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Supplementary Material

Root biomass, root : shoot ratio and belowground carbon stocks in the open savannahs of Roraima, Brazilian Amazonia

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Part A. Carbon concentration (%C) of the main tree and shrub species by biomass category (leaves and diameter classes of wood pieces 'd') observed in open savannahs in Roraima.

Species	Category	Fraction	%C	Weighted %C
Bowdichia virgilioides Kunth (Fabaceae)	Leaves	0.1458	50.98	47.93
	d≥10cm	0.1406	47.33	
	5≤d<10cm	0.5826	47.62	
	d<5cm	0.1309	46.53	
Byrsonima crassifolia (L.) Kunth & *B. coccolobifolia* Kunth (Malpighiaceae)	Leaves	0.1998	51.66	47.86
	d≥10cm	0.0597	46.29	
	5≤d<10cm	0.5845	47.18	
	d<5cm	0.1560	46.15	
B. verbascifolia (L.) Rich. ex Juss. (Malpighiaceae)	Leaves	0.3723	50.01	48.52
	d≥10cm	-	-	
	5≤d<10cm	0.6058	47.72	

	d<5cm	0.0218	45.53	
Curatella americana L. (Dilleniaceae)	Leaves	0.1760	44.14	44.85
	d≥10cm	0.1235	44.99	
	5≤d<10cm	0.4718	45.24	
	d<5cm	0.2287	44.52	
Hymatanthus articulatus (Vahl) Woodson (Apocynaceae)	Leaves	0.2663	51.34	47.62
	d≥10cm	0.2191	45.33	
	5≤d<10cm	0.3883	47.01	
	d<5cm	0.1264	45.67	
Others (16 species)	Leaves	0.1549	50.18	46.28
	d≥10cm	0.1355	45.81	
	5≤d<10cm	0.5753	45.63	
	d<5cm	0.1343	45.07	

Part B. Density (number ha^{-1}) and basal area (cm^2 ha^{-1}) of the tree-bush component present in different phytopedounits in two open savannah areas in Roraima (AB = Água Boa; MC = Cauamé/Monte Cristo).

Phytopedounit	Plot (n)		Family	Species	Density (number ha^{-1})			Basal Area (cm^2 ha^{-1})		
	AB	MC			$D_{30}\geq5$cm	2cm $\leq D_{30}<$5cm	Total	$D_{30}\geq5$cm	2cm $\leq D_{30}<$5cm	Total
DG-Arg	0	4	Apocynaceae	*Himatanthus articulatus*	1.04	15.63	16.7	43.85	437.47	481.3
			Dilleniaceae	*Curatella americana*	11.29	25.83	37.1	2955.44	441.02	3396.5
			Fabaceae	*Bowdichia virgilioides*	4.17	10.42	14.6	241.24	176.15	417.4
			Malpighiaceae	*Byrsonima coccolobifolia*	17.08	15.63	32.7	1369.77	278.21	1648.0
				Byrsonima crassifolia	27.63	31.25	58.9	2396.61	570.76	2967.4
			Proteaceae	*Roupala montana*	2.08	0.00	2.1	542.72	0.00	542.7
	Total DG-Arg				63.3	98.8	162.0	7549.6	1903.6	9453.2
DG-Lts	5	3	Dilleniaceae	*Curatella americana*	5.10	2.50	7.6	1576.78	81.98	1658.8
			Malpighiaceae	*Byrsonima coccolobifolia*	8.76	5.00	13.8	564.44	85.14	649.6
				Byrsonima crassifolia	15.07	10.48	25.5	1420.49	154.15	1574.6
			Proteaceae	*Roupala montana*	0.50	0.00	0.5	30.09	0.00	30.1
	Total DG-Lts				29.4	18.0	47.4	3591.8	321.3	3913.1
GP-Lts	2	3	Anonnaceae	*Xylopia aromatica*	0.80	0.00	0.8	69.33	0.00	69.3

			Apocynaceae	*Himatanthus articulatus*	3.20	4.00	7.2	605.50	42.10	647.6
			Dilleniaceae	*Curatella americana*	28.80	12.00	40.8	8119.37	324.90	8444.3
			Fabaceae	*Bowdichia virgilioides*	0.80	0.00	0.8	19.50	0.00	19.5
			Loganiaceae	*Antonia ovata*	0.00	8.00	8.0	0.00	125.30	125.3
			Malpighiaceae	*Byrsonima coccolobifolia*	4.80	0.00	4.8	380.80	0.00	380.8
				Byrsonima crassifolia	36.00	36.00	72.0	2729.77	792.71	3522.5
			Proteaceae	*Roupala montana*	16.00	4.00	20.0	1972.58	64.18	2036.8
	Total GP-Lts				90.4	64.0	154.4	13896.8	1349.2	15246.0
WG-Hyd	10	0	-	-	0.0	0.0	0.0	0.0	0.0	0.0

Part C. Distribution of root biomass (mean ± SD) by diameter category and method in the different vertical sections of the soil (0-100 cm). Different lower-case letters in each column indicate a distinct difference among values (SNK test; $p < 0.05$).

Phytopedounit	Depth (cm)	Fine roots (< 2mm)	Medium roots (2-10mm)	Subtotal (Direct Method)		Subtotal (Indirect Method ≥10mm)	Total
		$Mg.ha^{-1}$	$Mg.ha^{-1}$	$Mg.ha^{-1}$	%	$Mg.ha^{-1}$	$Mg.ha^{-1}$
DG-Arg	00-10	4.48±0.53	0.14±0.27	4.62±0.54	22.51		
	10-20	3.96±0.36	0.10±0.23	4.06±0.45	19.79		
	20-30	2.79±0.57	0.02±0.05	2.81±0.59	13.69		
	30-40	2.28±0.47	0.00	2.28±0.47	11.12	0.87±0.72 bc	21.40±2.47 a
	40-50	1.88±0.51	0.00	1.88±0.51	9.17		
	50-100	4.87±1.73	0.00	4.87±1.73	23.73		
Total DG-Arg		20.27±1.39 a	0.26±0.15 b	20.53±1.79 a	100.0		
DG-Lts	00-10	5.27±0.93	0.05±0.11	5.32±0.93	23.87		
	10-20	4.57±0.72	0.08±0.20	4.65±0.66	20.87		
	20-30	3.35±0.79	0.01±0.03	3.36±0.78	15.06		
	30-40	2.62±0.55	0.00	2.62±0.55	11.74	0.33±0.33 b	22.62±2.21 a
	40-50	1.85±0.51	0.00	1.85±0.51	8.28		
	50-100	4.49±1.33	0.00	4.49±1.33	20.17		
Total DG-Lts		22.14±1.47 a	0.14±0.10 b	22.28±2.41 a	100.0		
GP-Lts	00-10	4.50±1.03	0.11±0.19	4.61±1.08	22.07		
	10-20	4.00±0.96	0.12±0.20	4.12±0.96	19.74		
	20-30	2.96±0.84	0.07±0.12	3.03±0.86	14.50		
	30-40	2.35±1.02	0.07±0.18	2.42±1.14	11.59	1.26±0.22 c	22.14±4.9 a
	40-50	1.87±0.78	0.02±0.10	1.89±0.85	9.07		
	50-100	4.81±2.24	0.00	4.81±2.24	23.04		
Total GP-Lts		20.49±1.69 a	0.39±0.15 b	20.88±4.82 a	100.0		
WG-Hyd	00-10	7.79±2.53	0.00	7.79±2.53	26.37	0.00 a	29.52±7.15 b

10-20	6.43±1.64	0.00	6.43±1.64	21.78	
20-30	4.86±1.29	0.00	4.86±1.29	16.48	
30-40	3.25±0.80	0.00	3.25±0.80	11.02	
40-50	2.13±0.57	0.00	2.13±0.57	7.22	
50-100	5.06±1.84	0.00	5.06±1.84	17.13	
Total WG-Hyd	29.52±2.40 b	0.00 a	29.52±2.40 b	100	