

**Is the impact of eutrophication on phytoplankton diversity dependent on lake  
volume/ecosystem size?**

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**Supplementary Tab. 1.** Length and weight of juvenile roaches initially added in the mesocosms: DH, deep–high nutrient; DL, deep–low nutrient; SH, shallow–high nutrient; SL, shallow–low nutrients.

Fish added on the 13 <sup>th</sup> of June 2011					
Treatment	Length (mm)	Weight (g)	Length (mm)	Weight (g)	Total Biomass (g)
DH1	95	5.82	85	5.24	11.06
DH2	86	5.30	74	4.60	9.89
DH3	93	5.70	80	4.95	10.65
DL1	75	4.66	72	4.48	9.14
DL2	84	5.18	90	5.53	10.71
DL3	82	5.06	103	6.28	11.34
SH1	90	5.53	74	4.60	10.13
SH2	85	5.24	85	5.24	10.48
SH3	86	5.30	92	5.64	10.94
SL1	80	4.95	82	5.06	10.01
SL2	87	5.35	82	5.06	10.42
SL3	86	5.30	84	5.18	10.48

**Supplementary Tab. 2.** Length and weight of roaches added on the 12<sup>th</sup> of August to replace dead individuals. Treatments are listed as: DH, deep–high nutrient; DL, deep–low nutrient; SH, shallow–high nutrient; SL, shallow–low nutrients.

Fish added on 12 <sup>th</sup> of August 2011		
Treatment	Length (mm)	Weight (g)
DH1	54	4
DH2	-	-
DH3	175	15.4
DL1	58	4.4
DL2	63	4.8
DL4	152	13.2
SH1	92	7.6
SH2	96	7.9
SH3	69	5.4
SL1	125	10.7
SL2	192	17
SL3	46	3.2

**Supplementary Tab. 3.** Length and weight of roaches retrieved (between the 22<sup>nd</sup> to the 28<sup>th</sup> of November 2011) and recorded at the end of the experiment. Treatments are listed as: DH, deep–high nutrient; DL, deep–low nutrient; SH, shallow–high nutrient; SL, shallow–low nutrients.

Treatment	Fish retrieved at the end	
	Length (mm)	Weight (g)
DH1	124	17.0908
DH2	154	41.69
DH3	-	-
DL1	112	11.7281
DL2	-	-
DL3	119	14.033
SH1	-	-
SH2	116	14.2482
SH3	-	-
SL1	117	13.558
SL2	119	14.0472
SL3	80	4.17

**Supplementary Tab. 4.** Nutrient dosage performed during the initial phase and thereafter monthly. The ratio between total phosphorus (TP) and total nitrogen (TN) addition is 1:20 (by molecular weight).

Mesocosm type	Initial P (mg mesocosm <sup>-1</sup> )	Monthly P (mg mesocosm <sup>-1</sup> )	Initial N (mg N mesocosm <sup>-1</sup> )	Monthly N (mg N mesocosm <sup>-1</sup> )
Shallow (1m)-low NP	0	5.1	0	102
Shallow (1m)-high NP	179 *	81.6	1575 ***	1632
Deep (2 m)-low NP	0	10.8	0	216
Deep (2 m)-high NP	376 **	172	3225 ****	3440

\*1020 L x 175 µg P L<sup>-1</sup>; \*\*2150 L x 175 µg P L<sup>-1</sup>; \*\*\*1020 L x 1.5 mg N L<sup>-1</sup>; \*\*\*\*2150 L x 1.5 mg N L<sup>-1</sup>.

**Supplementary Fig. 1.** Observed nutrient concentrations from the enclosures, from the left to the right, deep and shallow mesocosms nutrient values are shown respectively. From the top to bottom panels, average replicates values and standard deviations of total phosphorus and total nitrogen are shown respectively over the entire sampling events.

