

1 Table S1. *Emiliana huxleyi* N and C content (pg/cell)

Treatment	Time (hours p.i.)	Replicate	pg N/cell	pg C/cell	Mean \pm SD pg N/cell	Mean \pm SD pg C/cell
Eh inf	0	A	1.580	9.190	1.507 \pm 0.077	9.268 \pm 0.1898
		B	1.550	9.580		
		C	1.500	9.036		
		D	1.555	9.165		
		E	1.366	9.368		
		F	1.488	9.270		
	24	A	1.945	11.102	1.889 \pm 0.129	10.856 \pm 0.430
		B	1.755	10.758		
		C	1.782	10.991		
		D	2.093	10.216		
		E	1.816	10.607		
		F	1.945	11.461		
Eh non-inf	0	A	1.480	8.559	1.507 \pm 0.050	8.940 \pm 0.936
		B	1.573	8.242		
		C	1.434	8.988		
		D	1.551	10.778		
		E	1.511	8.681		
		F	1.494	8.394		
	24	A	2.053	10.686	2.088 \pm 0.072	10.415 \pm 0.258
		B	1.997	10.410		
		C	2.110	10.714		
		D	2.212	10.173		
		E	2.088	10.427		
		F	2.067	10.082		

2 *Emiliana huxleyi* non-infected (Eh non-inf); *Emiliana huxleyi* infected with EhV-86 (Eh inf). Time indicate hours
3 post-infection. Values are mean \pm one standard deviation.
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14 Table S2. Growth and grazing rates for each experiment under both diet conditions.

	Experiment 1		Experiment 2		Experiment 3		Experiment 4	
	Om + Eh	Om + Eh	Om + Eh	Om + Eh	Om + Eh	Om + Eh	Om + Eh	Om + Eh
	non-inf	inf	non-inf	inf	non-inf	inf	non-inf	inf
Growth	NA	NA	0.433 ± 0.020	0.563 ± 0.025	0.325 ± 0.005	0.466 ± 0.006	0.2826 ± 0.068	0.540 ± 0.052
Grazing	14.880 ± 1.570	14.480 ± 0	57.873 ± 1.067	41.163 ± 2.545	50.877 ± 2.106	25.241 ± 0.648	72.263 ± 6.963	52.821 ± 2.760
Growth/Grazing	NA	NA	0.0075 ± 0.0001	0.0140 ± 0.0008	0.0068 ± 0.0005	0.0231 ± 0.0004	0.0051 ± 0.0010	0.0130 ± 0.0008

15 *Oxyrrhis marina* (Om); *Emiliania huxleyi* non-infected (Eh non-inf); *Emiliania huxleyi* infected with EhV-86 (Eh
 16 inf). Values are mean ± one standard deviation.

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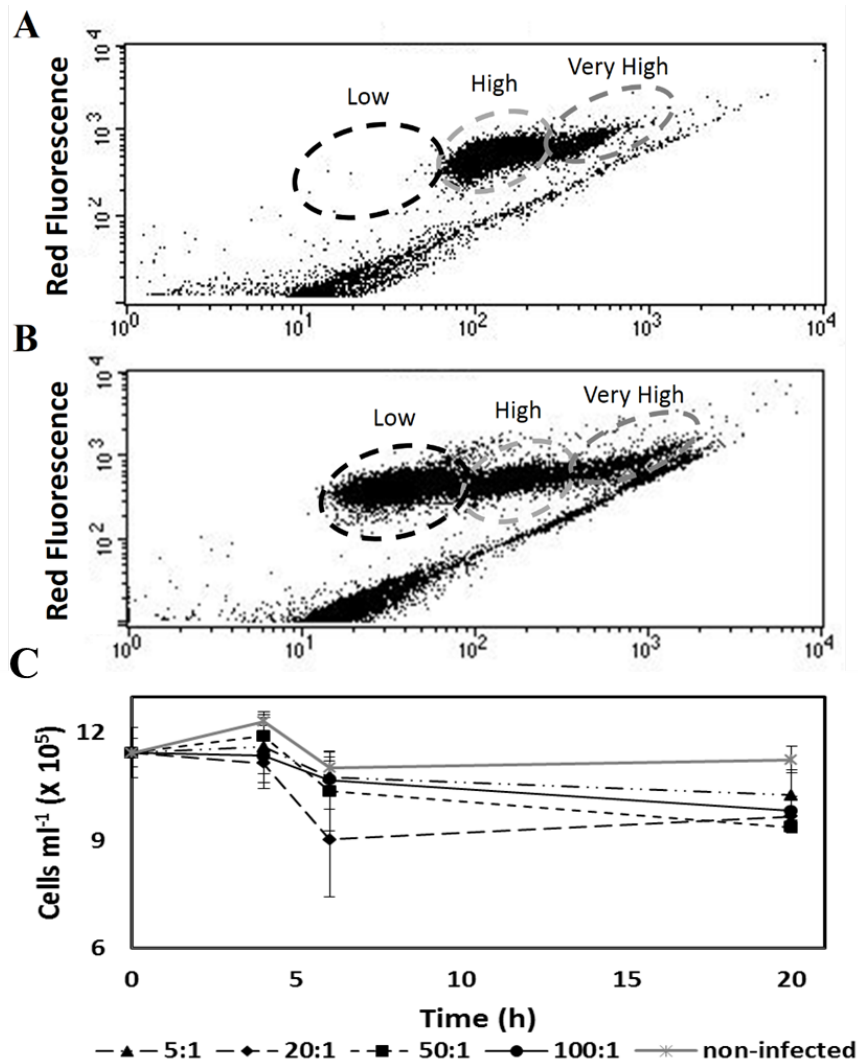
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32 Fig. S1. **A:** Non-infected *E. huxleyi* and **B:** EhV infected *E. huxleyi* representative FCM dotplots33 of *E. huxleyi* stained with lipid fluorescent dye FM1-43 20 h p.i. X-axis is relative orange

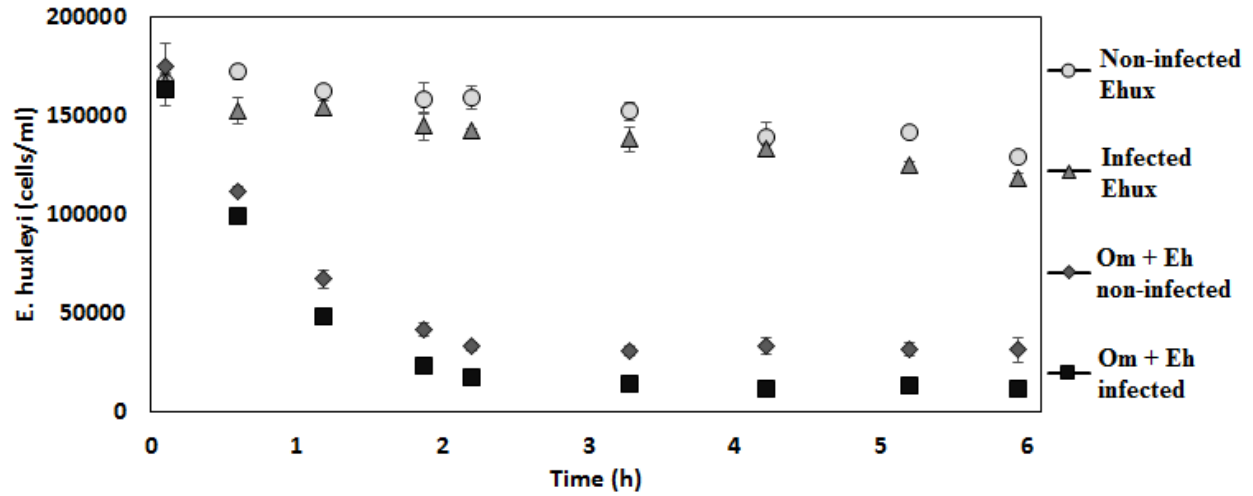
34 fluorescence and Y-axis is relative red fluorescence. Higher abundances of cells exhibiting a

35 very high or low orange fluorescence compared to non-infected cells are considered visibly

36 infected. **C:** Total *E. huxleyi* cell abundance over a 20 h period of time in non-infected cultures

37 and in cultures virally infected at virus:host ratios of 5:1, 20:1, 50:1, and 100:1. Biological

38 triplicates were enumerated for each treatment. Values are mean \pm one standard deviation.



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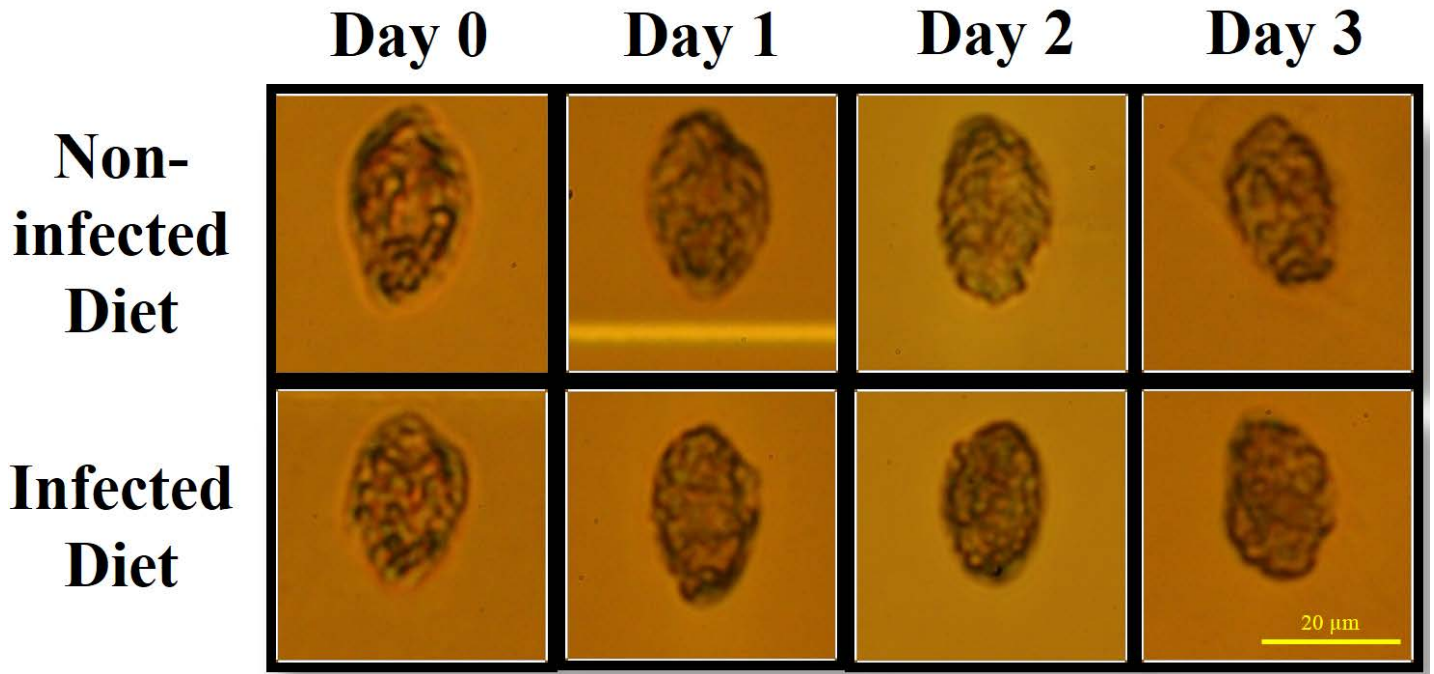
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50 Fig. S2. *E. huxleyi* concentration (cells ml⁻¹) over time (hours) during experiment 1. *Oxyrrhis*

51 *marina* (Om); *Emiliana huxleyi* (Eh). Values are mean ± one standard deviation. Measurable

52 grazing occurred during the initial 1.9 h p.i.



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64 Fig. S3. Representative *O. marina* pictures taken for volume measurements.

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