

## Supplementary Information

Table S1: Results of generalized linear model (quasipoisson, log-link function) used to examine the effects of treatment type, treatment time, number of cycles, and their interactions on either buoyancy or photosynthesis.

	Buoyancy				*	Photosynthesis				
	Estimate	Std. Error	t value	<i>p</i>		Estimate	Std. Error	t value	<i>p</i>	
Intercept	4.6317	0.0063	739.12	<0.0001	*	4.7021	0.0213	221.18	<0.0001	*
Treatment (Control Frozen)	-0.0585	0.0090	-6.53	<0.0001	*	0.0104	0.0307	0.34	0.7352	
Cycle (0 1)	-0.0069	0.0073	-0.94	0.3476		0.0259	0.0249	1.04	0.2974	
Cycle (0 2)	0.0046	0.0073	0.64	0.5239		-0.0576	0.0254	-2.27	0.0236	
Cycle (0 3)	0.0080	0.0073	1.10	0.2730		-0.1046	0.0257	-4.07	<0.0001	*
Time (18h 24h)	-0.0411	0.0063	-6.53	<0.0001	*	-0.1062	0.0216	-4.93	<0.0001	*
Time (18h 48h)	-0.0390	0.0063	-6.21	<0.0001	*	-0.1942	0.0221	-8.80	<0.0001	*
Treatment × Cycle (0 1)	-0.0253	0.0104	-2.45	0.0147	*	-0.3375	0.0368	-9.16	<0.0001	*
Treatment × Cycle (0 2)	-0.0574	0.0104	-5.54	<0.0001	*	-0.3806	0.0380	-10.03	<0.0001	*
Treatment × Cycle (0 3)	-0.0756	0.0104	-7.28	<0.0001	*	-0.4592	0.0390	-11.77	<0.0001	*
Treatment × Time (18h 24h)	0.1021	0.0090	11.35	<0.0001	*	-0.0356	0.0329	-1.08	0.2791	
Treatment × Time (18h 48h)	0.0730	0.0090	8.09	<0.0001	*	0.0040	0.0335	0.12	0.9052	
Degrees of Freedom:	719 Total; 708 Residual					719 Total; 708 Residual				
Null Deviance:	254.84					5006				
Residual Deviance:	196.48					2147				
Pseudo-R2:	0.229					0.5711				