II1B	143	14	35	123	490	34	67	Smf	Ultisols	Tuffac. sandstone	Humus,soil-like	
	Potassium (mg/g)	II1C	20	20	3	10	40	10	93	Wflm	Inceptisols	Tuffac. sandstone		
		III A	9.34		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	7.45		1				93	Wflm	Inceptisols	Tuffac. sandstone	Fresh-1980	
		II1B	1.82		1				93	Wflm	Inceptisols	Tuffac. sandstone	Fresh-1990	
		II1B	2.42	0.19	65	2.32	7.37	0.31	67	Smf	Ultisols	Tuffac. sandstone	Bark sound	
		II1B	0.69	0.07	22	0.62	1.41	0.10	67	Smf	Ultisols	Tuffac. sandstone	Exposed surface	
		II1B	0.98	0.12	17	0.93	1.87	0.03	67	Smf	Ultisols	Tuffac. sandstone	Sapwood sound	
		II1B	1.28	0.14	19	1.20	2.49	0.10	67	Smf	Ultisols	Tuffac. sandstone	Heartwood sound	
		II1B	1.04	0.11	64	0.84	3.58	0.02	67	Smf	Ultisols	Tuffac. sandstone	Xylem sound	
		II1B	0.82	0.20	32	0.23	4.69	0.05	67	Smf	Ultisols	Tuffac. sandstone	Xylem-cerambycid	
		II1B	1.00	0.12	28	0.97	3.17	0.09	67	Smf	Ultisols	Tuffac. sandstone	Xylem-(hard)	
		II1B	1.36	0.56	9	0.42	4.19	0.06	67	Smf	Ultisols	Tuffac. sandstone	Xylem-(friable)	
		II1B	0.48	0.07	35		2.77	0.20	67	Smf	Ultisols	Tuffac. sandstone	Humus,soil-like	
		II1C	2.02	0.06	3	0.36	5.38	0.33	93	Wflm	Inceptisols	Tuffac. sandstone	Fresh	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
<i>Dacryodes sp.</i>	Aluminum (mg/g)	II8A	2.69	5.44	47	0.96	23.48	0.25	146	Swf	Ultisols	Tuffac. sandstone	New		
		II8A	0.99	1.47	22	0.39	6.23	0.26	146	Swf	Ultisols	Tuffac. sandstone	Old		
	Ash (%)	II8A	13.71	4.24	46	12.59	32.65	8.64	146	Swf	Ultisols	Tuffac. sandstone	New		
		II8A	11.68	3.19	21	10.39	18.69	8.70	146	Swf	Ultisols	Tuffac. sandstone	Old		
	Calcium (mg/g)	II8A	7.90	1.40	47	7.52	11.21	5.74	146	Swf	Ultisols	Tuffac. sandstone	New		
		II8A	6.50	1.05	22	6.20	9.08	4.97	146	Swf	Ultisols	Tuffac. sandstone	Old		
	Iron (mg/g)	II8A	2.52	6.54	47	0.56	29.87	0.14	146	Swf	Ultisols	Tuffac. sandstone	New		
		II8A	0.70	1.10	22	0.25	4.68	0.17	146	Swf	Ultisols	Tuffac. sandstone	Old		
	Magnesium (mg/g)	II8A	1.27	0.23	47	1.26	1.90	0.81	146	Swf	Ultisols	Tuffac. sandstone	New		
		II8A	1.37	0.18	22	1.40	1.62	0.94	146	Swf	Ultisols	Tuffac. sandstone	Old		
	Manganese (mg/g)	II8A	0.83	0.16	47	0.78	1.27	0.60	146	Swf	Ultisols	Tuffac. sandstone	New		
		II8A	0.88	0.13	22	0.91	1.09	0.55	146	Swf	Ultisols	Tuffac. sandstone	Old		
	Phosphorus (mg/g)	II8A	0.23	0.10	47	0.18	0.52	0.12	146	Swf	Ultisols	Tuffac. sandstone	New		
		II8A	0.16	0.06	22	0.14	0.34	0.09	146	Swf	Ultisols	Tuffac. sandstone	Old		
	Potassium (mg/g)	II8A	1.34	0.23	47	1.32	1.86	0.83	146	Swf	Ultisols	Tuffac. sandstone	New		
		II8A	1.18	0.22	22	1.17	1.56	0.74	146	Swf	Ultisols	Tuffac. sandstone	Old		
	<i>Dacryodes excelsa</i>	Aluminum (mg/g)	II1A	0.69	0.91	15	0.47	3.61	0.06	107	Swf	Ultisols	Tuffac. sandstone		
			II1C	0.19	0.43	40	0.08	2.57	0.00	123	Wflm	Inceptisols	Tuffac. sandstone	Wood decay	
II1F			0.06		1				120	Swf	Ultisols	Tuffac. sandstone			
II9A			0.36	0.04	6	0.37	0.41	0.32	153	Swf	Ultisols	Tuffac. sandstone			
II8A			1.74	1.30	12	1.49	4.02	0.37	124	Lmrf	Ultisols	Tuffac. sandstone			
II8A			1.70	1.03	11	1.54	4.31	0.47	124	Lmrf	Ultisols	Tuffac. sandstone			
Ash (%)		II1A	8.76		1				94	Wfs	Ultisols	Lava	Understory biomass		
		II1A	6.50		1				101	Wfs	Ultisols	Tuffac. sandstone	Overstory biomass		
		II1A	6.26	0.28	8	6.27	6.61	5.76	100	Lmrf	Ultisols	Tuffac. sandstone	Decomp. (1month)		
		II1A	6.07	2.35	13	5.45	13.28	3.78	107	Swf	Ultisols	Tuffac. sandstone			
		II1B	0.88	0.48	45	0.78	2.75	0.40	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD		
		II1B	2.22	1.35	13	1.55	5.37	0.63	68	Swf	Ultisols	Tuffac. sandstone	Class 4 LD		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1B	2.94	1.71	2	2.94	4.15	1.73	68	Swf	Ultisols	Tuffac. sandstone	Class 5 LD	
		II1B	2.68	1.39	5	2.00	4.63	1.42	68	Swf	Ultisols	Tuffac. sandstone	Class 3/4 LD	
		III1B	6.96	6.37	3	5.03	14.08	1.78	68	Swf	Ultisols	Tuffac. sandstone	Class 4/5 LD	
		II1B	1.63	0.99	8	1.51	3.79	0.66	68	Swf	Ultisols	Tuffac. sandstone	Class 3 SD	
		II1B	6.66		1				68	Swf	Ultisols	Tuffac. sandstone	Class 3/4 ST	
		III1C	4.66		1				94	Wfs	Ultisols	Lava	Understory biomass	
		III1F	3.48		1				120	Swf	Ultisols	Tuffac. sandstone		
		II8A	8.04		1				71	Wfs	Ultisols	Tuffac. sandstone		
		II9A	10.07	0.81	6	10.26	10.84	8.85	153	Swf	Ultisols	Tuffac. sandstone		
		II8A	13.40	1.74	12	13.55	15.75	9.74	124	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	12.62	1.16	11	12.30	14.38	11.22	124	Wflm	Ultisols	Tuffac. sandstone		
	C/N	III1A	29	5	14	2	39	21	107	Swf	Ultisols	Tuffac. sandstone		
		II9A	66	4	6	67	69	59	153	Swf	Ultisols	Tuffac. sandstone		
		II8A	47	4	12	47	55	42	124	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	51	5	11	51	59	44	124	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	III1A	3.55	0.53	5	3.60	4.26	2.81	100	Lmrf	Ultisols	Tuffac. sandstone		
		III1A	5.46	2.07	5	6.01	7.25	2.23	100	Lmrf	Ultisols	Tuffac. sandstone	Decomp. (1 week)	
		III1A	4.32	0.85	5	4.34	5.50	3.09	100	Lmrf	Ultisols	Tuffac. sandstone	Decomp. (2 week)	
		III1A	6.26	0.72	8	6.75	7.12	4.90	100	Lmrf	Ultisols	Tuffac. sandstone	Decomp. (1 month)	
		III1A	4.66	0.81	5	5.13	5.35	3.55	135	Lmrf	Ultisols	Tuffac. sandstone		
		III1A	2.68	0.53	15	2.58	3.70	1.90	107	Swf	Ultisols	Tuffac. sandstone		
		III1B	1.38	0.65	45	1.39	3.32	0.30	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	
		III1B	1.94	1.50	13	1.40	4.68	0.50	68	Swf	Ultisols	Tuffac. sandstone	Class 4 LD	
		III1B	1.00	0.14	2	1.00	1.10	0.90	68	Swf	Ultisols	Tuffac. sandstone	Class 5 LD	
		III1B	4.61	3.23	5	3.16	9.44	1.84	68	Swf	Ultisols	Tuffac. sandstone	Class 3/4 LD	
		III1B	0.47	0.32	3	0.60	0.70	0.10	68	Swf	Ultisols	Tuffac. sandstone	Class 4/5 LD	
		III1B	1.57	0.62	8	1.75	2.33	0.62	68	Swf	Ultisols	Tuffac. sandstone	Class 3 SD	
		III1B	10.59		1				68	Swf	Ultisols	Tuffac. sandstone	Class 3/4 ST	
		III1B	5.18	2.24	6	5.50	8.37	2.28	135	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1B	1.32	2.66	8	0.41	7.89	0.28	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	6.42	3.16	40	6.45	15.94	2.22	123	Wflm	Inceptisols	Tuffac. sandstone	Wood decay	
		II1Ci	3.45	0.64	6	3.56	4.00	2.24	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1F	2.59		1				120	Swf	Ultisols	Tuffac. sandstone		
		II9A	5.77	0.62	6	5.79	6.43	5.04	153	Swf	Ultisols	Tuffac. sandstone		
		II8A	7.07	1.47	12	6.90	10.68	4.65	124	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	10.60	0.61	11	10.61	11.92	9.80	124	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II1A	47	1	92	48	49	45	150	Swf	Ultisols	Tuffac. sandstone		
		II1A	47	2	14	47	49	43	107	Swf	Ultisols	Tuffac. sandstone		
		II8A	51		1				71	Wfs	Ultisols	Tuffac. sandstone		
		II9A	50	1	6	49	51	49	153	Swf	Ultisols	Tuffac. sandstone		
		II8A	40.05	0.80	12	39.98	41.75	38.97	124	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	40.41	0.54	11	40.56	41.06	39.60	124	Wflm	Ultisols	Tuffac. sandstone		
	Iron (mg/kg)	II1A	450	610	15	270	2490	90	107	Rfs	Inceptisols	Tuffac. sandstone		
		II1C	170	400	40	70	2470	3	123	Wflm	Inceptisols	Tuffac. sandstone	Wood decay	
		II1F	21		1				120	Swf	Ultisols	Tuffac. sandstone		
		II9A	340	30	6	339	378	299	153	Swf	Ultisols	Tuffac. sandstone		
		II8A	1730	1508	12	1338	4658	250	124	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	1123	701	11	979	2901	319	124	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II1A	0.86	0.13	5	0.81	1.05	0.74	100	Lmrf	Ultisols	Tuffac. sandstone		
		II1A	1.15	0.48	5	0.97	1.91	0.73	100	Lmrf	Ultisols	Tuffac. sandstone	Decomp. (1 week)	
		II1A	0.84	0.09	5	0.85	0.95	0.73	100	Lmrf	Ultisols	Tuffac. sandstone	Decomp (2 week)	
		II1A	0.87	0.06	5	0.89	0.94	0.81	100	Lmrf	Ultisols	Tuffac. sandstone		
		II1A	1.22	0.17	5	1.16	1.41	1.00	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1A	1.29	0.31	15	1.30	2.14	0.80	107	Swf	Ultisols	Tuffac. sandstone		
		II1B	0.69	0.23	6	0.73	1.04	0.41	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	0.26	0.40	8	0.12	1.25	0.11	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	0.82	0.40	40	0.79	1.76	0.10	123	Wflm	Inceptisols	Tuffac. sandstone	Wood decay	
		II1Ci	0.70	0.04	6	0.70	0.76	0.64	135	Lmrf	Ultisols	Tuffac. sandstone		



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1F	1.76		1				120	Swf	Ultisols	Tuffac. sandstone		
		II9A	1.44	0.07	6	1.44	1.53	1.34	153	Swf	Ultisols	Tuffac. sandstone		
		II8A	1.51	0.07	12	1.50	1.65	1.41	124	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	1.10	0.06	11	1.08	1.22	1.00	124	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II1A	0.35	0.12	15	0.37	0.58	0.11	107	Swf	Ultisols	Tuffac. sandstone		
		II1C	0.23	0.15	40	0.23	0.61	0.04	123	Wflm	Inceptisols	Tuffac. sandstone	Wood decay	
		II1F	0.29		1				120	Swf	Ultisols	Tuffac. sandstone		
		II9A	1.22	0.17	6	1.24	1.38	0.97	153	Swf	Ultisols	Tuffac. sandstone		
		II8A	0.47	0.08	12	0.48	0.60	0.28	124	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	0.95	0.14	11	0.97	1.17	0.78	124	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II1A	1.01	0.18	5	1.00	1.20	0.77	100	Lmrf	Ultisols	Tuffac. sandstone	Decomp (1 week)	
		II1A	1.10	0.14	5	1.13	1.30	0.92	100	Lmrf	Ultisols	Tuffac. sandstone	Decomp (2 week)	
		II1A	2.04		1				94	Wfs	Ultisols	Lava	Understory biomass	
		II1A	1.32		1				101	Wfs	Ultisols	Tuffac. sandstone	Overstory biomass	
		II1A	0.12	0.06	8	0.13	0.16	0.05	100	Lmrf	Ultisols	Tuffac. sandstone	Decomp (1 month)	
		II1A	1.84	0.46	92	1.68	3.10	1.00	150	Swf	Ultisols	Tuffac. sandstone		
		II1A	1.35	0.11	5	1.38	1.47	1.23	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1A	1.67	0.29	14	1.64	2.19	1.20	107	Swf	Ultisols	Tuffac. sandstone		
		II1B	0.20	0.12	45	0.16	0.68	0.08	68	Swf	Ultisols	Tuffac. sandstone	Class 3LD	
		II1B	0.50	0.24	13	0.42	0.94	0.23	68	Swf	Ultisols	Tuffac. sandstone	Class 4 LD	
		II1B	0.78	0.18	2	0.78	0.91	0.65	68	Swf	Ultisols	Tuffac. sandstone	Class 5 LD	
		II1B	0.51	0.27	5	0.41	0.96	0.29	68	Swf	Ultisols	Tuffac. sandstone	Class 3/4 LD	
		II1B	0.92	0.39	3	0.99	1.27	0.50	68	Swf	Ultisols	Tuffac. sandstone	Class 4/5 LD	
		II1B	0.29	0.17	8	0.25	0.64	0.11	68	Swf	Ultisols	Tuffac. sandstone	Class 3 SD	
		II1B	0.58		1				68	Swf	Ultisols	Tuffac. sandstone	Class 3/4 ST	
		II1B	0.41	0.13	6	0.42	0.61	0.23	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	0.15	0.19	8	0.08	0.61	0.07	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	1.51		1				94	Wfs	Ultisols	Lava	Understory biomass	
		II1C	0.67	0.28	40	0.59	1.57	0.32	123	Wflm	Inceptisols	Tuffac. sandstone	Wood decay	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1Ci	0.31	0.02	6	0.32	0.34	0.28	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1F	1.02		1				120	Swf	Ultisols	Tuffac. sandstone		
		II8A	1.06		1				71	Wfs	Ultisols	Tuffac. sandstone		
		II9A	0.75	0.06	6	0.73	0.86	0.70	153	Swf	Ultisols	Tuffac. sandstone		
		II8A	0.85	0.06	12	0.84	0.97	0.76	124	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	0.80	0.06	11	0.80	0.91	0.70	124	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II1A	0.21	0.05	5	0.23	0.24	0.13	100	Lmrf	Ultisols	Tuffac. sandstone		
		II1A	0.22	0.12	5	0.18	0.40	0.10	100	Lmrf	Ultisols	Tuffac. sandstone	Decomp. (1 week)	
		II1A	0.27	0.09	5	0.28	0.38	0.14	100	Lmrf	Ultisols	Tuffac. sandstone	Decomp. (2 week)	
		II1A	0.83		1				94	Wfs	Ultisols	Lava	Understory biomass	
		II1A	0.70		1				101	Wfs	Ultisols	Tuffac. sandstone	Overstory biomass	
		II1A	0.64	0.04	5	0.63	0.70	0.60	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1A	0.77	0.15	15	0.75	1.10	0.56	107	Swf	Ultisols	Tuffac. sandstone		
		II1B	0.05	0.06	45	0.02	0.32	0.01	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	
		II1B	0.13	0.08	13	0.09	0.30	0.03	68	Swf	Ultisols	Tuffac. sandstone	Class 4 LD	
		II1B	0.22	0.05	2	0.22	0.25	0.19	68	Swf	Ultisols	Tuffac. sandstone	Class 5 LD	
		II1B	0.14	0.10	5	0.11	0.26	0.05	68	Swf	Ultisols	Tuffac. sandstone	Class 3/4 LD	
		II1B	0.35	0.17	3	0.43	0.45	0.15	68	Swf	Ultisols	Tuffac. sandstone	Class 4/5 LD	
		II1B	0.09	0.09	8	0.06	0.30	0.02	68	Swf	Ultisols	Tuffac. sandstone	Class 3 Sd	
		II1B	0.09		1				68	Swf	Ultisols	Tuffac. sandstone	Class 3/4 ST	
		II1B	0.27	0.08	6	0.29	0.39	0.14	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	0.09	0.12	8	0.06	0.39	0.03	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	0.38		1				94	Wfs	Ultisols	Lava	Understory biomass	
		II1C	0.22	0.10	40	0.20	0.52	0.07	123	Swf	Ultisols	Tuffac. sandstone	Wood decay	
		II1Ci	0.16	0.01	6	0.16	0.18	0.15	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1F	0.57		1				120	Swf	Ultisols	Tuffac. sandstone		
		II9A	0.13	0.01	6	0.13	0.14	0.12	153	Swf	Ultisols	Tuffac. sandstone		
		II8A	0.20	0.05	12	0.19	0.34	0.13	124	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	0.17	0.03	11	0.16	0.22	0.12	124	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
	Potassium (mg/g)	II1A	1.61	0.13	5	1.56	1.81	1.50	100	Lmrf	Ultisols	Tuffac. sandstone			
		II1A	1.54	0.16	5	1.54	1.68	1.29	100	Lmrf	Ultisols	Tuffac. sandstone	Decomp. (1 week)		
		III1A	1.35	0.20	5	1.34	1.67	1.10	100	Lmrf	Ultisols	Tuffac. sandstone	Decomp. (2 week)		
		II1A	4.54		1				94	Wfs	Ultisols	Lava	Understory biomass		
		II1A	7.22		1				101	Wfs	Ultisols	Tuffac. sandstone	Overstory biomass		
		II1A	6.26	0.72	8	6.45	7.12	4.90	100	Lmrf	Ultisols	Tuffac. sandstone	Decomp. (1 month)		
		II1A	5.80	1.40	5	5.73	7.24	3.59	135	Lmrf	Ultisols	Tuffac. sandstone			
		II1A	7.84	2.96	15	7.10	12.89	4.99	107	Swf	Ultisols	Tuffac. sandstone			
		II1B	0.62	0.42	45	0.59	1.66	0.03	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD		
		II1B	0.47	0.42	13	0.23	1.24	0.08	68	Swf	Ultisols	Tuffac. sandstone	Class 4 LD		
		II1B	0.20	0.11	4	0.17	0.35	0.10	68	Swf	Ultisols	Tuffac. sandstone	Class 5 LD		
		II1B	0.92	0.52	5	0.74	1.71	0.41	68	Swf	Ultisols	Tuffac. sandstone	Class 3/4 LD		
		II1B	0.27	0.12	3	0.21	0.41	0.20	68	Swf	Ultisols	Tuffac. sandstone	Class 4/5 LD		
		II1B	1.23	0.13	8	1.22	1.41	1.04	68	Swf	Ultisols	Tuffac. sandstone	Class 3 SD		
		II1B	0.71		1				68	Swf	Ultisols	Tuffac. sandstone	Class 3/4 ST		
		II1B	3.91	1.78	6	3.63	7.28	1.94	135	Lmrf	Ultisols	Tuffac. sandstone			
		II1B	1.74	2.10	8	1.02	6.89	0.73	135	Lmrf	Ultisols	Tuffac. sandstone			
		II1C	5.51		1				94	Wfs	Ultisols	Lava	Understory biomass		
		II1C	1.19	0.91	40	1.05	6.09	0.41	123	Wflm	Inceptisols	Tuffac. sandstone			
		II1Ci	4.23	0.29	6	4.13	4.81	4.02	135	Lmrf	Ultisols	Tuffac. sandstone			
		II1F	2.68		1				120	Swf	Ultisols	Tuffac. sandstone			
		II9A	2.12	0.09	6	2.14	2.21	1.96	153	Swf	Ultisols	Tuffac. sandstone			
		II8A	1.55	0.82	12	1.39	4.08	0.87	124	Lmrf	Ultisols	Tuffac. sandstone			
		II8A	1.71	0.22	11	1.66	2.25	1.39	124	Lmrf	Ultisols	Tuffac. sandstone			
		Sodium (mg/g)	II9A	3.97	0.22	6	4.00	4.23	3.68	153	Swf	Ultisols	Tuffac. sandstone		
		Sulfur (%)	II1A	0.32	0.10	59	0.29	0.69	0.19	150	Swf	Ultisols	Tuffac. sandstone		
II8A	0.38			1				71	Wfs	Ultisols	Tuffac. sandstone				
<i>Danaea nodosa</i>	Aluminum (mg/g)	II6A	7.71		1				129	Lmrf	Ultisols	Tuffac. sandstone			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Ash (%)	II6	4.37	2.01	69	3.98	10.63	0.03	135	Lmrf	Ultisols	Tuffac. sandstone		
		II6A	7.70		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	C/N	II6A	7		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II6	26		30	26	39	18	135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II6A	10.49		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II6	3.77	1.41	70	3.69	7.55	0.89	135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II6A	49		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II6	43	1	30	43	45	39	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II6A	1.43		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II6	0.37	0.68	7	0.20	4.37	0.02	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II6A	3.29		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II6	3.72	1.41	70	3.57	10.22	1.68	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II6A	0.13		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II6	0.15	0.08	70	0.14	0.54	0.01	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II6A	22.95		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II6	1.64	0.32	92	1.60	2.42	0.96	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II6A	1.19		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II6	0.93	0.24	70	0.93	1.54	0.41	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II6A	7.89		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II6	19.34	8.15	70	18.75	37.61	3.08	135	Lmrf	Ultisols	Tuffac. sandstone		
Sulfur (%)	II6A	0.68		1				129	Lmrf	Ultisols	Tuffac. sandstone			
	II6	0.41	0.17	30	0.35	0.83	0.17	135	Lmrf	Ultisols	Tuffac. sandstone			
<i>Daphnopsis philippiana</i>	Aluminum (mg/g)	II1A	0.17		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Ash (%)	II1A	3.09		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	C/N	II1A	36		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	67		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Calcium (mg/g)	II1A	3.86		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	4.97		1				93	Wflm	Inceptisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Iron (mg/g)	II1A	0.09		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	0.09		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Magnesium (mg/g)	II1A	1.51		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	0.47		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Manganese (mg/g)	II1A	0.14		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	0.22		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Nitrogen (%)	II1A	1.24		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	0.68		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II1A	0.57		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	0.42		1				93	Wflm	Inceptisols	Tuffac. sandstone		
Potassium (mg/g)	II1A	6.93		1				93	Wflm	Inceptisols	Tuffac. sandstone			
	II1C	4.84		1				93	Wflm	Inceptisols	Tuffac. sandstone			
<i>Delonix regia</i>	Wood density (g/cc)	II1C	0.29	0.02	3	0.30	0.31	0.27	115					
<i>Dendropanax arboreus</i>	Ash (%)	II8A	9.05		1				71	Wfs	Ultisols	Tuffac. sandstone		
	Carbon (%)	II8A	53		1				71	Wfs	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II8A	1.09		1				71	Wfs	Ultisols	Tuffac. sandstone		
	Sulfur (%)	II8A	0.25		1				71	Wfs	Ultisols	Tuffac. sandstone		
<i>Dennstaedtia bipinnata</i>	Aluminum (mg/g)	II6	0.29	0.15	7	0.29	0.54	0.03	135	Lmrf	Ultisols	Tuffac. sandstone		
	C/N	II6	20	4	4	19	26	18	135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II6	1.15	0.35	7	1.09	1.55	0.69	135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II6	43	1	4	44	45	41	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II6	0.24	0.06	7	0.21	0.37	0.19	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II6	3.33	2.91	7	2.17	9.80	1.67	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II6	0.06	0.03	7	0.05	0.11	0.03	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II6	2.23	0.36	7	2.39	2.54	1.58	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II6	0.85	0.23	7	0.88	1.12	0.52	135	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Potassium (mg/g)	II6	17.59	8.18	7	18.17	27.72	2.94	135	Lmrf	Ultisols	Tuffac. sandstone		
	Sulfur (%)	II6	0.79	0.11	4	0.80	0.89	0.66	135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Dennstaedtia obtusifolia</i>	Aluminum (mg/g)	II6	0.28	0.18	10	0.32	0.56	0.06	135	Lmrf	Ultisols	Tuffac. sandstone		
	C/N	II6	24	5	10	22	34	18	135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II6	4.71	2.20	10	5.45	8.75	0.69	135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II6	44	2	10	45	47	42	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II6	0.18	0.11	10	0.18	0.33	0.05	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II6	3.06	1.05	10	2.77	4.95	1.82	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II6	0.07	0.03	10	0.07	0.14	0.02	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II6	1.87	0.34	16	1.82	2.42	1.33	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II6	0.90	0.28	10	0.79	1.48	0.54	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II6	23.84	7.47	10	24.16	37.05	13.43	135	Lmrf	Ultisols	Tuffac. sandstone		
	Sulfur (%)	II6	0.63	0.51	10	0.40	1.68	0.24	135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Dennstaedtia spp.</i>	Aluminum (mg/g)	II6	0.47	0.09	3	0.15	0.23	0.06	135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II6	6.00	3.60	3	6.97	9.00	2.01	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II6	0.18	0.06	3	0.19	0.23	0.12	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II6	2.91	1.39	3	2.77	4.37	1.59	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II6	0.05	0.02	3	0.04	0.07	0.03	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II6	1.85	0.24	3	1.79	2.12	1.65	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II6	1.00	0.50	3	1.26	1.32	0.42	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II6	33.80	2.02	3	33.10	36.08	32.23	135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Dialium guineense</i>	Wood density (g/cc)	III C	0.88	0.06	20	0.88	0.97	0.78	115					
<i>Dieffenbachia seguine</i>	Aluminum (mg/kg)	II3A	128		1				121	Lmrf	Ultisols	Tuffac. sandstone		
		II3A	39		1				121	Lmrf	Ultisols	Tuffac. sandstone	Petiole	
		II3C	43		1				121	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Ash (%)	I13A	13.72		1				121	Lmrf	Ultisols	Tuffac. sandstone		
		I13A	9.01		1				121	Lmrf	Ultisols	Tuffac. sandstone	Petiole	
		I13C	7.50		1				121	Lmrf	Ultisols	Tuffac. sandstone		
	C/N	I13A	15		1				121	Lmrf	Ultisols	Tuffac. sandstone		
		I13A	51		1				121	Lmrf	Ultisols	Tuffac. sandstone		
		I13C	147		1				121	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	I13A	14.17		1				121	Lmrf	Ultisols	Tuffac. sandstone		
		I13A	8.66		1				121	Lmrf	Ultisols	Tuffac. sandstone	Petiole	
		I13C	8.47		1				121	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	I13A	47		1				121	Lmrf	Ultisols	Tuffac. sandstone		
		I13A	43		1				121	Lmrf	Ultisols	Tuffac. sandstone	Petiole	
		I13C	42		1				121	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/kg)	I13A	150		1				121	Lmrf	Ultisols	Tuffac. sandstone		
		I13A	28		1				121	Lmrf	Ultisols	Tuffac. sandstone	Petiole	
		I13C	29		1				121	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	I13A	4.37		1				121	Lmrf	Ultisols	Tuffac. sandstone		
		I13A	1.98		1				121	Lmrf	Ultisols	Tuffac. sandstone	Petiole	
		I13C	3.27		1				121	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	I13A	0.34		1				121	Lmrf	Ultisols	Tuffac. sandstone		
		I13A	0.90		1				121	Lmrf	Ultisols	Tuffac. sandstone	Petiole	
		I13C	1.78		1				121	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	I13A	3.05		1				121	Lmrf	Ultisols	Tuffac. sandstone		
		I13A	0.85		1				121	Lmrf	Ultisols	Tuffac. sandstone	Petiole	
		I13C	0.29		1				121	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	I13A	1.68		1				121	Lmrf	Ultisols	Tuffac. sandstone		
		I13A	0.86		1				121	Lmrf	Ultisols	Tuffac. sandstone	Petiole	
		I13C	0.46		1				121	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	I13A	44.85		1				121	Lmrf	Ultisols	Tuffac. sandstone		
		I13A	40.60		1				121	Lmrf	Ultisols	Tuffac. sandstone	Petiole	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II3C	24.35		1				121	Lmrf	Ultisols	Tuffac. sandstone		
<i>Dioscorea polygonoides</i>	Aluminum (mg/g)	II3	0.09	0.04	14	0.09	0.17	0.05	135	Lmrf	Ultisols	Tuffac. sandstone		
	C/N	II3	44	28	5	38	92	23	135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II3	5.18	2.43	14	5.20	8.99	1.89	135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II3	45	3	5	45	48	42	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II3	0.12	0.06	14	0.11	0.20	0.03	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II3	4.16	1.93	14	4.54	6.50	0.79	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II3	0.22	0.21	14	0.15	0.69	0.07	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II3	1.53	0.36	18	1.56	1.94	0.51	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II3	1.08	0.27	14	1.04	1.70	0.78	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II3	18.46	5.23	14	17.73	27.74	7.60	135	Lmrf	Ultisols	Tuffac. sandstone		
Sulfur (%)	II3	0.30	0.08	5	0.33	0.39	0.17	135	Lmrf	Ultisols	Tuffac. sandstone			
<i>Ditta myricoides</i>	Aluminum (mg/g)	III1A	0.14		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		III1B	0.31		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		III1C	0.04		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Ash (%)	III1B	2.50		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		III1C	0.14		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	C/N	III1B	35		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		III1C	420		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Calcium (mg/g)	III1A	5.63		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		III1B	3.63		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		III1C	0.89		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Iron (mg/kg)	III1A	140		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		III1B	70		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		III1C	70		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Magnesium (mg/g)	III1A	4.42		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		III1B	1.05		1				93	Wflm	Inceptisols	Tuffac. sandstone		



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Manganese (mg/g)	II1C	0.39		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	0.52		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	0.15		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Nitrogen (%)	II1C	0.13		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	1.27		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II1C	0.11		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	0.79		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	0.52		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Potassium (mg/g)	II1C	0.20		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	7.15		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	5.31		1				93	Wflm	Inceptisols	Tuffac. sandstone		
			II1C	1.54		1			93	Wflm	Inceptisols	Tuffac. sandstone		
<i>Drypetes glauca</i>	Ash (%)	II1B	1.53	0.87	3	1.09	2.53	0.97	68	Swf	Ultisols	Tuffac. sandstone	Class 3 Sd	
		II1B	1.83		1				68	Swf	Ultisols	Tuffac. sandstone	Class 2	
	Calcium (mg/g)	II1B	3.33	1.37	3	2.70	4.90	2.40	68	Swf	Ultisols	Tuffac. sandstone	Class 3 Sd	
		II1B	4.47		1				68	Swf	Ultisols	Tuffac. sandstone	Class 2	
	Nitrogen (%)	II1B	0.24	0.17	3	0.14	0.44	0.14	68	Swf	Ultisols	Tuffac. sandstone	Class 3 Sd	
		II1B	0.31		1				68	Swf	Ultisols	Tuffac. sandstone	Class 2	
	Phosphorus (mg/g)	II1B	0.14	0.11	3	0.09	0.28	0.07	68	Swf	Ultisols	Tuffac. sandstone	Class 3 Sd	
		II1B	0.22		1				68	Swf	Ultisols	Tuffac. sandstone	Class 2	
Potassium (mg/g)	II1B	0.32	0.18	3	0.28	0.52	0.17	68	Swf	Ultisols	Tuffac. sandstone	Class 3 Sd		
	II1B	0.30		1				68	Swf	Ultisols	Tuffac. sandstone	Class 2		
<i>Enterolobium cyclocarpum</i>	Wood density (g/cc)	II1B	0.37	0.01	5	0.37	0.38	0.37	97	Wfs	Inceptisols	Tuffac. sandstone		
<i>Erithalis fruticosa</i>	Aluminum (mg/g)	II2A	0.04	0.04	10	0.02	0.15	0.01	151	Sdf	Mollisols	Alluvial deposits		
	Ash (%)	II2A	5.02	0.55	10	4.98	6.12	4.03	151	Sdf	Mollisols	Alluvial deposits		
	C/N	II2A	48	8	10	45	61	41	151	Sdf	Mollisols	Alluvial deposits		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Calcium (mg/g)	II2A	9.63	4.62	2	9.71	13.68	13.68	104	Sdf	Mollisols	Alluvial deposits	New	
		II2A	11.08	2.90	11	11.53	14.87	2.88	104	Sdf	Mollisols	Alluvial deposits	Mature	
		II2A	7.68	1.58	10	8.39	9.61	4.97	151	Sdf	Mollisols	Alluvial deposits		
		II2A	10.85	3.16	25	11.53	14.87	2.88	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Carbon (%)	II2A	57	1	10	57	58	56	151	Sdf	Mollisols	Alluvial deposits		
	Iron (mg/kg)	II2A	35	34	10	25	132	16	151	Sdf	Mollisols	Alluvial deposits		
	Magnesium (mg/g)	II2A	0.85	0.46	2	0.83	1.34	0.42	104	Sdf	Mollisols	Alluvial deposits	New	
		II2A	2.72	0.63	11	2.60	4.09	1.66	104	Sdf	Mollisols	Alluvial deposits	Mature	
		II2A	1.18	0.22	10	1.23	1.50	0.75	151	Sdf	Mollisols	Alluvial deposits		
		II2A	2.42	0.92	25	2.57	4.09	0.42	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Manganese (mg/g)	II2A	0.03	0.01	10	0.03	0.06	0.02	151	Sdf	Mollisols	Alluvial deposits		
	Nitrogen (%)	II2A	0.87	0.08	2	0.87	0.94	0.80	104	Sdf	Mollisols	Alluvial deposits	New	
		II2A	0.72	0.09	11	0.71	0.91	0.62	104	Sdf	Mollisols	Alluvial deposits	Mature	
		II2A	1.20	0.17	10	1.26	1.37	0.92	151	Sdf	Mollisols	Alluvial deposits		
		II2A	0.75	0.10	26	0.76	0.94	0.62	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Phosphorus (mg/g)	II2A	0.54	0.24	2	0.54	0.75	0.33	104	Sdf	Mollisols	Alluvial deposits	New	
		II2A	0.25	0.06	11	0.26	0.34	0.15	104	Sdf	Mollisols	Alluvial deposits	Mature	
		II2A	0.26	0.06	10	0.24	0.34	0.19	151	Sdf	Mollisols	Alluvial deposits		
		II2A	0.29	0.15	26	0.27	0.75	0.15	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Potassium (mg/g)	II2A	8.34	0.73	2	8.29	9.13	7.65	104	Sdf	Mollisols	Alluvial deposits	New	
II2A		9.36	1.97	11	8.46	12.79	6.76	104	Sdf	Mollisols	Alluvial deposits	Mature		
II2A		6.78	1.58	10	6.88	8.93	4.39	151	Sdf	Mollisols	Alluvial deposits			
II2A		9.20	1.86	26	8.46	12.79	6.76	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest		
Sulfur (%)	II2A	0.22	0.03	10	0.22	0.27	0.17	151	Sdf	Mollisols	Alluvial deposits			
<i>Erythroides plantaginea</i>	Aluminum (mg/g)	II6	3.03		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	C/N	II6	17	5	2	17	21	14	135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II6	5.21		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II6	43	2	2	43	44	42	135	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Iron (mg/g)	II6	3.59		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II6	2.31		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II6	0.21		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II6	2.54	0.62	2	2.54	2.97	2.10	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II6	2.85		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II6	18.63		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Sulfur (%)	II6	0.20	0.09	2	0.20	0.27	0.13	135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Erythroxylum aerolatum</i>	Calcium (mg/g)	II1A	15.73		1				104	Sdf	Mollisols	Alluvial deposits	New	
		II1A	20.26	2.11	6	19.95	23.50	17.06	104	Sdf	Mollisols	Alluvial deposits		
		II1Ci	20.70		1				104	Sdf	Mollisols	Alluvial deposits		
	Magnesium (mg/g)	II1A	1.63		1				104	Sdf	Mollisols	Alluvial deposits	New	
		II1A	3.33	0.51	7	3.34	4.12	2.32	104	Sdf	Mollisols	Alluvial deposits		
		II1Ci	0.48		1				104	Sdf	Mollisols	Alluvial deposits		
	Nitrogen (%)	II1A	2.26		1				104	Sdf	Mollisols	Alluvial deposits	New	
		II1A	1.69	0.21	6	1.76	1.92	1.40	104	Sdf	Mollisols	Alluvial deposits		
	Phosphorus (mg/g)	II1A	1.38		1				104	Sdf	Mollisols	Alluvial deposits	New	
		II1A	0.81	0.15	7	0.78	1.07	0.63	104	Sdf	Mollisols	Alluvial deposits		
		II1Ci	0.26		1				104	Sdf	Mollisols	Alluvial deposits		
	Potassium (mg/g)	II1A	15.06		1				104	Sdf	Mollisols	Alluvial deposits	New	
		II1A	13.68	2.60	7	13.65	18.53	9.29	104	Sdf	Mollisols	Alluvial deposits		
		II1Ci	7.83		1				104	Sdf	Mollisols	Alluvial deposits		
	Calcium (mg/g)	II1A	19.61	2.55	14	19.57	23.50	15.40	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Magnesium (mg/g)	II1A	3.12	0.75	16	3.33	4.12	1.61	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Nitrogen (%)	II1A	1.87	0.39	16	1.85	2.63	1.40	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Phosphorus (mg/g)	II1A	0.88	0.24	16	0.83	1.38	0.63	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Potassium (mg/g)	II1A	13.85	2.47	16	13.74	18.53	9.29	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
<i>Erythroxylum rotundifolium</i>	Calcium (mg/g)	II1A	14.40		1				104	Sdf	Mollisols	Alluvial deposits		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Magnesium (mg/g)	II1A	14.40		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1Ci	20.70		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1Ci	23.24		1				104	Sdf	Mollisols	Alluvial deposits		
		II1Ci	23.24		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1A	1.34		1				104	Sdf	Mollisols	Alluvial deposits		
		II1A	1.34		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1Ci	0.48		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1Ci	0.19		1				104	Sdf	Mollisols	Alluvial deposits		
		II1Ci	0.19		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1A	1.65		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1Ci	0.89		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1Ci	0.85		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1A	0.34		1				104	Sdf	Mollisols	Alluvial deposits		
		II1A	0.34		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1Ci	0.26		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Phosphorus (mg/g)	II1Ci	0.21		1				104	Sdf	Mollisols	Alluvial deposits		
		II1Ci	0.21		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1A	9.76		1				104	Sdf	Mollisols	Alluvial deposits		
		II1A	9.76		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1Ci	7.83		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Potassium (mg/g)	II1Ci	5.86		1				104	Sdf	Mollisols	Alluvial deposits		
		II1Ci	5.86		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II8A	6.28	1.65	4	6.28	8.74	5.31	90	Swf	Ultisols	Tuffac. sandstone	Torn	
		II8A	4.67	0.42	3	4.61	5.12	4.29	90	Swf	Ultisols	Tuffac. sandstone	Recently fall	
		II8B	3.92	0.50	3	3.68	4.50	3.58	90	Swf	Ultisols	Tuffac. sandstone		
<i>Eucalyptus pathentinervis</i>	Ash (%)	II8C	4.60	0.29	3	4.51	4.92	4.36	90	Swf	Ultisols	Tuffac. sandstone		
		II8D	10.49	2.43	3	10.66	12.84	7.98	90	Swf	Ultisols	Tuffac. sandstone		
		II8A	15.13	1.27	4	15.13	16.12	13.44	90	Swf	Ultisols	Tuffac. sandstone	Torn	
		II8A	15.13	1.27	4	15.13	16.12	13.44	90	Swf	Ultisols	Tuffac. sandstone		
		II8A	15.13	1.27	4	15.13	16.12	13.44	90	Swf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II8A	15.13	1.27	4	15.13	16.12	13.44	90	Swf	Ultisols	Tuffac. sandstone	Torn	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II8A	14.84	0.40	3	14.90	15.20	14.41	90	Swf	Ultisols	Tuffac. sandstone	Recently fall	
		II8B	12.95	2.52	3	11.93	15.82	11.09	90	Swf	Ultisols	Tuffac. sandstone		
		II8C	11.57	0.43	3	11.34	12.07	11.30	90	Swf	Ultisols	Tuffac. sandstone		
		II8D	14.52	1.23	3	14.53	15.75	13.29	90	Swf	Ultisols	Tuffac. sandstone		
		II9A	9.14	2.20	22	9.51	12.01	1.38	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	10.68	2.66	22	10.31	17.23	6.73	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	9.24	2.03	5	9.04	12.49	7.04	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	6.94	0.91	6	7.41	7.70	5.42	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	5.97	0.94	5	5.79	7.54	5.11	139	Wfs	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II9A	3.09	0.68	22	3.00	5.58	2.17	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	3.34	0.85	22	3.31	5.60	2.23	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	3.27	0.83	5	2.88	4.62	2.58	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	3.56	0.43	6	3.65	3.96	2.80	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	2.70	0.40	5	2.80	3.12	2.04	139	Wfs	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II8A	0.78	0.26	4	0.78	1.16	0.56	90	Swf	Ultisols	Tuffac. sandstone	Torn	
		II8A	0.50	0.07	3	0.50	0.56	0.43	90	Swf	Ultisols	Tuffac. sandstone	Recently fall	
		II8B	0.32	0.05	3	0.34	0.35	0.26	90	Swf	Ultisols	Tuffac. sandstone		
		II8C	0.73	0.06	3	0.73	0.79	0.68	90	Swf	Ultisols	Tuffac. sandstone		
		II8D	1.23	0.20	3	1.15	1.46	1.09	90	Swf	Ultisols	Tuffac. sandstone		
		II9A	0.52	0.16	22	0.47	0.98	0.34	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	1.67	0.29	22	1.59	2.40	1.32	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	0.35	0.26	10	0.27	0.82	0.13	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	0.41	0.06	11	0.39	0.51	0.31	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	0.95	0.23	10	0.97	1.25	0.56	139	Wfs	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II8A	0.26	0.09	4	0.26	0.39	0.18	90	Swf	Ultisols	Tuffac. sandstone	Torn	
		II8A	0.14	0.01	3	0.14	0.15	0.13	90	Swf	Ultisols	Tuffac. sandstone	Recently fall	
		II8B	0.09	0.03	3	0.11	0.11	0.06	90	Swf	Ultisols	Tuffac. sandstone		
		II8B	0.10	0.03	3	0.11	0.11	0.06	90	Swf	Ultisols	Tuffac. sandstone		
		II8C	0.30	0.03	3	0.31	0.32	0.26	90	Swf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Potassium (mg/g)	II8D	0.48	0.11	3	0.44	0.60	0.39	90	Swf	Ultisols	Tuffac. sandstone		
		II9A	0.19	0.08	22	0.17	0.36	0.08	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	0.62	0.26	22	0.52	1.54	0.42	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	0.10	0.43	5	0.08	0.17	0.07	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	0.27	0.09	6	0.26	0.39	0.19	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	0.55	0.07	5	0.54	0.62	0.46	139	Wfs	Ultisols	Tuffac. sandstone		
		II8A	3.14	0.85	4	3.14	3.97	2.15	90	Swf	Ultisols	Tuffac. sandstone	Torn	
		II8A	2.68	0.57	3	2.45	3.33	2.26	90	Swf	Ultisols	Tuffac. sandstone	Recently fall	
		II8B	1.87	0.48	3	1.88	2.34	1.38	90	Swf	Ultisols	Tuffac. sandstone		
		II8C	2.47	0.74	3	2.11	3.32	1.99	90	Swf	Ultisols	Tuffac. sandstone		
		II8D	3.19	0.90	3	2.70	4.23	2.71	90	Swf	Ultisols	Tuffac. sandstone		
		II9A	3.48	0.97	22	3.33	5.17	0.80	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	4.84	1.49	22	4.67	8.76	2.06	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	2.91	0.98	5	2.59	4.64	2.28	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	3.56	0.21	6	3.50	3.84	3.28	139	Wfs	Ultisols	Tuffac. sandstone		
II9D	3.26	0.56	5	3.20	4.19	2.71	139	Wfs	Ultisols	Tuffac. sandstone				
<i>Eucalyptus robusta</i>	Aluminum (mg/g)	II8	2.76	2.53	19	1.58	7.92	0.19	152	Mfs	Histosol	Alluvial deposits		
	Ash (%)	II8	29.27	24.65	19	17.42	83.48	5.63	152	Mfs	Histosol	Alluvial deposits		
	C/N	II8	39	17	19	35	86	18	152	Mfs	Histosol	Alluvial deposits		
	Calcium (mg/g)	II8	28.05	8.39	19	26.30	41.38	16.60	152	Mfs	Histosol	Alluvial deposits		
	Carbon (%)	II8	42	14	19	50	53	12	152	Mfs	Histosol	Alluvial deposits		
	Iron (mg/g)	II8	4.78	4.58	19	2.49	13.18	0.26	152	Mfs	Histosol	Alluvial deposits		
	Magnesium (mg/g)	II8	3.49	1.20	19	2.863	6.59	2.32	152	Mfs	Histosol	Alluvial deposits		
	Manganese (mg/g)	II8	0.30	0.11	19	0.25	0.55	0.16	152	Mfs	Histosol	Alluvial deposits		
	Nitrogen (%)	II8	1.16	0.45	19	1.13	2.21	0.45	152	Mfs	Histosol	Alluvial deposits		
	Phosphorus (mg/g)	II8	0.32	0.11	19	0.27	0.59	0.17	152	Mfs	Histosol	Alluvial deposits		
	Potassium (mg/g)	II8	2.04	0.39	19	1.89	2.78	1.45	152	Mfs	Histosol	Alluvial deposits		
	Sulfur (%)	II8	0.26	0.10	19	0.26	0.47	0.09	152	Mfs	Histosol	Alluvial deposits		

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<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Wood density (g/cc)	II1B	0.85	0.03	3	0.85	0.87	0.82	97	Wfs	Inceptisols	Tuffac. sandstone		
<i>Eucalyptus saligna</i>	Ash (%)	II8A	3.14		1				90	Swf	Ultisols	Tuffac. sandstone	New	
		II8A	3.79		1				90	Swf	Ultisols	Tuffac. sandstone	Old	
		II8A	5.15	0.61	5	5.16	5.79	4.19	90	Swf	Ultisols	Tuffac. sandstone	Seeds	
		II8B	4.44	1.25	3	5.08	5.23	3.00	90	Swf	Ultisols	Tuffac. sandstone		
		II8C	4.52	1.66	3	4.27	6.29	3.00	90	Swf	Ultisols	Tuffac. sandstone	Torn	
	Calcium (mg/g)	II8D	12.39	4.66	3	11.33	17.49	8.35	90	Swf	Ultisols	Tuffac. sandstone		
		II8A	6.13		1				90	Swf	Ultisols	Tuffac. sandstone	New	
		II8A	11.14		1				90	Swf	Ultisols	Tuffac. sandstone	Old	
		II8C	12.45	2.04	5	13.37	13.82	9.62	90	Swf	Ultisols	Tuffac. sandstone	Seeds	
		II8B	12.96	4.05	3	15.23	15.37	8.28	90	Swf	Ultisols	Tuffac. sandstone		
		II8C	7.12	1.22	3	7.20	8.29	5.86	90	Swf	Ultisols	Tuffac. sandstone	Torn	
		II8D	11.51	0.56	3	11.66	11.98	10.89	90	Swf	Ultisols	Tuffac. sandstone		
		II9A	7.97	0.92	22	7.98	10.14	6.08	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	12.16	3.82	21	10.72	22.77	7.90	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	5.35	1.86	6	5.87	7.23	2.38	139	Wfs	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II9C	4.87	0.53	6	4.80	5.70	4.28	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	7.07	0.81	5	7.47	7.88	6.14	139	Wfs	Ultisols	Tuffac. sandstone		
		II8A	2.28		1				90	Swf	Ultisols	Tuffac. sandstone	New	
		II8A	2.69		1				90	Swf	Ultisols	Tuffac. sandstone	Old	
		II8C	2.31	0.42	5	2.37	2.94	1.85	90	Swf	Ultisols	Tuffac. sandstone	Seeds	
II8B		1.75	0.47	3	1.93	2.10	1.22	90	Swf	Ultisols	Tuffac. sandstone			
II8C		1.70	0.48	3	1.54	2.23	1.31	90	Swf	Ultisols	Tuffac. sandstone	Torn		
II8D		2.52	0.63	3	2.33	2.81	2.01	90	Swf	Ultisols	Tuffac. sandstone			
II9A		2.66	0.40	22	2.66	3.51	1.94	139	Wfs	Ultisols	Tuffac. sandstone			
II9A		4.38	1.06	21	4.23	6.69	2.44	139	Wfs	Ultisols	Tuffac. sandstone	Other		
II9B	1.89	0.70	6	2.03	2.42	0.52	139	Wfs	Ultisols	Tuffac. sandstone				
II9C	2.29	0.37	6	2.30	2.87	1.82	139	Wfs	Ultisols	Tuffac. sandstone				

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Nitrogen (%)	II9D	2.82	0.34	5	2.93	3.27	2.40	139	Wfs	Ultisols	Tuffac. sandstone		
		II8A	0.92		1				90	Swf	Ultisols	Tuffac. sandstone	New	
		II8A	0.79		1				90	Swf	Ultisols	Tuffac. sandstone	Old	
		II8C	0.73	0.06	5	0.75	0.78	0.67	90	Swf	Ultisols	Tuffac. sandstone	Seeds	
		II8B	0.85	0.10	3	0.81	0.97	0.75	90	Swf	Ultisols	Tuffac. sandstone		
		II8C	1.57	0.16	3	1.59	1.71	1.40	90	Swf	Ultisols	Tuffac. sandstone	Torn	
		II8D	1.20	0.09	3	1.25	1.25	1.09	90	Swf	Ultisols	Tuffac. sandstone	Loose litter	
		II9A	0.84	0.23	22	0.78	1.32	0.55	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	1.59	0.43	22	1.73	2.41	0.86	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	0.26	0.09	11	0.26	0.42	0.14	139	Wfs	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II9C	0.49	0.10	11	0.46	0.72	0.38	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	1.17	0.17	10	1.21	1.37	0.76	139	Wfs	Ultisols	Tuffac. sandstone		
		II8A	0.35		1				90	Swf	Ultisols	Tuffac. sandstone	New	
		II8A	0.17		1				90	Swf	Ultisols	Tuffac. sandstone	Old	
		II8C	0.27	0.04	5	0.26	0.32	0.23	90	Swf	Ultisols	Tuffac. sandstone	Seeds	
		II8B	0.14	0.01	3	0.14	0.15	0.14	90	Swf	Ultisols	Tuffac. sandstone		
		II8C	0.33	0.02	3	0.33	0.35	0.31	90	Swf	Ultisols	Tuffac. sandstone	Torn	
		II8D	0.40	0.02	3	0.40	0.43	0.39	90	Swf	Ultisols	Tuffac. sandstone		
		II9A	0.29	0.12	22	0.27	0.56	0.12	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	0.61	0.23	21	0.63	1.14	0.25	139	Wfs	Ultisols	Tuffac. sandstone	Other	
	Potassium (mg/g)	II9B	0.07	0.04	6	0.55	0.15	0.03	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	0.30	0.04	6	0.30	0.37	0.26	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	0.58	0.07	5	0.63	0.63	0.46	139	Wfs	Ultisols	Tuffac. sandstone		
		II8A	2.89		1				90	Swf	Ultisols	Tuffac. sandstone	New	
		II8A	1.37		1				90	Swf	Ultisols	Tuffac. sandstone	Old	
		II8C	2.34	1.08	5	1.67	3.53	1.38	90	Swf	Ultisols	Tuffac. sandstone	Seeds	
		II8B	1.78	0.95	3	1.59	2.81	0.94	90	Swf	Ultisols	Tuffac. sandstone		
		II8C	1.42	0.42	3	1.29	1.89	1.08	90	Swf	Ultisols	Tuffac. sandstone	Torn	
	II8D	1.95	0.96	3	1.71	3.01	1.13	90	Swf	Ultisols	Tuffac. sandstone			



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II9A	3.68	1.14	22	3.36	7.48	2.49	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	5.53	1.87	21	5.27	9.93	2.72	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	1.87	0.91	6	1.54	3.68	1.28	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	3.03	0.68	6	2.76	4.24	2.42	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	3.44	1.27	5	2.66	4.91	2.30	139	Wfs	Ultisols	Tuffac. sandstone		
<i>Eugeia eggersii</i>	Calcium (mg/g)	III1A	7.45		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		III1B	4.97		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		III1C	0.69		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	III1A	2.15		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		III1B	0.77		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		III1C	0.19		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	III1A	1.47		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		III1B	0.54		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		III1C	0.25		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	III1A	0.67		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		III1B	0.32		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	III1A	8.61		1				135	Lmrf	Ultisols	Tuffac. sandstone		
III1B		4.22		1				135	Lmrf	Ultisols	Tuffac. sandstone			
III1C		3.47		1				135	Lmrf	Ultisols	Tuffac. sandstone			
<i>Eugenia borinquensis</i>	Aluminum (mg/g)	III1A	0.18		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		III1B	0.11		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		III1C	0.13		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Ash (%)	III1A	2.88		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		III1B	3.73		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		III1C	0.78		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	C/N	III1A	55		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		III1B	66		1				93	Wflm	Inceptisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
	Calcium (mg/g)	II1C	200		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1A	2.97		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1B	7.09		1				93	Wflm	Inceptisols	Tuffac. sandstone			
	Iron (mg/g)	II1C	2.71		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1A	0.07		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1B	0.11		1				93	Wflm	Inceptisols	Tuffac. sandstone			
	Magnesium (mg/g)	II1C	0.11		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1A	1.60		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1B	1.92		1				93	Wflm	Inceptisols	Tuffac. sandstone			
	Manganese (mg/g)	II1C	0.57		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1A	0.16		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1B	0.12		1				93	Wflm	Inceptisols	Tuffac. sandstone			
	Nitrogen (%)	II1C	0.03		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1A	0.82		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1B	0.67		1				93	Wflm	Inceptisols	Tuffac. sandstone			
	Phosphorus (mg/g)	II1C	0.23		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1A	0.55		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1B	0.93		1				93	Wflm	Inceptisols	Tuffac. sandstone			
	Potassium (mg/g)	II1C	2.00		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1A	8.87		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1B	9.16		1				93	Wflm	Inceptisols	Tuffac. sandstone			
	<i>Eugenia eggersii</i>	Aluminum (mg/g)	II1C	3.30		1				93	Wflm	Inceptisols	Tuffac. sandstone		
			II1A	0.22		1				93	Wflm	Inceptisols	Tuffac. sandstone		
			II1B	0.06	0.03	2	0.06	0.08	0.04	93	Wflm	Inceptisols	Tuffac. sandstone		
Ash (%)		II1C	0.45		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1A	5.25		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1B	3.15	0.08	2	3.15	3.20	3.09	93	Wflm	Inceptisols	Tuffac. sandstone			
		II1C	0.45		1				93	Wflm	Inceptisols	Tuffac. sandstone			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
	C/N	II1A	35		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1B	96	12	2	96	104	88	93	Wflm	Inceptisols	Tuffac. sandstone			
		II1C	382		1				93	Wflm	Inceptisols	Tuffac. sandstone			
	Calcium (mg/g)	II1A	9.08		1					93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	4.91	2.80	2	4.91	6.89	2.93	93	Wflm	Inceptisols	Tuffac. sandstone			
		II1C	0.86		1				93	Wflm	Inceptisols	Tuffac. sandstone			
	Iron (mg/g)	II1A	0.14		1					93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	0.09	0.03	2	0.09	0.11	0.07	93	Wflm	Inceptisols	Tuffac. sandstone			
		II1C	0.05		1				93	Wflm	Inceptisols	Tuffac. sandstone			
	Magnesium (mg/g)	II1A	3.96		1					93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	1.23	0.16	2	1.23	1.35	1.12	93	Wflm	Inceptisols	Tuffac. sandstone			
		II1C	0.32		1				93	Wflm	Inceptisols	Tuffac. sandstone			
	Manganese (mg/g)	II1A	0.11		1					93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	0.04	0.02	2	0.36	0.05	0.03	93	Wflm	Inceptisols	Tuffac. sandstone			
		II1C	0.18		1				93	Wflm	Inceptisols	Tuffac. sandstone			
	Nitrogen (%)	II1A	1.24		1					93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	0.47	0.06	2	0.47	0.51	0.43	93	Wflm	Inceptisols	Tuffac. sandstone			
		II1C	0.12		1				93	Wflm	Inceptisols	Tuffac. sandstone			
	Phosphorus (mg/g)	II1A	0.65		1					93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	0.37	0.15	2	0.37	0.48	0.26	93	Wflm	Inceptisols	Tuffac. sandstone			
		II1C	0.15		1				93	Wflm	Inceptisols	Tuffac. sandstone			
	Potassium (mg/g)	II1A	10.28		1					93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	6.21	1.97	2	6.21	7.61	4.82	93	Wflm	Inceptisols	Tuffac. sandstone			
		II1C	1.86		1				93	Wflm	Inceptisols	Tuffac. sandstone			
	<i>Eugenia foetida</i>	Calcium (mg/g)	II1A	13.69		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
			II1Ci	19.73		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		Magnesium (mg/g)	II1A	3.74		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
II1Ci			1.66		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Nitrogen (%)	II1A	1.42		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1Ci	0.82		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Phosphorus (mg/g)	II1A	0.38		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1Ci	0.26		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Potassium (mg/g)	II1A	11.13		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1Ci	7.28		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
<i>Eugenia maleolens</i>	Calcium (mg/g)	II1A	13.69		1				104	Sdf	Mollisols	Alluvial deposits		
		II1Ci	19.73		1				104	Sdf	Mollisols	Alluvial deposits		
	Magnesium (mg/g)	II1A	3.74		1				104	Sdf	Mollisols	Alluvial deposits		
		II1Ci	1.66		1				104	Sdf	Mollisols	Alluvial deposits		
	Phosphorus (mg/g)	II1A	0.38		1				104	Sdf	Mollisols	Alluvial deposits		
		II1Ci	0.26		1				104	Sdf	Mollisols	Alluvial deposits		
Potassium (mg/g)	II1A	11.13		1				104	Sdf	Mollisols	Alluvial deposits			
	II1Ci	7.28		1				104	Sdf	Mollisols	Alluvial deposits			
<i>Eugenia monticola</i>	Ash (%)	II1A	4.58	0.38	5	4.76	4.92	3.96	126	Lmrf	Ultisols	Tuffac. sandstone	Mameyes, Luquillo	
		II1C	1.63	0.29	5	1.67	2.01	1.24	126	Lmrf	Ultisols	Tuffac. sandstone	Mameyes, Luquillo	
		II1Ci	6.85	1.38	6	6.85	9.04	4.70	126	Lmrf	Ultisols	Tuffac. sandstone	Mameyes, Luquillo	
	C/N	II1A	36	1	5	36	37	36	126	Lmrf	Ultisols	Tuffac. sandstone	Mameyes, Luquillo	
		II1C	143	28	5	141	178	104	126	Lmrf	Ultisols	Tuffac. sandstone	Mameyes, Luquillo	
		II1Ci	49	3	6	49	53	45	126	Lmrf	Ultisols	Tuffac. sandstone	Mameyes, Luquillo	
	Carbon (%)	II1A	54	0	5	54	54	54	126	Lmrf	Ultisols	Tuffac. sandstone	Mameyes, Luquillo	
		II1C	52	0	5	52	53	52	126	Lmrf	Ultisols	Tuffac. sandstone	Mameyes, Luquillo	
		II1Ci	51	1	6	52	52	49	126	Lmrf	Ultisols	Tuffac. sandstone	Mameyes, Luquillo	
	Nitrogen (%)	II1A	1.48	0.02	5	1.49	1.51	1.45	126	Lmrf	Ultisols	Tuffac. sandstone	Mameyes, Luquillo	
		II1C	0.38	0.08	5	0.37	0.50	0.29	126	Lmrf	Ultisols	Tuffac. sandstone	Mameyes, Luquillo	
		II1Ci	1.05	0.04	6	1.05	1.10	0.98	126	Lmrf	Ultisols	Tuffac. sandstone	Mameyes, Luquillo	
Sulfur (%)	II1A	0.16	0.01	5	0.15	0.17	0.15	126	Lmrf	Ultisols	Tuffac. sandstone	Mameyes, Luquillo		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1C	0.07	0.01	5	0.06	0.08	0.06	126	Lmrf	Ultisols	Tuffac. sandstone	Mameyes, Luquillo	
		II1Ci	0.18	0.03	6	0.19	0.22	0.13	126	Lmrf	Ultisols	Tuffac. sandstone	Mameyes, Luquillo	
	Wood density (g/cc)	II1C	0.71	0.03	5	0.72	0.74	0.66	126	Lmrf	Ultisols	Tuffac. sandstone	Mameyes, Luquillo	
<i>Eugenia rhombea</i>	Calcium (mg/g)	II1Ci	25.00		1				104	Sdf	Mollisols	Alluvial deposits		
		II1Ci	25.00		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Magnesium (mg/g)	II1Ci	0.49		1				104	Sdf	Mollisols	Alluvial deposits		
		II1Ci	0.49		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Nitrogen (%)	II1A	0.97		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1Ci	0.55		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Phosphorus (mg/g)	II1A	0.26		1				104	Sdf	Mollisols	Alluvial deposits		
		II1A	0.26		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1Ci	0.13		1				104	Sdf	Mollisols	Alluvial deposits		
		II1Ci	0.13		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Potassium (mg/g)	II1A	12.41		1				104	Sdf	Mollisols	Alluvial deposits		
		II1A	12.41		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	II1Ci	5.88		1				104	Sdf	Mollisols	Alluvial deposits			
	II1Ci	5.88		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest		
<i>Eugenia stahlii</i>	Ash (%)	II1A	7.34	0.90	3	7.00	8.36	6.67	94	Swf	Ultisols	Tuffac. sandstone		
		II1B	8.59	0.59	3	8.52	9.19	8.02	94	Swf	Ultisols	Tuffac. sandstone		
		II1C	1.58	0.11	2	1.58	1.65	1.50	94	Swf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II1A	0.76	0.07	3	0.76	0.83	0.69	94	Swf	Ultisols	Tuffac. sandstone		
		II1B	0.46	0.03	3	0.47	0.48	0.42	94	Swf	Ultisols	Tuffac. sandstone		
		II1C	0.22	0.01	2	0.22	0.22	0.21	94	Swf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II1A	0.46	0.07	3	0.43	0.53	0.42	94	Swf	Ultisols	Tuffac. sandstone		
		II1B	0.42	0.08	3	0.40	0.51	0.34	94	Swf	Ultisols	Tuffac. sandstone		
		II1C	0.19	0.00	2	0.19	0.19	0.19	94	Swf	Ultisols	Tuffac. sandstone		
Potassium (mg/g)	II1A	5.56	1.58	3	4.96	7.36	4.37	94	Swf	Ultisols	Tuffac. sandstone			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1B	0.50	0.26	3	0.37	0.80	0.32	94	Swf	Ultisols	Tuffac. sandstone		
		II1C	1.19	0.15	2	1.19	1.29	1.08	94	Swf	Ultisols	Tuffac. sandstone		
<i>Exostema caribaea</i>	Aluminum (mg/kg)	II1A	44		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		II1A	55	20	11	63	77	19	151	Sdf	Mollisols	Alluvial deposits		
		II1A	63		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
	Ash (%)	II1A	3.93		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
		II1A	3.97		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		II1A	3.83	0.09	11	3.81	3.98	3.70	151	Sdf	Mollisols	Alluvial deposits		
	C/N	II1A	21	1	11	21	22	20	151	Sdf	Mollisols	Alluvial deposits		
	Calcium (mg/g)	II1A	14.02	6.68	14	11.24	23.11	5.60	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1A	5.79		1				104	Sdf	Mollisols	Alluvial deposits	New	
		II1A	15.39	6.19	6	14.95	23.11	8.36	104	Sdf	Mollisols	Alluvial deposits		
		II1A	4.46		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
		II1A	5.56		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		II1A	7.61	0.66	11	7.74	8.56	6.44	151	Sdf	Mollisols	Alluvial deposits		
		II1Ci	16.30		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1Ci	16.30		1				104	Sdf	Mollisols	Alluvial deposits		
	Carbon (%)	II1A	56	1	11	56	57	55	151	Sdf	Mollisols	Alluvial deposits		
	Cobalt (µg/g)	II1A	0.43		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
	Iron (mg/g)	II1A	0.10		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		II1A	0.07	0.02	11	0.08	0.10	0.04	151	Sdf	Mollisols	Alluvial deposits		
		II1A	0.10		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
	Magnesium (mg/g)	II1A	2.07	1.14	16	1.67	4.73	1.05	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1A	1.07		1				104	Sdf	Mollisols	Alluvial deposits	New	
		II1A	2.21	1.15	7	1.93	4.73	1.27	104	Sdf	Mollisols	Alluvial deposits		
		II1A	1.37		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
		II1A	7.04		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		II1A	0.92	0.07	11	0.90	1.05	0.81	151	Sdf	Mollisols	Alluvial deposits		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		III1Ci	0.28		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		III1Ci	0.28		1				104	Sdf	Mollisols	Alluvial deposits		
	Manganese (mg/g)	III1A	0.01		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		III1A	0.02	0.01	11	0.02	0.03	0.01	151	Sdf	Mollisols	Alluvial deposits		
		III1A	0.04		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
	Nickel (µg/g)	III1A	12.80		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
	Nitrogen (%)	III1A	1.57	0.14	14	1.54	1.77	1.35	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		III1A	1.77		1				104	Sdf	Mollisols	Alluvial deposits	New	
		III1A	1.54	0.13	6	1.52	1.77	1.35	104	Sdf	Mollisols	Alluvial deposits		
		III1A	2.08		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
		III1A	1.38		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		III1A	2.66	0.10	11	2.67	2.82	2.52	151	Sdf	Mollisols	Alluvial deposits		
		III1Ci	0.63		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Phosphorus (mg/g)	III1A	0.48	0.11	16	0.45	0.70	0.36	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		III1A	0.63		1				104	Sdf	Mollisols	Alluvial deposits	New	
		III1A	0.46	0.11	7	0.44	0.70	0.36	104	Sdf	Mollisols	Alluvial deposits		
		III1A	0.86		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
		III1A	0.43		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		III1A	0.43	0.04	11	0.43	0.50	0.39	151	Sdf	Mollisols	Alluvial deposits		
		III1Ci	0.14		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		III1Ci	0.14		1				104	Sdf	Mollisols	Alluvial deposits		
	Potassium (mg/g)	III1A	10.25	1.79	16	9.43	13.20	7.88	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		III1A	12.55		1				104	Sdf	Mollisols	Alluvial deposits	New	
		III1A	9.92	1.66	7	9.35	13.20	7.88	104	Sdf	Mollisols	Alluvial deposits		
		III1A	11.97		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
		III1A	5.32		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		III1A	4.52	0.37	11	4.51	5.41	4.10	151	Sdf	Mollisols	Alluvial deposits		
		III1Ci	7.48		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		III1Ci	7.48		1				104	Sdf	Mollisols	Alluvial deposits		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
	Sulfur (%)	II1A	0.23	0.02	11	0.23	0.25	0.17	151	Sdf	Mollisols	Alluvial deposits			
	Zinc (µg/g)	II1A	21.90		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest		
<i>Faramaea occidentalis</i>	Ash (%)	II1A	8.60	0.69	6	8.55	9.51	7.73	126		Ultisols	Siltstone,sandstone	Urban forest, RP		
		II1C	2.30	0.57	6	2.48	2.72	1.24	126		Ultisols	Siltstone,sandstone	Urban forest, RP		
		II1Ci	8.49	0.67	5	8.60	9.39	7.61	126		Ultisols	Siltstone,sandstone	Urban forest, RP		
	C/N	II1A	27	1	6	27	28	26	126		Ultisols	Siltstone,sandstone	Urban forest, RP		
		II1C	135	25	6	143	164	98	126		Ultisols	Siltstone,sandstone	Urban forest, RP		
		II1Ci	32	6	5	32	38	22	126		Ultisols	Siltstone,sandstone	Urban forest, RP		
	Carbon (%)	II1A	49	0	6	49	49	48	126		Ultisols	Siltstone,sandstone	Urban forest, RP		
		II1C	51	0	6	51	52	50	126		Ultisols	Siltstone,sandstone	Urban forest, RP		
		II1Ci	49	1	5	49	50	48	126		Ultisols	Siltstone,sandstone	Urban forest, RP		
	Nitrogen (%)	II1A	1.81	0.04	6	1.81	1.86	1.75	126		Ultisols	Siltstone,sandstone	Urban forest, RP		
		II1C	0.39	0.08	6	0.36	0.52	0.31	126		Ultisols	Siltstone,sandstone	Urban forest, RP		
		II1Ci	1.60	0.37	5	1.57	2.22	1.27	126		Ultisols	Siltstone,sandstone	Urban forest, RP		
	Sulfur (%)	II1A	0.26	0.02	6	0.25	0.28	0.24	126		Ultisols	Siltstone,sandstone	Urban forest, RP		
		II1C	0.07	0.01	6	0.06	0.09	0.05	126		Ultisols	Siltstone,sandstone	Urban forest, RP		
		II1Ci	0.22	0.07	5	0.19	0.34	0.17	126		Ultisols	Siltstone,sandstone	Urban forest, RP		
Wood density (g/cc)	II1C	0.62	0.08	5	0.62	0.72	0.53	126		Ultisols	Siltstone,sandstone	Urban forest, RP			
<i>Ficus citrifolia</i>	Aluminum (mg/kg)	II1A	20		1				55	Dfs	Mangle	Dune deposits			
		II8A	73	63	3	54	143	22	55	Dfs	Mangle	Dune deposits			
		II8A	141		1					55	Dfs	Mangle	Dune deposits	Mona Island	
		II8D	145	100	2	145	216	74	55	Dfs	Mangle	Dune deposits			
	Ash (%)	II1A	13.98	0.27	5	13.95	14.37	13.63	55	Dfs	Mangle	Dune deposits			
		II8A	16.98	0.33	3	16.79	17.37	16.79	55	Dfs	Mangle	Dune deposits			
		II8A	8.48		1					55	Dfs	Mangle	Dune deposits	Mona Island	
		II8D	39.33	14.21	2	39.33	49.38	29.28	55	Dfs	Mangle	Dune deposits			
	Calcium (mg/g)	II1A	20.26	1.60	5	20.08	22.78	18.68	55	Dfs	Mangle	Dune deposits			



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II8A	36.69	6.21	3	35.15	43.53	31.40	55	Dfs	Mangle	Dune deposits		
		II8A	21.88		1				55	Dfs	Mangle	Dune deposits	Mona Island	
		II8D	103.03	29.12	2	103.03	123.62	82.44	55	Dfs	Mangle	Dune deposits		
	Iron (mg/g)	II1A	0.04	0.01	5	0.04	0.04	0.03	55	Dfs	Mangle	Dune deposits		
		II8A	0.09	0.02	3	0.10	0.11	0.07	55	Dfs	Mangle	Dune deposits		
		II8A	0.12		1				55	Dfs	Mangle	Dune deposits	Mona Island	
		II8D	0.26	0.00	2	0.26	0.26	0.25	55	Dfs	Mangle	Dune deposits		
	Magnesium (mg/g)	II1A	2.87	0.13	5	2.82	3.07	2.72	55	Dfs	Mangle	Dune deposits		
		II8A	3.65	0.32	3	3.61	3.99	3.35	55	Dfs	Mangle	Dune deposits		
		II8A	1.88		1				55	Dfs	Mangle	Dune deposits	Mona Island	
		II8D	4.85	2.10	2	4.85	6.33	3.36	55	Dfs	Mangle	Dune deposits		
	Manganese (mg/kg)	II1A	28	5	5	27	36	25	55	Dfs	Mangle	Dune deposits		
		II8A	51	13	3	45	65	42	55	Dfs	Mangle	Dune deposits		
		II8A	30		1				55	Dfs	Mangle	Dune deposits	Mona Island	
		II8D	52	5	2	52	55	48	55	Dfs	Mangle	Dune deposits		
	Nitrogen (%)	II1A	3.43	0.67	5	3.89	3.95	2.65	55	Dfs	Mangle	Dune deposits		
		II8A	3.95	0.77	3	4.39	4.40	3.06	55	Dfs	Mangle	Dune deposits		
		II8A	0.60		1				55	Dfs	Mangle	Dune deposits	Mona Island	
		II8D	8.80	2.28	2	8.88	10.49	7.26	55	Dfs	Mangle	Dune deposits		
	Phosphorus (mg/g)	II1A	4.58	0.94	5	4.92	5.20	2.93	55	Dfs	Mangle	Dune deposits		
		II8A	10.61	4.01	3	12.11	13.65	6.07	55	Dfs	Mangle	Dune deposits		
		II8A	0.19		1				55	Dfs	Mangle	Dune deposits	Mona Island	
		II8D	53.79	20.27	2	53.79	68.12	39.46	55	Dfs	Mangle	Dune deposits		
	Potassium (mg/g)	II1A	12.39	0.05	5	12.42	12.44	12.33	55	Dfs	Mangle	Dune deposits		
		II8A	6.74	1.81	3	7.61	7.93	4.70	55	Dfs	Mangle	Dune deposits		
		II8A	0.97		1				55	Dfs	Mangle	Dune deposits	Mona Island	
		II8D	9.14	1.92	2	9.14	10.49	7.78	55	Dfs	Mangle	Dune deposits		
	Sodium (mg/g)	II1A	1.96	0.19	5	1.87	2.21	1.75	55	Dfs	Mangle	Dune deposits		
		II8A	2.27	0.71	3	2.32	2.96	1.54	55	Dfs	Mangle	Dune deposits		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II8A	1.32		1				55	Dfs	Mangle	Dune deposits	Mona Island	
		II8D	5.16	1.82	2	5.16	6.44	3.87	55	Dfs	Mangle	Dune deposits		
	Wood density (g/cc)	II1B	0.42	0.01	3	0.42	0.43	0.41	97	Wfs	Inceptisols	Tuffac. sandstone		
<i>Forest Floor-Logs</i>	Calcium (mg/g)	II6	4.74	3.74	2	4.74	7.38	2.09	95	Wfs	Ultisols	Tuffac. sandstone	Class 3	
		II6	6.65	3.96	3	5.52	10.81	3.06	95	Wfs	Ultisols	Tuffac. sandstone	Class 3--4	
		II6	6.47	3.96	3	5.52	10.81	3.06	95	Wfs	Ultisols	Tuffac. sandstone	Class 4	
		II6	6.48	2.64	6	6.19	9.41	3.93	95	Wfs	Ultisols	Tuffac. sandstone	Class 4--5	
		II6	7.87	4.55	17	6.50	17.07	2.55	95	Wfs	Ultisols	Tuffac. sandstone	Class 5	
	Magnesium (mg/g)	II6	3.78	1.80	2	3.78	5.06	2.51	95	Wfs	Ultisols	Tuffac. sandstone	Class 3	
		II6	2.56	0.14	3	2.64	2.64	2.41	95	Wfs	Ultisols	Tuffac. sandstone	Class 3--4	
		II6	2.56	0.14	3	2.64	2.64	2.41	95	Wfs	Ultisols	Tuffac. sandstone	Class 4	
		II6	1.84	1.38	5	1.37	4.20	0.64	95	Wfs	Ultisols	Tuffac. sandstone	Class 4--5	
		II6	3.09	2.02	17	2.56	8.25	0.78	95	Wfs	Ultisols	Tuffac. sandstone	Class 5	
	Nitrogen (%)	II6	1.26	0.37	2	1.26	1.52	1.00	95	Wfs	Ultisols	Tuffac. sandstone	Class 3	
		II6	1.10	0.30	3	1.16	1.36	0.78	95	Wfs	Ultisols	Tuffac. sandstone	Class 3--4	
		II6	1.10	0.30	3	1.16	1.36	0.78	95	Wfs	Ultisols	Tuffac. sandstone	Class 4	
		II6	1.16	0.22	5	1.15	1.43	0.94	95	Wfs	Ultisols	Tuffac. sandstone	Class 4--5	
		II6	1.19	0.34	17	1.15	1.65	0.80	95	Wfs	Ultisols	Tuffac. sandstone	Class 5	
	Phosphorus (mg/g)	II6	0.81	0.48	2	0.81	1.15	0.47	95	Wfs	Ultisols	Tuffac. sandstone	Class 3	
		II6	0.67	0.35	3	0.50	1.06	0.43	95	Wfs	Ultisols	Tuffac. sandstone	Class 3--4	
		II6	0.67	0.35	3	0.50	1.06	0.43	95	Wfs	Ultisols	Tuffac. sandstone	Class 4	
		II6	0.44	0.11	5	0.43	0.57	0.33	95	Wfs	Ultisols	Tuffac. sandstone	Class 4--5	
		II6	0.40	0.13	17	0.47	0.56	0.22	95	Wfs	Ultisols	Tuffac. sandstone	Class 5	
Potassium (mg/g)	II6	6.62	6.18	2	6.62	10.99	2.25	95	Wfs	Ultisols	Tuffac. sandstone	Class 3		
	II6	7.14	6.12	3	3.70	14.21	3.51	95	Wfs	Ultisols	Tuffac. sandstone	Class 3--4		
	II6	7.14	6.12	3	3.70	14.21	3.51	95	Wfs	Ultisols	Tuffac. sandstone	Class 4		
	II6	8.79	6.33	6	6.90	20.68	2.95	95	Wfs	Ultisols	Tuffac. sandstone	Class 4--5		
	II6	5.03	1.39	17	5.32	6.71	2.98	95	Wfs	Ultisols	Tuffac. sandstone	Class 5		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
<i>Forest Floor-Roots</i>	Calcium (mg/g)	II6	4.66	3.14	14	2.93	11.25	2.20	127	Wfs	Ultisols	Tuffac. sandstone	Dead roots	
		II6	3.20	0.76	20	3.25	4.50	1.67	127	Wfs	Ultisols	Tuffac. sandstone	roots <2mm	
		II6	5.11	2.78	18	4.54	9.86	1.28	127	Wfs	Ultisols	Tuffac. sandstone	roots >=5mm	
		II6	4.97	2.47	11	5.33	10.24	0.84	127	Wfs	Ultisols	Tuffac. sandstone	>=2mm<5mm	
	Magnesium (mg/g)	II6	2.06	0.76	14	0.18	3.93	1.06	127	Wfs	Ultisols	Tuffac. sandstone	Dead roots	
		II6	2.36	1.01	20	2.30	4.82	1.01	127	Wfs	Ultisols	Tuffac. sandstone	roots <2mm	
		II6	2.06	1.95	18	1.61	7.20	0.34	127	Wfs	Ultisols	Tuffac. sandstone	roots >=5mm	
		II6	2.92	1.60	11	2.31	6.34	0.79	127	Wfs	Ultisols	Tuffac. sandstone	>=2mm<5mm	
	Nitrogen (%)	II6	0.78	0.35	11	0.68	1.60	0.37	127	Wfs	Ultisols	Tuffac. sandstone	Dead roots	
		II6	1.05	0.37	10	1.01	1.83	0.52	127	Wfs	Ultisols	Tuffac. sandstone	roots <2mm	
		II6	0.43	0.23	10	0.40	1.03	0.16	127	Wfs	Ultisols	Tuffac. sandstone	roots >=5mm	
		II6	0.67	0.29	8	0.63	1.26	0.27	127	Wfs	Ultisols	Tuffac. sandstone	>=2mm<5mm	
	Phosphorus (mg/g)	II6	0.33	0.11	14	0.29	0.59	0.19	127	Wfs	Ultisols	Tuffac. sandstone	Dead roots	
		II6	0.48	0.13	20	0.46	0.80	0.28	127	Wfs	Ultisols	Tuffac. sandstone	Roots <2mm	
		II6	0.22	0.07	18	0.21	0.36	0.10	127	Wfs	Ultisols	Tuffac. sandstone	Roots >=5mm	
		II6	0.30	0.13	11	0.26	0.52	0.15	127	Wfs	Ultisols	Tuffac. sandstone	>=2mm<5mm	
Potassium (mg/g)	II6	1.91	1.18	14	1.70	4.72	0.77	127	Wfs	Ultisols	Tuffac. sandstone	Dead roots		
	II6	1.83	0.79	20	1.38	3.19	0.76	127	Wfs	Ultisols	Tuffac. sandstone	Roots <2mm		
	II6	2.32	0.91	18	2.33	3.97	0.65	127	Wfs	Ultisols	Tuffac. sandstone	Roots >=5mm		
	II6	2.17	1.08	11	1.70	4.61	1.29	127	Wfs	Ultisols	Tuffac. sandstone	>=2mm<5mm		
<i>Genipa americana</i>	Wood density (g/cc)	II1B	0.59	0.02	3	0.59	0.61	0.58	97	Wfs	Inceptisols	Tuffac. sandstone		
<i>Gleichenia spp.</i>	Aluminum (mg/g)	II6	6.11		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II6	1.07		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II6	0.33		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II6	1.28		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/kg)	II6	68		1				135	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
	Nitrogen (%)	II6	1.01		1				135	Lmrf	Ultisols	Tuffac. sandstone			
	Phosphorus (mg/g)	II6	0.43		1				135	Lmrf	Ultisols	Tuffac. sandstone			
	Potassium (mg/g)	II6	7.87		1				135	Lmrf	Ultisols	Tuffac. sandstone			
<i>Gomidesia lindeniana</i>	Aluminum (µg/g)	II1A	36		1				58	Lmrf	Ultisols	Serpentinite			
	Calcium (mg/g)	II1A	7.22		1				58	Lmrf	Ultisols	Serpentinite			
	Cobalt (µg/g)	II1A	0.84		1				58	Lmrf	Ultisols	Serpentinite			
	Copper (µg/g)	II1A	7.55		1				58	Lmrf	Ultisols	Serpentinite			
	Chromium (µg/g)	II1A	4.18		1				58	Lmrf	Ultisols	Serpentinite			
	Iron (µg/g)	II1A	82.75		1				58	Lmrf	Ultisols	Serpentinite			
	Magnesium (mg/g)	II1A	7.42		1				58	Lmrf	Ultisols	Serpentinite			
	Manganese (µg/g)	II1A	13.70		1				58	Lmrf	Ultisols	Serpentinite			
	Niquel (µg/g)	II1A	181		1				58	Lmrf	Ultisols	Serpentinite			
	Nitrogen (%)	II1A	0.76		1				58	Lmrf	Ultisols	Serpentinite			
	Phosphorus (mg/g)	II1A	7.88		1				58	Lmrf	Ultisols	Serpentinite			
	Potassium (mg/g)	II1A	9.96		1				58	Lmrf	Ultisols	Serpentinite			
<i>Gonzalagunia spicata</i>	Aluminum (mg/g)	II2	0.19		1				135	Lmrf	Ultisols	Tuffac. sandstone			
		II8A	0.57	0.17	2	0.57	0.86	0.27	146	Swf	Ultisols	Tuffac. sandstone			
		II8B	0.17	0.15	2	0.17	0.27	0.06	146	Swf	Ultisols	Tuffac. sandstone			
	Ash (%)	II8A	6.62	0.98	2	6.62	7.31	5.93	146	Swf	Ultisols	Tuffac. sandstone			
		II8B	1.98	1.57	2	1.98	3.09	0.87	146	Swf	Ultisols	Tuffac. sandstone			
	C/N	II8A	30	12	2	30	38	21	146	Swf	Ultisols	Tuffac. sandstone			
		II8B	94	9	2	94	100	87	146	Swf	Ultisols	Tuffac. sandstone			
	Calcium (mg/g)	II2	6.20		1					135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	10.24	3.32	2	10.24	12.59	7.89	146	Swf	Ultisols	Tuffac. sandstone			
		II8B	5.94	4.91	2	5.94	9.41	2.47	146	Swf	Ultisols	Tuffac. sandstone			
Carbon (%)	II8A	53	2	2	53	55	51	146	Swf	Ultisols	Tuffac. sandstone				
	II8B	54	0	2	54	54	51	146	Swf	Ultisols	Tuffac. sandstone				

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
	Iron (mg/g)	II2	0.14		1				135	Lmrf	Ultisols	Tuffac. sandstone			
		II8A	0.37	0.32	2	0.37	0.60	0.14	146	Swf	Ultisols	Tuffac. sandstone			
		II8B	0.09	0.07	2	0.09	0.14	0.03	146	Swf	Ultisols	Tuffac. sandstone			
	Magnesium (mg/g)	II2	3.30		1					135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	3.34	0.83	2	3.34	3.93	2.76	146	Swf	Ultisols	Tuffac. sandstone			
		II8B	0.83	0.42	2	0.83	1.13	0.54	146	Swf	Ultisols	Tuffac. sandstone			
	Manganese (mg/g)	II2	0.10		1					135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	0.21	0.09	2	0.21	0.27	0.14	146	Swf	Ultisols	Tuffac. sandstone			
		II8B	0.07	0.02	2	0.07	0.08	0.05	146	Swf	Ultisols	Tuffac. sandstone			
	Nitrogen (%)	II2	1.14		1					135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	1.96	0.88	2	1.96	2.58	1.34	146	Swf	Ultisols	Tuffac. sandstone			
		II8B	0.58	0.06	2	0.58	0.62	0.54	146	Swf	Ultisols	Tuffac. sandstone			
Phosphorus (mg/g)	II2	0.72		1					135	Lmrf	Ultisols	Tuffac. sandstone			
	II8A	0.56	0.06	2	0.56	0.60	0.52	146	Swf	Ultisols	Tuffac. sandstone				
	II8B	0.23	0.08	2	0.23	0.29	0.18	146	Swf	Ultisols	Tuffac. sandstone				
Potassium (mg/g)	II2	16.80		1					135	Lmrf	Ultisols	Tuffac. sandstone			
	II8A	6.94	7.39	2	6.94	12.16	1.72	146	Swf	Ultisols	Tuffac. sandstone				
	II8B	3.08	3.20	2	3.08	5.34	0.82	146	Swf	Ultisols	Tuffac. sandstone				
<i>Guaiacum officinale</i>	Calcium (mg/g)	III1Ci	26.74		1				104	Sdf	Mollisols	Alluvial deposits			
		III1Ci	26.74		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest		
	Magnesium (mg/g)	III1Ci	1.73		1				104	Sdf	Mollisols	Alluvial deposits			
		III1Ci	1.73		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest		
	Nitrogen (%)	III1A	1.81		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest		
		III1Ci	2.17		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest		
	Phosphorus (mg/g)	III1A	0.44		1				104	Sdf	Mollisols	Alluvial deposits			
		III1A	0.44		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest		
		III1Ci	0.13		1				104	Sdf	Mollisols	Alluvial deposits			
		III1Ci	0.13		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Potassium (mg/g)	II1A	12.85		1				104	Sdf	Mollisols	Alluvial deposits		
		II1A	12.85		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1Ci	8.23		1				104	Sdf	Mollisols	Alluvial deposits		
		II1Ci	8.23		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
<i>Guaiacum sanctum</i>	Calcium (mg/g)	II1A	17.37		1				104	Sdf	Mollisols	Alluvial deposits		
		II1A	17.37		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1Ci	63.48		1				104	Sdf	Mollisols	Alluvial deposits		
		II1Ci	63.48		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Magnesium (mg/g)	II1A	2.41		1				104	Sdf	Mollisols	Alluvial deposits		
		II1A	2.41		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1Ci	3.30		1				104	Sdf	Mollisols	Alluvial deposits		
		II1Ci	3.30		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Nitrogen (%)	II1A	1.72		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1Ci	1.18		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Phosphorus (mg/g)	II1A	0.41		1				104	Sdf	Mollisols	Alluvial deposits		
		II1A	0.41		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1Ci	0.19		1				104	Sdf	Mollisols	Alluvial deposits		
		II1Ci	0.19		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Potassium (mg/g)	II1A	14.87		1				104	Sdf	Mollisols	Alluvial deposits		
		II1A	14.87		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
II1Ci		14.62		1				104	Sdf	Mollisols	Alluvial deposits			
II1Ci		14.62		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest		
<i>Guanica Forest</i>	Aluminum (mg/g)	II1A	0.10	0.05	60	0.10	0.24	0.02	134	Sdf	Mollisols	Alluvial deposits		
		II1B	0.14	0.08	55	0.14	0.50	0.03	134	Sdf	Mollisols	Alluvial deposits		
		II1C	0.03	0.02	18	0.02	0.07	0.01	134	Sdf	Mollisols	Alluvial deposits		
		II1D	0.17	0.14	51	0.13	0.80	0.01	134	Sdf	Mollisols	Alluvial deposits		
		II1G	1.75	2.41	3	0.70	4.51	0.04	134	Sdf	Mollisols	Alluvial deposits	Epiphyte	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1G	0.13	0.25	22	0.07	1.26	0.04	134	Sdf	Mollisols	Alluvial deposits	Leaves + branches	
		II1G	7.89	3.94	6	6.98	13.90	2.55	134	Sdf	Mollisols	Alluvial deposits		
		III1G	0.06	0.02	10	0.05	0.10	0.04	134	Sdf	Mollisols	Alluvial deposits	Vines	
		II8A	1.18	0.98	12	0.97	3.37	0.25	134	Sdf	Mollisols	Alluvial deposits		
		II8B	0.63	0.48	11	0.47	1.56	0.20	134	Sdf	Mollisols	Alluvial deposits		
		II8C	1.93	2.31	5	0.92	5.94	0.34	134	Sdf	Mollisols	Alluvial deposits		
		II8D	9.35	9.25	10	7.31	33.22	1.30	134	Sdf	Mollisols	Alluvial deposits		
	Ash (%)	III1A	9.74	0.82	59	9.85	11.57	7.80	134	Sdf	Mollisols	Alluvial deposits		
		II1B	7.35	1.45	46	7.45	10.65	3.52	134	Sdf	Mollisols	Alluvial deposits		
		III1C	4.34	1.85	18	4.49	7.95	1.34	134	Sdf	Mollisols	Alluvial deposits		
		III1D	4.17	0.75	34	4.18	6.17	2.28	134	Sdf	Mollisols	Alluvial deposits		
		III1G	5.48	2.83	3	3.85	8.75	3.83	134	Sdf	Mollisols	Alluvial deposits	Epiphyte	
		III1G	9.29	1.75	22	8.93	14.54	5.74	134	Sdf	Mollisols	Alluvial deposits	Leaves + branches	
		II1G	22.07	6.93	6	19.48	32.71	14.04	134	Sdf	Mollisols	Alluvial deposits		
		III1G	8.19	3.43	8	7.34	15.82	4.19	134	Sdf	Mollisols	Alluvial deposits	Vines	
		II8A	12.97	3.21	12	12.96	18.93	9.64	134	Sdf	Mollisols	Alluvial deposits		
		II8B	9.82	4.87	11	9.14	17.01	3.64	134	Sdf	Mollisols	Alluvial deposits		
		II8C	6.17		1				134	Sdf	Mollisols	Alluvial deposits		
		II8D	20.75	6.76	6	23.22	26.56	10.96	134	Sdf	Mollisols	Alluvial deposits		
		II9A	9.83	1.54	64	10.17	12.69	4.08	109	Sdf	Mollisols	Alluvial deposits	Guanica	
		II9B	6.83	2.71	56	6.05	14.21	1.24	109	Sdf	Mollisols	Alluvial deposits	Guanica	
		II9C	5.70	1.89	39	5.26	10.00	2.41	109	Sdf	Mollisols	Alluvial deposits	Guanica	
		II9D	6.00	2.13	28	5.98	9.82	1.04	109	Sdf	Mollisols	Alluvial deposits	Guanica	
	C/N	III1A	53	8	60	53	69	31	134	Sdf	Mollisols	Alluvial deposits		
		III1B	56	9	55	55	86	43	134	Sdf	Mollisols	Alluvial deposits		
		III1C	114	39	18	106	189	62	134	Sdf	Mollisols	Alluvial deposits		
		III1D	41	12	50	41	64	20	134	Sdf	Mollisols	Alluvial deposits		
		II1G	69	27	4	76	92	34	134	Sdf	Mollisols	Alluvial deposits	Epiphyte	
		III1G	36	7	22	35	49	25	134	Sdf	Mollisols	Alluvial deposits	Leaves + branches	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1G	22	1	6	2	24	20	134	Sdf	Mollisols	Alluvial deposits		
		II1G	42	18	10	37	77	17	134	Sdf	Mollisols	Alluvial deposits	Vines	
		II8A	37	8	12	37	50	23	134	Sdf	Mollisols	Alluvial deposits		
		II8B	61	25	11	53	97	38	134	Sdf	Mollisols	Alluvial deposits		
		II8C	39	6	5	41	46	29	134	Sdf	Mollisols	Alluvial deposits		
		II8D	28	11	9	25	52	17	134	Sdf	Mollisols	Alluvial deposits		
		II9A	36	12	68	35	65	17	109	Sdf	Mollisols	Alluvial deposits	Guanica	
		II9B	49	16	60	49	110	25	109	Sdf	Mollisols	Alluvial deposits	Guanica	
		II9C	28	15	53	23	85	11	109	Sdf	Mollisols	Alluvial deposits	Guanica	
		II9D	50	59	34	31	357	17	109	Sdf	Mollisols	Alluvial deposits	Guanica	
	Calcium (mg/g)	II1A	29.20	4.43	60	29.32	42.30	18.16	134	Sdf	Mollisols	Alluvial deposits		
		II1B	25.46	7.10	55	26.13	45.04	3.98	134	Sdf	Mollisols	Alluvial deposits		
		II1C	14.40	6.17	18	15.57	24.05	4.14	134	Sdf	Mollisols	Alluvial deposits		
		II1D	9.97	4.35	51	9.08	33.47	4.64	134	Sdf	Mollisols	Alluvial deposits		
		II1G	12.06	5.65	3	11.08	18.13	6.96	134	Sdf	Mollisols	Alluvial deposits	Epiphyte	
		II1G	27.31	8.07	22	25.58	56.97	18.47	134	Sdf	Mollisols	Alluvial deposits	Leaves + branches	
		II1G	44.95	13.82	6	41.53	63.56	27.25	134	Sdf	Mollisols	Alluvial deposits		
		II1G	23.00	5.27	10	25.97	28.13	16.01	134	Sdf	Mollisols	Alluvial deposits	Vines	
		II8A	43.13	10.32	12	41.40	69.13	32.65	134	Sdf	Mollisols	Alluvial deposits		
		II8B	24.09	16.50	11	36.32	57.89	12.99	134	Sdf	Mollisols	Alluvial deposits		
		II8C	19.70	8.66	5	16.63	30.63	9.60	134	Sdf	Mollisols	Alluvial deposits		
		II8D	44.05	13.37	10	40.88	61.78	20.42	134	Sdf	Mollisols	Alluvial deposits		
	Carbon (%)	II1A	51	1	60	51	53	49	134	Sdf	Mollisols	Alluvial deposits		
		II1B	50	1	55	50	54	48	134	Sdf	Mollisols	Alluvial deposits		
		II1C	52	1	18	52	54	50	134	Sdf	Mollisols	Alluvial deposits		
		II1D	53	1	50	52	56	50	134	Sdf	Mollisols	Alluvial deposits		
		II1G	52	1	4	52	52	50	134	Sdf	Mollisols	Alluvial deposits	Epiphyte	
		II1G	52	1	22	52	54	50	134	Sdf	Mollisols	Alluvial deposits	Leaves + branches	
		II1G	46	4	6	47	52	39	134	Sdf	Mollisols	Alluvial deposits		



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1G	52	2	10	51	54	47	134	Sdf	Mollisols	Alluvial deposits	Vines	
		II8A	51	1	12	51	42	48	134	Sdf	Mollisols	Alluvial deposits		
		II8B	51	2	11	51	53	48	134	Sdf	Mollisols	Alluvial deposits		
		II8C	52	2	5	53	55	49	134	Sdf	Mollisols	Alluvial deposits		
		II8D	45	6	9	46	52	32	134	Sdf	Mollisols	Alluvial deposits		
		II9A	50	1	68	51	52	44	109	Sdf	Mollisols	Alluvial deposits	Guanica	
		II9B	50	1	60	51	52	46	109	Sdf	Mollisols	Alluvial deposits	Guanica	
		II9C	52	2	53	52	56	48	109	Sdf	Mollisols	Alluvial deposits	Guanica	
		II9D	50	2	34	51	55	46	109	Sdf	Mollisols	Alluvial deposits	Guanica	
	Iron (mg/g)	II1A	0.11	0.15	60	0.06	1.08	0.01	134	Sdf	Mollisols	Alluvial deposits		
		II1B	0.13	0.14	55	0.10	1.04	0.04	134	Sdf	Mollisols	Alluvial deposits		
		II1C	0.05	0.03	18	0.05	0.10	0.01	134	Sdf	Mollisols	Alluvial deposits		
		II1D	0.16	0.16	51	0.11	0.89	0.02	134	Sdf	Mollisols	Alluvial deposits		
		II1G	1.56	1.98	3	0.78	3.80	0.09	134	Sdf	Mollisols	Alluvial deposits	Epiphyte	
		II1G	0.11	0.18	22	0.08	0.90	0.03	134	Sdf	Mollisols	Alluvial deposits	Leaves + branches	
		II1G	7.39	3.88	6	4.00	13.45	2.02	134	Sdf	Mollisols	Alluvial deposits		
		II1G	0.09	0.04	10	0.09	0.14	0.04	134	Sdf	Mollisols	Alluvial deposits	Vines	
		II8A	0.98	0.82	12	0.88	2.89	0.18	134	Sdf	Mollisols	Alluvial deposits		
		II8B	0.60	0.56	11	0.35	1.85	0.15	134	Sdf	Mollisols	Alluvial deposits		
		II8C	1.60	1.75	5	0.71	4.49	0.26	134	Sdf	Mollisols	Alluvial deposits		
		II8D	8.78	8.37	10	7.10	30.17	1.01	134	Sdf	Mollisols	Alluvial deposits		
	Magnesium (mg/g)	II1A	3.31	0.89	60	3.15	7.04	1.63	134	Sdf	Mollisols	Alluvial deposits		
		II1B	0.86	0.28	55	0.84	1.46	0.43	134	Sdf	Mollisols	Alluvial deposits		
		II1C	0.56	0.21	18	0.55	1.17	0.32	134	Sdf	Mollisols	Alluvial deposits		
		II1D	1.51	0.69	51	1.37	3.61	0.43	134	Sdf	Mollisols	Alluvial deposits		
		II1G	1.85	0.94	3	1.51	2.91	1.13	134	Sdf	Mollisols	Alluvial deposits	Epiphyte	
		II1G	2.54	0.97	22	2.42	3.87	0.97	134	Sdf	Mollisols	Alluvial deposits	Leaves + branches	
		II1G	2.84	0.62	6	2.86	3.44	1.77	134	Sdf	Mollisols	Alluvial deposits		
		II1G	2.06	2.49	10	1.11	8.62	0.41	134	Sdf	Mollisols	Alluvial deposits	Vines	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II8A	1.79	0.65	12	1.72	2.96	0.75	134	Sdf	Mollisols	Alluvial deposits		
		II8B	0.92	0.36	11	0.97	1.37	0.32	134	Sdf	Mollisols	Alluvial deposits		
		II8C	1.75	0.56	5	1.78	2.45	0.88	134	Sdf	Mollisols	Alluvial deposits		
		II8D	2.68	1.22	10	2.40	5.22	1.18	134	Sdf	Mollisols	Alluvial deposits		
	Manganese (mg/kg)	II1A	40	10	60	39	64	25	134	Sdf	Mollisols	Alluvial deposits		
		II1B	18	9	53	17	54	1	134	Sdf	Mollisols	Alluvial deposits		
		II1C	11	7	18	10	24	1	134	Sdf	Mollisols	Alluvial deposits		
		II1D	20	7	51	21	29	3	134	Sdf	Mollisols	Alluvial deposits		
		II1G	49	34	3	30	89	29	134	Sdf	Mollisols	Alluvial deposits	Epiphyte	
		II1G	41	15	22	45	63	13	134	Sdf	Mollisols	Alluvial deposits	Leaves + branches	
		II1G	234	78	6	233	326	122	134	Sdf	Mollisols	Alluvial deposits		
		II1G	40	21	10	37	69	14	134	Sdf	Mollisols	Alluvial deposits	Vines	
		II8A	78	40	12	65	171	36	134	Sdf	Mollisols	Alluvial deposits		
		II8B	39	22	11	39	83	12	134	Sdf	Mollisols	Alluvial deposits		
		II8C	63	55	5	37	160	23	134	Sdf	Mollisols	Alluvial deposits		
		II8D	242	180	10	238	638	43	134	Sdf	Mollisols	Alluvial deposits		
	Nitrogen (%)	II1A	0.99	0.19	60	0.95	1.69	0.73	134	Sdf	Mollisols	Alluvial deposits		
		II1B	0.91	0.13	55	0.90	1.19	0.60	134	Sdf	Mollisols	Alluvial deposits		
		II1C	0.51	0.16	18	0.49	0.83	0.28	134	Sdf	Mollisols	Alluvial deposits		
		II1D	1.41	0.50	50	1.28	2.80	0.83	134	Sdf	Mollisols	Alluvial deposits		
		II1G	0.87	0.44	4	0.70	1.50	0.57	134	Sdf	Mollisols	Alluvial deposits	Epiphyte	
		II1G	1.48	0.30	2	1.52	2.09	1.07	134	Sdf	Mollisols	Alluvial deposits	Leaves + branches	
		II1G	2.07	0.24	6	2.12	2.34	1.63	134	Sdf	Mollisols	Alluvial deposits		
		II1G	1.47	0.64	10	1.44	2.80	0.66	134	Sdf	Mollisols	Alluvial deposits	Vines	
		II8A	1.43	0.33	12	1.40	2.06	1.00	134	Sdf	Mollisols	Alluvial deposits		
		II8B	0.95	0.34	11	0.93	1.37	0.55	134	Sdf	Mollisols	Alluvial deposits		
		II8C	1.36	0.29	5	1.26	1.88	1.16	134	Sdf	Mollisols	Alluvial deposits		
		II8D	1.75	0.43	9	1.91	2.32	1.00	134	Sdf	Mollisols	Alluvial deposits		
		II9A	1.55	0.52	68	1.45	2.88	0.78	109	Sdf	Mollisols	Alluvial deposits	Guanica	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II9B	1.14	0.35	60	1.03	1.92	0.47	109	Sdf	Mollisols	Alluvial deposits	Guanica	
		II9C	2.33	1.00	53	2.23	4.87	0.59	109	Sdf	Mollisols	Alluvial deposits	Guanica	
		II9D	1.54	0.71	34	1.60	2.94	0.14	109	Sdf	Mollisols	Alluvial deposits	Guanica	
	Phosphorus (mg/g)	II1A	0.19	0.05	60	0.18	0.40	0.12	134	Sdf	Mollisols	Alluvial deposits		
		II1B	0.20	0.07	55	0.20	0.52	0.10	134	Sdf	Mollisols	Alluvial deposits		
		II1C	0.15	0.04	18	0.15	0.24	0.08	134	Sdf	Mollisols	Alluvial deposits		
		II1D	0.54	0.24	51	0.51	1.31	0.10	134	Sdf	Mollisols	Alluvial deposits		
		II1G	0.40	0.19	3	0.32	0.61	0.26	134	Sdf	Mollisols	Alluvial deposits	Epiphyte	
		II1G	0.41	0.10	22	0.40	0.63	0.24	134	Sdf	Mollisols	Alluvial deposits	Leaves + branches	
		II1G	0.43	0.04	6	0.42	0.48	0.39	134	Sdf	Mollisols	Alluvial deposits		
		II1G	0.43	0.29	10	0.35	1.20	0.15	134	Sdf	Mollisols	Alluvial deposits	Vines	
		II8A	0.26	0.06	12	0.24	0.37	0.17	134	Sdf	Mollisols	Alluvial deposits		
	Potassium (mg/g)	II8B	0.17	0.07	11	0.17	0.27	0.08	134	Sdf	Mollisols	Alluvial deposits		
		II8C	0.33	0.04	5	0.32	0.40	0.30	134	Sdf	Mollisols	Alluvial deposits		
		II8D	0.42	0.13	10	0.38	0.65	0.23	134	Sdf	Mollisols	Alluvial deposits		
		II1A	5.98	1.91	60	5.84	10.25	2.35	134	Sdf	Mollisols	Alluvial deposits		
		II1B	2.81	1.16	55	2.68	5.05	0.66	134	Sdf	Mollisols	Alluvial deposits		
		II1C	3.84	0.86	18	3.96	5.80	2.55	134	Sdf	Mollisols	Alluvial deposits		
		II1D	5.06	1.92	51	4.79	10.93	1.62	134	Sdf	Mollisols	Alluvial deposits		
		II1G	8.71	7.32	3	5.30	17.11	3.72	134	Sdf	Mollisols	Alluvial deposits	Epiphyte	
		II1G	10.78	3.20	22	10.24	17.66	3.46	134	Sdf	Mollisols	Alluvial deposits	Leaves + branches	
		II1G	3.88	0.67	6	3.68	5.00	3.15	134	Sdf	Mollisols	Alluvial deposits		
		II1G	11.28	9.08	10	9.41	35.09	1.93	134	Sdf	Mollisols	Alluvial deposits	Vines	
		II8A	3.42	0.55	12	3.40	4.19	2.60	134	Sdf	Mollisols	Alluvial deposits		
		II8B	2.63	0.86	11	2.60	3.80	1.34	134	Sdf	Mollisols	Alluvial deposits		
		II8C	2.60	0.72	5	2.79	3.58	1.73	134	Sdf	Mollisols	Alluvial deposits		
		II8D	0.23	1.35	10	4.04	7.05	2.20	134	Sdf	Mollisols	Alluvial deposits		
		Sulfur (%)	II1A	0.34	0.05	60	0.33	0.45	0.23	134	Sdf	Mollisols	Alluvial deposits	
	II1B		0.28	0.05	55	0.28	0.42	0.19	134	Sdf	Mollisols	Alluvial deposits		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1C	0.13	0.04	18	0.13	0.19	0.08	134	Sdf	Mollisols	Alluvial deposits		
		II1D	0.28	0.05	50	0.27	0.43	0.21	134	Sdf	Mollisols	Alluvial deposits		
		II1G	0.31	0.04	4	0.31	0.34	0.27	134	Sdf	Mollisols	Alluvial deposits	Epiphyte	
		II1G	0.33	0.08	22	0.31	0.54	0.22	134	Sdf	Mollisols	Alluvial deposits	Leaves + branches	
		II1G	0.38	0.10	6	0.37	0.56	0.26	134	Sdf	Mollisols	Alluvial deposits		
		II1G	0.28	0.12	10	0.25	0.46	0.13	134	Sdf	Mollisols	Alluvial deposits	Vines	
		II8A	0.33	0.04	12	0.33	0.40	0.26	134	Sdf	Mollisols	Alluvial deposits		
		II8B	0.24	0.06	11	0.24	0.36	0.15	134	Sdf	Mollisols	Alluvial deposits		
		II8C	0.27	0.06	5	0.24	0.38	0.22	134	Sdf	Mollisols	Alluvial deposits		
		II8D	0.36	0.04	9	0.38	0.41	0.29	134	Sdf	Mollisols	Alluvial deposits		
<i>Guapira obtusata</i>	Aluminum (mg/kg)	III1A	19		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
	Ash (%)	III1A	4.94		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
	Calcium (mg/g)	III1A	3.39		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
	Cobalt (µg/g)	III1A	0.40		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
	Iron (mg/kg)	III1A	59		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
	Magnesium (mg/g)	III1A	6.25		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
	Manganese (mg/kg)	III1A	38		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
	Nickel (µg/g)	III1A	2.35		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
	Nitrogen (%)	III1A	2.67		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
	Phosphorus (mg/g)	III1A	1.46		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
	Potassium (mg/g)	III1A	13.69		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
<i>Guararibaea turbinada</i>	Ash (%)	III1B	2.14		1				68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	
		III1B	1.20		1				68	Swf	Ultisols	Tuffac. sandstone	Class 4 LD	
		III1B	1.08		1				68	Swf	Ultisols	Tuffac. sandstone	Class 2/3 LD	
	Calcium (mg/g)	III1B	5.81		1				68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	
		III1B	1.88		1				68	Swf	Ultisols	Tuffac. sandstone	Class 4 LD	
		III1B	3.58		1				68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
	Nitrogen (%)	II1B	0.34		1				68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD		
		II1B	0.30		1				68	Swf	Ultisols	Tuffac. sandstone	Class 4 LD		
		III1B	0.16		1				68	Swf	Ultisols	Tuffac. sandstone	Class 2/3 LD		
	Phosphorus (mg/g)	II1B	0.18		1				68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD		
		III1B	0.06		1				68	Swf	Ultisols	Tuffac. sandstone	Class 4 LD		
		II1B	0.03		1				68	Swf	Ultisols	Tuffac. sandstone	Class 2/3 LD		
	Potassium (mg/g)	II1B	0.92		1				68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD		
		II1B	0.32		1				68	Swf	Ultisols	Tuffac. sandstone	Class 4 LD		
		II1B	0.25		1				68	Swf	Ultisols	Tuffac. sandstone	Class 2/3 LD		
<i>Guarea glabra</i>	Aluminum (mg/g)	II1B	0.10		1				93	Wflm	Inceptisols	Tuffac. sandstone			
	Ash (%)	III1A	5.88		1				94	Swf	Ultisols	Tuffac. sandstone			
		III1A	7.28	0.09	2	7.28	7.34	7.21	101	Wfs	Ultisols	Lava			
		II1B	4.06		1				94	Swf	Ultisols	Tuffac. sandstone			
		II1B	6.43		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1B	4.50	0.26	3	4.40	4.80	4.30	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD		
		II1B	1.57		1				68	Swf	Ultisols	Tuffac. sandstone	Class 3 ST		
		III1C	2.14		1				94	Swf	Ultisols	Tuffac. sandstone			
		C/N	II1B	44		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		Calcium (mg/g)	III1A	9.82		1				101	Wfs	Ultisols	Lava		
	II1B		21.06		1				93	Wflm	Inceptisols	Tuffac. sandstone			
	III1B		3.21	0.36	3	3.12	3.61	2.91	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD		
		II1B	4.26		1				68	Swf	Ultisols	Tuffac. sandstone	Class 3 ST		
		Iron (mg/g)	III1B	0.02		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		Magnesium (mg/g)	III1B	1.39		1				93	Wflm	Inceptisols	Tuffac. sandstone		
Manganese (mg/g)	III1B	0.04		1				93	Wflm	Inceptisols	Tuffac. sandstone				
Nitrogen (%)	III1A	2.84		1					94	Swf	Ultisols	Tuffac. sandstone			
	III1A	3.32	0.01	2	3.32	3.33	3.31	101	Wfs	Ultisols	Lava				
	II1B	1.23		1				94	Swf	Ultisols	Tuffac. sandstone				

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
	Phosphorus (mg/g)	II1B	0.97		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1B	0.34	0.06	3	0.31	0.41	0.29	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD		
		II1B	0.46		1				68	Swf	Ultisols	Tuffac. sandstone	Class 3 ST		
		II1C	0.40		1				94	Swf	Ultisols	Tuffac. sandstone			
		II1A	1.48		1				94	Swf	Ultisols	Tuffac. sandstone			
		II1A	2.06	0.36	2	2.06	2.31	1.80	101	Wfs	Ultisols	Lava			
		II1B	0.77		1				94	Swf	Ultisols	Tuffac. sandstone			
		II1B	0.65		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1B	0.15	0.06	3	0.13	0.22	0.10	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD		
		II1B	0.19		1				68	Swf	Ultisols	Tuffac. sandstone	Class 3 ST		
		II1C	0.29		1				94	Swf	Ultisols	Tuffac. sandstone			
		II1A	12.36		1				94	Swf	Ultisols	Tuffac. sandstone			
		II1A	18.07	0.10	2	18.07	18.14	18.00	101	Wfs	Ultisols	Lava			
		II1B	9.83		1				94	Swf	Ultisols	Tuffac. sandstone			
		<i>Guarea guidonia</i>	Potassium (mg/g)	II1B	8.43		1				93	Wflm	Inceptisols	Tuffac. sandstone	
II1B	0.43			0.15	3	0.44	0.58	0.28	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD		
II1B	0.76				1				68	Swf	Ultisols	Tuffac. sandstone	Class 3 ST		
II1C	3.39				1				94	Swf	Ultisols	Tuffac. sandstone			
Aluminum (mg/g)	II1A			0.43		1				129	Lmrf	Ultisols	Tuffac. sandstone		
Ash (%)	II1A			5.87	0.57	5	5.66	6.55	5.34	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	II1A			5.89		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	II1C			1.62	0.39	5	1.55	2.14	1.12	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
C/N	II1Ci			7.20	1.94	6	6.77	10.09	5.50	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	II8A			8.40		1				71	Wfs	Ultisols	Tuffac. sandstone		
	II1A			20	2	5	21	22	17	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	II1A			16		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	II1C			213	70	5	197	314	127	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	II1Ci			42	2	6	43	43	38	126		Ultisols	Siltstone,sandstone	Urban forest, RP	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Calcium (mg/g)	II1A	13.74		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II1A	5.20	0.90	14	5.29	6.49	3.82	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	6.27	2.16	14	6.00	9.73	3.44	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	1.28	0.48	27	1.06	2.37	0.87	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1Ci	18.01	2.86	25	17.57	23.99	13.93	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1F	2.85	0.35	12	2.79	3.53	2.42	135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II1A	55	1	5	54	56	54	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1A	57		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II1Aiii	46	1	126	46	48	43	125	Wfs	Ultisols	Tuffac. sandstone	Saplings	
		II1Aiii	45	1	95	45	48	41	125	Wfs	Ultisols	Tuffac. sandstone	Seedlings	
		II1C	53	1	5	53	53	52	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1Ci	52	2	6	52	54	49	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	Iron (mg/g)	II8A	55		1				71	Wfs	Ultisols	Tuffac. sandstone		
		II1A	0.43		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II1A	1.78		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II1A	3.93	0.74	14	4.00	4.92	2.75	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	2.16	0.22	14	2.07	2.55	1.92	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	0.72	0.12	27	0.73	0.93	0.51	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1Ci	2.87	0.83	25	2.62	5.06	1.76	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1F	2.63	0.57	12	2.54	3.97	1.76	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/kg)	II1A	52		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II1A	2.70	0.31	5	2.57	3.26	2.52	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1A	3.50		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II1A	2.68	0.22	14	2.63	3.04	2.41	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1Aiii	3.19	0.89	126	3.13	5.08	1.63	125	Wfs	Ultisols	Tuffac. sandstone	Saplings	
		II1Aiii	3.26	0.86	95	3.39	5.03	1.40	125	Wfs	Ultisols	Tuffac. sandstone	Seedlings	
		II1B	0.89	0.25	14	0.83	1.10	0.60	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	0.27	0.09	5	0.27	0.41	0.17	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1C	0.20	0.05	27	0.20	0.33	0.10	135	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Phosphorus (mg/g)	II1Ci	1.23	0.04	6	1.24	1.28	1.17	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1Ci	1.10	0.11	25	1.11	1.38	0.90	135	Lmrf	Ultisols	Tuffac. sandstone		
		III1F	2.55	0.31	12	2.59	3.01	2.06	135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	1.83		1				71	Wfs	Ultisols	Tuffac. sandstone		
		II1A	1.00		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II1A	1.54	0.11	14	1.54	1.74	1.35	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	0.45	0.13	14	0.42	0.68	0.30	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	0.18	0.07	27	0.16	0.31	0.09	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1Ci	0.48	0.09	25	0.47	0.68	0.31	135	Lmrf	Ultisols	Tuffac. sandstone		
		III1F	1.45	0.15	12	1.44	1.72	1.22	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1A	6.28		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II1A	11.87	1.17	14	11.64	13.88	10.06	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	5.94	1.36	14	6.08	8.08	3.70	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	1.60	0.79	27	1.48	2.94	0.30	135	Lmrf	Ultisols	Tuffac. sandstone		
			Potassium (mg/g)	II1Ci	5.78	1.90	25	5.41	8.67	2.90	135	Lmrf	Ultisols	Tuffac. sandstone
III1F	13.71			3.44	12	14.65	15.17	2.87	135	Lmrf	Ultisols	Tuffac. sandstone		
II1A	0.34			0.01	5	0.34	0.35	0.32	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
II1A	0.67				1				129	Lmrf	Ultisols	Tuffac. sandstone		
II1C	0.10			0.04	5	0.08	0.14	0.05	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
II1Ci	0.44			0.05	6	0.45	0.49	0.33	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
II8A	0.43				1				71	Wfs	Ultisols	Tuffac. sandstone		
II1C	0.52	0.09	5	0.54	0.60	0.38	126		Ultisols	Siltstone,sandstone	Urban forest, RP			
<i>Guarea ramiflora</i>	Carbon (%)	II1Aiii	44	1	110	44	46	42	125	Wfs	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II1Aiii	2.42	0.70	110	2.44	4.30	1.26	125	Wfs	Ultisols	Tuffac. sandstone		
<i>Guazuma ulmifolia</i>	Wood density (g/cc)	II1B	0.52	0.03	4	0.52	0.55	0.49	97	Wfs	Inceptisols	Tuffac. sandstone		
<i>Guettarda pungens</i>	Aluminum (mg/kg)	II1A	46		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Ash (%)	II1A	4.05		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Calcium (mg/g)	II1A	9.96		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Iron (mg/g)	III1A	0.12		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Magnesium (mg/g)	II1A	1.30		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Manganese (mg/g)	II1A	0.11		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Nitrogen (%)	II1A	0.77		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Phosphorus (mg/g)	II1A	0.30		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Potassium (mg/g)	II1A	6.88		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Zinc (µg/g)	II1A	40.09		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
<i>Guettarda scabra</i>	Aluminum (mg/kg)	II1A	26		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		II1A	11		1				102	Smf	Limestone	Tuffac. sandstone	New Adult	
	Ash (%)	II1A	3.42		1				102	Smf	Limestone	Tuffac. sandstone		
		II1A	6.28		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Calcium (mg/g)	II1A	2.40		1				102	Smf	Limestone	Tuffac. sandstone	New Adult	
		II1A	4.77		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Cobalt (µg/g)	II1A	0.10		1				102	Smf	Limestone	Tuffac. sandstone	New Adult	
	Iron (mg/kg)	II1A	81		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		II1A	22		1				102	Smf	Limestone	Tuffac. sandstone	New Adult	
	Magnesium (mg/g)	II1A	1.79		1				102	Smf	Limestone	Tuffac. sandstone	New Adult	
		II1A	4.92		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Manganese (mg/kg)	II1A	26		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		II1A	12		1				102	Smf	Limestone	Tuffac. sandstone	New Adult	
	Nickel (µg/g)	II1A	15		1				102	Smf	Limestone	Tuffac. sandstone	New Adult	
	Nitrogen (%)	II1A	0.81		1				102	Smf	Limestone	Tuffac. sandstone	New Adult	
		II1A	1.17		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Phosphorus (mg/g)	II1A	0.64		1				102	Smf	Limestone	Tuffac. sandstone	New Adult	
		II1A	0.41		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Potassium (mg/g)	II1A	13.72		1				102	Smf	Limestone	Tuffac. sandstone	New Adult	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Zinc ( $\mu\text{g/g}$ )	II1A	3.47		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		II1A	15.67		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
<i>Guzmania berteroniana</i>	Aluminum (mg/g)	II6	0.61		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	C/N	II6	39	6	2	39	43	34	135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II6	2.86		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II6	47	3	2	47	49	45	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II6	0.50		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II6	2.58		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II6	0.24		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II6	1.24	0.27	2	1.24	1.43	1.05	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II6	0.74		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II6	11.50		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Sulfur (%)	II6	0.30	0.09	2	0.30	0.37	0.24	135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Gymnanthes lucida</i>	Aluminum (mg/g)	II3A	0.04	0.02	16	0.04	0.06	0.01	151	Sdf	Mollisols	Alluvial deposits		
	Ash (%)	II3A	11.20	1.02	16	11.07	12.76	9.03	151	Sdf	Mollisols	Alluvial deposits		
	C/N	II3A	27	1	16	26	28	24	151	Sdf	Mollisols	Alluvial deposits		
	Calcium (mg/g)	II3A	27.32	3.91	16	27.03	32.83	16.02	151	Sdf	Mollisols	Alluvial deposits		
		II3Ci	28.53		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II3Ci	28.53		1				104	Sdf	Mollisols	Alluvial deposits		
	Carbon (%)	II3A	48	1	16	48	50	47	151	Sdf	Mollisols	Alluvial deposits		
	Iron (mg/g)	II3A	0.04	0.01	16	0.04	0.05	0.02	151	Sdf	Mollisols	Alluvial deposits		
	Magnesium (mg/g)	II3A	2.94		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II3A	1.63	0.24	16	1.60	2.00	1.28	151	Sdf	Mollisols	Alluvial deposits		
		II3A	2.94		1				104	Sdf	Mollisols	Alluvial deposits		
		II3Ci	1.14		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II3Ci	1.14		1				104	Sdf	Mollisols	Alluvial deposits		
Manganese (mg/kg)	II3A	27	7	16	26	39	17	151	Sdf	Mollisols	Alluvial deposits			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Nitrogen (%)	I13A	1.62		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		I13A	1.82	0.10	16	1.82	2.04	1.67	151	Sdf	Mollisols	Alluvial deposits		
		I13Ci	1.06		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Phosphorus (mg/g)	I13A	0.56		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		I13A	0.46	0.03	16	0.45	0.53	0.42	151	Sdf	Mollisols	Alluvial deposits		
		I13A	0.56		1				104	Sdf	Mollisols	Alluvial deposits		
		I13Ci	0.24		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		I13Ci	0.24		1				104	Sdf	Mollisols	Alluvial deposits		
	Potassium (mg/g)	I13A	19.30		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		I13A	7.04	0.53	16	7.04	8.40	6.16	151	Sdf	Mollisols	Alluvial deposits		
		I13Ci	10.22		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		I13A	19.30		1				104	Sdf	Mollisols	Alluvial deposits		
I13Ci		10.22		1				104	Sdf	Mollisols	Alluvial deposits			
Sulfur (%)	I13A	0.19	0.01	16	0.19	0.20	0.17	151	Sdf	Mollisols	Alluvial deposits			
<i>Heliconia caribaea</i>	Aluminum (mg/g)	I13	0.20	0.00	2	0.20	0.20	0.20	135	Lmrf	Ultisols	Tuffac. sandstone		
		I13A	0.06	0.02	3	0.06	0.08	0.05	122	Wflm	Inceptisols	Tuffac. sandstone	Palo Colorado	
		I13A	0.07	0.01	3	0.07	0.08	0.06	122	Lmrf	Ultisols	Tuffac. sandstone	Tabonuco forest	
		I13A	0.05	0.02	4	0.05	0.07	0.03	122	Wfs	Ultisols	Tuffac. sandstone	El Verde forest	
		I13F	0.12	0.12	13	0.07	0.38	0.02	129	Lmrf	Ultisols	Tuffac. sandstone	Dwarf forest	
		I13F	0.12	0.12	13	0.07	0.38	0.02	137	Wfs	Ultisols	Tuffac. sandstone		
		I13G	4.78	4.06	13	2.80	10.90	0.35	122	Wfs	Ultisols	Tuffac. sandstone	El Verde forest	
		I13G	1.80	1.97	5	1.47	5.16	0.20	122	Wflm	Inceptisols	Tuffac. sandstone	Palo Colorado	
		I13G	2.42	2.06	3	1.73	6.68	0.26	122	Lmrf	Ultisols	Tuffac. sandstone	Tabonuco forest	
	I13G	4.85	1.90	13	5.76	6.94	1.53	122	Smf	Ultisols	Tuffac. sandstone	Dwarf forest		
	Ash (%)	I13A	2.86	0.81	3	3.22	3.43	1.93	122	Wflm	Inceptisols	Tuffac. sandstone	Palo Colorado	
		I13A	6.46	0.13	3	6.45	6.60	6.34	122	Lmrf	Ultisols	Tuffac. sandstone	Tabonuco forest	
		I13A	5.99	0.07	4	6.01	6.04	5.90	122	Wfs	Ultisols	Tuffac. sandstone	El Verde forest	
I13F		15.30	1.19	13	15.21	17.03	13.53	129	Lmrf	Ultisols	Tuffac. sandstone	Dwarf forest		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		I13G	9.29	6.62	13	6.92	18.15	2.07	122	Wfs	Ultisols	Tuffac. sandstone	El Verde forest	
		I13G	6.87	2.21	5	6.40	10.40	4.63	122	Wflm	Inceptisols	Tuffac. sandstone	Palo Colorado	
		I13G	5.51	4.02	12	3.82	15.02	1.72	122	Lmrf	Ultisols	Tuffac. sandstone	Tabonuco forest	
		I13G	8.59	2.58	13	8.39	14.02	5.11	122	Smf	Ultisols	Tuffac. sandstone	Dwarf forest	
		I13F	15.30	1.19	13	15.21	17.03	13.53	137	Wfs	Ultisols	Tuffac. sandstone		
	C/N	I13	23	3	3	21	26	20	135	Lmrf	Ultisols	Tuffac. sandstone		
		I13A	67	2	3	68	68	65	122	Wflm	Inceptisols	Tuffac. sandstone	Palo Colorado	
		I13A	63	5	3	65	68	57	122	Lmrf	Ultisols	Tuffac. sandstone	Tabonuco forest	
		I13A	67	5	4	66	73	62	122	Wfs	Ultisols	Tuffac. sandstone	El verde Forest	
		I13F	20	4	13	20	27	14	129	Lmrf	Ultisols	Tuffac. sandstone	Dwarf forest	
		I13G	36	13	13	36	62	14	122	Wfs	Ultisols	Tuffac. sandstone	El Verde forest	
		I13G	40	14	5	31	57	29	122	Wflm	Inceptisols	Tuffac. sandstone	Palo Colorado	
		I13G	41	12	13	45	59	24	122	Lmrf	Ultisols	Tuffac. sandstone	Tabonuco forest	
		I13G	24	4	13	22	30	18	122	Smf	Ultisols	Tuffac. sandstone	Dwarf forest	
	Calcium (mg/g)	I13	2.81	0.08	2	2.81	2.86	2.75	135	Lmrf	Ultisols	Tuffac. sandstone		
		I13A	0.71	0.06	3	0.72	0.77	0.65	122	Wflm	Inceptisols	Tuffac. sandstone	Palo Colorado	
		I13A	1.80	0.06	3	2.82	1.86	1.74	122	Lmrf	Ultisols	Tuffac. sandstone	Tabonuco forest	
		I13A	1.88	0.14	4	1.88	2.04	1.72	122	Wfs	Ultisols	Tuffac. sandstone	El Verde forest	
		I13F	10.23	2.51	13	9.79	15.38	6.79	129	Lmrf	Ultisols	Tuffac. sandstone	Dwarf forest	
		I13F	10.23	2.51	13	9.79	15.38	6.79	137	Smf	Ultisols	Tuffac. sandstone		
		I13G	4.20	1.12	13	4.30	5.81	2.66	122	Wfs	Ultisols	Tuffac. sandstone	El Verde forest	
		I13G	9.77	2.15	5	9.04	13.54	8.13	122	Wflm	Inceptisols	Tuffac. sandstone	Palo Colorado	
		I13G	5.12	1.99	13	4.59	9.76	3.06	122	Lmrf	Ultisols	Tuffac. sandstone	Tabonuco forest	
		I13G	7.93	2.17	13	8.19	10.93	5.19	122	Smf	Ultisols	Tuffac. sandstone	Dwarf forest	
	Carbon (%)	I13	46	0	3	46	46	46	135	Lmrf	Ultisols	Tuffac. sandstone		
		I13A	50	0	3	51	51	50	122	Wflm	Inceptisols	Tuffac. sandstone	Palo Colorado	
		I13A	47	0	3	47	48	47	122	Lmrf	Ultisols	Tuffac. sandstone	Tabonuco forest	
		I13A	48	0	4	48	48	48	122	Wfs	Ultisols	Tuffac. sandstone	El verde Forest.	
		I13F	44	1	13	44	46	43	129	Smf	Ultisols	Tuffac. sandstone	Dwarf forest	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		I13F	44	1	13	44	47	46	137	Wfs	Ultisols	Tuffac. sandstone		
		I13G	49	5	13	51	55	43	122	Wfs	Ultisols	Tuffac. sandstone	El Verde forest	
		I13G	52	2	5	52	55	49	122	Wflm	Inceptisols	Tuffac. sandstone	Palo Colorado	
		I13G	56	5	13	56	63	48	122	Lmrf	Ultisols	Tuffac. sandstone	Tabonuco forest	
		I13G	51	2	13	51	55	49	122	Smf	Ultisols	Tuffac. sandstone	Dwarf forest	
	Iron (mg/g)	I13	0.08	0.01	2	0.08	0.09	0.08	135	Lmrf	Ultisols	Tuffac. sandstone		
		I13A	0.01	0.01	3	0.01	0.03	0.01	122	Wflm	Inceptisols	Tuffac. sandstone	Palo Colorado	
		I13A	0.06	0.00	3	0.06	0.06	0.06	122	Lmrf	Ultisols	Tuffac. sandstone	Tabonuco forest	
		I13A	0.04	0.01	4	0.05	0.05	0.04	122	Wfs	Ultisols	Tuffac. sandstone	El Verde Forest	
		I13F	0.16	0.11	13	0.11	0.33	0.05	129	Lmrf	Ultisols	Tuffac. sandstone	Dwarf forest	
		I13F	0.16	0.11	13	0.11	0.33	0.05	137	Wfs	Ultisols	Tuffac. sandstone		
		I13G	2.73	1.99	13	2.13	5.49	0.39	122	Wfs	Ultisols	Tuffac. sandstone	El Verde forest	
		I13G	0.21	0.03	5	0.20	0.25	0.18	122	Wflm	Inceptisols	Tuffac. sandstone	Palo Colorado	
		I13G	1.11	1.14	13	0.68	3.95	0.16	122	Lmrf	Ultisols	Tuffac. sandstone	Tabonuco forest	
		I13G	2.20	0.79	13	1.93	3.59	1.11	122	Smf	Ultisols	Tuffac. sandstone	Dwarf forest	
	Magnesium (mg/g)	I13	2.16	0.04	2	2.16	11.27	2.19	135	Lmrf	Ultisols	Tuffac. sandstone		
		I13A	1.01	0.08	3	0.99	1.09	0.94	122	Wflm	Inceptisols	Tuffac. sandstone	Palo Colorado	
		I13A	2.41	0.04	3	2.40	2.46	2.38	122	Lmrf	Ultisols	Tuffac. sandstone	Tabonuco forest	
		I13A	2.16	0.16	4	2.13	2.37	2.02	122	Wfs	Ultisols	Tuffac. sandstone	El Verde Forest	
		I13F	4.86	0.53	13	4.84	5.73	3.88	129	Smf	Ultisols	Tuffac. sandstone	Dwarf forest	
		I13F	4.86	0.53	13	4.84	5.73	3.88	137	Wfs	Ultisols	Tuffac. sandstone		
		I13G	1.75	0.65	13	1.38	2.78	1.06	122	Wfs	Ultisols	Tuffac. sandstone	El Verde forest	
		I13G	1.95	0.53	5	1.70	2.80	1.54	122	Wflm	Inceptisols	Tuffac. sandstone	Palo Colorado	
		I13G	1.11	0.41	13	1.08	1.81	0.20	122	Lmrf	Ultisols	Tuffac. sandstone	Tabonuco forest	
		I13G	1.28	0.21	13	1.27	1.66	0.98	122	Smf	Ultisols	Tuffac. sandstone	Dwarf forest	
	Manganese (mg/g)	I13	0.88	0.02	2	0.88	0.89	0.86	135	Lmrf	Ultisols	Tuffac. sandstone		
		I13A	0.07	0.00	3	0.07	0.08	0.07	122	Wflm	Inceptisols	Tuffac. sandstone	Palo Colorado	
		I13A	0.25	0.01	3	0.25	0.27	0.24	122	Lmrf	Ultisols	Tuffac. sandstone	Tabonuco forest	
		I13A	0.09	0.01	4	0.09	0.10	0.09	122	Wfs	Ultisols	Tuffac. sandstone	El Verde Forest	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		I13F	1.01	0.61	13	0.95	2.48	0.36	129	Smf	Ultisols	Tuffac. sandstone	Dwarf forest	
		I13F	1.01	0.61	13	0.95	2.48	0.36	137	Wfs	Ultisols	Tuffac. sandstone		
		I13G	0.05	0.01	13	0.50	0.07	0.03	122	Wfs	Ultisols	Tuffac. sandstone	El Verde forest	
		I13G	0.40	0.15	5	0.37	0.66	0.27	122	Wflm	Inceptisols	Tuffac. sandstone	Palo Colorado	
		I13G	0.39	0.20	13	0.41	0.70	0.07	122	Lmrf	Ultisols	Tuffac. sandstone	Tabonuco forest	
		I13G	0.22	0.16	13	0.16	0.61	0.08	122	Smf	Ultisols	Tuffac. sandstone	Dwarf forest	
	Nitrogen (%)	I13	2.04	0.27	3	2.18	2.22	1.73	135	Lmrf	Ultisols	Tuffac. sandstone		
		I13A	0.75	0.02	3	0.74	0.78	0.74	122	Wflm	Inceptisols	Tuffac. sandstone	Palo Colorado	
		I13A	0.75	0.07	3	0.73	0.83	0.70	122	Lmrf	Ultisols	Tuffac. sandstone	Tabonuco forest	
		I13A	0.72	0.05	4	0.72	0.78	0.66	122	Wfs	Ultisols	Tuffac. sandstone	El verde Forest	
		I13F	2.31	0.49	13	2.21	3.04	1.65	129	Smf	Ultisols	Tuffac. sandstone	Dwarf forest	
		I13F	2.31	0.49	13	2.21	3.04	1.65	137	Wfs	Ultisols	Tuffac. sandstone		
		I13G	1.53	0.55	13	1.41	3.07	0.90	122	Wfs	Ultisols	Tuffac. sandstone	El Verde forest	
		I13G	1.40	0.39	5	1.60	1.78	0.96	122	Wflm	Inceptisols	Tuffac. sandstone	Palo Colorado	
		I13G	1.46	0.37	13	1.26	2.24	1.02	122	Lmrf	Ultisols	Tuffac. sandstone	Tabonuco forest	
		I13G	2.21	0.33	13	2.30	2.94	1.70	122	Smf	Ultisols	Tuffac. sandstone	Dwarf forest	
	Phosphorus (mg/g)	I13	0.73	0.00	2	0.73	0.73	0.72	135	Lmrf	Ultisols	Tuffac. sandstone		
		I13A	0.19	0.02	3	0.18	0.20	0.17	122	Wflm	Inceptisols	Tuffac. sandstone	Palo Colorado	
		I13A	0.35	0.10	3	0.35	0.36	0.35	122	Lmrf	Ultisols	Tuffac. sandstone	Tabonuco forest	
		I13A	0.48	0.02	4	0.48	0.50	0.45	122	Wfs	Ultisols	Tuffac. sandstone	El Verde Forest	
		I13F	2.22	0.66	13	2.19	3.32	1.29	129	Smf	Ultisols	Tuffac. sandstone	Dwarf forest	
		I13F	2.22	0.66	13	2.19	3.32	1.29	137	Wfs	Ultisols	Tuffac. sandstone		
		I13G	0.22	0.08	13	0.20	0.34	0.11	122	Wfs	Ultisols	Tuffac. sandstone	El Verde forest	
		I13G	0.24	0.05	5	0.22	0.31	0.19	122	Wflm	Inceptisols	Tuffac. sandstone	Palo Colorado	
		I13G	0.26	0.09	13	0.24	0.43	0.14	122	Lmrf	Ultisols	Tuffac. sandstone	Tabonuco forest	
		I13G	0.68	0.16	13	0.68	0.95	0.46	122	Smf	Ultisols	Tuffac. sandstone	Dwarf forest	
	Potassium (mg/g)	I13	11.35	0.12	2	11.35	11.44	11.27	135	Lmrf	Ultisols	Tuffac. sandstone		
		I13A	15.56	0.97	3	15.45	16.58	14.65	122	Wflm	Inceptisols	Tuffac. sandstone	Palo Colorado	
		I13A	27.25	0.65	3	27.21	27.92	26.62	122	Lmrf	Ultisols	Tuffac. sandstone	Tabonuco forest	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II3A	25.51	1.26	4	25.33	27.21	24.17	122	Wfs	Ultisols	Tuffac. sandstone	El Verde Forest	
		II3F	34.34	5.39	13	36.27	42.52	24.28	129	Smf	Ultisols	Tuffac. sandstone	Dwarf forest	
		II3F	34.34	5.39	13	36.27	42.52	24.28	137	Wfs	Ultisols	Tuffac. sandstone		
		II3G	1.13	0.50	13	0.86	1.94	0.64	122	Wfs	Ultisols	Tuffac. sandstone	El Verde forest	
		II3G	1.86	0.64	5	2.20	2.26	0.76	122	Wflm	Inceptisols	Tuffac. sandstone	Palo Colorado	
		II3G	0.93	0.28	13	0.93	1.33	0.52	122	Lmrf	Ultisols	Tuffac. sandstone	Tabonuco forest	
		II3G	1.09	0.12	13	1.09	1.29	0.91	122	Smf	Ultisols	Tuffac. sandstone	Dwarf forest	
	Sulfur (%)	II3	0.33	0.09	3	0.29	0.43	0.26	135	Lmrf	Ultisols	Tuffac. sandstone		
		II3A	0.22	0.03	3	0.21	0.25	0.20	122	Wflm	Inceptisols	Tuffac. sandstone	Palo Colorado	
		II3A	0.26	0.02	3	0.27	0.28	0.24	122	Lmrf	Ultisols	Tuffac. sandstone	Tabonuco forest	
		II3A	0.24	0.03	4	0.24	0.27	0.21	122	Wfs	Ultisols	Tuffac. sandstone	El Verde Forest	
		II3F	0.16	0.04	13	0.16	0.22	0.10	129	Smf	Ultisols	Tuffac. sandstone	Dwarf forest	
		II3F	0.16	0.04	13	0.16	0.22	0.10	137	Wfs	Ultisols	Tuffac. sandstone		
		II3G	0.49	0.11	13	0.51	0.63	0.33	122	Wfs	Ultisols	Tuffac. sandstone	El Verde forest	
		II3G	0.40	0.07	5	0.37	0.48	0.33	122	Wflm	Inceptisols	Tuffac. sandstone	Palo Colorado	
		II3G	0.47	0.22	13	0.50	0.79	0.17	122	Lmrf	Ultisols	Tuffac. sandstone	Tabonuco forest	
		II3G	0.74	0.12	13	0.77	0.89	0.50	122	Wfs	Ultisols	Tuffac. sandstone	El Verde Forest	
<i>Henriettea squamulosum</i>	Aluminum (mg/g)	II1A	7.74		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	0.32		1				93	Wflm	Inceptisols	Tuffac. sandstone	New	
		II1B	3.16		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	0.30		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Ash (%)	II1A	5.95		1				93	Wflm	Inceptisols	Tuffac. sandstone	New	
		II1A	4.83		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	3.64		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	0.94		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	C/N	II1A	29		1				93	Wflm	Inceptisols	Tuffac. sandstone	New	
		II1A	70		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	53		1				93	Wflm	Inceptisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1C	218		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Calcium (mg/g)	II1A	14.18		1				93	Wflm	Inceptisols	Tuffac. sandstone	New	
		II1A	11.92		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	10.96		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	2.66		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Iron (mg/g)	II1A	0.21		1				93	Wflm	Inceptisols	Tuffac. sandstone	New	
		II1A	0.17		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	0.12		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Magnesium (mg/g)	II1A	3.57		1				93	Wflm	Inceptisols	Tuffac. sandstone	New	
		II1A	1.17		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	1.94		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	0.10		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Manganese (mg/g)	II1A	1.11		1				93	Wflm	Inceptisols	Tuffac. sandstone	New	
		II1A	0.82		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	0.47		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	0.05		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Nitrogen (%)	II1A	1.50		1				93	Wflm	Inceptisols	Tuffac. sandstone	New	
		II1A	0.63		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	0.85		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	0.21		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II1A	0.54		1				93	Wflm	Inceptisols	Tuffac. sandstone	New	
		II1A	0.47		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	0.45		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	0.09		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Potassium (mg/g)	II1A	7.38		1				93	Wflm	Inceptisols	Tuffac. sandstone	New	
		II1A	8.24		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	5.24		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	1.10		1				93	Wflm	Inceptisols	Tuffac. sandstone		



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
<i>Herbaceous</i>	Aluminum (mg/g)	II3	0.93	1.73	11	0.21	4.57	0.03	135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II3	7.28	2.39	11	8.42	10.27	2.71	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II3	1.10	1.99	11	0.27	5.89	0.07	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II3	3.22	1.08	11	2.75	5.01	1.33	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II3	0.20	0.11	11	0.19	0.48	0.06	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II3	1.71	0.47	11	1.77	2.41	1.10	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II3	1.24	0.32	11	1.05	1.85	0.84	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II3	29.36	6.80	11	31.81	36.94	18.64	135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Hernandia sonora</i>	Ash (%)	II1A	14.58	3.96	3	13.88	18.85	11.02	90	Swf	Ultisols	Tuffac. sandstone	Torn	
		II1A	11.60	4.27	3	13.82	14.30	6.67	90	Swf	Ultisols	Tuffac. sandstone	Whole	
		II1C	26.64	7.55	3	30.11	31.82	17.98	90	Swf	Ultisols	Tuffac. sandstone		
		II8A	7.46	0.17	2	7.46	7.58	7.34	90	Swf	Ultisols	Tuffac. sandstone	Recently fall	
		II8B	4.75	0.72	3	4.53	5.55	4.17	90	Swf	Ultisols	Tuffac. sandstone		
		II8C	6.50	2.55	3	7.45	8.44	3.61	90	Swf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II1A	11.11	3.64	3	9.32	15.30	8.70	90	Swf	Ultisols	Tuffac. sandstone	Torn	
		II1A	11.82	3.57	3	10.43	15.88	9.16	90	Swf	Ultisols	Tuffac. sandstone	Whole	
		II1C	8.61	4.22	3	6.26	13.48	6.09	90	Swf	Ultisols	Tuffac. sandstone		
		II8A	8.35	1.32	3	9.02	9.21	6.83	90	Swf	Ultisols	Tuffac. sandstone	Recently fall	
		II8B	6.20	3.62	3	4.31	10.38	3.92	90	Swf	Ultisols	Tuffac. sandstone		
		II8C	1.97	0.23	3	1.93	2.22	1.77	90	Swf	Ultisols	Tuffac. sandstone		
		II9A	9.16	0.96	22	8.95	11.82	7.91	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	6.95	2.19	22	6.38	15.15	3.94	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	4.15	2.14	7	3.63	8.45	2.00	139	Wfs	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II9C	1.37	0.96	6	1.18	3.08	0.41	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	7.05	3.58	5	5.61	11.77	3.70	139	Wfs	Ultisols	Tuffac. sandstone		
		II1A	4.61	0.53	3	4.85	4.99	4.01	90	Swf	Ultisols	Tuffac. sandstone	Torn	
II1A		5.14	1.04	3	5.10	6.20	4.12	90	Swf	Ultisols	Tuffac. sandstone	Whole		
II1C		3.17	1.24	3	2.86	4.53	2.10	90	Swf	Ultisols	Tuffac. sandstone			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II8A	6.26	0.91	3	6.51	7.02	5.24	90	Swf	Ultisols	Tuffac. sandstone	Recently fall	
		II8B	2.19	0.70	3	2.08	2.93	1.55	90	Swf	Ultisols	Tuffac. sandstone		
		II8C	2.70	0.35	3	2.66	3.07	2.37	90	Swf	Ultisols	Tuffac. sandstone		
		II9A	5.13	0.65	22	4.92	6.63	3.93	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	4.32	1.61	22	4.36	7.99	2.03	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	2.26	1.18	7	1.86	4.38	0.59	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	2.46	0.80	6	2.17	3.62	1.68	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	3.77	1.12	5	4.31	4.70	1.96	139	Wfs	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II1A	1.94	0.07	3	1.91	2.02	1.90	90	Swf	Ultisols	Tuffac. sandstone	Torn	
		II1A	1.65	0.01	3	1.65	1.72	1.59	90	Swf	Ultisols	Tuffac. sandstone	Whole	
		II1C	1.99	0.38	3	1.77	2.43	1.76	90	Swf	Ultisols	Tuffac. sandstone		
		II8A	1.09	0.09	3	1.06	1.19	1.01	90	Swf	Ultisols	Tuffac. sandstone	Recently fall	
		II8B	1.03	0.46	3	0.84	1.56	0.70	90	Swf	Ultisols	Tuffac. sandstone		
		II8C	2.07	0.01	3	2.06	2.08	2.06	90	Swf	Ultisols	Tuffac. sandstone		
		II9A	1.65	0.28	22	1.58	2.56	1.29	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	1.55	0.65	22	1.39	2.83	0.56	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	0.80	0.28	12	0.73	1.46	0.40	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	2.31	0.91	11	2.17	4.19	1.24	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	2.44	0.71	9	2.35	3.42	1.55	139	Wfs	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II1A	0.85	0.06	3	0.87	0.90	0.78	90	Swf	Ultisols	Tuffac. sandstone	Torn	
		II1A	0.64	0.08	3	0.69	0.69	0.54	90	Swf	Ultisols	Tuffac. sandstone	Whole	
		II1C	0.90	0.10	3	0.89	1.00	0.80	90	Swf	Ultisols	Tuffac. sandstone		
		II8A	0.45	0.04	3	0.45	0.49	0.40	90	Swf	Ultisols	Tuffac. sandstone	Recently fall	
		II8B	0.46	0.20	3	0.41	0.68	0.28	90	Swf	Ultisols	Tuffac. sandstone		
		II8C	2.18	0.49	3	1.94	2.74	1.86	90	Swf	Ultisols	Tuffac. sandstone		
		II9A	0.74	0.16	22	0.70	1.20	0.55	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	0.67	0.30	22	0.63	1.18	0.14	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	0.28	0.15	7	0.27	0.58	0.09	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	1.69	0.42	6	1.72	2.28	1.09	139	Wfs	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Potassium (mg/g)	II9D	1.32	0.54	5	1.27	2.10	0.81	139	Wfs	Ultisols	Tuffac. sandstone		
		II1A	3.22	1.19	3	2.59	4.59	2.47	90	Swf	Ultisols	Tuffac. sandstone	Torn	
		III1A	3.21	1.20	3	2.64	4.59	2.40	90	Swf	Ultisols	Tuffac. sandstone	Whole	
		II1C	2.78	0.64	3	2.87	3.38	2.10	90	Swf	Ultisols	Tuffac. sandstone		
		II8A	3.76	3.75	3	1.85	8.08	1.34	90	Swf	Ultisols	Tuffac. sandstone	Recently fall	
		II8B	1.92	0.36	3	2.08	2.18	1.50	90	Swf	Ultisols	Tuffac. sandstone		
		II8C	4.45	0.79	3	4.56	5.18	3.61	90	Swf	Ultisols	Tuffac. sandstone		
		II9A	4.69	1.06	22	4.45	7.01	2.87	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	4.68	2.24	22	4.10	12.04	1.68	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	2.02	1.30	7	1.90	4.30	0.61	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	10.42	3.74	3	9.62	16.57	5.70	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	8.09	4.70	5	7.53	15.78	3.74	139	Wfs	Ultisols	Tuffac. sandstone		
<i>Heteropteris laurifolia</i>	Aluminum (mg/g)	II4	0.19	0.01	2	0.19	0.20	0.19	135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II4	6.53	3.45	2	6.53	8.97	4.09	135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II4	48		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II4	0.16	0.06	2	0.16	0.20	0.12	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II4	5.05	0.93	2	5.05	5.70	4.39	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II4	0.71	0.87	2	0.71	1.32	0.09	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II4	1.26	0.35	2	1.26	1.50	1.01	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II4	0.69	0.50	2	0.69	1.05	0.33	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II4	8.29	10.14	2	8.29	15.46	1.12	135	Lmrf	Ultisols	Tuffac. sandstone		
	Sulfur (%)	II4	0.14		1				135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Heterotrichum cymosum</i>	Aluminum (mg/g)	II8A	10.97	3.83	3	8.79	15.39	8.73	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	4.13	2.72	2	4.13	6.05	2.20	146	Swf	Ultisols	Tuffac. sandstone		
	Ash (%)	II8A	10.48	2.38	3	9.48	13.19	8.76	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	3.81	1.38	2	3.81	4.78	2.83	146	Swf	Ultisols	Tuffac. sandstone		
	C/N	II8A	97	9	3	32	33	17	146	Swf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
	Calcium (mg/g)	I18B	95	49	2	95	129	60	146	Swf	Ultisols	Tuffac. sandstone			
		I18A	20.37	3.44	3	18.94	24.29	17.87	146	Swf	Ultisols	Tuffac. sandstone			
	Carbon (%)	I18B	6.72	2.88	2	6.72	8.75	4.68	146	Swf	Ultisols	Tuffac. sandstone			
		I18A	50	1	3	50	50	49	146	Swf	Ultisols	Tuffac. sandstone			
	Iron (mg/g)	I18B	52	1	2	52	53	52	146	Swf	Ultisols	Tuffac. sandstone			
		I18A	0.55	0.59	3	0.21	1.24	0.21	146	Swf	Ultisols	Tuffac. sandstone			
	Magnesium (mg/g)	I18B	1.09	1.49	2	1.09	2.15	0.04	146	Swf	Ultisols	Tuffac. sandstone			
		I18A	2.92	0.10	3	2.88	3.03	2.85	146	Swf	Ultisols	Tuffac. sandstone			
	Manganese (mg/g)	I18B	1.18	0.75	2	1.18	1.71	0.66	146	Swf	Ultisols	Tuffac. sandstone			
		I18A	0.51	0.21	3	0.40	0.75	0.38	146	Swf	Ultisols	Tuffac. sandstone			
	Nitrogen (%)	I18B	0.55	0.30	2	0.55	0.76	0.34	146	Swf	Ultisols	Tuffac. sandstone			
		I18A	1.96	0.73	3	1.54	2.81	1.54	146	Swf	Ultisols	Tuffac. sandstone			
	Phosphorus (mg/g)	I18B	0.64	0.32	2	0.64	0.86	0.41	146	Swf	Ultisols	Tuffac. sandstone			
		I18A	0.74	0.30	3	0.57	1.09	0.57	146	Swf	Ultisols	Tuffac. sandstone			
	Potassium (mg/g)	I18B	0.40	0.24	2	0.40	0.56	0.23	146	Swf	Ultisols	Tuffac. sandstone			
		I18A	7.34	3.97	3	9.51	9.74	2.76	146	Swf	Ultisols	Tuffac. sandstone			
			I18B	2.97	1.71	2	2.97	4.18	1.76	146	Swf	Ultisols	Tuffac. sandstone		
	<i>Hibiscus elatus</i>	Ash (%)	I18A	8.48	2.17	4	8.48	11.50	6.35	90	Swf	Ultisols	Tuffac. sandstone	Recently fall	
			I18A	8.32	2.82	6	8.32	10.70	2.93	90	Swf	Ultisols	Tuffac. sandstone	Torn	
			I18B	4.99	2.23	4	4.99	7.25	3.60	90	Swf	Ultisols	Tuffac. sandstone		
I18C			9.24		1				90	Swf	Ultisols	Tuffac. sandstone			
I18C			3.86	1.69	4	3.86	5.91	1.91	90	Swf	Ultisols	Tuffac. sandstone			
Calcium (mg/g)		I18D	13.57	5.41	4	13.57	20.12	7.19	90	Swf	Ultisols	Tuffac. sandstone			
		I18A	17.19	2.40	3	18.10	19.01	14.47	90	Swf	Ultisols	Tuffac. sandstone	Recently fall		
		I18A	21.95	4.99	5	21.95	29.26	16.48	90	Swf	Ultisols	Tuffac. sandstone	Torn		
		I18B	10.37	4.38	4	8.49	15.39	7.24	90	Swf	Ultisols	Tuffac. sandstone			
		I18C	18.75		1				90	Swf	Ultisols	Tuffac. sandstone			
		I18C	6.62	3.35	3	6.50	10.03	3.33	90	Swf	Ultisols	Tuffac. sandstone			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II8D	17.91	5.96	3	17.97	23.84	11.93	90	Swf	Ultisols	Tuffac. sandstone		
		II9A	13.32	2.67	22	12.75	21.52	10.17	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	4.63	1.97	22	3.82	8.82	2.26	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	6.55	3.73	7	6.04	12.53	1.40	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	6.04	1.05	6	5.73	8.04	5.11	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	8.08	1.61	6	7.63	10.82	6.54	139	Wfs	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II8A	5.25	1.90	3	5.19	7.19	3.38	90	Swf	Ultisols	Tuffac. sandstone	Recently fall	
		II8A	5.96	0.48	5	6.10	6.25	5.12	90	Swf	Ultisols	Tuffac. sandstone	Torn	
		II8B	2.94	0.50	3	2.88	3.47	2.48	90	Swf	Ultisols	Tuffac. sandstone		
		II8C	7.12		1				90	Swf	Ultisols	Tuffac. sandstone		
		II8C	2.46	0.37	3	2.63	2.72	2.04	90	Swf	Ultisols	Tuffac. sandstone		
		II8D	5.34	0.21	3	5.26	5.58	5.18	90	Swf	Ultisols	Tuffac. sandstone		
		II9A	7.05	1.47	22	6.91	12.21	4.88	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	3.07	1.04	22	2.68	5.38	1.79	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	2.77	1.58	7	3.16	4.85	0.38	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	4.72	0.41	6	4.79	5.19	4.02	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	4.38	0.29	6	4.44	4.80	3.95	139	Wfs	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II8A	0.91	0.13	4	0.91	1.02	0.76	90	Swf	Ultisols	Tuffac. sandstone	Recently fall	
		II8A	1.14	0.19	6	1.14	1.36	0.89	90	Swf	Ultisols	Tuffac. sandstone	Torn	
		II8B	0.68	0.09	4	0.68	0.80	0.61	90	Swf	Ultisols	Tuffac. sandstone		
		II8C	1.67	0.35	2	1.67	1.91	1.42	90	Swf	Ultisols	Tuffac. sandstone		
		II8C	0.70	0.31	4	0.70	1.08	0.32	90	Swf	Ultisols	Tuffac. sandstone		
		II8D	1.46	0.13	4	1.46	1.58	1.27	90	Swf	Ultisols	Tuffac. sandstone		
		II9A	1.00	0.26	22	0.94	1.68	0.72	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	0.77	0.33	22	0.66	1.37	0.37	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	0.53	0.23	12	0.59	0.77	0.12	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	1.51	0.32	11	1.51	2.18	1.08	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	1.62	0.27	11	1.58	2.14	1.32	139	Wfs	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II8A	0.35	0.05	3	0.32	0.41	0.32	90	Swf	Ultisols	Tuffac. sandstone	Recently fall	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Potassium (mg/g)	II8A	0.47	0.11	5	0.44	0.66	0.39	90	Swf	Ultisols	Tuffac. sandstone	Torn	
		II8B	0.85		1				90	Swf	Ultisols	Tuffac. sandstone		
		II8C	0.42	0.17	3	0.45	0.56	0.23	90	Swf	Ultisols	Tuffac. sandstone		
		II8C	0.63	0.06	3	0.59	0.70	0.59	90	Swf	Ultisols	Tuffac. sandstone		
		II8D	0.37	0.06	3	0.35	0.44	0.35	90	Swf	Ultisols	Tuffac. sandstone		
		II9A	0.48	0.15	22	0.45	0.88	0.30	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	0.54	0.29	11	0.44	1.19	0.21	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	0.18	0.11	7	0.19	0.29	0.03	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	1.10	0.22	6	1.11	1.38	0.76	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	0.99	0.20	6	0.97	1.29	0.76	139	Wfs	Ultisols	Tuffac. sandstone		
		II8A	6.12	0.28	4	6.28	6.28	5.80	90	Swf	Ultisols	Tuffac. sandstone	Recently fall	
		II8A	5.20	2.00	5	5.91	7.15	2.97	90	Swf	Ultisols	Tuffac. sandstone	Torn	
		II8B	2.27	0.72	3	2.67	2.70	1.44	90	Swf	Ultisols	Tuffac. sandstone		
		II8C	4.31		1				90	Swf	Ultisols	Tuffac. sandstone		
		II8C	2.61	0.53	3	2.46	3.19	2.17	90	Swf	Ultisols	Tuffac. sandstone		
		II8D	4.78	1.80	3	4.96	6.48	2.90	90	Swf	Ultisols	Tuffac. sandstone		
		II9A	7.62	1.82	22	7.78	10.58	4.38	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	5.05	2.97	22	4.02	13.27	1.60	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	2.23	1.44	7	2.05	4.71	0.41	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	11.62	3.21	6	11.23	15.66	8.31	139	Wfs	Ultisols	Tuffac. sandstone		
II9D	5.84	1.33	6	6.17	7.10	3.51	139	Wfs	Ultisols	Tuffac. sandstone				
	Wood density (g/cc)	II2B	0.44	0.11	173	0.44	0.72	0.18	97	Wfs	Inceptisols	Tuffac. sandstone	Heartwood	
		II2B	0.52	0.10	173	0.53	1.06	0.21	97	Wfs	Inceptisols	Tuffac. sandstone	Sapwood	
<i>Hilia paraitica</i>	Aluminum (mg/g)	II4	0.08		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II4	6.66		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II4	0.14		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II4	3.28		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II4	0.05		1				135	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Nitrogen (%)	II4	0.82		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II4	0.53		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II4	14.39		1				135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Homalium racemoso</i>	Aluminum (mg/kg)	II1A	62		1				148	Smf	Ultisols	Tuffac. sandstone		
	Ash (%)	II1A	6.05		1				148	Smf	Ultisols	Tuffac. sandstone		
	C/N	II1A	36		1				148	Smf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II1A	12.20		1				148	Smf	Ultisols	Tuffac. sandstone		
	Cobalt (mg/kg)	II1A	5.80		1				148	Smf	Ultisols	Tuffac. sandstone		
	Copper (mg/kg)	II1A	2.85		1				148	Smf	Ultisols	Tuffac. sandstone		
	Chromium (mg/kg)	II1A	1.49		1				148	Smf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II1A	0.06		1				148	Smf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II1A	5.19		1				148	Smf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II1A	0.04		1				148	Smf	Ultisols	Tuffac. sandstone		
	Niquel (mg/kg)	II1A	37.04		1				148	Smf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II1A	1.22		1				148	Smf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II1A	0.46		1				148	Smf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II1A	2.73		1				148	Smf	Ultisols	Tuffac. sandstone		
	Sodium (mg/g)	II1A	185.41		1				148	Smf	Ultisols	Tuffac. sandstone		
	Zinc (mg/kg)	II1A	13		1				148	Smf	Ultisols	Tuffac. sandstone		
<i>Hyeronima clusioides</i>	Wood density (g/cc)	II1B	0.77	0.03	3	0.78	0.79	0.73	97	Wfs	Inceptisols	Tuffac. sandstone		
<i>Hypolepsis spp</i>	Aluminum (mg/g)	II6	0.20	0.16	3	0.29	0.30	0.01	135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II6	2.09	0.60	3	1.75	2.78	1.73	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II6	0.13	0.02	3	0.12	0.13	0.09	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II6	0.14	0.08	3	1.44	1.50	1.34	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II6	0.16	0.22	3	0.04	0.42	0.04	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II6	1.19	0.21	3	1.08	1.43	1.07	135	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Phosphorus (mg/g)	II6	0.62	0.16	3	0.53	0.80	0.53	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II6	18.28	12.05	3	11.51	32.19	11.12	135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Ichnanthus pallens</i>	Aluminum (mg/g)	II3	0.67	1.08	24	0.32	4.77	0.05	135	Lmrf	Ultisols	Tuffac. sandstone		
	C/N	II3	19	4	21	19	27	14	135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II3	1.91	0.80	24	1.84	3.52	0.38	135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II3	39	1	21	38	41	36	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II3	0.63	0.95	24	0.25	4.01	0.09	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II3	3.54	2.59	24	3.04	13.29	1.14	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II3	0.48	0.33	24	0.43	1.78	0.15	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II3	1.75	0.47	40	1.67	2.77	0.83	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II3	0.66	0.18	24	0.70	1.08	0.34	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II3	21.27	8.07	24	23.24	39.53	1.84	135	Lmrf	Ultisols	Tuffac. sandstone		
	Sulfur (%)	II3	0.51	0.16	21	0.48	0.86	0.31	135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Ichnanthus spp.</i>	Aluminum (mg/g)	II3	1.35	1.30	12	0.74	4.23	0.30	135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II3	2.26	0.72	12	2.11	3.71	1.33	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II3	1.16	1.20	12	0.82	4.35	0.20	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II3	2.74	0.64	12	2.76	4.34	1.68	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II3	0.38	0.12	12	0.34	0.58	0.19	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II3	1.53	0.36	12	1.57	2.00	0.86	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II3	0.66	0.15	12	0.63	0.91	0.46	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II3	22.18	3.93	12	23.77	28.94	15.68	135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Ilex sideroxyloides</i>	Aluminum (mg/g)	III1A	0.24		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		III1B	0.22		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Ash (%)	III1A	3.25		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		III1B	4.43		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	C/N	III1A	44		1				93	Wflm	Inceptisols	Tuffac. sandstone		



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
	Calcium (mg/g)	II1B	76		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1A	4.75		1				93	Wflm	Inceptisols	Tuffac. sandstone			
	Iron (mg/g)	II1B	11.65		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1A	0.10		1				93	Wflm	Inceptisols	Tuffac. sandstone			
	Magnesium (mg/g)	II1B	0.07		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1A	2.16		1				93	Wflm	Inceptisols	Tuffac. sandstone			
	Manganese (mg/g)	II1B	1.14		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1A	0.57		1				93	Wflm	Inceptisols	Tuffac. sandstone			
	Nitrogen (%)	II1B	0.72		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1A	1.01		1				93	Wflm	Inceptisols	Tuffac. sandstone			
	Phosphorus (mg/g)	II1B	0.58		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1A	0.77		1				93	Wflm	Inceptisols	Tuffac. sandstone			
	Potassium (mg/g)	II1B	0.47		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1A	10.27		1				93	Wflm	Inceptisols	Tuffac. sandstone			
			II1B	8.16		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	<i>Inga fagifolia</i>	Aluminum (mg/g)	II8A	0.17	0.12	6	0.12	0.41	0.09	145	Wfs	Ultisols	Tuffac. sandstone		
Ash (%)		II8A	6.31	0.36	6	6.35	6.73	5.69	145	Wfs	Ultisols	Tuffac. sandstone			
C/N		II8A	29	2	6	29	31	26	145	Wfs	Ultisols	Tuffac. sandstone			
Calcium (mg/g)		II8A	10.76	2.23	6	10.15	14.32	8.16	145	Wfs	Ultisols	Tuffac. sandstone			
Carbon (%)		II8A	52	1	6	52	53	51	145	Wfs	Ultisols	Tuffac. sandstone			
Iron (mg/g)		II8A	0.12	0.02	6	0.12	0.17	0.10	145	Wfs	Ultisols	Tuffac. sandstone			
Magnesium (mg/g)		II8A	1.64	0.19	6	1.62	1.88	1.43	145	Wfs	Ultisols	Tuffac. sandstone			
Manganese (mg/g)		II8A	0.17	0.05	6	0.15	0.23	0.13	145	Wfs	Ultisols	Tuffac. sandstone			
Nitrogen (%)		II8A	1.82	0.11	6	1.79	2.00	1.71	145	Wfs	Ultisols	Tuffac. sandstone			
Phosphorus (mg/g)		II8A	0.26	0.06	6	0.24	0.36	0.21	145	Wfs	Ultisols	Tuffac. sandstone			
Potassium (mg/g)		II8A	2.75	0.29	6	2.70	3.27	2.49	145	Wfs	Ultisols	Tuffac. sandstone			
Sulfur (%)		II8A	0.19	0.01	6	0.19	0.20	0.18	145	Wfs	Ultisols	Tuffac. sandstone			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
<i>Inga laurina</i>	Aluminum (mg/g)	II1E	0.63	0.17	2	0.63	0.75	0.51	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1H	0.15	0.11	7	0.14	0.36	0.05	135	Lmrf	Ultisols	Tuffac. sandstone		
		II7A	0.37	0.33	3	0.25	0.74	0.12	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7A	0.41	0.49	5	0.21	1.28	0.09	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
		II7B	0.02	0.01	4	0.02	0.04	0.01	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7B	0.04	0.02	5	0.05	0.06	0.02	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
		II7C	0.18	0.14	3	0.20	0.32	0.03	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7C	0.23	0.29	4	0.13	0.66	0.02	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
	Ash (%)	II1A	4.55	0.86	6	4.51	5.87	3.46	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1A	4.20		1				71	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	1.41	0.48	6	1.41	2.10	0.66	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1Ci	5.58	0.89	5	5.70	6.64	4.21	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	C/N	II1A	24	1	6	24	26	23	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1C	95	20	6	90	134	78	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1Ci	37	5	5	37	43	32	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	Calcium (mg/g)	II1A	5.21	1.45	9	4.90	8.04	2.96	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	7.04	1.87	10	7.60	9.20	3.76	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	1.38	0.26	17	1.34	1.84	0.99	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1Ci	8.51	1.28	18	8.00	11.42	6.96	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1E	2.48	0.21	2	2.48	2.62	2.33	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1H	4.10	0.84	7	4.33	5.05	2.93	135	Lmrf	Ultisols	Tuffac. sandstone		
		II7A	12.04	0.68	3	12.07	12.69	11.34	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7A	8.29	1.09	5	8.87	9.15	6.76	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
		II7B	2.65	0.91	4	2.48	3.91	1.75	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7B	2.69	0.91	5	2.40	3.67	1.66	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
		II7C	4.86	1.09	3	5.06	5.84	3.68	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7C	5.45	2.24	4	4.91	8.39	3.60	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
	Carbon (%)	II1A	53	0	6	54	54	53	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1A	54		1				71	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1C	53	0	6	53	53	53	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1Ci	52	1	5	3	53	51	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	Iron (mg/g)	II1E	0.96	0.35	2	0.96	1.21	0.71	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1H	0.16	0.08	7	0.14	0.32	0.10	135	Lmrf	Ultisols	Tuffac. sandstone		
		II7A	0.47	0.44	3	0.34	0.97	0.11	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7A	0.42	0.55	5	0.20	1.40	0.07	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
		II7B	0.02	0.02	4	0.02	0.05	0.01	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7B	0.06	0.01	5	0.06	0.07	0.04	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
		II7C	0.13	0.10	3	0.14	0.22	0.03	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7C	0.29	0.41	4	0.12	0.89	0.02	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
	Magnesium (mg/g)	II1A	1.26	0.44	9	1.48	1.68	0.42	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	1.19	0.31	10	1.32	1.72	0.75	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	0.18	0.04	17	0.17	0.29	0.12	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1Ci	0.63	0.07	18	0.64	0.74	0.43	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1E	1.08	0.16	2	1.08	1.19	0.97	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1H	1.19	0.14	7	1.14	1.44	0.03	135	Lmrf	Ultisols	Tuffac. sandstone		
		II7A	0.83	0.09	3	0.86	0.90	0.73	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7A	0.65	0.20	5	0.69	0.81	0.36	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
		II7B	0.32	0.05	4	0.31	0.39	0.28	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7B	0.38	0.14	5	0.33	0.57	0.25	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
		II7C	0.42	0.12	3	0.38	0.55	0.32	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7C	0.49	0.35	4	0.36	1.01	0.25	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
	Manganese (mg/g)	II1E	0.06	0.02	2	0.06	0.07	0.04	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1H	0.13	0.03	7	0.15	0.16	0.10	135	Lmrf	Ultisols	Tuffac. sandstone		
		II7A	0.12	0.01	3	0.13	0.13	0.12	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7A	0.08	0.03	5	0.07	0.13	0.05	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
		II7B	0.03	0.01	4	0.03	0.05	0.02	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7B	0.03	0.01	5	0.03	0.04	0.02	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
		II7C	0.05	0.03	3	0.05	0.08	0.03	70	Lmrf	Ultisols	Tuffac. sandstone	1year	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Nitrogen (%)	II7C	0.08	0.03	4	0.07	0.11	0.05	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
		II1A	2.25	0.08	6	2.27	2.34	2.10	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		III1A	2.25	0.93	9	2.74	2.90	0.66	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1A	2.87		1				71	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	1.48	0.83	10	1.11	2.86	0.74	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	0.57	0.10	6	0.59	0.67	0.40	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1C	0.25	0.02	17	0.26	0.30	0.21	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1Ci	1.45	0.19	5	1.39	1.66	1.22	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1Ci	1.47	0.14	18	1.48	1.69	1.09	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II1E	1.19	0.12	2	1.19	1.27	1.10	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1H	1.75	0.28	7	1.79	2.10	1.44	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1A	0.93	0.35	9	1.09	1.29	0.31	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	0.62	0.42	10	0.41	1.44	0.29	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	0.06	0.02	17	0.05	0.09	0.03	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1Ci	0.27	0.03	18	0.27	0.33	0.24	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1E	0.34	0.03	2	0.34	0.36	0.32	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1H	0.66	0.08	7	0.64	0.82	0.56	135	Lmrf	Ultisols	Tuffac. sandstone		
		Potassium (mg/g)	II7A	0.24	0.05	3	0.23	0.30	0.20	70	Lmrf	Ultisols	Tuffac. sandstone	1year
	II7A		0.17	0.03	5	0.16	0.22	0.13	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
	II7B		0.05	0.02	4	0.06	0.71	0.03	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
	II7B		0.03	0.01	5	0.03	0.04	0.03	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
	II7C		0.12	0.05	3	0.14	0.16	0.07	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
	II7C		0.13	0.04	4	0.15	0.16	0.07	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
	II1A		6.99	2.13	9	7.31	10.44	3.86	135	Lmrf	Ultisols	Tuffac. sandstone		
	II1B		5.71	2.47	10	4.84	11.55	3.43	135	Lmrf	Ultisols	Tuffac. sandstone		
	II1C		2.74	0.59	17	2.60	3.94	1.74	135	Lmrf	Ultisols	Tuffac. sandstone		
	II1Ci		5.84	0.56	18	5.95	6.80	4.90	135	Lmrf	Ultisols	Tuffac. sandstone		
	II1E		5.39	0.65	2	5.39	5.85	4.93	135	Lmrf	Ultisols	Tuffac. sandstone		
	II1H		7.25	1.34	7	7.33	9.47	5.73	135	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Sulfur (%)	II7A	2.66	0.37	3	2.65	3.03	2.29	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7A	1.19	0.25	5	1.17	1.50	0.94	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
		II7B	1.64	0.53	4	1.60	2.20	1.15	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7B	1.08	0.42	5	1.19	1.54	0.61	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
		II7C	2.38	0.99	3	2.11	3.47	1.55	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7C	1.11	0.13	4	1.12	1.23	0.97	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
		II1A	0.26	0.02	6	0.26	0.29	0.25	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1A	0.36		1				71	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	0.06	0.01	6	0.06	0.07	0.04	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1Ci	0.12	0.02	5	0.12	0.14	0.09	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	Wood density (g/cc)	II1C	0.61	0.05	5	0.60	0.69	0.56	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
<i>Inga vera</i>	Aluminum (mg/g)	II8A	0.24	0.07	7	0.24	0.32	0.15	145	Wfs	Ultisols	Tuffac. sandstone		
		II8A	0.97	0.65	3	1.25	1.43	0.23	146	Wfs	Ultisols	Tuffac. sandstone		
		II8B	0.27	0.03	2	0.27	0.28	0.25	146	Wfs	Ultisols	Tuffac. sandstone		
	Ash (%)	II8A	6.68	1.64	6	6.47	9.37	4.70	145	Wfs	Ultisols	Tuffac. sandstone		
		II8A	6.81		1				71	Wfs	Ultisols	Tuffac. sandstone		
		II8A	6.54	1.03	3	7.07	7.20	5.36	145	Wfs	Ultisols	Tuffac. sandstone		
	C/N	II8B	2.36	1.40	2	2.36	3.38	1.34	145	Wfs	Ultisols	Tuffac. sandstone		
		II8A	27	1	7	27	28	26	145	Wfs	Ultisols	Tuffac. sandstone		
		II8A	15	1	3	15	16	15	145	Wfs	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II8B	42	4	2	42	44	39	145	Wfs	Ultisols	Tuffac. sandstone		
		II1A	8.80	2.57	5	7.80	11.81	5.98	100	Lmrf	Ultisols	Tuffac. sandstone	Fresh	
		II1A	11.63	3.94	5	11.75	16.92	6.91	100	Lmrf	Ultisols	Tuffac. sandstone	7 day Decomp.	
		II1A	10.50	3.00	5	10.85	13.24	7.06	100	Lmrf	Ultisols	Tuffac. sandstone	14 day Decomp.	
		II8A	9.52	1.32	7	10.24	11.05	8.05	145	Wfs	Ultisols	Tuffac. sandstone		
		II8A	15.36	2.52	3	16.85	17.90	11.34	145	Wfs	Ultisols	Tuffac. sandstone		
Carbon (%)	II8B	6.03	2.59	2	6.03	7.86	4.20	145	Wfs	Ultisols	Tuffac. sandstone			
	II8A	52	1	7	52	53	50	145	Wfs	Ultisols	Tuffac. sandstone			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II8A	54		1				71	Wfs	Ultisols	Tuffac. sandstone		
		II8A	53	1	3	53	54	53	145	Wfs	Ultisols	Tuffac. sandstone		
		II8B	53	2	2	53	54	52	145	Wfs	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II8A	0.21	0.06	7	0.19	0.30	0.15	145	Wfs	Ultisols	Tuffac. sandstone		
		II8A	0.59	0.07	3	0.56	0.67	0.54	145	Wfs	Ultisols	Tuffac. sandstone		
		II8B	0.18	0.07	2	0.18	0.23	0.13	145	Wfs	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II1A	3.16	0.74	5	2.78	4.25	2.49	100	Lmrf	Ultisols	Tuffac. sandstone	Fresh	
		II1A	3.41	1.10	5	3.31	4.72	2.07	100	Lmrf	Ultisols	Tuffac. sandstone	7 day Decomp.	
		II1A	2.99	0.77	5	3.11	3.71	1.75	100	Lmrf	Ultisols	Tuffac. sandstone	14 day Decomp.	
		II8A	1.24	0.16	7	1.26	1.47	1.02	145	Wfs	Ultisols	Tuffac. sandstone		
		II8A	1.56	0.32	3	1.48	1.91	1.30	145	Wfs	Ultisols	Tuffac. sandstone		
		II8B	0.70	0.09	2	0.70	0.76	0.63	145	Wfs	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II8A	0.26	0.06	7	0.28	0.32	0.15	145	Wfs	Ultisols	Tuffac. sandstone		
		II8A	0.15	0.06	3	0.16	0.20	0.09	145	Wfs	Ultisols	Tuffac. sandstone		
		II8B	0.05	0.00	2	0.05	0.05	0.04	145	Wfs	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II1A	2.08	0.09	5	2.07	2.17	1.95	100	Lmrf	Ultisols	Tuffac. sandstone	Fresh	
		II1A	2.04	0.14	5	2.01	2.22	1.89	100	Lmrf	Ultisols	Tuffac. sandstone	7 day Decomp.	
		II1A	2.17	0.16	5	2.21	2.33	1.91	100	Lmrf	Ultisols	Tuffac. sandstone	14 day Decomp.	
		II8A	1.94	0.07	7	1.91	2.03	1.85	145	Wfs	Ultisols	Tuffac. sandstone		
		II8A	1.99		1				71	Wfs	Ultisols	Tuffac. sandstone		
		II8A	3.46	0.03	3	3.47	3.48	3.42	145	Wfs	Ultisols	Tuffac. sandstone		
		II8B	1.29	0.09	2	1.29	1.35	1.22	145	Wfs	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II1A	0.85	0.19	5	0.80	1.06	0.61	100	Lmrf	Ultisols	Tuffac. sandstone	Fresh	
		II1A	0.82	0.23	5	0.81	1.07	0.49	100	Lmrf	Ultisols	Tuffac. sandstone	7 day Decomp.	
		II1A	0.86	0.17	5	0.88	1.05	0.60	100	Lmrf	Ultisols	Tuffac. sandstone	14 day Decomp.	
		II8A	0.35	0.03	7	0.36	0.39	0.30	145	Wfs	Ultisols	Tuffac. sandstone		
		II8A	0.77	0.21	3	0.68	1.02	0.62	145	Wfs	Ultisols	Tuffac. sandstone		
		II8B	0.42	0.18	2	0.40	0.53	0.27	145	Wfs	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II1A	3.20	0.73	5	2.82	4.11	2.55	100	Lmrf	Ultisols	Tuffac. sandstone	Fresh	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Sulfur (%)	II1A	2.79	0.56	5	2.66	3.55	2.16	100	Lmrf	Ultisols	Tuffac. sandstone	7 day Decomp.	
		II1A	2.57	0.45	5	2.61	3.04	1.85	100	Lmrf	Ultisols	Tuffac. sandstone	14 day Decomp.	
		II8A	3.43	0.38	7	3.39	3.89	2.88	145	Wfs	Ultisols	Tuffac. sandstone		
		II8A	4.10	4.12	3	1.92	8.85	1.52	145	Wfs	Ultisols	Tuffac. sandstone		
		II8B	3.32	3.04	2	3.32	5.47	1.17	145	Wfs	Ultisols	Tuffac. sandstone		
		II8A	0.17	0.01	7	0.17	0.18	0.14	145	Wfs	Ultisols	Tuffac. sandstone		
		II8A	0.28		1				71	Wfs	Ultisols	Tuffac. sandstone		
		II8A	0.50	0.06	3	0.47	0.58	0.46	145	Wfs	Ultisols	Tuffac. sandstone		
		II8B	0.25	0.01	2	0.25	0.26	0.25	145	Wfs	Ultisols	Tuffac. sandstone		
<i>Jacquinia berterii</i>	Aluminum (mg/kg)	II1A	40	58	10	21	201	2	151	Sdf	Mollisols	Alluvial deposits		
	Ash (%)	II1A	9.02	1.99	9	8.68	11.60	5.56	151	Sdf	Mollisols	Alluvial deposits		
	C/N	II1A	60	6	9	60	69	53	151	Sdf	Mollisols	Alluvial deposits		
	Calcium (mg/g)	II1A	7.76		1				104	Sdf	Mollisols	Alluvial deposits		
		II1A	7.76		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Carbon (%)	II1A	27.65	8.71	10	25.53	42.43	17.25	151	Sdf	Mollisols	Alluvial deposits		
		II1Ci	30.24		1				104	Sdf	Mollisols	Alluvial deposits		
		II1Ci	30.24		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1A	54	2	9	55	56	51	151	Sdf	Mollisols	Alluvial deposits		
	Iron (mg/kg)	II1A	33	26	10	30	105	13	151	Sdf	Mollisols	Alluvial deposits		
	Magnesium (mg/g)	II1A	2.30		1				104	Sdf	Mollisols	Alluvial deposits		
		II1A	2.30		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Manganese (mg/kg)	II1A	1.20	0.34	10	1.17	1.70	0.51	151	Sdf	Mollisols	Alluvial deposits		
		II1Ci	0.59		1				104	Sdf	Mollisols	Alluvial deposits		
		II1Ci	0.59		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1A	13	7	10	11	26	5	151	Sdf	Mollisols	Alluvial deposits		
Nitrogen (%)	II1A	0.78		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest		
	II1A	0.90	0.07	9	0.91	0.99	0.82	151	Sdf	Mollisols	Alluvial deposits			
		II1Ci	0.67		1			149	Sdf	Mollisols	Alluvial deposits	Guanica Forest		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
	Phosphorus (mg/g)	II1A	0.18		1				104	Sdf	Mollisols	Alluvial deposits			
		II1A	0.18		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest		
		III1A	0.22	0.05	10	0.23	0.28	0.16		151	Sdf	Mollisols	Alluvial deposits		
		II1Ci	0.15		1					104	Sdf	Mollisols	Alluvial deposits		
		II1Ci	0.15		1					149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Potassium (mg/g)	II1A	7.28		1					104	Sdf	Mollisols	Alluvial deposits		
		II1A	7.28		1					149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		III1A	4.98	0.69	10	4.97	6.00	4.19		151	Sdf	Mollisols	Alluvial deposits		
		II1Ci	7.12		1					104	Sdf	Mollisols	Alluvial deposits		
		II1Ci	7.12		1					149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
Sulfur (%)	II1A	0.26	0.03	9	0.27	0.31	0.21		151	Sdf	Mollisols	Alluvial deposits			
<i>Juglans jamaicensis</i>	Wood density (g/cc)	III1C	0.49	0.03	3	0.50	0.51	0.46	115						
<i>Kalanchoe pinnata</i>	Calcium (mg/g)	II3Ai	54.72	20.43	12	50.10	80.02	32.04	105						
		II3Aii	71.55	25.23	12	70.47	97.98	46.54	105				Shade		
		II3C	41.92	16.25	8	36.08	68.81	27.34	105				Shade		
		II3C	27.22	5.74	8	27.06	36.62	20.76	105				Sun		
		II3E	15.67	1.49	8	15.97	17.15	13.61	105				Shade		
		II3E	16.50	1.83	8	15.73	19.78	14.96	105				Sun		
	Magnesium (mg/g)	II3Ai	3.38	0.35	12	3.36	3.84	2.93	105						
		II3Aii	4.70	1.11	12	4.69	5.94	3.36	105				Shade		
		II3C	2.28	0.73	8	1.90	3.49	1.83	105				Shade		
		II3C	2.03	0.14	8	2.01	2.21	1.84	105				Sun		
		II3E	2.09	0.66	8	1.83	3.10	1.42	105				Shade		
		II3E	2.29	0.24	8	2.35	2.56	1.92	105				Sun		
	Nitrogen (%)	II3Ai	0.70	0.17	7	0.77	0.90	0.48	105						
		II3Aii	1.06	0.09	7	1.08	1.19	0.93	105				Shade		
II3C		0.33	0.05	5	0.32	0.40	0.27	105				Shade			



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Phosphorus (mg/g)	I13C	0.29	0.05	5	0.28	0.36	0.22	105				Sun	
		I13E	0.33	0.05	5	0.32	0.42	0.28	105				Shade	
		I13E	0.35	0.02	5	0.34	0.37	0.33	105				Sun	
		I13Ai	4.51	0.88	12	4.40	5.61	3.42	105					
		I13Aii	3.42	0.12	12	3.38	3.64	3.27	105				Shade	
		I13C	2.16	0.20	8	2.12	2.48	1.92	105				Shade	
		I13C	2.14	0.06	8	2.14	2.22	2.05	105				Sun	
		I13E	1.31	0.10	8	1.28	1.48	1.20	105				Shade	
		I13E	1.26	0.04	8	1.25	1.33	1.21	105				Sun	
		I13Ai	19.83	3.01	12	19.15	23.99	13.49	105					
		I13Aii	21.65	2.81	12	21.02	26.38	17.38	105				Shade	
		I13C	23.29	10.72	8	19.38	44.13	14.27	105				Shade	
		I13C	15.44	2.36	8	14.53	19.74	13.15	105				Sun	
		I13E	10.79	1.51	8	10.39	13.60	8.96	105				Shade	
I13E	9.21	0.45	8	9.24	9.96	8.62	105				Sun			
<i>Khaya grandifolia</i>	Wood density (g/cc)	I11B	0.57	0.02	5	0.58	0.58	0.54	97	Wfs	Inceptisols	Tuffac. sandstone		
<i>Khaya nyasica</i>	Ash (%)	I18A	7.21	1.65	4	7.21	9.52	5.62	90	Swf	Ultisols	Tuffac. sandstone		
		I18A	13.35	5.50	4	13.35	21.90	8.42	90	Swf	Ultisols	Tuffac. sandstone	Torn	
		I18A	8.37	0.69	4	8.37	9.34	7.86	90	Swf	Ultisols	Tuffac. sandstone	Whole	
		I18B	3.94	1.43	4	3.94	5.49	2.15	90	Swf	Ultisols	Tuffac. sandstone		
		I18C	1.91		1				90	Swf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	I18D	21.85	6.92	4	21.85	29.40	13.68	90	Swf	Ultisols	Tuffac. sandstone		
		I11A	5.63	1.42	8	5.46	7.76	3.49	135	Lmrf	Ultisols	Tuffac. sandstone		
		I11B	5.39	1.11	8	5.40	7.53	3.89	135	Lmrf	Ultisols	Tuffac. sandstone		
		I11C	1.35	0.26	15	1.34	2.10	1.08	135	Lmrf	Ultisols	Tuffac. sandstone		
		I11Ci	7.46	1.01	15	7.68	9.29	5.95	135	Lmrf	Ultisols	Tuffac. sandstone		
I18A	12.23	1.36	4	12.23	14.24	11.32	90	Swf	Ultisols	Tuffac. sandstone				

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II8A	11.02	1.70	4	11.02	12.18	8.63	90	Swf	Ultisols	Tuffac. sandstone	Torn	
		II8A	11.94	1.02	4	11.94	13.18	11.06	90	Swf	Ultisols	Tuffac. sandstone	Whole	
		II8B	8.03	3.15	4	8.03	11.09	4.15	90	Swf	Ultisols	Tuffac. sandstone		
		II8C	2.23		1				90	Swf	Ultisols	Tuffac. sandstone		
		II8D	7.49	2.97	4	7.94	11.19	4.01	90	Swf	Ultisols	Tuffac. sandstone		
		II9A	7.58	1.14	22	7.70	9.31	4.98	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	4.44	2.29	21	3.67	10.84	2.64	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	6.29	1.59	6	5.80	9.30	4.80	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	1.41	0.77	5	1.59	2.41	0.68	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	6.94	1.01	5	7.20	8.36	5.75	139	Wfs	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II1A	2.26	0.42	8	2.28	2.98	1.52	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	1.12	0.19	8	1.09	1.50	0.90	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	0.13	0.06	15	0.10	0.29	0.07	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1Ci	0.73	0.19	15	0.75	1.00	0.48	135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	2.79	0.84	4	2.79	4.03	2.26	90	Swf	Ultisols	Tuffac. sandstone		
		II8A	2.37	0.18	4	2.37	2.52	2.12	90	Swf	Ultisols	Tuffac. sandstone	Torn	
		II8A	2.31	0.08	4	2.31	2.38	2.20	90	Swf	Ultisols	Tuffac. sandstone	Whole	
		II8B	1.85	0.51	4	1.85	2.50	1.40	90	Swf	Ultisols	Tuffac. sandstone		
		II8C	0.77		1				90	Swf	Ultisols	Tuffac. sandstone		
		II8D	1.82	0.36	4	1.82	2.27	1.43	90	Swf	Ultisols	Tuffac. sandstone		
		II9A	2.34	0.38	22	2.41	3.12	1.74	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	1.52	0.59	21	1.36	3.38	0.76	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	2.29	0.68	6	2.27	3.10	1.11	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	0.91	0.56	5	1.15	1.39	0.01	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	2.22	0.18	5	2.20	2.41	1.99	139	Wfs	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II1A	1.70	0.46	8	1.62	2.53	0.90	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	0.69	0.12	8	0.67	0.90	0.54	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	0.08	0.03	15	0.08	0.14	0.05	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1Ci	0.33	0.05	15	0.31	0.45	0.24	135	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II8A	1.24	0.22	4	1.24	1.53	0.99	90	Swf	Ultisols	Tuffac. sandstone		
		II8A	1.29	0.12	4	1.29	1.45	1.18	90	Swf	Ultisols	Tuffac. sandstone	Tom leaves	
		II8A	1.05	0.17	4	1.05	1.29	0.91	90	Swf	Ultisols	Tuffac. sandstone	Whole	
		II8B	0.63	0.15	4	0.63	0.77	0.41	90	Swf	Ultisols	Tuffac. sandstone		
		II8C	0.44		1				90	Swf	Ultisols	Tuffac. sandstone		
		II8D	1.15	0.20	4	1.15	1.40	0.91	90	Swf	Ultisols	Tuffac. sandstone		
		II9A	1.04	0.18	22	1.06	1.30	0.70	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	0.73	0.34	22	0.61	1.66	0.36	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	0.51	0.19	11	0.54	0.77	0.16	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	0.72	0.16	9	0.69	1.07	0.54	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	1.26	0.18	10	1.20	1.57	1.02	139	Wfs	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II1A	0.90	0.25	8	0.84	1.44	0.67	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	0.43	0.15		0.40	0.68	0.24	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	0.04	0.02	15	0.03	0.08	0.02	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1Ci	0.13	0.02	15	0.12	0.18	0.10	135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	0.40	0.21	4	0.40	0.63	0.13	90	Swf	Ultisols	Tuffac. sandstone		
		II8A	0.35	0.07	4	0.35	0.40	0.24	90	Swf	Ultisols	Tuffac. sandstone	Torn	
		II8A	0.24	0.10	4	0.24	0.36	0.11	90	Swf	Ultisols	Tuffac. sandstone	Whole	
		II8B	0.19	0.09	4	0.19	0.24	0.05	90	Swf	Ultisols	Tuffac. sandstone		
		II8C	0.25		1				90	Swf	Ultisols	Tuffac. sandstone		
		II8D	0.36	0.07	4	0.36	0.42	0.27	90	Swf	Ultisols	Tuffac. sandstone		
		II9A	0.35	0.12	22	0.36	0.66	0.17	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	0.27	0.15	21	0.24	0.70	0.08	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	0.18	0.10	6	0.18	0.31	0.06	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	0.66	0.10	5	0.62	0.78	0.55	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	0.65	0.21	5	0.58	0.89	0.44	139	Wfs	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II1A	8.95	1.10	8	9.16	10.67	7.03	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	5.90	1.54	8	6.07	7.92	2.86	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	0.57	0.48	15	0.37	1.60	0.10	135	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1Ci	2.65	1.28	15	2.91	4.46	0.88	135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	4.89	2.80	4	4.89	8.33	1.78	90	Swf	Ultisols	Tuffac. sandstone		
		II8A	1.92	0.72	4	1.92	2.88	1.12	90	Swf	Ultisols	Tuffac. sandstone	Torn	
		II8A	2.05	0.77	4	2.05	3.09	1.23	90	Swf	Ultisols	Tuffac. sandstone	Whole	
		II8B	1.65	0.91	4	1.65	2.71	0.62	90	Swf	Ultisols	Tuffac. sandstone		
		II8C	0.99		1				90	Swf	Ultisols	Tuffac. sandstone		
		II8D	1.77	0.63	4	1.77	2.42	0.95	90	Swf	Ultisols	Tuffac. sandstone		
		II9A	5.37	1.02	22	4.36	7.09	2.78	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	2.43	1.15	21	2.28	5.43	0.89	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	2.65	0.88	6	2.49	3.95	1.77	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	3.53	1.00	5	4.04	4.62	2.35	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	3.84	0.88	5	4.18	4.93	2.86	139	Wfs	Ultisols	Tuffac. sandstone		
	Wood density (g/cc)	II1B	0.49	0.03	4	0.49	0.52	0.46	97	Wfs	Inceptisols	Tuffac. sandstone		
<i>Khaya senegalensis</i>	Wood density (g/cc)	II1B	0.50	0.03	5	0.50	0.52	0.46	97	Wfs	Inceptisols	Tuffac. sandstone		
<i>Krugiodendron ferreum</i>	Calcium (mg/g)	II1A	18.89		1				104	Sdf	Mollisols	Alluvial deposits		
		II1A	18.89		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1Ci	31.47		1				104	Sdf	Mollisols	Alluvial deposits		
		II1Ci	31.47		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Magnesium (mg/g)	II1A	3.13		1				104	Sdf	Mollisols	Alluvial deposits		
		II1A	3.13		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1Ci	1.98		1				104	Sdf	Mollisols	Alluvial deposits		
		II1Ci	1.98		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Nitrogen (%)	II1A	2.34		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1Ci	0.87		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Phosphorus (mg/g)	II1A	0.48		1				104	Sdf	Mollisols	Alluvial deposits		
		II1A	0.48		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1Ci	0.21		1				104	Sdf	Mollisols	Alluvial deposits		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Potassium (mg/g)	III1Ci	0.21		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1A	14.73		1				104	Sdf	Mollisols	Alluvial deposits		
		III1A	14.73		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		III1Ci	7.02		1				104	Sdf	Mollisols	Alluvial deposits		
		III1Ci	7.02		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
<i>Laguncularia racemosa</i>	Aluminum (mg/g)	II1A	0.04	0.01	4	0.04	0.05	0.04	78	Mfs	Mangle	Swamp		
		III1Aiiiib	0.45	0.02	6	0.04	0.07	0.03	83	Mfs	Histosol	Alluvial deposits	Adult	
		II1B	0.03	0.01	3	0.04	0.04	0.03	87	Mfs	Entisols	Compound dunes		
	Ash (%)	II1B	0.01	0.00	2	0.01	0.01	0.01	157	Mfs	Entisols	Compound dunes		
		II1A	19.17	3.51	13	19.03	22.71	12.50	72	Dfs	Mangle	Mangle		
		II1A	14.70	0.92	4	14.75	15.53	13.75	78	Mfs	Mangle	Swamp		
	C/N	II1B	2.27	0.43	3	2.09	2.76	1.96	87	Mfs	Entisols	Compound dunes		
		III1Aiiiib	12.11	2.77	6	13.12	14.66	8.55	83	Mfs	Histosol	Alluvial deposits	Adult	
		II1A	32	3	4	32	34	29	78	Mfs	Mangle	Swamp		
	Calcium (mg/g)	III1Aiiiib	29	3	6	29	32	26	83	Mfs	Histosol	Alluvial deposits	Adult	
		II1B	279	92	3	306	355	177	87	Mfs	Entisols	Compound dunes		
		II1A	33.40	10.60	12	27.20	49.90	23.00	72	Dfs	Mangle	Mangle		
		II1A	21.87		1				74	Dfs	Mangle	Dune deposits	Old	
		II1A	21.38		1				74	Dfs	Mangle	Dune deposits	Senescent	
		II1A	23.32		1				74	Dfs	Mangle	Dune deposits	Yellow	
		II1A	11.66		1				74	Dfs	Mangle	Dune deposits	Young Mature	
		II1A	25.09	5.21	4	24.99	30.06	20.30	78	Mfs	Mangle	Swamp		
		III1Aiiiib	19.08	8.20	6	16.48	29.77	11.44	83	Mfs	Histosol	Alluvial deposits	Adult	
		II1B	4.31	0.46	3	4.17	4.83	3.94	87	Mfs	Entisols	Compound dunes		
	Carbon (%)	II1B	6.76	0.07	2	6.76	6.71	6.81	157	Mfs	Entisols	Compound dunes		
II9A		21.86	6.22	12	21.86	31.26	11.73	73	Dfs	Mangle	Dune deposits			
II9C		7.36	3.19	10	7.36	13.75	3.03	73	Dfs	Mangle	Dune deposits			
II1A		39	0	4	39	40	39	78	Mfs	Mangle	Swamp			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Iron (mg/g)	II1Aiiiib	47	2	6	47	50	46	83	Mfs	Histosol	Alluvial deposits	Adult	
		II1A	0.05	0.04	4	0.04	0.11	0.02	78	Mfs	Mangle	Swamp		
		III1Aiiiib	0.74	0.26	6	0.77	1.02	0.40	83	Mfs	Histosol	Alluvial deposits	Adult	
		II1B	0.06	0.02	3	0.06	0.08	0.04	87	Mfs	Entisols	Compound dunes		
	Magnesium (mg/g)	III1B	0.01	0.01	2	0.01	0.01	0.02	157	Mfs	Entisols	Compound dunes		
		II1A	7.39		1				74	Dfs	Mangle	Dune deposits	Old	
		II1A	7.35		1				74	Dfs	Mangle	Dune deposits	Senescent	
		II1A	8.10		1				74	Dfs	Mangle	Dune deposits	Yellow	
		II1A	4.33		1				74	Dfs	Mangle	Dune deposits	Young Mature	
		II1A	5.84	0.41	4	5.82	6.24	5.48	78	Mfs	Mangle	Swamp		
		II1B	0.59	0.12	3	0.65	0.66	0.45	87	Mfs	Entisols	Compound dunes		
		II1B	0.72	0.13	2	0.72	0.63	0.81	157	Mfs	Entisols	Compound dunes		
		II9A	5.13	1.00	12	5.13	6.26	3.33	73	Dfs	Mangle	Dune deposits		
		II9C	1.89	0.47	10	1.89	2.41	1.25	73	Dfs	Mangle	Dune deposits		
	Manganese (mg/g)	III1Aiiiib	3.07	0.27	6	3.14	3.37	2.68	83	Mfs	Histosol	Alluvial deposits	Adult	
		II1A	0.02	0.01	4	0.02	0.03	0.01	78	Mfs	Mangle	Swamp		
		III1Aiiiib	0.08	0.04	6	0.07	0.14	0.05	83	Mfs	Histosol	Alluvial deposits	Adult	
		II1B	0.03	0.02	3	0.02	0.05	0.01	87	Mfs	Entisols	Compound dunes		
	Nitrogen (%)	II1B	0.01	0.00	2	0.01	0.01	0.01	157	Mfs	Entisols	Compound dunes		
		II1A	0.83	0.30	6	0.68	1.27	0.60	72	Dfs	Mangle	Mangle		
		II1A	1.26	0.13	4	1.26	1.38	1.14	78	Mfs	Mangle	Swamp		
		II1A	0.64		1				74	Dfs	Mangle	Dune deposits	Old	
		II1A	0.37		1				74	Dfs	Mangle	Dune deposits	Senescent	
		II1A	0.29		1				74	Dfs	Mangle	Dune deposits	Yellow	
		II1A	1.07		1				74	Dfs	Mangle	Dune deposits	Young Mature	
		III1Aiiiib	1.65	0.12	6	1.58	1.82	1.55	83	Mfs	Histosol	Alluvial deposits	Adult	
		II1B	0.18	0.07	3	0.15	0.25	0.13	87	Mfs	Entisols	Compound dunes		
		II9A	0.61	0.20	12	0.61	1.12	0.46	73	Dfs	Mangle	Dune deposits		
	II9C	0.73	0.11	10	0.73	0.99	0.65	73	Dfs	Mangle	Dune deposits			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Phosphorus (mg/g)	II1A	0.44	0.09	13	0.42	0.67	0.32	72	Dfs	Mangle	Mangle		
		II1A	0.50		1				74	Dfs	Mangle	Dune deposits	Old	
		II1A	0.22		1				74	Dfs	Mangle	Dune deposits	Senescent	
		II1A	0.14		1				74	Dfs	Mangle	Dune deposits	Yellow	
		II1A	0.93		1				74	Dfs	Mangle	Dune deposits	Young Mature	
		II1A	1.22	0.47	4	1.21	1.64	0.81	78	Mfs	Mangle	Swamp		
		II1Aiiiib	1.33	0.05	6	1.31	1.39	1.26	83	Mfs	Histosol	Alluvial deposits	Adult	
		II1B	0.35	0.15	3	0.26	0.53	0.26	87	Mfs	Entisols	Compound dunes		
		II1B	0.14	0.03	2	0.14	0.12	0.17	157	Mfs	Entisols	Compound dunes		
	Potassium (mg/g)	II9A	0.29	0.22	12	0.29	0.88	0.07	73	Dfs	Mangle	Dune deposits		
		II9C	0.75	0.19	10	0.75	1.04	0.43	73	Dfs	Mangle	Dune deposits		
		II1A	4.40	3.20	12	3.00	9.20	1.00	72	Dfs	Mangle	Mangle		
		II1A	16.71		1				74	Dfs	Mangle	Dune deposits	Old	
		II1A	15.97		1				74	Dfs	Mangle	Dune deposits	Senescent	
		II1A	14.13		1				74	Dfs	Mangle	Dune deposits	Yellow	
		II1A	11.47		1				74	Dfs	Mangle	Dune deposits	Young Mature	
		II1A	20.79	13.72	4	20.57	33.15	8.86	78	Mfs	Mangle	Swamp		
		II1Aiiiib	9.34	5.53	6	7.01	16.35	4.55	83	Mfs	Histosol	Alluvial deposits	Adult	
		II1B	2.31	0.32	3	2.31	2.63	2.00	87	Mfs	Entisols	Compound dunes		
Sodium (mg/g)	II1B	1.99	0.17	2	1.99	1.86	2.11	157	Mfs	Entisols	Compound dunes			
	II9A	5.33	0.98	12	5.33	6.58	3.68	73	Dfs	Mangle	Dune deposits			
	II9C	7.97	2.18	10	7.97	11.37	4.87	73	Dfs	Mangle	Dune deposits			
	II1A	49.57		1				74	Dfs	Mangle	Dune deposits	Old		
	II1A	56.34		1				74	Dfs	Mangle	Dune deposits	Senescent		
	II1A	52.58		1				74	Dfs	Mangle	Dune deposits	Yellow		
	II1A	27.47		1				74	Dfs	Mangle	Dune deposits	Young Mature		
	II1A	26.37	16.24	4	26.34	40.52	12.28	78	Mfs	Mangle	Swamp			
	II1Aiiiib	14.15	4.58	6	12.87	19.89	9.62	83	Mfs	Histosol	Alluvial deposits	Adult		
	II9A	22.93	6.72	12	22.93	30.63	12.10	73	Dfs	Mangle	Dune deposits			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
	Sulfur (mg/g)	II9C	6.72	1.96	10	6.72	8.77	3.32	73	Dfs	Mangle	Dune deposits			
		II1Aiiiib	0.31	0.08	6	0.31	0.43	0.22	83	Mfs	Histosol	Alluvial deposits	Adult		
<i>Leucaena leucocephala</i>	Aluminum (mg/g)	II8	3.29	2.56	20	2.11	8.46	0.48	152	Mfs	Histosol	Alluvial deposits			
	Ash (%)	II1A	9.27	1.19	5	9.87	10.11	7.29	126		Ultisols	Siltstone,sandstone	Urban forest, RP		
		II1C	1.57	0.31	5	1.55	2.01	1.15	126		Ultisols	Siltstone,sandstone	Urban forest, RP		
		II1Ci	7.76	1.42	6	7.24	10.34	6.28	126		Ultisols	Siltstone,sandstone	Urban forest, RP		
	C/N	II8	33.59	21.40	20	25.62	72.26	8.77	152	Mfs	Histosol	Alluvial deposits			
		II1A	12	1	5	12	14	12	126		Ultisols	Siltstone,sandstone	Urban forest, RP		
		II1C	95	27	5	107	123	60	126		Ultisols	Siltstone,sandstone	Urban forest, RP		
		II1Ci	19	3	6	20	21	13	126		Ultisols	Siltstone,sandstone	Urban forest, RP		
	Calcium (mg/g)	II8	22	7	20	20	33	14	152	Mfs	Histosol	Alluvial deposits			
		II8	26.38	13.88	20	23.51	67.87	11.80	152	Mfs	Histosol	Alluvial deposits			
		Carbon (%)	II1A	51	1	5	51	52	51	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
			II1C	52	1	5	52	52	51	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	II1Ci		51	2	6	52	53	49	126		Ultisols	Siltstone,sandstone	Urban forest, RP		
	Iron (mg/g)	II8	38	12	20	42	52	13	152	Mfs	Histosol	Alluvial deposits			
		II8	5.23	4.60	20	3.12	15.11	0.57	152	Mfs	Histosol	Alluvial deposits			
	Magnesium (mg/g)	II8	3.64	0.90	20	3.88	5.11	2.00	152	Mfs	Histosol	Alluvial deposits			
	Manganese (mg/g)	II8	0.20	0.13	20	0.15	4.61	0.04	152	Mfs	Histosol	Alluvial deposits			
	Nitrogen (%)	II1A	4.11	0.33	5	4.27	4.37	3.58	126		Ultisols	Siltstone,sandstone	Urban forest, RP		
		II1C	0.59	0.19	5	0.48	0.85	0.42	126		Ultisols	Siltstone,sandstone	Urban forest, RP		
		II1Ci	2.80	0.51	6	2.63	3.81	2.41	126		Ultisols	Siltstone,sandstone	Urban forest, RP		
		II8	1.76	0.45	20	1.66	2.45	0.80	148	Smf	Ultisols	Tuffac. sandstone			
	Phosphorus (mg/g)	II8	0.50	0.17	20	0.53	1.01	0.26	148	Smf	Ultisols	Tuffac. sandstone			
Potassium (mg/g)	II8	2.50	0.73	20	2.57	4.61	1.65	148	Smf	Ultisols	Tuffac. sandstone				
Sulfur (%)	II1A	0.44	0.03	5	0.44	0.47	0.39	126		Ultisols	Siltstone,sandstone	Urban forest, RP			
	II1C	0.08	0.02	5	0.09	0.10	0.05	126		Ultisols	Siltstone,sandstone	Urban forest, RP			
	II1Ci	0.42	0.16	6	0.46	0.60	0.23	126		Ultisols	Siltstone,sandstone	Urban forest, RP			



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Wood density (g/cc)	II8	0.42	0.11	2	0.43	0.65	0.20	148	Smf	Ultisols	Tuffac. sandstone	Urban forest, RP	
		II1C	0.69	0.08	5	0.70	0.77	0.60	126		Ultisols	Siltstone,sandstone		
<i>Lonchitis hirsuta</i>	Aluminum (mg/g)	II6	1.26	0.66	5	1.57	1.77	0.22	135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II6	2.94	0.89	5	2.24	4.18	1.97	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II6	0.38	0.40	5	0.30	1.07	0.10	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II6	3.00	0.99	5	2.58	4.76	2.51	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II6	0.06	0.03	5	0.05	0.10	0.04	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II6	1.52	0.54	5	1.33	2.47	1.11	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II6	1.00	0.74	5	0.74	2.32	0.50	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II6	20.60	9.88	5	21.67	33.73	5.92	135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Maesopsis eminii</i>	Wood density (g/cc)	III1B	0.46	0.04	5	0.44	0.52	0.43	97	Wfs	Inceptisols	Tuffac. sandstone		
<i>Magnolia portorricensis</i>	Wood density (g/cc)	III1C	0.49	0.02	4	0.49	0.51	0.46	115					
<i>Magnolia splendens</i>	Aluminum (mg/g)	III1A	0.14	0.04	2	0.14	0.12	0.11	93	Wflm	Inceptisols	Tuffac. sandstone		
		III1B	0.53	0.04	3	0.05	0.10	0.02	93	Wflm	Inceptisols	Tuffac. sandstone		
		III1C	0.05		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Ash (%)	III1A	5.85	0.61	2	5.85	6.20	5.15	93	Wflm	Inceptisols	Tuffac. sandstone		
		III1A	6.02		1				71	Lmrf	Ultisols	Tuffac. sandstone		
		III1B	4.00	0.47	3	3.86	4.53	3.62	93	Wflm	Inceptisols	Tuffac. sandstone		
	C/N	III1C	1.27		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		III1A	33	2	2	33	34	31	93	Wflm	Inceptisols	Tuffac. sandstone		
		III1B	57	11	3	52	69	49	93	Wflm	Inceptisols	Tuffac. sandstone		
	Calcium (mg/g)	III1C	245		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		III1A	6.86	1.77	2	7.75	8.01	4.83	93	Wflm	Inceptisols	Tuffac. sandstone		
		III1B	2.82	0.77	3	2.90	3.56	2.01	93	Wflm	Inceptisols	Tuffac. sandstone		
		III1C	1.27		1			93	Wflm	Inceptisols	Tuffac. sandstone			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Carbon (%)	II1A	57		1				71	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II1A	0.11	0.00	2	0.11	0.12	0.11	93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	0.06	0.01	3	0.06	0.06	0.04	93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	0.06		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Magnesium (mg/g)	II1A	2.37	0.01	2	2.37	2.37	2.36	93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	1.28	0.67	3	1.62	1.71	0.50	93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	0.45		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Manganese (mg/g)	II1A	0.35	0.08	2	0.35	0.45	0.31	93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	0.11	0.05	3	0.08	0.17	0.07	93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	0.06		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Nitrogen (%)	II1A	1.33	0.09	2	1.33	1.43	1.26	93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	1.60		1				71	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	0.80	0.13	3	0.85	0.90	0.65	93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	0.19		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II1A	0.74	0.02	2	0.74	0.77	0.73	93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	1.59	0.68	3	1.46	2.32	0.98	93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	0.07		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Potassium (mg/g)	II1A	11.75	1.72	2	11.75	12.90	9.77	93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	12.23	1.54	3	12.67	13.51	10.52	93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	1.67		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Sulfur (%)	II1A	0.22		1				71	Lmrf	Ultisols	Tuffac. sandstone		
<i>Mahogany Plantation</i>	Aluminum (mg/g)	II8A	3.03	2.51	11	1.24	7.28	0.58	133	Wfs	Ultisols	Tuffac. sandstone		
		II8B	1.80	1.88	9	0.76	4.84	0.43	133	Wfs	Ultisols	Tuffac. sandstone		
		II8C	1.13	1.10	11	0.65	3.25	0.22	133	Wfs	Ultisols	Tuffac. sandstone		
		II8D	13.07	5.21	9	14.19	20.61	5.18	133	Wfs	Ultisols	Tuffac. sandstone		
	Ash (%)	II8A	11.58	3.59	11	10.25	17.60	8.04	133	Wfs	Ultisols	Tuffac. sandstone		
		II8B	7.38	4.18	9	4.90	13.80	4.01	133	Wfs	Ultisols	Tuffac. sandstone		
		II8C	4.28	2.01	11	3.10	7.96	2.68	133	Wfs	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	C/N	II8D	21.75	6.53	9	22.02	31.42	13.07	133	Wfs	Ultisols	Tuffac. sandstone		
		II8A	39	11	11	32	57	26	133	Wfs	Ultisols	Tuffac. sandstone		
		II8B	77	26	9	78	124	43	133	Wfs	Ultisols	Tuffac. sandstone		
		II8C	63	10	11	61	79	44	133	Wfs	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II8D	24	3	9	23	30	20	133	Wfs	Ultisols	Tuffac. sandstone		
		II8A	23.91	4.64	11	22.93	34.62	16.27	133	Wfs	Ultisols	Tuffac. sandstone		
		II8B	13.71	2.75	9	13.12	19.37	11.11	133	Wfs	Ultisols	Tuffac. sandstone		
		II8C	7.02	1.14	11	7.50	8.50	4.84	133	Wfs	Ultisols	Tuffac. sandstone		
	Carbon (%)	II8D	19.32	2.08	9	19.46	21.96	14.84	133	Wfs	Ultisols	Tuffac. sandstone		
		II8A	49	2	11	50	52	44	133	Wfs	Ultisols	Tuffac. sandstone		
		II8B	49	2	9	50	51	46	133	Wfs	Ultisols	Tuffac. sandstone		
		II8C	51	2	11	51	53	48	133	Wfs	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II8D	42	4	9	42	47	37	133	Wfs	Ultisols	Tuffac. sandstone		
		II8A	2.76	2.57	11	0.95	7.50	0.45	133	Wfs	Ultisols	Tuffac. sandstone		
		II8B	2.16	2.71	9	0.61	7.21	0.25	133	Wfs	Ultisols	Tuffac. sandstone		
		II8C	1.11	1.17	11	0.67	3.47	0.04	133	Wfs	Ultisols	Tuffac. sandstone		
Magnesium (mg/g)	II8D	14.37	5.93	9	16.04	22.28	5.12	133	Wfs	Ultisols	Tuffac. sandstone			
	II8A	2.56	0.39	11	2.51	3.56	2.20	133	Wfs	Ultisols	Tuffac. sandstone			
	II8B	2.12	0.65	9	2.06	3.61	1.52	133	Wfs	Ultisols	Tuffac. sandstone			
	II8C	1.75	0.28	11	1.66	2.22	1.39	133	Wfs	Ultisols	Tuffac. sandstone			
Manganese (mg/g)	II8D	3.07	0.58	9	3.18	4.22	2.06	133	Wfs	Ultisols	Tuffac. sandstone			
	II8A	0.27	0.11	11	0.28	0.43	0.12	133	Wfs	Ultisols	Tuffac. sandstone			
	II8B	0.22	0.10	9	0.19	0.38	0.07	133	Wfs	Ultisols	Tuffac. sandstone			
	II8C	0.06	0.04	11	0.05	0.13	0.01	133	Wfs	Ultisols	Tuffac. sandstone			
Nitrogen (%)	II8D	0.73	0.21	9	0.76	0.98	0.41	133	Wfs	Ultisols	Tuffac. sandstone			
	II8A	1.32	0.31	11	1.45	1.72	0.92	133	Wfs	Ultisols	Tuffac. sandstone			
	II8B	0.70	0.24	9	0.64	1.14	0.41	133	Wfs	Ultisols	Tuffac. sandstone			
	II8C	0.83	0.13	11	0.82	1.14	0.65	133	Wfs	Ultisols	Tuffac. sandstone			
		II8D	1.80	0.14	9	1.74	2.01	1.58	133	Wfs	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Phosphorus (mg/g)	II8A	0.41	0.11	11	0.39	0.58	0.27	133	Wfs	Ultisols	Tuffac. sandstone		
		II8B	0.28	0.06	9	0.27	0.40	0.18	133	Wfs	Ultisols	Tuffac. sandstone		
		II8C	0.43	0.17	11	0.45	0.80	0.26	133	Wfs	Ultisols	Tuffac. sandstone		
		II8D	0.62	0.10	9	0.60	0.77	0.45	133	Wfs	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II8A	2.45	1.12	11	2.26	5.18	1.26	133	Wfs	Ultisols	Tuffac. sandstone		
		II8B	1.96	0.83	9	2.03	3.36	0.90	133	Wfs	Ultisols	Tuffac. sandstone		
		II8C	4.40	2.86	11	2.95	10.67	2.29	133	Wfs	Ultisols	Tuffac. sandstone		
		II8D	1.79	0.83	9	1.29	3.23	0.92	133	Wfs	Ultisols	Tuffac. sandstone		
<i>Mangrove</i>	Aluminum (mg/kg)	II1A	10	10	13	10	20	10	79	Mfs	Entisols	Swamps	Adult	
		II1A	90	170	13	20	650	20	79	Mfs	Entisols	Swamps	Dead	
		II1A	30	20	13	20	70	10	79	Mfs	Entisols	Swamps	Yellow	
		II1A	30	30	13	20	130	10	79	Mfs	Entisols	Swamps	Young	
	Ash (%)	II1A	9.30	0.48	13	9.44	9.98	8.29	79	Mfs	Entisols	Swamps	Adult	
		II1A	13.01	0.91	13	13.22	14.40	11.54	79	Mfs	Entisols	Swamps	Dead	
		II1A	13.25	1.26	12	13.48	15.28	11.24	79	Mfs	Entisols	Swamps	Yellow	
		II1A	7.88	0.48	12	7.69	8.66	7.31	79	Mfs	Entisols	Swamps	Young	
	C/N	II1A	39	1	13	40	41	37	79	Mfs	Entisols	Swamps	Adult	
		II1A	77	7	13	76	87	66	79	Mfs	Entisols	Swamps	Dead	
		II1A	73	7	12	73	84	61	79	Mfs	Entisols	Swamps	Yellow	
		II1A	50	3	12	49	55	46	79	Mfs	Entisols	Swamps	Young	
	Calcium (mg/g)	II1A	8.99	1.43	13	8.39	12.13	7.03	79	Mfs	Entisols	Swamps	Adult	
		II1A	11.39	2.57	13	10.66	14.98	8.47	79	Mfs	Entisols	Swamps	Dead	
		II1A	10.32	2.34	13	9.23	15.67	7.82	79	Mfs	Entisols	Swamps	Yellow	
		II1A	8.47	1.59	13	7.85	11.94	5.99	79	Mfs	Entisols	Swamps	Young	
	Carbon (%)	II1A	51	0	13	51	51	50	79	Mfs	Entisols	Swamps	Adult	
		II1A	49	1	13	49	51	48	79	Mfs	Entisols	Swamps	Dead	
		II1A	49	1	13	48	51	47	79	Mfs	Entisols	Swamps	Yellow	
		II1A	51	0	12	51	52	51	79	Mfs	Entisols	Swamps	Young	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Iron (mg/kg)	II1A	20	10	13	20	50	10	79	Mfs	Entisols	Swamps	Adult	
		II1A	32	31	12	24	130	14	79	Mfs	Entisols	Swamps	Dead	
		III1A	50	110	13	20	400	10	79	Mfs	Entisols	Swamps	Yellow	
		III1A	30	30	13	30	80	10	79	Mfs	Entisols	Swamps	Young	
	Magnesium (mg/g)	II1A	4.76	0.65	13	4.62	6.09	3.94	79	Mfs	Entisols	Swamps	Adult	
		II1A	5.99	0.76	13	5.93	7.53	4.99	79	Mfs	Entisols	Swamps	Dead	
		II1A	5.66	0.95	13	5.38	7.51	4.18	79	Mfs	Entisols	Swamps	Yellow	
		II1A	4.36	0.71	13	4.06	6.05	3.46	79	Mfs	Entisols	Swamps	Young	
	Manganese (mg/g)	II1A	0.06	0.02	13	0.05	0.09	0.03	79	Mfs	Entisols	Swamps	Adult	
		II1A	0.07	0.03	13	0.06	0.14	0.04	79	Mfs	Entisols	Swamps	Dead	
		II1A	0.06	0.03	13	0.05	0.14	0.04	79	Mfs	Entisols	Swamps	Yellow	
		II1A	0.05	0.02	13	0.04	0.09	0.03	79	Mfs	Entisols	Swamps	Young	
	Nitrogen (%)	II1A	1.29	0.04	13	1.27	1.38	1.25	79	Mfs	Entisols	Swamps	Adult	
		II1A	0.64	0.05	13	0.64	0.73	0.57	79	Mfs	Entisols	Swamps	Dead	
		II1A	0.68	0.06	12	0.66	0.78	0.61	79	Mfs	Entisols	Swamps	Yellow	
		II1A	1.03	0.07	12	1.04	1.12	0.92	79	Mfs	Entisols	Swamps	Young	
	Phosphorus (mg/g)	II1A	0.37	0.04	13	0.37	0.41	0.31	79	Mfs	Entisols	Swamps	Adult	
		II1A	0.08	0.03	13	0.07	0.13	0.05	79	Mfs	Entisols	Swamps	Dead	
		II1A	0.16	0.11	13	0.12	0.37	0.07	79	Mfs	Entisols	Swamps	Yellow	
		II1A	0.35	0.13	13	0.39	0.46	0.07	79	Mfs	Entisols	Swamps	Young	
	Potassium (mg/g)	II1A	5.91	1.05	13	5.93	7.74	3.94	79	Mfs	Entisols	Swamps	Adult	
		II1A	7.21	1.23	13	7.32	8.70	4.82	79	Mfs	Entisols	Swamps	Dead	
		II1A	6.45	1.08	13	6.45	7.90	4.89	79	Mfs	Entisols	Swamps	Yellow	
		II1A	5.50	0.86	13	5.29	6.70	4.08	79	Mfs	Entisols	Swamps	Young	
	Sulfur (%)	II1A	0.54	0.09	13	0.56	0.76	0.44	79	Mfs	Entisols	Swamps	Adult	
		II1A	0.75	0.13	13	0.76	0.97	0.56	79	Mfs	Entisols	Swamps	Dead	
		II1A	0.76	0.09	12	0.74	0.91	0.64	79	Mfs	Entisols	Swamps	Yellow	
		II1A	0.26	0.06	12	0.25	0.36	0.19	79	Mfs	Entisols	Swamps	Young	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
<i>Manilkara bidentata</i>	Aluminum (mg/g)	II1A	0.12	0.05	20	0.12	0.26	0.05	107	Swf	Ultisols	Tuffac. sandstone		
		II1A	0.44		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	0.11	0.02	3	0.11	0.13	0.10	145	Wfs	Ultisols	Tuffac. sandstone		
	Ash (%)	II9A	1.00	0.20	6	0.99	1.29	0.76	153	Swf	Ultisols	Tuffac. sandstone		
		II1A	6.85		1				94	Wfs	Ultisols	Tuffac. sandstone	<1cm dbh	
		II1A	6.71		1				101	Wfs	Ultisols	Tuffac. sandstone	Fresh	
		II1A	4.94	0.76	17	4.94	6.29	3.72	107	Swf	Ultisols	Tuffac. sandstone		
		II1A	4.27		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	3.50		1				94	Wfs	Ultisols	Tuffac. sandstone	<1cm dbh	
		II1B	3.62		1				68	Swf	Ultisols	Tuffac. sandstone	Wood decay	
		II1C	3.26		1				94	Wfs	Ultisols	Tuffac. sandstone	<1cm dbh	
		II8A	4.91	0.23	3	4.90	5.14	4.68	145	Wfs	Ultisols	Tuffac. sandstone		
		II8A	5.60		1				71	Wfs	Ultisols	Tuffac. sandstone		
		II9A	4.84	0.26	6	4.90	5.10	4.52	153	Swf	Ultisols	Tuffac. sandstone		
	C/N	II1A	43	4	20	43	48	37	107	Swf	Ultisols	Tuffac. sandstone		
		II1A	34		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	90	4	3	90	94	87	145	Wfs	Ultisols	Tuffac. sandstone		
		II9A	68	16	6	68	86	43	153	Swf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II1A	6.05	1.15	7	6.58	7.63	3.73	89	Swf	Ultisols	Tuffac. sandstone		
		II1A	5.71	1.51	20	5.22	8.60	3.44	107	Swf	Ultisols	Tuffac. sandstone		
		II1A	9.80		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	1.34		1				68	Swf	Ultisols	Tuffac. sandstone	Wood decay	
		II1C	2.11	0.83	13	1.73	3.55	1.12	89	Swf	Ultisols	Tuffac. sandstone		
		II1C	1.24	0.47	24	1.22	2.17	0.48	89	Swf	Ultisols	Tuffac. sandstone		
		II1D	11.41	9.32	4	11.23	22.42	0.77	89	Swf	Ultisols	Tuffac. sandstone		
		II1F	3.37		1				89	Swf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II8A	8.08	1.05	3	8.48	8.87	6.89	145	Wfs	Ultisols	Tuffac. sandstone		
II9A		8.34	1.45	6	8.16	9.97	6.89	153	Swf	Ultisols	Tuffac. sandstone			
II1A		49	1	20	49	51	46	107	Swf	Ultisols	Tuffac. sandstone			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1A	55		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II1Aiii	45	1	116	45	48	41	125	Wfs	Ultisols	Tuffac. sandstone		
		II8A	55	1	3	55	56	54	145	Wfs	Ultisols	Tuffac. sandstone		
		II8A	57		1				71	Wfs	Ultisols	Tuffac. sandstone		
		II9A	58	1	6	58	58	57	153	Swf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II1A	0.11	0.03	20	0.11	0.15	0.06	107	Swf	Ultisols	Tuffac. sandstone		
		II1A	0.42		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	0.11	0.01	3	0.11	0.12	0.09	145	Wfs	Ultisols	Tuffac. sandstone		
		II9A	0.97	0.20	6	0.95	1.30	0.75	153	Swf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II1A	3.29	0.75	7	3.54	3.99	1.89	89	Swf	Ultisols	Tuffac. sandstone		
		II1A	2.81	0.58	20	2.76	4.10	1.89	107	Swf	Ultisols	Tuffac. sandstone		
		II1A	1.89		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	0.68	0.34	13	0.71	1.44	0.31	89	Swf	Ultisols	Tuffac. sandstone		
		II1C	0.27	0.05	24	0.28	0.37	0.18	89	Swf	Ultisols	Tuffac. sandstone		
		II1D	3.22	2.01	4	4.18	4.33	0.21	89	Swf	Ultisols	Tuffac. sandstone		
		II1F	2.17		1				89	Swf	Ultisols	Tuffac. sandstone		
		II8A	2.37	0.69	3	2.12	3.15	1.83	145	Wfs	Ultisols	Tuffac. sandstone		
		II9A	3.22	0.45	6	3.32	3.67	2.40	153	Swf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II1A	0.03	0.01	20	0.03	0.05	0.02	107	Swf	Ultisols	Tuffac. sandstone		
		II1A	0.04		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	0.03	0.02	3	0.02	0.05	0.02	145	Wfs	Ultisols	Tuffac. sandstone		
		II9A	0.04	0.01	6	0.04	0.05	0.03	153	Swf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II1A	1.46		1				94	Wfs	Ultisols	Tuffac. sandstone	<1cm dbh	
		II1A	1.03		1				101	Wfs	Ultisols	Tuffac. sandstone	Fresh	
		II1A	1.15	0.12	20	1.13	1.37	0.99	107	Swf	Ultisols	Tuffac. sandstone		
		II1A	1.63		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II1Aiii	1.18	0.30	116	1.21	2.01	0.65	125	Wfs	Ultisols	Tuffac. sandstone		
		II1B	1.05		1				94	Wfs	Ultisols	Tuffac. sandstone	<1cm dbh	
		II1B	0.57		1				68	Swf	Ultisols	Tuffac. sandstone	Wood decay	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1C	1.05		1				94	Wfs	Ultisols	Tuffac. sandstone	<1cm dbh	
		II8A	0.61	0.03	3	0.62	0.64	0.58	145	Wfs	Ultisols	Tuffac. sandstone		
		II8A	0.67		1				71	Wfs	Ultisols	Tuffac. sandstone		
		II9A	0.89	0.25	6	0.85	1.35	0.67	153	Swf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II1A	0.46	0.11	7	0.50	0.61	0.30	89	Swf	Ultisols	Tuffac. sandstone		
		II1A	0.58		1				94	Wfs	Ultisols	Tuffac. sandstone	<1cm dbh	
		II1A	0.49		1				101	Wfs	Ultisols	Tuffac. sandstone	Fresh	
		II1A	0.47	0.06	20	0.45	0.59	0.39	107	Swf	Ultisols	Tuffac. sandstone		
		II1A	0.24		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	0.32		1				94	Wfs	Ultisols	Tuffac. sandstone	<1cm dbh	
		II1B	0.15		1				68	Swf	Ultisols	Tuffac. sandstone	Wood decay	
		II1C	0.16	0.08	13	0.14	0.30	0.07	89	Swf	Ultisols	Tuffac. sandstone		
		II1C	0.37		1				94	Wfs	Ultisols	Tuffac. sandstone	<1cm dbh	
		II1C	0.05	0.02	24	0.05	0.10	0.01	89	Swf	Ultisols	Tuffac. sandstone		
		II1D	0.68	0.48	4	0.75	1.18	0.02	89	Swf	Ultisols	Tuffac. sandstone		
		II1F	0.78		1				89	Swf	Ultisols	Tuffac. sandstone		
		II8A	0.12	0.03	3	0.10	0.16	0.10	145	Wfs	Ultisols	Tuffac. sandstone		
		II9A	0.16	0.11	6	0.13	0.37	0.08	153	Swf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II1A	5.86	2.05	7	5.86	8.30	2.03	89	Swf	Ultisols	Tuffac. sandstone		
		II1A	6.70		1				94	Wfs	Ultisols	Tuffac. sandstone	<1cm dbh	
		II1A	9.30		1				101	Wfs	Ultisols	Tuffac. sandstone	Fresh	
		II1A	7.72	2.94	20	8.42	12.10	3.57	107	Swf	Ultisols	Tuffac. sandstone		
		II1A	4.16		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	5.04		1				94	Wfs	Ultisols	Tuffac. sandstone	<1cm dbh	
		II1B	1.21		1				68	Swf	Ultisols	Tuffac. sandstone	Class 4 LD	
		II1C	1.69	0.69	13	2.01	2.46	0.69	89	Swf	Ultisols	Tuffac. sandstone		
		II1C	2.84		1				94	Wfs	Ultisols	Tuffac. sandstone	<1cm dbh	
		II1C	1.08	0.48	24	0.94	3.04	0.71	89	Swf	Ultisols	Tuffac. sandstone		



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Sodium (mg/g) Sulfur (%)	II1D	6.56	2.23	4	6.64	8.53	4.44	89	Swf	Ultisols	Tuffac. sandstone		
		II1F	11.68		1				89	Swf	Ultisols	Tuffac. sandstone		
		II8A	3.79	0.19	3	3.84	3.95	3.59	145	Wfs	Ultisols	Tuffac. sandstone		
		II9A	3.60	1.41	6	3.15	6.36	2.59	153	Swf	Ultisols	Tuffac. sandstone		
		II9A	2.69	0.22	6	2.68	3.01	2.39	153	Swf	Ultisols	Tuffac. sandstone		
		II1A	0.64		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	0.31	0.03	3	0.32	0.34	0.28	145	Wfs	Ultisols	Tuffac. sandstone		
		II8A	0.37		1				71	Wfs	Ultisols	Tuffac. sandstone		
<i>Marcgravia retiflora</i>	Aluminum (mg/g)	II4	0.38		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II4	4.01		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II4	47	3	13	48	49	41	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II4	0.29		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II4	1.54		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II4	0.06		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II4	0.88		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II4	15.85		1				135	Lmrf	Ultisols	Tuffac. sandstone		
Sulfur (%)	II4	0.30	0.14	13	0.28	0.57	0.12	135	Lmrf	Ultisols	Tuffac. sandstone			
<i>Marcgravia spp.</i>	Aluminum (mg/g)	II4	1.01	1.70	20	0.36	6.98	0.04	135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II4	4.53	2.23	20	4.06	9.08	1.24	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II4	1.10	2.10	20	0.31	8.85	0.07	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II4	2.53	1.78	20	1.85	7.93	0.79	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II4	0.14	0.12	20	0.21	0.51	0.02	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II4	0.91	0.20	20	0.90	1.25	0.50	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II4	0.85	0.31	20	0.84	1.60	0.40	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II4	16.08	5.53	20	16.41	32.58	9.75	135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Matayba dominguensis</i>	Ash (%)	III1B	2.00		1				68	Swf	Ultisols	Tuffac. sandstone	Wood decay	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Calcium (mg/g)	II1B	5.64		1				68	Swf	Ultisols	Tuffac. sandstone	Wood decay	
	Nitrogen (%)	II1B	0.27		1				68	Swf	Ultisols	Tuffac. sandstone	Wood decay	
	Phosphorus (mg/g)	III1B	0.12		1				68	Swf	Ultisols	Tuffac. sandstone	Wood decay	
	Potassium (mg/g)	II1B	1.99		1				68	Swf	Ultisols	Tuffac. sandstone	Wood decay	
<i>Megalastrum subincisa</i>	Aluminum (mg/g)	II3	1.89	0.88	5	1.63	2.91	1.04	135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II3	4.81	4.27	5	3.86	11.36	1.10	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II3	1.39	1.82	5	0.09	3.63	0.06	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II3	3.01	1.10	5	3.40	4.22	1.58	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II3	0.08	0.06	5	0.06	0.17	0.03	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II3	1.53	0.88	5	1.11	2.91	0.86	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II3	0.98	0.72	5	0.64	1.98	0.38	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II3	17.57	12.79	5	15.71	35.97	3.81	135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Melicoccus bijugatus</i>	Wood density (g/cc)	II1B	0.79	0.02	3	0.80	0.81	0.77	97	Wfs	Inceptisols	Tuffac. sandstone		
<i>Miconia impetiolaris</i>	Aluminum (mg/g)	II2A	20.20		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	Ash (%)	II2A	15.98		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	C/N	II2A	24		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II2A	18.33		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II2A	46		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II2A	5.58		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II2A	2.26		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II2A	0.26		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II2A	1.92		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II2A	0.84		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II2A	3.72		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	Sulfur (%)	II2A	0.34		1				129	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
<i>Miconia prasina</i>	Aluminum (mg/g)	II2A	25.83		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	10.58		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	8.57		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	13.19		1				131	Wfs	Mollisols	Plutonic rocks		
	Ash (%)	II2A	11.50	2.73	7	11.68	16.07	8.25	94	Swf	Ultisols	Tuffac. sandstone		
		II2A	10.28	1.19	6	10.99	11.11	8.52	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II2A	10.99		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	9.23	2.35	54	8.77	14.40	5.86	138	Wfs	Ultisols	Lava		
		II2A	7.05	0.95	6	7.05	7.94	5.28	94	Swf	Ultisols	Tuffac. sandstone		
		II2A	5.97	2.67	4	6.26	8.82	2.56	68	Swf	Ultisols	Tuffac. sandstone	Wood decay	
		II2A	5.63		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	4.57	1.32	7	4.60	6.29	2.98	94	Swf	Ultisols	Tuffac. sandstone		
		II2A	3.72	1.28	6	4.19	5.13	2.02	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II2A	4.61		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	12.52	1.30	5	11.92	14.22	11.29	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II2A	4.55		1				131	Wfs	Mollisols	Plutonic rocks		
	C/N	II2A	12.12	0.42	2	12.12	12.42	11.82	94	Swf	Ultisols	Tuffac. sandstone		
		II2A	26	1	6	26	28	25	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II2A	23		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	49		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	203	100	6	159	339	119	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II2A	61		1				131	Wfs	Mollisols	Plutonic rocks		
	Calcium (mg/g)	II2A	38	17	5	30	65	23	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II2A	74		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	12.40		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	3.28	0.80	4	3.44	4.02	2.24	68	Swf	Ultisols	Tuffac. sandstone	Wood decay	
		II2A	8.00		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	4.48		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	2.10		1				131	Wfs	Mollisols	Plutonic rocks		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Carbon (%)	II2A	50	1	6	50	52	49	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II2A	48		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	49	3	54	49	53	44	138	Wfs	Ultisols	Lava		
		II2A	50		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	50	0	6	50	51	50	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II2A	50		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	46	3	5	47	49	43	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II2A	50		1				131	Wfs	Mollisols	Plutonic rocks		
	Iron (mg/g)	II2A	0.10		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	0.09		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	0.06		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	0.29		1				131	Wfs	Mollisols	Plutonic rocks		
	Magnesium (mg/g)	II2A	1.48		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	0.79		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	0.46		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	0.45		1				131	Wfs	Mollisols	Plutonic rocks		
	Manganese (mg/g)	II2A	0.29		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	0.81		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	0.65		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	0.52		1				131	Wfs	Mollisols	Plutonic rocks		
	Nitrogen (%)	II2A	2.12		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	2.03	0.41	7	2.26	2.42	1.44	94	Swf	Ultisols	Tuffac. sandstone		
		II2A	1.91	0.11	6	1.93	2.04	1.77	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II2A	1.68	0.30	54	1.68	2.29	1.01	138	Wfs	Ultisols	Lava		
		II2A	1.02		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	0.82	0.19	6	0.82	1.13	0.58	94	Swf	Ultisols	Tuffac. sandstone		
		II2A	0.41	0.17	4	0.44	0.57	0.20	68	Swf	Ultisols	Tuffac. sandstone	Wood decay	
		II2A	0.81		1				131	Wfs	Mollisols	Plutonic rocks		
	II2A	0.45	0.29	7	0.28	0.83	0.18	94	Swf	Ultisols	Tuffac. sandstone			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II2A	0.30	0.12	6	0.33	0.42	0.15	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II2A	1.44	0.61	5	1.63	2.10	0.67	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II2A	0.68		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	1.54	0.01	2	1.54	1.55	1.53	94	Swf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II2A	1.06	0.35	7	0.82	1.49	0.65	94	Swf	Ultisols	Tuffac. sandstone		
		II2A	0.45		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	0.56	0.34	6	0.56	1.23	0.30	94	Swf	Ultisols	Tuffac. sandstone		
		II2A	0.16	0.10	4	0.17	0.26	0.03	68	Swf	Ultisols	Tuffac. sandstone	Wood decay	
		II2A	0.19		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	0.36	0.20	7	0.36	0.66	0.16	94	Swf	Ultisols	Tuffac. sandstone		
		II2A	0.12		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	0.12		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	1.26	0.34	2	1.26	1.50	1.02	94	Swf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II2A	7.43	2.30	7	7.10	11.93	5.12	94	Swf	Ultisols	Tuffac. sandstone		
		II2A	4.69		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	5.31	1.15	6	0.53	0.69	0.37	94	Swf	Ultisols	Tuffac. sandstone		
		II2A	1.24	0.21	4	1.31	1.35	0.94	68	Swf	Ultisols	Tuffac. sandstone	Wood decay	
		II2A	3.90		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	4.60	4.36	7	3.32	13.96	1.09	94	Swf	Ultisols	Tuffac. sandstone		
		II2A	3.39		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	3.14		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	9.23	3.88	2	9.23	1.20	0.65	94	Swf	Ultisols	Tuffac. sandstone		
	Sulfur (%)	II2A	0.19	0.01	6	0.19	0.20	0.18	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II2A	0.48		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	0.16		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	0.04	0.01	6	0.04	0.07	0.04	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II2A	0.14		1				131	Wfs	Mollisols	Plutonic rocks		
		II2A	0.20	0.11	5	0.20	0.31	0.08	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II2A	0.21		1				131	Wfs	Mollisols	Plutonic rocks		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Wood density (g/cc)	II2A	0.63	0.05	5	0.62	0.68	0.58	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
<i>Miconia racemosa</i>	Aluminum (mg/g)	II2A	20.61		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II2A	17.01	2.04	2	17.01	18.46	15.57	146	Swf	Ultisols	Tuffac. sandstone		
		II2A	2.21	0.70	3	1.83	3.02	1.79	146	Swf	Ultisols	Tuffac. sandstone		
	Ash (%)	II2A	16.49		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II2A	13.39	0.61	2	13.39	13.82	12.96	146	Swf	Ultisols	Tuffac. sandstone		
		II2A	3.53	1.05	3	4.10	4.17	2.32	146	Swf	Ultisols	Tuffac. sandstone		
	C/N	II2A	23		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II2A	22	4	2	22	25	19	146	Swf	Ultisols	Tuffac. sandstone		
		II2A	85	27	3	70	116	69	146	Swf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II2A	18.47		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II2A	40.32	4.47	2	40.32	43.49	37.16	146	Swf	Ultisols	Tuffac. sandstone		
		II2A	6.62	0.68	3	6.28	7.41	6.19	146	Swf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II2A	45		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II2A	47	3	2	47	49	44	146	Swf	Ultisols	Tuffac. sandstone		
		II2A	52	0	3	51	52	51	146	Swf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II2A	4.96		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II2A	0.47	0.43	2	0.47	0.77	0.16	146	Swf	Ultisols	Tuffac. sandstone		
		II2A	0.05	0.01	3	0.05	0.61	0.04	146	Swf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II2A	1.75		1				129	Lmrf	Ultisols	Tuffac. sandstone		
		II2A	1.93	0.61	2	1.93	2.36	1.51	146	Swf	Ultisols	Tuffac. sandstone		
		II2A	1.93	0.08	3	1.94	2.01	1.86	146	Swf	Ultisols	Tuffac. sandstone		
Manganese (mg/g)	II2A	0.39		1				129	Lmrf	Ultisols	Tuffac. sandstone			
	II2A	0.10	0.01	2	0.10	0.11	0.09	146	Swf	Ultisols	Tuffac. sandstone			
	II2A	0.05	0.04	3	0.03	0.09	0.03	146	Swf	Ultisols	Tuffac. sandstone			
Nitrogen (%)	II2A	1.94		1				129	Lmrf	Ultisols	Tuffac. sandstone			
	II2A	2.18	0.59	2	2.18	2.60	1.76	146	Swf	Ultisols	Tuffac. sandstone			
	II2A	0.65	0.17	3	0.74	0.75	0.45	146	Swf	Ultisols	Tuffac. sandstone			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
	Phosphorus (mg/g)	II2A	0.53		1				129	Lmrf	Ultisols	Tuffac. sandstone			
		II2A	0.75	0.21	2	0.75	0.89	0.60	146	Swf	Ultisols	Tuffac. sandstone			
		II2A	0.44	0.13	3	0.51	0.52	0.29	146	Swf	Ultisols	Tuffac. sandstone			
	Potassium (mg/g)	II2A	3.51		1					129	Lmrf	Ultisols	Tuffac. sandstone		
		II2A	4.63	2.68	2	4.63	6.53	2.73	146	Swf	Ultisols	Tuffac. sandstone			
		II2A	4.30	2.50	3	5.57	5.90	1.41	146	Swf	Ultisols	Tuffac. sandstone			
	Sulfur (%)	II2A	0.25		1				129	Lmrf	Ultisols	Tuffac. sandstone			
	<i>Miconia sp.</i>	Aluminum (mg/g)	II2A	32.76	7.05	30	31.72	46.00	21.65	146	Swf	Ultisols	Tuffac. sandstone	New	
			II2A	34.80	8.22	35	36.19	52.82	22.31	146	Swf	Ultisols	Tuffac. sandstone	Old	
Ash (%)		II2A	16.81	4.35	29	16.28	34.46	10.14	146	Swf	Ultisols	Tuffac. sandstone	New		
		II2A	17.89	2.86	35	17.70	26.84	12.79	146	Swf	Ultisols	Tuffac. sandstone	Old		
Calcium (mg/g)		II2A	27.37	7.85	30	23.38	43.42	18.08	146	Swf	Ultisols	Tuffac. sandstone	New		
		II2A	28.30	5.04	35	28.95	39.91	18.17	146	Swf	Ultisols	Tuffac. sandstone	Old		
Iron (mg/g)		II2A	2.70	4.21	30	1.23	21.14	0.19	146	Swf	Ultisols	Tuffac. sandstone	New		
		II2A	4.15	3.46	35	3.14	15.62	1.10	146	Swf	Ultisols	Tuffac. sandstone	Old		
Magnesium (mg/g)		II2A	3.68	1.09	30	3.35	6.66	2.36	146	Swf	Ultisols	Tuffac. sandstone	New		
		II2A	2.54	0.47	35	2.71	3.80	1.64	146	Swf	Ultisols	Tuffac. sandstone	Old		
Manganese (mg/g)		II2A	2.10	1.18	30	1.80	4.20	0.73	146	Swf	Ultisols	Tuffac. sandstone	New		
		II2A	1.16	0.31	35	1.09	1.78	0.53	146	Swf	Ultisols	Tuffac. sandstone	Old		
Phosphorus (mg/g)		II2A	0.45	0.17	30	0.46	0.81	0.19	146	Swf	Ultisols	Tuffac. sandstone	New		
		II2A	0.51	0.11	35	0.51	0.86	0.31	146	Swf	Ultisols	Tuffac. sandstone	Old		
Potassium (mg/g)		II2A	3.21	0.77	30	3.30	4.59	1.95	146	Swf	Ultisols	Tuffac. sandstone	New		
		II2A	3.14	0.67	35	3.12	4.23	1.75	146	Swf	Ultisols	Tuffac. sandstone	Old		
<i>Miconia spp.</i>		Aluminum (mg/g)	II2A	9.51	7.46	5	6.23	22.81	5.62	143	Wflm	Inceptisols	Tuffac. sandstone		
			II2A	4.65	3.78	6	3.25	12.27	2.57	143	Wflm	Inceptisols	Tuffac. sandstone	<1cm	
	II2A		5.69	2.53	4	6.59	7.55	2.04	143	Wflm	Inceptisols	Tuffac. sandstone	>1cm		
	Ash (%)	II2A	5.96	2.47	5	4.80	10.37	0.68	143	Wflm	Inceptisols	Tuffac. sandstone			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II2A	3.27	1.19	6	2.98	5.52	2.35	143	Wflm	Inceptisols	Tuffac. sandstone	<1cm	
		II2A	2.07	0.72	4	2.34	2.59	1.02	143	Wflm	Inceptisols	Tuffac. sandstone	>1cm	
	C/N	II2A	53	5	5	53	59	44	143	Wflm	Inceptisols	Tuffac. sandstone		
		II2A	94	13	6	98	105	72	143	Wflm	Inceptisols	Tuffac. sandstone	<1cm	
		II2A	121	25	4	121	151	92	143	Wflm	Inceptisols	Tuffac. sandstone	>1cm	
	Calcium (mg/g)	II2A	7.97	5.06	5	5.77	16.95	4.95	143	Wflm	Inceptisols	Tuffac. sandstone		
		II2A	4.44	2.78	6	3.57	9.52	2.31	143	Wflm	Inceptisols	Tuffac. sandstone	<1cm	
		II2A	1.92	0.81	4	2.04	2.70	0.88	143	Wflm	Inceptisols	Tuffac. sandstone	>1cm	
	Carbon (%)	II2A	50	2	5	51	51	46	143	Wflm	Inceptisols	Tuffac. sandstone		
		II2A	50	1	6	50	50	48	143	Wflm	Inceptisols	Tuffac. sandstone	<1cm	
		II2A	50	1	4	50	51	49	143	Wflm	Inceptisols	Tuffac. sandstone	>1cm	
	Iron (mg/g)	II2A	0.28	0.22	5	0.24	0.65	0.07	143	Wflm	Inceptisols	Tuffac. sandstone		
		II2A	0.14	0.34	6	0.08	0.91	0.02	143	Wflm	Inceptisols	Tuffac. sandstone	<1cm	
		II2A	0.92	0.99	4	0.81	2.05	0.02	143	Wflm	Inceptisols	Tuffac. sandstone	>1cm	
	Magnesium (mg/g)	II2A	2.32	1.21	5	1.79	4.47	1.64	143	Wflm	Inceptisols	Tuffac. sandstone		
		II2A	1.10	0.68	6	0.82	2.46	0.68	143	Wflm	Inceptisols	Tuffac. sandstone	<1cm	
		II2A	0.35	0.12	4	0.36	0.46	0.20	143	Wflm	Inceptisols	Tuffac. sandstone	>1cm	
	Manganese (mg/g)	II2A	0.18	0.09	5	0.15	0.34	0.12	143	Wflm	Inceptisols	Tuffac. sandstone		
		II2A	0.11	0.10	6	0.06	0.29	0.05	143	Wflm	Inceptisols	Tuffac. sandstone	<1cm	
		II2A	0.09	0.05	4	0.10	0.14	0.03	143	Wflm	Inceptisols	Tuffac. sandstone	>1cm	
	Nitrogen (%)	II2A	0.95	0.06	5	0.93	1.03	0.86	143	Wflm	Inceptisols	Tuffac. sandstone		
		II2A	0.54	0.08	6	0.51	0.69	0.48	143	Wflm	Inceptisols	Tuffac. sandstone	<1cm	
		II2A	0.43	0.09	4	0.42	0.54	0.33	143	Wflm	Inceptisols	Tuffac. sandstone	>1cm	
	Phosphorus (mg/g)	II2A	0.32	0.05	5	0.32	0.39	0.25	143	Wflm	Inceptisols	Tuffac. sandstone		
		II2A	0.17	0.03	6	0.15	0.23	0.14	143	Wflm	Inceptisols	Tuffac. sandstone	<1cm	
		II2A	0.11	0.03	4	0.11	0.15	0.07	143	Wflm	Inceptisols	Tuffac. sandstone	>1cm	
	Potassium (mg/g)	II2A	4.87	0.95	5	4.87	5.89	3.69	143	Wflm	Inceptisols	Tuffac. sandstone		
		II2A	3.31	1.40	6	2.90	6.01	2.09	143	Wflm	Inceptisols	Tuffac. sandstone	<1cm	
		II2A	2.52	1.21	4	2.50	3.77	1.32	143	Wflm	Inceptisols	Tuffac. sandstone	>1cm	



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
<i>Miconia tetrandia</i>	Aluminum (mg/g)	II1B	13.61		1				93	Smf	Ultisols	Tuffac. sandstone		
	Ash (%)	II1A	9.67	0.31	2	9.67	9.89	9.45	94	Swf	Ultisols	Tuffac. sandstone		
		II1B	8.88		1				93	Smf	Ultisols	Tuffac. sandstone		
		II1B	6.47	0.83	2	6.47	7.05	5.88	94	Swf	Ultisols	Tuffac. sandstone		
		II1C	5.52	0.13	2	5.52	5.61	5.43	94	Swf	Ultisols	Tuffac. sandstone		
		II1F	11.86		1				94	Swf	Ultisols	Tuffac. sandstone		
		C/N	II1B	47		1				93	Smf	Ultisols	Tuffac. sandstone	
	Calcium (mg/g)	II1B	15.26		1				93	Smf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II1B	0.07		1				93	Smf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II1B	1.88		1				93	Smf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II1B	0.44		1				93	Smf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II1A	1.46	0.03	2	1.46	1.48	1.44	94	Swf	Ultisols	Tuffac. sandstone		
		II1B	0.90		1				93	Smf	Ultisols	Tuffac. sandstone		
		II1B	0.67	0.02	2	0.67	0.68	0.65	94	Swf	Ultisols	Tuffac. sandstone		
		II1C	0.37	0.08	2	0.37	0.42	0.31	94	Swf	Ultisols	Tuffac. sandstone		
		II1F	1.54		1				94	Swf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II1A	0.58	0.05	2	0.58	0.61	0.54	94	Swf	Ultisols	Tuffac. sandstone		
		II1B	0.63		1				93	Smf	Ultisols	Tuffac. sandstone		
		II1B	0.32	0.01	2	0.32	0.33	0.32	94	Swf	Ultisols	Tuffac. sandstone		
		II1C	0.22	0.06	2	0.22	0.27	0.18	94	Swf	Ultisols	Tuffac. sandstone		
		II1F	1.24		1				94	Swf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II1A	4.00	0.11	2	4.00	4.08	3.92	94	Swf	Ultisols	Tuffac. sandstone		
		II1B	14.68		1				93	Smf	Ultisols	Tuffac. sandstone		
		II1B	3.48	0.00	2	3.48	3.48	3.48	94	Swf	Ultisols	Tuffac. sandstone		
		II1C	2.67	0.00	2	2.67	2.67	2.67	94	Swf	Ultisols	Tuffac. sandstone		
II1F		4.49		1				94	Swf	Ultisols	Tuffac. sandstone			
<i>Micropholis chrysophylloides</i>	Aluminum (mg/g)	II1A	0.10	0.07	4	0.10	0.21	0.05	93	Smf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1B	0.08		1				93	Smf	Ultisols	Tuffac. sandstone		
		II1C	0.19		1				93	Smf	Ultisols	Tuffac. sandstone		
	Ash (%)	II1A	2.68	0.32	4	2.68	3.16	2.47	93	Smf	Ultisols	Tuffac. sandstone		
		II1B	3.08		1				93	Smf	Ultisols	Tuffac. sandstone		
		II1C	0.53		1				93	Smf	Ultisols	Tuffac. sandstone		
	C/N	II1A	45	5	4	45	50	38	93	Smf	Ultisols	Tuffac. sandstone		
		II1B	70		1				93	Smf	Ultisols	Tuffac. sandstone		
		II1C	184		1				93	Smf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II1A	4.27	0.75	4	4.27	5.29	3.62	93	Smf	Ultisols	Tuffac. sandstone		
		II1B	10.23		1				93	Smf	Ultisols	Tuffac. sandstone		
		II1C	0.87		1				93	Smf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II1A	0.10	0.05	4	0.10	0.17	0.06	93	Smf	Ultisols	Tuffac. sandstone		
		II1B	0.10		1				93	Smf	Ultisols	Tuffac. sandstone		
		II1C	0.27		1				93	Smf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II1A	1.4	0.18	4	1.40	1.66	1.25	93	Smf	Ultisols	Tuffac. sandstone		
		II1A	0.14	0.12	4	0.14	0.28	0.03	93	Smf	Ultisols	Tuffac. sandstone		
		II1B	0.61		1				93	Smf	Ultisols	Tuffac. sandstone		
		II1C	0.13		1				93	Smf	Ultisols	Tuffac. sandstone		
		II1C	0.05		1				93	Smf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II1A	1.01	0.12	4	1.01	1.18	0.09	93	Smf	Ultisols	Tuffac. sandstone		
		II1B	0.64		1				93	Smf	Ultisols	Tuffac. sandstone		
		II1C	0.25		1				93	Smf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II1A	0.39	0.08	4	0.39	0.48	0.31	93	Smf	Ultisols	Tuffac. sandstone		
		II1B	0.34		1				93	Smf	Ultisols	Tuffac. sandstone		
		II1C	0.12		1				93	Smf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II1A	5.88	1.32	4	5.88	7.85	5.07	93	Smf	Ultisols	Tuffac. sandstone		
		II1B	4.1		1				93	Smf	Ultisols	Tuffac. sandstone		
		II1C	1.05		1				93	Smf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
<i>Micropholis garcinifolia</i>	Aluminum (mg/g)	II1B	0.07	0.05	3	0.10	0.11	0.01	93	Smf	Ultisols	Tuffac. sandstone		
	Ash (%)	II1B	2.16	1.04	3	2.67	2.84	0.96	93	Smf	Ultisols	Tuffac. sandstone		
	C/N	II1B	87	69	3	49	167	45	93	Smf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II1B	4.26	2.09	3	3.71	6.56	2.49	93	Smf	Ultisols	Tuffac. sandstone		
	Iron (mg/kg)	II1B	70	60	3	100	110	4	93	Smf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II1B	0.79	0.29	3	0.74	1.11	0.54	93	Smf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II1B	0.02	0.01	3	0.02	0.03	0.01	93	Smf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II1B	0.73	0.40	3	0.93	0.99	0.27	93	Smf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II1B	0.34	0.24	3	0.33	0.58	0.09	93	Smf	Ultisols	Tuffac. sandstone		
Potassium (mg/g)	II1B	3.82	2.43	3	4.59	5.78	1.10	93	Smf	Ultisols	Tuffac. sandstone			
<i>Mikania cordifolia</i>	Aluminum (mg/g)	II4	0.06		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II4	3.61		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II4	0.23		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II4	2.31		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II4	19.34		1				135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Mixed Species Guanica Forest</i>	Ash (%)	II1A	16.67	3.16	7	16.97	21.57	12.69	99	Sdf	Mollisols	Alluvial deposits	Decomp. cut plot	
		II1A	19.58	3.20	2	19.58	21.84	17.32	99	Sdf	Mollisols	Alluvial deposits	Decomp.	
		II1Ai	13.72	3.90	17	13.11	19.97	8.61	99	Sdf	Mollisols	Alluvial deposits	Canopy	
		II1C	7.14	2.34	10	7.49	10.95	2.22	99	Sdf	Mollisols	Alluvial deposits	Canopy	
		II1F	5.36		1				99	Sdf	Mollisols	Alluvial deposits	Canopy	
		II2	8.75	2.59	4	7.89	12.54	6.70	99	Sdf	Mollisols	Alluvial deposits	Decomp. control	
		II8A	12.62	0.30	2	12.62	12.83	12.40	99	Sdf	Mollisols	Alluvial deposits	Decomp.	
		II8A	13.11	1.26	2	13.11	14.00	12.22	99	Sdf	Mollisols	Alluvial deposits	Control plot	
		II8C	5.71	0.94	22	5.83	7.48	4.22	99	Sdf	Mollisols	Alluvial deposits	Cut plot	
		II9A	9.76	0.83	9	9.73	11.05	8.65	99	Sdf	Mollisols	Alluvial deposits	Control plot	
II9A	10.08	1.33	10	9.91	12.56	8.22	99	Sdf	Mollisols	Alluvial deposits	Cut plot			
II9B	8.28	1.62	10	8.66	10.58	6.06	99	Sdf	Mollisols	Alluvial deposits	Control plot			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II9B	10.43	4.55	8	10.52	15.75	4.89	99	Sdf	Mollisols	Alluvial deposits	Cut plot	
		II9C	4.94	0.90	6	5.24	6.02	3.58	99	Sdf	Mollisols	Alluvial deposits	Decomp.-control	
		II9C	6.01	0.29	3	6.00	6.31	5.73	99	Sdf	Mollisols	Alluvial deposits	Decomp.-cut plot	
	Nitrogen (%)	II1A	2.21	0.05	7	2.21	2.26	2.16	99	Sdf	Mollisols	Alluvial deposits	Decomp. cut plot	
		II1A	1.98		1				99	Sdf	Mollisols	Alluvial deposits	Decomp.	
		II1Ai	1.53	0.30	17	1.64	1.80	0.51	99	Sdf	Mollisols	Alluvial deposits	Canopy	
		II1C	0.84	0.22	10	0.84	1.08	0.36	99	Sdf	Mollisols	Alluvial deposits	Canopy	
		II1F	0.36		1				99	Sdf	Mollisols	Alluvial deposits	Canopy	
		II2	0.63	0.09	4	0.64	0.70	0.52	99	Sdf	Mollisols	Alluvial deposits	Decomp. Control	
		II8A	2.17	0.13	2	2.17	2.26	2.07	99	Sdf	Mollisols	Alluvial deposits	Control plot	
		II8A	1.86	0.05	2	1.86	1.89	1.82	99	Sdf	Mollisols	Alluvial deposits	Cut plot	
		II9A	1.01	0.11	9	0.98	1.21	0.88	99	Sdf	Mollisols	Alluvial deposits	Control plot	
		II9A	0.88	0.14	8	0.92	1.01	0.56	99	Sdf	Mollisols	Alluvial deposits	Cut plot	
		II9B	0.91	0.08	8	0.92	0.99	0.77	99	Sdf	Mollisols	Alluvial deposits	Control plot	
		II9B	0.80	0.16	6	0.84	1.01	0.61	99	Sdf	Mollisols	Alluvial deposits	Cut plot	
		II9C	1.44	0.72	4	1.16	2.50	0.95	99	Sdf	Mollisols	Alluvial deposits	Decomp.-control	
		II9C	1.38	0.11	2	1.38	1.45	1.30	99	Sdf	Mollisols	Alluvial deposits	Decomp.-cut	
	Phosphorus (mg/g)	II1A	0.66	0.03	7	0.65	0.70	0.60	99	Sdf	Mollisols	Alluvial deposits	Decomp. cut plot	
		II1A	0.69	0.03	2	0.69	0.71	0.66	99	Sdf	Mollisols	Alluvial deposits	Decomp.	
		II1Ai	0.41	0.20	17	0.28	0.73	0.21	99	Sdf	Mollisols	Alluvial deposits	Canopy	
		II1C	0.14	0.05	10	0.14	0.26	0.08	99	Sdf	Mollisols	Alluvial deposits	Canopy	
		II1F	0.92		1				99	Sdf	Mollisols	Alluvial deposits	Canopy	
		II2	0.18	0.04	4	0.17	0.22	0.14	99	Sdf	Mollisols	Alluvial deposits	Decomp. Control	
		II8A	0.70	0.01	2	0.70	0.71	0.69	99	Sdf	Mollisols	Alluvial deposits	Decomp.-control	
		II8A	0.64	0.07	2	0.64	0.69	0.59	99	Sdf	Mollisols	Alluvial deposits	Decomp.-cut	
		II8C	1.00	0.28	22	0.97	1.86	0.59	99	Sdf	Mollisols	Alluvial deposits	Decomp.	
		II9A	0.19	0.03	9	0.18	0.26	0.15	99	Sdf	Mollisols	Alluvial deposits	Control plot	
		II9A	0.19	0.03	10	0.19	0.24	0.15	99	Sdf	Mollisols	Alluvial deposits	Cut plot	
		II9B	0.20	0.02	10	0.19	0.25	0.17	99	Sdf	Mollisols	Alluvial deposits	Control plot	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Potassium (mg/g)	II9B	0.17	0.03	8	0.16	0.24	0.15	99	Sdf	Mollisols	Alluvial deposits	Cut plot	
		II9C	0.84	0.40	6	0.68	1.59	0.49	99	Sdf	Mollisols	Alluvial deposits	Control plot	
		II9C	1.01	0.35	3	0.92	1.39	0.71	99	Sdf	Mollisols	Alluvial deposits	Cut plot	
		II1A	1.26	0.24	7	1.20	1.70	0.90	99	Sdf	Mollisols	Alluvial deposits	Decomp. Cut	
		II1A	1.60	0.66	3	1.70	2.20	0.90	99	Sdf	Mollisols	Alluvial deposits	Decomp.	
		II1Ai	5.44	5.73	17	2.70	15.50	0.80	99	Sdf	Mollisols	Alluvial deposits	Canopy	
		II1C	0.70	0.25	9	0.70	1.10	0.30	99	Sdf	Mollisols	Alluvial deposits	Canopy	
		II1F	11.10		1				99	Sdf	Mollisols	Alluvial deposits	Canopy	
		II2	3.78	1.42	4	3.10	5.90	3.00	99	Sdf	Mollisols	Alluvial deposits	Decomp.-control	
		II8A	3.00	0.57	2	3.00	3.40	2.60	99	Sdf	Mollisols	Alluvial deposits	Decomp.	
		II8A	5.45	1.06	2	5.45	6.20	4.70	99	Sdf	Mollisols	Alluvial deposits	Control plot	
		II8C	1.49	0.48	22	1.54	2.98	0.59	99	Sdf	Mollisols	Alluvial deposits	Cut plot	
		II9A	0.68	0.19	9	0.70	0.97	0.28	99	Sdf	Mollisols	Alluvial deposits	Control plot	
		II9A	3.13	0.77	10	2.95	4.40	2.30	99	Sdf	Mollisols	Alluvial deposits	Cut plot	
		II9B	2.39	0.71	10	2.40	3.90	1.60	99	Sdf	Mollisols	Alluvial deposits	Control plot	
		II9B	3.41	3.16	7	2.20	9.90	0.20	99	Sdf	Mollisols	Alluvial deposits	Cut plot	
		II9C	0.68	0.22	6	0.60	0.95	0.49	99	Sdf	Mollisols	Alluvial deposits	Decomp.-control	
II9C	7.85	1.20	2	7.85	8.70	7.00	99	Sdf	Mollisols	Alluvial deposits	Decomp.-cut plot			
<i>Musa paradisiaca</i>	C/N	II3	25	9	2	25	32	19	135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II3	45	0	2	45	45	45	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II3	1.89	0.66	2	1.89	2.35	1.42	135	Lmrf	Ultisols	Tuffac. sandstone		
	Sulfur (%)	II3	0.30	0.10	2	0.30	0.38	0.23	135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Musa spp.</i>	Aluminum (mg/g)	II3	0.19	0.12	4	0.16	0.35	0.09	135	Lmrf	Ultisols	Tuffac. sandstone		
		II3A	0.09	0.06	4	0.12	0.13	0.01	135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II3	3.35	1.83	4	2.82	5.82	1.95	135	Lmrf	Ultisols	Tuffac. sandstone		
		II3A	8.05	3.05	4	7.28	12.00	5.63	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II3	0.20	0.11	4	0.16	0.36	0.12	135	Lmrf	Ultisols	Tuffac. sandstone		

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<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
	Magnesium (mg/g)	II3A	0.12	0.04	4	0.13	0.14	0.07	135	Lmrf	Ultisols	Tuffac. sandstone			
		II3	2.36	0.44	4	2.23	2.99	1.97	135	Lmrf	Ultisols	Tuffac. sandstone			
	Manganese (mg/g)	II3A	3.67	0.58	4	3.63	4.26	3.16	135	Lmrf	Ultisols	Tuffac. sandstone			
		II3	0.76	0.48	4	0.60	1.46	0.38	135	Lmrf	Ultisols	Tuffac. sandstone			
	Nitrogen (%)	II3A	1.81	1.21	4	1.80	2.89	0.77	135	Lmrf	Ultisols	Tuffac. sandstone			
		II3	1.37	0.42	4	1.55	1.64	0.74	135	Lmrf	Ultisols	Tuffac. sandstone			
	Phosphorus (mg/g)	II3A	1.53	0.79	4	1.75	2.21	0.41	135	Lmrf	Ultisols	Tuffac. sandstone			
		II3	1.01	0.25	4	1.12	1.16	0.64	135	Lmrf	Ultisols	Tuffac. sandstone			
	Potassium (mg/g)	II3A	0.75	0.47	4	0.75	1.16	0.35	135	Lmrf	Ultisols	Tuffac. sandstone			
		II3	31.13	7.81	4	28.55	42.40	25.03	135	Lmrf	Ultisols	Tuffac. sandstone			
			II3A	25.58	3.25	4	24.34	30.37	23.24	135	Lmrf	Ultisols	Tuffac. sandstone		
	<i>Myrcia deflexa</i>	Aluminum (mg/g)	II1B	0.14		1				93	Wflm	Inceptisols	Tuffac. sandstone		
II1C			0.07		1				93	Wflm	Inceptisols	Tuffac. sandstone			
Ash (%)		II1A	8.47		1				94	Wfs	Ultisols	Tuffac. sandstone			
		II1B	2.97		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1B	3.66		1				94	Wfs	Ultisols	Tuffac. sandstone			
C/N		II1C	0.21		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1C	2.75		1				94	Wfs	Ultisols	Tuffac. sandstone			
		II1B	83		1				93	Wflm	Inceptisols	Tuffac. sandstone			
Calcium (mg/g)		II1C	420		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1A	6.86	0.98	3	6.38	7.99	3.20	135	Lmrf	Ultisols	Tuffac. sandstone			
		II1B	9.39		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1B	3.93	1.57	2	3.93	5.04	2.82	135	Lmrf	Ultisols	Tuffac. sandstone			
		II1C	1.18		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1C	1.36		1				135	Lmrf	Ultisols	Tuffac. sandstone			
Iron (mg/g)		II1F	4.56		1				135	Lmrf	Ultisols	Tuffac. sandstone			
		II1B	0.15		1				93	Wflm	Inceptisols	Tuffac. sandstone			
		II1C	0.06		1				93	Wflm	Inceptisols	Tuffac. sandstone			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Magnesium (mg/g)	II1A	2.62	0.24	3	2.71	2.80	2.35	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	1.02		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	0.58	0.31	2	0.58	0.80	0.36	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	0.27		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	0.32		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II1F	1.32		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II1B	1.32		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	0.33		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	1.53		1				94	Wfs	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II1A	1.11	0.09	3	1.06	1.21	1.05	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	0.54		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	1.05		1				94	Wfs	Ultisols	Tuffac. sandstone		
		II1B	0.38	0.14	2	0.38	0.48	0.28	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	0.11		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	0.95		1				94	Wfs	Ultisols	Tuffac. sandstone		
II1C		0.16		1				135	Lmrf	Ultisols	Tuffac. sandstone			
II1F		1.10		1				135	Lmrf	Ultisols	Tuffac. sandstone			
Phosphorus (mg/g)	II1A	0.48		1				94	Wfs	Ultisols	Tuffac. sandstone			
	II1A	0.48	0.04	3	0.47	0.53	0.45	135	Lmrf	Ultisols	Tuffac. sandstone			
	II1B	0.48		1				93	Wflm	Inceptisols	Tuffac. sandstone			
	II1B	0.43		1				94	Wfs	Ultisols	Tuffac. sandstone			
	II1B	0.23	0.10	2	0.23	0.30	0.15	135	Lmrf	Ultisols	Tuffac. sandstone			
	II1C	0.07		1				93	Wflm	Inceptisols	Tuffac. sandstone			
	II1C	0.35		1				94	Wfs	Ultisols	Tuffac. sandstone			
	II1C	0.08		1				135	Lmrf	Ultisols	Tuffac. sandstone			
	II1F	1.24		1				135	Lmrf	Ultisols	Tuffac. sandstone			
Potassium (mg/g)	II1A	6.09		1				94	Wfs	Ultisols	Tuffac. sandstone			
	II1A	6.91	0.52	3	7.11	7.29	6.32	135	Lmrf	Ultisols	Tuffac. sandstone			
	II1B	5.59		1				93	Wflm	Inceptisols	Tuffac. sandstone			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1B	2.89		1				94	Wfs	Ultisols	Tuffac. sandstone		
		II1B	2.94	1.36	2	2.94	3.90	1.98	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	2.32		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	2.34		1				94	Wfs	Ultisols	Tuffac. sandstone		
		II1C	1.10		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II1F	19.15		1				135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Myrcia splendens</i>	Ash (%)	II1A	9.98	2.14	16	10.48	12.90	5.72	94	Swf	Ultisols	Tuffac. sandstone	Understory	
		II1A	10.05		1				101	Lmwf	Inceptisols	Tuffac. sandstone	Overstory	
		II1A	4.20	0.27	5	4.22	4.54	3.78	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1B	3.67	1.35	11	3.49	6.34	1.31	94	Swf	Ultisols	Tuffac. sandstone	Understory	
		II1C	1.91	1.24	15	1.48	4.62	0.75	94	Swf	Ultisols	Tuffac. sandstone	Understory	
		II1C	0.92	0.27	5	0.81	1.29	0.66	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	C/N	II1Ci	5.36	1.44	6	5.43	6.95	3.17	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1A	32	1	5	32	33	31	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1C	261	85	5	293	347	132	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	Carbon (%)	II1Ci	66	9	6	67	74	49	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1A	51	0	5	51	52	51	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1C	53	0	5	53	53	52	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	Nitrogen (%)	II1Ci	52	1	6	52	53	51	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1A	1.09	0.14	16	1.14	1.33	0.82	94	Swf	Ultisols	Tuffac. sandstone	Understory	
		II1A	1.22		1				101	Lmwf	Inceptisols	Tuffac. sandstone	Overstory	
	Nitrogen (%)	II1A	1.61	0.05	5	1.60	1.68	1.56	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1B	0.60	0.19	11	0.68	0.79	0.24	94	Swf	Ultisols	Tuffac. sandstone	Understory	
		II1C	0.39	0.17	15	0.37	0.68	0.15	94	Swf	Ultisols	Tuffac. sandstone	Understory	
II1C		0.23	0.10	5	0.18	0.40	0.15	126		Ultisols	Siltstone,sandstone	Urban forest, RP		
II1Ci		0.80	0.12	6	0.78	1.05	0.72	126		Ultisols	Siltstone,sandstone	Urban forest, RP		
Phosphorus (mg/g)	II1A	0.58	0.15	16	0.56	0.85	0.38	94	Swf	Ultisols	Tuffac. sandstone	Understory		
	II1A	0.63		1				101	Lmwf	Inceptisols	Tuffac. sandstone	Overstory		



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Potassium (mg/g)	II1B	0.45	0.17	11	0.43	0.70	0.15	94	Swf	Ultisols	Tuffac. sandstone	Understory	
		II1C	0.32	0.15	15	0.29	0.61	0.11	94	Swf	Ultisols	Tuffac. sandstone	Understory	
		III1A	4.11	1.90	16	4.90	6.50	0.70	94	Swf	Ultisols	Tuffac. sandstone	Understory	
		II1A	4.50		1				101	Lmwf	Inceptisols	Tuffac. sandstone	Overstory	
		II1B	0.28	0.15	11	0.34	0.46	0.03	94	Swf	Ultisols	Tuffac. sandstone	Understory	
	Sulfur (%)	II1C	1.28	1.28	15	1.60	4.30	0.70	94	Swf	Ultisols	Tuffac. sandstone	Understory	
		III1A	0.44	0.05	5	0.43	0.51	0.36	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1C	0.15	0.08	5	0.13	0.29	0.09	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	Wood density (g/cc)	II1Ci	0.54	0.09	6	0.52	0.69	0.44	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1C	0.61	0.07	5	0.61	0.71	0.53	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
<i>Neolaugeria resinosa</i>	Aluminum (mg/kg)	III1A	27		1				102	Smf	Limestone	Tuffac. sandstone	New Adult	
	Ash (%)	III1A	5.06		1				102	Smf	Limestone	Tuffac. sandstone	New Adult	
	Calcium (mg/g)	III1A	6.66		1				102	Smf	Limestone	Tuffac. sandstone	New Adult	
	Cobalt (µg/g)	III1A	0.95		1				102	Smf	Limestone	Tuffac. sandstone	New Adult	
	Iron (mg/kg)	III1A	47		1				102	Smf	Limestone	Tuffac. sandstone	New Adult	
	Magnesium (mg/g)	III1A	3.84		1				102	Smf	Limestone	Tuffac. sandstone	New Adult	
	Manganese (mg/kg)	III1A	127		1				102	Smf	Limestone	Tuffac. sandstone	New Adult	
	Nickel (µg/g)	III1A	30		1				102	Smf	Limestone	Tuffac. sandstone	New Adult	
	Nitrogen (%)	III1A	1.10		1				102	Smf	Limestone	Tuffac. sandstone	New Adult	
	Phosphorus (mg/g)	III1A	0.40		1				102	Smf	Limestone	Tuffac. sandstone	New Adult	
	Potassium (mg/g)	III1A	13.89		1				102	Smf	Limestone	Tuffac. sandstone		
<i>Nephrolepis portoricensis</i>	Aluminum (mg/g)	II6	4.91	3.09	21	4.73	10.90	0.05	135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II6	2.74	1.60	21	2.46	8.54	1.07	135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II6	41	1	9	42	42	38	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II6	0.69	1.59	21	0.25	7.47	0.04	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II6	4.04	1.55	21	4.02	7.77	1.41	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II6	0.10	0.04	21	0.09	0.20	0.04	135	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Nitrogen (%)	II6	1.50	0.38	25	1.48	2.43	0.80	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II6	0.83	0.37	21	0.68	1.91	0.47	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II6	13.83	8.40	21	11.16	27.50	1.46	135	Lmrf	Ultisols	Tuffac. sandstone		
	Sulfur (%)	II6	0.50	0.18	9	0.56	0.73	0.16	135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Nephrolepis rivularis</i>	Aluminum (mg/g)	II6	0.30	0.16	4	0.26	0.51	0.14	135	Lmrf	Ultisols	Tuffac. sandstone		
	C/N	II6	3	7	4	36	39	23	135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II6	10.75	2.34	4	10.49	13.32	8.70	135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II6	44	1	4	44	46	44	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II6	0.18	0.05	4	0.19	0.24	0.13	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II6	5.60	1.08	4	5.71	6.79	4.17	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II6	0.23	0.07	4	0.24	0.30	0.14	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II6	1.17	0.36	8	1.16	1.91	0.72	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II6	0.56	0.20	4	0.80	0.94	0.50	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II6	15.79	6.68	4	16.11	21.82	9.13	135	Lmrf	Ultisols	Tuffac. sandstone		
Sulfur (%)	II6	0.14	0.03	4	0.19	0.24	0.17	135	Lmrf	Ultisols	Tuffac. sandstone			
<i>Nepsera aquatica</i>	Aluminum (mg/g)	II3	0.64		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II3	2.52		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II3	0.15		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II3	1.61		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II3	0.04		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II3	0.66		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II3	0.37		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II3	8.90		1				135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Ocotea leucoxylin</i>	Aluminum (mg/g)	III A	0.40		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		III H	0.41	0.15	2	0.41	0.51	0.30	135	Lmrf	Ultisols	Tuffac. sandstone		
	Ash (%)	III A	4.52		1				93	Wflm	Inceptisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1A	9.16	2.26	6	8.84	12.82	6.92	126	Smf	Ultisols	Tuffac. sandstone	Luquillo Exp. Forest	
		II1C	1.63	0.24	6	1.62	1.97	1.28	126	Smf	Ultisols	Tuffac. sandstone	Luquillo Exp. Forest	
		II1Ci	12.14	1.65	5	11.47	14.05	10.51	126	Smf	Ultisols	Tuffac. sandstone	Luquillo Exp. Forest	
	C/N	II1A	21		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	27	2	6	28	28	24	126	Smf	Ultisols	Tuffac. sandstone	Luquillo Exp. Forest	
		II1C	178	39	6	189	214	108	126	Smf	Ultisols	Tuffac. sandstone	Luquillo Exp. Forest	
		II1Ci	32	4	5	33	37	27	126	Smf	Ultisols	Tuffac. sandstone	Luquillo Exp. Forest	
	Calcium (mg/g)	II1A	7.61	2.70	5	8.08	10.31	4.60	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1A	7.31		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	6.09	1.42	4	5.60	8.17	4.98	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	1.38	0.37	8	1.25	2.12	1.01	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1Ci	10.45	1.77	9	10.42	12.67	8.66	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1F	3.98	1.12	4	3.72	5.46	3.00	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1H	7.90	0.51	2	7.90	8.25	7.54	135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II1A	54	2	6	53	56	52	126	Smf	Ultisols	Tuffac. sandstone	Luquillo Exp. Forest	
		II1C	53	1	6	53	54	53	126	Smf	Ultisols	Tuffac. sandstone	Luquillo Exp. Forest	
		II1Ci	49	1	5	49	50	47	126	Smf	Ultisols	Tuffac. sandstone	Luquillo Exp. Forest	
	Iron (mg/g)	II1A	0.14		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1H	0.28	0.03	2	0.28	0.30	0.26	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II1A	1.80	0.30	5	1.99	2.05	1.38	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1A	2.55		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	1.22	0.36	4	1.24	1.60	0.79	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	0.15	0.04	8	0.16	0.19	0.09	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1Ci	0.60	0.12	9	0.60	0.79	0.39	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1F	2.29	0.26	4	2.30	2.60	1.98	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1H	1.70	0.10	2	1.70	1.77	1.62	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II1A	0.43		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1H	0.34	0.02	2	0.34	0.35	0.32	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II1A	2.11	0.10	5	2.11	2.26	2.01	135	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		III A	2.14		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		III A	2.37	0.27	3	2.29	2.68	2.15	94	Swf	Ultisols	Tuffac. sandstone		
		III A	2.01	0.10	6	2.00	2.16	1.92	126	Smf	Ultisols	Tuffac. sandstone	Luquillo Exp. Forest	
		III B	1.07	0.41	4	1.09	1.54	0.56	135	Lmrf	Ultisols	Tuffac. sandstone		
		III B	1.44	0.08	3	1.44	1.52	1.36	94	Swf	Ultisols	Tuffac. sandstone		
		III C	0.25	0.03	8	0.25	0.29	0.20	135	Lmrf	Ultisols	Tuffac. sandstone		
		III C	0.93	0.48	3	0.69	1.48	0.62	94	Swf	Ultisols	Tuffac. sandstone		
		III C	0.32	0.09	6	0.29	0.49	0.25	126	Smf	Ultisols	Tuffac. sandstone	Luquillo Exp. Forest	
		III Ci	1.26	0.08	9	1.26	1.36	1.13	135	Lmrf	Ultisols	Tuffac. sandstone		
		III Ci	1.54	0.18	5	1.48	1.76	1.36	126	Smf	Ultisols	Tuffac. sandstone	Luquillo Exp. Forest	
		III F	3.52	0.02	4	3.52	3.55	3.48	135	Lmrf	Ultisols	Tuffac. sandstone		
		III H	1.62	0.02	2	1.62	1.63	1.60	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	III A	0.79	0.22	5	0.78	1.13	0.58	135	Lmrf	Ultisols	Tuffac. sandstone		
		III A	1.12		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		III A	0.94	0.30	3	0.77	1.29	0.76	94	Swf	Ultisols	Tuffac. sandstone		
		III B	0.42	0.19	4	0.44	0.61	0.18	135	Lmrf	Ultisols	Tuffac. sandstone		
		III B	1.14	0.37	3	1.04	1.55	0.84	94	Swf	Ultisols	Tuffac. sandstone		
		III C	0.08	0.01	8	0.08	0.10	0.06	135	Lmrf	Ultisols	Tuffac. sandstone		
		III C	0.61	0.40	3	0.54	1.04	0.24	94	Swf	Ultisols	Tuffac. sandstone		
		III Ci	0.46	0.06	9	0.46	0.55	0.34	135	Lmrf	Ultisols	Tuffac. sandstone		
		III F	2.58	0.44	4	2.61	2.99	2.13	135	Lmrf	Ultisols	Tuffac. sandstone		
		III H	0.73	0.03	2	0.73	0.75	0.70	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	III A	7.37	1.45	5	7.02	9.88	6.34	135	Lmrf	Ultisols	Tuffac. sandstone		
		III A	10.82		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		III A	4.83	3.01	3	3.99	8.17	2.34	94	Swf	Ultisols	Tuffac. sandstone		
		III B	5.15	1.33	4	5.39	6.40	3.42	135	Lmrf	Ultisols	Tuffac. sandstone		
		III B	4.92	2.90	3	6.28	6.90	1.59	94	Swf	Ultisols	Tuffac. sandstone		
		III C	1.94	0.23	8	1.89	2.27	1.54	135	Lmrf	Ultisols	Tuffac. sandstone		
		III C	3.34	1.81	3	3.06	5.27	1.68	94	Swf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Sulfur (%)	II1Ci	4.76	0.56	9	4.78	5.83	3.92	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1F	12.95	1.04	4	12.79	14.36	11.87	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1H	7.83	0.32	2	7.83	8.06	7.61	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1A	0.20	0.02	6	0.20	0.24	0.18	126	Smf	Ultisols	Tuffac. sandstone	Luquillo Exp. Forest	
		II1C	0.01	0.01	6	0.01	0.03	0.01	126	Smf	Ultisols	Tuffac. sandstone	Luquillo Exp. Forest	
		II1Ci	0.17	0.03	5	0.16	0.21	0.15	126	Smf	Ultisols	Tuffac. sandstone	Luquillo Exp. Forest	
	Wood density (g/cc)	II1C	0.34	0.04	5	0.34	0.40	0.30	126	Smf	Ultisols	Tuffac. sandstone	Luquillo Exp. Forest	
<i>Ocotea moschata</i>	Wood density (g/cc)	II1B	0.38	0.01	3	0.38	0.38	0.37	97	Wfs	Inceptisols	Tuffac. sandstone		
<i>Ocotea spathulata</i>	Aluminum (mg/g)	II1A	0.58		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	0.05		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Ash (%)	II1B	3.10		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	0.35		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	C/N	II1B	43		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	195		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Calcium (mg/g)	II1A	6.43		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	2.12		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	1.41		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Iron (mg/g)	II1A	1.88		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	0.04		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	0.03		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Magnesium (mg/g)	II1B	0.58		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	0.26		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Manganese (mg/g)	II1A	0.10		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	0.03		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	0.01		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Nitrogen (%)	II1B	1.03		1				93	Wflm	Inceptisols	Tuffac. sandstone		
II1C		0.24		1				93	Wflm	Inceptisols	Tuffac. sandstone			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Phosphorus (mg/g)	II1A	1.56		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	1.89		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	0.11		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Potassium (mg/g)	II1A	18.65		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	11.29		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	1.49		1				93	Wflm	Inceptisols	Tuffac. sandstone		
<i>Odontosoria spp.</i>	Aluminum (mg/g)	II6	1.52		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II6	1.60		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II6	0.79		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II6	1.49		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II6	0.20		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II6	1.04		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II6	0.49		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II6	9.72		1				135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Olyra latifolia</i>	Aluminum (mg/g)	II3	0.40		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	C/N	II3	25		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II3	0.77		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II3	35		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II3	0.13		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II3	1.03		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II3	0.27		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II3	1.01		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II3	0.48		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II3	9.39		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Sulfur (%)	II3	0.24		1				135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Ormosia krugii</i>	Ash (%)	II1B	0.74	0.48	8	0.66	1.75	0.09	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Calcium (mg/g)	II1B	0.73	0.69	2	0.73	1.22	0.24	68	Swf	Ultisols	Tuffac. sandstone	Class 3 ST	
		II1A	2.08	0.49	9	1.82	2.89	1.65	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	2.77	1.55	8	3.01	4.87	0.84	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	
		II1B	0.19	0.12	2	0.19	0.27	0.11	68	Swf	Ultisols	Tuffac. sandstone	Class 3 ST	
		II1B	1.74	0.46	9	1.85	2.38	0.84	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	0.29	0.12	12	0.27	0.52	0.07	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1Ci	3.91	0.90	12	4.06	5.02	2.55	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II1F	1.75	0.52	3	1.59	2.34	1.34	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1A	0.91	0.11	9	0.88	1.13	0.80	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	0.43	0.17	9	0.41	0.65	0.18	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	0.06	0.03	12	0.07	0.09	0.02	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1Ci	0.28	0.09	12	0.24	0.49	0.18	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1F	0.77	0.09	3	0.72	0.87	0.71	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1A	2.12	0.09	9	2.10	2.27	2.02	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II1B	0.40	0.20	8	0.38	0.72	0.15	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	
		II1B	0.58	0.52	2	0.58	0.94	0.21	68	Swf	Ultisols	Tuffac. sandstone	Class 3 ST	
		II1B	0.95	0.23	9	0.88	1.25	0.60	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	0.21	0.02	12	0.21	0.24	0.18	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1Ci	0.90	0.05	12	0.91	0.98	0.83	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1F	1.27	0.11	3	1.21	1.39	1.20	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1A	0.76	0.06	9	0.76	0.85	0.65	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II1B	0.05	0.14	8	0.14	0.20	0.07	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	
		II1B	0.05	0.03	2	0.05	0.09	0.01	68	Swf	Ultisols	Tuffac. sandstone	Class 3 ST	
		II1B	0.49	0.30	9	0.36	0.82	0.19	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	0.03	0.01	12	0.03	0.47	0.02	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1Ci	0.48	0.18	12	0.18	0.20	0.13	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1F	0.41	0.18	3	0.37	0.61	0.26	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1A	4.45	0.59	9	4.26	5.78	3.78	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II1B	0.81	0.98	9	0.46	3.30	0.17	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		III B	0.63		1				68	Swf	Ultisols	Tuffac. sandstone	Class 3 ST	
		III B	2.85	1.40	9	2.58	4.31	1.23	135	Lmrf	Ultisols	Tuffac. sandstone		
		III C	0.42	0.17	12	0.40	0.80	0.21	135	Lmrf	Ultisols	Tuffac. sandstone		
		III Ci	1.75	0.55	12	1.54	2.68	1.03	135	Lmrf	Ultisols	Tuffac. sandstone		
		III F	3.69	0.97	3	3.41	4.77	2.90	135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Ouratea littoralis</i>	Aluminum (mg/kg)	III A	42		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		III A	38		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
	Ash (%)	III A	4.68		1				102	Sdf	Mollisols	Alluvial deposits	Adult	
		III A	4.74		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Calcium (mg/g)	III A	11.82		1				102	Smf	Limestone	Tuffac. sandstone		
		III A	12.07		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Cobalt (µg/g)	III A	0.75		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
	Iron (mg/kg)	III A	78		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		III A	58		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
	Magnesium (mg/g)	III A	3.09		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
		III A	2.66		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Manganese (mg/kg)	III A	48		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		III A	52		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
	Nickel (µg/g)	III A	34.15		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
	Nitrogen (%)	III A	1.06		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
		III A	1.08		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Phosphorus (mg/g)	III A	0.54		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
		III A	0.39		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Potassium (mg/g)	III A	6.22		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
		III A	5.00		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Zinc (µg/g)	III A	11.90		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
<i>Palicourea crocea</i>	Aluminum (mg/g)	II 2	0.32	0.10	2	0.32	0.39	0.25	135	Lmrf	Ultisols	Tuffac. sandstone		



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Calcium (mg/g)	II2	5.38	1.64	2	5.38	6.54	4.23	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II2	0.08	0.06	2	0.08	0.12	0.04	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II2	3.29	1.52	2	3.29	4.37	2.22	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II2	0.06	0.04	2	0.06	0.08	0.03	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II2	1.03	0.21	2	1.03	1.18	0.88	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II2	0.71	0.16	2	0.71	0.82	0.60	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II2	6.31	26.46	2	46.31	65.02	27.59	135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Palicourea riparia</i>	Aluminum (mg/g)	II2A	6.76	1.73	12	6.63	11.28	4.51	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2C	1.14	0.47	15	1.11	2.17	0.38	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2E	1.35	0.64	2	1.35	1.81	0.90	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2H	2.07		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	15.09	3.66	2	15.09	17.68	2.50	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	1.22	1.56	2	1.22	2.33	0.12	146	Swf	Ultisols	Tuffac. sandstone		
	Ash (%)	II2A	9.13	1.32	12	8.97	11.22	7.36	94	Swf	Ultisols	Tuffac. sandstone		
		II2B	5.20	0.59	8	5.14	5.98	4.36	94	Swf	Ultisols	Tuffac. sandstone		
		II2C	3.96	1.90	10	4.22	6.76	1.38	94	Swf	Ultisols	Tuffac. sandstone		
		II2F	7.73	0.85	4	8.06	8.31	6.47	94	Swf	Ultisols	Tuffac. sandstone		
		II8A	10.41	0.57	2	10.41	10.81	10.01	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	3.18	2.97	2	3.18	5.28	1.08	146	Swf	Ultisols	Tuffac. sandstone		
	C/N	II8A	18	8	2	18	24	12	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	75	8	2	75	81	69	146	Swf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II2A	8.65	1.10	13	8.66	10.31	6.29	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2B	11.02		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II2C	4.26	3.39	16	3.59	16.53	2.03	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2E	1.21	0.04	2	1.21	1.23	1.18	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2F	6.60		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II2H	4.73		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	12.26	5.40	2	12.26	16.07	8.44	146	Swf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II8B	3.61	4.49	2	3.61	6.78	0.43	146	Swf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II8A	51	3	2	51	53	49	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	52	2	2	52	53	51	146	Swf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II2A	0.22	0.06	12	0.21	0.36	0.12	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2C	0.09	0.04	15	0.09	0.20	0.04	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2E	1.10	0.45	2	1.10	1.42	0.78	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2H	0.19		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	0.57	0.45	2	0.57	0.89	0.25	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	0.03	0.03	2	0.03	0.05	0.01	146	Swf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II2A	4.21	0.67	13	4.17	5.36	2.87	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2B	3.53		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II2C	1.00	0.40	16	0.91	1.98	0.52	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2E	0.44	0.09	2	0.44	0.50	0.38	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2F	3.86		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II2H	2.10		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	3.48	0.83	2	3.48	4.07	2.89	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	0.95	1.25	2	0.95	1.83	0.07	146	Swf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II2A	0.15	0.07	12	0.15	0.28	0.07	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2C	0.11	0.04	15	0.11	0.22	0.05	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2E	0.05	0.05	2	0.05	0.09	0.02	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2H	0.12		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	0.20	0.17	2	0.20	0.32	0.09	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	0.07	0.08	2	0.07	0.12	0.01	146	Swf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II2A	2.29	0.34	13	2.35	2.68	1.52	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2A	2.68	0.30	12	2.68	3.08	2.12	94	Swf	Ultisols	Tuffac. sandstone		
		II2B	1.02		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II2B	1.15	0.20	8	1.13	1.37	0.94	94	Swf	Ultisols	Tuffac. sandstone		
		II2C	0.71	0.31	16	0.62	1.68	0.42	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2C	0.96	0.39	10	0.97	1.67	0.33	94	Swf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II2E	0.68	0.21	2	0.68	0.82	0.53	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2F	2.92		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II2F	2.35	0.94	4	1.86	3.43	1.75	94	Swf	Ultisols	Tuffac. sandstone		
		II2H	1.33		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	3.33	1.77	2	3.33	4.58	2.08	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	0.70	0.05	2	0.70	0.73	0.66	146	Swf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II2A	0.62	0.07	13	0.63	0.79	0.49	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2A	0.85	0.22	12	0.84	1.21	0.49	94	Swf	Ultisols	Tuffac. sandstone		
		II2B	0.44		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II2B	0.55	0.15	8	0.55	0.76	0.32	94	Swf	Ultisols	Tuffac. sandstone		
		II2C	0.29	0.12	16	0.26	0.54	0.14	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2C	0.48	0.26	10	0.46	0.91	0.17	94	Swf	Ultisols	Tuffac. sandstone		
		II2E	0.27	0.07	2	0.27	0.32	0.21	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2F	1.73		1				116					
		II2F	1.43	0.50	4	1.41	2.03	0.87	94	Swf	Ultisols	Tuffac. sandstone		
		II2H	0.41		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	1.04	0.55	2	1.04	1.43	0.65	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	0.49	0.64	2	0.49	0.95	0.04	146	Swf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II2A	13.78	1.96	13	14.17	16.90	9.51	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2A	13.71	5.41	12	14.80	23.90	2.20	94	Swf	Ultisols	Tuffac. sandstone		
		II2B	4.32		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II2B	6.60	2.62	8	5.40	9.50	1.50	94	Swf	Ultisols	Tuffac. sandstone		
		II2C	7.05	0.90	16	7.31	8.05	5.17	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2C	8.01	4.05	10	7.20	15.70	2.60	94	Swf	Ultisols	Tuffac. sandstone		
		II2E	4.97	0.62	2	4.97	5.41	4.54	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2F	13.48		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II2F	15.10	1.18	4	14.70	16.80	14.10	94	Swf	Ultisols	Tuffac. sandstone		
		II2H	7.85		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II2C	8.72	8.37	2	8.72	14.63	2.80	146	Swf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II8B	5.43	7.59	2	5.43	10.80	0.07	146	Swf	Ultisols	Tuffac. sandstone		
<i>Panicum maximum</i>	Aluminum (mg/g)	II3	0.23	0.18	6	0.14	0.57	0.11	144	Mfs	Histosol	Alluvial deposits		
	Ash (%)	II3	8.40	2.10	6	7.88	12.46	6.63	144	Mfs	Histosol	Alluvial deposits		
	C/N	II3	56	16	6	50	86	45	144	Mfs	Histosol	Alluvial deposits		
	Calcium (mg/g)	II3	3.63	1.23	6	4.27	4.58	1.56	144	Mfs	Histosol	Alluvial deposits		
	Carbon (%)	II3	46	1	6	47	48	44	144	Mfs	Histosol	Alluvial deposits		
	Iron (mg/g)	II3	0.24	0.27	6	0.12	0.77	0.04	144	Mfs	Histosol	Alluvial deposits		
	Magnesium (mg/g)	II3	2.63	0.86	6	2.36	3.88	1.78	144	Mfs	Histosol	Alluvial deposits		
	Manganese (mg/g)	II3	0.05	0.02	6	0.05	0.06	0.02	144	Mfs	Histosol	Alluvial deposits		
	Nitrogen (%)	II3	0.88	0.18	6	0.95	1.03	0.54	144	Mfs	Histosol	Alluvial deposits		
	Phosphorus (mg/g)	II3	1.63	0.18	6	1.71	1.81	1.39	144	Mfs	Histosol	Alluvial deposits		
Potassium (mg/g)	II3	10.55	2.43	6	11.66	13.02	6.72	144	Mfs	Histosol	Alluvial deposits			
<i>Pasture</i>	Aluminum (mg/g)	II9A	4.21	0.51	4	4.42	4.56	3.45	153	Swf	Ultisols	Tuffac. sandstone		
	Ash (%)	II9A	8.37	0.64	4	8.49	8.97	7.54	153	Swf	Ultisols	Tuffac. sandstone		
	C/N	II3	26	3	24	26	32	20	110	Lmrf	Ultisols	Tuffac. sandstone	Mameyes	
		II3	25	6	24	24	44	17	110	Wfs	Ultisols	Lava	Sabana	
	Calcium (mg/g)	II9A	101	5	4	101	108	97	153	Swf	Ultisols	Tuffac. sandstone		
		II9A	0.28	0.04	4	0.27	0.33	0.24	153	Swf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II3	45	3	24	45	49	36	110	Lmrf	Ultisols	Tuffac. sandstone	Mameyes	
		II3	45	3	24	45	50	41	110	Wfs	Ultisols	Lava	Sabana	
	Iron (mg/g)	II9A	49	0	4	48	49	48	153	Swf	Ultisols	Tuffac. sandstone		
		II9A	6.26	0.91	4	6.50	7.07	4.96	153	Swf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II9A	0.37	0.05	4	0.38	0.41	0.31	153	Swf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II9A	0.23	0.04	4	0.22	0.28	0.20	153	Swf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II3	1.76	0.25	24	1.50	2.21	1.34	110	Lmrf	Ultisols	Tuffac. sandstone	Mameyes	
		II3	1.90	0.40	24	1.84	2.72	1.09	110	Wfs	Ultisols	Lava	Sabana	
		II9A	0.48	0.02	4	0.49	0.50	0.45	153	Swf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Phosphorus (mg/g)	II9A	0.20	0.01	4	0.19	0.22	0.19	153	Swf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II9A	2.25	0.13	4	2.24	2.39	2.13	153	Swf	Ultisols	Tuffac. sandstone		
	Sodium (mg/g)	II9A	1.41	0.03	4	1.41	1.44	1.38	153	Swf	Ultisols	Tuffac. sandstone		
<i>Paullinia pinnata</i>	C/N	II4	53	48	2	53	86	19	135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II4	47	0	2	47	47	47	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II4	1.53	1.39	2	1.53	2.51	0.54	135	Lmrf	Ultisols	Tuffac. sandstone		
	Sulfur (%)	II4	0.18	0.04	2	0.18	0.21	0.16	135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Paullinia spp.</i>	Aluminum (mg/g)	II4	0.19		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II4	14.33		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II4	0.20		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II4	4.55		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II4	0.23		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II4	1.45		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II4	1.54		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II4	15.20		1				135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Peperomia spp.</i>	Aluminum (mg/g)	II3	0.27	0.18	5	0.27	0.56	0.11	135	Lmrf	Ultisols	Tuffac. sandstone		
	C/N	II3	13		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II3	7.08	2.31	5	5.84	9.68	4.97	135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II3	40		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II3	0.23	0.16	5	0.20	0.46	0.08	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II3	4.33	2.60	5	3.37	8.86	2.50	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II3	0.22	0.10	5	0.20	0.35	0.09	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II3	1.76	0.89	5	1.63	3.14	0.82	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II3	1.98	0.83	5	2.09	2.72	0.66	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II3	54.63	24.63	5	42.79	97.78	38.68	135	Lmrf	Ultisols	Tuffac. sandstone		
	Sulfur (%)	II3	0.31		1				135	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
<i>Petitia domingensis</i>	Aluminum (mg/g)	II1A	0.05		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Ash (%)	II1A	4.76		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Calcium (mg/g)	II1A	5.98		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Iron (mg/g)	II1A	0.08		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Magnesium (mg/g)	II1A	3.95		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Manganese (mg/g)	II1A	0.05		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Nitrogen (%)	II1A	1.35		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Phosphorus (mg/g)	II1A	0.82		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Potassium (mg/g)	II1A	6.16		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
Zinc (µg/g)	II1A	52.43		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest		
<i>Philodendron angustatum</i>	Aluminum (mg/g)	II4	0.18	0.15	2	0.18	0.28	0.07	135	Lmrf	Ultisols	Tuffac. sandstone		
	C/N	II4	44		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II4	5.89	2.57	2	5.89	7.71	4.07	135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II4	42		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II4	0.97	1.03	2	0.97	1.70	0.24	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II4	7.31	7.96	2	7.31	12.94	1.68	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II4	1.60	0.84	2	1.60	2.20	1.01	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II4	0.84	0.16	2	0.84	0.95	0.73	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II4	0.67	0.16	2	0.67	0.78	0.56	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II4	8.82	10.33	2	8.82	16.13	1.51	135	Lmrf	Ultisols	Tuffac. sandstone		
	Sulfur (%)	II4	0.14		1				135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Philodendron scandens</i>	Aluminum (mg/g)	II4	0.26	0.23	14	0.15	0.73	0.03	135	Lmrf	Ultisols	Tuffac. sandstone		
	C/N	II4	34	20	12	26	83	17	135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II4	7.09	1.89	14	6.61	12.42	5.11	135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II4	43	2	12	43	46	40	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II4	0.30	0.37	14	0.16	1.25	0.03	135	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Magnesium (mg/g)	II4	3.11	4.25	14	1.92	14.80	1.28	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II4	0.45	0.37	14	0.33	1.41	0.14	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II4	1.48	0.60	22	1.41	2.84	0.55	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II4	1.63	1.04	14	1.36	4.47	0.42	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II4	30.07	15.84	14	25.97	59.84	2.27	135	Lmrf	Ultisols	Tuffac. sandstone		
	Sulfur (%)	II4	0.15	0.05	12	0.15	0.22	0.07	135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Philodendron spp.</i>	Aluminum (mg/g)	II4	0.82	0.68	16	0.81	2.56	0.08	135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II4	7.04	2.25	16	6.76	10.36	3.36	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II4	1.02	0.98	16	0.81	3.04	0.02	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II4	1.91	0.75	16	2.01	3.34	0.81	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II4	0.47	0.21	16	0.39	0.83	0.18	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II4	1.18	0.40	15	1.05	1.85	0.37	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II4	1.49	0.79	16	1.44	2.86	0.26	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II4	34.19	12.77	16	38.14	52.46	8.91	135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Phoradendron racemosum</i>	Calcium (mg/g)	II3A	26.08		1				104	Sdf	Mollisols	Alluvial deposits		
		II3A	26.08		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Magnesium (mg/g)	II3A	11.31		1				104	Sdf	Mollisols	Alluvial deposits		
		II3A	11.31		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Nitrogen (%)	II3A	4.04		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Potassium (mg/g)	II3A	33.75		1				104	Sdf	Mollisols	Alluvial deposits		
		II3A	33.75		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
<i>Phytolacca icosandra</i>	Aluminum (mg/g)	II4	0.32	0.28	10	0.24	1.04	0.07	135	Lmrf	Ultisols	Tuffac. sandstone		
		II4A	2.29	0.42	12	2.39	2.79	1.41	141	Wflm	Ultisols	Tuffac. sandstone		
		II4C	0.57	0.40	1	0.38	1.31	0.25	141	Wflm	Ultisols	Tuffac. sandstone		
		II4E	1.26	0.70	9	1.07	2.91	0.68	141	Wflm	Ultisols	Tuffac. sandstone		
		II4E	0.83	0.37	10	1.74	2.35	1.20	141	Wflm	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II4F	0.07		1				141	Wflm	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II4	4.38	2.23	10	4.22	7.53	1.69	135	Lmrf	Ultisols	Tuffac. sandstone		
		II4A	6.52	2.01	12	6.44	9.86	3.24	141	Wflm	Ultisols	Tuffac. sandstone		
		II4C	3.32	1.40	11	3.10	5.66	1.38	141	Wflm	Ultisols	Tuffac. sandstone		
		II4E	4.21	1.63	9	4.19	7.47	2.13	141	Wflm	Ultisols	Tuffac. sandstone		
		II4E	8.89	3.18	10	9.84	12.80	4.91	141	Wflm	Ultisols	Tuffac. sandstone		
		II4F	3.26		1				141	Wflm	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II4	0.22	0.33	10	0.11	1.15	0.07	135	Lmrf	Ultisols	Tuffac. sandstone		
		II4A	1.66	2.24	12	0.98	8.25	0.33	141	Wflm	Ultisols	Tuffac. sandstone		
		II4C	0.30	0.21	1	0.17	0.69	0.11	141	Wflm	Ultisols	Tuffac. sandstone		
		II4E	0.97	0.54	9	0.80	2.17	0.49	141	Wflm	Ultisols	Tuffac. sandstone		
		II4E	1.39	0.39	10	1.28	1.97	0.92	141	Wflm	Ultisols	Tuffac. sandstone		
		II4F	0.08		1				141	Wflm	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II4	5.88	1.40	10	6.23	7.86	3.24	135	Lmrf	Ultisols	Tuffac. sandstone		
		II4A	8.01	2.13	12	8.12	11.24	3.83	141	Wflm	Ultisols	Tuffac. sandstone		
		II4C	4.68	2.77	11	3.75	10.80	1.39	141	Wflm	Ultisols	Tuffac. sandstone		
		II4E	1.77	0.37	9	1.73	2.44	1.36	141	Wflm	Ultisols	Tuffac. sandstone		
		II4E	3.19	1.23	10	2.91	6.06	1.70	141	Wflm	Ultisols	Tuffac. sandstone		
		II4F	4.39		1				141	Wflm	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II4	0.20	0.16	10	0.15	0.57	0.05	135	Lmrf	Ultisols	Tuffac. sandstone		
		II4A	1.59	0.86	12	1.84	2.55	0.22	141	Wflm	Ultisols	Tuffac. sandstone		
		II4C	0.19	0.13	11	0.17	0.51	0.06	141	Wflm	Ultisols	Tuffac. sandstone		
		II4E	0.21	0.08	9	0.18	0.39	0.15	141	Wflm	Ultisols	Tuffac. sandstone		
		II4E	0.26	0.06	10	0.25	0.38	0.21	141	Wflm	Ultisols	Tuffac. sandstone		
		II4F	0.79		1				141	Wflm	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II4	1.70	0.68	10	1.55	1.59	0.68	135	Lmrf	Ultisols	Tuffac. sandstone		
		II4A	3.63	1.55	12	3.03	7.03	2.07	141	Wflm	Ultisols	Tuffac. sandstone		
		II4C	0.98	0.64	11	0.69	2.48	0.50	141	Wflm	Ultisols	Tuffac. sandstone		
		II4E	0.69	0.13	9	0.65	0.91	0.54	141	Wflm	Ultisols	Tuffac. sandstone		



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Phosphorus (mg/g)	II4E	0.93	0.20	10	0.90	1.26	0.69	141	Wflm	Ultisols	Tuffac. sandstone		
		II4F	1.92		1				141	Wflm	Ultisols	Tuffac. sandstone		
		II4	0.81	0.58	10	0.71	2.05	0.19	135	Lmrf	Ultisols	Tuffac. sandstone		
		II4A	2.41	0.91	12	2.22	4.33	1.33	141	Wflm	Ultisols	Tuffac. sandstone		
		II4C	1.19	0.53	11	0.95	2.27	0.66	141	Wflm	Ultisols	Tuffac. sandstone		
		II4E	1.27	0.57	9	1.25	2.49	0.61	141	Wflm	Ultisols	Tuffac. sandstone		
		II4E	2.00	0.91	10	1.82	3.25	0.76	141	Wflm	Ultisols	Tuffac. sandstone		
		II4F	3.80		1				141	Wflm	Ultisols	Tuffac. sandstone		
		II4	58.12	19.88	10	60.75	89.46	26.24	135	Lmrf	Ultisols	Tuffac. sandstone		
		II4A	13.99	2.65	12	14.67	17.24	6.41	141	Wflm	Ultisols	Tuffac. sandstone		
		II4C	14.00	2.53	11	15.10	16.33	8.15	141	Wflm	Ultisols	Tuffac. sandstone		
		II4E	14.13	4.06	9	15.77	17.63	6.46	141	Wflm	Ultisols	Tuffac. sandstone		
		II4E	9.76	4.25	10	7.40	16.20	6.68	141	Wflm	Ultisols	Tuffac. sandstone		
		II4F	16.71		1				141	Wflm	Ultisols	Tuffac. sandstone		
<i>Phytolacca rivinoides</i>	Aluminum (mg/g)	II4	0.14	0.07	3	0.14	0.21	0.06	135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II4	1.71	0.70	3	2.04	2.17	0.91	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II4	0.13	0.08	3	0.16	0.20	0.04	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II4	3.82	1.68	3	3.43	5.57	2.36	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II4	0.09	0.04	3	0.09	0.14	0.05	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II4	1.25	1.04	3	0.92	2.42	0.41	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II4	0.83	0.86	3	0.47	1.82	0.21	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II4	36.57	17.43	3	41.82	50.76	17.12	135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Pictetia aculeata</i>	Aluminum (mg/kg)	III1A	40	21	14	41	82	12	151	Sdf	Mollisols	Alluvial deposits		
		III1A	60		1				102	Smf	Limestone	Tuffac. sandstone	Old	
	Ash (%)	III1A	10.82		1				102	Smf	Limestone	Tuffac. sandstone	Old	
		III1A	7.57	1.67	11	8.03	8.61	2.68	151	Sdf	Mollisols	Alluvial deposits		
	C/N	III1A	18	1	13	18	20	16	151	Sdf	Mollisols	Alluvial deposits		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Calcium (mg/g)	II1A	20.53		1				102	Smf	Limestone	Tuffac. sandstone		
		II1A	20.86	4.07	14	22.21	24.07	9.26	151	Sdf	Mollisols	Alluvial deposits		
		III1Ci	34.71		1				104	Sdf	Mollisols	Alluvial deposits		
		III1Ci	34.70		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Carbon (%)	II1A	52	1	13	52	53	51	151	Sdf	Mollisols	Alluvial deposits		
	Cobalt (µg/g)	II1A	3.00		1				102	Smf	Limestone	Tuffac. sandstone	Old	
	Iron (mg/kg)	II1A	50	13	14	50	81	23	151	Sdf	Mollisols	Alluvial deposits		
		II1A	83		1				102	Smf	Limestone	Tuffac. sandstone	Old	
	Magnesium (mg/g)	II1A	2.55		1				104	Sdf	Mollisols	Alluvial deposits		
		II1A	2.82		1				102	Smf	Limestone	Tuffac. sandstone	Old	
		II1A	2.55		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1A	2.12	0.44	14	2.14	3.02	0.92	151	Sdf	Mollisols	Alluvial deposits		
III1Ci		1.04		1				104	Sdf	Mollisols	Alluvial deposits			
III1Ci		1.04		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest		
Manganese (mg/kg)	II1A	42	11	14	41	66	16	151	Sdf	Mollisols	Alluvial deposits			
	II1A	11		1				102	Smf	Limestone	Tuffac. sandstone	Old		
Nickel (µg/g)	II1A	14.45		1				102	Smf	Limestone	Tuffac. sandstone	Old		
Nitrogen (%)	II1A	0.86		1				102	Smf	Limestone	Tuffac. sandstone	Old		
	II1A	2.15		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest		
	II1A	2.85	0.17	13	2.87	3.16	2.54	151	Sdf	Mollisols	Alluvial deposits			
	III1Ci	1.33		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest		
	III1Ci	0.12		1				104	Sdf	Mollisols	Alluvial deposits			
Phosphorus (mg/g)	II1A	0.82		1				104	Sdf	Mollisols	Alluvial deposits			
	II1A	0.40		1				102	Smf	Limestone	Tuffac. sandstone	Old		
	II1A	0.82		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest		
	II1A	0.69	0.14	14	0.71	0.81	0.26	151	Sdf	Mollisols	Alluvial deposits			
	III1Ci	0.12		1				104	Sdf	Mollisols	Alluvial deposits			
	III1Ci	0.12		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest		
Potassium (mg/g)	II1A	17.63		1				104	Sdf	Mollisols	Alluvial deposits			
	II1A	4.75		1				102	Smf	Limestone	Tuffac. sandstone	Old		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1A	17.63		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1A	7.27	1.47	14	7.52	8.63	2.97	151	Sdf	Mollisols	Alluvial deposits		
		II1Ci	6.65		1				104	Sdf	Mollisols	Alluvial deposits		
		II1Ci	6.65		1				149	Sdf	Mollisols	Alluvial deposits		Guanica Forest
	Sulfur (%)	II1A	0.27	0.02	13	0.27	0.30	0.22	151	Sdf	Mollisols	Alluvial deposits		
<i>Pilea inaequalis</i>	Aluminum (mg/g)	II3	1.89	2.00	42	1.33	10.17	0.05	135	Lmrf	Ultisols	Tuffac. sandstone		
	C/N	II3	21	3	20	20	26	17	135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II3	29.65	10.24	42	28.53	60.43	1.24	135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II3	36	1	20	36	39	34	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II3	2.23	2.89	42	1.10	14.02	0.20	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II3	7.79	2.41	42	7.35	12.92	0.84	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II3	0.24	0.12	42	0.23	0.66	0.02	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II3	1.70	0.35	53	1.75	2.34	0.48	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II3	1.18	0.34	42	1.16	1.98	0.27	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II3	34.91	16.71	42	31.90	108.39	4.54	135	Lmrf	Ultisols	Tuffac. sandstone		
Sulfur (%)	II3	0.51	0.21	20	0.47	1.13	0.22	135	Lmrf	Ultisols	Tuffac. sandstone			
<i>Pilea krugii</i>	Aluminum (mg/g)	II3	1.49	0.01	2	1.49	1.50	1.48	135	Lmrf	Ultisols	Tuffac. sandstone		
	C/N	II3	16		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II3	22.39	0.57	2	22.39	22.43	22.35	135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II3	38		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II3	1.19	0.02	2	1.19	1.20	1.17	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II3	6.62	0.08	2	6.62	6.68	6.56	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II3	0.45	0.00	2	0.45	0.45	0.45	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II3	1.78	0.06	3	1.46	2.43	1.45	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II3	1.34	0.01	2	1.34	1.35	1.33	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II3	29.79	0.07	2	29.79	29.84	29.74	135	Lmrf	Ultisols	Tuffac. sandstone		
Sulfur (%)	II3	0.32		1				135	Lmrf	Ultisols	Tuffac. sandstone			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
<i>Pimenta racemosa</i>	Ash (%)	II2A	7.92	1.10	5	7.75	9.66	6.77	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II2C	1.63	0.43	5	1.59	2.06	0.98	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II2Ci	10.28	3.43	6	10.19	15.17	5.57	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	C/N	II2A	59	5	5	59	64	52	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II2C	425	201	5	339	777	287	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II2Ci	102	26	6	90	136	76	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	Carbon (%)	II2A	53	1	5	53	54	51	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II2C	54	1	5	54	54	52	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II2Ci	51	2	6	51	54	49	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	Nitrogen (%)	II2A	0.90	0.09	5	0.88	1.04	0.83	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II2C	0.14	0.05	5	0.16	0.19	0.07	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II2Ci	0.53	0.11	6	0.56	0.65	0.39	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	Sulfur (%)	II2A	0.16	0.02	5	0.16	0.20	0.15	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II2C	0.03	0.01	5	0.03	0.05	0.02	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II2Ci	0.14	0.07	6	0.12	0.23	0.07	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
Wood density (g/cc)	II2C	0.67	0.07	5	0.71	0.72	0.58	126		Ultisols	Siltstone,sandstone	Urban forest, RP		
<i>Pine plantation</i>	Aluminum (mg/g)	II9A	5.59	0.66	3	5.86	6.07	4.84	153	Swf	Ultisols	Tuffac. sandstone		
	Ash (%)	II9A	7.12	0.16	3	7.15	7.27	6.95	153	Swf	Ultisols	Tuffac. sandstone		
	C/N	II9A	70	1	3	69	70	69	153	Swf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II8A	14.64	4.03	122	14.92	25.64	8.50	156	Swf	Ultisols	Tuffac. sandstone	Other	
		II8A	5.44	1.44	131	5.21	16.80	4.12	156	Swf	Ultisols	Tuffac. sandstone	Pine leaves	
		II8B	3.97	2.77	130	3.15	19.03	1.30	156	Swf	Ultisols	Tuffac. sandstone	<2cm diameter	
		II8B	2.73	1.91	33	2.23	8.25	1.22	156	Swf	Ultisols	Tuffac. sandstone	<2cm diameter	
		II8C	2.35	3.04	121	1.87	29.76	0.68	156	Swf	Ultisols	Tuffac. sandstone		
		II8D	6.84	2.35	128	6.43	13.89	3.40	156	Swf	Ultisols	Tuffac. sandstone		
		II9A	6.66	0.93	3	6.16	7.73	6.09	153	Swf	Ultisols	Tuffac. sandstone		
		II9A	14.20	2.48	129	14.18	21.64	7.99	156	Swf	Ultisols	Tuffac. sandstone	Other	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II9A	3.96	0.66	120	3.97	5.04	0.95	156	Swf	Ultisols	Tuffac. sandstone	Pine leaves	
		II9B	3.55	1.95	64	3.08	10.07	1.09	156	Swf	Ultisols	Tuffac. sandstone		
		II9C	4.00	3.58	50	2.58	15.18	0.25	156	Swf	Ultisols	Tuffac. sandstone		
		II9D	8.18	1.98	48	8.09	13.77	3.57	156	Swf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II9A	52	1	3	53	53	52	153	Swf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II9A	3.06	0.31	3	3.08	3.35	2.74	153	Swf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II8A	3.30	1.15	122	2.92	7.02	2.64	156	Swf	Ultisols	Tuffac. sandstone	Other	
		II8A	1.51	0.29	131	1.44	3.42	1.20	156	Swf	Ultisols	Tuffac. sandstone	Pine leaves	
		II8B	1.05	0.73	130	0.85	5.81	0.46	156	Swf	Ultisols	Tuffac. sandstone	<2cm diameter	
		II8B	0.80	0.63	33	0.63	3.22	0.40	156	Swf	Ultisols	Tuffac. sandstone	<2cm diameter	
		II8C	1.08	0.84	121	0.89	7.75	0.49	156	Swf	Ultisols	Tuffac. sandstone		
		II8D	1.98	0.52	128	4.88	4.24	1.50	156	Swf	Ultisols	Tuffac. sandstone		
		II9A	1.87	0.05	3	1.89	1.90	1.81	153	Swf	Ultisols	Tuffac. sandstone		
		II9A	3.56	0.81	129	3.52	5.95	1.03	156	Swf	Ultisols	Tuffac. sandstone	Other	
		II9A	1.19	0.17	120	1.20	1.63	0.27	156	Swf	Ultisols	Tuffac. sandstone	Pine leaves	
		II9B	0.91	0.54	64	0.73	2.75	0.27	156	Swf	Ultisols	Tuffac. sandstone		
		II9C	1.79	1.16	50	1.49	4.84	0.56	156	Swf	Ultisols	Tuffac. sandstone		
		II9D	2.15	0.46	48	2.10	3.61	1.40	156	Swf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II9A	0.79	0.03	3	0.79	0.82	0.76	153	Swf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II8A	1.59	0.35	116	1.59	2.51	2.04	156	Swf	Ultisols	Tuffac. sandstone	Other	
		II8A	0.58	0.13	124	0.56	1.37	0.59	156	Swf	Ultisols	Tuffac. sandstone	Pine leaves	
		II8B	0.44	0.29	122	0.34	1.95	0.16	156	Swf	Ultisols	Tuffac. sandstone	<2cm diameter	
		II8B	0.35	0.26	31	0.27	1.13	0.10	156	Swf	Ultisols	Tuffac. sandstone	<2cm diameter	
		II8C	0.57	0.25	117	0.52	1.92	0.29	156	Swf	Ultisols	Tuffac. sandstone		
		II8D	1.14	0.26	122	1.10	2.03	0.97	156	Swf	Ultisols	Tuffac. sandstone		
		II9A	0.75	0.01	3	0.75	0.76	0.75	153	Swf	Ultisols	Tuffac. sandstone		
		II9A	1.63	0.31	115	1.58	2.47	0.99	156	Swf	Ultisols	Tuffac. sandstone	Other	
		II9A	0.46	0.06	114	0.40	0.56	0.28	156	Swf	Ultisols	Tuffac. sandstone	Pine leaves	
		II9B	0.44	0.32	55	0.33	1.64	0.08	156	Swf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
<i>Pinus caribaea</i>	Phosphorus (mg/g)	II9C	0.89	0.34	48	0.87	1.61	0.27	156	Swf	Ultisols	Tuffac. sandstone		
		II9D	1.36	0.23	48	1.36	1.90	0.78	156	Swf	Ultisols	Tuffac. sandstone		
		II8A	0.55	0.16	122	0.53	1.19	0.59	156	Swf	Ultisols	Tuffac. sandstone	Other	
		II8A	0.23	0.09	131	0.22	1.12	0.19	156	Swf	Ultisols	Tuffac. sandstone	Pine leaves	
		II8B	0.19	0.13	130	0.16	0.89	0.04	156	Swf	Ultisols	Tuffac. sandstone	<2cm diameter	
		II8B	0.14	0.10	33	0.12	0.42	0.04	156	Swf	Ultisols	Tuffac. sandstone	<2cm diameter	
		II8C	0.27	0.16	121	0.22	1.29	0.08	156	Swf	Ultisols	Tuffac. sandstone		
		II8D	0.52	0.12	128	0.51	0.96	0.45	156	Swf	Ultisols	Tuffac. sandstone		
		II9A	0.24	0.01	3	0.24	0.25	0.24	153	Swf	Ultisols	Tuffac. sandstone		
		II9A	0.59	0.17	129	0.60	1.33	0.24	156	Swf	Ultisols	Tuffac. sandstone	Other	
		II9A	0.16	0.04	120	0.17	0.27	0.08	156	Swf	Ultisols	Tuffac. sandstone	Pine leaves	
		II9B	0.20	0.24	64	0.15	1.66	0.04	156	Swf	Ultisols	Tuffac. sandstone		
		II9C	0.59	0.31	50	0.55	1.40	0.14	156	Swf	Ultisols	Tuffac. sandstone		
		II9D	0.80	0.27	48	0.72	1.89	0.39	156	Swf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II8A	2.90	1.63	122	2.46	9.27	1.39	156	Swf	Ultisols	Tuffac. sandstone	Other	
	II8A	1.09	0.49	131	0.96	5.15	0.72	156	Swf	Ultisols	Tuffac. sandstone	Pine leaves		
	II8B	0.70	0.72	130	0.47	5.71	0.25	156	Swf	Ultisols	Tuffac. sandstone	<2cm diameter		
	II8B	0.46	0.31	33	0.34	1.50	0.23	156	Swf	Ultisols	Tuffac. sandstone	<2cm diameter		
	II8C	0.99	1.06	121	0.66	8.29	0.24	156	Swf	Ultisols	Tuffac. sandstone			
	II8D	1.79	1.92	128	1.16	10.21	0.73	156	Swf	Ultisols	Tuffac. sandstone			
	II9A	1.78	0.04	3	1.55	1.82	1.75	153	Swf	Ultisols	Tuffac. sandstone			
	II9A	5.40	2.00	129	5.20	10.75	1.88	156	Swf	Ultisols	Tuffac. sandstone	Other		
	II9A	1.63	0.49	120	1.57	3.02	0.37	156	Swf	Ultisols	Tuffac. sandstone	Pine leaves		
	II9B	0.81	0.93	64	0.55	6.21	0.11	156	Swf	Ultisols	Tuffac. sandstone			
	II9C	3.83	2.11	50	3.70	8.82	0.62	156	Swf	Ultisols	Tuffac. sandstone			
	II9D	3.21	1.88	48	2.80	13.88	1.76	156	Swf	Ultisols	Tuffac. sandstone			
Sodium (mg/g)	II9A	1.39	0.05	3	1.37	1.44	1.36	153	Swf	Ultisols	Tuffac. sandstone			
Ash (%)	II1A	2.93		1				101	Swf	Ultisols	Tuffac. sandstone	Overstory		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II8A	10.88	7.65	4	7.68	22.21	5.95	90	Swf	Ultisols	Tuffac. sandstone		
		II8A	3.19	0.39	7	3.30	3.74	2.63	90	Swf	Ultisols	Tuffac. sandstone	Whole	
		II8A	8.24	0.31	2	8.24	8.46	8.02	90	Swf	Ultisols	Tuffac. sandstone	Old	
		II8A	2.52	0.04	3	2.51	2.56	2.49	90	Swf	Ultisols	Tuffac. sandstone	Recently	
		II8A	7.70	5.03	6	4.96	15.31	3.51	90	Swf	Ultisols	Tuffac. sandstone	Torn	
		II8B	3.92	5.82	8	1.89	18.31	1.64	90	Swf	Ultisols	Tuffac. sandstone		
		II8B	6.34	3.26	6	6.50	10.15	2.18	90	Swf	Ultisols	Tuffac. sandstone		
		II8C	0.71	0.36	3	0.71	0.96	0.45	90	Swf	Ultisols	Tuffac. sandstone	Pine seeds	
		II8D	8.06	4.49	13	6.17	14.71	1.18	90	Swf	Ultisols	Tuffac. sandstone		
		II8D	10.17	4.03	4	11.24	13.56	5.71	90	Swf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II1B	1.03	0.10	6	1.04	1.13	0.84	69	Swf	Ultisols	Tuffac. sandstone	Fresh	
		II8A	4.89	0.63	4	4.67	5.80	4.41	90	Swf	Ultisols	Tuffac. sandstone		
		II8A	4.83	0.77	7	4.57	5.87	3.87	90	Swf	Ultisols	Tuffac. sandstone	Whole	
		II8A	1.38	0.20	5	1.48	1.54	1.10	69	Swf	Ultisols	Tuffac. sandstone	6 months	
		II8A	1.38	0.18	5	1.48	1.55	1.13	69	Swf	Ultisols	Tuffac. sandstone	12 months	
		II8A	22.99	3.56	2	22.99	25.51	20.48	90	Swf	Ultisols	Tuffac. sandstone	Old	
		II8A	5.11	0.95	3	4.63	6.20	4.50	90	Swf	Ultisols	Tuffac. sandstone	Recently	
		II8A	5.68	0.84	6	5.95	6.50	4.64	90	Swf	Ultisols	Tuffac. sandstone	Torn	
		II8B	3.63	0.81	8	3.75	4.93	2.51	90	Swf	Ultisols	Tuffac. sandstone		
		II8B	2.10	0.49	5	2.17	2.5	1.29	69	Swf	Ultisols	Tuffac. sandstone	18 months	
		II8B	3.72	1.48	6	3.26	6.06	1.96	90	Swf	Ultisols	Tuffac. sandstone		
		II8C	1.74	1.38	3	1.30	3.29	0.63	90	Swf	Ultisols	Tuffac. sandstone	Pine seeds	
		II8C	2.23	1.16	4	1.90	3.81	1.33	69	Swf	Ultisols	Tuffac. sandstone	24 months	
		II8D	1.81	0.23	4	1.90	1.96	1.47	69	Swf	Ultisols	Tuffac. sandstone	30 months	
		II8D	7.36	3.63	4	6.01	12.72	4.72	90	Swf	Ultisols	Tuffac. sandstone		
		II8D	4.88	1.82	13	4.60	8.90	2.44	90	Swf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II1B	0.59	0.06	6	0.61	0.64	0.50	69	Swf	Ultisols	Tuffac. sandstone	Fresh	
		II7B	0.48	0.08	5	0.51	0.53	0.33	69	Swf	Ultisols	Tuffac. sandstone	6 months	
		II7B	0.53	0.07	5	0.55	0.62	0.42	69	Swf	Ultisols	Tuffac. sandstone	12 months	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II7B	0.65	0.11	5	0.68	0.72	0.45	69	Swf	Ultisols	Tuffac. sandstone	18 months	
		II7B	0.75	0.29	4	0.64	1.17	0.55	69	Swf	Ultisols	Tuffac. sandstone	24 months	
		II7B	0.52	0.09	4	0.49	0.64	0.44	69	Swf	Ultisols	Tuffac. sandstone	30 months	
		II8A	1.67	0.13	4	1.69	1.81	1.50	90	Swf	Ultisols	Tuffac. sandstone		
		II8A	1.47	0.44	7	1.25	2.22	1.10	90	Swf	Ultisols	Tuffac. sandstone	Whole	
		II8A	1.20	0.29	8	1.18	1.67	0.75	90	Swf	Ultisols	Tuffac. sandstone		
		II8A	5.85	1.83	2	5.85	7.15	4.56	90	Swf	Ultisols	Tuffac. sandstone	Old	
		II8A	1.76	0.20	3	1.65	2.00	1.64	90	Swf	Ultisols	Tuffac. sandstone	Recently	
		II8A	1.99	0.32	6	2.02	2.40	1.41	90	Swf	Ultisols	Tuffac. sandstone	Torn	
		II8B	1.14	0.41	6	0.98	1.90	0.78	90	Swf	Ultisols	Tuffac. sandstone	Loose litter	
		II8C	1.04	0.45	3	1.06	1.47	0.58	90	Swf	Ultisols	Tuffac. sandstone		
		II8D	1.85	0.74	13	1.83	3.58	0.80	90	Swf	Ultisols	Tuffac. sandstone		
		II8D	2.18	0.75	4	2.04	3.21	1.43	90	Swf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II1A	0.88		1				101	Swf	Ultisols	Tuffac. sandstone	Overstory	
		II1B	0.13	0.02	6	0.13	0.15	0.11	69	Swf	Ultisols	Tuffac. sandstone	Fresh	
		II7B	0.11	0.03	5	0.11	0.15	0.08	69	Swf	Ultisols	Tuffac. sandstone	6months	
		II7B	0.15	0.03	5	0.14	0.19	0.12	69	Swf	Ultisols	Tuffac. sandstone	12 months	
		II7B	0.22	0.05	5	0.22	0.29	0.16	69	Swf	Ultisols	Tuffac. sandstone	18 months	
		II7B	0.24	0.07	4	0.24	0.31	0.17	69	Swf	Ultisols	Tuffac. sandstone	24 months	
		II7B	0.22	0.03	4	0.22	0.24	0.19	69	Swf	Ultisols	Tuffac. sandstone	30 months	
		II8A	1.01	0.13	4	1.00	1.15	0.88	90	Swf	Ultisols	Tuffac. sandstone		
		II8A	0.47	0.12	7	0.49	0.65	0.32	90	Swf	Ultisols	Tuffac. sandstone	Whole	
		II8A	1.32	0.12	2	1.32	1.40	1.23	90	Swf	Ultisols	Tuffac. sandstone	Old	
		II8A	0.40	0.05	3	0.38	0.46	0.36	90	Swf	Ultisols	Tuffac. sandstone	Recently	
		II8A	0.95	0.23	6	0.97	1.28	0.60	90	Swf	Ultisols	Tuffac. sandstone	Torn	
		II8B	0.52	0.22	8	0.45	0.88	0.24	90	Swf	Ultisols	Tuffac. sandstone		
		II8B	0.60	0.19	6	0.64	0.85	0.28	90	Swf	Ultisols	Tuffac. sandstone		
		II8C	0.67	0.44	3	0.85	0.98	0.17	90	Swf	Ultisols	Tuffac. sandstone	Pine seeds	
		II8D	0.91	0.41	13	1.06	1.51	0.23	90	Swf	Ultisols	Tuffac. sandstone		



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
Phosphorus (mg/g)		II8D	1.20	0.20	4	1.21	1.40	1.00	90	Swf	Ultisols	Tuffac. sandstone			
		II1A	0.78		1				101	Swf	Ultisols	Tuffac. sandstone	Overstory		
		II1B	0.17	0.02	6	0.16	0.20	0.14	69	Swf	Ultisols	Tuffac. sandstone	Fresh		
		II7B	0.11	0.03	5	0.09	0.17	0.09	69	Swf	Ultisols	Tuffac. sandstone	6months		
		II7B	0.10	0.02	5	0.10	0.12	0.09	69	Swf	Ultisols	Tuffac. sandstone	12 months		
		II7B	0.15	0.04	5	0.16	0.18	0.09	69	Swf	Ultisols	Tuffac. sandstone	18 months		
		II7B	0.13	0.03	4	0.13	0.16	0.09	69	Swf	Ultisols	Tuffac. sandstone	24 months		
		II7B	0.10	0.02	4	0.10	0.11	0.08	69	Swf	Ultisols	Tuffac. sandstone	30 months		
		II8A	0.49	0.07	4	0.47	0.58	0.43	90	Swf	Ultisols	Tuffac. sandstone			
		II8A	0.19	0.08	7	0.19	0.34	0.11	90	Swf	Ultisols	Tuffac. sandstone	Whole		
		II8A	0.56	0.03	2	0.56	0.57	0.54	90	Swf	Ultisols	Tuffac. sandstone	Old		
		II8A	0.24	0.04	3	0.23	0.28	0.21	90	Swf	Ultisols	Tuffac. sandstone	Recently		
		II8A	0.45	0.10	6	0.47	0.55	0.30	90	Swf	Ultisols	Tuffac. sandstone	Torn		
		II8B	0.21	0.10	8	0.18	0.42	0.11	90	Swf	Ultisols	Tuffac. sandstone			
		II8B	0.28	0.08	6	0.29	0.35	0.13	90	Swf	Ultisols	Tuffac. sandstone			
		II8C	0.29	0.20	3	0.24	0.51	0.11	90	Swf	Ultisols	Tuffac. sandstone	Pine seeds		
		II8D	0.44	0.12	13	0.48	0.61	0.21	90	Swf	Ultisols	Tuffac. sandstone			
		II8D	0.58	0.07	4	0.58	0.66	0.51	90	Swf	Ultisols	Tuffac. sandstone			
	Potassium (mg/g)		II1A	2.00		1				101	Swf	Ultisols	Tuffac. sandstone	Overstory	
			II1B	0.73	0.09	6	0.76	0.85	0.59	69	Swf	Ultisols	Tuffac. sandstone	Fresh	
		II7B	0.80	0.11	5	0.84	0.93	0.64	69	Swf	Ultisols	Tuffac. sandstone	6months		
		II7B	1.16	0.75	5	0.94	2.00	0.42	69	Swf	Ultisols	Tuffac. sandstone	12 months		
		II7B	0.68	0.32	5	0.54	1.04	0.34	69	Swf	Ultisols	Tuffac. sandstone	18 months		
		II7B	1.40	0.61	4	1.29	2.14	0.90	69	Swf	Ultisols	Tuffac. sandstone	24 months		
		II7B	0.37	0.3	4	0.23	0.81	0.20	69	Swf	Ultisols	Tuffac. sandstone	30 months		
		II8A	1.76	0.33	4	1.81	2.08	1.35	90	Swf	Ultisols	Tuffac. sandstone			
		II8A	1.96	0.53	7	1.87	3.06	1.71	90	Swf	Ultisols	Tuffac. sandstone	Whole		
		II8A	2.38	0.06	2	2.38	2.42	2.34	90	Swf	Ultisols	Tuffac. sandstone	Old		
	II8A	2.56	1.57	3	2.04	4.32	1.31	90	Swf	Ultisols	Tuffac. sandstone	Recently			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II8A	1.42	0.60	6	1.35	2.22	0.78	90	Swf	Ultisols	Tuffaceoussandstone	Torn	
		II8B	1.81	0.47	8	1.94	2.41	1.20	90	Swf	Ultisols	Tuffac. sandstone		
		II8B	2.23	0.57	6	2.24	2.86	1.49	90	Swf	Ultisols	Tuffac. sandstone		
		II8C	1.67	1.11	3	1.16	2.94	0.90	90	Swf	Ultisols	Tuffac. sandstone	Pine seeds	
		II8D	2.19	0.8	13	2.09	3.74	0.94	90	Swf	Ultisols	Tuffac. sandstone		
		II8D	2.24	0.54	4	2.10	2.97	1.78	90	Swf	Ultisols	Tuffac. sandstone		
		Wood density (g/cc)	II1C	0.49	0.03	18	0.49	0.53	0.44	115				
<i>Pinus caribaea hondurensis</i>	Calcium (mg/g)	II9A	3.25	0.45	22	3.17	4.21	2.25	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	11.03	2.29	20	10.79	16.45	8.54	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	2.52	0.79	5	2.31	3.81	1.66	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	1.65	1.01	6	1.37	3.54	0.81	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	4.64	1.45	5	4.62	6.05	2.35	139	Wfs	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II9A	1.21	0.18	22	1.17	1.71	0.94	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	5.67	1.43	20	5.75	8.29	3.53	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	0.81	0.16	5	0.87	0.94	0.55	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	1.18	0.17	6	1.19	1.47	0.97	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	2.13	0.28	5	2.24	2.44	1.71	139	Wfs	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II9A	0.37	0.06	3	0.37	0.52	0.24	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	1.75	0.34	21	1.74	2.42	1.05	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	0.32	0.18	10	0.26	0.66	0.14	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	0.57	0.18	11	0.56	0.91	0.28	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	1.24	0.61	9	1.16	2.80	0.65	139	Wfs	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II9A	0.18	0.06	22	0.18	0.30	0.04	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	0.86	0.18	20	0.86	1.28	0.43	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	0.18	0.10	5	0.15	0.29	0.08	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	0.48	0.30	6	0.46	0.85	0.08	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	0.74	0.11	5	0.76	0.87	0.57	139	Wfs	Ultisols	Tuffac. sandstone		
Potassium (mg/g)	II9A	1.84	0.38	22	1.82	2.74	0.97	139	Wfs	Ultisols	Tuffac. sandstone			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II9A	7.51	2.23	20	7.99	12.50	2.81	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	1.46	0.53	5	1.14	2.10	1.02	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	1.74	0.92	6	1.87	2.79	0.51	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	3.20	0.66	5	2.97	3.93	2.46	139	Wfs	Ultisols	Tuffac. sandstone		
<i>Pinus elliottii</i>	Calcium (mg/g)	II9A	2.99	0.36	22	2.98	3.61	2.39	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	9.28	4.16	22	8.37	19.51	3.22	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	3.08	1.56	6	2.68	5.72	1.68	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	1.13	0.87	5	0.65	2.56	0.52	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	4.48	1.92	6	4.00	8.25	2.78	139	Wfs	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II9A	1.65	0.32	22	1.60	2.51	1.12	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	5.20	2.22	22	4.72	11.38	1.60	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	0.61	0.15	6	0.61	0.83	0.37	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	1.02	0.48	5	0.88	1.82	0.59	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	2.47	1.97	6	1.81	6.48	1.36	139	Wfs	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II9A	0.38	0.13	22	0.36	0.90	0.28	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	1.34	0.31	22	1.37	2.02	0.78	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	0.30	0.10	11	0.32	0.49	0.12	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	1.15	1.04	10	0.84	3.43	0.12	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	0.83	0.20	11	0.83	1.24	0.57	139	Wfs	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II9A	0.22	0.05	22	0.22	0.31	0.14	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	0.52	0.16	22	0.54	0.78	0.18	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	0.14	0.08	6	0.15	0.24	0.02	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	0.37	0.16	5	0.34	0.61	0.21	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	0.49	0.16	6	0.49	0.66	0.27	139	Wfs	Ultisols	Tuffac. sandstone		
Potassium (mg/g)	II9A	1.94	0.37	22	1.90	2.57	1.09	139	Wfs	Ultisols	Tuffac. sandstone			
	II9A	5.21	2.14	22	4.75	9.56	1.15	139	Wfs	Ultisols	Tuffac. sandstone	Other		
	II9B	1.01	0.28	6	1.02	1.44	0.62	139	Wfs	Ultisols	Tuffac. sandstone			
	II9C	1.81	0.77	5	1.47	2.91	1.09	139	Wfs	Ultisols	Tuffac. sandstone			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II9D	2.28	0.43	6	2.27	2.76	1.64	139	Wfs	Ultisols	Tuffac. sandstone		
<i>Pinus massoniana</i>	Ash (%)	II1B	1.27	0.52	2	1.27	1.63	1.70	68	Swf	Ultisols	Tuffac. sandstone	Class 3-4 LD	
		II1B	1.04	0.23	2	1.04	1.20	0.87	68	Swf	Ultisols	Tuffac. sandstone	Class 2 SD	
		II1B	1.22	0.72	6	0.97	2.65	0.74	68	Swf	Ultisols	Tuffac. sandstone	Class 3 SD	
	Calcium (mg/g)	II1B	2.15	0.07	2	2.15	2.20	2.10	68	Swf	Ultisols	Tuffac. sandstone	Class 3 1 LD	
		II1B	2.83	0.66	2	2.83	3.29	2.36	68	Swf	Ultisols	Tuffac. sandstone	Class 2 SD	
		II1B	1.98	0.72	6	2.05	3.19	1.10	68	Swf	Ultisols	Tuffac. sandstone	Class 3 SD	
	Nitrogen (%)	II1B	0.47	0.04	2	0.47	0.50	0.44	68	Swf	Ultisols	Tuffac. sandstone	Class 3-4 LD	
		II1B	0.25	0.03	2	0.25	0.27	0.23	68	Swf	Ultisols	Tuffac. sandstone	Class 2 SD	
		II1B	0.40	0.35	6	0.30	1.04	0.12	68	Swf	Ultisols	Tuffac. sandstone	Class 3 SD	
	Phosphorus (mg/g)	II1B	0.19	0.02	2	0.19	0.21	0.18	68	Swf	Ultisols	Tuffac. sandstone	Class 3-4 LD	
		II1B	0.07	0.00	2	0.07	0.07	0.07	68	Swf	Ultisols	Tuffac. sandstone	Class 2 SD	
		II1B	0.12	0.08	6	0.09	0.26	0.06	68	Swf	Ultisols	Tuffac. sandstone	Class 3 SD	
	Potassium (mg/g)	II1B	0.13		1				68	Swf	Ultisols	Tuffac. sandstone	Class 3-4 LD	
		II1B	0.37	0.06	2	0.37	0.41	0.32	68	Swf	Ultisols	Tuffac. sandstone	Class 2 SD	
II1B		0.42	0.26	6	0.31	0.91	0.23	68	Swf	Ultisols	Tuffac. sandstone	Class 3 SD		
<i>Pinus ocarpa</i>	Wood density (g/cc)	II1C	0.41	0.04	3	0.39	0.46	0.38	115					
<i>Piper aduncum</i>	Aluminum (mg/g)	II2A	0.71		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	Ash (%)	II2A	14.62		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	C/N	II2A	15		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II2A	13.95		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II2A	48		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II2A	0.61		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II2A	2.10		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II2A	0.09		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II2A	3.22		1				129	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Phosphorus (mg/g)	II2A	0.91		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II2A	14.85		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	Sulfur (%)	II2A	0.50		1				129	Lmrf	Ultisols	Tuffac. sandstone		
<i>Piper glabrescens</i>	Aluminum (mg/g)	II2A	0.19	0.12	14	0.16	0.55	0.05	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2B	0.06	0.01	4	0.05	0.07	0.04	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2C	0.06	0.03	14	0.05	0.13	0.03	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2E	2.24	0.60	9	2.17	3.33	1.18	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2H	0.24	0.10	8	0.25	0.37	0.11	135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	0.96	1.06	2	0.96	1.70	0.21	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	0.13	0.16	2	0.13	0.24	0.02	146	Swf	Ultisols	Tuffac. sandstone		
	Ash (%)	II8A	22.66	4.67	2	22.66	25.96	19.35	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	6.65	2.17	2	6.65	8.18	5.11	146	Swf	Ultisols	Tuffac. sandstone		
	C/N	II8A	13	4	2	13	16	10	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	34	4	2	34	37	31	146	Swf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II2A	10.60	1.15	14	10.35	13.10	9.08	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2B	6.81	0.52	4	7.06	7.09	6.04	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2C	3.35	0.84	14	3.23	4.76	1.97	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2E	2.30	0.42	9	2.37	2.95	1.75	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2H	8.15	1.53	8	8.51	10.09	5.45	135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	18.37	2.16	2	18.37	19.90	16.85	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	6.29	1.05	2	6.29	7.03	5.54	146	Swf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II8A	43	1	2	43	44	42	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	50	2	2	50	51	48	146	Swf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II2A	0.18	0.09	14	0.16	0.43	0.07	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2B	0.08	0.02	4	0.09	0.10	0.06	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2C	0.09	0.06	14	0.07	0.25	0.04	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2E	2.35	0.93	9	2.24	4.43	1.32	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2H	0.21	0.11	8	0.21	0.36	0.07	135	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II8A	1.66	2.13	2	1.66	3.17	0.16	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	0.13	0.02	2	0.13	0.14	0.11	146	Swf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II2A	3.55	0.95	14	3.48	6.29	2.27	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2B	5.53	1.46	4	5.64	7.13	3.72	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2C	3.86	1.32	14	3.52	7.53	1.80	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2E	2.13	0.38	9	2.21	2.77	1.49	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2H	5.67	0.74	8	5.52	6.57	4.68	135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	2.89	1.04	2	2.89	3.63	2.16	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	3.75	1.88	2	3.75	5.08	2.42	146	Swf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II2A	0.29	0.05	14	0.30	0.37	0.16	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2B	0.16	0.03	4	0.17	0.19	0.12	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2C	0.08	0.03	14	0.08	0.14	0.04	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2E	0.21	0.07	9	0.20	0.30	0.11	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2H	0.37	0.06	8	0.39	0.43	0.29	135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	0.33	0.17	2	0.328	0.45	0.21	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	0.06	0.04	2	0.06	0.09	0.04	146	Swf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II2A	2.13	0.25	14	2.15	2.62	1.75	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2B	1.06	0.09	4	1.02	1.19	1.00	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2C	0.93	0.18	14	0.92	1.14	0.66	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2E	1.29	0.18	9	1.25	1.61	1.06	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2H	1.77	0.25	8	1.71	2.18	1.44	135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	3.47	1.04	2	3.47	4.20	2.73	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	1.47	0.25	2	1.47	1.64	1.29	146	Swf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II2A	1.04	0.16	14	0.99	1.34	0.80	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2B	0.79	0.15	4	0.78	0.98	0.61	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2C	0.64	0.23	14	0.57	1.23	0.31	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2E	0.68	0.08	9	0.66	0.83	0.59	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2H	1.13	0.26	8	1.19	1.48	0.70	135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	0.89	0.08	2	0.89	0.95	0.84	146	Swf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Potassium (mg/g)	II8B	0.45	0.02	2	0.45	0.47	0.41	146	Swf	Ultisols	Tuffac. sandstone		
		II2A	24.21	6.26	14	26.29	33.86	11.68	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2B	13.47	4.96	4	13.25	19.58	7.78	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2C	15.83	8.60	14	12.25	34.90	6.27	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2E	11.90	1.77	9	12.11	13.94	8.06	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2H	26.54	7.27	8	27.67	36.17	15.13	135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	12.84	15.11	2	12.84	23.52	2.16	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	6.68	7.60	2	6.68	12.05	1.30	146	Swf	Ultisols	Tuffac. sandstone		
<i>Piper hispidium</i>	Aluminum (mg/kg)	II2A	137	85	11	130	350	46	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2C	232	335	13	71	915	2	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2E	1607	762	14	1331	3641	682	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2H	495	457	3	382	997	105	135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	859	806	2	859	1429	290	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	196	43	3	219	222	146	146	Swf	Ultisols	Tuffac. sandstone		
	Ash (%)	II8A	16.14	1.16	2	16.14	16.96	15.32	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	2.54	0.92	3	2.05	3.60	1.96	146	Swf	Ultisols	Tuffac. sandstone		
	C/N	II8A	10	3	2	10	12	8	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	65	1	3	65	66	65	146	Swf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II2A	12.09	1.21	11	11.98	14.06	10.43	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2C	4.65	1.39	13	4.11	6.56	1.54	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2E	2.34	0.53	14	2.28	3.33	1.54	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2H	10.03	0.20	3	9.93	10.26	9.89	135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	11.57	6.24	2	11.57	15.98	7.16	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	2.87	0.50	3	2.66	3.43	2.52	146	Swf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II8A	49	2	2	49	50	48	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	53	0	3	53	53	52	146	Swf	Ultisols	Tuffac. sandstone		
Iron (mg/g)	II2A	0.17	0.07	11	0.16	0.31	0.10	135	Lmrf	Ultisols	Tuffac. sandstone			
	II2C	0.52	0.96	13	0.10	2.74	0.03	135	Lmrf	Ultisols	Tuffac. sandstone			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II2E	1.60	1.01	14	1.31	4.48	0.63	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2H	0.39	0.37	3	0.30	0.80	0.07	135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	0.60	0.56	2	0.60	0.99	0.20	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	0.09	0.01	3	0.08	0.09	0.08	146	Swf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II2A	4.14	0.58	11	4.20	5.13	3.35	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2C	1.40	0.48	13	1.22	2.30	0.84	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2E	1.37	0.58	14	1.20	3.12	0.84	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2H	3.53	3.00	3	3.21	4.21	3.17	135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	2.34	1.80	2	2.34	3.62	1.07	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	0.59	0.19	3	0.53	0.80	0.44	146	Swf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II2A	0.14	0.08	11	0.14	0.24	0.03	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2C	0.04	0.03	13	0.03	0.11	0.01	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2E	0.24	0.06	14	0.27	0.32	0.13	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2H	0.16	0.02	3	0.15	0.18	0.14	135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	0.09	0.06	2	0.09	0.13	0.05	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	0.01	0.00	3	0.01	0.01	0.01	146	Swf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II2A	2.31	0.56	11	2.13	3.38	1.70	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2C	0.80	0.34	13	0.64	1.54	0.50	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2E	0.85	0.20	14	0.83	1.44	0.64	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2H	1.52	0.39	3	1.57	1.88	1.10	135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	5.13	1.68	2	5.13	6.31	3.94	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	0.80	0.01	3	0.80	0.81	0.80	146	Swf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II2A	1.63	0.84	11	1.20	3.54	0.90	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2C	1.01	0.66	13	0.71	2.40	0.44	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2E	0.64	0.11	14	0.63	0.91	0.44	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2H	1.16	0.38	3	0.95	1.61	0.93	135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	1.18	0.11	2	1.81	1.26	1.10	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	0.39	0.03	3	0.40	0.42	0.36	146	Swf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II2A	26.82	7.64	11	22.16	37.93	18.74	135	Lmrf	Ultisols	Tuffac. sandstone		



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II2C	30.99	12.67	13	26.42	50.63	8.33	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2E	12.84	2.73	14	11.51	18.31	8.33	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2H	33.56	12.23	3	31.31	46.76	22.60	135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	11.25	14.00	2	11.25	21.15	1.35	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	5.01	7.01	3	1.09	13.11	0.85	146	Swf	Ultisols	Tuffac. sandstone		
<i>Pisonia albida</i>	Calcium (mg/g)	II4A	12.01		1				104	Sdf	Mollisols	Alluvial deposits	New	
		II4A	16.03	5.24	7	17.29	22.26	3.03	104	Sdf	Mollisols	Alluvial deposits	Mature	
		II4A	15.49	5.05	15	1.87	22.26	3.03	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II4Ci	11.69		1				104	Sdf	Mollisols	Alluvial deposits		
		II4Ci	11.69		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Magnesium (mg/g)	II4A	9.68		1				104	Sdf	Mollisols	Alluvial deposits	New	
		II4A	7.61	2.13	7	7.93	10.36	3.18	104	Sdf	Mollisols	Alluvial deposits	Mature	
		II4A	7.88	2.11	15	8.27	10.36	3.18	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II4Ci	4.17		1				104	Sdf	Mollisols	Alluvial deposits		
		II4Ci	4.17		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Nitrogen (%)	II4A	2.51		1				104	Sdf	Mollisols	Alluvial deposits	New	
		II4A	1.89	0.26	7	1.75	2.31	1.64	104	Sdf	Mollisols	Alluvial deposits	Mature	
		II4A	1.98	0.30	16	1.87	2.51	1.64	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II4Ci	0.71		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II4A	1.42		1				104	Sdf	Mollisols	Alluvial deposits	New	
	Phosphorus (mg/g)	II4A	0.95	0.30	7	0.83	1.57	0.68	104	Sdf	Mollisols	Alluvial deposits	Mature	
		II4A	1.01	0.32	15	0.83	1.57	0.68	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II4Ci	0.16		1				104	Sdf	Mollisols	Alluvial deposits		
		II4Ci	0.16		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II4A	16.85		1				104	Sdf	Mollisols	Alluvial deposits	New	
Potassium (mg/g)	II4A	13.64	4.70	7	11.83	22.29	8.04	104	Sdf	Mollisols	Alluvial deposits	Mature		
	II4A	14.04	4.51	16	13.55	22.29	8.04	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest		
	II4Ci	6.23		1				104	Sdf	Mollisols	Alluvial deposits			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
		II4Ci	6.23		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest		
<i>Pisonia subcordata</i>	Aluminum (mg/kg)	II4A	31		1				102	Smf	Limestone	Tuffac. sandstone	Adult		
	Ash (%)	II4A	4.66		1				102	Smf	Limestone	Tuffac. sandstone	Adult		
	Calcium (mg/g)	II4A	2.86		1				102	Smf	Limestone	Tuffac. sandstone	Adult		
	Cobalt (µg/g)	II4A	0.30		1				102	Smf	Limestone	Tuffac. sandstone	Adult		
	Iron (mg/kg)	II4A	45		1				102	Smf	Limestone	Tuffac. sandstone	Adult		
	Magnesium (mg/g)	II4A	6.10		1				102	Smf	Limestone	Tuffac. sandstone	Adult		
	Manganese (mg/kg)	II4A	48		1				102	Smf	Limestone	Tuffac. sandstone	Adult		
	Nickel (µg/g)	II4A	69.75		1				102	Smf	Limestone	Tuffac. sandstone	Adult		
	Nitrogen (%)	II4A	1.50		1				102	Smf	Limestone	Tuffac. sandstone	Adult		
	Phosphorus (mg/g)	II4A	0.78		1				102	Smf	Limestone	Tuffac. sandstone	Adult		
Potassium (mg/g)	II4A	12.91		1				102	Smf	Limestone	Tuffac. sandstone				
<i>Pithecellobium dulce</i>	Wood density (g/cc)	II1B	0.60		1				97	Wfs	Inceptisols	Tuffac. sandstone			
<i>Plumeria alba</i>	Ash (%)	II2A	7.87	0.28	3	8.00	8.07	7.55	91	Sdf	Mollisols	Alluvial deposits	InMature		
		II2A	9.33	0.99	3	9.34	10.31	8.33	91	Sdf	Mollisols	Alluvial deposits			
		II2A	10.37	1.76	4	10.41	11.97	8.71	91	Sdf	Mollisols	Alluvial deposits	1st defoliation		
		II2A	8.65	0.03	2	8.65	8.67	8.63	91	Sdf	Mollisols	Alluvial deposits	2nd defoliation		
		II2A	8.40	0.50	4	8.37	8.94	7.92	91	Sdf	Mollisols	Alluvial deposits	Mature		
	Calcium (mg/g)	II2B	6.53		1					91	Sdf	Mollisols	Alluvial deposits		
		II2A	1.60	0.20	3	1.50	1.8	1.50	91	Sdf	Mollisols	Alluvial deposits	InMature		
		II2A	25.50	9.90	3	30.60	31.80	14.00	91	Sdf	Mollisols	Alluvial deposits			
		II2A	33.30	11.40	4	34.40	43.60	21.00	91	Sdf	Mollisols	Alluvial deposits	1st defoliation		
		II2A	18.80	5.30	2	18.80	22.50	15.00	91	Sdf	Mollisols	Alluvial deposits	2nd defoliation		
	Nitrogen (%)	II2A	22.60	2.80	4	22.40	26.20	19.40	91	Sdf	Mollisols	Alluvial deposits	Mature		
		II2B	23.40		1					91	Sdf	Mollisols	Alluvial deposits		
		II2A	3.73	0.43	3	3.76	4.15	3.29	91	Sdf	Mollisols	Alluvial deposits	InMature		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Phosphorus (mg/g)	II2A	1.27	0.41	3	1.50	1.51	0.79	91	Sdf	Mollisols	Alluvial deposits		
		II2A	1.21	0.11	4	1.24	1.31	1.06	91	Sdf	Mollisols	Alluvial deposits	1st defoliation	
		II2A	0.75	0.01	2	0.75	0.75	0.74	91	Sdf	Mollisols	Alluvial deposits	2nd defoliation	
		II2A	1.80	0.35	4	1.94	2.05	1.28	91	Sdf	Mollisols	Alluvial deposits	Mature	
		II2B	0.43		1				91	Sdf	Mollisols	Alluvial deposits		
		II2A	3.44	0.67	3	0.35	0.41	0.28	91	Sdf	Mollisols	Alluvial deposits	InMature	
		II2A	0.86	0.07	3	0.89	0.90	0.78	91	Sdf	Mollisols	Alluvial deposits		
		II2A	1.32	0.33	4	1.42	1.57	0.84	91	Sdf	Mollisols	Alluvial deposits	1st defoliation	
		II2A	1.81	0.12	2	1.81	1.90	1.72	91	Sdf	Mollisols	Alluvial deposits	2nd defoliation	
		II2B	0.28		1				91	Sdf	Mollisols	Alluvial deposits		
		II2A	0.27	0.33	4	0.12	0.75	0.08	91	Sdf	Mollisols	Alluvial deposits	Mature	
		II2A	28.00	3.50	3	3.00	3.00	2.39	91	Sdf	Mollisols	Alluvial deposits	InMature	
		II2A	4.70	3.40	3	6.40	7.00	0.80	91	Sdf	Mollisols	Alluvial deposits		
		II2A	2.60	2.30	4	2.10	5.40	0.70	91	Sdf	Mollisols	Alluvial deposits	1st defoliation	
		<i>Plumeria obtusa</i>	Potassium (mg/g)	II2A	0.60	0.00	2	0.60	0.60	0.60	91	Sdf	Mollisols	Alluvial deposits
II2A	14.20			5.80	4	16.70	17.90	5.60	91	Sdf	Mollisols	Alluvial deposits	Mature	
II2B	5.30				1				91	Sdf	Mollisols	Alluvial deposits		
II2A	6.10			0.26	2	6.10	6.28	5.91	91	Sdf	Mollisols	Alluvial deposits		
II2B	7.67				1				91	Sdf	Mollisols	Alluvial deposits		
II2A	12.7			3.00	2	12.7	14.80	10.50	91	Sdf	Mollisols	Alluvial deposits		
II2B	17.7				1				91	Sdf	Mollisols	Alluvial deposits		
II2A	1.34			0.28	2	1.34	1.53	1.14	91	Sdf	Mollisols	Alluvial deposits		
II2B	0.67				1				91	Sdf	Mollisols	Alluvial deposits		
II2A	0.32			0.41	2	0.32	0.61	0.03	91	Sdf	Mollisols	Alluvial deposits		
II2B	0.59				1				91	Sdf	Mollisols	Alluvial deposits		
II2A	8.10			0.10	2	8.10	8.20	8.00	91	Sdf	Mollisols	Alluvial deposits		
II2B	16.20				1				91	Sdf	Mollisols	Alluvial deposits		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
<i>Plumeria rubra (red)</i>	Ash (%)	II2A	10.00	0.13	2	10.00	10.09	9.90	91	Sdf	Mollisols	Alluvial deposits	Dorado	
	Calcium (mg/g)	II2A	21.30	2.50	2	21.30	23.00	19.50	91	Sdf	Mollisols	Alluvial deposits	Dorado	
	Nitrogen (%)	II2A	2.28	0.17	2	2.28	2.40	2.16	91	Sdf	Mollisols	Alluvial deposits	Dorado	
	Phosphorus (mg/g)	II2A	0.30	0.01	2	0.30	0.31	0.30	91	Sdf	Mollisols	Alluvial deposits	Dorado	
	Potassium (mg/g)	II2A	26.30	0.40	2	26.30	26.50	26.00	91	Sdf	Mollisols	Alluvial deposits	Dorado	
<i>Plumeria rubra (white)</i>	Ash (%)	II2A	9.88	0.81	2	9.88	10.45	9.31	91	Sdf	Mollisols	Alluvial deposits	Dorado	
		II2A	10.62	0.50	3	10.09	10.69	10.09	91	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Calcium (mg/g)	II2A	7.50	2.80	2	7.50	9.50	5.50	91	Sdf	Mollisols	Alluvial deposits	Dorado	
		II2A	18.80	8.10	3	15.90	28.00	12.50	91	Sdf	Mollisols	Alluvial deposits	GuanicaForest	
	Nitrogen (%)	II2A	2.69	0.44	2	2.69	3.00	2.38	91	Sdf	Mollisols	Alluvial deposits	Dorado	
		II2A	2.67	0.14	3	2.60	2.84	2.58	91	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Phosphorus (mg/g)	II2A	3.31	0.51	2	3.31	3.67	2.95	91	Sdf	Mollisols	Alluvial deposits	Dorado	
		II2A	2.16	0.29	3	2.20	2.42	1.85	91	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Potassium (mg/g)	II2A	35.80	3.20	2	35.80	38.00	33.50	91	Sdf	Mollisols	Alluvial deposits	Dorado	
II2A		29.80	3.00	3	29.50	32.90	27.00	91	Sdf	Mollisols	Alluvial deposits	Guanica Forest		
<i>Polipodium chnoodes</i>	Aluminum (mg/g)	II6	0.52		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II6	4.61		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II6	0.62		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II6	4.39		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II6	0.66		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II6	1.75		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II6	1.04		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II6	22.65		1				135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Polybotrya cervina</i>	Aluminum (mg/g)	II6	0.23	0.01	2	0.23	0.23	0.22	135	Lmrf	Ultisols	Tuffac. sandstone		
		II6	0.88	0.63	8	0.90	1.73	0.13	135	Lmrf	Ultisols	Tuffac. sandstone		
	C/N	II6	34	12	3	39	44	20	135	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
	Calcium (mg/g)	II6	3.02	0.58	2	3.02	3.43	2.61	135	Lmrf	Ultisols	Tuffac. sandstone			
		II6	5.60	3.48	8	6.98	9.22	0.65	135	Lmrf	Ultisols	Tuffac. sandstone			
	Carbon (%)	II6	45	4	3	44	49	42	135	Lmrf	Ultisols	Tuffac. sandstone			
	Iron (mg/g)	II6	0.18	0.07	2	0.18	0.23	0.14	135	Lmrf	Ultisols	Tuffac. sandstone			
	Iron (mg/g)	II6	0.37	0.24	8	0.31	0.84	0.08	135	Lmrf	Ultisols	Tuffac. sandstone			
	Magnesium (mg/g)	II6	2.84	0.05	2	2.84	2.88	2.81	135	Lmrf	Ultisols	Tuffac. sandstone			
		II6	4.76	1.90	8	5.13	7.61	1.48	135	Lmrf	Ultisols	Tuffac. sandstone			
	Manganese (mg/g)	II6	0.16	0.09	2	0.16	0.23	0.10	135	Lmrf	Ultisols	Tuffac. sandstone			
		II6	0.18	0.11	8	0.20	0.32	0.03	135	Lmrf	Ultisols	Tuffac. sandstone			
	Nitrogen (%)	II6	1.33	0.18	2	1.33	1.45	1.20	135	Lmrf	Ultisols	Tuffac. sandstone			
		II6	1.80	0.59	10	2.08	2.48	1.04	135	Lmrf	Ultisols	Tuffac. sandstone			
	Phosphorus (mg/g)	II6	1.08	0.69	2	1.08	1.57	0.59	135	Lmrf	Ultisols	Tuffac. sandstone			
		II6	1.30	0.54	8	1.27	2.01	0.61	135	Lmrf	Ultisols	Tuffac. sandstone			
	Potassium (mg/g)	II6	19.33	0.12	2	19.33	19.42	19.25	135	Lmrf	Ultisols	Tuffac. sandstone			
		II6	33.47	15.80	8	39.77	52.00	10.43	135	Lmrf	Ultisols	Tuffac. sandstone			
	Sulfur (%)	II6	0.50	0.25	3	0.42	0.78	0.30	135	Lmrf	Ultisols	Tuffac. sandstone			
	<i>Polypodium crassifolium</i>	Aluminum (mg/g)	II6	0.10		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		Calcium (mg/g)	II6	5.25		1				135	Lmrf	Ultisols	Tuffac. sandstone		
Iron (mg/g)		II6	0.10		1				135	Lmrf	Ultisols	Tuffac. sandstone			
Magnesium (mg/g)		II6	6.51		1				135	Lmrf	Ultisols	Tuffac. sandstone			
Manganese (mg/g)		II6	0.43		1				135	Lmrf	Ultisols	Tuffac. sandstone			
Nitrogen (%)		II6	0.73		1				135	Lmrf	Ultisols	Tuffac. sandstone			
Phosphorus (mg/g)		II6	0.39		1				135	Lmrf	Ultisols	Tuffac. sandstone			
Potassium (mg/g)		II6	23.97		1				135	Lmrf	Ultisols	Tuffac. sandstone			
<i>Polypodium spp.</i>	Aluminum (mg/g)	II6	1.33	1.54	2	1.33	2.42	0.24	135	Lmrf	Ultisols	Tuffac. sandstone			
	C/N	II6	32	8	2	32	37	26	135	Lmrf	Ultisols	Tuffac. sandstone			
	Calcium (mg/g)	II6	8.68	5.57	2	8.68	12.62	4.74	135	Lmrf	Ultisols	Tuffac. sandstone			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Carbon (%)	II6	44	1	2	44	45	43	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II6	0.74	0.74	2	0.74	1.26	0.21	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II6	3.50	1.85	2	3.50	4.81	2.19	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II6	0.74	0.06	2	0.74	0.78	0.69	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II6	1.44	0.22	3	1.47	1.64	1.21	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II6	1.95	0.29	2	1.95	2.15	1.74	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II6	24.24	5.74	2	24.24	28.30	20.18	135	Lmrf	Ultisols	Tuffac. sandstone		
	Sulfur (%)	II6	0.29	0.09	2	0.29	0.35	0.22	135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Pouteria multiflora</i>	Wood density (g/cc)	II1C	0.78	0.02	3	0.79	0.80	0.76	118					
<i>Prescottia oligatha</i>	Aluminum (µg/g)	II6A	3.35		1				155	Smf	Ultisols	Tuffac. sandstone	Luquillo	
		II6A	1.08		1				155	Lmrf	Ultisols	Serpentinite	Maricao	
		II6E	6.67		1				155	Smf	Ultisols	Tuffac. sandstone	Luquillo	
		II6E	7.21		1				155	Lmrf	Ultisols	Serpentinite	Maricao	
		II6F	0.73		1				155	Smf	Ultisols	Tuffac. sandstone	Luquillo	
		II6F	1.18		1				155	Lmrf	Ultisols	Serpentinite	Maricao	
	Calcium (mg/g)	II6A	10.41		1				155	Smf	Ultisols	Tuffac. sandstone	Luquillo	
		II6A	11.68		1				155	Lmrf	Ultisols	Serpentinite	Maricao	
		II6E	8.40		1				155	Smf	Ultisols	Tuffac. sandstone	Luquillo	
		II6E	6.71		1				155	Lmrf	Ultisols	Serpentinite	Maricao	
		II6F	6.24		1				155	Smf	Ultisols	Tuffac. sandstone	Luquillo	
		II6F	6.13		1				155	Lmrf	Ultisols	Serpentinite	Maricao	
	Cobalt (µg/g)	II6A	2.80		1				155	Smf	Ultisols	Tuffac. sandstone	Luquillo	
		II6A	3.50		1				155	Lmrf	Ultisols	Serpentinite	Maricao	
		II6E	4.20		1				155	Smf	Ultisols	Tuffac. sandstone	Luquillo	
		II6E	11.20		1				155	Lmrf	Ultisols	Serpentinite	Maricao	
		II6F	0.99		1				155	Smf	Ultisols	Tuffac. sandstone	Luquillo	
		II6F	2.50		1				155	Lmrf	Ultisols	Serpentinite	Maricao	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
Copper ( $\mu\text{g/g}$ )		II6A	32.20		1				155	Smf	Ultisols	Tuffac. sandstone	Luquillo		
		II6A	15.90		1				155	Lmrf	Ultisols	Serpentinite	Maricao		
		II6E	32.30		1					155	Smf	Ultisols	Tuffac. sandstone	Luquillo	
		II6E	34.40		1					155	Lmrf	Ultisols	Serpentinite	Maricao	
		II6F	19.60		1					155	Smf	Ultisols	Tuffac. sandstone	Luquillo	
		II6F	15.20		1					155	Lmrf	Ultisols	Serpentinite	Maricao	
Chromium ( $\mu\text{g/g}$ )		II6A	5.10		1				155	Smf	Ultisols	Tuffac. sandstone	Luquillo		
		II6A	14.02		1				155	Lmrf	Ultisols	Serpentinite	Maricao		
		II6E	6.00		1					155	Smf	Ultisols	Tuffac. sandstone	Luquillo	
		II6E	760		1					155	Lmrf	Ultisols	Serpentinite	Maricao	
		II6F	0.24		1					155	Smf	Ultisols	Tuffac. sandstone	Luquillo	
		II6F	116		1					155	Lmrf	Ultisols	Serpentinite	Maricao	
Iron ( $\mu\text{g/g}$ )		II6A	3.08		1				155	Smf	Ultisols	Tuffac. sandstone	Luquillo		
		II6A	3.95		1				155	Lmrf	Ultisols	Serpentinite	Maricao		
		II6E	4.74		1					155	Smf	Ultisols	Tuffac. sandstone	Luquillo	
		II6E	27.77		1					155	Lmrf	Ultisols	Serpentinite	Maricao	
		II6F	0.63		1					155	Smf	Ultisols	Tuffac. sandstone	Luquillo	
		II6F	3.54		1					155	Lmrf	Ultisols	Serpentinite	Maricao	
Magnesium ( $\text{mg/g}$ )		II6A	2.87		1				155	Smf	Ultisols	Tuffac. sandstone	Luquillo		
		II6A	1.94		1				155	Lmrf	Ultisols	Serpentinite	Maricao		
		II6E	2.16		1					155	Smf	Ultisols	Tuffac. sandstone	Luquillo	
		II6E	1.75		1					155	Lmrf	Ultisols	Serpentinite	Maricao	
		II6F	1.75		1					155	Smf	Ultisols	Tuffac. sandstone	Luquillo	
		II6F	1.65		1					155	Lmrf	Ultisols	Serpentinite	Maricao	
Manganese ( $\mu\text{g/g}$ )		II6A	292		1				155	Smf	Ultisols	Tuffac. sandstone	Luquillo		
		II6A	133		1				155	Lmrf	Ultisols	Serpentinite	Maricao		
		II6E	567		1					155	Smf	Ultisols	Tuffac. sandstone	Luquillo	
		II6E	332		1					155	Lmrf	Ultisols	Serpentinite	Maricao	
		II6F	102		1					155	Smf	Ultisols	Tuffac. sandstone	Luquillo	

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<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Nickel (µg/g)	II6F	119		1				155	Lmrf	Ultisols	Serpentinite	Maricao	
		II6A	9		1				155	Smf	Ultisols	Tuffac. sandstone	Luquillo	
		II6A	24		1				155	Lmrf	Ultisols	Serpentinite	Maricao	
		II6E	8		1				155	Smf	Ultisols	Tuffac. sandstone	Luquillo	
		II6E	139		1				155	Lmrf	Ultisols	Serpentinite	Maricao	
		II6F	3		1				155	Smf	Ultisols	Tuffac. sandstone	Luquillo	
	Nitrogen (%)	II6F	25		1				155	Lmrf	Ultisols	Serpentinite	Maricao	
		II6A	1.80		1				155	Smf	Ultisols	Tuffac. sandstone	Luquillo	
		II6E	1.60		1				155	Lmrf	Ultisols	Serpentinite	Luquillo	
		II6E	1.80		1				155	Smf	Ultisols	Tuffac. sandstone	Maricao	
	Phosphorus (mg/g)	II6F	1.60		1				155	Lmrf	Ultisols	Serpentinite	Luquillo	
		II6A	1.16		1				155	Smf	Ultisols	Tuffac. sandstone	Luquillo	
		II6A	1.88		1				155	Lmrf	Ultisols	Serpentinite	Maricao	
		II6E	0.96		1				155	Smf	Ultisols	Tuffac. sandstone	Luquillo	
		II6E	95		1				155	Lmrf	Ultisols	Serpentinite	Maricao	
		II6F	1.09		1				155	Smf	Ultisols	Tuffac. sandstone	Luquillo	
	potassium (mg/g)	II6F	2.18		1				155	Lmrf	Ultisols	Serpentinite	Maricao	
		II6A	10.00		1				155	Smf	Ultisols	Tuffac. sandstone	Luquillo	
		II6A	26.64		1				155	Lmrf	Ultisols	Serpentinite	Maricao	
		II6E	6.65		1				155	Smf	Ultisols	Tuffac. sandstone	Luquillo	
II6E		5.57		1				155	Lmrf	Ultisols	Serpentinite	Maricao		
II6F		18.88		1				155	Smf	Ultisols	Tuffac. sandstone	Luquillo		
<i>Prestoea montana</i>	Aluminum (mg/g)	II6F	32.62		1				155	Lmrf	Ultisols	Serpentinite	Maricao	
		II6A	1.01	1.42	6	0.22	3.48	0.04	93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	0.32	0.30	22	0.20	1.32	0.10	107	Rfs	Inceptisols	Tuffac. sandstone		
	Ash (%)	II1A	0.16	0.06	108	0.15	0.37	0.03	147	Lmrf	Ultisols	Tuffac. sandstone		
		II1E	0.04		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	7.55	3.18	6	7.69	11.81	2.50	93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A												



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1A	8.97	3.24	7	9.31	13.56	4.24	92	Smf	Ultisols	Tuffac. sandstone		
		II1A	7.92	1.29	17	7.75	10.72	4.46	107	Rfs	Inceptisols	Tuffac. sandstone		
		III1A	7.20	0.78	108	7.08	9.24	5.82	147	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	2.18	0.56	15	2.18	3.54	1.27	68	Swf	Ultisols	Tuffac. sandstone	Class 2 SD	
		II1B	2.99		1				68	Swf	Ultisols	Tuffac. sandstone	Class 2 LD	
		II1B	2.04	0.60	27	1.99	3.22	1.09	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	
		II1B	2.81	0.59	8	2.97	3.51	1.72	68	Swf	Ultisols	Tuffac. sandstone	Class 3 SD	
		II1B	3.12	0.79	12	3.07	4.34	2.12	68	Swf	Ultisols	Tuffac. sandstone	Class 3/4 LD	
		II1B	6.19	3.60	3	7.51	8.94	2.12	68	Swf	Ultisols	Tuffac. sandstone	Class 3/4 LD	
		II1B	2.82	1.00	7	2.41	4.77	1.84	68	Swf	Ultisols	Tuffac. sandstone	Class 4/5 LD	
		II1B	3.48	0.76	2	0.76	4.02	2.94	68	Swf	Ultisols	Tuffac. sandstone	Class 4/5 SD	
		III1B	3.30	0.08	2	3.20	3.26	3.14	68	Swf	Ultisols	Tuffac. sandstone	Class 4/5 SD	
		II1B	2.41	0.29	5	2.33	2.74	2.05	69	Swf	Ultisols	Tuffac. sandstone	Class 1 LD	
		II1B	1.28	0.69	6	1.30	2.41	0.54	69	Swf	Ultisols	Tuffac. sandstone	Class 2 LD	
		III1B	2.93	1.94	18	2.21	8.14	0.87	69	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	
		II1B	2.28	0.65	4	2.14	3.14	1.71	69	Swf	Ultisols	Tuffac. sandstone	Class 3 DS	
		III1B	2.21	0.62	2	2.21	2.65	1.77	69	Swf	Ultisols	Tuffac. sandstone	Class 2/3 SD	
		II1B	2.05	0.07	2	2.05	2.10	2.00	69	Swf	Ultisols	Tuffac. sandstone	Class 3/4 ST	
		II1E	2.10		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		III1E	7.50	4.26	6	5.53	15.57	4.73	92	Smf	Ultisols	Tuffac. sandstone		
		III1E	7.64	2.75	9	7.17	14.57	5.51	92	Smf	Ultisols	Tuffac. sandstone		
	C/N	II1A	43	27	6	33	97	24	93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	23	4	22	22	36	18	107	Rfs	Inceptisols	Tuffac. sandstone		
		III1A	29	2	108	30	33	24	147	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	44	1	3	45	46	43	93	Wflm	Inceptisols	Tuffac. sandstone		
		II1E	318		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Calcium (mg/g)	II1A	3.21	1.71	6	3.40	5.26	0.36	93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	4.80	0.95	22	4.82	7.11	3.37	107	Rfs	Inceptisols	Tuffac. sandstone		
		II1A	3.05		1				135	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1A	4.02	1.02	108	3.88	6.53	0.83	147	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	4.00	1.20	15	3.50	6.20	2.70	68	Swf	Ultisols	Tuffac. sandstone	Class 2 LD	
		III1B	3.10		1				68	Swf	Ultisols	Tuffac. sandstone	Class 2 LD	
		II1B	4.30	1.30	27	4.10	7.70	2.20	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	
		III1B	3.20	0.80	8	3.10	4.20	1.80	68	Swf	Ultisols	Tuffac. sandstone	Class 3 SD	
		II1B	8.70	4.10	12	8.50	18.00	4.50	68	Swf	Ultisols	Tuffac. sandstone	Class 3/4 LD	
		II1B	9.10	2.90	3	9.00	12.00	6.20	68	Swf	Ultisols	Tuffac. sandstone	Class 3/4 LD	
		II1B	5.30	1.70	7	4.70	8.00	3.30	68	Swf	Ultisols	Tuffac. sandstone	Class 4/5 LD	
		II1B	6.80	0.40	2	6.80	7.00	6.50	68	Swf	Ultisols	Tuffac. sandstone	Class 4/5 SD	
		III1B	5.50	1.40	2	5.50	6.50	4.50	68	Swf	Ultisols	Tuffac. sandstone	Class 4/5 SD	
		II1B	2.44	0.28	5	2.45	2.87	2.17	69	Swf	Ultisols	Tuffac. sandstone	Class 1 LD	
		III1B	3.74	2.03	6	3.83	6.92	1.49	69	Swf	Ultisols	Tuffac. sandstone	Class 2 LD	
		II1B	4.89	2.37	18	4.59	10.70	1.70	69	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	
		II1B	3.85	0.69	4	3.84	4.70	3.00	69	Swf	Ultisols	Tuffac. sandstone	Class 3 SD	
		III1B	4.14	0.86	2	4.14	4.75	3.53	69	Swf	Ultisols	Tuffac. sandstone	Class 2/3 SD	
		II1B	4.82	1.17	2	4.82	5.64	3.99	69	Swf	Ultisols	Tuffac. sandstone	Class 3/4 ST	
		III1C	2.10	1.28	3	2.54	4.15	1.57	93	Wflm	Inceptisols	Tuffac. sandstone		
		III1C	4.12		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		III1E	1.71		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Carbon (%)	II1A	45	2	22	45	50	41	107	Rfs	Inceptisols	Tuffac. sandstone		
		II1A	46	1	108	46	47	45	147	Lmrf	Ultisols	Tuffac. sandstone		
		III1A	44	1	73	44	45	35	150	Swf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II1A	0.70	0.88	6	0.22	2.25	0.10	93	Wflm	Inceptisols	Tuffac. sandstone		
		III1A	0.21	0.11	22	0.17	0.50	0.09	107	Rfs	Inceptisols	Tuffac. sandstone		
		II1A	0.09	0.03	108	0.08	0.31	0.04	147	Lmrf	Ultisols	Tuffac. sandstone		
		III1E	0.15		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Magnesium (mg/g)	II1A	2.06	1.39	6	1.89	3.68	0.64	93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	3.88	0.72	22	3.87	5.26	1.76	107	Rfs	Inceptisols	Tuffac. sandstone		
		III1A	3.17		1				135	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1A	2.48	0.51	108	2.47	3.48	0.23	147	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	1.19	1.00	3	0.72	2.68	0.63	93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	2.48		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II1E	0.82		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Manganese (mg/g)	II1A	0.34	0.24	6	0.32	0.68	0.02	93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	0.35	0.21	22	0.25	0.88	0.03	107	Rfs	Inceptisols	Tuffac. sandstone		
		II1A	0.40	0.11	108	0.40	0.64	0.14	147	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	0.11	0.09	3	0.07	0.25	0.06	93	Wflm	Inceptisols	Tuffac. sandstone		
		II1E	0.09		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Nitrogen (%)	II1A	1.20	0.45	6	1.13	1.76	0.46	93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	1.96	0.30	22	1.98	2.49	1.38	107	Rfs	Inceptisols	Tuffac. sandstone		
		II1A	1.25		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II1A	1.58	0.08	108	1.57	1.91	1.40	147	Lmrf	Ultisols	Tuffac. sandstone		
		II1A	2.04	0.30	73	2.00	2.84	1.53	150	Swf	Ultisols	Tuffac. sandstone		
		II1B	0.41	0.15	15	0.38	0.74	0.22	68	Swf	Ultisols	Tuffac. sandstone	Class 2 LD	
		II1B	0.43	0.08	2	0.43	0.48	0.37	68	Swf	Ultisols	Tuffac. sandstone	Class 2 SD	
		II1B	0.54	0.24	27	0.46	1.02	0.22	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	
		II1B	0.41	0.14	8	0.37	0.66	0.26	68	Swf	Ultisols	Tuffac. sandstone	Class 3 SD	
		II1B	0.68	0.19	12	0.68	0.99	0.36	68	Swf	Ultisols	Tuffac. sandstone	Class 3/4 LD	
		II1B	0.81	0.18	3	0.78	1.01	0.65	68	Swf	Ultisols	Tuffac. sandstone	Class 3/4 LD	
		II1B	0.85	0.28	7	0.86	1.27	0.42	68	Swf	Ultisols	Tuffac. sandstone	Class 4/5 LD	
		II1B	0.94	0.54	2	0.94	1.32	0.55	68	Swf	Ultisols	Tuffac. sandstone	Class 4/5 SD	
		II1B	0.85	0.25	2	0.85	1.03	0.67	68	Swf	Ultisols	Tuffac. sandstone	Class 4/5 SD	
		II1B	0.43	0.19	5	0.35	0.77	0.34	69	Swf	Ultisols	Tuffac. sandstone	Class 1 LD	
		II1B	0.23	0.10	6	0.22	0.40	0.12	69	Swf	Ultisols	Tuffac. sandstone	Class 2 LD	
		II1B	0.72	0.26	18	0.67	1.37	0.35	69	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	
		II1B	0.37	0.12	4	0.39	0.50	0.22	69	Swf	Ultisols	Tuffac. sandstone	Class 3 SD	
		II1B	0.49	0.18	2	0.49	0.62	0.36	69	Swf	Ultisols	Tuffac. sandstone	Class 2/3 SD	
		II1B	0.87	0.06	2	0.87	0.91	0.82	69	Swf	Ultisols	Tuffac. sandstone	Class 3/4 ST	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1C	0.47	0.56	3	0.22	1.30	0.14	93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	1.10		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		III1E	0.14		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II1A	0.63	0.34	6	0.61	1.03	0.26	93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	1.06	0.45	7	0.94	2.04	0.74	92	Smf	Ultisols	Tuffac. sandstone		
		II1A	1.03	0.28	22	1.05	1.59	0.47	107	Rfs	Inceptisols	Tuffac. sandstone		
		II1A	0.75		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II1A	0.74	0.12	108	0.74	1.06	0.24	147	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	0.15	0.06	15	0.15	0.28	0.07	68	Swf	Ultisols	Tuffac. sandstone	Class 2 LD	
		II1B	0.14		1				68	Swf	Ultisols	Tuffac. sandstone	Class 2 SD	
		II1B	0.26	0.13	27	0.25	0.57	0.05	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	
		II1B	0.13	0.06	8	0.14	0.21	0.05	68	Swf	Ultisols	Tuffac. sandstone	Class 3 SD	
		II1B	0.40	0.25	12	0.29	1.04	0.18	68	Swf	Ultisols	Tuffac. sandstone	Class 3/4 LD	
		II1B	0.38	0.18	3	0.03	0.59	0.24	68	Swf	Ultisols	Tuffac. sandstone	Class 3/4 LD	
		II1B	0.59	0.41	2	0.59	0.88	0.29	68	Swf	Ultisols	Tuffac. sandstone	Class 4/5 SD	
		II1B	0.09	0.10	5	0.03	0.25	0.02	69	Swf	Ultisols	Tuffac. sandstone	Class 2 LD	
		II1B	0.11	0.05	6	0.09	0.20	0.08	69	Swf	Ultisols	Tuffac. sandstone	Class 2 LD	
		II1B	0.34	0.26	18	0.28	1.14	0.06	69	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	
		II1B	0.16	0.03	4	0.16	0.19	0.11	69	Swf	Ultisols	Tuffac. sandstone	Class 3 SD	
		II1B	0.24	0.10	2	0.24	0.31	0.17	69	Swf	Ultisols	Tuffac. sandstone	Class 2/3 SD	
		II1B	0.32	0.03	2	0.32	0.34	0.29	69	Swf	Ultisols	Tuffac. sandstone	Class 3/4 ST	
		II1C	0.28	0.32	3	0.13	0.76	0.10	93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	0.57		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		III1E	0.12		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		III1E	1.06	0.50	6	0.89	2.05	0.71	92	Smf	Ultisols	Tuffac. sandstone		
		III1E	1.11	0.27	9	1.02	1.79	0.88	92	Smf	Ultisols	Tuffac. sandstone		
		II1B	0.52	0.19	7	0.58	0.80	0.26	68	Swf	Ultisols	Tuffac. sandstone	Class 4/5 LD	
	Potassium (mg/g)	II1A	7.71	5.30	6	10.29	12.05	0.90	93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	9.28	3.85	22	8.71	17.82	4.43	107	Rfs	Inceptisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1A	1.47		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II1A	6.79	1.44	108	6.78	10.95	0.69	147	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	2.85	0.43	5	2.76	3.46	2.37	68	Swf	Ultisols	Tuffac. sandstone	Class 1 LD	
		II1B	0.52		1				68	Swf	Ultisols	Tuffac. sandstone	Class 2 LD	
		II1B	3.10	4.90	18	1.52	18.60	0.22	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	
		II1B	0.27		1				68	Swf	Ultisols	Tuffac. sandstone	Class 3 SD	
		II1B	0.35		1				68	Swf	Ultisols	Tuffac. sandstone	Class 3/4 LD	
		II1B	1.41	0.38	2	1.41	1.68	1.14	68	Swf	Ultisols	Tuffac. sandstone	Class 3/4 ST	
		II1B	2.85	0.43	5	2.76	3.46	2.37	69	Swf	Ultisols	Tuffac. sandstone	Class 1 LD	
		II1B	0.52	0.25	6	0.53	0.96	0.25	69	Swf	Ultisols	Tuffac. sandstone	Class 2 LD	
		II1B	3.10	4.90	18	1.52	18.6	0.22	69	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	
		II1B	2.73	1.74	4	3.21	4.24	0.27	69	Swf	Ultisols	Tuffac. sandstone	Class 3 SD	
		II1B	4.35	1.18	2	4.35	5.18	3.51	69	Swf	Ultisols	Tuffac. sandstone	Class 2/3 SD	
		II1B	1.41	0.38	2	1.41	1.68	1.14	69	Swf	Ultisols	Tuffac. sandstone	Class 3/4 ST	
		II1C	5.58	3.70	3	4.77	10.76	2.03	93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	9.74		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II1E	4.60		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Sulfur (%)	II1A	0.69	0.07	108	0.70	0.87	0.51	147	Lmrf	Ultisols	Tuffac. sandstone		
		II1A	0.69	0.16	54	0.67	1.19	0.45	150	Swf	Ultisols	Tuffac. sandstone		
<i>Prunus occidentalis</i>	Wood density (g/cc)	II1C	0.78	0.04	5	0.80	0.82	0.72	117					
<i>Psychotria berteriana</i>	Aluminum (mg/g)	II2A	0.89	0.19	25	0.85	1.39	0.64	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2A	3.45	7.12	7	0.80	19.59	0.57	143	Wflm	Inceptisols	Tuffac. sandstone		
		II2A	1.03		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II2B	0.21	0.09	2	0.21	0.27	0.15	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2B	0.82	0.34	2	0.82	1.07	0.58	93	Wflm	Inceptisols	Tuffac. sandstone		
		II2C	0.24	0.25	26	0.17	1.13	0.06	135	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II2C	0.92	1.59	6	0.28	4.16	0.15	143	Wflm	Inceptisols	Tuffac. sandstone	<1cm	
		II2C	0.17	0.07	8	0.16	0.34	0.11	143	Wflm	Inceptisols	Tuffac. sandstone	>1cm	
		II2E	1.24	0.70	13	1.07	2.73	0.27	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2F	0.25		1				143	Wflm	Inceptisols	Tuffac. sandstone		
		II2H	0.64	0.19	6	0.68	0.87	0.36	135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	2.81	2.33	2	2.81	4.45	1.16	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	0.28	0.12	2	0.28	0.36	0.19	146	Swf	Ultisols	Tuffac. sandstone		
	Ash (%)	II2A	9.10	1.74	7	8.69	12.69	7.43	143	Wflm	Inceptisols	Tuffac. sandstone		
		II2A	10.40		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II2B	5.51		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II2C	4.14	0.63	6	4.07	5.26	3.37	143	Wflm	Inceptisols	Tuffac. sandstone	<1cm	
		II2C	1.97	0.25	8	2.05	2.21	1.39	143	Wflm	Inceptisols	Tuffac. sandstone	>1cm	
		II2F	5.06		1				143	Wflm	Inceptisols	Tuffac. sandstone		
		II8A	10.92	1.68	2	10.92	12.10	9.73	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	2.49	0.62	2	2.49	2.92	2.05	146	Swf	Ultisols	Tuffac. sandstone		
	C/N	II2A	21	5	7	19	30	16	143	Wflm	Inceptisols	Tuffac. sandstone		
		II2A	13		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II2B	51		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II2C	79	19	6	77	107	58	143	Wflm	Inceptisols	Tuffac. sandstone	<1cm	
		II2C	133	26	8	140	157	91	143	Wflm	Inceptisols	Tuffac. sandstone	>1cm	
		II2F	32		1				143	Wflm	Inceptisols	Tuffac. sandstone		
		II8A	14	4	2	14	17	11	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	72	33	2	72	95	48	146	Swf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II2A	8.64	1.17	25	8.68	10.70	6.49	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2A	13.74	3.00	7	14.13	17.35	7.97	143	Wflm	Inceptisols	Tuffac. sandstone		
		II2A	12.23		1				93	Wflm	Inceptisols	Tuffac. sandstone	Leaves	
		II2B	4.66	0.44	2	4.66	4.97	4.35	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2B	9.93	2.33	2	9.93	11.57	8.28	93	Wflm	Inceptisols	Tuffac. sandstone		
		II2C	4.06	1.13	26	4.24	5.86	1.95	135	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II2C	5.89	1.31	5	5.82	7.52	3.98	143	Wflm	Inceptisols	Tuffac. sandstone	<1cm	
		II2C	2.00	0.31	8	2.01	2.47	1.58	143	Wflm	Inceptisols	Tuffac. sandstone	>1cm	
		II2E	3.17	0.76	13	2.89	4.75	2.29	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2F	5.76		1				143	Wflm	Inceptisols	Tuffac. sandstone		
		II2H	8.17	1.40	6	7.89	10.83	7.03	135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	21.35	8.49	2	21.35	27.35	15.35	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	4.78	2.35	2	4.78	6.45	3.12	146	Swf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II2A	46	2	7	47	47	42	143	Wflm	Inceptisols	Tuffac. sandstone		
		II2C	47	1	6	47	48	46	143	Wflm	Inceptisols	Tuffac. sandstone	<1cm	
		II2C	48	0	8	48	49	48	143	Wflm	Inceptisols	Tuffac. sandstone	>1cm	
		II2F	51		1				143	Wflm	Inceptisols	Tuffac. sandstone		
		II8A	50	5	2	50	54	47	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	53	0	2	53	53	53	146	Swf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II2A	0.27	0.42	25	0.17	2.22	0.04	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2A	0.39	0.66	7	0.16	1.89	0.11	143	Wflm	Inceptisols	Tuffac. sandstone		
		II2A	0.24		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II2B	0.07	0.02	2	0.07	0.08	0.05	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2B	0.28	0.22	2	0.28	0.43	0.12	93	Wflm	Inceptisols	Tuffac. sandstone		
		II2C	0.15	0.29	26	0.07	1.29	0.01	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2C	0.06	0.02	6	0.06	0.07	0.04	143	Wflm	Inceptisols	Tuffac. sandstone	<1cm	
		II2C	0.09	0.10	8	0.04	0.29	0.02	143	Wflm	Inceptisols	Tuffac. sandstone	>1cm	
		II2E	1.54	1.36	13	1.28	4.54	0.05	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2F	0.03		1				143	Wflm	Inceptisols	Tuffac. sandstone		
		II2H	0.17	0.05	6	0.18	0.23	0.10	135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	1.01	0.52	2	1.01	1.37	0.64	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	0.10	0.09	2	0.10	0.17	0.04	146	Swf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II2A	4.42	0.89	25	4.19	6.85	3.07	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2A	5.58	1.16	7	5.36	7.57	3.81	143	Wflm	Inceptisols	Tuffac. sandstone		
		II2A	6.02		1				93	Wflm	Inceptisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II2B	1.64	0.76	2	1.64	2.18	1.10	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2B	4.30	1.38	2	4.30	5.28	3.33	93	Wflm	Inceptisols	Tuffac. sandstone		
		II2C	1.42	0.51	26	1.37	2.56	0.62	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2C	2.22	0.82	6	2.31	3.14	0.94	143	Wflm	Inceptisols	Tuffac. sandstone	<1cm	
		II2C	0.54	0.24	8	0.48	0.87	0.29	143	Wflm	Inceptisols	Tuffac. sandstone	>1cm	
		II2E	0.92	0.65	13	0.80	3.03	0.51	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2F	2.87		1				143	Wflm	Inceptisols	Tuffac. sandstone		
		II2H	3.97	1.28	6	3.72	2.72	0.43	135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	4.39	4.69	2	4.39	7.71	1.07	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	0.70	0.08	2	0.70	0.76	0.64	146	Swf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II2A	0.17	0.05	25	0.17	0.28	0.09	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2A	0.50	0.22	7	0.47	0.79	0.23	143	Wflm	Inceptisols	Tuffac. sandstone		
		II2A	0.19		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II2B	0.23	0.13	2	0.23	0.33	0.14	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2B	0.54	0.66	2	0.54	1.01	0.08	93	Wflm	Inceptisols	Tuffac. sandstone		
		II2C	0.13	0.06	26	0.13	0.27	0.04	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2C	0.28	0.14	6	0.27	0.44	0.08	143	Wflm	Inceptisols	Tuffac. sandstone	<1cm	
		II2C	0.05	0.03	8	0.04	0.09	0.02	143	Wflm	Inceptisols	Tuffac. sandstone	>1cm	
		II2E	0.08	0.06	13	0.07	0.27	0.04	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2F	0.17		1				143	Wflm	Inceptisols	Tuffac. sandstone		
		II2H	0.32	0.11	6	0.31	0.47	0.18	135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	0.16	0.09	2	0.16	0.23	0.10	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	0.03	0.02	2	0.03	0.04	0.01	146	Swf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II2A	2.61	0.32	25	2.57	3.62	2.21	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2A	2.35	0.51	7	2.46	3.05	1.42	143	Wflm	Inceptisols	Tuffac. sandstone		
		II2A	3.17		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II2B	0.65	0.07	2	0.65	0.70	0.60	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2B	0.86		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II2C	0.57	0.14	26	0.56	0.93	0.35	135	Lmrf	Ultisols	Tuffac. sandstone		



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II2C	0.63	0.15	6	0.62	0.81	0.44	143	Wflm	Inceptisols	Tuffac. sandstone	<1cm	
		II2C	0.38	0.09	8	0.35	0.54	0.30	143	Wflm	Inceptisols	Tuffac. sandstone	>1cm	
		II2E	0.72	0.15	13	0.71	0.99	0.50	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2F	1.61		1				143	Wflm	Inceptisols	Tuffac. sandstone		
		II2H	1.79	0.25	6	1.83	2.05	1.48	135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	3.96	1.60	2	3.96	5.09	2.83	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	0.80	0.38	2	0.83	1.10	0.56	146	Swf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II2A	0.92	0.16	25	0.91	1.27	0.68	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2A	0.82	0.20	7	0.81	1.19	0.57	143	Wflm	Inceptisols	Tuffac. sandstone		
		II2A	0.99		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II2B	0.37	0.01	2	0.37	0.38	0.36	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2B	0.69	0.28	2	0.69	0.89	0.49	93	Wflm	Inceptisols	Tuffac. sandstone		
		II2C	0.32	0.06	26	0.32	0.40	0.21	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2C	0.24	0.06	6	0.26	0.30	0.16	143	Wflm	Inceptisols	Tuffac. sandstone	<1cm	
		II2C	0.13	0.02	8	0.13	0.17	0.10	143	Wflm	Inceptisols	Tuffac. sandstone	>1cm	
		II2E	0.34	0.12	13	0.33	0.67	0.23	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2F	0.57		1				143	Wflm	Inceptisols	Tuffac. sandstone		
		II2H	0.72	0.21	6	0.68	1.06	0.45	135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	0.98	0.10	2	0.94	1.06	0.91	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	0.53	0.26	2	0.53	0.72	0.35	146	Swf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II2A	28.63	9.19	25	27.70	47.97	17.89	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2A	11.64	2.55	7	10.86	15.79	8.33	143	Wflm	Inceptisols	Tuffac. sandstone		
		II2A	17.31		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II2B	10.79	0.03	2	1.79	10.81	10.77	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2B	10.40	4.61	2	10.40	13.66	7.14	93	Wflm	Inceptisols	Tuffac. sandstone		
		II2C	18.57	7.97	26	17.45	34.83	7.18	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2C	6.44	1.69	6	5.72	8.64	4.96	143	Wflm	Inceptisols	Tuffac. sandstone	<1cm	
		II2C	4.92	1.34	8	5.38	6.41	2.83	143	Wflm	Inceptisols	Tuffac. sandstone	>1cm	
		II2E	12.23	4.61	13	11.40	23.94	7.93	135	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II2F	9.69		1				143	Wflm	Inceptisols	Tuffac. sandstone		
		II2H	23.95	5.19	6	23.83	31.53	17.53	135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	12.03	13.83	2	12.03	21.81	2.25	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	3.67	1.91	2	3.67	5.02	2.32	146	Swf	Ultisols	Tuffac. sandstone		
<i>Psychotria maleolens</i>	Aluminum (mg/g)	II2A	14.16	2.13	5	12.77	17.16	12.56	143	Wflm	Inceptisols	Tuffac. sandstone		
		II2C	3.52	1.18	6	3.40	5.34	2.05	143	Wflm	Inceptisols	Tuffac. sandstone	<1cm	
	Ash (%)	II2A	12.10	1.50	5	11.91	13.91	9.88	143	Wflm	Inceptisols	Tuffac. sandstone		
		II2C	3.36	0.79	6	3.14	4.53	2.51	143	Wflm	Inceptisols	Tuffac. sandstone	<1cm	
	C/N	II2A	34	4	5	35	40	30	143	Wflm	Inceptisols	Tuffac. sandstone		
		II2C	129	33	6	126	174	77	143	Wflm	Inceptisols	Tuffac. sandstone	<1cm	
	Calcium (mg/g)	II2A	11.78	0.55	5	11.63	12.58	11.13	143	Wflm	Inceptisols	Tuffac. sandstone		
		II2C	3.99	1.12	6	3.97	5.65	2.54	143	Wflm	Inceptisols	Tuffac. sandstone	<1cm	
	Carbon (%)	II2A	42	2	5	43	43	40	143	Wflm	Inceptisols	Tuffac. sandstone		
		II2C	47	0	6	47	47	46	143	Wflm	Inceptisols	Tuffac. sandstone	<1cm	
	Iron (mg/g)	II2A	0.30	0.34	5	0.15	0.91	0.14	143	Wflm	Inceptisols	Tuffac. sandstone		
		II2C	0.06	0.03	6	0.05	0.12	0.03	143	Wflm	Inceptisols	Tuffac. sandstone	<1cm	
	Magnesium (mg/g)	II2A	5.17	0.77	5	4.85	6.49	4.53	143	Wflm	Inceptisols	Tuffac. sandstone		
		II2C	1.49	0.54	6	1.47	2.12	0.86	143	Wflm	Inceptisols	Tuffac. sandstone	<1cm	
	Manganese (mg/g)	II2A	0.15	0.09	5	0.11	0.28	0.08	143	Wflm	Inceptisols	Tuffac. sandstone		
		II2C	0.05	0.40	6	0.03	0.11	0.02	143	Wflm	Inceptisols	Tuffac. sandstone	<1cm	
	Nitrogen (%)	II2A	1.24	0.11	5	1.24	1.37	1.08	143	Wflm	Inceptisols	Tuffac. sandstone		
		II2C	0.39	0.12	6	0.37	0.61	0.27	143	Wflm	Inceptisols	Tuffac. sandstone	<1cm	
	Phosphorus (mg/g)	II2A	0.44	0.05	5	0.47	0.48	0.35	143	Wflm	Inceptisols	Tuffac. sandstone		
		II2C	0.20	0.09	6	0.17	0.31	0.12	143	Wflm	Inceptisols	Tuffac. sandstone	<1cm	
	Potassium (mg/g)	II2A	4.80	0.66	5	4.54	5.95	4.33	143	Wflm	Inceptisols	Tuffac. sandstone		
		II2C	4.97	0.81	6	4.73	6.08	4.10	143	Wflm	Inceptisols	Tuffac. sandstone	<1cm	
<i>Psychotria sp</i>	Ash (%)	II2A	12.67	1.00	2	12.67	13.37	11.96	94	Swf	Ultisols	Tuffac. sandstone	Tree diam. <3cm	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
	Nitrogen (%)	II2B	6.36	0.68	2	6.36	6.84	5.88	94	Swf	Ultisols	Tuffac. sandstone	Tree diam. <3cm		
		II2C	4.63	1.94	2	4.63	6.00	3.25	94	Swf	Ultisols	Tuffac. sandstone	Tree diam. <3cm		
		II2A	2.36	0.04	2	2.36	2.39	2.33	94	Swf	Ultisols	Tuffac. sandstone	Tree diam. <3cm		
	Phosphorus (mg/g)	II2B	0.94	0.09	2	0.94	1.00	0.87	94	Swf	Ultisols	Tuffac. sandstone	Tree diam. <3cm		
		II2C	0.83	0.30	2	0.83	1.04	0.62	94	Swf	Ultisols	Tuffac. sandstone	Tree diam. <3cm		
		II2A	1.21	0.04	2	1.21	1.24	1.18	94	Swf	Ultisols	Tuffac. sandstone	Tree diam. <3cm		
	Potassium (mg/g)	II2B	0.72	0.06	2	0.72	0.76	0.67	94	Swf	Ultisols	Tuffac. sandstone	Tree diam. <3cm		
		II2C	0.54	0.13	2	0.54	0.63	0.44	94	Swf	Ultisols	Tuffac. sandstone	Tree diam. <3cm		
		II2A	20.79	3.49	2	20.79	23.25	18.32	94	Swf	Ultisols	Tuffac. sandstone	Tree diam. <3cm		
	<i>Pteris altissima</i>	C/N	II6	15		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		Carbon (%)	II6	40		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		Nitrogen (%)	II6	2.63		1				135	Lmrf	Ultisols	Tuffac. sandstone		
Sulfur (%)		II6	0.51		1				135	Lmrf	Ultisols	Tuffac. sandstone			
<i>Pterocarpus macrocarpus</i>	Wood density (g/cc)	II1B	0.52	0.04	6	0.52	0.45	0.53	97	Wfs	Inceptisols	Tuffac. sandstone			
<i>Pterocarpus officinalis</i>	Aluminum (mg/g)	II1A	0.06	0.02	14	0.07	0.10	0.03	78	Mfs	Mangle	Swamp			
		II1A	0.05	0.03	12	0.05	0.11	0.03	83	Mfs	Histosol	Alluvial deposits			
		II1Ai	0.03	0.00	2	0.03	0.03	0.03	83	Mfs	Histosol	Alluvial deposits	Rachis		
		II1Aiii	0.05	0.01	28	0.05	0.08	0.03	83	Mfs	Histosol	Alluvial deposits			
		II9A	0.55	2.18	49	0.09	11.61	0.03	84	Mfs	Histosol	Alluvial deposits	Laguncularia		
		II9A	0.35	1.05	87	0.10	6.03	0.02	84	Mfs	Histosol	Alluvial deposits	Other		
		II9A	0.45	1.78	228	0.11	18.58	0.02	84	Mfs	Histosol	Alluvial deposits			
		II9B	0.19	0.59	74	0.06	3.42	0.01	84	Mfs	Histosol	Alluvial deposits			
		II9C	0.10	0.05	2	0.10	0.13	0.07	84	Mfs	Histosol	Alluvial deposits			
II9D	1.89	6.51	69	0.24	40.26	0.05	84	Mfs	Histosol	Alluvial deposits					

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Ash (%)	II1A	7.67	0.86	38	7.68	9.87	6.23	76	Mfs	Histosol	Alluvial deposits		
		II1A	6.91	0.98	14	7.12	7.80	4.73	78	Mfs	Histosol	Alluvial deposits		
		III1B	6.44	1.03	30	6.58	8.25	4.62	76	Mfs	Histosol	Alluvial deposits		
		II1F	4.02	0.30	5	4.07	4.33	3.57	76	Mfs	Histosol	Alluvial deposits	Seeds	
		II9A	13.30	3.36	49	12.84	25.56	8.89	84	Mfs	Histosol	Alluvial deposits		
		II9A	9.00	3.91	84	8.64	16.87	3.59	84	Mfs	Histosol	Alluvial deposits	Other	
		II9A	6.04	3.04	211	5.43	34.79	2.80	84	Mfs	Histosol	Alluvial deposits		
		II9B	6.09	1.40	72	6.08	9.95	3.01	84	Mfs	Histosol	Alluvial deposits		
		II9C	4.18	0.94	2	4.18	4.84	3.51	84	Mfs	Histosol	Alluvial deposits		
		II9D	8.76	10.12	69	6.13	63.56	4.53	84	Mfs	Histosol	Alluvial deposits		
		III1A	0.48	0.06	9	0.47	0.56	0.41	83	Mfs	Histosol	Alluvial deposits		
		III1Ai	0.54	0.01	2	0.54	0.54	0.53	83	Mfs	Histosol	Alluvial deposits	Rachis	
		III1Aiii	0.49	0.03	28	0.44	0.57	0.42	83	Mfs	Histosol	Alluvial deposits		
		C/N	III1A	16	2	14	17	18	13	78	Mfs	Entisols	Swamps	
	III1A		35	3	9	35	40	31	83	Mfs	Histosol	Alluvial deposits		
	III1Ai		41	1	2	41	42	40	83	Mfs	Histosol	Alluvial deposits	Rachis	
	III1Aiii		16	2	28	16	19	14	83	Mfs	Histosol	Alluvial deposits		
	Calcium (mg/g)	II1A	21.63	3.01	38	21.29	28.97	15.44	76	Smf	Inceptisols	Swamps		
		II1A	20.13	5.10	14	22.43	25.47	9.52	78	Mfs	Entisols	Swamps		
		II1A	11.83	1.49	12	11.90	14.17	9.00	83	Mfs	Histosol	Alluvial deposits		
		III1Ai	15.66	0.28	2	15.66	15.86	15.46	83	Mfs	Histosol	Alluvial deposits	Rachis	
		III1Aiii	9.149	1.74	28	9.099	12.13	5.65	83	Mfs	Histosol	Alluvial deposits		
		II1B	21.59	3.52	30	21.38	28.57	15.48	76	Smf	Inceptisols	Swamps		
		III1F	2.72	0.76	5	2.59	3.90	1.84	76	Smf	Inceptisols	Swamps	Seeds	
		II9A	38.71	9.91	49	35.99	58.93	19.24	84	Mfs	Histosol	Alluvial deposits	Laguncularia	
		II9A	26.95	15.32	87	18.08	60.89	9.36	84	Mfs	Histosol	Alluvial deposits	Other	
		II9A	15.23	3.54	228	14.62	33.64	8.71	84	Mfs	Histosol	Alluvial deposits		
	II9B	18.59	5.70	74	18.80	29.57	9.55	84	Mfs	Histosol	Alluvial deposits			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II9C	4.17	1.75	2	4.17	5.41	2.93	84	Mfs	Histosol	Alluvial deposits		
		II9D	15.40	5.38	69	14.36	32.74	5.92	84	Mfs	Histosol	Alluvial deposits		
	Carbon (%)	III1A	43	0	14	43	44	43	78	Mfs	Mangle	Swamp		
		III1A	51	1	9	51	52	50	83	Mfs	Histosol	Alluvial deposits		
		III1Ai	52	0	2	52	52	52	83	Mfs	Histosol	Alluvial deposits	Rachis	
		III1Aiii	54	1	28	54	54	53	83	Mfs	Histosol	Alluvial deposits		
	Iron (mg/g)	III1A	0.05	0.02	14	0.05	0.09	0.02	78	Mfs	Mangle	Swamp		
		III1A	0.07	0.02	12	0.07	0.10	0.04	83	Mfs	Histosol	Alluvial deposits		
		III1Ai	0.04	0.01	2	0.04	0.04	0.04	83	Mfs	Histosol	Alluvial deposits	Rachis	
		III1Aiii	0.09	0.04	28	0.07	0.21	0.05	83	Mfs	Histosol	Alluvial deposits		
		II9A	1.34	2.53	49	0.68	14.60	0.22	84	Mfs	Histosol	Alluvial deposits	Laguncularia	
		II9A	0.65	1.25	87	0.27	6.88	0.02	84	Mfs	Histosol	Alluvial deposits	Other	
		II9A	0.55	1.91	228	0.15	20.45	0.04	84	Mfs	Histosol	Alluvial deposits		
		II9B	0.35	0.94	74	0.15	6.03	0.03	84	Mfs	Histosol	Alluvial deposits		
		II9C	0.25	0.34	2	0.25	0.49	0.01	84	Mfs	Histosol	Alluvial deposits		
		II9D	2.37	7.21	69	0.40	40.26	0.12	84	Mfs	Histosol	Alluvial deposits		
	Magnesium (mg/g)	III1A	4.43	0.65	38	4.53	5.47	2.90	76	Mfs	Histosol	Alluvial deposits		
		III1A	5.85	2.08	14	6.13	8.02	2.53	78	Mfs	Histosol	Alluvial deposits		
		III1B	2.82	0.40	30	2.84	3.76	1.88	76	Mfs	Histosol	Alluvial deposits		
		III1G	2.18	0.23	5	2.20	2.49	1.94	76	Mfs	Histosol	Alluvial deposits	Seeds	
		II9A	2.90	0.58	49	2.87	4.37	1.99	84	Mfs	Histosol	Alluvial deposits	Laguncularia	
		II9A	2.77	0.41	87	2.76	4.07	1.94	84	Mfs	Histosol	Alluvial deposits	Other	
		II9A	3.59	0.56	228	3.53	6.12	2.14	84	Mfs	Histosol	Alluvial deposits		
		II9B	2.13	0.45	74	2.19	2.92	0.91	84	Mfs	Histosol	Alluvial deposits		
		II9C	1.94	0.09	2	1.94	2.01	1.88	84	Mfs	Histosol	Alluvial deposits		
		II9D	3.16	1.17	69	2.89	8.88	2.06	84	Mfs	Histosol	Alluvial deposits		
		III1A	1.95	0.47	12	2.00	2.71	1.31	83	Mfs	Histosol	Alluvial deposits		
		III1Ai	1.42	0.00	2	1.42	1.42	1.41	83	Mfs	Histosol	Alluvial deposits	Rachis	
		III1Aiii	3.47	0.60	2	3.52	4.45	2.04	83	Mfs	Histosol	Alluvial deposits		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Manganese (mg/g)	II1A	0.02	0.01	14	0.02	0.05	0.01	78	Mfs	Mangle	Swamp		
		II1A	0.06	0.02	12	0.06	0.09	0.03	83	Mfs	Histosol	Alluvial deposits		
		III1Ai	0.04	0.00	2	0.04	0.04	0.04	83	Mfs	Histosol	Alluvial deposits	Rachis	
		III1Aiii	0.07	0.04	28	0.06	0.15	0.04	83	Mfs	Histosol	Alluvial deposits		
		II9A	0.13	0.06	49	0.11	0.35	0.07	84	Mfs	Histosol	Alluvial deposits	Laguncularia	
		II9A	0.24	0.16	87	0.22	0.78	0.04	84	Mfs	Histosol	Alluvial deposits	Other	
		II9A	0.11	0.05	228	0.10	0.46	0.04	84	Mfs	Histosol	Alluvial deposits		
		II9B	0.09	0.05	74	0.07	0.25	0.02	84	Mfs	Histosol	Alluvial deposits		
		II9C	0.02	0.01	2	0.02	0.03	0.02	84	Mfs	Histosol	Alluvial deposits		
	II9D	0.17	0.14	69	0.13	0.85	0.06	84	Mfs	Histosol	Alluvial deposits			
	Nitrogen (%)	II1A	1.77	0.16	38	1.75	2.21	1.40	76	Mfs	Histosol	Alluvial deposits		
		II1A	2.75	0.31	14	2.58	3.30	2.41	78	Mfs	Mangle	Swamp		
		II1A	1.45	0.14	9	1.46	1.65	1.25	83	Mfs	Histosol	Alluvial deposits		
		II1Ai	1.27	0.04	2	1.27	1.30	1.24	83	Mfs	Histosol	Alluvial deposits	Rachis	
		III1Aiii	3.42	0.33	28	3.41	3.87	2.81	83	Mfs	Histosol	Alluvial deposits		
		II1B	1.08	0.13	30	1.08	1.33	0.79	76	Smf	Inceptisols	Swamps		
	Phosphorus (mg/g)	II1G	2.80	0.08	5	2.82	2.88	2.67	76	Smf	Inceptisols	Swamps		
		II1A	0.55	0.13	38	0.54	0.80	0.31	76	Smf	Inceptisols	Swamps		
		II1A	0.91	0.15	14	0.86	1.23	0.71	78	Mfs	Mangle	Swamp		
II1A		0.73	0.10	12	0.71	0.87	0.62	83	Mfs	Histosol	Alluvial deposits			
II1Ai		0.48	0.02	2	0.48	0.49	0.46	83	Mfs	Histosol	Alluvial deposits	Rachis		
III1Aiii		1.11	0.16	28	1.07	1.50	0.86	83	Mfs	Histosol	Alluvial deposits			
II1B		0.40	0.15	30	0.37	0.86	0.21	76	Smf	Inceptisols	Swamps			
III1F		1.51	0.17	5	1.54	1.66	1.24	76	Smf	Inceptisols	Swamps	Seeds		
II9A		0.59	0.17	49	0.55	0.95	0.32	84	Mfs	Histosol	Alluvial deposits	Laguncularia		
II9A		0.46	0.15	87	0.46	0.76	0.19	84	Mfs	Histosol	Alluvial deposits	Other		
II9A	0.39	0.14	228	0.37	0.82	0.19	84	Mfs	Histosol	Alluvial deposits				
II9B	0.29	0.11	74	0.27	0.56	0.09	84	Mfs	Histosol	Alluvial deposits				
II9C	1.15	0.00	2	1.15	1.15	1.14	84	Mfs	Histosol	Alluvial deposits				

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Potassium (mg/g)	II9D	0.94	0.21	69	0.94	1.47	0.54	84	Mfs	Histosol	Alluvial deposits		
		II1A	5.72	0.76	38	5.75	7.15	4.08	76	Smf	Inceptisols	Swamps		
		III1A	12.69	3.94	14	12.22	20.93	8.21	78	Mfs	Mangle	Swamp		
		II1A	10.66	0.91	12	10.66	12.29	8.86	83	Mfs	Histosol	Alluvial deposits		
		II1Ai	10.33	0.22	2	10.33	10.49	10.17	83	Mfs	Histosol	Alluvial deposits	Rachis	
		II1Aiii	9.20	1.65	28	8.94	12.79	6.95	83	Mfs	Histosol	Alluvial deposits		
		II1B	5.11	1.08	30	5.09	6.66	3.16	76	Smf	Inceptisols	Swamps		
		II1G	12.42	1.15	5	12.33	13.89	11.10	76	Smf	Inceptisols	Swamps	Seeds	
		II9A	5.32	1.38	49	5.25	9.41	3.63	84	Mfs	Histosol	Alluvial deposits	Laguncularia	
		II9A	4.09	1.53	87	3.81	8.07	1.63	84	Mfs	Histosol	Alluvial deposits	Other	
	II9A	4.05	1.01	228	3.91	7.94	2.00	84	Mfs	Histosol	Alluvial deposits			
	II9B	3.33	1.33	74	3.08	7.70	1.01	84	Mfs	Histosol	Alluvial deposits			
	II9C	9.34	0.35	2	9.34	9.59	9.10	84	Mfs	Histosol	Alluvial deposits			
	II9D	4.35	1.63	69	3.88	9.17	2.21	84	Mfs	Histosol	Alluvial deposits			
	Sodium (mg/g)	II1A	0.61	0.23	14	0.55	1.00	0.28	78	Mfs	Mangle	Swamp		
		II1A	1.51	0.65	12	1.36	2.79	0.92	83	Mfs	Histosol	Alluvial deposits		
		II1Ai	0.72	0.00	2	0.72	0.72	0.72	83	Mfs	Histosol	Alluvial deposits	Rachis	
		II1Aiii	0.43	0.14	28	0.42	0.66	0.21	83	Mfs	Histosol	Alluvial deposits		
	Sulfur (mg/g)	II1A	0.15	0.02	9	0.14	0.17	0.12	83	Mfs	Histosol	Alluvial deposits		
		II1Ai	0.13	0.00	2	0.13	0.13	0.13	83	Mfs	Histosol	Alluvial deposits	Rachis	
II1Aiii		0.41	0.05	28	0.41	0.52	0.31	83	Mfs	Histosol	Alluvial deposits			
Wood density (g/cc)	II1B	0.53		1				97	Wfs	Inceptisols	Tuffac. sandstone			
<i>Rhizophora mangle</i>	Aluminum (mg/kg)	II1A	30	10	2	30	40	30	78	Mfs	Mangle	Swamp		
		II1A	10	10	12	10	30	10	81	Mfs	Entisols	Swamps	Adult	
		II1A	30	30	12	20	110	10	81	Mfs	Entisols	Swamps	Dead	
		II1A	13	4	12	12	23	8	81	Mfs	Entisols	Swamps	Old	
		II1A	60	60	12	20	220	10	81	Mfs	Entisols	Swamps	Yellow	
		II1A	20	20	12	10	50	10	81	Mfs	Entisols	Swamps	Young	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		III A	66	3	4	65	70	64	82	Mfs	Entisols	Swamps		
		III B	146	3	2	146	148	144	82	Mfs	Entisols	Swamps	Dead wood	
		III B	31	3	3	32	34	28	87	Mfs	Entisols	Compound dunes		
		III B	17	1	2	17	16	18	157	Mfs	Entisols	Compound dunes		
		III C	50	10	4	50	70	40	82	Mfs	Entisols	Swamps	Woody roots	
		III E	1002	306	3	849	1354	802	80	Mfs	Entisols	Swamps		
		III A	25	33	36	15	166	7	80	Mfs	Entisols	Swamps		
		III C	48	10	4	48	57	38	80	Mfs	Entisols	Swamps		
		III C	39	42	18	32	207	15	80	Mfs	Entisols	Swamps	Young stems	
		III E	108	112	4	91	241	11	80	Mfs	Entisols	Swamps		
		III E	13	3	2	13	15	11	80	Mfs	Entisols	Swamps	Roots & lenticels	
	Ash (%)	III A	14.67	2.99	9	14.22	19.64	11.44	72	Dfs	Mangle	Mangle	Border	
		III A	15.33	2.02	7	14.40	18.86	13.10	72	Dfs	Mangle	Mangle	Canal	
		III A	18.18	2.47	8	18.51	20.50	12.67	72	Dfs	Mangle	Mangle	Hipersaline lagoon	
		III A	15.05	0.64	5	15.18	15.91	14.28	72	Dfs	Mangle	Mangle	Seedlings	
		III A	1.59	0.31	9	1.49	2.24	1.25	72	Dfs	Mangle	Mangle	Border	
		III A	1.15	0.42	7	1.14	1.75	0.50	72	Dfs	Mangle	Mangle	Canal	
		III A	10.31	0.05	2	10.31	10.35	10.28	78	Mfs	Mangle	Swamp		
		III A	8.55	0.58	36	8.47	9.63	7.44	80	Mfs	Entisols	Swamps		
		III A	10.82	0.09	4	10.79	10.94	10.75	82	Mfs	Entisols	Swamps		
		III A	17.20	0.80	3				85	Dfs	Mangle	Dune deposits		
		III A	8.74		1				86	Mfs	Entisols	Swamps		
		III A	13.14		1				86	Mfs	Entisols	Swamps	Yellow	
		III A	10.18		1				86	Mfs	Entisols	Swamps		
		III Ai	13.18	2.12	5	13.77	16.68	11.67	75	Dfs	Mangle	Dune deposits		
		III Aii	14.28	2.33	5	13.58	17.55	11.83	75	Dfs	Mangle	Dune deposits		
		III B	10.44	0.02	2	10.44	10.45	10.42	82	Mfs	Entisols	Swamps	Dead wood	
		III B	3.81	1.65	3	3.99	5.36	2.07	87	Mfs	Entisols	Compound dunes		
		III C	11.39	0.11	4	11.41	11.49	11.26	80	Mfs	Entisols	Swamps		



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1C	11.17	2.22	18	10.82	14.72	6.83	80	Mfs	Entisols	Swamps	Young stems	
		II1C	11.48	0.26	4	11.48	11.72	11.25	82	Mfs	Entisols	Swamps	Woody roots	
		II1C	12.30	0.05	3				85	Dfs	Mangle	Dune deposits		
		II1C	10.60		1				86	Mfs	Entisols	Swamps		
		II1E	16.46	1.38	4	16.47	17.68	15.21	80	Mfs	Entisols	Swamps		
		II1E	6.07	0.12	2	6.07	6.15	5.98	80	Mfs	Entisols	Swamps	Roots & lenticels	
		II1F	8.50		1				86	Mfs	Entisols	Swamps	Mature	
		II1F	7.20		1				86	Mfs	Entisols	Swamps	Inmature	
		II1G	16.50	1.10	3				85	Dfs	Mangle	Dune deposits		
		II6	9.30	0.70	3				85	Dfs	Mangle	Dune deposits	Seedlings	
		II6	2.98		1				86	Mfs	Entisols	Swamps	Inmature	
		II6	2.24		1				86	Mfs	Entisols	Swamps	Mature	
	C/N	II1A	26	0	2	26	26	25	78	Mfs	Mangle	Swamp		
		II1A	39	5	36	40	46	29	80	Mfs	Entisols	Swamps		
		II1A	40	5	12	41	46	32	81	Mfs	Entisols	Swamps	Adult	
		II1A	80	29	12	1	143	57	81	Mfs	Entisols	Swamps	Dead	
		II1A	39	4	12	40	43	32	81	Mfs	Entisols	Swamps	Old	
		II1A	80	26	12	72	133	58	81	Mfs	Entisols	Swamps	Yellow	
		II1A	44	4	12	44	48	36	81	Mfs	Entisols	Swamps	Young	
		II1A	43	2	4	43	45	41	82	Mfs	Entisols	Swamps		
		II1B	229	0	2	229	229	229	82	Mfs	Entisols	Swamps	Dead wood	
		II1B	208	38	2	208	235	181	87	Mfs	Entisols	Compound dunes		
		II1C	76	2	4	76	78	73	80	Mfs	Entisols	Swamps		
		II1C	79	19	18	88	104	47	80	Mfs	Entisols	Swamps	Young stems	
		II1C	112	9	4	112	122	104	82	Mfs	Entisols	Swamps	Woody roots	
		II1E	47	3	3	47	49	44	80	Mfs	Entisols	Swamps		
		II1E	76	5	4	75	83	73	80	Mfs	Entisols	Swamps		
	Calcium (mg/g)	II1A	12.60	2.80	8	12.40	17.50	7.50	72	Dfs	Mangle	Mangle	Hipersaline lagoon	
		II1A	11.50	4.20	7	11.40	17.50	5.00	72	Dfs	Mangle	Mangle	Canal	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1A	15.90	3.10	9	14.90	22.40	12.50	72	Dfs	Mangle	Mangle	Border	
		II1A	21.55	0.32	2	21.55	21.77	21.33	72	Dfs	Mangle	Mangle	Yellow-fringe	
		III1A	17.81	1.67	2	17.81	18.99	16.63	72	Dfs	Mangle	Mangle	Old-fringe	
		III1A	22.47	0.11	2	22.47	22.55	22.39	72	Dfs	Mangle	Mangle	Senescent-fringe	
		III1A	16.12	0.23	2	16.12	16.29	15.96	72	Dfs	Mangle	Mangle	Young-fringe	
		III1A	8.15	1.21	2	8.15	9.00	7.30	72	Dfs	Mangle	Mangle	Old-salina	
		III1A	15.16	0.28	2	15.16	15.36	14.96	72	Dfs	Mangle	Mangle	Senescent-salina	
		III1A	12.04	0.55	2	12.04	12.43	11.65	72	Dfs	Mangle	Mangle	Yellow-salina	
		III1A	7.89	0.51	2	7.89	8.26	7.53	72	Dfs	Mangle	Mangle	Young-salina	
		III1A	12.02	4.23	5	13.14	16.28	4.38	77	Mfs	Swamp	Swamp		
		III1A	18.33	0.20	2	18.33	18.47	18.19	78	Mfs	Mangle	Swamp		
		III1A	8.20	1.00	36	8.24	9.94	6.19	80	Mfs	Entisols	Swamps		
		III1A	8.66	1.54	12	8.95	10.87	5.90	81	Mfs	Entisols	Swamps	Adult	
		III1A	12.37	1.83	12	12.16	17.17	10.22	81	Mfs	Entisols	Swamps	Dead	
		III1A	9.03	0.95	12	9.19	10.30	6.72	81	Mfs	Entisols	Swamps	Old	
		III1A	12.35	1.42	12	12.60	14.67	9.81	81	Mfs	Entisols	Swamps	Yellow	
		III1A	7.81	1.04	12	8.10	9.05	6.07	81	Mfs	Entisols	Swamps	Young	
		III1A	8.66	1.04	4	8.73	9.70	7.48	82	Mfs	Entisols	Swamps		
		III1B	29.31	0.62	2	29.31	29.75	28.87	82	Mfs	Entisols	Swamps	Dead wood	
		III1B	7.14	7.15	3	3.39	15.39	2.64	87	Mfs	Entisols	Compound dunes		
		III1B	3.77	0.34	2	3.77	3.53	4.01	157	Mfs	Entisols	Compound dunes		
		III1C	24.82	0.62	4	24.94	25.37	24.03	80	Mfs	Entisols	Swamps		
		III1C	24.82	8.03	18	23.23	42.00	17.01	80	Mfs	Entisols	Swamps	Young stems	
		III1C	27.07	2.38	4	26.04	30.61	25.51	82	Mfs	Entisols	Swamps	Woody roots	
		III1E	2.32	0.08	3	2.28	2.40	2.27	80	Mfs	Entisols	Swamps		
		III1E	1.89	0.15	4	1.86	2.11	1.74	80	Mfs	Entisols	Swamps		
		III1E	3.14	0.04	2	3.14	3.17	3.12	80	Mfs	Entisols	Swamps	Roots & lenticels	
		II9A	16.61	2.79	11	17.22	19.84	9.86	73	Dfs	Mangle	Dune deposits		
		II9B	25.47	3.54	11	24.42	32.37	20.70	73	Dfs	Mangle	Dune deposits		

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<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II9C	3.78	1.33	11	3.55	5.89	1.70	73	Dfs	Mangle	Dune deposits		
		II9D	9.94	1.05	11	9.93	11.67	7.71	73	Dfs	Mangle	Dune deposits		
	Carbon (%)	III1A	41	0	2	41	42	41	78	Mfs	Mangle	Swamp		
		II1A	47	3	36	48	50	38	80	Mfs	Entisols	Swamps		
		II1A	44	1	12	44	46	43	81	Mfs	Entisols	Swamps	Adult	
		II1A	44	1	12	44	46	42	81	Mfs	Entisols	Swamps	Dead	
		II1A	44	2	12	4	46	41	81	Mfs	Entisols	Swamps	Old	
		II1A	44	2	12	44	46	40	81	Mfs	Entisols	Swamps	Yellow	
		II1A	44	1	12	44	45	43	81	Mfs	Entisols	Swamps	Young	
		II1A	50	0	4	50	51	50	82	Mfs	Entisols	Swamps		
		II1A	38	1	3				85	Dfs	Mangle	Dune deposits		
		II1B	48	0	2	48	48	48	82	Mfs	Entisols	Swamps	Dead wood	
		II1C	45	0	4	45	45	45	80	Mfs	Entisols	Swamps		
		II1C	45	7	18	46	66	35	80	Mfs	Entisols	Swamps	Young stems	
		II1C	49	0	4	49	49	49	82	Mfs	Entisols	Swamps	Woody roots	
		II1C	40	1	3				85	Dfs	Mangle	Dune deposits		
		II1E	40	0	3	40	40	40	80	Mfs	Entisols	Swamps		
		II1E	40	1	4	40	41	39	80	Mfs	Entisols	Swamps		
		II1E	47	0	2	47	47	47	80	Mfs	Entisols	Swamps	Roots & lenticels	
		II1G	38	0	3				85	Dfs	Mangle	Dune deposits		
	Iron (mg/kg)	II6	43	1	3				85	Dfs	Mangle	Dune deposits	Seedlings	
		II1A	50	0	2	50	50	50	78	Mfs	Mangle	Swamp		
		II1A	30	20	12	30	80	10	81	Mfs	Entisols	Swamps	Adult	
		II1A	40	10	12	40	50	20	81	Mfs	Entisols	Swamps	Dead	
		II1A	20	10	12	30	40	10	81	Mfs	Entisols	Swamps	Old	
		II1A	30	10	12	30	50	10	81	Mfs	Entisols	Swamps	Yellow	
		II1A	20	10	11	20	30	10	81	Mfs	Entisols	Swamps	Young	
		II1A	40	0	4	40	40	30	82	Mfs	Entisols	Swamps		
		II1B	150	0	2	150	150	150	82	Mfs	Entisols	Swamps	Dead wood	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1B	36	8	3	36	44	28	87	Mfs	Entisols	Compound dunes		
		II1B	15	1	2	15	14	16	157	Mfs	Entisols	Compound dunes		
		III1C	60	10	4	60	60	50	82	Mfs	Entisols	Swamps	Woody roots	
		III1A	39	19	36	38	110	6	80	Mfs	Entisols	Swamps		
		III1C	62	20	4	63	83	40	80	Mfs	Entisols	Swamps		
		III1C	33	16	18	34	71	2	80	Mfs	Entisols	Swamps	Young stems	
		III1E	3729	1627	3	3695	5372	2119	80	Mfs	Entisols	Swamps		
		III1E	155	32	4	151	192	127	80	Mfs	Entisols	Swamps		
		III1E	18	5	2	18	21	14	80	Mfs	Entisols	Swamps	Roots & lenticels	
	Magnesium (mg/g)	III1A	7.61	0.04	2	7.61	7.64	7.58	74	Dfs	Mangle	Dune deposits	Senescent-fringe	
		III1A	6.70	0.15	2	6.70	6.81	6.59	74	Dfs	Mangle	Dune deposits	Young-fringe	
		III1A	5.71	0.37	2	5.71	5.97	5.45	74	Dfs	Mangle	Dune deposits	Old-salina	
		III1A	7.28	0.36	2	7.28	7.53	7.02	74	Dfs	Mangle	Dune deposits	Senescent-salina	
		III1A	6.91	0.13	2	6.91	7.00	6.91	74	Dfs	Mangle	Dune deposits	Yellow-salina	
		III1A	4.97	0.04	2	4.97	5.00	4.94	74	Dfs	Mangle	Dune deposits	Mature-salina	
		III1A	1.02	0.21	4	0.94	1.38	0.78	72	Dfs	Mangle	Mangle	Border	
		III1A	1.27	0.31	4	1.26	1.73	0.94	72	Dfs	Mangle	Mangle	Canal	
		III1A	3.59	0.71	5	3.59	5.03	2.65	77	Mfs	Swamp	Swamp		
		III1A	4.54	0.08	2	4.54	4.60	4.48	78	Mfs	Mangle	Swamp		
		III1A	4.69	0.46	36	4.56	5.84	3.94	80	Mfs	Entisols	Swamps		
		III1A	4.48	0.84	12	4.21	6.41	3.61	81	Mfs	Entisols	Swamps	Adult	
		III1A	6.27	0.87	12	6.06	7.70	5.04	81	Mfs	Entisols	Swamps	Dead	
		III1A	4.51	0.78	12	4.48	5.66	3.35	81	Mfs	Entisols	Swamps	Old	
		III1A	6.22	1.02	12	5.81	7.88	5.12	81	Mfs	Entisols	Swamps	Yellow	
		III1A	3.96	0.62	12	3.77	5.37	3.35	81	Mfs	Entisols	Swamps	Young	
		III1B	0.89	0.28	3	0.90	1.16	0.60	87	Mfs	Entisols	Compound dunes		
		III1B	0.69	0.00	2	0.69	0.69	0.69	157	Mfs	Entisols	Compound dunes		
		III1C	2.71	0.18	4	2.72	2.88	2.50	80	Mfs	Entisols	Swamps		
		III1C	2.56	0.53	18	2.63	3.97	1.49	80	Mfs	Entisols	Swamps	Young stems	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1E	4.69	0.46	3	4.44	5.22	4.41	80	Mfs	Entisols	Swamps		
		II1E	3.76	0.52	4	3.82	4.31	3.10	80	Mfs	Entisols	Swamps		
		III1E	1.51	0.02	2	1.51	1.53	1.49	80	Mfs	Entisols	Swamps	Roots & lenticels	
		II9A	6.13	1.32	11	6.53	7.40	2.83	73	Dfs	Mangle	Dune deposits		
		II9B	3.09	0.35	11	3.23	3.47	2.52	73	Dfs	Mangle	Dune deposits		
		II9C	1.78	0.46	11	1.73	2.60	1.10	73	Dfs	Mangle	Dune deposits		
		II9D	3.48	0.33	11	3.38	4.04	2.88	73	Dfs	Mangle	Dune deposits		
		III1A	4.83	1.04	4	4.83	5.85	3.80	82	Mfs	Entisols	Swamps		
		III1B	3.07	0.13	2	3.07	3.16	2.98	82	Mfs	Entisols	Swamps	Dead wood	
		III1C	1.72	0.35	4	1.76	2.04	1.33	82	Mfs	Entisols	Swamps	Woody roots	
	Manganese (mg/g)	III1A	0.59	0.00	2	0.59	0.60	0.59	78	Mfs	Mangle	Swamp		
		III1A	0.06	0.03	12	0.06	0.11	0.02	81	Mfs	Entisols	Swamps	Adult	
		III1A	0.09	0.03	12	0.08	0.13	0.03	81	Mfs	Entisols	Swamps	Dead	
		III1A	0.06	0.03	12	0.06	0.10	0.03	81	Mfs	Entisols	Swamps	Old	
		III1A	0.09	0.04	12	0.09	0.15	0.13	81	Mfs	Entisols	Swamps	Yellow	
		III1A	0.05	0.02	12	0.04	0.08	0.02	81	Mfs	Entisols	Swamps	Young	
		III1A	0.05	0.01	4	0.05	0.07	0.04	82	Mfs	Entisols	Swamps		
		III1B	0.02	0.00	2	0.02	0.02	0.02	82	Mfs	Entisols	Swamps	Dead wood	
		III1B	0.05	0.04	3	0.03	0.10	0.02	87	Mfs	Entisols	Compound dunes		
		III1B	0.05	0.01	2	0.05	0.04	0.05	157	Mfs	Entisols	Compound dunes		
		III1C	0.04	0.00	4	0.05	0.05	0.04	82	Mfs	Entisols	Swamps	Woody roots	
		III1A	0.06	0.03	36	0.06	0.12	0.02	80	Mfs	Entisols	Swamps		
		III1C	0.10	0.00	4	0.10	0.10	0.10	80	Mfs	Entisols	Swamps		
		III1C	0.06	0.03	18	0.05	0.14	0.02	80	Mfs	Entisols	Swamps	Young stems	
		III1E	0.04	0.00	3	0.03	0.05	0.02	80	Mfs	Entisols	Swamps		
		III1E	0.01	0.02	4	0.01	0.01	0.01	80	Mfs	Entisols	Swamps		
		III1E	0.01	0.00	2	0.01	0.01	0.01	80	Mfs	Entisols	Swamps	Roots & lenticels	
	Nitrogen (%)	III1C	0.40		1				86	Mfs	Entisols	Swamps		
		III1A	1.07	0.31	3	0.96	1.55	0.73	72	Dfs	Mangle	Mangle	Hipersaline lagoon	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1A	1.27	0.31	4	1.26	1.73	0.94	72	Dfs	Mangle	Mangle	Canal	
		II1A	1.02	0.21	4	0.94	1.38	0.78	72	Dfs	Mangle	Mangle	Border-control	
		III1A	1.12	0.23	5	1.08	1.51	0.89	75	Dfs	Mangle	Dune deposits	Seedlings	
		III1A	1.21	0.16	5	1.23	1.41	0.97	77	Mfs	Swamp	Swamp		
		III1A	1.62	0.03	2	1.62	1.64	1.60	78	Mfs	Mangle	Swamp		
		III1A	1.23	0.22	36	1.21	1.65	0.85	80	Mfs	Entisols	Swamps		
		III1A	1.12	0.13	12	1.07	1.38	1.00	81	Mfs	Entisols	Swamps	Adult	
		III1A	0.60	0.15	12	0.64	0.74	0.32	81	Mfs	Entisols	Swamps	Dead	
		III1A	1.13	0.13	12	1.07	1.38	1.02	81	Mfs	Entisols	Swamps	Old	
		III1A	0.59	0.13	12	0.61	0.73	0.34	81	Mfs	Entisols	Swamps	Yellow	
		III1A	1.02	0.11	12	0.99	1.21	0.91	81	Mfs	Entisols	Swamps	Young	
		III1A	1.17	0.06	4	1.17	1.23	1.12	82	Mfs	Entisols	Swamps		
		III1A	1.17	0.11	3				85	Dfs	Mangle	Dune deposits		
		III1A	0.97		1				86	Mfs	Entisols	Swamps		
		III1A	0.62		1				86	Mfs	Entisols	Swamps	Yellow	
		III1A	1.07		1				86	Mfs	Entisols	Swamps		
		III1A	0.31		1				74	Dfs	Mangle	Dune deposits	Yellow-fringe	
		III1A	0.55		1				74	Dfs	Mangle	Dune deposits	Old-fringe	
		III1A	0.28		1				74	Dfs	Mangle	Dune deposits	Senescent-fringe	
		III1A	0.84		1				74	Dfs	Mangle	Dune deposits	Young-fringe	
		III1A	1.38		1				74	Dfs	Mangle	Dune deposits	Old-salina	
		III1A	0.37		1				74	Dfs	Mangle	Dune deposits	Senescent-salina	
		III1A	0.39		1				74	Dfs	Mangle	Dune deposits	Yellow-salina	
		III1A	0.83		1				74	Dfs	Mangle	Dune deposits	Mature-salina	
		III1Ai	1.42	0.07	5	1.42	1.52	1.36	75	Dfs	Mangle	Dune deposits		
		III1Aii	1.51	0.07	5	1.51	1.59	1.41	75	Dfs	Mangle	Dune deposits		
		III1B	0.21	0.00	2	0.21	0.21	0.21	82	Mfs	Entisols	Swamps	Dead wood	
		III1B	0.22	0.03	2	0.22	0.24	0.19	87	Mfs	Entisols	Compound dunes		
		III1C	0.60	0.02	4	0.60	0.62	0.58	80	Mfs	Entisols	Swamps		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1C	0.62	0.27	18	0.52	1.40	0.38	80	Mfs	Entisols	Swamps	Young stems	
		II1C	0.44	0.04	4	0.44	0.47	0.40	82	Mfs	Entisols	Swamps	Woody roots	
		II1C	0.83	0.08	3				85	Dfs	Mangle	Dune deposits		
		II1E	0.86	0.05	3	0.86	0.90	0.81	80	Mfs	Entisols	Swamps		
		II1E	0.52	0.03	4	0.53	0.55	0.49	80	Mfs	Entisols	Swamps		
		II1E	0.46	0.00	2	0.46	0.46	0.46	80	Mfs	Entisols	Swamps	Roots & lenticels	
		II1F	0.47		1				86	Mfs	Entisols	Swamps	Mature	
		II1F	0.63		1				86	Mfs	Entisols	Swamps	Inmature	
		II1G	1.27	0.09	3				85	Dfs	Mangle	Dune deposits		
		II6	0.86	0.07	3				85	Dfs	Mangle	Dune deposits	Seedlings	
		II6	0.47		1				86	Mfs	Entisols	Swamps	Inmature	
		II6	0.24		1				86	Mfs	Entisols	Swamps	Mature	
		II9A	0.70	0.27	11	0.60	1.48	0.54	73	Dfs	Mangle	Dune deposits		
		II9B	0.72	0.08	11	0.68	0.88	0.65	73	Dfs	Mangle	Dune deposits		
		II9C	0.68	0.11	11	0.66	0.86	0.54	73	Dfs	Mangle	Dune deposits		
		II9D	0.58	0.12	11	0.57	0.78	0.41	73	Dfs	Mangle	Dune deposits		
	Phosphorus (mg/g)	II1A	0.40	0.03	3				85	Dfs	Mangle	Dune deposits		
		II1C	0.20	0.04	3				85	Dfs	Mangle	Dune deposits		
		II1G	0.40	0.03	3				85	Dfs	Mangle	Dune deposits		
		II6	0.50	0.04	3				85	Dfs	Mangle	Dune deposits	Seedlings	
		II1A	0.46	0.11	9	0.41	0.70	0.36	72	Dfs	Mangle	Mangle	Border	
		II1A	0.65	0.35	7	0.48	1.42	0.36	72	Dfs	Mangle	Mangle	Canal	
		II1A	0.41	0.11	5	0.36	0.60	0.33	72	Dfs	Mangle	Mangle	Hipersaline lagoon	
		II1A	0.85	0.04	5	0.85	0.89	0.79	75	Dfs	Mangle	Dune deposits	Seedlings	
		II1A	0.11	0.02	2	0.11	0.12	0.10	74	Dfs	Mangle	Dune deposits	Yellow-fringe	
		II1A	0.38	0.00	2	0.38	0.38	0.38	74	Dfs	Mangle	Dune deposits	Old-fringe	
		II1A	0.21	0.01	2	0.21	0.22	0.21	74	Dfs	Mangle	Dune deposits	Senescen-fringe	
		II1A	0.41	0.02	2	0.41	0.42	0.40	74	Dfs	Mangle	Dune deposits	Young m.-fringe	
		II1A	0.46	0.04	2	0.46	0.49	0.43	74	Dfs	Mangle	Dune deposits	Old mature-salina	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1A	0.10	0.02	2	0.10	0.12	0.09	74	Dfs	Mangle	Dune deposits	Senescent-salina	
		II1A	0.22	0.01	2	0.22	0.22	0.21	74	Dfs	Mangle	Dune deposits	Yellow-salina	
		III1A	0.62	0.01	2	0.62	0.63	0.61	74	Dfs	Mangle	Dune deposits	Young-salina	
		II1A	0.94	0.09	5	0.95	1.12	0.79	77	Mfs	Swamp	Swamp		
		II1A	0.77	0.00	2	0.77	0.77	0.77	78	Mfs	Mangle	Swamp		
		II1A	0.43	0.10	36	0.40	0.62	0.31	80	Mfs	Entisols	Swamps		
		II1A	0.46	0.08	12	0.44	0.60	0.37	81	Mfs	Entisols	Swamps	Adult	
		II1A	0.09	0.02	12	0.08	0.14	0.07	81	Mfs	Entisols	Swamps	Dead	
		II1A	0.40	0.08	12	0.38	0.56	0.32	81	Mfs	Entisols	Swamps	Old	
		II1A	0.11	0.05	12	0.09	0.21	0.08	81	Mfs	Entisols	Swamps	Yellow	
		II1A	0.56	0.12	12	0.50	0.74	0.41	81	Mfs	Entisols	Swamps	Young	
		II1A	0.40	0.09	4	0.40	0.49	0.31	82	Mfs	Entisols	Swamps		
		II1A	0.68		1				86	Mfs	Entisols	Swamps		
		II1A	0.05		1				86	Mfs	Entisols	Swamps	Yellow	
		II1A	0.37		1				86	Mfs	Entisols	Swamps		
		II1Ai	0.80	0.04	5	0.80	0.84	0.75	75	Dfs	Mangle	Dune deposits		
		II1Aii	0.83	0.05	5	0.85	0.88	0.77	75	Dfs	Mangle	Dune deposits		
		II1B	0.06	0.00	2	0.06	0.06	0.06	82	Mfs	Entisols	Swamps	Dead wood	
		II1B	0.28	0.07	3	0.29	0.34	0.21	87	Mfs	Entisols	Compound dunes		
		II1B	0.19	0.03	2	0.19	0.17	0.21	157	Mfs	Entisols	Compound dunes		
		II1C	0.19	0.01	4	0.19	0.20	0.18	80	Mfs	Entisols	Swamps		
		II1C	0.31	0.15	18	0.20	0.62	0.17	80	Mfs	Entisols	Swamps	Young stems	
		II1C	0.17	0.02	4	0.18	0.19	0.15	82	Mfs	Entisols	Swamps	Woody roots	
		II1C	0.08		1				86	Mfs	Entisols	Swamps		
		II1E	0.30	0.03	3	0.29	0.33	0.27	80	Mfs	Entisols	Swamps		
		II1E	0.23	0.01	4	0.23	0.24	0.21	80	Mfs	Entisols	Swamps		
		II1E	0.12	0.00	2	0.12	0.12	0.11	80	Mfs	Entisols	Swamps	Roots & lenticels	
		II1F	0.37		1				86	Mfs	Entisols	Swamps	Mature	
		II1F	0.51		1				86	Mfs	Entisols	Swamps	Immature	



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II6	0.61		1				86	Mfs	Entisols	Swamps	iInmature	
		II6	0.50		1				86	Mfs	Entisols	Swamps	Mature	
		II9A	0.29	0.15	11	0.28	0.70	0.12	73	Dfs	Mangle	Dune deposits		
		II9B	0.40	0.09	11	0.38	0.61	0.31	73	Dfs	Mangle	Dune deposits		
		II9C	5.63	0.74	11	0.64	0.96	0.37	73	Dfs	Mangle	Dune deposits		
		II9D	0.31	0.08	11	0.29	0.44	0.21	73	Dfs	Mangle	Dune deposits		
	Potassium (mg/g)	II1A	2.90	0.20	3				85	Dfs	Mangle	Dune deposits		
		II1C	1.40	0.10	3				85	Dfs	Mangle	Dune deposits		
		II1G	2.40	0.10	3				85	Dfs	Mangle	Dune deposits		
		II6	2.60	0.30	3				85	Dfs	Mangle	Dune deposits	Seedlings	
		III1A	2.10	4.00	7	2.00	2.80	1.60	72	Dfs	Mangle	Mangle	Hipersaline lagoon	
		III1A	1.80	0.50	6	1.90	2.50	1.20	72	Dfs	Mangle	Mangle	Canal	
		III1A	2.00	0.80	8	1.80	3.50	1.00	72	Dfs	Mangle	Mangle	Border-control	
		III1A	6.61	2.93	5	7.35	9.83	5.94	75	Dfs	Mangle	Dune deposits	Seedlings	
		III1A	8.85	1.03	2	8.85	9.58	8.12	74	Dfs	Mangle	Dune deposits	Yellow-fringe	
		III1A	8.90	0.25	2	8.90	9.07	8.72	74	Dfs	Mangle	Dune deposits	Old-fringe	
		III1A	5.56	0.13	2	5.56	5.65	5.48	74	Dfs	Mangle	Dune deposits	Senescen-fringe	
		III1A	10.55	0.04	2	10.55	10.57	10.53	74	Dfs	Mangle	Dune deposits	Young m.-fringe	
		III1A	6.41	0.42	2	6.41	6.70	6.11	74	Dfs	Mangle	Dune deposits	Old mature-salina	
		III1A	6.56	0.05	2	6.56	6.60	6.56	74	Dfs	Mangle	Dune deposits	Senescent-salina	
		III1A	6.29	0.15	2	6.29	6.40	6.19	74	Dfs	Mangle	Dune deposits	Yellow-salina	
		III1A	8.57	0.17	2	8.57	8.69	8.45	74	Dfs	Mangle	Dune deposits	Young m.-salina	
		III1A	9.67	0.61	2	9.67	10.10	9.24	74	Dfs	Mangle	Dune deposits	Yellow-fringe	
		III1A	7.34	0.50	2	7.34	7.69	6.99	74	Dfs	Mangle	Dune deposits	Old-fringe	
		III1A	10.56	3.89	5	11.38	14.63	3.91	77	Mfs	Swamp	Swamp		
		III1A	20.29	0.12	2	20.29	20.38	20.21	78	Mfs	Mangle	Swamp		
		III1A	6.03	0.35	36	6.07	6.52	5.32	80	Mfs	Entisols	Swamps		
		III1A	6.11	0.32	12	6.07	6.69	5.45	81	Mfs	Entisols	Swamps	Adult	
		III1A	5.64	1.18	12	5.64	7.66	3.96	81	Mfs	Entisols	Swamps	Dead	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1A	5.88	0.46	12	5.81	6.67	4.89	81	Mfs	Entisols	Swamps	Old	
		II1A	5.98	1.81	12	6.48	7.90	2.75	81	Mfs	Entisols	Swamps	Yellow	
		III1A	5.79	0.18	12	5.79	6.13	5.55	81	Mfs	Entisols	Swamps	Young	
		II1A	5.08	0.30	4	5.05	5.48	4.76	82	Mfs	Entisols	Swamps		
		III1Ai	4.39	1.93	5	4.99	7.00	2.34	75	Dfs	Mangle	Dune deposits		
		III1Aii	6.29	1.49	5	6.00	8.73	4.99	75	Dfs	Mangle	Dune deposits		
		II1B	2.60	0.06	2	2.60	2.64	2.56	82	Mfs	Entisols	Swamps	Dead wood	
		II1B	1.24	0.30	3	1.23	1.55	0.94	87	Mfs	Entisols	Compound dunes		
		II1B	0.75	0.46	2	0.75	0.42	1.07	157	Mfs	Entisols	Compound dunes		
		II1C	2.23	0.08	4	2.24	2.30	2.12	80	Mfs	Entisols	Swamps		
		II1C	2.80	0.83	18	2.39	4.26	1.96	80	Mfs	Entisols	Swamps	Young stems	
		II1C	3.48	0.21	4	3.53	3.67	3.18	82	Mfs	Entisols	Swamps	Woody roots	
		II1E	3.99	0.42	3	4.06	4.36	3.54	80	Mfs	Entisols	Swamps		
		II1E	4.64	0.37	4	4.71	5.02	4.13	80	Mfs	Entisols	Swamps		
		III1E	5.17	0.05	2	5.17	5.20	5.13	80	Mfs	Entisols	Swamps	Roots & lenticels	
		II9A	5.78	2.00	11	5.06	9.13	3.08	73	Dfs	Mangle	Dune deposits		
		II9B	4.32	1.23	11	4.22	6.56	2.54	73	Dfs	Mangle	Dune deposits		
		II9C	5.63	0.74	11	5.56	6.68	4.55	73	Dfs	Mangle	Dune deposits		
		II9D	3.95	0.64	11	4.10	4.78	3.00	73	Dfs	Mangle	Dune deposits		
	Sodium (mg/g)	II1A	9.84	0.23	2	9.84	10.00	9.84	74	Dfs	Mangle	Dune deposits	Senescen-fringe	
		II1A	16.09	0.09	2	16.09	16.16	16.03	74	Dfs	Mangle	Dune deposits	Young m.-fringe	
		II1A	22.98	1.44	2	22.98	24.00	21.97	74	Dfs	Mangle	Dune deposits	Old mature-salina	
		II1A	34.47	0.27	2	34.47	34.66	34.28	74	Dfs	Mangle	Dune deposits	Senescent-salina	
		II1A	40.85	0.65	2	40.85	41.31	40.38	74	Dfs	Mangle	Dune deposits	Yellow-salina	
		II1A	26.88	0.47	2	26.88	27.22	26.55	74	Dfs	Mangle	Dune deposits	Mature-salina	
		II1A	19.91	0.74	2	19.91	20.43	19.38	74	Dfs	Mangle	Dune deposits	Yellow-fringe	
		II1A	14.61	0.53	2	14.61	14.99	14.24	74	Dfs	Mangle	Dune deposits	Old-fringe	
		II1A	11.87	7.49	5	7.42	22.62	3.78	77	Mfs	Swamp	Swamp		
		II1A	14.00	0.27	2	14.00	14.19	13.81	78	Mfs	Mangle	Swamp		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Sulfur (mg/g)	II1A	11.73	1.70	36	11.58	14.60	9.20	80	Mfs	Entisols	Swamps		
		II1A	12.26	1.22	12	12.17	14.75	10.65	81	Mfs	Entisols	Swamps	Adult	
		II1A	16.18	4.40	12	16.72	22.15	9.67	81	Mfs	Entisols	Swamps	Dead	
		II1A	14.73	4.18	12	14.60	20.35	10.06	81	Mfs	Entisols	Swamps	Old	
		II1A	17.74	5.24	12	17.87	24.52	10.69	81	Mfs	Entisols	Swamps	Yellow	
		II1A	11.05	0.83	12	11.25	12.16	9.45	81	Mfs	Entisols	Swamps	Young	
		II1C	10.43	0.54	4	10.46	11.01	9.79	80	Mfs	Entisols	Swamps		
		II1C	11.01	1.21	18	10.94	15.10	9.26	80	Mfs	Entisols	Swamps	Young stems	
		II1E	27.28	1.06	3	26.71	28.50	26.62	80	Mfs	Entisols	Swamps		
		II1E	48.24	5.96	4	49.31	53.73	40.62	80	Mfs	Entisols	Swamps		
		II1E	11.52	0.30	2	11.52	11.74	11.31	80	Mfs	Entisols	Swamps	Roots & lenticels	
		II9A	16.25	3.79	11	17.05	20.73	6.72	73	Dfs	Mangle	Dune deposits		
		II9B	9.32	2.69	11	8.66	13.59	5.09	73	Dfs	Mangle	Dune deposits		
		II9C	9.77	2.08	11	9.16	14.65	7.33	73	Dfs	Mangle	Dune deposits		
		II9D	10.20	1.53	11	10.29	12.88	7.76	73	Dfs	Mangle	Dune deposits		
		II1A	0.60	0.29	4	0.60	0.87	0.35	82	Mfs	Entisols	Swamps		
		II1B	0.11	0.01	2	0.11	0.12	0.10	82	Mfs	Entisols	Swamps	Dead wood	
		II1C	0.14	0.02	4	0.14	0.16	0.12	82	Mfs	Entisols	Swamps	Woody roots	
<i>Rourea surinamensis</i>	Aluminum (mg/g)	II4	0.12	0.12	7	0.07	0.38	0.05	135	Lmrf	Ultisols	Tuffac. sandstone		
	C/N	II4	41	5	2	41	44	37	135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II4	5.18	0.85	7	5.44	6.15	3.93	135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II4	45	3	2	45	47	43	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II4	0.11	0.12	7	0.05	0.37	0.03	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II4	2.07	0.56	7	2.28	2.67	1.18	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II4	0.60	0.48	7	0.46	1.59	0.09	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II4	0.93	0.22	9	0.93	1.27	0.62	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II4	0.69	0.26	7	0.69	1.12	0.36	135	Lmrf	Ultisols	Tuffac. sandstone		
Potassium (mg/g)	II4	6.92	2.34	7	7.13	10.93	3.97	135	Lmrf	Ultisols	Tuffac. sandstone			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
	Sulfur (%)	II4	0.31	0.04	2	0.31	0.34	0.29	135	Lmrf	Ultisols	Tuffac. sandstone			
<i>Roystonea borinquena</i>	Aluminum (mg/g)	III1F	0.05	0.02	2	0.05	0.06	0.04	119						
		III1F	0.06	0.01	2	0.06	0.07	0.05	119				Fruits-no seeds		
	Ash (%)	III1F	2.82	0.57	2	2.82	3.22	2.41	119						
		III1F	9.05	0.04	2	9.05	9.07	9.02	119					Fruits-no seeds	
	Calcium (mg/g)	III1F	1.51	0.04	2	1.51	1.54	1.48	119						
		III1F	13.79	0.66	2	13.79	14.26	13.32	119					Fruits-no seeds	
	Iron (mg/g)	III1F	0.47	0.02	2	0.47	0.48	0.46	119						
		III1F	0.04	0.01	2	0.04	0.05	0.04	119					Fruits-no seeds	
	Magnesium (mg/g)	III1F	0.91	0.03	2	0.91	0.93	0.89	119						
		III1F	3.18	0.14	2	3.18	3.27	3.08	119					Fruits-no seeds	
	Manganese (mg/kg)	III1F	15	10	2	15	15	14	119						
		III1F	21	1	2	21	21	20	119					Fruits-no seeds	
	Nitrogen (%)	III1F	1.15	0.01	2	1.15	1.15	1.14	119						
		III1F	0.51	0.01	2	0.55	0.50	0.50	119					Fruits-no seeds	
	Phosphorus (mg/g)	III1F	1.74	0.04	2	1.74	1.77	1.71	119						
		III1F	0.92	0.04	2	0.92	0.94	0.89	119					Fruits-no seeds	
Potassium (mg/g)	III1F	4.74	0.12	2	4.74	4.83	4.66	119							
	III1F	18.10	0.10	2	18.10	18.17	18.03	119					Fruits-no seeds		
<i>Sabicea hirsuta</i>	Aluminum (mg/g)	II3	0.18	0.10	6	0.14	0.31	0.09	135	Lmrf	Ultisols	Tuffac. sandstone			
	C/N	II3	41	15	2	41	52	30	135	Lmrf	Ultisols	Tuffac. sandstone			
	Calcium (mg/g)	II3	3.75	1.38	6	3.27	6.44	2.64	135	Lmrf	Ultisols	Tuffac. sandstone			
	Carbon (%)	II3	45	0	2	45	45	45	135	Lmrf	Ultisols	Tuffac. sandstone			
	Iron (mg/g)	II3	0.20	0.15	6	0.15	0.45	0.06	135	Lmrf	Ultisols	Tuffac. sandstone			
	Magnesium (mg/g)	II3	2.14	0.71	6	2.10	3.05	1.30	135	Lmrf	Ultisols	Tuffac. sandstone			
	Manganese (mg/g)	II3	0.41	0.21	6	0.36	0.78	0.16	135	Lmrf	Ultisols	Tuffac. sandstone			
	Nitrogen (%)	II3	1.28	0.50	8	1.05	2.04	0.74	135	Lmrf	Ultisols	Tuffac. sandstone			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Phosphorus (mg/g)	II3	0.81	0.24	6	0.69	1.17	0.61	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II3	23.80	10.17	6	22.92	42.45	11.88	135	Lmrf	Ultisols	Tuffac. sandstone		
	Sulfur (%)	II3	0.13	0.07	2	0.13	0.18	0.08	135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Sapindus saponaria</i>	Aluminum (mg/g)	II1A	0.48		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	Ash (%)	II1A	3.69		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	C/N	II1A	15		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II1A	7.10		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II1A	55		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II1A	0.48		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II1A	0.77		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II1A	0.14		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II1A	3.62		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II1A	0.70		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II1A	2.58		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	Sulfur (%)	II1A	0.51		1				129	Lmrf	Ultisols	Tuffac. sandstone		
<i>Sapium laurocerasus</i>	Aluminum (mg/g)	II1A	0.27	0.44	15	0.09	1.62	0.01	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	0.29	0.42	15	0.06	1.12	0.00	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1E	0.53	0.73	8	0.11	2.02	0.03	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1H	0.27	0.01	2	0.27	0.28	0.27	135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	0.25	0.12	7	0.24	0.40	0.08	145	Wfs	Ultisols	Tuffac. sandstone		
	Ash (%)	II1A	7.22		1				71	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	2.56	1.13	31	2.43	5.58	1.05	68	Swf	Ultisols	Tuffac. sandstone	Class 1 LD	
		II1B	1.80	0.81	8	1.66	3.62	1.02	68	Swf	Ultisols	Tuffac. sandstone	Class 2 LD	
		II1B	1.73	0.72	8	1.75	2.95	0.71	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	
		II1B	1.66	0.20	2	1.66	1.80	1.52	68	Swf	Ultisols	Tuffac. sandstone	Class 4 LD	
		II1B	2.52	1.11	3	3.02	3.29	1.25	68	Swf	Ultisols	Tuffac. sandstone	Class 2 ST	
		II8A	11.90	1.12	7	12.01	13.25	10.31	145	Wfs	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	C/N	II8A	40	2	7	40	42	37	145	Wfs	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II1A	7.57	4.08	15	7.69	13.98	1.69	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	8.30	3.42	31	8.06	16.55	3.42	68	Swf	Ultisols	Tuffac. sandstone	Class 1 LD	
		II1B	3.10	1.92	8	5.64	5.65	0.98	68	Swf	Ultisols	Tuffac. sandstone	Class 2 LD	
		II1B	2.76	1.21	8	2.70	4.51	1.16	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	
		II1B	2.55	0.35	2	2.55	2.80	2.30	68	Swf	Ultisols	Tuffac. sandstone	Class 4 LD	
		II1B	7.02	4.62	3	7.17	11.56	2.33	68	Swf	Ultisols	Tuffac. sandstone	Class 2 ST	
		II1C	2.44	1.29	15	2.10	5.15	0.98	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1E	6.02	4.27	8	6.45	11.99	1.11	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1H	7.15	1.20	2	7.15	8.00	6.30	135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II8A	16.73	1.67	7	16.03	19.89	14.86	145	Wfs	Ultisols	Tuffac. sandstone		
		II1A	51		1				71	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II8A	47	1	7	46	48	45	145	Wfs	Ultisols	Tuffac. sandstone		
		II1A	0.37	0.59	15	0.11	1.96	0.01	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	0.29	0.42	15	0.08	1.14	0.01	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1E	0.56	0.76	8	0.27	2.31	0.05	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1H	0.23	0.09	2	0.23	0.30	0.17	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II8A	0.25	0.15	7	0.24	0.45	0.10	145	Wfs	Ultisols	Tuffac. sandstone		
		II1A	4.52	2.11	15	5.38	6.69	1.06	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	1.64	1.01	15	1.31	4.12	0.94	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1E	4.04	2.23	8	4.36	6.95	1.44	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1H	4.66	1.52	2	4.66	5.73	3.59	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II8A	4.32	0.49	7	4.04	5.05	3.84	145	Wfs	Ultisols	Tuffac. sandstone		
		II1A	0.14	0.05	15	0.12	0.24	0.08	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	0.08	0.04	15	0.06	0.15	0.04	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1E	0.19	0.11	8	0.19	0.38	0.07	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1H	0.26	0.01	2	0.26	0.27	0.26	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II8A	0.21	0.04	7	0.21	0.28	0.15	145	Wfs	Ultisols	Tuffac. sandstone		
		II1A	1.88		1				71	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1A	1.44	0.82	14	1.76	2.46	0.24	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	0.22	0.07	31	0.20	0.46	0.12	68	Swf	Ultisols	Tuffac. sandstone	Class 1 LD	
		II1B	0.19	0.08	8	0.17	0.31	0.10	68	Swf	Ultisols	Tuffac. sandstone	Class 2 LD	
		II1B	0.33	0.25	8	0.21	0.79	0.14	68	Swf	Ultisols	Tuffac. sandstone	Class 3 LD	
		II1B	0.66	0.01	2	0.66	0.67	0.65	68	Swf	Ultisols	Tuffaceoussandstone	Class 4 LD	
		II1B	0.23	0.09	3	0.27	0.29	0.13	68	Swf	Ultisols	Tuffac. sandstone	Class 2 ST	
		II1C	0.36	0.13	15	0.40	0.52	0.05	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1E	1.02	0.62	8	1.06	1.68	0.28	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1H	1.42	0.42	2	1.42	1.72	1.12	135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	1.17	0.05	7	1.15	1.24	1.11	145	Wfs	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II1A	1.13	0.53	15	1.47	1.69	0.28	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	0.12	0.16	31	0.09	0.98	0.03	68	Swf	Ultisols	Tuffac. sandstone	Class 1 LD	
		II1B	0.08	0.04	8	0.09	0.16	0.03	68	Swf	Ultisols	Tuffac. sandstone	Class 2 LD	
		II1B	0.13	0.08	8	0.12	0.26	0.02	68	Swf	Ultisols	Tuffaceoussandstone	Class 3 LD	
		II1B	0.27	0.01	2	0.27	0.28	0.27	68	Swf	Ultisols	Tuffac. sandstone	Class 4 LD	
		II1B	0.09	0.04	3	0.10	0.12	0.05	68	Swf	Ultisols	Tuffac. sandstone	Class 2 ST	
		II1C	0.47	0.18	1	0.48	0.84	0.25	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1E	0.85	0.41	8	0.97	1.34	0.34	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1H	1.20	0.57	2	1.20	1.61	0.80	135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	0.62	0.12	7	0.68	0.72	0.42	145	Wfs	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II1A	20.54	9.33	15	23.65	32.72	4.44	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	0.76	0.22	8	1.56	1.12	0.47	68	Swf	Ultisols	Tuffac. sandstone	Class 2 LD	
		II1B	0.86	0.72	8	0.66	2.38	0.23	68	Swf	Ultisols	Tuffaceoussandstone	Class 3 LD	
		II1B	0.29	0.02	2	0.29	0.30	0.27	68	Swf	Ultisols	Tuffac. sandstone	Class 4 LD	
		II1B	2.80	1.68	3	2.94	4.41	1.05	68	Swf	Ultisols	Tuffac. sandstone	Class 2 ST	
		II1B	2.08	1.26	31	1.81	6.20	0.66	68	Swf	Ultisols	Tuffac. sandstone	Class 1 LD	
		II1C	10.25	4.41	15	10.84	16.93	4.98	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1E	15.75	11.46	8	13.57	29.91	3.84	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1H	26.94	1.94	2	26.94	28.31	25.57	135	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Sulfur (%)	II8A	7.03	2.09	7	7.29	9.58	4.69	145	Wfs	Ultisols	Tuffac. sandstone		
		II1A	0.50		1				71	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	0.52	0.08	7	0.57	0.60	0.38	145	Wfs	Ultisols	Tuffac. sandstone		
<i>Sauvagesia erecta</i>	Aluminum (mg/g)	II3	0.19		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II3	3.42		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II3	0.16		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II3	1.33		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II3	0.74		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II3	0.70		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II3	0.33		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II3	7.83		1				135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Schefflera morototoni</i>	Ash (%)	II1A	7.90	0.47	6	7.85	8.45	7.40	126				Urban forest, RP	
		II1A	5.82	0.40	2	5.85	6.10	5.54	94	Swf	Ultisols	Tuffac. sandstone		
		II1B	2.11		1				68	Swf	Ultisols	Tuffac. sandstone	Class 4 LD	
		II1B	2.49	0.85	2	2.49	3.09	1.89	94	Swf	Ultisols	Tuffac. sandstone		
		II1C	1.21	0.09	6	1.22	1.35	1.09	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1C	3.19	0.95	3	3.48	3.96	2.13	94	Swf	Ultisols	Tuffac. sandstone		
		II1Ci	8.50	0.76	5	8.38	9.54	7.61	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II8A	5.56		1				71	Wfs	Ultisols	Tuffac. sandstone		
	C/N	II1A	25	3	6	25	28	21	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1C	292	24	6	296	322	258	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1Ci	72	5	5	73	79	67	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	Calcium (mg/g)	II1A	6.77	1.01	7	7.26	7.58	4.94	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	4.30		1				68	Swf	Ultisols	Tuffac. sandstone	Class 4 LD	
		II1B	22.71	5.74	5	22.73	29.99	17.08	135	Lmrf	Ultisols	Tuffac. sandstone		
II1C		1.11	0.12	9	1.13	1.29	0.89	135	Lmrf	Ultisols	Tuffac. sandstone			
II1Ci		9.13	0.97	8	9.20	10.46	7.17	135	Lmrf	Ultisols	Tuffac. sandstone			



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Carbon (%)	II1A	51	1	6	51	52	51	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1C	52	0	6	52	52	52	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1Ci	48	0	5	48	49	48	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	Magnesium (mg/g)	II8A	56		1				71	Wfs	Ultisols	Tuffac. sandstone		
		II1A	3.45	0.72	7	3.08	4.37	2.52	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	4.87	0.93	5	4.82	5.90	3.84	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	0.76	0.08	9	0.73	0.89	0.66	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II1Ci	1.74	0.09	8	1.75	1.85	1.61	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1A	2.08	0.25	6	2.01	2.38	1.82	126	Lmrf	Ultisols	Tuffac. sandstone	Urban forest, RP	
		II1A	2.14	0.02	2	2.14	2.15	2.12	94	Swf	Ultisols	Tuffac. sandstone		
		II1A	1.32	0.42	7	1.51	1.66	1.69	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	1.04		1				68	Swf	Ultisols	Tuffac. sandstone	Class 4 LD	
		II1B	0.45	0.16	2	0.45	0.56	0.33	94	Swf	Ultisols	Tuffac. sandstone		
		II1B	0.68	0.06	5	0.66	0.78	0.63	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	0.18	0.01	6	0.18	0.20	0.16	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1C	0.43	0.11	3	0.40	0.56	0.34	94	Swf	Ultisols	Tuffac. sandstone		
		II1C	0.08	0.00	9	0.08	0.08	0.07	35	Lmrf	Ultisols	Tuffac. sandstone		
		II1Ci	0.67	0.04	5	0.66	0.71	0.62	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1Ci	0.35	0.04	8	0.35	0.39	0.28	135	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	0.87		1				71	Wfs	Ultisols	Tuffac. sandstone		
			Phosphorus (mg/g)	II1A	0.97	0.10	2	0.97	1.03	0.90	94	Swf	Ultisols	Tuffac. sandstone
II1A	0.83			0.24	7	0.78	1.15	0.56	135	Lmrf	Ultisols	Tuffac. sandstone		
II1B	0.23				1				68	Swf	Ultisols	Tuffac. sandstone	Class 4 LD	
II1B	0.29			0.12	2	0.29	0.37	0.20	94	Swf	Ultisols	Tuffac. sandstone		
II1B	0.46			0.09	5	0.45	0.56	0.34	135	Lmrf	Ultisols	Tuffac. sandstone		
II1C	0.31			0.09	3	0.27	0.41	0.25	94	Swf	Ultisols	Tuffac. sandstone		
II1C	0.04			0.01	9	0.04	0.07	0.03	135	Lmrf	Ultisols	Tuffac. sandstone		
II1Ci	0.15			0.03	8	0.16	0.19	0.12	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II1A	11.94	0.79	2	11.94	12.50	11.38	94	Swf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
	Sulfur (%)	II1A	7.31	1.47	7	6.99	9.43	5.07	135	Lmrf	Ultisols	Tuffac. sandstone	Class 4 LD		
		II1B	0.51		1				68	Swf	Ultisols	Tuffac. sandstone			
		II1B	4.09	3.87	2	4.09	6.82	1.35	94	Swf	Ultisols	Tuffac. sandstone			
		II1B	3.92	0.89	5	4.19	4.74	2.61	135	Lmrf	Ultisols	Tuffac. sandstone			
		II1C	5.11	2.25	3	4.93	7.45	2.96	94	Swf	Ultisols	Tuffac. sandstone			
		II1C	0.71	0.15	9	0.67	0.91	0.49	135	Lmrf	Ultisols	Tuffac. sandstone			
		II1Ci	2.24	0.50	8	2.16	3.05	1.55	135	Lmrf	Ultisols	Tuffac. sandstone			
		II1A	0.35	0.04	6	0.33	0.43	0.31	126		Ultisols	Siltstone,sandstone			Urban forest, RP
		II1C	0.01	0.01	4	0.01	0.02	0.01	126		Ultisols	Siltstone,sandstone			Urban forest, RP
		II1Ci	0.07	0.01	5	0.07	0.83	0.05	126		Ultisols	Siltstone,sandstone			Urban forest, RP
		II8A	0.32		1				71	Wfs	Ultisols	Tuffac. sandstone			
Wood density (g/cc)	II1C	0.16	0.03	5	0.17	0.20	0.13	126		Ultisols	Siltstone,sandstone	Urban forest, RP			
<i>Schizolobium parahybum</i>	Wood density (g/cc)	II1C	0.29	0.03	5	0.28	0.33	0.26	97	Wfs	Inceptisols	Tuffac. sandstone			
<i>Schlegelia brachyantha</i>	Aluminum (mg/g)	II1	0.02		1				135	Lmrf	Ultisols	Tuffac. sandstone			
	C/N	II1	65		1				135	Lmrf	Ultisols	Tuffac. sandstone			
	Calcium (mg/g)	II1	6.50		1				135	Lmrf	Ultisols	Tuffac. sandstone			
	Carbon (%)	II1	46		1				135	Lmrf	Ultisols	Tuffac. sandstone			
	Iron (mg/g)	II1	0.23		1				135	Lmrf	Ultisols	Tuffac. sandstone			
	Magnesium (mg/g)	II1	6.16		1				135	Lmrf	Ultisols	Tuffac. sandstone			
	Manganese (mg/g)	II1	0.15		1				135	Lmrf	Ultisols	Tuffac. sandstone			
	Nitrogen (%)	II1	0.71		1				135	Lmrf	Ultisols	Tuffac. sandstone			
	Phosphorus (mg/g)	II1	0.30		1				135	Lmrf	Ultisols	Tuffac. sandstone			
	Potassium (mg/g)	II1	2.47		1				135	Lmrf	Ultisols	Tuffac. sandstone			
Sulfur (%)	II1	0.15		1				135	Lmrf	Ultisols	Tuffac. sandstone				
<i>Scleria canescens</i>	Aluminum (mg/g)	II3	0.27		1				135	Lmrf	Ultisols	Tuffac. sandstone			
	C/N	II3	20		1										

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Calcium (mg/g)	II3	0.96		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II3	35		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II3	0.06		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II3	0.73		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II3	0.74		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II3	1.10	0.93	2	1.10	1.75	0.44	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II3	0.93		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II3	10.10		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Sulfur (%)	II3	0.35		1				135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Scleria spp.</i>	Aluminum (mg/g)	II3	0.39	0.29	30	0.34	1.81	0.11	135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II3	1.85	0.48	30	1.80	2.80	1.06	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II3	0.20	0.21	30	0.16	1.21	0.06	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II3	1.22	0.20	30	1.21	1.70	0.72	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II3	0.74	0.44	30	0.63	2.16	0.10	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II3	0.78	0.26	30	0.72	1.35	0.44	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II3	0.59	0.27	30	0.52	1.26	0.20	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II3	11.18	6.16	30	8.71	24.96	4.00	135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Secondary Forest</i>	Aluminum (mg/g)	II1A	4.76	5.62	55	2.60	23.76	0.20	112	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II1A	4.94	5.37	51	2.67	20.63	0.20	112	Lmrf	Ultisols	Tuffac. sandstone	Puente Roto	
		II8B	1.33	0.83	8	1.46	2.31	0.32	130	Mfs	Ultisols	Tuffac. sandstone	<=2cm	
		II8B	0.69	0.71	9	0.46	2.37	0.06	130	Mfs	Ultisols	Tuffac. sandstone	>2cm	
		II8D	11.11	3.25	10	11.07	16.25	6.43	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II9A	2.39	1.50	22	1.78	6.37	0.57	132	Wfs	Mollisols	Plutonic rocks		
		II1E	8.27	2.97	16	8.14	14.39	3.67	114	Wfs	Ultisols	Lava	Lives <2mm	
		II1E	13.73	5.17	16	15.06	21.69	3.49	114	Wfs	Ultisols	Lava	Dead roots <2mm	
		II1E	5.92	4.04	6	5.00	13.37	1.24	114	Wfs	Ultisols	Lava	Live >2mm<5mm	
		II1E	5.70	2.59	5	5.32	9.26	2.88	114	Wfs	Ultisols	Lava	Dead >2mm<5mm	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1E	3.44	1.60	6	3.20	5.79	1.59	114	Wfs	Ultisols	Lava	>5mm	
		II1E	4.44	2.21	29	4.06	8.56	0.94	131	Wfs	Mollisols	Plutonic rocks	<1cm	
		III1E	1.98	1.20	19	1.70	4.57	0.58	131	Wfs	Mollisols	Plutonic rocks	>1cm<2cm	
		II1E	2.52	2.61	5	1.70	7.13	0.86	131	Wfs	Mollisols	Plutonic rocks	>2cm	
		II3	4.60	3.04	3	3.54	10.99	1.77	142	Wflm	Inceptisols	Tuffac. sandstone		
		II3	5.44	2.88	17	5.45	11.66	1.81	142	Wflm	Inceptisols	Tuffac. sandstone		
		II6	6.77	4.47	17	6.48	13.92	0.57	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8A	3.04	2.89	16	1.54	9.95	0.89	111	Rfs	Inceptisols	Tuffac. sandstone		
		II8A	1.74	1.30	12	1.49	4.02	0.37	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8A	7.69	4.09	32	7.13	15.29	1.82	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8A	1.70	1.03	11	1.54	4.31	0.47	124	Wflm	Ultisols	Tuffac. sandstone	Dacroides-Adjuntas	
		II8A	3.59	2.92	17	3.16	9.61	0.29	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8A	4.93	4.46	9	4.16	13.03	0.56	130	Mfs	Ultisols	Tuffac. sandstone		
		II8A	9.15	6.15	35	7.46	23.53	2.21	132	Wfs	Mollisols	Plutonic rocks		
		II8A	7.21	5.21	69	6.23	26.62	1.17	136	Wfs	Ultisols	Tuffac. sandstone		
		II8A	2.49	1.41	66	2.21	7.23	0.18	140	Swf	Ultisols	Tuffac. sandstone	Cubuy	
		II8A	0.68	0.25	6	0.71	0.96	0.35	140	Sdf	Mollisols	Alluvial deposits	Guanica	
		II8A	2.99	3.15	144	2.08	19.54	0.10	140	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8A	1.28	1.03	75	1.10	6.75	0.21	140	Wflm	Inceptisols	Tuffac. sandstone	Palm Forest	
		II8A	2.53	1.53	20	2.22	5.02	0.36	140	Rfs	Inceptisols	Tuffac. sandstone	Pico del Este	
		II8A	6.65	4.97	20	5.57	23.59	1.10	142	Wflm	Inceptisols	Tuffac. sandstone	Dicotiledonea	
		II8A	4.73	2.95	21	3.54	9.99	0.72	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8B	0.65	0.61	12	0.43	1.93	0.08	111	Rfs	Inceptisols	Tuffac. sandstone		
		II8B	2.14	1.32	13	1.82	5.85	0.85	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8B	4.15	3.40	8	2.26	9.13	1.41	124				Dacroides	
		II8B	6.63	6.20	48	5.03	27.80	0.08	132	Wfs	Mollisols	Plutonic rocks		
		II8B	1.53	1.70	51	1.04	8.17	0.18	136	Wfs	Ultisols	Tuffac. sandstone		
		II8B	1.00	0.71	65	0.71	2.76	0.06	140	Swf	Ultisols	Tuffac. sandstone	Cubuy	
		II8B	0.31	0.20	11	0.27	0.64	0.07	140	Sdf	Mollisols	Alluvial deposits	Guanica	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II8B	1.25	1.65	139	0.75	13.05	0.04	140	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8B	1.09	1.03	66	0.74	6.63	0.18	140	Wflm	Inceptisols	Tuffac. sandstone	Palm Forest	
		II8B	1.28	0.94	17	1.11	3.12	0.19	140	Rfs	Inceptisols	Tuffac. sandstone	Pico del Este	
		II8B	2.70	1.58	31	2.73	7.37	0.26	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8C	3.19	3.22	16	2.06	14.14	0.98	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8C	2.03	0.69	7	2.06	3.26	1.01	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8C	2.26	1.69	8	1.89	5.59	0.44	130	Mfs	Ultisols	Tuffac. sandstone		
		II8C	9.46	12.64	21	3.12	40.30	0.42	132	Wfs	Mollisols	Plutonic rocks		
		II8C	0.33	1.64	2	4.33	5.49	3.17	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8D	3.41	3.93	16	1.84	13.47	1.34	111	Rfs	Inceptisols	Tuffac. sandstone		
		II8D	19.92	3.01	9	20.75	23.81	14.23	124	Lmrf	Ultisols	Tuffac. sandstone	Adjuntas	
		II8D	12.53	4.53	8	12.02	19.02	6.40	130	Mfs	Ultisols	Tuffac. sandstone		
		II8D	14.28	10.69	27	15.96	40.31	0.10	132	Wfs	Mollisols	Plutonic rocks		
		II8D	6.40	2.44	62	6.40	10.62	0.43	140	Swf	Ultisols	Tuffac. sandstone	Cubuy	
		II8D	5.77	1.63	7	6.83	7.31	3.19	140	Sdf	Mollisols	Alluvial deposits	Guanica	
		II8D	4.67	5.11	138	3.17	32.92	0.21	140	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8D	4.30	3.38	67	3.32	17.06	0.29	140	Wflm	Inceptisols	Tuffac. sandstone	Palm Forest	
		II8D	12.81	10.10	9	9.60	34.68	2.74	140	Rfs	Inceptisols	Tuffac. sandstone	Pico del Este	
		II8D	8.29	3.84	8	8.32	13.11	2.47	142	Wflm	Inceptisols	Tuffac. sandstone	Fern	
		II8D	14.63	6.79	42	13.78	27.17	4.18	142	Wflm	Inceptisols	Tuffac. sandstone		
		II9A	0.65	0.39	12	0.59	1.35	0.21	124					
		II9A	4.97	4.18	10	2.91	13.10	1.28	124					
		II9A	0.96	0.96	583	0.61	6.41	0.02	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9A	1.45	1.25	138	1.08	6.59	0.13	130	Mfs	Ultisols	Tuffac. sandstone		
		II9A	1.25	0.13	3	1.27	1.37	1.11	153	Swf	Ultisols	Tuffac. sandstone		
		II9A	0.57	0.47	14	0.52	1.42	0.06	154	Wfs	Ultisols	Tuffac. sandstone		
		II9B	0.53	0.31	11	0.42	1.06	0.15	124					
		II9B	0.53	1.17	420	0.17	8.75	0.02	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9B	0.97	1.44	96	0.43	9.05	0.02	130	Mfs	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II9B	2.79	2.68	29	1.97	8.92	0.11	132	Wfs	Mollisols	Plutonic rocks		
		II9B	0.13	0.14	14	0.09	0.46	0.04	154	Wfs	Ultisols	Tuffac. sandstone		
		II9C	2.17	1.50	15	2.11	5.75	0.42	124					
		II9C	0.68	0.77	463	0.45	8.41	0.01	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9C	0.89	1.38	129	0.33	8.15	0.01	130	Mfs	Ultisols	Tuffac. sandstone		
		II9C	1.35	1.19	21	0.96	4.21	0.07	132	Wfs	Mollisols	Plutonic rocks		
		II9D	9.10	2.73	5	10.49	11.57	0.42	124				Dacroides	
		II9D	1.23	1.63	464	0.82	20.70	0.04	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9D	9.49	7.11	58	7.82	27.17	0.04	130	Mfs	Ultisols	Tuffac. sandstone		
		II9D	2.37	2.45	17	2.21	10.14	0.18	132	Wfs	Mollisols	Plutonic rocks		
		II9D	0.34	0.31	13	0.13	0.82	0.03	154	Wfs	Ultisols	Tuffac. sandstone		
	Ash (%)	II1A	11.82	9.14	39	8.66	57.55	2.47	112	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II1A	11.42	8.11	39	9.11	43.26	5.03	112	Lmrf	Ultisols	Tuffac. sandstone	Puente Roto	
		II8B	4.66	1.22	8	4.61	6.33	2.51	130	Mfs	Ultisols	Tuffac. sandstone	<=2cm	
		II8B	3.88	1.37	9	3.51	6.24	2.40	130	Mfs	Ultisols	Tuffac. sandstone	>2cm	
		II8D	24.98	8.34	10	25.10	36.43	14.12	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II9A	5.15	0.39	22	5.16	5.98	4.41	132	Wfs	Mollisols	Plutonic rocks		
		II1E	5.99	2.23	29	5.19	11.67	2.10	131	Wfs	Mollisols	Plutonic rocks	<1cm	
		II1E	4.78	1.59	19	4.81	7.79	2.65	131	Wfs	Mollisols	Plutonic rocks	>1cm<2cm	
		II1E	3.07	0.95	5	2.87	4.66	2.07	131	Wfs	Mollisols	Plutonic rocks	>2cm	
		II3	12.86	4.23	10	14.29	19.20	6.35	142	Wflm	Inceptisols	Tuffac. sandstone		
		II3	17.39	4.99	9	16.54	24.69	10.69	142	Wflm	Inceptisols	Tuffac. sandstone		
		II6	9.49	2.96	14	8.83	15.44	3.11	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8A	13.40	1.74	12	13.55	15.75	9.74	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8A	18.14	6.47	32	15.60	33.79	10.00	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8A	12.62	1.16	1	12.30	14.38	11.22	124				Dacroides-Adjuntas	
		II8A	13.33	3.12	17	13.42	19.79	8.90	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8A	13.84	5.90	9	12.88	25.99	8.05	130	Mfs	Ultisols	Tuffac. sandstone		
		II8A	10.44	7.35	35	9.05	39.90	4.45	132	Wfs	Mollisols	Plutonic rocks		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II8A	12.36	4.34	66	11.83	26.25	5.86	140	Swf	Ultisols	Tuffac. sandstone	Cubuy	
		II8A	12.35	2.51	6	12.15	16.24	9.25	140	Sdf	Mollisols	Alluvial deposits	Guanica	
		II8A	11.04	5.52	143	9.58	43.62	3.78	140	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8A	5.73	3.21	72	5.12	15.39	0.51	140	Wflm	Inceptisols	Tuffac. sandstone	Palm Forest	
		II8A	5.38	2.03	18	4.64	10.94	3.13	140	Rfs	Inceptisols	Tuffac. sandstone	Pico del Este	
		II8A	12.68	5.55	19	11.99	23.01	4.52	142	Wflm	Inceptisols	Tuffac. sandstone	Dicotiledonea	
		II8A	12.23	6.70	17	11.37	23.25	3.31	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8A	5.75	4.25	16	3.19	14.46	2.55	111	Rfs	Inceptisols	Tuffac. sandstone		
		II8A	15.67	9.19	69	13.21	56.02	3.09	136	Wfs	Ultisols	Tuffac. sandstone		
		II8B	7.26	2.06	13	7.18	12.87	4.92	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8B	8.69	2.24	8	7.92	13.01	5.93	124				Dacroides	
		II8B	4.79	2.21	48	4.52	11.18	1.26	132	Wfs	Mollisols	Plutonic rocks		
		II8B	6.35	2.01	65	6.13	12.83	3.34	140	Swf	Ultisols	Tuffac. sandstone	Cubuy	
		II8B	8.39	1.82	10	8.58	11.02	5.19	140	Sdf	Mollisols	Alluvial deposits	Guanica	
		II8B	4.61	3.50	139	3.52	28.12	0.72	140	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8B	3.60	2.09	65	3.11	11.86	0.64	140	Wflm	Inceptisols	Tuffac. sandstone	Palm Forest	
		II8B	3.44	1.47	15	3.11	8.00	1.33	140	Rfs	Inceptisols	Tuffac. sandstone	Pico del Este	
		II8B	6.72	3.12	29	6.83	17.38	1.94	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8B	2.18	1.08	12	1.74	4.20	1.17	111	Rfs	Inceptisols	Tuffac. sandstone		
		II8B	4.52	3.07	50	3.87	19.85	0.78	136	Wfs	Ultisols	Tuffac. sandstone		
		II8C	6.16	3.66	12	4.97	15.20	2.14	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8C	3.77	0.99	7	3.96	5.16	2.34	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8C	4.55	2.61	8	4.07	9.30	2.03	130	Mfs	Ultisols	Tuffac. sandstone		
		II8C	4.55	2.42	13	4.24	9.43	0.15	132	Wfs	Mollisols	Plutonic rocks		
		II8D	30.00	6.12	9	29.32	38.67	21.74	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8D	24.14	7.22	8	23.27	35.18	13.41	130	Mfs	Ultisols	Tuffac. sandstone		
		II8D	20.35	15.84	27	21.86	51.81	1.77	132	Wfs	Mollisols	Plutonic rocks		
		II8D	26.65	8.91	62	25.35	57.08	11.49	140	Swf	Ultisols	Tuffac. sandstone	Cubuy	
		II8D	28.99	3.34	7	30.64	32.09	23.10	140	Sdf	Mollisols	Alluvial deposits	Guanica	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II8D	12.38	8.45	137	10.46	59.23	2.45	140	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8D	11.92	10.26	66	7.26	41.00	2.36	140	Wflm	Inceptisols	Tuffac. sandstone	Palm Forest	
		II8D	21.63	12.94	8	23.74	42.75	5.26	140	Rfs	Inceptisols	Tuffac. sandstone	Pico del Este	
		II8D	17.97	5.21	2	17.97	21.65	14.28	142	Wflm	Inceptisols	Tuffac. sandstone	Fern	
		II8D	43.13	23.78	35	38.46	90.18	16.19	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8D	5.94	6.04	16	4.26	21.09	1.03	111	Rfs	Inceptisols	Tuffac. sandstone		
		II9A	6.52	0.93	7	6.70	8.20	5.29	154	Wfs	Ultisols	Tuffac. sandstone		
		II9A	8.41	1.38	87	8.21	11.85	5.45	108	Wf-LM	Ultisols	Tuffac. sandstone	Mameyes	
		II9A	7.80	4.35	95	6.96	46.08	2.62	108	Wf-LM	Ultisols	Tuffac. sandstone	Sabana	
		II9A	7.15	1.33	20	6.84	9.55	5.30	113	Wfs	Ultisols	Lava		
		II9A	10.91	1.22	12	10.99	12.29	8.52	124					
		II9A	9.00	2.02	10	8.83	11.95	6.28	124					
		II9A	8.55	0.99	138	8.55	12.44	5.98	130	Mfs	Ultisols	Tuffac. sandstone		
		II9A	8.08	0.21	3	8.17	8.22	7.84	153	Swf	Ultisols	Tuffac. sandstone		
		II9B	5.08	0.94	7	4.99	6.53	3.88	154	Wfs	Ultisols	Tuffac. sandstone		
		II9B	4.55	1.94	59	4.38	8.94	0.54	108	Wf-LM	Ultisols	Tuffac. sandstone	Mameyes	
		II9B	4.03	1.55	56	3.81	8.15	1.41	108	Wf-LM	Ultisols	Tuffac. sandstone	Mameyes	
		II9B	3.78	1.96	16	3.06	9.42	1.76	113	Wfs	Ultisols	Lava		
		II9B	4.59	0.85	11	4.80	5.72	3.22	124					
		II9B	4.25	1.98	96	4.04	13.71	0.63	130	Mfs	Ultisols	Tuffac. sandstone		
		II9B	3.42	1.10	28	3.26	5.70	1.87	132	Wfs	Mollisols	Plutonic rocks		
		II9C	4.18	1.07	45	4.41	6.20	0.10	108	Wf-LM	Ultisols	Tuffac. sandstone	Mameyes	
		II9C	4.78	1.28	49	4.85	7.89	2.44	108	Wf-LM	Ultisols	Tuffac. sandstone	Sabana	
		II9C	4.51	0.81	18	4.24	5.91	3.12	113	Wfs	Ultisols	Lava		
		II9C	5.94	3.73	15	6.30	15.08	0.44	124					
		II9C	4.63	1.90	129	4.57	9.34	1.41	130	Mfs	Ultisols	Tuffac. sandstone		
		II9C	3.80	1.23	21	3.65	6.91	2.18	132	Wfs	Mollisols	Plutonic rocks		
		II9D	6.19	3.57	6	4.61	12.90	3.65	154	Wfs	Ultisols	Tuffac. sandstone		
		II9D	5.49	1.69	38	5.15	9.93	2.20	108	Wf-LM	Ultisols	Tuffac. sandstone	Mameyes	



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II9D	5.58	2.21	32	5.67	9.77	0.76	108	Wf-LM	Ultisols	Tuffac. sandstone	Sabana	
		II9D	7.18	2.32	10	7.27	10.42	4.06	113	Wfs	Ultisols	Lava		
		II9D	21.90	6.77	5	23.60	28.22	0.44	124				Dacroides	
		II9D	17.13	10.14	58	13.72	38.43	4.97	130	Mfs	Ultisols	Tuffac. sandstone		
		II9D	6.60	1.42	14	6.74	9.66	2.84	132	Wfs	Mollisols	Plutonic rocks		
	C/N	II1A	25	8	55	25	47	12	112	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II1A	28	13	49	24	72	14	112	Lmrf	Ultisols	Tuffac. sandstone	Puente Roto	
		II8B	41	13	8	36	67	28	130	Mfs	Ultisols	Tuffac. sandstone	<=2cm	
		II8B	63	27	9	58	102	28	130	Mfs	Ultisols	Tuffac. sandstone	>2cm	
		II8D	28	6	10	26	40	23	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II9A	27	3	22	28	32	22	132	Wfs	Mollisols	Plutonic rocks		
		II1E	39	14	29	35	95	22	131	Wfs	Mollisols	Plutonic rocks	<1cm	
		II1E	45	22	19	37	114	28	131	Wfs	Mollisols	Plutonic rocks	>1cm<2cm	
		II1E	35	2	5	34	37	32	131	Wfs	Mollisols	Plutonic rocks	>2cm	
		II8A	36	3	16	36	41	32	111	Rfs	Inceptisols	Tuffac. sandstone		
		II8A	47	4	12	47	55	42	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8A	36	6	32	36	50	28	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8A	51	5	11	51	59	44	124				Dacroides-Adjuntas	
		II8A	43	8	17	40	55	34	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8A	22	2	9	22	26	19	130	Mfs	Ultisols	Tuffac. sandstone		
		II8A	20	3	33	20	25	14	132	Wfs	Mollisols	Plutonic rocks		
		II8B	68	14	12	66	99	53	111	Rfs	Inceptisols	Tuffac. sandstone		
		II8B	66	11	13	67	79	40	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8B	57	19	8	54	99	35	124				Dacroides	
		II8B	39	15	49	38	90	27	132	Wfs	Mollisols	Plutonic rocks		
		II8C	48	17	12	46	77	25	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8C	43	10	7	40	61	34	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8C	38	5	8	36	45	33	130	Mfs	Ultisols	Tuffac. sandstone		
		II8C	22	7	21	21	40	14	132	Wfs	Mollisols	Plutonic rocks		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II8D	48	23	16	39	111	34	111	Rfs	Inceptisols	Tuffac. sandstone		
		II8D	24	3	9	24	28	20	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8D	15	2	8	15	18	13	130	Mfs	Ultisols	Tuffac. sandstone		
		II8D	22	11	27	17	53	13	132	Wfs	Mollisols	Plutonic rocks		
		II9A	33	9	130	31	97	21	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9A	81	18	87	82	121	41	108	Wf-LM	Ultisols	Tuffac. sandstone	Mameyes	
		II9A	53	15	95	49	94	34	108	Wf-LM	Ultisols	Tuffac. sandstone	Sabana	
		II9A	68	8	12	70	75	46	124					
		II9A	56	10	10	57	75	41	124					
		II9A	25	5	138	25	62	19	130	Mfs	Ultisols	Tuffac. sandstone		
		II9A	61	1	3	61	62	59	153	Swf	Ultisols	Tuffac. sandstone		
		II9B	65	24	94	60	162	32	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9B	50	17	63	48	93	8	108	Wf-LM	Ultisols	Tuffac. sandstone	Mameyes	
		II9B	34	17	70	30	114	14	108	Wf-LM	Ultisols	Tuffac. sandstone	Mameyes	
		II9B	80	11	11	80	98	65	124					
		II9B	47	29	96	41	219	22	130	Mfs	Ultisols	Tuffac. sandstone		
		II9B	42	9	30	44	60	26	132	Wfs	Mollisols	Plutonic rocks		
		II9C	38	9	100	37	77	18	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9C	79	22	45	83	125	28	108	Wf-LM	Ultisols	Tuffac. sandstone	Mameyes	
		II9C	74	17	49	71	115	38	108	Wf-LM	Ultisols	Tuffac. sandstone	Sabana	
		II9C	40	20	15	33	100	26	124					
		II9C	30	10	129	27	62	16	130	Mfs	Ultisols	Tuffac. sandstone		
		II9C	25	5	21	23	39	18	132	Wfs	Mollisols	Plutonic rocks		
		II9D	43	9	85	42	72	47	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9D	70	16	38	70	113	26	108	Wf-LM	Ultisols	Tuffac. sandstone	Mameyes	
		II9D	54	22	39	51	138	17	108	Wf-LM	Ultisols	Tuffac. sandstone	Sabana	
		II9D	41	4	5	43	44	15	124				Dacroides	
		II9D	19	8	58	17	53	13	130	Mfs	Ultisols	Tuffac. sandstone		
		II9D	28	7	17	29	41	16	132	Wfs	Mollisols	Plutonic rocks		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Calcium (mg/g)	II1A	14.63	4.55	55	14.59	28.09	4.15	112	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II1A	13.88	3.96	51	14.43	22.30	6.83	112	Lmrf	Ultisols	Tuffac. sandstone	Puente Roto	
		II8B	9.39	1.48	8	9.69	10.74	6.09	130	Mfs	Ultisols	Tuffac. sandstone	<=2cm	
		II8B	7.61	1.72	9	6.77	9.86	5.17	130	Mfs	Ultisols	Tuffac. sandstone	>2cm	
		II8D	5.80	1.16	10	6.02	8.00	3.54	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II9A	6.58	0.99	22	6.43	8.48	5.00	132	Wfs	Mollisols	Plutonic rocks		
		II1E	7.60	1.70	16	7.87	10.46	3.83	114	Wfs	Ultisols	Lava	Lives <2mm	
		II1E	9.77	2.54	16	10.03	14.63	6.79	114	Wfs	Ultisols	Lava	Dead roots <2mm	
		II1E	5.99	4.27	6	5.06	12.38	1.35	114	Wfs	Ultisols	Lava	Live >2mm<5mm	
		II1E	8.57	1.38	5	8.97	10.10	6.41	114	Wfs	Ultisols	Lava	Dead >2mm<5mm	
		II1E	3.77	2.18	6	3.00	7.71	1.97	114	Wfs	Ultisols	Lava	>5mm	
		II1E	4.18	1.54	29	4.15	7.13	1.68	131	Wfs	Mollisols	Plutonic rocks	<1cm	
		II1E	5.51	2.14	19	6.30	9.11	2.12	131	Wfs	Mollisols	Plutonic rocks	>1cm<2cm	
		II1E	3.54	1.23	5	2.92	5.00	2.38	131	Wfs	Mollisols	Plutonic rocks	>2cm	
		II3	3.77	1.77	13	4.35	6.51	1.20	142	Wflm	Inceptisols	Tuffac. sandstone		
		II3	2.00	0.76	17	1.76	4.16	1.03	142	Wflm	Inceptisols	Tuffac. sandstone		
		II6	9.30	4.64	17	9.13	21.89	1.63	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8A	4.43	0.81	16	4.74	5.32	2.54	111	Rfs	Inceptisols	Tuffac. sandstone		
		II8A	7.07	1.47	12	6.90	10.68	4.65	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8A	9.02	2.96	32	8.13	16.59	4.25	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8A	10.60	0.61	11	10.61	11.92	9.80	124				Dacroides-Adjuntas	
		II8A	11.76	1.77	17	11.31	14.88	9.27	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8A	14.31	2.56	9	14.26	18.19	10.48	130	Mfs	Ultisols	Tuffac. sandstone		
		II8A	8.42	1.78	35	8.08	11.21	4.43	132	Wfs	Mollisols	Plutonic rocks		
		II8A	5.64	2.17	69	5.32	14.83	1.70	136	Wfs	Ultisols	Tuffac. sandstone		
		II8A	11.27	3.91	66	10.59	22.53	6.00	140	Swf	Ultisols	Tuffac. sandstone	Cubuy	
		II8A	38.37	10.42	6	36.89	56.29	26.28	140	Sdf	Mollisols	Alluvial deposits	Guanica	
		II8A	8.18	3.03	144	7.24	17.90	3.53	140	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8A	6.45	4.02	75	5.12	20.31	1.18	140	Swf	Ultisols	Tuffac. sandstone	Palm Forest	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II8A	4.52	1.67	20	4.17	8.74	2.51	140	Swf	Ultisols	Tuffac. sandstone	Pico del Este	
		II8A	6.70	3.09	20	5.47	16.80	3.75	142	Wflm	Inceptisols	Tuffac. sandstone	Dicotiledonea	
		II8A	3.57	1.64	21	3.03	8.73	1.79	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8A	12.14	2.91	135	11.61	21.97	5.22	156	Swf	Ultisols	Tuffac. sandstone		
		II8B	3.60	1.72	12	3.16	7.47	1.97	111	Rfs	Inceptisols	Tuffac. sandstone		
		II8B	9.83	2.23	13	10.15	12.53	5.86	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8B	21.75	3.64	8	23.33	25.56	15.17	124				Dacroides	
		II8B	7.89	2.54	488	8.27	12.84	1.37	132	Wfs	Mollisols	Plutonic rocks		
		II8B	6.31	3.19	51	5.88	15.20	1.18	136	Wfs	Ultisols	Tuffac. sandstone		
		II8B	11.66	4.52	65	11.92	27.26	3.65	140	Swf	Ultisols	Tuffac. sandstone	Cubuy	
		II8B	26.99	8.10	11	25.01	28.84	15.47	140	Sdf	Mollisols	Alluvial deposits	Guanica	
		II8B	5.58	2.05	139	5.33	13.31	0.60	140	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8B	6.206	4.68	66	4.912	30.07	1.69	140	Wflm	Inceptisols	Tuffac. sandstone	Palm Forest	
		II8B	4.47	1.43	17	4.15	6.58	1.78	140	Rfs	Inceptisols	Tuffac. sandstone	Pico del Este	
		II8B	6.05	3.57	31	5.28	17.63	1.62	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8B	9.95	3.40	126	9.13	23.79	3.56	156	Swf	Ultisols	Tuffac. sandstone	<2cm	
		II8B	8.06	4.10	23	8.46	15.98	2.15	156	Swf	Ultisols	Tuffac. sandstone	≥2cm	
		II8C	4.25	2.70	16	3.50	10.39	1.44	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8C	5.94	1.89	7	5.59	10.00	4.58	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8C	3.85	1.60	8	3.92	5.99	2.08	130	Mfs	Ultisols	Tuffac. sandstone		
		II8C	6.13	3.40	21	5.70	13.90	1.26	132	Wfs	Mollisols	Plutonic rocks		
		II8C	4.75	2.53	2	4.75	6.54	2.96	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8C	6.14	3.95	86	5.58	32.23	1.04	156	Swf	Ultisols	Tuffac. sandstone		
		II8D	3.66	0.89	16	3.72	4.82	1.64	111	Rfs	Inceptisols	Tuffac. sandstone		
		II8D	11.05	1.82	9	11.72	12.98	7.23	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8D	14.78	1.67	8	15.14	16.94	12.21	130	Mfs	Ultisols	Tuffac. sandstone		
		II8D	6.52	1.94	27	6.70	9.55	1.68	132	Wfs	Mollisols	Plutonic rocks		
		II8D	10.56	3.95	62	10.22	21.04	3.97	140	Swf	Ultisols	Tuffac. sandstone	Cubuy	
		II8D	72.05	10.33	7	75.08	84.78	54.27	140	Sdf	Mollisols	Alluvial deposits	Guanica	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II8D	6.83	2.89	138	6.09	20.24	1.26	140	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8D	6.33	2.99	67	5.86	15.93	2.77	140	Wflm	Inceptisols	Tuffac. sandstone	Palm Forest	
		II8D	2.52	0.63	9	2.32	3.55	1.71	140	Rfs	Inceptisols	Tuffac. sandstone	Pico del Este	
		II8D	7.51	4.55	8	7.33	14.48	1.98	142	Wflm	Inceptisols	Tuffac. sandstone	Fern	
		II8D	3.81	2.33	42	3.30	9.36	0.50	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8D	10.04	2.89	124	10.17	21.48	4.01	156	Swf	Ultisols	Tuffac. sandstone		
		II9A	8.21	1.75	626	8.11	15.75	0.07	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9A	5.99	0.81	12	5.68	8.06	5.12	124					
		II9A	10.91	3.52	10	10.50	17.62	6.08	124					
		II9A	16.35	3.17	138	16.31	26.47	3.06	130	Mfs	Ultisols	Tuffac. sandstone		
		II9A	10.09	0.48	3	10.04	10.59	9.64	153	Swf	Ultisols	Tuffac. sandstone		
		II9A	8.29	3.50	14	7.56	15.66	4.38	154	Wfs	Ultisols	Tuffac. sandstone		
		II9A	11.17	2.97	128	10.19	21.13	5.98	156	Swf	Ultisols	Tuffac. sandstone		
		II9B	5.97	2.54	462	5.61	20.16	1.17	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9B	7.79	1.54	11	7.67	10.32	5.79	124					
		II9B	12.42	6.29	96	1.12	49.60	1.57	130	Mfs	Ultisols	Tuffac. sandstone		
		II9B	6.44	2.53	28	5.66	11.44	3.45	132	Wfs	Mollisols	Plutonic rocks		
		II9B	11.88	2.82	14	11.80	16.31	7.92	154	Wfs	Ultisols	Tuffac. sandstone		
		II9B	9.80	2.40	58	9.25	17.45	3.84	156	Swf	Ultisols	Tuffac. sandstone		
		II9C	4.33	2.68	63	3.75	24.05	0.42	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9C	4.20	1.72	15	4.87	6.91	0.76	124					
		II9C	8.73	4.29	129	8.06	19.67	1.27	130	Mfs	Ultisols	Tuffac. sandstone		
		II9C	4.22	1.84	21	3.49	8.25	1.42	132	Wfs	Mollisols	Plutonic rocks		
		II9C	5.50	2.41	49	5.13	10.84	0.64	156	Swf	Ultisols	Tuffac. sandstone		
		II9D	8.47	4.24	505	7.88	36.74	1.32	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9D	4.43	1.22	5	4.03	6.24	0.76	124				Dacroides	
		II9D	15.87	3.62	58	15.84	25.62	7.82	130	Mfs	Ultisols	Tuffac. sandstone		
		II9D	9.08	2.36	15	9.62	11.95	4.33	132	Wfs	Mollisols	Plutonic rocks		
		II9D	7.49	4.68	13	5.14	16.27	1.82	154	Wfs	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II9D	9.67	2.80	49	9.75	19.89	2.87	156	Swf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II1A	44	6	55	46	51	16	112	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II1A	44	7	49	47	52	23	112	Lmrf	Ultisols	Tuffac. sandstone	Puente Roto	
		II8D	35	4	10	35	40	29	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II9A	53	1	22	53	55	52	132	Wfs	Mollisols	Plutonic rocks		
		II1E	49	2	16	49	53	47	114	Wfs	Ultisols	Lava	Lives <2mm	
		II1E	46	3	18	45	51	40	114	Wfs	Ultisols	Lava	Dead <2mm	
		II1E	51	3	6	52	54	45	114	Wfs	Ultisols	Lava	Live >2mm<5mm	
		II1E	51	2	5	51	53	49	114	Wfs	Ultisols	Lava	Dead >2mm<5mm	
		II1E	52	2	6	52	53	49	114	Wfs	Ultisols	Lava	>5mm	
		II1E	53	1	29	53	55	50	131	Wfs	Mollisols	Plutonic rocks	<1cm	
		II1E	53	2	19	53	56	51	131	Wfs	Mollisols	Plutonic rocks	>1cm<2cm	
		II1E	55	2	5	56	57	53	131	Wfs	Mollisols	Plutonic rocks	>2cm	
		II3	46	4	13	46	51	38	142	Wflm	Inceptisols	Tuffac. sandstone		
		II3	42	3	13	40	46	38	142	Wflm	Inceptisols	Tuffac. sandstone		
		II6	47	3	15	47	53	43	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8A	40	1	12	40	42	39	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8A	38	3	32	39	42	31	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8A	40	1	11	41	41	40	124				Dacroides-Adjuntas	
		II8A	40	1	17	40	42	37	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8A	50	5	33	52	55	33	132	Wfs	Mollisols	Plutonic rocks		
		II8A	45	5	69	45	55	24	136	Wfs	Ultisols	Tuffac. sandstone		
		II8A	51	5	20	51	58	42	142	Wflm	Inceptisols	Tuffac. sandstone	Dicotiledonea	
		II8A	48	4	20	48	53	40	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8B	43	1	13	43	44	40	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8B	42	1	8	43	44	40	124				Dacroides	
		II8B	52	2	49	52	55	49	132	Wfs	Mollisols	Plutonic rocks		
		II8B	51	3	50	50	55	43	136	Wfs	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II8B	53	2	31	53	56	48	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8C	44	2	13	44	46	39	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8C	45	0	7	44	45	44	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8C	50	6	21	51	55	29	132	Wfs	Mollisols	Plutonic rocks		
		II8C	55	1	2	55	56	54	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8D	32	3	9	33	36	28	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8D	44	10	27	43	66	27	132	Wfs	Mollisols	Plutonic rocks		
		II8D	46	4	7	45	52	42	142	Wflm	Inceptisols	Tuffac. sandstone	Fern	
		II8D	31	14	42	36	47	3	142	Wflm	Inceptisols	Tuffac. sandstone		
		II9A	48	1	130	48	51	40	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9A	49	1	87	49	55	46	108	Wf-LM	Ultisols	Tuffac. sandstone	Mameyes	
		II9A	49	1	95	49	51	45	108	Wf-LM	Ultisols	Tuffac. sandstone	Sabana	
		II9A	51	1	20	51	53	49	113	Wfs	Ultisols	Lava		
		II9A	41	1	12	41	42	41	124					
		II9A	42	1	10	42	43	41	124					
		II9A	51	0	3	51	51	51	153	Swf	Ultisols	Tuffac. sandstone		
		II9B	50	2	94	49	56	46	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9B	49	2	63	49	56	42	108	Wf-LM	Ultisols	Tuffac. sandstone	Mameyes	
		II9B	49	2	70	49	53	45	108	Wf-LM	Ultisols	Tuffac. sandstone	Mameyes	
		II9B	52	2	18	52	56	47	113	Wfs	Ultisols	Lava		
		II9B	44	0	11	44	45	44	124					
		II9B	52	1	30	52	56	50	132	Wfs	Mollisols	Plutonic rocks		
		II9C	49	2	100	49	52	44	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9C	51	2	45	50	56	47	108	Wf-LM	Ultisols	Tuffac. sandstone	Mameyes	
		II9C	50	2	49	50	54	42	108	Wf-LM	Ultisols	Tuffac. sandstone	Sabana	
		II9C	53	1	19	53	55	51	113	Wfs	Ultisols	Lava		
		II9C	44	2	15	43	46	39	124					
		II9C	54	2	21	54	58	51	132	Wfs	Mollisols	Plutonic rocks		
		II9D	44	2	85	44	54	41	106	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II9D	48	2	38	49	52	44	108	Wf-LM	Ultisols	Tuffac. sandstone	Mameyes	
		II9D	48	2	39	48	51	44	108	Wf-LM	Ultisols	Tuffac. sandstone	Sabana	
		II9D	48	2	12	48	51	43	113	Wfs	Ultisols	Lava		
		II9D	36	3	5	35	41	2	124				Dacroides	
		II9D	49	1	17	50	52	46	132	Wfs	Mollisols	Plutonic rocks		
	Iron (mg/g)	II1A	5.97	7.72	55	2.88	31.92	0.14	112	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II1A	5.05	6.44	51	2.46	27.70	0.10	112	Lmrf	Ultisols	Tuffac. sandstone	Puente Roto	
		II8B	0.99	0.84	8	0.61	2.47	0.38	130	Mfs	Ultisols	Tuffac. sandstone	<=2cm	
		II8B	0.51	0.37	9	0.48	1.28	0.04	130	Mfs	Ultisols	Tuffac. sandstone	>2cm	
		II8D	14.65	7.04	10	15.58	22.84	5.87	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II9A	0.13	0.04	22	0.12	0.26	0.09	132	Wfs	Mollisols	Plutonic rocks		
		II1E	8.57	3.42	16	8.10	15.52	3.08	114	Wfs	Ultisols	Lava	Lives <2mm	
		II1E	17.62	7.80	16	17.56	32.12	4.68	114	Wfs	Ultisols	Lava	Dead <2mm	
		II1E	7.22	5.92	6	5.48	18.55	1.46	114	Wfs	Ultisols	Lava	Live >2mm<5mm	
		II1E	6.35	3.64	5	5.66	11.27	2.50	114	Wfs	Ultisols	Lava	Dead >2mm<5mm	
		II1E	3.62	1.81	6	3.41	6.60	1.78	114	Wfs	Ultisols	Lava	>5mm	
		II1E	1.27	0.69	29	1.02	2.66	0.38	131	Wfs	Mollisols	Plutonic rocks	<1cm	
		II1E	1.04	0.86	19	0.87	2.78	0.19	131	Wfs	Mollisols	Plutonic rocks	>1cm<2cm	
		II1E	0.99	0.68	5	0.64	1.97	0.36	131	Wfs	Mollisols	Plutonic rocks	>2cm	
		II3	2.33	2.10	13	1.56	7.68	0.52	142	Wflm	Inceptisols	Tuffac. sandstone		
		II3	2.73	1.63	17	2.16	6.34	0.61	142	Wflm	Inceptisols	Tuffac. sandstone		
		II6	1.52	1.38	17	1.29	6.04	0.16	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8A	0.90	0.81	16	0.50	2.62	0.20	111	Rfs	Inceptisols	Tuffac. sandstone		
		II8A	1.73	1.51	12	1.34	4.66	0.25	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8A	5.81	5.14	32	4.13	17.37	0.38	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8A	1.12	0.70	11	0.98	2.90	0.32	124				Dacroides-Adjuntas	
		II8A	2.37	2.25	17	1.80	7.06	0.15	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8A	6.01	6.30	9	4.50	19.01	0.50	130	Mfs	Ultisols	Tuffac. sandstone		
		II8A	3.13	3.11	35	1.23	15.45	0.23	132	Wfs	Mollisols	Plutonic rocks		



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II8A	5.82	4.85	69	4.84	26.77	0.74	136	Wfs	Ultisols	Tuffac. sandstone		
		II8A	2.89	1.88	66	2.54	8.94	0.15	140	Swf	Ultisols	Tuffac. sandstone	Cubuy	
		II8A	0.60	0.20	6	0.62	0.80	0.32	140	Sdf	Mollisols	Alluvial deposits	Guanica	
		II8A	2.72	3.93	144	1.56	30.68	0.22	140	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8A	1.05	1.22	75	0.65	7.13	0.12	140	Wflm	Inceptisols	Tuffac. sandstone	Palm Forest	
		II8A	1.52	1.46	20	1.34	5.95	0.17	140	Rfs	Inceptisols	Tuffac. sandstone	Pico del Este	
		II8A	3.66	3.14	20	3.20	14.50	0.31	142	Wflm	Inceptisols	Tuffac. sandstone	Dicotiledonea	
		II8A	2.86	2.11	21	2.28	6.93	0.30	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8B	0.45	0.41	12	0.31	1.50	0.07	111	Rfs	Inceptisols	Tuffac. sandstone		
		II8B	2.11	1.77	13	1.85	6.98	0.57	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8B	1.31	0.90	8	0.93	2.86	0.20	124				Dacroides	
		II8B	0.43	0.52	48	0.22	2.24	0.07	132	Wfs	Mollisols	Plutonic rocks		
		II8B	1.23	1.46	51	0.66	7.14	0.09	136	Wfs	Ultisols	Tuffac. sandstone		
		II8B	0.94	0.79	65	0.68	3.66	0.08	140	Swf	Ultisols	Tuffac. sandstone	Cubuy	
		II8B	0.29	0.17	11	0.25	0.52	0.08	140	Sdf	Mollisols	Alluvial deposits	Guanica	
		II8B	1.17	2.08	139	0.53	18.07	0.05	140	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8B	0.77	0.88	66	0.57	5.20	0.09	140	Wflm	Inceptisols	Tuffac. sandstone	Palm Forest	
		II8B	1.33	1.72	17	0.62	6.90	0.11	140	Rfs	Inceptisols	Tuffac. sandstone	Pico del Este	
		II8B	1.80	1.37	31	1.50	5.73	0.11	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8C	4.57	4.04	16	2.72	15.41	1.06	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8C	1.27	0.43	7	1.46	1.68	0.77	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8C	2.80	2.50	8	2.20	8.06	0.36	130	Mfs	Ultisols	Tuffac. sandstone		
		II8C	2.24	3.45	21	1.01	14.78	0.11	132	Wfs	Mollisols	Plutonic rocks		
		II8C	3.17	1.66	2	3.17	4.41	1.92	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8D	1.92	1.44	16	1.69	5.25	0.27	111	Rfs	Inceptisols	Tuffac. sandstone		
		II8D	18.67	5.07	9	20.15	26.84	12.63	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8D	14.67	6.26	8	14.85	24.05	4.82	130	Mfs	Ultisols	Tuffac. sandstone		
		II8D	5.95	5.54	27	5.44	16.67	0.01	132	Wfs	Mollisols	Plutonic rocks		
		II8D	9.23	4.10	62	9.61	16.07	0.23	140	Swf	Ultisols	Tuffac. sandstone	Cubuy	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II8D	6.10	1.70	7	6.26	8.12	3.24	140	Sdf	Mollisols	Alluvial deposits	Guanica	
		II8D	4.61	6.19	138	2.68	46.97	0.15	140	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8D	4.70	5.07	67	2.40	21.72	0.18	140	Wflm	Inceptisols	Tuffac. sandstone	Palm Forest	
		II8D	14.36	18.33	9	8.01	50.59	1.43	140	Rfs	Inceptisols	Tuffac. sandstone	Pico del Este	
		II8D	4.09	2.11	8	3.39	6.80	1.45	142	Wflm	Inceptisols	Tuffac. sandstone	Fern	
		II8D	11.11	7.34	42	9.91	30.39	1.35	142	Wflm	Inceptisols	Tuffac. sandstone		
		II9A	1.31	2.74	583	0.40	29.61	0.01	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9A	0.49	0.31	12	0.46	1.12	0.12	124					
		II9A	0.51	0.44	10	0.40	1.71	0.18	124					
		II9A	0.35	0.52	138	0.24	4.33	0.09	130	Mfs	Ultisols	Tuffac. sandstone		
		II9A	0.86	0.11	3	0.88	0.95	0.74	153	Swf	Ultisols	Tuffac. sandstone		
		II9A	0.28	0.20	14	0.31	0.60	0.03	154	Wfs	Ultisols	Tuffac. sandstone		
		II9B	0.38	1.27	420	0.13	18.75	0.01	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9B	0.47	0.28	11	0.34	1.06	0.17	124					
		II9B	0.55	2.75	96	0.12	19.35	0.01	130	Mfs	Ultisols	Tuffac. sandstone		
		II9B	0.08	0.03	29	0.07	0.17	0.03	132	Wfs	Mollisols	Plutonic rocks		
		II9B	0.20	0.38	14	0.05	1.12	0.02	154	Wfs	Ultisols	Tuffac. sandstone		
		II9C	1.01	1.82	460	0.44	22.67	0.01	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9C	3.32	2.39	15	3.56	7.92	0.24	124					
		II9C	0.37	0.78	129	0.20	7.48	0.01	130	Mfs	Ultisols	Tuffac. sandstone		
		II9C	0.33	0.24	21	0.30	1.13	0.04	132	Wfs	Mollisols	Plutonic rocks		
		II9D	1.23	3.72	464	0.37	43.77	0.01	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9D	11.59	4.23	5	14.00	15.43	0.24	124				Dacroides	
		II9D	9.43	8.96	58	6.76	27.44	0.02	130	Mfs	Ultisols	Tuffac. sandstone		
		II9D	0.53	0.57	17	0.39	2.22	0.10	132	Wfs	Mollisols	Plutonic rocks		
		II9D	0.27	0.21	13	0.19	0.60	0.05	154	Wfs	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II8B	1.94	0.58	8	2.01	2.92	1.14	130	Mfs	Ultisols	Tuffac. sandstone	<=2cm	
		II8B	2.21	1.21	9	2.47	3.49	0.47	130	Mfs	Ultisols	Tuffac. sandstone	>2cm	
		II9A	2.29	0.33	22	2.26	3.01	1.77	132	Wfs	Mollisols	Plutonic rocks		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1E	1.95	0.54	16	1.81	3.00	1.29	114	Wfs	Ultisols	Lava	Lives <2mm	
		II1E	17.71	0.03	16	1.62	2.28	1.27	114	Wfs	Ultisols	Lava	Dead <2mm	
		III1E	1.49	0.31	6	1.39	2.05	1.22	114	Wfs	Ultisols	Lava	Live >2mm<5mm	
		II1E	1.38	0.28	5	1.20	1.80	1.18	114	Wfs	Ultisols	Lava	Dead >2mm<5mm	
		III1E	1.50	0.77	6	1.19	2.78	0.85	114	Wfs	Ultisols	Lava	>5mm	
		III1E	1.15	0.31	29	1.15	2.00	0.67	131	Wfs	Mollisols	Plutonic rocks	<1cm	
		II1E	1.24	0.39	19	1.19	1.99	0.65	131	Wfs	Mollisols	Plutonic rocks	>1cm<2cm	
		III1E	0.96	0.36	5	0.77	1.38	0.65	131	Wfs	Mollisols	Plutonic rocks	>2cm	
		II3	3.05	0.94	13	2.88	4.31	1.42	142	Wflm	Inceptisols	Tuffac. sandstone		
		II3	2.84	0.68	17	2.91	4.00	1.70	142	Wflm	Inceptisols	Tuffac. sandstone		
		II6	3.97	1.64	17	4.36	6.63	1.03	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8A	3.68	0.86	9	3.70	5.25	2.38	130	Mfs	Ultisols	Tuffac. sandstone		
		II8A	2.36	0.49	35	2.41	3.51	1.27	132	Wfs	Mollisols	Plutonic rocks		
		II8A	1.72	0.67	69	1.59	3.33	0.63	136	Wfs	Ultisols	Tuffac. sandstone		
		II8A	2.62	0.48	66	2.48	3.74	1.81	140	Swf	Ultisols	Tuffac. sandstone	Cubuy	
		II8A	2.03	0.61	6	2.06	2.79	1.07	140	Sdf	Mollisols	Alluvial deposits	Guanica	
		II8A	1.91	0.56	144	1.93	3.32	0.67	140	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8A	1.76	0.61	75	1.67	3.09	0.46	140	Wflm	Inceptisols	Tuffac. sandstone	Palm Forest	
		II8A	1.69	0.68	20	1.41	4.02	1.18	140	Rfs	Inceptisols	Tuffac. sandstone	Pico del Este	
		II8A	1.78	0.58	20	1.60	3.21	1.10	142	Wflm	Inceptisols	Tuffac. sandstone	Dicotiledonea	
		II8A	1.32	0.61	21	1.20	3.43	0.50	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8A	3.65	0.81	135	3.54	6.13	1.61	156	Swf	Ultisols	Tuffac. sandstone		
		II8B	1.70	0.62	48	1.68	3.11	0.37	132	Wfs	Mollisols	Plutonic rocks		
		II8B	1.12	0.47	51	1.00	3.05	0.46	136	Wfs	Ultisols	Tuffac. sandstone		
		II8B	2.00	0.46	65	1.96	3.35	1.21	140	Swf	Ultisols	Tuffac. sandstone	Cubuy	
		II8B	0.87	0.36	11	0.85	1.85	0.53	140	Sdf	Mollisols	Alluvial deposits	Guanica	
		II8B	1.16	0.68	139	1.10	6.21	0.23	140	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8B	1.17	0.59	66	1.00	2.88	0.33	140	Wflm	Inceptisols	Tuffac. sandstone	Palm Forest	
		II8B	0.76	0.14	17	0.75	1.03	0.51	140	Rfs	Inceptisols	Tuffac. sandstone	Pico del Este	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II8B	0.96	0.38	31	0.90	2.55	0.40	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8B	2.41	0.89	126	2.25	7.82	0.33	156	Swf	Ultisols	Tuffac. sandstone	<2cm	
		II8B	1.53	0.68	23	1.39	3.00	0.43	156	Swf	Ultisols	Tuffac. sandstone	≥2cm	
		II8C	1.31	0.48	8	1.25	2.03	0.74	130	Mfs	Ultisols	Tuffac. sandstone		
		II8C	2.14	1.43	21	1.92	7.81	1.22	132	Wfs	Mollisols	Plutonic rocks		
		II8C	1.58	0.44	2	1.58	1.88	1.27	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8C	2.71	1.63	86	2.35	10.65	0.90	156	Swf	Ultisols	Tuffac. sandstone		
		II8D	4.22	0.93	8	4.17	5.38	2.76	130	Mfs	Ultisols	Tuffac. sandstone		
		II8D	1.65	0.41	27	1.67	2.39	0.94	132	Wfs	Mollisols	Plutonic rocks		
		II8D	2.86	0.89	62	2.63	4.48	1.43	140	Swf	Ultisols	Tuffac. sandstone	Cubuy	
		II8D	2.59	0.37	7	2.72	2.96	1.83	140	Sdf	Mollisols	Alluvial deposits	Guanica	
		II8D	1.78	0.60	138	1.69	3.65	0.58	140	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8D	2.10	0.84	67	1.88	4.54	1.08	140	Wflm	Inceptisols	Tuffac. sandstone	Palm Forest	
		II8D	1.04	0.31	9	0.95	1.71	0.70	140	Rfs	Inceptisols	Tuffac. sandstone	Pico del Este	
		II8D	3.31	1.57	8	3.72	5.44	1.33	142	Wflm	Inceptisols	Tuffac. sandstone	Fern	
		II8D	1.90	0.65	42	1.80	3.72	0.63	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8D	4.87	1.79	125	4.70	10.26	1.47	156	Swf	Ultisols	Tuffac. sandstone		
		II9A	2.23	0.57	626	21.14	5.32	0.02	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9A	1.36	0.26	12	1.27	1.96	1.16	124					
		II9A	2.41	0.43	10	2.32	3.08	1.76	124					
		II9A	3.23	0.77	138	3.18	5.38	1.22	130	Mfs	Ultisols	Tuffac. sandstone		
		II9A	2.34	0.05	3	2.37	2.38	2.28	153	Swf	Ultisols	Tuffac. sandstone		
		II9A	2.62	0.92	13	2.35	4.05	1.52	154	Wfs	Ultisols	Tuffac. sandstone		
		II9A	3.44	0.55	128	3.39	5.41	2.25	156	Swf	Ultisols	Tuffac. sandstone		
		II9B	1.38	0.65	462	1.27	6.67	0.37	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9B	1.50	0.26	11	1.57	1.81	0.98	124					
		II9B	2.22	0.95	96	2.10	6.57	0.65	130	Mfs	Ultisols	Tuffac. sandstone		
		II9B	1.72	0.70	29	1.44	4.63	0.90	132	Wfs	Mollisols	Plutonic rocks		
		II9B	2.49	0.45	14	2.41	3.32	1.92	154	Wfs	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II9B	1.91	0.54	58	1.92	3.22	0.79	156	Swf	Ultisols	Tuffac. sandstone		
		II9C	1.65	0.82	463	1.48	7.84	0.12	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9C	1.60	0.51	15	1.79	2.30	0.68	124					
		II9C	0.09	0.16	129	0.07	1.81	0.01	130	Mfs	Ultisols	Tuffac. sandstone		
		II9C	1.92	0.53	21	1.79	3.00	0.96	132	Wfs	Mollisols	Plutonic rocks		
		II9C	2.18	0.64	49	2.27	4.02	1.01	156	Swf	Ultisols	Tuffac. sandstone		
		II9D	2.87	1.15	505	2.73	7.46	0.46	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9D	1.25	0.16	5	1.30	1.39	0.51	124				Dacroides	
		II9D	4.74	1.04	58	4.66	7.23	2.53	130	Mfs	Ultisols	Tuffac. sandstone		
		II9D	4.26	1.44	17	4.63	6.84	1.82	132	Wfs	Mollisols	Plutonic rocks		
		II9D	3.01	1.76	13	2.37	6.97	1.08	154	Wfs	Ultisols	Tuffac. sandstone		
		II9D	3.03	0.87	49	2.91	6.13	1.29	156	Swf	Ultisols	Tuffac. sandstone		
		II1A	1.93	0.61	55	1.88	3.80	0.84	112	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II1A	2.19	0.77	51	2.17	4.27	0.98	112	Lmrf	Ultisols	Tuffac. sandstone	Puente Roto	
		II8D	1.42	0.15	10	1.43	1.62	1.08	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8A	1.74	0.13	16	1.50	1.99	1.48	111	Rfs	Inceptisols	Tuffac. sandstone		
		II8A	1.51	0.07	12	1.50	1.65	1.41	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8A	1.61	0.40	32	1.56	2.63	0.98	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8A	1.10	0.06	11	1.08	1.22	1.00	124				Dacroides-Adjuntas	
		II8A	1.22	0.12	17	1.21	1.46	1.01	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8B	0.93	0.30	12	0.97	1.32	0.53	111	Rfs	Inceptisols	Tuffac. sandstone		
		II8B	1.24	0.20	13	1.25	1.51	0.83	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8B	1.11	0.25	8	1.04	1.63	0.83	124				Dacroides	
		II8C	1.03	0.49	16	0.84	1.99	0.46	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8C	0.84	0.14	7	0.81	1.11	0.70	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8D	1.90	0.31	16	1.94	2.30	1.27	111	Rfs	Inceptisols	Tuffac. sandstone		
		II8D	1.48	0.20	9	1.49	1.83	1.23	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II9C	2.82	1.22	129	2.68	5.74	0.83	130	Mfs	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II1A	0.63	0.64	55	0.36	2.41	0.05	112	Lmrf	Ultisols	Tuffac. sandstone	Bisley	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1A	0.38	0.34	51	0.22	1.29	0.06	112	Lmrf	Ultisols	Tuffac. sandstone	Puente Roto	
		II8B	0.17	0.11	8	0.15	0.30	0.03	130	Mfs	Ultisols	Tuffac. sandstone	<=2cm	
		II8B	0.14	0.21	9	0.08	0.67	0.01	130	Mfs	Ultisols	Tuffac. sandstone	>2cm	
		II8D	0.37	0.08	10	0.37	0.48	0.25	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II9A	0.72	0.18	22	0.65	1.04	0.43	132	Wfs	Mollisols	Plutonic rocks		
		II1E	0.37	0.15	16	0.37	0.76	0.14	114	Wfs	Ultisols	Lava	Lives <2mm	
		II1E	0.69	0.30	16	0.67	1.29	0.18	114	Wfs	Ultisols	Lava	Dead <2mm	
		II1E	0.20	0.07	6	0.19	0.33	0.12	114	Wfs	Ultisols	Lava	Live >2mm<5mm	
		II1E	0.56	0.38	5	0.82	0.86	0.13	114	Wfs	Ultisols	Lava	Dead >2mm<5mm	
		II1E	0.35	0.38	6	0.14	1.05	0.13	114	Wfs	Ultisols	Lava	>5mm	
		II1E	0.23	0.15	29	0.23	0.61	0.03	131	Wfs	Mollisols	Plutonic rocks	<1cm	
		II1E	0.20	0.09	19	0.21	0.45	0.02	131	Wfs	Mollisols	Plutonic rocks	>1cm<2cm	
		II1E	0.17	0.06	15	0.14	0.27	0.11	131	Wfs	Mollisols	Plutonic rocks	>2cm	
		II3	0.22	0.14	13	0.23	0.44	0.06	142	Wflm	Inceptisols	Tuffac. sandstone		
		II3	0.55	0.16	17	0.54	0.91	0.24	142	Wflm	Inceptisols	Tuffac. sandstone		
		II6	0.47	0.28	17	0.35	1.20	0.19	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8A	0.28	0.21	16	0.17	0.69	0.08	111	Rfs	Inceptisols	Tuffac. sandstone		
		II8A	0.47	0.08	12	0.48	0.60	0.28	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8A	0.41	0.08	32	0.41	0.58	0.24	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8A	0.95	0.14	11	0.97	1.17	0.78	124				Dacroides-Adjuntas	
		II8A	1.07	0.21	17	1.10	1.60	0.73	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8A	0.29	0.19	9	0.29	0.65	0.10	130	Mfs	Ultisols	Tuffac. sandstone		
		II8A	1.19	0.61	35	1.05	3.49	0.50	132	Wfs	Mollisols	Plutonic rocks		
		II8A	0.66	0.41	69	0.64	1.83	0.04	136	Wfs	Ultisols	Tuffac. sandstone		
		II8A	0.40	0.27	66	0.39	1.44	0.07	140	Swf	Ultisols	Tuffac. sandstone	Cubuy	
		II8A	0.06	0.01	6	0.06	0.08	0.04	140	Sdf	Mollisols	Alluvial deposits	Guanica	
		II8A	0.31	0.15	144	0.27	1.00	0.09	140	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8A	0.59	0.36	75	0.55	1.42	0.06	140	Wflm	Inceptisols	Tuffac. sandstone	Palm Forest	
		II8A	0.14	0.10	20	0.12	0.36	0.03	140	Rfs	Inceptisols	Tuffac. sandstone	Pico del Este	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II8A	0.50	0.25	20	0.44	1.04	0.19	142	Wflm	Inceptisols	Tuffac. sandstone	Dicotiledonea	
		II8A	0.33	0.17	21	0.26	0.87	0.11	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8B	0.18	0.30	12	0.07	0.87	0.03	111	Rfs	Inceptisols	Tuffac. sandstone		
		II8B	0.31	0.08	13	0.30	0.46	0.20	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8B	1.43	1.00	8	0.93	3.72	0.82	124				Dacroides	
		II8B	1.05	1.42	48	0.73	9.82	0.09	132	Wfs	Mollisols	Plutonic rocks		
		II8B	0.38	0.28	51	0.36	1.27	0.02	136	Wfs	Ultisols	Tuffac. sandstone		
		II8B	0.26	0.22	65	0.20	0.99	0.06	140	Swf	Ultisols	Tuffac. sandstone	Cubuy	
		II8B	0.03	0.01	11	0.03	0.07	0.02	140	Sdf	Mollisols	Alluvial deposits	Guanica	
		II8B	0.16	0.10	139	0.13	0.69	0.03	140	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8B	0.29	0.19	66	0.28	0.92	0.03	140	Wflm	Inceptisols	Tuffac. sandstone	Palm Forest	
		II8B	0.09	0.06	17	0.07	0.19	0.02	140	Rfs	Inceptisols	Tuffac. sandstone	Pico del Este	
		II8B	0.29	0.18	31	0.24	0.94	0.04	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8C	0.18	0.12	15	0.12	0.44	0.07	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8C	0.37	0.18	7	0.33	0.73	0.21	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8C	0.10	0.07	8	0.11	0.22	0.03	130	Mfs	Ultisols	Tuffac. sandstone		
		II8C	0.77	0.67	21	0.41	1.95	0.14	132	Wfs	Mollisols	Plutonic rocks		
		II8C	0.25	0.15	2	0.25	0.35	0.14	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8D	0.16	0.09	16	0.14	0.41	0.08	111	Rfs	Inceptisols	Tuffac. sandstone		
		II8D	1.56	0.35	9	1.52	2.05	1.10	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8D	0.65	0.28	8	0.69	1.09	0.28	130	Mfs	Ultisols	Tuffac. sandstone		
		II8D	1.20	0.55	27	1.35	2.59	0.09	132	Wfs	Mollisols	Plutonic rocks		
		II8D	0.54	0.35	62	0.48	2.07	0.11	140	Swf	Ultisols	Tuffac. sandstone	Cubuy	
		II8D	0.18	0.04	7	0.17	0.26	0.14	140	Sdf	Mollisols	Alluvial deposits	Guanica	
		II8D	0.36	0.21	138	0.33	1.44	0.02	140	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8D	0.76	0.44	67	0.72	1.63	0.21	140	Wflm	Inceptisols	Tuffac. sandstone	Palm Forest	
		II8D	0.12	0.06	9	0.12	0.24	0.04	140	Rfs	Inceptisols	Tuffac. sandstone	Pico del Este	
		II8D	0.37	0.17	8	0.39	0.58	0.17	142	Wflm	Inceptisols	Tuffac. sandstone	Fern	
		II8D	0.53	0.25	42	0.45	1.37	0.22	142	Wflm	Inceptisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II9A	0.40	0.16	583	0.39	2.20	0.01	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9A	0.50	0.08	12	0.50	0.64	0.40	124					
		II9A	0.39	0.12	10	0.39	0.57	0.23	124					
		II9A	0.14	0.05	138	0.13	0.29	0.02	130	Mfs	Ultisols	Tuffac. sandstone		
		II9A	1.07	0.05	3	1.05	1.13	1.03	153	Swf	Ultisols	Tuffac. sandstone		
		II9A	0.40	0.27	14	0.36	0.79	0.05	154	Wfs	Ultisols	Tuffac. sandstone		
		II9B	0.25	0.20	420	0.19	1.74	0.02	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9B	0.34	0.06	11	0.34	0.45	0.24	124					
		II9B	0.13	0.15	96	0.09	0.08	0.01	130	Mfs	Ultisols	Tuffac. sandstone		
		II9B	0.80	0.79	29	0.63	4.40	0.22	132	Wfs	Mollisols	Plutonic rocks		
		II9B	0.24	0.26	14	0.07	0.74	0.03	154	Wfs	Ultisols	Tuffac. sandstone		
		II9C	0.21	0.18	463	0.17	2.17	0.02	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9C	0.22	0.07	15	0.24	0.31	0.08	124					
		II9C	0.46	0.22	21	0.46	0.94	0.09	132	Wfs	Mollisols	Plutonic rocks		
		II9D	0.46	0.27	64	0.40	1.93	0.02	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9D	0.23	0.07	5	0.20	0.34	0.07	124				Dacroides	
		II9D	0.54	0.40	58	0.45	1.38	0.04	130	Mfs	Ultisols	Tuffac. sandstone		
		II9D	0.56	0.21	17	0.48	1.14	0.34	132	Wfs	Mollisols	Plutonic rocks		
		II9D	0.17	0.07	13	0.15	0.26	0.04	154	Wfs	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II1A	1.91	0.58	55	1.88	3.82	0.95	112	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II1A	1.75	0.52	49	1.81	2.63	0.61	112	Lmrf	Ultisols	Tuffac. sandstone	Puente Roto	
		II8B	1.15	0.29	8	1.25	1.58	0.67	130	Mfs	Ultisols	Tuffac. sandstone	<=2cm	
		II8B	0.86	0.44	9	0.78	1.59	0.44	130	Mfs	Ultisols	Tuffac. sandstone	>2cm	
		II8D	1.29	0.18	10	1.33	1.49	0.94	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II9A	1.96	0.21	22	1.93	2.37	1.67	132	Wfs	Mollisols	Plutonic rocks		
		II1E	1.87	0.48	16	1.89	2.67	0.64	114	Wfs	Ultisols	Lava	Lives <2mm	
		II1E	1.84	0.50	18	1.98	2.48	0.59	114	Wfs	Ultisols	Lava	Dead <2mm	
		II1E	0.96	0.30	6	0.96	1.32	0.45	114	Wfs	Ultisols	Lava	Live >2mm<5mm	
		II1E	1.31	0.48	5	1.26	1.89	0.72	114	Wfs	Ultisols	Lava	Dead >2mm<5mm	



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1E	0.74	0.20	6	0.72	1.03	0.50	114	Wfs	Ultisols	Lava	>5mm	
		II1E	1.49	0.39	29	1.51	2.30	0.57	131	Wfs	Mollisols	Plutonic rocks	<1cm	
		III1E	1.34	0.41	19	1.40	1.93	0.49	131	Wfs	Mollisols	Plutonic rocks	>1cm<2cm	
		II1E	1.59	0.16	5	1.65	1.79	1.41	131	Wfs	Mollisols	Plutonic rocks	>2cm	
		II3	1.54	0.79	13	1.35	4.08	0.96	142	Wflm	Inceptisols	Tuffac. sandstone		
		II3	2.14	0.72	13	2.10	3.24	1.02	142	Wflm	Inceptisols	Tuffac. sandstone		
		II6	1.50	0.61	15	1.52	2.87	0.54	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8A	1.82	0.11	9	1.83	1.96	1.65	130	Mfs	Ultisols	Tuffac. sandstone		
		II8A	2.59	0.32	33	2.58	3.27	2.06	132	Wfs	Mollisols	Plutonic rocks		
		II8A	1.21	0.10	16	1.19	1.36	1.09	111	Rfs	Inceptisols	Tuffac. sandstone		
		II8A	0.85	0.06	12	0.84	0.97	0.76	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8A	1.08	0.14	32	1.06	1.38	0.79	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8A	0.80	0.06	11	0.80	0.91	0.70	124				Dacroides-Adjuntas	
		II8A	0.96	0.14	17	1.02	1.14	0.75	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8A	1.51	0.37	69	1.52	2.31	0.57	136	Wfs	Ultisols	Tuffac. sandstone		
		II8A	1.08	0.37	20	1.00	2.53	0.70	142	Wflm	Inceptisols	Tuffac. sandstone	Dicotiledonea	
		II8A	0.81	0.21	20	0.82	1.24	0.34	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8A	1.01	0.20	124	0.99	2.22	0.66	156	Swf	Ultisols	Tuffac. sandstone		
		II8B	1.45	0.42	49	1.38	2.38	0.57	132	Wfs	Mollisols	Plutonic rocks		
		II8B	0.68	0.11	12	0.70	0.86	0.46	111	Rfs	Inceptisols	Tuffac. sandstone		
		II8B	0.67	0.13	13	0.64	1.00	0.56	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8B	0.79	0.20	8	0.79	1.16	0.44	124				Dacroides	
		II8B	0.78	0.20	50	0.76	1.29	0.29	136	Wfs	Ultisols	Tuffac. sandstone		
		II8B	0.72	0.20	31	0.70	1.20	0.34	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8B	0.64	0.17	118	0.62	1.20	0.34	156	Swf	Ultisols	Tuffac. sandstone	<2cm	
		II8B	0.52	0.18	21	0.53	0.85	0.21	156	Swf	Ultisols	Tuffac. sandstone	≥2cm	
		II8C	1.19	0.14	8	1.21	1.34	1.01	130	Mfs	Ultisols	Tuffac. sandstone		
		II8C	2.36	0.60	21	2.24	3.64	1.33	132	Wfs	Mollisols	Plutonic rocks		
		II8C	1.01	0.39	12	0.93	1.73	0.58	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II8C	1.07	0.21	7	1.11	1.31	0.74	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8C	0.86	0.04	2	0.86	0.88	0.83	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8C	0.97	0.41	84	0.93	2.71	0.28	156	Swf	Ultisols	Tuffac. sandstone		
		II8D	2.34	0.18	8	2.28	2.61	2.16	130	Mfs	Ultisols	Tuffac. sandstone		
		II8D	2.20	0.67	27	2.01	3.52	1.18	132	Wfs	Mollisols	Plutonic rocks		
		II8D	1.01	0.27	16	1.04	1.32	0.41	111	Rfs	Inceptisols	Tuffac. sandstone		
		II8D	1.35	0.18	9	1.25	1.64	1.20	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8D	1.08	0.26	7	1.11	1.54	0.74	142	Wflm	Inceptisols	Tuffac. sandstone	Fern	
		II8D	0.91	0.41	42	0.98	1.77	0.10	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8D	1.10	0.20	117	1.10	1.51	0.56	156	Swf	Ultisols	Tuffac. sandstone		
		II9A	1.54	0.36	14	1.45	2.17	1.12	154	Wfs	Ultisols	Tuffac. sandstone		
		II9A	1.74	0.28	138	1.70	2.27	0.69	130	Mfs	Ultisols	Tuffac. sandstone		
		II9A	1.52	0.25	175	1.52	2.45	0.50	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9A	1.65	0.35	87	1.68	2.42	0.84	108	Wf-LM	Ultisols	Tuffac. sandstone	Mameyes	
		II9A	1.09	0.29	95	1.02	1.91	0.67	108	Wf-LM	Ultisols	Tuffac. sandstone	Sabana	
		II9A	1.27	0.16	20	1.23	1.67	0.94	113	Wfs	Ultisols	Lava		
		II9A	0.62	0.10	12	0.60	0.92	0.54	124					
		II9A	0.78	0.14	10	0.75	1.04	0.55	124					
		II9A	0.84	0.02	3	0.84	0.86	0.83	153	Swf	Ultisols	Tuffac. sandstone		
		II9A	0.73	0.12	128	0.71	1.11	0.54	156	Swf	Ultisols	Tuffac. sandstone		
		II9B	0.85	0.20	14	0.90	1.24	0.06	154	Wfs	Ultisols	Tuffac. sandstone		
		II9B	1.12	0.38	96	1.10	1.97	0.21	130	Mfs	Ultisols	Tuffac. sandstone		
		II9B	1.32	0.33	30	1.19	2.06	0.87	132	Wfs	Mollisols	Plutonic rocks		
		II9B	0.92	0.31	129	0.87	1.72	0.30	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9B	1.01	0.34	63	0.96	1.94	0.16	108	Wf-LM	Ultisols	Tuffac. sandstone	Mameyes	
		II9B	0.69	0.33	70	0.63	2.31	0.28	108	Wf-LM	Ultisols	Tuffac. sandstone	Mameyes	
		II9B	0.87	0.31	18	0.92	1.45	0.30	113	Wfs	Ultisols	Lava		
		II9B	0.56	0.08	11	0.56	0.68	0.45	124					
		II9B	0.60	0.16	58	0.60	1.03	0.27	156	Swf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II9C	1.58	0.44	129	1.62	2.67	0.73	130	Mfs	Ultisols	Tuffac. sandstone		
		II9C	2.24	0.36	21	2.25	2.90	1.38	132	Wfs	Mollisols	Plutonic rocks		
		II9C	1.38	0.35	138	1.34	2.90	0.65	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9C	1.56	0.43	45	1.56	2.40	0.55	108	Wf-LM	Ultisols	Tuffac. sandstone	Mameyes	
		II9C	1.49	0.32	49	1.44	2.27	0.78	108	Wf-LM	Ultisols	Tuffac. sandstone	Sabana	
		II9C	1.38	0.32	19	1.34	2.36	1.00	113	Wfs	Ultisols	Lava		
		II9C	1.23	0.36	15	1.24	1.65	0.45	124					
		II9C	1.32	0.38	49	1.32	2.01	0.68	156	Swf	Ultisols	Tuffac. sandstone		
		II9D	1.06	0.60	13	0.73	2.14	0.45	154	Wfs	Ultisols	Tuffac. sandstone		
		II9D	2.15	0.49	58	2.18	3.27	0.82	130	Mfs	Ultisols	Tuffac. sandstone		
		II9D	1.86	0.54	17	1.70	3.13	1.13	132	Wfs	Mollisols	Plutonic rocks		
		II9D	1.26	0.39	122	1.15	2.47	0.67	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9D	1.45	0.32	38	1.45	2.32	0.55	108	Wf-LM	Ultisols	Tuffac. sandstone	Mameyes	
		II9D	1.13	0.45	39	1.10	2.83	0.34	108	Wf-LM	Ultisols	Tuffac. sandstone	Sabana	
		II9D	1.21	0.44	12	1.08	2.30	0.81	113	Wfs	Ultisols	Lava		
		II9D	0.90	0.12	5	0.88	1.08	0.36	124				Dacroides	
		II9D	1.14	0.33	48	1.10	2.00	0.49	156	Swf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II1A	0.74	0.31	55	0.71	1.81	0.28	112	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II1A	0.69	0.28	51	0.74	1.19	0.17	112	Lmrf	Ultisols	Tuffac. sandstone	Puente Roto	
		II8B	0.42	0.13	8	0.44	0.55	0.26	130	Mfs	Ultisols	Tuffac. sandstone	<=2cm	
		II8B	0.32	0.16	9	0.28	0.57	0.15	130	Mfs	Ultisols	Tuffac. sandstone	>2cm	
		II8D	0.53	0.11	10	0.53	0.66	0.32	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II9A	0.50	0.18	22	0.46	0.92	0.30	132	Wfs	Mollisols	Plutonic rocks		
		II1E	0.63	0.15	16	0.62	0.84	0.24	114	Wfs	Ultisols	Lava	Lives <2mm	
		II1E	0.49	0.14	16	0.53	0.63	0.17	114	Wfs	Ultisols	Lava	Dead roots <2mm	
		II1E	0.34	0.13	6	0.37	0.46	0.11	114	Wfs	Ultisols	Lava	Live >2mm<5mm	
		II1E	0.32	0.05	5	0.31	0.39	0.25	114	Wfs	Ultisols	Lava	Dead >2mm<5mm	
		II1E	0.27	0.11	6	0.24	0.48	0.17	114	Wfs	Ultisols	Lava	>5mm	
		II1E	0.25	0.13	29	0.21	0.56	0.11	131	Wfs	Mollisols	Plutonic rocks	<1cm	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1E	0.20	0.08	19	0.18	0.41	0.11	131	Wfs	Mollisols	Plutonic rocks	>1cm<2cm	
		II1E	0.17	0.03	5	0.17	0.20	0.13	131	Wfs	Mollisols	Plutonic rocks	>2cm	
		II3	0.71	0.44	13	0.62	2.16	0.42	142	Wflm	Inceptisols	Tuffac. sandstone		
		II3	0.80	0.19	17	0.76	1.25	0.54	142	Wflm	Inceptisols	Tuffac. sandstone		
		II6	0.66	0.23	17	0.60	1.05	0.30	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8A	0.44	0.04	16	0.43	0.52	0.38	111	Rfs	Inceptisols	Tuffac. sandstone		
		II8A	0.20	0.05	12	0.19	0.34	0.13	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8A	0.31	0.08	32	0.30	0.46	0.14	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8A	0.17	0.03	11	0.16	0.22	0.12	124				Dacroides-Adjuntas	
		II8A	0.25	0.08	17	0.26	0.37	0.12	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8A	0.63	0.15	9	0.66	0.88	0.44	130	Mfs	Ultisols	Tuffac. sandstone		
		II8A	0.69	0.18	35	0.66	1.04	0.42	132	Wfs	Mollisols	Plutonic rocks		
		II8A	0.51	0.23	69	0.54	1.06	0.12	136	Wflm	Inceptisols	Tuffac. sandstone		
		II8A	0.57	0.11	66	0.57	0.84	0.35	140	Rfs	Inceptisols	Tuffac. sandstone	Cubuy	
		II8A	0.40	0.09	6	0.42	0.50	0.23	140	Sdf	Mollisols	Alluvial deposits	Guanica	
		II8A	0.49	0.18	144	0.45	1.11	0.14	140	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8A	0.52	0.20	75	0.51	1.14	0.11	140	Wflm	Inceptisols	Tuffac. sandstone	Palm Forest	
		II8A	0.35	0.12	20	0.34	0.64	0.21	140	Rfs	Inceptisols	Tuffac. sandstone	Pico del Este	
		II8A	0.30	0.20	20	0.23	1.03	0.16	142	Wflm	Inceptisols	Tuffac. sandstone	Dicotiledonea	
		II8A	0.29	0.09	21	0.28	0.48	0.16	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8A	0.42	0.09	135	0.42	0.80	0.20	156	Swf	Ultisols	Tuffac. sandstone		
		II8B	0.25	0.12	12	0.23	0.49	0.13	111	Rfs	Inceptisols	Tuffac. sandstone		
		II8B	0.20	0.04	13	0.20	0.28	0.13	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8B	0.23	0.08	8	0.23	0.39	0.14	124				Dacroides	
		II8B	0.40	0.17	48	0.38	0.99	0.13	132	Wfs	Mollisols	Plutonic rocks		
		II8B	0.23	0.12	51	0.24	0.47	0.05	136	Wfs	Ultisols	Tuffac. sandstone		
		II8B	0.32	0.08	65	0.31	0.56	0.17	140	Swf	Ultisols	Tuffac. sandstone	Cubuy	
		II8B	0.25	0.11	11	0.23	0.54	0.14	140	Sdf	Mollisols	Alluvial deposits	Guanica	
		II8B	0.22	0.12	139	0.20	1.13	0.09	140	Lmrf	Ultisols	Tuffac. sandstone	Bisley	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II8B	0.33	0.14	66	0.28	0.84	0.15	140	Wflm	Inceptisols	Tuffac. sandstone	Palm Forest	
		II8B	0.15	0.05	17	0.13	0.26	0.06	140	Rfs	Inceptisols	Tuffac. sandstone	Pico del Este	
		II8B	0.20	0.10	31	0.19	0.69	0.08	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8B	0.29	0.12	126	0.28	1.27	0.12	156	Swf	Ultisols	Tuffac. sandstone	<2cm	
		II8B	0.23	0.11	23	0.20	0.51	0.09	156	Swf	Ultisols	Tuffac. sandstone	≥2cm	
		II8C	0.55	0.29	16	0.51	1.35	0.22	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8C	0.54	0.12	7	0.57	0.67	0.34	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8C	0.63	0.12	8	0.60	0.80	0.50	130	Mfs	Ultisols	Tuffac. sandstone		
		II8C	0.78	0.24	21	0.76	1.27	0.27	132	Wfs	Mollisols	Plutonic rocks		
		II8C	0.44	0.13	2	0.44	0.53	0.35	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8C	0.51	0.27	86	0.45	1.35	0.06	156	Swf	Ultisols	Tuffac. sandstone		
		II8D	0.38	0.15	16	0.40	0.57	0.11	111	Rfs	Inceptisols	Tuffac. sandstone		
		II8D	0.60	0.15	9	0.58	0.90	0.41	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8D	0.95	0.16	8	1.00	1.16	0.65	130	Mfs	Ultisols	Tuffac. sandstone		
		II8D	0.78	0.32	27	0.83	1.24	0.21	132	Wfs	Mollisols	Plutonic rocks		
		II8D	0.62	0.14	62	0.63	0.92	0.32	140	Swf	Ultisols	Tuffac. sandstone	Cubuy	
		II8D	0.47	0.03	7	0.47	0.52	0.41	140	Sdf	Mollisols	Alluvial deposits	Guanica	
		II8D	0.46	0.18	138	0.45	1.24	0.14	140	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8D	0.66	0.14	67	0.64	0.97	0.39	140	Wflm	Inceptisols	Tuffac. sandstone	Palm Forest	
		II8D	0.34	0.11	9	0.32	0.53	0.19	140	Rfs	Inceptisols	Tuffac. sandstone	Pico del Este	
		II8D	0.50	0.15	8	0.54	0.72	0.28	142	Wflm	Inceptisols	Tuffac. sandstone	Fern	
		II8D	0.40	0.14	42	0.38	0.89	0.19	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8D	0.57	0.13	125	0.57	1.05	0.28	156	Swf	Ultisols	Tuffac. sandstone		
		II9A	0.43	0.16	626	0.41	1.80	0.01	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9A	0.15	0.06	12	0.13	0.32	0.11	124					
		II9A	0.25	0.05	10	0.24	0.35	0.17	124					
		II9A	0.65	0.17	138	0.63	1.14	0.28	130	Mfs	Ultisols	Tuffac. sandstone		
		II9A	0.28	0.01	3	0.28	0.29	0.27	153	Swf	Ultisols	Tuffac. sandstone		
		II9A	0.82	0.17	14	0.77	1.09	0.62	154	Wfs	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II9A	0.33	0.08	128	0.32	0.56	0.19	156	Swf	Ultisols	Tuffac. sandstone		
		II9B	0.27	0.12	462	0.25	1.36	0.09	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9B	0.25	0.05	11	0.25	0.35	0.18	124					
		II9B	0.39	0.23	96	0.33	1.86	0.08	130	Mfs	Ultisols	Tuffac. sandstone		
		II9B	0.33	0.13	29	0.30	0.68	0.14	132	Wfs	Mollisols	Plutonic rocks		
		II9B	0.75	0.16	14	0.72	1.12	0.59	154	Wfs	Ultisols	Tuffac. sandstone		
		II9B	0.31	0.09	58	0.30	0.52	0.15	156	Swf	Ultisols	Tuffac. sandstone		
		II9C	0.82	0.26	463	0.81	3.90	0.14	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9C	0.86	0.26	15	0.84	1.35	0.44	124					
		II9C	1.09	0.26	129	1.07	1.80	0.29	130	Mfs	Ultisols	Tuffac. sandstone		
		II9C	1.04	0.26	21	1.01	1.72	0.65	132	Wfs	Mollisols	Plutonic rocks		
		II9C	1.23	0.43	49	1.09	2.43	0.61	156	Swf	Ultisols	Tuffac. sandstone		
		II9D	0.50	0.26	505	0.43	2.00	0.11	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9D	0.54	0.13	5	0.56	0.68	0.26	124				Dacroides	
		II9D	1.17	0.41	58	1.20	2.79	0.22	130	Mfs	Ultisols	Tuffac. sandstone		
		II9D	0.72	0.34	17	0.69	1.70	0.37	132	Wfs	Mollisols	Plutonic rocks		
		II9D	0.81	0.40	13	0.74	1.36	0.32	154	Wfs	Ultisols	Tuffac. sandstone		
		II9D	0.91	0.54	49	0.77	3.88	0.18	156	Swf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II1A	2.33	1.32	55	2.01	6.13	0.80	112	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II1A	2.17	1.33	51	1.82	6.32	0.43	112	Lmrf	Ultisols	Tuffac. sandstone	Puente Roto	
		II8B	2.01	0.32	8	2.00	2.49	1.48	130	Mfs	Ultisols	Tuffac. sandstone	<=2cm	
		II8B	2.18	1.12	9	2.23	3.94	0.86	130	Mfs	Ultisols	Tuffac. sandstone	>2cm	
		II8D	1.86	0.38	10	1.97	2.36	1.01	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II9A	4.94	1.16	22	4.99	7.58	3.01	132	Wfs	Mollisols	Plutonic rocks		
		II1E	2.52	1.44	16	2.04	6.52	1.18	114	Wfs	Ultisols	Lava	Lives <2mm	
		II1E	1.96	0.49	16	1.95	2.91	1.11	114	Wfs	Ultisols	Lava	Dead roots <2mm	
		II1E	3.08	2.41	6	2.12	6.16	0.70	114	Wfs	Ultisols	Lava	Live >2mm<5mm	
		II1E	1.56	0.42	5	1.29	2.07	1.20	114	Wfs	Ultisols	Lava	Dead >2mm<5mm	
		II1E	2.36	3.38	6	1.10	9.22	0.53	114	Wfs	Ultisols	Lava	>5mm	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1E	1.93	0.97	29	1.52	4.57	0.70	131	Wfs	Mollisols	Plutonic rocks	<1cm	
		II1E	2.71	1.95	19	1.94	9.11	1.34	131	Wfs	Mollisols	Plutonic rocks	>1cm<2cm	
		III1E	2.71	0.90	5	2.94	3.55	1.23	131	Wfs	Mollisols	Plutonic rocks	>2cm	
		II3	10.17	7.24	13	7.37	32.71	5.32	142	Wflm	Inceptisols	Tuffac. sandstone		
		II3	15.00	4.31	17	14.98	24.73	7.35	142	Wflm	Inceptisols	Tuffac. sandstone		
		II6	9.11	2.94	17	9.41	14.51	3.96	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8A	4.35	0.36	16	4.39	4.94	3.57	111	Rfs	Inceptisols	Tuffac. sandstone		
		II8A	1.55	0.82	12	1.39	4.08	0.87	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8A	1.41	0.56	32	1.28	4.10	0.78	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8A	1.71	0.22	11	1.66	2.25	1.39	124				Dacroides-Adjuntas	
		II8A	1.76	0.39	17	1.61	2.74	1.45	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8A	2.81	0.72	9	2.87	4.02	1.61	130	Mfs	Ultisols	Tuffac. sandstone		
		II8A	2.54	0.61	35	2.50	5.15	1.66	132	Wfs	Mollisols	Plutonic rocks		
		II8A	1.27	0.37	69	1.18	2.63	0.73	136	Wfs	Ultisols	Tuffac. sandstone		
		II8A	2.80	1.17	66	2.50	7.07	1.62	140	Swf	Ultisols	Tuffac. sandstone	Cubuy	
		II8A	4.09	0.91	6	4.30	5.01	2.44	140	Swf	Ultisols	Tuffac. sandstone	Guanica	
		II8A	2.64	1.56	144	2.27	8.40	0.67	140	Swf	Ultisols	Tuffac. sandstone	Bisley	
		II8A	1.93	1.73	75	1.51	10.62	0.27	140	Wflm	Inceptisols	Tuffac. sandstone	Palm Forest	
		II8A	2.77	1.79	20	2.64	8.57	1.00	140	Rfs	Inceptisols	Tuffac. sandstone	Pico del Este	
		II8A	1.83	1.00	20	1.54	5.50	0.94	142	Wflm	Inceptisols	Tuffac. sandstone	Dicotiledonea	
		II8A	1.11	0.33	21	1.09	1.85	0.58	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8A	1.64	0.55	135	1.50	4.80	0.76	156	Swf	Ultisols	Tuffac. sandstone		
		II8B	2.37	0.73	12	2.25	3.78	1.49	111	Rfs	Inceptisols	Tuffac. sandstone		
		II8B	1.35	0.66	13	1.29	0.75	0.66	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8B	1.52	0.35	8	1.47	1.91	0.99	124				Dacroides	
		II8B	2.26	0.82	48	2.22	4.60	0.75	132	Wfs	Mollisols	Plutonic rocks		
		II8B	1.16	0.49	51	1.08	2.79	0.12	136	Wfs	Ultisols	Tuffac. sandstone		
		II8B	2.34	0.63	65	2.21	4.78	1.39	140	Swf	Ultisols	Tuffac. sandstone	Cubuy	
		II8B	3.42	1.08	11	3.45	5.30	1.92	140	Sdf	Mollisols	Alluvial deposits	Guanica	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II8B	1.61	1.35	139	1.26	10.24	0.36	140	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8B	1.22	0.57	66	1.03	0.77	0.37	140	Wflm	Inceptisols	Tuffac. sandstone	Palm Forest	
		II8B	1.38	0.83	17	1.37	3.40	0.48	140	Rfs	Inceptisols	Tuffac. sandstone	Pico del Este	
		II8B	1.22	0.81	31	1.08	5.28	0.49	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8B	1.02	0.64	126	0.86	0.88	0.42	156	Swf	Ultisols	Tuffac. sandstone	<2cm	
		II8B	0.73	0.49	23	0.68	2.61	0.22	156	Swf	Ultisols	Tuffac. sandstone	≥2cm	
		II8C	2.61	1.67	16	2.22	6.91	0.92	124	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8C	1.88	0.82	7	1.56	3.08	1.10	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8C	1.54	0.34	8	1.51	2.07	1.14	130	Mfs	Ultisols	Tuffac. sandstone		
		II8C	4.16	2.98	21	3.05	12.20	1.35	132	Wfs	Mollisols	Plutonic rocks		
		II8C	1.57	0.79	2	1.57	2.13	1.01	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8C	2.65	2.43	86	1.81	11.98	0.45	156	Swf	Ultisols	Tuffac. sandstone		
		II8D	4.22	1.33	16	4.50	5.72	1.54	111	Rfs	Inceptisols	Tuffac. sandstone		
		II8D	1.60	0.33	9	1.52	2.18	1.13	124	Wflm	Ultisols	Tuffac. sandstone	Adjuntas	
		II8D	2.29	0.51	8	2.22	3.40	1.68	130	Mfs	Ultisols	Tuffac. sandstone		
		II8D	2.33	1.24	27	2.03	6.44	1.21	132	Wfs	Mollisols	Plutonic rocks		
		II8D	2.45	0.77	62	2.36	5.35	1.43	140	Swf	Ultisols	Tuffac. sandstone	Cubuy	
		II8D	4.37	0.29	7	4.40	4.61	3.81	140	Sdf	Mollisols	Alluvial deposits	Guanica	
		II8D	2.60	2.51	138	1.88	21.44	0.65	140	Lmrf	Ultisols	Tuffac. sandstone	Bisley	
		II8D	1.55	0.43	67	1.45	2.64	0.79	140	Wflm	Inceptisols	Tuffac. sandstone	Palm Forest	
		II8D	1.57	0.55	9	1.51	2.72	0.86	140	Rfs	Inceptisols	Tuffac. sandstone	Pico del Este	
		II8D	2.46	0.99	8	2.52	3.99	1.13	142	Wflm	Inceptisols	Tuffac. sandstone	Fern	
		II8D	1.63	0.30	42	1.60	4.15	0.85	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8D	1.68	1.10	125	1.41	9.88	0.67	156	Swf	Ultisols	Tuffac. sandstone		
		II9A	3.98	1.44	626	3.71	9.54	0.03	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9A	1.96	0.38	12	1.86	3.10	1.64	124					
		II9A	3.27	0.90	10	3.30	4.72	1.81	124					
		II9A	6.41	1.89	138	6.31	11.77	2.59	130	Mfs	Ultisols	Tuffac. sandstone		
		II9A	8.76	0.20	3	8.76	8.97	8.56	153	Swf	Ultisols	Tuffac. sandstone		



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II9A	6.37	1.85	14	5.83	9.16	4.56	154	Wfs	Ultisols	Tuffac. sandstone		
		II9A	4.92	1.41	128	4.74	7.95	1.88	156	Swf	Ultisols	Tuffac. sandstone		
		II9B	1.62	1.02	462	1.29	6.51	0.35	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9B	3.83	0.67	11	3.97	4.90	2.84	124					
		II9B	2.80	1.87	96	2.41	13.06	0.60	130	Mfs	Ultisols	Tuffac. sandstone		
		II9B	2.76	0.81	29	2.40	4.54	1.49	132	Wfs	Mollisols	Plutonic rocks		
		II9B	6.25	1.54	14	5.96	9.56	4.53	154	Wfs	Ultisols	Tuffac. sandstone		
		II9B	2.00	1.59	58	1.46	9.29	0.43	156	Swf	Ultisols	Tuffac. sandstone		
		II9C	4.91	2.39	463	4.52	29.95	1.91	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9C	4.49	1.43	15	4.59	8.10	2.07	124					
		II9C	9.48	5.30	129	7.71	31.24	1.79	130	Mfs	Ultisols	Tuffac. sandstone		
		II9C	6.08	1.73	21	5.76	11.19	4.08	132	Wfs	Mollisols	Plutonic rocks		
		II9C	8.17	2.21	49	8.09	12.68	0.78	156	Swf	Ultisols	Tuffac. sandstone		
		II9D	4.43	2.47	505	3.85	26.38	0.55	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9D	2.67	0.47	5	2.64	3.37	1.43	124					
		II9D	5.30	2.31	58	4.92	12.90	2.05	130	Mfs	Ultisols	Tuffac. sandstone		
		II9D	6.52	2.39	16	6.26	11.65	2.97	132	Wfs	Mollisols	Plutonic rocks		
		II9D	8.48	3.08	13	8.08	14.59	2.99	154	Wfs	Ultisols	Tuffac. sandstone		
		II9D	6.18	3.71	49	5.05	16.48	1.70	156	Swf	Ultisols	Tuffac. sandstone		
	Sodium (mg/g)	II9A	2.03	0.07	3	2.00	2.11	1.97	153	Swf	Ultisols	Tuffac. sandstone		
	Sulfur (%)	II9A	0.29	0.04	22	0.30	0.39	0.23	132	Wfs	Mollisols	Plutonic rocks		
		II1E	0.34	0.08	16	0.36	0.45	0.09	114	Wfs	Ultisols	Lava	Lives <2mm	
		II1E	0.29	0.09	18	0.29	0.39	0.08	114	Wfs	Ultisols	Lava	Dead <2mm	
		II1E	0.22	0.13	6	0.20	0.44	0.06	114	Wfs	Ultisols	Lava	Live >2mm<5mm	
		II1E	0.19	0.06	5	0.21	0.25	0.10	114	Wfs	Ultisols	Lava	Dead >2mm<5mm	
		II1E	0.14	0.04	6	0.12	0.20	0.10	114	Wfs	Ultisols	Lava	>5mm	
		II1E	0.29	0.16	29	0.24	0.72	0.09	131	Wfs	Mollisols	Plutonic rocks	<1cm	
		II1E	0.22	0.11	19	0.21	0.46	0.06	131	Wfs	Mollisols	Plutonic rocks	>1cm<2cm	
		II1E	0.23	0.16	5	0.13	0.43	0.11	131	Wfs	Mollisols	Plutonic rocks	>2cm	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II3	0.39	0.14	13	0.36	0.69	0.20	142	Wflm	Inceptisols	Tuffac. sandstone		
		II3	0.57	0.16	13	0.54	0.82	0.25	142	Wflm	Inceptisols	Tuffac. sandstone		
		II6	0.36	0.15	15	0.34	0.72	0.18	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8A	0.45	0.13	33	0.42	0.72	0.26	132	Wfs	Mollisols	Plutonic rocks		
		II8A	0.25	0.08	69	0.25	0.50	0.10	136	Wfs	Ultisols	Tuffac. sandstone		
		II8A	0.19	0.04	20	0.18	0.29	0.15	142	Wflm	Inceptisols	Tuffac. sandstone	Dicotiledonea	
		II8A	0.17	0.05	20	0.17	0.27	0.08	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8B	0.24	0.10	49	0.23	0.49	0.05	132	Wfs	Mollisols	Plutonic rocks		
		II8B	0.15	0.04	50	0.14	0.25	0.04	136	Wfs	Ultisols	Tuffac. sandstone		
		II8B	0.10	0.03	31	0.12	0.20	0.07	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8C	0.40	0.22	21	0.37	0.91	0.13	132	Wfs	Mollisols	Plutonic rocks		
		II8C	0.13	0.00	2	0.13	0.13	0.13	142	Wflm	Inceptisols	Tuffac. sandstone		
		II8D	0.38	0.15	27	0.33	0.71	0.19	132	Wfs	Mollisols	Plutonic rocks		
		II8D	0.20	0.08	7	0.20	0.30	0.09	142	Wflm	Inceptisols	Tuffac. sandstone	Fern	
		II8D	0.15	0.07	42	0.17	0.28	0.02	142	Wflm	Inceptisols	Tuffac. sandstone		
		II9A	0.31	0.05	130	0.31	0.41	0.15	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9B	0.16	0.04	94	0.16	0.25	0.05	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9B	0.16	0.04	30	0.16	0.25	0.09	132	Wfs	Mollisols	Plutonic rocks		
		II9C	0.21	0.04	100	0.21	0.38	0.13	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9C	0.24	0.04	21	0.24	0.34	0.16	132	Wfs	Mollisols	Plutonic rocks		
		II9D	0.17	0.05	85	0.17	0.30	0.07	106	Lmrf	Ultisols	Tuffac. sandstone		
		II9D	0.21	0.08	17	0.19	0.40	0.09	132	Wfs	Mollisols	Plutonic rocks		
<i>Securidaca virgata</i>	Aluminum (mg/g)	II4	0.15	0.13	6	0.13	0.39	0.03	135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II4	1.40	0.52	6	1.30	2.21	0.92	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II4	0.20	0.11	6	0.17	0.39	0.09	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II4	0.91	0.39	6	0.90	1.44	0.43	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II4	0.08	0.04	6	0.09	0.14	0.02	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II4	1.01	0.30	6	0.91	1.41	0.75	135	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Phosphorus (mg/g)	II4	0.64	0.24	6	0.58	1.06	0.42	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II4	8.79	1.55	6	9.19	10.28	6.05	135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Selaginella krugii</i>	Aluminum (mg/g)	II3	4.62	2.15	6	5.57	6.85	1.31	135	Lmrf	Ultisols	Tuffac. sandstone		
	C/N	II3	31	3	4	29	35	29	135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II3	2.49	1.09	6	2.37	3.83	0.88	135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II3	43	2	4	43	45	41	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II3	4.14	2.17	6	4.56	6.48	0.84	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II3	1.76	0.37	6	1.74	2.22	1.31	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II3	0.54	0.18	6	0.60	0.70	0.29	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II3	1.37	0.15	9	1.42	1.55	1.14	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II3	0.55	0.11	6	0.58	0.67	0.38	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II3	9.73	3.24	6	9.15	15.32	6.82	135	Lmrf	Ultisols	Tuffac. sandstone		
	Sulfur (%)	II3	0.46	0.11	4	0.44	0.61	0.35	135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Slonea berteriana</i>	Aluminum (mg/g)	II1A	0.09	0.04	2	0.09	0.12	0.05	67	Smf	Ultisols	Tuffac. sandstone		
		II1C	0.02		1				67	Smf	Ultisols	Tuffac. sandstone		
		II1H	0.16		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	II7A	II7A	1.35	1.82	5	0.23	4.35	0.12	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7A	0.47	0.30	3	0.36	0.81	0.24	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
		II7B	0.05	0.05	4	0.05	0.11	0.01	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7B	0.07	0.07	3	0.05	0.14	0.01	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
		II7C	0.31	0.37	5	0.04	0.71	0.03	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7C	0.46	0.32	3	0.52	0.75	0.12	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
		II7C	0.46	0.32	3	0.52	0.75	0.12	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
	Ash (%)	II1A	3.81	0.64	2	3.81	4.36	3.26	67	Smf	Ultisols	Tuffac. sandstone		
		II1C	0.75		1				67	Smf	Ultisols	Tuffac. sandstone		
	C/N	II1A	49	21	2	49	70	30	67	Smf	Ultisols	Tuffac. sandstone		
		II1C	371		1				67	Smf	Ultisols	Tuffac. sandstone		
Calcium (mg/g)	II1A	7.78	0.36	2	7.78	8.27	7.39	67	Smf	Ultisols	Tuffac. sandstone			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1A	3.40	1.43	6	4.04	4.53	0.70	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	6.86	3.69	5	6.06	1.31	3.11	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	2.02		1				67	Smf	Ultisols	Tuffac. sandstone		
		II1C	2.26	0.63	8	2.46	2.92	1.14	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1Ci	10.43	1.18	8	10.52	12.07	7.89	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1F	4.83		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II1H	2.73		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II7A	12.85	0.46	5	12.94	13.50	12.30	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7A	6.72	3.27	3	7.33	9.64	3.19	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
		II7B	10.05	4.10	4	10.56	14.01	5.10	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7B	5.39	3.40	3	5.33	8.82	2.02	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
		II7C	16.19	9.47	5	21.69	25.37	5.11	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7C	3.24	0.76	3	3.05	4.08	2.60	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
	Carbon (%)	II1A	47	5	101	47	61	36	150	Swf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II1A	0.07	0.01	2	0.07	0.07	0.05	67	Smf	Ultisols	Tuffac. sandstone		
		II1C	0.02		1				67	Smf	Ultisols	Tuffac. sandstone		
		II1H	0.17		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II7A	1.99	2.84	5	0.27	6.44	0.12	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7A	0.49	0.41	3	0.28	0.96	0.23	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
		II7B	0.08	0.06	4	0.08	0.15	0.01	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7B	0.07	0.04	3	0.06	0.12	0.03	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
		II7C	0.50	0.61	5	0.09	1.18	0.03	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7C	0.49	0.43	3	0.40	0.95	0.12	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
	Magnesium (mg/g)	II1A	1.46	0.25	2	1.46	1.71	1.22	67	Smf	Ultisols	Tuffac. sandstone		
		II1A	1.72	0.67	6	1.94	2.40	0.47	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	1.77	0.61	5	1.54	2.47	0.99	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	0.30		1				67	Smf	Ultisols	Tuffac. sandstone		
		II1C	0.30	0.02	8	0.30	0.33	0.27	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1Ci	0.68	0.08	8	0.67	0.79	0.60	135	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1F	1.57		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II1H	1.61		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II7A	1.40	0.67	5	1.00	2.38	0.87	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7A	0.79	0.51	3	0.54	1.37	0.45	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
		II7B	1.13	0.84	4	1.06	1.99	0.39	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7B	0.34	0.20	3	0.44	0.48	0.11	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
		II7C	1.53	0.96	5	2.03	2.55	0.46	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7C	0.39	0.20	3	0.34	0.60	0.22	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
	Manganese (mg/g)	II1A	0.29	0.23	2	0.29	0.50	0.09	67	Smf	Ultisols	Tuffac. sandstone		
		II1C	0.04		1				67	Smf	Ultisols	Tuffac. sandstone		
		II1H	0.09		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II7A	0.24	0.18	5	0.14	0.47	0.10	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7A	0.17	0.09	3	0.20	0.25	0.07	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
		II7B	0.13	0.10	4	0.13	0.23	0.05	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7B	0.09	0.11	3	0.03	0.22	0.02	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
		II7C	0.45	0.40	5	0.57	0.97	0.05	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7C	0.11	0.10	3	0.07	0.22	0.04	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
	Nitrogen (%)	II1A	1.04	0.44	2	1.04	1.43	0.64	67	Smf	Ultisols	Tuffac. sandstone		
		II1A	1.22	0.39	5	1.40	1.52	0.55	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1A	1.89	0.62	101	1.72	4.20	0.92	150	Swf	Ultisols	Tuffac. sandstone		
		II1B	0.93	0.33	5	0.93	1.45	0.57	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	0.13		1				67	Smf	Ultisols	Tuffac. sandstone		
		II1C	0.12	0.02	8	0.11	0.16	0.10	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1Ci	0.49	0.06	8	0.48	0.63	0.46	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1F	0.85		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II1H	1.59		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II1A	0.56	0.10	2	0.56	0.65	0.47	67	Smf	Ultisols	Tuffac. sandstone		
		II1A	0.68	0.08	6	0.62	0.77	0.57	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	0.62	0.16	5	0.61	0.81	0.38	135	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Potassium (mg/g)	II1C	0.08		1				67	Smf	Ultisols	Tuffac. sandstone		
		II1C	0.05	0.01	8	0.04	0.07	0.03	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1Ci	0.16	0.02	8	0.17	0.19	0.13	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1F	0.68		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II1H	0.84		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II7A	0.35	0.18	5	0.25	0.60	0.19	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7A	0.17	0.05	3	0.16	0.22	0.13	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
		II7B	0.15	0.08	4	0.16	0.22	0.06	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7B	0.09	0.06	3	0.07	0.16	0.04	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
		II7C	0.28	0.19	5	0.25	0.49	0.08	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7C	0.19	0.05	3	0.21	0.24	0.14	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
		II1A	8.85	2.39	2	8.85	11.83	6.90	67	Smf	Ultisols	Tuffac. sandstone		
		II1A	7.57	1.76	6	6.97	10.87	6.32	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	5.76	0.82	5	5.52	6.88	5.03	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	2.19		1				67	Smf	Ultisols	Tuffac. sandstone		
		II1C	1.77	0.33	8	1.65	2.53	1.53	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1Ci	5.35	0.37	8	5.30	6.07	4.86	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1F	6.00		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II1H	13.17		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II7A	2.17	1.12	5	2.86	3.06	0.78	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7A	0.98	0.37	3	1.03	1.32	0.58	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
		II7B	1.31	0.73	4	1.18	2.23	0.65	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
		II7B	0.73	0.21	3	0.63	0.97	0.06	70	Lmrf	Ultisols	Tuffac. sandstone	2year	
		II7C	1.58	1.03	5	0.87	2.75	0.80	70	Lmrf	Ultisols	Tuffac. sandstone	1year	
II7C	0.99	0.56	3	0.79	1.63	0.57	70	Lmrf	Ultisols	Tuffac. sandstone	2year			
	Sulfur (%)	II1A	0.31	0.09	68	0.31	0.55	0.12	150	Swf	Ultisols	Tuffac. sandstone		
<i>Solanum torvum</i>	Aluminum (mg/g)	II8A	1.55	1.33	2	1.55	2.49	0.61	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	0.15	0.15	2	0.15	0.26	0.04	146	Swf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Ash (%)	II8A	8.50	1.61	2	8.50	9.64	7.36	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	3.34	1.82	2	3.34	4.63	2.05	146	Swf	Ultisols	Tuffac. sandstone		
	C/N	II8A	15	1	2	15	16	14	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	64	4	2	64	67	61	146	Swf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II8A	12.91	5.29	2	12.91	16.65	9.17	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	8.81	0.39	2	8.81	9.08	8.53	146	Swf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II8A	52	1	2	52	52	51	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	52	1	2	52	53	51	146	Swf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II8A	1.14	0.78	2	1.14	1.70	0.59	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	0.09	0.10	2	0.09	0.16	0.02	146	Swf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II8A	2.70	2.01	2	2.70	4.12	1.28	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	2.07	2.14	2	2.07	0.58	0.56	146	Swf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II8A	0.14	0.11	2	0.14	0.22	0.06	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	0.03	0.02	2	0.03	0.05	0.02	146	Swf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II8A	3.52	0.43	2	3.52	3.82	3.21	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	0.81	0.08	2	0.81	0.87	0.75	146	Swf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II8A	1.31	0.67	2	1.31	1.78	0.83	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	0.58	0.13	2	0.58	0.67	0.48	146	Swf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II8A	10.11	12.12	2	10.11	18.68	1.54	146	Swf	Ultisols	Tuffac. sandstone		
		II8B	5.58	5.46	2	0.58	9.44	1.71	146	Swf	Ultisols	Tuffac. sandstone		
<i>Spathodea campanulata</i>	Ash (%)	II1A	6.70	0.50	5	6.94	7.20	6.10	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1C	2.68	0.58	5	2.83	3.45	2.04	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1Ci	11.08	1.88	6	11.03	13.18	8.53	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	C/N	II1A	19	2	5	20	21	16	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1C	299	104	5	281	422	187	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1Ci	65	18	6	62	88	47	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	Carbon (%)	II1A	51	1	5	51	52	51	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1C	50	0	5	51	51	50	126		Ultisols	Siltstone,sandstone	Urban forest, RP	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Nitrogen (%)	II1Ci	46	1	6	46	47	45	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1A	2.66	0.35	5	2.58	3.26	2.36	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1C	0.19	0.06	5	0.18	0.27	0.12	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	Sulfur (%)	II1Ci	0.75	0.20	6	0.76	1.00	0.52	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1A	0.28	0.03	5	0.29	0.31	0.24	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1C	0.04	0.02	5	0.50	0.60	0.01	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	Wood density (g/cc)	II1Ci	0.09	0.03	6	0.09	0.11	0.05	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1B	0.26	0.01	3	0.26	0.27	0.26	97	Wfs	Inceptisols	Tuffac. sandstone		
		II1C	0.23	0.06	5	0.22	0.32	0.18	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
<i>Swietenia humilis</i>	Aluminum (mg/kg)	II1A	62	20	6	50	94	45	103	Swf	Ultisols	Lava,tuff	Mature-Coamo	
		II1A	168	29	3	160	206	136	103	Swf	Ultisols	Lava, tuff	Mature-Guavate	
	Calcium (mg/g)	II1A	18.73	4.17	6	19.10	25.69	12.93	103	Swf	Ultisols	Lava,tuff	Mature-Coamo	
		II1A	16.97	4.02	3	16.04	21.93	12.32	103	Swf	Ultisols	Lava, tuff	Mature-Guavate	
	Magnesium (mg/g)	II1A	2.46	0.44	6	2.48	3.03	1.79	103	Swf	Ultisols	Lava,tuff	Mature-Coamo	
		II1A	2.87	0.17	3	2.88	3.08	2.66	103	Swf	Ultisols	Lava, tuff	Mature-Guavate	
	Manganese (mg/kg)	II1A	14	6	6	15	22	5	103	Swf	Ultisols	Lava,tuff	Mature-Coamo	
		II1A	12	8	3	10	23	5	103	Swf	Ultisols	Lava, tuff	Mature-Guavate	
	Nitrogen (%)	II1A	1.57	0.54	6	1.32	2.42	1.05	103	Swf	Ultisols	Lava,tuff	Mature-Coamo	
		II1A	1.88	0.25	3	2.01	2.08	1.52	103	Swf	Ultisols	Lava, tuff	Mature-Guavate	
	Phosphorus (mg/g)	II1A	0.77	0.15	6	0.79	1.03	0.59	103	Swf	Ultisols	Lava,tuff	Mature-Coamo	
		II1A	0.88	0.04	3	0.89	0.92	0.81	103	Swf	Ultisols	Lava, tuff	Mature-Guavate	
	Potassium (mg/g)	II1A	8.14	1.91	6	8.57	10.39	5.07	103	Swf	Ultisols	Lava,tuff	Mature-Coamo	
		II1A	13.95	1.90	3	14.24	16.09	11.69	103	Swf	Ultisols	Lava, tuff	Mature-Guavate	
<i>Swietenia macrophylla</i>	Aluminum (mg/kg)	II1A	740	50	2	740	780	710	129	Lmrf	Ultisols	Tuffac. sandstone		
		II1A	124	45	5	123	213	64	103	Swf	Ultisols	Lava, tuff	Mature-Guavate	
	Ash (%)	II1A	42	11	6	37	61	30	103	Swf	Ultisols	Lava,tuff	Mature-Coamo	
		II1A	7.41	1.17	6	7.78	8.76	5.66	94	Swf	Ultisols	Tuffac. sandstone		



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1A	8.13		1				101	Lmwf	Inceptisols	Tuffac. sandstone	Fresh	
		II1A	5.64		1				101	SWf	Ultisols	Tuffac. sandstone	Fresh	
		III1A	6.87	0.02	2	6.87	6.88	6.85	129	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	4.07	0.71	3	3.95	4.84	3.43	94	Swf	Ultisols	Tuffac. sandstone		
		II1C	3.80	0.87	6	3.90	4.72	2.42	94	Swf	Ultisols	Tuffac. sandstone		
		II8A	5.34	1.48	9	5.54	7.06	2.37	90	Swf	Ultisols	Tuffac. sandstone		
		II8B	4.32	0.77	4	4.43	5.08	3.36	90	Swf	Ultisols	Tuffac. sandstone		
		II8D	17.64	4.47	4	17.32	23.00	12.90	90	Swf	Ultisols	Tuffac. sandstone		
	C/N	II1A	24		1				129	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II1A	10.15	4.41	5	12.54	14.10	3.53	104	Sdf	Mollisols	Alluvial deposits	New	
		II1A	11.73	2.60	6	12.20	15.37	8.55	104	Sdf	Mollisols	Alluvial deposits	Young	
		III1A	11.60	5.79	15	11.59	24.37	1.85	104	Sdf	Mollisols	Alluvial deposits		
		II1A	15.60	3.14	5	14.52	20.81	10.88	103	Swf	Ultisols	Lava, tuff	Mature-Guavate	
		II1A	17.22	2.26	6	17.42	21.98	13.75	103	Swf	Ultisols	Lava,tuff	Mature-Coamo	
		III1A	20.18	1.73	2	20.18	21.40	18.96	129	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	15.02	4.93	9	16.68	20.19	5.85	90	Swf	Ultisols	Tuffac. sandstone		
		II8B	12.71	0.47	4	12.52	13.24	12.36	90	Swf	Ultisols	Tuffac. sandstone		
		II8D	17.24	5.64	4	19.84	21.11	10.76	90	Swf	Ultisols	Tuffac. sandstone		
		II9A	14.07	3.20	22	13.97	18.35	6.90	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	9.03	2.59	22	9.37	15.42	4.59	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	5.76	2.38	7	5.00	10.59	3.03	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	4.43	2.23	6	5.12	6.78	1.52	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	8.40	2.56	5	7.65	12.82	6.41	139	Wfs	Ultisols	Tuffac. sandstone		
	Carbon (%)	III1A	53	0	2	53	53	52	129	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	III1A	1.41	0.14	2	1.41	1.51	1.31	129	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	III1A	1.26	0.36	5	1.45	1.62	0.79	104	Sdf	Mollisols	Alluvial deposits	New	
		III1A	1.45	0.47	6	1.35	2.22	0.84	104	Sdf	Mollisols	Alluvial deposits	Young	
		III1A	1.32	0.25	17	1.28	2.00	0.88	104	Sdf	Mollisols	Alluvial deposits		
		III1A	2.77	0.48	5	2.81	3.63	2.03	103	Swf	Ultisols	Lava, tuff	Mature-Guavate	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1A	2.40	0.80	6	2.34	3.89	1.18	103	Swf	Ultisols	Lava,tuff	Mature-Coamo	
		II1A	2.02	0.17	2	2.02	2.14	1.90	129	Lmrf	Ultisols	Tuffac. sandstone		
		II8A	2.55	0.56	9	2.63	3.20	1.38	90	Swf	Ultisols	Tuffac. sandstone		
		II8B	2.70	0.25	4	2.72	2.94	2.44	90	Swf	Ultisols	Tuffac. sandstone		
		II8D	3.00	0.42	4	3.22	3.26	2.52	90	Swf	Ultisols	Tuffac. sandstone		
		II9A	3.63	0.86	22	3.43	5.70	2.27	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	3.97	1.48	22	4.16	7.29	2.02	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	1.64	0.82	7	1.69	3.06	0.52	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	2.48	0.83	6	2.49	3.61	1.31	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	2.72	0.80	5	2.58	3.89	1.80	139	Wfs	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II1A	0.06	0.00	2	0.06	0.06	0.06	129	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II1A	1.90	0.15	6	1.96	2.05	1.74	94	Swf	Ultisols	Tuffac. sandstone		
		II1A	1.66		1				101	Lmwf	Inceptisols	Tuffac. sandstone	Fresh	
		II1A	1.86		1				101	SWf	Ultisols	Tuffac. sandstone	Fresh	
		II1A	1.02	0.16	5	0.99	1.20	0.77	104	Sdf	Mollisols	Alluvial deposits	New	
		II1A	1.25	0.09	6	1.28	1.33	1.01	104	Sdf	Mollisols	Alluvial deposits	Young	
		II1A	1.27	0.83	14	0.94	3.34	0.41	104	Sdf	Mollisols	Alluvial deposits		
		II1A	1.62	0.14	5	1.55	1.83	1.44	103	Swf	Ultisols	Lava, tuff	Mature-Guavate	
		II1A	1.46	0.16	6	1.38	1.77	1.29	103	Swf	Ultisols	Lava,tuff	Mature-Coamo	
		II1A	2.23	0.01	2	2.23	2.23	2.22	129	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	0.48	0.11	3	0.46	0.59	0.38	94	Swf	Ultisols	Tuffac. sandstone		
		II1C	0.58	0.23	6	0.58	0.96	0.27	94	Swf	Ultisols	Tuffac. sandstone		
		II8A	1.15	0.21	9	1.22	1.47	0.81	90	Swf	Ultisols	Tuffac. sandstone		
		II8B	0.70	0.21	4	0.69	0.92	0.51	90	Swf	Ultisols	Tuffac. sandstone		
		II8D	1.47	0.08	4	1.45	1.57	1.40	90	Swf	Ultisols	Tuffac. sandstone		
		II9A	0.97	0.24	22	0.98	1.56	0.63	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	1.55	0.41	22	1.44	2.35	0.93	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	0.37	0.17	12	0.37	0.64	0.15	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	0.72	0.17	11	0.70	0.97	0.53	139	Wfs	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
Phosphorus (mg/g)		II9D	1.17	0.18	9	1.43	1.82	1.24	139	Wfs	Ultisols	Tuffac. sandstone		
		II1A	0.58	0.18	5	0.60	0.84	0.33	104	Sdf	Mollisols	Alluvial deposits	New	
		III1A	0.73	0.19	6	0.78	0.95	0.48	104	Sdf	Mollisols	Alluvial deposits	Young	
		III1A	0.81	0.93	17	0.48	3.63	0.16	104	Sdf	Mollisols	Alluvial deposits		
		III1A	0.73	0.18	5	0.71	1.14	0.54	103	Swf	Ultisols	Lava, tuff	Mature-Guavate	
		III1A	0.69	0.12	6	0.70	0.86	0.54	103	Swf	Ultisols	Lava,tuff	Mature-Coamo	
		III1A	1.10	0.24	6	1.03	1.39	0.84	94	Swf	Ultisols	Tuffac. sandstone		
		III1A	0.88		1				101	Lmwf	Inceptisols	Tuffac. sandstone	Fresh	
		III1A	0.88		1				101	SWf	Ultisols	Tuffac. sandstone	Fresh	
		III1A	0.55	0.03	2	0.55	0.57	0.53	129	Lmrf	Ultisols	Tuffac. sandstone		
		III1B	0.56	0.04	3	0.57	0.59	0.51	94	Swf	Ultisols	Tuffac. sandstone		
		III1C	0.94	0.71	6	0.72	2.12	0.23	94	Swf	Ultisols	Tuffac. sandstone		
		II8A	0.31	0.07	9	0.28	0.44	0.24	90	Swf	Ultisols	Tuffac. sandstone		
		II8B	0.20	0.05	4	0.20	0.25	0.15	90	Swf	Ultisols	Tuffac. sandstone		
		II8D	0.44	0.06	4	0.46	0.49	0.38	90	Swf	Ultisols	Tuffac. sandstone		
		II9A	0.39	0.15	22	0.37	0.71	0.12	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	0.66	0.40	22	0.56	2.10	0.26	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	0.22	0.22	7	0.14	0.64	0.03	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	0.57	0.27	6	0.59	0.99	0.27	139	Wfs	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)		II9D	1.28	0.80	5	1.06	2.68	0.71	139	Wfs	Ultisols	Tuffac. sandstone	
		III1A	10.23	4.08	6	9.60	15.52	6.26	94	Swf	Ultisols	Tuffac. sandstone		
		III1A	6.00		1				101	Lmwf	Inceptisols	Tuffac. sandstone	Fresh	
		III1A	8.00		1				101	SWf	Ultisols	Tuffac. sandstone	Fresh	
		III1A	9.84	2.67	5	8.08	13.63	7.32	104	Sdf	Mollisols	Alluvial deposits	New	
		III1A	14.59	5.04	6	17.52	18.81	7.23	104	Sdf	Mollisols	Alluvial deposits	Young	
		III1A	9.33	4.09	17	7.57	18.72	2.27	104	Sdf	Mollisols	Alluvial deposits		
		III1A	14.04	3.71	5	12.87	22.70	10.37	103	Swf	Ultisols	Lava, tuff	Mature-Guavate	
		III1A	7.98	1.28	6	7.64	10.55	6.74	103	Swf	Ultisols	Lava,tuff	Mature-Coamo	
		III1A	5.01	0.54	2	5.01	5.39	4.63	129	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

Species	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #		
	Sulfur (%)	II1B	7.60	0.39	3	7.51	8.03	7.26	94	Swf	Ultisols	Tuffac. sandstone				
		II1C	6.34	2.81	6	5.10	10.30	3.00	94	Swf	Ultisols	Tuffac. sandstone				
		II8A	2.61	1.36	9	2.15	5.08	1.20	90	Swf	Ultisols	Tuffac. sandstone				
		II8B	1.95	0.94	4	1.81	2.95	1.08	90	Swf	Ultisols	Tuffac. sandstone				
		II8D	2.43	1.35	4	2.32	3.83	1.14	90	Swf	Ultisols	Tuffac. sandstone				
		II9A	5.40	1.31	22	5.26	7.98	3.01	139	Wfs	Ultisols	Tuffac. sandstone				
		II9A	5.01	2.09	22	4.09	10.78	2.76	139	Wfs	Ultisols	Tuffac. sandstone	Other			
		II9B	2.44	1.85	7	2.22	5.48	0.45	139	Wfs	Ultisols	Tuffac. sandstone				
		II9C	4.47	1.16	6	4.58	5.97	3.14	139	Wfs	Ultisols	Tuffac. sandstone				
		II9D	4.40	1.89	5	3.56	6.99	2.64	139	Wfs	Ultisols	Tuffac. sandstone				
		II1A	0.39	0.02	2	0.39	0.40	0.38	129	Lmrf	Ultisols	Tuffac. sandstone				
		<i>Swietenia macrophylla xmahagoni</i>	Aluminum (mg/kg)	II1A	166	119	3	93	323	85	103	Swf	Ultisols	Lava, tuff	Guavate c.-shady	
				II1A	90	41	10	89	185	20	103	Swf	Ultisols	Lava, tuff	Guavate fert.-shady	
II1A	137			36	8	123	208	94	103	Swf	Ultisols	Lava, tuff	Guavate fert.-sun			
II1A	307			140	4	260	551	176	103	Lmwf	Inceptisols	Tuffac. sandstone	Harvey			
II1A	161			66	5	189	227	60	103	SWf	Ultisols	Tuffac. sandstone	Rio Chiquito			
II1A	102			15	3	104	118	82	103	Smf	Alfisols	Sandstone,sillstone	Vieques c.-sun			
II1A	129			24	5	129	160	92	103	Swf	Ultisols	Lava, tuff	Guavate c.-sun			
Calcium (mg/g)	II1A			13.89	3.91	3	15.61	17.90	8.55	103	Swf	Ultisols	Lava, tuff	Guavate c.-shady		
	II1A			16.88	5.01	10	16.87	27.21	10.30	103	Swf	Ultisols	Lava, tuff	Guavate fert.-shady		
	II1A		13.29	2.76	8	13.15	17.80	9.14	103	Swf	Ultisols	Lava, tuff	Guavate fert.-sun			
	II1A		19.19	3.58	4	19.13	24.91	12.54	103	Lmwf	Inceptisols	Tuffac. sandstone	Harvey			
	II1A		10.10	3.67	5	8.25	16.08	6.37	103	SWf	Ultisols	Tuffac. sandstone	Rio Chiquito			
	II1A		8.21	2.73	3	7.51	11.57	5.53	103	Smf	Alfisols	Sandstone,sillstone	Vieques c.-sun			
Magnesium (mg/g)	II1A		13.19	2.93	5	13.43	18.06	9.59	103	Swf	Ultisols	Lava, tuff	Guavate c.-sun			
	II1C		12.99		1				103	SWf	Ultisols	Tuffac. sandstone	Rio Chiquito			
	II1A		1.92	0.43	3	1.86	2.50	1.40	103	Swf	Ultisols	Lava, tuff	Guavate c.-shady			
	II1A		1.51	0.36	10	1.44	2.33	1.15	103	Swf	Ultisols	Lava, tuff	Guavate fert.-shady			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		III1A	2.2	0.50	8	1.96	3.25	1.76	103	Swf	Ultisols	Lava, tuff	Guavate fert.-sun	
		III1A	2.42	0.35	4	2.41	2.93	1.95	103	Lmwf	Inceptisols	Tuffac. sandstone	Harvey	
		III1A	2.65	0.69	5	2.46	3.59	1.79	103	SWf	Ultisols	Tuffac. sandstone	Rio Chiquito	
		III1A	1.43	0.14	3	1.46	1.59	1.25	103	Smf	Alfisols	Sandstone,sillstone	Vieques c.-sun	
		III1A	1.71	0.26	5	1.59	2.09	1.42	103	Swf	Ultisols	Lava, tuff	Guavate c.-sun	
		III1C	0.53		1				103	SWf	Ultisols	Tuffac. sandstone	Rio Chiquito	
	Manganese (mg/kg)	III1A	23	6	3	27	27	14	103	Swf	Ultisols	Lava, tuff	Guavate c.-shady	
		III1A	34	12	10	34	57	15	103	Swf	Ultisols	Lava, tuff	Guavate fert.-shady	
		III1A	20	7	8	18	34	11	103	Swf	Ultisols	Lava, tuff	Guavate fert.-sun	
		III1A	38	16	4	36	63	17	103	Lmwf	Inceptisols	Tuffac. sandstone	Harvey	
		III1A	21	6	5	22	28	13	103	SWf	Ultisols	Tuffac. sandstone	Rio Chiquito	
		III1A	20	7	3	18	29	14	103	Smf	Alfisols	Sandstone,sillstone	Vieques c.-sun	
		III1A	41	12	5	37	56	26	103	Swf	Ultisols	Lava, tuff	Guavate c.-sun	
	Nitrogen (%)	III1A	1.66	0.33	3	1.85	1.90	1.22	103	Swf	Ultisols	Lava, tuff	Guavate c.-shady	
		III1A	1.77	0.21	10	1.79	2.18	1.40	103	Swf	Ultisols	Lava, tuff	Guavate fert.-shady	
		III1A	1.73	0.15	8	1.71	1.92	1.46	103	Swf	Ultisols	Lava, tuff	Guavate fert.-sun	
		III1A	1.72	0.06	4	1.74	1.78	1.61	103	Lmwf	Inceptisols	Tuffac. sandstone	Harvey	
		III1A	1.75	0.29	5	1.84	2.04	1.22	103	SWf	Ultisols	Tuffac. sandstone	Rio Chiquito	
		III1A	1.25	0.10	3	1.30	1.34	1.12	103	Smf	Alfisols	Sandstone,sillstone	Vieques c.-sun	
		III1A	1.64	0.16	5	1.67	1.83	1.38	103	Swf	Ultisols	Lava, tuff	Guavate c.-sun	
		III1C	0.28		1				103	SWf	Ultisols	Tuffac. sandstone	Rio Chiquito	
	Phosphorus (mg/g)	III1A	0.78	0.08	3	0.74	0.88	0.72	103	Swf	Ultisols	Lava, tuff	Guavate c.-shady	
		III1A	0.73	0.08	10	0.75	0.82	0.56	103	Swf	Ultisols	Lava, tuff	Guavate fert.-shady	
		III1A	0.88	0.20	8	0.81	1.20	0.66	103	Swf	Ultisols	Lava, tuff	Guavate fert.-sun	
		III1A	0.69	0.09	4	0.66	0.83	0.59	103	Lmwf	Inceptisols	Tuffac. sandstone	Harvey	
		III1A	0.70	0.25	5	0.59	1.19	0.55	103	SWf	Ultisols	Tuffac. sandstone	Rio Chiquito	
		III1A	0.78	0.14	3	0.72	0.96	0.66	103	Smf	Alfisols	Sandstone,sillstone	Vieques c.-sun	
		III1A	0.66	0.04	5	0.67	0.70	0.61	103	Swf	Ultisols	Lava, tuff	Guavate c.-sun	
		III1C	0.16		1				103	SWf	Ultisols	Tuffac. sandstone	Rio Chiquito	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Potassium (mg/g)	III1A	14.53	2.52	3	15.80	16.83	11.20	103	Swf	Ultisols	Lava, tuff	Guavate c.-shady	
		III1A	10.49	1.66	10	9.95	12.86	8.42	103	Swf	Ultisols	Lava, tuff	Guavate fert.-shady	
		III1A	16.4	2.58	8	16.41	21.11	12.91	103	Swf	Ultisols	Lava, tuff	Guavate fert.-sun	
		III1A	13.45	4.67	4	12.18	21.36	8.68	103	Lmwf	Inceptisols	Tuffac. sandstone	Harvey	
		III1A	8.78	2.06	5	9.43	11.61	5.87	103	SWf	Ultisols	Tuffac. sandstone	Rio Chiquito	
		III1A	6.65	1.37	3	6.03	8.50	5.46	103	Smf	Alfisols	Sandstone,sillstone	Vieques c.-sun	
		III1A	10.36	2.12	5	10.18	13.03	7.79	103	Swf	Ultisols	Lava, tuff	Guavate c.-sun	
		III1C	5.56		1				103	SWf	Ultisols	Tuffac. sandstone	Rio Chiquito	
<i>Swietenia mahagoni</i>	Aluminum (mg/kg)	III1A	71		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		III1A	20	2	2	20	18	22	102	Smf	Limestone	Tuffac. sandstone	Young	
		III1A	57	11	4	51	67	43	103	Swf	Ultisols	Lava,tuff	Coamo	
		III1A	60		1				103	Smf	Alfisols	Sandstone,sillstone	Young-Vieques	
	Ash (%)	III1A	6.51		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Calcium (mg/g)	III1A	4.31	1.09	2	4.31	3.54	5.08	102	Smf	Limestone	Tuffac. sandstone	Young	
		III1A	10.86	0.84	4	10.59	12.19	10.00	103	Swf	Ultisols	Lava,tuff	Coamo	
		III1A	8.16		1				103	Smf	Alfisols	Sandstone,sillstone	Young-Vieques	
		III1A	10.37		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		III1Ci	18.86	7.26	4	18.66	27.54	10.47	103	Lmwf	Inceptisols	Tuffac. sandstone	Harvey	
		III1Ci	23.91	5.15	10	22.14	33.79	15.50	103	SWf	Ultisols	Tuffac. sandstone	Rio Chiquito	
	Cobalt (µg/g)	III1A	0.33	0.04	2	0.33	0.35	0.30	102	Smf	Limestone	Tuffac. sandstone	Young	
	Iron (mg/kg)	III1A	101		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		III1A	35	2	2	35	37	33	102	Smf	Limestone	Tuffac. sandstone	Young	
	Magnesium (mg/g)	III1A	2.64	0.14	2	2.64	2.74	2.54	102	Smf	Limestone	Tuffac. sandstone	Young	
		III1A	1.10	0.22	4	1.08	1.37	0.85	103	Swf	Ultisols	Lava,tuff	Coamo	
III1Aia		1.20		1				103	Smf	Alfisols	Sandstone,sillstone	Young-Vieques		
III1A		4.07		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest		
III1Ci		0.73	0.40	4	0.74	1.14	0.33	103	Lmwf	Inceptisols	Tuffac. sandstone	Harvey		
III1Ci		0.54	0.36	10	0.45	1.89	0.28	103	SWf	Ultisols	Tuffac. sandstone	Rio Chiquito		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Manganese (mg/kg)	II1A	18		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		II1A	20	2	2	20	19	22	102	Smf	Limestone	Tuffac. sandstone	Young	
		III1A	9	5	4	6	16	5	103	Swf	Ultisols	Lava,tuff	Coamo	
		III1Aia	15		1				103	Smf	Alfisols	Sandstone,sillstone	Young-Vieques	
	Nickel (µg/g)	II1A	4.10	0.42	2	4.10	4.40	3.80	102	Smf	Limestone	Tuffac. sandstone	Young	
	Nitrogen (%)	II1A	1.17	0.07	2	1.17	1.23	1.12	102	Smf	Limestone	Tuffac. sandstone	Young	
		III1A	1.32	0.19	4	1.33	1.51	1.10	103	Swf	Ultisols	Lava,tuff	Coamo	
		III1Aia	1.26		1				103	Smf	Alfisols	Sandstone,sillstone	Young-Vieques	
		II1A	1.10		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Phosphorus (mg/g)	III1Ci	0.59	0.14	4	0.67	0.70	0.40	103	Lmwf	Inceptisols	Tuffac. sandstone	Harvey	
		III1Ci	0.31	0.09	10	0.28	0.50	0.20	103	SWf	Ultisols	Tuffac. sandstone	Rio Chiquito	
		II1A	0.68	0.01	2	0.68	0.69	0.67	102	Smf	Limestone	Tuffac. sandstone	Young	
II1A		0.69	0.03	4	0.69	0.74	0.64	103	Swf	Ultisols	Lava,tuff	Coamo		
III1Aia		0.83		1				103	Smf	Alfisols	Sandstone,sillstone	Young-Vieques		
II1A		0.43		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest		
Potassium (mg/g)	III1Ci	0.35	0.19	4	0.40	0.51	0.01	103	Lmwf	Inceptisols	Tuffac. sandstone	Harvey		
	III1Ci	0.13	0.04	10	0.13	0.20	0.06	103	SWf	Ultisols	Tuffac. sandstone	Rio Chiquito		
	II1A	8.00	1.35	2	8.00	8.96	7.05	102	Smf	Limestone	Tuffac. sandstone	Young		
	II1A	7.20	0.48	4	7.27	7.97	6.49	103	Swf	Ultisols	Lava,tuff	Coamo		
	III1Aia	8.46		1				103	Smf	Alfisols	Sandstone,sillstone	Young-Vieques		
	II1A	5.53		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest		
Zinc (µg/g)	III1Ci	14.03	4.72	4	14.03	19.01	9.10	103	Lmwf	Inceptisols	Tuffac. sandstone	Harvey		
	III1Ci	6.82	1.06	10	7.17	8.22	5.02	103	SWf	Ultisols	Tuffac. sandstone	Rio Chiquito		
Calcium (mg/g)	II1A	16.25		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest		
	II1A	11.35	4.91	51	12.07	24.37	1.85	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest		
Magnesium (mg/g)	III1Ci	27.16	7.64	4	27.27	33.93	20.15	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest		
	II1A	1.34	0.33	55	1.30	2.22	0.79	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest		
Nitrogen (%)	III1Ci	0.21	0.04	4	0.21	0.25	0.17	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest		
	II1A	1.22	0.59	55	1.19	3.34	0.41	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Phosphorus (mg/g)	III1Ci	0.27	0.03	4	0.27	0.31	0.24	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		III1A	0.75	0.72	54	0.53	3.63	0.16	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Potassium (mg/g)	III1Ci	0.06	0.04	4	0.06	0.10	0.02	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		III1A	10.57	4.57	55	8.10	18.81	2.27	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		III1Ci	7.22	1.86	4	7.23	9.02	5.39	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
<i>Swietenia sp</i>	Aluminum (mg/kg)	III1A	26	17	16	20	70	10	103	Wfs	Ultisols	Lava	Mature f.-Sabana	
		III1A	101	23	7	110	135	63	103	Wfs	Ultisols	Lava	Old-Sabana	
		III1A	16	4	2	14	21	13	103	Wfs	Ultisols	Lava	Young-Sabana	
	Calcium (mg/g)	III1Aiib	151	24	3	161	175	120	103	Wfs	Ultisols	Lava	Mature f.-Sabana	
		III1A	12.51	2.27	16	11.70	16.19	9.69	103	Wfs	Ultisols	Lava	Mature f.-Sabana	
		III1A	16.97	3.26	7	18.39	20.55	11.65	103	Wfs	Ultisols	Lava	Old-Sabana	
		III1A	4.32	0.50	2	4.30	4.80	3.87	103	Wfs	Ultisols	Lava	Young-Sabana	
		III1Aiib	12.88	3.10	2	12.88	15.58	10.16	103	Wfs	Ultisols	Lava	Mature f.-Sabana	
	Magnesium (mg/g)	III1A	3.66	0.92	16	3.72	5.38	2.46	103	Wfs	Ultisols	Lava	Mature f.-Sabana	
		III1A	3.62	0.95	7	3.16	5.47	2.49	103	Wfs	Ultisols	Lava	Old-Sabana	
		III1A	2.52	0.64	2	2.50	3.12	1.95	103	Wfs	Ultisols	Lava	Young-Sabana	
		III1Aiib	3.86	0.40	3	3.80	4.50	3.45	103	Wfs	Ultisols	Lava	Mature f.-Sabana	
	Manganese (mg/kg)	III1A	36	7	16	36	47	25	103	Wfs	Ultisols	Lava	Mature f.-Sabana	
		III1A	43	15	7	42	75	27	103	Wfs	Ultisols	Lava	Old-Sabana	
		III1A	14	4	2	15	18	10	103	Wfs	Ultisols	Lava	Young-Sabana	
		III1Aiib	50	13	3	50	61	37	103	Wfs	Ultisols	Lava	Mature f.-Sabana	
	Nitrogen (%)	III1A	2.09	0.17	16	2.03	2.43	1.91	103	Wfs	Ultisols	Lava	Mature f.-Sabana	
		III1A	1.77	0.28	7	1.81	2.34	1.44	103	Wfs	Ultisols	Lava	Old-Sabana	
		III1A	1.77	0.22	2	1.77	1.98	1.57	103	Wfs	Ultisols	Lava	Young-Sabana	
		III1Aiib	1.67	0.04	3	1.67	1.71	1.62	103	Wfs	Ultisols	Lava	Mature f.-Sabana	
Phosphorus (mg/g)	III1A	0.73	0.10	16	0.74	0.85	0.54	103	Wfs	Ultisols	Lava	Mature f.-Sabana		
	III1A	0.55	0.09	7	0.54	0.75	0.45	103	Wfs	Ultisols	Lava	Old-Sabana		
	III1A	1.21	0.20	2	1.21	1.40	1.02	103	Wfs	Ultisols	Lava	Young-Sabana		



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Potassium (mg/g)	III Aiib	0.68	0.07	3	0.66	0.77	0.60	103	Wfs	Ultisols	Lava	Mature f.-Sabana	
		III A	11.08	1.77	16	10.55	13.92	8.81	103	Wfs	Ultisols	Lava	Mature f.-Sabana	
		III A	8.80	1.96	7	8.31	12.30	5.77	103	Wfs	Ultisols	Lava	Old-Sabana	
		III A	14.35	1.66	2	14.37	15.81	12.86	103	Wfs	Ultisols	Lava	Young-Sabana	
		III Aiib	9.49	1.37	2	9.51	10.72	8.21	103	Wfs	Ultisols	Lava	Mature f.-Sabana	
<i>Syzygium jambos</i>	Aluminum (mg/g)	III A	0.07	0.04	6	0.07	0.12	0.04	129	Lmrf	Ultisols	Tuffac. sandstone		
		III A	0.19	0.02	2	0.19	0.21	0.18	131	Wfs	Mollisols	Plutonic rocks		
		III B	0.15	0.05	2	0.15	0.18	0.11	131	Wfs	Mollisols	Plutonic rocks		
		III C	0.12	0.00	2	0.12	0.13	0.12	131	Wfs	Mollisols	Plutonic rocks		
		III E	0.61	0.19	3	0.52	0.83	0.49	131	Wfs	Mollisols	Plutonic rocks		
	Ash (%)	II 6	1.30	0.44	25	1.27	2.26	0.62	129	Lmrf	Ultisols	Tuffac. sandstone	Decomp.	
		III A	5.16	0.82	6	5.15	6.07	3.96	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		III A	4.00	0.23	6	3.95	4.27	3.69	129	Lmrf	Ultisols	Tuffac. sandstone		
		III A	5.59	1.05	8	4.83	6.82	4.02	94	Swf	Ultisols	Tuffac. sandstone	Understory	
		III A	4.15	0.25	2	4.15	4.33	3.97	131	Wfs	Mollisols	Plutonic rocks		
		III B	4.71	0.75	6	4.22	5.79	3.92	94	Swf	Ultisols	Tuffac. sandstone	Understory	
		III B	2.30	0.81	2	2.30	2.87	1.72	101	Wfs	Ultisols	Lava		
		III B	3.10	0.45	2	3.10	3.41	2.78	131	Wfs	Mollisols	Plutonic rocks		
		III C	1.55	0.38	6	1.44	2.24	1.21	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		III C	3.25	0.71	8	3.93	4.42	2.06	94	Swf	Ultisols	Tuffac. sandstone	Understory	
		III C	1.57	0.52	2	1.57	1.93	1.20	131	Wfs	Mollisols	Plutonic rocks		
		III Ci	5.45	0.82	5	5.22	6.76	4.53	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		III E	2.80	0.32	3	2.63	3.16	2.60	131	Wfs	Mollisols	Plutonic rocks		
		II 6	7.74	1.15	25	7.67	9.69	5.35	129	Lmrf	Ultisols	Tuffac. sandstone	Decomp.	
		C/N	III A	39	3	6	41	42	34	126		Ultisols	Siltstone,sandstone	Urban forest, RP
III A	37		1	6	37	38	35	129	Lmrf	Ultisols	Tuffac. sandstone			
III A	36		2	2	36	37	34	131	Wfs	Mollisols	Plutonic rocks			
III B	79		9	2	79	85	72	131	Wfs	Mollisols	Plutonic rocks			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1C	406	193	6	306	655	235	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1C	126	1	2	126	127	126	131	Wfs	Mollisols	Plutonic rocks		
		II1Ci	90	22	5	86	118	59	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1E	60	25	3	47	89	45	131	Wfs	Mollisols	Plutonic rocks		
		II6	30	4	25	29	37	23	129	Lmrf	Ultisols	Tuffac. sandstone	Decomp.	
	Calcium (mg/g)	II1A	6.65	0.51	6	6.79	7.19	5.89	129	Lmrf	Ultisols	Tuffac. sandstone		
		II1A	6.33	0.75	2	6.33	6.86	5.81	131	Wfs	Mollisols	Plutonic rocks		
		II1B	3.30	1.42	2	3.30	4.31	2.29	101	Wfs	Ultisols	Lava		
		II1B	5.69	1.49	2	5.69	6.71	4.66	131	Wfs	Mollisols	Plutonic rocks		
		II1C	1.61	0.04	2	1.61	1.58	0.64	131	Wfs	Mollisols	Plutonic rocks		
		II1E	2.51	0.32	3	2.66	2.74	2.14	131	Wfs	Mollisols	Plutonic rocks		
		II6	11.17	1.67	25	11.81	14.80	7.86	129	Lmrf	Ultisols	Tuffac. sandstone	Decomp.	
	Carbon (%)	II1A	54	0	6	54	54	53	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1A	53	0	6	53	54	53	129	Lmrf	Ultisols	Tuffac. sandstone		
		II1A	55	0	2	55	55	54	131	Wfs	Mollisols	Plutonic rocks		
		II1B	52	0	2	52	52	51	131	Wfs	Mollisols	Plutonic rocks		
		II1C	52	0	6	52	52	51	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1C	52	0	2	52	52	52	131	Wfs	Mollisols	Plutonic rocks		
		II1Ci	52	0	5	52	53	52	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1E	53	1	3	53	53	52	131	Wfs	Mollisols	Plutonic rocks		
		II6	52	1	25	52	54	50	129	Lmrf	Ultisols	Tuffac. sandstone	Decomp.	
	Iron (mg/g)	II1A	0.05	0.01	6	0.05	0.08	0.04	129	Lmrf	Ultisols	Tuffac. sandstone		
		II1A	0.08	0.03	2	0.08	0.10	0.06	131	Wfs	Mollisols	Plutonic rocks		
		II1B	0.11	0.00	2	0.11	0.11	0.11	131	Wfs	Mollisols	Plutonic rocks		
		II1C	0.10	0.04	2	0.10	0.12	0.07	131	Wfs	Mollisols	Plutonic rocks		
		II1E	0.67	0.10	3	0.64	0.78	0.59	131	Wfs	Mollisols	Plutonic rocks		
		II6	1.64	0.88	25	1.40	4.35	0.50	129	Lmrf	Ultisols	Tuffac. sandstone	Decomp.	
	Magnesium (mg/g)	II1A	3.05	0.49	6	3.16	3.51	2.24	129	Lmrf	Ultisols	Tuffac. sandstone		
		II1A	3.74	0.29	2	3.74	3.94	3.53	131	Wfs	Mollisols	Plutonic rocks		

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<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II1B	2.43	0.61	2	2.43	2.86	2.01	131	Wfs	Mollisols	Plutonic rocks		
		II1C	0.95	0.11	2	0.95	1.03	0.87	131	Wfs	Mollisols	Plutonic rocks		
		III1E	1.70	0.20	3	1.78	1.85	1.47	131	Wfs	Mollisols	Plutonic rocks		
	Manganese (mg/kg)	II6	1.95	0.53	25	1.84	3.30	1.35	129	Lmrf	Ultisols	Tuffac. sandstone	Decomp.	
		III1A	22	14	6	16	42	9	129	Lmrf	Ultisols	Tuffac. sandstone		
		II6	103	99	25	73	550	34	129	Lmrf	Ultisols	Tuffac. sandstone	Decomp.	
		III1A	8	2	2	8	9	6	131	Wfs	Mollisols	Plutonic rocks		
		III1B	26	13	2	26	35	16	131	Wfs	Mollisols	Plutonic rocks		
		III1C	6		1				131	Wfs	Mollisols	Plutonic rocks		
	Nitrogen (%)	III1E	24	3	2	24	26	22	131	Wfs	Mollisols	Plutonic rocks		
		III1A	1.37	0.12	6	1.32	1.58	1.29	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		III1A	1.44	0.05	6	1.45	1.49	1.38	129	Lmrf	Ultisols	Tuffac. sandstone		
		III1A	1.07	0.16	8	1.06	1.30	0.85	94	Swf	Ultisols	Tuffac. sandstone	Understory	
		III1A	1.53	0.10	2	1.53	1.60	1.46	131	Wfs	Mollisols	Plutonic rocks		
		III1B	0.61	0.10	6	0.58	0.82	0.51	94	Swf	Ultisols	Tuffac. sandstone	Understory	
		III1B	0.53	0.12	2	0.53	0.61	0.44	101	Wfs	Ultisols	Lava		
		III1B	0.66	0.07	2	0.66	0.71	0.61	131	Wfs	Mollisols	Plutonic rocks		
		III1C	0.15	0.06	6	0.17	0.22	0.08	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		III1C	0.48	0.17	8	0.51	0.71	0.25	94	Swf	Ultisols	Tuffac. sandstone	Understory	
		III1C	0.41	0.00	2	0.41	0.41	0.41	131	Wfs	Mollisols	Plutonic rocks		
		III1Ci	0.62	0.18	5	0.61	0.90	0.44	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	Phosphorus (mg/g)	III1E	0.96	0.33	3	1.13	1.17	0.58	131	Wfs	Mollisols	Plutonic rocks		
		II6	1.81	0.30	25	1.77	2.38	1.36	129	Lmrf	Ultisols	Tuffac. sandstone	Decomp.	
		III1A	0.73	0.05	6	0.74	0.77	0.62	129	Lmrf	Ultisols	Tuffac. sandstone		
		III1A	0.66	0.11	8	0.59	0.83	0.55	94	Swf	Ultisols	Tuffac. sandstone	Understory	
		III1A	0.51	0.02	2	0.51	0.52	0.49	131	Wfs	Mollisols	Plutonic rocks		
		III1B	0.45	0.19	6	0.38	0.83	0.35	94	Swf	Ultisols	Tuffac. sandstone	Understory	
	III1B	0.34	0.01	2	0.34	0.40	0.28	101	Wfs	Ultisols	Lava			
	III1B	0.29	0.06	2	0.29	0.33	0.25	131	Wfs	Mollisols	Plutonic rocks			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Potassium (mg/g)	II1C	0.47	0.25	8	0.38	0.87	0.18	94	Swf	Ultisols	Tuffac. sandstone	Understory	
		II1C	0.20	0.01	2	0.20	0.20	0.19	131	Wfs	Mollisols	Plutonic rocks		
		III1E	0.23	0.01	3	0.23	0.24	0.22	131	Wfs	Mollisols	Plutonic rocks		
		II6	0.38	0.04	25	0.37	0.46	0.33	129	Lmrf	Ultisols	Tuffac. sandstone	Decomp.	
		III1A	8.06	0.25	6	8.03	8.44	7.75	129	Lmrf	Ultisols	Tuffac. sandstone		
		III1A	5.00	1.20	8	5.30	6.90	3.20	94	Swf	Ultisols	Tuffac. sandstone	Understory	
		III1A	3.98	0.18	2	3.98	4.11	3.86	131	Wfs	Mollisols	Plutonic rocks		
		III1B	3.40	1.40	6	4.10	4.80	1.30	94	Swf	Ultisols	Tuffac. sandstone	Understory	
		III1B	4.30	0.33	2	4.30	4.54	4.07	101	Wfs	Ultisols	Lava	Understory	
		III1B	3.34	0.10	2	3.34	3.41	2.27	131	Wfs	Mollisols	Plutonic rocks		
	III1C	3.60	1.40	8	3.30	5.50	1.00	94	Swf	Ultisols	Tuffac. sandstone			
	III1C	2.66	1.20	2	2.66	3.50	1.81	131	Wfs	Mollisols	Plutonic rocks			
	III1E	2.02	0.15	3	2.03	2.16	1.86	131	Wfs	Mollisols	Plutonic rocks			
	II6	0.68	0.21	25	0.64	1.19	0.31	129	Lmrf	Ultisols	Tuffac. sandstone	Decomp.		
	Sulfur (%)	III1A	0.14	0.01	6	0.14	0.15	0.11	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	III1A	0.20	0.01	6	0.20	0.22	0.18	129	Lmrf	Ultisols	Tuffac. sandstone			
	III1A	0.36	0.02	2	0.36	0.38	0.48	131	Wfs	Mollisols	Plutonic rocks			
	III1B	0.27	0.02	2	0.27	0.28	0.25	131	Wfs	Mollisols	Plutonic rocks			
	III1C	0.04	0.02	6	0.04	0.07	0.03	126		Ultisols	Siltstone,sandstone	Urban forest, RP		
	III1C	0.14	0.02	2	0.14	0.15	0.12	131	Wfs	Mollisols	Plutonic rocks			
III1Ci	0.25	0.05	5	0.25	0.32	0.19	126		Ultisols	Siltstone,sandstone	Urban forest, RP			
III1E	0.44	0.14	3	0.49	0.55	0.28	131	Wfs	Mollisols	Plutonic rocks				
II6	0.15	0.02	25	0.15	0.19	0.11	129	Lmrf	Ultisols	Tuffac. sandstone	Decomp.			
Wood density (g/cc)	III1C	0.56	0.05	5	0.55	0.62	0.51	126		Ultisols	Siltstone,sandstone	Urban forest, RP		
<i>Tabebuia aemantha</i>	Aluminum (mg/kg)	III1A	17		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		III1A	10		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
	Ash (%)	III1A	5.79		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		III1A	3.56		1				102	Smf	Limestone	Tuffac. sandstone	Adult	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Calcium (mg/g)	II1A	4.15		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		II1A	2.41		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
	Cobalt (µg/g)	III1A	0.70		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
		III1A	66		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Iron (mg/kg)	III1A	16		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
		III1A	2.57		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Magnesium (mg/g)	III1A	1.45		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
		III1A	18		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Manganese (mg/kg)	III1A	8		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
		III1A	40.65		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
	Nickel (µg/g)	III1A	1.30		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		III1A	0.83		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
	Nitrogen (%)	III1A	0.60		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		III1A	0.58		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
	Phosphorus (mg/g)	III1A	7.88		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		III1A	15.36		1				102	Smf	Limestone	Tuffac. sandstone	Adult	
	Potassium (mg/g)	III1A	11.42		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		III1A												
	Zinc (µg/g)	III1A												
		III1A												
<i>Tababuia heterophylla</i>	Aluminum (µg/g)	III1A	5.68	4.31	2	5.58	9.65	1.90	58	Lmrf	Ultisols	Serpentinite		
	Ash (%)	III1A	4.82	0.60	3	4.52	5.51	4.42	101	Swf	Ultisols	Tuffac. sandstone		
		III1A	4.88	1.09	7	4.65	6.52	3.20	94	Swf	Ultisols	Tuffac. sandstone		
		III1B	4.23		1				94	Swf	Ultisols	Tuffac. sandstone		
		III1C	3.15	2.15	5	2.21	5.77	1.22	94	Swf	Ultisols	Tuffac. sandstone	Fresh	
		III1A	5.06	0.39	5	4.91	5.67	4.66	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		III1A	3.37	0.88	51	3.15	6.87	2.23	138	Wfs	Ultisols	Lava		
		III1C	1.01	0.22	5	0.95	1.35	0.80	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		III1Ci	4.44	0.38	6	4.33	5.02	4.09	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	C/N	III1A	32	2	5	31	35	28	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
III1C		368	112	5	346	556	264	126		Ultisols	Siltstone,sandstone	Urban forest, RP		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		III1Ci	128	29	6	133	166	87	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	Calcium (mg/g)	III1A	5.32	0.25	2	5.34	5.56	5.05	58	Lmrf	Ultisols	Serpentinite		
	Carbon (%)	III1A	53	0	5	53	53	52	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		III1A	50	1	51	50	51	48	126		Ultisols	Siltstone,sandstone		
		III1C	55	0	5	55	56	55	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	Cobalt (µg/g)	III1Ci	54	0	6	55	55	54	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		III1A	0.93	0.42	2	0.90	1.35	0.57	58	Lmrf	Ultisols	Serpentinite		
	Copper (µg/g)	III1A	7.09	3.55	2	6.99	10.69	3.69	58	Lmrf	Ultisols	Serpentinite		
	Chromium (µg/g)	III1A	108	80	2	109	178	35	58	Lmrf	Ultisols	Serpentinite		
	Iron (µg/g)	III1A	551	586	2	524	1111	43	58	Lmrf	Ultisols	Serpentinite		
	Magnesium (mg/g)	III1A	2.56	0.34	2	2.57	2.87	2.24	58	Lmrf	Ultisols	Serpentinite		
	Manganese (µg/g)	III1A	43	26	2	43	66	20	58	Lmrf	Ultisols	Serpentinite		
	Niquel (µg/g)	III1A	136	18	2	135	155	118	58	Lmrf	Ultisols	Serpentinite		
	Nitrogen (%)	III1A	1.20	0.27	3	1.09	1.51	1.01	101	Swf	Ultisols	Tuffac. sandstone		
		III1A	1.60	0.62	7	1.65	2.28	0.70	94	Swf	Ultisols	Tuffac. sandstone		
		III1B	0.67		1				94	Swf	Ultisols	Tuffac. sandstone		
		III1C	0.65	0.40	5	0.49	1.09	0.28	94	Swf	Ultisols	Tuffac. sandstone	Fresh	
		III1A	1.66	0.13	5	1.67	1.85	1.50	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		III1A	1.45	18.00	51	1.45	1.89	1.10	138	Wfs	Ultisols	Lava		
		III1A	1.12	0.24	2	1.12	1.33	0.89	58	Lmrf	Ultisols	Serpentinite		
		III1C	0.16	0.04	5	0.16	0.21	0.10	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		III1Ci	0.45	0.11	6	0.41	0.62	0.33	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	Phosphorus (mg/g)	III1A	0.80	0.22	3	0.81	1.01	0.57	101	Swf	Ultisols	Tuffac. sandstone		
		III1A	1.31	0.55	7	1.15	2.12	0.55	94	Swf	Ultisols	Tuffac. sandstone		
		III1B	0.86		1				94	Swf	Ultisols	Tuffac. sandstone		
		III1C	0.37	0.16	5	0.34	0.63	0.22	94	Swf	Ultisols	Tuffac. sandstone	Fresh	
		III1A	13.87	2.47	2	14.01	16.05	11.42	58	Lmrf	Ultisols	Serpentinite		
	Potassium (mg/g)	III1A	7.67	2.08	3	7.00	10.00	6.00	101	Swf	Ultisols	Tuffac. sandstone		
		III1A	13.20	5.00	7	13.10	20.50	4.80	94	Swf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Sulfur (%)	II1B	10.84		1				94	Swf	Ultisols	Tuffac. sandstone		
		II1C	7.70	8.80	5	3.60	23.40	3.10	94	Swf	Ultisols	Tuffac. sandstone		
		II1A	11.33	3.73	2	11.32	14.61	8.08	58	Lmrf	Ultisols	Serpentinite		
		II1A	0.18	0.04	5	0.17	0.26	0.16	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1C	0.04	0.02	5	0.04	0.07	0.01	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1Ci	0.05	0.01	6	0.05	0.07	0.04	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1C	0.49	0.02	20	0.49	0.53	0.46	115					
	Wood density (g/cc)	II1C	0.49	0.02	20	0.49	0.53	0.46	115					
		II1C	0.51	0.01	5	0.50	0.53	0.50	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
<i>Tabebuia rigida</i>	Aluminum (mg/g)	II1A	0.17		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	0.62	0.30	39	0.59	1.29	0.17	107	Rfs	Inceptisols	Tuffac. sandstone		
		II1B	0.08		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Ash (%)	II1C	0.06		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	4.47		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	3.60	0.60	26	3.63	4.74	2.38	107	Rfs	Inceptisols	Tuffac. sandstone		
		II1B	2.22		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	C/N	II1C	0.62		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	38		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	34	5	39	34	46	23	107	Rfs	Inceptisols	Tuffac. sandstone		
	Calcium (mg/g)	II1B	146		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	460		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	2.92		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	2.23	1.09	39	1.89	6.91	1.15	107	Rfs	Inceptisols	Tuffac. sandstone		
	Carbon (%)	II1B	2.31		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	0.64		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	46	2	39	47	49	42	107	Rfs	Inceptisols	Tuffac. sandstone		
	Iron (mg/g)	II1A	0.11		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	0.59	0.38	39	0.52	2.34	0.17	107	Rfs	Inceptisols	Tuffac. sandstone		
II1B		0.07		1				93	Wflm	Inceptisols	Tuffac. sandstone			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Magnesium (mg/g)	II1C	0.06		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	3.09		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	2.23	0.43	39	2.24	3.09	1.32	107	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	1.50		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Manganese (mg/g)	II1C	0.41		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	0.12		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	0.03	0.03	39	0.03	0.19	0.02	107	Rfs	Inceptisols	Tuffac. sandstone		
		II1B	0.42		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Nitrogen (%)	II1C	0.05		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	1.15		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	1.41	0.22	39	1.40	1.94	0.94	107	Rfs	Inceptisols	Tuffac. sandstone		
		II1B	0.31		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II1C	0.10		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	0.67		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	0.73	0.23	39	0.71	1.41	0.40	107	Rfs	Inceptisols	Tuffac. sandstone		
		II1B	0.50		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Potassium (mg/g)	II1C	0.14		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	8.74		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	7.05	3.92	39	5.36	20.52	3.04	107	Rfs	Inceptisols	Tuffac. sandstone		
		II1B	3.21		1				93	Wflm	Inceptisols	Tuffac. sandstone		
Wood density (g/cc)	II1C	1.04		1				93	Wflm	Inceptisols	Tuffac. sandstone			
	II1B	0.56	0.05	23	0.56	0.67	0.46	97	Wfs	Inceptisols	Tuffac. sandstone			
<i>Tabebuia spp.</i>	Calcium (mg/g)	II1A	20.26		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1Ci	19.28	0.15	2	19.28	19.39	19.18	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Magnesium (mg/g)	II1A	15.56		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1Ci	7.00	0.25	2	7.00	7.18	6.83	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Nitrogen (%)	II1A	1.75		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1Ci	1.39	0.41	4	1.39	1.76	1.03	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Phosphorus (mg/g)	II1Ci	0.86	0.54	4	0.88	1.33	0.34	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Potassium (mg/g)	II1A	17.67		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		II1Ci	20.08	0.60	2	20.08	20.50	19.66	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
<i>Tabonuco forest</i>	Aluminum (mg/g)	II9A	1.01	0.40	4	0.98	1.52	0.55	153	Swf	Ultisols	Tuffac. sandstone		
	Ash (%)	II9A	6.97	0.59	4	7.08	7.48	6.22	153	Swf	Ultisols	Tuffac. sandstone		
	C/N	II9A	33	1	4	33	33	31	153	Swf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II9A	9.14	1.30	4	9.41	10.37	7.35	153	Swf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II9A	51	1	4	51	53	50	153	Swf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II9A	0.23	0.12	4	0.18	0.41	0.16	153	Swf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II9A	2.98	0.36	4	3.07	3.30	2.47	153	Swf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II9A	0.28	0.07	4	0.27	0.38	0.21	153	Swf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II9A	1.58	0.06	4	1.57	1.66	1.52	153	Swf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II9A	0.57	0.04	4	0.57	0.61	0.53	153	Swf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II9A	7.41	0.59	4	7.39	8.11	6.75	153	Swf	Ultisols	Tuffac. sandstone		
	Sodium (mg/g)	II9A	2.65	0.29	4	2.57	3.06	2.40	153	Swf	Ultisols	Tuffac. sandstone		
<i>Tabonuco Sec. Forest</i>	Aluminum (mg/g)	II8A	5.26	4.76	11	3.13	14.59	1.25	133	Wfs	Ultisols	Tuffac. sandstone		
		II8B	1.53	1.30	9	1.18	4.37	0.39	133	Wfs	Ultisols	Tuffac. sandstone		
		II8C	1.92	1.55	11	1.60	6.13	0.68	133	Wfs	Ultisols	Tuffac. sandstone		
		II8D	20.90	6.20	9	22.39	27.84	11.07	133	Wfs	Ultisols	Tuffac. sandstone		
	Ash (%)	II8A	11.78	4.36	11	9.85	20.17	8.14	133	Wfs	Ultisols	Tuffac. sandstone		
		II8B	4.43	2.29	9	3.54	8.56	2.70	133	Wfs	Ultisols	Tuffac. sandstone		
		II8C	3.44	2.07	11	2.78	9.20	2.07	133	Wfs	Ultisols	Tuffac. sandstone		
		II8D	25.85	5.66	8	28.42	30.93	14.48	133	Wfs	Ultisols	Tuffac. sandstone		
	C/N	II8A	39	6	11	39	48	31	133	Wfs	Ultisols	Tuffac. sandstone		
		II8B	71	13	9	74	86	53	133	Wfs	Ultisols	Tuffac. sandstone		
		II8C	59	5	11	57	66	50	133	Wfs	Ultisols	Tuffac. sandstone		
		II8D	25	2	9	25	28	22	133	Wfs	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
Calcium (mg/g)		II8A	11.11	2.33	11	10.86	16.34	8.20	133	Wfs	Ultisols	Tuffac. sandstone		
		II8B	9.36	1.71	9	9.46	11.59	6.56	133	Wfs	Ultisols	Tuffac. sandstone		
		II8C	4.02	0.89	11	4.07	5.49	2.33	133	Wfs	Ultisols	Tuffac. sandstone		
		II8D	9.00	1.05	9	8.65	10.70	7.70	133	Wfs	Ultisols	Tuffac. sandstone		
Carbon (%)		II8A	49	3	11	50	52	43	133	Wfs	Ultisols	Tuffac. sandstone		
		II8B	51	1	9	51	53	48	133	Wfs	Ultisols	Tuffac. sandstone		
		II8C	54	3	11	55	56	48	133	Wfs	Ultisols	Tuffac. sandstone		
		II8D	40	4	9	40	47	36	133	Wfs	Ultisols	Tuffac. sandstone		
Iron (mg/g)		II8A	3.96	4.40	11	2.24	12.57	0.67	133	Wfs	Ultisols	Tuffac. sandstone		
		II8B	1.07	1.15	9	0.58	3.41	0.21	133	Wfs	Ultisols	Tuffac. sandstone		
		II8C	1.53	1.49	11	1.15	5.47	0.29	133	Wfs	Ultisols	Tuffac. sandstone		
		II8D	22.02	8.92	9	26.46	32.46	8.96	133	Wfs	Ultisols	Tuffac. sandstone		
Magnesium (mg/g)		II8A	1.99	0.39	11	2.06	2.49	1.48	133	Wfs	Ultisols	Tuffac. sandstone		
		II8B	1.47	0.32	9	1.52	2.00	1.06	133	Wfs	Ultisols	Tuffac. sandstone		
		II8C	1.39	0.29	11	1.35	1.81	0.86	133	Wfs	Ultisols	Tuffac. sandstone		
		II8D	1.97	0.27	9	1.98	2.48	1.47	133	Wfs	Ultisols	Tuffac. sandstone		
Manganese (mg/g)		II8A	1.00	0.20	11	1.06	1.34	0.75	133	Wfs	Ultisols	Tuffac. sandstone		
		II8B	0.49	0.15	9	0.48	0.71	0.32	133	Wfs	Ultisols	Tuffac. sandstone		
		II8C	0.16	0.07	11	0.14	0.32	0.09	133	Wfs	Ultisols	Tuffac. sandstone		
		II8D	1.47	0.27	9	1.46	1.91	1.00	133	Wfs	Ultisols	Tuffac. sandstone		
Nitrogen (%)		II8A	1.26	0.14	11	1.27	1.41	1.04	133	Wfs	Ultisols	Tuffac. sandstone		
		II8B	0.74	0.14	9	0.70	0.95	0.58	133	Wfs	Ultisols	Tuffac. sandstone		
		II8C	0.93	0.11	11	0.93	1.10	0.78	133	Wfs	Ultisols	Tuffac. sandstone		
		II8D	1.65	0.21	9	1.64	2.04	1.41	133	Wfs	Ultisols	Tuffac. sandstone		
Phosphorus (mg/g)		II8A	0.33	0.08	11	0.29	0.46	0.22	133	Wfs	Ultisols	Tuffac. sandstone		
		II8B	0.22	0.06	9	0.20	0.33	0.14	133	Wfs	Ultisols	Tuffac. sandstone		
		II8C	0.46	0.16	11	0.48	0.67	0.19	133	Wfs	Ultisols	Tuffac. sandstone		
		II8D	0.52	0.09	9	0.53	0.69	0.39	133	Wfs	Ultisols	Tuffac. sandstone		
Potassium (mg/g)		II8A	1.62	0.49	11	1.37	2.60	1.13	133	Wfs	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II8B	1.17	0.44	9	1.03	1.98	0.72	133	Wfs	Ultisols	Tuffac. sandstone		
		II8C	2.90	1.09	11	3.35	4.13	0.62	133	Wfs	Ultisols	Tuffac. sandstone		
		II8D	1.30	0.22	9	1.24	1.80	1.08	133	Wfs	Ultisols	Tuffac. sandstone		
<i>Tectaria trifoliata</i>	Aluminum (mg/g)	II6	1.05	1.16	9	0.75	4.01	0.11	135	Lmrf	Ultisols	Tuffac. sandstone		
	C/N	II6	24	7	7	23	38	16	135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II6	7.16	1.80	9	6.57	11.19	5.35	135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II6	42	2	7	43	44	40	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II6	1.04	1.09	9	0.67	3.63	0.22	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II6	4.69	1.95	9	3.73	9.15	2.95	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II6	0.14	0.05	9	0.12	0.24	0.09	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II6	1.87	0.36	11	1.89	2.44	1.16	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II6	0.85	0.24	9	0.91	1.24	0.39	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II6	22.79	11.62	9	26.11	35.37	3.54	135	Lmrf	Ultisols	Tuffac. sandstone		
	Sulfur (%)	II6	0.79	0.33	7	0.73	1.36	0.42	135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Telypteris deltoidea</i>	C/N	II6	30		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II6	39		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II6	1.29		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Sulfur (%)	II6	0.41		1				135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Terebraria recinosa</i>	Aluminum (μg/g)	II1A	30		1				58	Lmrf	Ultisols	Serpentinite		
		II1A	113		1				58	Lmrf	Ultisols	Serpentinite		
	Calcium (mg/g)	II1A	7.64		1				58	Lmrf	Ultisols	Serpentinite		
		II1A	10.15		1				58	Lmrf	Ultisols	Serpentinite		
	Cobalt (μg/g)	II1A	0.79		1				58	Lmrf	Ultisols	Serpentinite		
		II1A	1.44		1				58	Lmrf	Ultisols	Serpentinite		
	Copper (μg/g)	II1A	7		1				58	Lmrf	Ultisols	Serpentinite		
		II1A	14		1				58	Lmrf	Ultisols	Serpentinite		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
	Chromium (µg/g)	II1A	2		1				58	Lmrf	Ultisols	Serpentinite			
		II1A	3		1				58	Lmrf	Ultisols	Serpentinite			
	Iron (µg/g)	II1A	35		1				58	Lmrf	Ultisols	Serpentinite			
		II1A	135		1				58	Lmrf	Ultisols	Serpentinite			
	Magnesium (mg/g)	II1A	35.05		1				58	Lmrf	Ultisols	Serpentinite			
		II1A	1.74		1				58	Lmrf	Ultisols	Serpentinite			
	Manganese (µg/g)	II1A	18		1				58	Lmrf	Ultisols	Serpentinite			
		II1A	76		1				58	Lmrf	Ultisols	Serpentinite			
	Niquel (µg/g)	II1A	54		1				58	Lmrf	Ultisols	Serpentinite			
		II1A	62		1				58	Lmrf	Ultisols	Serpentinite			
	Nitrogen (%)	II1A	0.80		1				58	Lmrf	Ultisols	Serpentinite			
		II1A	0.90		1				58	Lmrf	Ultisols	Serpentinite			
	Phosphorus (mg/g)	II1A	9.18		1				58	Lmrf	Ultisols	Serpentinite			
		II1A	10.62		1				58	Lmrf	Ultisols	Serpentinite			
	Potassium (mg/g)	II1A	7.38		1				58	Lmrf	Ultisols	Serpentinite			
		II1A	17.42		1				58	Lmrf	Ultisols	Serpentinite			
	<i>Terminalia ivorensis</i>	Ash (%)	II8A	8.28		1				90	Swf	Ultisols	Tuffac. sandstone	New	
			II8A	9.64		1				90	Swf	Ultisols	Tuffac. sandstone	Old	
II8A			9.97	2.08	6	9.99	13.08	7.43		90	Swf	Ultisols	Tuffac. sandstone		
Calcium (mg/g)		II8B	4.50	0.44	3	4.54	4.91	4.04		90	Swf	Ultisols	Tuffac. sandstone		
		II8C	9.59		1					90	Swf	Ultisols	Tuffac. sandstone	Seeds	
		II8D	19.59	7.28	3	15.47	27.99	15.31		90	Swf	Ultisols	Tuffac. sandstone		
		II8A	19.95		1					90	Swf	Ultisols	Tuffac. sandstone	New	
Calcium (mg/g)		II8A	18.98		1					90	Swf	Ultisols	Tuffac. sandstone	Old	
		II8A	22.31	6.64	6	23.15	29.07	14.45		90	Swf	Ultisols	Tuffac. sandstone		
		II8B	11.15	2.93	3	9.94	14.49	9.02		90	Swf	Ultisols	Tuffac. sandstone		
	II8C	9.75		1					90	Swf	Ultisols	Tuffac. sandstone	Seeds		
	II8D	12.05	3.94	3	10.19	16.58	9.38		90	Swf	Ultisols	Tuffac. sandstone			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
		II9A	13.30	2.78	22	13.86	17.79	7.84	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	11.59	2.53	22	11.07	17.93	8.45	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	8.13	1.36	5	7.96	10.16	6.40	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	5.05	1.23	6	4.90	7.30	3.59	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	7.75	1.29	6	7.76	9.55	5.66	139	Wfs	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II8A	4.20		1				90	Swf	Ultisols	Tuffac. sandstone	New	
		II8A	3.80		1				90	Swf	Ultisols	Tuffac. sandstone	Old	
		II8A	4.39	0.49	6	4.34	5.14	3.66	90	Swf	Ultisols	Tuffac. sandstone		
		II8B	2.31	0.20	3	2.37	2.47	2.09	90	Swf	Ultisols	Tuffac. sandstone		
		II8C	2.53		1				90	Swf	Ultisols	Tuffac. sandstone	Seeds	
		II8D	2.87	0.44	3	2.72	3.36	2.52	90	Swf	Ultisols	Tuffac. sandstone		
		II9A	4.68	1.01	22	4.42	6.99	3.40	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	3.31	1.13	22	2.87	6.49	2.08	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	2.43	0.71	5	2.05	3.50	1.81	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	2.55	0.76	6	2.45	3.63	1.72	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	2.79	0.23	6	2.74	3.21	2.58	139	Wfs	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II8A	1.13		1				90	Swf	Ultisols	Tuffac. sandstone	New	
		II8A	1.16		1				90	Swf	Ultisols	Tuffac. sandstone	Old	
		II8A	1.13	0.17	6	1.16	1.34	0.90	90	Swf	Ultisols	Tuffac. sandstone		
		II8B	0.64	0.04	3	0.65	0.68	0.60	90	Swf	Ultisols	Tuffac. sandstone		
		II8C	1.17		1				90	Swf	Ultisols	Tuffac. sandstone	Seeds	
		II8D	1.21	0.04	3	1.22	1.25	1.17	90	Swf	Ultisols	Tuffac. sandstone		
		II9A	1.17	0.30	22	1.04	1.97	0.78	139	Wfs	Ultisols	Tuffac. sandstone		
		II9A	1.14	0.28	23	0.98	1.62	0.72	139	Wfs	Ultisols	Tuffac. sandstone	Other	
		II9B	0.48	0.09	10	0.50	0.60	0.32	139	Wfs	Ultisols	Tuffac. sandstone		
		II9C	1.52	0.47	11	1.67	2.06	0.74	139	Wfs	Ultisols	Tuffac. sandstone		
		II9D	1.28	0.31	11	1.28	1.58	0.50	139	Wfs	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II8A	0.19		1				90	Swf	Ultisols	Tuffac. sandstone	New	
		II8A	0.42		1				90	Swf	Ultisols	Tuffac. sandstone	Old	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
	Potassium (mg/g)	II8A	0.35	0.12	6	0.36	0.50	0.19	90	Swf	Ultisols	Tuffac. sandstone			
		II8B	0.22	0.05	3	0.23	0.27	0.16	90	Swf	Ultisols	Tuffac. sandstone			
		II8C	0.60		1					90	Swf	Ultisols	Tuffac. sandstone	Seeds	
		II8D	0.51	0.01	3	0.50	0.52	0.50	90	Swf	Ultisols	Tuffac. sandstone			
		II9A	0.48	0.18	22	0.42	0.99	0.18	139	Wfs	Ultisols	Tuffac. sandstone			
		II9A	0.44	0.15	22	0.41	0.72	0.17	139	Wfs	Ultisols	Tuffac. sandstone	Other		
		II9B	0.22	0.04	5	0.23	0.27	0.16	139	Wfs	Ultisols	Tuffac. sandstone			
		II9C	0.79	0.30	6	0.78	1.19	0.48	139	Wfs	Ultisols	Tuffac. sandstone			
		II9D	0.71	0.13	6	0.69	0.88	0.56	139	Wfs	Ultisols	Tuffac. sandstone			
		II8A	1.74		1					90	Swf	Ultisols	Tuffac. sandstone	New	
		II8A	1.82		1					90	Swf	Ultisols	Tuffac. sandstone	Old	
		II8A	3.76	1.83	6	2.95	6.63	1.74	90	Swf	Ultisols	Tuffac. sandstone			
		II8B	2.07	0.98	3	1.98	3.09	1.14	90	Swf	Ultisols	Tuffac. sandstone			
		II8C	2.41		1					90	Swf	Ultisols	Tuffac. sandstone	Seeds	
		II8D	2.65	1.28	3	2.66	3.92	1.37	90	Swf	Ultisols	Tuffac. sandstone			
		II9A	5.07	1.40	22	4.74	8.39	3.20	139	Wfs	Ultisols	Tuffac. sandstone			
		II9A	5.20	1.44	22	4.87	8.29	3.31	139	Wfs	Ultisols	Tuffac. sandstone	Other		
		II9B	3.60	0.87	5	3.50	4.85	2.57	139	Wfs	Ultisols	Tuffac. sandstone			
		II9C	5.90	1.32	6	5.65	8.03	4.02	139	Wfs	Ultisols	Tuffac. sandstone			
		II9D	4.60	1.48	6	4.98	5.95	2.16	139	Wfs	Ultisols	Tuffac. sandstone			
<i>Ternstroemia stahlia</i>	Aluminum (mg/kg)	III1A	51		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest		
		III1A	56		1				102	Smf	Limestone	Tuffac. sandstone	Old		
		III1A	26		1					102	Smf	Limestone	Tuffac. sandstone	Young	
	Ash (%)	III1A	5.85		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest		
	Calcium (mg/g)	III1A	8.69		1					102	Smf	Limestone	Tuffac. sandstone	Old	
		III1A	2.72		1					102	Smf	Limestone	Tuffac. sandstone	Young	
			III1A	9.71		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Cobalt (µg/g)	III1A	0.80		1					102	Smf	Limestone	Tuffac. sandstone	Old	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Iron (mg/kg)	II1A	0.50		1				102	Smf	Limestone	Tuffac. sandstone	Young	
		II1A	87		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		II1A	53		1				102	Smf	Limestone	Tuffac. sandstone	Old	
	Magnesium (mg/g)	II1A	24		1				102	Smf	Limestone	Tuffac. sandstone	Young	
		II1A	2.67		1				102	Smf	Limestone	Tuffac. sandstone	Old	
		II1A	1.78		1				102	Smf	Limestone	Tuffac. sandstone	Young	
	Manganese (mg/kg)	II1A	4.67		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		II1A	22		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
		II1A	13		1				102	Smf	Limestone	Tuffac. sandstone	Old	
	Nickel (µg/g)	II1A	11		1				102	Smf	Limestone	Tuffac. sandstone	Young	
		II1A	11		1				102	Smf	Limestone	Tuffac. sandstone	Old	
		II1A	18		1				102	Smf	Limestone	Tuffac. sandstone	Young	
	Nitrogen (%)	II1A	0.74		1				102	Smf	Limestone	Tuffac. sandstone	Old	
		II1A	1.04		1				102	Smf	Limestone	Tuffac. sandstone	Young	
		II1A	0.83		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Phosphorus (mg/g)	II1A	0.32		1				102	Smf	Limestone	Tuffac. sandstone	Old	
		II1A	0.81		1				102	Smf	Limestone	Tuffac. sandstone	Young	
		II1A	0.34		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
	Potassium (mg/g)	II1A	7.62		1				102	Smf	Limestone	Tuffac. sandstone	Old	
		II1A	12.29		1				102	Smf	Limestone	Tuffac. sandstone	Young	
		II1A	7.03		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest	
Zinc (µg/g)	II1A	5		1				149	Sdf	Mollisols	Alluvial deposits	Susua forest		
<i>Tetragastris balsamifera</i>	Calcium (mg/g)	II1A	5.67	1.45	3	6.11	6.86	4.05	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	5.54	2.92	3	6.56	7.82	2.83	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	5.94	2.72	3	7.05	7.90	2.83	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II1A	1.66	0.14	3	1.67	1.79	1.52	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	1.01	0.22	3	1.06	1.20	0.77	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	1.10	0.17	3	1.14	1.24	0.92	135	Lmrf	Ultisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Nitrogen (%)	II1A	1.40	0.04	3	1.40	1.44	1.37	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	0.48	0.12	3	0.54	0.56	0.35	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	0.50	0.11	3	0.56	0.57	0.37	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II1A	0.67	0.00	3	0.67	0.67	0.67	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	0.33	0.11	3	0.34	0.44	0.22	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	0.34	0.08	3	0.37	0.41	0.25	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II1A	7.20	0.50	3	7.06	7.75	6.78	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1B	4.53	1.26	3	4.33	5.88	3.38	135	Lmrf	Ultisols	Tuffac. sandstone		
		II1C	5.07	0.74	3	4.91	5.89	4.43	135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Thespesia grandiflora</i>	Ash (%)	II1A	9.34	0.48	6	9.23	10.00	8.84	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1C	1.77	0.62	6	1.46	2.58	1.26	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1Ci	9.32	2.17	5	8.31	11.76	7.02	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	C/N	II1A	24	1	6	24	26	23	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1C	212	92	6	200	321	102	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1Ci	58	13	5	52	72	43	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	Carbon (%)	II1A	53	0	6	53	54	53	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1C	55	0	6	55	55	54	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1Ci	53	2	5	52	56	51	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	Nitrogen (%)	II1A	2.21	0.08	6	2.22	2.28	2.07	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1C	0.31	0.15	6	0.28	0.54	0.17	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1Ci	0.95	0.21	5	1.02	1.20	0.71	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
	Sulfur (%)	II1A	0.27	0.02	6	0.27	0.30	0.24	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1C	0.03	0.01	6	0.03	0.05	0.02	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
		II1Ci	0.11	0.04	5	0.12	0.15	0.08	126		Ultisols	Siltstone,sandstone	Urban forest, RP	
Wood density (g/cc)	II1C	0.49	0.00	5	0.51	0.52	0.43	126		Ultisols	Siltstone,sandstone	Urban forest, RP		
<i>Thelypteris deltoidea</i>	Aluminum (mg/g)	II6	0.97	0.81	38	0.71	3.16	0.04	135	Lmrf	Ultisols	Tuffac. sandstone		
	C/N	II6	33	4	20	33	38	20	135	Lmrf	Ultisols	Tuffac. sandstone		



Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Calcium (mg/g)	II6	3.76	0.87	38	3.75	5.66	1.90	135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II6	41	1	20	41	43	38	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II6	0.81	0.83	38	0.47	3.30	0.05	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II6	3.80	0.60	38	3.74	5.82	2.85	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II6	0.30	0.50	8	0.18	3.18	0.06	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II6	1.21	0.21	51	1.22	1.97	0.71	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II6	0.57	0.18	38	0.53	1.15	0.30	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II6	6.62	2.40	37	6.54	14.15	2.66	135	Lmrf	Ultisols	Tuffac. sandstone		
	Sulfur (%)	II6	0.47	0.14	20	0.44	0.78	0.29	135	Lmrf	Ultisols	Tuffac. sandstone		
<i>Thouinia striata</i>	Calcium (mg/g)	III1A	3.12		1				104	Sdf	Mollisols	Alluvial deposits	New	
		III1A	8.07	4.08	7	7.17	13.63	0.94	104	Sdf	Mollisols	Alluvial deposits	Mature	
		III1A	7.41	4.16	15	6.79	13.63	0.94	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		III1Ci	15.48		1				104	Sdf	Mollisols	Alluvial deposits		
		III1Ci	15.48		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Magnesium (mg/g)	III1A	1.11		1				104	Sdf	Mollisols	Alluvial deposits	New	
		III1A	1.22	0.41	7	1.31	1.75	0.43	104	Sdf	Mollisols	Alluvial deposits	Mature	
		III1A	1.20	0.38	15	1.28	1.75	0.43	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		III1Ci	2.36		1				104	Sdf	Mollisols	Alluvial deposits		
		III1Ci	2.36		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Nitrogen (%)	III1A	1.88		1				104	Sdf	Mollisols	Alluvial deposits	New	
		III1A	1.86	0.17	6	1.86	2.12	1.65	104	Sdf	Mollisols	Alluvial deposits	Mature	
		III1A	1.85	0.15	16	1.85	2.12	1.65	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		III1Ci	0.75		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
	Phosphorus (mg/g)	III1A	0.87		1				104	Sdf	Mollisols	Alluvial deposits	New	
		III1A	0.80	0.10	7	0.79	1.01	0.67	104	Sdf	Mollisols	Alluvial deposits	Mature	
		III1A	0.81	0.09	16	0.80	1.01	0.67	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		III1Ci	0.39		1				104	Sdf	Mollisols	Alluvial deposits		
III1Ci		0.39		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Potassium (mg/g)	II1A	11.88		1				104	Sdf	Mollisols	Alluvial deposits	New	
		II1A	10.34	0.75	7	10.19	12.16	9.35	104	Sdf	Mollisols	Alluvial deposits	Mature	
		III1A	10.53	0.88	16	10.21	12.16	9.35	149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
		III1Ci	9.50		1				104	Sdf	Mollisols	Alluvial deposits		
		III1Ci	9.50		1				149	Sdf	Mollisols	Alluvial deposits	Guanica Forest	
<i>Torralbasia cuneifolia</i>	Aluminum (mg/g)	II1B	0.11		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Ash (%)	II1B	2.76		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	C/N	II1B	106		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Calcium (mg/g)	II1B	8.65		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Iron (mg/g)	II1B	0.12		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Magnesium (mg/g)	II1B	0.95		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Manganese (mg/g)	II1B	0.01		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Nitrogen (%)	II1B	0.42		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II1B	0.53		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Potassium (mg/g)	II1B	2.90		1				93	Wflm	Inceptisols	Tuffac. sandstone		
<i>Trema micranthum</i>	Ash (%)	II2A	9.37		1				94	Swf	Ultisols	Tuffac. sandstone		
		II2B	3.48		1				94	Swf	Ultisols	Tuffac. sandstone		
		II2C	2.12		1				94	Swf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II2A	3.63		1				94	Swf	Ultisols	Tuffac. sandstone		
		II2B	0.72		1				94	Swf	Ultisols	Tuffac. sandstone		
		II2C	0.51		1				94	Swf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II2A	2.14		1				94	Swf	Ultisols	Tuffac. sandstone		
		II2B	0.70		1				94	Swf	Ultisols	Tuffac. sandstone		
		II2C	0.37		1				94	Swf	Ultisols	Tuffac. sandstone		
Potassium (mg/g)	II2A	17.93		1				94	Swf	Ultisols	Tuffac. sandstone			
	II2B	3.35		1				94	Swf	Ultisols	Tuffac. sandstone			
	II2C	3.50		1				94	Swf	Ultisols	Tuffac. sandstone			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
<i>Trichilia palida</i>	Ash (%)	II1A	9.71		1				71	Swf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II1A	52		1				71	Swf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II1A	1.42		1				71	Swf	Ultisols	Tuffac. sandstone		
	Sulfur (%)	II1A	0.29		1				71	Swf	Ultisols	Tuffac. sandstone		
<i>Trichipteris borinquena</i>	Aluminum (mg/g)	II6	0.88	0.99	4	0.84	1.82	0.03	135	Lmrf	Ultisols	Tuffac. sandstone		
	C/N	II6	29	7	13	28	38	17	135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II6	4.45	2.53	4	3.49	8.10	2.72	135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II6	44	2	13	43	47	42	135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II6	1.15	0.82	4	1.16	1.88	0.42	135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II6	6.07	1.62	4	6.12	7.55	4.48	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II6	0.12	0.01	4	0.12	0.13	0.11	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II6	1.63	0.42	14	1.55	2.48	1.19	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II6	0.69	0.36	4	0.60	1.15	0.40	135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II6	10.42	9.27	4	7.94	22.63	3.17	135	Lmrf	Ultisols	Tuffac. sandstone		
Sulfur (%)	II6	0.39	0.18	13	0.33	0.90	0.22	135	Lmrf	Ultisols	Tuffac. sandstone			
<i>Trichipteris procera</i>	Aluminum (mg/g)	II6	2.59		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	C/N	II6	37		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Calcium (mg/g)	II6	2.65		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Carbon (%)	II6	41		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Iron (mg/g)	II6	0.09		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Magnesium (mg/g)	II6	2.71		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II6	0.13		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II6	1.11		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II6	0.83		1				135	Lmrf	Ultisols	Tuffac. sandstone		
	Potassium (mg/g)	II6	16.48		1				135	Lmrf	Ultisols	Tuffac. sandstone		
Sulfur (%)	II6	0.27		1				135	Lmrf	Ultisols	Tuffac. sandstone			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #	
<i>Trichostigma octandrum</i>	C/N	II4	46		1				135	Lmrf	Ultisols	Tuffac. sandstone			
	Carbon (%)	II4	45		1				135	Lmrf	Ultisols	Tuffac. sandstone			
	Nitrogen (%)	II4	0.96		1				135	Lmrf	Ultisols	Tuffac. sandstone			
	Sulfur (%)	II4	0.15		1				135	Lmrf	Ultisols	Tuffac. sandstone			
<i>Turpinia occidentalis</i>	Ash (%)	II1A	5.41	0.40	2	5.41	5.69	5.12	101	Swf	Ultisols	Tuffac. sandstone			
		II1B	2.30	0.13	2	2.30	2.39	2.21	101	Swf	Ultisols	Tuffac. sandstone			
	Calcium (mg/g)	II1A	11.35		1					101	Swf	Ultisols	Tuffac. sandstone		
		II1B	7.05	2.59	2	7.05	8.89	5.22	101	Swf	Ultisols	Tuffac. sandstone			
	Nitrogen (%)	II1A	1.46	0.10	2	1.46	1.53	1.39	101	Swf	Ultisols	Tuffac. sandstone			
		II1B	0.29	0.11	2	0.29	0.36	0.21	101	Swf	Ultisols	Tuffac. sandstone			
	Phosphorus (mg/g)	II1A	0.85	0.12	2	0.85	0.93	0.76	101	Swf	Ultisols	Tuffac. sandstone			
		II1B	0.25	0.13	2	0.25	0.34	0.16	101	Swf	Ultisols	Tuffac. sandstone			
Potassium (mg/g)	II1A	13.34	0.90	2	13.34	13.98	12.70	101	Swf	Ultisols	Tuffac. sandstone				
	II1B	6.75	0.45	2	6.75	7.07	6.44	101	Swf	Ultisols	Tuffac. sandstone				
<i>Urera baccifera</i>	Aluminum (mg/g)	II2	0.21		1				135	Lmrf	Ultisols	Tuffac. sandstone			
		II2A	0.07	0.01	4	0.06	0.09	0.06	135	Lmrf	Ultisols	Tuffac. sandstone			
		II2C	0.05	0.03	5	0.04	0.08	0.02	135	Lmrf	Ultisols	Tuffac. sandstone			
		II2H	0.09	0.00	2	0.09	0.09	0.08	135	Lmrf	Ultisols	Tuffac. sandstone			
	Calcium (mg/g)	II2	19.81		1					135	Lmrf	Ultisols	Tuffac. sandstone		
		II2A	37.30	12.30	4	38.00	51.25	21.952	135	Lmrf	Ultisols	Tuffac. sandstone			
		II2C	8.36	2.42	5	8.13	11.02	4.70	135	Lmrf	Ultisols	Tuffac. sandstone			
		II2H	15.11	2.21	2	15.11	16.67	13.55	135	Lmrf	Ultisols	Tuffac. sandstone			
	Iron (mg/g)	II2	0.22		1					135	Lmrf	Ultisols	Tuffac. sandstone		
		II2A	0.08	0.01	4	0.08	0.10	0.06	135	Lmrf	Ultisols	Tuffac. sandstone			
		II2C	0.02	0.01	5	0.02	0.04	0.01	135	Lmrf	Ultisols	Tuffac. sandstone			
		II2H	0.13	0.09	2	0.13	0.19	0.06	135	Lmrf	Ultisols	Tuffac. sandstone			

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Magnesium (mg/g)	II2	6.49		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II2A	10.79	4.90	4	9.47	17.52	6.68	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2C	5.50	1.05	5	5.77	6.66	3.82	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2H	7.24	1.01	2	7.24	7.95	6.52	135	Lmrf	Ultisols	Tuffac. sandstone		
	Manganese (mg/g)	II2	0.18		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II2A	0.30	0.22	4	0.23	0.61	0.13	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2C	0.13	0.03	5	0.13	0.15	0.09	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2H	0.17	0.04	2	0.17	0.20	0.15	135	Lmrf	Ultisols	Tuffac. sandstone		
	Nitrogen (%)	II2	1.27		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II2A	2.69	0.51	4	2.82	3.14	1.96	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2C	0.62	0.05	5	0.60	0.71	0.57	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2H	1.36	0.01	2	1.36	1.36	1.35	135	Lmrf	Ultisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II2	4.34		1				135	Lmrf	Ultisols	Tuffac. sandstone		
		II2A	2.90	0.71	4	2.892	3.73	2.07	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2C	1.12	0.56	5	0.80	2.07	0.77	135	Lmrf	Ultisols	Tuffac. sandstone		
		II2H	1.43	0.23	2	1.43	1.59	1.27	135	Lmrf	Ultisols	Tuffac. sandstone		
Potassium (mg/g)	II2	50.59		1				135	Lmrf	Ultisols	Tuffac. sandstone			
	II2A	41.05	9.15	4	44.73	47.29	27.45	135	Lmrf	Ultisols	Tuffac. sandstone			
	II2C	31.00	2.58	5	31.75	33.52	26.87	135	Lmrf	Ultisols	Tuffac. sandstone			
	II2H	32.82	0.70	2	32.82	33.31	32.33	135	Lmrf	Ultisols	Tuffac. sandstone			
<i>Xylosma schwaneckeanum</i>	Aluminum (mg/g)	II1A	9.34		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	3.42		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	2.70		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Ash (%)	II1B	4.90		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	1.26		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	C/N	II1B	69		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	692		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Calcium (mg/g)	II1A	18.37		1				93	Wflm	Inceptisols	Tuffac. sandstone		

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Iron (mg/kg)	II1B	5.12		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	1.67		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	1530		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Magnesium (mg/g)	II1B	70		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	4		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	0.22		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Manganese (mg/g)	II1B	1.12		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	0.37		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	0.49		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Nitrogen (%)	II1B	0.21		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1C	0.17		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	0.63		1				93	Wflm	Inceptisols	Tuffac. sandstone		
	Phosphorus (mg/g)	II1C	0.07		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1A	1.62		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II1B	0.76		1				93	Wflm	Inceptisols	Tuffac. sandstone		
Potassium (mg/g)	II1C	0.05		1				93	Wflm	Inceptisols	Tuffac. sandstone			
	II1A	11.32		1				93	Wflm	Inceptisols	Tuffac. sandstone			
	II1B	11.50		1				93	Wflm	Inceptisols	Tuffac. sandstone			
<i>Young Secondary forest</i>	Calcium (mg/g)	II1C	2.05		1				93	Wflm	Inceptisols	Tuffac. sandstone		
		II8A	9.76	2.11	10	9.05	12.91	7.54	98	Lmrf	Ultisols	Tuffac. sandstone	Mameyes Basin	
		II8B	9.48	2.75	10	8.74	15.32	6.15	98	Lmrf	Ultisols	Tuffac. sandstone	Mameyes Basin	
	Magnesium (mg/g)	II8D	9.37	2.36	10	8.47	14.63	6.76	98	Lmrf	Ultisols	Tuffac. sandstone	Mameyes Basin	
		II8A	3.13	0.63	10	2.88	4.30	2.31	98	Lmrf	Ultisols	Tuffac. sandstone	Mameyes Basin	
		II8B	2.32	0.77	10	2.25	3.59	1.36	98	Lmrf	Ultisols	Tuffac. sandstone	Mameyes Basin	
	Phosphorus (mg/g)	II8D	3.55	0.96	10	3.26	5.46	2.53	98	Lmrf	Ultisols	Tuffac. sandstone	Mameyes Basin	
		II8A	0.62	0.12	10	0.59	0.83	0.48	98	Lmrf	Ultisols	Tuffac. sandstone	Mameyes Basin	
		II8B	0.43	0.05	10	0.45	0.50	0.35	98	Lmrf	Ultisols	Tuffac. sandstone	Mameyes Basin	
		II8D	0.74	0.13	10	0.69	0.96	0.61	98	Lmrf	Ultisols	Tuffac. sandstone	Mameyes Basin	

Table 8. Element concentration of plant parts by species. Tissue or plant part codes are in Table 2. Source code are in appendix 1. Life zone codes are Table 1.

<i>Species</i>	Element	Tissue	Mean	Sd	n	Median	Max	Min	Source	Life zone	Soil order	Geology and/or parent material	Notes	Species #
	Potassium (mg/g)	II8A	3.55	1.04	10	3.20	5.57	2.34	98	Lmrf	Ultisols	Tuffac. sandstone	Mameyes Basin	
		II8B	2.86	0.78	10	2.98	3.81	1.10	98	Lmrf	Ultisols	Tuffac. sandstone	Mameyes Basin	
		II8D	2.90	0.76	10	2.53	4.08	1.98	98	Lmrf	Ultisols	Tuffac. sandstone	Mameyes Basin	
<i>Zanthoxylum flavum</i>	Wood density (g/cc)	III C	0.78	0.08	4	0.70	0.50	0.71	115					
<i>Zanthoxylum martinicense</i>	Wood density (g/cc)	III B	0.43	0.03	3	0.44	0.45	0.40	97	Wfs	Inceptisols	Tuffac. sandstone		

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total											
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes			
Alluvial deposits	Mollisols	Sdf	Calcium (mg/g)	0--5	4.55	1.60	2	4.55	5.68	3.42	1	Disturb surface			
				0--5	5.44	0.88	8	5.70	6.24	3.60	1	Disturb plot			
				0--5	5.12	1.37	14	5.10	7.25	2.58	1	Undisturb plot			
				5--15	5.16	0.88	8	4.91	6.95	4.20	1	Disturb plot			
				5--15	5.18	1.17	14	4.99	7.13	2.88	1	Undisturb plot			
				5--15	4.50		1				1	Undisturb deep			
			ECEC (cmol/kg <sup>-1</sup> )	5--15	3.84	1.11	2	3.84	4.63	3.05	1	Undisturb surface			
				0--5	29.32	12.43	2	29.32	38.12	8.00	1	Disturb surface			
				0--5	36.58	6.61	8	38.08	42.66	24.47	1	Disturb plot			
				0--5	35.13	11.36	14	32.42	53.00	16.38	1	Undisturb plot			
				5--15	34.48	7.17	8	33.61	47.99	27.01	1	Disturb plot			
				5--15	35.41	9.38	14	36.12	50.20	17.86	1	Undisturb plot			
			Loss on ignition (%)	5--15	25.56	8.63	2	25.56	31.67	19.46	1	Undisturb surface			
				0--5	71.21	10.23	20	73.07	84.86	46.12	1	Disturb plot			
				0--5	67.03	10.38	5	63.69	81.04	5.00	1	Disturb surface			
				0--5	64.62	13.15	38	63.15	87.30	42.33	1	Undisturb plot			
				5--15	75.93	9.85	20	78.56	87.69	57.46	1	Disturb plot			
				5--15	74.43	5.79	5	73.02	81.16	9.85	1	Disturb deep			
			Magnesium (mg/g)	5--15	69.24	13.34	40	69.07	93.18	32.17	1	Undisturb plot			
				5--15	69.20	7.89	4	70.03	77.76	58.95	1	Undisturb deep			
				5--15	53.58	11.94	5	51.21	73.38	41.13	1	Undisturb surface			
				0--5	0.96	0.26	8	0.99	1.34	0.63	1	Disturb plot			
				0--5	0.66	0.47	2	0.66	0.99	0.33	1	Disturb surface			
				0--5	1.00	0.54	14	0.76	2.03	0.37	1	Undisturb plot			
							5--15	0.89	0.37	8	0.76	1.46	0.53	1	Disturb plot
							5--15	1.00	0.44	14	1.04	2.05	0.39	1	Undisturb plot



Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				5--15	0.81		1				1	Undisturb deep
				5--15	0.67	0.31	2	0.67	0.89	0.45	1	Undisturb surface
			Nitrogen (%)	0--5	1.01	0.26	8	0.99	1.40	0.67	1	Disturb plot
				0--5	1.14	0.31	5	1.26	1.43	0.17	1	Disturb surface
				0--5	1.15	0.30	14	1.23	1.62	0.60	1	Undisturb plot
				5--15	0.81	0.26	8	0.74	1.20	0.55	1	Disturb plot
				5--15	0.94	0.17	5	0.96	1.09	0.26	1	Disturb deep
				5--15	1.00	0.29	14	1.01	1.39	0.47	1	Undisturb plot
				5--15	0.99	0.40	2	0.99	1.27	0.71	1	Undisturb deep
				5--15	1.43	0.41	4	1.59	1.71	0.82	1	Undisturb surface
			Organic matter (%)	0--5	19.63	7.58	20	19.68	36.79	8.56	1	Disturb plot
				0--5	23.63	9.33	38	23.89	41.33	8.66	1	Undisturb plot
				5--15	16.13	7.41	20	13.93	30.66	7.57	1	Disturb plot
				5--15	15.51	4.15	5	17.24	18.42	8.36	1	Disturb deep
				5--15	22.11	5.91	5	22.78	28.40	13.88	1	Disturb surface
				5--15	19.64	8.05	39	19.80	37.65	6.71	1	Undisturb plot
				5--15	18.34	6.40	4	17.86	26.48	11.16	1	Undisturb deep
				5--15	29.98	8.75	5	32.24	38.09	15.02	1	Undisturb surface
			pH (H <sub>2</sub> O)	0--5	7.66	0.18	8	7.65	7.95	7.39	1	Disturb plot
				0--5	7.65	0.17	33	7.66	7.99	7.28	1	Undisturb plot
				5--15	7.68	0.16	16	7.70	7.87	7.37	1	Disturb plot
				5--15	7.70	0.17	33	7.69	7.97	7.27	1	Undisturb plot
			Phosphorus (mg/kg)	0--5	535	141	20	509	902	363	1	Disturb plot
				0--5	590	130	38	600	1010	370	1	Undisturb plot
				5--15	490	140	20	480	930	330	1	Disturb plot
				5--15	460	80	5	460	560	140	1	Disturb deep

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				5--15	590	150	5	650	730	80	1	Disturb surface
				5--15	550	120	40	540	850	340	1	Undisturb plot
				5--15	610	100	4	650	670	460	1	Undisturb deep
				5--15	600	70	5	620	690	510	1	Undisturb surface
			Potassium (mg/g)	0--5	0.53	0.17	8	0.48	0.77	0.32	1	Disturb plot
				0--5	0.45	0.21	14	0.39	0.93	0.12	1	Undisturb plot
				5--15	0.50	0.18	8	0.54	0.74	0.28	1	Disturb plot
				5--15	0.42	0.21	2	0.42	0.56	0.27	1	Disturb surface
				5--15	0.47	0.19	14	0.46	0.88	0.01	1	Undisturb plot
				5--15	0.42		1				1	Undisturb deep
				5--15	0.31	0.17	2	0.31	0.43	0.19	1	Undisturb surface
Alluvial deposits	Mollisols	Sdf	Loss on ignition (%)	0-5	21.52		1				2	Ewell site-grassy
				0-5	21.18	1.55	4	21.27	22.88	19.29	2	Ewell site-quad 1-4
				0-5	12.83		1				2	North forest
				0-5	25.93		1				2	South forest
				0-5	22.47		1				2	Eastern forest
				0-5	34.59		1				2	West forest
				5--10	20.46		1				2	Ewell site-grassy
				5--15	19.13	1.18	4	19.02	20.41	18.06	2	Ewell site-quad 1-4
				5--15	18.80		1				2	North forest
				5--15	23.04		1				2	South forest
				5--15	21.63		1				2	Eastern forest
				5--10	29.76		1				2	West forest
			Organic matter (%)	0-5	9.32		1				2	Ewell site-grassy
				0-5	10.07	1.05	4	10.29	10.98	8.74	2	Ewell site-quad 1-4
				0-5	11.34		1				2	North forest

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0-5	13.36		1				2	South forest
				0-5	11.54		1				2	Eastern forest
				0-5	21.25		1				2	West forest
				5--10	8.57		1				2	Ewell site-grassy
				5--10	8.72	0.89	4	8.58	9.91	7.81	2	Ewell site-quad 1-4
				5--10	8.78		1				2	North forest
				5--10	11.75		1				2	South forest
				5--10	10.33		1				2	Eastern forest
				5--10	17.39		1				2	West forest
			pH (H <sub>2</sub> O)	0-5	7.54		1				2	Ewell site-grassy
				0-5	7.55	0.11	4	7.56	7.67	7.41	2	Ewell site-quad 1-4
				0-5	7.66		1				2	South forest
				0-5	7.75		1				2	Eastern forest
				0-5	7.67		1				2	West forest
				5--10	7.44		1				2	Ewell site-grassy
				5--10	7.58	0.10	4	7.58	7.68	7.48	2	Ewell site-quad 1-4
				5--10	7.61		1				2	South forest
				5--10	7.74		1				2	Eastern forest
				5--10	7.68		1				2	West forest
			Phosphorus (mg/kg)	0-5	11		1				2	Ewell site-grassy
				0-5	11	1	4	10	12	10	2	Ewell site-quad 1-4
				0-5	12		1				2	North forest
				0-5	16		1				2	South forest
				0-5	12		1				2	Eastern forest
				0-5	19		1				2	West forest
				5--10	10		1				2	Ewell site-grassy

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				5--10	9	1	4	9	10	8	2	Ewell site-quad 1-4
				5--10	12		1				2	North forest
				5--10	11		1				2	South forest
				5--10	10		1				2	Eastern forest
				5--10	18		1				2	West forest
			Phosphorus-total (mg/g)	0-5	0.73		1				2	Ewell site-grassy
				0-5	0.63	0.08	4	0.62	0.73	0.54	2	Ewell site-quad 1-4
				0-5	0.93		1				2	North forest
				0-5	0.79		1				2	South forest
				0-5	0.64		1				2	Eastern forest
				0-5	0.84		1				2	West forest
				5--10	0.65		1				2	Ewell site-grassy
				5--10	0.58	0.15	4	0.56	0.77	0.41	2	Ewell site-quad 1-4
				5--10	0.66		1				2	North forest
				5--10	0.68		1				2	South forest
				5--10	0.60		1				2	Eastern forest
				5--10	0.80		1				2	West forest
Alluvial deposits	Mollisols	Sdf	Bulk density (g/cc)	0--4	0.86	0.07	4	0.84	0.95	0.81	3	Soil pit
				6--16	0.88	0.14	7	0.80	1.03	0.72	3	Soil pit
				18--63	1.21	0.13	6	1.23	1.35	0.99	3	Soil pit
			Clay (%)	0-4	34	10	4	34	47	23	3	Soil pit
				6--16	50	4	7	52	56	46	3	Soil pit
				18--63	30	12	6	28	48	19	3	Soil pit
			Loss on ignition (%)	0-4	3.12	1.33	4	3.04	4.81	1.59	3	Soil pit
				6--16	6.98	1.94	7	6.98	9.70	4.40	3	Soil pit
				18--63	1.41	1.69	6	0.69	4.61	0.24	3	Soil pit

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Moisture (%)	0-4	20.85	2.64	4	20.11	24.55	18.65	3	Soilpit
				6--16	20.80	4.43	7	22.27	25.27	12.13	3	Soil pit
				18--63	12.33	5.32	6	11.64	21.77	6.97	3	Soil pit
			Nitrogen (%)	0-4	0.24	0.10	4	0.21	0.39	0.17	3	Soil pit
				6--16	0.45	0.11	7	0.43	0.63	0.32	3	Soil pit
				18--63	0.07	0.04	6	0.05	0.12	0.02	3	Soil pit
			pH (H <sub>2</sub> O)	0-4	7.97	0.10	4	7.96	8.08	7.87	3	Soil pit
				6--16	7.88	0.16	7	7.82	8.23	7.75	3	Soil pit
				18--63	8.11	0.21	6	8.15	8.42	7.84	3	Soil pit
			Phosphorus-total (mg/g)	0-4	0.28	0.16	4	0.24	0.51	0.14	3	Soil pit
				6--16	0.36	0.06	7	0.38	0.42	0.24	3	Soil pit
				18--63	0.17	0.07	6	0.16	0.30	0.08	3	Soil pit
			Sand (%)	0-4	25	6	4	23	34	19	3	Soil pit
				6--16	18	3	7	17	24	14	3	Soil pit
				18--63	15	4	6	14	21	10	3	Soil pit
			Silt (%)	0-4	41	9	4	37	55	35	3	Soil pit
				6--16	32	5	7	34	37	23	3	Soil pit
				18--63	55	16	6	58	71	31	3	Soil pit
Tuffaceous sandstone	Inceptisols	Lmwf	Bulk density (g/cc)	0--24	0.57	0.09	11	0.59	0.70	0.32	4	Landslide-scarce veg.
				0--24	0.52	0.10	11	0.49	0.69	0.32	4	Landslide-with veg.
				0--21	0.62	0.32	10	0.53	1.51	0.39	4	Landslide-without veg.
			Bulk density (g/cc)	0--22	1.09	0.23	6	0.99	1.43	0.88	5	Rio Icaco
				0-23	1.22	0.11	6	1.19	1.39	1.10	5	Lanslide
				0-23	0.89	0.14	12	0.88	1.11	0.71	5	Toro Willey top
				0-23	0.78	0.17	28	0.83	1.05	0.38	5	Toro-186
Tuffaceous sandstone	Ultisols	Lmrf	0--23	0.97	0.13	23	0.97	1.22	0.71	5	Rio Grande-186	

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Tuffaceous sandstone	Inceptisols	Lmrf		0-24	0.72	0.13	12	0.71	0.99	0.54	5	930-Mt. Britton
				0-24	1.10	0.11	6	1.13	1.24	0.96	5	CS-2
				0--24	1.07	0.17	6	1.09	1.28	0.77	5	Yunque road
				0--25	1.05	0.37	6	1.08	1.63	0.56	5	West Fork top
				0--25	1.01	0.20	6	0.98	1.37	0.83	5	West Fork nemoca
				0--25	0.84	0.20	6	0.86	1.07	0.57	5	West Fork bottom
				0--25	1.07	0.12	6	1.07	1.24	0.92	5	West Fork steep
Tuffaceous sandstone	Ultisols	Lmrf		0--25	1.11	0.28	6	1.05	1.44	0.82	5	CV-1
Tuffaceous sandstone	Inceptisols	Lmrf		0--25	0.78	0.18	12	0.75	1.02	0.54	5	Dwarf-1
				0--25	0.94	0.27	6	0.94	1.24	0.61	5	Yunque road
			Clay (%)	0--22	27	9	6	30	36	15	5	Rio Icaco
				0--23	29	13	6	34	43	11	5	Lanslide
				0--23	35	15	12	31	59	14	5	Toro Willey top
				0--23	64	20	29	74	85	18	5	Toro-186
				0--23	64	18	24	67	84	11	5	Rio Grande-186
Tuffaceous sandstone	Ultisols	Lmrf		0--23	64	18	24	67	84	11	5	Rio Grande-186
Tuffaceous sandstone	Inceptisols	Lmrf		0--24	35	17	12	31	61	12	5	930-Mt. Britton
				0--24	26	7	6	25	35	17	5	CS-2
				0--24	28	15	6	25	47	10	5	Yunque road
				0--25	27	10	6	25	45	15	5	West Fork top
				0--25	41	13	6	43	57	24	5	West Fork nemoca
				0--25	53	18	6	54	81	31	5	West Fork bottom
				0--25	31	12	6	28	48	18	5	West Fork steep
Tuffaceous sandstone	Ultisols	Lmrf		0--25	22	11	6	20	37	9	5	CV-1
Tuffaceous sandstone	Inceptisols	Lmrf		0--25	40	16	12	46	60	15	5	Dwarf-1
				0--25	28	13	6	32	40	10	5	Yunque bath
				0--22	3.03	1.34	6	2.55	4.74	1.50	5	Rio Icaco

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
		Lmrf		0--23	4.02	1.29	6	3.74	5.66	2.58	5	Lanslide
		Lmrf		0--23	8.53	4.54	12	7.04	15.73	2.52	5	Toro Willey top
				0--23	11.90	7.26	29	9.69	28.16	1.69	5	Toro-186
Tuffaceous sandstone	Ultisols	Lmrf		0--23	6.82	2.91	23	7.00	14.58	3.13	5	Rio Grande-186
Tuffaceous sandstone	Inceptisols	Lmrf		0--24	10.29	4.36	12	11.38	16.16	2.83	5	930-Mt. Britton
				0--24	4.34	2.37	6	3.77	7.26	1.73	5	CS-2
				0--24	8.74	3.56	6	7.92	14.76	5.04	5	Yunque road
				0--25	12.50	8.46	6	10.25	23.08	3.03	5	West Fork top
				0--25	12.28	4.81	6	13.02	17.66	4.66	5	West Fork nemoca
				0--25	12.37	7.92	6	9.10	23.33	4.66	5	West Fork bottom
				0--25	7.46	3.68	6	6.87	12.58	2.27	5	West Fork steep
Tuffaceous sandstone	Ultisols	Lmrf		0--25	5.07	2.49	6	4.99	9.54	2.56	5	CV-1
Tuffaceous sandstone	Inceptisols	Lmrf		0--25	12.82	7.90	12	12.86	27.67	2.16	5	Dwarf-1
				0--25	10.02	5.86	6	9.52	18.21	3.60	5	Yunque bath
			Sand (%)	0-22	57	4	6	57	63	51	5	Rio Icaico
				0-23	58	15	6	54	78	44	5	Lanslide
				0-23	40	16	12	47	57	11	5	Toro Willey top
				0-23	15	19	29	6	65	1	5	Toro-186
Tuffaceous sandstone	Ultisols	Lmrf		0--23	15	15	24	13	75	1	5	Rio Grande-186
Tuffaceous sandstone	Inceptisols	Lmrf		0-24	32	19	12	27	70	7	5	930-Mt. Britton
				0-24	53	7	6	56	61	40	5	CS-2
				0--24	53	23	6	52	79	26	5	Yunque road
				0--25	50	17	6	54	67	18	5	West Fork top
				0--25	26	6	6	27	33	17	5	West Fork nemoca
				0--25	13	9	6	11	26	2	5	West Fork bottom
				0--25	43	13	6	40	59	28	5	West Fork steep

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Tuffaceous sandstone	Ultisols	Lmrf		0--25	58	10	6	61	72	46	5	CV-1
Tuffaceous sandstone	Inceptisols	Lmrf		0--25	24	13	12	22	46	10	5	Dwarf-1
				0--25	55	16	6	47	82	42	5	Yunque bath
			Silt (%)	0-22	16	9	6	13	30	7	5	Rio Icaco
				0-23	13	2	6	13	18	11	5	Lanslide
				0-23	27	12	12	31	44	5	5	Toro Willey top
				0-23	22	7	29	20	43	13	5	Toro-186
Tuffaceous sandstone	Ultisols	Lmrf		0--23	21	10	22	19	58	12	5	Rio Grande-186
Tuffaceous sandstone	Inceptisols	Lmrf		0-24	34	12	12	32	52	19	5	930-Mt. Britton
				0-24	21	6	6	20	30	15	5	CS-2
				0--24	20	8	6	23	27	7	5	Yunque road
				0--25	23	7	6	22	37	17	5	West Fork top
				0--25	33	11	6	32	46	23	5	West Fork nemoca
				0--25	34	10	6	36	43	16	5	West Fork bottom
				0--25	26	6	6	24	39	23	5	West Fork steep
Tuffaceous sandstone	Ultisols	Lmrf		0--25	19	3	6	18	22	16	5	CV-1
Tuffaceous sandstone	Inceptisols	Lmrf		0--25	35	5	12	34	46	29	5	Dwarf-1
				0--25	17	5	6	19	22	8	5	Yunque bath
Tuffaceous sandstone	Ultisols	Smf	Aluminum (cmol/kg <sup>-1</sup> )	0-15	4.41	1.36	9	4.60	5.80	1.60	6	Cubuy pine
				0-15	1.74	1.11	9	1.80	3.40	0.10	6	Cubuy secondary forest
				0-15	4.01	1.12	9	4.20	5.30	1.70	6	El Verde
				0-15	1.83	0.71	9	1.90	3.10	0.40	6	Guzmán pine
				0-15	0.70	0.64	9	0.60	2.00	0.10	6	Guzmán secondary forest
				0-15	0.46	0.28	9	0.30	1.00	0.20	6	Harvey-mahagony
				15-30	3.10	1.44	9	3.00	4.80	0.60	6	Cubuy secondary forest
				15-30	3.81	1.10	9	4.40	5.20	1.90	6	El Verde



Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				15-30	2.37	0.69	9	2.40	3.30	1.30	6	Guzmán pine
				15-30	1.29	0.54	9	1.20	2.30	0.70	6	Guzmán secondary forest
				15-30	1.41	0.78	9	1.50	2.70	0.30	6	Harvey-mahagony
				15-30	3.08	0.51	9	3.00	4.10	2.50	6	Cubuy pine
			Aluminum-total (%)	0-15	8.57	2.85	9	9.46	9.98	1.02	6	Guzmán pine
				0-15	9.99	1.00	9	9.93	11.19	8.53	6	Harvey-mahagony
				0-15	10.81	1.15	9	11.22	12.19	9.33	6	El Verde
				0-15	13.04	2.96	9	14.38	17.39	8.64	6	Guzmán secondary forest
				0-15	6.66	1.08	9	6.75	8.59	5.18	6	Cubuy secondary forest
				0-15	8.78	1.04	9	9.12	10.13	7.08	6	Cubuy pine
				15-30	10.56	1.08	9	10.42	12.74	9.21	6	Guzmán pine
				15-30	11.25	1.45	9	11.53	13.06	8.47	6	Harvey-mahagony
				15-30	12.14	1.86	9	11.97	14.92	9.37	6	El Verde
				15-30	13.61	3.55	9	14.37	18.02	7.53	6	Guzmán secondary forest
				15-30	6.81	0.80	9	7.04	7.72	5.59	6	Cubuy secondary forest
				15-30	9.19	1.06	9	9.32	10.87	7.77	6	Cubuy pine
			Bulk density (g/cc)	0-15	0.90	0.09	9	0.92	1.03	0.78	6	Guzmán pine
				0-15	0.89	0.07	9	0.92	0.98	0.78	6	Harvey-mahagony
				0-15	0.71	0.08	9	0.68	0.88	0.61	6	El Verde
				0-15	0.85	0.12	9	0.91	0.96	0.59	6	Guzmán secondary forest
				0-15	0.79	0.10	9	0.84	0.88	0.61	6	Cubuy secondary forest
				0-15	0.76	0.08	9	0.76	0.89	0.65	6	Cubuy pine
				15-30	0.93	0.09	9	0.94	1.04	0.74	6	Guzmán pine
				15-30	0.91	0.06	9	0.92	1.00	0.81	6	Harvey-mahagony
				15-30	0.88	0.06	9	0.88	0.94	0.76	6	El Verde
				15-30	0.84	0.10	9	0.86	0.99	0.66	6	Guzmán secondary forest

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				15-30	0.90	0.05	9	0.88	0.98	0.85	6	Cubuy secondary forest
				15-30	1.05	0.06	9	1.04	1.14	0.94	6	Cubuy pine
			Calcium (mg/kg)	0-15	470	115	9	457	670	325	6	Guzmán pine
				0-15	877	184	9	838	1227	608	6	Harvey-mahagony
				0-15	389	108	9	422	554	227	6	El Verde
				0-15	1023	289	9	964	1546	637	6	Guzmán secondary forest
				0-15	810	577	9	584	2080	325	6	Cubuy secondary forest
				0-15	300	110	9	268	487	138	6	Cubuy pine
				15-30	354	79	9	333	472	233	6	Guzmán pine
				15-30	615	257	9	555	1126	349	6	Harvey-mahagony
				15-30	218	102	9	171	455	131	6	El Verde
				15-30	756	443	9	765	1355	153	6	Guzmán secondary forest
				15-30	389	380	9	278	1302	100	6	Cubuy secondary forest
				15-30	284	103	9	256	464	166	6	Cubuy pine
			Calcium-total (mg/kg)	0-15	1369	511	9	1148	2419	719	6	Guzmán pine
				0-15	3750	642	9	3812	4594	2728	6	Harvey-mahagony
				0-15	2116	540	9	1946	3180	1631	6	El Verde
				0-15	4844	1500	9	3808	7065	3550	6	Guzmán secondary forest
				0-15	4086	5222	9	1793	16933	1026	6	Cubuy secondary forest
				0-15	962	467	9	968	1809	292	6	Cubuy pine
				15-30	984	299	9	870	1457	649	6	Guzmán pine
				15-30	2555	488	9	2532	3263	1917	6	Harvey-mahagony
				15-30	1355	459	9	1359	2033	736	6	El Verde
				15-30	4233	2406	9	3800	8429	1708	6	Guzmán secondary forest
				15-30	1544	1513	9	1046	5316	501	6	Cubuy secondary forest
				15-30	793	275	9	718	1172	440	6	Cubuy pine

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Clay (%)	0-15	43	8	9	47	52	29	6	Guzmán pine
				0-15	28	13	9	26	50	14	6	Harvey-mahagony
				0-15	37	20	9	29	78	19	6	El Verde
				0-15	32	8	9	31	43	23	6	Guzmán secondary forest
				0-15	44	20	9	36	83	24	6	Cubuy secondary forest
				0-15	59	18	9	58	81	35	6	Cubuy pine
				15-30	52	13	9	52	74	34	6	Guzmán pine
				15-30	43	10	9	40	60	32	6	Harvey-mahagony
				15-30	57	20	9	46	89	34	6	El Verde
				15-30	38	8	9	41	48	25	6	Guzmán secondary forest
			ECEC (cmol/kg <sup>-1</sup> )	15-30	76	15	9	81	88	41	6	Cubuy secondary forest
				15-30	68	19	9	68	89	42	6	Cubuy pine
				0-15	6.96	0.86	9	6.86	8.16	5.83	6	Guzmán pine
				0-15	11.16	2.35	9	10.33	14.21	7.56	6	Harvey-mahagony
				0-15	10.43	0.42	9	10.36	11.11	9.76	6	El Verde
				0-15	25.73	9.30	9	28.00	39.01	13.12	6	Guzmán secondary forest
				0-15	8.71	2.48	9	8.57	12.32	5.52	6	Cubuy secondary forest
				0-15	7.54	0.70	9	7.33	8.72	6.41	6	Cubuy pine
				15-30	6.04	0.83	9	6.13	6.93	4.27	6	Guzmán pine
				15-30	9.01	1.48	9	8.52	11.16	7.29	6	Harvey-mahagony
			Iron (mg/kg)	15-30	7.56	0.97	9	7.85	8.74	5.86	6	El Verde
				15-30	24.76	13.97	9	31.60	40.47	8.16	6	Guzmán secondary forest
				15-30	9.30	9.66	9	5.80	34.79	4.37	6	Cubuy secondary forest
				15-30	5.69	0.62	9	5.37	6.59	5.04	6	Cubuy pine
				0-15	415	84	9	411	605	346	6	Guzmán pine
				0-15	195	41	9	204	246	125	6	Harvey-mahagony

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0-15	1520	504	9	1533	2330	841	6	El Verde
				0-15	289	117	9	291	486	125	6	Guzmán secondary forest
				0-15	2428	1216	9	1926	4218	474	6	Cubuy secondary forest
				0-15	1492	615	9	1410	2791	851	6	Cubuy pine
				15-30	165	57	9	162	285	79	6	Guzmán pine
				15-30	117	41	9	106	200	62	6	Harvey-mahagony
				15-30	675	434	9	579	1669	234	6	El Verde
				15-30	228	184	9	119	514	70	6	Guzmán secondary forest
				15-30	1400	853	9	1254	3165	480	6	Cubuy secondary forest
				15-30	435	174	9	392	852	230	6	Cubuy pine
			Iron-total (%)	0-15	9.15	0.63	9	9.19	10.52	8.47	6	Guzmán pine
				0-15	8.17	0.57	9	8.17	8.95	7.33	6	Harvey-mahagony
				0-15	9.26	1.48	9	9.59	11.00	7.20	6	El Verde
				0-15	7.90	1.02	9	7.77	9.77	6.68	6	Guzmán secondary forest
				0-15	6.79	0.92	9	7.10	8.16	5.08	6	Cubuy secondary forest
				0-15	8.32	2.99	9	7.62	15.90	6.11	6	Cubuy pine
				15-30	10.16	0.66	9	10.06	11.02	9.31	6	Guzmán pine
				15-30	8.80	0.56	9	9.00	9.54	8.06	6	Harvey-mahagony
				15-30	10.72	1.29	9	10.55	12.75	8.65	6	El Verde
				15-30	8.67	2.03	9	7.96	12.03	6.43	6	Guzmán secondary forest
				15-30	7.71	0.69	9	8.00	8.50	6.64	6	Cubuy secondary forest
				15-30	7.69	0.66	9	7.75	8.69	6.62	6	Cubuy pine
			Magnesium (mg/kg)	0-15	284	75	9	287	424	176	6	Guzmán pine
				0-15	479	204	9	408	760	198	6	Harvey-mahagony
				0-15	334	66	9	359	432	224	6	El Verde
				0-15	1781	1143	9	2289	3434	281	6	Guzmán secondary forest

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0-15	226	159	9	159	515	62	6	Cubuy secondary forest
				0-15	94	88	9	54	301	28	6	Cubuy pine
				15-30	197	57	9	210	265	97	6	Guzmán pine
				15-30	350	129	9	341	655	212	6	Harvey-mahagony
				15-30	194	37	9	189	250	141	6	El Verde
				15-30	2084	1444	9	2763	3633	225	6	Guzmán secondary forest
				15-30	100	59	9	72	201	25	6	Cubuy secondary forest
				15-30	62	37	9	44	115	27	6	Cubuy pine
			Magnesium-total (mg/kg)	0-15	1033	129	9	1027	1301	823	6	Guzmán pine
				0-15	2297	629	9	2169	3682	1662	6	Harvey-mahagony
				0-15	948	152	9	957	1135	694	6	El Verde
				0-15	14093	8300	9	13305	27746	2065	6	Guzmán secondary forest
				0-15	1665	1534	9	1122	5373	635	6	Cubuy secondary forest
				0-15	601	193	9	532	1094	464	6	Cubuy pine
				15-30	991	93	9	979	1201	914	6	Guzmán pine
				15-30	2876	1838	9	2089	7097	1542	6	Harvey-mahagony
				15-30	780	160	9	766	982	536	6	El Verde
				15-30	17617	11930	9	15079	35029	1656	6	Guzmán secondary forest
				15-30	886	453	9	859	1900	464	6	Cubuy secondary forest
				15-30	463	60	9	448	586	394	6	Cubuy pine
			Manganese (mg/kg)	0-15	412	166	9	386	750	242	6	Guzmán pine
				0-15	269	99	9	238	492	179	6	Harvey-mahagony
				0-15	114	58	9	117	222	51	6	El Verde
				0-15	223	148	9	140	462	96	6	Guzmán secondary forest
				0-15	106	46	9	118	180	27	6	Cubuy secondary forest
				0-15	177	83	9	209	283	60	6	Cubuy pine

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				15-30	154	128	9	112	387	33	6	Guzmán pine
				15-30	270	95	9	299	445	162	6	Harvey-mahagony
				15-30	60	38	9	39	108	16	6	El Verde
				15-30	149	176	9	56	462	14	6	Guzmán secondary forest
				15-30	50	55	9	22	170	5	6	Cubuy secondary forest
				15-30	118	81	9	100	274	28	6	Cubuy pine
			Manganese-total (mg/kg)	0-15	3842	1615	9	3441	6962	1904	6	Guzmán pine
				0-15	2685	412	9	2590	3443	2130	6	Harvey-mahagony
				0-15	593	280	9	486	1124	259	6	El Verde
				0-15	2207	627	9	2119	3212	1230	6	Guzmán secondary forest
				0-15	454	253	9	426	873	104	6	Cubuy secondary forest
				0-15	766	399	9	722	1646	260	6	Cubuy pine
				15-30	2717	1866	9	2573	6221	595	6	Guzmán pine
				15-30	2969	464	9	2810	6486	1647	6	Harvey-mahagony
				15-30	589	285	9	518	1124	261	6	El Verde
				15-30	1703	881	9	1601	3384	487	6	Guzmán secondary forest
				15-30	389	267	9	421	938	92	6	Cubuy secondary forest
				15-30	678	451	9	602	1557	231	6	Cubuy pine
			Nitrogen (%)	0-15	0.23	0.02	9	0.22	0.26	0.20	6	Guzmán pine
				0-15	0.28	0.04	9	0.30	0.32	0.22	6	Harvey-mahagony
				0-15	0.42	0.02	9	0.42	0.46	0.37	6	El Verde
				0-15	0.23	0.11	9	0.19	0.40	0.07	6	Guzmán secondary forest
				0-15	0.32	0.04	9	0.32	0.37	0.24	6	Cubuy secondary forest
				0-15	0.29	0.07	9	0.30	0.40	0.14	6	Cubuy pine
				15-30	0.14	0.04	9	0.14	0.22	0.09	6	Guzmán pine
				15-30	0.14	0.04	9	0.14	0.19	0.08	6	Harvey-mahagony

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				15-30	0.26	0.03	9	0.25	0.30	0.22	6	El Verde
				15-30	0.11	0.11	9	0.05	0.31	0.02	6	Guzmán secondary forest
				15-30	0.20	0.03	9	0.18	0.25	0.16	6	Cubuy secondary forest
				15-30	0.21	0.02	9	0.22	0.24	0.18	6	Cubuy pine
			Organic matter (%)	0-15	3.77	0.83	9	3.80	4.64	1.72	6	Guzmán pine
				0-15	5.21	0.72	9	5.08	6.14	3.76	6	Harvey-mahagony
				0-15	8.43	0.49	9	8.44	9.05	7.36	6	El Verde
				0-15	4.61	1.85	9	4.45	7.43	1.69	6	Guzmán secondary forest
				0-15	6.76	0.81	9	6.91	7.94	5.27	6	Cubuy secondary forest
				0-15	6.16	1.15	9	6.04	8.70	4.51	6	Cubuy pine
				15-30	2.25	0.51	9	2.25	3.28	1.54	6	Guzmán pine
				15-30	2.59	0.68	9	2.51	3.45	1.63	6	Harvey-mahagony
				15-30	4.91	0.72	9	4.78	6.24	3.90	6	El Verde
				15-30	1.98	1.66	9	1.13	5.40	0.56	6	Guzmán secondary forest
				15-30	4.09	0.70	9	3.79	5.60	3.55	6	Cubuy secondary forest
				15-30	3.72	0.57	9	3.64	4.57	2.80	6	Cubuy pine
			pH (H <sub>2</sub> O)	0-15	4.42	0.13	9	4.42	4.68	4.24	6	Guzmán pine
				0-15	4.56	0.20	9	4.53	4.89	4.32	6	Harvey-mahagony
				0-15	4.40	0.12	9	4.36	4.63	4.28	6	El Verde
				0-15	5.32	0.24	9	5.34	5.60	5.02	6	Guzmán secondary forest
				0-15	4.79	0.25	9	4.74	5.38	4.59	6	Cubuy secondary forest
				0-15	4.49	0.30	9	4.50	5.02	3.98	6	Cubuy pine
				15-30	4.48	0.12	9	4.53	4.61	4.24	6	Guzmán pine
				15-30	4.47	0.13	9	4.49	4.63	4.31	6	Harvey-mahagony
				15-30	4.51	0.12	9	4.49	4.74	4.37	6	El Verde
				15-30	5.35	0.32	9	5.36	5.96	4.93	6	Guzmán secondary forest

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			pH (KCl)	15-30	4.69	0.21	9	4.65	5.18	4.49	6	Cubuy secondary forest
				15-30	4.75	0.19	9	4.84	4.92	4.35	6	Cubuy pine
				0-15	4.11	0.19	9	4.05	4.58	3.89	6	Guzmán pine
				0-15	4.54	0.19	9	4.60	4.79	4.22	6	Harvey-mahagony
				0-15	3.93	0.12	9	3.89	4.19	3.77	6	El Verde
				0-15	4.73	0.39	9	4.72	5.58	4.29	6	Guzmán secondary forest
				0-15	4.37	0.25	9	4.34	4.92	4.06	6	Cubuy secondary forest
				0-15	4.23	0.20	9	4.17	4.67	3.94	6	Cubuy pine
				15-30	4.07	0.10	9	4.05	4.22	3.91	6	Guzmán pine
				15-30	4.17	0.22	9	4.06	4.52	3.97	6	Harvey-mahagony
			Phosphorus (mg/kg)	15-30	4.00	0.10	9	3.95	4.16	3.90	6	El Verde
				15-30	4.49	0.30	9	4.56	5.06	4.15	6	Guzmán secondary forest
				15-30	4.16	0.44	9	3.96	4.94	3.82	6	Cubuy secondary forest
				15-30	4.36	0.21	9	4.37	4.70	3.93	6	Cubuy pine
				0-15	5	2	9	6	7	2	6	Guzmán pine
				0-15	11	2	9	11	14	8	6	Harvey-mahagony
				0-15	18	3	9	18	21	12	6	El Verde
				0-15	6	5	9	5	16	1	6	Guzmán secondary forest
				0-15	16	5	9	16	25	6	6	Cubuy secondary forest
				0-15	20	5	9	21	28	13	6	Cubuy pine
			15-30	2	1	9	2	5	1	6	Guzmán pine	
			15-30	5	1	9	5	7	3	6	Harvey-mahagony	
			15-30	6	2	9	7	9	4	6	El Verde	
			15-30	4	4	9	1	11	1	6	Guzmán secondary forest	
			15-30	5	3	9	4	10	2	6	Cubuy secondary forest	
			15-30	9	3	9	10	13	5	6	Cubuy pine	



Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Phosphorus-total (mg/kg)	0-15	377	49	9	362	453	316	6	Guzmán pine
				0-15	229	76	9	212	416	135	6	Harvey-mahagony
				0-15	351	59	9	359	443	250	6	El Verde
				0-15	257	142	9	264	422	68	6	Guzmán secondary forest
				0-15	255	86	9	186	386	155	6	Cubuy secondary forest
				0-15	263	40	9	276	316	194	6	Cubuy pine
				15-30	301	37	9	308	349	223	6	Guzmán pine
				15-30	172	48	9	158	256	116	6	Harvey-mahagony
				15-30	273	61	9	271	359	183	6	El Verde
				15-30	187	149	9	141	418	36	6	Guzmán secondary forest
				15-30	134	68	9	131	285	40	6	Cubuy secondary forest
				15-30	189	60	9	180	279	108	6	Cubuy pine
			Potassium (mg/kg)	0-15	107	43	9	98	184	63	6	Guzmán pine
				0-15	756	141	9	770	1007	578	6	Harvey-mahagony
				0-15	281	36	9	286	328	201	6	El Verde
				0-15	651	211	9	715	855	246	6	Guzmán secondary forest
				0-15	383	572	9	205	1905	121	6	Cubuy secondary forest
				0-15	139	47	9	116	243	102	6	Cubuy pine
				15-30	56	28	9	43	113	32	6	Guzmán pine
				15-30	489	112	9	490	662	321	6	Harvey-mahagony
				15-30	145	20	9	141	176	114	6	El Verde
				15-30	404	169	9	430	638	134	6	Guzmán secondary forest
				15-30	92	36	9	74	163	64	6	Cubuy secondary forest
				15-30	115	109	9	80	404	60	6	Cubuy pine
			Potassium-total (%)	0-15	0.58	0.06	9	0.56	0.72	0.53	6	Guzmán pine
				0-15	0.36	0.08	9	0.42	0.45	0.27	6	Harvey-mahagony

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0-15	0.54	0.13	9	0.55	0.73	0.34	6	El Verde
				0-15	0.78	0.08	9	0.80	0.90	0.66	6	Guzmán secondary forest
				0-15	0.45	0.13	9	0.43	0.77	0.35	6	Cubuy secondary forest
				0-15	0.68	0.24	9	0.63	1.30	0.50	6	Cubuy pine
				15-30	0.57	0.05	9	0.57	0.66	0.49	6	Guzmán pine
				15-30	0.34	0.07	9	0.31	0.44	0.27	6	Harvey-mahagony
				15-30	0.57	0.12	9	0.56	0.72	0.39	6	El Verde
				15-30	0.77	0.09	9	0.75	0.92	0.67	6	Guzmán secondary forest
				15-30	0.41	0.08	9	0.38	0.57	0.32	6	Cubuy secondary forest
				15-30	0.62	0.07	9	0.64	0.68	0.48	6	Cubuy pine
			Sand (%)	0-15	25	8	9	22	36	16	6	Guzmán pine
				0-15	36	15	9	43	52	16	6	Harvey-mahagony
				0-15	36	18	9	44	54	5	6	El Verde
				0-15	27	9	9	28	41	16	6	Guzmán secondary forest
				0-15	23	15	9	22	42	2	6	Cubuy secondary forest
				0-15	18	12	9	16	34	1	6	Cubuy pine
				15-30	19	12	9	21	35	2	6	Guzmán pine
				15-30	24	7	9	27	31	9	6	Harvey-mahagony
				15-30	21	14	9	24	38	1	6	El Verde
				15-30	22	7	9	24	32	14	6	Guzmán secondary forest
				15-30	6	8	9	3	27	1	6	Cubuy secondary forest
				15-30	14	10	9	11	31	4	6	Cubuy pine
			Silt (%)	0-15	33	2	9	32	38	31	6	Guzmán pine
				0-15	36	7	9	34	55	32	6	Harvey-mahagony
				0-15	27	8	9	27	44	17	6	El Verde
				0-15	41	6	9	40	55	34	6	Guzmán secondary forest

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0-15	33	8	9	35	43	15	6	Cubuy secondary forest
				0-15	23	8	9	26	32	9	6	Cubuy pine
				15-30	29	3	9	28	34	25	6	Guzmán pine
				15-30	33	4	9	33	38	27	6	Harvey-mahagony
				15-30	22	8	9	23	37	10	6	El Verde
				15-30	40	3	9	41	44	34	6	Guzmán secondary forest
				15-30	19	7	9	17	32	11	6	Cubuy secondary forest
				15-30	19	10	9	21	30	6	6	Cubuy pine
			Sodium (mg/kg)	0-15	31	5	9	30	41	23	6	Guzmán pine
				0-15	89	9	9	90	105	73	6	Harvey-mahagony
				0-15	96	16	9	97	116	75	6	El Verde
				0-15	138	40	9	136	192	58	6	Guzmán secondary forest
				0-15	60	25	9	69	88	15	6	Cubuy secondary forest
				0-15	25	8	9	24	38	13	6	Cubuy pine
				15-30	28	7	9	25	37	19	6	Guzmán pine
				15-30	80	22	9	87	109	40	6	Harvey-mahagony
				15-30	70	13	9	74	85	52	6	El Verde
				15-30	155	68	9	170	245	54	6	Guzmán secondary forest
				15-30	56	23	9	55	90	12	6	Cubuy secondary forest
Tuffaceous sandstone	Ultisols	Smf		15-30	16	6	9	15	22	10	6	Cubuy Pine
Tuffaceous sandstone	Inceptisols	Wflm	Manganese (mg/kg)	0-10	21	15	4	17	42	5	7	Toro Trail-forest
				0-10	36	29	8	37	76	1	7	Toro Trail-landslide
Tuffaceous sandstone	Inceptisols	Wflm		0-10	11	9	2	11	17	5	7	Rio Cubuy-landslide
Tuffaceous sandstone	Ultisols	Wflm		0-10	28		1				7	Quebrada La Coca-forest
				0-10	59	19	2	59	73	46	7	Quebrada La Coca-landslide
				0-10	36		1				7	Quebrada Sonadora-forest

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth								
				(cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0-10	111	6	2	111	115	106	7	Queb.Sonadora-landslide
				0-10	16		1				7	Rio Cubuy-forest
				0-10	10		1				7	Rio Espiritu Santo-forest
Tuffaceous sandstone	Ultisols	Wflm		0-10	97	9	2	97	103	90	7	Rio Esp. Santo-landslide
Tuffaceous sandstone	Inceptisols	Wflm	Phosphorus (mg/kg)	0-10	22	10	4	19	36	15	7	Toro Trail-forest
				0-10	8	6	8	8	17	1	7	Toro Trail-landslide
				0-10	5	5	2	5	8	1	7	Rio Cubuy-landslide
Tuffaceous sandstone	Ultisols	Wflm		0-10	110		1				7	Rio Espiritu Santo-forest
				0-10	1	0	2	1	1	1	7	Rio Esp. Santo-landslide
				0-10	20		1				7	Quebrada La Coca-forest
				0-10	6	1	2	6	7	6	7	Quebrada La Coca-landslide
				0-10	26		1				7	Quebrada Sonadora-forest
				0-10	2	2	2	2	4	1	7	Quebrada Sonadora-landslide
				0-10	24		1				7	Rio Cubuy-forest
Tuffaceous sandstone	Inceptisols	Wflm	Potassium (mg/kg)	0-10	113	44	4	108	164	42	7	Toro Trail-forest
				0-10	48	29	8	40	87	16	7	Toro Trail-landslide
Tuffaceous sandstone	Ultisols	Wflm		0-10	99		1				7	Quebrada La Coca-forest
				0-10	62	10	2	62	69	54	7	Quebrada La Coca-landslide
				0-10	115		1				7	Queb.Sonadora-forest
				0-10	43	34	2	43	67	19	7	Quebrada Sonadora-landslide
				0-10	128		1				7	Rio Cubuy-forest
				0-10	44	31	2	44	66	23	7	Rio Cubuy-landslide
				0-10	155		1				7	Rio Espiritu Santo-forest
				0-10	42	9	2	42	48	36	7	Rio Esp. Santo-landslide
Tuffaceous sandstone	Ultisols	Smf	Clay (%)	0--30	51	10	3	53	60	38	8	Barrancas, Barranquitas
Tuffaceous sandstone	Inceptisols	Swf		0--30	47		1				8	Buena Vista, Las Marias

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Lava, tuff	Ultisols	Smf		0--30	40	9	2	40	46	33	8	Carite Forest
				0--30	37		1				8	Cercadilla, Cayey
				0--30	41	10	2	41	48	34	8	Cerro El Gato, Cayey
Limestone	Ultisols	Swf		0--30	44	16	4	44	60	30	8	Cerro Gordo, Moca
Tuffaceous sandstone	Ultisols	Swf		0--30	19		1				8	Cubuy, Mab
Plutonic rocks	Inceptisols	Smf		0--30	15		1				8	Espino, SanLorenzo
Lava, tuff	Ultisols	Swf		0--30	34		1				8	Guavate Forest
Alluvial deposits	Inceptisols	Smf		0--30	17		1				8	Guayanes, Yabucoa
Tuffaceous sandstone	Ultisols	Swf		0--30	59	4	3	60	62	55	8	Guzmán Abajo, Mab
Serpentinite	Ultisols	Swf		0--30	52		1				8	Indiera Arriba, Maricao
Tuffaceous sandstone	Ultisols	Swf		0--30	54	4	2	54	57	50	8	Las Marias
Limestone	Entisols	Swf		0--30	65		1				8	Mamey, Moca
Plutonic rocks	Inceptisols	Swf		0--30	16	2	3	16	18	15	8	Paso Palmas, Utuado
				0--30	27	8	2	27	32	21	8	Piedras Blancas, Yabucoa
Plutonic rocks	Ultisols	Swf		0--30	22		1				8	Salto Caguana, Utuado
				30--100	64	4	2	64	67	60	8	Barrancas, Barranquitas
Tuffaceous sandstone	Inceptisols	Swf		30--100	37		1				8	Buena Vista, Las Marias
Lava, tuff	Ultisols	Smf		30--100	44	9	2	54	60	48	8	Carite Forest
				30--100	55		1				8	Cercadilla, Cayey
				30--100	52	6	2	52	56	48	8	Cerro El Gato, Cayey
Limestone	Ultisols	Swf		30--100	51	12	4	56	58	34	8	Cerro Gordo, Moca
Tuffaceous sandstone	Ultisols	Swf		30--100	36		1				8	Cubuy, Mab
Plutonic rocks	Inceptisols	Smf		30--100	12		1				8	Espino, San Lorenzo
Lava, tuff	Ultisols	Swf		30--100	60		1				8	Guavate Forest
Alluvial deposits	Inceptisols	Smf		30--100	25		1				8	Guayanes, Yabucoa
Tuffaceous sandstone	Ultisols	Swf		30--100	70	5	3	72	74	64	8	Guzmán Abajo, Mab

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth								
				(cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Serpentinite	Ultisols	Swf		30--100	57		1				8	Indiera Arriba, Maricao
Tuffaceous sandstone	Ultisols	Swf		30--100	52	2	2	52	54	50	8	Las Marias
Limestone	Entisols	Swf		30--100	65		1				8	Mamey, Moca
Plutonic rocks	Inceptisols	Swf		30--100	16	4	3	16	21	12	8	Paso Palmas, Utuado
				30--100	23	1	2	23	23	22	8	Piedras Blancas, Yabucoa
Plutonic rocks	Ultisols	Swf		30--100	22		1				8	Salto Caguana, Utuado
Tuffaceous sandstone	Ultisols	Smf	Loss on ignition (%)	0--30	13.59	3.43	3	15.28	15.85	9.64	8	Barrancas, Barranquitas
Tuffaceous sandstone	Inceptisols	Swf		0--30	9.57		1				8	Buena Vista, Las Marias
Lava, tuff	Ultisols	Smf		0--30	13.86	3.44	2	13.86	16.29	11.43	8	Carite Forest
Tuffaceous sandstone	Ultisols	Swf		0--30	9.32		1				8	Cercadilla, Cayey
				0--30	12.14	0.90	2	12.14	12.77	11.50	8	Cerro El Gato, Cayey
Limestone	Ultisols	Swf		0--30	12.24	2.31	4	11.73	15.25	10.24	8	Cerro Gordo, Moca
Tuffaceous sandstone	Ultisols	Swf		0--30	16.26		1				8	Cubuy, Mab
Plutonic rocks	Inceptisols	Smf		0--30	6.11		1				8	Espino, San Lorenzo
Lava, tuff	Ultisols	Swf		0--30	11.15		1				8	Guavate Forest
Alluvial deposits	Inceptisols	Smf		0--30	3.78		1				8	Guayanes, Yabucoa
Tuffaceous sandstone	Ultisols	Swf		0--30	15.45	1.06	3	15.39	16.54	14.42	8	Guzmán Abajo, Mab
Serpentinite	Ultisols	Swf		0--30	12.80		1				8	Indiera Arriba, Maricao
Tuffaceous sandstone	Ultisols	Swf		0--30	11.71	2.62	2	11.71	13.56	9.86	8	Las Marias
Limestone	Entisols	Swf		0--30	8.98		1				8	Mamey, Moca
Plutonic rocks	Inceptisols	Swf		0--30	5.02	0.32	3	4.99	5.35	4.72	8	Paso Palmas, Utuado
				0--30	7.71	0.16	2	7.71	7.82	7.59	8	Piedras Blancas, Yabucoa
Plutonic rocks	Ultisols	Swf		0--30	6.15		1				8	Salto Caguana, Utuado
Tuffaceous sandstone	Ultisols	Smf		30--100	11.09	2.84	2	11.09	13.10	9.08	8	Barrancas, Barranquitas
Tuffaceous sandstone	Inceptisols	Swf		30--100	11.22		1				8	Buena Vista, Las Marias
Lava, tuff	Ultisols	Smf		30--100	11.77	1.49	2	11.77	12.82	10.71	8	Carite Forest

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total													
Geology and parent material	Soil order	Life zone	Element	Depth									
				(cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes	
Tuffaceous sandstone	Ultisols	Swf		30--100	8.54		1					8	Cercadilla, Cayey
Tuffaceous sandstone	Ultisols	Swf		30--100	8.15	0.41	2	8.15	8.44	7.86		8	Cerro El Gato, Cayey
Limestone	Ultisols	Swf		30--100	12.46	1.27	4	12.79	13.52	10.74		8	Cerro Gordo, Moca
Tuffaceous sandstone	Ultisols	Swf		30--100	9.81		1					8	Cubuy, Mab
Plutonic rocks	Inceptisols	Smf		30--100	4.47		1					8	Espino, San Lorenzo
Lava, tuff	Ultisols	Swf		30--100	12.87		1					8	Guavate Forest
Alluvial deposits	Inceptisols	Smf		30--100	3.18		1					8	Guayanes, Yabucoa
Tuffaceous sandstone	Ultisols	Swf		30--100	14.88	1.18	3	14.81	16.09	13.73		8	Guzmán Abajo, Mab
Serpentinite	Ultisols	Swf		30--100	12.60		1					8	Indiera Arriba, Maricao
Tuffaceous sandstone	Ultisols	Swf		30--100	10.31	0.63	2	10.31	10.75	9.86		8	Las Marias
Limestone	Entisols	Swf		30--100	9.38		1					8	Mamey, Moca
Plutonic rocks	Inceptisols	Swf		30--100	4.94	0.73	3	4.93	5.67	4.21		8	Paso Palmas, Utuado
Plutonic rocks	Inceptisols	Smf		30--100	5.78	0.62	2	5.78	6.22	5.34		8	Piedras Blancas, Yabucoa
Plutonic rocks	Ultisols	Swf		30--100	7.00		1					8	Salto Caguana, Utuado
Tuffaceous sandstone	Ultisols	Smf	Organic matter (%)	0--30	3.90	1.13	3	3.52	5.17	3.01		8	Barrancas, Barranquitas
				30--100	1.70	0.09	2	1.70	1.76	1.63		8	Barrancas, Barranquitas
Tuffaceous sandstone	Inceptisols	Swf		0--30	2.14		1					8	Buena Vista, Las Marias
				30--100	0.50		1					8	Buena Vista, Las Marias
Lava, tuff	Ultisols	Smf		0--30	3.59	1.51	2	3.59	4.66	2.52		8	Carite Forest
				30--100	2.11	0.30	2	2.11	2.32	1.89		8	Carite Forest
Tuffaceous sandstone	Ultisols	Swf		0--30	2.77		1					8	Cercadilla, Cayey
				30--100	1.25		1					8	Cercadilla, Cayey
				0--30	4.42	0.70	2	4.42	4.91	3.92		8	Cerro El Gato, Cayey
				30--100	1.39	0.18	2	1.39	1.52	1.26		8	Cerro El Gato, Cayey
Limestone	Ultisols	Swf		0--30	2.47	0.48	4	2.49	3.02	1.88		8	Cerro Gordo, Moca
				30--100	0.76	0.42	4	0.76	1.26	0.25		8	Cerro Gordo, Moca

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth		n	Median	Max	Min	Source	Site/notes	
				(cm)	Mean							
Tuffaceous sandstone	Ultisols	Swf		0--30	6.41	1				8	Cubuy, Mab	
				30--100	1.38	1				8	Cubuy, Mab	
Plutonic rocks	Inceptisols	Smf		0--30	2.64	1				8	Espino, San Lorenzo	
				30--100	1.13	1				8	Espino, San Lorenzo	
Lava, tuff	Ultisols	Swf		0--30	2.78	1				8	Guavate Forest	
				30--100	1.14	1				8	Guavate Forest	
Alluvial deposits	Inceptisols	Smf		0--30	1.27	1				8	Guayanes, Yabucoa	
				30--100	0.63	1				8	Guayanes, Yabucoa	
Tuffaceous sandstone	Ultisols	Swf		0--30	2.68	0.59	3	2.88	3.15	2.02	8	Guzmán Abajo, Mab
				30--100	1.05	0.14	3	1.13	1.13	0.88	8	Guzmán Abajo, Mab
Serpentinite	Ultisols	Swf		0--30	3.77		1				8	Indiera Arriba, Maricao
				30--100	1.38		1				8	Indiera Arriba, Maricao
Tuffaceous sandstone	Ultisols	Swf		0--30	3.15	0.35	2	3.15	3.39	2.90	8	Las Marias
				30--100	1.51	0.18	2	1.51	1.64	1.38	8	Las Marias
Limestone	Entisols	Swf		0--30	1.51		1				8	Mamey, Moca
				30--100	0.63		1				8	Mamey, Moca
Plutonic rocks	Inceptisols	Swf		0--30	1.51	0.58	3	1.64	2.02	0.88	8	Paso Palmas, Utuado
				30--100	0.88	0.66	3	1.26	1.26	0.12	8	Paso Palmas, Utuado
				0--30	1.89	0.89	2	1.89	2.52	1.26	8	Piedras Blancas, Yabucoa
				30--100	0.88	0.71	2	0.88	1.38	0.38	8	Piedras Blancas, Yabucoa
Plutonic rocks	Ultisols	Swf		0--30	1.70		1			8	Salto Caguana, Utuado	
Plutonic rocks	Ultisols	Swf		30--100	1.01		1			8	Salto Caguana, Utuado	
Tuffaceous sandstone	Ultisols	Smf	pH (H <sub>2</sub> O)	0--30	4.44	0.17	3	4.52	4.56	4.24	8	Barrancas, Barranquitas
				30--100	4.40	0.16	2	4.40	4.51	4.28	8	Barrancas, Barranquitas
Tuffaceous sandstone	Inceptisols	Swf		0--30	4.61		1				8	Buena Vista, Las Marias
				30--100	4.74		1				8	Buena Vista, Las Marias



Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total											
Geology and parent material	Soil order	Life zone	Element	Depth							
				(cm)	Mean	Sd	n	Median	Max	Min	Source
Lava, tuff	Ultisols	Smf	0--30	4.52	0.20	2	4.52	4.66	4.38	8	Carite Forest
			30--100	4.52	0.04	2	4.52	4.55	4.49	8	Carite Forest
Tuffaceous sandstone	Ultisols	Swf	0--30	4.37		1				8	Cercadilla, Cayey
			30--100	4.08		1				8	Cercadilla, Cayey
			0--30	4.23	0.03	2	4.23	4.25	4.21	8	Cerro El Gato, Cayey
Limestone	Ultisols	Swf	30--100	4.19	0.23	2	4.19	4.35	4.02	8	Cerro El Gato, Cayey
			0--30	4.46	0.07	4	4.44	4.55	4.39	8	Cerro Gordo, Moca
Tuffaceous sandstone	Ultisols	Swf	30--100	4.37	0.12	4	4.37	4.52	4.23	8	Cerro Gordo, Moca
			0--30	5.20		1				8	Cubuy, Mab
Plutonic rocks	Inceptisols	Smf	30--100	5.64		1				8	Cubuy, Mab
			0--30	5.06		1				8	Espino, San Lorenzo
Lava, tuff	Ultisols	Swf	30--100	5.03		1				8	Espino, San Lorenzo
			0--30	4.94		1				8	Guavate Forest
Alluvial deposits	Inceptisols	Smf	30--100	4.73		1				8	Guavate Forest
			0--30	5.03		1				8	Guayanes, Yabucoa
Tuffaceous sandstone	Ultisols	Swf	30--100	4.88		1				8	Guayanes, Yabucoa
			0--30	4.64	0.07	3	4.60	4.72	4.59	8	Guzmán Abajo, Mab
Serpentinite	Ultisols	Swf	30--100	4.75	0.08	3	4.78	4.82	4.66	8	Guzmán Abajo, Mab
			0--30	4.44		1				8	Indiera Arriba, Maricao
Tuffaceous sandstone	Ultisols	Swf	30--100	4.36		1				8	Indiera Arriba, Maricao
			0--30	4.34	0.05	2	4.34	4.37	4.30	8	Las Marias
Limestone	Entisols	Swf	30--100	4.30	0.09	2	4.30	4.36	4.23	8	Las Marias
			0--30	4.30		1				8	Mamey, Moca
Plutonic rocks	Inceptisols	Swf	30--100	4.27		1				8	Mamey, Moca
			0--30	5.14	0.34	3	4.96	5.53	4.94	8	Paso Palmas, Utuado
			30--100	5.27	0.23	3	5.18	5.53	5.10	8	Paso Palmas, Utuado

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Plutonic rocks	Ultisols	Swf		0--30	4.52	0.01	2	4.52	4.52	4.51	8	Piedras Blancas, Yabucoa
				30--100	4.62	0.14	2	4.62	4.72	4.52	8	Piedras Blancas, Yabucoa
				0--30	5.30		1				8	Salto Caguana, Utuado
				30--100	5.19		1				8	Salto Caguana, Utuado
Tuffaceous sandstone	Ultisols	Smf	Phosphorus-total (mg/g)	0--30	0.46	0.03	3	0.46	0.49	0.42	8	Barrancas, Barranquitas
				30--100	0.50	0.13	2	0.50	0.59	0.41	8	Barrancas, Barranquitas
Tuffaceous sandstone	Inceptisols	Swf		0--30	0.29		1				8	Buena Vista, Las Marias
				30--100	0.27		1				8	Buena Vista, Las Marias
Lava, tuff	Ultisols	Smf		0--30	0.34	0.14	2	0.34	0.44	0.24	8	Carite Forest
				30--100	0.31	0.08	2	0.31	0.37	0.25	8	Carite Forest
Tuffaceous sandstone	Ultisols	Swf		0--30	0.39		1				8	Cercadilla, Cayey
				30--100	0.35		1				8	Cercadilla, Cayey
Limestone	Ultisols	Swf		0--30	0.34	0.00	2	0.34	0.34	0.34	8	Cerro El Gato, Cayey
				30--100	0.28	0.06	2	0.28	0.31	0.24	8	Cerro El Gato, Cayey
				0--30	0.19	0.06	4	0.19	0.24	0.13	8	Cerro Gordo, Moca
				30--100	0.20	0.09	4	0.20	0.29	0.10	8	Cerro Gordo, Moca
Tuffaceous sandstone	Ultisols	Swf		0--30	0.45		1				8	Cubuy, Mab
				30--100	0.30		1				8	Cubuy, Mab
Plutonic rocks	Inceptisols	Smf		0--30	0.26		1				8	Espino, San Lorenzo
				30--100	0.23		1				8	Espino, San Lorenzo
Lava, tuff	Ultisols	Swf		0--30	0.21		1				8	Guavate Forest
				30--100	0.13		1				8	Guavate Forest
Alluvial deposits	Inceptisols	Smf		0--30	0.09		1				8	Guayanes, Yabucoa
				30--100	0.06		1				8	Guayanes, Yabucoa
Tuffaceous sandstone	Ultisols	Swf		0--30	0.20	0.07	3	0.24	0.24	0.12	8	Guzmán Abajo, Mab
				30--100	0.22	0.02	3	0.22	0.23	0.19	8	Guzmán Abajo, Mab

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Serpentinite	Ultisols	Swf		0--30	0.44		1				8	Indiera Arriba, Maricao
				30--100	0.35		1				8	Indiera Arriba, Maricao
Tuffaceous sandstone	Ultisols	Swf		0--30	0.55	0.09	2	0.55	0.62	0.49	8	Las Marias
				30--100	0.49	0.09	2	0.49	0.55	0.42	8	Las Marias
Limestone	Entisols	Swf		0--30	0.15		1				8	Mamey, Moca
				30--100	0.09		1				8	Mamey, Moca
Plutonic rocks	Inceptisols	Swf		0--30	0.33	0.20	3	0.25	0.56	0.19	8	Paso Palmas, Utuado
				30--100	0.26	0.12	3	0.22	0.40	0.17	8	Paso Palmas, Utuado
				0--30	0.11	0.01	2	0.11	0.12	0.10	8	Piedras Blancas, Yabucoa
				30--100	0.09	0.00	2	0.09	0.10	0.09	8	Piedras Blancas, Yabucoa
Plutonic rocks	Ultisols	Swf		0--30	0.36		1				8	Salto Caguana, Utuado
				30--100	0.29		1				8	Salto Caguana, Utuado
Tuffaceous sandstone	Ultisols	Smf	Sand (%)	0--30	16	6	3	18	21	9	8	Barrancas, Barranquitas
				30--100	13	0	2	13	13	13	8	Barrancas, Barranquitas
Tuffaceous sandstone	Inceptisols	Swf		0--30	18		1				8	Buena Vista, Las Marias
				30--100	21		1				8	Buena Vista, Las Marias
Lava, tuff	Ultisols	Smf		0--30	20	4	2	20	23	17	8	Carite Forest
				30--100	20	3	2	20	22	18	8	Carite Forest
Tuffaceous sandstone	Ultisols	Swf		0--30	17		1				8	Cercadilla, Cayey
				30--100	13		1				8	Cercadilla, Cayey
				0--30	21	4	2	21	23	18	8	Cerro El Gato, Cayey
				30--100	18	3	2	18	21	16	8	Cerro El Gato, Cayey
Limestone	Ultisols	Swf		0--30	13	7	4	11	23	8	8	Cerro Gordo, Moca
				30--100	16	7	4	14	26	9	8	Cerro Gordo, Moca
Tuffaceous sandstone	Ultisols	Swf		0--30	37		1				8	Cubuy, Mab
				30--100	23		1				8	Cubuy, Mab

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth		n	Median	Max	Min	Source	Site/notes	
				(cm)	Mean Sd							
Plutonic rocks	Inceptisols	Smf		0--30	63	1				8	Espino, San Lorenzo	
				30--100	66	1				8	Espino, San Lorenzo	
Lava, tuff	Ultisols	Swf		0--30	37	1				8	Guavate Forest	
				30--100	8	1				8	Guavate Forest	
Alluvial deposits	Inceptisols	Smf		0--30	58	1				8	Guayanes, Yabucoa	
				30--100	56	1				8	Guayanes, Yabucoa	
Tuffaceous sandstone	Ultisols	Swf		0--30	12	3	3	11	14	9	8	Guzmán Abajo, Mab
				30--100	4	1	3	4	6	3	8	Guzmán Abajo, Mab
Serpentinite	Ultisols	Swf		0--30	14		1				8	Indiera Arriba, Maricao
				30--100	10		1				8	Indiera Arriba, Maricao
Tuffaceous sandstone	Ultisols	Swf		0--30	12	1	2	12	12	11	8	Las Marias
				30--100	15	2	2	15	16	13	8	Las Marias
Limestone	Entisols	Swf		0--30	11		1				8	Mamey, Moca
				30--100	11		1				8	Mamey, Moca
Plutonic rocks	Inceptisols	Swf		0--30	59	3	3	57	62	56	8	Paso Palmas, Utuado
				30--100	61	6	3	64	65	55	8	Paso Palmas, Utuado
				0--30	53	7	2	53	58	48	8	Piedras Blancas, Yabucoa
				30--100	55	5	2	55	59	52	8	Piedras Blancas, Yabucoa
Plutonic rocks	Ultisols	Swf		0--30	43		1				8	Salto Caguana, Utuado
				30--100	44		1				8	Salto Caguana, Utuado
Tuffaceous sandstone	Ultisols	Smf	Silt (%)	0--30	33	5	3	31	38	30	8	Barrancas, Barranquitas
				30--100	24	4	2	24	27	21	8	Barrancas, Barranquitas
Tuffaceous sandstone	Inceptisols	Swf		0--30	34		1				8	Buena Vista, Las Marias
				30--100	42		1				8	Buena Vista, Las Marias
Lava, tuff	Ultisols	Smf		0--30	40	5	2	40	44	37	8	Carite Forest
				30--100	36	1	2	36	37	36	8	Carite Forest

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth								
				(cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Tuffaceous sandstone	Ultisols	Swf		0--30	46		1				8	Cercadilla, Cayey
				30--100	33		1				8	Cercadilla, Cayey
				0--30	38	6	2	38	43	34	8	Cerro El Gato, Cayey
				30--100	30	3	2	30	32	28	8	Cerro El Gato, Cayey
Limestone	Ultisols	Swf		0--30	42	13	4	41	59	30	8	Cerro Gordo, Moca
				30--100	34	5	4	32	41	29	8	Cerro Gordo, Moca
Tuffaceous sandstone	Ultisols	Swf		0--30	44		1				8	Cubuy, Mab
				30--100	41		1				8	Cubuy, Mab
Plutonic rocks	Inceptisols	Smf		0--30	22		1				8	Espino, San Lorenzo
				30--100	23		1				8	Espino, San Lorenzo
Lava, tuff	Ultisols	Swf		0--30	29		1				8	Guavate Forest
				30--100	32		1				8	Guavate Forest
Alluvial deposits	Inceptisols	Smf		0--30	25		1				8	Guayanes, Yabucoa
				30--100	20		1				8	Guayanes, Yabucoa
Tuffaceous sandstone	Ultisols	Swf		0--30	29	1	3	29	31	28	8	Guzmán Abajo, Mab
				30--100	26	4	3	24	31	23	8	Guzmán Abajo, Mab
Serpentinite	Ultisols	Swf		0--30	34		1				8	Indiera Arriba, Maricao
				30--100	32		1				8	Indiera Arriba, Maricao
Tuffaceous sandstone	Ultisols	Swf		0--30	35	4	2	35	37	32	8	Las Marias
				30--100	33	0	2	33	33	33	8	Las Marias
Limestone	Entisols	Swf		0--30	25		1				8	Mamey, Moca
				30--100	24		1				8	Mamey, Moca
Plutonic rocks	Inceptisols	Swf		0--30	25	4	3	25	29	22	8	Paso Palmas, Utuado
				30--100	23	3	3	24	25	20	8	Paso Palmas, Utuado
				0--30	20	0	2	20	20	20	8	Piedras Blancas, Yabucoa
				30--100	22	4	2	22	25	19	8	Piedras Blancas, Yabucoa

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth								
				(cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Plutonic rocks	Ultisols	Swf		0--30	35		1				8	Salto Caguana, Utuado
				30--100	34		1				8	Salto Caguana, Utuado
Tuffaceous sandstone	Ultisols	Lmrf	Aluminum (cmol/kg <sup>-1</sup> )	0--10	3.12	1.82	4	2.74	5.46	1.53	9	Top
				0--10	2.43	0.73	9	2.30	3.36	1.33	9	Ridge
				0--10	1.96	1.42	3	2.64	2.91	0.33	9	Side
				0--10	2.86	1.32	4	2.92	4.15	1.47	9	Slope
				0--10	1.69	0.86	9	1.76	2.83	0.21	9	Valley
				10--20	2.69	0.86	4	2.55	3.85	1.81	9	Top
				10--20	2.36	0.86	9	2.16	3.77	1.19	9	Ridge
				10--20	2.12	1.71	3	2.85	3.34	0.16	9	Side
				10--20	2.56	0.54	4	2.61	3.05	1.97	9	Slope
				10--20	1.92	1.04	9	1.83	3.33	0.22	9	Valley
			20--30	2.41	0.73	4	2.92	4.15	1.47	9	Top	
			20--30	2.25	1.00	9	1.83	3.77	1.15	9	Ridge	
			20--30	2.24	1.64	3	2.85	3.34	0.16	9	Side	
			20--30	2.47	0.46	4	2.92	4.15	1.47	9	Slope	
			20--30	1.69	1.02	9	1.83	3.15	0.24	9	Valley	
			Calcium (mg/g)	0--10	0.21	0.20	4	0.22	0.38	0.04	9	Top
				0--10	0.14	0.06	9	0.15	0.24	0.05	9	Ridge
				0--10	0.29	0.13	3	0.26	0.43	0.18	9	Side
				0--10	0.20	0.19	4	0.17	0.43	0.04	9	Slope
				0--10	0.45	0.24	9	0.43	0.86	0.13	9	Valley
10--20	0.09	0.10		4	0.07	0.23	0.01	9	Top			
10--20	0.08	0.08		9	0.04	0.23	0.03	9	Ridge			
10--20	0.11	0.08		3	0.07	0.21	0.07	9	Side			
10--20	0.08	0.08		4	0.08	0.17	0.01	9	Slope			

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				10--20	0.30	0.26	9	0.16	0.71	0.06	9	Valley
				20--30	0.12	0.17	4	0.05	0.38	0.01	9	Top
				20--30	0.05	0.05	9	0.04	0.16	0.01	9	Ridge
				20--30	0.07	0.06	3	0.04	0.13	0.03	9	Side
				20--30	0.09	0.09	4	0.06	0.21	0.01	9	Slope
				20--30	0.34	0.30	9	0.20	0.83	0.05	9	Valley
			Effective cation exchange (cmol/kg <sup>-1</sup> )	0--10	3.12	1.82	4	2.74	5.46	1.53	9	Top
				0--10	2.43	0.73	9	2.30	3.36	1.33	9	Ridge
				0--10	1.96	1.42	3	2.64	2.91	0.33	9	Side
				0--10	2.86	1.32	4	2.92	4.15	1.47	9	Slope
				0--10	1.69	0.86	9	1.76	2.83	0.21	9	Valley
				10--20	2.69	0.86	4	2.55	3.85	1.81	9	Top
				10--20	2.36	0.86	9	2.16	3.77	1.19	9	Ridge
				10--20	2.12	1.71	3	2.85	3.34	0.16	9	Side
				10--20	4.38	0.84	4	4.17	5.50	3.65	9	Slope
				10--20	5.03	1.09	9	5.36	6.14	3.21	9	Valley
				20--30	4.93	3.92	4	4.20	11.30	1.85	9	Top
				20--30	3.96	2.90	9	3.05	10.31	1.60	9	Ridge
				20--30	3.79	2.84	3	4.04	6.23	0.74	9	Side
				20--30	4.41	2.34	4	4.35	8.61	1.91	9	Slope
				20--30	5.04	3.20	9	4.41	10.10	1.39	9	Valley
			Iron (mg/g)	0--10	1.67	1.44	4	1.50	3.35	0.32	9	Top
				0--10	1.57	0.73	9	1.60	2.66	0.48	9	Ridge
				0--10	2.45	0.16	3	2.51	2.58	2.27	9	Side
				0--10	3.15	3.15	4	2.09	7.70	0.74	9	Slope
				0--10	0.81	0.25	9	0.80	1.39	0.58	9	Valley

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				10--20	0.83	0.65	4	0.77	1.58	0.22	9	Top
				10--20	0.57	0.46	9	0.43	1.70	0.23	9	Ridge
				10--20	0.88	0.64	3	0.53	1.62	0.48	9	Side
				10--20	2.73	3.20	4	1.71	7.23	0.28	9	Slope
				10--20	0.41	0.17	9	0.37	0.79	0.21	9	Valley
				20--30	0.54	0.39	4	0.56	0.89	0.14	9	Top
				20--30	0.32	0.28	9	0.22	0.97	0.08	9	Ridge
				20--30	0.29	0.16	3	0.37	0.40	0.11	9	Side
				20--30	0.84	0.67	4	0.82	1.50	0.22	9	Slope
				20--30	0.31	0.15	9	0.32	0.64	0.10	9	Valley
			Magnesium (mg/g)	0--10	0.13	0.13	4	0.08	0.31	0.03	9	Top
				0--10	0.12	0.05	9	0.11	0.21	0.04	9	Ridge
				0--10	0.19	0.11	3	0.22	0.28	0.07	9	Side
				0--10	0.17	0.10	4	0.17	0.26	0.07	9	Slope
				0--10	0.19	0.06	9	0.21	0.31	0.11	9	Valley
				10--20	0.15	0.16	3	0.09	0.38	0.04	9	Top
				10--20	0.09	0.03	9	0.09	0.13	0.05	9	Ridge
				10--20	0.12	0.11	3	0.10	0.24	0.03	9	Side
				10--20	0.13	0.12	4	0.10	0.29	0.03	9	Slope
				10--20	0.14	0.04	9	0.15	0.23	0.09	9	Valley
				20--30	0.19	0.26	4	0.09	0.57	0.03	9	Top
				20--30	0.14	0.18	9	0.10	0.63	0.04	9	Ridge
				20--30	0.08	0.08	3	0.07	0.17	0.02	9	Side
				20--30	0.15	0.16	4	0.10	0.36	0.03	9	Slope
				20--30	0.15	0.05	9	0.15	0.22	0.09	9	Valley
			Manganese (mg/kg)	0--10	23	21	4	21	48	3	9	Top



Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0--10	25	13	9	23	46	9	9	Ridge
				0--10	15	5	3	18	19	10	9	Side
				0--10	17	13	4	14	36	6	9	Slope
				0--10	27	16	9	23	61	11	9	Valley
				10--20	23	25	3	44	45	3	9	Top
				10--20	21	21	9	14	58	1	9	Ridge
				10--20	9	6	3	8	15	2	9	Side
				10--20	14	12	4	15	25	2	9	Slope
				10--20	23	14	9	21	57	9	9	Valley
				20--30	35	39	4	35	71	1	9	Top
				20--30	17	16	9	18	48	1	9	Ridge
				20--30	25	26	3	21	53	2	9	Side
				20--30	20	20	4	19	40	1	9	Slope
				20--30	23	6	9	20	34	17	9	Valley
			Organic matter (%)	0--10	5.17	1.30	4	5.11	6.81	3.66	9	Top
				0--10	5.47	0.37	9	5.55	5.94	4.79	9	Ridge
				0--10	6.10	0.21	3	6.08	6.32	5.90	9	Side
				0--10	4.68	1.20	4	4.83	5.90	3.15	9	Slope
				0--10	4.71	1.21	9	4.47	7.54	3.19	9	Valley
				10--20	3.36	0.65	4	3.44	3.97	2.60	9	Top
				10--20	3.61	0.69	9	3.74	4.53	2.54	9	Ridge
				10--20	3.93	0.17	3	3.91	4.11	3.78	9	Side
				10--20	3.24	0.38	4	3.29	3.56	2.81	9	Slope
				10--20	3.44	0.58	9	3.62	4.15	2.54	9	Valley
				20--30	2.91	0.56	4	3.01	3.46	2.16	9	Top
				20--30	2.65	0.84	9	2.60	4.28	1.43	9	Ridge

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			pH (H <sub>2</sub> O)	20--30	2.93	0.69	3	2.72	3.70	2.36	9	Side
				20--30	5.74	3.31	4	5.89	8.72	2.45	9	Slope
				20--30	2.89	0.68	9	2.73	3.97	1.85	9	Valley
				0--10	4.66	0.32	4	4.65	5.04	4.31	9	Top
				0--10	4.63	0.21	9	4.59	5.00	4.29	9	Ridge
				0--10	4.85	0.69	3	4.51	5.64	4.40	9	Side
				0--10	4.67	0.23	4	4.67	4.93	4.41	9	Slope
				0--10	4.79	0.26	9	4.75	5.39	4.50	9	Valley
				10--20	4.86	0.23	4	4.90	5.09	4.55	9	Top
				10--20	4.78	0.22	4	4.82	5.05	4.39	9	Ridge
				10--20	4.89	0.55	3	4.65	5.52	4.51	9	Side
				10--20	4.85	0.24	4	4.91	5.09	4.51	9	Slope
				10--20	4.95	0.25	9	4.94	5.39	4.54	9	Valley
				20--30	4.92	0.22	4	4.96	5.13	4.61	9	Top
				20--30	4.88	0.26	9	4.88	5.16	4.32	9	Ridge
			20--30	5.00	0.42	3	4.95	5.44	4.61	9	Side	
			20--30	4.87	0.20	4	4.88	5.10	4.63	9	Slope	
			20--30	5.04	0.24	9	4.99	5.39	4.73	9	Valley	
			Phosphorus (mg/kg)	0--10	7	3	4	6	11	5	9	Top
				0--10	10	2	9	9	13	7	9	Ridge
				0--10	14	3	3	12	18	12	9	Side
				0--10	10	6	4	9	18	4	9	Slope
				0--10	12	5	9	10	21	6	9	Valley
				10--20	4	2	4	4	6	2	9	Top
				10--20	4	1	9	4	6	2	9	Ridge
				10--20	4	1	3	4	5	4	9	Side

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				10--20	6	4	4	5	12	3	9	Slope
				10--20	7	3	9	7	12	2	9	Valley
				20--30	3	1	4	3	3	2	9	Top
				20--30	3	1	9	3	6	2	9	Ridge
				20--30	3	1	3	3	4	3	9	Side
				20--30	3	0	4	3	4	3	9	Slope
				20--30	4	2	9	4	8	2	9	Valley
			Potassium (mg/g)	0--10	0.10	0.02	4	0.10	0.12	0.07	9	Top
				0--10	0.18	0.25	9	0.09	0.85	0.07	9	Ridge
				0--10	0.12	0.02	3	0.12	0.15	0.10	9	Side
				0--10	0.10	0.01	4	0.10	0.11	0.08	9	Slope
				0--10	0.13	0.08	9	0.10	0.32	0.04	9	Valley
				10--20	0.05	0.01	4	0.05	0.05	0.03	9	Top
				10--20	0.05	0.01	9	0.05	0.07	0.03	9	Ridge
				10--20	0.05	0.02	3	0.05	0.06	0.04	9	Side
				10--20	0.06	0.03	4	0.06	0.09	0.04	9	Slope
				10--20	0.08	0.06	9	0.06	0.23	0.02	9	Valley
				20--30	0.04	0.02	4	0.04	0.06	0.03	9	Top
				20--30	0.03	0.01	9	0.03	0.06	0.01	9	Ridge
				20--30	0.12	0.10	3	0.10	0.23	0.04	9	Side
				20--30	0.04	0.02	4	0.05	0.06	0.02	9	Slope
				20--30	0.08	0.07	9	0.06	0.24	0.03	9	Valley
			Sodium (mg/kg)	0--10	78	31	4	74	119	45	9	Top
				0--10	56	15	9	55	80	31	9	Ridge
				0--10	69	3	3	69	71	66	9	Side
				0--10	56	14	4	54	74	42	9	Slope

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Tuffaceous sandstone	Ultisols	Swf	Aluminum (cmol/kg <sup>-1</sup> )	0--10	56	18	9	52	87	30	9	Valley
				10--20	51	23	4	52	74	28	9	Top
				10--20	46	22	9	41	78	1	9	Ridge
				10--20	56	18	3	46	76	45	9	Side
				10--20	40	10	4	41	49	29	9	Slope
				10--20	50	16	9	52	76	25	9	Valley
				20--30	51	33	4	53	86	12	9	Top
				20--30	42	23	9	34	88	16	9	Ridge
				20--30	47	12	3	42	61	39	9	Side
			20--30	40	15	4	42	54	24	9	Slope	
			20--30	47	18	9	42	82	19	9	Valley	
			0--35	1.12	0.73	10	1.11	2.45	0.31	10		
			25--60	0.88	0.73	10	0.84	2.23	0.01	10		
			50--85	0.90	0.95	7	0.53	2.81	0.01	10		
			85--100	0.56	0.34	4	0.58	0.95	0.11	10		
			100--120	0.72	0.48	4	0.99	1.00	0.16	10		
			Aluminum-total (%)	0--35	12.68	2.40	10	12.22	16.87	10.20	10	
			25--60	13.99	3.13	10	13.71	20.16	9.89	10		
			50--85	19.92	2.68	7	20.16	22.40	9.89	10		
85--100	19.34	4.08	4	20.18	22.82	14.15	10					
100--120	19.31	3.13	4	19.91	22.43	14.98	10					
Carbon/Nitrogen	0--35	15	2	10	16	19	12	10				
25--60	20	15	10	16	62	13	10					
50--85	13	2	7	13	62	10	10					
85--100	13	2	4	12	16	11	10					
100--120	15	8	4	13	26	9	10					

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Calcium (mg/g)	0--35	1.08	0.66	10	1.16	2.14	0.12	10	
				25--60	0.82	0.57	10	0.97	1.57	0.10	10	
				50--85	0.83	0.50	7	0.78	1.57	0.10	10	
				85--100	0.94	0.54	4	1.00	1.53	0.22	10	
				100--120	1.38	0.17	4	1.32	1.63	1.25	10	
			Calcium-total (%)	0--35	0.43	0.17	10	0.43	0.76	0.14	10	
				25--60	0.39	0.16	10	0.37	0.76	0.15	10	
				50--85	0.31	0.31	7	0.17	0.98	0.09	10	
				85--100	0.39	0.32	4	0.28	0.86	0.15	10	
				100--120	0.27	0.05	4	0.26	0.34	0.22	10	
			ECEC (cmol/kg <sup>-1</sup> )	0--35	11.91	3.75	10	12.10	19.25	5.70	10	
				25--60	9.70	3.82	10	10.50	14.18	3.91	10	
				50--85	10.20	3.06	7	10.46	14.18	3.91	10	
				85--100	9.12	3.52	4	9.42	12.83	4.81	10	
				100--120	11.61	2.80	4	10.99	15.14	9.33	10	
			Iron (mg/g)	0--35	1.21	0.71	10	1.16	2.48	0.42	10	
				25--60	0.63	0.45	10	0.51	1.34	0.06	10	
				50--85	0.30	0.28	7	0.23	1.34	0.03	10	
				85--100	0.18	0.25	4	0.07	0.55	0.02	10	
				100--120	0.11	0.09	4	0.07	0.25	0.05	10	
			Iron-total (%)	0--35	5.40	1.08	10	5.38	6.65	3.95	10	
				25--60	6.09	1.23	10	6.66	7.43	4.05	10	
				50--85	8.41	1.41	7	8.45	10.72	4.05	10	
				85--100	8.45	1.19	4	8.62	9.67	6.88	10	
				100--120	8.22	1.94	4	8.14	10.64	5.97	10	
			Magnesium-total (%)	0--35	1.13	0.26	10	1.07	1.54	0.78	10	

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				25--60	1.31	0.44	10	1.10	2.34	0.97	10	
				50--85	1.19	0.50	7	1.05	2.34	0.86	10	
				85--100	1.60	0.54	4	1.55	2.18	1.13	10	
				100--120	1.27	0.25	4	1.22	1.58	0.97	10	
			Manganese (mg/g)	0--35	0.08	0.05	10	0.06	0.18	0.03	10	
				25--60	0.10	0.09	10	0.08	0.30	0.02	10	
				50--85	0.06	0.04	7	0.07	0.30	0.01	10	
				85--100	0.04	0.03	4	0.04	0.07	0.01	10	
				100--120	0.05	0.02	4	0.05	0.07	0.03	10	
			Manganese-total (%)	0--35	0.07	0.03	10	0.05	0.15	0.04	10	
				25--60	0.11	0.07	10	0.12	0.28	0.03	10	
				50--85	0.10	0.05	7	0.12	0.28	0.03	10	
				85--100	0.13	0.05	4	0.13	0.18	0.06	10	
				100--120	0.16	0.07	4	0.16	0.23	0.07	10	
			Nitrogen (%)	0--35	0.40	0.12	10	0.40	0.63	0.23	10	
				25--60	0.19	0.11	10	0.18	0.38	0.02	10	
				50--85	0.08	0.03	7	0.08	0.38	0.02	10	
				85--100	0.04	0.02	4	0.04	0.06	0.02	10	
				100--120	0.03	0.01	4	0.03	0.04	0.01	10	
			Organic matter (%)	0--35	10.51	3.78	10	10.38	16.76	5.32	10	
				25--60	5.30	3.07	10	5.07	10.50	0.44	10	
				50--85	1.54	1.02	7	1.79	10.50	0.06	10	
				85--100	0.93	0.57	4	0.81	1.68	0.43	10	
				100--120	0.56	0.27	4	0.50	0.94	0.31	10	
			pH (H <sub>2</sub> O)	0--35	4.76	0.37	10	4.78	5.32	4.05	10	
				25--60	4.80	0.44	10	4.85	5.37	4.07	10	

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total									
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes	
				50--85	4.87	0.50	7	4.86	5.61	4.07	10		
				85--100	5.02	0.98	4	4.88	6.12	4.18	10		
				100--120	4.97	0.88	4	5.01	5.80	4.04	10		
			Phosphorus (mg/kg)	0--35	31	16	10	29	60	13	10		
				25--60	12	15	10	7	52	1	10		
				50--85	2	1	7	2	52	1	10		
				85--100	1	1	4	1	3	1	10		
				100--120	1	1	4	1	2	1	10		
			Phosphorus-total (%)	0--35	0.04	0.02	10	0.04	0.06	0.01	10		
				25--60	0.03	0.01	10	0.02	0.05	0.01	10		
				50--85	0.02	0.01	7	0.02	0.05	0.01	10		
				85--100	0.02	0.01	4	0.02	0.03	0.01	10		
				100--120	0.02	0.01	4	0.01	0.03	0.01	10		
			Potassium (mg/g)	0--35	0.24	0.08	10	0.27	0.33	0.10	10		
				25--60	0.15	0.06	10	0.16	0.24	0.06	10		
				50--85	0.12	0.06	7	0.14	0.24	0.04	10		
				85--100	0.11	0.05	4	0.10	0.17	0.05	10		
				100--120	0.10	0.06	4	0.09	0.17	0.05	10		
			Sodium (mg/g)	0--35	0.15	0.04	10	0.15	0.21	0.07	10		
				25--60	0.14	0.07	10	0.13	0.25	0.05	10		
				50--85	0.18	0.09	7	0.14	0.30	0.05	10		
				85--100	0.19	0.11	4	0.17	0.33	0.10	10		
				100--120	0.17	0.06	4	0.17	0.23	0.12	10		
Serpentinite	Oxisols	Smf	Bulk density (g/cc)	0--18	1.25		1				11		Nipe
Limestone	Entisols	Smf		0--18	1.52		1				11		St. Lucie
Limestone	Oxisols	Smf		0--18	1.35		1				11		Coto

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Limestone	Ultisols	Smf		0--18	1.29		1				11	Almirante
Sandstone, sillstone	Entisols	Smf		0--18	1.36		1				11	Corcega
Alluvial deposits	Alfisols	Smf		0--18	1.58		1				11	Islote
Alluvial deposits	Ultisols	Smf		0--18	1.76		1				11	Guayabo
Blanket deposits	Ultisols	Smf		0--18	1.05		1				11	Espinosa
Alluvial deposits	Mollisols	Smf		0--18	1.35		1				11	Toa
Blanket deposits	Ultisols	Smf		0--18	1.63		1				11	Sabana Seca
Alluvial deposits	Entisols	Smf		0--18	1.44		1				11	Cataño
Sandstone, sillstone	Entisols	Smf		0--18	1.28		1				11	Piñones
Alluvial deposits	Mollisols	Smf		0--18	1.02		1				11	Colinas
Sandstone, sillstone	Inceptisols	Smf		0--18	1.24		1				11	Malaya
Plutonic rocks	Ultisols	Smf		0--18	1.41		1				11	Jayuya
Tuffaceous sandstone	Entisols	Swf		0--18	1.11		1				11	Fortuna
Lava, tuff	Alfisols	Smf		0--18	1.18		1				11	Cayagua
Alluvial deposits	Alfisols	Smf		0--18	1.96		1				11	Dune
Alluvial deposits	Mollisols	Smf		0--18	0.97		1				11	Ensenada
Blanket deposits	Inceptisols	Smf		0--18	1.13		1				11	Jaucas
Limestone	Vertisols	Sdf		0--18	1.35		1				11	Fraternidad
Tuffaceous sandstone	Mollisols	Smf		0--18	1.26		1				11	Estación
Tuffaceous sandstone	Inceptisols	Smf		0--18	1.28		1				11	Jacana
Tuffaceous sandstone	Ultisols	Smf		0--18	1.16		1				11	Cabo Rojo
Tuffaceous sandstone	Inceptisols	Smf		0--18	1.23		1				11	Lajas
Tuffaceous sandstone	Inceptisols	Smf		0--18	1.45		1				11	Caguas
Alluvial deposits	Entisols	Smf		0--18	1.29		1				11	San Germán
Siltstone, sandstone	Ultisols	Sdf		0--18	1.16		1				11	Alonso
Lava, tuff	Ultisols	Smf		0--18	1.43		1				11	Ciales



Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth								
				(cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Alluvial deposits	Alfisols	Sdf		0--18	1.68		1				11	Machete
Lava, tuff	Inceptisols	Sdf		0--18	1.45		1				11	Vives
Tuffaceous, sandstone	Alfisols	Smf		0--18	1.39		1				11	Via
Serpentinite	Oxisols	Smf	Clay (%)	0--18	27		1				11	Nipe
Limestone	Entisols	Smf		0--18	6		1				11	St. Lucie
Limestone	Oxisols	Smf		0--18	25		1				11	Coto
Limestone	Ultisols	Smf		0--18	40		1				11	Almirante
Sandstone, sillstone	Entisols	Smf		0--18	27		1				11	Córcega
Alluvial deposits	Alfisols	Smf		0--18	6		1				11	Islote
Alluvial deposits	Ultisols	Smf		0--18	21		1				11	Guayabo
Blanket deposits	Ultisols	Smf		0--18	15		1				11	Espinosa
Alluvial deposits	Mollisols	Smf		0--18	25		1				11	Toa
Blanket deposits	Ultisols	Smf		0--18	12		1				11	Sabana Seca
Alluvial deposits	Entisols	Smf		0--18	5		1				11	Cataño
Sandstone, sillstone	Entisols	Smf		0--18	14		1				11	Piñones
Alluvial deposits	Mollisols	Smf		0--18	50		1				11	Colinas
Sandstone, sillstone	Inceptisols	Smf		0--18	67		1				11	Malaya
Plutonic rocks	Ultisols	Smf		0--18	20		1				11	Jayuya
Tuffaceous sandstone	Entisols	Swf		0--18	20		1				11	Fortuna
Lava, tuff	Alfisols	Smf		0--18	23		1				11	Cayagua
Alluvial deposits	Alfisols	Smf		0--18	3		1				11	Dune
Alluvial deposits	Mollisols	Smf		0--18	10		1				11	Ensenada
Blanket deposits	Inceptisols	Smf		0--18	12		1				11	Jaucas
Limestone	Vertisols	Sdf		0--18	29		1				11	Fraternidad
Tuffaceous sandstone	Mollisols	Smf		0--18	24		1				11	Estación
Tuffaceous sandstone	Inceptisols	Smf		0--18	43		1				11	Jacana

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth								
				(cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Tuffaceous sandstone	Ultisols	Smf		0--18	17		1				11	Cabo Rojo
Tuffaceous sandstone	Inceptisols	Smf		0--18	42		1				11	Lajas
Tuffaceous sandstone	Inceptisols	Smf		0--18	39		1				11	Caguas
Alluvial deposits	Entisols	Smf		0--18	24		1				11	San Germán
Siltstone, sandstone	Ultisols	Sdf		0--18	24		1				11	Alonso
Lava, tuff	Ultisols	Smf		0--18	26		1				11	Ciales
Alluvial deposits	Alfisols	Sdf		0--18	26		1				11	Machete
Lava, tuff	Inceptisols	Sdf		0--18	36		1				11	Vives
Tuffaceous, sandstone	Alfisols	Smf		0--18	21		1				11	Via
Serpentinite	Oxisols	Smf	Organic matter (%)	0--18	4.72		1				11	Nipe
Limestone	Entisols	Smf		0--18	0.60		1				11	St. Lucie
Limestone	Oxisols	Smf		0--18	3.59		1				11	Coto
Limestone	Ultisols	Smf		0--18	4.91		1				11	Almirante
Sandstone, sillstone	Entisols	Smf		0--18	3.33		1				11	Córcega
Alluvial deposits	Alfisols	Smf		0--18	1.41		1				11	Islote
Alluvial deposits	Ultisols	Smf		0--18	1.79		1				11	Guayabo
Blanket deposits	Ultisols	Smf		0--18	3.06		1				11	Espinosa
Alluvial deposits	Mollisols	Smf		0--18	2.36		1				11	Toa
Blanket deposits	Ultisols	Smf		0--18	2.30		1				11	Sabana Seca
Alluvial deposits	Entisols	Smf		0--18	2.66		1				11	Cataño
Sandstone, sillstone	Entisols	Smf		0--18	3.54		1				11	Piñones
Alluvial deposits	Mollisols	Smf		0--18	8.09		1				11	Colinas
Sandstone, sillstone	Inceptisols	Smf		0--18	3.65		1				11	Malaya
Plutonic rocks	Ultisols	Smf		0--18	0.76		1				11	Jayuya
Tuffaceous sandstone	Entisols	Swf		0--18	3.34		1				11	Fortuna
Lava, tuff	Alfisols	Smf		0--18	2.91		1				11	Cayagua

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth								
				(cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Alluvial deposits	Alfisols	Smf	pH (H <sub>2</sub> O)	0--18	0.35		1				11	Dune
Alluvial deposits	Mollisols	Smf		0--18	2.10		1				11	Ensenada
Blanket deposits	Inceptisols	Smf		0--18	2.61		1				11	Jaucas
Limestone	Vertisols	Sdf		0--18	4.40		1				11	Fraternidad
Tuffaceous sandstone	Mollisols	Smf		0--18	3.05		1				11	Estación
Tuffaceous sandstone	Inceptisols	Smf		0--18	4.67		1				11	Jacana
Tuffaceous sandstone	Ultisols	Smf		0--18	7.51		1				11	Cabo Rojo
Tuffaceous sandstone	Inceptisols	Smf		0--18	4.60		1				11	Lajas
Tuffaceous sandstone	Inceptisols	Smf		0--18	3.39		1				11	Caguas
Alluvial deposits	Entisols	Smf		0--18	4.61		1				11	San Germán
Siltstone, sandstone	Ultisols	Sdf		0--18	6.42		1				11	Alonso
Lava, tuff	Ultisols	Smf		0--18	2.55		1				11	Ciales
Alluvial deposits	Alfisols	Sdf		0--18	1.31		1				11	Machete
Lava, tuff	Inceptisols	Sdf		0--18	1.81		1				11	Vives
Tuffaceous, sandstone	Alfisols	Smf		0--18	3.09		1				11	Via
Serpentinite	Oxisols	Smf		0--18	5.43		1				11	Nipe
Limestone	Entisols	Smf		0--18	5.65		1				11	St. Lucie
Limestone	Oxisols	Smf		0--18	5.57		1				11	Coto
Limestone	Ultisols	Smf		0--18	5.81		1				11	Almirante
Sandstone, sillstone	Entisols	Smf		0--18	7.70		1				11	Córcega
Alluvial deposits	Alfisols	Smf	0--18	7.87		1				11	Islote	
Alluvial deposits	Ultisols	Smf	0--18	5.15		1				11	Guayabo	
Blanket deposits	Ultisols	Smf	0--18	7.67		1				11	Espinosa	
Alluvial deposits	Mollisols	Smf	0--18	5.64		1				11	Toa	
Blanket deposits	Ultisols	Smf	0--18	6.80		1				11	Sabana Seca	
Alluvial deposits	Entisols	Smf	0--18	8.26		1				11	Cataño	

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth								
				(cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Sandstone, sillstone	Entisols	Smf		0--18	8.14		1				11	Piñones
Alluvial deposits	Mollisols	Smf		0--18	7.26		1				11	Colinas
Sandstone, sillstone	Inceptisols	Smf		0--18	4.35		1				11	Malaya
Plutonic rocks	Ultisols	Smf		0--18	6.03		1				11	Jayuya
Tuffaceous sandstone	Entisols	Swf		0--18	6.87		1				11	Fortuna
Lava, tuff	Alfisols	Smf		0--18	4.73		1				11	Cayagua
Alluvial deposits	Alfisols	Smf		0--18	8.86		1				11	Dune
Alluvial deposits	Mollisols	Smf		0--18	8.23		1				11	Ensenada
Blanket deposits	Inceptisols	Smf		0--18	8.09		1				11	Jaucas
Limestone	Vertisols	Sdf		0--18	7.64		1				11	Fraternidad
Tuffaceous sandstone	Mollisols	Smf		0--18	7.28		1				11	Estación
Tuffaceous sandstone	Inceptisols	Smf		0--18	6.16		1				11	Jacana
Tuffaceous sandstone	Ultisols	Smf		0--18	5.82		1				11	Cabo Rojo
Tuffaceous sandstone	Inceptisols	Smf		0--18	7.21		1				11	Lajas
				0--18	6.28		1				11	Caguas
Alluvial deposits	Entisols	Smf		0--18	6.80		1				11	San Germán
Siltstone, sandstone	Ultisols	Sdf		0--18	7.22		1				11	Alonso
Lava, tuff	Ultisols	Smf		0--18	4.99		1				11	Ciales
Alluvial deposits	Alfisols	Sdf		0--18	5.72		1				11	Machete
Lava, tuff	Inceptisols	Sdf		0--18	7.29		1				11	Vives
Tuffaceous, sandstone	Alfisols	Smf		0--18	5.08		1				11	Via
Serpentinite	Oxisols	Smf	Sand (%)	0--18	36		1				11	Nipe
Limestone	Entisols	Smf		0--18	91		1				11	St. Lucie
Limestone	Oxisols	Smf		0--18	49		1				11	Coto
Limestone	Ultisols	Smf		0--18	32		1				11	Almirante
Sandstone, sillstone	Entisols	Smf		0--18	41		1				11	Córcega

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Alluvial deposits	Alfisols	Smf		0--18	83		1				11	Islote
Alluvial deposits	Ultisols	Smf		0--18	69		1				11	Guayabo
Blanket deposits	Ultisols	Smf		0--18	66		1				11	Espinosa
Alluvial deposits	Mollisols	Smf		0--18	22		1				11	Toa
Blanket deposits	Ultisols	Smf		0--18	74		1				11	Sabana Seca
Alluvial deposits	Entisols	Smf		0--18	86		1				11	Cataño
Sandstone, sillstone	Entisols	Smf		0--18	71		1				11	Piñones
Alluvial deposits	Mollisols	Smf		0--18	18		1				11	Colinas
Sandstone, sillstone	Inceptisols	Smf		0--18	10		1				11	Malaya
Plutonic rocks	Ultisols	Smf		0--18	53		1				11	Jayuya
Tuffaceous sandstone	Entisols	Swf		0--18	22		1				11	Fortuna
Lava, tuff	Alfisols	Smf		0--18	57		1				11	Cayagua
Alluvial deposits	Alfisols	Smf		0--18	97		1				11	Dune
Alluvial deposits	Mollisols	Smf		0--18	80		1				11	Ensenada
Blanket deposits	Inceptisols	Smf		0--18	73		1				11	Jaucas
Limestone	Vertisols	Sdf		0--18	42		1				11	Fraternidad
Tuffaceous sandstone	Mollisols	Smf		0--18	36		1				11	Estación
Tuffaceous sandstone	Inceptisols	Smf		0--18	25		1				11	Jacana
Tuffaceous sandstone	Ultisols	Smf		0--18	51		1				11	Cabo Rojo
Tuffaceous sandstone	Inceptisols	Smf		0--18	24		1				11	Lajas
Tuffaceous sandstone	Inceptisols	Smf		0--18	29		1				11	Caguas
Alluvial deposits	Entisols	Smf		0--18	39		1				11	San Germán
Siltstone, sandstone	Ultisols	Sdf		0--18	34		1				11	Alonso
Lava, tuff	Ultisols	Smf		0--18	52		1				11	Ciales
Alluvial deposits	Alfisols	Sdf		0--18	41		1				11	Machete
Lava, tuff	Inceptisols	Sdf		0--18	34		1				11	Vives

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth								
				(cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Tuffaceous, sandstone	Alfisols	Smf		0--18	43		1				11	Via
Serpentinite	Oxisols	Smf	Silt (%)	0--18	37		1				11	Nipe
Limestone	Entisols	Smf		0--18	3		1				11	St. Lucie
Limestone	Oxisols	Smf		0--18	26		1				11	Coto
Limestone	Ultisols	Smf		0--18	28		1				11	Almirante
Sandstone, sillstone	Entisols	Smf		0--18	31		1				11	Córcega
Alluvial deposits	Alfisols	Smf		0--18	11		1				11	Islote
Alluvial deposits	Ultisols	Smf		0--18	10		1				11	Guayabo
Blanket deposits	Ultisols	Smf		0--18	19		1				11	Espinosa
Alluvial deposits	Mollisols	Smf		0--18	53		1				11	Toa
Blanket deposits	Ultisols	Smf		0--18	15		1				11	Sabana Seca
Alluvial deposits	Entisols	Smf		0--18	9		1				11	Cataño
Sandstone, sillstone	Entisols	Smf		0--18	15		1				11	Piñones
Alluvial deposits	Mollisols	Smf		0--18	32		1				11	Colinas
Sandstone, sillstone	Inceptisols	Smf		0--18	23		1				11	Malaya
Plutonic rocks	Ultisols	Smf		0--18	28		1				11	Jayuya
Tuffaceous sandstone	Entisols	Swf		0--18	58		1				11	Fortuna
Lava, tuff	Alfisols	Smf		0--18	20		1				11	Cayagua
Alluvial deposits	Alfisols	Smf		0--18	0		1				11	Dune
Alluvial deposits	Mollisols	Smf		0--18	11		1				11	Ensenada
Blanket deposits	Inceptisols	Smf		0--18	15		1				11	Jaucas
Limestone	Vertisols	Sdf		0--18	29		1				11	Fraternidad
Tuffaceous sandstone	Mollisols	Smf		0--18	40		1				11	Estación
Tuffaceous sandstone	Inceptisols	Smf		0--18	32		1				11	Jacana
Tuffaceous sandstone	Ultisols	Smf		0--18	32		1				11	Cabo Rojo
Tuffaceous sandstone	Inceptisols	Smf		0--18	34		1				11	Lajas

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Tuffaceous sandstone	Inceptisols	Smf		0--18	33		1				11	Caguas
Alluvial deposits	Entisols	Smf		0--18	37		1				11	San Germán
Siltstone, sandstone	Ultisols	Sdf		0--18	42		1				11	Alonso
Lava, tuff	Ultisols	Smf		0--18	23		1				11	Ciales
Alluvial deposits	Alfisols	Sdf		0--18	33		1				11	Machete
Lava, tuff	Inceptisols	Sdf		0--18	30		1				11	Vives
Tuffaceous, sandstone	Alfisols	Smf		0--18	35		1				11	Via
Tuffaceous, sandstone	Ultisols	Swf	Aluminum (cmol/kg <sup>-1</sup> )	0--10	0.30	0.21	48	0.25	0.82	0.02	12	Landslide
			Calcium (mg/g)	0--10	0.83	0.45	48	0.79	1.51	0.05	12	Landslide
			ECEC (cmol/kg <sup>-1</sup> )	0--10	9.08	3.76	48	9.82	14.85	1.30	12	Landslide
			Iron (mg/g)	0--10	0.18	0.12	48	0.14	0.65	0.06	12	Landslide
			Magnesium (mg/g)	0--10	0.48	0.23	48	0.50	0.86	0.02	12	Landslide
			Manganese (mg/g)	0--10	0.21	0.11	48	0.20	0.52	0.04	12	Landslide
			Phosphorus (mg/kg)	0--10	9	8	48	6	39	1	12	Landslide
			Potassium (mg/g)	0--10	0.13	0.09	48	0.10	0.43	0.03	12	Landslide
			Sodium (mg/g)	0--10	0.08	0.03	48	0.08	0.15	0.04	12	Landslide
Swamps	Inceptisols	Smf	Bulk density (g/cc)	0--7.6	1.33	0.32	2	1.33	1.56	1.11	13	Humacao
Swamps	Ultisols	Smf		0--7.6	0.96		1				13	Cienaga Alta
Tuffaceous sandstone	Ultisols	Swf		0--7.6	1.12		1				13	El Verde
Tuffaceous sandstone	Ultisols	Lmwf		0--7.6	1.21		1				13	Villalba
				0--7.6	0.93		1				13	Lares
Sandstone, sillstone	Ultisols	Swf		0--7.6	1.29		1				13	San Sebastián
Plutonic rocks	Ultisols	Smf		0--7.6	0.69		1				13	Jayuya
Limestone	Mollisols	Smf		0--7.6	0.70		1				13	Rio Abajo
Swamps	Inceptisols	Smf	Clay (%)	0--7.6	29	12	2	29	37	20	13	Humacao
Swamps	Ultisols	Lmrf		0--7.6	35		1				13	Cienaga Alta

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Tuffaceous sandstone	Ultisols	Swf		0--7.6	50		1				13	El verde
Tuffaceous sandstone	Ultisols	Lmwf		0--7.6	42	19	2	42	56	29	13	Villalba
				0--7.6	47		1				13	Lares
Sandstone, sillstone	Ultisols	Swf		0--7.6	29		1				13	San Sebastián
Plutonic rocks	Ultisols	Smf		0--7.6	68		1				13	Jayuya
Limestone	Mollisols	Smf		0--7.6	60		1				13	Rio Abajo
Swamps	Inceptisols	Smf	Loss on ignition (%)	0--7.6	8.07	2.88	2	8.07	10.10	6.03	13	Humacao
Swamps	Ultisols	Lmrf		0--7.6	18.54		1				13	Cienaga Alta
Tuffaceous sandstone	Ultisols	Swf		0--7.6	12.58		1				13	El Verde
Tuffaceous sandstone	Ultisols	Lmwf		0--7.6	10.15	4.50	2	10.15	13.33	6.96	13	Villalba
				0--7.6	7.36		1				13	Lares
Sandstone, sillstone	Ultisols	Swf		0--7.6	11.57		1				13	San Sebastián
Plutonic rocks	Ultisols	Smf		0--7.6	18.87		1				13	Jayuya
Limestone	Mollisols	Smf		0--7.6	12.69		1				13	Rio Abajo
Swamps	Inceptisols	Smf	Organic matter (%)	0--7.6	5.08	2.05	2	5.08	6.53	3.63	13	Humacao
Swamps	Ultisols	Lmrf		0--7.6	7.39		1				13	Cienaga Alta
Tuffaceous sandstone	Ultisols	Swf		0--7.6	6.33		1				13	El Verde
Tuffaceous sandstone	Ultisols	Lmwf		0--7.6	6.17	2.40	2	6.17	7.86	4.47	13	Villalba
Tuffaceous sandstone	Ultisols	Lmwf		0--7.6	4.50		1				13	Lares
Sandstone, sillstone	Ultisols	Swf		0--7.6	7.40		1				13	San Sebastián
Plutonic rocks	Ultisols	Smf		0--7.6	11.09		1				13	Jayuya
Limestone	Mollisols	Smf		0--7.6	6.04		1				13	Rio Abajo
Swamps	Inceptisols	Smf	pH (H <sub>2</sub> O)	0--7.6	5.50	0.14	2	5.50	5.60	5.40	13	Humacao
Swamps	Ultisols	Lmrf		0--7.6	5.14		1				13	Cienaga Alta
Tuffaceous sandstone	Ultisols	Swf		0--7.6	5.16		1				13	El Verde
Tuffaceous sandstone	Ultisols	Lmwf		0--7.6	7.00	0.75	2	7.00	7.53	6.47	13	Villalba



Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Tuffaceous sandstone	Ultisols	Lmwf		0--7.6	4.40		1				13	Lares
Sandstone, sillstone	Ultisols	Swf		0--7.6	6.60		1				13	San Sebastián
Plutonic rocks	Ultisols	Smf		0--7.6	4.30		1				13	Jayuya
Limestone	Mollisols	Smf		0--7.6	5.07		1				13	Rio Abajo
Swamps	Inceptisols	Smf	Phosphorus (mg/kg)	0--7.6	9	6	2	9	13	4	13	Humacao
Swamps	Ultisols	Lmrf		0--7.6	4		1				13	Cienaga Alta
Tuffaceous sandstone	Ultisols	Swf		0--7.6	2		1				13	El Verde
Tuffaceoussandstone	Ultisols	Lmwf		0--7.6	28	17	2	28	41	16	13	Villalba
				0--7.6	7		1				13	Lares
Sandstone, sillstone	Ultisols	Swf		0--7.6	8		1				13	San Sebastián
Plutonic rocks	Ultisols	Smf		0--7.6	4		1				13	Jayuya
Limestone	Mollisols	Smf		0--7.6	5		1				13	Rio Abajo
Swamps	Inceptisols	Smf	Phosphorus-total (%)	0--7.6	0.03	0.01	2	0.03	0.04	0.03	13	Humacao
Swamps	Ultisols	Lmrf		0--7.6	0.07		1				13	Cienaga Alta
Tuffaceous sandstone	Ultisols	Swf		0--7.6	0.04		1				13	El Verde
Tuffaceous sandstone	Ultisols	Lmwf		0--7.6	0.07	0.00	2	0.07	0.08	0.07	13	Villalba
Tuffaceous sandstone	Ultisols	Lmwf		0--7.6	0.03		1				13	Lares
Sandstone, sillstone	Ultisols	Swf		0--7.6	0.03		1				13	San Sebastián
Plutonic rocks	Ultisols	Smf		0--7.6	0.09		1				13	Jayuya
Limestone	Mollisols	Smf		0--7.6	0.05		1				13	Rio Abajo
Swamps	Inceptisols	Smf	Sand (%)	0--7.6	41	4	2	41	44	38	13	Humacao
Swamps	Ultisols	Lmrf		0--7.6	41		1				13	Cienaga Alta
Tuffaceous sandstone	Ultisols	Swf		0--7.6	26		1				13	El Verde
Tuffaceous sandstone	Ultisols	Lmwf		0--7.6	35	22	2	35	51	20	13	Villalba
Tuffaceous sandstone	Ultisols	Lmwf		0--7.6	27		1				13	Lares
Sandstone, sillstone	Ultisols	Swf		0--7.6	27		1				13	San Sebastián

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth								
				(cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Plutonic rocks	Ultisols	Smf		0--7.6	12		1				13	Jayuya
Limestone	Mollisols	Smf		0--7.6	14		1				13	Rio Abajo
Swamps	Inceptisols	Smf	Silt (%)	0--7.6	30	8	2	30	36	25	13	Humacao
Swamps	Ultisols	Lmrf		0--7.6	25		1				13	Cienaga Alta
Tuffaceous sandstone	Ultisols	Swf		0--7.6	25		1				13	El Verde
Tuffaceous sandstone	Ultisols	Lmwf		0--7.6	22	3	2	22	24	20	13	Villalba
Tuffaceous sandstone	Ultisols	Lmwf		0--7.6	26		1				13	Lares
Sandstone, sillstone	Ultisols	Swf		0--7.6	44		1				13	San Sebastián
Plutonic rocks	Ultisols	Smf		0--7.6	20		1				13	Jayuya
Limestone	Mollisols	Smf		0--7.6	26		1				13	Rlo Abajo
Limestone	Ultisols	Smf	Aluminum (cmol/kg <sup>-1</sup> )	0-12	0.21	0.04	3	0.23	0.24	0.16	14	Guajataca Forest
Blanket deposits	Alfisols	Smf		0-30	0.12		1				14	Cambalache Forest
Alluvial deposits	Vertisols	Sdf		0-30	0.06		1				14	Fort Allen, Juana Díaz
Limestone	Ultisols	Smf		0-30	0.08	0.05	8	0.07	0.14	0.04	14	Guajataca Forest
Alluvial deposits	Mollisols	Sdf		0-30	0.11		1				14	Guánica Forest
Swamps	Mollisols	Sdf		0-30	0.13	0.02	2	0.13	0.14	0.11	14	Guayanilla forest
Limestone	Ultisols	Swf		0-30	0.17		1				14	Rio Abajo forest
Tuffaceous sandstone	Ultisols	Smf		0-30	0.11	0.01	3	0.11	0.12	0.10	14	Susua Forest
Sandstone, sillstone	Alfisols	Smf		0-30	0.09		1				14	Vieques
Limestone	Ultisols	Smf	Calcium (mg/g)	0-12	6.56	3.32	3	5.09	10.36	4.23	14	Guajataca Forest
Blanket deposits	Alfisols	Smf		0-30	2.50		1				14	Cambalache Forest
Alluvial deposits	Vertisols	Sdf		0-30	4.16		1				14	Fort Allen, Juana Díaz
Limestone	Ultisols	Smf		0-30	4.88	1.63	8	4.92	6.97	2.62	14	Guajataca Forest
Alluvial deposits	Mollisols	Sdf		0-30	5.14		1				14	Guánica Forest
Swamps	Mollisols	Sdf		0-30	9.18	0.72	2	9.18	9.69	8.67	14	Guayanilla Forest

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Limestone	Ultisols	Swf		0-30	10.99		1				14	Rio Abajo Forest
Tuffaceous sandstone	Ultisols	Smf		0-30	1.27	0.29	3	1.43	1.44	0.94	14	Susua Forest
Sandstone, sillstone	Alfisols	Smf		0-30	1.18		1				14	Vieques
Limestone	Ultisols	Smf	Clay (%)	0-12	18	12	3	18	31	7	14	Guajataca Forest
Blanket deposits	Alfisols	Smf		0-30	23		1				14	Cambalache Forest
Alluvial deposits	Vertisols	Sdf		0-30	40		1				14	Fon Allen, Juana Díaz
Limestone	Ultisols	Smf		0-30	38	20	8	38	73	8	14	Guajataca Forest
Alluvial deposits	Mollisols	Sdf		0-30	5		1				14	Guánica Forest
Swamps	Mollisols	Sdf		0-30	34	39	2	34	61	7	14	Guayanilla Forest
Lava, tuff	Ultisols	Swf		0-30	18		1				14	Rio Abajo Forest
Tuffaceous sandstone	Ultisols	Smf		0-30	53	19	3	62	66	31	14	Susua Forest
Sandstone, sillstone	Alfisols	Smf		0-30	23		1				14	Vieques
Limestone	Ultisols	Smf	ECEC (cmol/kg <sup>-1</sup> )	0-12	38.49	18.68	3	30.39	59.85	25.24	14	Guajataca Forest
Blanket deposits	Alfisols	Smf		0-30	14.98		1				14	Cambalache Forest
Alluvial deposits	Vertisols	Sdf		0-30	38.44		1				14	Fort Allen, Juana Díaz
Limestone	Ultisols	Smf		0-30	32.26	13.58	8	39.67	40.51	16.59	14	Guajataca Forest
Alluvial deposits	Mollisols	Sdf		0-30	28.95		1				14	Guánica Forest
Swamps	Mollisols	Sdf		0-30	60.89	7.11	2	60.89	65.91	55.86	14	Guayanilla Forest
Limestone	Ultisols	Swf		0-30	58.16		1				14	Rio Abajo Forest
Tuffaceous sandstone	Ultisols	Smf		0-30	54.60	20.53	3	63.19	69.44	31.17	14	Susua Forest
Sandstone, sillstone	Alfisols	Smf		0-30	9.29		1				14	Vieques
Limestone	Ultisols	Smf	Iron (mg/g)	0-12	0.10	0.12	3	0.06	0.24	0.01	14	Guajataca Forest
Blanketdeposits	Alfisols	Smf		0-30	0.16		1				14	Cambalache Forest
Alluvial deposits	Vertisols	Sdf		0-30	0.01		1				14	Fort Allen, Juana Díaz
Limestone	Ultisols	Smf		0-30	0.14	0.12	8	0.09	0.39	0.03	14	Guajataca Forest
Alluvial deposits	Mollisols	Sdf		0-30	0.02		1				14	Guánica Forest

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Swamps	Mollisols	Sdf		0-30	0.05	0.06	2	0.05	0.09	0.01	14	Guayanilla Forest
Limestone	Ultisols	Swf		0-30	0.04		1				14	Rio Abajo Forest
Tuffaceous sandstone	Ultisols	Smf		0-30	0.16	0.01	3	0.16	0.17	0.15	14	Susua Forest
Sandstone, sillstone	Alfisols	Smf		0-30	0.20		1				14	Vieques
Limestone	Ultisols	Smf	Magnesium (mg/g)	0-12	0.53	0.21	3	0.45	0.77	0.36	14	Guajataca Forest
Blanket deposits	Alfisols	Smf		0-30	0.23		1				14	Cambalache Forest
Alluvial deposits	Vertisols	Sdf		0-30	1.71		1				14	Fort Allen, Juana Díaz
Limestone	Ultisols	Smf		0-30	0.30	0.17	8	0.33	0.54	0.12	14	Guajataca Forest
Alluvial deposits	Mollisols	Sdf		0-30	0.25		1				14	Guánica Forest
Swamps	Mollisols	Sdf		0-30	1.59	1.32	2	1.59	2.52	0.65	14	Guayanilla Forest
Limestone	Ultisols	Swf		0-30	0.24		1				14	Rio Abajo Forest
Tuffaceous sandstone	Ultisols	Smf		0-30	5.71	2.56	3	6.64	7.68	2.81	14	Susua Forest
Sandstone, sillstone	Alfisols	Smf		0-30	0.28		1				14	Vieques
Limestone	Ultisols	Smf	Manganese (mg/g)	0-12	0.21	0.11	3	0.22	0.31	0.09	14	Guajataca Forest
Blanket deposits	Alfisols	Smf		0-30	0.35		1				14	Cambalache Forest
Alluvial deposits	Vertisols	Sdf		0-30	0.04		1				14	Fort Allen, Juana Díaz
Limestone	Ultisols	Smf		0-30	0.09	0.05	8	0.09	0.17	0.01	14	Guajataca Forest
Limestone	Ultisols	Smf		0-30	0.05		1				14	Guajataca Forest
Swamps	Mollisols	Sdf		0-30	0.07	0.00	2	0.07	0.07	0.07	14	Guayanilla Forest
Limestone	Ultisols	Swf		0-30	0.03		1				14	Rio Abajo Forest
Tuffaceous sandstone	Ultisols	Smf		0-30	0.13	0.03	3	0.15	0.15	0.10	14	Susua Forest
Sandstone, sillstone	Alfisols	Smf		0-30	0.10		1				14	Vieques
Limestone	Ultisols	Smf	Organic matter (%)	0-12	14.76	5.43	3	12.14	21.01	11.14	14	Guajataca Forest
Blanket deposits	Alfisols	Smf		0-30	5.01		1				14	Cambalache Forest
Alluvial deposits	Vertisols	Sdf		0-30	3.14		1				14	Fort Allen, Juana Díaz
Limestone	Ultisols	Smf		0-30	6.62	1.40	8	6.43	8.74	5.00	14	Guajataca Forest

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Limestone	Ultisols	Smf		0-30	5.82		1				14	Guajataca Forest
Swamps	Mollisols	Sdf		0-30	5.70	0.93	2	5.70	6.36	5.04	14	Guayanilla Forest
Limestone	Ultisols	Swf		0-30	16.73		1				14	Rio Abajo Forest
Tuffaceous sandstone	Ultisols	Smf		0-30	5.10	1.11	3	5.19	6.17	3.95	14	Susua Forest
Sandstone, sillstone	Alfisols	Smf		0-30	2.10		1				14	Vieques
Limestone	Ultisols	Smf	pH (H <sub>2</sub> O)	0-12	6.23	0.72	3	6.61	6.69	5.40	14	Guajataca Forest
Blanket deposits	Alfisols	Smf		0-30	6.13		1				14	Cambalache Forest
Alluvial deposits	Vertisols	Sdf		0-30	8.05		1				14	Fon Allen, Juana Díaz
Limestone	Ultisols	Smf		0-30	6.57	0.72	8	6.59	7.80	5.40	14	Guajataca Forest
Alluvial deposits	Mollisols	Sdf		0-30	7.86		1				14	Guánica Forest
Swamps	Mollisols	Sdf		0-30	6.89	1.06	2	6.89	7.64	6.14	14	Guayanilla Forest
Lava, tuff	Ultisols	Swf		0-30	7.02		1				14	Rio Abajo Forest
Tuffaceous sandstone	Ultisols	Smf		0-30	6.20	0.05	3	6.22	6.23	6.14	14	Susua Forest
Sandstone, sillstone	Alfisols	Smf		0-30	5.89		1				14	Vieques
Limestone	Ultisols	Smf	pH (KCl)	0-12	5.58	0.81	3	6.00	6.09	4.65	14	Guajataca Forest
Blanket deposits	Alfisols	Smf		0-30	5.71		1				14	Cambalache Forest
Alluvial deposits	Vertisols	Sdf		0-30	6.99		1				14	Fort Allen, Juana Díaz
Limestone	Ultisols	Smf		0-30	5.93	0.71	8	5.93	7.13	4.79	14	Guajataca Forest
Alluvial deposits	Mollisols	Sdf		0-30	7.36		1				14	Guánica Forest
Swamps	Mollisols	Sdf		0-30	6.10	1.16	2	6.10	6.92	5.28	14	Guayanilla Forest
Lava, tuff	Ultisols	Swf		0-30	6.35		1				14	Rio Abajo Forest
Tuffaceous sandstone	Ultisols	Smf		0-30	5.25	0.15	3	5.3	5.37	5.09	14	Susua Forest
Sandstone, sillstone	Alfisols	Smf		0-30	4.69		1				14	Vieques
Limestone	Ultisols	Smf	Phosphorus (mg/kg)	0-12	48	6	3	47	54	43	14	Guajataca Forest
Blanket deposits	Alfisols	Smf		0-30	38		1				14	Cambalache Forest
Alluvial deposits	Vertisols	Sdf		0-30	63		1				14	Fort Allen, Juana Díaz

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth								
				(cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Limestone	Ultisols	Smf		0-30	48	12	8	49	71	29	14	Guajataca Forest
Alluvial deposits	Mollisols	Sdf		0-30	48		1				14	Guánica Forest
Swamps	Mollisols	Sdf		0-30	58	3	2	58	60	56	14	Guayanilla Forest
Limestone	Ultisols	Swf		0-30	95		1				14	Rio Abajo Forest
Tuffaceous sandstone	Ultisols	Smf		0-30	21	5	3	21	26	16	14	Susua Forest
Sandstone, sillstone	Alfisols	Smf		0-30	39		1				14	Vieques
Limestone	Ultisols	Smf	Potassium (mg/g)	0-12	0.15	0.06	3	0.14	0.21	0.10	14	Guajataca Forest
Blanket deposits	Alfisols	Smf		0-30	0.08		1				14	Cambalache Forest
Alluvial deposits	Vertisols	Sdf		0-30	0.42		1				14	Fort Allen, Juana Díaz
Limestone	Ultisols	Smf		0-30	0.14	0.08	8	0.12	0.32	0.09	14	Guajataca Forest
Alluvial deposits	Mollisols	Sdf		0-30	0.27		1				14	Guánica Forest
Swamps	Mollisols	Sdf		0-30	0.46	0.18	2	0.46	0.59	0.33	14	Guayanilla forest
Limestone	Ultisols	Swf		0-30	0.21		1				14	Rio Abajo Forest
Tuffaceous sandstone	Ultisols	Smf		0-30	0.12	0.04	3	0.11	0.16	0.09	14	Susua Forest
Sandstone, sillstone	Alfisols	Smf		0-30	0.15		1				14	Vieques
Limestone	Ultisols	Smf	Sand (%)	0-12	43	2	3	43	45	42	14	Guajataca Forest
Blanket deposits	Alfisols	Smf		0-30	46		1				14	Cambalache Forest
Alluvial deposits	Vertisols	Sdf		0-30	22		1				14	Fon Allen, Juana Díaz
Limestone	Ultisols	Smf		0-30	24	11	8	25	35	3	14	Guajataca Forest
Alluvial deposits	Mollisols	Sdf		0-30	27		1				14	Guánica Forest
Swamps	Mollisols	Sdf		0-30	19	8	2	19	25	14	14	Guayanilla Forest
Lava, tuff	Ultisols	Swf		0-30	59		1				14	Rio Abajo Forest
Tuffaceous sandstone	Ultisols	Smf		0-30	24	22	3	13	49	9	14	Susua Forest
Sandstone, sillstone	Alfisols	Smf		0-30	61		1				14	Vieques
Limestone	Ultisols	Smf	Silt (%)	0-12	38	14	3	40	51	24	14	Guajataca Forest
Blanket deposits	Alfisols	Smf		0-30	30		1				14	Cambalache Forest

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total											
Geology and parent material	Soil order	Life zone	Element	Depth		n	Median	Max	Min	Source	Site/notes
				(cm)	Mean						
Alluvial deposits	Vertisols	Sdf		0-30	38	1				14	Fon Allen, Juana Díaz
Limestone	Ultisols	Smf		0-30	39	8	39	77	23	14	Guajataca Forest
Alluvial deposits	Mollisols	Sdf		0-30	68	1				14	Guánica Forest
Swamps	Mollisols	Sdf		0-30	47	2	47	68	25	14	Guayanilla Forest
Lava, tuff	Ultisols	Swf		0-30	23	1				14	Rio Abajo Forest
Tuffaceous sandstone	Ultisols	Smf		0-30	23	3	25	25	20	14	Susua Forest
Sandstone, sillstone	Alfisols	Smf		0-30	17	1				14	Vieques
Limestone	Ultisols	Smf	Sodium (mg/g)	0-12	0.17	3	0.16	0.21	0.14	14	Guajataca Forest
Blanket deposits	Alfisols	Smf		0-30	0.06	1				14	Cambalache Forest
Alluvial deposits	Vertisols	Sdf		0-30	0.52	1				14	Fort Allen, Juana Díaz
Limestone	Ultisols	Smf		0-30	0.11	8	0.12	0.17	0.05	14	Guajataca Forest
Limestone	Ultisols	Smf		0-30	0.08	1				14	Guajataca Forest
Swamps	Mollisols	Sdf		0-30	0.12	2	0.12	0.16	0.07	14	Guayanilla Forest
Limestone	Ultisols	Swf		0-30	0.11	1				14	Rio Abajo Forest
Tuffaceous sandstone	Ultisols	Smf		0-30	0.10	3	0.11	0.12	0.08	14	Susua Forest
Sandstone, sillstone	Alfisols	Smf		0-30	0.13	1				14	Vieques
Tuffaceous sandstone	Ultisols	Lmrf	Aluminum (cmol/kg <sup>-1</sup> )	0-10	1.35	3	1.12	1.91	1.01	15	TR-1
				0-15	0.51	2	0.51	0.85	0.16	15	Young Secondary Forest
				15-30	1.68	2	1.68	3.30	0.06	15	Young Secondary Forest
				30-35	1.85	3	1.82	3.18	0.55	15	TR1
				30-50	1.09	2	1.09	2.07	0.10	15	Young Secondary Forest
				50-75	2.18	3	2.12	3.18	1.23	15	TR-1
			Bulk density (g/cc)	0-10	0.73	3	0.65	0.90	0.63	15	TR-1
				0-15	0.64	2	0.64	0.67	0.60	15	Young Secondary Forest
				15-30	0.56	2	0.56	0.70	0.41	15	Young Secondary Forest
				30-35	0.91	3	0.81	1.20	0.73	15	TR1

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				30-50	0.84	0.27	2	0.84	1.03	0.65	15	Young Secondary Forest
				50-75	1.01	0.00	3	1.03	1.04	0.96	15	TR-I
			Calcium (mg/g)	0-10	0.16	0.04	3	0.17	0.19	0.11	15	TR-I
				0-15	0.92	1.00	2	0.92	1.63	0.22	15	Young Secondary Forest
				15-30	1.52	0.27	2	1.52	1.71	1.33	15	Young Secondary Forest
				30-35	0.06	0.03	3	0.06	0.09	0.02	15	TR-I
				30-50	0.85	0.83	2	0.85	1.44	0.26	15	Young Secondary Forest
				50-75	0.11	0.10	3	0.07	0.23	0.03	15	TR-I
			Clay (%)	0-10	34	9	3	36	42	25	15	TR-I
				0-15	38	1	2	38	38	37	15	Young Secondary Forest
				15-30	41	23	2	41	57	25	15	Young Secondary Forest
				30-35	25	1	3	25	26	24	15	TR-I
				30-50	45	25	2	45	63	27	15	Young Secondary Forest
				50-75	27	7	3	25	34	21	15	TR-I
			ECEC (cmol/kg <sup>-1</sup> )	0-10	3.02	0.31	3	3.12	3.27	2.68	15	TR-I
				0-15	12.26	10.15	2	12.26	19.44	5.08	15	Young Secondary Forest
				15-30	19.38	4.96	2	19.38	22.88	15.87	15	Young Secondary Forest
				30-35	2.70	0.92	3	2.83	3.54	1.72	15	TR-I
				30-50	12.31	9.41	2	12.31	18.96	5.65	15	Young Secondary Forest
				50-75	3.52	0.48	3	3.65	3.93	2.99	15	TR-I
			Iron (mg/g)	0-10	1.23	0.11	3	1.29	1.29	1.10	15	TR-I
				0-15	1.40	0.45	2	1.40	1.71	1.08	15	Young Secondary Forest
				15-30	0.19	0.14	2	0.19	0.30	0.09	15	Young Secondary Forest
				30-35	0.44	0.47	3	0.19	0.98	0.15	15	TR-I
				30-50	0.14	0.12	2	0.14	0.23	0.06	15	Young Secondary Forest
				50-75	0.11	0.05	3	0.09	0.17	0.07	15	TR-I



Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Magnesium (mg/g)	0-10	0.07	0.03	3	0.06	0.11	0.05	15	TR-1
				0-15	0.58	0.65	2	0.58	1.04	0.12	15	Young Secondary Forest
				15-30	1.11	0.20	2	1.11	1.25	0.96	15	Young Secondary Forest
				30-35	0.05	0.03	3	0.05	0.07	0.01	15	TR1
				30-50	0.74	0.79	2	0.74	1.30	0.18	15	Young Secondary Forest
				50-75	0.08	0.07	3	0.05	0.16	0.02	15	TR-1
			Manganese (mg/kg)	0-10	12	7	3	10	20	6	15	TR-1
				0-15	196	49	2	196	230	161	15	Young Secondary Forest
				15-30	45	35	2	45	70	20	15	Young Secondary Forest
				30-35	6	8	3	2	15	2	15	TR1
				30-50	41	20	2	41	20	27	15	Young Secondary Forest
				50-75	10	7	3	7	17	4	15	TR-1
			Organic matter (%)	0-10	3.14	0.12	3	3.08	3.28	3.06	15	TR-1
				0-15	8.21	0.03	2	8.21	8.23	8.19	15	Young Secondary Forest
				15-30	1.60	1.10	2	1.60	2.37	0.82	15	Young Secondary Forest
				30-35	1.59	1.29	3	1.18	3.04	0.55	15	TR1
				30-50	1.29	0.60	2	1.29	1.71	0.86	15	Young Secondary Forest
				50-75	0.48	0.13	3	0.48	0.61	0.36	15	TR-1
			pH (H <sub>2</sub> O)	0-10	4.80	0.36	3	4.90	5.10	4.40	15	TR-1
				0-15	5.30	0.42	2	5.30	5.60	5.00	15	Young Secondary Forest
				15-30	5.50	0.28	2	5.50	5.70	5.30	15	Young Secondary Forest
				30-35	4.83	0.21	3	4.90	5.00	4.60	15	TR1
				30-50	5.70	0.00	2	5.70	5.70	5.70	15	Young Secondary Forest
				50-75	5.00	0.10	3	5.00	5.10	4.90	15	TR-1
			pH (KCl)	0-10	3.83	0.15	3	3.80	4.00	3.70	15	TR-1
				0-15	4.45	0.35	2	4.45	4.70	4.20	15	Young Secondary Forest

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				15-30	4.20	0.57	2	4.20	4.60	3.80	15	Young Secondary Forest
				30-35	3.87	0.21	3	3.80	4.10	3.70	15	TR1
				30-50	4.15	0.49	2	4.15	4.50	3.80	15	Young Secondary Forest
				50-75	3.87	0.06	3	3.90	3.90	3.80	15	TR-1
			Phosphorus (mg/kg)	0-10	10	2	3	10	12	8	15	TR-1
				0-15	36	1	2	36	37	35	15	Young Secondary Forest
				15-30	9	4	2	9	12	6	15	Young Secondary Forest
				30-35	4	3	3	2	7	2	15	TR1
				30-50	8	2	2	8	10	7	15	Young Secondary Forest
				50-75	1	1	3	2	2	0	15	TR-1
			Potassium (mg/kg)	0-10	53	11	3	56	62	40	15	TR-1
				0-15	688	231	2	688	851	524	15	Young Secondary Forest
				15-30	166	114	2	166	247	85	15	Young Secondary Forest
				30-35	22	25	3	10	50	5	15	TR1
				30-50	98	6	2	98	102	94	15	Young Secondary Forest
				50-75	7	2	3	7	10	5	15	TR-1
			Sand (%)	0-10	54	7	3	51	62	49	15	TR-1
				0-15	16	3	2	16	18	14	15	Young Secondary Forest
				15-30	10	3	2	10	12	8	15	Young Secondary Forest
				30-35	45	6	3	46	51	39	15	TR1
				30-50	13	9	2	13	19	6	15	Young Secondary Forest
				50-75	41	7	3	41	47	34	15	TR-1
			Silt (%)	0-10	12	2	3	13	13	9	15	TR-1
				0-15	49	20	2	49	63	35	15	Young Secondary Forest
				15-30	49	20	2	49	63	35	15	Young secondary forest
				30-35	30	7	3	29	37	23	15	TR1

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total													
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes	
Serpentinite	Ultisols	Lmrf	Sodium (mg/kg)	30-50	43	16	2	43	54	31	15	Young secondary forest	
				50-75	33	1	3	32	34	32	15	TR-1	
				0-10	30	10	3	40	40	20	15	TR-1	
				0-15	130	30	2	130	150	110	15	Young secondary forest	
				15-30	110	10	2	110	120	100	15	Young secondary forest	
				30-35	30	10	3	30	40	30	15	TR1	
				30-50	130	20	2	130	140	110	15	Young secondary forest	
				50-75	40	20	3	30	60	30	15	TR-1	
			Clay (%)	0-10	24	6	6	24	31	16	16	Forest Keeper/H	
				0-10	20	5	6	20	27	14	16	Mototrola Tower	
				10--20	27	11	6	24	46	15	16	Forest Keeper/H	
				10--20	19	8	6	18	31	10	16	Mototrola Tower	
				20--30	28	9	6	31	39	14	16	Forest Keeper/H	
				20--30	27	6	6	28	32	16	16	Mototrola Tower	
				30-40	31	9	6	29	48	21	16	Forest Keeper/H	
				30-40	27	5	6	27	34	19	16	Mototrola Tower	
				Organic matter (%)	0-10	7.33	0.50	6	7.30	8.10	6.68	16	Forest Keeper/H
					0-10	8.88	1.77	6	8.87	11.25	6.07	16	Mototrola Tower
					10--20	6.12	1.40	6	6.08	8.01	4.72	16	Forest Keeper/H
					10--20	6.31	0.69	6	6.01	7.19	5.55	16	Mototrola Tower
20--30	4.63	1.14	6		4.82	6.01	2.96	16	Forest Keeper/H				
20--30	4.71	0.90	6		4.78	5.97	3.20	16	Mototrola Tower				
30-40	3.82	0.57	6		3.96	4.46	2.93	16	Forest Keeper/H				
30-40	3.99	0.32	6		3.95	4.57	3.62	16	Mototrola Tower				
Sand (%)	0-10	59	7	6	60	67	50	16	Forest Keeper/H				
	0-10	59	7	6	60	67	50	16	Mototrola Tower				

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth								
				(cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Serpentine	Ultisols	Lmrf	Silt (%)	10--20	64	11	6	67	78	50	16	Forest Keeper-I
				10--20	64	11	6	67	78	50	16	Mototrola Tower
				20--30	54	8	6	54	69	47	16	Forest Keeper/H
				20--30	54	8	6	54	69	47	16	Mototrola Tower
				30-40	56	7	6	56	67	45	16	Mototrola Tower
				30--40	56	7	6	56	67	45	16	Forest Keeper/H
				0-10	29	3	6	28	34	26	16	Forest Keeper/H
				0-10	21	4	6	21	26	17	16	Mototrola Tower
				10--20	28	8	6	26	41	19	16	Forest Keeper/H
			10--20	17	5	6	17	25	12	16	Mototrola Tower	
			20--30	24	6	6	23	35	18	16	Forest Keeper/H	
			20--30	19	3	6	19	25	15	16	Mototrola Tower	
			30-40	19	3	6	20	23	14	16	Forest Keeper/H	
			30-40	17	3	6	17	21	14	16	Mototrola Tower	
			0--10	0.13	0.05	22	0.12	0.25	0.06	17	Plantation	
			0--10	0.12	0.04	3	0.13	0.15	0.07	17	Control plot	
			10--20	0.11	0.05	18	0.10	0.20	0.02	17	Plantation	
			10--20	0.10	0.05	3	0.08	0.16	0.07	17	Control plot	
20--30	0.11	0.04	21	0.11	0.18	0.04	17	Plantation				
20--30	0.10	0.04	4	0.08	0.16	0.06	17	Control plot				
30--40	0.11	0.05	18	0.11	0.23	0.03	17	Plantation				
30--40	0.10	0.05	3	0.08	0.15	0.06	17	Control plot				
			Calcium (cmol/kg <sup>-1</sup> )	0--10	7.80	2.14	22	7.89	13.03	3.84	17	Plantation
				0--10	5.82	1.53	3	5.06	7.58	4.82	17	Control plot
				10--20	7.89	1.84	18	7.74	10.67	3.98	17	Plantation
				10--20	5.72	1.65	3	5.32	7.54	4.31	17	Control plot

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Calcium (mg/g)	20--30	7.26	2.47	21	7.43	13.67	3.72	17	Plantation
				20--30	5.39	1.01	4	5.05	6.87	4.59	17	Control plot
				30--40	6.87	2.18	18	7.15	10.66	3.46	17	Plantation
				30--40	4.79	1.50	3	4.09	6.51	3.77	17	Control plot
				0--10	1.56	0.43	22	1.58	2.61	0.77	17	Plantation
				0--10	1.16	0.31	3	1.01	1.52	0.96	17	Control plot
				10--20	1.58	0.37	18	1.55	2.13	0.80	17	Plantation
				10--20	1.15	0.33	3	1.06	1.51	0.86	17	Control plot
				20--30	1.45	0.49	21	1.49	2.73	0.74	17	Plantation
				20--30	1.08	0.20	4	1.01	1.37	0.92	17	Control plot
			ECEC (cmol/kg <sup>-1</sup> )	30--40	1.37	0.44	18	1.43	2.13	0.69	17	Plantation
				30--40	0.96	0.30	3	0.82	1.30	0.75	17	Control plot
				0--10	9.40	2.51	22	9.65	14.30	4.80	17	Plantation
				0--10	6.99	2.11	3	5.80	9.42	5.74	17	Control plot
				10--20	9.39	2.21	18	9.38	12.85	4.78	17	Plantation
				10--20	6.64	2.03	3	6.08	8.90	4.95	17	Control plot
				20--30	8.47	2.70	21	8.73	14.76	4.33	17	Plantation
				20--30	6.16	1.30	4	5.71	8.07	5.15	17	Control plot
				30--40	8.07	2.45	18	8.49	11.66	4.18	17	Plantation
				30--40	5.28	1.44	3	4.64	6.93	4.28	17	Control plot
			Iron (mg/kg)	0--10	25	20	22	17	71	6	17	Plantation
				0--10	12	11	3	6	25	5	17	Control plot
				10--20	28	22	18	15	67	5	17	Plantation
				10--20	8	6	3	6	15	4	17	Control plot
				20--30	19	16	21	12	55	2	17	Plantation
				20--30	6	2	4	5	9	4	17	Control plot

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				30--40	17	12	18	13	50	4	17	Plantation
				30--40	6	4	3	4	10	3	17	Control plot
			Potassium (cmol/kg <sup>-1</sup> )	0--10	0.12	0.03	22	0.12	0.18	0.06	17	Plantation
				0--10	0.14	0.03	3	0.15	0.16	0.10	17	Control plot
				10--20	0.10	0.03	18	0.11	0.14	0.05	17	Plantation
				10--20	0.09	0.03	3	0.09	0.12	0.07	17	Control plot
				20--30	0.08	0.02	21	0.08	0.13	0.05	17	Plantation
				20--30	0.08	0.02	4	0.07	0.11	0.07	17	Control plot
				30--40	0.08	0.02	18	0.07	0.14	0.04	17	Plantation
				30--40	0.07	0.02	3	0.06	0.09	0.05	17	Control plot
			Potassium (mg/kg)	0--10	46	12	22	47	68	25	17	Plantation
				0--10	53	13	3	58	63	38	17	Control plot
				10--20	39	9	18	42	55	21	17	Plantation
				10--20	36	9	3	34	46	28	17	Control plot
				20--30	31	8	21	29	51	18	17	Plantation
				20--30	30	9	4	26	43	26	17	Control plot
				30--40	30	9	18	27	53	17	17	Plantation
				30--40	25	7	3	22	33	20	17	Control plot
			Loss on ignition (%)	0--10	4.63	0.87	18	4.81	5.88	3.13	17	Plantation
				0--10	3.95	1.25	3	3.46	5.38	3.02	17	Control plot
				10--20	4.39	0.83	18	4.40	5.98	3.27	17	Plantation
				10--20	3.36	1.01	3	3.44	4.33	2.32	17	Control plot
				20--30	3.89	0.78	18	3.80	5.43	2.70	17	Plantation
				20--30	2.96	0.60	3	2.94	3.57	2.38	17	Control plot
				30--40	3.64	0.74	18	3.52	5.24	2.47	17	Plantation
				30--40	2.81	0.74	3	2.75	3.58	2.10	17	Control plot

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Magnesium (cmol/kg <sup>-1</sup> )	0--10	1.15	0.47	22	0.99	2.01	0.54	17	Plantation
				0--10	0.83	0.51	3	0.59	1.42	0.49	17	Control plot
				10--20	1.07	0.45	18	0.89	1.91	0.56	17	Plantation
				10--20	0.65	0.28	3	0.54	0.97	0.44	17	Control plot
				20--30	0.84	0.38	21	0.76	1.80	0.36	17	Plantation
				20--30	0.53	0.19	4	0.47	0.81	0.37	17	Control plot
				30--40	0.82	0.31	18	0.80	1.27	0.44	17	Plantation
				30--40	0.27	0.17	3	0.34	0.40	0.08	17	Control plot
			Magnesium (mg/g)	0--10	0.14	0.06	22	0.12	0.24	0.06	17	Plantation
				0--10	0.10	0.06	3	0.07	0.17	0.06	17	Control plot
				10--20	0.13	0.05	18	0.11	0.23	0.07	17	Plantation
				10--20	0.08	0.03	3	0.07	0.12	0.05	17	Control plot
				20--30	0.10	0.05	21	0.09	0.22	0.04	17	Plantation
				20--30	0.06	0.02	4	0.06	0.10	0.05	17	Control plot
				30--40	0.10	0.04	18	0.10	0.15	0.05	17	Plantation
				30--40	0.03	0.02	3	0.04	0.05	0.01	17	Control plot
			Manganese (mg/kg)	0--10	14	6	22	13	28	8	17	Plantation
				0--10	11	5	3	10	16	7	17	Control plot
				10--20	13	6	18	12	29	6	17	Plantation
				10--20	7	2	3	7	9	6	17	Control plot
				20--30	10	4	21	10	19	4	17	Plantation
				20--30	6	2	4	5	9	4	17	Control plot
				30--40	10	4	18	10	17	5	17	Plantation
				30--40	5	2	3	4	7	4	17	Control plot
			Nitrogen (%)	0--10	0.09	0.02	22	0.10	0.13	0.05	17	Plantation
				0--10	0.08	0.03	3	0.07	0.12	0.06	17	Control plot

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				10--20	0.10	0.04	18	0.09	0.20	0.05	17	Plantation
				10--20	0.07	0.02	3	0.08	0.08	0.04	17	Control plot
				20--30	0.08	0.08	21	0.06	0.40	0.02	17	Plantation
				20--30	0.05	0.02	4	0.06	0.06	0.03	17	Control plot
				30--40	0.05	0.02	18	0.05	0.10	0.03	17	Plantation
				30--40	0.04	0.02	3	0.04	0.05	0.02	17	Control plot
			Sodium (cmol/kg <sup>-1</sup> )	0--10	0.21	0.15	22	0.16	0.72	0.07	17	Plantation
				0--10	0.08	0.05	3	0.11	0.11	0.03	17	Control plot
				10--20	0.22	0.16	18	0.17	0.69	0.08	17	Plantation
				10--20	0.08	0.04	3	0.06	0.12	0.05	17	Control plot
				20--30	0.19	0.14	21	0.15	0.53	0.05	17	Plantation
				20--30	0.07	0.04	4	0.06	0.12	0.04	17	Control plot
				30--40	0.20	0.14	18	0.15	0.62	0.06	17	Plantation
				30--40	0.05	0.04	3	0.03	0.10	0.03	17	Control plot
			Sodium (mg/g)	0--10	0.05	0.03	22	0.04	0.17	0.02	17	Plantation
				0--10	0.02	0.01	3	0.03	0.03	0.01	17	Control plot
				10--20	0.05	0.04	18	0.04	0.16	0.02	17	Plantation
				10--20	0.02	0.01	3	0.01	0.03	0.01	17	Control plot
				20--30	0.04	0.03	21	0.03	0.12	0.01	17	Plantation
				20--30	0.02	0.01	4	0.01	0.03	0.01	17	Control plot
				30--40	0.05	0.03	18	0.03	0.14	0.01	17	Plantation
				30--40	0.01	0.01	3	0.01	0.02	0.01	17	Control plot
			Phosphorus (mg/kg)	0--10	7	2	22	7	10	4	17	Plantation
				0--10	5	3	3	5	8	3	17	Control plot
				10--20	7	2	18	6	10	4	17	Plantation
				10--20	4	1	3	4	5	3	17	Control plot



Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				20--30	5	2	21	5	9	2	17	Plantation
				20--30	3	1	4	3	4	2	17	Control plot
				30--40	0	2	18	4	9	3	17	Plantation
				30--40	2	1	3	2	3	2	17	Control plot
			pH (H <sub>2</sub> O)	0--10	7.60	0.35	18	7.63	8.09	6.72	17	Plantation
				0--10	7.80	0.40	3	7.86	8.16	7.37	17	Control plot
				10--20	7.57	0.40	18	7.71	8.06	6.67	17	Plantation
				10--20	7.89	0.29	3	7.96	8.14	7.57	17	Control plot
				20--30	7.64	0.38	18	7.71	8.16	6.80	17	Plantation
				20--30	7.85	0.23	3	7.82	8.10	7.64	17	Control plot
				30--40	7.76	0.33	18	7.82	8.15	6.77	17	Plantation
				30--40	8.01	0.28	3	8.15	8.19	7.68	17	Control plot
			pH (KCl)	0--10	6.73	0.42	18	6.68	7.36	6.00	17	Plantation
				0--10	6.99	0.29	3	7.00	7.28	6.70	17	Control plot
				10--20	6.72	0.54	18	6.84	7.48	5.76	17	Plantation
				10--20	7.07	0.34	3	7.15	7.36	6.69	17	Control plot
				20--30	6.84	0.52	18	6.87	7.68	5.99	17	Plantation
				20--30	7.22	0.21	3	7.25	7.41	6.99	17	Control plot
				30--40	6.93	0.47	18	7.00	7.72	5.62	17	Plantation
				30--40	7.35	0.38	3	7.40	7.70	6.95	17	Control plot
Alluvial deposits	Inceptisols	Dfs	Aluminum (cmol/kg <sup>-1</sup> )	0--10	0.39	0.13	4	0.40	0.52	0.24	18	Control
				0--10	0.33	0.12	19	0.30	0.65	0.15	18	Plantation
			Carbon (%)	0--10	3.76	0.50	4	3.76	4.36	3.15	18	Control
				0--10	3.68	0.52	19	3.85	4.60	2.37	18	Plantation
			Calcium (cmol/kg <sup>-1</sup> )	0--10	40.24	7.51	4	40.96	48.51	30.52	18	Control
				0--10	38.17	6.84	19	36.44	50.96	27.07	18	Plantation

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth								
				(cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Alluvial deposits	Inceptisols	Dfs	Calcium (mg/g)	0--10	8.05	1.50	4	8.19	9.70	6.11	18	Control
				0--10	7.64	1.37	19	7.29	10.19	5.42	18	Plantation
			ECEC (cmol/kg <sup>-1</sup> )	0--10	51.46	5.82	4	52.48	56.45	44.43	18	Control
				0--10	49.97	6.15	19	49.14	62.61	40.43	18	Plantation
			Iron (mg/kg)	0--10	13	8	4	14	21	4	18	Control
				0--10	13	7	19	12	34	4	18	Plantation
			Potassium (cmol/kg <sup>-1</sup> )	0--10	1.28	0.30	4	1.28	1.60	0.96	18	Control
				0--10	1.04	0.18	19	0.98	1.44	0.76	18	Plantation
			Potassium (mg/g)	0--10	0.49	0.12	4	0.49	0.61	0.37	18	Control
				0--10	0.39	0.07	19	0.37	0.55	0.29	18	Plantation
			Magnesium (cmol/kg <sup>-1</sup> )	0--10	8.58	3.16	4	8.90	11.61	4.92	18	Control
				0--10	9.46	2.27	19	10.11	12.37	4.20	18	Plantation
			Magnesium (mg/g)	0--10	1.03	0.38	4	1.07	1.39	0.59	18	Control
				0--10	1.14	0.27	19	1.21	1.48	0.50	18	Plantation
			Manganese (mg/kg)	0--10	28	7	4	29	34	19	18	Control
				0--10	35	10	19	37	48	17	18	Plantation
			Nitrogen (%)	0--10	0.40	0.05	4	0.40	0.45	0.33	18	Control
				0--10	0.41	0.06	19	0.43	0.52	0.28	18	Plantation
			Sodium (cmol/kg <sup>-1</sup> )	0--10	0.97	0.15	4	0.99	1.13	0.78	18	Control
				0--10	0.98	0.15	19	0.97	1.34	0.70	18	Plantation
			Sodium (mg/g)	0--10	0.22	0.03	4	0.23	0.26	0.18	18	Control
				0--10	0.23	0.03	1	0.22	0.31	0.16	18	Plantation
			Phosphorus (mg/kg)	0--10	17	9	4	16	29	8	18	Control
				0--10	12	3	19	12	21	8	18	Plantation
			Sulfur (%)	0--10	0.04	0.01	4	0.05	0.05	0.03	18	Control
				0--10	0.04	0.01	19	0.05	0.06	0.02	18	Plantation

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Alluvial deposits	Histosol	Mfs	Aluminum (cmol/kg <sup>-1</sup> )	0--10	0.12	0.05	17	0.12	0.18	0.04	19	Plantation
				0--10	0.10	0.06	3	0.12	0.15	0.04	19	Control
				10--20	0.08	0.04	20	0.08	0.15	0.03	19	Plantation
				10--20	0.07	0.03	4	0.08	0.10	0.03	19	Control
				20--30	0.08	0.04	17	0.08	0.15	0.02	19	Plantation
				20--30	0.10	0.04	3	0.09	0.14	0.06	19	Control
				30--40	0.04	0.03	20	0.03	0.12	0.01	19	Plantation
			Carbon (%)	30--40	0.05	0.01	3	0.04	0.06	0.04	19	Control
				0--10	1.93	0.35	17	1.84	2.81	1.39	19	Plantation
				0--10	2.20	0.22	3	2.30	2.35	1.95	19	Control
				10--20	1.56	0.32	20	1.62	2.12	0.69	19	Plantation
				10--20	1.63	0.39	4	1.62	2.03	1.24	19	Control
				20--30	1.27	0.41	17	1.26	1.83	0.40	19	Plantation
				20--30	1.63	0.96	3	1.56	2.62	0.71	19	Control
			Calcium (cmol/kg <sup>-1</sup> )	30--40	1.33	0.79	20	1.19	2.96	0.19	19	Plantation
				30--40	1.59	0.85	3	1.21	2.56	1.00	19	Control
				0--10	6.81	1.27	17	6.76	10.32	4.51	19	Plantation
				0--10	7.72	2.11	3	7.00	10.09	6.06	19	Control
				10--20	6.41	1.31	20	6.79	8.63	4.01	19	Plantation
				10--20	8.23	1.43	4	8.35	9.85	6.36	19	Control
				20--30	5.73	1.57	17	5.80	8.68	3.37	19	Plantation
			Calcium (mg/g)	20--30	6.73	3.13	3	6.68	9.88	3.63	19	Control
				30--40	4.79	1.55	20	4.57	8.53	2.56	19	Plantation
				30--40	6.19	3.26	3	5.30	9.80	3.46	19	Control
				0--10	1.36	0.26	17	1.35	2.06	0.90	19	Plantation
				0--10	1.54	0.42	3	1.40	2.02	1.21	19	Control

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				10--20	1.28	0.26	20	1.36	1.73	0.80	19	Plantation
				10--20	1.65	0.29	4	1.67	1.97	1.27	19	Control
				20--30	1.15	0.31	7	1.16	1.74	0.67	19	Plantation
				20--30	1.35	0.63	3	1.34	1.98	0.73	19	Control
				30--40	0.96	0.31	20	0.91	1.71	0.51	19	Plantation
				30--40	1.24	0.62	3	1.06	1.96	0.69	19	Control
			ECEC (cmol/kg <sup>-1</sup> )	0--10	9.31	1.58	17	9.34	12.48	6.04	19	Plantation
				0--10	9.42	2.86	3	8.38	12.66	7.23	19	Control
				10--20	8.46	1.99	20	8.88	11.63	5.13	19	Plantation
				10--20	10.23	2.05	4	10.73	12.14	7.32	19	Control
				20--30	7.38	2.05	17	7.05	11.45	4.09	19	Plantation
				20--30	8.32	3.90	3	8.47	12.14	4.34	19	Control
				30--40	6.10	1.95	20	6.09	10.49	3.20	19	Plantation
				30--40	7.25	3.68	3	6.33	11.30	4.13	19	Control
			Iron (mg/kg)	0--10	28	18	17	23	73	8	19	Plantation
				0--10	25	27	3	11	56	9	19	Control
				10--20	23	15	20	19	61	5	19	Plantation
				10--20	20	22	4	32	50	8	19	Control
				20--30	20	15	17	17	52	1	19	Plantation
				20--30	17	13	3	18	30	3	19	Control
				30--40	15	13	20	12	42	1	19	Plantation
				30--40	9	8	3	5	18	3	19	Control
			Potassium (cmol/kg <sup>-1</sup> )	0--10	0.34	0.07	17	0.32	0.57	0.28	19	Plantation
				0--10	0.31	0.03	3	0.29	0.35	0.28	19	Control
				10--20	0.27	0.03	20	0.26	0.35	0.23	19	Plantation
				10--20	0.28	0.02	4	0.29	0.29	0.25	19	Control

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				20--30	0.24	0.02	17	0.23	0.29	0.21	19	Plantation
				20--30	0.26	0.04	3	0.25	0.30	0.22	19	Control
				30--40	0.22	0.02	20	0.23	0.25	0.20	19	Plantation
				30--40	0.24	0.02	3	0.24	0.25	0.22	19	Control
			Potassium (mg/g)	0--10	0.13	0.03	17	0.12	0.22	0.11	19	Plantation
				0--10	0.12	0.01	3	0.11	0.13	0.11	19	Control
				10--20	0.10	0.01	20	0.10	0.13	0.09	19	Plantation
				10--20	0.11	0.01	4	0.11	0.11	0.09	19	Control
				20--30	0.09	0.01	17	0.09	0.11	0.08	19	Plantation
				20--30	0.10	0.02	3	0.10	0.11	0.08	19	Control
				30--40	0.08	0.01	20	0.09	0.10	0.07	19	Plantation
				30--40	0.09	0.01	3	0.09	0.10	0.08	19	Control
			Loss on ignition (%)	0--10	4.67	0.82	17	4.80	6.04	3.01	19	Plantation
				0--10	4.16	1.82	3	3.48	6.22	2.77	19	Control
				10--20	4.01	0.87	20	4.25	5.26	2.31	19	Plantation
				10--20	4.36	0.65	4	4.56	4.88	3.42	19	Control
				20--30	3.46	0.93	17	3.31	5.76	2.10	19	Plantation
				20--30	3.17	1.60	3	2.94	4.87	1.71	19	Control
				30--40	2.66	0.64	20	2.55	3.79	1.63	19	Plantation
				30--40	2.47	1.26	3	2.12	3.86	1.42	19	Control
			Magnesium (cmol/kg <sup>-1</sup> )	0--10	1.68	0.43	17	1.67	2.69	1.05	19	Plantation
				0--10	1.18	0.69	3	0.92	1.96	0.66	19	Control
				10--20	1.35	0.61	20	1.22	2.49	0.64	19	Plantation
				10--20	1.50	0.61	4	1.79	1.83	0.58	19	Control
				20--30	0.98	0.40	17	0.92	1.72	0.38	19	Plantation
				20--30	1.11	0.71	3	1.21	1.76	0.35	19	Control

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				30--40	0.72	0.35	20	0.66	1.37	0.22	19	Plantation
				30--40	0.66	0.40	3	0.59	1.09	0.31	19	Control
			Magnesium (mg/g)	0--10	0.22	0.05	17	0.20	0.32	0.13	19	Plantation
				0--10	0.14	0.08	3	0.11	0.24	0.08	19	Control
				10--20	0.16	0.07	20	0.15	0.30	0.08	19	Plantation
				10--20	0.18	0.07	4	0.22	0.22	0.07	19	Control
				20--30	0.12	0.05	17	0.11	0.21	0.05	19	Plantation
				20--30	0.13	0.09	3	0.15	0.21	0.04	19	Control
				30--40	0.09	0.04	20	0.08	0.17	0.03	19	Plantation
				30--40	0.08	0.05	3	0.07	0.13	0.04	19	Control
			Manganese (mg/kg)	0--10	22	6	17	22	35	13	19	Plantation
				0--10	20	9	3	16	31	13	19	Control
				10--20	15	4	20	15	23	9	19	Plantation
				10--20	19	8	4	21	26	10	19	Control
				20--30	11	4	17	11	20	4	19	Plantation
				20--30	12	7	3	15	17	4	19	Control
				30--40	9	4	20	9	17	3	19	Plantation
				30--40	8	4	3	7	13	5	19	Control
			Nitrogen (%)	0--10	0.15	0.03	17	0.15	0.19	0.06	19	Plantation
				0--10	0.11	0.08	3	0.09	0.19	0.05	19	Control
				10--20	0.11	0.04	20	0.12	0.02	0.04	19	Plantation
				10--20	0.12	0.03	4	0.12	0.16	0.08	19	Control
				20--30	0.09	0.05	17	0.08	0.17	0.02	19	Plantation
				20--30	0.07	0.07	3	0.06	0.14	0.01	19	Control
				30--40	0.05	0.03	20	0.04	0.11	0.01	19	Plantation
				30--40	0.06	0.07	2	0.06	0.11	0.01	19	Control

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Sodium (cmol/kg <sup>-1</sup> )	0--10	0.37	0.25	17	0.29	1.00	0.10	19	Plantation
				0--10	0.11	0.01	3	0.11	0.12	0.11	19	Control
				10--20	0.36	0.25	20	0.28	1.20	0.09	19	Plantation
				10--20	0.15	0.04	4	0.15	0.18	0.10	19	Control
				20--30	0.35	0.21	17	0.28	0.92	0.10	19	Plantation
				20--30	0.13	0.06	3	0.11	0.20	0.09	19	Control
				30--40	0.33	0.20	20	0.24	0.87	0.08	19	Plantation
				30--40	0.12	0.02	3	0.12	0.14	0.10	19	Control
			Sodium (mg/g)	0--10	0.08	0.06	17	0.07	0.23	0.02	19	Plantation
				0--10	0.03	0.00	3	0.03	0.03	0.03	19	Control
				10--20	0.08	0.06	20	0.06	0.28	0.02	19	Plantation
				10--20	0.03	0.01	4	0.04	0.04	0.02	19	Control
				20--30	0.08	0.05	17	0.07	0.21	0.02	19	Plantation
				20--30	0.03	0.01	3	0.03	0.05	0.02	19	Control
				30--40	0.08	0.05	20	0.06	0.20	0.02	19	Plantation
				30--40	0.03	0.01	3	0.03	0.03	0.02	19	Control
			Phosphorus (mg/kg)	0--10	8	2	17	8	12	5	19	Plantation
				0--10	9	4	3	9	12	5	19	Control
				10--20	6	1	20	6	10	4	19	Plantation
				10--20	8	2	4	8	9	5	19	Control
				20--30	4	1	17	4	6	2	19	Plantation
				20--30	5	3	3	5	9	2	19	Control
				30--40	3	1	20	3	5	2	19	Plantation
				30--40	3	2	3	2	6	2	19	Control
			pH (H <sub>2</sub> O)	0--10	7.65	0.42	17	7.83	8.20	6.81	19	Plantation
				0--10	7.75	0.68	3	8.09	8.20	6.97	19	Control

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				10--20	7.69	0.53	20	7.82	8.21	6.11	19	Plantation
				10--20	7.48	0.61	4	7.45	8.08	6.93	19	Control
				20--30	7.66	0.45	17	7.86	8.16	6.72	19	Plantation
				20--30	7.90	0.32	3	7.92	8.20	7.57	19	Control
				30--40	7.88	0.48	20	8.01	8.24	6.31	19	Plantation
				30--40	8.10	0.21	3	8.19	8.26	7.86	19	Control
			pH (KCl)	0--10	6.98	0.45	17	7.09	7.42	5.57	19	Plantation
				0--10	6.97	0.84	3	7.40	7.51	6.00	19	Control
				10--20	6.98	0.55	20	7.21	7.52	5.50	19	Plantation
				10--20	6.55	0.93	4	6.49	7.49	5.75	19	Control
				20--30	6.90	0.51	17	6.95	7.62	5.77	19	Plantation
				20--30	7.16	0.48	3	7.18	7.63	6.68	19	Control
				30--40	7.19	0.53	20	7.34	7.72	5.72	19	Plantation
				30--40	7.41	0.19	3	7.35	7.62	7.26	19	Control
			Sulfur (mg/kg)	0--10	170	60	17	170	320	100	19	Plantation
				0--10	150	110	3	120	270	60	19	Control
				10--20	140	60	17	110	320	70	19	Plantation
				10--20	130	70	4	140	200	40	19	Control
				20--30	160	80	17	110	360	70	19	Plantation
				20--30	140	60	3	110	200	100	19	Control
				30--40	140	50	18	140	250	60	19	Plantation
				30--40	70	30	3	70	90	40	19	Control
Alluvial deposits	Mollisols	Sdf	C/N	0--10	17	5	35	18	28	18	20	Guanica Forest
			Carbon (%)	0--10	11.47	4.49	35	12.27	23.00	4.87	20	Guanica Forest
			Nitrogen (%)	0--10	0.68	0.28	35	0.59	1.16	0.40	20	Guanica Forest
			Sulfur (%)	0--10	0.03	0.02	35	0.02	0.09	0.01	20	Guanica Forest



Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Tuffaceous sandstone	Ultisols	Swf	C/N	0--10	15	2	18	15	20	12	21	El Verde
				0--10	11	1	61	11	15	8	21	Mameyes
				0--10	13	2	71	13	18	10	21	Sabana
			Carbon (%)	0-10	9.93	4.28	18	8.87	19.50	5.06	21	El Verde
				0--10	4.98	1.37	61	4.95	8.49	2.35	21	Mameyes
				0--10	5.55	1.78	71	5.17	14.21	2.78	21	Sabana
			Nitrogen (%)	0--10	0.63	0.18	18	0.57	0.99	0.39	21	El Verde
				0--10	0.46	0.09	61	0.46	0.68	0.29	21	Mameyes
				0--10	0.42	0.10	71	0.47	0.87	0.24	21	Sabana
			Sulfur (%)	0--10	0.09	0.02	18	0.09	0.13	0.06	21	El Verde
0--10	0.05	0.01		61	0.05	0.08	0.03	21	Mameyes			
0--10	0.07	0.01		71	0.07	0.10	0.05	21	Sabana			
Tuffaceous sandstone	Ultisols	Lmrf	Aluminum (mg/kg)	0--10	90	44	3	80	138	52	22	Hot water extraction
				0--10	357	77	3	360	432	279	22	Hot water extraction
				10--20	26	156	3	65	304	11	22	Hot water extraction
				10--40	260	110	5	220	425	141	22	Hot water extraction
				20--40	6	8	4	3	17	1	22	Hot water extraction
			Calcium (mg/kg)	0--10	2	2	3	3	3		22	Hot water extraction
				0--10	91	85	3	88	178	8	22	Ammonium acetate extraction
				0--10	8	3	3	8	11	6	22	Hot water extraction
				0--10	189	76	3	193	262	111	22	Ammonium acetate extraction
				10--20	3	2	2	3	4	1	22	Hot water extraction
				10--20	30	21	3	38	45	5	22	Ammonium acetate extraction
				10--40	5	4	5	4	13	2	22	Hot water extraction
				10--40	84	37	5	67	149	60	22	Ammonium acetate extraction
				20--40	1	0	4	1	1	1	22	Hot water extraction

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Iron (mg/kg)	20--40	11	10	5	10	28	1	22	Ammonium acetate extraction
				0--10	83	53	3	81	136	31	22	Hot water extraction
				0--10	112	61	3	101	178	57	22	Hot water extraction
				10--20	133	165	3	74	319	5	22	Hot water extraction
				10--40	50	18	5	52	66	20	22	Hot water extraction
			Magnesium (mg/kg)	20--40	7	8	4	3	19	1	22	Hot water extraction
				0--10	3	1	3	3	3	2	22	Hot water extraction
				0--10	68	50	3	44	125	36	22	Ammonium acetate extraction
				0--10	9	4	3	8	13	5	22	Hot water extraction
				0--10	108	60	3	74	177	73	22	Ammonium acetate extraction
				10--20	2	2	3	1	5	1	22	Hot water extraction
				10--20	30	8	3	33	37	21	22	Ammonium acetate extraction
				10--40	4	2	5	4	6	1	22	Hot water extraction
				10--40	64	44	5	46	142	38	22	Ammonium acetate extraction
				20--40	0.40	0.25	6	0.38	0.86	0.16	22	Hot water extraction
			Phosphorus (mg/kg)	20--40	11	6	6	9	22	6	22	Ammonium acetate extraction
				0--10	0.19	0.16	3	0.11	0.38	0.08	22	Hot water extraction
				0--10	3.87	1.44	3	3.96	5.25	2.38	22	Hot water extraction
				10--20	0.36	0.38	3	0.27	0.79	0.04	22	Hot water extraction
				10--40	2.90	1.30	5	3.47	4.08	0.92	22	Hot water extraction
			Potassium (mg/kg)	20--40	0.09	0.07	2	0.09	0.14	0.04	22	Hot water extraction
				0--10	6	3	3	6	9	3	22	Hot water extraction
				0--10	17	6	3	19	22	10	22	Hot water extraction
				10--20	6	6	3	4	13	1	22	Hot water extraction
				10--40	12	6	5	16	17	5	22	Hot water extraction
			20--40	0.73	0.45	6	0.70	1.35	0.22	22	Hot water extraction	

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0--10	50	15	3	46	67	38	22	Ammonium acetate extraction
				0--10	65	18	3	70	79	45	22	Ammonium acetate extraction
				10--20	25	3	3	27	27	21	22	Ammonium acetate extraction
				10--40	42	10	5	45	54	30	22	Ammonium acetate extraction
				20--40	15	8	6	11	29	8	22	Ammonium acetate extraction
			Sodium (mg/kg)	0--10	21	3	3	20	24	19	22	Ammonium acetate extraction
				0--10	49	19	3	49	69	30	22	Ammonium acetate extraction
				10--20	14	1	3	14	16	14	22	Ammonium acetate extraction
				10--40	35	10	5	34	44	19	22	Ammonium acetate extraction
				20--40	8	2	6	8	10	4	22	Ammonium acetate extraction
Swamp	Mangle	Mfs	Aluminum (cmol/kg <sup>-1</sup> )	0--20	0.41	0.28	18	0.32	0.94	0.15	23	
				20--30	0.25		1				23	
			Calcium (cmol/kg <sup>-1</sup> )	0--20	51.52	11.38	18	57.11	67.22	29.64	23	
				20--30	61.34		1				23	
			Calcium (mg/g)	0--20	10.30	2.28	18	11.42	13.44	5.93	23	
				20--30	12.27		1				23	
			Carbon (%)	0--20	28.32	4.94	16	30.64	33.39	18.89	23	
			Iron (mg/g)	0--20	0.59	0.65	18	0.08	1.61	0.03	23	
				20--30	0.01		1				23	
			Loss on ignition (%)	0--20	62.60	5.87	18	63.68	72.08	50.56	23	
				20--30	78.31		1				23	
			Magnesium (mg/g)	0--20	4.68	2.46	18	2.81	8.30	2.31	23	
				20--30	2.02		1				23	
			Magnesium (cmol/kg <sup>-1</sup> )	0--20	38.97	20.50	18	23.43	69.16	19.24	23	
				20--30	16.81		1				23	
			Manganese (mg/g)	0--20	0.07	0.04	18	0.07	0.16	0.02	23	

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth								
				(cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				20--30	0.07		1					23
			Nitrogen (%)	0--20	1.56	0.35	16	1.64	1.95	1.10		23
			Organic matter (%)	0--20	28.35	5.72	18	30.61	37.73	17.15		23
			pH (H <sub>2</sub> O)	20--30	34.86	0.69	2	34.86	35.35	34.37		23
				0--20	6.30	1.12	9	7.06	7.43	4.93		23
			pH (KCl)	20--30	7.14	0.00	1					23
				0--20	6.15	1.04	9	6.83	7.12	4.87		23
			Phosphorus (mg/kg)	20--30	6.76	0.00	1	6.76	6.76	6.76		23
				0--20	45	16	18	44	63	26		23
			Potassium (cmol/kg <sup>-1</sup> )	20--30	23		1					23
				0--20	2.27	1.82	18	1.53	5.89	0.32		23
			Potassium (mg/g)	20--30	0.29		1					23
				0--20	0.89	0.71	18	0.60	2.30	0.12		23
			Sodium (cmol/kg <sup>-1</sup> )	20--30	0.11		1					23
				0--20	75.83	62.29	18	36.78	169.50	9.41		23
			Sodium (mg/g)	20--30	8.06		1					23
				0--20	17.44	14.33	18	8.46	38.99	2.16		23
			Aluminum (mg/g)	20--30	1.85		1					23
				0--30	0.11	0.04	26	0.10	0.20	0.03		24
			Aluminum-total (mg/g)	100-150	0.09	0.02	26	0.09	0.13	0.05		24
				0--30	16.71	2.80	26	16.36	23.07	12.44		24
			Calcium (mg/g)	100-150	13.55	2.09	26	13.67	18.25	9.17		24
				0--30	5.97	1.29	6	6.30	7.53	2.01		24
			Calcium-total (mg/g)	100-150	6.44	0.82	26	6.38	7.71	4.70		24
				0--30	5.70	0.63	26	5.77	7.01	4.06		24
Swamps	Entisols	Mfs		100-150	5.48	0.34	26	5.50	5.96	4.82		24

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Carbon (%)	0--30	25.31	6.61	26	27.05	32.16	7.15	24	
				100-150	26.76	4.62	26	28.62	32.65	14.06	24	
			Iron-total (mg/g)	0--30	17.77	2.29	26	17.58	21.15	12.01	24	
				100-150	17.08	2.81	26	17.60	22.06	11.30	24	
			Magnesium (mg/g)	0--30	10.52	2.33	26	10.97	13.19	3.24	24	
				100-150	12.83	1.64	26	13.01	15.64	10.06	24	
			Magnesium-total (mg/g)	0--30	11.80	1.51	26	1.63	14.01	8.09	24	
				100-150	12.95	0.84	26	12.79	14.30	11.24	24	
			Manganese (mg/kg)	0--30	130	5	26	120	250	7	24	
				100-150	160	5	26	160	280	10	24	
			Manganese-total (mg/g)	0--30	0.08	0.03	26	0.07	0.17	0.05	24	
				100-150	0.07	0.01	26	0.07	0.10	0.05	24	
			Nitrogen (%)	0--30	0.95	0.27	26	1.05	1.19	0.28	24	
				100-150	0.83	0.15	26	0.87	0.97	0.37	24	
			Phosphorus (mg/g)	0--30	0.05	0.01	26	0.05	0.07	0.02	24	
				100-150	0.05	0.01	26	0.05	0.06	0.03	24	
			Phosphorus-total (mg/g)	0--30	0.20	0.05	26	0.20	0.29	0.11	24	
				100-150	0.13	0.03	26	0.12	0.18	0.08	24	
			Potassium (mg/g)	0--30	3.62	0.92	26	3.74	4.85	0.97	24	
				100-150	4.21	0.85	26	4.02	5.45	2.85	24	
			Potassium-total (mg/g)	0--30	3.64	0.32	26	3.68	4.06	2.82	24	
				100-150	3.75	0.27	26	3.80	4.25	3.02	24	
			Sulfur (%)	0--30	6.77	2.19	26	7.38	9.69	1.60	24	
				100-150	7.65	1.55	26	8.36	9.46	3.96	24	
Swamp	Histosol	Mfs	Aluminum (mg/kg)	0--20	9	11	10	3	32	6	25	Low salinity
				0--20	130	110	10	120	320	20	25	Intermediates alinity

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0--20	75	126	10	30	3240	11	25	High salinity
			Calcium (mg/g)	0--20	1.00	0.28	10	1.05	1.28	0.52	25	Low salinity
				0--20	0.60	0.16	10	0.62	0.85	0.39	25	Intermediates alinity
				0--20	0.93	0.70	10	0.69	2.22	0.34	25	High salinity
			Carbon (%)	0--20	20.39	6.22	10	21.97	28.06	10.12	25	Low salinity
				0--20	17.82	5.53	10	15.78	27.10	11.19	25	Intermediates alinity
				0--20	18.94	1.23	10	18.94	20.31	16.94	25	High salinity
			Iron (mg/g)	0--20	0.05	0.06	10	0.02	0.19	0.01	25	Low salinity
				0--20	0.05	0.04	10	0.04	0.11	0.01	25	Intermediates alinity
				0--20	0.02	0.02	10	0.01	0.09	0.01	25	High salinity
			Loss on ignition (%)	0--20	44.32	9.80	10	47.56	55.91	28.39	25	Low salinity
				0--20	39.78	9.31	10	35.84	55.35	28.99	25	Intermediates alinity
				0--20	40.14	2.03	10	40.27	42.86	37.80	25	High salinity
			Magnesium (mg/g)	0--20	0.74	0.21	10	0.75	1.02	0.42	25	Low salinity
				0--20	0.67	0.03	10	0.69	0.77	0.54	25	Intermediates alinity
				0--20	0.89	0.53	10	0.81	1.82	0.33	25	High salinity
			Manganese (mg/kg)	0--20	14	14	10	8	39	2	25	Low salinity
				0--20	10	7	10	8	22	4	25	Intermediates alinity
				0--20	20	21	10	14	58	1	25	High salinity
			Nitrogen (%)	0--20	0.63	0.15	10	0.70	0.79	0.37	25	Low salinity
				0--20	0.57	0.12	10	0.65	0.69	0.40	25	Intermediates alinity
				0--20	1.36	0.87	10	1.08	3.00	0.58	25	High salinity
			pH (H <sub>2</sub> O)	0--20	5.95	0.21	10	6.05	6.14	5.69	25	Low salinity
				0--20	5.66	0.36	10	5.48	6.10	5.25	25	Intermediates alinity
				0--20	5.21	0.47	10	5.34	5.75	4.38	25	High salinity
			pH (KCl)	0--20	5.55	0.15	10	5.60	5.78	5.37	25	Low salinity

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Swamps	Entisols	Mfs	Phosphorus (mg/kg)	0--20	5.29	0.33	10	5.11	5.77	4.94	25	Intermediates alinity
				0--20	4.82	0.43	10	4.89	5.32	4.08	25	High salinity
			Potassium (mg/g)	0--20	4	3	10	3	11	2	25	Low salinity
				0--20	3	2	10	3	6	2	25	Intermediates alinity
			Sulfur (%)	0--20	2	10	10	2	3	2	25	High salinity
				0--20	0.17	0.08	10	0.15	0.30	0.10	25	Low salinity
				0--20	0.20	0.03	10	0.20	0.26	0.15	25	Intermediates alinity
			Aluminum (mg/g)	0--20	0.22	0.08	10	0.21	0.34	0.11	25	High salinity
				0--20	1.38	0.44	10	1.51	1.90	0.68	25	Low salinity
				0--20	1.09	0.39	10	1.02	1.71	0.57	25	Intermediates alinity
				0--20	1.03	0.19	10	1.06	1.29	0.74	25	High salinity
				0--20	0.16	0.11	12	0.13	0.34	0.03	26	Hot water extraction
			Calcium (mg/g)	0--20	3.48	1.07	12	3.68	5.02	1.72	26	Hot water extraction
				0--20	4.01	0.70	12	4.28	4.73	2.61	26	Ammonium Acetate extraction
			Carbon (%)	0--20	21.52	6.09	12	23.46	28.70	9.43	26	
			Iron (mg/g)	0--20	0.07	0.06	12	0.04	0.20	0.01	26	Hot water extraction
			Loss on ignition (%)	0--20	61.38	14.40	12	66.03	74.90	33.39	26	
			Magnesium (mg/g)	0--20	8.54	2.30	12	8.86	11.41	4.14	26	Hot water extraction
				0--20	9.72	2.31	12	10.54	11.90	5.06	26	Ammonium acetate extraction
			Manganese (mg/g)	0--20	0.02	0.01	12	0.02	0.06	0.01	26	Hot water extraction
0--20	0.02	0.01		12	0.01	0.04	0.01	26	Ammonium acetate extraction			
Nitrogen (%)	0--20	0.92	0.27	12	0.97	1.27	0.36	26				
pH (H <sub>2</sub> O)	0--20	4.16	0.31	12	4.18	4.59	3.76	26				
pH (KCl)	0--20	4.06	0.32	12	4.07	4.50	3.66	26				
Phosphorus (mg/kg)	0--20	8	5	12	7	22	2	26	Hot water extraction			
	0--20	257	140	12	213	572	82	26	Ammonium acetate extraction			

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Tuffaceous sandstone	Ultisols	Lmrf	Potassium (mg/g)	0--20	1.65	0.74	12	1.77	2.52	0.11	26	Hot water extraction
				0--20	0.05	0.01	12	0.05	0.06	0.03	26	Ammonium acetate extraction
			Aluminum (mg/g)	0--10	0.15	0.09	36	0.14	0.38	0.02	27	Gap 1993
				0--10	0.20	0.14	17	0.17	0.46	0.02	27	Control 1993
				0--10	0.34	0.12	36	0.34	0.59	0.13	27	Gap 1994
				0--10	0.30	0.16	17	0.31	0.57	0.08	27	Control 1994
				0--10	0.32	0.13	34	0.34	0.70	0.10	27	Gap 1995
				0--10	0.28	0.15	17	0.29	0.57	0.02	27	Control 1995
				0--10	0.32	0.13	36	0.31	0.68	0.06	27	Gap 1996
				0--10	0.29	0.16	17	0.31	0.55	0.06	27	Control 1996
				0--10	0.32	0.11	44	0.32	0.53	0.14	27	Gap 1997
				0--10	0.15	0.08	9	0.12	0.25	0.03	27	Control 1997
				0--10	0.29	0.11	30	0.31	0.52	0.13	27	Gap 1998
				0--10	0.27	0.14	14	0.27	0.56	0.07	27	Control 1998
				0--10	0.37	0.11	30	0.39	0.55	0.11	27	Gap 1999
				0--10	0.27	0.14	14	0.30	0.51	0.04	27	Control 1999
				10--35	0.18	0.11	30	0.16	0.51	0.001	27	Gap 1993
				10--35	0.18	0.12	14	0.18	0.35	0.02	27	Control 1993
				10--35	0.37	0.14	30	0.36	0.68	0.11	27	Gap 1994
				10--35	0.27	0.14	14	0.30	0.48	0.05	27	Control 1994
	10--35	0.37	0.16	32	0.35	0.66	0.04	27	Gap 1995			
	10--35	0.28	0.17	14	0.26	0.73	0.05	27	Control 1995			
	10--35	0.35	0.14	30	0.34	0.72	0.13	27	Gap 1996			
	10--35	0.32	0.18	13	0.31	0.81	0.02	27	Control 1996			
	10--35	0.32	0.11	37	0.33	0.58	0.16	27	Gap 1997			
	10--35	0.15	0.09	7	0.17	0.27	0.05	27	Control 1997			



Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Calcium (mg/g)	10--35	0.34	0.13	36	0.33	0.64	0.10	27	Gap 1998
				10--35	0.24	0.14	16	0.25	0.45	0.05	27	Control 1998
				10--35	0.35	0.15	36	0.34	0.62	0.06	27	Gap 1999
				10--35	0.24	0.11	16	0.26	0.38	0.06	27	Control 1999
				0--10	0.13	0.10	36	0.10	0.40	0.02	27	Gap 1993
				0--10	0.14	0.09	17	0.11	0.33	0.03	27	Control 1993
				0--10	0.28	0.16	36	0.24	0.70	0.04	27	Gap 1994
				0--10	0.26	0.17	17	0.17	0.64	0.12	27	Control 1994
				0--10	0.30	0.20	34	0.26	0.73	0.03	27	Gap 1995
				0--10	0.34	0.19	17	0.31	0.66	0.06	27	Control 1995
				0--10	0.28	0.19	36	0.27	0.83	0.02	27	Gap 1996
				0--10	0.33	0.17	17	0.31	0.62	0.06	27	Control 1996
				0--10	0.17	0.11	44	0.16	0.47	0.01	27	Gap 1997
				0--10	0.30	0.19	9	0.28	0.70	0.06	27	Control 1997
				0--10	0.29	0.16	30	0.26	0.78	0.03	27	Gap 1998
				0--10	0.35	0.15	14	0.31	0.64	0.13	27	Control 1998
				0--10	0.34	0.23	30	0.26	1.21	0.09	27	Gap 1999
				0--10	0.36	0.28	14	0.23	1.08	0.09	27	Control 1999
				10--35	0.04	0.02	30	0.04	0.11	0.01	27	Gap 1993
				10--35	0.05	0.04	14	0.03	0.13	0.01	27	Control 1993
				10--35	0.10	0.06	30	0.10	0.25	0.01	27	Gap 1994
				10--35	0.10	0.09	14	0.06	0.31	0.03	27	Control 1994
				10--35	0.12	0.12	32	0.07	0.44	0.01	27	Gap 1995
				10--35	0.13	0.11	14	0.09	0.39	0.01	27	Control 1995
				10--35	0.12	0.09	30	0.09	0.34	0.01	27	Gap 1996
				10--35	0.12	0.10	14	0.08	0.32	0.01	27	Control 1996

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				10--35	0.06	0.06	37	0.04	0.25	0.01	27	Gap 1997
				10--35	0.16	0.20	7	0.13	0.34	0.02	27	Control 1997
				10--35	0.11	0.08	36	0.10	0.32	0.01	27	Gap 1998
				10--35	0.15	0.13	16	0.10	0.50	0.03	27	Control 1998
				10--35	0.17	0.14	36	0.11	0.59	0.02	27	Gap 1999
				10--35	0.16	0.17	16	0.08	0.63	0.04	27	Control 1999
			Magnesium (mg/g)	0--10	0.07	0.03	36	0.07	0.15	0.03	27	Gap 1993
				0--10	0.06	0.03	17	0.05	0.11	0.03	27	Control 1993
				0--10	0.16	0.08	36	0.13	0.41	0.06	27	Gap 1994
				0--10	0.12	0.06	17	0.10	0.23	0.05	27	Control 1994
				0--10	0.16	0.07	34	0.16	0.33	0.05	27	Gap 1995
				0--10	0.15	0.08	17	0.15	0.30	0.03	27	Control 1995
				0--10	0.16	0.06	36	0.16	0.28	0.05	27	Gap 1996
				0--10	0.14	0.08	17	0.12	0.30	0.06	27	Control 1996
				0--10	0.11	0.06	44	0.10	0.32	0.03	27	Gap 1997
				0--10	0.14	0.05	9	0.16	0.22	0.07	27	Control 1997
				0--10	0.17	0.07	30	0.16	0.32	0.05	27	Gap 1998
				0--10	0.15	0.07	14	0.13	0.27	0.06	27	Control 1998
				0--10	0.20	0.11	30	0.17	0.59	0.06	27	Gap 1999
				0--10	0.14	0.08	14	0.11	0.30	0.05	27	Control 1999
				10--35	0.05	0.02	30	0.05	0.11	0.02	27	Gap 1993
				10--35	0.04	0.03	14	0.03	0.12	0.01	27	Control 1993
				10--35	0.10	0.05	30	0.08	0.22	0.03	27	Gap 1994
				10--35	0.08	0.06	14	0.05	0.18	0.01	27	Control 1994
				10--35	0.10	0.06	32	0.08	0.22	0.02	27	Gap 1995
				10--35	0.09	0.07	14	0.08	0.22	0.01	27	Control 1995

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				10--35	0.10	0.06	30	0.79	0.23	0.02	27	Gap 1996
				10--35	0.08	0.07	14	0.06	0.25	0.01	27	Control 1996
				10--35	0.06	0.04	37	0.05	0.17	0.01	27	Gap 1997
				10--35	0.12	0.08	7	0.12	0.24	0.03	27	Control 1997
				10--35	0.10	0.06	36	0.07	0.21	0.02	27	Gap 1998
				10--35	0.09	0.07	16	0.06	0.20	0.01	27	Control 1998
				10--35	0.12	0.07	36	94.00	0.27	0.03	27	Gap 1999
				10--35	0.09	0.08	16	0.06	0.27	0.02	27	Control 1999
			Manganese (mg/kg)	0--10	16	17	36	9	81	3	27	Gap 1993
				0--10	10	16	17	5	73	3	27	Control 1993
				0--10	17	9	36	14	52	5	27	Gap 1994
				0--10	14	9	17	11	33	3	27	Control 1994
				0--10	22	24	34	18	119	1	27	Gap 1995
				0--10	13	8	17	14	25	3	27	Control 1995
				0--10	27	21	36	20	95	3	27	Gap 1996
				0--10	15	7	17	16	31	4	27	Control 1996
				0--10	11	8	44	10	35	1	27	Gap 1997
				0--10	16	2	9	16	20	14	27	Control 1997
				0--10	31	34	30	20	147	3	27	Gap 1998
				0--10	16	6	14	16	28	8	27	Control 1998
				0--10	19	14	30	17	69	3	27	Gap 1999
				0--10	11	7	14	10	23	2	27	Control 1999
				10--35	21	40	30	8	188	1	27	Gap 1993
				10--35	7	14	14	3	55	1	27	Control 1993
				10--35	14	15	30	12	78	1	27	Gap 1994
				10--35	12	12	14	10	39	1	27	Control 1994

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				10--35	20	33	32	10	139	1	27	Gap 1995
				10--35	8	8	14	6	22	1	27	Control 1995
				10--35	26	33	27	13	121	1	27	Gap 1996
				10--35	12	13	12	7	46	1	27	Control 1996
				10--35	9	13	37	4	71	1	27	Gap 1997
				10--35	15	8	7	13	26	6	27	Control 1997
				10--35	29	50	36	12	185	1	27	Gap 1998
				10--35	11	9	16	7	27	1	27	Control 1998
				10--35	18	15	33	13	80	1	27	Gap 1999
				10--35	7	9	16	4	33	1	27	Control 1999
			pH (H <sub>2</sub> O)	0--10	4.48	0.20	36	4.52	4.92	4.04	27	Gap 1994
				0--10	4.47	0.18	17	4.42	4.81	4.21	27	Control 1994
				0--10	4.44	0.27	34	4.37	5.18	4.05	27	Gap 1995
				0--10	4.46	0.24	17	4.44	4.91	4.11	27	Control 1995
				0--10	4.57	0.27	36	4.53	5.21	4.13	27	Gap 1996
				0--10	4.69	0.40	17	4.74	5.43	4.17	27	Control 1996
				0--10	4.54	0.35	44	4.42	5.23	3.86	27	Gap 1997
				0--10	5.14	0.17	9	5.14	5.36	4.77	27	Control 1997
				0--10	5.92	7.30	30	4.56	4.45	4.05	27	Gap 1998
				0--10	4.64	0.32	14	4.71	5.06	4.11	27	Control 1998
				0--10	4.88	0.29	30	4.88	5.30	3.97	27	Gap 1999
				0--10	4.86	0.25	14	4.85	5.24	4.58	27	Control 1999
				10--35	4.55	0.14	30	4.50	4.75	4.20	27	Gap 1994
				10--35	4.49	0.20	14	4.45	4.79	4.17	27	Control 1994
				10--35	4.44	0.25	32	4.39	5.00	3.85	27	Gap 1995
				10--35	4.92	0.19	14	4.52	4.79	4.22	27	Control 1995

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				10--35	4.51	0.27	30	4.47	5.05	4.50	27	Gap 1996
				10--35	4.69	0.26	14	4.64	5.29	4.28	27	Control 1996
				10--35	4.58	0.32	37	4.51	5.38	4.14	27	Gap 1997
				10--35	5.07	0.26	7	5.05	5.46	4.66	27	Control 1997
				10--35	4.55	0.24	36	4.52	5.00	4.13	27	Gap 1998
				10--35	4.66	0.30	16	4.64	5.12	4.21	27	Control 1998
				10--35	4.99	0.26	36	4.97	5.53	4.01	27	Gap 1999
				10--35	4.97	0.32	16	5.04	5.41	4.18	27	Control 1999
			pH (KCl)	0--10	3.91	0.15	36	3.89	4.44	3.68	27	Gap 1996
				0--10	3.91	0.27	17	4.01	4.32	3.42	27	Control 1996
				0--10	3.92	0.13	44	3.94	4.15	3.58	27	Gap 1997
				0--10	4.13	0.11	9	4.19	4.29	3.97	27	Control 1997
				0--10	3.97	0.12	30	3.99	4.18	3.70	27	Gap 1998
				0--10	4.02	0.23	14	4.07	4.38	3.58	27	Control 1998
				0--10	3.92	0.11	30	3.91	4.20	3.64	27	Gap 1999
				0--10	3.93	0.23	14	3.99	4.24	3.49	27	Control 1999
				10--35	3.93	0.11	30	3.93	4.11	3.70	27	Gap 1996
				10--35	3.97	0.23	14	3.93	4.57	3.65	27	Control 1996
				10--35	3.95	0.08	37	3.94	4.11	3.76	27	Gap 1997
				10--35	4.18	0.15	7	4.12	4.42	4.03	27	Control 1997
				10--35	4.02	0.09	36	4.01	4.17	3.85	27	Gap 1998
				10--35	4.08	0.24	16	4.03	4.54	3.78	27	Control 1998
				10--35	3.95	0.09	36	3.93	4.12	3.75	27	Gap 1999
				10--35	4.02	0.33	16	3.96	4.91	3.40	27	Control 1999
			Potassium (mg/kg)	0--10	25	16	36	21	65	2	27	Gap 1993
				0--10	36	19	16	36	74	8	27	Control 1993

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0--10	54	22	36	50	154	24	27	Gap 1994
				0--10	81	46	17	67	202	22	27	Control 1994
				0--10	62	38	34	50	158	14	27	Gap 1995
				0--10	77	54	17	62	237	27	27	Control 1995
				0--10	50	29	36	45	135	13	27	Gap 1996
				0--10	60	23	17	59	107	27	27	Control 1996
				0--10	31	14	43	29	65	3	27	Gap 1997
				0--10	78	35	9	68	152	39	27	Control 1997
				0--10	53	17	30	54	85	18	27	Gap 1998
				0--10	75	38	14	58	174	43	27	Control 1998
				0--10	326	112	30	325	517	91	27	Gap 1999
				0--10	188	82	14	165	328	97	27	Control 1999
				10--35	130	11	30	9	48	1	27	Gap 1993
				10--35	19	5	9	18	27	11	27	Control 1993
				10--35	28	16	30	24	72	9	27	Gap 1994
				10--35	33	15	14	33	72	13	27	Control 1994
				10--35	30	20	32	24	91	7	27	Gap 1995
				10--35	26	15	14	19	58	15	27	Control 1995
				10--35	19	15	26	17	72	1	27	Gap 1996
				10--35	27	20	14	20	77	6	27	Control 1996
				10--35	16	8	35	14	44	6	27	Gap 1997
				10--35	37	17	7	29	58	15	27	Control 1997
				10--35	26	11	35	26	56	9	27	Gap 1998
				10--35	31	19	16	22	73	13	27	Control 1998
				10--35	245	91	36	262	508	71	27	Gap 1999
				10--35	128	61	16	108	281	75	27	Control 1999

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total															
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Depth			Median	Max	Min	Source	Site/notes			
					Mean	Sd	n								
Tuffaceous sandstone	Ultisols	Lmrf	Iron (mg/g)	0--10	0.80	0.47	133	0.76	2.22	0.12	28				
				0--10	1.24	1.07	63	0.73	4.02	0.13	28	Control			
			Loss on ignition (%)	0--10	18.14	2.72	133	17.94	31.58	12.82	28				
				0--10	18.76	3.06	63	19.48	24.62	9.04	28	Control			
			Manganese (mg/kg)	0--10	72	80	133	43	445	3	28				
				0--10	98	124	63	48	702	2	28	Control			
			Organic matter (%)	0--10	5.62	1.84	133	5.69	10.09	2.15	28				
				0--10	6.36	2.43	63	6.24	13.12	1.25	28	Control			
			Phosphorus (mg/kg)	0--10	9	5	133	9	33	1	28				
				0--10	13	11	63	10	46	1	28	Control			
			Potassium (mg/g)	0--10	0.07	0.03	133	0.06	0.19	0.02	28				
				0--10	0.09	0.06	63	0.08	0.33	0.01	28	Control			
			Tuffaceous sandstone	Ultisols	Swf	Aluminum (cmol/kg <sup>-1</sup> )	0--10	1.55	3.35	80	0.25	13.99	0.10	29	
							10--35	2.55	4.22	85	0.63	15.63	0.04	29	
C/N	0--10	15				1	80	15	18	12	29				
	10--35	18				4	85	17	31	14	29				
Calcium (cmol/kg <sup>-1</sup> )	0--10	22.19				15.72	80	24.12	51.28	0.43	29				
	10--35	21.11				16.44	85	20.33	52.86	0.13	29				
Calcium (mg/g)	0--10	4.44				3.14	80	4.82	10.26	0.09	29				
	10--35	4.22				3.29	85	4.07	10.57	0.03	29				
Carbon (%)	0--10	3.84				0.75	80	3.73	5.64	2.05	29				
	10--35	1.81				0.43	85	1.84	2.84	0.79	29				
ECEC (cmol/kg <sup>-1</sup> )	0--10	35.05				18.40	80	39.78	69.74	8.31	29				
	10--35	36.41				18.42	85	41.03	67.31	6.41	29				
Iron (mg/g)	0--10	0.25				0.34	80	0.08	1.39	0.01	29				
	10--35	0.24				0.34	85	0.07	1.30	0.02	29				

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth								
				(cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Loss on ignition (%)	0--10	15.50	2.96	80	16.19	19.35	9.88	29	
				10--35	12.61	2.94	85	13.89	16.07	5.76	29	
			Magnesium (cmol/kg <sup>-1</sup> )	0--10	10.90	5.88	80	12.78	19.96	0.50	29	
				10--35	12.29	7.33	85	13.72	27.37	0.33	29	
			Magnesium (mg/g)	0--10	1.31	0.71	80	1.53	2.39	0.06	29	
				10--35	1.48	0.88	85	1.65	3.28	0.04	29	
			Manganese (mg/g)	0--10	0.12	0.05	80	0.12	0.30	0.05	29	
				10--35	0.84	0.04	85	0.09	0.16	0.01	29	
			Nitrogen (%)	0--10	0.26	0.05	80	0.26	0.36	0.13	29	
				10--35	0.11	0.04	85	0.11	0.20	0.03	29	
			pH (H <sub>2</sub> O)	0--10	5.70	0.64	80	5.81	6.72	4.03	29	
				10--35	5.49	0.60	85	5.53	6.49	4.21	29	
			pH (KCl)	0--10	4.55	0.49	80	4.63	5.29	3.38	29	
				10--35	4.09	0.32	85	4.05	4.76	3.51	29	
			Phosphorus (mg/kg)	0--10	11	5	80	10	25	5	29	
				10--35	6	3	85	5	15	2	29	
			Potassium (mg/g)	0--10	0.14	0.08	80	0.12	0.32	0.05	29	
				10--35	0.08	0.07	85	0.04	0.26	0.01	29	
			Sodium (cmol/kg <sup>-1</sup> )	0--10	0.41	0.17	80	0.42	0.94	0.11	29	
				10--35	0.46	0.26	85	0.47	1.17	0.08	29	
			Sodium (mg/g)	0--10	0.09	0.04	80	0.10	0.22	0.02	29	
				10--35	0.11	0.06	85	0.11	0.27	0.02	29	
Compound dunes	Ultisols	Mfs	Potassium (cmol/kg <sup>-1</sup> )	0--10	0.37	0.07	4	0.40	0.42	0.26	30	Ensenada Brei
				10--40	0.45	0.50	11	0.25	2.04	0.12	30	Ensenada Brei
				40--50	0.46	0.15	4	0.44	0.65	0.30	30	Ensenada Brei
Alluvial deposits	Alfisol	Mfs		0--10	0.31	0.09	5	0.36	0.38	0.20	30	Cerro Gordo



Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Compound dunes	Ultisols	Mfs	Calcium (cmol/kg <sup>-1</sup> )	10--50	0.13	0.04	5	0.13	0.17	0.06	30	Cerro Gordo
				70--80	0.19	0.01	2	0.19	0.19	0.18	30	Cerro Gordo
				0--10	2.49	0.90	4	2.93	2.98	1.14	30	Ensenada Brei
				10--40	1.73	1.27	11	1.36	4.29	0.52	30	Ensenada Brei
				40--50	2.20	1.37	4	1.97	4.05	0.81	30	Ensenada Brei
Alluvial deposits	Alfisol	Mfs		0--10	2.57	1.34	5	1.82	4.07	1.24	30	Cerro Gordo
				10--50	1.48	0.91	5	1.11	2.85	0.67	30	Cerro Gordo
				70--80	4.64	0.49	2	4.64	4.99	4.29	30	Cerro Gordo
Compound dunes	Ultisols	Mfs	Calcium (mg/g)	0--10	0.50	0.18	4	0.59	0.60	0.23	30	Ensenada Brei
				10--40	0.35	0.25	11	0.27	0.86	0.10	30	Ensenada Brei
				40--50	0.44	0.27	4	0.39	0.81	0.16	30	Ensenada Brei
Alluvial deposits	Alfisol	Mfs		0--10	0.51	0.27	5	0.36	0.81	0.25	30	Cerro Gordo
				10--50	0.30	0.18	5	0.22	0.57	0.13	30	Cerro Gordo
				70--80	0.93	0.10	2	0.93	1.00	0.86	30	Cerro Gordo
Compound dunes	Ultisols	Mfs	Iron (mg/g)	0--10	0.06	0.00	4	0.06	0.06	0.05	30	Ensenada Brei
				10--40	0.06	0.07	11	0.03	0.28	0.02	30	Ensenada Brei
				40--50	0.03	0.01	4	0.03	0.04	0.02	30	Ensenada Brei
Alluvial deposits	Alfisol	Mfs		0--10	0.07	0.02	5	0.06	0.09	0.05	30	Cerro Gordo
				10--50	0.04	0.02	5	0.03	0.06	0.02	30	Cerro Gordo
				70--80	0.03	0.00	2	0.03	0.03	0.03	30	Cerro Gordo
Compound dunes	Ultisols	Mfs	Magnesium (cmol/kg <sup>-1</sup> )	0--10	1.57	0.55	4	1.40	2.36	1.11	30	Ensenada Brei
				10--40	1.32	1.07	11	0.78	4.05	0.53	30	Ensenada Brei
				40--50	2.68	1.80	4	2.40	5.13	0.81	30	Ensenada Brei
Alluvial deposits	Alfisol	Mfs		0--10	2.75	1.33	5	2.08	4.63	1.83	30	Cerro Gordo
				10--50	1.70	1.98	5	0.74	5.19	0.58	30	Cerro Gordo
				70--80	4.28	0.11	2	4.28	4.35	4.20	30	Cerro Gordo

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Compound dunes	Ultisols	Mfs	Magnesium (mg/g)	0--10	0.19	0.07	4	0.17	0.28	0.13	30	Ensenada Brei
				10--40	0.16	0.13	11	0.09	0.49	0.06	30	Ensenada Brei
				40--50	0.32	0.22	4	0.29	0.62	0.10	30	Ensenada Brei
Alluvial deposits	Alfisol	Mfs		0--10	0.33	0.16	5	0.25	0.56	0.17	30	Cerro Gordo
				10--50	0.20	0.24	5	0.09	0.62	0.07	30	Cerro Gordo
				70--80	0.51	0.01	2	0.51	0.52	0.50	30	Cerro Gordo
Compound dunes	Ultisols	Mfs	Manganese (mg/kg)	0--10	62	16	4	69	73	38	30	Ensenada Brei
				10--40	23	6	11	22	34	16	30	Ensenada Brei
				40--50	20	6	4	21	26	13	30	Ensenada Brei
Alluvial deposits	Alfisol	Mfs		0--10	52	12	5	47	68	40	30	Cerro Gordo
				10--50	21	9	5	20	30	11	30	Cerro Gordo
				70--80	25	0	2	25	25	25	30	Cerro Gordo
Compound dunes	Ultisols	Mfs	pH (H <sub>2</sub> O)	0--10	5.90	0.40	4	5.80	6.40	5.60	30	Ensenada Brei
				10--40	6.00	1.00	11	5.90	6.80	5.20	30	Ensenada Brei
				40--50	6.00	0.50	4	5.80	6.70	5.50	30	Ensenada Brei
Alluvial deposits	Alfisol	Mfs		0--10	6.20	0.60	5	6.00	7.20	5.60	30	Cerro Gordo
				10--50	5.80	0.20	5	5.70	6.10	5.50	30	Cerro Gordo
				70--80	6.30	0.00	2	6.30	6.30	6.30	30	Cerro Gordo
Compound dunes	Ultisols	Mfs	Phosphorus (mg/kg)	0--10	12	2	4	13	14	9	30	Ensenada Brei
				10--40	9	12	11	6	5	4	30	Ensenada Brei
				40--50	3	1	4	3	3	2	30	Ensenada Brei
Alluvial deposits	Alfisol	Mfs		0--10	7	1	5	8	8	6	30	Cerro Gordo
				10--50	3	1	5	3	5	1	30	Cerro Gordo
				70--80	2	0	2	2	2	2	30	Cerro Gordo
Compound dunes	Ultisols	Mfs	Potassium (mg/g)	0--10	0.14	0.03	4	0.15	0.16	0.10	30	Ensenada Brei
				10--40	0.17	0.21	11	0.10	0.78	0.05	30	Ensenada Brei

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total									
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes	
Alluvial deposits	Alfisol	Mfs		40--50	0.18	0.06	4	0.17	0.25	0.12	30	Ensenada Brei	
				0--10	0.12	0.03	5	0.14	0.17	0.08	30	Cerro Gordo	
				10--50	0.05	0.02	5	0.05	0.07	0.02	30	Cerro Gordo	
				70--80	0.07	0.00	2	0.07	0.07	0.07	30	Cerro Gordo	
Tuffaceous sandstone	Ultisols	Lmrf	Aluminum (cmol/kg <sup>-1</sup> )	0--20	0.29		1					31	
				20--100	9.21	4.62	2	9.21	12.48	5.94	31		
				100-150	11.08	2.07	3	12.03	12.50	8.71	31		
				200-400	11.14	2.90	2	11.14	13.19	9.09	31		
				400-500	15.08	0.50	3	15.31	15.42	14.50	31		
				500-680	4.77	4.99	4	2.96	11.94	1.23	31		
				Calcium (cmol/kg <sup>-1</sup> )	0--20	7.05		1					31
					20--100	1.28	0.58	2	1.28	1.70	0.87	31	
			100-150		0.59	0.15	3	0.64	0.72	0.42	31		
			200-400		0.49	0.17	2	0.49	0.60	0.37	31		
			400-500		0.95	0.17	3	1.01	1.08	0.76	31		
			500-680		7.40	7.15	4	7.21	14.23	0.97	31		
			Calcium (mg/g)		0--20	1.41		1					31
					20--100	0.26	0.12	2	0.26	0.34	0.17	31	
				100-150	0.12	0.03	3	0.13	0.14	0.08	31		
				200-400	0.10	0.03	2	0.10	0.12	0.07	31		
400-500	0.19	0.03		3	0.20	0.22	0.15	31					
500-680	1.48	1.43		4	1.44	2.85	0.19	31					
Carbon (%)	0--20	3.58			1					31			
	20--100	0.32		0.05	2	0.32	0.35	0.28	31				
	100-150	0.38	0.17	3	0.34	0.57	0.23	31					
	200-400	0.18	0.05	2	0.18	0.22	0.15	31					

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				400-500	0.08	0.02	3	0.07	0.10	0.07	31	
				500-680	0.07	0.03	4	0.08	0.09	0.04	31	
			ECEC (cmol/kg <sup>-1</sup> )	0--20	10.72		1				31	
				20--100	11.43	3.71	2	11.43	14.05	8.81	31	
				100-150	12.37	2.42	3	13.26	14.21	9.63	31	
				200-400	12.60	3.68	2	12.60	15.20	9.99	31	
				400-500	18.13	0.41	3	18.01	18.59	17.79	31	
				500-680	18.78	7.43	4	17.64	8.34	4.65	31	
			Iron (mg/kg)	0--20	340		1				31	
				20--100	70	40	2	70	110	40	31	
				100-150	80	20	3	70	100	70	31	
				200-400	80	20	2	80	90	60	31	
				400-500	80	10	3	60	70	60	31	
				500-680	40	10	4	40	50	30	31	
			Loss on ignition (%)	0--20	18.33		1				31	
				20--100	13.26	0.32	2	13.26	13.49	13.03	31	
				100-150	14.22	0.7	3	14.34	14.86	13.47	31	
				200-400	13.30	0.86	2	13.30	13.90	12.69	31	
				400-500	12.13	0.19	3	12.07	12.34	11.99	31	
				500-680	11.09	0.99	4	11.36	11.90	9.72	31	
			Magnesium (cmol/kg <sup>-1</sup> )	0--20	2.66		1				31	
				20--100	0.67	0.23	2	0.67	0.83	0.50	31	
				100-150	0.52	0.26	3	0.43	0.82	0.32	31	
				200-400	0.73	0.60	2	0.73	1.16	0.31	31	
				400-500	1.78	0.21	3	1.88	1.93	1.53	31	
				500-680	4.89	3.55	4	4.61	8.50	1.83	31	

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Magnesium (mg/g)	0--20	0.32		1				31	
				20--100	0.08	0.03	2	0.08	0.10	0.06	31	
				100-150	0.06	0.03	3	0.05	0.10	0.04	31	
				200-400	0.09	0.07	2	0.09	0.14	0.04	31	
				400-500	0.21	0.03	3	0.23	0.23	0.18	31	
			Magnesium (mg/g)	500-680	0.59	0.43	4	0.55	1.02	0.22	31	
				0--20	3.44		1				31	
				20--100	2.24	1.33	2	2.24	3.18	1.30	31	
				100-150	2.42	2.14	3	1.68	4.83	0.75	31	
				200-400	6.78	0.54	2	6.78	7.16	6.39	31	
				400-500	4.45	1.68	3	3.49	6.39	3.48	31	
				500-680	1.36	1.75	4	0.58	3.97	0.31	31	
			Nitrogen (%)	0--20	0.23		1				31	
				20--100	0.03	0.01	2	0.03	0.04	0.02	31	
				100-150	0.03	0.02	3	0.02	0.05	0.02	31	
				200-400	0.02	0.00	2	0.02	0.02	0.01	31	
				400-500	0.01	0.00	3	0.01	0.02	0.01	31	
			pH (H <sub>2</sub> O)	0--20	4.73		1				31	
				20--100	4.80	0.15	2	4.78	4.88	4.67	31	
				100-150	4.88	0.14	3	4.96	4.97	4.72	31	
				200-400	4.54	0.46	2	4.54	4.86	4.21	31	
				400-500	4.98	0.03	3	4.99	5.00	4.95	31	
				500-680	5.25	0.43	4	5.29	5.67	4.76	31	
			pH (KCl)	0--20	4.47		1				31	
				20--100	3.81	0.11	2	3.81	3.89	3.73	31	
				100-150	3.72	0.04	3	3.74	3.74	3.67	31	

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total							
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source
			Potassium (mg/g)	200-400	3.74	0.08	2	3.74	3.80	3.68	31
				400-500	3.64	0.04	3	3.64	3.68	3.60	31
				500-680	3.72	0.08	4	3.72	3.80	3.64	31
			Potassium (cmol/kg <sup>-1</sup> )	0--20	0.18		1				31
				20--100	0.05	0.03	2	0.05	0.07	0.03	31
				100-150	0.02	0.00	3	0.02	0.02	0.02	31
			Sodium (cmol/kg <sup>-1</sup> )	200-400	0.03	0.01	2	0.03	0.04	0.02	31
				400-500	0.06	0.01	3	0.06	0.06	0.05	31
				500-680	0.12	0.04	4	0.13	0.14	0.06	31
			Sodium (mg/g)	0--20	0.47		1				31
				20--100	0.14	0.08	2	0.14	0.20	0.08	31
				100-150	0.05	0.00	3	0.05	0.05	0.05	31
			Sodium (cmol/kg <sup>-1</sup> )	200-400	0.08	0.03	2	0.08	0.10	0.06	31
				400-500	0.15	0.02	3	0.15	0.16	0.13	31
				500-680	0.31	0.09	4	0.35	0.36	0.17	31
			Sodium (mg/g)	0--20	0.26		1				31
				20--100	0.13	0.02	2	0.13	0.14	0.12	31
				100-150	0.12	0.02	3	0.12	0.14	0.10	31
			Sodium (mg/g)	200-400	0.16	0.01	2	0.16	0.17	0.16	31
				400-500	0.17	0.00	3	0.18	0.18	0.17	31
				500-680	0.27	0.07	4	0.29	0.33	0.17	31
			Sodium (mg/g)	0--20	0.06		1				31
				20--100	0.03	0.00	2	0.03	0.03	0.03	31
				100-150	0.03	0.00	3	0.03	0.03	0.02	31
			Sodium (mg/g)	200-400	0.04	0.00	2	0.04	0.04	0.04	31
				400-500	0.04	0.00	3	0.04	0.04	0.04	31

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth								
				(cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				500-680	0.06	0.02	4	0.07	0.08	0.04	31	
			Sulfur (%)	0--20	0.06		1				31	
				20--100	0.06	0.01	2	0.06	0.06	0.05	31	
				100-150	0.05	0.01	3	0.06	0.06	0.04	31	
				200-400	0.04	0.03	2	0.04	0.05	0.02	31	
				400-500	0.01	0.00	3	0.01	0.01	0.01	31	
Alluvial deposits	Oxisols	Mfs	Carbon (%)	1500	10.29	2.60	399	9.92	23.30	5.11	32	Lagoon sediments
			C/N	1500	12	2	399	12	16	4	32	Lagoon sediments
			Nitrogen (%)	1500	0.90	0.31	399	0.87	4.40	0.47	32	Lagoon sediments
Alluvial deposits	Oxisols	Mfs	Aluminum (cmol/kg <sup>-1</sup> )	0--15	0.17	0.05	12	0.18	0.23	0.09	33	Quebradillas
				0--15	0.05	0.05	3	0.04	0.11	0.01	33	Isabela
			Bulk density(g/cc)	0--15	0.92	0.20	12	0.93	1.23	0.57	33	Quebradillas
Camuy formation	Alfisol	Mfs		0--15	1.09	0.58	3	1.22	1.59	0.45	33	Isabela
Alluvial deposits	Oxisols	Mfs	C/N	0--15	91	41	12	84	148	42	33	Quebradillas
Camuy formation	Alfisol	Mfs		0--15	299	392	3	129	747	21	33	Isabela
Alluvial deposits	Oxisols	Mfs	Calcium (cmol/kg <sup>-1</sup> )	0--15	25.06	9.30	12	26.58	36.75	13.05	33	Quebradillas
Camuy formation	Alfisol	Mfs		0--15	23.60	23.84	3	19.74	49.13	1.93	33	Isabela
Alluvial deposits	Oxisols	Mfs	Calcium (mg/g)	0--15	5.01	1.86	12	5.32	7.35	2.61	33	Quebradillas
Camuy formation	Alfisol	Mfs		0--15	4.72	4.77	3	3.95	9.83	0.39	33	Isabela
Alluvial deposits	Oxisols	Mfs	Carbon (%)	0--15	38.51	2.78	12	38.05	42.18	34.45	33	Quebradillas
Camuy formation	Alfisol	Mfs		0--15	38.37	8.69	3	41.37	45.17	28.58	33	Isabela
Alluvial deposits	Oxisols	Mfs	ECEC (cmol/kg <sup>-1</sup> )	0--15	28.15	10.06	12	30.178	40.95	14.66	33	Quebradillas
Camuy formation	Alfisol	Mfs		0--15	30.11	32.32	3	21.77	65.79	2.77	33	Isabela
Alluvial deposits	Oxisols	Mfs	Iron (mg/g)	0--15	0.01	0.05	12	0.01	0.03	0.01	33	Quebradillas
Camuy formation	Alfisol	Mfs		0--15	0.05	0.06	3	0.01	0.12	0.01	33	Isabela
Alluvial deposits	Oxisols	Mfs	Magnesium (cmol/kg <sup>-1</sup> )	0--15	2.36	1.03	12	2.39	3.95	0.95	33	Quebradillas

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Camuy formation	Alfisol	Mfs		0--15	5.86	8.31	3	1.54	15.44	0.59	33	Isabela
Alluvial deposits	Oxisols	Mfs	Magnesium (mg/g)	0--15	0.28	0.12	12	0.29	0.47	0.11	33	Quebradillas
Camuy formation	Alfisol	Mfs		0--15	0.70	1.00	3	0.19	1.85	0.07	33	Isabela
Alluvial deposits	Oxisols	Mfs	Manganese (mg/g)	0--15	0.03	0.01	12	0.03	0.04	0.01	33	Quebradillas
Camuy formation	Alfisol	Mfs		0--15	0.02	0.00	3	0.02	0.02	0.02	33	Isabela
Alluvial deposits	Oxisols	Mfs	Nitrogen (%)	0--15	0.50	0.20	12	0.46	0.82	0.28	33	Quebradillas
Camuy formation	Alfisol	Mfs		0--15	0.58	0.68	3	0.32	1.35	0.06	33	Isabela
Alluvial deposits	Oxisols	Mfs	Organic matter (%)	0--15	7.88	3.55	12	7.01	14.23	3.34	33	Quebradillas
Camuy formation	Alfisol	Mfs		0--15	9.34	10.34	3	5.93	20.96	1.14	33	Isabela
Alluvial deposits	Oxisols	Mfs	pH (H <sub>2</sub> O)	0--15	7.69	0.19	12	7.70	7.89	7.16	33	Quebradillas
Camuy formation	Alfisol	Mfs		0--15	7.23	0.91	3	7.70	7.81	6.19	33	Isabela
Alluvial deposits	Oxisols	Mfs	pH (KCl)	0--15	7.14	0.22	12	7.18	7.37	6.51	33	Quebradillas
Camuy formation	Alfisol	Mfs		0--15	6.61	1.07	3	7.19	7.26	5.38	33	Isabela
Alluvial deposits	Oxisols	Mfs	Phosphorus (mg/g)	0--15	0.05	0.03	12	0.04	0.10	0.02	33	Quebradillas
Camuy formation	Alfisol	Mfs		0--15	0.03	0.01	3	0.20	0.04	0.02	33	Isabela
Alluvial deposits	Oxisols	Mfs	Potassium (mg/g)	0--15	0.16	0.07	12	0.16	0.31	0.07	33	Quebradillas
Camuy formation	Alfisol	Mfs		0--15	0.11	0.03	3	0.12	0.13	0.08	33	Isabela
Alluvial deposits	Oxisols	Mfs	Potassium (cmol/kg <sup>-1</sup> )	0--15	0.42	0.19	12	0.41	0.81	0.19	33	Quebradillas
Camuy formation	Alfisol	Mfs		0--15	0.30	0.07	3	0.33	0.35	0.22	33	Isabela
Alluvial deposits	Oxisols	Mfs	Sodium (cmol/kg <sup>-1</sup> )	0--15	0.14	0.09	12	0.12	0.33	0.04	33	Quebradillas
Camuy formation	Alfisol	Mfs		0--15	0.30	0.40	3	0.13	0.76	0.03	33	Isabela
Alluvial deposits	Oxisols	Mfs	Sodium (mg/g)	0--15	0.03	0.02	12	0.03	0.08	0.01	33	Quebradillas
Camuy formation	Alfisol	Mfs		0--15	0.07	0.09	3	0.03	0.17	0.01	33	Isabela
Tuffaceous sandstone	Inceptisols	Rfs	Aluminum (cmol/kg <sup>-1</sup> )	0--10	5.75	2.20	20	5.46	10.10	2.82	34	Ridge
				0--10	6.21	2.30	19	7.10	9.46	1.16	34	Riparian
				0--10	5.18	1.25	19	4.84	7.57	3.20	34	Slope



Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0--10	5.33	1.53	20	5.04	9.44	2.93	34	Slope-ridge
				0--10	5.15	1.72	21	5.24	7.90	2.02	34	Slope-riparian
				0--10	3.91	1.50	20	3.37	6.59	1.82	34	Streambank
				10--25	4.27	1.16	20	3.88	7.26	2.94	34	Ridge
				10--25	5.24	2.12	20	5.80	8.44	0.64	34	Riparian
				10--25	4.41	1.15	21	4.32	6.11	2.21	34	Slope
				10--25	4.08	0.85	19	4.22	6.54	2.72	34	Slope-ridge
				10--25	4.32	1.66	20	3.87	7.57	2.59	34	Slope-riparian
				10--25	4.57	1.54	20	4.54	7.33	1.93	34	Streambank
				25--50	2.68	0.44	19	2.65	3.59	1.94	34	Ridge
				25--50	5.54	2.03	20	4.90	9.40	0.64	34	Riparian
				25--50	2.42	0.53	18	2.42	3.72	1.68	34	Slope
				25--50	2.91	0.52	21	2.88	3.87	2.20	34	Slope-ridge
				25--50	4.32	1.81	19	3.79	8.68	2.46	34	Streambank
			Calcium (cmol/kg <sup>-1</sup> )	0--10	0.57	0.63	20	0.38	2.83	0.15	34	Ridge
				0--10	1.30	1.13	19	1.04	4.07	0.18	34	Riparian
				0--10	0.27	0.24	19	0.15	0.74	0.07	34	Slope
				0--10	0.43	0.20	20	0.42	0.86	0.16	34	Slope-ridge
				0--10	0.50	0.45	21	0.27	1.72	0.10	34	Slope-riparian
				0--10	1.39	1.12	20	0.83	2.85	0.24	34	Streambank
				10--25	0.11	0.06	20	0.15	0.23	0.04	34	Ridge
				10--25	1.14	1.88	20	0.54	8.57	0.04	34	Riparian
				10--25	0.09	0.05	21	0.08	0.22	0.02	34	Slope
				10--25	0.13	0.05	19	0.12	0.24	0.06	34	Slope-ridge
				10--25	0.20	0.20	20	0.11	0.73	0.04	34	Slope-riparian
				10--25	0.80	0.77	20	0.36	2.33	0.07	34	Streambank

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				25--50	0.03	0.01	19	0.03	0.05	0.01	34	Ridge
				25--50	0.86	1.41	20	0.46	6.47	0.05	34	Riparian
				25--50	0.03	0.03	18	0.02	0.12	0.01	34	Slope
				25--50	0.03	0.01	21	0.03	0.05	0.01	34	Slope-ridge
				25--50	0.49	0.57	19	0.23	2.05	0.04	34	Streambank
			Calcium (mg/kg)	0--10	114	126	20	77	566	31	34	Ridge
				0--10	260	225	19	209	814	36	34	Riparian
				0--10	54	48	19	31	148	14	34	Slope
				0--10	86	41	20	83	171	31	34	Slope-ridge
				0--10	100	89	21	53	344	21	34	Slope-riparian
				0--10	279	225	20	165	570	47	34	Streambank
				10--25	23	11	20	21	47	8	34	Ridge
				10--25	227	376	20	108	1713	8	34	Riparian
				10--25	18	10	21	16	44	4	34	Slope
				10--25	25	10	19	24	48	12	34	Slope-ridge
				10--25	40	39	20	23	146	8	34	Slope-riparian
				10--25	159	154	20	72	465	15	34	Streambank
				25--50	5	2	19	5	10	2	34	Ridge
				25--50	173	281	20	91	1294	10	34	Riparian
				25--50	5	5	18	5	24	1	34	Slope
				25--50	6	2	21	6	11	3	34	Slope-ridge
				25--50	97	113	19	45	409	9	34	Streambank
			Carbon (%)	0--10	5.08	2.07	20	4.37	11.10	3.03	34	Ridge
				0--10	7.28	2.71	19	6.35	13.25	3.34	34	Riparian
				0--10	4.68	1.57	19	4.33	7.70	2.10	34	Slope
				0--10	4.26	1.07	20	4.10	6.83	2.75	34	Slope-ridge

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0--10	6.01	1.88	21	5.41	9.81	3.36	34	Slope-riparian
				0--10	2.61	1.24	20	2.60	5.26	0.97	34	Streambank
				10--25	2.77	1.08	20	2.64	5.28	1.12	34	Ridge
				10--25	6.31	2.38	20	6.16	10.25	2.42	34	Riparian
				10--25	3.50	1.25	21	3.47	5.70	1.46	34	Slope
				10--25	2.72	1.00	19	2.58	4.69	1.50	34	Slope-ridge
				10--25	4.92	1.79	20	4.39	7.68	2.82	34	Slope-riparian
				10--25	2.62	1.28	20	2.19	5.23	0.98	34	Streambank
				25--50	1.17	0.35	19	1.12	1.88	0.65	34	Ridge
				25--50	5.23	2.72	20	4.36	13.10	1.40	34	Riparian
				25--50	1.35	0.61	18	1.22	2.97	0.71	34	Slope
				25--50	1.07	0.20	21	1.03	1.61	0.71	34	Slope-ridge
				25--50	1.91	1.27	19	1.37	4.92	0.81	34	Streambank
			Effective cation exchange capacity	0--10	7.17	2.80	20	6.48	14.62	3.08	34	Ridge
			{ Ca+K+Mg(cmol/kg <sup>-1</sup> )	0--10	8.63	1.83	19	8.12	11.89	5.15	34	Riparian
				0--10	6.03	1.44	19	5.49	8.83	3.74	34	Slope
				0--10	6.45	1.84	20	6.14	11.55	3.99	34	Slope-ridge
				0--10	6.26	1.95	21	5.88	9.99	2.58	34	Slope-riparian
				0--10	6.17	1.72	20	6.45	9.58	3.63	34	Streambank
				10--25	4.77	1.27	20	4.26	8.03	3.27	34	Ridge
				10--25	7.11	1.43	20	7.38	10.19	4.40	34	Riparian
				10--25	4.87	1.21	21	4.95	6.75	2.44	34	Slope
				10--25	4.54	0.94	19	4.55	7.33	3.13	34	Slope-ridge
				10--25	4.90	1.81	20	4.31	8.37	3.01	34	Slope-riparian
				10--25	6.01	1.22	20	5.73	8.39	3.96	34	Streambank
				25--50	2.84	0.47	19	2.86	3.81	2.02	34	Ridge

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				25--50	7.09	1.82	20	7.30	10.67	4.35	34	Riparian
				25--50	2.58	0.59	18	2.56	3.95	1.85	34	Slope
				25--50	3.06	0.52	21	3.06	4.08	2.26	34	Slope-ridge
				25--50	5.32	2.01	19	4.75	9.43	3.06	34	Streambank
			Iron (mg/g)	0--10	2.01	0.63	20	1.72	3.20	1.43	34	Ridge
				0--10	1.01	0.47	19	1.05	1.94	0.49	34	Riparian
				0--10	1.89	0.72	19	1.74	3.37	0.88	34	Slope
				0--10	1.88	0.47	20	2.02	2.74	1.00	34	Slope-ridge
				0--10	1.56	0.42	21	1.62	2.50	0.91	34	Slope-riparian
				0--10	0.73	0.35	20	0.59	1.59	0.33	34	Streambank
				10--25	1.49	0.49	20	1.47	2.50	0.69	34	Ridge
				10--25	0.79	0.35	20	0.69	1.60	0.25	34	Riparian
				10--25	1.51	0.43	21	1.58	2.37	0.78	34	Slope
				10--25	1.20	0.43	19	1.17	2.29	0.12	34	Slope-ridge
				10--25	1.18	0.29	20	1.22	1.62	0.50	34	Slope-riparian
				10--25	0.66	0.18	20	0.59	1.04	0.46	34	Streambank
				25--50	0.56	0.30	19	0.44	1.37	0.24	34	Ridge
				25--50	0.68	0.38	20	0.52	1.40	0.22	34	Riparian
				25--50	0.72	0.35	18	0.59	0.13	0.18	34	Slope
				25--50	0.49	0.19	21	0.46	1.24	0.30	34	Slope-ridge
				25--50	0.68	0.32	19	0.56	1.57	0.36	34	Streambank
			Loss on ignition (%)	0--10	13.42	4.60	20	13.13	25.56	7.86	34	Ridge
				0--10	21.38	3.89	19	21.55	29.58	12.57	34	Riparian
				0--10	12.14	2.30	19	12.28	15.99	6.80	34	Slope
				0--10	12.28	2.66	20	12.21	18.71	8.06	34	Slope-ridge
				0--10	13.49	4.11	21	12.06	25.90	8.49	34	Slope-riparian

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0--10	12.62	4.03	20	13.51	19.44	6.79	34	Streambank
				10--25	8.97	2.15	20	8.73	13.88	6.16	34	Ridge
				10--25	20.03	3.09	20	20.35	25.26	13.08	34	Riparian
				10--25	9.63	1.99	21	10.12	12.66	5.70	34	Slope
				10--25	8.47	2.54	19	8.65	14.02	4.51	34	Slope-ridge
				10--25	11.94	4.53	20	10.17	21.35	7.23	34	Slope-riparian
				10--25	13.55	3.46	20	14.85	18.41	7.93	34	Streambank
				25--50	7.09	1.71	19	6.35	10.53	4.75	34	Ridge
				25--50	18.60	7.47	20	17.99	47.76	9.67	34	Riparian
				25--50	6.41	1.32	18	6.45	8.55	4.18	34	Slope
				25--50	6.60	1.27	21	6.19	8.81	4.51	34	Slope-ridge
				25--50	11.64	3.85	19	11.96	17.45	1.46	34	Streambank
			Magnesium (cmol/kg <sup>-1</sup> )	0--10	0.49	0.23	20	0.44	1.12	0.24	34	Ridge
				0--10	0.71	0.30	19	0.74	1.40	0.24	34	Riparian
				0--10	0.29	0.10	19	0.25	0.47	0.15	34	Slope
				0--10	0.34	0.18	20	0.29	0.75	0.14	34	Slope-ridge
				0--10	0.33	0.24	21	0.21	1.05	0.08	34	Slope-riparian
				0--10	0.59	0.29	20	0.66	0.93	0.19	34	Streambank
				10--25	0.15	0.07	20	0.13	0.29	0.03	34	Ridge
				10--25	0.44	0.24	20	0.47	0.90	0.11	34	Riparian
				10--25	0.15	0.07	21	0.14	0.35	0.07	34	Slope
				10--25	0.12	0.06	19	0.11	0.28	0.06	34	Slope-ridge
				10--25	0.19	0.14	20	0.15	0.50	0.04	34	Slope-riparian
				10--25	0.39	0.23	20	0.40	0.81	0.07	34	Streambank
				25--50	0.05	0.02	19	0.05	0.09	0.03	34	Ridge
				25--50	0.42	0.32	20	0.37	1.13	0.04	34	Riparian

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Magnesium (mg/kg)	25--50	0.05	0.02	18	0.05	0.11	0.02	34	Slope
				25--50	0.04	0.02	21	0.03	0.09	0.01	34	Slope-ridge
				25--50	0.24	0.18	19	0.19	0.60	0.04	34	Streambank
				0--10	59	27	20	52	135	28	34	Ridge
				0--10	85	36	19	89	168	28	34	Riparian
				0--10	34	12	19	31	56	18	34	Slope
				0--10	40	21	20	35	90	16	34	Slope-ridge
				0--10	40	29	21	26	126	9	34	Slope-riparian
				0--10	71	34	20	79	111	23	34	Streambank
				10--25	18	9	20	16	35	4	34	Ridge
				10--25	53	29	20	57	108	13	34	Riparian
				10--25	18	9	21	17	42	8	34	Slope
				10--25	14	7	19	13	33	7	34	Slope-ridge
				10--25	23	17	20	17	60	5	34	Slope-riparian
				10--25	47	27	20	48	97	9	34	Streambank
			25--50	6	2	19	6	11	4	34	Ridge	
			25--50	50	38	20	44	136	5	34	Riparian	
			25--50	6	3	18	6	13	2	34	Slope	
			25--50	5	3	21	4	11	1	34	Slope-ridge	
			25--50	29	22	19	23	72	5	34	Streambank	
			Manganese (mg/kg)	0--10	5	4	20	4	15	2	34	Ridge
				0--10	41	46	19	25	195	4	34	Riparian
				0--10	4	2	19	3	8	2	34	Slope
				0--10	6	3	20	5	13	2	34	Slope-ridge
				0--10	6	5	21	4	22	1	34	Slope-riparian
				0--10	80	41	20	90	131	15	34	Streambank

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				10--25	2	1	20	2	3	1	34	Ridge
				10--25	39	49	20	12	138	2	34	Riparian
				10--25	2	1	21	2	4	1	34	Slope
				10--25	3	1	19	2	6	1	34	Slope-ridge
				10--25	4	3	20	3	11	0.4	34	Slope-riparian
				10--25	54	34	20	53	121	5	34	Streambank
				25--50	0.75	0.40	19	0.75	1.51	0.04	34	Ridge
				25--50	29	36	20	19	138	1	34	Riparian
				25--50	1.6	1.6	17	1.0	6.1	0.3	34	Slope
				25--50	1.6	1.1	17	1.2	4.2	0.3	34	Slope-ridge
				25--50	35	26	19	35	83	3	34	Streambank
			Nitrogen (%)	0--10	0.22	0.08	20	0.22	0.40	0.03	34	Ridge
				0--10	0.33	0.09	19	0.30	0.55	0.22	34	Riparian
				0--10	0.23	0.08	19	0.23	0.45	0.10	34	Slope
				0--10	0.21	0.05	20	0.21	0.33	0.14	34	Slope-ridge
				0--10	0.25	0.09	21	0.23	0.44	0.13	34	Slope-riparian
				0--10	0.13	0.07	20	0.13	0.27	0.05	34	Streambank
				10--25	0.14	0.05	20	0.13	0.23	0.07	34	Ridge
				10--25	0.28	0.07	20	0.27	0.43	0.16	34	Riparian
				10--25	0.17	0.06	21	0.17	0.29	0.08	34	Slope
				10--25	0.14	0.05	19	0.14	0.23	0.08	34	Slope-ridge
				10--25	0.20	0.08	20	0.17	0.33	0.11	34	Slope-riparian
				10--25	0.15	0.07	20	0.15	0.27	0.06	34	Streambank
				25--50	0.07	0.02	19	0.06	0.13	0.03	34	Ridge
				25--50	0.19	0.08	20	0.18	0.39	0.06	34	Riparian
				25--50	0.06	0.02	18	0.06	0.12	0.04	34	Slope

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			pH (H <sub>2</sub> O)	25--50	0.06	0.01	21	0.06	0.08	0.04	34	Slope-ridge
				25--50	0.10	0.06	19	0.08	0.22	0.04	34	Streambank
				0--10	4.28	0.14	20	4.29	4.47	3.94	34	Ridge
				0--10	4.63	0.31	19	4.69	5.23	4.15	34	Riparian
				0--10	4.32	0.23	19	4.36	4.64	3.78	34	Slope
				0--10	4.31	0.16	20	4.28	4.72	4.05	34	Slope-ridge
				0--10	4.55	0.24	21	4.58	4.98	4.15	34	Slope-riparian
				0--10	4.89	0.21	20	4.96	5.17	4.41	34	Streambank
				10--25	4.42	0.16	20	4.42	4.62	4.10	34	Ridge
				10--25	4.77	0.49	20	4.80	6.51	4.31	34	Riparian
				10--25	4.38	0.15	21	4.41	4.62	4.04	34	Slope
				10--25	4.43	0.11	19	4.42	4.66	4.24	34	Slope-ridge
				10--25	4.62	0.21	20	4.60	5.08	4.20	34	Slope-riparian
				10--25	4.82	0.19	20	4.90	5.10	4.49	34	Streambank
			pH (KCl)	25--50	4.70	0.15	19	4.72	4.98	4.26	34	Ridge
				25--50	4.79	0.28	20	4.25	5.55	4.37	34	Riparian
				25--50	4.60	0.24	18	4.25	5.08	4.33	34	Slope
				25--50	4.52	0.24	21	4.57	4.86	4.12	34	Slope-ridge
				25--50	4.75	0.21	19	4.75	5.10	4.38	34	Streambank
				0--10	3.55	0.13	20	3.58	3.73	3.18	34	Ridge
				0--10	3.87	0.19	19	3.91	4.28	3.56	34	Riparian
				0--10	3.66	0.16	19	3.71	3.88	3.39	34	Slope
				0--10	3.66	0.13	20	3.68	3.89	3.43	34	Slope-ridge
				0--10	3.78	0.17	21	3.81	4.00	3.52	34	Slope-riparian
			0--10	3.94	0.14	20	3.96	4.23	3.67	34	Streambank	
			10--25	3.82	0.12	20	3.79	4.09	3.58	34	Ridge	



Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				10--25	4.04	0.45	20	3.96	5.67	3.71	34	Riparian
				10--25	3.73	0.11	21	3.73	3.94	3.53	34	Slope
				10--25	3.81	0.08	19	3.80	3.96	3.62	34	Slope-ridge
				10--25	3.89	0.13	20	3.92	4.04	3.64	34	Slope-riparian
				10--25	3.92	0.09	20	3.91	4.04	3.75	34	Streambank
				25--50	4.01	0.06	19	4.02	4.09	3.87	34	Ridge
				25--50	3.95	0.21	20	3.93	4.64	3.52	34	Riparian
				25--50	4.00	0.09	18	4.03	4.13	3.78	34	Slope
				25--50	4.01	0.05	21	4.01	4.10	3.93	34	Slope-ridge
				25--50	3.95	0.09	19	3.96	4.10	3.78	34	Streambank
			Phosphorus (mg/kg)	0--10	7	2	20	7	12	4	34	Ridge
				0--10	14	4	19	14	24	10	34	Riparian
				0--10	8	3	19	7	15	4	34	Slope
				0--10	6	1	20	6	10	4	34	Slope-ridge
				0--10	15	3	21	14	20	10	34	Slope-riparian
				0--10	6	2	20	6	10	3	34	Streambank
				10--25	3.5	2.4	20	3.2	9.5	0.5	34	Ridge
				10--25	12	4	20	11	21	6	34	Riparian
				10--25	6	3	21	6	12	2	34	Slope
				10--25	3	1	19	3	5	1	34	Slope-ridge
				10--25	11	3	20	11	17	7	34	Slope-riparian
				10--25	6	2	20	6	10	4	34	Streambank
				25--50	1	1	11	1	3	1	34	Ridge
				25--50	8	3	20	8	17	1	34	Riparian
				25--50	1.4	1.3	17	1.0	6.0	0.3	34	Slope
				25--50	1	0	9	1	1	1	34	Slope-ridge

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Potassium (cmol/kg <sup>-1</sup> )	25--50	5	1	19	5	7	1	34	Streambank
				0--10	0.16	0.04	20	0.15	0.23	0.11	34	Ridge
				0--10	0.21	0.06	19	0.19	0.32	0.10	34	Riparian
				0--10	0.14	0.02	19	0.14	0.17	0.11	34	Slope
				0--10	0.15	0.03	20	0.15	0.24	0.10	34	Slope-ridge
				0--10	0.16	0.05	21	0.16	0.28	0.09	34	Slope-riparian
				0--10	0.15	0.06	20	0.15	0.26	0.07	34	Streambank
				10--25	0.10	0.03	20	0.10	0.16	0.03	34	Ridge
				10--25	0.15	0.04	20	0.14	0.25	0.09	34	Riparian
				10--25	0.11	0.03	21	0.10	0.18	0.04	34	Slope
				10--25	0.10	0.03	19	0.10	0.16	0.04	34	Slope-ridge
				10--25	0.10	0.04	20	0.09	0.22	0.04	34	Slope-riparian
				10--25	0.13	0.06	20	0.14	0.24	0.04	34	Streambank
				25--50	0.04	0.01	17	0.03	0.07	0.01	34	Ridge
				25--50	0.11	0.06	20	0.11	0.27	0.03	34	Riparian
				25--50	0.04	0.03	18	0.03	0.12	0.02	34	Slope
				25--50	0.03	0.01	20	0.03	0.05	0.01	34	Slope-ridge
				25--50	0.11	0.10	19	0.09	0.45	0.04	34	Streambank
			Potassium (mg/g)	0--10	0.06	0.01	20	0.059	0.09	0.04	34	Ridge
				0--10	0.08	0.02	19	0.07	0.12	0.04	34	Riparian
				0--10	0.05	0.07	19	0.05	0.06	0.04	34	Slope
				0--10	0.06	0.01	20	0.06	0.09	0.04	34	Slope-ridge
				0--10	0.06	0.02	21	0.06	0.10	0.03	34	Slope-riparian
				0--10	0.06	0.02	2	0.06	0.10	0.03	34	Streambank
				10--25	0.04	0.01	20	0.04	0.06	0.01	34	Ridge
				10--25	0.06	0.02	20	0.05	0.09	0.03	34	Riparian

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				10--25	0.04	0.01	21	0.04	0.07	0.02	34	Slope
				10--25	0.04	0.01	19	0.04	0.06	0.02	34	Slope-ridge
				10--25	0.04	0.02	20	0.03	0.09	0.02	34	Slope-riparian
				10--25	0.05	0.02	20	0.05	0.09	0.02	34	Streambank
				25--50	0.01	0.01	17	0.01	0.03	0.01	34	Ridge
				25--50	0.04	0.02	20	0.04	0.10	0.01	34	Riparian
				25--50	0.02	0.01	18	0.01	0.05	0.01	34	Slope
				25--50	0.012	0.004	20	0.012	0.019	0.004	34	Slope-ridge
				25--50	0.04	0.04	19	0.03	0.17	0.01	34	Streambank
			Sodium (cmol/kg <sup>-1</sup> )	0--10	0.20	0.06	20	0.19	0.34	0.11	34	Ridge
				0--10	0.20	0.07	19	0.18	0.36	0.10	34	Riparian
				0--10	0.16	0.05	19	0.15	0.25	0.07	34	Slope
				0--10	0.21	0.06	20	0.22	0.28	0.12	34	Slope-ridge
				0--10	0.13	0.08	21	0.10	0.27	0.03	34	Slope-riparian
				0--10	0.14	0.07	20	0.14	0.27	0.03	34	Streambank
				10--25	0.14	0.07	20	0.10	0.28	0.06	34	Ridge
				10--25	0.14	0.05	20	0.14	0.22	0.04	34	Riparian
				10--25	0.11	0.04	21	0.12	0.17	0.04	34	Slope
				10--25	0.12	0.04	19	0.11	0.20	0.06	34	Slope-ridge
				10--25	0.09	0.05	20	0.08	0.19	0.01	34	Slope-riparian
				10--25	0.13	0.08	20	0.12	0.29	0.02	34	Streambank
				25--50	0.05	0.02	19	0.05	0.09	0.03	34	Ridge
				25--50	0.16	0.07	20	0.16	0.40	0.08	34	Riparian
				25--50	0.05	0.03	18	0.04	0.09	0.01	34	Slope
				25--50	0.06	0.02	21	0.06	0.09	0.02	34	Slope-ridge
				25--50	0.16	0.15	19	0.13	0.69	0.04	34	Streambank

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Sodium (mg/kg)	0--10	45	13	20	44	77	26	34	Ridge
				0--10	45	15	19	42	83	22	34	Riparian
				0--10	37	12	19	33	57	16	34	Slope
				0--10	48	13	20	50	65	27	34	Slope-ridge
				0--10	29	18	21	23	62	7	34	Slope-riparian
				0--10	32	16	20	32	61	7	34	Streambank
				10--25	32	16	20	24	65	14	34	Ridge
				10--25	33	11	20	33	50	9	34	Riparian
				10--25	26	8	21	28	39	9	34	Slope
				10--25	27	9	19	26	45	13	34	Slope-ridge
				10--25	20	11	20	18	44	30	34	Slope-riparian
				10--25	30	18	20	27	66	5	34	Streambank
				25--50	12	4	19	11	21	6	34	Ridge
				25--50	36	17	20	36	92	18	34	Riparian
				25--50	10	6	18	10	20	2	34	Slope
				25--50	13	4	21	14	20	5	34	Slope-ridge
				25--50	37	34	19	30	158	9	34	Streambank
			Sulfur (%)	0--10	0.40	0.01	20	0.04	0.07	0.02	34	Ridge
				0--10	0.07	0.02	19	0.06	0.12	0.04	34	Riparian
				0--10	0.04	0.01	19	0.04	0.61	0.02	34	Slope
				0--10	0.04	0.01	20	0.04	0.06	0.02	34	Slope-ridge
				0--10	0.05	0.02	21	0.04	0.08	0.03	34	Slope-riparian
				0--10	0.03	0.01	20	0.02	0.06	0.01	34	Streambank
				10--25	0.03	0.01	20	0.02	0.04	0.02	34	Ridge
				10--25	0.06	0.02	20	0.06	0.10	0.04	34	Riparian
				10--25	0.03	0.01	21	0.03	0.05	0.01	34	Slope

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

			total									
Geology and parent material	Soil order	Life zone	Element	Depth								
				(cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				10--25	0.03	0.01	19	0.02	0.04	0.02	34	Slope-ridge
				10--25	0.04	0.02	20	0.03	0.07	0.02	34	Slope-riparian
				10--25	0.03	0.01	20	0.02	0.06	0.01	34	Streambank
				25--50	0.02	0.01	19	0.01	0.02	0.01	34	Ridge
				25--50	0.05	0.02	20	0.04	0.09	0.02	34	Riparian
				25--50	0.02	0.01	18	0.02	0.03	0.01	34	Slope
				25--50	0.02	0.00	21	0.01	0.02	0.01	34	Slope-ridge
				25--50	0.02	0.01	19	0.02	0.05	0.01	34	Streambank
Tuffaceous sandstone	Ultisols	Lmrf	Organic matter (%)	0--12	2.20		1				35	
				65--95	1.41	0.23	4	1.43	1.65	1.12	35	
				105--145	1.89	0.20	4	0.87	1.12	0.60	35	
				155-195	0.54	0.06	4	0.52	0.61	0.47	35	
				205-225	0.52	0.19	3	0.47	0.73	0.37	35	
Serpentinite	Ultisols	Lmrf	Aluminum (cmol/kg <sup>-1</sup> )	0--60	0.13	0.12	12	0.10	0.49	0.03	36	
			Aluminum-total (mg/g)	0--60	112.59	23.17	12	157.79	209.86	79.01	36	
			Calcium (cmol/kg <sup>-1</sup> )	0--60	4.13	2.50	12	3.65	8.70	0.43	36	
			Calcium (mg/g)	0--60	0.83	0.50	12	0.73	1.74	0.09	36	
			Calcium-total (mg/g)	0--60	118.68	38.35	12	110.92	206.23	75.97	36	
			Cobalt-total (mg/g)	0--60	0.53	0.08	12	0.38	0.67	0.43	36	
			Copper-total (mg/g)	0--60	0.02	0.01	12	0.02	0.04	0.01	36	
			Cromium-total (mg/g)	0--60	6.68	1.17	12	6.86	8.33	5.10	36	
			ECEC (cmol/kg <sup>-1</sup> )	0--60	36.98	9.88	12	36.16	54.41	24.86	36	
			Iron (mg/g)	0--60	0.31	0.17	12	0.25	0.76	0.12	36	
			Iron-total (mg/g)	0--60	317.14	54.03	12	321.68	409.82	240.03	36	
			Magnesium (cmol/kg <sup>-1</sup> )	0--60	32.16	9.61	12	31.36	49.66	18.93	36	
			Magnesium (mg/g)	0--60	3.78	1.13	12	3.69	5.84	2.23	36	

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total							
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source
			Magnesium-total (mg/g)	0--60	26.49	9.23	12	26.60	42.72	13.39	36
			Manganese (mg/g)	0--60	0.22	0.11	12	0.20	0.40	0.06	36
			Manganese-total (mg/g)	0--60	7.75	1.43	12	7.57	10.22	5.67	36
			Nickel-total (mg/g)	0--60	2.44	0.54	12	2.45	3.53	1.51	36
			Nitrogen (%)	0--60	0.44	0.24	12	0.35	0.98	0.25	36
			Organic matter (%)	0--60	10.65	5.66	12	9.21	24.49	5.00	36
			pH (H <sub>2</sub> O)	0--60	6.10	0.37	12	6.13	6.55	5.17	36
			pH (KCl)	0--60	5.41	0.20	11	5.46	5.70	5.09	36
			Phosphorus (mg/kg)	0--60	6	4	12	4	13	2	36
			Phosphorus-total (mg/g)	0--60	0.57	0.16	12	0.55	0.88	0.38	36
			Potassium (cmol/kg <sup>-1</sup> )	0--60	0.31	0.13	12	0.30	0.59	0.16	36
			Potassium (mg/g)	0--60	0.12	0.05	12	0.12	0.23	0.06	36
			Potassium-total (mg/g)	0--60	1.38	0.37	12	1.34	2.20	0.93	36
			Sodium (cmol/kg <sup>-1</sup> )	0--60	0.24	0.08	12	0.25	0.39	0.13	36
			Sodium (mg/g)	0--60	0.05	0.02	12	0.06	0.09	0.03	36
Tuffaceous sandstone	Inceptisols	Wflm	Calcium (mg/g)	0--15	2.65	0.67	5	2.86	3.27	1.91	37
				15--30	1.67	0.39	5	1.51	2.19	1.21	37
			Iron (mg/g)	0--15	0.42	0.13	5	0.40	0.58	0.29	37
				15--30	0.42	0.16	5	0.33	0.65	0.27	37
			Loss on ignition (%)	0--15	14.31	1.93	5	15.15	15.64	10.91	37
				15--30	12.08	1.42	5	11.76	14.50	10.72	37
			Magnesium (mg/g)	0--15	0.43	0.07	5	0.46	0.50	0.35	37
				15--30	0.32	0.11	5	0.29	0.50	0.24	37
			Manganese (mg/g)	0--15	0.08	0.05	5	0.10	0.13	0.03	37
				15--30	0.07	0.03	5	0.07	0.12	0.03	37
			Nitrogen (%)	0--15	0.19	0.05	5	0.20	0.23	0.10	37

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Tuffaceous sandstone	Ultisols	Lmrf	Organic matter (%)	15--30	0.12	0.02	5	0.11	0.16	0.10	37	
				0--15	4.51	1.32	5	5.05	5.37	2.20	37	
			pH (H <sub>2</sub> O)	15--30	2.71	0.40	5	2.75	3.10	2.17	37	
				0--15	5.50	0.41	5	5.75	5.86	4.91	37	
			pH (KCl)	15--30	5.32	0.17	5	5.29	5.49	5.10	37	
				0--15	4.43	0.53	5	4.70	4.83	3.53	37	
			Phosphorus (mg/g)	15--30	4.09	0.26	5	4.24	4.29	3.66	37	
				0--15	0.02	0.00	5	0.02	0.02	0.01	37	
			Potassium (mg/g)	15--30	0.02	0.00	5	0.02	0.02	0.01	37	
				0--15	0.10	0.03	5	0.09	0.14	0.08	37	
			Aluminum (cmol/kg <sup>-1</sup> )	15--30	0.13	0.04	5	0.13	0.17	0.08	37	
				0--15	1.89	1.24	9	1.38	3.64	0.35	38	<i>Dieffenbachia seguine</i>
			Aluminum (cmol/kg <sup>-1</sup> )	0--15	8.17	6.62	17	6.94	19.47	0.19	38	<i>Ichnanthus pallens</i>
				0--15	1.59	1.82	11	0.79	6.17	0.34	38	<i>Pilea inaequalis</i>
			Base saturation (cmol/kg <sup>-1</sup> )	0--15	22.00	19.00	9	16.00	53.00	3.00	38	<i>Dieffenbachia seguine</i>
				0--15	57.48	34.22	17	59.29	93.44	1.71	38	<i>Ichnanthus pallens</i>
			C/N	0--15	13.05	14.47	11	6.97	48.81	3.09	38	<i>Pilea inaequalis</i>
				0--15	18.00	2.00	10	18.00	21.00	16.00	38	<i>Dieffenbachia seguine</i>
			Calcium (cmol/kg <sup>-1</sup> )	0--15	23.00	5.00	17	22.00	37.00	17.00	38	<i>Ichnanthus pallens</i>
				0--15	18.00	3.00	11	17.00	22.00	14.00	38	<i>Pilea inaequalis</i>
Calcium (mg/g)	0--15	4.66	2.00	10	4.83	7.30	1.34	38	<i>Dieffenbachia seguine</i>			
	0--15	2.23	2.11	17	1.77	6.62	0.24	38	<i>Ichnanthus pallens</i>			
Calcium (mg/g)	0--15	5.85	1.47	11	5.94	8.22	2.97	38	<i>Pilea inaequalis</i>			
	0--15	0.93	0.40	10	0.97	1.46	0.27	38	<i>Dieffenbachia seguine</i>			
				0--15	0.45	0.42	17	0.35	1.32	0.05	38	<i>Ichnanthus pallens</i>
				0--15	1.17	0.29	11	1.19	1.64	0.59	38	<i>Pilea inaequalis</i>

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Carbon (%)	0--15	3.98	0.76	10	3.94	5.63	2.89	38	<i>Dieffenbachia seguine</i>
				0--15	4.34	1.49	17	4.22	7.30	2.69	38	<i>Ichnanthus pallens</i>
				0--15	3.69	0.70	11	3.82	4.98	2.49	38	<i>Pilea inaequalis</i>
			Effective cation exchange capacity {Ca+K+Mg(cmol/kg <sup>-1</sup> )	0--15	9.52	2.08	10	9.57	12.75	6.81	38	<i>Dieffenbachia seguine</i>
				0--15	12.69	4.56	17	11.35	22.34	6.68	38	<i>Ichnanthus pallens</i>
				0--15	11.72	1.73	11	11.89	15.30	9.18	38	<i>Pilea inaequalis</i>
			Iron (mg/g)	0--15	0.52	0.24	10	0.46	0.99	0.28	38	<i>Dieffenbachia seguine</i>
				0--15	1.69	1.00	17	1.84	3.30	0.25	38	<i>Ichnanthus pallens</i>
				0--15	0.46	0.19	11	0.40	0.94	0.26	38	<i>Pilea inaequalis</i>
			Loss on ignition (%)	0--15	17.56	2.34	10	18.72	19.50	12.31	38	<i>Dieffenbachia seguine</i>
				0--15	17.53	3.08	17	17.76	23.36	12.78	38	<i>Ichnanthus pallens</i>
				0--15	16.49	1.91	11	16.12	19.75	12.92	38	<i>Pilea inaequalis</i>
			Magnesium (cmol/kg <sup>-1</sup> )	0--15	2.75	0.97	10	2.92	4.25	1.41	38	<i>Dieffenbachia seguine</i>
				0--15	1.85	1.15	17	1.72	3.81	0.54	38	<i>Ichnanthus pallens</i>
				0--15	3.74	1.47	11	3.36	7.06	2.20	38	<i>Pilea inaequalis</i>
			Magnesium (mg/g)	0--15	0.33	0.12	10	0.35	0.51	0.17	38	<i>Dieffenbachia seguine</i>
				0--15	0.22	0.14	17	0.21	0.46	0.07	38	<i>Ichnanthus pallens</i>
				0--15	0.48	0.18	11	0.40	0.85	0.26	38	<i>Pilea inaequalis</i>
			Manganese (mg/kg)	0--15	59	32	10	54	110	14	38	<i>Dieffenbachia seguine</i>
				0--15	30	34	17	9	120	3	38	<i>Ichnanthus pallens</i>
				0--15	132	40	11	119	202	88	38	<i>Pilea inaequalis</i>
			Nitrogen (%)	0--15	0.22	0.05	10	0.22	0.33	0.17	38	<i>Dieffenbachia seguine</i>
				0--15	0.20	0.09	17	0.21	0.34	0.07	38	<i>Ichnanthus pallens</i>
				0--15	0.21	0.04	11	0.23	0.26	0.14	38	<i>Pilea inaequalis</i>
			pH (H <sub>2</sub> O)	0--15	4.91	0.16	10	4.91	5.20	4.69	38	<i>Dieffenbachia seguine</i>
				0--15	4.56	0.36	17	4.40	5.39	4.07	38	<i>Ichnanthus pallens</i>



Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0--15	5.05	0.21	11	5.00	5.40	4.72	38	<i>Pilea inaequalis</i>
			pH (KCl)	0--15	4.13	0.18	10	4.13	4.44	3.90	38	<i>Dieffenbachia seguine</i>
				0--15	3.71	0.42	17	3.65	4.54	3.11	38	<i>Ichnanthus pallens</i>
				0--15	4.21	0.18	11	4.24	4.42	3.88	38	<i>Pilea inaequalis</i>
			Phosphorus (mg/kg)	0--15	7	2	10	7	10	4	38	<i>Dieffenbachia seguine</i>
				0--15	12	5	17	12	24	5	38	<i>Ichnanthus pallens</i>
				0--15	7	2	11	7	11	5	38	<i>Pilea inaequalis</i>
			Potassium (cmol/kg <sup>-1</sup> )	0--15	0.20	0.08	10	0.22	0.32	0.10	38	<i>Dieffenbachia seguine</i>
				0--15	0.21	0.06	17	0.19	0.31	0.10	38	<i>Ichnanthus pallens</i>
				0--15	0.34	0.15	11	0.27	0.74	0.20	38	<i>Pilea inaequalis</i>
			Potassium (mg/g)	0--15	0.08	0.03	10	0.08	0.12	0.04	38	<i>Dieffenbachia seguine</i>
				0--15	0.08	0.02	17	0.07	0.12	0.04	38	<i>Ichnanthus pallens</i>
				0--15	0.13	0.06	11	0.10	0.28	0.08	38	<i>Pilea inaequalis</i>
			Sodium (cmol/kg <sup>-1</sup> )	0--15	0.21	0.05	10	0.21	0.28	0.14	38	<i>Dieffenbachia seguine</i>
				0--15	0.23	0.08	17	0.20	0.46	0.12	38	<i>Ichnanthus pallens</i>
				0--15	0.21	0.05	11	0.20	0.34	0.16	38	<i>Pilea inaequalis</i>
			Sodium (mg/g)	0--15	0.05	0.01	10	0.05	0.07	0.03	38	<i>Dieffenbachia seguine</i>
				0--15	0.05	0.02	17	0.05	0.11	0.03	38	<i>Ichnanthus pallens</i>
				0--15	0.05	0.01	11	0.05	0.08	0.04	38	<i>Pilea inaequalis</i>
Tuffaceous sandstone	Ultisols	Swf	Clay (%)	0--30	38	15	4	40	52	21	39	Caracoles-El Verde
Tuffaceous sandstone	Ultisols	Wf-LM		0--30	13	4	4	13	17	8	39	Toro Negro
Lava, tuff	Ultisols	Swf		0--30	33	16	6	30	55	14	39	Guavate
Limestone	Mollisols	Smf		0--30	21	29	6	9	77	1	39	Rio Abajo
Limestone	Ultisols	Smf		0--30	5	4	4	4	9	1	39	Guajataca
Tuffaceous sandstone	Inceptisols	Wfs		0--30	35	23	4	38	55	11	39	Sabana
Tuffaceous sandstone	Ultisols	Wfs		0--30	51		1				39	Arboretum

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Tuffaceous sandstone	Ultisols	Swf	pH (H <sub>2</sub> O)	0--30	4.65	0.39	4	4.55	5.20	4.30	39	Caracoles-El Verde
Tuffaceous sandstone	Ultisols	Wf-LM		0--30	5.08	0.05	4	5.10	5.10	5.00	39	Toro Negro
Lava, tuff	Ultisols	Swf		0--30	4.77	0.14	6	4.75	5.00	4.60	39	Guavate
Limestone	Mollisols	Smf		0--30	6.02	1.03	6	6.20	7.30	4.80	39	Rio Abajo
Limestone	Ultisols	Smf		0--30	7.10	0.45	4	7.15	7.60	6.50	39	Guajataca
Tuffaceous sandstone	Inceptisols	Wfs		0--30	5.28	0.55	4	5.15	6.00	4.80	39	Sabana
Tuffaceous sandstone	Ultisols	Wfs		0--30	5.16		1				39	Arboretum
Tuffaceous sandstone	Ultisols	Swf	Sand (%)	0--30	34	16	4	4	55	20	39	Caracoles-El Verde
Tuffaceous sandstone	Ultisols	Wf-LM		0--30	53	8	4	53	60	45	39	Toro Negro
Lava, tuff	Ultisols	Swf		0--30	23	15	6	15	44	11	39	Guavate
Limestone	Mollisols	Smf		0--30	42	23	6	44	66	7	39	Rio Abajo
Limestone	Ultisols	Smf		0--30	33	9	4	32	44	25	39	Guajataca
Tuffaceous sandstone	Inceptisols	Wfs		0--30	16	9	4	17	25	6	39	Sabana
Tuffaceous sandstone	Ultisols	Wfs		0--30	16		1				39	Arboretum
Tuffaceous sandstone	Ultisols	Swf	Silt (%)	0--30	27	4	4	28	31	24	39	Caracoles-El Verde
Tuffaceous sandstone	Ultisols	Wf-LM		0--30	34	4	4	35	38	29	39	Toro Negro
Lava, tuff	Ultisols	Swf		0--30	44	10	6	41	59	34	39	Guavate
Limestone	Mollisols	Smf		0--30	37	13	6	39	54	16	39	Rio Abajo
Limestone	Ultisols	Smf		0--30	62	5	4	63	67	55	39	Guajataca
Tuffaceous sandstone	Inceptisols	Wfs		0--30	49	14	4	48	64	35	39	Sabana
Tuffaceous sandstone	Ultisols	Wfs		0--30	33		1				39	Arboretum
Limestone	Mollisols	Smf	Calcium (mg/kg)	0--30	4891	2861	10	3988	9119	1372	40	Rio Abajo
Blanket deposits	Alfisols	Smf		0--30	1598	910	12	1476	3216	173	40	Cambalache forest
Lava, tuff	Ultisols	Swf		0--30	5528	1729	2	5528	6750	4305	40	Cayey
				0--30	2425	1260	2	2425	3316	1534	40	Guavate forest
Plutonic rocks	Inceptisols	Mfs		0--30	1343		1				40	Patillas

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Tuffaceous sandstone	Ultisols	Wfs		0--30	6600	804	4	6504	7634	5760	40	Caribbean National Forest
Limestone	Mollisols	Smf	Effective cation exchange capacity	0--30	29	13	10	24	48	9	40	Rio Abajo
Blanket deposits	Alfisols	Smf	{Ca+K+Mg(cmol/kg <sup>-1</sup> )	0--30	11	4	12	10	19	4	40	Cambalache forest
Lava, tuff	Ultisols	Swf		0--30	38	12	2	38	46	30	40	Cayey
				0--30	18	5	2	18	22	14	40	Guavate forest
Plutonic rocks	Inceptisols	Mfs		0--30	9		1				40	Patillas
Tuffaceous sandstone	Ultisols	Wfs		0--30	45	4	4	45	49	40	40	Caribbean National Forest
Limestone	Mollisols	Smf	Magnesium (mg/kg)	0--30	273	109	10	252	486	161	40	Rio Abajo
Blanket deposits	Alfisols	Smf		0--30	119	49	12	112	204	46	40	Cambalache forest
Lava, tuff	Ultisols	Swf		0--30	1156	344	2	1156	1399	912	40	Cayey
				0--30	548	59	2	548	589	506	40	Guavate forest
Plutonic rocks	Inceptisols	Mfs		0--30	204		1				40	Patillas
Tuffaceous sandstone	Ultisols	Wfs		0--30	1267	131	4	1232	1446	1158	40	Caribbean National Forest
Limestone	Mollisols	Smf	Potassium (mg/kg)	0--30	260	54	10	268	371	172	40	Rio Abajo
Blanket deposits	Alfisols	Smf		0--30	226	52	12	229	292	141	40	Cambalache forest
Lava, tuff	Ultisols	Swf		0--30	258	40	2	258	286	229	40	Cayey
				0--30	303	73	2	203	254	151	40	Guavate forest
Plutonic rocks	Inceptisols	Mfs		0--30	131		1				40	Patillas
Tuffaceous sandstone	Ultisols	Wfs		0--30	279	17	4	279	299	259	40	Caribbean National Forest
Limestone	Mollisols	Smf	Sodium (mg/kg)	0--30	35	18	10	29	82	21	40	Rio Abajo
Blanket deposits	Alfisols	Smf		0--30	16	8	12	13	37	8	40	Cambalache forest
Lava, tuff	Ultisols	Swf		0--30	77	7	2	77	82	73	40	Cayey
				0--30	57	28	2	57	77	38	40	Guavate forest
Plutonic rocks	Inceptisols	Mfs		0--30	56		1				40	Patillas
Tuffaceous sandstone	Ultisols	Wfs		0--30	60	37	4	65	100	11	40	Caribbean National Forest
Tuffaceous sandstone	Ultisols	Lmrf	Aluminum (cmol/kg <sup>-1</sup> )	0--10	6.98	1.29	11	6.64	8.74	4.94	41	

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total							
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source
				10--20	6.10	0.95	11	6.02	8.11	4.36	41
				20--30	5.64	0.77	11	5.75	6.88	3.87	41
			Calcium (cmol/kg <sup>-1</sup> )	0--10	1.21	0.97	11	0.89	3.74	0.39	41
				10--20	0.51	0.37	11	0.33	1.30	0.16	41
				20--30	0.26	0.17	11	0.24	0.60	0.05	41
			Calcium (mg/g)	0--10	0.24	0.19	11	0.18	0.75	0.08	41
				10--20	0.10	0.07	11	0.07	0.26	0.03	41
				20--30	0.05	0.03	11	0.05	0.12	0.01	41
			Effective cation exchange capacity {Ca+K+Mg(cmol/kg <sup>-1</sup> )	0--10	10.77	1.24	11	10.63	12.93	8.64	41
				10--20	8.36	0.99	11	8.25	10.10	6.53	41
				20--30	7.41	1.17	11	7.23	9.70	5.23	41
			Iron (mg/g)	0--10	2.11	0.40	11	2.00	2.86	1.54	41
				10--20	1.78	0.49	11	1.59	2.75	1.34	41
				20--30	1.63	0.39	11	1.52	2.60	1.16	41
			Magnesium (cmol/kg <sup>-1</sup> )	0--10	1.75	0.29	11	1.65	2.26	1.37	41
				10--20	1.13	0.20	11	1.07	1.62	0.87	41
				20--30	0.87	0.30	11	0.72	1.53	0.57	41
			Magnesium (mg/g)	0--10	0.21	0.03	1	0.20	0.27	0.16	41
				10--20	0.14	0.02	11	0.13	0.19	0.10	41
				20--30	0.10	0.04	11	0.09	0.18	0.07	41
			Manganese (mg/kg)	0--10	4	2	11	3	8	2	41
				10--20	3	1	11	2	5	1	41
				20--30	2	1	11	2	50	1	41
			Organic matter (%)	0--10	10.19	3.21	11	9.40	17.20	7.23	41
				10--20	6.90	2.40	11	6.37	11.00	2.75	41
				20--30	12.36	2.59	10	12.38	15.77	6.37	41

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total											
Geology and parent material	Soil order	Life zone	Element	Depth							
				(cm)	Mean	Sd	n	Median	Max	Min	Source
			pH (H <sub>2</sub> O)	0--10	3.96	0.12	11	3.97	4.18	3.72	41
				10--20	4.02	0.16	11	4.05	4.18	3.64	41
				20--30	4.12	0.14	11	4.16	4.29	3.89	41
			pH (KCl)	0--10	3.47	0.11	11	3.48	3.62	3.31	41
				10--20	3.55	0.11	11	3.55	3.72	3.36	41
				20--30	3.60	0.09	11	3.60	3.77	3.43	41
			Phosphorus (mg/kg)	0--10	9	2	11	10	11	6	41
				10--20	6	2	11	5	8	4	41
				20--30	4	1	11	4	6	2	41
			Potassium (cmol/kg <sup>-1</sup> )	0--10	0.17	0.10	11	0.13	0.36	0.07	41
				10--20	0.12	0.08	11	0.09	0.27	0.04	41
				20--30	0.10	0.08	11	0.06	0.23	0.02	41
			Potassium (mg/g)	0--10	0.07	0.04	11	0.05	0.14	0.03	41
				10--20	0.05	0.03	11	0.04	0.10	0.02	41
				20--30	0.04	0.03	11	0.02	0.09	0.01	41
			Sodium (cmol/kg <sup>-1</sup> )	0--10	0.66	0.11	11	0.65	0.87	0.46	41
				10--20	0.90	0.08	11	0.50	0.59	0.35	41
				20--30	0.54	0.51	11	0.38	2.04	0.25	41
			Sodium (mg/g)	0--10	0.15	0.03	11	0.15	0.20	0.11	41
				10--20	0.11	0.02	11	0.11	0.14	0.08	41
Tuffaceous sandstone	Ultisols	Lmrf		20--30	0.12	0.12	11	0.09	0.47	0.06	41
Tuffaceous sandstone	Inceptisols	Smf	Clay (%)	0--10	36	13	8	40	47	13	42
				10--20	32	12	8	36	43	13	42
				20--30	28	12	8	28	45	5	42
				30--40	26	12	8	31	39	6	42
			Organic matter (%)	0--10	5.45	2.30	8	5.41	9.32	2.74	42

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			pH (H <sub>2</sub> O)	10--20	3.39	2.07	8	2.82	6.98	1.30	42	
				20--30	1.99	1.11	8	1.66	4.32	0.85	42	
				30--40	1.71	0.98	8	1.68	3.39	0.69	42	
				0--10	7.16	1.01	8	6.94	8.68	5.75	42	
				10--20	7.47	1.05	8	7.16	9.07	6.15	42	
				20--30	7.83	0.74	8	7.50	8.96	6.93	42	
				30--40	7.61	0.71	8	7.57	8.68	6.89	42	
				0--10	33	25	8	19	75	15	42	
				10--20	37	24	8	26	76	13	42	
				20--30	42	25	8	40	89	12	42	
				30--40	47	29	8	38	91	15	42	
				0--10	32	13	8	36	46	12	42	
			10--20	32	13	8	34	47	11	42		
			20--30	25	15	8	25	43	4	42		
			30--40	27	16	8	30	47	3	42		
Alluvial deposits	Inceptisols	Mfs	Bulk density (g/cc)	0--8	1.40		1				43	Yabucoa
				0--19	0.97		1				43	Yabucoa
				36--43	1.54		1				43	Yabucoa
Limestone	Mollisols	Smf	0--8	0.66	0.18	2	0.66	0.79	0.53	43	Rio Abajo	
			15--23	1.07		1				43	Rio Abajo	
Alluvial deposits	Inceptisols	Mfs	Calcium-total (mg/g)	0--8	1.70		1				43	Yabucoa
				0--19	0.78		1				43	Yabucoa
Alluvial deposits	Inceptisols	Mfs	36--43	1.03		1				43	Yabucoa	
Limestone	Mollisols	Smf	0--8	9.28	2.01	2	9.28	10.70	7.86	43	Rio Abajo	
			15--23	25.06		1				43	Rio Abajo	
Alluvial deposits	Inceptisols	Mfs	Clay (%)	0--8	7		1				43	Yabucoa

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Limestone	Mollisols	Smf		0--19	29		1				43	Yabucoa
				36--43	10		1				43	Yabucoa
				0--8	27	20	2	27	41	13	43	Rio Abajo
				15--23	11		1				43	Rio Abajo
Alluvial deposits	Inceptisols	Mfs	Magnesium-total (mg/g)	0--8	1.34		1				43	Yabucoa
				0--19	1.70		1				43	Yabucoa
				36--43	2.24		1				43	Yabucoa
Limestone	Mollisols	Smf		0--8	9.27	1.02	2	9.27	9.99	8.55	43	Rio Abajo
				15--23	6.96		1				43	Rio Abajo
Alluvial deposits	Inceptisols	Mfs	Nitrogen (%)	0--8	0.16		1				43	Yabucoa
				0--19	0.11		1				43	Yabucoa
				36--43	0.06		1				43	Yabucoa
Limestone	Mollisols	Smf		0--8	0.30	0.11	2	0.30	0.38	0.22	43	Rio Abajo
				15--23	0.33		1				43	Rio Abajo
Alluvial deposits	Inceptisols	Mfs	Organic matter (%)	0--8	2.29		1				43	Yabucoa
				0--19	1.70		1				43	Yabucoa
Alluvial deposits	Inceptisols	Mfs		36--43	0.65		1				43	Yabucoa
Limestone	Mollisols	Smf		0--8	4.16	2.52	2	4.16	5.94	2.37	43	Rio Abajo
				15--23	4.91		1				43	Rio Abajo
Alluvial deposits	Inceptisols	Mfs	Phosphorus-total (mg/g)	0--8	0.45		1				43	Yabucoa
				0--19	0.33		1				43	Yabucoa
				36--43	0.32		1				43	Yabucoa
Limestone	Mollisols	Smf		0--8	0.62	0.29	2	0.62	0.82	0.41	43	Rio Abajo
				15--23	1.12		1				43	Rio Abajo
Alluvial deposits	Inceptisols	Mfs	Potassium-total (mg/g)	0--8	1.48		1				43	Yabucoa
				0--19	1.61		1				43	Yabucoa

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				36--43	1.27		1				43	Yabucoa
Limestone	Mollisols	Smf		0--8	2.80	0.25	2	2.80	2.98	2.63	43	Rio Abajo
				15--23	3.72		1				43	Rio Abajo
Alluvial deposits	Inceptisols	Mfs	Sand (%)	0--8	72		1				43	Yabucoa
				0--19	41		1				43	Yabucoa
Alluvial deposits	Inceptisols	Mfs		36--43	66		1				43	Yabucoa
Limestone	Mollisols	Smf		0--8	27	23	2	27	43	11	43	Rio Abajo
Limestone	Mollisols	Smf		15--23	53		1				43	Rio Abajo
Alluvial deposits	Inceptisols	Mfs	Silt (%)	0--8	21		1				43	Yabucoa
				0--19	30		1				43	Yabucoa
Alluvial deposits	Inceptisols	Mfs		36--43	24		1				43	Yabucoa
Limestone	Mollisols	Smf		0--8	46	3	2	46	48	44	43	Rio Abajo
				15--23	36		1				43	Rio Abajo
Alluvial deposits	Inceptisols	Mfs	Sodium-total (mg/g)	0--8	0.47		1				43	Yabucoa
				0--19	0.33		1				43	Yabucoa
				36--43	0.32		1				43	Yabucoa
Limestone	Mollisols	Smf		0--8	0.78	0.01	2	0.78	0.79	0.77	43	Rio Abajo
				15--23	0.99		1				43	Rio Abajo
Lava	Ultisols	Wfs	Calcium (%)	0--6	0.06	0.01	4	0.06	0.08	0.05	44	
				5--20	0.05	0.01	5	0.05	0.06	0.05	44	
				12--39	0.06	0.01	3	0.06	0.07	0.05	44	
				28--58	0.06	0.01	4	0.07	0.07	0.05	44	
			Organic matter (%)	0--6	7.83	1.76	4	8.43	9.18	5.29	44	
				5--20	2.41	1.04	5	2.01	4.01	1.51	44	
				12--39	0.80	0.07	3	0.76	0.88	0.75	44	
				28--58	0.32	0.13	4	0.38	0.38	0.12	44	



Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total											
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source Site/notes				
Tuffaceous sandstone	Ultisols	Wfs	pH (H <sub>2</sub> O)	0--6	4.22	0.28	4	4.16	4.61	3.95	44				
				5--20	4.05	0.10	5	4.01	4.16	3.92	44				
				12--39	4.11	0.09	3	4.13	4.18	4.01	44				
				28--58	4.03	0.11	4	4.01	4.17	3.91	44				
			Phosphorus (%)	0--6	0.02	0.00	4	0.02	0.02	0.01	44				
				5--20	0.01	0.01	5	0.01	0.02	0.01	44				
				12--39	0.01	0.00	3	0.01	0.01	0.01	44				
				28--58	0.02	0.00	4	0.02	0.02	0.02	44				
			Potassium (%)	0--6	0.07	0.02	4	0.07	0.09	0.06	44				
				5--20	0.08	0.02	5	0.07	0.10	0.06	44				
				12--39	0.04	0.03	3	0.06	0.06	0.01	44				
				28--58	0.07	0.03	4	0.06	0.10	0.04	44				
						Aluminum (cmol/kg <sup>-1</sup> )	0--10	6.20	0.76	4	6.25	6.90	5.40	45	<i>Khaya nyassica</i>
							0--10	5.60	0.10	3	5.60	5.70	5.50	45	<i>Pinus elliottii</i>
							0--10	5.70	0.56	3	5.60	6.30	5.20	45	<i>Terminalia ivorensis</i>
							0--10	3.73	2.48	3	3.00	6.50	1.70	45	<i>Anthocephalus cadamba</i>
0--10	5.43	0.66					4	5.65	5.90	4.50	45	<i>Swietenia macrophylla</i>			
0--10	3.37	1.54					3	4.10	4.40	1.60	45	<i>Hibiscus elatus</i>			
0--10	4.20	1.73					3	3.80	6.10	2.70	45	<i>Eucalyptus saligna</i>			
0--10	4.40	1.40					3	3.80	6.00	3.40	45	<i>Pinus caribaea</i> var. <i>hondurensis</i>			
0--10	2.67	0.38					3	2.50	3.10	2.40	45	<i>Hernandia sonora</i>			
0--10	15.85	24.81					4	4.40	53.00	1.60	45	<i>Eucalyptus pathentinervis</i>			
Aluminum-total (mg/g)	0--10	46.05					1.79	4	45.39	48.69	44.71	45	<i>Khaya nyassica</i>		
	0--10	62.85					6.89	4	65.22	68.24	52.74	45	<i>Pinus elliottii</i>		
	0--10	57.85	6.89	4	55.49	67.71	52.51	45	<i>Terminalia ivorensis</i>						
	0--10	39.09	8.68	4	35.20	52.06	33.90	45	<i>Anthocephalus cadamba</i>						

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0--10	65.38	8.32	4	68.35	71.36	53.46	45	<i>Swietenia macrophylla</i>
				0--10	91.26	8.51	4	93.93	98.01	79.16	45	<i>Hibiscus elatus</i>
				0--10	97.62	8.10	4	97.67	104.94	90.19	45	<i>Eucalyptus saligna</i>
				0--10	59.72	27.91	4	55.28	95.98	32.50	45	<i>Pinus caribaea</i> var. <i>hondurensis</i>
				0--10	32.60	5.25	4	33.82	36.98	25.77	45	<i>Hernandia sonora</i>
				0--10	35.72	2.95	4	36.70	38.07	31.40	45	<i>Eucalyptus pathentinervis</i>
			Bulk density (g/cc)	0--10	0.60	0.11	4	0.56	0.77	0.53	45	<i>Khaya nyassica</i>
				0--10	0.73	0.08	4	0.73	0.81	0.63	45	<i>Pinus elliotii</i>
				0--10	0.45	0.04	4	0.45	0.51	0.41	45	<i>Terminalia ivorensis</i>
				0--10	0.56	0.08	4	0.57	0.63	0.46	45	<i>Anthocephalus cadamba</i>
				0--10	0.57	0.08	5	0.56	0.66	0.48	45	<i>Swietenia macrophylla</i>
				0--10	0.69	0.12	4	0.70	0.82	0.54	45	<i>Hibiscus elatus</i>
				0--10	0.54	0.06	4	0.54	0.61	0.47	45	<i>Eucalyptus saligna</i>
				0--10	0.81	0.10	4	0.83	0.91	0.69	45	<i>Pinus caribaea</i> var. <i>hondurensis</i>
				0--10	0.50	0.12	4	0.52	0.62	0.33	45	<i>Hernandia sonora</i>
				0--10	0.72	0.14	5	0.74	0.88	0.50	45	<i>Eucalyptus pathentinervis</i>
			Calcium (mg/kg)	0--10	299	55	4	323	331	217	45	<i>Khaya nyassica</i>
				0--10	214	51	3	205	268	168	45	<i>Pinus elliotii</i>
				0--10	236	38	3	227	278	204	45	<i>Terminalia ivorensis</i>
				0--10	362	279	3	323	658	105	45	<i>Anthocephalus cadamba</i>
				0--10	300	116	4	266	467	202	45	<i>Swietenia macrophylla</i>
				0--10	274	151	3	192	448	182	45	<i>Hibiscus elatus</i>
				0--10	550	245	3	502	816	333	45	<i>Eucalyptus saligna</i>
				0--10	237	26	3	250	253	207	45	<i>Pinus caribaea</i> var. <i>hondurensis</i>
				0--10	239	48	3	214	294	208	45	<i>Hernandia sonora</i>
				0--10	203	121	4	160	379	114	45	<i>Eucalyptus pathentinervis</i>

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth								
				(cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Calcium-total (mg/g)	0--10	0.26	0.06	4	0.26	0.33	0.18	45	<i>Khaya nyassica</i>
		0--10		0.20	0.15	4	0.20	0.39	0.03	45	<i>Pinus elliottii</i>	
		0--10		0.19	0.03	4	0.21	0.21	0.15	45	<i>Terminalia ivorensis</i>	
		0--10		0.49	0.17	4	0.45	0.71	0.33	45	<i>Anthocephalus cadamba</i>	
		0--10		0.52	0.32	4	0.45	0.95	0.25	45	<i>Swietenia macrophylla</i>	
		0--10		0.44	0.25	4	0.54	0.61	0.07	45	<i>Hibiscus elatus</i>	
		0--10		1.17	0.38	4	1.09	0.85	0.63	45	<i>Eucalyptus saligna</i>	
		0--10		0.49	0.04	4	0.50	0.53	0.43	45	<i>Pinus caribaea</i> var. <i>hondurensis</i>	
		0--10		0.63	0.11	4	0.60	0.77	0.55	45	<i>Hernandia sonora</i>	
		0--10	0.81	0.37	4	0.87	1.14	0.37	45	<i>Eucalyptus pathentinervis</i>		
			Clay (%)	0--10	32		1				45	<i>Khaya nyassica</i>
		0--10		18		1				45	<i>Pinus elliottii</i>	
		0--10		34		1				45	<i>Terminalia ivorensis</i>	
		0--10		34		1				45	<i>Anthocephalus cadamba</i>	
		0--10		26		1				45	<i>Swietenia macrophylla</i>	
		0--10		22		1				45	<i>Hibiscus elatus</i>	
		0--10		25		1				45	<i>Eucalyptus saligna</i>	
		0--10		27		1				45	<i>Pinus caribaea</i> var. <i>hondurensis</i>	
		0--10		25		1				45	<i>Hernandia sonora</i>	
		0--10	24		1				45	<i>Eucalyptus pathentinervis</i>		
			Iron (mg/g)	0--10	4.93	1.57	4	4.79	6.75	3.39	45	<i>Khaya nyassica</i>
		0--10		2.93	0.91	3	2.49	3.98	2.32	45	<i>Pinus elliottii</i>	
		0--10		2.56	0.58	3	2.50	3.17	2.01	45	<i>Terminalia ivorensis</i>	
		0--10		1.94	0.51	3	2.05	2.39	1.39	45	<i>Anthocephalus cadamba</i>	
		0--10		3.95	0.43	4	3.90	4.45	3.56	45	<i>Swietenia macrophylla</i>	
		0--10		2.83	0.74	3	3.15	3.36	1.98	45	<i>Hibiscus elatus</i>	

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0--10	1.78	0.38	3	1.76	2.16	1.41	45	<i>Eucalyptus saligna</i>
				0--10	1.84	0.86	3	1.40	2.82	1.29	45	<i>Pinus caribaea</i> var. <i>hondurensis</i>
				0--10	8.61	1.24	3	8.40	9.94	7.48	45	<i>Hernandia sonora</i>
				0--10	2.52	0.74	4	2.23	3.62	2.00	45	<i>Eucalyptus pathentinervis</i>
			Iron-total (mg/g)	0--10	64.29	3.91	4	63.49	69.73	60.46	45	<i>Khaya nyassica</i>
				0--10	77.14	2.73	4	77.92	79.40	73.30	45	<i>Pinus elliottii</i>
				0--10	74.73	5.30	4	76.45	78.99	67.04	45	<i>Terminalia ivorensis</i>
				0--10	55.24	4.66	4	53.07	62.21	52.61	45	<i>Anthocephalus cadamba</i>
				0--10	60.85	4.67	4	60.11	66.49	56.67	45	<i>Swietenia macrophylla</i>
				0--10	62.30	5.12	4	63.77	66.71	54.96	45	<i>Hibiscus elatus</i>
				0--10	64.60	8.02	4	68.03	69.63	52.72	45	<i>Eucalyptus saligna</i>
				0--10	79.38	8.75	4	77.84	90.79	71.05	45	<i>Pinus caribaea</i> var. <i>hondurensis</i>
				0--10	56.08	2.20	4	56.24	58.57	53.28	45	<i>Hernandia sonora</i>
				0--10	64.42	3.06	4	64.78	67.60	60.53	45	<i>Eucalyptus pathentinervis</i>
			Magnesium (mg/kg)	0--10	183	26	4	192	204	195	45	<i>Khaya nyassica</i>
				0--10	24	51	3	99	182	90	45	<i>Pinus elliottii</i>
				0--10	209	15	3	202	226	199	45	<i>Terminalia ivorensis</i>
				0--10	262	81	3	286	328	172	45	<i>Anthocephalus cadamba</i>
				0--10	177	65	4	149	274	137	45	<i>Swietenia macrophylla</i>
				0--10	211	69	3	175	291	168	45	<i>Hibiscus elatus</i>
				0--10	415	212	3	489	580	175	45	<i>Eucalyptus saligna</i>
				0--10	220	49	3	231	263	167	45	<i>Pinus caribaea</i> var. <i>hondurensis</i>
				0--10	277	77	3	234	366	230	45	<i>Hernandia sonora</i>
				0--10	226	87	4	193	354	163	45	<i>Eucalyptus pathentinervis</i>
			Magnesium-total (mg/g)	0--10	0.89	0.05	4	0.90	0.94	0.83	45	<i>Khaya nyassica</i>
				0--10	0.85	0.10	4	0.87	0.96	0.72	45	<i>Pinus elliottii</i>

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0--10	1.34	0.24	4	1.24	1.69	1.18	45	<i>Terminalia ivorensis</i>
				0--10	0.87	0.45	4	0.68	1.55	0.59	45	<i>Anthocephalus cadamba</i>
				0--10	0.86	0.18	4	0.85	1.05	0.68	45	<i>Swietenia macrophylla</i>
				0--10	0.94	0.02	4	0.94	0.97	0.93	45	<i>Hibiscus elatus</i>
				0--10	2.01	1.24	4	1.49	3.85	1.23	45	<i>Eucalyptus saligna</i>
				0--10	0.75	0.32	4	0.74	1.08	0.45	45	<i>Pinus caribaea</i> var. <i>hondurensis</i>
				0--10	0.83	0.09	4	0.84	0.94	0.72	45	<i>Hernandia sonora</i>
				0--10	0.77	0.17	4	0.78	0.92	0.60	45	<i>Eucalyptus pathentinervis</i>
			Manganese (mg/kg)	0--10	26	9	4	22	39	20	45	<i>Khaya nyassica</i>
				0--10	16	3	3	16	19	13	45	<i>Pinus elliottii</i>
				0--10	115	21	3	111	138	96	45	<i>Terminalia ivorensis</i>
				0--10	83	18	3	76	103	70	45	<i>Anthocephalus cadamba</i>
				0--10	38	12	4	32	56	31	45	<i>Swietenia macrophylla</i>
				0--10	23	10	3	24	32	13	45	<i>Hibiscus elatus</i>
				0--10	74	24	3	60	102	60	45	<i>Eucalyptus saligna</i>
				0--10	13	7	3	11	21	8	45	<i>Pinus caribaea</i> var. <i>hondurensis</i>
				0--10	8	3	3	8	11	5	45	<i>Hernandia sonora</i>
				0--10	17	7	4	1	22	7	45	<i>Eucalyptus pathentinervis</i>
			Manganese-total (mg/g)	0--10	0.04	0.02	4	0.03	0.07	0.01	45	<i>Khaya nyassica</i>
				0--10	0.07	0.01	4	0.08	0.08	0.07	45	<i>Pinus elliottii</i>
				0--10	0.41	0.13	4	0.35	0.61	0.33	45	<i>Terminalia ivorensis</i>
				0--10	0.25	0.10	4	0.25	0.35	0.17	45	<i>Anthocephalus cadamba</i>
				0--10	0.21	0.08	4	0.18	0.34	0.15	45	<i>Swietenia macrophylla</i>
				0--10	0.08	0.01	4	0.08	0.09	0.07	45	<i>Hibiscus elatus</i>
				0--10	0.28	0.09	4	0.26	0.39	0.21	45	<i>Eucalyptus saligna</i>
				0--10	0.07	0.03	4	0.06	0.13	0.05	45	<i>Pinus caribaea</i> var. <i>hondurensis</i>

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0--10	0.05	0.02	4	0.06	0.07	0.03	45	<i>Hernandia sonora</i>
				0--10	0.25	0.25	4	0.16	0.62	0.09	45	<i>Eucalyptus pathentinervis</i>
			Nitrogen (%)	0--10	0.42	0.07	3	0.42	0.48	0.35	45	<i>Khaya nyassica</i>
				0--10	0.26	0.04	3	0.27	3.00	0.22	45	<i>Pinus elliottii</i>
				0--10	0.51	0.02	3	0.52	0.52	0.48	45	<i>Terminalia ivorensis</i>
				0--10	0.43	0.03	3	0.44	0.45	0.40	45	<i>Anthocephalus cadamba</i>
				0--10	0.50	0.03	3	0.49	0.53	0.47	45	<i>Swietenia macrophylla</i>
				0--10	0.37	0.05	3	0.37	0.42	0.33	45	<i>Hibiscus elatus</i>
				0--10	0.38	0.06	3	0.35	0.45	0.33	45	<i>Eucalyptus saligna</i>
				0--10	0.23	0.02	3	0.24	0.24	0.21	45	<i>Pinus caribaea</i> var. <i>hondurensis</i>
				0--10	0.47	0.04	3	0.05	0.51	0.43	45	<i>Hernandia sonora</i>
				0--10	0.42	0.02	3	0.42	0.43	0.40	45	<i>Eucalyptus pathentinervis</i>
			Organic matter (%)	0--10	8.93	1.04	3	8.90	9.98	7.90	45	<i>Khaya nyassica</i>
				0--10	6.45	1.12	3	6.38	7.60	5.36	45	<i>Pinus elliottii</i>
				0--10	9.99	1.06	3	10.52	10.68	8.77	45	<i>Terminalia ivorensis</i>
				0--10	8.70	0.09	3	8.73	8.78	8.60	45	<i>Anthocephalus cadamba</i>
				0--10	8.84	0.87	3	8.76	9.75	8.02	45	<i>Swietenia macrophylla</i>
				0--10	8.44	0.95	3	8.76	9.19	7.37	45	<i>Hibiscus elatus</i>
				0--10	9.80	2.10	3	10.89	11.14	7.38	45	<i>Eucalyptus saligna</i>
				0--10	5.61	0.42	3	5.37	6.10	5.36	45	<i>Pinus caribaea</i> var. <i>hondurensis</i>
				0--10	9.83	0.16	3	9.88	9.96	9.65	45	<i>Hernandia sonora</i>
				0--10	9.69	1.39	3	9.86	10.98	8.22	45	<i>Eucalyptus pathentinervis</i>
			pH (H <sub>2</sub> O)	0--10	4.52	0.07	3	4.55	4.56	4.44	45	<i>Khaya nyassica</i>
				0--10	4.64	0.05	3	4.63	4.69	4.60	45	<i>Pinus elliottii</i>
				0--10	4.64	0.03	3	4.63	4.67	4.61	45	<i>Terminalia ivorensis</i>
				0--10	4.66	0.11	3	4.63	4.78	4.57	45	<i>Anthocephalus cadamba</i>

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0--10	4.42	0.11	3	4.42	4.52	4.31	45	<i>Swietenia macrophylla</i>
				0--10	4.73	0.19	3	4.64	4.95	4.61	45	<i>Hibiscus elatus</i>
				0--10	4.75	0.06	3	4.75	4.80	4.69	45	<i>Eucalyptus saligna</i>
				0--10	4.74	0.05	3	4.75	4.78	4.69	45	<i>Pinus caribaea</i> var. <i>hondurensis</i>
				0--10	4.83	0.03	3	4.83	4.85	4.80	45	<i>Hernandia sonora</i>
				0--10	4.83	0.27	3	4.78	5.12	4.59	45	<i>Eucalyptus pathentinervis</i>
			Phosphorus (mg/kg)	0--10	37	5	4	40	40	29	45	<i>Khaya nyassica</i>
				0--10	21	8	3	24	26	12	45	<i>Pinus elliottii</i>
				0--10	31	3	3	32	33	28	45	<i>Terminalia ivorensis</i>
				0--10	25	6	3	28	29	19	45	<i>Anthocephalus cadamba</i>
				0--10	28	1	4	28	30	27	45	<i>Swietenia macrophylla</i>
				0--10	25	12	3	31	33	12	45	<i>Hibiscus elatus</i>
				0--10	26	8	3	30	30	17	45	<i>Eucalyptus saligna</i>
				0--10	11	7	3	14	15	3	45	<i>Pinus caribaea</i> var. <i>hondurensis</i>
				0--10	36	6	3	38	40	29	45	<i>Hernandia sonora</i>
				0--10	14	2	4	15	16	12	45	<i>Eucalyptus pathentinervis</i>
			Phosphorus-total (mg/g)	0--10	0.31	0.03	4	0.30	0.35	0.28	45	<i>Khaya nyassica</i>
				0--10	0.32	0.03	4	0.33	0.36	0.29	45	<i>Pinus elliottii</i>
				0--10	0.39	0.04	4	0.38	0.45	0.37	45	<i>Terminalia ivorensis</i>
				0--10	0.51	0.06	4	0.49	0.59	0.46	45	<i>Anthocephalus cadamba</i>
				0--10	0.60	0.10	4	0.61	0.69	0.49	45	<i>Swietenia macrophylla</i>
				0--10	0.54	0.04	4	0.55	0.58	0.49	45	<i>Hibiscus elatus</i>
				0--10	0.59	0.07	4	0.58	0.67	0.52	45	<i>Eucalyptus saligna</i>
				0--10	0.51	0.21	4	0.41	0.82	0.39	45	<i>Pinus caribaea</i> var. <i>hondurensis</i>
				0--10	0.39	0.02	4	0.38	0.41	0.37	45	<i>Hernandia sonora</i>
				0--10	0.35	0.02	4	0.35	0.37	0.33	45	<i>Eucalyptus pathentinervis</i>

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Potassium (mg/kg)	0--10	277	23	4	288	290	243	45	<i>Khaya nyassica</i>
				0--10	208	45	3	188	259	176	45	<i>Pinus elliottii</i>
				0--10	269	19	3	261	291	255	45	<i>Terminalia ivorensis</i>
				0--10	254	53	3	267	300	196	45	<i>Anthocephalus cadamba</i>
				0--10	269	38	4	256	325	240	45	<i>Swietenia macrophylla</i>
				0--10	242	46	3	220	295	210	45	<i>Hibiscus elatus</i>
				0--10	225	65	3	250	274	152	45	<i>Eucalyptus saligna</i>
				0--10	158	47	3	152	208	115	45	<i>Pinus caribaea</i> var. <i>hondurensis</i>
				0--10	270	35	3	290	290	230	45	<i>Hernandia sonora</i>
				0--10	186	20	4	194	200	157	45	<i>Eucalyptus pathentinervis</i>
			Potassium-total (mg/g)	0--10	2.10	0.05	4	2.11	2.14	2.03	45	<i>Khaya nyassica</i>
				0--10	2.39	0.12	4	2.42	2.51	2.23	45	<i>Pinus elliottii</i>
				0--10	2.35	0.11	4	2.31	2.51	2.28	45	<i>Terminalia ivorensis</i>
				0--10	1.45	0.15	4	1.39	1.67	1.37	45	<i>Anthocephalus cadamba</i>
				0--10	1.93	0.03	4	1.94	1.95	1.89	45	<i>Swietenia macrophylla</i>
				0--10	2.46	0.09	4	2.47	2.56	2.35	45	<i>Hibiscus elatus</i>
				0--10	2.64	0.04	4	2.63	2.69	2.59	45	<i>Eucalyptus saligna</i>
				0--10	2.54	0.73	4	2.39	3.47	1.93	45	<i>Pinus caribaea</i> var. <i>hondurensis</i>
				0--10	1.44	0.07	4	1.46	1.50	1.33	45	<i>Hernandia sonora</i>
				0--10	1.63	0.08	4	1.61	1.75	1.57	45	<i>Eucalyptus pathentinervis</i>
			Sand (%)	0--10	15		1				45	<i>Khaya nyassica</i>
				0--10	12		1				45	<i>Pinus elliottii</i>
				0--10	21		1				45	<i>Terminalia ivorensis</i>
				0--10	11		1				45	<i>Anthocephalus cadamba</i>
				0--10	19		1				45	<i>Swietenia macrophylla</i>
				0--10	10		1				45	<i>Hibiscus elatus</i>



Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0--10	23		1				45	<i>Eucalyptus saligna</i>
				0--10	5		1				45	<i>Pinus caribaea</i> var. <i>hondurensis</i>
				0--10	29		1				45	<i>Hernandia sonora</i>
				0--10	13		1				45	<i>Eucalyptus pathentinervis</i>
			Silt (%)	0--10	53		1				45	<i>Khaya nyassica</i>
				0--10	70		1				45	<i>Pinus elliottii</i>
				0--10	45		1				45	<i>Terminalia ivorensis</i>
				0--10	55		1				45	<i>Anthocephalus cadamba</i>
				0--10	55		1				45	<i>Swietenia macrophylla</i>
				0--10	68		1				45	<i>Hibiscus elatus</i>
				0--10	52		1				45	<i>Eucalyptus saligna</i>
				0--10	68		1				45	<i>Pinus caribaea</i> var. <i>hondurensis</i>
				0--10	46		1				45	<i>Hernandia sonora</i>
				0--10	63		1				45	<i>Eucalyptus pathentinervis</i>
			Sodium (mg/kg)	0--10	55	14	4	56	71	37	45	<i>Khaya nyassica</i>
				0--10	51	4	3	49	56	48	45	<i>Pinus elliottii</i>
				0--10	63	6	3	63	69	58	45	<i>Terminalia ivorensis</i>
				0--10	75	28	3	64	107	55	45	<i>Anthocephalus cadamba</i>
				0--10	83	25	4	91	104	47	45	<i>Swietenia macrophylla</i>
				0--10	57	12	3	59	67	44	45	<i>Hibiscus elatus</i>
				0--10	134	52	3	156	171	74	45	<i>Eucalyptus saligna</i>
				0--10	8	13	3	93	96	73	45	<i>Pinus caribaea</i> var. <i>hondurensis</i>
				0--10	128	43	3	152	154	78	45	<i>Hernandia sonora</i>
				0--10	67	26	4	67	94	42	45	<i>Eucalyptus pathentinervis</i>
Tuffaceous sandstone	Ultisols	Mfs	Aluminum saturation (%)	0--15	7.10	14.93	28	2.33	75.27	0.57	46	
				15--30	21.77	25.86	25	8.43	80.12	0.42	46	

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total													
Geology and parent material	Soil order	Life zone	Element	Depth		Mean	Sd	n	Median	Max	Min	Source	Site/notes
				(cm)									
			Aluminum (cmol/kg <sup>-1</sup> )	0--15		1.00	1.37	28	0.57	7.03	0.18	46	
				15--30		2.12	2.39	25	0.75	7.08	0.11	46	
			Bulk density (g/cc)	0--15		0.52	0.14	28	0.55	0.73	0.10	46	
				15--30		0.75	0.19	25	0.80	0.97	0.27	46	
			Calcium (cmol/kg <sup>-1</sup> )	0--15		16.24	9.52	28	14.18	32.92	0.45	46	
				15--30		5.98	4.27	25	4.29	14.80	0.07	46	
			Calcium (mg/g)	0--15		3.25	1.90	28	2.84	6.58	0.09	46	
				15--30		1.20	0.85	25	0.86	2.96	0.01	46	
			Effective cation exchange capacity {Ca+K+Mg(cmol/kg <sup>-1</sup> )	0--15		26.07	13.28	28	21.62	52.78	9.34	46	
				15--30		13.39	5.16	25	10.85	26.42	8.38	46	
			Iron (mg/g)	0--15		0.20	0.12	28	0.19	0.41	0.04	46	
				15--30		0.16	0.08	25	0.14	0.34	0.04	46	
			Loss on ignition (%)	0--15		25.87	5.41	28	24.85	40.27	16.82	46	
				15--30		17.80	1.82	25	17.59	21.59	14.79	46	
			Magnesium (cmol/kg <sup>-1</sup> )	0--15		8.02	4.27	28	6.83	17.28	1.58	46	
				15--30		4.62	2.45	25	4.29	10.26	1.38	46	
			Magnesium (mg/g)	0--15		0.96	0.51	28	0.82	2.07	0.19	46	
				15--30		0.56	0.30	25	0.52	1.23	0.17	46	
			Manganese (mg/g)	0--15		0.28	0.14	28	0.28	0.63	0.05	46	
				15--30		0.12	0.13	25	0.10	0.64	0.01	46	
			Nitrogen (%)	0--15		0.58	0.28	28	0.51	1.30	0.15	46	
				15--30		0.19	0.08	25	0.18	0.33	0.04	46	
			Organic matter (%)	0--15		10.56	4.94	28	9.76	23.72	2.53	46	
				15--30		3.16	1.48	25	2.99	6.83	0.77	46	
			pH (H <sub>2</sub> O)	0--15		5.42	0.56	28	5.35	6.47	4.30	46	
				15--30		5.14	0.47	25	5.05	5.97	4.45	46	

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total											
Geology and parent material	Soil order	Life zone	Element	Depth							
				(cm)	Mean	Sd	n	Median	Max	Min	Source
Plutonic rocks	Mollisols	Wfs	pH (KCl)	0--15	4.74	0.53	28	4.74	5.82	3.48	46
				15--30	4.29	0.47	25	4.98	4.98	3.59	46
			Phosphorus (mg/kg)	0--15	15	7	28	14	37	7	46
				15--30	5	2	25	5	11	2	46
			Potassium (cmol/kg <sup>-1</sup> )	0--15	0.37	0.18	28	0.33	0.84	0.08	46
				15--30	0.25	0.29	25	0.13	1.30	0.05	46
			Potassium (mg/g)	0--15	0.14	0.07	28	0.13	0.32	0.03	46
				15--30	0.09	0.11	25	0.05	0.50	0.02	46
			Sodium (cmol/kg <sup>-1</sup> )	0--15	0.45	0.26	28	0.38	0.98	0.08	46
				15--30	0.42	0.26	25	0.41	0.96	0.07	46
			Sodium (mg/g)	0--15	0.10	0.06	28	0.09	0.23	0.02	46
				15--30	0.10	0.06	25	0.09	0.22	0.02	46
			Aluminum (cmol/kg <sup>-1</sup> )	0--15	14.86	1.97	18	14.64	19.42	12.09	47
				15--30	14.37	1.41	21	14.05	16.61	10.81	47
			Bulk density (g/cc)	0--15	0.74	0.11	18	0.74	0.93	0.52	47
				15--30	1.12	0.16	18	1.14	1.42	0.75	47
			C/N	0--15	12	1	18	12	13	11	47
				15--30	12	0	21	12	13	11	47
			Calcium (cmol/kg <sup>-1</sup> )	0--15	0.55	0.31	18	0.50	1.65	0.18	47
				15--30	0.20	0.10	21	0.17	0.50	0.10	47
Calcium (mg/g)	0--15	0.11	0.06	18	0.10	0.33	0.04	47			
	15--30	0.04	0.02	21	0.03	0.10	0.02	47			
Carbon (%)	0--15	4.18	0.81	18	4.22	5.85	2.81	47			
	15--30	2.18	0.67	21	2.00	3.42	1.41	47			
Effective cation exchange capacity {Ca+K+Mg}(cmol/kg <sup>-1</sup> )	0--15	16.41	1.90	18	16.04	20.68	13.59	47			
	15--30	15.09	1.39	21	14.68	17.18	11.46	47			

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total													
Geology and parent material	Soil order	Life zone	Element	Depth		Mean	Sd	n	Median	Max	Min	Source	Site/notes
				(cm)									
			Iron (mg/g)	0--15		0.73	0.30	18	0.63	1.59	0.40	47	
				15--30		0.51	0.20	21	0.40	0.89	0.28	47	
			Loss on ignition (%)	0--15		15.58	3.20	18	16.74	21.10	10.30	47	
				15--30		14.54	9.27	21	12.97	53.09	8.28	47	
			Magnesium (cmol/kg <sup>-1</sup> )	0--15		0.60	0.17	18	0.59	1.01	0.33	47	
				15--30		0.27	0.07	21	0.25	0.43	0.18	47	
			Magnesium (mg/g)	0--15		0.07	0.02	18	0.07	0.12	0.04	47	
				15--30		0.03	0.01	21	0.30	0.05	0.02	47	
			Manganese (mg/g)	0--15		0.12	0.07	18	0.11	0.25	0.02	47	
				15--30		0.06	0.05	21	0.54	0.19	0.01	47	
			Nitrogen (%)	0--15		0.34	0.06	18	0.33	0.48	0.24	47	
				15--30		0.18	0.05	21	0.17	0.28	0.12	47	
			pH (H <sub>2</sub> O)	0--15		4.02	0.25	18	4.00	4.46	3.45	47	
				15--30		4.23	0.21	21	4.22	4.58	3.66	47	
			pH (KCl)	0--15		3.45	0.18	18	3.49	3.67	3.13	47	
				15--30		3.59	0.09	21	3.60	3.80	3.44	47	
			Phosphorus (mg/kg)	0--15		28	4	18	29	34	21	47	
				15--30		12	4	21	11	19	8	47	
			Potassium (cmol/kg <sup>-1</sup> )	0--15		0.29	0.06	18	0.27	0.42	0.20	47	
				15--30		0.16	0.05	21	0.16	0.25	0.10	47	
			Potassium (mg/g)	0--15		0.11	0.02	18	0.10	0.16	0.07	47	
				15--30		0.06	0.02	21	0.06	0.09	0.04	47	
			Sodium (cmol/kg <sup>-1</sup> )	0--15		0.12	0.03	18	0.11	0.18	0.07	47	
				15--30		0.09	0.04	21	0.08	0.24	0.06	47	
			Sodium (mg/kg)	0--15		27	7	18	26	4	15	47	
				15--30		21	9	21	18	54	14	47	

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Tuffaceous sandstone	Ultisols	Wfs	Aluminum (cmol/kg <sup>-1</sup> )	0--15	0.40	0.35	69	0.22	1.33	0.07	48	Mahogany plantation-fumigated
				0--15	0.63	0.57	50	0.40	1.81	0.02	48	Mahogany plantation
				0--15	2.18	1.14	24	2.43	4.03	0.25	48	Pine plantation-fumigated
				0--15	2.69	1.29	37	3.09	4.56	0.09	48	Pine plantation
				0--15	0.94	0.57	27	0.82	2.21	0.19	48	Guzman secondary forest-fumigated
				0--15	1.25	0.67	34	1.15	2.79	0.09	48	Guzman secondary forest
				0--15	1.73	0.85	69	1.66	3.84	0.32	48	Tabonuco secondary forest-fumigated
				0--15	2.52	1.09	54	2.47	4.86	0.20	48	Tabonuco secondary forest
				0--15	0.16	0.04	23	0.16	0.27	0.07	48	Toa Baja
			Calcium (cmol/kg <sup>-1</sup> )	0--15	0.06	0.02	21	0.06	0.10	0.02	48	Toa Baja-fumigated
				0--15	6.42	4.56	69	5.74	38.59	2.01	48	Mahogany plantation-fumigated
				0--15	7.71	87.28	50	5.58	40.96	2.29	48	Mahogany plantation
				0--15	2.92	0.87	24	3.04	4.95	1.63	48	Pine plantation-fumigated
				0--15	2.86	1.07	37	2.69	5.62	1.01	48	Pine plantation
				0--15	3.67	1.61	27	3.48	8.85	1.47	48	Guzman secondary forest-fumigated
				0--15	5.00	6.62	34	3.62	41.16	1.39	48	Guzman secondary forest
				0--15	2.65	1.33	69	2.59	6.38	0.55	48	Tabonuco secondary forest-fumigated
				0--15	3.06	1.35	54	3.09	7.05	0.74	48	Tabonuco secondary forest
				0--15	7.54	1.71	23	7.45	12.06	4.92	48	Toa Baja
				0--15	7.18	1.59	21	7.56	9.89	4.58	48	Toa Baja-fumigated
			Calcium (mg/g)	0--15	1.28	0.91	69	1.15	7.72	0.40	48	Mahogany plantation-fumigated
				0--15	1.54	1.46	50	1.12	8.19	0.46	48	Mahogany plantation
				0--15	0.59	0.17	24	0.61	0.99	0.33	48	Pine plantation-fumigated
				0--15	0.57	0.21	37	0.54	1.12	0.20	48	Pine plantation
				0--15	0.73	0.32	27	0.70	1.77	0.29	48	Guzman secondary forest-fumigated
				0--15	1.00	1.33	34	0.72	8.23	0.28	48	Guzman secondary forest

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0--15	0.53	0.27	69	0.52	1.28	0.11	48	Tabonuco secondary forest-fumigated
				0--15	0.61	0.27	54	0.62	1.41	0.15	48	Tabonuco secondary forest
				0--15	1.51	0.34	23	1.49	2.41	0.98	48	Toa Baja
				0--15	1.44	0.32	21	1.51	1.98	0.92	48	Toa Baja-fumigated
				0--15	1.95	0.26	23	1.93	2.48	1.45	48	Toa Baja
			Effective cation exchange capacity	0--15	12.12	5.09	69	11.41	45.55	5.39	48	Mahogany plantation-fumigated
			{Ca+K+Mg(cmol/kg <sup>-1</sup> )	0--15	13.70	7.34	50	11.71	46.68	6.63	48	Mahogany plantation
				0--15	8.01	1.14	24	7.84	10.29	6.34	48	Pine plantation-fumigated
				0--15	8.20	1.34	37	8.25	10.97	5.53	48	Pine plantation
				0--15	8.95	2.57	27	8.44	17.11	5.83	48	Guzman secondary forest-fumigated
				0--15	10.49	6.81	34	8.78	46.88	6.61	48	Guzman secondary forest
				0--15	6.83	1.82	69	6.90	10.90	3.22	48	Tabonuco secondary forest-fumigated
				0--15	8.04	1.52	54	8.09	11.29	4.15	48	Tabonuco secondary forest
				0--15	10.27	2.16	23	10.28	16.18	6.57	48	Toa Baja
			Iron (mg/g)	0--15	0.74	0.50	69	0.54	2.01	0.14	48	Mahogany plantation-fumigated
				0--15	0.68	0.42	50	0.52	1.70	0.19	48	Mahogany plantation
				0--15	0.49	0.37	24	0.40	1.53	0.11	48	Pine plantation-fumigated
				0--15	0.54	0.36	37	0.43	1.62	0.12	48	Pine plantation
				0--15	0.63	0.31	27	0.54	1.44	0.27	48	Guzman secondary forest-fumigated
				0--15	0.72	0.33	34	0.75	1.55	0.28	48	Guzman secondary forest
				0--15	2.70	1.54	69	2.46	8.04	0.85	48	Tabonuco secondary forest-fumigated
				0--15	2.77	1.65	54	2.77	7.77	0.23	48	Tabonuco secondary forest
				0--15	4.41	1.13	23	4.34	6.90	2.53	48	Toa Baja
			Magnesium (cmol/kg <sup>-1</sup> )	0--15	5.09	1.19	69	5.31	6.83	1.37	48	Mahogany plantation-fumigated
				0--15	5.18	0.90	50	5.15	6.73	3.09	48	Mahogany plantation
				0--15	2.78	0.65	24	2.58	4.24	1.63	48	Pine plantation-fumigated

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0--15	2.52	0.60	37	2.38	3.93	1.55	48	Pine plantation
				0--15	4.03	1.12	27	3.92	7.22	2.42	48	Guzman secondary forest-fumigated
				0--15	3.94	0.92	34	3.83	6.47	2.43	48	Guzman secondary forest
				0--15	2.20	0.76	69	2.05	4.15	1.00	48	Tabonuco secondary forest-fumigated
				0--15	2.26	0.74	54	2.19	1.08	0.87	48	Tabonuco secondary forest
				0--15	1.59	0.65	23	1.35	2.81	0.77	48	Toa Baja
				0--15	1.29	0.55	21	1.12	2.65	0.55	48	Toa Baja-fumigated
			Magnesium (mg/g)	0--15	0.61	0.14	69	0.64	0.82	0.16	48	Mahogany plantation-fumigated
				0--15	0.62	0.11	50	0.62	0.81	0.37	48	Mahogany plantation
				0--15	0.33	77.00	24	0.31	0.51	0.20	48	Pine plantation-fumigated
				0--15	0.30	0.07	37	0.29	0.47	0.19	48	Pine plantation
				0--15	0.48	0.14	27	0.47	0.87	0.29	48	Guzman secondary forest-fumigated
				0--15	0.47	0.11	34	0.46	0.78	0.29	48	Guzman secondary forest
				0--15	0.26	0.09	69	0.25	0.50	0.12	48	Tabonuco secondary forest-fumigated
				0--15	0.27	0.09	54	0.26	0.59	0.13	48	Tabonuco secondary forest
				0--15	0.19	0.08	23	0.16	0.34	0.09	48	Toa Baja
				0--15	0.16	0.07	21	0.13	0.32	0.07	48	Toa Baja-fumigated
			Manganese (mg/kg)	0--15	17	5	23	15	31	12	48	Toa Baja
				0--15	58	66	69	38	419	5	48	Mahogany plantation-fumigated
				0--15	42	27	50	34	120	8	48	Mahogany plantation
				0--15	130	101	24	86	344	20	48	Pine plantation-fumigated
				0--15	67	43	37	72	195	14	48	Pine plantation
				0--15	87	37	27	95	155	19	48	Guzman secondary forest-fumigated
				0--15	61	26	34	53	123	12	48	Guzman secondary forest
				0--15	111	90	69	62	445	19	48	Tabonuco secondary forest-fumigated
				0--15	92	67	54	56	286	15	48	Tabonuco secondary forest

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0--15	6	1	21	6	9	4	48	Toa Baja-fumigated
			Nitrogen (%)	0--15	0.14	0.03	23	0.13	0.19	0.08	48	Toa Baja
			pH (H <sub>2</sub> O)	0--15	7.21	0.42	23	7.32	7.72	5.96	48	Toa Baja
			pH (KCl)	0--15	6.58	0.48	23	6.81	7.11	5.30	48	Toa Baja
			Phosphorus (mg/kg)	0--15	9	2	23	8	13	7	48	Toa Baja
				0--15	9	3	69	9	20	5	48	Mahogany plantation-fumigated
				0--15	5	2	50	5	12	1	48	Mahogany plantation
				0--15	5	3	24	4	12	1	48	Pine plantation-fumigated
				0--15	4	2	37	4	9	1	48	Pine plantation
				0--15	9	4	27	7	17	3	48	Guzman secondary forest-fumigated
				0--15	6	3	34	7	11	2	48	Guzman secondary forest
				0--15	15	5	69	14	32	7	48	Tabonuco secondary forest-fumigated
				0--15	7	2	54	7	15	3	48	Tabonuco secondary forest
			Potassium (cmol/kg <sup>-1</sup> )	0--15	12	3	21	12	17	8	48	Toa Baja-fumigated
				0--15	0.57	0.23	23	0.52	1.16	0.32	48	Toa Baja
				0--15	0.21	0.09	69	0.19	0.53	0.10	48	Mahogany plantation-fumigated
				0--15	0.17	0.08	50	0.16	0.37	0.07	48	Mahogany plantation
				0--15	0.13	0.00	24	0.13	0.22	0.05	48	Pine plantation-fumigated
				0--15	0.12	0.08	37	0.09	0.31	0.04	48	Pine plantation
				0--15	0.32	0.17	27	0.29	0.84	0.14	48	Guzman secondary forest-fumigated
				0--15	0.29	0.15	34	0.27	0.79	0.10	48	Guzman secondary forest
				0--15	0.25	0.07	69	0.24	0.44	0.14	48	Tabonuco secondary forest-fumigated
				0--15	0.20	0.06	54	0.19	0.37	0.10	48	Tabonuco secondary forest
				0--15	0.21	0.06	21	0.20	0.37	0.11	48	Toa Baja-fumigated
			Potassium (mg/g)	0--15	0.08	0.04	69	0.08	0.21	0.04	48	Mahogany plantation-fumigated
				0--15	0.07	0.03	50	0.06	0.14	0.03	48	Mahogany plantation



Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total													
Geology and parent material	Soil order	Life zone	Element	Depth									
				(cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes	
Tuffaceous sandstone	Ultisols	Lmrf	Aluminum (cmol/kg <sup>-1</sup> )	0--15	0.05	0.02	24	0.05	0.09	0.02	48	Pine plantation-fumigated	
				0--15	0.05	0.03	37	0.04	0.12	0.01	48	Pine plantation	
				0--15	0.12	0.07	27	0.11	0.33	0.05	48	Guzman secondary forest-fumigated	
				0--15	0.12	0.06	34	0.10	0.31	0.04	48	Guzman secondary forest	
				0--15	0.10	0.03	69	0.09	0.17	0.05	48	Tabonuco secondary forest-fumigated	
				0--15	0.08	0.02	54	0.08	0.15	0.04	48	Tabonuco secondary forest	
				0--15	0.22	0.09	23	0.20	0.44	0.12	48	Toa Baja	
				0--15	0.08	0.03	21	0.08	0.14	0.04	48	Toa Baja-fumigated	
				Sodium (cmol/kg <sup>-1</sup> )	0--15	0.42	0.17	23	0.39	0.85	0.18	48	Toa Baja
				Sodium (mg/g)	0--15	0.10	0.04	23	0.09	0.20	0.04	48	Toa Baja
				0--10	3.80	0.44	6	3.68	4.45	3.36	49	Cloud forest-dry soil	
				0--10	2.35	0.53	6	2.41	2.92	1.67	49	Colorado forest-dry forest	
				0--10	6.62	1.38	6	6.37	8.70	4.84	49	Tabonuco forest-dry forest	
				0--10	0.51	0.28	5	0.40	0.94	0.28	49	Cloud forest-wet soil	
			0--10	1.12	0.32	6	1.32	1.34	0.62	49	Colorado forest-wet soil		
			0--10	2.50	0.54	6	2.65	3.18	1.72	49	Tabaonuco forest-wet soil		
			10--35	3.36	0.40	5	3.34	3.88	2.84	49	Cloud forest-dry soil		
			10--35	2.15	0.51	5	2.46	2.57	1.47	49	Colorado forest-dry forest		
			10--35	0.75	1.08	5	4.84	5.95	3.42	49	Tabonuco forest-dry forest		
			10--35	0.72	0.12	5	0.72	0.90	0.60	49	Cloud forest-wet soil		
			10--35	1.02	0.29	5	0.92	1.46	0.78	49	Colorado forest-wet soil		
			10--35	1.71	0.71	5	1.79	2.57	0.85	49	Tabaonuco forest-wet soil		
			Calcium (mg/kg)	0--10	365	87	6	380	528	293	49	Cloud forest-dry soil	
			0--10	272	114	6	257	411	139	49	Colorado forest-dry forest		
			0--10	99	29	6	101	130	62	49	Tabonuco forest-dry forest		
			0--10	90	41	6	82	165	63	49	Cloud forest-wet soil		

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0--10	150	76	6	148	234	73	49	Colorado forest-wet soil
				0--10	28	12	6	26	470	14	49	Tabaonuco forest-wet soil
				10--35	116	27	5	131	140	85	49	Cloud forest-dry soil
				10--35	91	45	5	73	170	61	49	Colorado forest-dry forest
				10--35	14	5	5	13	22	10	49	Tabonuco forest-dry forest
				10--35	55	22	5	44	81	36	49	Cloud forest-wet soil
				10--35	44	35	5	29	103	16	49	Colorado forest-wet soil
				10--35	7	5	5	5	13	3	49	Tabaonuco forest-wet soil
			Iron (mg/g)	0--10	0.41	0.24	6	2.38	2.86	2.20	49	Cloud forest-dry soil
				0--10	1.77	0.21	6	1.77	2.15	1.50	49	Colorado forest-dry forest
				0--10	3.35	2.59	6	3.01	7.21	1.39	49	Tabonuco forest-dry forest
				0--10	2.53	0.61	6	2.27	3.75	2.19	49	Cloud forest-wet soil
				0--10	1.51	0.34	6	1.50	1.88	0.93	49	Colorado forest-wet soil
				0--10	2.30	1.09	6	1.97	3.70	1.31	49	Tabaonuco forest-wet soil
				10--35	2.36	0.15	5	2.29	2.60	2.26	49	Cloud forest-dry soil
				10--35	0.13	0.10	5	1.23	1.36	1.12	49	Colorado forest-dry forest
				10--35	0.99	0.52	4	0.87	1.70	0.54	49	Tabonuco forest-dry forest
				10--35	2.69	0.56	5	2.52	3.51	2.05	49	Cloud forest-wet soil
				10--35	0.84	0.09	5	0.82	0.97	0.71	49	Colorado forest-wet soil
				10--35	1.32	0.75	5	1.17	2.45	0.52	49	Tabaonuco forest-wet soil
			Loss on ignition (%)	0--10	35.36	2.08	6	35.09	37.83	33.37	49	Cloud forest-dry soil
				0--10	13.95	1.36	6	13.87	15.63	12.16	49	Colorado forest-dry forest
				0--10	21.54	2.95	6	21.89	26.37	18.09	49	Tabonuco forest-dry forest
				10--35	24.65	3.60	5	24.53	28.29	19.60	49	Cloud forest-dry soil
				10--35	10.98	1.40	5	11.28	12.38	8.95	49	Colorado forest-dry forest
				10--35	14.79	1.30	5	14.24	16.30	13.63	49	Tabonuco forest-dry forest

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth								
				(cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Magnesium (mg/g)	0--10	0.15	0.05	6	0.14	0.21	0.12	49	Cloud forest-dry soil
				0--10	0.11	0.02	6	0.11	0.13	0.08	49	Colorado forest-dry forest
				0--10	0.15	0.02	6	0.15	0.18	0.11	49	Tabonuco forest-dry forest
				0--10	0.04	0.02	6	0.03	0.06	0.03	49	Cloud forest-wet soil
				0--10	0.06	0.01	6	0.06	0.07	0.03	49	Colorado forest-wet soil
				0--10	0.05	0.02	6	0.05	0.07	0.03	49	Tabaonuco forest-wet soil
				10--35	0.06	0.02	5	0.07	0.08	0.04	49	Cloud forest-dry soil
				10--35	0.08	0.02	5	0.07	0.12	0.06	49	Colorado forest-dry forest
				10--35	0.06	0.02	5	0.05	0.10	0.05	49	Tabonuco forest-dry forest
				10--35	0.03	0.01	5	0.03	0.04	0.02	49	Cloud forest-wet soil
				10--35	0.04	0.02	5	0.04	0.06	0.02	49	Colorado forest-wet soil
				10--35	0.03	0.01	5	0.02	0.04	0.02	49	Tabaonuco forest-wet soil
			Manganese (mg/kg)	0--10	11	2	6	11	14	8	49	Cloud forest-dry soil
				0--10	20	12	6	14	35	11	49	Colorado forest-dry forest
				0--10	12	5	6	14	16	5	49	Tabonuco forest-dry forest
				0--10	0.97	0.47	6	0.98	1.61	0.24	49	Cloud forest-wet soil
				0--10	10	10	6	6	26	1	49	Colorado forest-wet soil
				0--10	3	2	6	3	5	2	49	Tabaonuco forest-wet soil
				10--35	9	9	5	6	25	4	49	Cloud forest-dry soil
				10--35	15	12	5	10	37	8	49	Colorado forest-dry forest
				10--35	2	1	4	2	3	1	49	Tabonuco forest-dry forest
				10--35	4.09	6.77	4	0.99	14.21	0.16	49	Cloud forest-wet soil
				10--35	6	5	5	4	15	3	49	Colorado forest-wet soil
				10--35	0.79	0.60	5	0.69	1.69	0.08	49	Tabaonuco forest-wet soil
			Nitrogen (%)	0--10	0.60	0.05	6	0.60	0.65	0.54	49	Cloud forest-dry soil
				0--10	0.19	0.04	6	0.20	0.25	0.15	49	Colorado forest-dry forest

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0--10	0.32	0.06	6	0.30	0.41	0.25	49	Tabonuco forest-dry forest
				10--35	0.33	0.08	5	0.33	0.41	0.21	49	Cloud forest-dry soil
				10--35	0.13	0.01	5	0.13	0.15	0.11	49	Colorado forest-dry forest
				10--35	0.14	0.01	5	0.14	0.16	0.13	49	Tabonuco forest-dry forest
			Organic matter (%)	0--10	24.58	1.05	6	24.64	25.84	22.97	49	Cloud forest-dry soil
				0--10	7.80	1.29	6	7.75	9.63	6.19	49	Colorado forest-dry forest
				0--10	9.85	2.39	6	10.17	13.73	6.87	49	Tabonuco forest-dry forest
				10--35	15.91	4.05	5	16.39	19.61	10.07	49	Cloud forest-dry soil
				10--35	4.27	0.72	5	4.56	4.76	3.01	49	Colorado forest-dry forest
				10--35	3.59	0.58	5	3.37	4.41	3.05	49	Tabonuco forest-dry forest
			pH (H <sub>2</sub> O)	0--10	4.89	0.05	6	4.88	4.96	4.85	49	Cloud forest-dry soil
				0--10	4.81	0.11	6	4.86	4.89	4.63	49	Colorado forest-dry forest
				0--10	4.25	0.14	6	4.22	4.44	4.11	49	Tabonuco forest-dry forest
				0--10	5.19	0.09	6	5.22	5.29	5.03	49	Cloud forest-wet soil
				0--10	5.14	0.13	6	5.08	5.37	5.02	49	Colorado forest-wet soil
				0--10	5.12	0.06	6	5.12	5.19	5.03	49	Tabonuco forest-wet soil
				10--35	5.07	0.05	5	5.04	5.13	5.03	49	Cloud forest-dry soil
				10--35	4.74	0.09	5	4.72	4.84	4.62	49	Colorado forest-dry forest
				10--35	4.36	0.26	5	4.43	4.62	4.07	49	Tabonuco forest-dry forest
				10--35	5.20	0.15	5	5.15	5.47	5.10	49	Cloud forest-wet soil
				10--35	5.30	0.22	5	5.18	5.66	5.13	49	Colorado forest-wet soil
				10--35	5.17	0.09	5	5.18	5.29	5.05	49	Tabonuco forest-wet soil
			pH (KCl)	0--10	4.09	0.06	6	4.06	4.16	4.03	49	Cloud forest-dry soil
				0--10	3.95	0.07	6	3.96	4.05	3.83	49	Colorado forest-dry forest
				0--10	3.55	0.16	6	3.53	3.76	3.32	49	Tabonuco forest-dry forest
				10--35	4.09	0.03	5	4.11	4.12	4.05	49	Cloud forest-dry soil

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Phosphorus (mg/kg)	10--35	4.02	0.09	5	4.03	4.12	3.90	49	Colorado forest-dry forest
				10--35	3.72	0.15	5	3.79	3.85	3.50	49	Tabonuco forest-dry forest
				0--10	13	2	6	13	15	10	49	Cloud forest-dry soil
				0--10	9	1	6	9	10	7	49	Colorado forest-dry forest
				0--10	14	5	6	16	18	6	49	Tabonuco forest-dry forest
				10--35	9	2	5	10	12	6	49	Cloud forest-dry soil
				10--35	4	1	5	4	5	3	49	Colorado forest-dry forest
				10--35	3	1	4	3	4	1	49	Tabonuco forest-dry forest
				0--10	10	2	6	9	12	8	49	Cloud forest-wet soil
				0--10	4	1	6	4	5	3	49	Colorado forest-wet soil
			Potassium (mg/kg)	0--10	7	2	6	7	9	5	49	Tabaonuco forest-wet soil
				10--35	9	2	5	9	11	5	49	Cloud forest-wet soil
				10--35	3	1	5	3	3	2	49	Colorado forest-wet soil
				10--35	5	1	5	6	6	3	49	Tabaonuco forest-wet soil
				0--10	114	19	6	122	130	78	49	Cloud forest-dry soil
				0--10	90	25	6	90	121	50	49	Colorado forest-dry forest
				0--10	94	25	6	88	143	72	49	Tabonuco forest-dry forest
				10--35	70	10	5	72	85	59	49	Cloud forest-dry soil
				10--35	59	17	5	67	76	38	49	Colorado forest-dry forest
				10--35	34	7	4	33	42	27	49	Tabonuco forest-dry forest
			0--10	40	9	6	41	52	26	49	Cloud forest-wet soil	
			0--10	47	10	6	50	58	31	49	Colorado forest-wet soil	
			0--10	48	27	6	59	73	7	49	Tabaonuco forest-wet soil	
			10--35	35	12	5	31	48	22	49	Cloud forest-wet soil	
			10--35	29	15	5	27	52	13	49	Colorado forest-wet soil	
			10--35	11	8	5	13	20	1	49	Tabaonuco forest-wet soil	

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total																
Geology and parent material	Soil order	Life zone	Element	Depth												
				(cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes				
Tuffaceous sandstone	Ultisols	Lmrf	Sodium (mg/g)	0--10	0.10	0.02	6	0.10	0.12	0.08	49	Cloud forest-dry soil				
				0--10	0.05	0.01	6	0.05	0.07	0.04	49	Colorado forest-dry forest				
			0--10	0.10	0.01	6	0.12	0.13	0.11	49	Tabonuco forest-dry forest					
			10--35	0.08	0.01	5	0.08	0.09	0.06	49	Cloud forest-dry soil					
			10--35	0.04	0.01	5	0.04	0.05	0.02	49	Colorado forest-dry forest					
			10--35	0.07	0.01	5	0.07	0.09	0.06	49	Tabonuco forest-dry forest					
				Carbon (%)	0--10	7.20	2.95	16	6.36	12.18	3.57	50	<i>Dacroydes excelsa</i>			
					0--10	7.09	4.82	21	5.54	23.03	3.05	50	<i>Guarea guidonia</i>			
							Nitrogen (%)	10--20	3.10	0.58	19	3.18	3.94	2.03	50	<i>Dacroydes excelsa</i>
								10--20	4.99	3.54	25	3.85	15.92	2.74	50	<i>Guarea guidonia</i>
							Sulfur (%)	0--10	0.47	0.14	16	0.44	0.77	0.28	50	<i>Dacroydes excelsa</i>
								0--10	0.47	0.16	21	0.41	0.90	0.28	50	<i>Guarea guidonia</i>
								10--20	0.25	0.04	19	0.25	0.34	0.17	50	<i>Dacroydes excelsa</i>
								10--20	0.34	0.12	25	0.31	0.70	0.24	50	<i>Guarea guidonia</i>
								0--10	0.07	0.01	16	0.06	0.09	0.05	50	<i>Dacroydes excelsa</i>
								0--10	0.07	0.02	21	0.07	0.12	0.04	50	<i>Guarea guidonia</i>
				10--20	0.04	0.01	19	0.04	0.06	0.04	50	<i>Dacroydes excelsa</i>				
				10--20	0.06	0.02	25	0.06	0.10	0.03	50	<i>Guarea guidonia</i>				
Plutonic rocks	Inceptisols	Mfs	Aluminum-total (mg/g)	0--15	34.87	4.29	16	35.52	42.71	28.66	51	Secondary forest-tobacco				
				0--15	47.88	7.05	15	46.75	62.99	38.97	51	Secondary forest-coffee				
				15--30	37.59	6.80	17	35.27	55.63	29.99	51	Secondary forest-tobacco				
				15--30	49.82	9.80	20	47.33	66.79	36.13	51	Secondary forest-coffee				
						Calcium-total (mg/g)	0--15	4.24	1.16	16	4.38	5.84	1.50	51	Secondary forest-tobacco	
							0--15	5.38	1.72	15	5.76	7.49	2.43	51	Secondary forest-coffee	
							15--30	3.51	1.22	17	3.57	5.79	1.43	51	Secondary forest-tobacco	
							15--30	4.43	1.60	20	5.21	6.04	2.05	51	Secondary forest-coffee	

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Carbon (%)	0--15	1.60	0.38	16	1.65	2.43	1.08	51	Secondary forest-tobacco
		0--15		1.71	0.47	15	1.65	2.61	1.02	51	Secondary forest-coffee	
		15--30		0.89	0.32	17	0.87	1.63	0.48	51	Secondary forest-tobacco	
		15--30		0.75	0.39	18	0.61	1.57	0.32	51	Secondary forest-coffee	
			Iron-total (mg/g)	0--15	43.79	2.70	16	43.84	49.87	39.46	51	Secondary forest-tobacco
		0--15		60.85	8.43	15	59.79	74.24	46.26	51	Secondary forest-coffee	
		15--30		45.49	4.77	17	44.31	59.25	39.97	51	Secondary forest-tobacco	
		15--30		60.89	10.83	20	62.18	80.23	45.15	51	Secondary forest-coffee	
			Loss on ignition (%)	0--15	91.66	1.47	14	91.47	93.81	89.91	51	Secondary forest-tobacco
		0--15		91.85	1.86	15	91.86	94.38	88.57	51	Secondary forest-coffee	
		15--30		94.18	1.62	15	93.60	96.87	91.83	51	Secondary forest-tobacco	
		15--30		95.66	1.76	18	95.88	98.18	91.87	51	Secondary forest-coffee	
			Magnesium-total (mg/g)	0--15	8.59	1.74	16	8.48	12.07	5.60	51	Secondary forest-tobacco
		0--15		14.14	3.28	15	14.54	18.14	8.71	51	Secondary forest-coffee	
		15--30		8.47	1.87	17	8.10	12.45	5.68	51	Secondary forest-tobacco	
		15--30		14.65	4.20	20	16.21	20.56	7.39	51	Secondary forest-coffee	
			Manganese-total (mg/g)	0--15	1.18	0.13	16	1.20	1.36	0.90	51	Secondary forest-tobacco
		0--15		1.18	0.18	15	1.15	1.41	0.76	51	Secondary forest-coffee	
		15--30		1.18	0.14	17	1.20	1.41	0.97	51	Secondary forest-tobacco	
		15--30		1.12	0.14	20	1.11	1.36	0.75	51	Secondary forest-coffee	
			Nitrogen (%)	0--15	0.14	0.03	16	0.15	0.20	0.10	51	Secondary forest-tobacco
		0--15		0.15	0.04	15	0.15	0.23	0.10	51	Secondary forest-coffee	
		15--30		0.09	0.03	17	0.09	0.14	0.05	51	Secondary forest-tobacco	
		15--30		0.07	0.03	18	0.06	0.14	0.04	51	Secondary forest-coffee	
			pH (H <sub>2</sub> O)	0--15	6.39	0.36	14	6.39	6.91	5.48	51	Secondary forest-tobacco
		0--15		6.26	0.27	15	6.25	6.67	5.91	51	Secondary forest-coffee	

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				15--30	6.07	0.48	15	6.12	6.90	5.33	51	Secondary forest-tobacco
				15--30	6.04	0.29	18	6.08	6.48	5.52	51	Secondary forest-coffee
			pH (KCl)	0--15	4.80	0.40	14	4.80	5.39	3.95	51	Secondary forest-tobacco
				0--15	4.61	0.34	15	4.62	5.06	4.00	51	Secondary forest-coffee
				15--30	4.33	0.56	15	4.39	5.60	3.54	51	Secondary forest-tobacco
				15--30	4.11	0.30	18	4.01	4.74	3.78	51	Secondary forest-coffee
			Phosphorus-total (mg/g)	0--15	0.35	0.10	16	0.32	0.58	0.22	51	Secondary forest-tobacco
				0--15	0.28	0.06	15	0.27	0.38	0.18	51	Secondary forest-coffee
				15--30	0.30	0.07	17	0.28	0.44	0.17	51	Secondary forest-tobacco
				15--30	0.21	0.05	20	0.20	0.31	0.14	51	Secondary forest-coffee
			Potassium-total (mg/g)	0--15	1.71	0.28	16	1.64	2.56	1.32	51	Secondary forest-tobacco
				0--15	1.85	0.20	15	1.85	2.28	1.52	51	Secondary forest-coffee
				15--30	1.54	0.19	17	1.47	1.99	1.28	51	Secondary forest-tobacco
				15--30	1.68	0.18	20	1.69	1.99	1.35	51	Secondary forest-coffee
			Sulfur (%)	0--15	0.02	0.01	16	0.02	0.03	0.01	51	Secondary forest-tobacco
				0--15	0.02	0.01	15	0.02	0.03	0.01	51	Secondary forest-coffee
				15--30	0.01	0.00	17	0.01	0.02	0.01	51	Secondary forest-tobacco
				15--30	0.01	0.01	18	0.01	0.02	0.01	51	Secondary forest-coffee
Tuffaceous sandstone	Ultisols	Smf	C/N	0--10	13	2	28	13	17	11	52	
			Carbon (%)	0--10	5.43	1.71	29	5.19	9.51	2.97	52	
			Loss on ignition (%)	0--10	18.57	4.12	28	17.95	30.35	13.61	52	
			Nitrogen (%)	0--10	0.41	0.10	29	0.40	0.63	0.25	52	
			pH (H <sub>2</sub> O)	0--10	5.45	0.76	24	5.34	7.12	4.48	52	
			pH (KCl)	0--10	4.75	0.80	24	4.63	6.70	3.80	52	
			Sulfur (%)	0--10	0.06	0.01	29	0.06	0.08	0.04	52	
Tuffaceous sandstone	Ultisols	Smf	Aluminum-total (mg/g)	0--10	24.16	11.60	23	24.75	45.52	6.57	53	



Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total							
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source
Tuffaceous sandstone	Ultisols	Mfs	Calcium-total (mg/g)	0--10	1.41	1.36	49	0.89	6.35	0.29	53
			Carbon (%)	0--10	1.86	0.67	26	2.08	2.79	0.34	53
			Iron (mg/g)	0--10	0.08	0.03	4	0.07	0.10	0.05	53
			Iron-total (mg/g)	0--10	27.85	12.13	23	33.92	47.21	8.87	53
			Loss on ignition (%)	0--10	13.05	4.79	48	13.51	21.95	2.27	53
			Magnesium-total (mg/g)	0--10	2.95	2.06	49	2.46	8.74	0.34	53
			Manganese (mg/g)	0--10	0.02	0.00	4	0.02	0.02	0.02	53
			Manganese-total (mg/g)	0--10	0.95	0.61	49	1.00	2.40	0.13	53
			Nitrogen (%)	0--10	0.19	0.07	26	0.21	0.28	0.03	53
			pH (H <sub>2</sub> O)	0--10	4.54	0.58	18	4.46	6.38	3.91	53
			pH (KCl)	0--10	3.75	0.61	18	3.59	5.82	3.28	53
			Phosphorus (mg/g)	0--10	1.49	0.33	4	1.50	1.79	1.16	53
			Phosphorus-total (mg/g)	0--10	0.88	0.79	49	0.60	4.32	0.26	53
			Potassium (mg/g)	0--10	0.30	0.07	4	0.30	0.36	0.24	53
			Potassium-total (mg/g)	0--10	1.89	0.92	49	1.65	5.21	0.79	53
			Aluminum (cmol/kg <sup>-1</sup> )	0-15	3.01	2.06	22	2.40	8.28	0.60	54
			Aluminum-total (mg/g)	0-15	46.63	10.72	22	47.01	62.25	28.22	54
			C/N	0-15	14	3	22	14	24	11	54
			Calcium (cmol/kg <sup>-1</sup> )	0-15	4.80	2.35	2	4.73	10.03	1.19	54
			Calcium (mg/g)	0-15	0.96	0.47	22	0.95	2.01	0.24	54
Calcium-total (mg/g)	0-15	1.13	0.65	22	1.04	2.66	0.27	54			
Carbon (%)	0-15	9.60	6.02	22	8.28	27.42	1.42	54			
ECEC (cmol/kg <sup>-1</sup> )	0-15	10.70	2.72	22	10.33	17.31	6.56	54			
Iron (mg/g)	0-15	0.89	0.59	22	0.70	2.89	0.07	54			
Iron-total (mg/g)	0-15	52.52	15.61	22	54.05	90.67	27.62	54			
Loss on ignition (%)	0-15	30.68	12.75	22	29.64	55.82	8.53	54			

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total							
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source
			Magnesium (cmol/kg <sup>-1</sup> )	0-15	1.93	0.89	22	1.75	4.48	0.56	54
			Magnesium (mg/g)	0-15	0.23	0.11	22	0.21	0.54	0.07	54
			Magnesium-total (mg/g)	0-15	4.89	2.32	22	4.62	9.39	0.56	54
			Manganese (mg/g)	0-15	0.13	0.09	22	0.09	0.41	0.05	54
			Manganese-total (mg/g)	0-15	1.06	0.65	22	0.98	2.95	0.17	54
			Nitrogen (%)	0-15	0.66	0.36	22	0.60	1.68	0.09	54
			pH (H <sub>2</sub> O)	0-15	4.80	0.37	21	4.81	5.70	4.32	54
			pH (KCl)	0-15	3.72	0.26	21	3.64	4.26	3.28	54
			Phosphorus (mg/g)	0-15	0.04	0.02	22	0.03	0.08	0.01	54
			Phosphorus-total (mg/g)	0-15	0.78	0.34	22	0.75	1.39	0.22	54
			Potassium-total (mg/g)	0-15	1.60	0.39	22	1.54	2.61	1.00	54
			Potassium (cmol/kg <sup>-1</sup> )	0-15	0.52	0.20	22	0.48	1.07	0.23	54
			Potassium (mg/g)	0-15	0.20	0.08	22	0.18	0.41	0.09	54
			Sodium (cmol/kg <sup>-1</sup> )	0-15	0.44	0.06	22	0.44	0.57	0.37	54
			Sodium (mg/g)	0-15	0.10	0.01	22	0.10	0.13	0.09	54
			Sulfur (%)	0-15	0.09	0.04	22	0.09	0.20	0.01	54
Tuffaceous sandstone	Ultisols	Mfs	Aluminum (meq/100g)	0--15	11.54	13.47	11	5.00	34.79	0.73	55
		Dfs	Bulk density (g/cc)	0--15	0.27	0.06	11	0.28	0.34	0.12	55
		Dfs		15--30	0.57	0.21	2	0.57	0.71	0.42	55
		Dfs	C/N	0--15	9	1	11	9	10	8	55
		Dfs	Calcium (cmol/kg <sup>-1</sup> )	0--15	49.11	1.82	14	39.35	90.05	27.36	55
		Dfs		15--30	58.02	4.62	2	58.02	61.29	54.76	55
		Dfs	Calcium (mg/g)	0--15	9.82	4.37	14	7.87	18.01	5.47	55
		Dfs		15--30	11.61	0.92	2	11.61	12.26	1.95	55
		Dfs	Carbon (%)	0--15	25.28	7.95	11	23.60	41.28	17.39	55
		Dfs	Effective cation exchange capacity	0--15	69.89	27.54	14	57.65	119.49	41.11	55

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total							
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source Site/notes
		Dfs	{Ca+K+Mg(cmol/kg <sup>-1</sup> )	15--30	70.46	6.10	2	70.49	74.81	66.17	55
		Dfs	Iron (mg/g)	0--15	0.28	0.36	14	0.12	1.16	0.01	55
		Dfs		15--30	0.62	0.41	2	0.62	0.91	0.34	55
		Dfs	Loss on ignition (%)	0--15	47.32	11.38	14	42.80	73.20	35.43	55
		Dfs		15--30	28.74	4.09	2	28.74	31.63	25.85	55
		Dfs	Magnesium (cmol/kg <sup>-1</sup> )	0--15	4.08	0.77	14	3.85	5.88	2.81	55
		Dfs		15--30	4.78	1.67	2	4.78	5.96	3.60	55
		Dfs	Magnesium (mg/g)	0--15	0.49	0.09	14	0.46	0.71	0.34	55
		Dfs		15--30	0.57	0.20	2	0.57	0.72	0.43	55
		Dfs	Manganese (mg/kg)	0--15	9	4	14	10	15	2	55
		Dfs		15--30	6	4	2	6	8	3	55
		Dfs	Nitrogen (%)	0--15	2.65	0.91	14	2.22	4.40	1.74	55
		Dfs		15--30	1.28	0.13	2	1.28	1.37	1.19	55
		Dfs	pH (H <sub>2</sub> O)	0--15	4.34	0.81	11	4.27	5.94	3.41	55
		Dfs		15--30	3.89	0.30	2	3.89	4.10	3.68	55
		Dfs	pH (KCl)	0--15	4.15	0.74	11	4.20	5.57	3.21	55
		Dfs		15--30	3.78	0.25	2	3.78	3.95	3.60	55
		Dfs	Phosphorus (mg/g)	0--15	1.87	2.10	14	0.74	5.81	0.20	55
		Dfs		15--30	4.76	0.44	2	4.76	5.08	4.45	55
		Dfs	Potassium (cmol/kg <sup>-1</sup> )	0--15	2.79	2.30	14	2.07	7.77	0.86	55
		Dfs		15--30	5.75	1.22	2	5.75	6.62	4.89	55
		Dfs	Potassium (mg/g)	0--15	1.06	0.88	14	0.79	2.95	0.33	55
		Dfs		15--30	2.19	0.46	2	2.19	2.51	1.86	55
		Dfs	Sodium (cmol/kg <sup>-1</sup> )	0--15	4.84	2.04	14	5.14	8.16	1.54	55
		Dfs		15--30	1.94	1.93	2	1.94	3.30	0.57	55
		Dfs	Sodium (mg/g)	0--15	1.11	0.47	14	1.18	1.88	0.36	55

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Tuffaceous sandstone	Ultisols	Dfs		15--30	0.45	0.44	2	0.45	0.76	0.13	55	
		Dfs	Sulfur (%)	0--15	0.57	0.19	11	0.54	0.91	0.32	55	
		Wfs	Aluminum (cmol/kg <sup>-1</sup> )	0-9	1.01	0.43	5	0.70	1.55	0.69	56	Coffee plantation
				0-9	1.02	0.22	5	0.95	1.33	0.81	56	Pasture
			C/N	0-9	12	1	5	11	13	10	56	Coffee plantation
				0-9	13	2	5	12	16	12	56	Pasture
			Calcium (cmol/kg <sup>-1</sup> )	0-9	14.98	2.91	5	14.38	18.23	11.97	56	Coffee plantation
				0-9	7.70	2.96	5	9.51	9.95	3.09	56	Pasture
			Calcium (mg/g)	0-9	3.00	0.58	5	2.88	3.65	2.39	56	Coffee plantation
				0-9	1.54	0.59	5	1.90	1.99	0.62	56	Pasture
			Carbon (%)	0-9	7.78	1.93	5	7.61	9.79	5.69	56	Coffee plantation
				0-9	6.09	2.68		5.58	10.66	3.71	56	Pasture
			Effective cation exchange capacity	0-9	25.00	3.07	5	23.33	28.60	22.44	56	Coffee plantation
			{Ca+K+Mg}(cmol/kg <sup>-1</sup> )	0-9	12.82	3.06	5	14.40	15.97	7.30	56	Pasture
			Iron (mg/g)	0-9	0.16	0.04	5	0.17	0.21	0.11	56	Coffee plantation
				0-9	0.32	0.08	5	0.28	0.45	0.26	56	Pasture
			Loss on ignition (%)	0-9	25.17	3.07	5	26.63	27.76	20.92	56	Coffee plantation
				0-9	18.23	4.97	5	18.74	25.78	12.50	56	Pasture
			Magnesium (cmol/kg <sup>-1</sup> )	0-9	7.75	0.90	5	7.92	8.52	6.35	56	Coffee plantation
				0-9	2.96	0.80	5	3.04	3.75	1.76	56	Pasture
			Magnesium (mg/g)	0-9	0.93	0.11	5	0.95	1.02	0.76	56	Coffee plantation
				0-9	0.36	0.10	5	0.36	0.45	0.21	56	Pasture
			Manganese (mg/g)	0-9	0.21	0.04	5	0.20	0.26	0.17	56	Coffee plantation
				0-9	0.10	0.03	5	0.09	0.14	0.07	56	Pasture
	Nitrogen (%)	0-9	0.67	0.12	5	0.71	0.78	0.50	56	Coffee plantation		
		0-9	0.45	0.13	5	0.43	0.66	0.31	56	Pasture		

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth								
				(cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Alluvial deposits	Inceptisols	Dfs	pH (H <sub>2</sub> O)	0-9	5.85	0.24	5	5.93	6.04	5.45	56	Coffee plantation
				0-9	5.47	0.19	5	5.41	5.80	5.35	56	Pasture
			pH (KCl)	0-9	4.87	0.26	5	4.98	5.09	4.44	56	Coffee plantation
				0-9	4.48	0.22	5	4.45	4.83	4.22	56	Pasture
			Phosphorus (mg/kg)	0-9	21	3	5	23	25	17	56	Coffee plantation
				0-9	16	3	5	14	22	14	56	Pasture
			Potassium (cmol/kg <sup>-1</sup> )	0-9	0.69	0.09	5	0.70	0.79	0.56	56	Coffee plantation
				0-9	0.68	0.08	5	0.66	0.80	0.60	56	Pasture
			Potassium (mg/g)	0-9	0.26	0.03	5	0.27	0.30	0.21	56	Coffee plantation
				0-9	0.26	0.03	5	0.25	0.30	0.23	56	Pasture
			Sodium (cmol/kg <sup>-1</sup> )	0-9	0.57	0.22	5	0.50	0.96	0.39	56	Coffee plantation
				0-9	0.45	0.02	5	0.45	0.48	0.42	56	Pasture
			Sodium (mg/g)	0-9	0.13	0.05	5	0.11	0.22	0.09	56	Coffee plantation
				0-9	0.15	0.01	5	0.10	0.11	0.10	56	Pasture
			Sulfur (%)	0-9	0.15	0.03	5	0.15	0.18	0.09	56	Coffee plantation
				0-9	0.10	0.03	5	0.10	0.15	0.07	56	Pasture
			Aluminum-total (mg/g)	0--15	19.90	5.59	15	21.20	28.12	7.30	57	
				15--30	21.72	4.99	15	23.43	28.17	13.69	57	
			Bulk density (g/cc)	0--15	0.81	0.35	15	0.75	1.34	0.13	57	
				15--30	0.89	0.42	15	0.88	1.54	0.07	57	
C/N	0--15	28	9	15	31	43	12	57				
	15--30	45	26	15	38	120	15	57				
Calcium-total (mg/g)	0--15	48.66	20.54	15	50.11	84.47	18.57	57				
	15--30	51.44	29.21	15	52.32	116.27	9.53	57				
Carbon (%)	0--15	4.72	3.58	15	3.84	17.24	2.87	57				
	15--30	6.01	4.79	15	4.12	19.68	2.36	57				

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Iron-total (mg/g)	0--15	25.82	8.06	15	28.89	37.25	11.80	57	
				15--30	27.01	8.59	15	32.29	36.81	13.28	57	
			Loss on ignition (%)	0--15	18.45	11.60	15	15.51	52.78	8.76	57	
				15--30	19.29	11.53	15	14.78	41.96	7.91	57	
			Magnesium-total (mg/g)	0--15	14.44	5.50	15	12.88	31.57	7.67	57	
				15--30	13.17	2.32	15	13.34	16.45	8.08	57	
			Manganese-total (mg/g)	0--15	1.09	0.33	15	1.08	1.64	0.34	57	
				15--30	1.00	0.43	15	1.15	1.71	0.40	57	
			Nitrogen (%)	0--15	0.19	0.17	15	0.13	0.76	0.08	57	
				15--30	0.16	0.13	15	0.09	0.47	0.05	57	
			pH (H <sub>2</sub> O)	0--15	7.77	0.24	15	7.78	8.32	7.35	57	
				15--30	7.87	0.34	15	7.86	8.53	7.29	57	
			pH (KCl)	0--15	7.50	0.19	15	7.47	8.02	7.28	57	
				15--30	7.37	0.32	15	7.48	7.79	6.49	57	
			Phosphorus-total (mg/g)	0--15	1.79	2.34	15	0.73	7.22	0.47	57	
				15--30	0.97	0.92	15	0.58	3.86	0.48	57	
			Potassium-total (mg/g)	0--15	6.28	1.45	15	6.68	7.96	2.87	57	
				15--30	7.08	1.21	15	7.17	9.11	4.61	57	
			Sulfur (%)	0--15	0.32	0.43	15	0.12	1.70	0.03	57	
				15--30	0.50	0.59	15	0.11	1.61	0.02	57	
Serpentinite	Ultisols	Lmrf	Aluminum (cmol/kg <sup>-1</sup> )	0--5	0.08	0.04	20	0.07	0.15	0.03	58	Baseball park
				0--5	0.14	0.04	20	0.14	0.22	0.06	58	Farmlands
				0--5	0.17	0.08	20	0.15	0.34	0.01	58	Charcoal house
				0--5	0.19	0.10	31	0.18	0.59	0.04	58	Houses
				0--5	0.16	0.07	9	0.16	0.25	0.04	58	Mature forest
				5--10	0.07	0.04	24	0.07	0.14	0.07	58	Baseball park

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				5--10	0.12	0.04	24	0.13	0.19	0.03	58	Farmlands
				5--10	0.13	0.06	24	0.12	0.29	0.04	58	Charcoal house
				5--10	0.14	0.05	36	0.14	0.24	0.03	58	Houses
				5--10	0.11	0.06	12	0.12	0.21	0.02	58	Mature forest
			Bulk density (g/cc)	0--5	0.44	0.04	20	0.42	0.55	0.38	58	Baseball park
				0--5	0.56	0.11	20	0.56	0.77	0.40	58	Farmlands
				0--5	0.39	0.10	20	0.40	0.55	0.18	58	Charcoal house
				0--5	0.52	0.22	31	0.56	0.95	0.15	58	Houses
				0--5	0.23	0.08	9	0.21	0.38	0.17	58	Mature forest
				5--10	0.71	0.11	24	0.7	0.92	0.49	58	Baseball park
				5--10	0.69	0.13	24	0.72	0.99	0.48	58	Farmlands
				5--10	0.44	0.14	24	0.39	0.73	0.26	58	Charcoal house
				5--10	0.52	0.30	36	0.58	1.15	0.10	58	Houses
				5--10	0.27	0.11	12	0.32	0.38	0.08	58	Mature forest
			C/N	0--5	7	0	20	7	8	7	58	Baseball park
				0--5	7	1	20	7	8	6	58	Farmlands
				0--5	8	1	20	8	10	6	58	Charcoal house
				0--5	8	1	31	8	9	7	58	Houses
				0--5	8	1	9	8	9	7	58	Mature forest
				5--10	7	0	24	7	8	6	58	Baseball park
				5--10	7	0	24	7	7	6	58	Farmlands
				5--10	7	1	24	7	10	6	58	Charcoal house
				5--10	7	1	36	7	9	6	58	Houses
				5--10	7	0	12	7	8	7	58	Mature forest
			Calcium (cmol/kg <sup>-1</sup> )	0--5	47.21	15.49	20	52.54	67.13	18.82	58	Baseball park
				0--5	34.65	8.44	20	37.40	50.74	17.06	58	Farmlands

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0--5	47.04	9.38	20	46.96	74.78	29.84	58	Charcoal house
				0--5	45.40	16.04	31	42.04	71.05	15.91	58	Houses
				0--5	68.69	8.31	9	67.99	80.75	58.56	58	Mature forest
				5--10	49.61	15.27	24	51.34	71.35	21.74	58	Baseball park
				5--10	33.13	8.64	24	35.30	49.27	11.98	58	Farmlands
				5--10	44.86	9.22	24	44.65	65.96	29.81	58	Charcoal house
				5--10	43.09	16.48	36	36.47	70.17	15.34	58	Houses
				5--10	66.46	8.07	12	68.21	79.88	54.67	58	Mature forest
			Calcium (mg/g)	0--5	9.44	3.10	20	10.51	13.43	3.76	58	Baseball park
				0--5	6.93	1.69	20	7.48	10.15	3.41	58	Farmlands
				0--5	9.41	1.88	20	9.39	14.96	5.97	58	Charcoal house
				0--5	9.08	3.21	31	8.41	14.21	3.18	58	Houses
				0--5	13.74	1.66	9	13.60	16.15	11.71	58	Mature forest
				5--10	9.92	3.05	24	10.27	14.27	4.35	58	Baseball park
				5--10	6.62	1.73	24	7.06	9.85	2.40	58	Farmlands
				5--10	8.97	1.84	24	8.93	13.19	5.96	58	Charcoal house
				5--10	8.62	3.30	36	7.29	14.03	3.07	58	Houses
				5--10	13.29	1.65	12	13.64	15.98	10.94	58	Mature forest
			Carbon (%)	0--5	4.15	0.72	20	4.31	5.64	2.88	58	Baseball park
				0--5	4.05	1.11	20	3.78	7.04	2.78	58	Farmlands
				0--5	7.27	2.16	20	6.79	11.65	4.65	58	Charcoal house
				0--5	7.52	3.98	31	5.73	17.35	2.42	58	Houses
				0--5	11.67	4.36	9	9.75	20.46	7.86	58	Mature forest
				5--10	3.62	0.63	24	3.73	4.76	2.46	58	Baseball park
				5--10	3.33	1.08	24	3.28	6.74	1.73	58	Farmlands
				5--10	6.20	2.09	24	5.35	11.32	3.86	58	Charcoal house



Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				5--10	6.33	3.43	36	4.89	15.63	1.64	58	Houses
				5--10	8.42	1.91	12	8.56	11.68	5.89	58	Mature forest
			Effective cation exchange capacity	0--5	55.19	15.59	20	61.72	73.74	26.79	58	Baseball park
			{Ca+K+Mg(cmol/kg <sup>-1</sup> )	0--5	40.43	8.72	20	42.80	58.27	21.54	58	Farmlands
				0--5	52.87	11.16	20	51.91	85.88	32.69	58	Charcoal house
				0--5	51.32	17.63	31	46.27	78.10	18.83	58	Houses
				0--5	76.57	8.36	9	77.20	90.03	65.76	58	Mature forest
				5--10	56.77	15.15	24	59.32	77.64	28.45	58	Baseball park
				5--10	38.28	9.15	24	39.95	55.55	15.19	58	Farmlands
				5--10	50.18	11.24	24	48.23	74.96	33.07	58	Charcoal house
				5--10	48.24	18.15	36	40.22	78.04	18.15	58	Houses
			Iron (mg/g)	5--10	73.18	8.04	12	74.45	87.26	62.81	58	Mature forest
				0--5	0.51	1.57	20	0.01	5.70	0.01	58	Baseball park
				0--5	6.95	2.77	20	6.64	12.62	3.12	58	Farmlands
				0--5	4.55	5.31	20	0.02	13.08	0.01	58	Charcoal house
				0--5	0.01	0.01	31	0.01	0.03	0.01	58	Houses
				0--5	0.01	0.01	9	0.01	0.02	0.01	58	Mature forest
				5--10	1.04	2.08	24	0.01	5.87	0.01	58	Baseball park
				5--10	6.37	2.17	24	6.02	11.38	3.20	58	Farmlands
				5--10	3.12	4.22	24	0.02	10.56	0.01	58	Charcoal house
				5--10	0.01	0.01	36	0.01	0.03	0.01	58	Houses
				5--10	0.01	0.00	12	0.01	0.02	0.01	58	Mature forest
			Loss on ignition (%)	0--5	25.57	1.63	20	22.67	25.47	19.45	58	Baseball park
				0--5	17.23	3.69	20	16.28	26.64	11.86	58	Farmlands
				0--5	26.98	6.73	20	25.67	42.76	19.39	58	Charcoal house
				0--5	27.65	12.68	31	21.19	53.67	9.84	58	Houses

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0--5	40.57	9.84	9	38.19	60.53	31.66	58	Mature forest
				5--10	21.15	1.3	24	21.54	23.31	18.73	58	Baseball park
				5--10	15.13	3.21	24	14.50	24.02	8.74	58	Farmlands
				5--10	23.83	5.90	24	22.68	39.77	17.28	58	Charcoal house
				5--10	24.95	12.59	36	18.56	53.47	7.82	58	Houses
				5--10	33.46	5.59	12	32.94	42.41	26.57	58	Mature forest
			Magnesium (cmol/kg <sup>-1</sup> )	0--5	6.76	0.99	20	6.61	8.46	5.35	58	Baseball park
				0--5	4.40	1.35	20	4.39	8.38	1.85	58	Farmlands
				0--5	4.54	2.52	20	3.86	12.85	1.98	58	Charcoal house
				0--5	4.40	2.04	31	3.81	9.20	1.77	58	Houses
				0--5	6.65	1.28	9	6.60	7.90	4.70	58	Mature forest
				5--10	6.08	0.89	24	6.13	7.67	4.76	58	Baseball park
				5--10	3.86	1.28	24	3.73	7.05	1.49	58	Farmlands
				5--10	4.10	2.40	24	3.32	10.81	2.07	58	Charcoal house
				5--10	3.80	1.91	36	3.05	9.50	1.61	58	Houses
				5--10	5.60	0.97	12	5.87	6.87	3.98	58	Mature forest
			Magnesium (mg/g)	0--5	0.81	0.12	22	0.79	1.02	0.64	58	Baseball park
				0--5	0.53	0.16	20	0.53	1.01	0.22	58	Farmlands
				0--5	0.55	0.30	20	0.46	1.54	0.24	58	Charcoal house
				0--5	0.53	0.25	31	0.46	1.10	0.21	58	Houses
				0--5	0.80	0.15	9	0.79	0.95	0.56	58	Mature forest
				5--10	0.73	0.11	24	0.74	0.92	0.57	58	Baseball park
				5--10	0.46	0.15	24	0.45	0.85	0.18	58	Farmlands
				5--10	0.49	0.29	24	0.40	1.30	0.25	58	Charcoal house
				5--10	0.46	0.23	36	0.37	1.14	0.19	58	Houses
				5--10	0.67	0.12	12	0.70	0.82	0.48	58	Mature forest

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Manganese (mg/g)	0--5	0.12	0.05	20	0.11	0.30	0.08	58	Baseball park
				0--5	0.06	0.02	20	0.07	0.08	0.01	58	Farmlands
				0--5	0.08	0.02	20	0.07	0.13	0.04	58	Charcoal house
				0--5	0.07	0.04	31	0.08	0.14	0.01	58	Houses
				0--5	0.10	0.05	9	0.11	0.16	0.02	58	Mature forest
				5--10	0.10	0.03	24	0.09	0.20	0.07	58	Baseball park
				5--10	0.05	0.02	24	0.06	0.07	0.01	58	Farmlands
				5--10	0.07	0.02	24	0.07	0.10	0.03	58	Charcoal house
				5--10	0.07	0.03	36	0.06	0.14	0.01	58	Houses
				5--10	0.06	0.04	12	0.04	0.12	0.02	58	Mature forest
			Nitrogen (%)	0--5	0.58	0.09	20	0.61	0.72	0.40	58	Baseball park
				0--5	0.53	0.08	20	0.56	0.66	0.37	58	Baseball park
				0--5	0.58	0.20	20	0.53	1.16	0.36	58	Farmlands
				0--5	0.55	0.18	20	0.51	1.09	0.34	58	Farmlands
				0--5	0.96	0.28	20	0.88	1.64	0.57	58	Charcoal house
				0--5	0.86	0.29	20	0.83	1.47	0.20	58	Charcoal house
				0--5	0.99	0.51	31	0.81	1.95	0.28	58	Houses
				0--5	1.49	0.43	9	1.33	2.21	0.97	58	Mature forest
				5--10	0.52	0.09	24	0.53	0.66	0.35	58	Baseball park
				5--10	0.47	0.08	24	0.48	0.60	0.32	58	Baseball park
				5--10	0.50	0.17	24	0.49	1.05	0.27	58	Farmlands
				5--10	0.47	0.16	24	0.47	0.99	0.26	58	Farmlands
				5--10	0.84	0.25	24	0.80	1.34	0.51	58	Charcoal house
				5--10	0.89	0.51	36	0.69	2.09	0.18	58	Houses
				5--10	1.18	0.26	12	1.22	1.58	0.80	58	Mature forest
			Organic matter (%)	0--5	8.98	1.57	20	9.31	12.19	6.22	58	Baseball park

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0--5	8.75	2.39	20	8.18	15.23	6.01	58	Farmlands
				0--5	15.71	4.68	20	14.69	25.19	10.05	58	Charcoal house
				0--5	16.26	8.60	31	12.39	37.52	5.24	58	Houses
				0--5	25.24	9.43	9	21.08	44.23	17.00	58	Mature forest
				5--10	7.82	1.37	24	8.07	10.3	5.31	58	Baseball park
				5--10	7.15	2.33	24	7.10	14.57	3.75	58	Farmlands
				5--10	13.40	4.52	24	11.58	24.47	8.34	58	Charcoal house
				5--10	13.69	7.42	36	10.58	33.79	3.55	58	Houses
				5--10	18.20	4.14	12	18.51	25.26	12.74	58	Mature forest
			pH (H <sub>2</sub> O)	0--5	7.36	0.32	20	7.40	7.74	6.53	58	Baseball park
				0--5	7.77	0.09	20	7.76	7.92	7.61	58	Farmlands
				0--5	7.77	0.14	20	7.79	7.91	7.36	58	Charcoal house
				0--5	7.81	0.17	31	7.81	8.08	7.48	58	Houses
				0--5	7.55	0.12	9	7.56	7.74	7.36	58	Mature forest
				5--10	7.4	0.33	24	7.51	7.76	6.70	58	Baseball park
				5--10	7.85	0.09	24	7.82	8.04	7.69	58	Farmlands
				5--10	7.84	0.09	24	7.87	7.98	7.67	58	Charcoal house
				5--10	7.89	0.13	36	7.87	8.06	7.58	58	Houses
				5--10	7.65	0.15	12	7.68	7.87	7.38	58	Mature forest
			pH (KCl)	0--5	6.62	0.38	20	6.69	7.03	5.57	58	Baseball park
				0--5	7.24	0.13	20	7.29	7.41	7.02	58	Farmlands
				0--5	7.21	0.13	20	7.25	7.35	6.76	58	Charcoal house
				0--5	7.28	0.13	31	7.28	7.53	7.02	58	Houses
				0--5	7.00	0.13	9	7.01	7.21	6.85	58	Mature forest
				5--10	6.64	0.37	24	6.81	7.01	5.89	58	Baseball park
				5--10	7.23	0.14	24	7.28	7.40	6.97	58	Farmlands

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Phosphorus (mg/kg)	5--10	7.25	0.08	24	7.26	7.36	7.03	58	Charcoal house
				5--10	7.30	0.13	36	7.31	7.55	7.01	58	Houses
				5--10	7.06	0.19	12	7.09	7.29	6.80	58	Mature forest
				0--5	7	1	20	7	10	5	58	Baseball park
				0--5	14	2	20	14	18	10	58	Farmlands
				0--5	15	4	20	15	29	9	58	Charcoal house
				0--5	21	5	31	20	33	11	58	Houses
				0--5	17	7	9	19	28	6	58	Mature forest
				5--10	6	1	24	6	8	4	58	Baseball park
				5--10	13	3	24	13	18	7	58	Farmlands
			Potassium (cmol/kg <sup>-1</sup> )	5--10	13	3	24	12	21	8	58	Charcoal house
				5--10	21	7	36	20	37	8	58	Houses
				5--10	12	4	12	12	18	6	58	Mature forest
				0--5	0.91	0.21	20	0.88	1.38	0.43	58	Baseball park
				0--5	1.05	0.29	20	1.07	1.54	0.15	58	Farmlands
				0--5	0.90	0.18	20	0.85	1.45	0.71	58	Charcoal house
				0--5	1.05	0.28	31	0.94	1.65	0.46	58	Houses
				0--5	0.84	0.05	9	0.87	0.89	0.76	58	Mature forest
				5--10	0.77	0.19	2	0.78	1.07	0.27	58	Baseball park
				5--10	0.97	0.19	24	0.94	1.41	0.71	58	Farmlands
			Potassium (mg/g)	5--10	0.83	0.15	24	0.81	1.37	0.58	58	Charcoal house
				5--10	0.97	0.21	36	0.91	1.56	0.70	58	Houses
				5--10	0.80	0.09	12	0.82	0.93	0.64	58	Mature forest
				0--5	0.35	0.08	20	0.33	0.53	0.16	58	Baseball park
				0--5	0.40	0.11	20	0.41	0.59	0.06	58	Farmlands
				0--5	0.34	0.07	20	0.33	0.55	0.27	58	Charcoal house

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0--5	0.40	0.11	31	0.36	0.63	0.18	58	Houses
				0--5	0.32	0.02	9	0.33	0.34	0.29	58	Mature forest
				5--10	0.29	0.07	24	0.30	0.41	0.10	58	Baseball park
				5--10	0.37	0.07	24	0.36	0.54	0.27	58	Farmlands
				5--10	0.32	0.06	24	0.31	0.52	0.22	58	Charcoal house
				5--10	0.37	0.08	36	0.35	0.59	0.27	58	Houses
				5--10	0.30	0.03	12	0.31	0.35	0.24	58	Mature forest
			Sodium (cmol/kg <sup>-1</sup> )	0--5	0.23	0.05	20	0.25	0.32	0.15	58	Baseball park
				0--5	0.20	0.09	20	0.17	0.38	0.08	58	Farmlands
				0--5	0.22	0.07	20	0.20	0.36	0.13	58	Charcoal house
				0--5	0.28	0.13	31	0.25	0.59	0.08	58	Houses
				0--5	0.22	0.04	9	0.21	0.27	0.15	58	Mature forest
				5--10	0.24	0.07	24	0.23	0.40	0.14	58	Baseball park
				5--10	0.20	0.12	24	0.16	0.50	0.08	58	Farmlands
				5--10	0.25	0.14	24	0.20	0.62	0.12	58	Charcoal house
				5--10	0.24	0.10	36	0.22	0.55	0.08	58	Houses
				5--10	0.22	0.06	12	0.21	0.36	0.15	58	Mature forest
			Sodium (mg/kg)	0--5	54	12	20	57	74	34	58	Baseball park
				0--5	45	20	20	39	88	19	58	Farmlands
				0--5	51	16	20	46	83	31	58	Charcoal house
				0--5	64	29	31	58	135	17	58	Houses
				0--5	50	9	9	49	62	35	58	Mature forest
				5--10	55	16	24	53	92	33	58	Baseball park
				5--10	47	28	24	38	115	19	58	Farmlands
				5--10	57	32	24	45	142	27	58	Charcoal house
				5--10	56	24	36	50	125	20	58	Houses

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
Serpentinite	Ultisols	Lmrf		5--10	50	14	12	48	82	34	58	Mature forest
			Aluminum (cmol/kg <sup>-1</sup> )	0--15	0.17	0.10	10	0.16	0.37	0.04	59	
			Bulk density (g/cc)	0--15	0.84	0.10	10	0.83	1.04	0.71	59	
			Calcium (cmol/kg <sup>-1</sup> )	0--15	4.22	2.53	10	3.57	8.33	1.58	59	
			Calcium (mg/g)	0--15	0.84	0.51	10	0.71	1.67	0.32	59	
			Clay (%)	0--15	44	5	10	45	49	31	59	
			ECEC (cmol/kg <sup>-1</sup> )	0--15	19.47	13.11	10	14.91	36.51	4.40	59	
			Iron (mg/g)	0--15	0.24	0.07	10	0.23	0.37	0.13	59	
			Magnesium (cmol/kg <sup>-1</sup> )	0--15	14.57	12.48	10	10.71	33.90	2.22	59	
			Magnesium (mg/g)	0--15	1.75	1.50	10	1.29	4.07	0.27	59	
			Manganese (mg/g)	0--15	0.07	0.03	10	0.07	0.13	0.05	59	
			Nitrogen (%)	0--15	0.29	0.08	10	0.27	0.41	0.16	59	
			Organic matter (%)	0--15	7.80	1.48	10	0.67	9.99	5.69	59	
			pH (H <sub>2</sub> O)	0--15	5.30	0.40	10	5.40	5.90	4.80	59	
			pH (KCl)	0--15	5.90	5.00	10	6.00	6.60	5.30	59	
			Phosphorus (mg/kg)	0--15	9	2	10	10	12	6	59	
			Potassium (mg/g)	0--15	0.14	0.04	10	0.14	0.20	0.08	59	
			Potassium (cmol/kg <sup>-1</sup> )	0--15	0.36	0.10	10	0.36	0.52	0.21	59	
			Potassium (mg/g)	0--15	0.14	0.04	10	0.14	0.20	0.08	59	
			Alluvial deposits	Mollisols	Sdf	Sand (%)	0--15	24	6	10	23	
Silt (%)	0--15	32				4	10	34	36	26	59	
Sodium (cmol/kg <sup>-1</sup> )	0--15	0.15				0.06	10	0.17	0.27	0.08	59	
Sodium (mg/g)	0--15	0.04				0.01	10	0.04	0.06	0.02	59	
Aluminum (cmol/kg <sup>-1</sup> )	0--10	0.39				0.46	241	0.18	2.19	0.01	60	
Aluminum-total (mg/g)	0--10	19.34				13.61	391	15.10	58.17	1.18	60	
Calcium (cmol/kg <sup>-1</sup> )	0--10	46.59				17.85	241	47.23	97.06	15.78	60	

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total									
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes	
			Calcium (mg/g)	0--10	9.32	3.57	241	9.45	19.41	3.16	60		
			Calcium-total (mg/g)	0--10	143.81	97.56	391	114.23	346.58	1.91	60		
			Carbon (%)	0--10	19.60	8.59	343	16.46	46.07	8.45	60		
			ECEC (cmol/kg <sup>-1</sup> )	0--10	55.60	20.64	241	56.91	117.38	23.10	60		
			Iron (mg/g)	0--10	0.02	0.02	239	0.01	0.13	0.01	60		
			Iron-total (mg/g)	0--10	20.81	14.39	391	16.07	58.79	1.53	60		
			Loss on ignition (%)	0--10	32.79	16.22	415	30.50	80.02	11.47	60		
			Magnesium (cmol/kg <sup>-1</sup> )	0--10	6.60	3.13	241	6.17	19.72	1.70	60		
			Magnesium (mg/g)	0--10	0.79	0.38	241	0.74	2.37	0.20	60		
			Magnesium-total (mg/g)	0--10	4.47	1.87	391	4.42	14.06	0.21	60		
			Manganese (mg/g)	0--10	0.05	0.04	239	0.04	0.57	0.01	60		
			Manganese-total (mg/g)	0--10	0.41	0.26	391	0.32	1.14	0.04	60		
			Nitrogen (%)	0--10	1.30	0.65	343	1.25	3.14	0.36	60		
			pH (H <sub>2</sub> O)	0--10	7.87	0.21	412	7.93	8.25	7.04	60		
			pH (KCl)	0--10	7.26	0.20	212	7.29	7.72	6.30	60		
			Phosphorus (mg/g)	0--10	0.01	0.01	239	0.01	0.14	0.00	60		
			Phosphorus-total (mg/g)	0--10	0.65	0.25	391	0.65	1.42	0.03	60		
			Potassium (cmol/kg <sup>-1</sup> )	0--10	1.58	1.24	239	1.38	18.93	0.28	60		
			Potassium (mg/g)	0--10	0.60	0.47	239	0.53	7.19	0.11	60		
			Potassium-total (mg/g)	0--10	8.89	2.58	391	9.28	13.89	0.76	60		
			Sodium (cmol/kg <sup>-1</sup> )	0--10	0.46	0.28	237	0.42	1.24	0.01	60		
			Sodium (mg/g)	0--10	0.11	0.07	237	0.10	0.29	0.01	60		
			Sulfur (%)	0--10	0.17	0.10	343	0.16	0.45	0.02	60		
Tuffaceous sandstone	Ultisols	Wfs	Aluminum saturation (%)	0--10	61.69	14.46	3	58.11	77.60	49.35	61		Bisley
				0--10	49.46	18.38	5	51.63	66.23	20.02	61		Dwarf forest
				0--10	48.41	23.87	6	43.68	82.52	24.17	61		El Verde



Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth								
				(cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0--10	29.99	27.76	11	21.12	100.00	6.70	61	Montane palm forest
				0--10	44.81	18.83	15	40.49	77.64	21.78	61	Palo Colorado forest
				0--10	31.45	25.82	15	15.77	85.34	5.25	61	Tabonuco forest
				10--20	56.62	17.99	3	49.52	77.08	43.26	61	Bisley
				10--20	63.32	9.43	6	61.55	77.38	52.21	61	Dwarf forest
				10--20	61.31	28.33	6	67.93	92.74	24.30	61	El Verde
				10--20	41.43	30.92	8	38.23	10.00	4.01	61	Montane palm forest
				10--20	5.47	21.32	16	58.26	86.87	10.16	61	Palo Colorado forest
				10--20	30.52	26.43	17	21.51	82.76	3.64	61	Tabonuco forest
				20--30	57.48	16.54	3	54.67	73.92	40.84	61	Bisley
				20--30	67.14	9.58	5	65.46	80.15	57.93	61	Dwarf forest
				20--30	57.11	31.53	6	66.44	84.77	16.09	61	El Verde
				20--30	40.45	30.12	7	34.44	100.00	6.58	61	Montane palm forest
				20--30	58.11	19.68	15	53.97	85.52	23.67	61	Palo Colorado forest
				20--30	31.55	29.84	15	17.45	85.58	3.10	61	Tabonuco forest
				30--40	64.48	14.61	2	64.48	74.81	54.15	61	Bisley
				30--40	70.60	7.89	6	69.60	82.90	62.72	61	Dwarf forest
				30--40	65.53	36.04	5	88.02	89.64	6.46	61	El Verde
				30--40	40.74	31.82	7	6.20	8.81	2.63	61	Montane palm forest
				30--40	53.69	26.20	15	52.89	90.88	7.37	61	Palo Colorado forest
				30--40	23.12	24.26	16	10.87	66.41	2.53	61	Tabonuco forest
			Aluminum (cmol/kg <sup>-1</sup> )	0--10	2.12	0.67	3	1.75	2.90	1.72	61	Bisley
				0--10	5.01	1.95	5	6.20	6.59	2.02	61	Dwarf forest
				0--10	4.40	3.23	6	3.75	9.34	1.06	61	El Verde
				0--10	1.60	0.89	11	1.56	3.12	0.72	61	Montane palm forest
				0--10	2.08	1.14	15	1.57	4.46	1.00	61	Palo Colorado forest

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total							Source	Site/notes
				Depth (cm)	Mean	Sd	n	Median	Max	Min		
				0--10	3.28	3.02	15	2.01	12.80	0.77	61	Tabonuco forest
				10--20	1.55	0.68	3	1.21	2.34	1.11	61	Bisley
				10--20	4.23	1.27	6	4.72	5.65	2.65	61	Dwarf forest
				10--20	4.86	3.92	6	4.35	11.14	0.93	61	El Verde
				10--20	1.76	0.85	8	1.83	2.80	0.36	61	Montane palm forest
				10--20	1.88	1.14	16	1.53	4.08	0.20	61	Palo Colorado forest
				10--20	3.76	3.73	17	2.67	11.55	0.40	61	Tabonuco forest
				20--30	1.49	0.37	3	1.36	1.91	1.20	61	Bisley
				20--30	4.09	1.21	5	3.87	6.14	2.89	61	Dwarf forest
				20--30	4.65	4.16	6	4.03	11.33	0.58	61	El Verde
				20--30	1.82	0.85	7	1.77	2.81	0.49	61	Montane palm forest
				20--30	1.95	1.36	15	1.49	4.38	0.43	61	Palo Colorado forest
				20--30	2.83	2.38	15	2.21	8.89	0.36	61	Tabonuco forest
				30--40	1.93	1.15	2	1.93	2.74	1.11	61	Bisley
				30--40	3.86	0.66	6	3.83	5.01	3.08	61	Dwarf forest
				30--40	5.33	4.88	5	5.79	12.67	0.19	61	El Verde
				30--40	1.84	1.07	5	0.25	0.47	0.18	61	Montane palm forest
				30--40	1.55	1.24	15	1.38	4.01	0.05	61	Palo Colorado forest
				30--40	2.34	2.21	16	1.79	8.59	0.29	61	Tabonuco forest
			Calcium (cmol/kg <sup>-1</sup> )	0--10	0.50	0.30	3	0.44	0.89	0.33	61	Bisley
				0--10	2.51	1.80	5	2.38	5.20	0.89	61	Dwarf forest
				0--10	1.69	0.84	6	1.71	2.87	0.39	61	El Verde
				0--10	3.43	2.25	10	2.68	7.48	1.37	61	Montane palm forest
				0--10	1.29	0.75	15	1.44	2.50	0.27	61	Palo Colorado forest
				0--10	7.62	7.68	15	6.64	27.10	0.26	61	Tabonuco forest
				10--20	0.46	0.26	3	0.35	0.76	0.27	61	Bisley

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth								
				(cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				10--20	0.70	0.27	6	0.70	1.11	0.29	61	Dwarf forest
				10--20	0.74	0.67	6	0.60	1.80	0.05	61	El Verde
				10--20	2.59	1.98	7	2.20	6.36	0.89	61	Montane palm forest
				10--20	0.52	0.34	16	0.48	1.30	0.08	61	Palo Colorado forest
				10--20	8.02	7.43	17	7.39	23.14	0.40	61	Tabonuco forest
				20--30	0.44	0.31	3	0.34	0.78	0.19	61	Bisley
				20--30	0.57	0.23	5	0.58	0.85	0.23	61	Dwarf forest
				20--30	0.85	0.69	6	0.66	1.77	0.18	61	El Verde
				20--30	2.90	1.60	6	2.53	4.84	0.76	61	Montane palm forest
				20--30	0.45	0.36	15	0.35	1.28	0.05	61	Palo Colorado forest
				20--30	7.98	7.40	15	7.59	24.83	0.30	61	Tabonuco forest
				30--40	0.45	0.21	2	0.45	0.59	0.30	61	Bisley
				30--40	0.40	0.18	6	0.45	0.55	0.12	61	Dwarf forest
				30--40	0.42	0.51	5	0.19	1.30	0.09	61	El Verde
				30--40	2.76	1.90	6	2.50	6.22	0.49	61	Montane palm forest
				30--40	0.24	0.18	15	0.20	0.70	0.01	61	Palo Colorado forest
				30--40	8.38	7.32	17	7.47	25.04	0.69	61	Tabonuco forest
			Calcium (mg/g)	0--10	0.11	0.06	3	0.09	0.18	0.07	61	Bisley
				0--10	0.50	0.36	5	0.48	1.04	0.18	61	Dwarf forest
				0--10	0.34	0.17	6	0.34	0.57	0.08	61	El Verde
				0--10	0.69	0.45	10	0.54	1.50	0.27	61	Montane palm forest
				0--10	0.26	0.15	15	0.29	0.50	0.06	61	Palo Colorado forest
				0--10	1.53	1.54	15	1.33	5.42	0.05	61	Tabonuco forest
				10--20	0.09	0.05	3	0.07	0.15	0.05	61	Bisley
				10--20	0.14	0.05	6	0.14	0.22	0.06	61	Dwarf forest
				10--20	0.15	0.13	6	0.12	0.36	0.01	61	El Verde

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				10--20	0.52	0.40	7	0.44	1.27	0.18	61	Montane palm forest
				10--20	0.10	0.07	16	0.09	0.26	0.02	61	Palo Colorado forest
				10--20	1.60	1.49	17	1.48	4.63	0.08	61	Tabonuco forest
				20--30	0.09	0.06	3	0.07	0.16	0.04	61	Bisley
				20--30	0.11	0.05	5	0.12	0.17	0.05	61	Dwarf forest
				20--30	0.17	0.14	6	0.13	0.35	0.04	61	El Verde
				20--30	0.58	0.32	6	0.51	0.97	0.15	61	Montane palm forest
				20--30	0.09	0.07	15	0.07	0.26	0.01	61	Palo Colorado forest
				20--30	1.60	1.48	15	1.52	4.97	0.06	61	Tabonuco forest
				30--40	0.09	0.04	2	0.09	0.12	0.06	61	Bisley
				30--40	0.08	0.04	6	0.09	0.11	0.02	61	Dwarf forest
				30--40	0.08	0.10	5	0.04	0.26	0.02	61	El Verde
				30--40	0.55	0.38	6	0.50	1.24	0.10	61	Montane palm forest
				30--40	0.05	0.04	15	0.04	0.14	0.01	61	Palo Colorado forest
				30--40	1.68	1.65	17	1.49	5.01	0.14	61	Tabonuco forest
			Effective cation exchange capacity	0--10	3.41	0.37	3	3.49	3.74	3.01	61	Bisley
			{Ca+K+Mg(cmol/kg <sup>-1</sup> )	0--10	10.16	1.54	5	9.82	12.76	8.76	61	Dwarf forest
				0--10	8.14	2.76	6	9.09	10.92	4.38	61	El Verde
				0--10	7.33	3.14	11	7.27	12.78	1.56	61	Montane palm forest
				0--10	4.75	1.85	15	4.29	9.41	2.52	61	Palo Colorado forest
				0--10	16.37	14.15	15	13.55	54.02	3.02	61	Tabonuco forest
				10--20	2.69	0.41	3	2.80	3.04	2.24	61	Bisley
				10--20	6.60	1.45	6	6.99	8.05	4.68	61	Dwarf forest
				10--20	6.83	3.12	6	6.20	12.01	3.83	61	El Verde
				10--20	5.57	2.32	8	5.34	8.99	1.95	61	Montane palm forest
				10--20	3.29	1.34	16	3.05	5.35	1.41	61	Palo Colorado forest

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				10--20	16.81	15.13	17	11.18	51.24	3.94	61	Tabonuco forest
				20--30	2.63	0.29	3	2.58	2.94	2.36	61	Bisley
				20--30	6.09	1.47	5	5.62	8.36	4.83	61	Dwarf forest
				20--30	6.85	3.80	6	5.69	13.77	3.61	61	El Verde
				20--30	5.84	2.82	7	6.56	9.77	1.77	61	Montane palm forest
				20--30	3.14	1.62	15	2.53	6.93	1.24	61	Palo Colorado forest
				20--30	15.02	12.74	15	13.22	50.94	3.16	61	Tabonuco forest
				30--40	2.86	1.14	2	2.86	3.66	2.05	61	Bisley
				30--40	5.55	1.16	6	6.01	6.82	3.72	61	Dwarf forest
				30--40	6.76	4.58	5	6.58	14.13	2.91	61	El Verde
				30--40	5.61	2.19	7	1.99	3.37	0.20	61	Montane palm forest
				30--40	2.42	1.31	15	2.25	4.64	0.68	61	Palo Colorado forest
				30--40	15.13	12.26	17	10.72	5.37	1.41	61	Tabonuco forest
			Iron (mg/g)	0--10	2.16	0.31	5	2.33	2.47	1.73	61	Dwarf forest
				0--10	1.68	0.37	5	1.73	2.09	1.14	61	El Verde
				0--10	0.57	0.31	8	0.45	0.99	0.25	61	Montane palm forest
				0--10	1.24	0.63	10	1.00	2.48	0.48	61	Palo Colorado forest
				0--10	1.55	1.04	11	1.67	3.39	0.30	61	Tabonuco forest
				10--20	1.62	0.48	6	1.64	2.11	0.76	61	Dwarf forest
				10--20	1.37	0.67	5	1.47	2.09	0.33	61	El Verde
				10--20	0.45	0.33	5	0.40	0.98	0.13	61	Montane palm forest
				10--20	0.83	0.54	11	0.87	1.94	0.13	61	Palo Colorado forest
				10--20	1.47	1.28	13	1.38	4.19	0.30	61	Tabonuco forest
				20--30	1.37	0.91	5	1.77	2.26	0.08	61	Dwarf forest
				20--30	0.82	0.53	5	0.66	1.69	0.27	61	El Verde
				20--30	0.40	0.34	5	0.31	0.99	0.13	61	Montane palm forest

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				20--30	0.79	0.59	11	0.75	2.24	0.13	61	Palo Colorado forest
				20--30	1.74	1.21	10	1.60	3.69	0.28	61	Tabonuco forest
				30--40	0.70	0.69	6	0.46	1.63	0.08	61	Dwarf forest
				30--40	0.43	0.47	5	0.27	1.24	0.07	61	El Verde
				30--40	0.42	0.46	5	0.22	1.23	0.13	61	Montane palm forest
				30--40	0.39	0.35	10	0.19	0.93	0.05	61	Palo Colorado forest
				30--40	1.66	1.17	12	1.52	3.89	0.29	61	Tabonuco forest
			Loss on ignition (%)	0--10	20.23	4.21	28	20.35	34.62	14.35	61	Bisley
				0--10	25.61	7.47	17	23.92	38.74	15.76	61	Dwarf forest
				0--10	22.24	2.88	33	22.13	30.71	15.31	61	El Verde
				0--10	20.22	4.85	15	18.60	28.60	14.76	61	Montane palm forest
				0--10	10.40	4.18	19	9.80	19.74	6.11	61	Palo Colorado forest
				0--10	20.97	6.78	22	19.06	37.59	12.89	61	Tabonuco forest
				0--20	22.05	3.27	7	23.65	24.83	16.80	61	Jimenez, Caribbean National Forest
				0--20	14.06	3.68	7	13.45	19.18	10.19	61	Road 191
				10--20	18.08	2.56	30	18.32	22.03	12.89	61	Bisley
				10--20	23.21	7.96	17	25.52	34.09	11.98	61	Dwarf forest
				10--20	20.16	1.90	32	20.10	24.32	15.47	61	El Verde
				10--20	17.66	3.38	13	17.40	26.28	11.90	61	Montane palm forest
				10--20	9.87	4.95	21	8.30	19.10	3.81	61	Palo Colorado forest
				10--20	19.42	6.41	23	18.63	35.48	10.33	61	Tabonuco forest
				20--30	16.80	2.66	28	16.33	21.12	10.84	61	Bisley
				20--30	20.12	7.43	17	20.20	31.82	10.44	61	Dwarf forest
				20--30	18.99	1.59	32	19.15	22.13	13.50	61	El Verde
				20--30	17.10	4.18	13	16.39	26.74	9.41	61	Montane palm forest
				20--30	9.20	3.82	22	7.90	17.00	3.52	61	Palo Colorado forest

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				20--30	23.40	22.60	20	19.53	116.41	9.13	61	Tabonuco forest
				20--40	19.33	3.09	6	20.22	22.61	15.34	61	Jimenez, Caribbean National Forest
				20--40	12.91	3.70	6	12.53	17.68	8.78	61	Road 191
				30--40	17.57	2.58	28	17.76	24.18	10.66	61	Bisley
				30--40	17.45	6.09	17	16.67	28.46	0.57	61	Dwarf forest
				30--40	18.75	1.73	26	19.09	23.22	14.92	61	El Verde
				30--40	16.89	4.42	14	16.32	28.48	9.45	61	Montane palm forest
				30--40	8.58	3.27	21	7.92	16.43	3.19	61	Palo Colorado forest
				30--40	17.09	5.94	20	17.73	26.85	6.22	61	Tabonuco forest
				40--50	17.17	2.23	7	16.92	21.04	13.93	61	El Verde
				40--50	17.70	2.43	4	18.81	19.96	14.41	61	Jimenez, Caribbean National Forest
				40--50	10.99	1.92	5	11.89	12.73	8.65	61	Road 191
			Magnesium (cmol/kg <sup>-1</sup> )	0--10	0.45	0.15	3	0.49	0.58	0.28	61	Bisley
				0--10	1.34	0.25	5	1.18	1.61	1.14	61	Dwarf forest
				0--10	1.47	0.94	6	1.35	2.63	0.21	61	El Verde
				0--10	1.87	0.68	10	2.08	2.88	0.61	61	Montane palm forest
				0--10	0.87	0.57	15	0.67	1.87	0.26	61	Palo Colorado forest
				0--10	4.58	5.09	15	2.97	20.04	0.35	61	Tabonuco forest
				10--20	0.44	0.14	3	0.45	0.58	0.30	61	Bisley
				10--20	0.77	0.21	6	0.74	1.14	0.49	61	Dwarf forest
				10--20	0.84	0.38	6	0.86	1.27	0.17	61	El Verde
				10--20	1.13	0.44	7	1.20	1.53	0.32	61	Montane palm forest
				10--20	0.46	0.35	16	0.36	1.27	0.13	61	Palo Colorado forest
				10--20	4.13	4.45	17	2.18	14.91	0.41	61	Tabonuco forest
				20--30	0.44	0.23	3	0.38	0.69	0.24	61	Bisley
				20--30	0.72	0.26	5	0.77	1.02	0.31	61	Dwarf forest

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total							Source	Site/notes
				Depth (cm)	Mean	Sd	n	Median	Max	Min		
				20--30	1.03	0.26	6	0.93	1.49	0.76	61	El Verde
				20--30	14.14	0.42	6	1.26	1.55	0.34	61	Montane palm forest
				20--30	0.39	0.27	15	0.25	1.01	0.12	61	Palo Colorado forest
				20--30	3.40	3.75	15	2.23	14.65	0.30	61	Tabonuco forest
				30--40	0.24	0.15	2	0.24	0.34	0.13	61	Bisley
				30--40	0.60	0.27	6	0.65	0.87	0.20	61	Dwarf forest
				30--40	0.77	0.11	5	0.83	0.86	0.63	61	El Verde
				30--40	1.03	0.42	6	1.07	1.49	0.35	61	Montane palm forest
				30--40	0.35	0.22	15	0.31	0.97	0.09	61	Palo Colorado forest
				30--40	3.63	3.49	17	2.51	13.72	0.52	61	Tabonuco forest
			Magnesium (mg/g)	0--10	0.05	0.02	3	0.06	0.07	0.03	61	Bisley
				0--10	0.16	0.03	5	0.14	0.19	0.14	61	Dwarf forest
				0--10	0.18	0.11	6	0.16	0.32	0.03	61	El Verde
				0--10	0.22	0.08	10	0.25	0.35	0.07	61	Montane palm forest
				0--10	0.10	0.07	15	0.08	0.22	0.03	61	Palo Colorado forest
				0--10	0.55	0.61	15	0.36	2.41	0.04	61	Tabonuco forest
				10--20	0.05	0.02	3	0.05	0.07	0.04	61	Bisley
				10--20	0.09	0.03	6	0.09	0.14	0.06	61	Dwarf forest
				10--20	0.10	0.05	6	0.10	0.15	0.02	61	El Verde
				10--20	0.14	0.05	7	0.14	0.18	0.04	61	Montane palm forest
				10--20	0.06	0.04	16	0.04	0.15	0.02	61	Palo Colorado forest
				10--20	0.50	0.54	17	0.26	1.79	0.05	61	Tabonuco forest
				20--30	0.05	0.04	3	0.05	0.08	0.03	61	Bisley
				20--30	0.09	0.03	5	0.09	0.12	0.04	61	Dwarf forest
				20--30	0.12	0.03	6	0.11	0.18	0.09	61	El Verde
				20--30	0.14	0.05	6	0.15	0.19	0.04	61	Montane palm forest



Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				20--30	0.05	0.03	15	0.03	0.12	0.01	61	Palo Colorado forest
				20--30	0.41	0.45	15	0.27	1.76	0.04	61	Tabonuco forest
				30--40	0.03	0.02	2	0.03	0.04	0.02	61	Bisley
				30--40	0.07	0.03	6	0.08	0.11	0.03	61	Dwarf forest
				30--40	0.09	0.01	5	0.10	0.10	0.08	61	El Verde
				30--40	0.12	0.05	6	0.13	0.18	0.04	61	Montane palm forest
				30--40	0.04	0.03	15	0.04	0.12	0.01	61	Palo Colorado forest
				30--40	0.44	0.42	17	0.30	1.65	0.06	61	Tabonuco forest
			Manganese (mg/g)	0--10	0.02	0.01	5	0.01	0.02	0.01	61	Dwarf forest
				0--10	0.08	0.08	5	0.05	0.20	0.01	61	El Verde
				0--10	0.32	0.15	8	0.25	0.52	0.19	61	Montane palm forest
				0--10	0.03	0.02	10	0.03	0.05	0.01	61	Palo Colorado forest
				0--10	0.23	0.22	11	0.13	0.63	0.02	61	Tabonuco forest
				10--20	0.01	0.00	6	0.01	0.01	0.01	61	Dwarf forest
				10--20	0.07	0.10	5	0.02	0.23	0.01	61	El Verde
				10--20	0.23	0.07	5	0.19	0.30	0.15	61	Montane palm forest
				10--20	0.01	0.01	11	0.01	0.03	0.01	61	Palo Colorado forest
				10--20	0.24	0.27	13	0.11	0.83	0.01	61	Tabonuco forest
				20--30	0.05	0.11	5	0.01	0.25	0.01	61	Dwarf forest
				20--30	0.09	0.11	5	0.04	0.27	0.01	61	El Verde
				20--30	0.18	0.06	5	0.21	0.23	0.09	61	Montane palm forest
				20--30	0.01	0.01	11	0.01	0.03	0.01	61	Palo Colorado forest
				20--30	0.32	0.23	10	0.32	0.64	0.06	61	Tabonuco forest
				30--40	0.10	0.14	6	0.01	0.30	0.01	61	Dwarf forest
				30--40	0.09	0.12	5	0.05	0.30	0.01	61	El Verde
				30--40	0.15	0.07	5	0.14	0.21	0.05	61	Montane palm forest

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Nitrogen (%)	30--40	0.01	0.01	10	0.01	0.03	0.01	61	Palo Colorado forest
				30--40	0.27	0.15	12	0.29	0.48	0.05	61	Tabonuco forest
				0--10	0.51	0.17	5	0.58	0.69	0.30	61	Dwarf forest
				0--10	0.23	0.09	6	0.23	0.37	0.14	61	Montane palm forest
				0--10	0.18	0.09	5	0.15	0.29	0.09	61	Palo Colorado forest
				0--10	0.37	0.16	5	0.34	0.62	0.22	61	Tabonuco forest
				10--20	0.37	0.18	6	0.41	0.54	0.15	61	Dwarf forest
				10--20	0.15	0.10	5	0.13	0.33	0.06	61	Montane palm forest
				10--20	0.13	0.09	5	0.08	0.25	0.05	61	Palo Colorado forest
				10--20	0.30	0.08	6	0.31	0.41	0.20	61	Tabonuco forest
				20--30	0.26	0.20	5	0.19	0.53	0.08	61	Dwarf forest
				20--30	0.15	0.11	5	0.12	0.33	0.06	61	Montane palm forest
				20--30	0.13	0.09	6	0.11	0.23	0.05	61	Palo Colorado forest
				20--30	0.29	0.09	5	0.32	0.40	0.20	61	Tabonuco forest
				30--40	0.14	0.16	6	0.07	0.42	0.02	61	Dwarf forest
				30--40	0.14	0.11	5	0.10	0.33	0.06	61	Montane palm forest
				30--40	0.07	0.05	6	0.04	0.14	0.02	61	Palo Colorado forest
				30--40	0.24	0.11	6	0.23	0.36	0.09	61	Tabonuco forest
			Organic matter (%)	0--10	6.33	2.44	79	5.90	17.57	1.86	61	Bisley
				0--10	17.70	8.64	27	19.95	33.51	3.46	61	Dwarf forest
				0--10	7.59	2.11	79	7.27	15.46	4.10	61	El Verde
				0--10	6.36	3.65	24	5.59	15.32	2.17	61	Montane palm forest
				0--10	6.68	3.52	25	5.53	13.65	2.19	61	Palo Colorado forest
				0--10	9.21	5.94	27	6.54	29.03	3.71	61	Tabonuco forest
				0--20	5.48	2.01	13	6.36	7.54	1.56	61	Jimenez, Caribbean National Forest
				0--20	6.90	2.88	12	5.49	12.68	4.09	61	Road 191

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth								
				(cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				10--20	4.46	1.67	78	4.44	14.63	0.73	61	Bisley
				10--20	15.15	8.83	27	16.15	31.65	0.32	61	Dwarf forest
				10--20	5.44	1.61	82	5.12	10.35	2.50	61	El Verde
				10--20	4.27	3.17	22	3.41	11.50	0.62	61	Montane palm forest
				10--20	5.12	3.19	25	4.22	11.85	1.07	61	Palo Colorado forest
				10--20	7.68	4.67	27	7.14	17.76	2.59	61	Tabonuco forest
				20--30	3.41	1.02	73	3.65	5.11	1.00	61	Bisley
				20--30	12.51	8.53	27	11.79	26.42	0.47	61	Dwarf forest
				20--30	4.36	1.43	77	4.03	7.82	1.52	61	El Verde
				20--30	3.54	2.63	23	3.01	11.26	0.25	61	Montane palm forest
				20--30	4.49	3.27	27	3.19	12.85	1.11	61	Palo Colorado forest
				20--30	6.50	3.23	24	6.05	14.06	1.75	61	Tabonuco forest
				20--40	3.46	1.34	13	3.96	5.14	0.93	61	Jimenez, Caribbean National Forest
				20--40	4.58	2.75	11	3.73	10.53	1.87	61	Road 191
				30--40	2.54	1.06	76	2.53	5.28	0.72	61	Bisley
				30--40	8.63	7.14	27	5.80	22.94	0.28	61	Dwarf forest
				30--40	3.51	1.66	63	3.26	10.63	0.74	61	El Verde
				30--40	3.10	2.61	23	2.63	12.02	0.56	61	Montane palm forest
				30--40	3.05	2.66	25	1.82	8.55	0.66	61	Palo Colorado forest
				30--40	5.26	3.27	230	4.43	11.91	1.40	61	Tabonuco forest
				40--50	2.66	0.71	10	2.57	4.04	1.47	61	El Verde
				40--50	2.59	1.26	10	2.51	5.39	0.67	61	Jimenez, Caribbean National Forest
				40--50	2.82	1.42	11	2.50	5.88	1.20	61	Road 191
			pH (H <sub>2</sub> O)	0--10	4.85	0.29	83	4.80	5.88	3.92	61	Bisley
				0--10	4.65	0.16	27	4.67	5.00	4.31	61	Dwarf forest
				0--10	4.92	0.25	75	4.92	5.52	4.31	61	El Verde

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth								
				(cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0--10	5.05	0.20	21	5.08	5.41	4.62	61	Montane palm forest
				0--10	4.60	0.24	25	4.67	4.94	3.93	61	Palo Colorado forest
				0--10	4.94	0.25	26	4.90	5.85	4.61	61	Tabonuco forest
				0--20	4.80	0.13	13	4.78	5.05	4.65	61	Jimenez, Caribbean National Forest
				0--20	4.67	0.24	12	4.67	5.04	4.28	61	Road 191
				10--20	4.90	0.26	83	4.88	5.96	4.29	61	Bisley
				10--20	4.72	0.21	27	4.72	5.25	4.28	61	Dwarf forest
				10--20	4.97	0.19	79	5.00	5.44	4.48	61	El Verde
				10--20	4.98	0.23	20	5.00	5.37	4.60	61	Montane palm forest
				10--20	4.67	0.25	25	4.72	5.05	4.15	61	Palo Colorado forest
				10--20	4.90	0.30	27	4.83	5.53	4.41	61	Tabonuco forest
				20--30	4.93	0.22	75	4.92	5.45	4.37	61	Bisley
				20--30	4.79	0.18	27	4.78	5.11	4.43	61	Dwarf forest
				20--30	5.00	0.21	73	5.02	5.62	4.47	61	El Verde
				20--30	5.03	0.17	20	5.04	5.35	4.74	61	Montane palm forest
				20--30	4.72	0.31	27	4.70	5.23	4.03	61	Palo Colorado forest
				20--30	4.98	0.20	24	4.99	5.33	4.52	61	Tabonuco forest
				20--40	4.93	0.15	12	4.95	5.12	4.63	61	Jimenez, Caribbean National Forest
				20--40	5.13	1.46	12	4.72	9.71	4.30	61	Road 191
				30--40	5.01	0.23	79	5.01	5.48	4.39	61	Bisley
				30--40	4.77	0.22	27	4.79	5.22	4.26	61	Dwarf forest
				30--40	5.05	0.21	63	5.02	5.78	4.65	61	El Verde
				30--40	4.99	0.20	22	4.97	5.43	4.62	61	Montane palm forest
				30--40	4.81	0.36	25	4.84	5.68	4.17	61	Palo Colorado forest
				30--40	5.10	0.30	23	5.14	4.66	4.49	61	Tabonuco forest
				40--50	4.69	0.26	9	4.68	5.14	4.28	61	El Verde

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			pH (KCl)	40--50	5.04	0.21	10	5.05	5.36	4.71	61	Jimenez, Caribbean National Forest
				40--50	4.85	0.19	11	4.89	5.11	4.59	61	Road 191
				0--10	4.04	0.27	83	3.98	5.20	3.15	61	Bisley
				0--10	3.85	0.12	27	3.86	4.21	3.59	61	Dwarf forest
				0--10	4.07	0.24	75	4.04	4.73	3.52	61	El Verde
				0--10	0.10	0.22	21	4.15	4.55	3.64	61	Montane palm forest
				0--10	3.89	0.19	25	3.95	4.18	3.42	61	Palo Colorado forest
				0--10	3.91	0.21	26	3.93	4.48	3.43	61	Tabonuco forest
				0--20	3.89	0.13	13	3.95	4.06	3.69	61	Jimenez, Caribbean National Forest
				0--20	4.01	0.13	12	4.05	4.16	3.83	61	Road 191
				10--20	4.08	0.23	83	4.05	5.19	3.64	61	Bisley
				10--20	3.89	0.08	27	3.90	4.06	3.74	61	Dwarf forest
				10--20	4.07	0.20	79	4.04	4.47	3.58	61	El Verde
				10--20	4.02	0.17	20	4.01	4.42	3.74	61	Montane palm forest
				10--20	4.02	0.22	25	4.03	4.63	3.57	61	Palo Colorado forest
				10--20	3.90	0.24	27	3.91	4.31	3.48	61	Tabonuco forest
				20--30	4.10	0.20	75	4.08	4.62	3.62	61	Bisley
				20--30	3.92	0.09	27	3.93	4.07	3.77	61	Dwarf forest
				20--30	4.06	0.20	73	4.04	4.67	3.62	61	El Verde
				20--30	4.07	0.16	20	4.09	4.40	3.76	61	Montane palm forest
				20--30	4.05	0.22	27	4.06	4.47	3.55	61	Palo Colorado forest
				20--30	3.92	0.19	24	3.91	4.28	3.51	61	Tabonuco forest
				20--40	4.21	0.80	12	4.05	6.68	3.65	61	Jimenez, Caribbean National Forest
				20--40	4.05	0.13	12	4.02	4.26	3.88	61	Road 191
				30--40	4.12	0.23	79	4.10	4.67	3.61	61	Bisley
				30--40	3.91	0.12	27	3.91	4.26	3.61	61	Dwarf forest

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				30--40	4.08	0.23	63	4.02	4.99	3.68	61	El Verde
				30--40	4.07	0.18	22	4.09	4.54	3.78	61	Montane palm forest
				30--40	4.22	0.44	25	4.11	5.38	3.62	61	Palo Colorado forest
				30--40	3.96	0.20	23	3.91	4.37	3.52	61	Tabonuco forest
				40--50	3.93	0.11	9	3.91	4.08	3.82	61	El Verde
				40--50	4.09	0.27	10	4.18	4.49	3.65	61	Jimenez, Caribbean National Forest
				40--50	4.11	0.22	11	4.04	4.63	3.94	61	Road 191
			Phosphorus (mg/kg)	0--10	13	4	3	12	18	10	61	Bisley
				0--10	25	12	5	29	40	9	61	Dwarf forest
				0--10	22	6	6	21	32	15	61	El Verde
				0--10	12	4	8	12	19	7	61	Montane palm forest
				0--10	16	14	10	11	44	2	61	Palo Colorado forest
				0--10	25	6	11	26	34	13	61	Tabonuco forest
				10--20	7	1	3	6	8	6	61	Bisley
				10--20	18	15	6	19	37	2	61	Dwarf forest
				10--20	9	5	6	9	18	4	61	El Verde
				10--20	8	6	5	4	18	4	61	Montane palm forest
				10--20	10	8	9	7	25	1	61	Palo Colorado forest
				10--20	23	9	13	25	38	10	61	Tabonuco forest
				20--30	4	1	3	4	4	3	61	Bisley
				20--30	17	17	4	15	36	1	61	Dwarf forest
				20--30	6	4	6	5	12	2	61	El Verde
				20--30	5	5	5	5	16	3	61	Montane palm forest
				20--30	14	9	7	11	24	2	61	Palo Colorado forest
				20--30	21	9	10	19	35	10	61	Tabonuco forest
				30--40	2	1	2	2	2	1	61	Bisley

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				30--40	33	16	2	33	44	21	61	Dwarf forest
				30--40	2	1	4	2	3	1	61	El Verde
				30--40	6	5	5	6	14	2	61	Montane palm forest
				30--40	6	3	5	6	9	2	61	Palo Colorado forest
				30--40	18	8	12	17	31	5	61	Tabonuco forest
			Potassium (cmol/kg <sup>-1</sup> )	0--10	0.48	0.05	5	0.50	0.53	0.40	61	Dwarf forest
				0--10	0.43	0.08	5	0.41	0.53	0.32	61	El Verde
				0--10	0.53	0.25	8	0.61	0.75	0.15	61	Montane palm forest
				0--10	0.36	0.18	10	0.37	0.71	0.13	61	Palo Colorado forest
				0--10	0.49	0.28	11	0.38	1.02	0.19	61	Tabonuco forest
				10--20	0.29	0.12	6	0.28	0.42	0.16	61	Dwarf forest
				10--20	0.23	0.15	5	0.21	0.48	0.09	61	El Verde
				10--20	0.33	0.11	5	0.30	0.47	0.21	61	Montane palm forest
				10--20	0.26	0.15	11	0.26	0.49	0.07	61	Palo Colorado forest
				10--20	0.35	0.26	13	0.24	0.86	0.07	61	Tabonuco forest
				20--30	0.19	0.10	5	0.14	0.30	0.08	61	Dwarf forest
				20--30	0.16	0.08	5	0.12	0.30	0.10	61	El Verde
				20--30	0.27	0.09	5	0.25	0.42	0.20	61	Montane palm forest
				20--30	0.24	0.15	11	0.26	0.48	0.06	61	Palo Colorado forest
				20--30	0.37	0.24	10	0.34	0.75	0.07	61	Tabonuco forest
				30--40	0.16	0.08	6	0.16	0.26	0.07	61	Dwarf forest
				30--40	0.10	0.09	5	0.07	0.25	0.04	61	El Verde
				30--40	0.29	0.13	6	0.39	0.52	0.20	61	Montane palm forest
				30--40	0.15	0.12	10	0.12	0.37	0.04	61	Palo Colorado forest
				30--40	0.38	0.16	12	0.36	0.67	0.05	61	Tabonuco forest
			Potassium (mg/g)	0--10	0.18	0.02	5	0.19	0.20	0.15	61	Dwarf forest

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth								
				(cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0--10	0.16	0.03	5	0.16	0.20	0.12	61	El Verde
				0--10	0.20	0.09	8	0.23	0.28	0.06	61	Montane palm forest
				0--10	0.14	0.07	10	0.14	0.27	0.05	61	Palo Colorado forest
				0--10	0.19	0.11	11	0.15	0.39	0.07	61	Tabonuco forest
				10--20	0.11	0.04	6	0.11	0.16	0.06	61	Dwarf forest
				10--20	0.09	0.06	5	0.08	0.18	0.04	61	El Verde
				10--20	0.12	0.04	5	0.11	0.18	0.08	61	Montane palm forest
				10--20	0.10	0.06	11	0.10	0.19	0.03	61	Palo Colorado forest
				10--20	0.13	0.10	13	0.09	0.33	0.03	61	Tabonuco forest
				20--30	0.07	0.04	5	0.06	0.12	0.03	61	Dwarf forest
				20--30	0.06	0.03	5	0.05	0.12	0.04	61	El Verde
				20--30	0.10	0.03	5	0.10	0.16	0.08	61	Montane palm forest
				20--30	0.09	0.06	11	0.10	0.18	0.02	61	Palo Colorado forest
				20--30	0.14	0.09	10	0.13	0.29	0.03	61	Tabonuco forest
				30--40	0.06	0.03	6	0.06	0.10	0.03	61	Dwarf forest
				30--40	0.04	0.03	5	0.03	0.09	0.02	61	El Verde
				30--40	0.11	0.05	5	0.09	0.18	0.07	61	Montane palm forest
				30--40	0.06	0.05	10	0.04	0.14	0.02	61	Palo Colorado forest
				30--40	0.15	0.06	12	0.14	0.26	0.02	61	Tabonuco forest
			Sodium (cmol/kg <sup>-1</sup> )	0--10	0.28	0.06	3	0.30	0.33	0.22	61	Bisley
				0--10	0.83	0.13	5	0.78	1.03	0.70	61	Dwarf forest
				0--10	0.34	0.23	4	0.43	0.49	0.01	61	El Verde
				0--10	0.59	0.16	10	0.60	0.84	0.30	61	Montane palm forest
				0--10	0.28	0.13	15	0.26	0.66	0.13	61	Palo Colorado forest
				0--10	0.67	0.36	12	0.67	1.35	0.14	61	Tabonuco forest
				10--20	0.24	0.11	3	0.25	0.34	0.13	61	Bisley



Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth								
				(cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				10--20	0.60	0.15	6	0.64	0.74	0.41	61	Dwarf forest
				10--20	0.30	0.21	4	0.38	0.44	0.01	61	El Verde
				10--20	0.40	0.13	7	0.39	0.57	0.16	61	Montane palm forest
				10--20	0.25	0.16	16	0.19	0.66	0.10	61	Palo Colorado forest
				10--20	0.78	0.69	14	0.57	2.44	0.12	61	Tabonuco forest
				20--30	0.26	0.01	3	0.27	0.27	0.25	61	Bisley
				20--30	0.52	0.15	5	0.61	0.65	0.29	61	Dwarf forest
				20--30	0.39	0.07	3	0.35	0.47	0.34	61	El Verde
				20--30	0.43	0.12	6	0.44	0.57	0.22	61	Montane palm forest
				20--30	0.20	0.09	15	0.18	0.42	0.09	61	Palo Colorado forest
				20--30	0.65	0.59	13	0.54	2.46	0.13	61	Tabonuco forest
				30--40	0.26	0.06	2	0.26	0.30	0.21	61	Bisley
				30--40	0.53	0.16	6	0.59	0.65	0.24	61	Dwarf forest
				30--40	0.36	0.01	2	0.36	0.36	0.35	61	El Verde
				30--40	0.38	0.11	6	1.07	1.49	0.35	61	Montane palm forest
				30--40	0.17	0.10	15	0.16	0.36	0.08	61	Palo Colorado forest
				30--40	0.73	0.69	15	0.58	2.97	0.10	61	Tabonuco forest
			Sodium (mg/g)	0--10	0.07	0.01	3	0.07	0.08	0.05	61	Bisley
				0--10	0.19	0.03	5	0.18	0.24	0.16	61	Dwarf forest
				0--10	0.10	0.01	3	0.11	0.11	0.09	61	El Verde
				0--10	0.14	0.04	10	0.14	0.19	0.07	61	Montane palm forest
				0--10	0.06	0.03	15	0.06	0.15	0.03	61	Palo Colorado forest
				0--10	0.15	0.08	12	0.15	0.31	0.03	61	Tabonuco forest
				10--20	0.06	0.02	3	0.06	0.08	0.03	61	Bisley
				10--20	0.14	0.03	6	0.15	0.17	0.09	61	Dwarf forest
				10--20	0.09	0.01	3	0.10	0.10	0.08	61	El Verde

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth								
				(cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				10--20	0.09	0.03	7	0.09	0.13	0.04	61	Montane palm forest
				10--20	0.06	0.04	16	0.04	0.15	0.02	61	Palo Colorado forest
				10--20	0.18	0.16	14	0.13	0.56	0.03	61	Tabonuco forest
				20--30	0.06	0.00	3	0.06	0.03	0.06	61	Bisley
				20--30	0.12	0.04	5	0.14	0.15	0.07	61	Dwarf forest
				20--30	0.09	0.02	3	0.08	0.11	0.08	61	El Verde
				20--30	0.10	0.26	6	0.10	0.13	0.05	61	Montane palm forest
				20--30	0.05	0.02	15	0.04	0.10	0.02	61	Palo Colorado forest
				20--30	0.15	0.14	13	0.01	0.57	0.03	61	Tabonuco forest
				30--40	0.06	0.02	2	0.06	0.07	0.05	61	Bisley
				30--40	0.12	0.04	6	0.14	0.15	0.06	61	Dwarf forest
				30--40	0.08	0.00	2	0.08	0.08	0.08	61	El Verde
				30--40	0.09	0.02	6	0.09	0.12	0.05	61	Montane palm forest
				30--40	0.04	0.02	15	0.04	0.08	0.02	61	Palo Colorado forest
				30--40	0.17	0.16	15	0.13	0.68	0.02	61	Tabonuco forest
Alluvial deposits	Mollisols	Sdf	Aluminum (cmol/kg <sup>-1</sup> )	0--15	0.09	0.11	114	0.05	0.51	0.01	62	
			Bulk density (g/cc)	0--15	0.63	0.11	80	0.66	0.81	0.25	62	
			Calcium (cmol/kg <sup>-1</sup> )	0--15	52.84	13.29	114	53.65	86.39	14.79	62	
			Calcium (mg/g)	0--15	10.57	2.66	114	10.73	17.28	2.96	62	
			ECEC (cmol/kg <sup>-1</sup> )	0--15	61.83	14.64	114	60.72	99.84	19.85	62	
			Iron (mg/kg)	0--15	7	4	114	6	20	2	62	
			Potassium (cmol/kg <sup>-1</sup> )	0--15	2.86	3.63	114	0.77	13.39	0.31	62	
			Potassium (mg/g)	0--15	0.32	0.15	114	0.29	0.65	0.12	62	
			Loss on ignition (%)	0--15	25.15	6.60	114	23.70	42.25	14.17	62	
			Magnesium (cmol/kg <sup>-1</sup> )	0--15	4.99	1.97	114	4.38	11.30	2.25	62	
			Magnesium (mg/g)	0--15	0.60	0.24	114	0.53	1.36	0.27	62	

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth								
				(cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Manganese (mg/g)	0--15	0.09	0.07	114	0.05	0.28	0.01	62	
			Sodium (cmol/kg <sup>-1</sup> )	0--15	1.05	1.45	114	0.22	5.22	0.02	62	
			Sodium (mg/g)	0--15	0.24	0.33	114	0.05	1.20	0.01	62	
			Nitrogen (%)	0--15	0.66	0.21	114	0.64	1.31	0.30	62	
			Organic matter (%)	0--15	11.93	4.97	114	10.25	23.76	4.81	62	
			Phosphorus (mg/kg)	0--15	8	6	114	6	27	3	62	
			pH (H <sub>2</sub> O)	0--15	7.74	0.27	114	7.81	8.18	7.01	62	
			pH (KCl)	0--15	7.03	0.28	114	7.08	7.48	6.04	62	
Alluvial deposits	Histosol	Mfs	Aluminum (cmol/kg <sup>-1</sup> )	0--10	0.11	0.07	3	0.09	0.18	0.05	63	<i>Casuarina equisetifolia</i> plantation
				0--10	0.09	0.10	3	0.05	0.20	0.02	63	<i>Eucalyptus robusta</i> plantation
				0--10	0.16	0.20	3	0.05	0.39	0.04	63	<i>Leucaena leucocephala</i> plantation
				10--25	0.05	0.03	3	0.04	0.08	0.03	63	<i>Casuarina equisetifolia</i> plantation
				10--25	0.10	0.03	3	0.09	0.13	0.07	63	<i>Eucalyptus robusta</i> plantation
				10--25	0.13	0.13	3	0.06	0.28	0.05	63	<i>Leucaena leucocephala</i> plantation
			C/N	0--10	13	3	3	12	16	11	63	<i>Casuarina equisetifolia</i> plantation
				0--10	18	9	3	16	28	11	63	<i>Eucalyptus robusta</i> plantation
				0--10	20	10	3	20	29	10	63	<i>Leucaena leucocephala</i> plantation
			Calcium (cmol/kg <sup>-1</sup> )	10--25	18	6	3	21	22	11	63	<i>Casuarina equisetifolia</i> plantation
				10--25	31	1	3	42	42	10	63	<i>Eucalyptus robusta</i> plantation
				10--25	57	42	3	70	90	10	63	<i>Leucaena leucocephala</i> plantation
				0--10	6.94	0.77	3	7.23	7.53	6.07	63	<i>Casuarina equisetifolia</i> plantation
				0--10	6.64	1.83	3	6.94	8.30	4.68	63	<i>Eucalyptus robusta</i> plantation
				0--10	5.59	1.55	3	5.43	7.22	4.13	63	<i>Leucaena leucocephala</i> plantation
				10--25	5.63	0.59	3	5.35	6.31	5.24	63	<i>Casuarina equisetifolia</i> plantation
				10--25	6.15	1.98	3	5.30	8.41	4.73	63	<i>Eucalyptus robusta</i> plantation
				10--25	4.71	2.06	3	3.97	7.03	3.12	63	<i>Leucaena leucocephala</i> plantation

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth								
				(cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Calcium (mg/g)	0--10	1.39	0.15	3	1.45	1.51	1.22	63	<i>Casuarina equisetifolia</i> plantation
				0--10	1.33	0.37	3	1.39	1.66	0.94	63	<i>Eucalyptus robusta</i> plantation
				0--10	1.12	0.31	3	1.09	1.44	0.83	63	<i>Leucaena leucocephala</i> plantation
				10--25	1.13	0.12	3	1.07	1.26	1.05	63	<i>Casuarina equisetifolia</i> plantation
				10--25	1.23	0.40	3	1.06	1.68	0.95	63	<i>Eucalyptus robusta</i> plantation
				10--25	0.94	0.41	3	0.79	1.41	0.62	63	<i>Leucaena leucocephala</i> plantation
			Carbon (%)	0--10	1.77	0.45	3	1.64	2.27	1.41	63	<i>Casuarina equisetifolia</i> plantation
				0--10	1.84	0.14	3	1.86	1.97	1.70	63	<i>Eucalyptus robusta</i> plantation
				0--10	2.28	0.31	3	2.22	2.61	2.00	63	<i>Leucaena leucocephala</i> plantation
				10--25	1.38	0.59	3	1.26	2.02	0.85	63	<i>Casuarina equisetifolia</i> plantation
				10--25	1.73	0.33	3	1.67	2.08	1.43	63	<i>Eucalyptus robusta</i> plantation
				10--25	2.19	0.48	3	2.11	2.71	1.75	63	<i>Leucaena leucocephala</i> plantation
			Effective cation exchange capacity {Ca+K+Mg(cmol/kg <sup>-1</sup> )	0--10	9.60	0.74	3	9.96	10.08	8.75	63	<i>Casuarina equisetifolia</i> plantation
				0--10	8.48	2.25	3	8.74	10.59	6.12	63	<i>Eucalyptus robusta</i> plantation
				0--10	8.20	3.19	3	7.09	11.79	5.71	63	<i>Leucaena leucocephala</i> plantation
				10--25	7.50	0.55	3	7.45	8.07	6.98	63	<i>Casuarina equisetifolia</i> plantation
				10--25	7.44	2.29	3	6.28	10.08	5.97	63	<i>Eucalyptus robusta</i> plantation
				10--25	6.84	3.79	3	4.91	11.20	4.40	63	<i>Leucaena leucocephala</i> plantation
			Iron (mg/kg)	0--10	17	3	3	17	20	14	63	<i>Casuarina equisetifolia</i> plantation
				0--10	21	6	3	24	25	14	63	<i>Eucalyptus robusta</i> plantation
				0--10	28	38	3	7	72	5	63	<i>Leucaena leucocephala</i> plantation
				10--25	14	12	3	9	28	6	63	<i>Casuarina equisetifolia</i> plantation
				10--25	9	6	3	7	16	8	63	<i>Eucalyptus robusta</i> plantation
				10--25	32	52	3	2	92	1	63	<i>Leucaena leucocephala</i> plantation
			Loss on ignition (%)	0--10	8.78	1.62	3	7.98	10.64	7.71	63	<i>Casuarina equisetifolia</i> plantation
				0--10	4.92	0.46	3	5.05	5.31	4.41	63	<i>Eucalyptus robusta</i> plantation

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Magnesium (cmol/kg <sup>-1</sup> )	0--10	6.71	4.39	3	4.46	11.76	3.90	63	<i>Leucaena leucocephala</i> plantation
				10--25	5.70	1.64	3	5.28	7.51	4.32	63	<i>Casuarina equisetifolia</i> plantation
				10--25	4.52	1.53	3	5.24	5.55	2.76	63	<i>Eucalyptus robusta</i> plantation
				10--25	5.56	4.64	3	2.91	10.92	2.85	63	<i>Leucaena leucocephala</i> plantation
				0--10	1.88	0.24	3	1.97	2.06	1.60	63	<i>Casuarina equisetifolia</i> plantation
				0--10	1.34	0.35	3	1.43	1.63	0.95	63	<i>Eucalyptus robusta</i> plantation
				0--10	1.89	1.25	3	1.20	3.34	1.14	63	<i>Leucaena leucocephala</i> plantation
				10--25	1.34	0.4	3	1.30	1.75	0.96	63	<i>Casuarina equisetifolia</i> plantation
				10--25	0.80	0.18	3	0.75	1.00	0.64	63	<i>Eucalyptus robusta</i> plantation
				10--25	1.46	1.3	3	0.84	2.96	0.59	63	<i>Leucaena leucocephala</i> plantation
				0--10	0.23	0.03	3	0.24	0.25	0.19	63	<i>Casuarina equisetifolia</i> plantation
				0--10	0.16	0.04	3	0.17	0.20	0.11	63	<i>Eucalyptus robusta</i> plantation
			Magnesium (mg/g)	0--10	0.23	0.15	3	0.15	0.40	0.14	63	<i>Leucaena leucocephala</i> plantation
				10--25	0.16	0.05	3	0.16	0.21	0.12	63	<i>Casuarina equisetifolia</i> plantation
				10--25	0.10	0.02	3	0.09	0.12	0.08	63	<i>Eucalyptus robusta</i> plantation
				10--25	0.18	0.16	3	0.10	0.36	0.07	63	<i>Leucaena leucocephala</i> plantation
				0--10	5	1	3	5	6	4	63	<i>Casuarina equisetifolia</i> plantation
				0--10	9	3	3	7	13	7	63	<i>Eucalyptus robusta</i> plantation
				0--10	33	44	3	11	84	4	63	<i>Leucaena leucocephala</i> plantation
				10--25	3	1	3	3	4	2	63	<i>Casuarina equisetifolia</i> plantation
				10--25	3	1	3	3	3	2	63	<i>Eucalyptus robusta</i> plantation
				10--25	2	2	3	1	4	1	63	<i>Leucaena leucocephala</i> plantation
				0--10	0.14	0.01	3	0.14	0.14	0.13	63	<i>Casuarina equisetifolia</i> plantation
				Nitrogen (%)	0--10	0.11	0.04	3	0.12	0.15	0.07	63
			0--10		0.13	0.06	3	0.11	0.20	0.09	63	<i>Leucaena leucocephala</i> plantation
			10--25		0.08	0.02	3	0.08	0.09	0.06	63	<i>Casuarina equisetifolia</i> plantation

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			pH (H <sub>2</sub> O)	10--25	0.08	0.06	3	0.05	0.15	0.04	63	<i>Eucalyptus robusta</i> plantation
				10--25	0.08	0.09	3	0.03	0.18	0.03	63	<i>Leucaena leucocephala</i> plantation
				0--10	7.64	0.11	3	7.66	7.73	7.52	63	<i>Casuarina equisetifolia</i> plantation
				0--10	7.68	0.08	3	7.67	7.76	7.60	63	<i>Eucalyptus robusta</i> plantation
				0--10	7.49	0.80	3	7.85	8.05	6.58	63	<i>Leucaena leucocephala</i> plantation
				10--25	7.66	0.40	3	7.60	7.99	7.22	63	<i>Casuarina equisetifolia</i> plantation
			pH (KCl)	10--25	7.82	0.36	3	7.66	8.23	7.57	63	<i>Eucalyptus robusta</i> plantation
				10--25	7.55	1.06	3	8.06	8.26	6.34	63	<i>Leucaena leucocephala</i> plantation
				0--10	6.89	0.40	3	7.02	7.21	6.45	63	<i>Casuarina equisetifolia</i> plantation
				0--10	6.90	0.46	3	6.77	7.41	6.51	63	<i>Eucalyptus robusta</i> plantation
				0--10	6.65	1.09	3	6.95	7.55	5.44	63	<i>Leucaena leucocephala</i> plantation
				10--25	7.34	0.23	3	7.43	7.50	7.08	63	<i>Casuarina equisetifolia</i> plantation
			Phosphorus (mg/kg)	10--25	7.26	0.46	3	7.19	7.75	6.84	63	<i>Eucalyptus robusta</i> plantation
				10--25	6.91	1.26	3	7.51	7.76	5.46	63	<i>Leucaena leucocephala</i> plantation
				0--10	5	0	3	5	5	5	63	<i>Casuarina equisetifolia</i> plantation
				0--10	6	1	3	6	7	5	63	<i>Eucalyptus robusta</i> plantation
				0--10	6	2	3	6	7	4	63	<i>Leucaena leucocephala</i> plantation
				10--25	4	1	3	4	5	3	63	<i>Casuarina equisetifolia</i> plantation
			Potassium (cmol/kg <sup>-1</sup> )	10--25	4	1	3	5	5	3	63	<i>Eucalyptus robusta</i> plantation
				10--25	4	3	3	3	8	2	63	<i>Leucaena leucocephala</i> plantation
				0--10	0.03	0.04	3	0.28	0.32	0.24	63	<i>Casuarina equisetifolia</i> plantation
				0--10	0.22	0.01	3	0.22	0.22	0.21	63	<i>Eucalyptus robusta</i> plantation
				0--10	0.31	0.02	3	0.32	0.33	0.29	63	<i>Leucaena leucocephala</i> plantation
				10--25	0.26	0.03	3	0.27	0.28	0.22	63	<i>Casuarina equisetifolia</i> plantation
			10--25	0.20	0.01	3	0.20	0.21	0.19	63	<i>Eucalyptus robusta</i> plantation	
			10--25	0.25	0.07	3	0.24	0.32	0.19	63	<i>Leucaena leucocephala</i> plantation	

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Potassium (mg/g)	0--10	0.11	0.02	3	0.11	0.12	0.09	63	<i>Casuarina equisetifolia</i> plantation
				0--10	0.08	0.00	3	0.08	0.08	0.08	63	<i>Eucalyptus robusta</i> plantation
				0--10	0.19	0.01	3	0.12	0.12	0.11	63	<i>Leucaena leucocephala</i> plantation
				10--25	0.10	0.01	3	0.10	0.11	0.08	63	<i>Casuarina equisetifolia</i> plantation
				10--25	0.08	0.00	3	0.08	0.08	0.07	63	<i>Eucalyptus robusta</i> plantation
				10--25	0.10	0.03	3	0.09	0.12	0.07	63	<i>Leucaena leucocephala</i> plantation
			Sodium (cmol/kg <sup>-1</sup> )	0--10	0.39	0.15	3	0.38	0.55	0.25	63	<i>Casuarina equisetifolia</i> plantation
				0--10	0.20	0.06	3	0.23	0.24	0.13	63	<i>Eucalyptus robusta</i> plantation
				0--10	0.24	0.25	3	0.12	0.52	0.07	63	<i>Leucaena leucocephala</i> plantation
				10--25	0.22	0.12	3	0.15	0.36	0.14	63	<i>Casuarina equisetifolia</i> plantation
				10--25	0.20	0.16	3	0.17	0.38	0.06	63	<i>Eucalyptus robusta</i> plantation
				10--25	0.29	0.35	3	0.11	0.69	0.06	63	<i>Leucaena leucocephala</i> plantation
			Sodium (mg/kg)	0--10	90	34	3	87	125	58	63	<i>Casuarina equisetifolia</i> plantation
				0--10	46	14	3	53	55	30	63	<i>Eucalyptus robusta</i> plantation
				0--10	55	56	3	28	119	17	63	<i>Leucaena leucocephala</i> plantation
				10--25	50	29	3	34	84	33	63	<i>Casuarina equisetifolia</i> plantation
				10--25	47	37	3	40	87	15	63	<i>Eucalyptus robusta</i> plantation
				10--25	66	80	3	26	158	13	63	<i>Leucaena leucocephala</i> plantation
			Sulfur (%)	0--10	0.03	0.00	3	0.03	0.03	0.03	63	<i>Casuarina equisetifolia</i> plantation
				0--10	0.04	0.02	3	0.03	0.06	0.03	63	<i>Eucalyptus robusta</i> plantation
				0--10	0.04	0.00	3	0.04	0.04	0.03	63	<i>Leucaena leucocephala</i> plantation
				10--25	0.02	0.01	3	0.03	0.03	0.02	63	<i>Casuarina equisetifolia</i> plantation
				10--25	0.03	0.01	3	0.03	0.03	0.02	63	<i>Eucalyptus robusta</i> plantation
				10--25	0.03	0.00	3	0.03	0.03	0.03	63	<i>Leucaena leucocephala</i> plantation
Alluvial deposits	Histosol	Mfs	Carbon (%)	0--10	1.82	0.20	13	1.73	2.05	1.68	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				0--10	1.75	0.02	3	1.74	1.77	1.73	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0--10	1.91	0.37	3	2.07	2.17	1.48	64	<i>Casuarina equisetifolia</i>
				0--10	1.75	0.41	3	1.67	2.19	1.39	64	<i>Eucalyptus robusta</i>
				0--10	2.24	0.59	3	2.29	2.81	1.63	64	<i>Leucaena leucocephala</i>
				10--20	1.87	0.01	2	1.87	1.87	1.86	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				10--20	1.41	0.12	3	1.45	1.51	1.28	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				10--20	1.44	0.26	4	1.35	1.82	1.23	64	<i>Casuarina equisetifolia</i>
				10--20	1.53	0.16	3	1.61	1.63	1.35	64	<i>Eucalyptus robusta</i>
				10--20	1.50	0.74	3	1.70	2.12	0.68	64	<i>Leucaena leucocephala</i>
				20--30	1.16	0.37	2	1.16	1.42	0.90	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				20--30	0.91	0.32	3	0.81	1.26	0.65	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				20--30	1.36	0.41	3	1.18	1.83	1.07	64	<i>Casuarina equisetifolia</i>
				20--30	1.60	0.21	3	1.72	1.72	1.35	64	<i>Eucalyptus robusta</i>
				20--30	1.17	0.68	3	1.41	1.69	0.40	64	<i>Leucaena leucocephala</i>
				30--40	0.80	0.18	2	0.80	0.92	0.67	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				30--40	1.00	0.64	4	1.01	1.56	0.43	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				30--40	1.61	0.54	3	1.61	2.16	1.08	64	<i>Casuarina equisetifolia</i>
				30--40	2.01	0.66	4	2.25	2.50	1.05	64	<i>Eucalyptus robusta</i>
				30--40	1.08	1.27	4	0.59	2.96	0.19	64	<i>Leucaena leucocephala</i>
			Nitrogen (%)	0--10	0.13	0.05	13	0.14	0.21	0.05	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				0--10	0.14	0.03	13	0.14	0.19	0.08	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				0--10	0.11	0.03	15	0.11	0.18	0.06	64	<i>Casuarina equisetifolia</i>
				0--10	0.11	0.03	13	0.10	0.18	0.06	64	<i>Eucalyptus robusta</i>
				0--10	0.11	0.04	14	0.12	0.19	0.06	64	<i>Leucaena leucocephala</i>
				10--20	0.13	0.02	11	0.12	0.19	0.11	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				10--20	0.12	0.04	13	0.13	0.20	0.07	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				10--20	0.10	0.03	13	0.10	0.16	0.05	64	<i>Casuarina equisetifolia</i>



Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				10--20	0.09	0.04	12	0.08	0.17	0.04	64	<i>Eucalyptus robusta</i>
				10--20	0.09	0.03	12	0.09	0.15	0.06	64	<i>Leucaena leucocephala</i>
				20--30	0.10	0.03	9	0.10	0.16	0.05	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				20--30	0.11	0.11	10	0.07	0.40	0.04	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				20--30	0.06	0.03	10	0.06	0.14	0.02	64	<i>Casuarina equisetifolia</i>
				20--30	0.06	0.02	10	0.06	0.10	0.02	64	<i>Eucalyptus robusta</i>
				20--30	0.07	0.03	9	0.06	0.12	0.03	64	<i>Leucaena leucocephala</i>
				30--40	0.08	0.02	8	0.07	0.11	0.04	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				30--40	0.05	0.02	10	0.04	0.08	0.03	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				30--40	0.04	0.02	9	0.04	0.08	0.01	64	<i>Casuarina equisetifolia</i>
				30--40	0.04	0.03	10	0.03	0.08	0.01	64	<i>Eucalyptus robusta</i>
				30--40	0.04	0.02	10	0.04	0.07	0.02	64	<i>Leucaena leucocephala</i>
			Sulfur (mg/kg)	0--10	250	60	3	220	320	210	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				0--10	230	40	3	250	250	190	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				0--10	100	3	3	200	200	100	64	<i>Casuarina equisetifolia</i>
				0--10	120	10	3	120	130	110	64	<i>Eucalyptus robusta</i>
				0--10	130	30	3	130	150	100	64	<i>Leucaena leucocephala</i>
				10--20	100	0	2	100	100	100	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				10--20	100	40	3	150	180	100	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				10--20	90	20	3	90	110	70	64	<i>Casuarina equisetifolia</i>
				10--20	130	30	3	140	150	90	64	<i>Eucalyptus robusta</i>
				10--20	90		1				64	<i>Leucaena leucocephala</i>
				20--30	300	100	2	300	400	200	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				20--30	200	50	3	220	230	140	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				20--30	100	40	3	90	150	70	64	<i>Casuarina equisetifolia</i>
				20--30	100	10	3	100	110	90	64	<i>Eucalyptus robusta</i>

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				20--30	120	40	3	110	170	90	64	<i>Leucaena leucocephala</i>
				30--40	200	100	2	200	300	200	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				30--40	150	30	4	140	200	120	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				30--40	120	10	2	120	130	110	64	<i>Casuarina equisetifolia</i>
				30--40	120	20	4	120	140	90	64	<i>Eucalyptus robusta</i>
				30--40	100	50	3	90	150	60	64	<i>Leucaena leucocephala</i>
			Aluminum (cmol/kg <sup>-1</sup> )	0--10	0.10	0.05	13	0.10	0.17	0.01	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				0--10	0.07	0.05	13	0.08	0.14	0.01	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				0--10	0.14	0.08	15	0.15	0.26	0.02	64	<i>Casuarina equisetifolia</i>
				0--10	0.10	0.05	13	0.08	0.18	0.04	64	<i>Eucalyptus robusta</i>
				0--10	0.10	0.05	14	0.09	0.18	0.01	64	<i>Leucaena leucocephala</i>
				10--20	0.08	0.06	11	0.09	0.18	0.01	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				10--20	0.05	0.03	13	0.05	0.10	0.01	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				10--20	0.11	0.09	13	0.10	0.24	0.01	64	<i>Casuarina equisetifolia</i>
				10--20	0.09	0.06	12	0.09	0.17	0.01	64	<i>Eucalyptus robusta</i>
				10--20	0.11	0.06	12	0.10	0.20	0.02	64	<i>Leucaena leucocephala</i>
				20--30	0.05	0.04	9	0.03	0.12	0.01	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				20--30	0.06	0.04	10	0.06	0.12	0.01	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				20--30	0.08	0.06	10	0.07	0.18	0.01	64	<i>Casuarina equisetifolia</i>
				20--30	0.07	0.04	10	0.08	0.14	0.02	64	<i>Eucalyptus robusta</i>
				20--30	0.07	0.06	9	0.06	0.16	0.01	64	<i>Leucaena leucocephala</i>
				30--40	0.06	0.04	8	0.06	0.12	0.01	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				30--40	0.06	0.06	10	0.04	0.18	0.01	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				30--40	0.07	0.07	9	0.03	0.23	0.01	64	<i>Casuarina equisetifolia</i>
				30--40	0.05	0.04	10	0.05	0.13	0.02	64	<i>Eucalyptus robusta</i>
				30--40	0.05	0.03	10	0.04	0.09	0.01	64	<i>Leucaena leucocephala</i>

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			C/N	0--10	11	1	3	11	12	11	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
		0--10		12	1	3	12	13	1	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>	
		0--10		13	1	3	14	14	12	64	<i>Casuarina equisetifolia</i>	
		0--10		17	4	3	16	22	14	64	<i>Eucalyptus robusta</i>	
		0--10		15	7	3	12	23	11	64	<i>Leucaena leucocephala</i>	
		10--20		15	1	2	15	16	15	64	<i>C. equisetifolia</i> + <i>E. robusta</i>	
		10--20		11	1	3	11	13	10	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>	
		10--20		17	7	4	15	28	12	64	<i>Casuarina equisetifolia</i>	
		10--20		24	12	3	23	36	12	64	<i>Eucalyptus robusta</i>	
		10--20		17	11	3	11	30	10	64	<i>Leucaena leucocephala</i>	
		20--30		9	1	2	9	10	9	64	<i>C. equisetifolia</i> + <i>E. robusta</i>	
		20--30		10	1	3	10	11	9	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>	
		20--30		21	11	3	23	31	9	64	<i>Casuarina equisetifolia</i>	
		20--30		57	31	3	71	78	21	64	<i>Eucalyptus robusta</i>	
		20--30		17	9	3	12	27	11	64	<i>Leucaena leucocephala</i>	
		30--40		9	1	2	9	10	9	64	<i>C. equisetifolia</i> + <i>E. robusta</i>	
		30--40		17	3	4	18	20	13	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>	
		30--40		91	29	3	107	108	57	64	<i>Casuarina equisetifolia</i>	
		30--40		140	122	4	116	307	21	64	<i>Eucalyptus robusta</i>	
		30--40		42	65	4	10	140	8	64	<i>Leucaena leucocephala</i>	
		Calcium (cmol/kg <sup>-1</sup> )	0--10	8.48	2.27	13	8.43	13.19	5.63	64	<i>C. equisetifolia</i> + <i>E. robusta</i>	
			0--10	9.42	2.92	13	8.92	15.19	6.59	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>	
			0--10	10.23	3.43	15	9.39	15.64	5.84	64	<i>Casuarina equisetifolia</i>	
			0--10	8.81	2.55	13	8.45	13.38	4.51	64	<i>Eucalyptus robusta</i>	
			0--10	8.70	4.76	14	7.21	19.66	3.84	64	<i>Leucaena leucocephala</i>	
			10--20	8.82	1.48	11	8.82	11.24	6.34	64	<i>C. equisetifolia</i> + <i>E. robusta</i>	

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				10--20	9.34	3.11	13	7.91	15.48	6.46	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				10--20	9.51	4.01	13	7.67	16.32	4.01	64	<i>Casuarina equisetifolia</i>
				10--20	8.12	2.69	12	7.87	12.53	4.06	64	<i>Eucalyptus robusta</i>
				10--20	8.92	4.91	12	7.99	19.58	3.98	64	<i>Leucaena leucocephala</i>
				20--30	7.81	1.52	9	8.17	9.82	5.31	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				20--30	6.89	1.33	10	6.62	9.18	4.38	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				20--30	7.23	3.57	10	6.31	12.73	3.72	64	<i>Casuarina equisetifolia</i>
				20--30	7.34	3.22	10	6.67	13.67	3.37	64	<i>Eucalyptus robusta</i>
				20--30	6.85	3.14	9	6.54	14.04	3.73	64	<i>Leucaena leucocephala</i>
				30--40	7.24	2.15	8	7.33	10.04	4.19	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				30--40	6.27	1.63	10	6.32	9.09	4.06	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				30--40	6.97	3.78	9	5.19	12.45	3.57	64	<i>Casuarina equisetifolia</i>
				30--40	5.90	2.84	10	5.38	10.66	2.56	64	<i>Eucalyptus robusta</i>
				30--40	5.90	2.77	10	5.60	12.26	3.39	64	<i>Leucaena leucocephala</i>
			Calcium (mg/g)	0--10	1.70	0.45	13	1.69	2.64	1.13	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				0--10	1.88	0.59	13	1.78	3.04	1.32	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				0--10	2.05	0.69	15	1.88	3.13	1.17	64	<i>Casuarina equisetifolia</i>
				0--10	1.76	0.51	13	1.69	2.68	0.90	64	<i>Eucalyptus robusta</i>
				0--10	1.74	0.95	14	1.44	3.93	0.77	64	<i>Leucaena leucocephala</i>
				10--20	1.76	0.30	11	1.76	2.25	1.27	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				10--20	1.87	0.62	13	1.58	3.10	1.29	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				10--20	1.90	0.80	13	1.54	3.27	0.80	64	<i>Casuarina equisetifolia</i>
				10--20	1.62	0.54	12	1.57	2.51	0.81	64	<i>Eucalyptus robusta</i>
				10--20	1.78	0.98	12	1.60	3.92	0.80	64	<i>Leucaena leucocephala</i>
				20--30	1.56	0.30	9	1.63	1.96	1.06	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				20--30	1.38	0.27	10	1.32	1.84	0.88	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				20--30	1.45	0.71	10	1.26	2.55	0.74	64	<i>Casuarina equisetifolia</i>
				20--30	1.47	0.65	10	1.33	2.73	0.67	64	<i>Eucalyptus robusta</i>
				20--30	1.37	0.63	9	1.31	2.81	0.75	64	<i>Leucaena leucocephala</i>
				30--40	1.45	0.43	8	1.47	2.01	0.84	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				30--40	1.25	0.33	10	1.26	1.82	0.81	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				30--40	1.39	0.76	9	1.04	2.49	0.71	64	<i>Casuarina equisetifolia</i>
				30--40	1.18	0.57	10	1.08	2.13	0.51	64	<i>Eucalyptus robusta</i>
				30--40	1.18	0.55	10	1.12	2.45	0.68	64	<i>Leucaena leucocephala</i>
			Effective cation exchange capacity	0--10	10.73	2.87	13	10.55	16.32	7.37	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
			{Ca+K+Mg(cmol/kg <sup>-1</sup> )	0--10	12.20	3.20	13	11.22	18.29	8.41	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				0--10	12.35	3.75	15	11.55	18.49	7.11	64	<i>Casuarina equisetifolia</i>
				0--10	10.60	2.91	13	9.57	16.98	6.04	64	<i>Eucalyptus robusta</i>
				0--10	10.85	5.65	14	9.70	23.74	4.80	64	<i>Leucaena leucocephala</i>
				10--20	10.85	2.00	11	11.01	14.70	7.77	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				10--20	11.64	3.61	13	10.32	19.00	7.67	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				10--20	11.38	4.49	13	9.66	19.20	5.13	64	<i>Casuarina equisetifolia</i>
				10--20	9.64	3.18	12	8.95	15.39	5.20	64	<i>Eucalyptus robusta</i>
				10--20	11.01	5.84	12	10.04	23.95	4.78	64	<i>Leucaena leucocephala</i>
				20--30	9.42	1.72	9	9.73	11.65	7.05	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				20--30	8.47	1.26	10	8.50	10.98	6.61	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				20--30	8.54	4.02	10	7.55	14.97	4.33	64	<i>Casuarina equisetifolia</i>
				20--30	8.35	3.25	10	7.67	14.76	4.09	64	<i>Eucalyptus robusta</i>
				20--30	8.41	3.77	9	8.06	16.45	4.42	64	<i>Leucaena leucocephala</i>
				30--40	8.67	2.34	8	8.75	11.48	5.76	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				30--40	7.87	1.78	10	7.99	10.57	4.91	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				30--40	8.24	4.18	9	6.33	14.45	4.32	64	<i>Casuarina equisetifolia</i>

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Iron (mg/kg)	30--40	6.84	2.98	10	6.55	11.66	3.20	64	<i>Eucalyptus robusta</i>
		30--40		7.12	3.28	10	6.93	14.23	3.96	64	<i>Leucaena leucocephala</i>	
		0--10		30	23	13	23	73	9	64	<i>C. equisetifolia</i> + <i>E. robusta</i>	
		0--10		29	16	12	28	61	4	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>	
		0--10		23	13	15	22	53	9	64	<i>Casuarina equisetifolia</i>	
		0--10		12	5	13	9	22	5	64	<i>Eucalyptus robusta</i>	
		0--10		19	19	14	9	59	6	64	<i>Leucaena leucocephala</i>	
		10--20		23	18	11	15	67	7	64	<i>C. equisetifolia</i> + <i>E. robusta</i>	
		10--20		29	19	12	29	72	10	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>	
		10--20		21	15	13	14	59	7	64	<i>Casuarina equisetifolia</i>	
		10--20		11	6	12	11	28	5	64	<i>Eucalyptus robusta</i>	
		10--20		20	18	12	10	56	5	64	<i>Leucaena leucocephala</i>	
		20--30		23	14	9	17	52	6	64	<i>C. equisetifolia</i> + <i>E. robusta</i>	
		20--30		21	11	10	16	39	8	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>	
		20--30		11	10	10	8	32	2	64	<i>Casuarina equisetifolia</i>	
		20--30		8	3	10	8	13	1	64	<i>Eucalyptus robusta</i>	
		20--30		15	16	9	7	55	5	64	<i>Leucaena leucocephala</i>	
		30--40		20	12	8	20	41	4	64	<i>C. equisetifolia</i> + <i>E. robusta</i>	
		30--40		17	9	10	14	33	5	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>	
		30--40		7	4	9	5	14	3	64	<i>Casuarina equisetifolia</i>	
		30--40	6	4	10	6	10	1	64	<i>Eucalyptus robusta</i>		
		30--40	13	9	10	11	26	4	64	<i>Leucaena leucocephala</i>		
		Loss on ignition (%)	0--10	6.31	1.88	12	5.86	10.20	3.33	64	<i>C. equisetifolia</i> + <i>E. robusta</i>	
			0--10	5.63	0.94	13	5.16	6.86	4.47	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>	
			0--10	5.11	1.05	14	5.23	7.02	3.72	64	<i>Casuarina equisetifolia</i>	
			0--10	4.64	1.01	13	4.40	6.88	3.01	64	<i>Eucalyptus robusta</i>	

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0--10	4.81	1.50	13	4.84	8.26	3.13	64	<i>Leucaena leucocephala</i>
				10--20	5.72	1.61	11	5.29	9.60	4.32	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				10--20	5.25	1.10	13	4.70	7.72	4.15	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				10--20	4.59	1.24	13	4.29	7.18	2.31	64	<i>Casuarina equisetifolia</i>
				10--20	4.04	1.23	12	3.62	6.05	2.34	64	<i>Eucalyptus robusta</i>
				10--20	5.32	4.18	12	4.14	18.31	2.86	64	<i>Leucaena leucocephala</i>
				20--30	5.11	1.62	9	4.44	7.90	3.78	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				20--30	4.13	1.14	9	3.82	6.91	3.16	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				20--30	3.28	0.61	9	3.30	4.29	2.48	64	<i>Casuarina equisetifolia</i>
				20--30	3.38	1.00	9	3.08	5.01	2.10	64	<i>Eucalyptus robusta</i>
				20--30	4.13	1.53	9	3.93	7.67	2.90	64	<i>Leucaena leucocephala</i>
				30--40	4.07	0.85	8	3.71	5.24	3.27	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				30--40	3.35	0.60	10	3.48	4.35	2.29	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				30--40	2.62	0.75	9	2.51	3.56	1.63	64	<i>Casuarina equisetifolia</i>
				30--40	2.69	0.61	10	2.50	3.69	1.78	64	<i>Eucalyptus robusta</i>
				30--40	2.80	0.43	10	2.83	3.44	2.18	64	<i>Leucaena leucocephala</i>
			Magnesium (cmol/kg <sup>-1</sup> )	0--10	1.48	0.59	13	1.45	2.61	0.54	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				0--10	1.81	0.41	13	1.88	2.35	0.99	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				0--10	1.30	0.31	15	1.32	2.05	0.77	64	<i>Casuarina equisetifolia</i>
				0--10	1.10	0.26	13	1.01	1.75	0.70	64	<i>Eucalyptus robusta</i>
				0--10	1.32	0.58	14	1.22	2.37	0.69	64	<i>Leucaena leucocephala</i>
				10--20	1.30	0.47	11	1.07	2.12	0.78	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				10--20	1.56	0.66	13	1.30	2.75	0.81	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				10--20	1.12	0.36	13	1.13	1.71	0.63	64	<i>Casuarina equisetifolia</i>
				10--20	0.82	0.23	12	0.73	1.38	0.58	64	<i>Eucalyptus robusta</i>
				10--20	1.15	0.70	12	0.95	2.14	0.11	64	<i>Leucaena leucocephala</i>

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Magnesium (mg/g)	20--30	1.07	0.20	9	1.09	1.36	0.77	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				20--30	1.02	0.29	10	0.97	1.51	0.62	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				20--30	0.75	0.36	10	0.67	1.55	0.36	64	<i>Casuarina equisetifolia</i>
				20--30	0.62	0.14	10	0.62	0.85	0.38	64	<i>Eucalyptus robusta</i>
				20--30	0.93	0.48	9	0.76	1.80	0.48	64	<i>Leucaena leucocephala</i>
				30--40	0.89	0.23	8	0.87	1.21	0.51	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				30--40	0.95	0.25	10	0.98	1.26	0.52	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				30--40	0.69	0.23	9	0.74	1.00	0.34	64	<i>Casuarina equisetifolia</i>
				30--40	0.53	0.19	10	0.51	0.84	0.30	64	<i>Eucalyptus robusta</i>
				30--40	0.69	0.36	10	0.61	1.22	0.22	64	<i>Leucaena leucocephala</i>
				0--10	0.18	0.07	13	0.17	0.31	0.06	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				0--10	0.22	0.05	13	0.23	0.28	0.12	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				0--10	0.16	0.04	15	0.16	0.25	0.09	64	<i>Casuarina equisetifolia</i>
				0--10	0.13	0.03	13	0.12	0.21	0.08	64	<i>Eucalyptus robusta</i>
				0--10	0.16	0.07	1	0.15	0.28	0.08	64	<i>Leucaena leucocephala</i>
				10--20	0.16	0.06	11	0.13	0.25	0.09	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				10--20	0.19	0.08	13	0.16	0.33	0.10	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				10--20	0.13	0.04	13	0.14	0.21	0.08	64	<i>Casuarina equisetifolia</i>
				10--20	0.10	0.03	12	0.09	0.17	0.07	64	<i>Eucalyptus robusta</i>
				10--20	0.14	0.08	12	0.11	0.26	0.01	64	<i>Leucaena leucocephala</i>
				20--30	0.13	0.02	9	0.13	0.16	0.09	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				20--30	0.12	0.04	10	0.12	0.18	0.07	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				20--30	0.09	0.04	10	0.08	0.19	0.04	64	<i>Casuarina equisetifolia</i>
				20--30	0.07	0.02	10	0.07	0.10	0.05	64	<i>Eucalyptus robusta</i>
				20--30	0.11	0.06	9	0.09	0.22	0.06	64	<i>Leucaena leucocephala</i>
				30--40	0.11	0.03	8	0.11	0.15	0.06	64	<i>C. equisetifolia</i> + <i>E. robusta</i>



Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Manganese (mg/kg)	30--40	0.11	0.03	10	0.12	0.15	0.06	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				30--40	0.08	0.03	9	0.09	0.12	0.04	64	<i>Casuarina equisetifolia</i>
				30--40	0.06	0.02	10	0.06	0.10	0.04	64	<i>Eucalyptus robusta</i>
				30--40	0.08	0.04	10	0.07	0.15	0.03	64	<i>Leucaena leucocephala</i>
				0--10	16	9	13	16	31	3	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				0--10	14	8	13	14	25	2	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				0--10	18	11	15	14	38	6	64	<i>Casuarina equisetifolia</i>
				0--10	13	6	13	13	23	5	64	<i>Eucalyptus robusta</i>
				0--10	13	0	14	11	26	4	64	<i>Leucaena leucocephala</i>
				10--20	14	8	11	13	29	3	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				10--20	11	7	13	14	20	1	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				10--20	14	7	13	16	25	5	64	<i>Casuarina equisetifolia</i>
				10--20	11	4	12	11	18	5	64	<i>Eucalyptus robusta</i>
				10--20	12	8	12	12	31	3	64	<i>Leucaena leucocephala</i>
				20--30	9	7	9	11	20	3	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				20--30	10	5	10	10	18	3	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				20--30	7	10	10	8	11	3	64	<i>Casuarina equisetifolia</i>
				20--30	7	3	10	8	11	3	64	<i>Eucalyptus robusta</i>
				20--30	7	5	9	6	19	3	64	<i>Leucaena leucocephala</i>
				30--40	10	6	8	9	17	3	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
			30--40	10	4	10	11	17	4	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>	
			30--40	7	2	9	6	11	4	64	<i>Casuarina equisetifolia</i>	
			30--40	6	3	10	6	11	3	64	<i>Eucalyptus robusta</i>	
			30--40	7	3	10	7	10	3	64	<i>Leucaena leucocephala</i>	
			pH (H <sub>2</sub> O)	0--10	7.56	0.43	12	7.71	8.04	6.81	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				0--10	7.67	0.22	13	7.71	8.03	7.23	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				0--10	7.79	0.20	14	7.74	8.19	7.56	64	<i>Casuarina equisetifolia</i>
				0--10	7.84	0.26	13	7.85	8.14	7.25	64	<i>Eucalyptus robusta</i>
				0--10	7.79	0.33	13	7.92	8.20	7.03	64	<i>Leucaena leucocephala</i>
				10--20	7.67	0.35	11	7.78	8.06	6.95	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				10--20	7.61	0.37	13	7.62	8.10	6.65	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				10--20	7.84	0.25	13	7.88	8.17	7.21	64	<i>Casuarina equisetifolia</i>
				10--20	7.93	0.11	12	7.96	8.09	7.75	64	<i>Eucalyptus robusta</i>
				10--20	7.81	0.45	12	7.98	8.21	6.63	64	<i>Leucaena leucocephala</i>
				20--30	7.67	0.32	9	7.82	7.91	6.96	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				20--30	7.73	0.25	9	7.82	8.01	7.25	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				20--30	7.84	0.29	9	7.91	8.16	7.26	64	<i>Casuarina equisetifolia</i>
				20--30	7.97	0.15	9	7.97	8.19	7.71	64	<i>Eucalyptus robusta</i>
				20--30	7.96	0.27	9	8.03	8.18	7.31	64	<i>Leucaena leucocephala</i>
				30--40	7.71	0.42	8	7.81	8.06	6.71	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				30--40	7.88	0.26	10	7.95	8.16	7.25	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				30--40	8.04	0.15	9	8.05	8.24	7.76	64	<i>Casuarina equisetifolia</i>
				30--40	8.02	0.13	10	8.06	8.24	7.76	64	<i>Eucalyptus robusta</i>
				30--40	7.99	0.15	10	8.02	8.18	7.66	64	<i>Leucaena leucocephala</i>
			pH (KCl)	0--10	6.74	0.57	9	7.04	7.23	5.81	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				0--10	6.81	0.31	10	6.81	7.27	6.23	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				0--10	6.98	0.26	11	6.95	7.37	6.57	64	<i>Casuarina equisetifolia</i>
				0--10	7.14	0.13	10	7.15	7.34	6.86	64	<i>Eucalyptus robusta</i>
				0--10	7.07	0.57	10	7.30	7.63	6.04	64	<i>Leucaena leucocephala</i>
				10--20	6.85	0.46	9	6.97	7.33	6.03	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				10--20	6.70	0.60	10	6.70	7.34	5.43	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				10--20	7.06	0.35	10	7.05	7.40	6.19	64	<i>Casuarina equisetifolia</i>

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				10--20	7.22	0.21	9	7.16	7.60	6.94	64	<i>Eucalyptus robusta</i>
				10--20	7.08	0.57	9	7.20	7.82	5.82	64	<i>Leucaena leucocephala</i>
				20--30	6.97	0.21	7	7.03	7.18	6.56	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				20--30	6.95	0.45	6	7.09	7.33	6.21	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				20--30	7.28	0.34	6	7.26	7.73	6.87	64	<i>Casuarina equisetifolia</i>
				20--30	7.28	0.28	6	7.36	7.49	6.72	64	<i>Eucalyptus robusta</i>
				20--30	7.28	0.66	6	7.45	7.83	5.99	64	<i>Leucaena leucocephala</i>
				30--40	6.98	0.24	6	7.00	7.34	6.61	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				30--40	6.97	0.41	6	6.92	7.45	6.43	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				30--40	7.35	0.29	6	7.37	7.72	6.99	64	<i>Casuarina equisetifolia</i>
				30--40	7.35	0.10	6	7.37	7.49	7.21	64	<i>Eucalyptus robusta</i>
				30--40	7.31	0.36	6	7.71	7.73	6.69	64	<i>Leucaena leucocephala</i>
			Phosphorus (mg/kg)	0--10	8	2	13	8	11	5	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				0--10	7	2	13	7	9	2	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				0--10	8	2	15	8	16	6	64	<i>Casuarina equisetifolia</i>
				0--10	7	2	13	7	12	3	64	<i>Eucalyptus robusta</i>
				0--10	7	2	14	8	12	4	64	<i>Leucaena leucocephala</i>
				10--20	7	1	11	7	9	6	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				10--20	6	2	13	6	9	2	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				10--20	7	2	13	7	12	4	64	<i>Casuarina equisetifolia</i>
				10--20	6	2	12	6	10	4	64	<i>Eucalyptus robusta</i>
				10--20	7	2	12	7	10	4	64	<i>Leucaena leucocephala</i>
				20--30	6	2	9	6	9	4	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				20--30	4	1	10	4	6	3	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				20--30	4	1	10	4	6	2	64	<i>Casuarina equisetifolia</i>
				20--30	4	2	10	4	7	2	64	<i>Eucalyptus robusta</i>

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				20--30	4	2	9	4	8	3	64	<i>Leucaena leucocephala</i>
				30--40	5	2	8	4	9	3	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				30--40	4	0	10	4	4	3	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				30--40	3	1	9	3	5	2	64	<i>Casuarina equisetifolia</i>
				30--40	4	2	10	3	7	2	64	<i>Eucalyptus robusta</i>
				30--40	3	1	10	3	5	2	64	<i>Leucaena leucocephala</i>
			Potassium (cmol/kg <sup>-1</sup> )	0--10	0.17	0.10	13	0.13	0.37	0.06	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				0--10	0.17	0.11	13	0.14	0.39	0.03	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				0--10	0.17	0.08	15	0.13	0.35	0.10	64	<i>Casuarina equisetifolia</i>
				0--10	0.15	0.08	13	0.12	0.30	0.05	64	<i>Eucalyptus robusta</i>
				0--10	0.16	0.10	14	0.15	0.35	0.07	64	<i>Leucaena leucocephala</i>
				10--20	0.14	0.07	11	0.12	0.28	0.06	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				10--20	0.13	0.10	13	0.09	0.34	0.03	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				10--20	0.15	0.07	13	0.13	0.27	0.07	64	<i>Casuarina equisetifolia</i>
				10--20	0.14	0.07	12	0.11	0.25	0.05	64	<i>Eucalyptus robusta</i>
				10--20	0.14	0.08	12	0.12	0.28	0.05	64	<i>Leucaena leucocephala</i>
				20--30	0.12	0.08	9	0.08	0.28	0.04	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				20--30	0.11	0.08	10	0.07	0.24	0.04	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				20--30	0.11	0.08	10	0.08	0.23	0.04	64	<i>Casuarina equisetifolia</i>
				20--30	0.12	0.07	10	0.10	0.24	0.05	64	<i>Eucalyptus robusta</i>
				20--30	0.12	0.09	9	0.08	0.24	0.04	64	<i>Leucaena leucocephala</i>
				30--40	0.11	0.07	8	0.10	0.24	0.03	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				30--40	0.13	0.09	10	0.08	0.23	0.03	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				30--40	0.11	0.07	9	0.08	0.22	0.04	64	<i>Casuarina equisetifolia</i>
				30--40	0.12	0.08	10	0.09	0.24	0.05	64	<i>Eucalyptus robusta</i>
				30--40	0.12	0.09	10	0.07	0.24	0.03	64	<i>Leucaena leucocephala</i>

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
			Potassium (mg/g)	0--10	0.07	0.04	13	0.05	0.14	0.03	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				0--10	0.07	0.04	13	0.06	0.15	0.01	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				0--10	0.07	0.03	15	0.05	0.14	0.04	64	<i>Casuarina equisetifolia</i>
				0--10	0.06	0.03	13	0.05	0.12	0.02	64	<i>Eucalyptus robusta</i>
				0--10	0.06	0.04	14	0.06	0.13	0.03	64	<i>Leucaena leucocephala</i>
				10--20	0.05	0.03	11	0.05	0.11	0.02	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				10--20	0.05	0.04	13	0.04	0.13	0.01	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				10--20	0.06	0.03	13	0.05	0.10	0.03	64	<i>Casuarina equisetifolia</i>
				10--20	0.05	0.03	12	0.04	0.10	0.02	64	<i>Eucalyptus robusta</i>
				10--20	0.05	0.03	12	0.05	0.11	0.02	64	<i>Leucaena leucocephala</i>
				20--30	0.04	0.03	9	0.03	0.11	0.02	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				20--30	0.04	0.03	10	0.03	0.09	0.01	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				20--30	0.04	0.03	10	0.03	0.09	0.02	64	<i>Casuarina equisetifolia</i>
				20--30	0.05	0.03	10	0.04	0.09	0.02	64	<i>Eucalyptus robusta</i>
				20--30	0.05	0.03	9	0.03	0.09	0.01	64	<i>Leucaena leucocephala</i>
				30--40	0.04	0.03	8	0.04	0.09	0.01	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				30--40	0.05	0.03	10	0.03	0.09	0.01	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				30--40	0.04	0.03	9	0.03	0.08	0.01	64	<i>Casuarina equisetifolia</i>
				30--40	0.05	0.03	10	0.03	0.09	0.02	64	<i>Eucalyptus robusta</i>
				30--40	0.05	0.03	10	0.03	0.09	0.01	64	<i>Leucaena leucocephala</i>
			Sodium (cmol/kg <sup>-1</sup> )	0--10	0.49	0.44	13	0.38	1.44	0.09	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				0--10	0.72	0.48	13	0.60	1.61	0.17	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				0--10	0.52	0.44	15	0.29	1.34	0.10	64	<i>Casuarina equisetifolia</i>
				0--10	0.44	0.43	13	0.24	1.49	0.11	64	<i>Eucalyptus robusta</i>
				0--10	0.56	0.68	14	0.22	2.28	0.07	64	<i>Leucaena leucocephala</i>
				10--20	0.52	0.35	11	0.38	1.11	0.11	64	<i>C. equisetifolia</i> + <i>E. robusta</i>

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

Geology and parent material	Soil order	Life zone	Element	total								
				Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				10--20	0.57	0.36	13	0.53	1.20	0.17	64	<i>C. equisetifolia + L. leucaena</i>
				10--20	0.49	0.47	13	0.22	1.40	0.12	64	<i>Casuarina equisetifolia</i>
				10--20	0.47	0.43	12	0.32	1.22	0.09	64	<i>Eucalyptus robusta</i>
				10--20	0.69	0.72	12	0.34	2.17	0.08	64	<i>Leucaena leucocephala</i>
				20--30	0.39	0.24	9	0.29	0.78	0.09	64	<i>C. equisetifolia + E. robusta</i>
				20--30	0.39	0.24	10	0.38	0.92	0.15	64	<i>C. equisetifolia + L. leucaena</i>
				20--30	0.36	0.42	10	0.23	1.47	0.05	64	<i>Casuarina equisetifolia</i>
				20--30	0.20	0.12	10	0.15	0.36	0.08	64	<i>Eucalyptus robusta</i>
				20--30	0.43	0.49	9	0.23	1.61	0.08	64	<i>Leucaena leucocephala</i>
				30--40	0.36	0.27	8	0.27	0.97	0.12	64	<i>C. equisetifolia + E. robusta</i>
				30--40	0.46	0.22	10	0.48	0.87	0.17	64	<i>C. equisetifolia+ L. leucaena</i>
				30--40	0.40	0.49	9	0.19	1.67	0.12	64	<i>Casuarina equisetifolia</i>
				30--40	0.23	0.13	10	0.22	0.47	0.06	64	<i>Eucalyptus robusta</i>
				30--40	0.35	0.36	10	0.21	1.20	0.08	64	<i>Leucaena leucocephala</i>
			Sodium (mg/g)	0--10	0.11	0.10	13	0.09	0.33	0.02	64	<i>C. equisetifolia + E. robusta</i>
				0--10	0.17	0.11	13	0.14	0.37	0.04	64	<i>C. equisetifolia+ L. leucaena</i>
				0--10	0.12	0.10	15	0.07	0.31	0.02	64	<i>Casuarina equisetifolia</i>
				0--10	0.10	0.10	13	0.06	0.34	0.03	64	<i>Eucalyptus robusta</i>
				0--10	0.13	0.16	14	0.05	0.53	0.02	64	<i>Leucaena leucocephala</i>
				10--20	0.12	0.08	11	0.09	0.25	0.03	64	<i>C. equisetifolia + E. robusta</i>
				10--20	0.13	0.08	13	0.12	0.28	0.04	64	<i>C. equisetifolia+ L. leucaena</i>
				10--20	0.11	0.11	13	0.05	0.32	0.03	64	<i>Casuarina equisetifolia</i>
				10--20	0.11	0.10	12	0.07	0.28	0.02	64	<i>Eucalyptus robusta</i>
				10--20	0.16	0.17	12	0.08	0.50	0.02	64	<i>Leucaena leucocephala</i>
				20--30	0.09	0.06	9	0.07	0.18	0.02	64	<i>C. equisetifolia + E. robusta</i>
				20--30	0.09	0.06	10	0.09	0.21	0.04	64	<i>C. equisetifolia+ L. leucaena</i>

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total												
Geology and parent material	Soil order	Life zone	Element	Depth (cm)	Mean	Sd	n	Median	Max	Min	Source	Site/notes
				20--30	0.08	0.10	10	0.05	0.34	0.01	64	<i>Casuarina equisetifolia</i>
				20--30	0.05	0.03	10	0.04	0.83	0.02	64	<i>Eucalyptus robusta</i>
				20--30	0.10	0.11	9	0.05	0.37	0.02	64	<i>Leucaena leucocephala</i>
				30--40	0.08	0.06	8	0.06	0.22	0.03	64	<i>C. equisetifolia</i> + <i>E. robusta</i>
				30--40	0.11	0.05	10	0.11	0.20	0.04	64	<i>C. equisetifolia</i> + <i>L. leucaena</i>
				30--40	0.09	0.11	9	0.04	0.38	0.03	64	<i>Casuarina equisetifolia</i>
				30--40	0.05	0.03	10	0.05	0.11	0.01	64	<i>Eucalyptus robusta</i>
				30--40	0.08	0.08	10	0.05	0.28	0.02	64	<i>Leucaena leucocephala</i>
Tuffaceous sandstone	Entisols	Mfs	Calcium (mg/g)	0--30	4.47	1.27	2	4.47	5.36	3.57	65	Canovanas
				0--30	5.86	0.37	2	5.86	6.12	5.60	65	Carolina
				30--76	4.67	2.16	2	4.67	6.19	3.14	65	Canovanas
				30--76	5.39	0.63	2	5.39	5.84	4.95	65	Carolina
			Magnesium (mg/g)	0--30	0.42	0.05	2	0.42	0.46	0.39	65	Canovanas
				0--30	0.28	0.03	2	0.28	0.30	0.26	65	Carolina
				30--76	0.45	0.21	2	0.45	0.60	0.30	65	Canovanas
				30--76	0.31	0.00	2	0.31	0.32	0.31	65	Carolina
Plutonic rocks	Inceptisols	Mfs	Aluminum (cmol/kg <sup>-1</sup> )	0--15	9.50	4.23	12	8.94	16.12	4.63	66	
				15--30	9.60	3.93	12	9.24	15.07	5.02	66	
			Bulk density (g/cc)	0--15	0.65	0.08	2	0.67	0.79	0.49	66	
				15--30	1.02	0.12	12	1.07	1.17	0.76	66	
			Calcium (cmol/kg <sup>-1</sup> )	0--15	1.12	0.92	12	0.76	3.36	0.36	66	
				15--30	0.26	0.26	12	0.16	1.02	0.07	66	
			Calcium (mg/g)	0--15	0.22	0.18	12	0.15	0.67	0.07	66	
				15--30	0.05	0.05	12	0.03	0.20	0.01	66	
			Effective cation exchange capacity	0--15	11.98	3.83	12	1.52	17.42	7.16	66	
			{Ca+K+Mg}(cmol/kg <sup>-1</sup> )	15--30	10.60	3.78	12	10.34	15.96	6.25	66	

Table 9. Element concentration in soils and other soil characteristics by depth, geology, soil order, and life zone. Life zone codes are in Table 1.

total											
Geology and parent material	Soil order	Life zone	Element	Depth							
				(cm)	Mean	Sd	n	Median	Max	Min	Source
			Iron (mg/g)	0--15	2.04	0.56	12	1.98	3.06	1.24	66
				15--30	1.44	0.51	12	1.44	2.42	0.60	66
			Magnesium (mg/g)	0--15	0.12	0.04	12	0.12	0.22	0.08	66
				15--30	0.07	0.03	12	0.06	0.13	0.04	66
			Magnesium (cmol/kg <sup>-1</sup> )	0--15	1.00	0.33	12	1.00	1.88	0.67	66
				15--30	0.55	0.22	2	0.49	1.13	0.30	66
			Manganese (mg/kg)	0--15	14	13	12	11	42	1	66
				15--30	6	8	12	4	30	0	66
			Nitrogen (%)	0--15	0.24	0.04	12	0.24	0.31	0.16	66
				15--30	0.11	0.03	12	0.12	0.15	0.07	66
			Organic matter (%)	0--15	5.84	0.84	12	5.70	7.66	4.78	66
				15--30	2.60	0.42	12	2.60	3.16	1.73	66
			pH (H <sub>2</sub> O)	0--15	4.09	0.23	12	4.13	4.51	3.79	66
				15--30	4.12	0.19	12	4.08	4.39	3.78	66
			pH (KCl)	0--15	3.60	0.20	12	3.59	3.91	3.25	66
				15--30	3.63	0.15	12	3.65	3.82	3.37	66
			Phosphorus (mg/kg)	0--15	14	4	12	15	22	9	66
				15--30	5	1	11	5	7	2	66
			Potassium (cmol/kg <sup>-1</sup> )	0--15	0.24	0.15	12	0.22	0.50	0.05	66
				15--30	0.13	0.06	8	0.14	0.20	0.07	66
			Potassium (mg/g)	0--15	0.09	0.06	12	0.09	0.19	0.02	66
				15--30	0.05	0.02	8	0.05	0.08	0.03	66
			Sodium (cmol/kg <sup>-1</sup> )	0--15	0.13	0.05	12	0.11	0.23	0.09	66
				15--30	0.08	0.03	12	0.07	0.12	0.04	66
			Sodium (mg/kg)	0--15	30	11	12	26	53	20	66
				15--30	18	6	12	16	29	6	66