

Additional file 2 Encounters by site and treatment and general response to treatments (TRT) for herbaceous species during (2008 to 2016) oak restoration experiments at Catoosa Wildlife Management Area (CWMA; Cumberland County, Tennessee, USA), Green River Game Lands (GRGL; Polk County, North Carolina, USA), and Land Between the Lakes National Recreation Area (LBL; Stewart County, Tennessee, USA). Treatments included unmanaged (UN), burn-only (O) in spring (Sp) or fall (Fa), and savanna (7 m² ha⁻¹, S) or woodland (14 m² ha⁻¹, W) residual basal area paired with spring (mid March) or fall (mid October) fire. We compared average encounters in treatments with average encounters in UN, and labeled response as positive (+, UN < treatments), negative (−, UN > treatments), neutral (N, UN = treatments), or rare (R, < 2 total encounters).

Graminoids Scientific name	CWMA					GRGL						LBL				TRT
	UN	SpW	FaW	SpS	FaS	UN	FaO	SpW	FaW	SpS	FaS	UN	SpO	SpW	SpS	
<i>Agrostis perennans</i> (Walter) Tuck.				3												+
<i>Agrostis scabra</i> Willd.					4					1						+
<i>Andropogon gerardii</i> Vitman	1	7	43	30	38				1	3	2	2		5		+
<i>Andropogon virginicus</i> L.		86	55	258	432	2		54	9	183	90	4	32	79		+
<i>Anthoxanthum odoratum</i> L.				3	1											+
<i>Arrhenatherum elatius</i> (L.) P. Beauv. Ex J. Presl & C. Presl			4		2											+
<i>Arundinaria appalachiana</i> Triplett, Weakley, & L.G. Clark								8		9						+
<i>Bouteloua curtipendula</i> (Michx.) Torr.				2												+
<i>Bromus arvensis</i> L.		1														R
<i>Bromus secalinus</i> L.				1												R
<i>Carex abscondita</i> Mackenzie								8								+
<i>Carex albicans</i> Willd. ex Spreng.		46	46	169	88	1		4	8	14	9	10	41	21	18	+
<i>Carex albursina</i> Sheldon			1			2							8	8	11	+
<i>Carex aureolensis</i> Steud.										1						R
<i>Carex blanda</i> Dewey								4						1	8	+
<i>Carex caroliniana</i> Schwein.		3			2											+
<i>Carex cephalophora</i> Muhl. ex Willd.				6								4	1	2	4	-
<i>Carex communis</i> L.H. Bailey		14													2	+
<i>Carex debilis</i> Michx.		9	4	22	20				1					1		+
<i>Carex digitalis</i> Willd.				2	2			1								+
<i>Carex gracilescens</i> Steud.													5	9	7	+
<i>Carex gravida</i> L.H. Bailey												1	1	10	9	+
<i>Carex hirsutella</i> Mack.	2	8	2	20	10							10	1	28	31	+
<i>Carex hirtifolia</i> Mack.						2			1							-
<i>Carex jamesii</i> Schwein.		2	2	22	19				6	1	2	1	32	14	31	+
<i>Carex laxiculmis</i> Schwein.						2	1		15	2						+
<i>Carex laxiflora</i> Lam.	1	1	3	4	14	2			2	1		11	24	24	21	+
<i>Carex louisianica</i> L.H. Bailey					1									1	1	+
<i>Carex picta</i> Steud.												1				R
<i>Carex prasina</i> Wahlenb.			1		6											+
<i>Carex rosea</i> Schkuhr ex Willd.					1											R
<i>Carex sparganioides</i> Muhl. ex Willd.												2				+
<i>Carex</i> L. spp.	25	49	46	83	34	3	1		1			68	109	114	139	+
<i>Carex striatula</i> Michx.				1	2				5	1			4		24	+
<i>Carex swanii</i> (Fernald) Mack.		39	80	138	135		2	12	15	7	4	6	18	96	207	+
<i>Carex virescens</i> Muhl. ex Willd.					2			2	41	22	14			14	1	+
<i>Chasmanthium laxum</i> (L.) Yates	2	111	131	391	179		1				1			92	88	+
<i>Chasmanthium sessiliflorum</i> (Poir.) Yates		93	52	104	118					1				1	6	+

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Graminoids, continued Scientific name	CWMA					GRGL						LBL				TRT
	UN	SpW	FaW	SpS	FaS	UN	FaO	SpW	FaW	SpS	FaS	UN	SpO	SpW	SpS	
<i>Chasmanthium</i> Link spp.	1											1				+
<i>Cyperus esculentus</i> L.						1						4				+
<i>Dactylis glomerata</i> L.												5				+
<i>Danthonia compressa</i> Austin	1											1				+
<i>Danthonia sericea</i> Nutt.	41 40 59 47					1 1 1 1						7 27 20				+
<i>Danthonia spicata</i> (L.) P. Beauv. Ex Roem. & Schult	69 24 228 96					1 4 7 1						10 4 41 35				+
<i>Danthonia</i> DC. spp.	1	101	53	207	109	6	1	1		4	2	18	56	88	151	+
<i>Dichantehlium latifolium</i> (L.) Gould & C.A. Clark	12 32 109 104					20 5 53 66 51 43						4 48 68 159				+
<i>Dichantheium aciculare</i> (Desv. ex Poir.) Gould & C.A. Clark	1	58	103	215	194	14 2 15						21 34 17				+
<i>Dichantheium commutatum</i> (Schultes) Gould	5	118	107	280	188	15 14 68 57 124 46						25 39 80				+
<i>Dichantheium depauperatum</i> (Muhl.) Gould	9 5											4 8				+
<i>Dichantheium dichotomum</i> (L.) Gould	3	117	131	451	267	7 3 19 46 96 24						4 20 202 245				+
<i>Dichantheium laxiflorum</i> (Lam.) Gould	79 37 168 86					1 1						4 110 101				+
<i>Dichantheium linearifolium</i> (Scribn. ex Nash) Gould	5 5 3 11											2 2 6				+
<i>Dichantheium oligosanthos</i> (Schult.) Gould	11															+
<i>Dichantheium polyanthes</i> (Schult.) Mohlenbr.	2	12	11	12	11	1						7 7				+
<i>Dichantheium scoparium</i> (Lam.) Gould	1 3 2 5											1 3				+
<i>Dichantheium sphaerocarpon</i> (Elliott) Gould	4 3															+
<i>Dichantheium</i> (Hitchc. & Chase) Gould spp.	16	235	131	281	186	19	18	37	25	78	30	59	107	200	320	+
<i>Digitaria ischaemum</i> (Schreb.) Schreb. ex Muhl.	2											2				+
<i>Elymus hystrix</i> L.	4	1				10 4						4 1 9				+
<i>Elymus virginicus</i> L.	1					6 1						4 2				+
<i>Juncus coriaceus</i> Mack.	1															R
<i>Juncus effusus</i> L.	6															+
<i>Juncus marginatus</i> Rostk.	1 1															+
<i>Juncus</i> L. spp.	1 5 4															+
<i>Juncus tenuis</i> Willd.	7 6					3						5 3				+
<i>Leersia virginica</i> Willd.	8 1 1					1										+
<i>Microstegium vimineum</i> (Trin.) A. Camus **	12 2 10 18					11 3 8 13						9 1				+
<i>Miscanthus sinensis</i> Anderss.**						1 13 2										+
<i>Muhlenbergia tenuiflora</i> (Willd.) Britt.	2	2				18 1						1 1 20				+
<i>Panicum anceps</i> Michx.	1 1 4					1						3 9				+
<i>Panicum rigidulum</i> Bosc ex Nees	1											1				+
<i>Piptochaetium avenaceum</i> (L.) Parodi	102	247	658	1484	1359	2	12 15 6 3				24 63 104 137				+	
<i>Rhynchospora capitellata</i> (Michx.) Vahl	1 7											1				+
<i>Rhynchospora</i> Vahl spp.	3											3				+
<i>Saccharum alopecuroides</i> (L.) Nutt.	1															R

** Non-native invasive species.

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Graminoids, continued						GRGL						LBL				
Scientific name	UN	SpW	FaW	SpS	FaS	UN	FaO	SpW	FaW	SpS	FaS	UN	SpO	SpW	SpS	TRT
<i>Schedonorus arundinaceus</i> (Schreb.) Dumort.				8										57	11	+
<i>Schizachyrium scoparium</i> (Michx.) Nash		14	45	82	34		1			11	6		2	17	13	+
<i>Schoenoplectus tabernaemontani</i> (C.C. Gmel.) Palla					1			1								+
<i>Scirpus cyperinus</i> (L.) Kunth				1							1					+
<i>Scirpus pendulus</i> Muhl.					1						2					+
<i>Scleria minor</i> W. Stone		16	16	37	41			9	2	17	1		1	8	12	+
<i>Scleria triglomerata</i> Michx.		4	3	25	35			7	1	44	6			7		+
<i>Sorghastrum nutans</i> (L.) Nash			3	1	10										5	+
<i>Sorghum halepense</i> (L.) Pers.													1	2		+
<i>Steinchisma hians</i> (Elliott) Nash		2			3										2	+

Legumes						GRGL						LBL				
Scientific name	UN	SpW	FaW	SpS	FaS	UN	FaO	SpW	FaW	SpS	FaS	UN	SpO	SpW	SpS	TRT
<i>Amphicarpaea bracteata</i> (L.) Fernald	1		1		2							9	22	30	39	+
<i>Baptisia tinctoria</i> (L.) R. Br.		1		10		1		1								+
<i>Chamaecrista fasciculata</i> (Michx.) Greene			5	12	6			2	1		2			2		+
<i>Chamaecrista nictitans</i> (L.) Moench		6	22	33	54			2	6		6					+
<i>Clitoria mariana</i> L.			2		2									1	1	+
<i>Desmodium cuspidatum</i> (Muhl. ex Willd.) DC. ex D. Don															5	+
<i>Desmodium glabellum</i> (Michx.) DC.					2											+
<i>Desmodium laevigatum</i> (Nutt.) DC.			1	3	8				1			2	3	11	5	+
<i>Desmodium marlandicum</i> (L.) DC.			1	1		1		1					1	1	6	+
<i>Desmodium nudiflorum</i> (L.) DC.	31	13	6	6	6	13	1	1	38			14	23	8	32	-
<i>Desmodium nuttallii</i> (Schindl.) B.G. Schub.				2	1								1		3	+
<i>Desmodium obtusum</i> (Muhl. Ex Willd.) DC.					1								4			+
<i>Desmodium paniculatum</i> (L.) DC.									1						4	+
<i>Desmodium rotundifolium</i> DC.		1	3		2	2		1	4	1	2	3	30	7	38	+
<i>Desmodium</i> Desv. spp.	2				3								8	3	4	+
<i>Galactia volubilis</i> (L.) Britton									1			1	1		7	+
<i>Lespedeza cuneata</i> (Dum. Cours.) G. Don		3		5	8					1				3	9	+
<i>Lespedeza hirta</i> (L.) Hornem.		4	9	20	40								15	20	15	+
<i>Lespedeza intermedia</i> (L.) Pers.					2											+
<i>Lespedeza procumbens</i> Michx.		7	18	14	25				8		1	5	14	50	47	+
<i>Lespedeza repens</i> (L.) W.P.C. Barton		24	25	114	100			2	5	3		5	27	47	39	+
<i>Lespedeza</i> Michx. spp.		2	4	14	7			1					4	4	16	+
<i>Lespedeza violacea</i> (L.) Pers.		3			10					1						+
<i>Lespedeza virginica</i> (L.) Britton					1									1	1	+

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Legumes, continued		CWMA					GRGL						LBL				
Scientific name	UN	SpW	FaW	SpS	FaS	UN	FaO	SpW	FaW	SpS	FaS	UN	SpO	SpW	SpS	TRT	
<i>Mimosa microphylla</i> Dryand.		2	2	3	6											+	
<i>Orbexilum pedunculatum</i> (Mill.) Rydb.		1	3		1								1			+	
<i>Strophostyles helvola</i> (L.) Elliott															4	+	
<i>Stylosanthes biflora</i> (L.) Britton, Sterns & Poggenb.															1	R	
<i>Trifolium campestre</i> Schreb.					1				1							+	
<i>Trifolium repens</i> L.													3			+	
Other forbs		CWMA					GRGL						LBL				TRT
Scientific name	UN	SpW	FaW	SpS	FaS	UN	FaO	SpW	FaW	SpS	FaS	UN	SpO	SpW	SpS		
<i>Acalypha virginica</i> L.				2				5	1			1		6	8	+	
<i>Achillea millefolium</i> L.														1		R	
<i>Actaea racemosa</i> L.						1			26			15	22	11	19	+	
<i>Agalinis gattereri</i> (Small) Small										1						R	
<i>Agalinis tenuifolia</i> (Vahl) Raf.				3	4									1		+	
<i>Ageratina altissima</i> (L.) R.M. King & H. Rob.									16			1	2	4	11	+	
<i>Ageratina aromatica</i> (L.) Spach													1		1	+	
<i>Ageratina luciae-brauniae</i> (Fernald) R.M. King & H. Rob.									2							+	
<i>Agrimonia striata</i> Michx.	1								1							-	
<i>Agrimonia pubescens</i> Wallr.		1						2	7			1	2	2	6	+	
<i>Ambrosia trifida</i> L.								1								R	
<i>Ambrosia artemisiifolia</i> L.		1		6				1	6	6	1		1		2	+	
<i>Angelica venenosa</i> (Greenway) Fernald				2	3										2	+	
<i>Antennaria plantaginifolia</i> (L.) Richardson		1	1	7	8	1		3					1		5	+	
<i>Aristolochia serpentaria</i> L.			7			2									1	N	
<i>Arnoglossum reniforme</i> (Hook.) H. Rob.								1								R	
<i>Asclepias variegata</i> L.								2					1			+	
<i>Aster</i> L. spp.			1	13	3				1					4	1	+	
<i>Astilbe biternata</i> (Vent.) Britton									1							R	
<i>Aureolaria virginica</i> (L.) Pennell					1									2		+	
<i>Aureolaria laevigata</i> (Raf.) Raf.			3													+	
<i>Bidens aristosa</i> (Michx.) Britton				2	4											+	
<i>Blephilia ciliata</i> (L.) Benth.						1		3						1		N	
<i>Blephilia hirsuta</i> (Pursh) Benth.					2											+	
<i>Boehmeria cylindrica</i> (L.) Sw.						1			2							-	
<i>Bradburia pilosa</i> Nutt.				1	1											+	
<i>Ceanothus americanus</i> L.				3	4											+	
<i>Chamaelirium luteum</i> (L.) A. Gray		1														R	

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	UN	SpW	FaW	SpS	FaS	UN	FaO	SpW	FaW	SpS	FaS	UN	SpO	SpW	SpS	
<i>Chimaphila maculata</i> (L.) Pursh	21	4	9	1	2	2	1									-
<i>Chrysopsis mariana</i> (L.) Elliott		1	1	2	6											+
<i>Circaea lutetiana</i> L.		3	4		4							1	2	1		+
<i>Cirsium carolinianum</i> (Walter) Fernald & B.G. Schub.					3											+
<i>Cirsium discolor</i> (Muhl. ex Willd.) Spreng.				2	1				1		1		2			+
<i>Cleistes bifaria</i> (Fernald) Catling & Gregg		1	1	3	5				1							+
<i>Collinsonia canadensis</i> L.						1										R
<i>Collinsonia tuberosa</i> Michx.							1									R
<i>Comandra umbellata</i> (L.) Nutt.				2	2								3			+
<i>Conopholis americana</i> (L.) Wallr.	1								1							-
<i>Conyza canadensis</i> (L.) Cronquist		4	16	46	101			8	3	18	10			4	7	+
<i>Coreopsis major</i> Walter	1	36	43	57	76	13	1	11	3	13	4		6	8	10	+
<i>Cunila origanoides</i> (L.) Britton						2			7		12	10	23	81	19	+
<i>Cuscuta</i> L. spp.			2	1												+
<i>Cynoglossum virginianum</i> L.								1				13	11	2	2	-
<i>Daucus carota</i> L.									1							R
<i>Diodia teres</i> Walter															1	R
<i>Dioscorea villosa</i> L.		2	6	4	4	6	2		5		1	4	5	2	16	+
<i>Doellingeria umbellata</i> (Mill.) Nees			2													+
<i>Elephantopus carolinianus</i> Raeusch.		4	2	1	8			1	2			3			2	+
<i>Elephantopus tomentosus</i> L.		3	2	1	8			1	2							+
<i>Epigaea repens</i> L.							1									R
<i>Erechtites hieraciifolia</i> (L.) Raf. ex DC.	1	54	14	298	145		1	48	30	184	34	2	3	115	92	+
<i>Erigeron annuus</i> (L.) Pers.					1								1		2	+
<i>Eryngium yuccifolium</i> Michx.					1											R
<i>Eupatorium album</i> L.									3							+
<i>Eupatorium perfoliatum</i> L.					1									1		+
<i>Eupatorium pilosum</i> Walter			1	3	4											+
<i>Eupatorium purpureum</i> (L.) E.E. Lamont								2	16	1						+
<i>Eupatorium serotinum</i> Michx.	1	1	1	21	13									3	1	+
<i>Eupatorium sessilifolium</i> L.									14							+
<i>Eupatorium capillifolium</i> (Lam.) Small				2	6			2		4	1				12	+
<i>Eupatorium hyssopifolium</i> L.				1	2										1	+
<i>Eupatorium rotundifolium</i> L.		8	2	17	18											+
<i>Euphorbia corollata</i> L.			1	1	1		1		1	3				1	1	+
<i>Eurybia divaricata</i> (L.) G.L. Nesom									1							R
<i>Eurybia hemispherica</i> (Alexander) G.L. Nesom			11	7	5											+

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Other forbs, continued	CWMA					GRGL					LBL				TRT	
Scientific name	UN	SpW	FaW	SpS	FaS	UN	FaO	SpW	FaW	SpS	FaS	UN	SpO	SpW		SpS
<i>Eurybia surculosa</i> (Michx.) G.L. Nesom		6	3	19	5											+
<i>Fragaria virginiana</i> Duchesne				2	2						2					+
<i>Frasera caroliniensis</i> Walter												3			1	-
<i>Galax urceolata</i> (Poir.) Brummitt	1	1	1	2		6	144	13	14	56	82	11	1	2	1	+
<i>Galearis spectabilis</i> (L.) Raf.							1									R
<i>Galium aparine</i> L.				2					1				1	1		+
<i>Galium circaezans</i> Michx.	4	6	7	3	3	2		15	15	1		3	3	5	7	+
<i>Galium pilosum</i> Aiton		1		1												+
<i>Galium triflorum</i> Michx.			3						2					2		+
<i>Gamochaeta purpurea</i> (L.) Cabrera		2		9	7			1	1		1		2	1	1	+
<i>Gentiana decora</i> Pollard					1				2							+
<i>Gentiana saponaria</i> L.		1			1		1									+
<i>Gentiana villosa</i> L.			2													+
<i>Gillenia stipulata</i> (Muhl. ex Willd.) Baill.													1		5	+
<i>Gnaphalium obtusifolium</i> L.		16	7	89	46							1	1	6	5	+
<i>Goodyera pubescens</i> (Willd.) R. Br.									1							R
<i>Helianthus divaricatus</i> L.								3						1		+
<i>Helianthus hirsutus</i> Raf.		1		1									3		5	+
<i>Helianthus</i> L. spp.									1							R
<i>Helianthus strumosus</i> L.													3			+
<i>Helianthus microcephalus</i> Torr. & Gray					1	1		1	7					1		+
<i>Hexastylis arifolia</i> (Michx.) Small	1	1		1	5											+
<i>Hieracium longipilum</i> Torr.														1		R
<i>Hieracium venosum</i> L.		1			1			2	1	3				1		+
<i>Houstonia caerulea</i> L.		1			2			1								+
<i>Houstonia purpurea</i> L.								3	11	8	4					+
<i>Hypericum denticulatum</i> Walter															2	+
<i>Hypericum drummondii</i> (Grev. & Hook.) Torr. & A. Gray				2	5										4	+
<i>Hypericum nudiflorum</i> Michx. ex Willd.				1												R
<i>Hypericum stragulum</i> P. Adams & N. Robson		9	7	27	16				2	4	1	1	3	17	3	+
<i>Hypericum mutilum</i> L.		1		1							2	6	6	20	12	+
<i>Hypochaeris radicata</i> L.										4	1					+
<i>Hypoxis hirsute</i> (L.) Coville									1	2						+
<i>Impatiens capensis</i> Meerb.								1								R
<i>Impatiens pallida</i> Nutt.														1		R
<i>Ipomoea pandurata</i> (L.) G. Mey.		2	1	1	4	1			7	2				2	2	+
<i>Iris cristata</i> Aiton		2		11	3	3		7		10	1	2	5		2	+

Continued next page.

Additional file 2, continued Encounters by site and treatment and general response to treatments (TRT) for herbaceous species during (2008 to 2016) oak restoration experiments at Catoosa Wildlife Management Area (CWMA; Cumberland County, Tennessee, USA), Green River Game Lands (GRGL; Polk County, North Carolina, USA), and Land Between the Lakes National Recreation Area (LBL; Stewart County, Tennessee, USA). Treatments included unmanaged (UN), burn-only (O) in spring (Sp) or fall (Fa), and savanna (7 m² ha⁻¹, S) or woodland (14 m² ha⁻¹, W) residual basal area paired with spring (mid March) or fall (mid October) fire. We compared average encounters in treatments with average encounters in UN, and labeled response as positive (+, UN < treatments), negative (–, UN > treatments), neutral (N, UN = treatments), or rare (R, < 2 total encounters).

Other forbs, continued Scientific name	CWMA					GRGL						LBL					TRT
	UN	SpW	FaW	SpS	FaS	UN	FaO	SpW	FaW	SpS	FaS	UN	SpO	SpW	SpS		
<i>Iris verna</i> L.		1		10	8										1	+	
<i>Krigia biflora</i> (Walter) S.F. Blake		7	2	4	5					2			2		1	+	
<i>Lactuca canadensis</i> L.			3	6	7				1				2	5	2	+	
<i>Lactuca floridana</i> (L.) Gaertn.		4	1	1	6	1			1	2				3		+	
<i>Lechea minor</i> L.			5	4	2											+	
<i>Lechea</i> L. spp.			2	2												+	
<i>Lechea mucronate</i> Raf.		1	1	1												+	
<i>Liatris aspera</i> Michx.					2									3		+	
<i>Ligusticum canadense</i> (L.) Britton			1		4											+	
<i>Linum medium</i> (Planch.) Britton				3	6											+	
<i>Lobelia spicata</i> Lam.					1											R	
<i>Lobelia inflata</i> L.										1	2					+	
<i>Lobelia puberula</i> Michx.				4	2				3	1				2	5	+	
<i>Ludwigia alternifolia</i> L.					2									2	3	+	
<i>Lycopus americanus</i> Muhl. ex W.P.C. Barton					3											+	
<i>Lycopus virginicus</i> L.				1					1							+	
<i>Lysimachia ciliate</i> L.		3														+	
<i>Lysimachia quadrifolia</i> L.		104	90	216	122	2		18	30	14	3	3	2	3	3	+	
<i>Lysimachia lanceolata</i> Walter				8	1											+	
<i>Maianthemum racemosum</i> (L.) Link	3	1	1	4	4	3			11			2	1	1	1	-	
<i>Medeola virginiana</i> L.						1		1	4				1			+	
<i>Mikania scandens</i> (L.) Willd.													1			R	
<i>Mitchella repens</i> L.	8	2		1												-	
<i>Monarda didyma</i> L.									1							R	
<i>Monarda fistulosa</i> L.									1			3	4	28	9	+	
<i>Mosla dianthera</i> (Buch.-Ham. ex Roxb.) Maxim.**		1		1												+	
<i>Oxalis grandis</i> Small		3		1				2	7	5			1	3	11	+	
<i>Packera anonyma</i> (Wood) Weber & A. Löve			1	2	3								2			+	
<i>Panax quinquefolius</i> L.														1		R	
<i>Passiflora lutea</i> L.								2	3	1		1	2		1	+	
<i>Perilla frutescens</i> (L.) Britton													6	3	8	+	
<i>Phlox amoena</i> Sims					6											+	
<i>Phryma leptostachya</i> L.															2	+	
<i>Physalis virginiana</i> Mill.				1												R	
<i>Phytolacca Americana</i> L.		1		3	2			8	19	9	7					+	
<i>Pityopsis graminifolia</i> (Michx.) Nutt.					1											R	
<i>Plantago aristate</i> Michx.				1	2									1	2	+	

** Non-native invasive species.

Continued next page.

Additional file 2, continued Encounters by site and treatment and general response to treatments (TRT) for herbaceous species during (2008 to 2016) oak restoration experiments at Catoosa Wildlife Management Area (CWMA; Cumberland County, Tennessee, USA), Green River Game Lands (GRGL; Polk County, North Carolina, USA), and Land Between the Lakes National Recreation Area (LBL; Stewart County, Tennessee, USA). Treatments included unmanaged (UN), burn-only (O) in spring (Sp) or fall (Fa), and savanna (7 m² ha⁻¹, S) or woodland (14 m² ha⁻¹, W) residual basal area paired with spring (mid March) or fall (mid October) fire. We compared average encounters in treatments with average encounters in UN, and labeled response as positive (+, UN < treatments), negative (–, UN > treatments), neutral (N, UN = treatments), or rare (R, < 2 total encounters).

Other forbs, continued Scientific name	CWMA					GRGL					LBL				TRT	
	UN	SpW	FaW	SpS	FaS	UN	FaO	SpW	FaW	SpS	FaS	UN	SpO	SpW		SpS
<i>Plantago major</i> L.										1						R
<i>Podophyllum peltatum</i> L.									4		6	4	2	3		-
<i>Polygala polygama</i> Walter				11	21											+
<i>Polygala curtissii</i> A. Gray								1								R
<i>Polygonatum biflorum</i> (Walter) Elliott	4		4	8	3	1		4	11			1			4	+
<i>Polygonatum pubescens</i> (Willd.) Pursh									1							R
<i>Polygonum cespitosum</i> Blume					2								1	1		+
<i>Polygonum</i> L. spp.				3												+
<i>Porteranthus trifoliatius</i> (L.) Britton		1	1	5	3								1		2	+
<i>Potentilla canadensis</i> L.	1	19	7	83	74	2		72	89	47	32		2	10	10	+
<i>Potentilla simplex</i> Michx.	3	13	7	17	18			1					4	11	34	+
<i>Prunella vulgaris</i> L.										1	2					+
<i>Pycnanthemum loomisii</i> Nutt.		1		3					3							+
<i>Pycnanthemum montanum</i> Michx.					2	1		6	3							+
<i>Pycnanthemum pycnanthemoides</i> (Leavenworth) Fernald						1			8			4	9	6	4	+
<i>Pycnanthemum tenuifolium</i> Schrad.														1		R
<i>Ranunculus recurvatus</i> Poir.	3		1			1			17					5	2	+
<i>Ranunculus septentrionalis</i> Poir.									1							R
<i>Rhexia mariana</i> L.		1		3	5											+
<i>Rhexia virginica</i> L.				2	5											+
<i>Rosa carolina</i> L.				4	1							1	1	1	6	+
<i>Rosa setigera</i> Michx.					1											R
<i>Rudbeckia hirta</i> L.				2	3											+
<i>Ruellia humilis</i> Nutt.															3	+
<i>Rumex acetosella</i> L.				9												+
<i>Sabatia angularis</i> (L.) Pursh				2	3									2		+
<i>Salvia lyrata</i> L.				3			1		2						3	+
<i>Sanguinaria canadensis</i> L.						1		1	6							+
<i>Saururus cernuus</i> L.					1											R
<i>Scutellaria incana</i> Biehler			3	2	4											+
<i>Scutellaria integrifolia</i> L.		2	1	3												+
<i>Scutellaria serrata</i> Andrews					1											R
<i>Scutellaria</i> L. spp.									1							R
<i>Scutellaria elliptica</i> Muhl. ex Spreng.		6		3	2			1	5				1	1		+
<i>Sericocarpus linifolius</i> (L.) Britton, Sterns & Poggenb.			4										3			+
<i>Silene stellata</i> (L.) W.T. Aiton								1	3							+
<i>Sisyrinchium albidum</i> Raf.				2	6											+

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Other forbs, continued Scientific name	CWMA					GRGL						LBL				TRT
	UN	SpW	FaW	SpS	FaS	UN	FaO	SpW	FaW	SpS	FaS	UN	SpO	SpW	SpS	
<i>Sisyrinchium angustifolium</i> Mill.								1								R
<i>Sisyrinchium mucronatum</i> Michx.								2								+
<i>Smilax biltmoreana</i> (Small) J.B.S. Norton ex Pennell						2				2		1				-
<i>Smilax ecirrhata</i> (Engelm. ex Kunth) S. Watson						1										R
<i>Solanum carolinense</i> L.		5		3	3											+
<i>Solidago altissima</i> L.			1		2			2					2	4		+
<i>Solidago arguta</i> Aiton			1		1											+
<i>Solidago bicolor</i> L.								1				1				+
<i>Solidago caesia</i> L.	1		2	2	2	1		3	3			2	4	2		+
<i>Solidago curtisii</i> Torr. & A. Gray			4													+
<i>Solidago erecta</i> Pursh		1	1	3	9							5	4	19		+
<i>Solidago gigantea</i> Aiton					1			1								+
<i>Solidago hispida</i> Muhl. ex Willd.														1		R
<i>Solidago juncea</i> Aiton			2					1								+
<i>Solidago nemoralis</i> Aiton		2										1	5	3		+
<i>Solidago odora</i> Aiton		25	102	153	233	1	1					1	8	28		+
<i>Solidago rugosa</i> Mill.		1	8	78	38			2			1	2	4	2		+
<i>Solidago speciosa</i> Nutt.		6														+
<i>Solidago sphacelata</i> Raf.														1		R
<i>Solidago</i> L. spp.			10	3				3	2					1		+
<i>Solidago ulmifolia</i> Muhl. ex Willd.												1				R
<i>Spiraea tomentosa</i> L.		3														+
<i>Streptopus roseus</i> Michx.	6		1	2	1							2	2			-
<i>Symphyotrichum patens</i> (Aiton) G.L. Nesom												1		2		+
<i>Symphyotrichum pilosum</i> (Willd.) G.L. Nesom		9	10	19	61					2			5			+
<i>Taraxacum officinale</i> F.H. Wigg.				1							1					+
<i>Tephrosia virginiana</i> (L.) Pers.														2		+
<i>Teucrium canadense</i> L.					3									2		+
<i>Thalictrum pubescens</i> Pursh.		9			2											+
<i>Thalictrum revolutum</i> DC.					5											+
<i>Thalictrum thalictroides</i> (L.) Eames & B. Boivin						2						1				-
<i>Torilis arvensis</i> (Huds.) Link										7			1		5	+
<i>Trillium grandiflorum</i> (Michx.) Salisb.												1				R
<i>Trillium</i> L. spp.						1		1				3	2		3	-
<i>Triodanis perfoliata</i> (L.) Nieuwl.			2													+
<i>Uvularia perfoliata</i> L.	6	1		2	3	3				2		1	1		2	-
<i>Uvularia sessilifolia</i> L.								1				1		1		-

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Other forbs, continued		CWMA					GRGL						LBL				TRT
Scientific name		UN	SpW	FaW	SpS	FaS	UN	FaO	SpW	FaW	SpS	FaS	UN	SpO	SpW	SpS	
<i>Verbasicum thapsus</i> L.									1					1			+
<i>Verbesina occidentalis</i> (L.) Walter									27								+
<i>Verbesina alternifolia</i> (L.) Britton ex Kearney						2			3		3		4				+
<i>Vernonia gigantea</i> (Walter) Trel.				2	3	1			3						1		+
<i>Viola canadensis</i> L.					1												R
<i>Viola hastata</i> Michx.	1						5	4	4								+
<i>Viola lanceolata</i> L.			6		5	2											+
<i>Viola primulifolia</i> L.					5												+
<i>Viola pubescens</i> Aiton				2	5	5	1	3	12	12	16		2	1	9	7	+
<i>Viola sagittate</i> Aiton			1	16	14	7		2	4		6						+
<i>Viola</i> L. spp.					1	1	1		3	27	1	10				1	+
<i>Viola triloba</i> Schwein.	1								1	6	1		5	8	3	4	–
<i>Viola hirsutula</i> Brainerd	1			1		4	5		4	3	8		1	1	1		–
<i>Viola rotundifolia</i> Michx.	3			5	1												–
<i>Viola sororia</i> Willd.				2	1	4			2		1		1	1			+
<i>Xyris torta</i> Sm.											1						R
Ferns		CWMA					GRGL						LBL				TRT
Scientific name		UN	SpW	FaW	SpS	FaS	UN	FaO	SpW	FaW	SpS	FaS	UN	SpO	SpW	SpS	
<i>Asplenium bradleyi</i> D.C. Eaton													1				R
<i>Asplenium platyneuron</i> (L.) Britton, Sterns & Poggenb.													1				R
<i>Athyrium filix-femina</i> (L.) Roth			66	45	36	108	1	4	71	9	16	3			4	27	+
<i>Botrychium virginianum</i> (L.) Sw.									1				2				–
<i>Dennstaedtia punctilobula</i> (Michx.) T. Moore						1									1		+
<i>Dryopteris intermedia</i> (Muhl. ex Willd.) A. Gray	7	11				4			2	12			1	2			+
<i>Lygodium palmatum</i> (Bernh.) Sw.			16	127	40	36									1		+
<i>Osmunda cinnamomea</i> L.			16	36	83	117			20		1	2	1				+
<i>Osmunda regalis</i> L.				7	25	18											+
<i>Phegopteris hexagonoptera</i> (Michx.) Fée									1	2			4	21		2	+
<i>Polystichum acrostichoides</i> (Michx.) Schott	54	5	9	16	20		9		3	15	9	4	33	71	26	23	–
<i>Pteridium aquilinum</i> (L.) Kuhn			55	37	19	11	4	1		6	1	2	2	9	2	46	+
<i>Sceptridium bitermatum</i> (Sav.) Lyon						1											R
<i>Thelypteris noveboracensis</i> (L.) Nieuwl.	2	159	72	69	106			8	67		9	10	1				+
<i>Woodwardia areolata</i> (L.) T. Moore														3	1	2	+