

**Table S1.** Results of two-way ANOVA analysis of the effects of shrub size (Size), sampling location (Location), and their interaction on soil physicochemical properties and soil microbial communities.

Factors	Size		Location		Size × location	
	F	<i>P</i>	F	<i>P</i>	F	<i>P</i>
SWC	0.42	0.66	1.41	0.25	1.02	0.38
pH	3.20	0.07	5.76	<b>&lt; 0.05</b>	0.18	0.84
SSC	4.54	<b>&lt; 0.05</b>	18.94	<b>&lt; 0.01</b>	3.58	0.05
SOM	17.80	<b>&lt; 0.01</b>	58.79	<b>&lt; 0.01</b>	8.04	<b>&lt; 0.01</b>
TN	10.46	<b>&lt; 0.01</b>	28.14	<b>&lt; 0.01</b>	10.90	<b>&lt; 0.01</b>
AP	16.04	<b>&lt; 0.01</b>	74.54	<b>&lt; 0.01</b>	8.90	<b>&lt; 0.01</b>
Total PLFAs	38.97	<b>&lt; 0.01</b>	18.73	<b>&lt; 0.01</b>	3.60	<b>&lt; 0.05</b>
Bacterial PLFAs	34.49	<b>&lt; 0.01</b>	12.76	<b>&lt; 0.01</b>	3.67	<b>&lt; 0.05</b>
Fungal PLFAs	43.32	<b>&lt; 0.01</b>	61.53	<b>&lt; 0.01</b>	3.61	<b>&lt; 0.05</b>
F/B ratio	0.84	0.45	13.64	<b>&lt; 0.01</b>	5.85	<b>&lt; 0.05</b>
GP bacterial PLFAs	11.68	<b>&lt; 0.01</b>	6.44	<b>&lt; 0.05</b>	2.20	0.14
GN bacterial PLFAs	21.13	<b>&lt; 0.01</b>	4.62	<b>&lt; 0.05</b>	6.55	<b>&lt; 0.01</b>
GP/GN ratio	9.89	<b>&lt; 0.01</b>	0.15	0.71	13.35	<b>&lt; 0.01</b>
AMF PLFAs	170.78	<b>&lt; 0.01</b>	212.66	<b>&lt; 0.01</b>	14.98	<b>&lt; 0.01</b>

Note: The bold numerals indicate the significance at  $P < 0.05$ .