

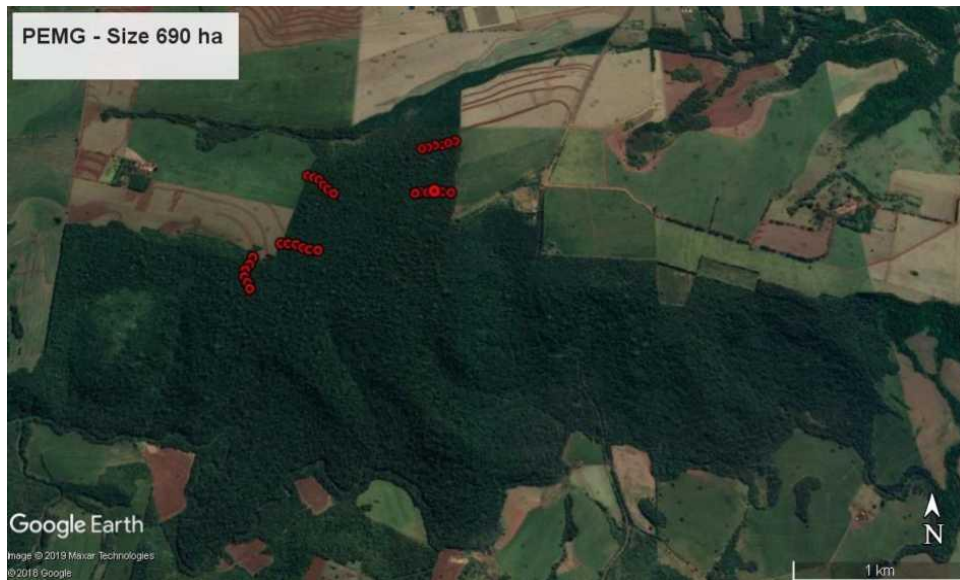
# BIG TREES, BIG FALL: LARGE-DIAMETER TREES AND THE FATE OF CARBON STOCKS IN ATLANTIC FOREST REMNANTS

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## Supplementary Material

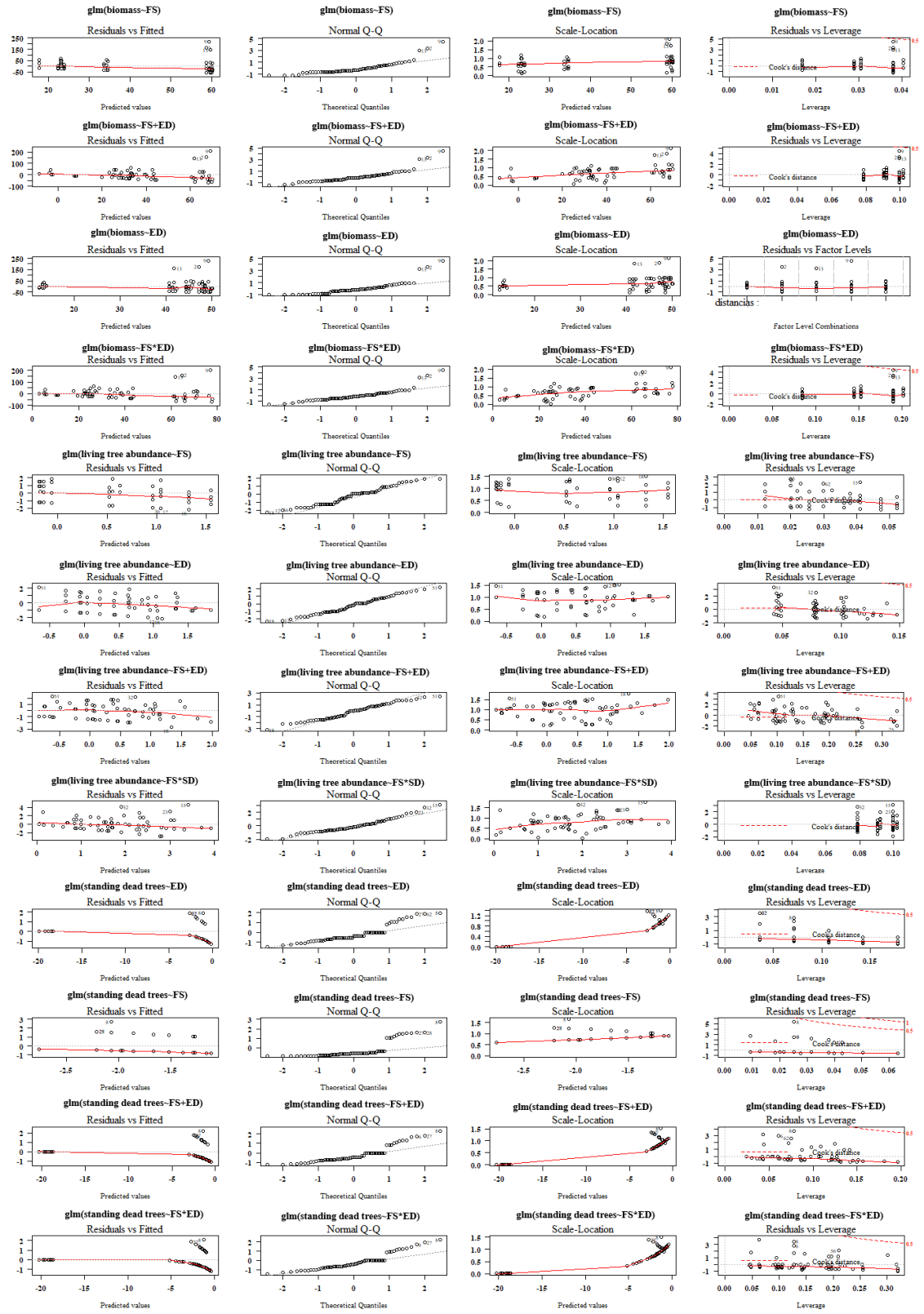
**Figure S1.** Google Earth image cutouts showing transect allocation (red circles show approximate plot center), in each of the five seasonal semideciduous Atlantic Forest fragments sampled.



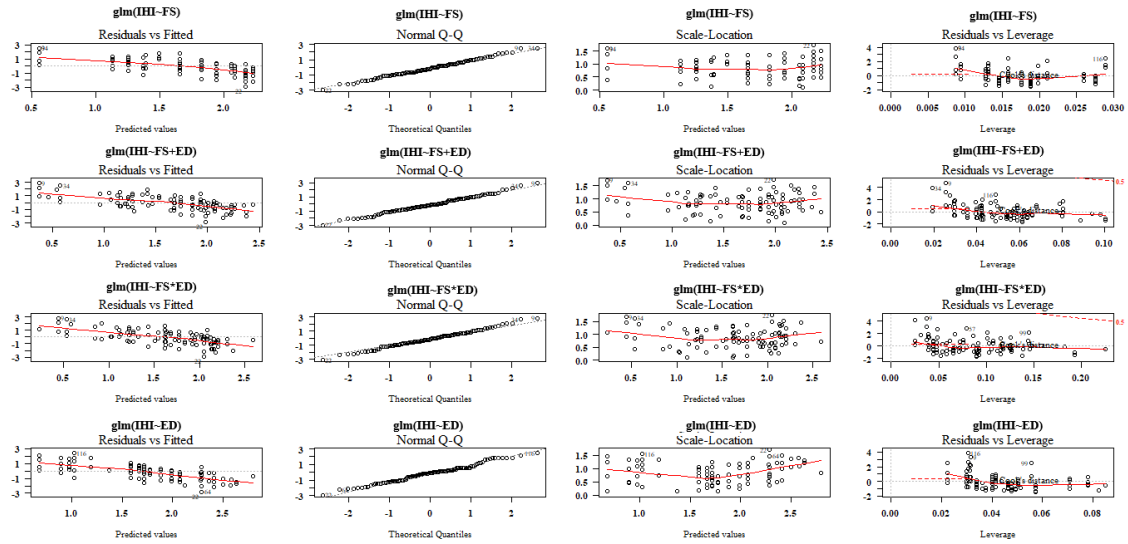




**Figure S2.** Residuals analyze plot of diagnostic of glm (generalized linear models) for aboveground biomass, living trees abundance, standing dead trees abundance and inverse health condition index versus fragment size (FS) and distance from edge (ED), with interaction (\*) and without (+).







**Table S1.** Aboveground biomass (AGB) of trees with DBH  $\geq 50$  cm, sampled along edge-interior gradient (250 m), in seasonal Atlantic Forest fragments, Parana state, Brazil. DBH = diameter at breast height.

Forest fragment Fragment size (ha)	Distance from edge (m)	Aboveground biomass (Mg/ha)					Total
		T1	T2	T3	T4	T5	
Mata dos Godoy State Park (PEMG) 690 ha	0-50	0	24	49	27	22	24
	50-100	222	30	0	57	32	68
	100-150	37	36	214	0	126	82
	150-200	60	278	118	31	30	103
	200-250	89	135	192	55	89	112
	<b>Total</b>						<b>78</b>
Fazenda Bule 288 ha	0-50	0	0	0	-	-	0
	50-100	11	188	22	-	-	73
	100-150	40	0	78	-	-	39
	150-200	54	0	101	-	-	51
	200-250	40	43	27	-	-	37
	<b>Total</b>						<b>40</b>
Fazenda Alvorada 122 ha	0-50	0	15	-	-	-	7
	50-100	24	22	-	-	-	23
	100-150	70	0	-	-	-	35
	150-200	48	40	-	-	-	44
	200-250	0	0	-	-	-	0
	<b>Total</b>						<b>22</b>
Fazenda Congonhas 108 ha	0-50	118	39	-	-	-	79
	50-100	0	70	-	-	-	35
	100-150	11	25	-	-	-	18
	150-200	0	92	-	-	-	46
	200-250	25	47	-	-	-	36
	<b>Total</b>						<b>43</b>
Fazenda Santo Antonio 34 ha	0-50	0	-	-	-	-	0
	50-100	72	-	-	-	-	72

Forest fragment Fragment size (ha)	Distance from edge (m)	Aboveground biomass (Mg/ha)				
	100-150	0	-	-	-	0
	150-200	0	-	-	-	0
	200-250	43	-	-	-	43
	<b>Total</b>	<b>23</b>	-	-	-	<b>23</b>

**Table S2.** Abundance of living and dead trees (DBH  $\geq$  50 cm) sampled along edge-interior gradients (250 m) in seasonal Atlantic Forest fragments, Paraná state, Brazil. DBH = diameter at breast height.

Forest fragment Fragment size (ha)	Distance from edge (m)	Abundance of large trees									
		Transects									
		Living large trees					Standing dead large trees				
		T1	T2	T3	T4	T5	T1	T2	T3	T4	T5
Mata dos Godoy State Park (PEMG) 690 ha	0-50	0	2	4	1	1	0	1	0	0	0
	50-100	1	2	0	4	2	0	0	0	0	0
	100-150	3	2	3	0	6	0	2	0	0	0
	150-200	1	4	2	2	2	0	1	1	0	0
	200-250	4	4	8	3	3	0	0	0	0	0
	<b>Total</b>	<b>9</b>	<b>14</b>	<b>17</b>	<b>10</b>	<b>14</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>0</b>
Fazenda Bule 288 ha	0-50	0	0	0	-	-	0	0	0	-	-
	50-100	1	6	1	-	-	1	0	0	-	-
	100-150	2	0	2	-	-	1	1	0	-	-
	150-200	3	0	5	-	-	0	0	0	-	-
	200-250	2	2	2	-	-	0	0	0	-	-
	<b>Total</b>	<b>8</b>	<b>8</b>	<b>10</b>	-	-	<b>2</b>	<b>1</b>	<b>0</b>	-	-
Fazenda Alvorada 122 ha	0-50	0	1	-	-	-	0	0	-	-	-
	50-100	1	1	-	-	-	0	0	-	-	-
	100-150	1	0	-	-	-	0	0	-	-	-
	150-200	2	2	-	-	-	1	0	-	-	-
	200-250	0	0	-	-	-	0	0	-	-	-
	<b>Total</b>	<b>4</b>	<b>4</b>	-	-	-	<b>1</b>	<b>0</b>	-	-	-
Fazenda Congonhas 108 ha	0-50	3	2	-	-	-	1	0	-	-	-
	50-100	0	3	-	-	-	0	0	-	-	-
	100-150	1	1	-	-	-	0	0	-	-	-
	150-200	0	2	-	-	-	1	0	-	-	-
	200-250	1	2	-	-	-	0	0	-	-	-
	<b>Total</b>	<b>5</b>	<b>10</b>	-	-	-	<b>2</b>	<b>0</b>	-	-	-
Fazenda Santo Antônio 34 ha	0-50	0	-	-	-	-	0	-	-	-	-
	50-100	3	-	-	-	-	1	-	-	-	-
	100-150	0	-	-	-	-	1	-	-	-	-
	150-200	0	-	-	-	-	0	-	-	-	-
	200-250	2	-	-	-	-	0	-	-	-	-
	<b>Total</b>	<b>5</b>	-	-	-	-	<b>2</b>	-	-	-	-

**Table S3.** Abundance of tree species with DBH  $\geq$  50 cm sampled in seasonal Atlantic Forest fragments, Paraná state, Brazil. DBH = diameter at breast height.

<b>Species</b>	<b>PEMG</b>	<b>BUL</b>	<b>ALV</b>	<b>CGH</b>	<b>SAN</b>	<b>WD</b>
<i>Alchornea triplinervia</i> (Spreng.) Müll.Arg.	8	1	0	0	0	0.47
<i>Aspidosperma polyneuron</i> Müll.Arg.	8	2	0	6	0	0.71
<i>Gallesia integrifolia</i> (Spreng.) Harms	7	0	5	3	4	0.49
<i>Alchornea glandulosa</i> Poepp. & Endl.	6	0	0	0	0	0.35
<i>Cabrlea canjerana</i> (Vell.) Mart.	4	2	0	0	0	0.43
<i>Astronium graveolens</i> Jacq.	3	0	1	1	1	0.62
<i>Ficus insipida</i> Willd.	3	6	0	0	0	0.38
<i>Annona cacans</i> Warm.	2	0	0	1	0	0.31
<i>Colubrina glandulosa</i> Perkins	2	1	0	0	0	0.62
<i>Croton floribundus</i> Spreng.	2	1	0	0	0	0.42
<i>Ficus eximia</i> Schott	2	0	0	2	0	0.41
<i>Margaritaria nobilis</i> L.f.	2	0	0	0	0	0.61
<i>Nectandra megapotamica</i> (Spreng.) Mez	2	0	0	0	0	0.51
<i>Ocotea indecora</i> (Schott) Mez	2	1	0	0	0	0.62
<i>Prunus myrtifolia</i> (L.) Urb.	2	2	0	0	0	0.61
<i>Anadenanthera colubrina</i> (Vell.) Brenan	1	0	0	0	0	0.52
<i>Campomanesia guaviroba</i> (DC.) Kiaersk.	1	0	0	0	0	0.57
<i>Cariniana estrellensis</i> (Raddi) Kuntze	1	0	1	0	0	0.64
<i>Chrysophyllum gonocarpum</i> (Mart. & Eich. ex Miq.) Engl.	1	0	0	0	0	0.54
<i>Holocalyx balansae</i> Micheli	1	2	0	0	0	0.71
Unknown sp.	1	0	0	0	0	0.51
Unknown sp.1	1	0	0	0	0	0.51
<i>Machaerium stipitatum</i> Vogel	1	1	0	0	0	0.61
<i>Parapiptadenia rigida</i> (Benth.) Brenan	1	0	0	0	0	0.61
<i>Balfourodendron riedelianum</i> (Engl.) Engl.	0	0	1	0	0	0.63
<i>Cinnamomum sellowianum</i> (Nees & Mart.) Kosterm.	0	1	0	0	0	0.51
<i>Enterolobium contortisiliquum</i> (Vell.) Morong	0	0	0	1	0	0.38
Unknown sp.2	0	1	0	0	0	0.51
Lauraceae	0	2	0	0	0	0.62
<i>Myrsine umbellata</i> Mart.	0	1	0	0	0	0.52
Myrtaceae sp.	0	0	0	1	0	0.58
<i>Rauvolfia sellowii</i> Müll.Arg.	0	2	0	0	0	0.48
<b>Total abundance</b>	<b>64</b>	<b>26</b>	<b>8</b>	<b>15</b>	<b>5</b>	