



Supplementary Material

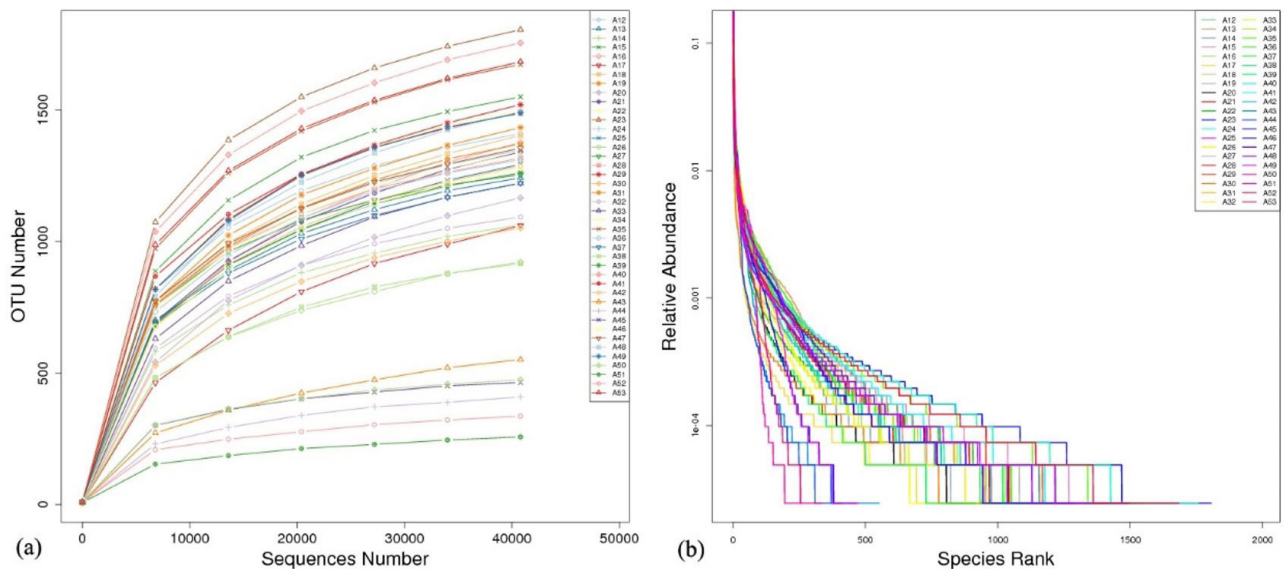
Microeukaryotic Variation in Local Sediments with the Influence of Sea-Crossing Bridge Construction: A Case Study in East China

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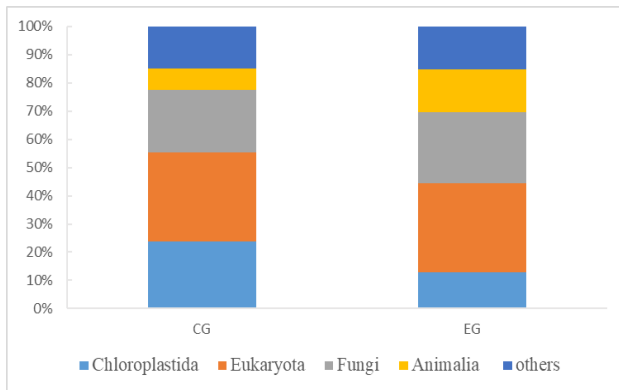
Supplementary Fig. S1. Rarefaction curves (a) and rank abundance curves (b) of all sediment samples.

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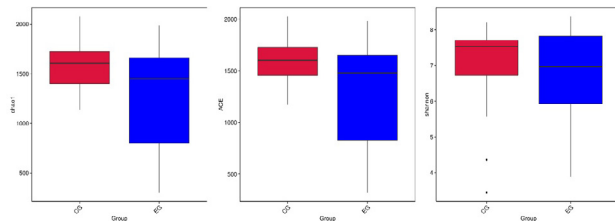


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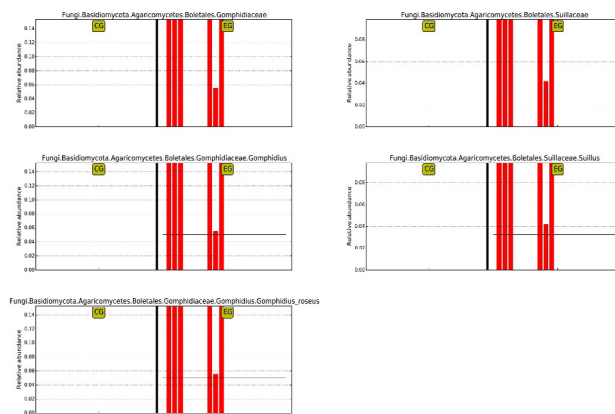
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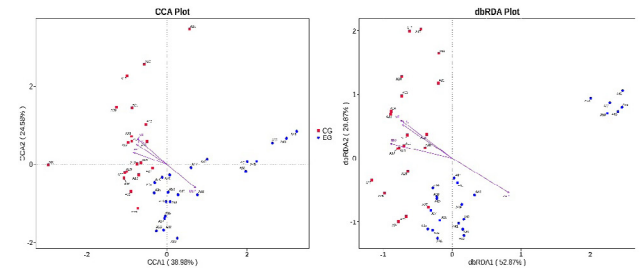
Supplementary Fig. S2. Relative abundance at the kingdom level between two groups.



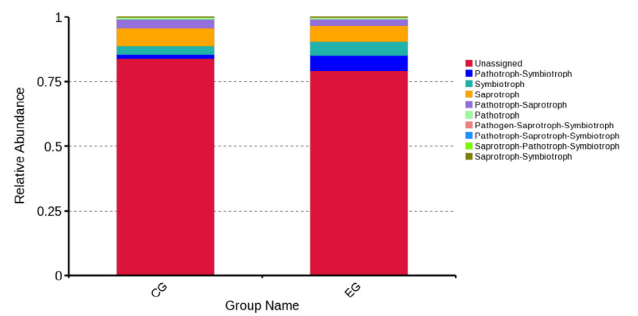
Supplementary Fig. S3. Alpha diversity estimates between two groups.



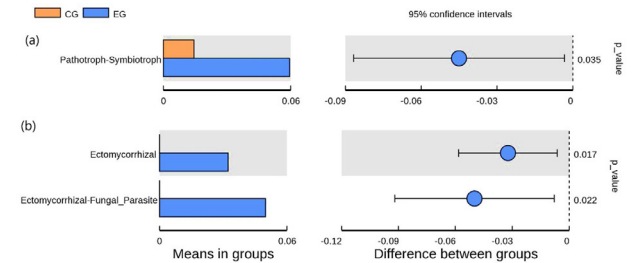
Supplementary Fig. S4. Relative abundance of identified *Fungi* biomarkers in LEfSe analysis.



Supplementary Fig. S5. CCA (left panel) and dbRDA (right panel) plotting showing the relationship between microbial communities and physical factors.



Supplementary Fig. S6. Relative abundance of classified trophic mode groups in this study.



Supplementary Fig. S7. Trophic modes (a) and compositions (b) with different abundance between groups.

Supplementary Table SI. Statistical information of four environmental factors (physical parameters).

Group	Sample ID	Flow velocity (VF, cm/s)	Depth (DEP, m)	Drilled pile shaft friction (FR1, kPa)	Sinking pile shaft friction (FR2, kPa)	
CG	A12	16	26	46	50	
	A13	17	28	50	47	
	A14	17	28	50	47	
	A15	16	26	46	43	
	A16	14	29	48	44	
	A17	14	29	48	44	
	A18	9	30	50	42	
	A19	7	31	50	40	
	A20	16	28	48	47	
	A21	17	28	48	47	
	A22	16	29	50	44	
	A23	14	29	50	44	
	A24	6	31	50	40	
	A25	16	26	46	50	
	A26	14	26	46	50	
	A27	17	27	48	48	
	A28	17	27	48	48	
	A29	16	29	50	47	
	A30	16	29	50	47	
	A31	15	29	50	47	
	EG	A32	4	35	37	40
		A33	4	35	37	40
		A34	4	35	37	40
		A35	6	34	35	42
		A36	6	34	35	42
		A37	6	34	35	42
		A38	6	34	35	42
		A39	4	35	37	40
		A40	4	35	37	40
		A41	6	34	35	42
A42		6	34	36	39	
A43		6	34	36	39	
A44		6	34	36	39	
A45		4	35	40	37	
A46		4	35	40	37	
A47		6	34	36	39	
A48		4	35	40	37	
A49		4	35	40	37	
A50		4	35	40	37	
A51		4	35	40	37	
A52		6	34	36	39	
A53		4	35	40	37	

Supplementary Table SII. Information of sequencing data and OUT statistics.

Group	Sample ID	Effective read	Base (bp)	Q20 (%)	Q30 (%)	OUT number	
CG	A12	60,119	18,358,689	98.44	95.73	1580	
	A13	61,242	18,763,692	98.40	95.58	1462	
	A14	47,889	14,684,940	98.42	95.65	1237	
	A15	47,780	14,822,905	98.32	95.32	1699	
	A16	67,719	20,741,616	98.47	95.81	1626	
	A17	65,180	19,913,073	98.46	95.81	1297	
	A18	67,748	20,889,990	98.43	95.62	1594	
	A19	65,302	20,009,692	98.42	95.68	1601	
	A20	65,534	20,046,608	98.46	95.78	1366	
	A21	63,947	19,532,364	98.19	95.12	1569	
	A22	61,953	19,081,032	97.95	94.30	1694	
	A23	63,136	19,277,055	98.30	95.31	1957	
	A24	64,267	19,658,311	98.45	95.72	1510	
	A25	67,598	20,668,749	98.50	95.76	1459	
	A26	66,675	20,318,869	98.44	95.67	1076	
	A27	45,636	13,870,218	98.41	95.54	1375	
	A28	65,551	20,014,589	98.43	95.74	1455	
	A29	69,399	21,165,583	98.44	95.72	1688	
	A30	63,672	19,044,583	98.35	95.66	1215	
	A31	68,501	20,897,564	98.46	95.72	1553	
	EG	A32	61,569	18,833,779	98.33	95.45	1256
		A33	60,583	18,303,254	98.13	94.98	1405
		A34	64,072	19,569,050	98.27	95.17	1519
		A35	67,198	20,437,811	98.30	95.34	1833
		A36	62,935	19,292,739	98.38	95.51	1481
		A37	64,270	19,725,414	98.37	95.47	1381
		A38	60,346	18,541,628	98.40	95.55	1066
		A39	54,515	16,681,070	98.37	95.43	1392
		A40	42,242	12,910,355	98.39	95.47	1755
		A41	63,156	19,273,792	98.37	95.47	1667
		A42	65,695	21,836,332	98.00	94.10	1460
A43		66,407	20,509,388	99.00	96.56	637	
A44		67,389	21,365,516	99.37	97.63	455	
A45		66,763	20,558,745	99.02	96.63	523	
A46		67,020	20,546,092	98.33	95.38	1447	
A47		66,929	20,497,720	98.29	95.25	1540	
A48		66,385	20,169,475	98.19	95.00	1668	
A49		61,848	18,947,392	98.25	95.05	1661	
A50		68,322	21,019,394	98.94	96.43	539	
A51		60,649	18,821,705	99.25	97.42	284	
A52		68,281	21,057,146	99.34	97.53	379	
A53		66,960	20,435,181	98.25	95.12	1860	

Supplementary Table SIII. Information of Alpha diversity estimates including Chao1, ACE and Shannon index.

Group	Sample name	Shannon	Chao1	ACE	
CG	A12	7.644	1524.754	1588.01	
	A13	7.963	1386.354	1464.486	
	A14	7.436	1229.634	1244.494	
	A15	8.207	1722.74	1729.273	
	A16	7.63	1758.727	1785.276	
	A17	4.357	1403.909	1432.203	
	A18	7.859	1760.619	1753.995	
	A19	7.034	1739.049	1725.873	
	A20	5.568	1490.9	1499.38	
	A21	7.074	1690.394	1666.922	
	A22	6.076	1623.687	1682.677	
	A23	8.042	2077.502	2026.798	
	A24	7.654	1600.532	1586.785	
	A25	7.672	1613.757	1615.094	
	A26	6.307	1135.333	1171.693	
	A27	7.678	1364.053	1388.377	
	A28	6.872	1568.325	1510.361	
	A29	7.252	1807.33	1770.787	
	A30	3.44	1309.048	1260.615	
	A31	7.792	1643.902	1669.26	
	EG	A32	7.087	1195.789	1251.762
		A33	6.195	1353.658	1434.943
		A34	7.694	1607.562	1582.827
		A35	7.976	1937.814	1907.484
		A36	7.963	1438.079	1499.376
		A37	7.669	1462.833	1459.835
		A38	6.041	992.426	1057.848
		A39	7.026	1394.541	1420.754
		A40	8.374	1990	1983.051
		A41	7.475	1737.858	1725.273
		A42	6.272	1548.388	1536.358
A43		4.366	736.067	747.963	
A44		3.877	491.787	501.082	
A45		5.676	528.909	533.35	
A46		6.899	1610.259	1575.955	
A47		7.87	1674	1619.644	
A48		6.914	1818.248	1780.771	
A49		7.906	1616.319	1665.615	
A50		5.893	569.192	567.752	
A51		4.477	301.386	319.135	
A52		5.535	405.188	423.046	
A53		7.991	1923.028	1903.151	