

**Appendix S8. Blocked indicator species analysis comparing composition of undershrub and interspace communities within the low, intermediate, and high stress-disturbance communities.**

Significant indicators are highlighted in grey. Relative frequency (RF) is proportion of study sites in the respective low, intermediate, or high stress community with species present in the respective community. Relative abundance (RA) is the species' proportion of the total abundance in respective community relative to its abundance in the other (concentration of abundance into a particular community). Indicator values (IV) are the maximum of  $100 \cdot RF \cdot RA$ .

<u>Group Stress Level</u>	<u>Canopy microsite</u>			<u>Interspace microsite</u>			<u>P-value</u>
	<u>RF</u>	<u>RA</u>	<u>IV</u>	<u>RF</u>	<u>RA</u>	<u>IV</u>	
<u>Low</u>							
<i>E. elymoides</i>	50	31	29	86	34	15	0.4689
<i>A. thurberianum</i>	57	25	35	93	38	14	0.3349
<i>P. spicata</i>	29	15	37	86	44	4	0.0964
<i>P. secunda</i>	93	36	32	100	32	33	0.9808
<i>B. tectorum</i>	43	27	29	79	37	11	0.5659
<i>L. perfoliatum</i>	29	20	26	64	41	6	0.4571
<u>Intermediate</u>							
<i>E. elymoides</i>	83	45	37	83	23	19	0.0188
<i>A. thurberianum</i>	67	31	21	83	34	29	0.6655
<i>P. spicata</i>	64	38	24	62	29	18	0.8144
<i>P. secunda</i>	95	38	37	95	29	28	0.0528
<i>B. tectorum</i>	69	33	23	83	33	28	0.8096
<i>L. perfoliatum</i>	43	33	14	57	33	19	0.6663
<u>High</u>							
<i>E. elymoides</i>	100	56	56	63	13	8	0.0002
<i>A. thurberianum</i>	84	53	45	58	17	10	0.01
<i>P. spicata</i>	42	57	24	16	16	2	0.0173
<i>P. secunda</i>	100	56	56	63	13	8	0.0002
<i>B. tectorum</i>	100	16	12	100	42	42	0.0012
<i>L. perfoliatum</i>	100	17	37	100	33	33	0.0496