

Supporting Information for

Red Claw Crayfish *Cherax quadricarinatus* Cultivation Influences the Dynamics

and Assembly of Benthic Bacterial Communities in Paddy Fields

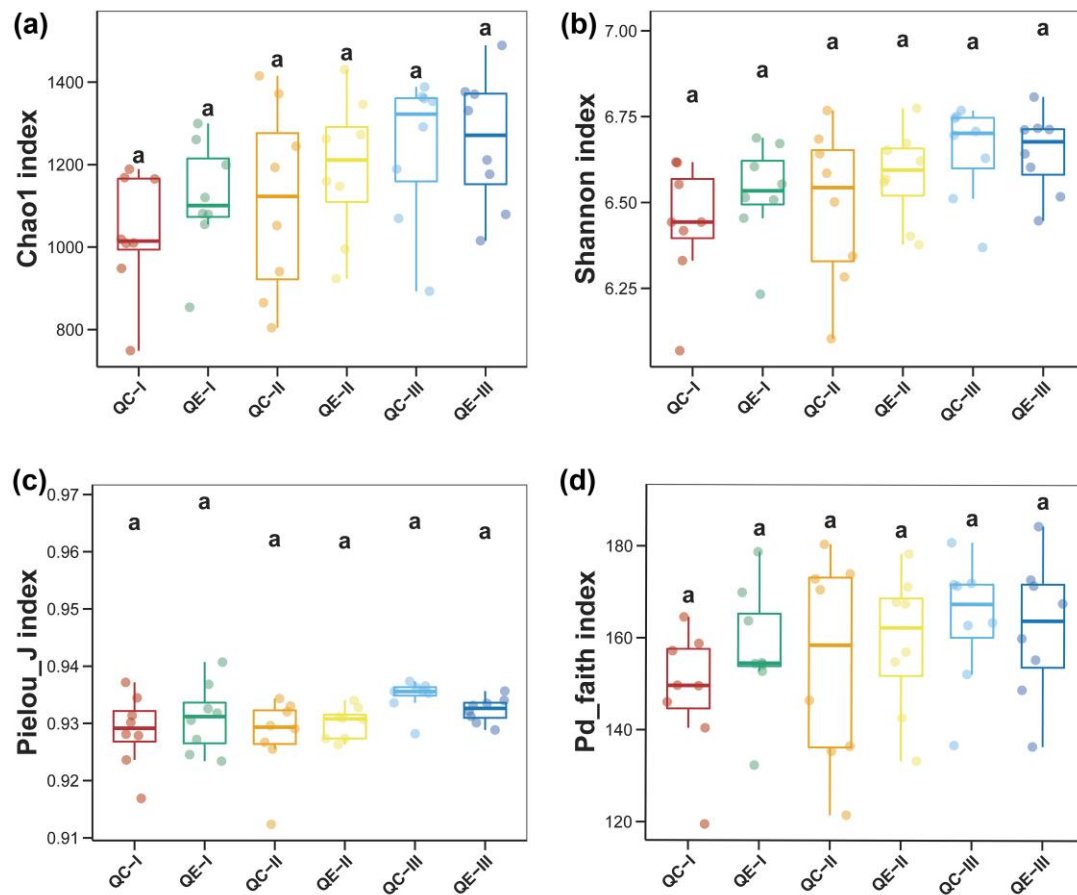


Figure S1. Differences in alpha diversity indices of bacterial communities in paddy soil with and without red claw crayfish *Cherax quadricarinatus* cultivation during the experimental period. Different lowercase letters above each box in the same sub-figure represent significant differences between groups (Tukey's HSD test, $P < 0.05$). QE and QC indicate the red claw crayfish cultivation group and the control group, respectively. I, II, and III represent three culture stages, which are the 25th August, 25th September, and 25th October, respectively.

Table S1. Two-way PERMANOVA of culture stages and red claw crayfish *Cherax quadricarinatus* cultivation for bacterial community in paddy fields based on the Bray–Curtis distance.

	F	R²	p-value
Culture stage	3.0328	0.1165	0.001
Red claw crayfish cultivation	1.2332	0.0237	0.057
Two-factor interaction	1.3835	0.0532	0.003

Table S2. Topological parameters of co-occurrence networks constructed by bacteria in paddy soil. QE and QC indicate the red claw crayfish cultivation group and the control group, respectively. I, II, and III represent three culture stages, which are the 25th August, 25th September, and 25th October, respectively.

Topological parameters	QC-I	QE-I	QC-II	QE-II	QC-III	QE-III
Node number	145	151	170	188	192	190
Edge number	488	293	432	499	577	607
Positive edge ratio	55.53%	53.92%	65.51%	56.71%	58.06%	59.14%
Negative edge ratio	44.67%	46.08%	34.49%	43.29%	41.94%	40.86%
Degree	6.37	3.88	5.08	4.31	6.01	6.39
Diameter	11	14	11	11	10	11
Density	0.047	0.026	0.03	0.028	0.031	0.034
Modularity	0.607	0.712	0.694	0.653	0.638	0.062

Table S3. Significance tests of environmental factors in Redundancy analysis (RDA).

	R²	p-value
TP	0.048	0.511
TN	0.787	0.001
Ammonia	0.284	0.010
Nitrite	0.252	0.030
Nitrate	0.592	0.001