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Succession of Bacterial Communities in a Seasonally Stratified Lake with an Anoxic and Sulfidic Hypolimnion

Diao, M.; Sinnige, R. ; Kalbitz, K.; Huisman, J.; Muyzer, G.

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Supplementary Material

Succession of bacterial communities in a seasonally stratified lake with an anoxic and sulfidic hypolimnion

Muhe Diao, Ruben Sinnige, Karsten Kalbitz, Jef Huisman, Gerard Muyzer*

* Correspondence: g.muijzer@uva.nl

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Supplementary Figures

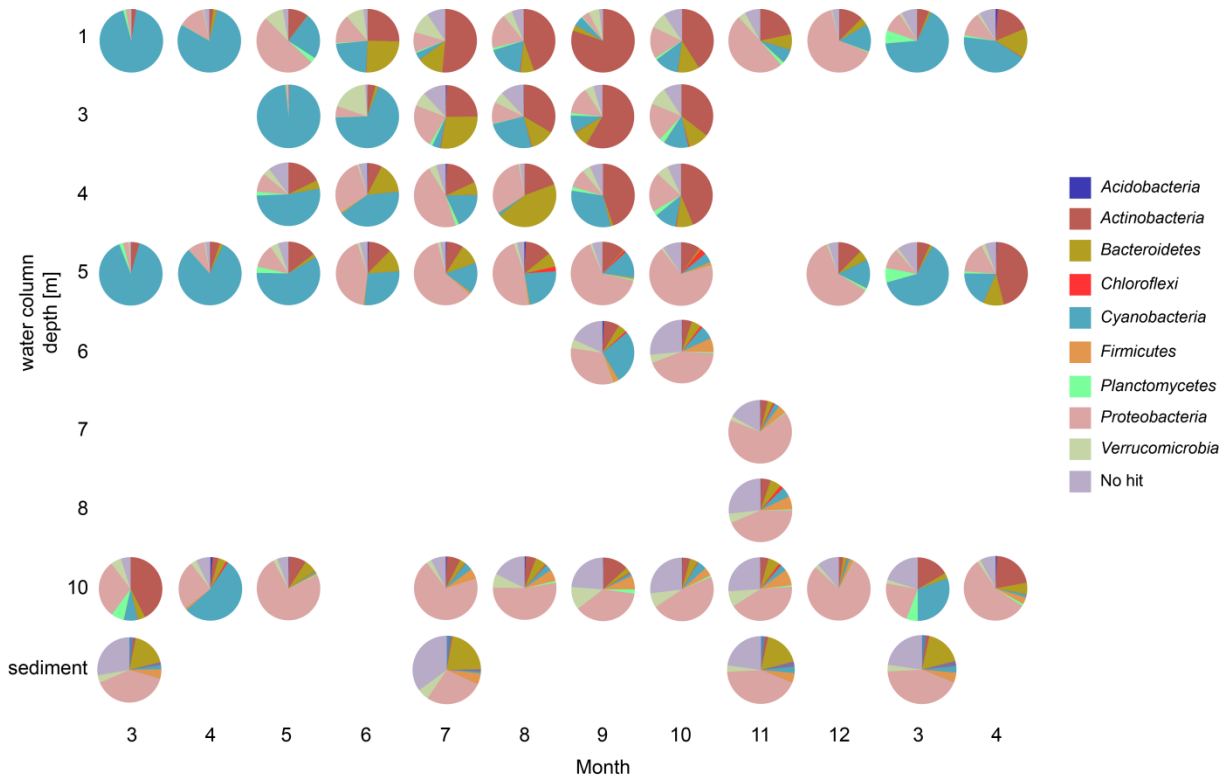
Figure S1. Composition of the bacterial community over time and space in Lake Vechten.

Figure S2. Global co-occurrence network of bacterial species and environmental variables.

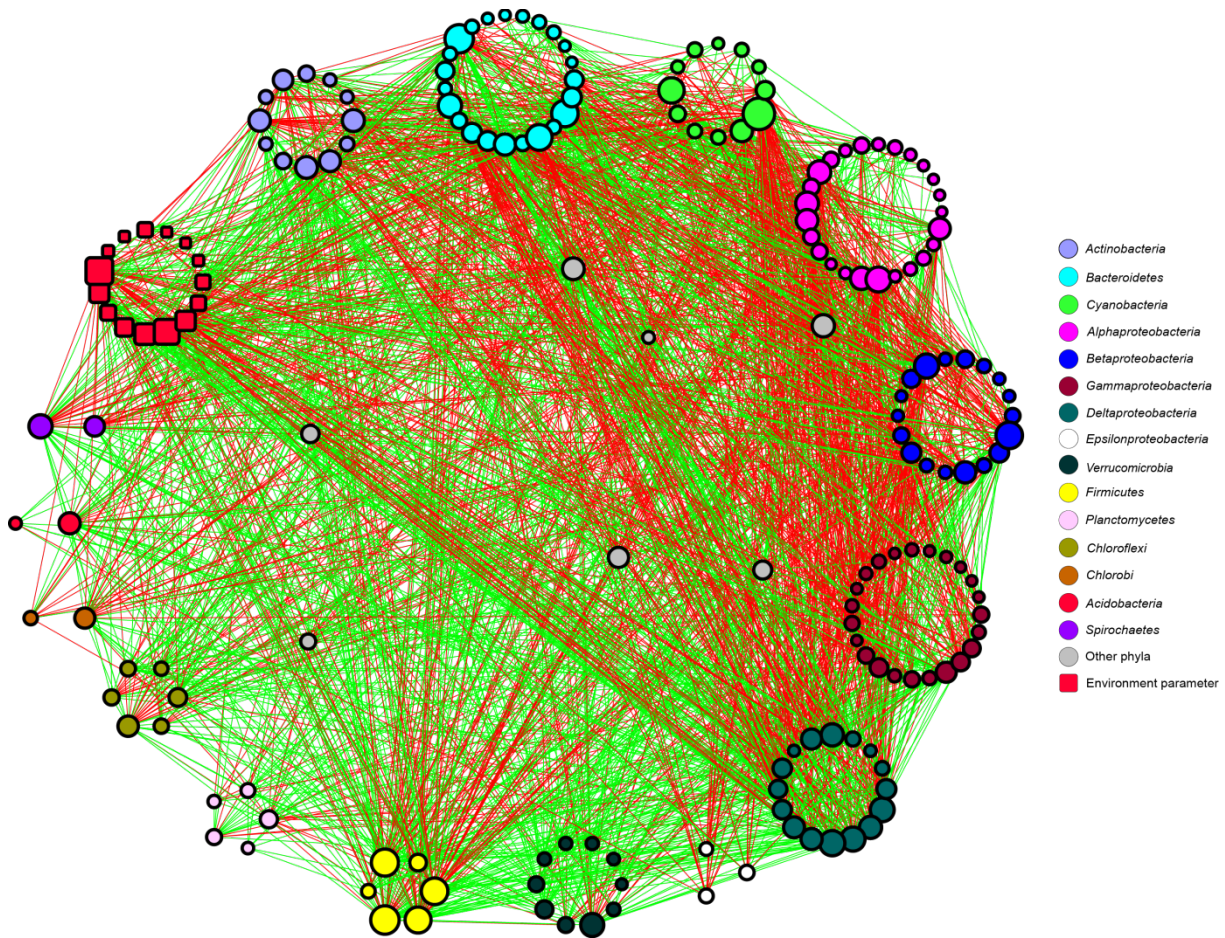
Supplementary Tables:

Table S1. List of DNA samples used for 16S rRNA gene amplicon sequencing.

Table S2. Relative abundances of major bacterial taxa in the water column and sediment.



Supplementary Figure S1. Composition of the bacterial community over time and space in Lake Vechten. The lower row presents the bacterial community composition in the sediment. Only bacterial phyla with an average relative abundance (sum of all relative abundances divided by sample number) > 0.3% are shown.



Supplementary Figure S2. Global co-occurrence network of bacterial species and environmental variables. Circles represent bacteria; red squares are environmental parameters. The size of the symbol indicates the number of interactions ('degrees'). Green lines indicate positive interactions (co-occurrence); red lines indicate negative interactions (mutual exclusion).

Supplementary Tables

Supplementary Table S1. List of DNA samples used for 16S rRNA gene amplicon sequencing.

Sample ID	Date	Depth (m)	Sample ID	Date	Depth (m)
A0301	2013-03-06	1	G0901	2013-09-02	1
A0305		5	G0903		3
A0310		10	G0904		4
A03S		Sediment	G0905		5
B0401	2013-04-10	1	G0906		6
B0405		5	G0910		10
B0410		10	H0901	2013-09-30	1
C0501	2013-05-08	1	H0903		3
C0503		3	H0904		4
C0504		4	H0905		5
C0505		5	H0906		6
C0510		10	H0910		10
D0601	2013-06-06	1	I1101	2013-11-07	1
D0603		3	I1107		7
D0604		4	I1108		8
D0605		5	I1110		10
D0610		10	I11S		Sediment
E0701	2013-07-01	1	J1201	2013-12-03	1
E0703		3	J1205		5
E0704		4	J1210		10
E0705		5	K0201	2014-02-25	1
E0710		10	K0205		5
E07S		Sediment	K0210		10
F0701	2013-07-29	1	K02S		Sediment
F0703		3	L0301	2014-03-31	1
F0704		4	L0305		5
F0705		5	L0310		10
F0710		10			

Supplementary Table S2. Relative abundances of major bacterial taxa in the water column and sediment.

Bacterial taxa	Water column			Sediment		
	Average (%)	Max. (%)	Min. (%)	Average (%)	Max. (%)	Min. (%)
<i>Actinobacteria</i>	18.2	79.9	0.4	1.0	1.1	0.5
<i>Bacteroidetes</i>	6.8	44.6	0	17.5	20.3	16.4
<i>Cyanobacteria</i>	26.9	98.0	0.8	1.9	2.9	0.8
<i>Alphaproteobacteria</i>	4.4	38.4	0.3	1.3	1.7	0.8
<i>Betaproteobacteria</i>	18.2	62.7	0.1	8.5	11.6	4.6
<i>Gammaproteobacteria</i>	6.0	28.9	0.2	5.9	7.4	3.4
<i>Deltaproteobacteria</i>	0.9	5.1	0	17.0	18.4	14.5
<i>Epsilonproteobacteria</i>	1.9	57.3	0	0	0	0
<i>Verrucomicrobia</i>	4.0	18.6	0.1	3.7	5.0	2.9
<i>Firmicutes</i>	1.3	7.9	0	4.4	4.8	4.2
<i>Planctomycetes</i>	1.4	7.4	0.1	0.2	0.2	0.1
<i>Chloroflexi</i>	0.4	2.9	0	1.4	2.0	1.0
<i>Chlorobi</i>	0.1	1.1	0	0.2	0.2	0.2
<i>Lentisphaerae</i>	0.2	2.0	0	0.3	0.4	0.2
<i>Spirochaetes</i>	0.1	0.6	0	2.7	3.5	2.0
<i>Fusobacteria</i>	0.1	0.8	0	0	0	0

The table shows the average over all samples, and the minimum and maximum relative abundance observed.