Metadata

**Elevated pCO2 affects tissue biomass composition, but not calcification, in a reef coral under two light regimes**

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Physiological data for *Pocillopora acuta* fragments exposed to 32 d of pCO2 and light treatments. Colonies were collected 13 and 29 October 2014 at ~ 1 m from a reef adjacent to the Hawai‘i Institute of Marine Biology in Kāne‘ohe Bay, O‘ahu, Hawai‘i (21°26’08.9”N, 157°47’12.0”W).

Columns

*CO2* = carbon dioxide (CO2) gas addition to seawater treatment, either ambient partial pressure CO2 (ACO2, mean = 435 μatm pCO2) or high (HCO2, 957 μatm pCO2)

*Light* = light treatment, either low light (LL, 7.5 mol photons m-2 d-1) or high light (15.7 mol photons m-2 d-1)

*Treatment* = orthogonal combination of light-pCO2 treatments. LL–AC = low light-ambient pCO2, LL–HC = low light-high pCO2, HL–AC = high light-ambient pCO2, HL–HC = high light-high pCO2

*Tank* = replicate experimental tanks for each orthogonal treatment conditions

*Colony* = letters indicate separate colonies (genets) that were collected from the reef and fragmented into ramets

*Number* = arbitrary identifier

*total blastate ml* = total tissue slurry of the coral + symbiont tissues. This was collected by using an artists airbrush filled with a filtered seawater reservoir. This represents the entire tissue extract.

*surface area cm2* = this is the surface area of the coral fragment in square centimeters, determined from wax dipping.

*change in weight g* = this is the total change in skeletal dry weight (i.e., net calcification) incurred between initial and final mass measurements (23 d). This was determined by the buoyant weight technique. Note these values are non-normalized and integrate a 23 d period.

*AFDW g/ml* = ash free-dry weight of coral biomass in grams per ml of total blastate.

*cells/ml* = total number of *Symbiodinium* cells per ml of total blastate

*ug chl a/ml* = μg of chlorophyll a per ml of total blastate

*ug chl c2/ml* = μg of chlorophyll c2 per ml of total blastate

*mg protein/ml* = mg of total protein per ml of total blastate

*mg carb/ml* = mg of carbohydrates per ml of total blastate

*mg lipid/ml* = mg of lipids per ml of total blastate

*g lipid/gdw* = grams of lipids per grams of tissue. These values come directly from lipid analysis and represent the mass of lipid yield divided by the mass of non-lipid + lipid biomass (total biomass in sample).

\* Notes \*

blank cells represent samples where data points were not measured