

Supplementary material

Table S1. Regression coefficients and goodness-of-fit statistics of allometric models for independently estimating the biomass of different parts and total biomass in mixed stands of *Pinus elliottii* Engelm. and *Pinus taeda* L. in Southern Brazil.

Parts	Model	b_0	b_1	b_2	b_3	$R^2_{Adj.}$ (%)	AIC	BIC	S_{yx} (kg)	S_{yx} (%)
Roots	1	0.069	1.85			83.74	463.81	470.55	6.37	31.63
	2	0.069	0.925			83.74	463.81	470.55	6.37	31.63
	3	0.094	0.602			81.65	472.25	479.00	6.76	33.59
	4	0.069	1.862	-0.012		83.5	469.8	474.8	6.37	31.62
	5	0.213	0.984	0.352	0.454	84.13	474.02	475.26	6.20	30.78
	6	0.113	1.120	0.846		86.81	454.10	459.09	5.82	28.27
	7	0.681	0.838	0.868		83.51	469.76	474.76	6.36	31.62
	8	0.122	1.562	0.259		84.01	467.60	472.59	6.27	31.13
	9	0.164	0.947	0.815	0.181	86.85	460.83	462.07	5.64	28.01
Stem	1	0.005	3.229			93.73	704.24	710.99	35.46	28.40
	2	0.005	1.615			93.73	704.24	710.99	35.46	28.40
	3	0.004	1.112			97.96	625.82	632.56	20.25	16.22
	4	0.004	1.877	1.501		98.27	619.01	624.01	18.89	14.80
	5	0.006	1.654	1.591	0.118	98.28	625.61	626.85	18.30	14.66
	6	0.005	3.098	0.177		93.74	709.2	714.19	35.20	28.19
	7	0.037	2.411	0.85		96.83	661.49	666.48	25.03	20.05
	8	0.001	3.848	-0.538		94.82	695.89	700.88	32.01	25.64
	9	0.001	3.678	0.285	-0.585	94.99	700.52	701.76	31.25	25.03
Bark	1	0.029	2.071			80.56	470.51	477.25	6.68	38.52
	2	0.029	1.035			80.56	470.51	477.25	6.68	38.52
	3	0.037	0.687			81.74	466.12	472.87	6.57	37.34
	4	0.034	1.519	0.548		81.56	471.78	476.77	6.46	37.24
	5	0.031	1.596	0.519	-0.041	81.29	479.75	480.99	6.46	37.24
	6	0.005	3.098	0.177		81.39	472.43	477.42	6.49	37.42
	7	0.229	1.26	0.652		79.57	478.98	483.97	6.80	39.21
	8	0.014	2.423	-0.313		80.86	474.41	479.41	6.58	37.95

	9	0.018	1.98	0.599	-0.378	81.91	477.40	478.64	6.35	36.62
Branches	1	0.006	2.601			85.08	502.40	509.14	8.39	38.56
	2	0.006	1.301			85.08	502.40	509.14	8.39	38.56
	3	0.01	0.847			79.98	522.99	529.74	9.72	44.67
	4	0.005	3.351	-0.722		86.08	502.50	507.50	8.04	36.97
	5	0.034	1.805	-0.063	0.786	87.44	502.25	503.49	7.58	34.85
	6	0.010	1.776	1.011		88.36	489.98	494.97	7.52	33.80
	7	0.274	0.859	1.509		86.11	502.36	507.36	8.03	36.93
	8	0.037	1.705	0.817		87.63	494.28	499.27	7.58	34.86
	9	0.018	1.98	0.599	-0.378	90.14	485.33	486.57	6.72	30.88
Needles	1	0.311	1.172			56.03	421.74	428.49	4.71	44.56
	2	0.311	0.586			56.03	421.74	428.49	4.71	44.56
	3	0.487	0.354			52.07	427.79	434.53	4.92	46.53
	4	0.200	1.838	-0.583		57.62	424.14	429.13	4.70	43.43
	5	0.395	1.305	-0.376	0.306	57.46	431.35	432.59	4.57	43.18
	6	0.334	1.086	0.093		55.43	427.66	432.66	4.71	44.54
	7	1.706	0.294	0.857		55.72	427.20	432.2	4.70	44.39
	8	0.723	0.691	0.503		57.50	424.33	429.32	4.60	43.49
	9	0.757	0.628	0.073	0.501	56.89	432.27	433.52	4.60	43.47
Total	1	0.031	2.792			95.63	722.27	729.01	40.34	20.72
	2	0.031	1.396			95.63	722.27	729.01	40.34	20.72
	3	0.032	0.952			97.57	681.21	687.96	30.08	15.45
	4	0.032	1.994	0.855		97.56	686.41	691.41	29.91	15.37
	5	0.054	1.594	1.019	0.210	97.66	690.56	691.80	29.97	14.95
	6	0.035	2.532	0.326		95.94	722.03	727.02	38.58	19.82
	7	0.346	1.804	0.895		96.11	719.03	724.02	37.76	19.40
	8	0.017	3.082	-0.251		95.88	723.19	728.19	38.90	19.98
	9	0.017	2.837	0.385	-0.308	96.33	721.89	723.13	36.40	18.70

b_0 , b_1 , b_2 , and b_3 are the regression coefficients; $R_{Adj.}^2$ is the adjusted coefficient of determination; AIC is the Akaike information criterion; BIC is the Bayesian information criterion; S_{yx} is the standard error of estimate; the grey color highlights the selected models for each part in the independent fitting.

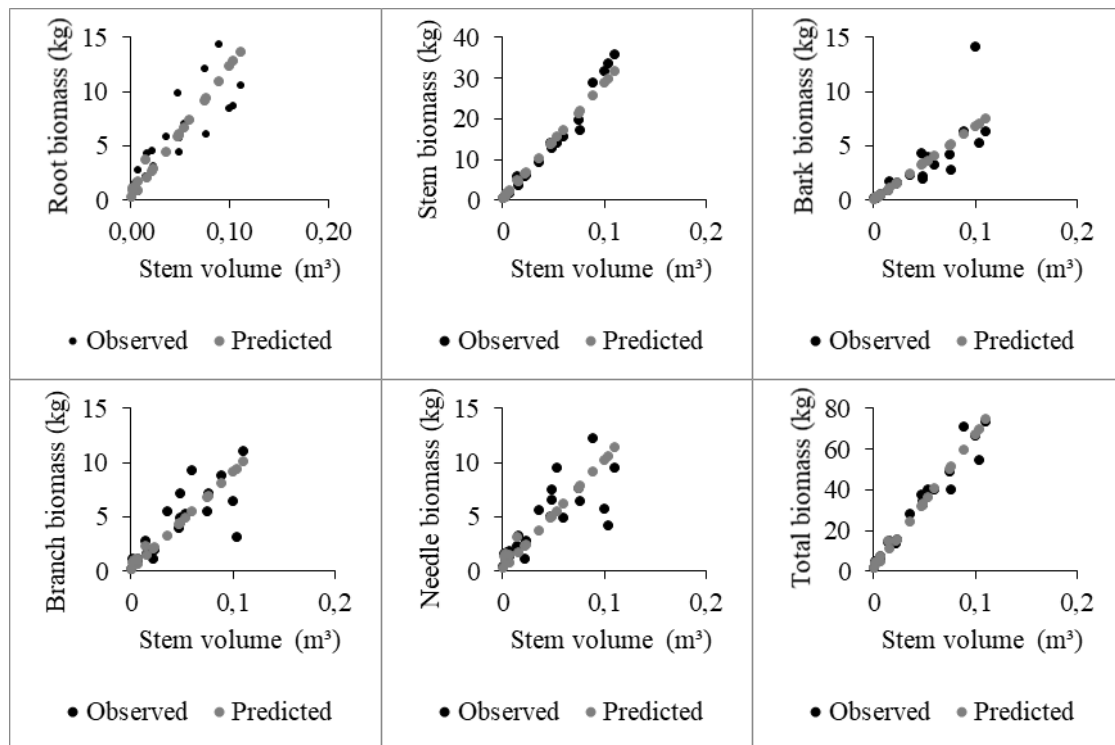


Figure S1. Distribution of estimated biomass using ratio estimators relative to observed biomass of *Pinus elliottii* and *Pinus taeda* in Southern Brazil, after two-stage stratification in diameter class I (1.91 – 16.23 cm).

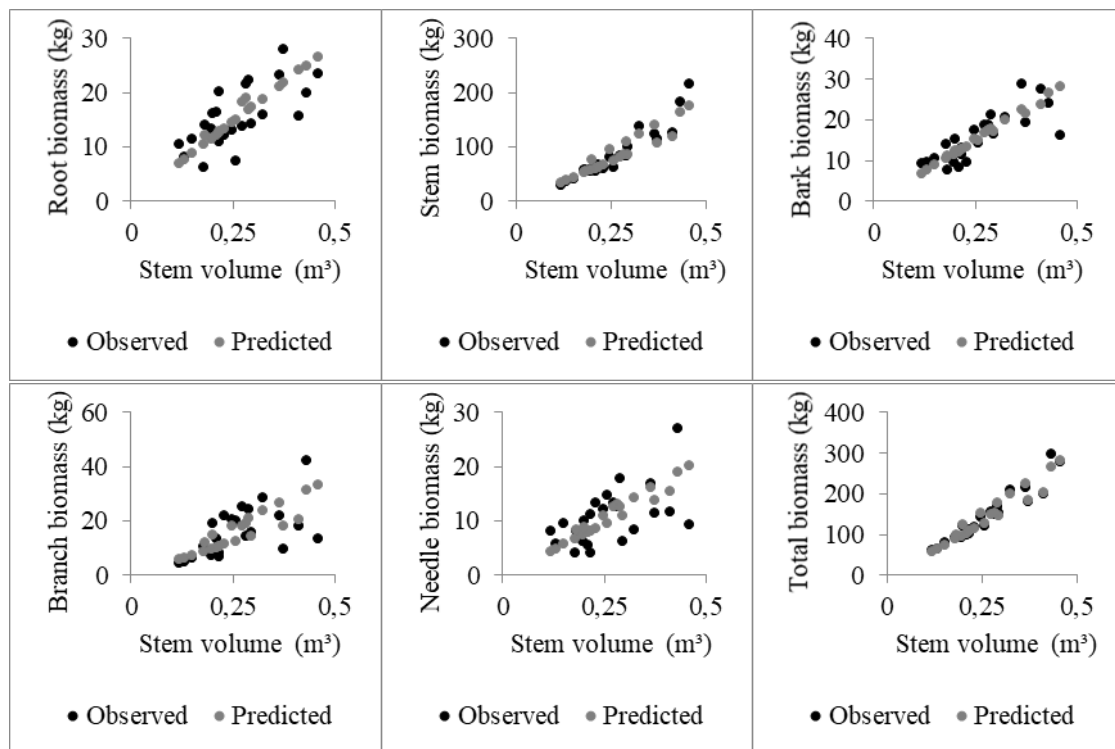


Figure S2. Distribution of estimated biomass using ratio estimators relative to observed biomass of *Pinus elliottii* and *Pinus taeda* in Southern Brazil, after two-stage stratification in diameter class II (16.24 – 23.55 cm).

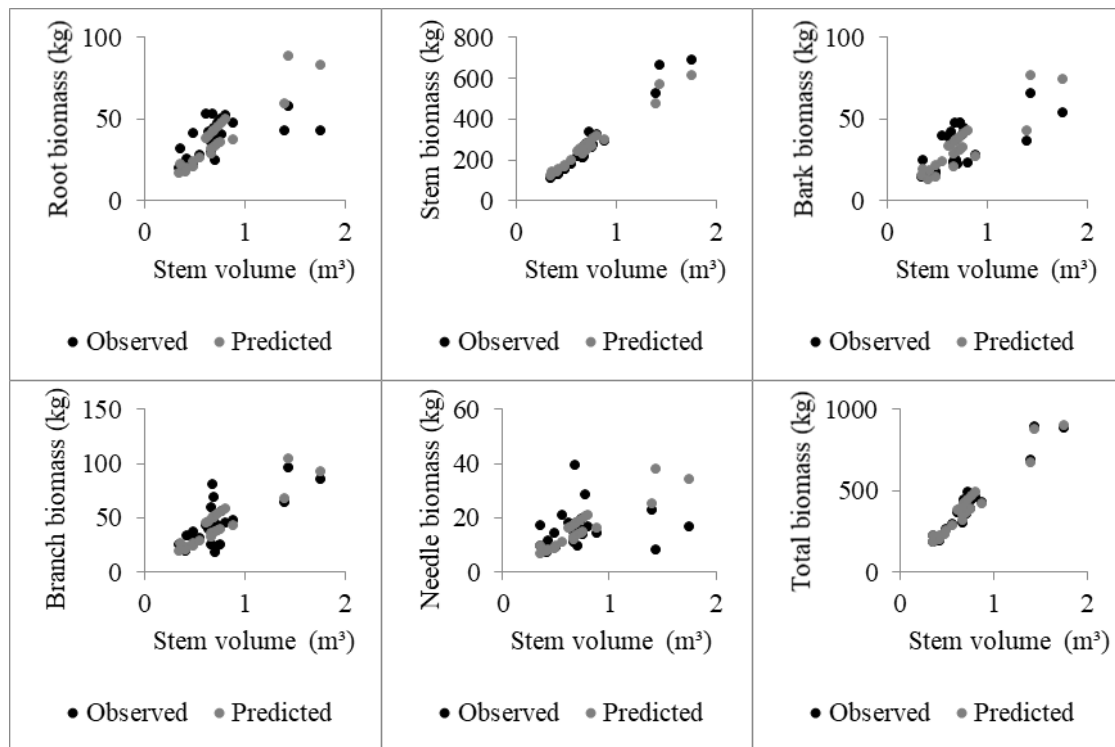


Figure S3. Distribution of estimated biomass using ratio estimators relative to observed biomass of *Pinus elliottii* and *Pinus taeda* in Southern Brazil, after two-stage stratification in diameter class III (23.56 – 40.27 cm).