The following supplement accompanies the article

Capacity for short-term physiological acclimation to light does not control the lower depth distributions of branching corals

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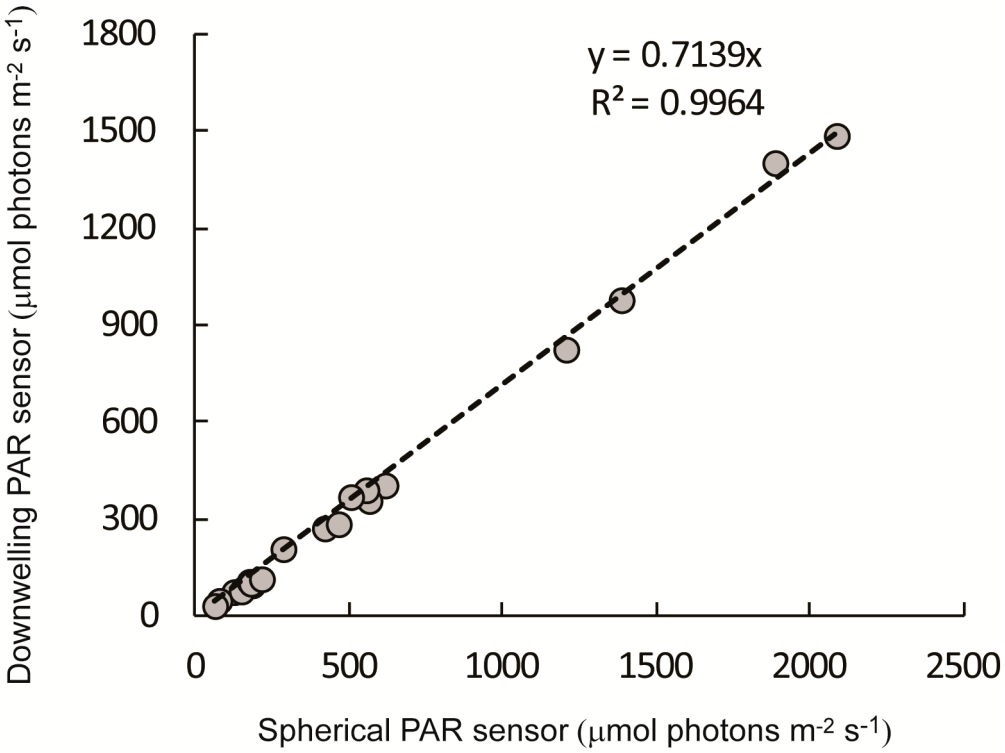
Marine Ecology Progress Series 508: 149–162 (2014)

Supplement 1. Settings and calibration of experimental devices

Table S1. Diving pulse-amplitude-modulate (PAM) settings as used for all F_v/F_m and rapid light curve (RLCs) measurements

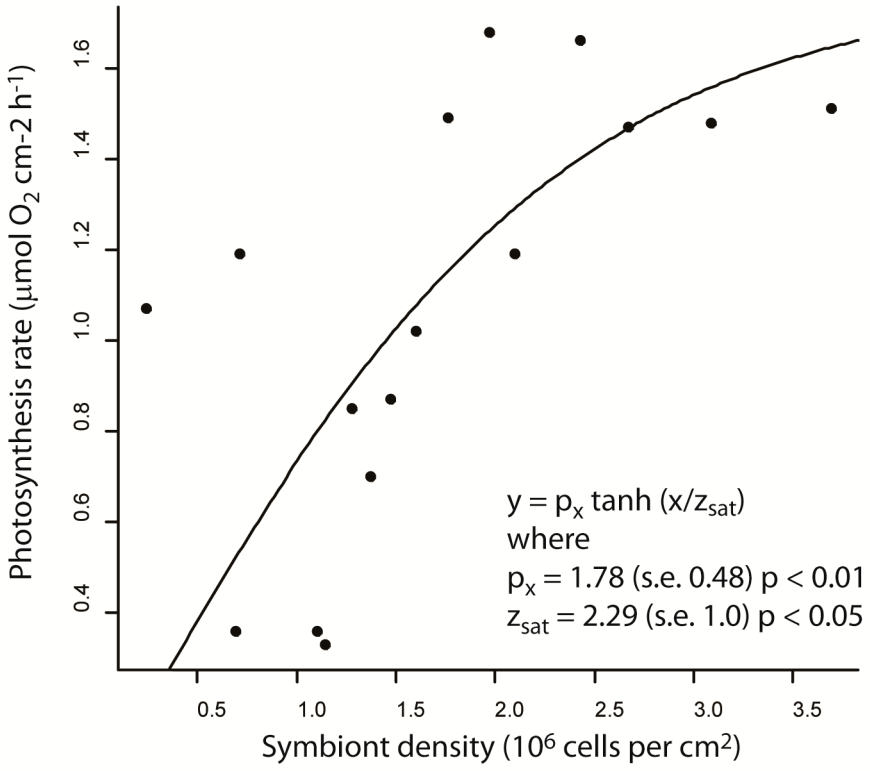
PAM setting	Value
Measurement intensity (MI)	10
Saturation intensity (SI)	8
Saturation width (SW)	0.8
Actinic intensity (AI)	3
Actinic width (AW)	0:30
Actinic light factor (AF)	1.00
Gain (G)	10
Damp (D)	1
ETR factor (EF)	0.84
F_o	0
Clock width (CW)	0:30
Clock item (CI)	1
Light curve width (LW)	0:10
Light curve intensity	1
Induction curve delay (ID)	0:40
Induction curve width (IW)	0:20
Temp offs (DO)	0.0
Temp gain (DG)	1.00
Light offs (LO)	0.0
Light gain (LG)	1.00

Fig. S1. Relationship between light measurements made using a spherical photosynthetically active radiation (PAR) sensor (Li-193S, LI-COR) and a downwelling PAR sensor (Li-192) both attached to a Li-1400 data logger. Measurements were made within a large (4 m diameter) outdoor reef aquarium ('touch tank'), and taken sporadically at different times of the day over 3 d in March 2014. Data points indicate light intensity measured by both sensors at the same time and position within the touch tank. Sensors were positioned over both sandy and live rock substratum to best mimic natural variation in field light conditions



Supplement 2. Carbon equivalent conversion relationship

Fig. S2. Relationship between symbiont density and maximum photosynthesis rate used to convert changes in symbiont density measured in this study to carbon equivalents. Data are unpublished measurements for the Mediterranean coral *Cladocora caespitosa* collected by M. Hoogenboom that have been converted to measurements per unit tissue surface area instead of per unit tissue biomass as analysed in Hoogenboom et al. (2010). Line: nonlinear regression with parameters indicated within the figure panel (p_x: asymptotic rate of maximum photosynthesis, z_{sat}: symbiont density at which photosynthesis rate is 75% of its asymptotic value). SE: standard error



Supplement 3. Depth distribution of study species and benthic composition with depth around Lizard Island

Fig. S3. Abundance of colonies of (A) *Acropora muricata,* (B) *A. nasuta*, (C) *A. millepora* and (D) *A. digitifera* recorded at 11 different sites between 1 and –11 m relative to the lowest astronomical tide (LAT) around Lizard Island, Australia. (+, •) transects where the corals were respectively present and absent

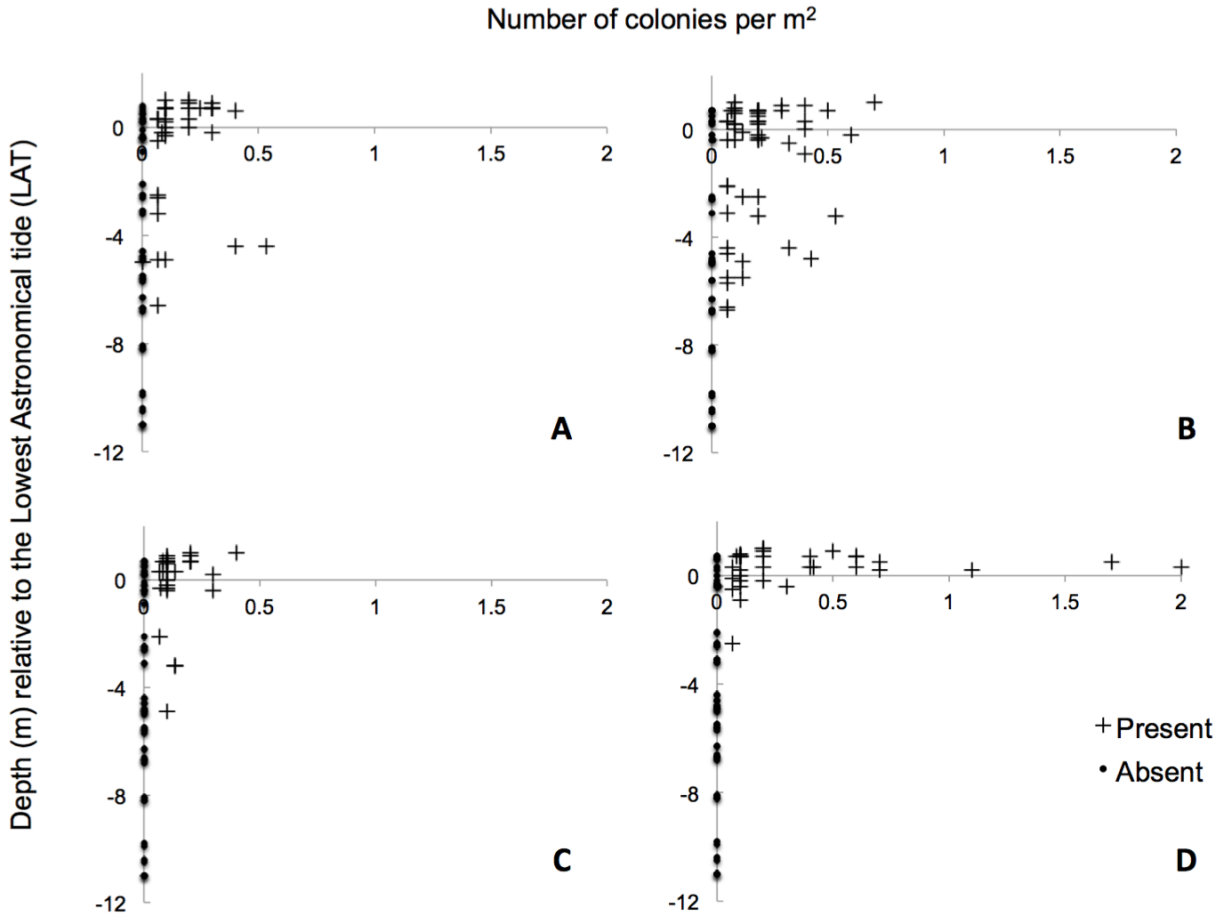
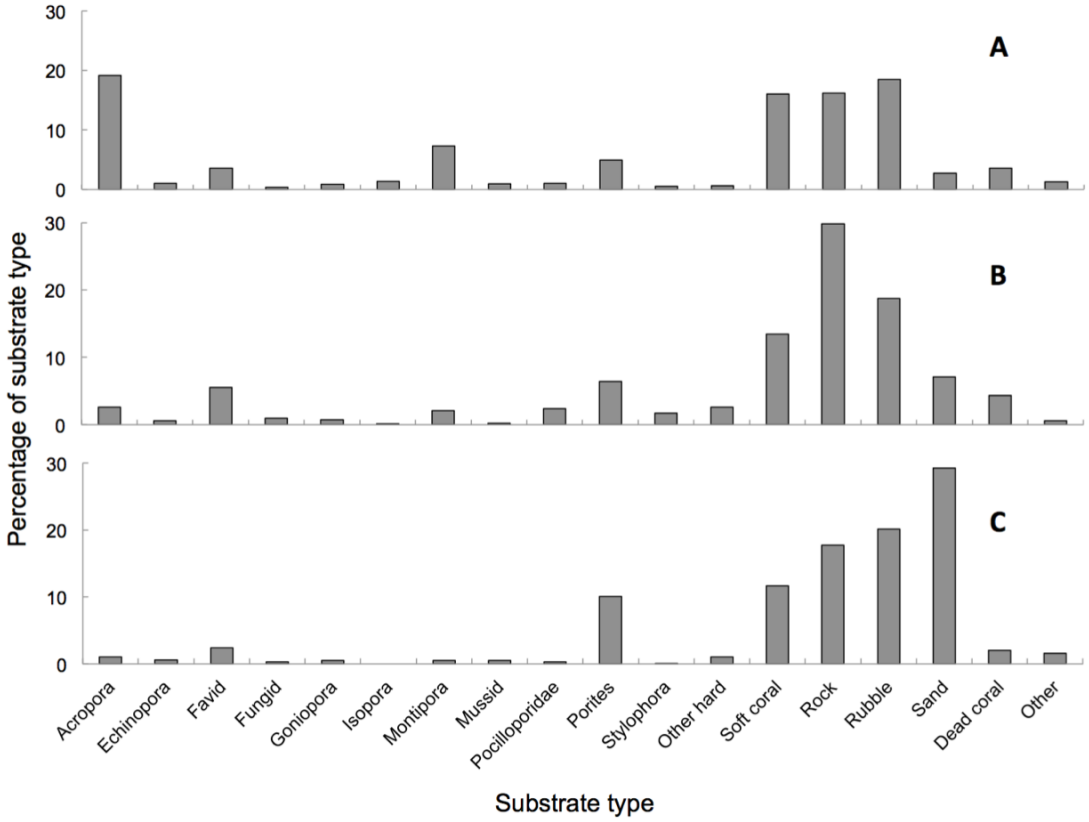


Fig. S4. Percentage of substrate type from the sum of distances recorded by line-intercept transects at (A) shallow (0–3 m), (B) medium (3–7 m) and (C) deep (7–13 m) depth of 11 different sites around Lizard Island, Australia



LITERATURE CITED

Hoogenboom M, Beraud E, Ferrier-Pages C (2010) Relationship between symbiont density and photosynthetic carbon acquisition in the temperate coral *Cladocora caespitosa*. Coral Reefs 29:21–29