Supplementary Materials

Article

Cyanobacterial Nitrogen Fixation Influences the Nitrogen Removal Efficiency in a Constructed Wetland

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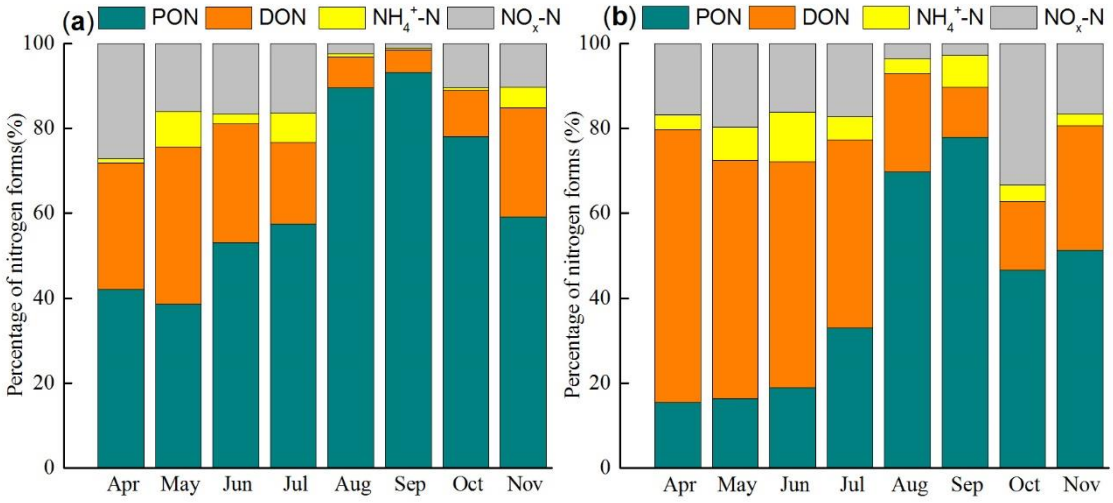

Figure S1: Relative abundance of nitrogen fractions in (a) the artificial lake (AL) and (b) the constructed wetland (CW). PON, particulate organic nitrogen; DON, dossolved organic nitrogen.

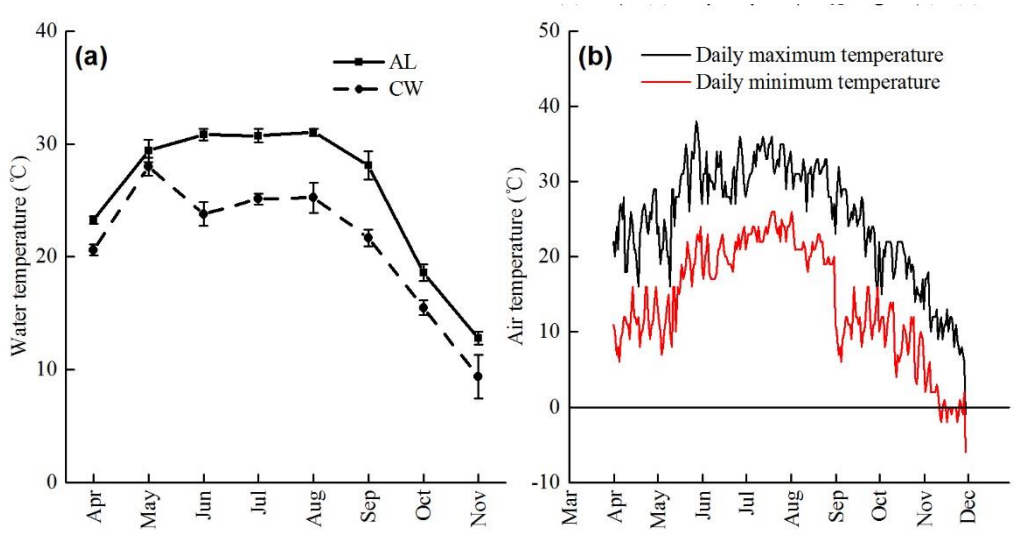

Figure S2: The (a) water temperature and (b) daily air temperature in the study site

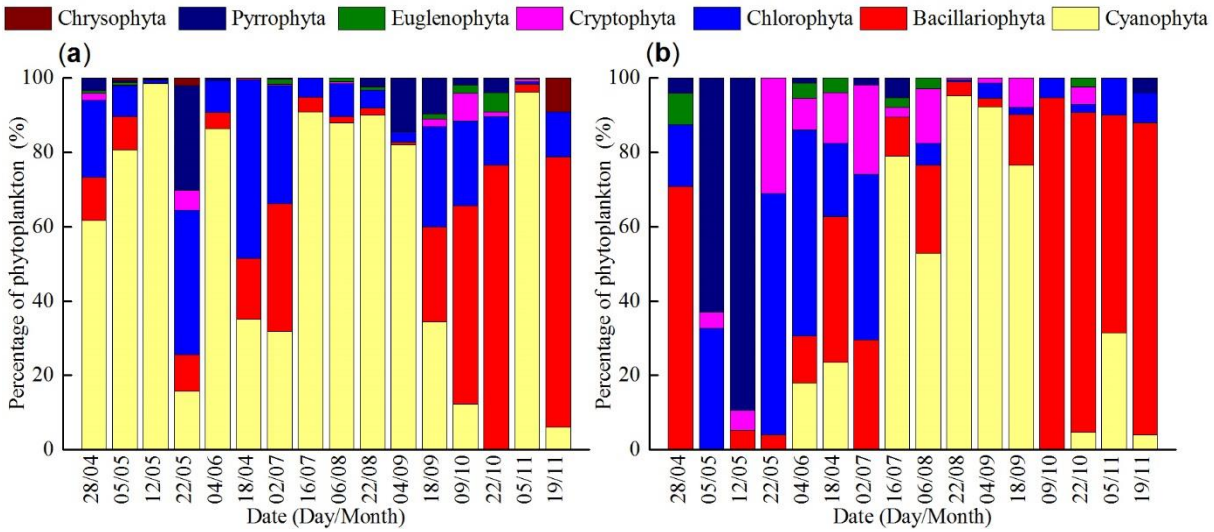

Figure S3: Relative abundance of phytoplankton classes in (a) the artificial lake (AL) and (b) the constructed wetland (CW).

Table S4: Pearson correlation coefficients between temperature and the cell densities and nitrogen removal efficiency (***, $P < 0.001$; **, $P < 0.01$; *, $P < 0.05$; n=32).

	Total phytoplankton		*Anabaena sp.*		*Microcystis sp.*		PON removal	DON removal	NH_4^+-N removal	NOx-N removal
Temperature	AL	CW	AL	CW	AL	CW	efficiency	efficiency	efficiency	efficiency
Water temperature	-0.142	-0.098	0.221	-0.234	-0.010	0.260	-0.415*	0.059	0.067	-0.156
Maximum air temperature	-0.165	-0.174	0.246	-0.186	-0.016	0.432*	-0.381*	0.07	0.134	-0.134
Minimum air temperature	-0.137	-0.279	0.130	-0.219	0.151	0.504**	-0.330	0.055	0.005	-0.081

Table S5: Pearson correlation coefficients between cell densities of phytoplankton and nitrogen forms in the artificial lake (AL) and the constructed wetland (CW) (***, $P < 0.001$; **, $P < 0.01$; *, $P < 0.05$; n=32).

	Total phytoplankton		*Anabaena sp.*		*Microcystis sp.*	
Nitrogen forms	AL	CW	AL	CW	AL	CW
PON	0.473**	0.614***	0.384*	0.715***	0.058	-0.231
DON	0.467**	0.592***	0.378*	0.723***	0.038	-0.284
NH_4^+-N	-0.427*	0.685***	-0.144	0.772***	-0.067	-0.243
NO_3^--N	-0.463*	-0.269	-0.180	-0.239	-0.327†	-0.149

Table S6: Pearson correlation coefficients between cell densities of phytoplankton and removal efficiency of nitrogen fractions in the artificial lake (AL) and the constructed wetland (CW) (***, $P < 0.001$; **, $P < 0.01$; *, $P < 0.05$; n=32).

	Total phytoplankton		*Anabaena sp.*		*Microcystis sp.*	
Removal efficiency	AL	CW	AL	CW	AL	CW
PON	-0.532	-0.200	0.193	-0.010	-0.719*	-0.058
DON	-0.321	0.323	-0.285	0.233	-0.055	-0.221
NH_4^+-N	-0.350	-0.635	-0.511	-0.819	-0.282	0.362

NO_3^--N	-0.130	-0.162	0.331	-0.186	-0.281	0.340