Supplement B: Parameter estimates
Pulsed-resource mast systems and the movement, demographic storage, and diet breadth of consumers

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March 5, 2018

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Table SB0.1: Posterior estimates for maturation coefficients $\boldsymbol{\beta}^v$, main effect of species (intercepts) and species-diameter interaction.

	estimate	se	2.5%	97.5%
pinuEchi	-7.62	1.25	-10.20	-5.25
pinuRigi	-10.40	1.35	-13.10	-7.82
pinuStro	-8.90	0.31	-9.44	-8.22
pinuTaed	-9.31	0.21	-9.71	-8.89
pinuVirg	-10.70	1.34	-13.40	-8.13
pinuEchi: log(diam)	2.86	0.39	2.13	3.66
pinuRigi: log(diam)	3.92	0.47	3.01	4.86
pinuStro: log(diam)	2.63	0.10	2.42	2.81
pinuTaed: log(diam)	3.15	0.07	3.02	3.28
pinuVirg: log(diam)	3.82	0.47	2.94	4.76

Table SB0.2: Posterior estimates for fecundity coefficients $\boldsymbol{\beta}^x$, main effect of species (intercepts) and species-diameter interaction.

	estimate	se	2.5%	97.5%
pinuEchi	-7.96	1.17	-10.30	-5.69
pinuRigi	-10.90	1.46	-13.80	-8.19
pinuStro	-8.94	0.27	-9.43	-8.37
pinuTaed	-9.33	0.20	-9.72	-8.95
pinuVirg	-11.30	1.40	-14.20	-8.69
pinuEchi: log(diam)	2.97	0.37	2.26	3.71
pinuRigi: log(diam)	4.09	0.51	3.13	5.13
pinuStro: log(diam)	2.64	0.09	2.47	2.80
pinuTaed: log(diam)	3.16	0.06	3.04	3.29
pinuVirg: log(diam)	4.04	0.49	3.13	5.05

Table SB0.3: Posterior estimates for fixed year effects on fecundity, γ_t.

	estimate	se
1991	-0.10	0.63
1992	0.94	0.34
1993	1.34	0.15
1994	0.71	0.36
1995	1.26	0.20
1996	1.14	0.26
1997	-1.23	0.21
1998	-0.59	0.37
1999	0.64	0.37
2000	-0.68	0.36
2001	-0.59	0.34
2002	-0.57	0.35
2003	-0.57	0.35
2004	-0.01	0.36
2005	0.34	0.31
2006	0.16	0.30
2007	-0.65	0.36
2008	-0.06	0.32
2009	0.14	0.34
2010	-0.83	0.34
2011	-0.57	0.32
2012	-0.46	0.34
2013	0.12	0.29
2014	0.32	0.28
2015	0.05	0.30
2016	1.00	0.30
2017	-1.28	0.19

Table SB0.4: Year effects for random groups $\gamma_{g,t}$ begin in 1998, when multiple groups are first present. Groups are defined by species-region.

	pinuEchi DF	pinuRigi SAPP	pinuStro HF	pinuStro SAPP	pinuTaed DF	pinuTaed SAPP	pinuVirg DF
1998	-0.85	0.00	0.00	0.88	-0.02	-0.14	0.00
1999	0.17	0.00	0.00	-0.68	0.20	0.37	0.00
2000	-0.78	0.00	0.00	0.23	0.12	0.33	0.00
2001	-0.66	0.00	0.00	0.34	0.48	-0.07	0.00
2002	-0.82	0.00	0.00	0.23	0.33	0.33	0.00
2003	-0.05	0.00	0.00	-0.01	0.23	-0.27	0.00
2004	-0.67	0.04	0.00	0.40	0.36	-0.09	0.00
2005	0.83	0.66	0.00	-0.77	-0.78	-0.38	0.00
2006	0.77	1.01	0.00	-0.43	-1.05	-0.55	0.00
2007	-1.04	-0.08	0.00	0.32	0.63	0.68	0.00
2008	0.99	-0.49	0.00	-0.37	-0.14	-0.51	0.00
2009	-0.04	1.08	0.00	-0.40	-0.36	-0.93	0.00
2010	-0.84	-0.68	0.00	0.59	0.26	0.79	0.00
2011	-0.77	0.40	0.00	-0.12	0.15	0.30	0.00
2012	0.05	-0.64	0.00	0.14	0.55	0.04	0.00
2013	0.95	-0.12	0.00	-0.37	-0.14	-0.65	-0.06
2014	0.99	-0.36	0.00	-0.06	-0.61	0.55	-0.71
2015	-0.06	-0.24	0.00	0.45	-0.31	0.14	-0.05
2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2017	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table SB0.5: Posterior standard errors for random year coefficients in **??** and group variances τ_t^2.

	pinuEchi DF	pinuRigi SAPP	pinuStro HF	pinuStro SAPP	pinuTaed DF	pinuTaed SAPP	pinuVirg DF	τ_t^2
1998	-0.85	0.00	0.00	0.88	-0.02	-0.14	0.00	0.37
1999	0.17	0.00	0.00	-0.68	0.20	0.37	0.00	0.37
2000	-0.78	0.00	0.00	0.23	0.12	0.33	0.00	0.36
2001	-0.66	0.00	0.00	0.34	0.48	-0.07	0.00	0.34
2002	-0.82	0.00	0.00	0.23	0.33	0.33	0.00	0.35
2003	-0.05	0.00	0.00	-0.01	0.23	-0.27	0.00	0.35
2004	-0.67	0.04	0.00	0.40	0.36	-0.09	0.00	0.36
2005	0.83	0.66	0.00	-0.77	-0.78	-0.38	0.00	0.31
2006	0.77	1.01	0.00	-0.43	-1.05	-0.55	0.00	0.30
2007	-1.04	-0.08	0.00	0.32	0.63	0.68	0.00	0.36
2008	0.99	-0.49	0.00	-0.37	-0.14	-0.51	0.00	0.32
2009	-0.04	1.08	0.00	-0.40	-0.36	-0.93	0.00	0.34
2010	-0.84	-0.68	0.00	0.59	0.26	0.79	0.00	0.34
2011	-0.77	0.40	0.00	-0.12	0.15	0.30	0.00	0.32
2012	0.05	-0.64	0.00	0.14	0.55	0.04	0.00	0.34
2013	0.95	-0.12	0.00	-0.37	-0.14	-0.65	-0.06	0.29
2014	0.99	-0.36	0.00	-0.06	-0.61	0.55	-0.71	0.28
2015	-0.06	-0.24	0.00	0.45	-0.31	0.14	-0.05	0.30
2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
2017	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19

Table SB0.6: Posterior variances for random individual effects, $diag(\mathbf{B}_w)$.

	estimate	std err
pinuEchi	0.72	0.08
pinuRigi	0.71	0.08
pinuStro	0.71	0.08
pinuTaed	0.72	0.08
pinuVirg	0.72	0.08
pinuEchi: log(diam)	0.63	0.07
pinuRigi: log(diam)	0.62	0.08
pinuStro: log(diam)	0.47	0.06
pinuTaed: log(diam)	0.53	0.05
pinuVirg: log(diam)	0.75	0.08

Table SB0.7: Posterior mean estimates for the $M \times H$ matrix $\mathbf{m}$.

	pinuEchi	pinuRigi	pinuStro	pinuTaed	pinuVirg
pinuIMMAfruit	0.00	0.00	0.02	0.00	0.00
pinuRigi	0.00	0.44	0.01	0.00	0.00
pinuStro	0.00	0.00	0.04	0.00	0.00
pinuStrofruit	0.00	0.00	0.01	0.00	0.00
pinuTaed	0.00	0.00	0.01	0.01	0.00
pinuUNKN	0.98	0.39	0.90	0.98	0.99
pinuUNKNfruit	0.02	0.17	0.01	0.01	0.01

Table SB0.8: Posterior standard errors for the $M \times H$ matrix $\mathbf{m}$ in **??**.

	pinuEchi	pinuRigi	pinuStro	pinuTaed	pinuVirg
pinuIMMAfruit	0.00	0.00	0.00	0.00	0.00
pinuRigi	0.00	0.02	0.00	0.00	0.00
pinuStro	0.00	0.00	0.01	0.00	0.00
pinuStrofruit	0.00	0.00	0.00	0.00	0.00
pinuTaed	0.00	0.00	0.00	0.00	0.00
pinuUNKN	0.00	0.02	0.01	0.00	0.00
pinuUNKNfruit	0.00	0.02	0.00	0.00	0.00

Table SB0.9: Posterior standard errors for the residual variance and root mean square prediction error of seed trap data.

	estimate	std err	2.5%	97.5%
σ^2	3.14	0.06	3.05	3.29
rmspe	4.15	2.17	0.00	9.26

Table SB0.10: Posterior estimates for dispersal parameters u_g for random species-region groups, overall mean and variance, and transformed to mean dispersal distance d.

group	parameter	estimate	std.err	2.5%	97.5%
pinuEchi-DF	u (m^2)	183.00	1.94	179.00	187.00
pinuRigi-SAPP	u (m^2)	183.00	1.94	180.00	187.00
pinuStro-HF	u (m^2)	182.00	2.01	178.00	186.00
pinuStro-SAPP	u (m^2)	198.00	1.87	194.00	201.00
pinuTaed-DF	u (m^2)	183.00	2.08	179.00	187.00
pinuTaed-SAPP	u (m^2)	183.00	2.00	179.00	187.00
pinuVirg-DF	u (m^2)	182.00	1.98	178.00	186.00
mean	$\tilde{u}$ (m^2)	182.00	1.43	179.00	185.00
variance	$\tilde{U}$ (m^4)	1.63	0.01	1.60	1.66
pinuEchi-DF	d (m)	21.20	0.11	21.00	21.50
pinuRigi-SAPP	d (m)	21.30	0.11	21.00	21.50
pinuStro-HF	d (m)	21.20	0.12	21.00	21.40
pinuStro-SAPP	d (m)	22.10	0.10	21.90	22.30
pinuTaed-DF	d (m)	21.20	0.12	21.00	21.50
pinuTaed-SAPP	d (m)	21.20	0.12	21.00	21.50
pinuVirg-DF	d (m)	21.20	0.12	21.00	21.40
mean	$\tilde{d}$ (m)	21.20	0.08	21.00	21.40
variance	$\tilde{D}$ (m^2)	2.00	0.01	1.99	2.02