

## Supplementary material

### **Microbial activity and diversity in the rhizosphere soil of the invasive species *Zizania latifolia* in the wetland of Wuchang Lake, China**

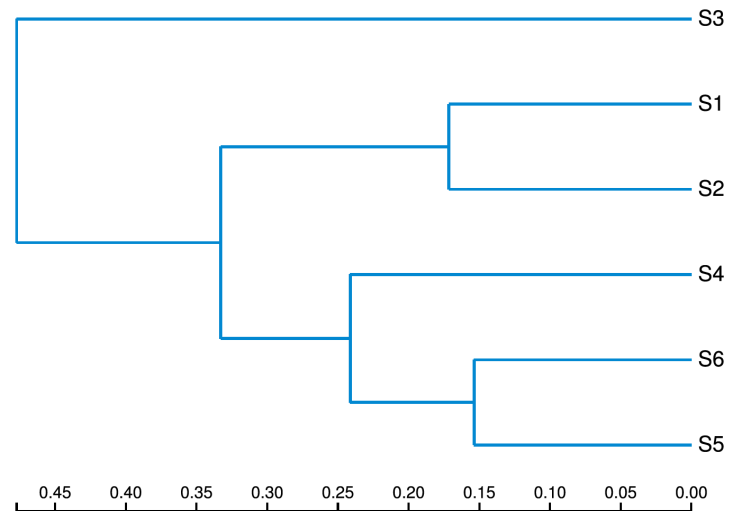
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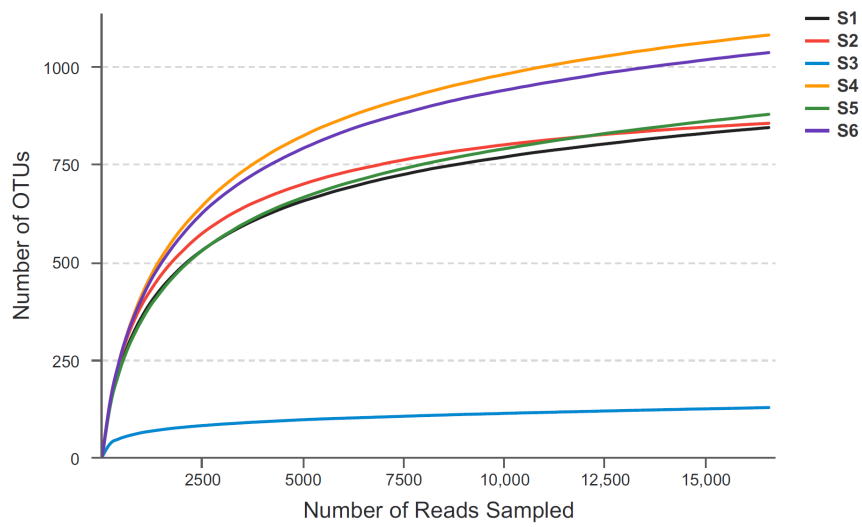
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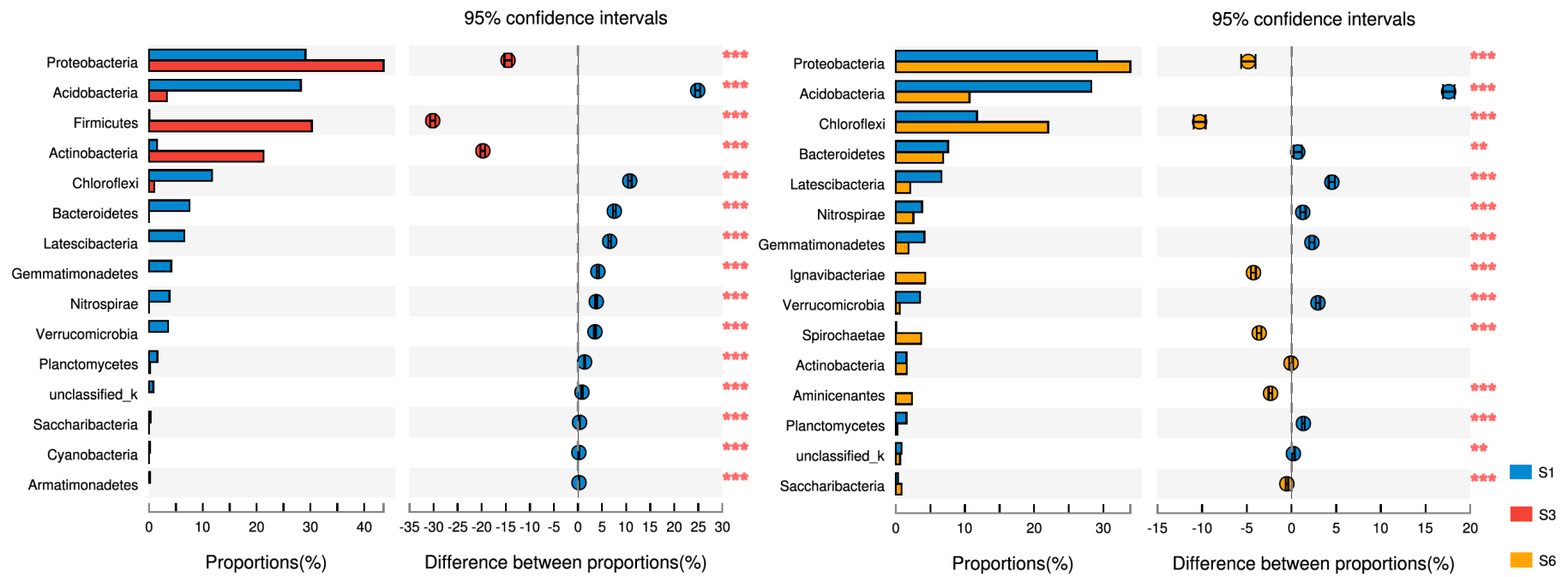
## Supplementary Figures



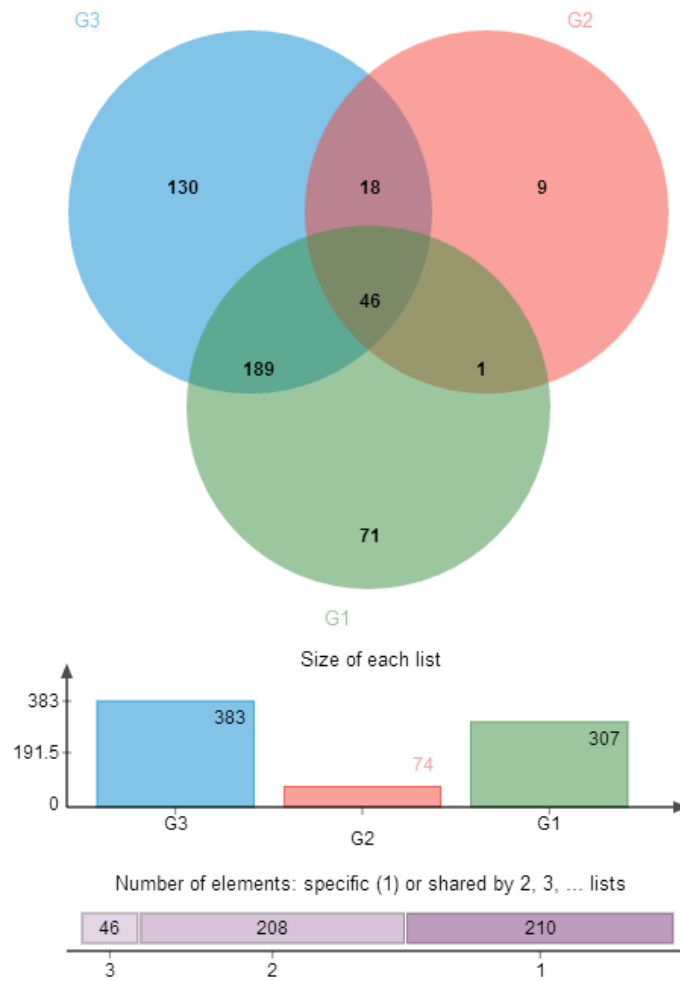
**Figure S1.** Hierarchical cluster analysis of bacterial communities in the rhizosphere soil of *Zizania latifolia* at the genus level. Non-rhizosphere soils without *Zizania latifolia* invasion were collected from the lakeshore above the seasonal high water level (S1) and from a lakeshore slope (S2) subjected to seasonal flooding. Rhizosphere soils were obtained: S3 from a representative floating blanket in the center of the enclosed pond, S4 from the sediment under the lower water level, S5 from the pond bank, and S6 from exposed lake sludge.



**Figure S2.** Rarefaction curves of OTUs for microbial communities in the rhizosphere soil of *Zizania latifolia*. Non-rhizosphere soils without *Zizania latifolia* invasion were collected from the lakeshore above the seasonal high water level (S1) and from a lakeshore slope (S2) subjected to seasonal flooding. Rhizosphere soils were obtained: S3 from a representative floating blanket in the center of the enclosed pond, S4 from the sediment under the lower water level, S5 from the pond bank, and S6 from exposed lake sludge.



**Figure S3.** Chi-square test bar plot of bacterial communities in the rhizosphere soil of *Zizania latifolia* at the Phylum level including the non-rhizosphere soil without seasonal flooding (S1), the rhizosphere soil from the floating blanket (S3), and the rhizosphere soil from exposed lake sludge above the lower water level (S6).



**Figure S4.** Venn diagrams of bacterial communities in the rhizosphere soil of *Zizania latifolia* including G1 (non-rhizosphere soils, S1 and S2), G2 (the rhizosphere soil from the floating blanket, S3) and G3 (rhizosphere soils located on the lake sludge, S4, S5 and S6).

## Supplementary Table

**Table S1.** Comparison of phylotype coverage and diversity estimators of bacterial communities in the rhizosphere soil of *Zizania latifolia*.

Sample	Community richness			Community diversity			Community evenness		
	Sobs	Ace	Chao	Shannon	Simpson	Coverage	Heip	Shannoneven	Simpsoneven
S1	844	946.2	971.8	5.78	0.0065	0.991	0.38	0.86	0.18
S2	855	901.8	908.5	5.98	0.0043	0.994	0.46	0.89	0.27
S3	127	194.5	168.3	3.15	0.0651	0.998	0.18	0.65	0.12
S4	1081	1204.7	1243.3	5.99	0.0066	0.988	0.37	0.86	0.14
S5	878	1005.1	1093.8	5.68	0.0082	0.989	0.33	0.84	0.14
S6	1036	1150.3	1194.8	6.03	0.0046	0.989	0.40	0.87	0.21

Non-rhizosphere soils without *Zizania latifolia* invasion were collected from the lakeshore above the seasonal high water level (S1) and from a lakeshore slope (S2) subjected to seasonal flooding. Rhizosphere soils were obtained: S3 from a representative floating blanket in the center of the enclosed pond, S4 from the sediment under the lower water level, S5 from the pond bank, and S6 from exposed lake sludge.