Supplementary Tables

Diversity and dynamics of rare and of resident bacterial populations in coastal sands

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Table S1. Summary of diversity estimators of richness for all samples at three different sediment depths and in the water column at different sampling times.

Table S2. Contribution of environmental parameters to the variation in the Phylum level, OTU_{all}, resident OTU, SSO_{rel} data sets and in sequences potentially affiliated with pathogens.

Table S3. Percentages of SSO_{rel} in each sample at different levels of OTU definition (PyroNoise-corrected data).

Table S1. Total OTU number for all samples at three different sediment depths and in the water column at different sampling times, for the raw OTU_{all} and the PyroNoise-corrected data sets at different percentages of sequence clustering ($OTU_{0\%}$ and $OTU_{3\%}$).

0-5 cm	Average over time	February 2005	April 2005	July 2005	November 2005	March1 2006	March2 2006
Total number of V6 sequences	8,827 ±2,398	8,527	4,722	9,035	12,153	8,856	9,667
Total OTU_{unique}	2,029 ±613	1,660	1,042	2,081	2,747	2,518	2,126
Total $OTU_{0\%}$	1,071±400	784	505	1,068	1,539	1,492	1,035
Total $OTU_{3\%}$	1,036±384	763	496	1,036	1,487	1,442	994
5-10 cm							
Total number of V6 sequences	14,736 ±4,717	16,197	9,648	8,044	18,948	16,770	18,806
Total OTU_{unique}	3,648 ±988	3,228	2,606	2,521	4,605	4,694	4,231
Total $OTU_{0\%}$	1,962±528	1,639	1,487	1,402	2,469	2,643	2,133
Total $OTU_{3\%}$	1,865±470	1,568	1,436	1,373	2,301	2,473	2,036
10-15 cm							
Total number of V6 sequences	14,078 ±5,118	7,132	13,593	nd	nd	16,672	18,914
Total OTU_{unique}	4,279 ±1,369	2,408	4,194	nd	nd	4,935	5,577
Total $OTU_{0\%}$	2,370±840	1,207	2,476	nd	nd	2,586	3,210
Total $OTU_{3\%}$	2,235±761	1,179	2,341	nd	nd	2,426	2,993

	Sand (0-5 cm)		
April 2008	Sediment	Pore water	Water column
Total number of V6 sequences	18,157	9,726	10,557
Total OTU_{unique}	3,806	1,940	1,788
Total $OTU_{0\%}$	2,830	1,376	1,336
Total $OTU_{3\%}$	2,697	1,189	1,213

Table S2. Contribution of environmental parameters to the variation in the Phylum level, OTU_{all}, resident OTU, SSOrel data sets and in sequences potentially affiliated with pathogens.

Data sets	Total number of sequences	$R^{2,a}$	Individual factor contribution[b]											
			Salinity	Pigments (Chl a)	Nutrients					Enzymes					Cell abundance
					SiO_2	PO_4	NO_2	NO_3	NH_4	Chit	α-glu	Lip	Am	Phos	
SSO_{rel}	55,512	21%***		-1	0.4	-0.3		-0.6					-0.8		-0.9
OTU_{all}	197,684	17%***		-1										-0.8	-0.9
Phylum	40,660	75%**	0.2	1	-0.6	0.2	-0.4	0.4	-0.6	0.6	0.8	0.2		0.8	0.9
Resident OTU	60,021	55%***	-0.1	-0.9	0.3	-0.3	0.3	-0.5	0.4	-0.6	-0.7	-0.1		-0.8	-0.9
Pathogens	426	55%**	0.1	1	-0.4	0.2		0.6	-0.6		0.7	0.2		0.8	0.9

[a]Adjusted R^2 indicates the amount of variation explained by environmental parameters (salinity, pigments, nutrients, enzymes and cell abundance), their significance is indicated as NS (non significant), * ($P \leq 0.05$), ** ($P \leq 0.01$), and *** ($P \leq 0.001$). Values were rounded to one decimal after the comma.

[b]Only significant, standardized correlation coefficients to the first redundancy analysis (RDA) axis are indicated for each parameter.

Chl a, chlorophyll a; SiO_2, silicate; PO_4, phosphate; NO_2, nitrite; NO_3, nitrate; NH_4, ammonium; Chit, chitinase; α-glu, α-glucosidase; Lip, lipase; Am, aminopeptidase; Phos, phosphatase.

Table S3. Percentages of SSO_{rel} in each sample at different levels of OTU definition (PyroNoise-corrected data).

Sampling date	Sediment layer [cm]	0%	3%	5%	10%
February 2005	0-5	1	0.8	0.6	0.5
	5-10	2.9	2.4	1.7	1.2
	10-15	2.1	1.9	1.6	1.2
April 2005	0-5	0.6	0.5	0.4	0.3
	5-10	2.9	2.6	2.4	1.8
	10-15	6	5.6	4.9	3.9
July 2005	0-5	1.8	1.7	1.1	0.8
	5-10	2.4	2.3	1.9	1.7
November 2005	0-5	3.5	3.3	2.7	2.4
	5-10	5.8	4.6	4.3	3.1
March1 2006	0-5	2.9	2.4	2.2	1.9
	5-10	6	4.9	4.1	3.4
	10-15	5.9	4.9	4.4	3.3
March2 2006	0-5	1.7	1.6	1.2	1
	5-10	4.1	3.5	2.8	2
	10-15	8.3	7.3	6.3	5.2