

## Supplementary material

### **Diverse symbiont bleaching responses are evident from 2-degree heating week bleaching conditions as thermal stress intensifies in coral**

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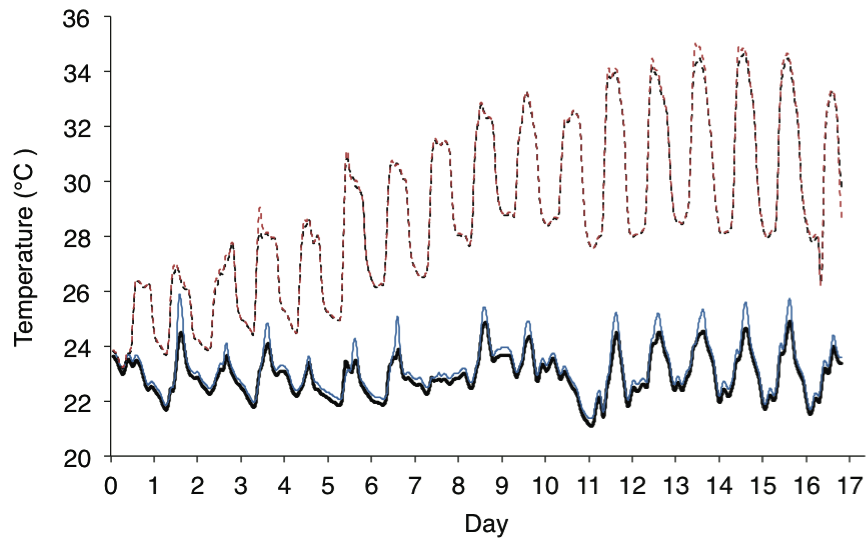
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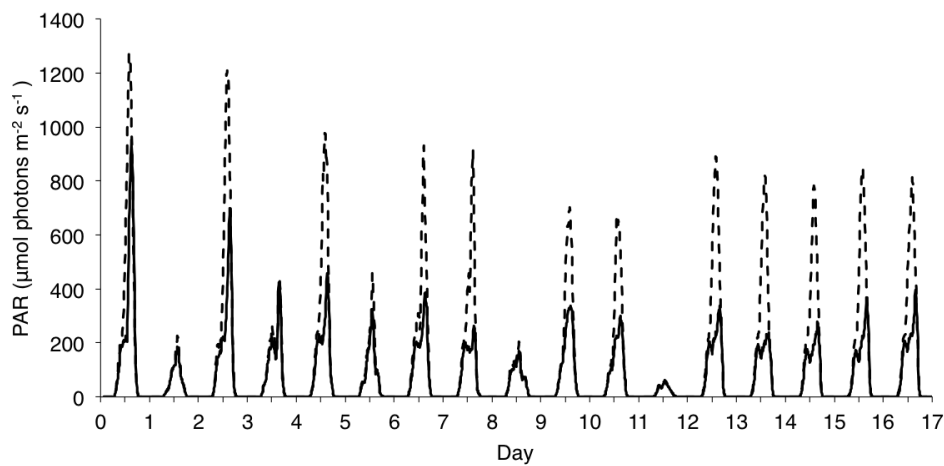
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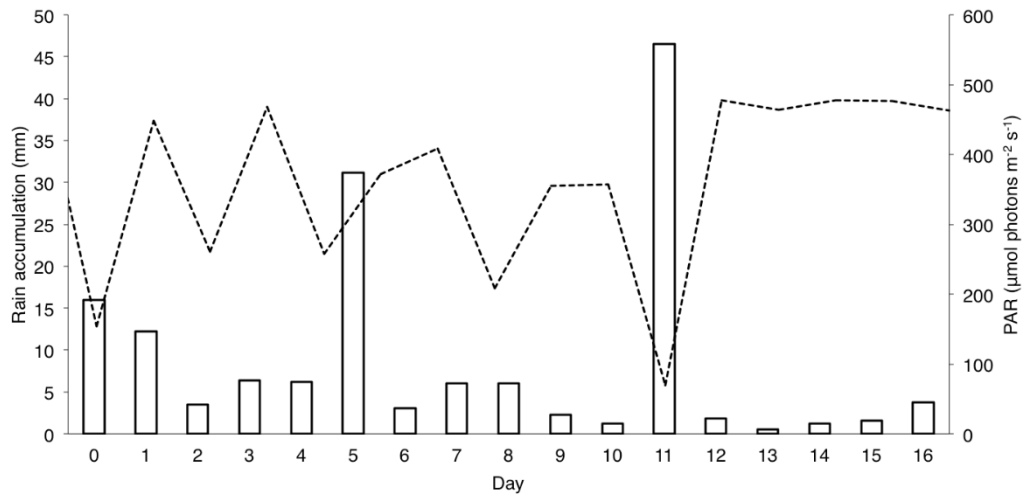
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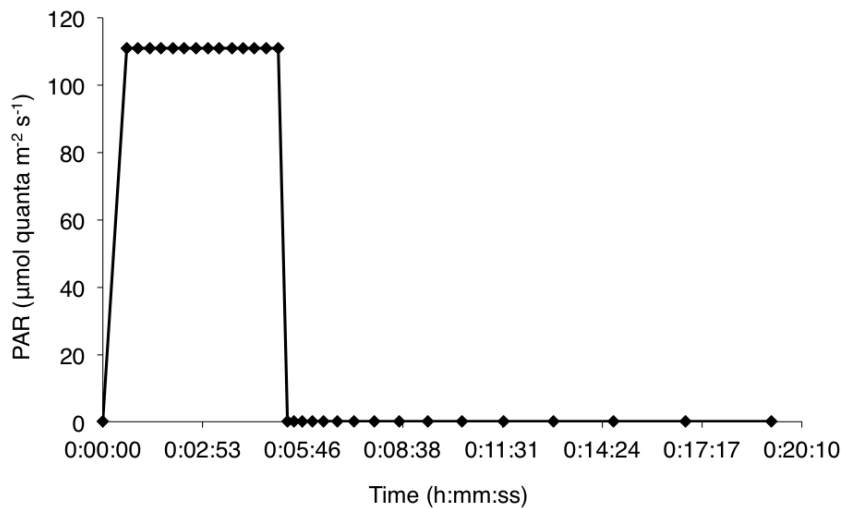
**Fig. S1.** Temperatures recorded during the 16-day thermal experiment, ambient aquaria (solid line, black; treatment tank 1, blue; treatment tank 2) and heated aquaria (dashed line, black; heated tank 1, red; heated tank 2).



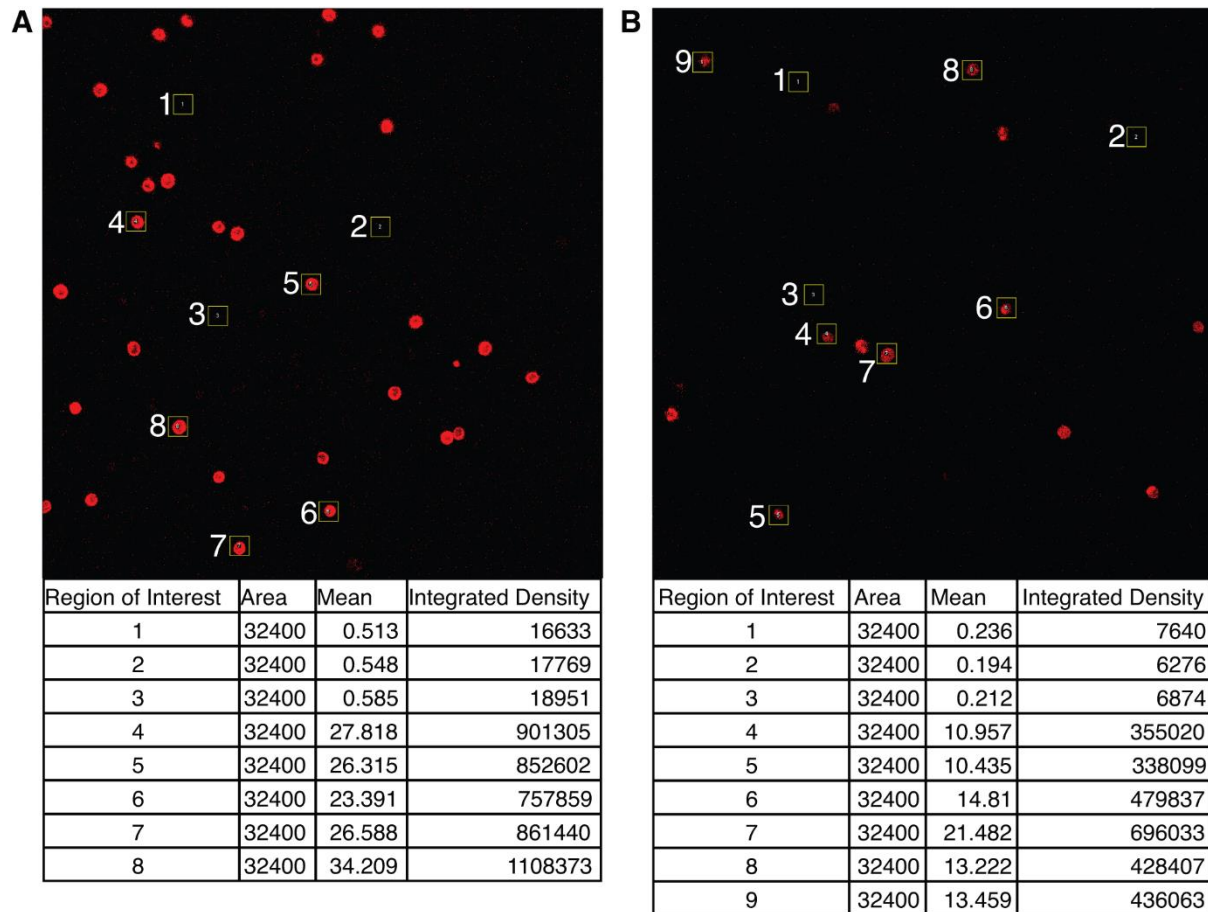
**Fig. S2.** Photosynthetically active radiation recorded within aquaria during the 16-day thermal experiment. Data collected from PAR sensors within one ambient aquaria (solid line) and the average of two heated aquaria (dashed line) are shown. Values represent the running average light levels recorded in aquaria.



**Fig. S3.** Environmental data obtained from the Integrated Marine Observing System (IMOS). Bars show the daily recorded rain accumulation (mm) taken from Heron Island IMOS relay pole 6 and the dotted line shows the daily average PAR, data taken from IMOS relay pole 8.



**Fig. S4.** Profile of the photosynthetically active radiation (PAR) that coral nubbins were exposed to throughout the Imaging PAM Induction + Recovery curve analysis.



**Fig. S5.** Demonstration of the methodology used to determine chlorophyll *a* fluorescence intensity in *Symbiodinium* cells isolated from *A. aspera*. Examples of chlorophyll-*a* fluorescence intensity measurements for *Symbiodinium* cells isolated on day 16, (A) from control tank one nubbin one and (B) heated tank two nubbin three are provided. Measurements for specific regions of interest (yellow boxes) were made using ImageJ, numbers indicate regions of interest in each adjacent data set. The first three regions of interest in each frame were used for background correction.