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Supplementary Material

Past fire shaping future fuel: influence of recent fire history on forest foliage chemistry

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Table S1. Model selection table for Log Carbon:Nitrogen. Top ranked models with a delta less than 2.5 shown. '+' indicates the term's presence in the model. Type = Fresh or Litter, FF = Fire Frequency, TSF = Time Since Fire. Elevation and DBH (diameter at breast height) were scaled in the model. Bolded model indicates most parsimonious model. Random terms for each model were Tree/Site

cnd((Int))	dsp((Int))	FF	DBH	Elevation	TSF	Type	FF:TSF	FF:Type	df	logLik	AICc	delta	weight
3.962	+	+	0.02684	0.03037		+		+	9	76.294	-133.7	0.00	0.365
3.951	+	+	0.02752		+	+		+	9	75.707	-132.6	1.17	0.203
3.974	**+**	**+**	**0.02934**			**+**		**+**	**8**	**74.548**	**-132.4**	**1.32**	**0.189**
3.963	+	+	0.02685	0.03180	+	+		+	10	76.295	-131.5	2.19	0.122
3.966	+	+	0.02626		+	+	+	+	10	76.290	-131.5	2.20	0.121

Table S2. Model selection table for Log Carbon:Phosphorus. Top ranked models with a delta less than 2.5 shown. '+' indicates the term's presence in the model. Type = Fresh or Litter, FF = Fire Frequency, TSF = Time Since Fire. Elevation and DBH (diameter at breast height) were scaled in the model. Bolded model indicates most parsimonious model. Random terms for each model were Tree/Site

cnd((Int))	dsp((Int))	FF	DBH	Elevation	TSF	Type	FF:TSF	FF:Type	df	logLik	AICc	delta
6.532	+	**+**		**0.2142**		**+**			**7**	**-19.241**	**53.4**	**0.00**
6.599	+	+		0.3043	+	+			8	-18.676	54.6	1.14
6.550	+	+		0.2144		+	+		8	-18.829	54.9	1.45
6.534	+	+	0.004887	0.2137		+			8	-19.223	55.6	2.24
6.576	+	+		0.3043	+	+		+	9	-18.102	55.7	2.31

Table S3. Model selection table for Log Carbon:Potassium. Top ranked models with a delta less than 2.5 shown. '+' indicates the term's presence in the model. Type = Fresh or Litter, FF = Fire Frequency, TSF = Time Since Fire. Elevation and DBH (diameter at breast height) were scaled in the model. Bolded model indicates most parsimonious model. Random terms for each model were Tree/Site

cnd((Int))	dsp((Int))	FF	DBH	Elevation	TSF	Type	FF:Type	df	logLik	AICc	delta
5.504	**+**	**+**				**+**	**+**	**7**	**-14.360**	**43.6**	**0.00**
5.491	+	+			+	+	+	8	-14.217	45.6	1.99
5.526	+	+		0.0766	+	+	+	9	-13.065	45.6	2.00
5.508	+	+	0.01271			+	+	8	-14.231	45.7	2.02

Table S4. Minimum, maximum, mean, and standard deviation of leaf nutrient data separated by fire treatment and leaf type (fresh or litter). C:P = Carbon:Phosphorus, C:K = Carbon:Potassium, C:N = Carbon:Nitrogen, N:P = Nitrogen:Phosphorus, DBH = Diameter at Breast Height.

		Nitrogen (%)	Carbon (%)	Phosphorus (%)	Potassium (%)	C:P	C:K	C:N	N:P	DBH (metres)	Tree Elevation (metres)
10 – 20 years Time since fire, High fire frequency											
Litter	min	0.4	52.54	0.013	0.013	1641.9	1616.1	61.4	20.7	0.2	7.34
	max	0.91	55.97	0.034	0.035	4206.3	4256.8	135.7	43.0	1.1	23.07
	mean	0.58	54.88	0.02	0.021	2946.6	2839.7	99.3	30.0	0.63	11.54
	sd	0.15	0.9	0.007	0.007	800.5	889.5	21.3	7.2	0.23	5.91
Fresh	min	0.74	52.74	0.027	0.147	809.3	174.8	45.5	13.1	0.2	7.34
	max	1.21	55.06	0.067	0.311	1938.5	370.4	72.5	30.3	1.9	23.07
	mean	0.99	54.17	0.054	0.212	1060.7	265.0	55.6	19.1	0.69	11.77
	sd	0.13	0.64	0.012	0.044	301.3	51.7	7.8	4.2	0.39	6.04
3 years Time since fire, High fire frequency											
Litter	min	0.4	53.41	0.01	0.011	1981.3	1816.7	63.7	31.2	0.19	45.95
	max	0.89	56.66	0.029	0.029	5511.6	5151.1	133.7	47.8	1.9	77.53
	mean	0.53	54.73	0.014	0.019	4399.1	3197.0	107.4	40.5	0.78	61.03
	sd	0.14	0.96	0.005	0.006	1135.7	1004.6	21.3	4.6	0.53	7.67
Fresh	min	0.73	52.7	0.03	0.136	1055.5	187.1	47.7	20.2	0.19	45.95
	max	1.14	55.75	0.052	0.287	1831.5	387.9	75.4	29.0	1.9	77.53
	mean	0.89	54.32	0.037	0.211	1511.9	269.3	61.8	24.4	0.78	61.03
	sd	0.12	0.9	0.007	0.047	263.7	61.3	7.8	2.7	0.53	7.67

Table S4 cont.

		Nitrogen (%)	Carbon (%)	Phosphorus (%)	Potassium (%)	C:P	C:K	C:N	N:P	DBH (metres)	Tree Elevation (metres)
10 – 20 years Time since fire,											
Low fire frequency											
Litter	min	0.42	52.7	0.014	0.017	1016.0	1196.2	52.3	15.0	0.2	7.96
	max	1.06	56.92	0.055	0.047	3791.1	3347.1	131.7	40.2	0.92	83.19
	mean	0.66	55.34	0.032	0.029	1948.1	2079.2	87.9	22.4	0.5	33.66
	sd	0.17	0.87	0.011	0.009	743.5	645.4	19.8	7.8	0.22	27.84
Fresh	min	0.7	51.99	0.04	0.123	241.2	164.8	42.3	3.2	0.2	7.96
	max	1.28	54.99	0.222	0.326	1369.5	433.7	76.2	24.2	0.92	83.19
	mean	1.05	53.85	0.092	0.227	703.2	250.9	52.3	13.9	0.5	33.66
	sd	0.15	0.77	0.045	0.051	304.8	66.1	8.4	6.0	0.22	27.84
3 years Time since fire,											
Low fire frequency											
Litter	min	0.46	52.69	0.017	0.012	1060.1	1093.7	58.8	16.4	0.17	74.73
	max	0.9	56.16	0.05	0.049	3282.8	4626	120.3	36.7	0.83	97.42
	mean	0.68	54.83	0.028	0.03	2215.0	2058	83	26.1	0.51	85.19
	sd	0.1	0.97	0.011	0.01	828	895.6	14.9	6.9	0.22	7.84
Fresh	min	0.78	51.86	0.035	0.179	347.5	168.2	35.5	7.9	0.17	74.73
	max	1.46	55.71	0.153	0.308	1591.8	299.4	69.6	25.5	0.83	97.42
	mean	1.02	54.16	0.068	0.222	959.6	250.9	54.4	17.2	0.51	85.19
	sd	0.18	0.88	0.033	0.039	390.50	39.9	9.3	5.2	0.22	7.84

Table S5. Mean nutrient re-absorption efficiency values for nitrogen (N), phosphorus (P) and Potassium (K). Calculated as (fresh leaves - litter) / fresh leaves) * 100.

Nutrient resorption efficiency (%)	N	P	K
Total mean	38	62	89
10 – 20 years time since fire, high fire frequency	41	63	90
10 – 20 years time since fire, low fire frequency	37	65	87
3 years time since fire, high fire frequency	40	62	91
3 years time fire, low fire frequency	33	59	86

Table S6. Minimum, maximum, mean, and standard deviation of soil data from Bowd (2022) separated by fire treatment.

	Soil moisture (%)	Ammonium Nitrogen (mg/kg)	Nitrate Nitrogen (mg/kg)	Phosphorus (mg/kg)	Potassium (mg/kg)	Sulphur (mg/kg)	Organic Carbon (%)	Conductivity (dS/m)	pH
10 – 20 years time since fire, high fire frequency									
min	9	1.12	0.56	0.97	20.9	1.9	0.83	0.019	3.7
max	15.4	3.79	0.69	1.25	25.3	3.1	1.45	0.033	4
mean	11.88	1.95	0.62	1.11	22.6	2.4	1.08	0.025	3.85
sd	2.52	1.03	0.06	0.09	1.9	0.47	0.22	0.005	0.12
3 years time since fire, high fire frequency									
min	9.4	1.48	0.56	0.86	11.7	1.3	0.54	0.015	4
max	14	2.34	0.73	2.13	23	1.9	1.17	0.025	4.4
mean	11.87	1.94	0.64	1.16	18.4	1.58	0.79	0.019	4.25
sd	1.78	0.32	0.06	0.48	4.3	0.22	0.25	0.004	0.15
10 – 20 years time since fire, low fire frequency									
min	4.9	0.85	0.6	1.04	15.7	1.7	0.49	0.015	4
max	10.4	2.24	0.69	1.65	25.6	2.1	0.93	0.025	4.3
mean	8.43	1.47	0.64	1.26	19.2	1.83	0.69	0.02	4.17
sd	2.01	0.5	0.03	0.21	3.6	0.15	0.18	0.004	0.12
3 years time since fire, low fire frequency									
min	6.8	0.93	0.56	1.02	16.2	1.3	0.57	0.017	4.2
max	9.6	3.07	0.7	2.34	24.2	2.2	0.74	0.027	4.5
mean	8.62	1.52	0.62	1.6	18.7	1.65	0.67	0.02	4.38
sd	1.18	0.79	0.06	0.47	3	0.4	0.06	0.004	0.12