

680 **Figure S1.** Population dynamics of *Synechococcus* in four replicate chemostats ($-V_1, -V_2, -V_3,$
 $-V_4$). Dashed vertical line (day 29) represent the time of virus was added to the +V chemostats.

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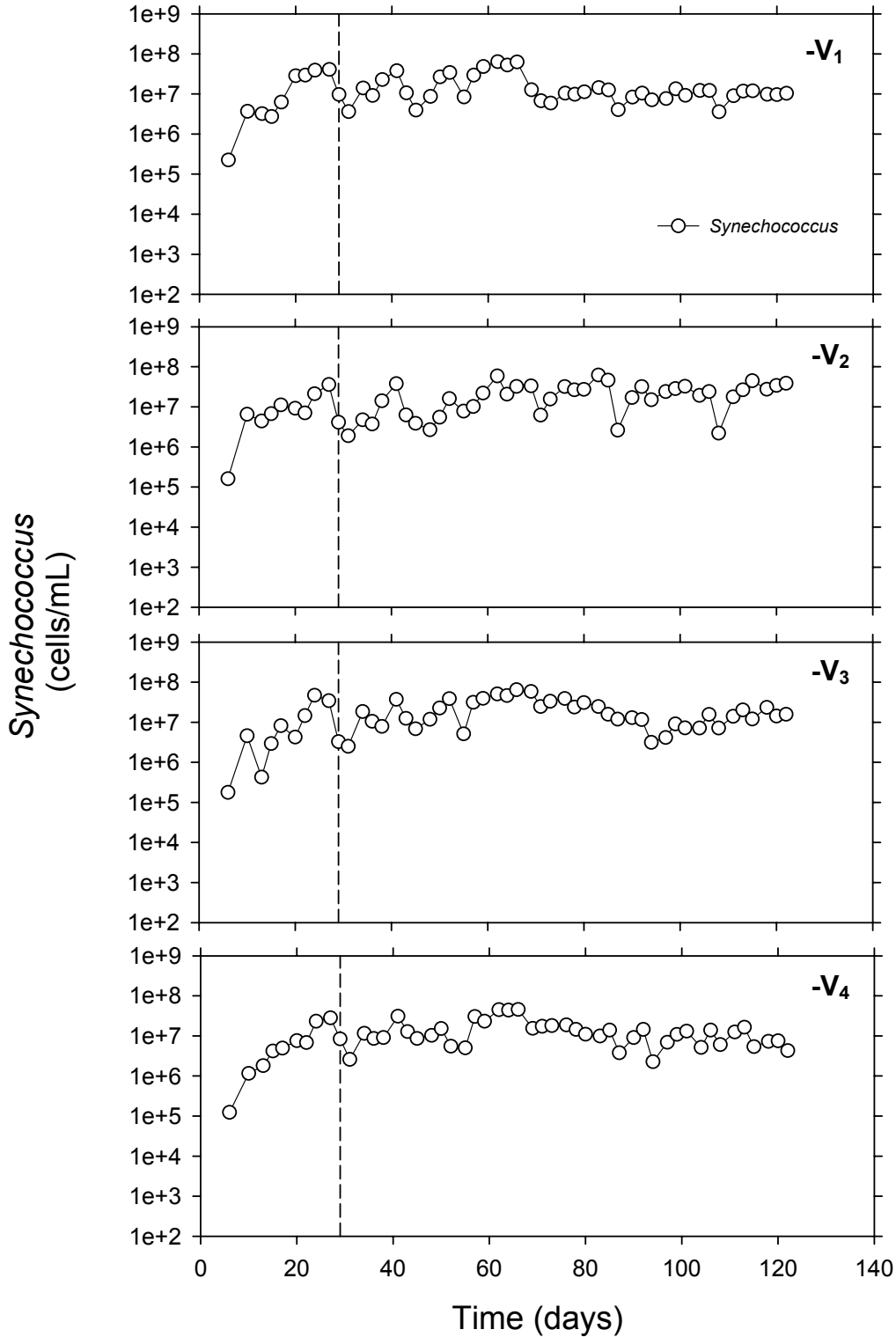
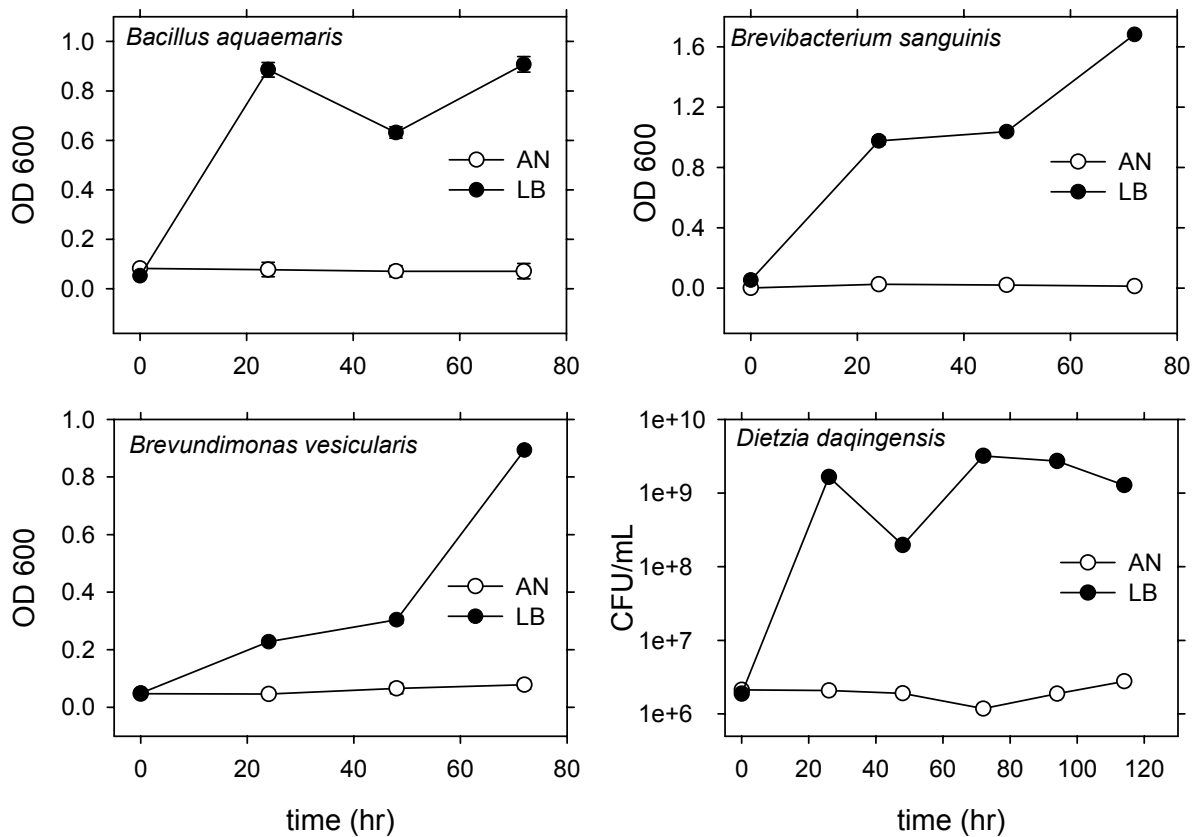


Fig. S2. Growth curves for some of the heterotrophic bacteria that were isolated from the
 684 inoculum and chemostats. A 1 mL aliquot of a homogenized culture was inoculated into
 replicate Erlenmeyer flasks containing 20 mL of AN (artificial seawater) or LB (carbon-rich)
 686 media. Population densities (mean \pm SEM) were assessed by measuring the optical density at
 600 nm (OD 600) of subsamples over time or by the number of colony forming units (CFU) on
 688 LB agar plates.



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698 **Fig. S3.** Concentrations (mean \pm SEM) of particulate (i.e., microbial) carbon, nitrogen, and
700 phosphorus in +V and -V treatments over the duration of the chemostat experiment. Vertical
702 line indicates time of virus addition for +V treatments.

