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Article

Different Assembly Patterns of Planktonic and Sedimentary Bacterial Community in a Few Connected Eutrophic Lakes

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Supplementary Materials

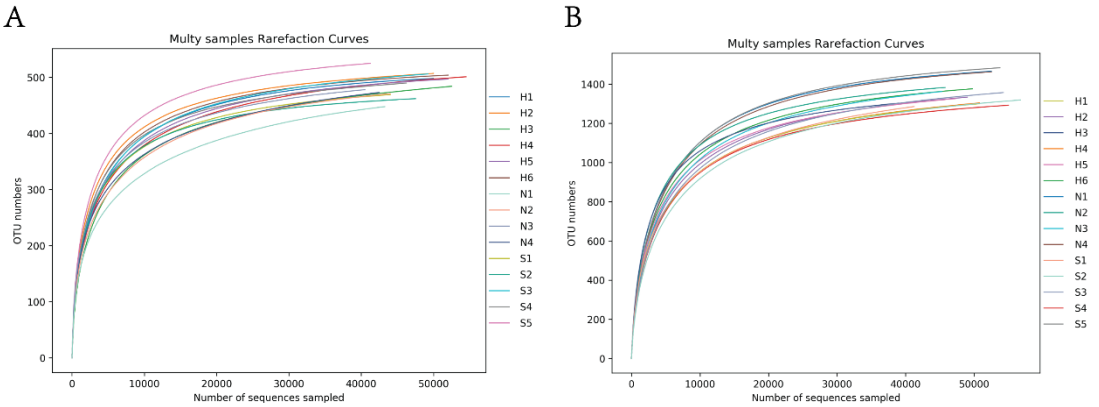

Figure S1. Rarefaction curve of planktonic (**A**) and sedimentary (**B**) samples.

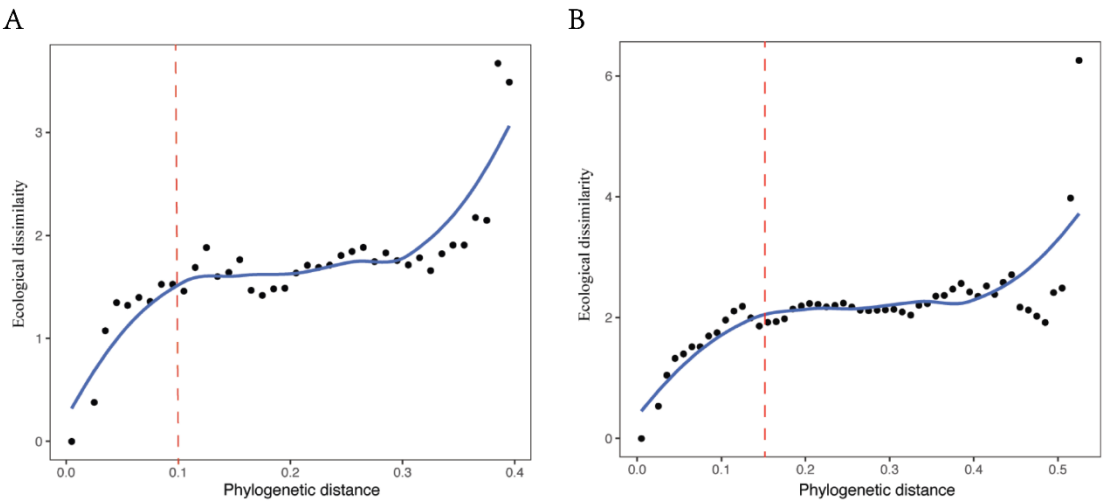

Figure S2. Phylogenetic signal in waters (**A**) and in sediments (**B**). Median habitat differences between pairs of OTUs as a function of between OTU phylogenetic distances. Medians are taken within phylogenetic distance bins. The vertical dotted line indicates the point at which the curve becomes non-monotonic, meaning the phylogenetic signal.

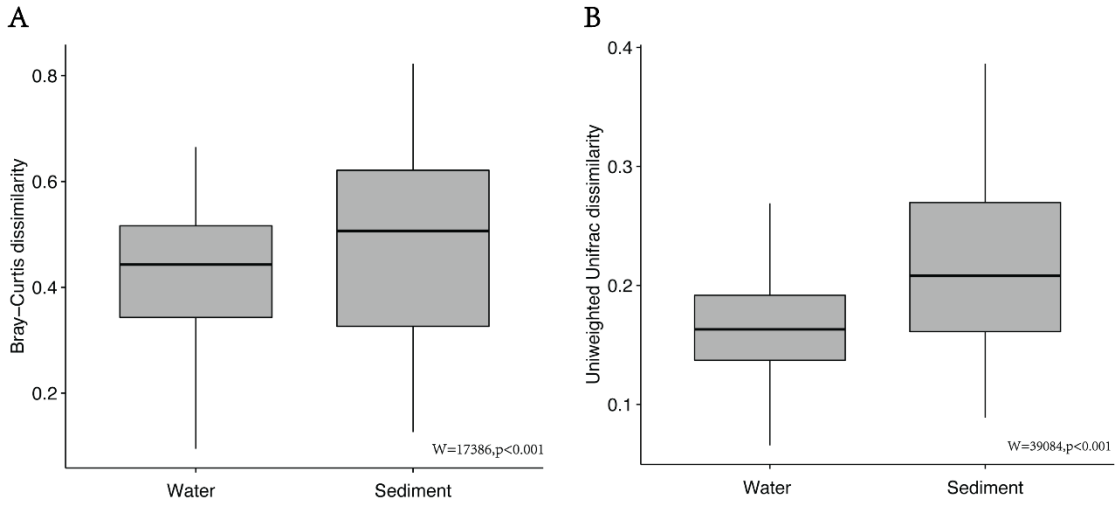

Figure S3. Comparison of Bray-Curtis dissimilarity (**A**) and Unweighted Unifrac dissimilarity (**B**) between planktonic and sedimentary bacterial. Water represents the planktonic bacteria and the Sediment represents the sedimentary bacteria. The bottom, middle, and top line of each box represents the first quartile, the median, and the third quartiles of the value range. The whiskers extend to values at 1.5X the inter-quartile range.

Table S1. Limnological parameters.

Lake (Lake Code)	Sample Code	Longitude (°E)	Lantitude (°N)	Water Depth (m)
Lake Houguan HGH	H1	114.06308	30.28487	2.31
	H2	114.07176	30.29178	2.46
	H3	114.06478	30.29592	2.13
	H4	114.07169	30.30328	2.61
	H5	114.07229	30.3054	2.64
	H6	114.07591	30.30438	2.01
Lake Longyang LYH	L1	114.10539	30.33133	1.89
	L2	114.10214	30.33194	2.13
	L3	114.10331	30.33305	2.52
	L4	114.10236	30.33487	1.65
Lake Moshui MSH	M1	114.14046	30.3216	1.38
	M2	114.13386	30.32272	1.02
	M3	114.1312	30.32385	1.68
	M4	114.12363	30.32318	1.71
Lake Nantaizi NTZ	N1	114.10359	30.30236	1.59
	N2	114.11079	30.29589	1.65
	N3	114.11391	30.29356	1.47
	N4	114.11383	30.29177	1.44
Lake Sanjiao SJH	S1	114.09367	30.30566	1.11
	S2	114.10001	30.3107	1.65
	S3	114.10008	30.31218	1.65
	S4	114.10068	30.31366	1.65
	S5	114.09335	30.31325	1.47

Table S2. Physicochemical properties of the water and sediment collected from the sampled lakes.

Samples	SD (m)	T (℃)	pH	OPR	Cond.	DO (mg/L)	TN (mg/L)	NH4-N (mg/L)	NO3-N (mg/L)	TP (mg/L)	PO_4^{3-} (mg/L)	chl.a (μg/L)	COD_{cr}	Mean TSIc
H1	0.38	30	8.83	239	0.3	8.23	3.45	0.52	0.15	0.129	0.017	58.06	30.53	72.9
H2	0.3	30	8.87	238	0.3	9.69	0.71	0.5	0.3	0.21	0.017	148.18	26.72	79.5
H3	0.43	31	8.92	236	0.3	9.64	0.61	0.45	0.08	0.129	0.017	39.9	26.72	71.2
H4	0.43	31	9.08	231	0.3	10.68	0.91	0.5	0.48	0.129	0.035	51.75	26.72	72.0
H5	0.38	31	8.9	242	0.3	8.87	0.66	0.47	0.61	0.129	0.017	43.28	30.53	72.1
H6	0.31	31	8.88	221	0.3	8.41	4.41	0.45	0.15	0.162	0.07	57.09	19.08	75.0
L1	0.21	30.8	8.58	254	0.6	10.46	12.51	2.36	0.94	0.34	0.122	204.37	38.17	84.6
L2	0.27	31.1	8.34	264	0.5	9.35	5.73	4.62	0.91	0.34	0.052	194.89	30.53	83.3
L3	0.19	31	8.2	269	0.5	8.47	7.09	1.04	0.66	0.243	0.052	157.74	53.44	82.6
L4	0.26	31.5	8.44	259	0.5	11.49	7.85	1.02	1.06	0.259	0.07	187.35	3.82	81.9
M1	0.2	30.6	8.15	258	0.4	5.17	10.39	2.06	0.63	0.291	0.052	201.73	7.63	84.0
M2	0.17	30.9	8.56	249	0.4	8.95	8.16	2.21	0.43	0.323	0.052	229.92	11.45	85.7
M3	0.18	30.9	8.61	249	0.4	10.21	6.49	1.99	1.09	0.404	0.035	235.84	49.62	86.6
M4	0.22	31.6	8.34	261	0.4	8.5	5.07	1.84	0.66	0.34	0.052	220.95	68.7	84.6
N1	0.19	32.9	9.39	212	0.3	15.8	5.27	0.5	0.58	0.291	0.087	251.09	57.25	84.9
N2	0.18	32.6	9.13	229	0.3	11.9	2.33	0.52	0.3	0.226	0.07	87.02	34.35	80.7
N3	0.19	32.3	9	234	0.3	10.61	4.21	0.5	0.4	0.21	0.052	69.3	38.17	79.5
N4	0.2	31.2	8.88	240	0.4	10.2	7.6	0.5	0.46	0.21	0.052	79.78	83.97	79.6
S1	0.18	29.9	8.15	283	0.3	5.22	4.46	0.17	0.4	0.275	0.035	99.38	41.98	82.1
S2	0.21	29.8	8.48	266	0.3	5.94	2.03	0.5	0.43	0.259	0.087	89.44	3.82	80.7
S3	0.19	30.5	8.71	263	0.3	8.34	2.94	0.2	0.23	0.275	0.122	101.42	38.17	81.9
S4	0.18	31.2	9.09	239	0.3	10.22	3.5	0.27	0.35	0.372	0.052	96.1	61.07	83.6
S5	0.22	32.4	9.11	234	0.3	12.24	4.36	0.47	0.3	0.243	0.052	68.46	30.53	79.4