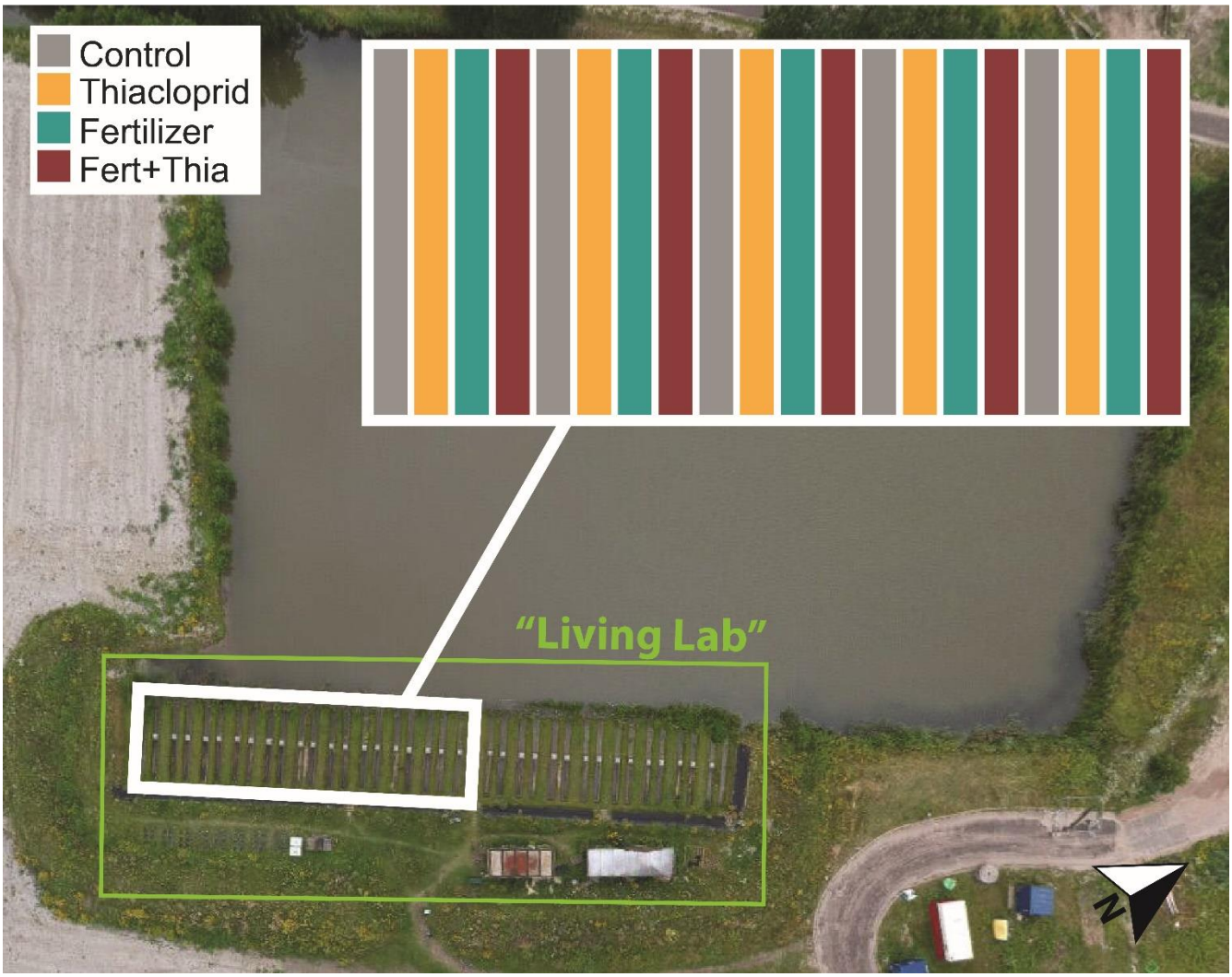
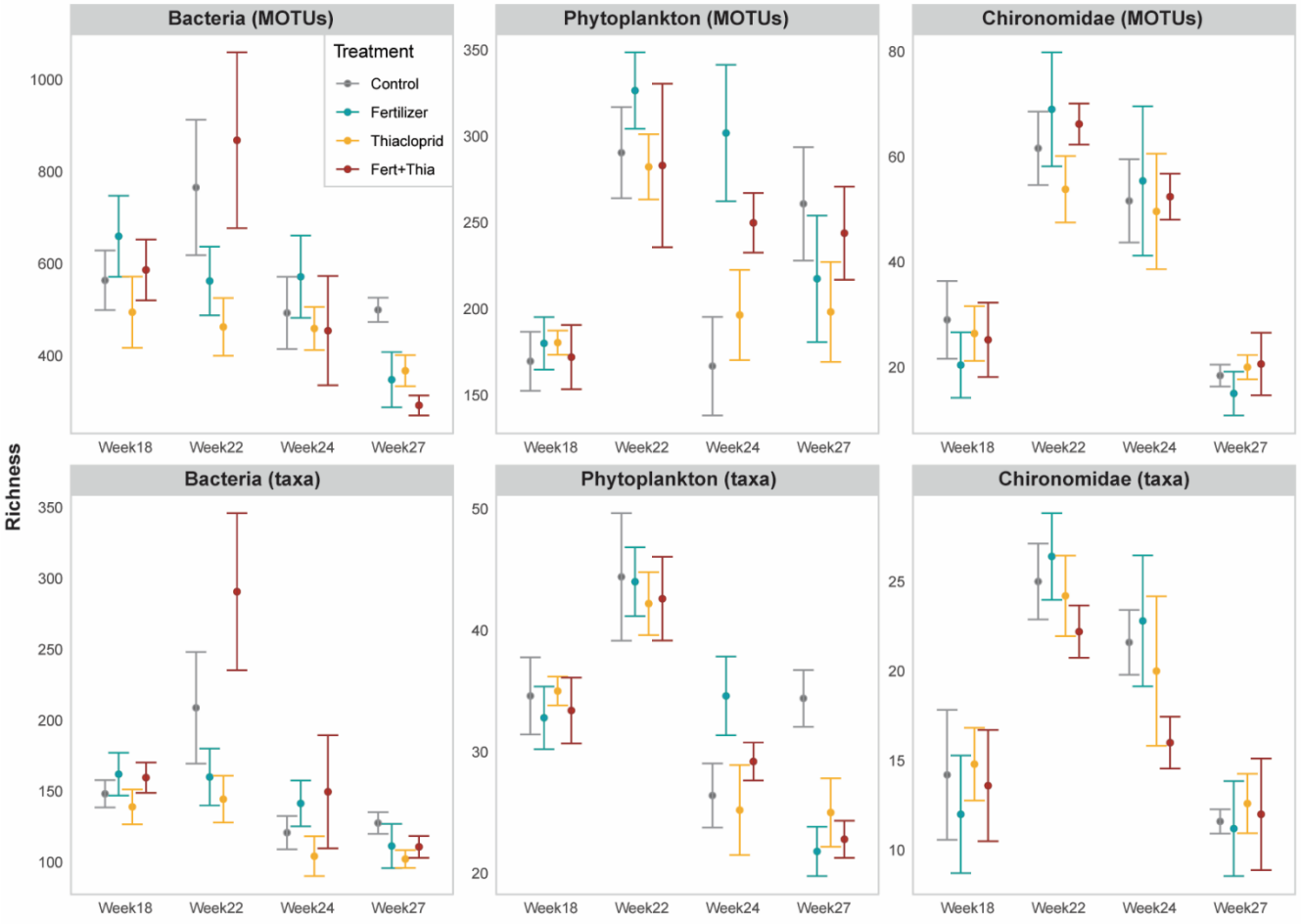
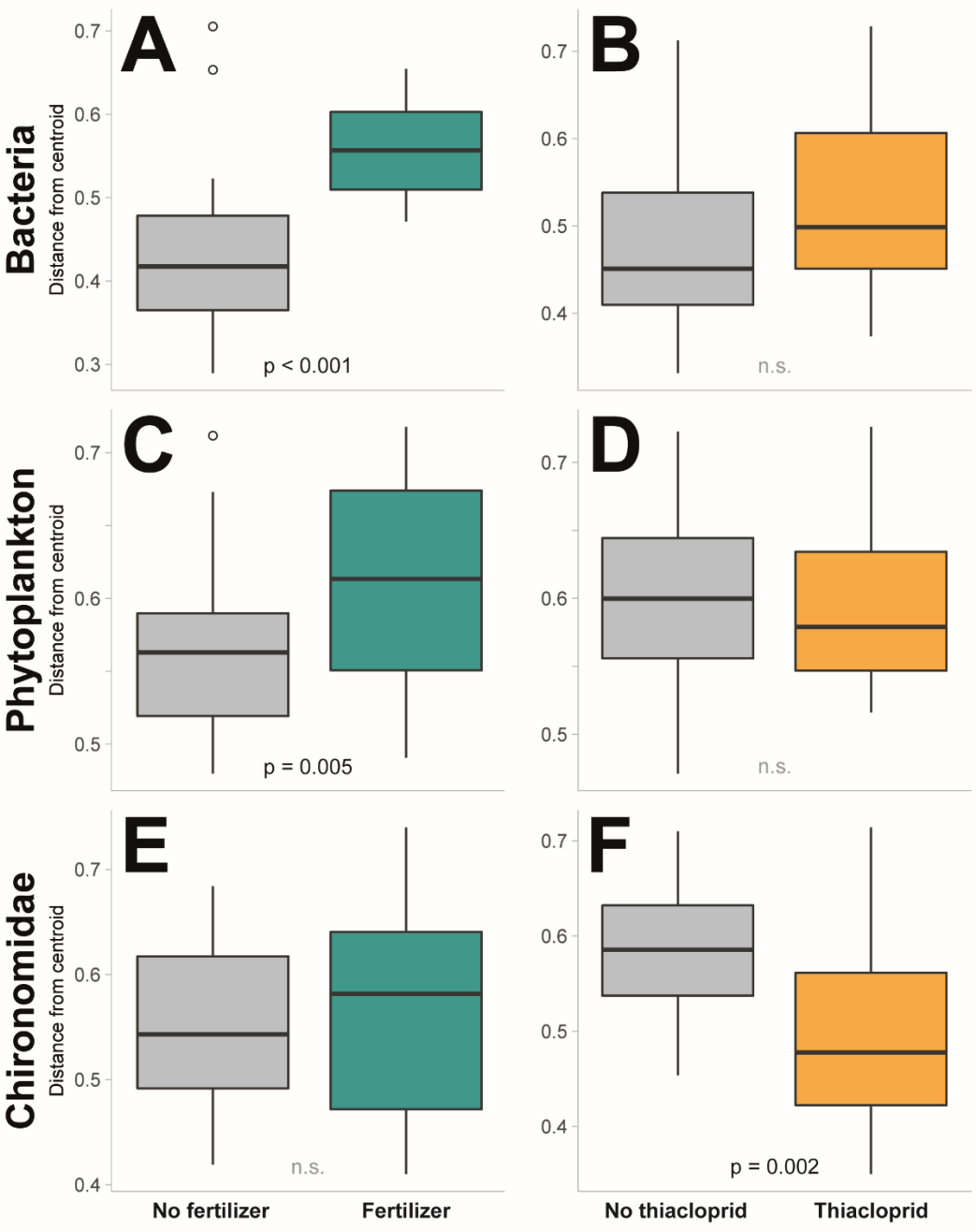
Supplemental Figure S1. Schematic overview of the experimental setup and the position of the "Living Lab" in relation to the connected reservoir. Aerial photo by Jelle Derksen.



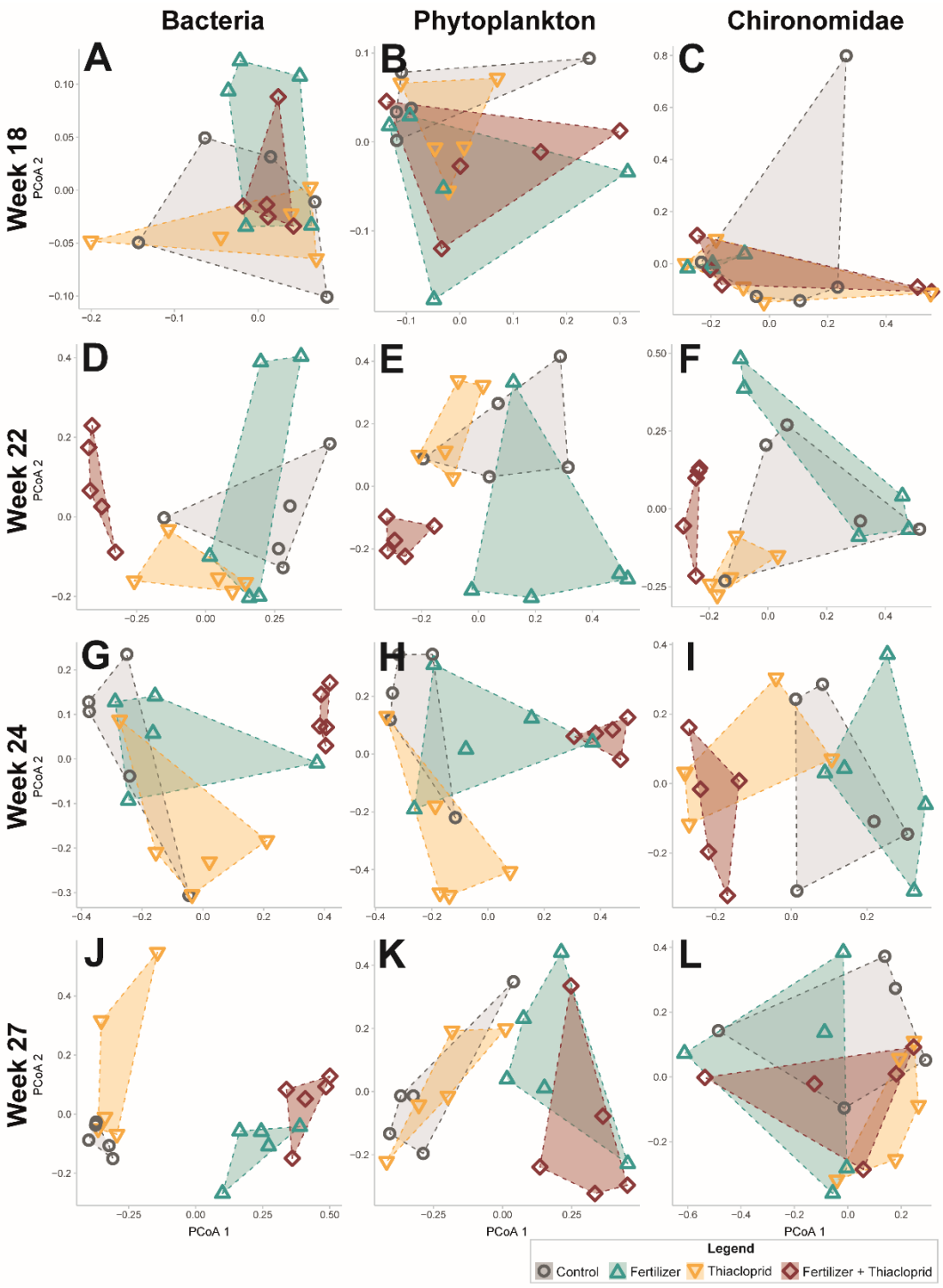
Supplemental Figure S2. Observed mean (and standard error) MOTU and taxa richness for each of the taxonomic groups: bacteria, phytoplankton, and chironomids, in control situation, and with added fertilizer, thiacloprid, and combined treatments.



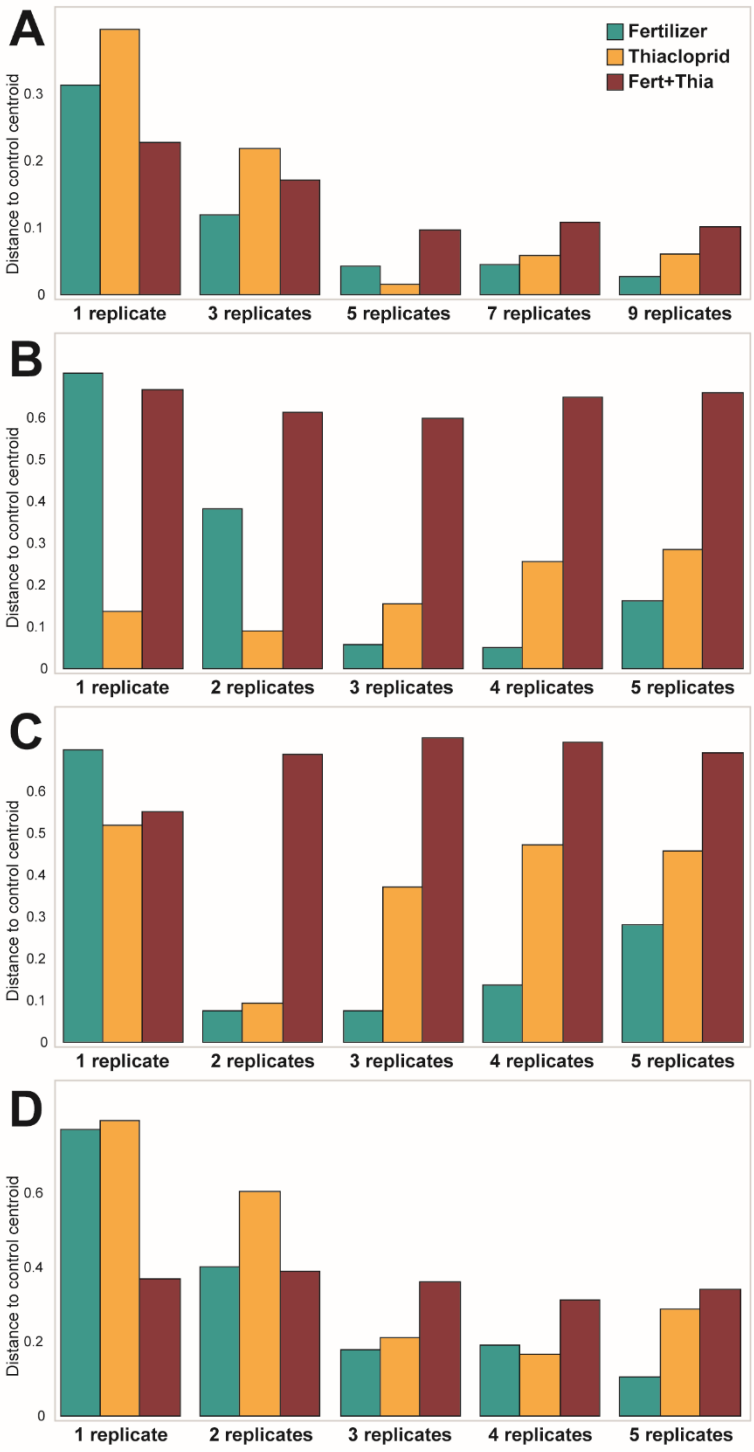
Supplemental Figure S3. Beta dispersion in weeks 22 to 27 under the two different treatments (tested independently) for bacteria exposed to fertilizer (A) and thiacloprid (B), phytoplankton exposed to fertilizer (C) and thiacloprid (D), and chironomids exposed to fertilizer (E) and thiacloprid (F). Fertilizer caused significant divergence in bacteria and phytoplankton communities (A and C), whereas thiacloprid caused significant convergence in chironomid communities (F). ANOVA p-values are provided in the panels.



Supplemental Figure S4. PCoA plots for each of the four measurements, both prior to (week 18, A-C) and after application of treatments (week 22-27, D-L) for of the three taxonomic groups: bacteria, phytoplankton and chironomids.



Supplemental Figure S5. Average distance from centroid to the control centroid in week 24 for the (A) macroinvertebrates assessed with morphological methods (Barmentlo et al. 2019), and (B) bacteria, (C) phytoplankton and (D) chironomids assessed with eDNA (this study), at different numbers of replicate ditches sampled for eDNA.



Supplemental Tabel S1. Primers used for first and second round PCRs.

First Round PCR				
Primer	**Target**	**Direction**	**Sequence** (Universal tail + template-specific primer)	**Reference**
D512for	Phytoplankton	Forward	TCGTCGGCAGCGTCAGATGTGTATAAGAGACAG ATTCCAGCTCCAATAGCG	Zimmerman et al., 2011
D978rev	Phytoplankton	Reverse	GTCTCGTGGGCTCGGAGATGTGTATAAGAGACAG GACTACGATGGTATCTAATC	Zimmerman et al., 2011
S-D-Arch-0519-a-S-15	Bacteria	Forward	TCGTCGGCAGCGTCAGATGTGTATAAGAGACAG CAGCMGCCGCGGTAA	Klindworth et al., 2013
S-D-Bact-0785-a-A-21	Bacteria	Reverse	GTCTCGTGGGCTCGGAGATGTGTATAAGAGACAG TACNVGGGTATCTAATCC	Klindworth et al., 2013
LCO-1490	Chironomidae	Forward	TCGTCGGCAGCGTCAGATGTGTATAAGAGACAG GGTCAACAAATCATAAAGATATTGG	Bista et al., 2017
COIA-R	Chironomidae	Reverse	GTCTCGTGGGCTCGGAGATGTGTATAAGAGACAG CARAAWCTTATATTATTTATTCGDGG	Bista et al., 2017
Second Round PCR				
Primer		**Direction**	**Sequence** (Illumina adapter – index – universal tail)	
NEX-F		Forward	AATGATACGGCGACCACCGAGATCTACAC **[i5 index]** TCGTCGGCAGCGTC	
NEX-R		Reverse	CAAGCAGAAGACGGCATACGAGAT **[i7 index]** GTCTCGTGGGCTCGG	