

**Appendix S7:** Results from simultaneous autoregressive models with a Poisson distribution showing the predictors of vascular plant species richness at the large (9 m<sup>2</sup>) and small (1 m<sup>2</sup>) grain sizes, and at the difference in richness between the two grain sizes ( $\Delta_{9-1}$ ) for native species in plots in which alien species cover was less than 10 %. A best subset modelling approach was used to select the most parsimonious set of explanatory variables.

<b>Native 9 m<sup>2</sup> grain</b>		
<b>Variable</b>	<b>Estimate</b>	<b>p-value</b>
Intercept	3.791	<0.001
Presence of <i>A. selago</i>	0.935	<0.001
Distance to nearest drainage	-0.004	0.004
Elevation	-0.004	<0.001
Hillshade	-0.006	0.023
Northness	0.349	<0.001
Slope	0.020	0.001
<b>Native 1 m<sup>2</sup> grain</b>		
<b>Variable</b>	<b>Estimate</b>	<b>p-value</b>
Intercept	2.291	<0.001
Presence of <i>A. selago</i>	0.649	<0.001
Distance to nearest drainage	-0.001	0.077
Elevation	-0.004	<0.001
Hillshade	-0.005	0.011
Northness	0.039	0.693
Slope	0.020	<0.001
Topographical wetness index	0.080	<0.001
Elevation*Northness	0.001	0.048
<b>Difference in native species richness between grains (native <math>\Delta_{9-1}</math>)</b>		
<b>Variable</b>	<b>Estimate</b>	<b>p-value</b>
Intercept	1.104	<0.001
Presence of <i>A. selago</i>	0.267	0.016
Distance to nearest drainage	-0.001	0.072
Elevation	-0.001	0.027
Northness	0.140	0.015
Topographical wetness index	-0.047	0.025