

Supplementary material

Short-term stem mortality of 10 deciduous broadleaved species following prescribed burning in upland forests of the Southern US

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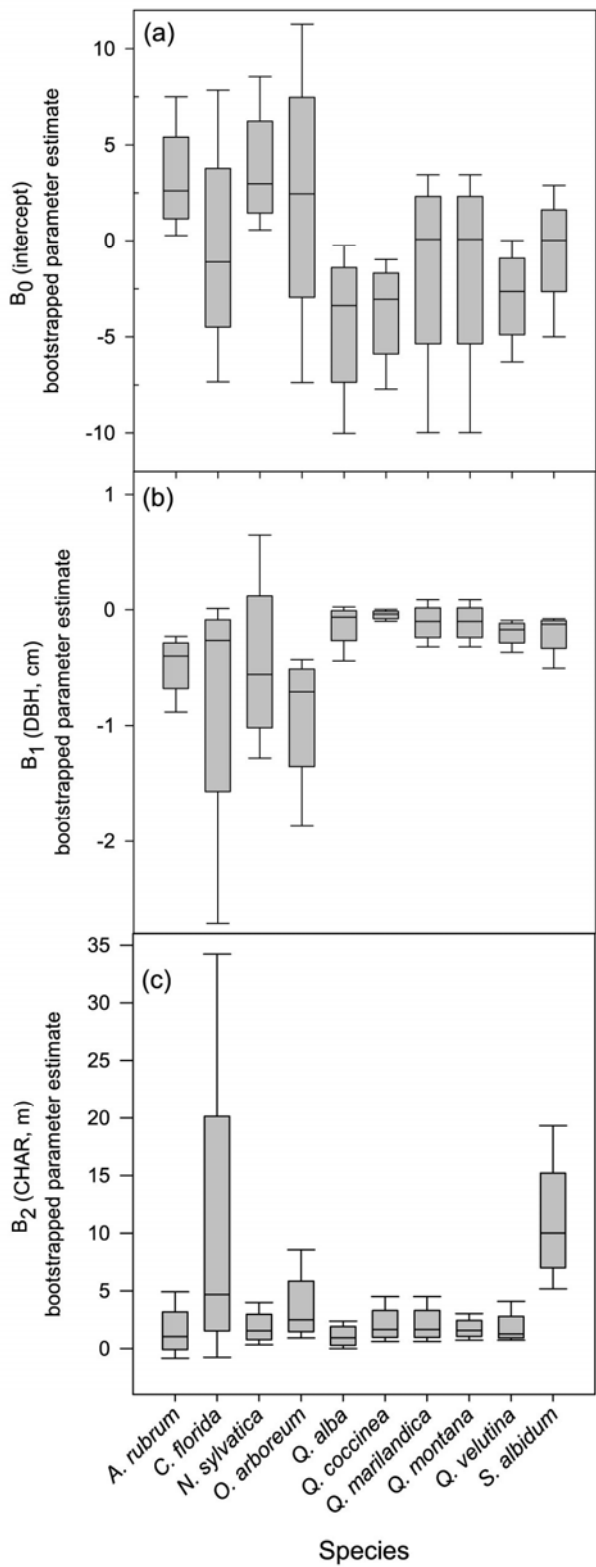


Fig. S1. Box plot displaying the range of values associated with the bootstrapped parameter estimates for ten deciduous broadleaved species common to upland forests in the southern US.

Table S1. Weather and prescribed burn information associated with the study sites

Max temp, maximum temperature (°C); Min RH, minimum relative humidity (%); DSLR (cm), number of days since last rain (in centimetres); BI, Burning Index; KBDI, Keetch–Byram Drought Index; 10-h FM, lowest 10-h fuel moisture during the burn (%); FT, Forest type of plots within burn unit as calculated in the Southern Variant of the Forest Vegetation Simulator (Keyser 2008). National Park acronyms are defined in Fig. 1. Forest type codes as follows: 103, *Pinus strobus*; 161, *Pinus taeda*; 162, *Pinus echinata*; 163, *Pinus virginiana*; 167, *Pinus rigida*; 181, *Juniperus virginiana*; 401, *Pinus strobus–Quercus rubra–Fraxinus americana*; 402, *Juniperus virginiana*–deciduous broadleaved; 404, *Pinus echinata–Quercus*; 405, *Pinus virginiana–Quercus falcata*; 406, *Pinus taeda*–deciduous broadleaved; 409, other *Pinus*–deciduous broadleaved; 501, *Quercus stellata–Quercus marilandica*; 502, *Quercus montana*; 503, *Quercus alba–Quercus rubra–Carya*; 504, *Quercus alba*; 510, *Quercus coccinea*; 515, *Quercus montana–Quercus velutina–Quercus coccinea*; 520, mixed upland deciduous broadleaved; 999, nonstocked

State	National park	Burn unit	Number of plots	Date	Max. air temp (°C)	Min. RH (%)	DSLR (cm)	BI	KBDI	10-h FM (%)	FT
AL	LIRI	Kral's Complex A	3	27-Mar-01	12	18	6 (1.07)	13	36	5	161, 162
AL	LIRI	Brook's Branch	5	09-Jun-02	29	48	3 (0.23)	17	444	9	404, 406, 501
AL	LIRI	07/08	4	12-Jun-02	34	29	6 (0.23)	18	483	8	502, 503, 515
AL	LIRI	01/103 A	2	13-Jun-02	33	37	7 (0.23)	20	496	9	163, 404
AL	LIRI	Slant Rock	2	21-Aug-06	31	55	1 (0.05)	16	636	18	515
AL	LIRI	01/103 B	1	09-Mar-07	20	25	7 (1.80)	38	34	8	404
AL	LIRI	Field School	1	12-Mar-07	19	21	1 (0.18)	38	53	5	405
AL	LIRI	10/06	1	08-Mar-09	22	48	7 (0.13)	33	27	10	405
AL	LIRI	Edna Hill	2	08-Mar-09	22	48	7 (0.13)	33	27	10	162, 502
KY	CUGA	Dark Ridge A&B	2	04-Apr-05	23	28	1 (0.36)	23	14	6	503, 515
KY	CUGA	Campground	1	24-Apr-06	27	42	2 (3.15)	20	37	9	503
KY	CUGA	Dark Ridge C	2	24-Apr-06	27	42	2 (3.15)	20	37	9	503, 515
KY	CUGA	Tiprell	3	28-Apr-06	23	23	2 (1.02)	18	59	6	515
KY	CUGA	Lewis Hollow	2	25-Mar-08	12	29	5 (1.40)	50	22	7	502, 515
KY	CUGA	Harlan A	4	07-Apr-08	23	40	1 (0.28)	26	16	9	502, 515
KY	CUGA	Hoot Owl Hollow	2	11-Apr-10	24	12	3 (1.37)	35	134	5	502, 515
KY	MACA	Temple Hills A	1	23-Apr-02	19	37	1 (0.13)	20	139	9	502
KY	MACA	Bruce Hollow	4	26-Feb-04	11	32	14 (0.08)	20	38	8	181
KY	MACA	Jim Lee	1	06-Apr-04	21	25	5 (0.03)	22	59	6	181
KY	MACA	Crystal Cave A	1	11-Apr-05	28	37	3 (0.20)	19	105	10	520

KY	MACA	Big Woods A	1	22-Apr-07	27	26	3 (0.03)	26	98	6	504
KY	MACA	Dennison Ferry	2	30-Apr-07	31	26	2 (0.10)	22	146	8	402, 503
KY	MACA	Goblin Knob	2	16-Apr-08	21	28	2 (0.23)	30	48	7	503, 504
KY	MACA	Peanut Knob	1	18-Apr-08	25	30	4 (0.23)	38	71	6	504
KY	MACA	Big Woods B	1	18-Mar-09	23	39	2 (0.03)	38	25	9	503
KY	MACA	Temple Hills B	1	23-Mar-09	22	30	7 (0.03)	34	55	8	502
KY	MACA	Crystal Cave B	2	20-Mar-12	29	35	2 (0.38)	23	54	8	163
MO	OZAR	Campbell Pt.	3	14-Mar-00	.	.	.	.	.	.	503, 504
MO	OZAR	Brandewiede	2	22-Mar-00	.	.	.	.	.	.	503, 999
MO	OZAR	Little Booming Shoal	3	23-Mar-00	.	.	.	.	.	.	503, 515, 999
MO	OZAR	Quarry	1	09-Mar-01	15	19	5 (1.09)	28	10	11	503
MO	OZAR	West Thorny	3	20-Mar-01	17	28	4 (0.97)	47	12	7	503, 504
MO	OZAR	Booming Shoal II	3	09-Apr-01	32	36	5 (2.24)	39	67	6	503, 515
MO	OZAR	Lower Thorny	1	01-Apr-02	22	23	6 (1.24)	17	44	8	504
MO	OZAR	Chilton Creek	5	23-Mar-03	22	20	2 (0.18)	22	15	9	504, 515, 999
MO	OZAR	Russell Mt.	4	10-Apr-03	19	13	3 (0.81)	21	21	9	503, 515, 999
MO	OZAR	Beaver Pond	1	25-Feb-04	9	43	13 (0.10)	27	32	11	515
MO	OZAR	Mill/Buzzard Mt.	1	04-Apr-04	23	11	5 (0.53)	19	94	8	999
MO	OZAR	South Chilton	4	04-Apr-06	21	15	1 (0.38)	20	63	5	503, 515
MO	OZAR	Angel Ridge	4	22-Mar-07	26	40	1 (0.48)	14	71	12	503, 515
MO	OZAR	Peavine	4	10-Mar-09	26	27	2 (0.64)	23	64	9	501, 503, 515
MO	OZAR	Vance/Barnett Mt.	1	24-Mar-11	26	9	4 (0.05)	21	90	10	999
MS	NATR	Trace East North	1	02-Apr-02	27	39	2 (3.53)	16	28	12	705
MS	NATR	Trace West South B	3	05-Apr-02	21	21	5 (3.53)	18	48	10	404, 406, 503
MS	NATR	Trace West South A	1	16-Apr-02	31	47	6 (2.72)	15	111	11	503
MS	NATR	Trace East South	2	12-Mar-03	15	32	6 (0.64)	15	23	9	406, 501
MS	NATR	Tishomingo	2	30-Apr-03	33	43	5 (3.30)	12	116	7	404, 503
MS	NATR	Milepost 17	1	15-Mar-08	29	40	4 (2.41)	99	73	8	161
MS	NATR	Needs Center	1	06-Apr-11	24	20	1 (2.04)	9	18	12	161
SC	KIMO	Battlefield	3	01-Apr-00	23	30	6 (4.70)	26	66	14	515
SC	KIMO	Brown's Mountain	2	11-Jun-01	31	49	2 (3.28)	23	269	8	502
SC	KIMO	Brown's Mt.	1	11-Jun-01	31	49	2 (3.28)	23	269	8	404
SC	KIMO	Y&S Road	3	24-Mar-02	21	16	3 (2.16)	25	27	8	502, 515
SC	KIMO	Houser House	1	17-Apr-02	31	40	3 (0.03)	16	147	9	502
SC	KIMO	Coneflower	4	24-May-02	27	23	6 (1.78)	23	310	7	501, 510, 515
SC	KIMO	Dellingham	1	14-Apr-03	27	21	3 (0.58)	21	43	8	502
SC	KIMO	Brushy Mt.	1	24-Jun-03	33	36	4 (0.58)	17	359	9	502
SC	KIMO	Midway	2	24-Mar-07	29	33	7 (0.03)	33	137	7	501, 515
SC	KIMO	Piedmont	1	08-Apr-09	16	23	2 (0.03)	50	105	6	502

SC	KIMO	Garner Creek	2	06-May-06	27	14	7 (1.55)	27	302	8	501
SC	KIMO	Turkeybeard	1	13-Jun-01	28	66	4 (3.28)	6	288	21	502
SC	CONG	RCW	1	08-Apr-99	31	24	7 (1.55)	22	218	7	161
TN	BISO	Divide Road	2	17-Apr-05	25	13	3 (1.27)	27	59	9	510, 515
TN	BISO	Bald Knob	2	13-Apr-06	26	26	5 (3.63)	34	48	10	510
TN	BISO	Darrow Ridge	1	24-Apr-06	26	41	2 (1.91)	20	29	9	515
TN	BISO	Gobbler's Knob	4	21-Mar-09	16	17	5 (0.74)	45	28	7	502, 503, 515
TN	GRSM	Tabcat 1	4	04-Aug-97	31	34	6 (0.61)	24	368	8	163, 167
TN	GRSM	Wedge Ridge	4	30-Oct-98	24	46	10 (0.03)	23	294	10	163, 167
TN	GRSM	Lynn Hollow	3	12-Jun-99	31	35	1 (0.03)	23	239	9	404, 502, 503
TN	GRSM	Stoney Ridge	3	23-Apr-01	28	35	6 (0.18)	25	66	5	163, 401
TN	GRSM	Arbutus Ridge	4	13-Mar-03	23	30	7 (2.82)	0	43	8	163, 167, 515
TN	GRSM	Tabcat 2	3	03-Apr-03	24	30	3 (1.42)	22	23	7	163, 404
TN	GRSM	Wash Ridge	4	08-Apr-04	24	17	5 (0.28)	19	36	8	515
TN	GRSM	Cooper Road	6	10-Apr-05	26	35	2 (0.48)	19	65	8	103, 163, 167, 502, 515
TN	GRSM	Beard Cane	2	21-Apr-08	21	36	2 (2.03)	25	49	7	510, 515
TN	GRSM	Wear Cove Gap	2	17-Apr-09	22	34	3 (0.94)	25	15	7	502
TN	GRSM	Canadian top	1	07-May-10	30	34	4 (5.89)	21	68	7	515
VA	SHEN	Jarman Gap	7	10-Apr-13	32	28	5 (0.28)	67	506	5	163, 167, 409, 502, 515
AR	BUFF	Lower Wilderness	7	10-Mar-04	.	.	.	.	.	.	503, 501, 404
AR	BUFF	Pruitt Cedar Glade	1	14-Mar-05	12	28	5 (0.79)	29	67	6	402
AR	BUFF	Riddell	1	03-Mar-05	17	28	3 (0.61)	29	13	8	503
AR	BUFF	Cecil Cove	3	11-Nov-09	22	46	12 (1.60)	0	112	16	503, 501, 510
AR	BUFF	Turney	2	19-Nov-08	23	25	4 (0.18)	7	279	6	501, 404
AR	BUFF	Barn Bluff	1	20-Nov-08	24	22	5 (0.18)	6	285	8	162
AR	PERI	Williams Hollow	3	16-Mar-03	24	38	3 (1.07)	29	41	9	503, 504
AR	PERI	Northeast Corner	2	16-Mar-03	24	38	3 (1.07)	29	41	9	501
AR	PERI	Huntsville East	1	23-Jan-04	.	.	.	.	.	.	503
AR	PERI	Tour South	2	02-Apr-06	29	42	1 (0.23)	0	131	35	501
AR	HOSP	North Mountain	2	12-Apr-06	26	41	5 (0.03)	30	145	10	503
AR	HOSP	Sugarloaf Mountain	2	20-Mar-07	22	55	4 (0.38)	26	154	11	503
AR	HOSP	Crabtree Cemetery	3	05-Nov-07	26	43	12 (0.05)	15	423	9	404, 503

Reference

Keyser CE (2008) Southern (SN) variant overview: Forest vegetation simulator. USDA Forest Service, Forest Management Service Center. (Fort Collins, CO, USA)

Available at https://www.fs.fed.us/fmhc/ftp/fvs/docs/overviews/FVSsn_Overview.pdf [Verified 26 June 2017]