

**Table S2.** Monte Carlo permutation test of soil phoD microbial communities and soil properties.

Factors	pH	SOM	TN	AN	TP	AP	humus
RDA1	0.982	-0.997	-0.995	-0.942	-0.943	-0.964	-0.834
RDA2	0.190	0.075	-0.096	-0.335	-0.332	-0.267	-0.552
r <sup>2</sup>	0.123	0.523	0.544	0.487	0.702	0.827	0.458
Pr(>r)	0.431	0.007	0.012	0.009	0.001	0.001	0.019
Significance		**	*	**	***	***	*

Note: \* 0.05, \*\* 0.01, \*\*\*0.001, p values based on 999 permutations.