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Project: Ocean Acidification: Scope for Resilience to Ocean Acidification in Macroalgae
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Experimental trials culture conditions (v2)

Trial number	Algae origin	Algae collection date	Expt. start date	Expt. end date	Temp.	Target pCO2
2	Santa Catalina Isl., CA	6/4/2014	6/12/2014	7/29/2014	15	ambient, moderate, high
3	Leo Carillo, CA	8/13/2014	8/14/2014	8/27/2014	15	ambient, moderate, high
4	Santa Catalina Isl., CA	9/7/2014	9/11/2014	10/6/2014	15	ambient, moderate, high
5	Santa Catalina Isl., CA	10/10/2014	10/14/2014	11/4/2014	20	ambient, moderate, high
6	Santa Catalina Isl., CA	10/31/2014	11/6/2014	11/24/2014	20	ambient, moderate, high
7	Santa Catalina Isl., CA	11/20/2014	11/27/2014	12/16/2014	20	ambient, moderate, high
8	Santa Catalina Isl., CA	1/25/2015	1/30/2015	2/23/2015	20	ambient, moderate, high

Notes: Trial 1 was a pilot test of culture system and methodological procedures so was not used for data collection in the testing of hypotheses. In each culture pot, pCO2 was set by the supply rate of CO2 in the corresponding mass-flow controlled gas mixing system to be within a target range of either near ambient, moderately elevated or highly elevated in each trial. The near-ambient range was narrower than the other target ranges (set points typically ~380 - 390 µatm) as it served as the control range in each trial. However, actual pCO2 in solution in each culture pot varied slightly from constant target values on a diurnal cycle associated with the metabolic activities of the algae contained within each pot. Unique average values of pCO2 in each culture pot based on different set values for each mass-flow controlled mixer within the qualitative ranges of ambient, moderate and highly increased pCO2 levels that were replicated in each trial of the experiment enabled a more powerful regression-type experimental design. With a regression type approach, we could estimate the functional relationship between response variables and pCO2, which was not possible with a simple categorical treatment design.