# 1 Running a simple model with no ncp etc

2   1. SLA: variation due to sppecies is much greater than pop, hf has a negative population effect

3   2. LDMC: Very large population level estimates, all very similar. Larger population effects than
4   species level, about double.

5   3. Height: Species variation is greater than population level variation, HF and WM both have
6   positive population level effects (like RGR).

7   4. Relative Growth Rate: Species variation greater than population, small population level esti-
8   mates, HF and WM have positive effects other two populations are negative

9   **Specific leaf area**

Table 1: Summary of the intercept only model for SLA across the two years of data (2019 and 2022) (n = 599) with species (n = 18) and population (n = 4).
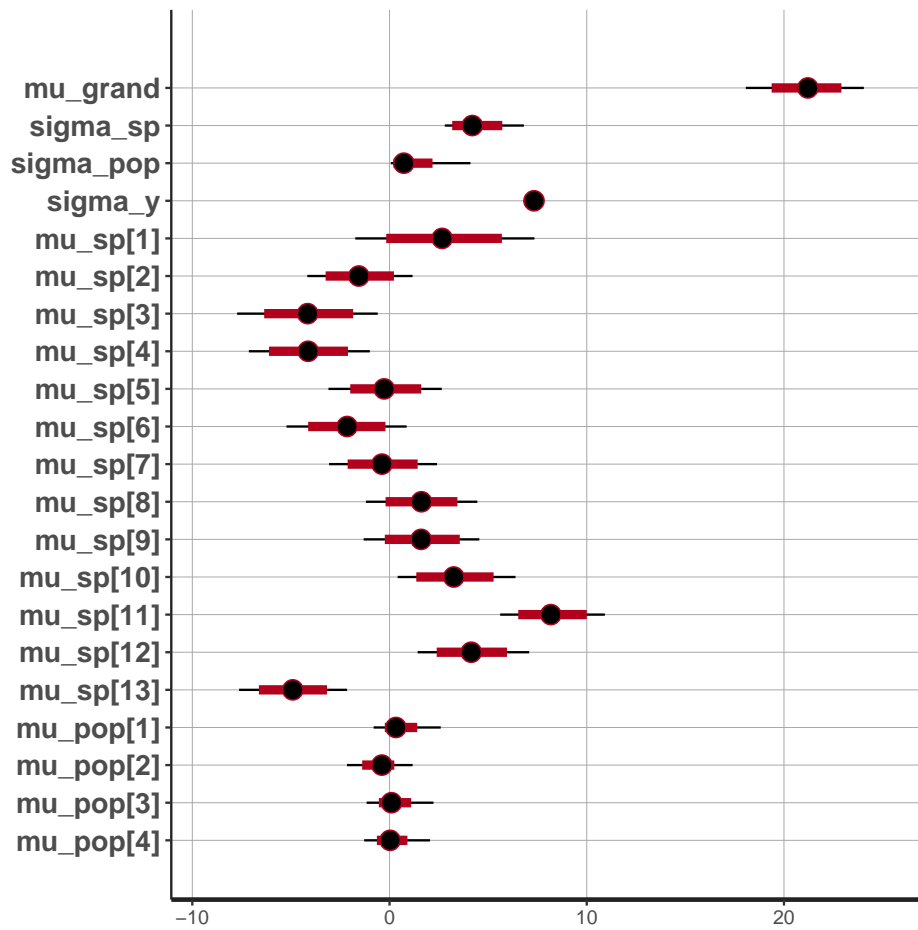
	mean	25%	75%	n_eff	Rhat
alpha	21.35	20.69	22.11	578.31	1.01
ACEPEN	2.45	1.09	3.82	2464.13	1.00
ACESPI	1.24	-0.33	2.85	2406.69	1.00
ALNINC	-1.70	-2.46	-0.94	737.69	1.00
AMECAN	-4.20	-5.24	-3.14	1341.23	1.00
AROMEL	-4.22	-5.12	-3.34	1009.50	1.00
BETALL	-0.35	-1.17	0.42	823.56	1.00
BETPAP	-2.28	-3.20	-1.37	1036.84	1.00
BETPOP	-0.55	-1.35	0.25	775.20	1.00
DIELON	1.41	0.58	2.21	869.75	1.00
MYRGAL	1.48	0.61	2.30	918.40	1.00
QUEALB	2.28	0.62	3.90	2537.62	1.00
QUERUB	-1.14	-2.91	0.61	2773.19	1.00
SAMRAC	3.09	2.17	3.94	1024.59	1.00
SORAME	0.32	-0.75	1.40	1412.60	1.00
SPIALB	8.01	7.24	8.76	713.47	1.00
SPITOM	3.95	3.14	4.72	790.82	1.00
VACMYR	-2.17	-3.66	-0.64	2454.05	1.00
VIBCAS	-5.02	-5.79	-4.26	813.01	1.00
GR	0.46	0.02	0.72	560.72	1.02
HF	-0.40	-0.79	-0.03	640.11	1.01
SH	0.19	-0.16	0.42	574.87	1.02
WM	0.12	-0.21	0.36	570.50	1.02
sigma_a_sp	3.82	3.25	4.29	2331.61	1.00
sigma_a_pop	0.95	0.35	1.14	617.86	1.02
sigma_y	7.20	7.08	7.30	3529.72	1.00
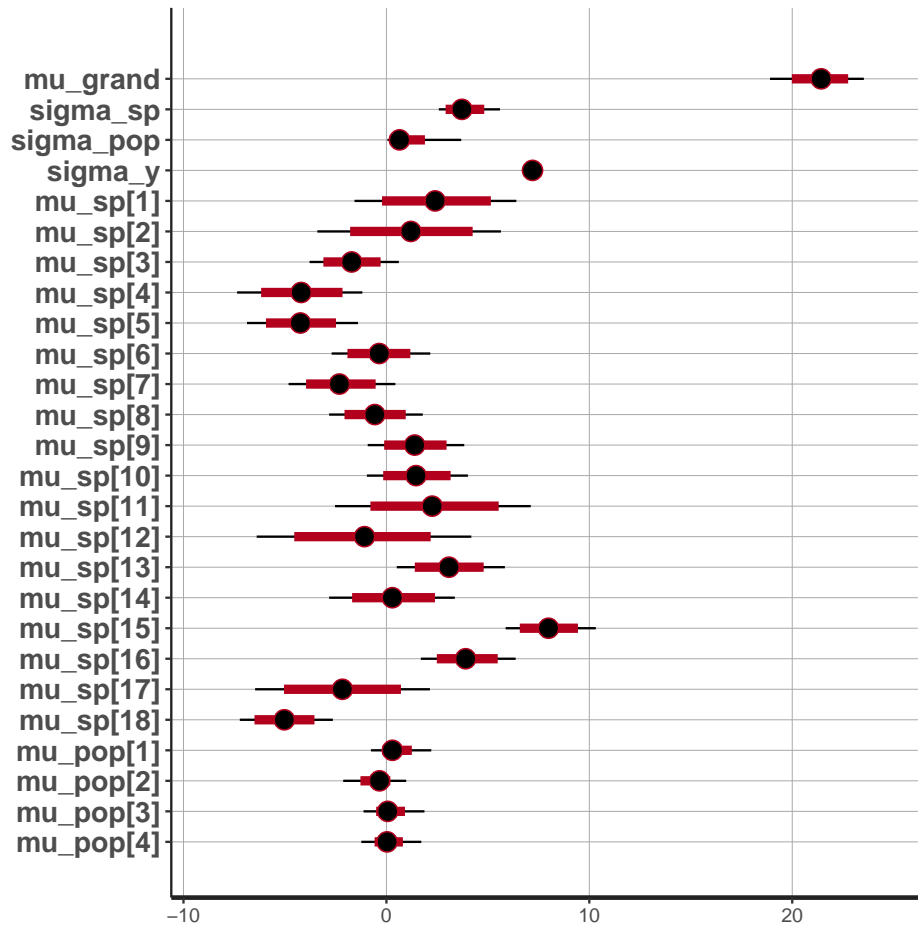
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Table 2: Summary of the intercept only model for SLA in 2022 (n = 446) with species (n = 13) and population (n = 4).

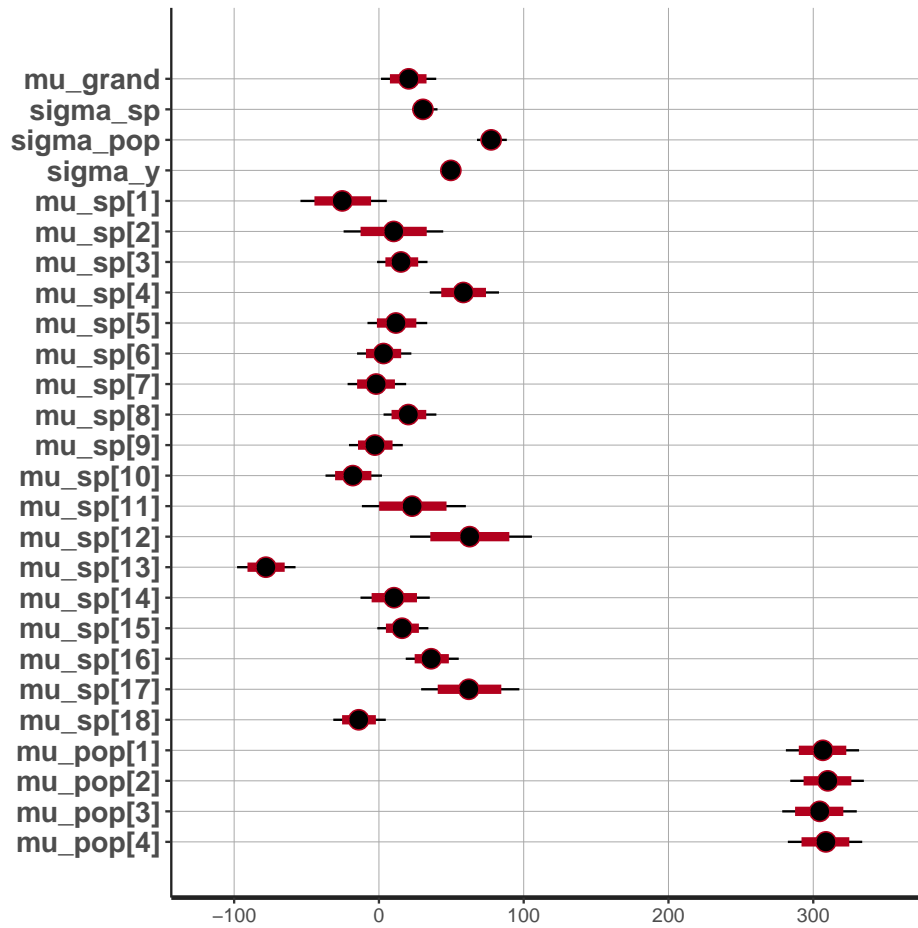|	mean	25%	75%	n_eff	Rhat
alpha	21.17	20.27	22.13	481.32	1.00
ACEPEN	2.71	1.17	4.25	1378.96	1.00
ALNINC	-1.53	-2.44	-0.63	655.56	1.00
AMECAN	-4.13	-5.28	-2.96	973.53	1.00
AROMEL	-4.11	-5.15	-3.07	865.17	1.00
BETALL	-0.22	-1.19	0.75	686.36	1.00
BETPAP	-2.16	-3.17	-1.13	788.64	1.00
BETPOP	-0.37	-1.29	0.54	669.90	1.00
DIELON	1.62	0.61	2.56	703.71	1.00
MYRGAL	1.64	0.65	2.67	735.50	1.00
SAMRAC	3.29	2.24	4.29	810.81	1.00
SPIALB	8.22	7.34	9.10	645.03	1.00
SPITOM	4.16	3.21	5.06	683.53	1.00
VIBCAS	-4.90	-5.83	-3.99	697.15	1.00
GR	0.49	0.02	0.81	543.80	1.00
HF	-0.45	-0.85	-0.04	635.54	1.00
SH	0.23	-0.17	0.51	569.42	1.00
WM	0.12	-0.25	0.39	586.04	1.00
sigma_a_sp	4.36	3.63	4.93	1801.74	1.00
sigma_a_pop	1.05	0.40	1.26	563.11	1.00
sigma_y	7.33	7.22	7.44	2647.75	1.00

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12 **Leaf dry matter content**

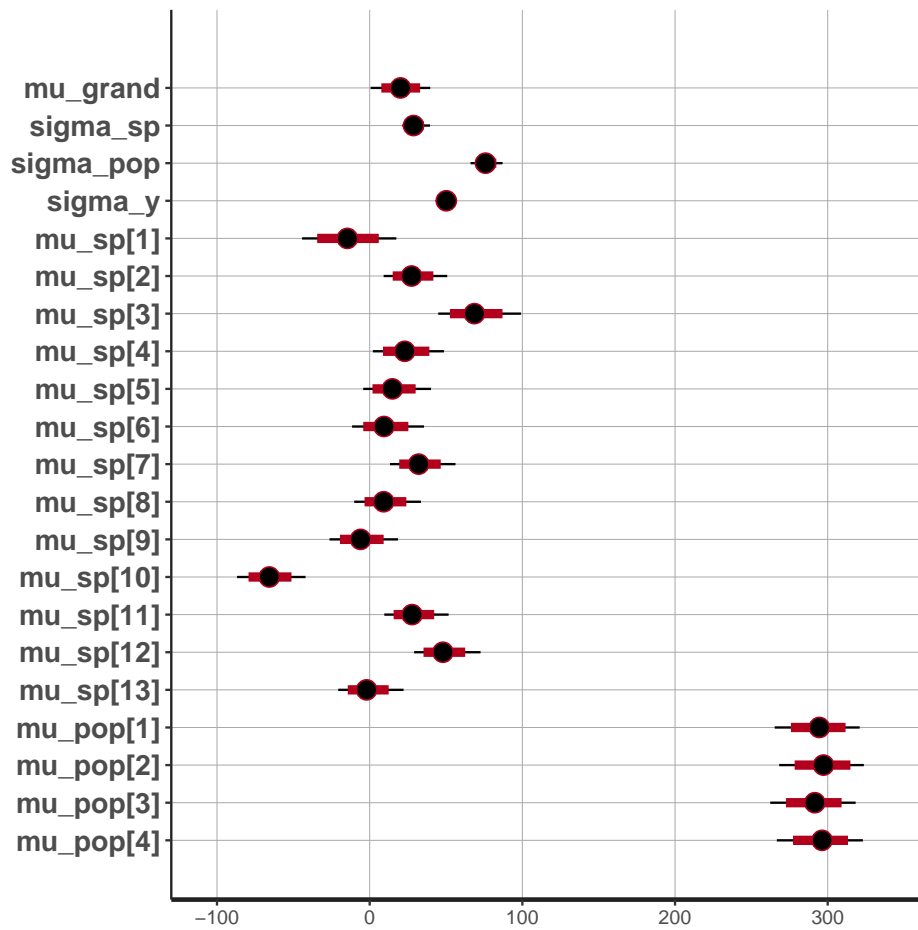Table 3: Summary of the intercept only model for LDMC in 2019 (n = 599) with species (n = 18) and population (n = 4).

	mean	25%	75%	n_eff	Rhat
alpha	20.36	13.64	27.03	2325.01	1.00
ACEPEN	-25.12	-35.45	-14.87	3344.96	1.00
ACESPI	10.14	-2.40	22.62	3759.11	1.00
ALNINC	15.55	9.47	21.32	1083.29	1.00
AMECAN	58.46	50.09	66.55	1711.55	1.00
AROMEL	12.02	4.83	18.97	1475.46	1.00
BETALL	3.20	-3.25	9.33	1184.71	1.00
BETPAP	-1.87	-8.70	4.92	1441.84	1.00
BETPOP	20.59	14.35	26.63	1159.22	1.00
DIELON	-2.59	-8.88	3.53	1178.31	1.00
MYRGAL	-17.84	-24.42	-11.41	1345.81	1.00
QUEALB	23.17	10.85	35.05	3095.56	1.00
QUERUB	62.83	48.20	77.23	3277.29	1.00
SAMRAC	-78.06	-85.03	-71.30	1561.70	1.00
SORAME	10.58	2.20	18.67	2028.57	1.00
SPIALB	16.14	10.15	21.95	1090.99	1.00
SPITOM	36.38	30.08	42.58	1140.58	1.00
VACMYR	62.42	50.76	73.79	2760.80	1.00
VIBCAS	-13.84	-19.93	-7.91	1165.10	1.00
GR	306.58	298.06	315.14	1112.33	1.00
HF	309.87	301.26	318.57	1133.73	1.00
SH	304.34	295.74	313.05	1104.73	1.00
WM	308.46	299.85	317.06	1116.44	1.00
sigma_a_sp	30.79	27.65	33.54	2722.96	1.00
sigma_a_pop	77.65	74.05	81.15	4562.14	1.00
sigma_y	49.69	48.96	50.40	5107.31	1.00

Table 4: Summary of the intercept only model for LDMC in 2019 and 2022 (n = 446) with species (n = 13) and population (n = 4).

	mean	25%	75%	n_eff	Rhat
alpha	20.34	13.80	27.09	2412.17	1.00
ACEPEN	-14.31	-25.25	-3.82	2480.55	1.00
ALNINC	28.07	20.76	34.48	907.15	1.00
AMECAN	69.34	60.05	77.72	1246.09	1.00
AROMEL	23.61	15.36	31.29	1221.27	1.00
BETALL	15.56	7.90	22.28	993.63	1.00
BETPAP	10.03	1.96	17.22	1090.83	1.00
BETPOP	32.77	25.33	39.39	926.16	1.00
DIELON	9.82	2.46	16.52	1004.06	1.00
MYRGAL	-5.50	-13.23	1.42	998.32	1.00
SAMRAC	-65.42	-73.05	-58.30	1202.43	1.00
SPIALB	28.60	21.39	34.91	878.64	1.01
SPITOM	48.67	41.24	55.38	928.25	1.01
VIBCAS	-1.34	-8.67	5.11	975.03	1.00
GR	294.16	284.96	303.85	1032.34	1.01
HF	296.90	287.89	306.56	1071.81	1.00
SH	291.17	281.67	300.94	1054.39	1.00
WM	295.76	286.72	305.47	1060.69	1.01
sigma_a_sp	29.15	25.84	31.93	2020.55	1.00
sigma_a_pop	76.06	72.44	79.53	3939.35	1.00
sigma_y	50.22	49.46	50.96	6180.32	1.00

15   Height

Table 5: Summary of the intercept only model for plant height in 2019 (n = 302) with species (n = 18) and population (4).

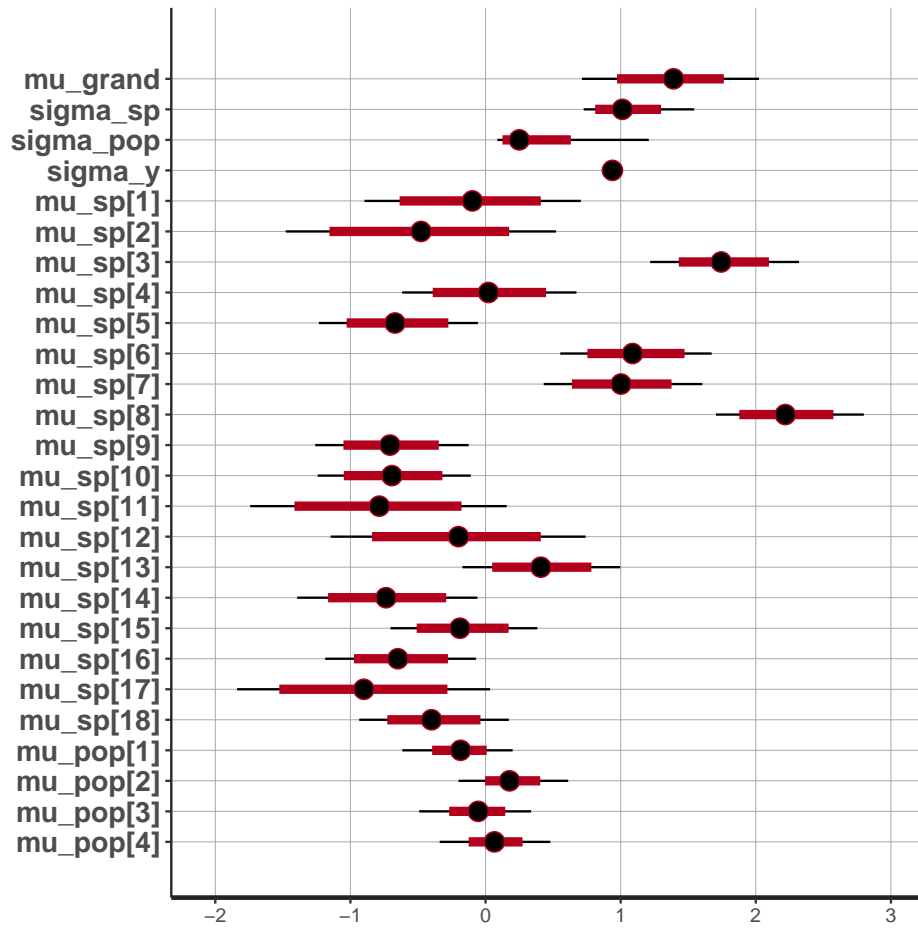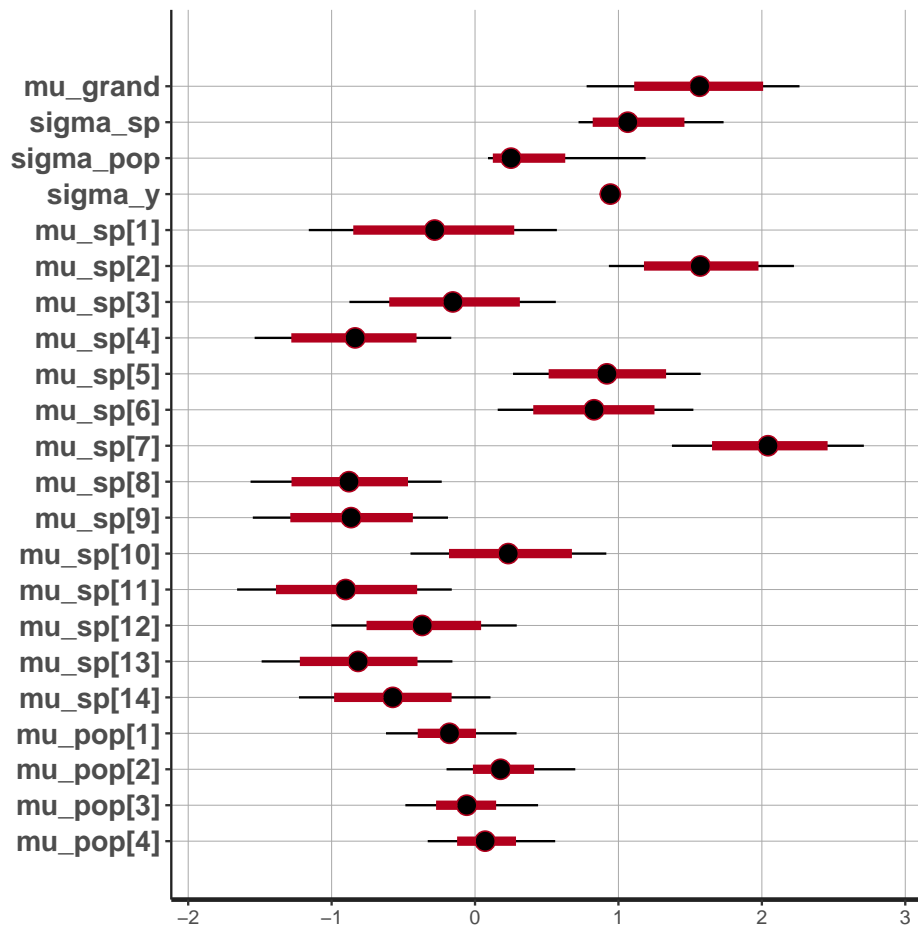|	mean	25%	75%	n_eff	Rhat
alpha	1.39	1.19	1.59	416.99	1.01
ACEPEN	-0.11	-0.38	0.15	1167.32	1.01
ACESPI	-0.48	-0.85	-0.14	2007.49	1.00
ALNINC	1.75	1.57	1.92	505.74	1.01
AMECAN	0.03	-0.20	0.25	763.69	1.01
AROMEL	-0.66	-0.86	-0.47	639.97	1.01
BETALL	1.10	0.91	1.28	519.50	1.01
BETPAP	1.00	0.81	1.19	623.85	1.01
BETPOP	2.22	2.03	2.40	550.62	1.01
DIELON	-0.70	-0.88	-0.52	542.73	1.01
MYRGAL	-0.69	-0.87	-0.50	596.41	1.01
QUEALB	-0.79	-1.11	-0.45	1591.65	1.00
QUERUB	-0.20	-0.53	0.12	1717.92	1.00
SAMRAC	0.41	0.22	0.60	632.69	1.01
SORAME	-0.73	-0.96	-0.50	776.30	1.01
SPIALB	-0.18	-0.36	-0.01	502.77	1.01
SPITOM	-0.64	-0.83	-0.47	533.17	1.01
VACMYR	-0.91	-1.22	-0.58	1647.09	1.00
VIBCAS	-0.39	-0.57	-0.21	541.49	1.01
GR	-0.20	-0.28	-0.10	427.93	1.01
HF	0.18	0.09	0.29	448.23	1.01
SH	-0.06	-0.15	0.03	435.03	1.01
WM	0.07	-0.02	0.16	439.58	1.01
sigma_a_sp	1.04	0.90	1.15	2612.49	1.00
sigma_a_pop	0.35	0.17	0.39	567.54	1.01
sigma_y	0.94	0.92	0.96	3498.92	1.00

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Table 6: Summary of the intercept only model for plant height in 2021 (n = 257) with species (n = 14) and population (4).

	mean	25%	75%	n_eff	Rhat
alpha	1.55	1.33	1.79	443.03	1.01
ACEPEN	-0.28	-0.57	0.00	933.49	1.00
ALNINC	1.57	1.37	1.78	484.54	1.01
AMECAN	-0.15	-0.38	0.08	612.93	1.00
BETPAP	-0.84	-1.06	-0.62	546.02	1.01
BETPOP	0.92	0.71	1.13	543.67	1.01
BETALL	0.83	0.61	1.05	556.20	1.01
VIBCAS	2.05	1.84	2.26	521.68	1.01
SPIALB	-0.88	-1.08	-0.67	475.20	1.01
SPITOM	-0.86	-1.08	-0.65	539.82	1.01
MYRGAL	0.24	0.01	0.45	569.39	1.01
AROMEL	-0.90	-1.15	-0.65	708.72	1.00
SAMRAC	-0.36	-0.57	-0.16	500.25	1.01
DIELON	-0.82	-1.02	-0.61	504.99	1.01
SORAME	-0.57	-0.77	-0.36	501.06	1.01
GR	-0.18	-0.28	-0.09	479.57	1.01
HF	0.20	0.08	0.28	449.43	1.01
SH	-0.05	-0.15	0.04	455.80	1.01
WM	0.08	-0.03	0.17	461.50	1.01
sigma_a_sp	1.11	0.92	1.25	1559.69	1.00
sigma_a_pop	0.34	0.17	0.39	624.94	1.00
sigma_y	0.94	0.93	0.96	2193.02	1.00

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18 Stem specific density

Table 7: Summary of the intercept only model for plant SSD in 2022 (n = 240) with species (n = 12) and population (n = 4).

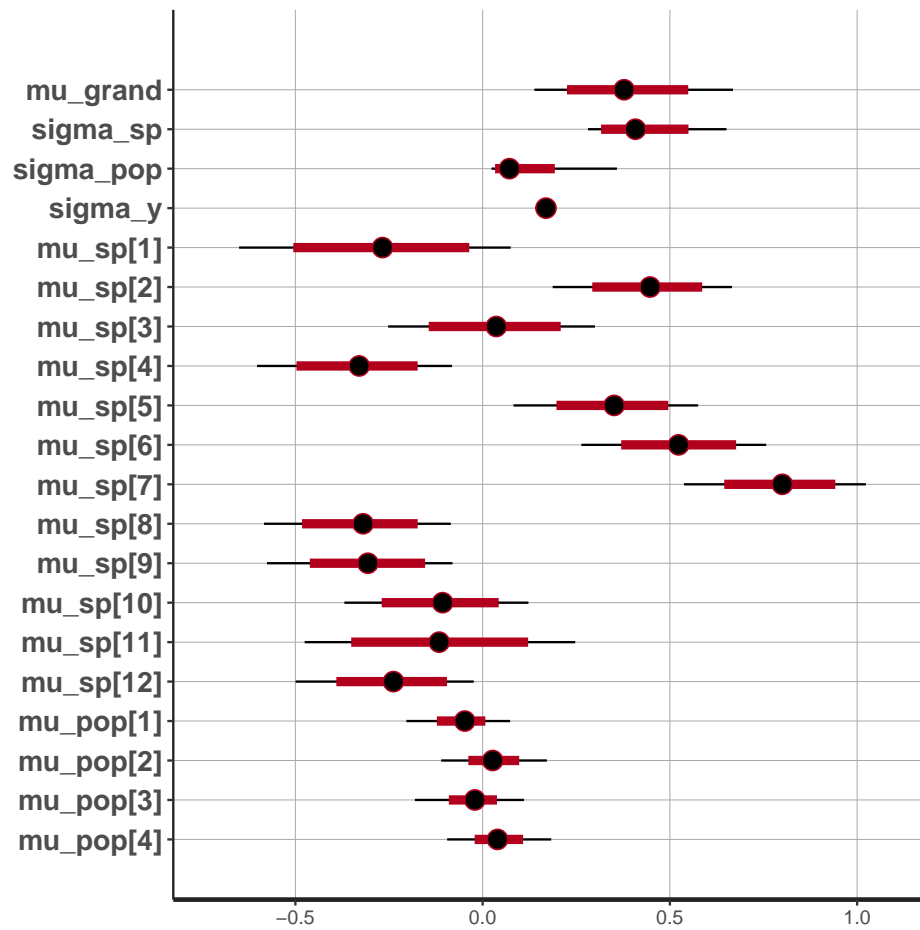|	mean	25%	75%	n_eff	Rhat
alpha	0.44	0.42	0.45	378.00	1.01
ALNINC	-0.02	-0.04	-0.00	425.22	1.01
AMECAN	0.08	0.05	0.10	676.62	1.01
AROMEL	0.07	0.05	0.09	489.93	1.01
BETALL	0.03	0.02	0.05	453.54	1.01
BETPAP	0.04	0.02	0.06	560.61	1.01
BETPOP	0.06	0.04	0.07	459.13	1.01
DIELON	-0.12	-0.14	-0.10	469.54	1.01
MYRGAL	-0.07	-0.08	-0.05	493.18	1.01
SAMRAC	-0.14	-0.16	-0.12	510.04	1.01
SPIALB	-0.00	-0.02	0.02	429.45	1.01
SPITOM	0.02	0.00	0.04	475.36	1.01
VIBCAS	0.06	0.04	0.08	446.64	1.01
GR	0.00	-0.00	0.00	724.72	1.01
HF	0.00	-0.00	0.01	719.06	1.00
SH	-0.00	-0.01	0.00	700.47	1.01
WM	-0.00	-0.00	0.00	738.87	1.01
sigma_a_sp	0.09	0.07	0.10	1071.28	1.00
sigma_a_pop	0.01	0.00	0.01	559.24	1.00
sigma_y	0.06	0.06	0.06	1727.99	1.00

Table 8: Summary of the intercept only model for plant relative growth rate averaged over 3 years (n = 222) with species (n = 12) and population (n = 4).

	mean	25%	75%	n_eff	Rhat
alpha	0.38	0.30	0.47	565.01	1.01
ACEPEN	-0.27	-0.39	-0.14	1245.20	1.00
ALNINC	0.44	0.37	0.52	637.41	1.01
AMECAN	0.03	-0.06	0.12	840.24	1.01
AROMEL	-0.33	-0.41	-0.25	715.29	1.01
BETALL	0.35	0.27	0.43	648.92	1.01
BETPAP	0.52	0.44	0.60	692.55	1.01
BETPOP	0.80	0.72	0.88	644.22	1.01
DIELON	-0.32	-0.40	-0.24	677.06	1.01
MYRGAL	-0.31	-0.39	-0.22	673.49	1.01
SAMRAC	-0.11	-0.19	-0.03	697.58	1.01
SORAME	-0.11	-0.24	0.02	1326.93	1.00
SPIALB	-0.24	-0.31	-0.16	622.07	1.01
SPITOM	-0.29	-0.37	-0.21	656.81	1.01
VIBCAS	-0.24	-0.31	-0.16	645.10	1.01
GR	-0.05	-0.08	-0.02	542.18	1.01
HF	0.03	-0.00	0.06	552.77	1.00
SH	-0.02	-0.05	0.01	547.36	1.01
WM	0.04	0.01	0.07	531.84	1.01
sigma_a_sp	0.42	0.36	0.47	2254.62	1.00
sigma_a_pop	0.10	0.05	0.11	681.82	1.00
sigma_y	0.17	0.16	0.18	2568.16	1.00

20 Relative Growth Rate