Supplementary material.

Tables of Influence of environmental factors on forest understorey species in northern Mexico

Table S1. Descriptive statistics for the soil variables analyzed.

	Soil variable	Mean	Std. Dev.	Min.	Max.	Chi-square statistic	*p*-value
EC	Electric conductivity (dS/m)	0.22	0.10	0.08	0.44	0.052	0.819
NO_3	Nitrate (kg/ha)	24.22	16.73	9.73	68.99	2.547	0.11
P	Phosphorus (ppm)	13.93	12.75	1.31	40.44	0.144	0.703
Ca	Calcium (ppm)	1,287.00	481.00	450.00	2,376.00	0.37	0.542
Mg	Magnesium (ppm)	356.57	211.80	114.00	990.00	0.369	0.543
Na	Sodium (ppm)	117.07	43.38	56.00	205.00	0.146	0.701
K	Potassium (ppm)	420.36	182.04	112.00	881.00	0.209	0.647
Fe	Iron (ppm)	76.36	32.82	10.30	122.40	0.005	0.938
Zn	Zinc (ppm)	0.57	0.49	0.14	2.70	0.117	0.732
Mn	Manganese (ppm)	63.53	63.59	6.04	271.92	0.243	0.621
Cu	Copper (ppm)	0.31	0.12	0.12	0.58	0.417	0.518
pH	pH (numeric)	5.67	0.19	5.38	6.10	1.478	0.224
OM	Organic material (%)	3.66	3.27	0.66	14.20	0.243	0.621
Sat	Percent saturation (%)	48.63	14.84	29.50	80.00	0.036	0.849
Sand	Percent sand (%)	52.35	9.62	31.42	63.42	0.052	0.819
Silt	Percent silt (%)	31.14	6.95	19.28	45.28	0.036	0.849
Clay	Percent clay (%)	16.51	5.74	9.30	31.30	0.052	0.818
OB	Rel. proportion of other bases in CEC (%)	6.04	0.33	5.43	6.59	0.117	0.732
%H	Rel. proportion of H in CEC (%)	20.04	2.85	13.5	24.30	0.117	0.732
%Ca	Rel. proportion of Ca in CEC (%)	43.22	6.96	21.09	52.54	0.07	0.790
%Mg	Rel. proportion of Mg in CEC (%)	19.11	6.59	9.99	37.90	0.116	0.732
%K	Rel. proportion of K in CEC (%)	7.78	3.60	2.39	14.53	0.636	0.425
%Na	Rel. proportion of Na in CEC (%)	3.85	1.80	1.03	7.53	0.901	0.342
CEC	Cation exchange capacity (meq/100 g soil)	14.90	5.01	6.51	25.12	0.243	0.621
HC	Hydraulic conductivity (cm/h)	8.74	11.37	1.50	48.40	1.67	0.196

Significance value (α=0.001 after Bonferroni correction).

Table S2. Edaphic variables of greater relative importance for the presence of each species, according to variable selection by Random Forest.

Variables	Ludi	Codi	Gewi	Acwr	Agpa	Ceco	Arpu
EC	2.93	6.13	2.20	3.28	2.26	6.12	2.89
NO3	7.25	1.08	2.28	0.70	9.7	5.56	7.65
P	8.98	1.07	2.69	4.44	4.67	0.72	3.89
Ca	1.20	14.07	10.06	3.02	1.91	12.31	3.52
Mg	2.20	1.79	12.78	3.71	3.85	1.51	1.16
Na	4.00	1.73	2.17	1.73	2.26	0.70	5.54
K	5.65	0.39	1.99	2.86	15.13	0.94	5.07
Fe	3.47	6.43	3.65	1.95	3.40	18.13	4.21
Mn	1.03	1.73	2.88	7.02	3.16	2.51	11.79
Cu	1.80	15.29	2.69	0.84	5.95	6.81	1.21
Zn	2.79	9.76	1.10	1.41	1.24	5.44	3.03
pH	4.08	0.26	1.89	0.04	1.18	3.84	2.34
OM	6.15	0.24	0.52	5.42	10.1	1.08	6.95
Sat	5.77	1.73	1.35	13.49	6.71	1.34	9.43
Sand	2.26	1.73	9.06	1.77	5.99	0.81	0.54
Silt	2.13	0.99	8.27	0.66	3.05	0.81	3.52
Clay	3.41	8.63	0.94	14.27	0.84	1.99	0.51
OB	5.06	0.44	1.99	0.29	1.38	0.38	2.08
%H	3.06	0.07	1.34	0.03	1.34	0.69	1.86
%Ca	2.29	5.68	2.96	3.59	2.88	8.59	3.89
%Mg	7.72	3.97	3.15	2.28	4.16	2.83	4.21
%K	3.16	3.18	1.56	15.49	3.85	3.84	5.19
%Na	2.28	3.97	5.27	4.65	1.34	1.38	2.24
CEC	1.46	13.26	10.76	3.28	2.31	6.25	3.37
HC	3.67	1.54	4.23	2.25	2.26	3.30	3.26

Where: EC: Electric conductivity, NO_3: Nitrate (kg/ha), P: Phosphorus (ppm), Ca: Calcium (ppm), Mg: Magnesium (ppm), Na: Sodium (ppm), K: Potassium (ppm), Fe: Iron (ppm), Mn: Manganese (ppm), Cu: Copper (ppm), pH: Hydrogen ion concentration, OM: Organic material (%), Sat: Saturation (%), Sand (%), Silt (%), Clay (%), OB: Relative proportion of other bases in CEC (%), %H: Relative Proportion of H in CEC (%), %Ca: Relative proportion of Ca in CEC (%), %Mg: Relative proportion of Mg in CEC (%), %K: Relative proportion of K in CEC (%), %Na: Relative proportion of Na in CEC (%), CEC: Cation exchange capacity, HC: Hydarulic conductivity (cm/h), Ld: *Lupinus diehlii*, Codi: *Comelinna dianthifolia*, Gewi: *Geranium wislizeni,* Acwr: *Acmispon wrightii,* Agpa: *Agatache pallida,* Ceco: *Ceanothus coeruleus*, Arpu: *Arctostaphylos pungens*.