

## Response of phytoplankton to organic enrichment and shrimp activity in tropical aquaculture ponds: a mesocosm study

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Table S1: Summary of the zootechnical results after 44 days and effects of shrimp density (D) and access to the sediment (S). Statistical comparisons were carried out by a two-way analysis of variance (ANOVA), with D and S as major sources of variance (F-values are shown in the right part of the table). Values in bold type are significant at  $P < 0.05$ .

	Mean and standard deviation in each treatment				Two way ANOVA F-values		
	D4S <sup>-</sup>	D4S <sup>+</sup>	D12S <sup>-</sup>	D12S <sup>+</sup>	D	S	D x S
Survival (%)*	90 ± 16	95 ± 8	81 ± 5	90 ± 0	3.7	0.7	0.11
Weight(g)**	12.3 ± 1.1a	16.1 ± 0.5b	11.2 ± 0.2a	14.5 ± 0.4b	<b>13.3</b>	<b>96.3</b>	0.45
Growth (g j <sup>-1</sup> )	0.07 ± 0.02a	0.16 ± 0.01b	0.05 ± 0.00a	0.13 ± 0.01c	<b>13.3</b>	<b>96.3</b>	0.45
Biomass gain (g m <sup>-2</sup> )	8.1 ± 5.4a	25.8 ± 4.3b	0.4 ± 5.9a	50.6 ± 4.2c	<b>8.9</b>	<b>140.0</b>	<b>32.1</b>

\* Survival data were transformed Arcsin( $\sqrt{\quad}$ ) before ANOVA

\*\* Initial shrimp weight = 9.0 ± 1.5 g

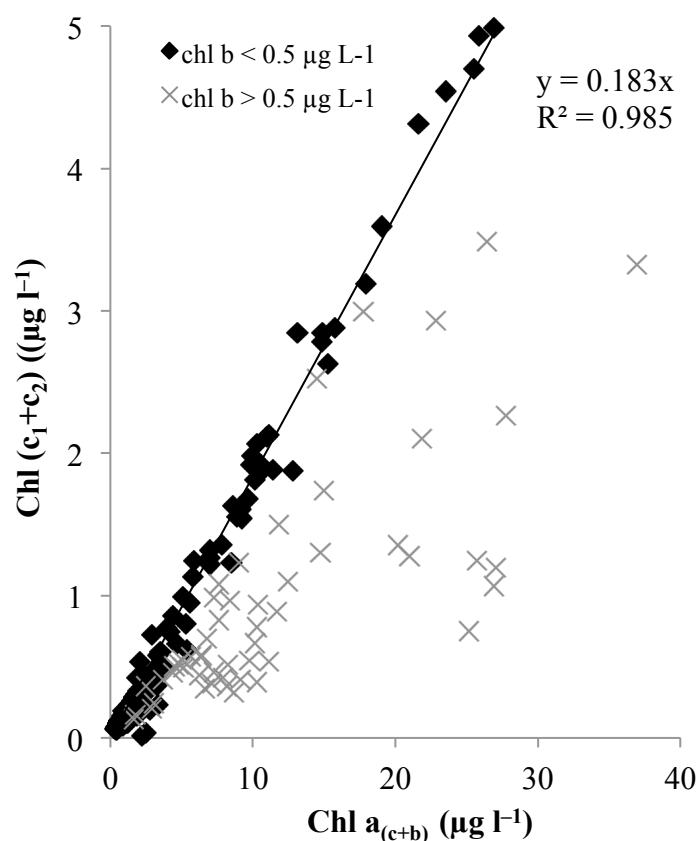


Fig. S1: Relation between chl ( $c_1+c_2$ ) and chl  $a_{(c+b)}$ \* for samples characterized by chl  $b$  concentrations less than 0.5  $\mu\text{g l}^{-1}$  ( $N = 132$ ) and higher than 0.5  $\mu\text{g l}^{-1}$  ( $N = 54$ ). Five pairs of data characterized by significant concentrations of chl  $c_3$  were deleted from this graph. \* chl  $a_{(c+b)}$ : contribution of chl  $a$  associated with chromophytes and green algae.

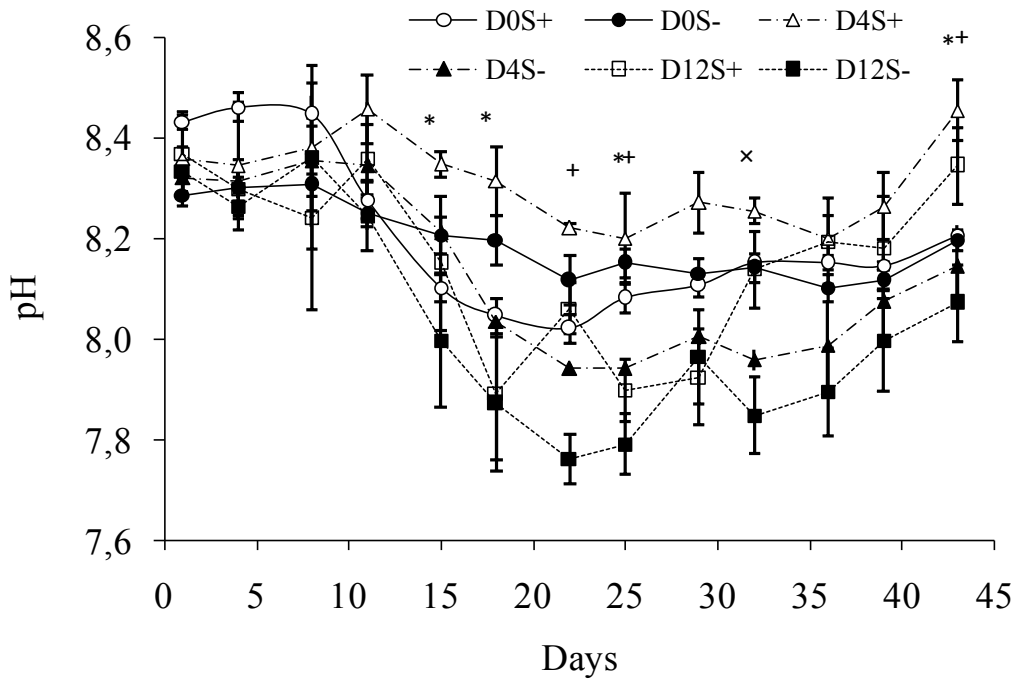


Fig. S2: Temporal mean ( $\pm$ S.D.) variations of pH measured in the water column. Signs (\*) and (+) indicate a significant density and access to sediment effects ( $p < 0.05$ ), respectively (using two-way analysis of variance). Sign (x) indicates significant differences ( $p < 0.05$ ) between daily values (using the Kruskal-Wallis test).

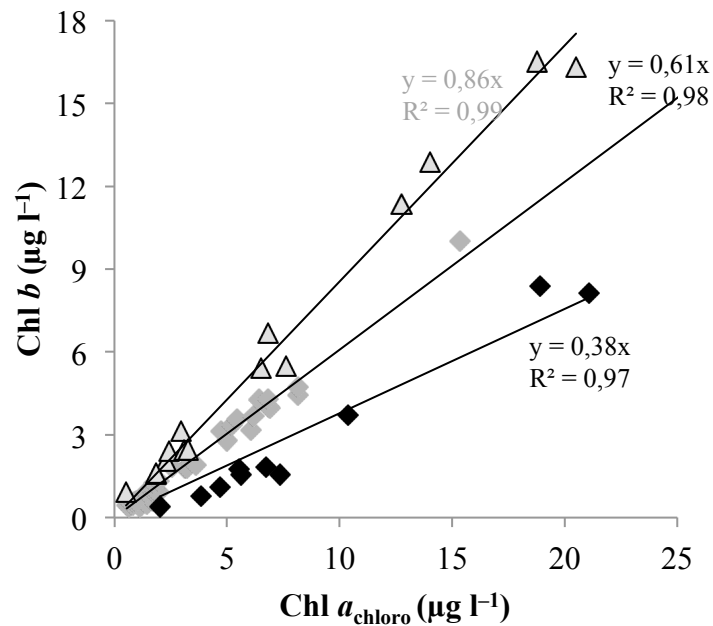


Fig. S3: Relationships between chl *b* (concentrations  $> 0.4 \mu\text{g l}^{-1}$ ) and chl *a* concentrations associated with Chlorophytes. ( $\Delta$ ): identified as prasinophytes type 3 (with prasinoxanthin); ( $\blacklozenge$ ): identified as prasinophytes type 1-2 (without prasinoxanthin); ( $\blacklozenge$ ): identified as chlorophytes.