

Project Update: December 2012

We surveyed 16 sites along the Belize Barrier Reef in May 2012 to measure biomass and density of reef fish, coral cover, coral recruitment, and macroalgal cover. Preliminary data analysis suggests no *general* increase in herbivore biomass over time. However, herbivore density has increased at 13 out of 16 sites. The observed increases in density were only detected in small and medium sizes classes (0-30 cm). This could be due to an increase in recruitment. Given the life history of parrot fishes, we don't expect to see increases in the density of larger size classes (30-50 cm) until 3-5 years after the implementation of the ban. We found a slight decrease in benthic macroalgae cover from 2009 to 2012 at 10 of 15 sites. However, we have not yet detected a general increase in coral recruitment or coral cover. We plan to develop a size structured model to predict relative abundances over time and provide realistic goals for herbivore recovery.

In addition, our work that was funded by my first Rufford grant was published in Conservation Letters in September 2012.

Cox, C.E., C.D. Jones, J.P. Wares, K.D. Castillo, M.D. McField, and J.F. Bruno. 2012. Genetic testing reveals some mislabeling but general compliance with a ban on herbivorous fish harvesting in Belize. Conservation Letters. DOI: [10.1111/j.1755-263X.2012.00286.x](https://doi.org/10.1111/j.1755-263X.2012.00286.x)