

## Supplementary Material

**Tab. S1** - Pearson's correlation coefficients between gap size, soil physico-chemical and biological variables for Gap soil cores only. (\*):  $p < 0.05$  (two-tailed); (\*\*):  $p < 0.01$  (two-tailed).

	Gap-size	BD	Clay	Silt	Sand	pH	Total N	P	SOC	Moisture content	MBC	MBP	MBN	MBC/MBN	MBC/MBP	MBN/MBP	MBC/SOC	MBN/total N	MBP/P	Respiration	
Gap-size	-																				
BD	0.540**	-																			
Clay	-0.067	0.192	-																		
Silt	-0.155	-0.251	-0.708**	-																	
Sand	0.184	-0.103	-0.902**	0.334	-																
pH	0.038	0.285	0.29	0.034	-0.408*	-															
Total N	-0.143	-0.259	-0.508**	0.254	0.523**	-0.519**	-														
P	0.207	0.049	-0.452*	0.304	0.418*	-0.176	0.249	-													
SOC	-0.143	-0.26	-0.509**	0.256	0.524**	-0.520**	0.962**	0.249	-												
Moisture content	-0.061	-0.162	-0.359	0.526**	0.158	-0.018	0.131	0.298	0.131	-											
MBC	0.06	-0.199	-0.322	0.363*	0.208	-0.249	0.165	0.09	0.165	0.09	-										
MBP	0.1	-0.241	-0.303	0.3	0.221	-0.094	0.183	0.02	0.182	0.336	0.469**	-									
MBN	-0.352	-0.508**	-0.142	0.152	0.103	-0.636**	0.463*	0.071	0.465*	0.105	-0.073	-0.162	-								
MBC/MBN	0.348	-0.016	0.109	0.045	-0.169	0.321	-0.223	-0.11	-0.224	-0.106	0.508**	0.239	-0.581**	-							
MBC/MBP	-0.046	0.007	0.113	-0.039	-0.127	-0.138	-0.037	0.021	-0.037	-0.336	0.221	-0.635**	0.239	0.075	-						
MBN/MBP	-0.256	-0.133	0.158	-0.171	-0.106	-0.286	0.119	0.002	0.12	-0.122	-0.227	-0.635**	0.616**	-0.545**	0.645**	-					
MBC/SOC	-0.127	-0.242	0.021	0.118	-0.098	0.026	-0.117	-0.31	-0.118	-0.331	0.755**	0.088	-0.057	0.599**	0.373	-0.12	-				
MBN/total N	-0.328	-0.408*	0.317	-0.221	-0.289	-0.335	0.074	-0.088	0.074	-0.133	-0.173	-0.303	0.879**	-0.540**	0.399*	0.727**	0.059	-			
MBP/P	-0.056	-0.129	-0.217	0.261	0.125	-0.08	-0.085	-0.38	-0.085	0.177	0.450*	0.794**	-0.293	0.139	-0.490*	-0.548**	0.332	-0.404	-		
Respiration	0.239	0.076	0.093	-0.025	-0.109	-0.117	-0.271	-0.053	-0.272	0.226	0.04	0.175	0.018	0.082	-0.157	-0.204	-0.23	0.102	0.236	-	