

Table S11. Spearman's rank correlation of soil properties, climate conditions, and elemental accumulation in *A. frigida*.

	Soil pH	LOI	Humus	Electrical Conductivity	Soil Moisture	Soil C	Soil N	Soil H	AF C	AF N	AF H	AccuAF Na	AccuAF Mg	AccuAF Al	AccuAF FP	AccuAF K	AccuAF Ca	AccuAF Mn	AccuAF Fe	Precipitation	Dung cover	Dried plant cover	New biomass	Old biomass	Temperature
Soil pH	1.000	.371	.163	.689**	-.059	.349	.084	-.101	.082	.045	.264	-.064	.160	.082	.145	.264	-.200	-.082	.109	-.304	.083	-.321	.286	-.414	.304
LOI		1.000	-.128	.265	.620**	.895**	.779**	.574*	-.200	.355	-.273	.200	.662*	.609*	.364	.636*	-.727*	.345	.606*	.077	-.164	.276	-.103	.300	-.077
Humus			1.000	.118	.112	-.153	-.168	-.263	-.373	.182	-.236	.518	.128	.364	.182	.191	-.118	-.027	.355	-.486*	.073	-.281	.501*	-.048	.486*
Electrical conductivity				1.000	-.177	.289	.135	-.099	.182	.173	.564	-.100	.078	-.064	.327	.318	-.182	-.182	-.077	-.069	.120	-.278	.084	-.399	.069
Soil Moisture					1.000	.512*	.694**	.745**	-.077	-.191	-.287	.333	.126	.182	-.132	-.018	-.401	-.173	.196	-.095	-.347	.611**	.024	.595**	.095
Soil C						1.000	.898**	.686**	-.314	.096	-.346	-.155	.696*	.647*	.023	.487	-.597	.670*	.660*	.200	-.070	.323	-.184	.339	-.200
Soil N							1.000	.838**	-.118	-.073	-.364	-.082	.630*	.473	-.109	.300	-.700*	.391	.483	.243	-.223	.554*	-.272	.520*	-.243
Soil H								1.000	.191	-.409	.109	-.191	-.247	-.218	-.500	-.300	-.236	-.182	-.191	.277	-.116	.598**	-.276	.518*	-.277
AF C									1.000	-.618*	.491	.264	-.580	-.845**	-.582	-.709*	-.227	-.673*	-.843**	.173	.311	.014	-.296	-.256	-.173
AF N										1.000	-.191	-.191	.530	.618*	.955**	.855**	.136	.282	.592	-.115	.165	-.333	.215	-.247	.115
AF H											1.000	-.309	-.621*	-.573	-.155	-.209	.055	-.609*	-.569	-.173	.069	-.091	.153	-.402	.173
AccuAFNa												1.000	-.064	-.118	-.218	-.300	-.436	-.218	-.150	.058	.362	-.274	-.043	.228	-.058
AccuAFMg													1.000	.813**	.566	.772**	-.338	.580	.805**	-.058	-.147	-.106	-.086	.076	.058
AccuAFAl														1.000	.564	.836**	-.227	.773**	.998**	-.346	-.064	-.055	.320	.251	.346
AccuAFP															1.000	.855**	.173	.209	.538	-.058	-.069	-.228	.105	-.251	.058
AccuAFK																1.000	-.164	.473	.825**	-.289	-.037	-.242	.263	-.142	.289
AccuAFCa																	1.000	0.000	-.219	.173	-.389	.183	.029	-.128	-.173
AccuAFMn																		1.000	.779**	-.173	-.174	.100	.210	.288	.173
AccuAFFe																			1.000	-.376	-.073	-.043	.345	.238	.376
Precipitation																				1.000	-.061	.139	-.928**	.105	-1.000**
Dung cover																					1.000	-.464*	.232	-.323	.061
Dried plant cover																						1.000	-.209	.850**	-.139
New biomass																							1.000	-.162	.928**
Old biomass																								1.000	-.105
Temperature																									1.000

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Correlations significant at the 0.01 level (2-tailed) are indicated in black font, while correlations significant at the 0.05 level (2-tailed) are shown in blue font.