

REBECCA ALBRIGHT

Curriculum Vitae

California Academy of Sciences
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CURRENT POSITION

Assistant Curator and McCosker Chair of Aquatic Biology, California Academy of Sciences, 2016 – *present*.

EDUCATION

Ph.D. University of Miami, Rosenstiel School of Marine and Atmospheric Science, 2011.

B.Sc. Duke University, Biological Sciences, 2003.

PROFESSIONAL EXPERIENCE

- 2014 – 2016 Postdoctoral Fellow, Carnegie Institution for Science, Stanford, California
- 2011 – 2014 Postdoctoral Fellow, Australian Institute of Marine Science, Townsville, Australia
- 2006 – 2007 Vice President, Torres Environmental Consulting, Santo Domingo, Dominican Republic
- 2004 – 2006 Environmental Consultant, Aecomar S.A., Santo Domingo, Dominican Republic
- 2004 – 2007 Vice President, Reef Check Dominican Republic, Santo Domingo, Dominican Republic
- 2004 – 2004 Founder and Director, Reef Check Youth Dominican Republic, Dominican Republic

RESEARCH GRANTS, FELLOWSHIPS, AND AWARDS

- 2016 “Coral Calcification: A Stony Coral Model System”, **Carnegie Institution for Science**, with Co-PIs Arthur Grossman and Ken Caldeira (US \$100,000 for two years)
- 2015 “Remote Sensing of Coral Reefs”, **Carnegie Institution for Science**, with Co-PIs Greg Asner, Ken Caldeira, (US \$100,000 for two years)
- 2013 “Increasing the Available Carbonate Chemistry Data for the Great Barrier Reef”, **Great Barrier Reef Foundation**, with Co-PIs Brad Eyre, Damien Maher, Isaac Santos, Ken Anthony, John Pfitzner, and Dan Alongi (AUD \$789,086 for two years)
- 2013 “Developing a Carbon Budget for the Great Barrier Reef”, **Great Barrier Reef Foundation**, with Co-PIs Brad Eyre, Damien Maher, Isaac Santos, Ken Anthony, Richard Brinkman, and Dan Alongi (AUD \$643,900 for two years)
- 2013 **My Research in Three Minutes** champion, Australian Institute of Marine Science
- 2011 **Super Science Fellowship**, Australian Research Council, “Spatial and Temporal Variability of Carbonate Chemistry of the Great Barrier Reef” (AUD ~\$300,000 for three years)
- 2010 **Rowland Award for Best Student Publication**, University of Miami
- 2009 **Protect Our Reefs** research grant, Mote Marine Laboratory, with Co-PI Chris Langdon (US \$22,604 for one year)
- 2008 **George Burlew Tuna and Marlin Club** scholarship (US \$500)
- 2008 **Lerner-Gray Fund** for Marine Research Grant (US \$1000)
- 2008 **Frank J. Millero Prize for Best Student Publication**, University of Miami
- 2007 **Protect Our Reefs** research grant, Mote Marine Laboratory, with Co-PI Chris Langdon (US \$14,500 for one year)
- 2005 **Maytag Fellowship**, University of Miami (US ~\$100,000 for three years)

PEER-REVIEWED PUBLICATIONS

14. **Albright, R.**, K.R.N. Anthony, M. Baird, R. Beeden, M. Byrne, C. Collier, S. Dove, K. Fabricius, O. Hoegh-Guldberg, R.P. Kelly, J. Lough, M. Mongin, P.L. Munday, R.J. Pears, B.D. Russell, B. Tilbrook, E. Abal (2016) Ocean acidification: Linking science to management solutions using the Great Barrier Reef as a case study. *Journal of Environmental Management* 182: 641-650.
13. Kwiatkowski, L., **R. Albright**, J. Hosfelt, Y. Nebuchina, A. Ninokawa, T. Rivlin, M. Sesboue, K. Wolfe, K. Caldeira (2016) Interannual stability of organic to inorganic carbon production on a coral atoll. *Geophysical Research Letters* 43:3880-3888, doi:10.1002/2016/GL068723.
12. **Albright, R.**, L. Caldeira, J. Hosfelt, L. Kwiatkowski, J. K. Maclaren, B. M. Mason, Y. Nebuchina, A. Ninokawa, J. Pongratz, K. L. Rieke, T. Rivlin, K. Schneider, M. Sesboue, K. Shamberger, J. Silverman, K. Wolfe, K. Zhu, K. Caldeira (2016) Reversal of ocean acidification enhances net coral reef calcification. *Nature*, doi:10.1038/nature17155.
11. **Albright R.**, J. Benthuisen, N. Cantin, K. Caldeira, K. Anthony (2015) Coral Reef Metabolism and Carbon Chemistry Dynamics of a Coral Reef Flat. *Geophysical Research Letters* 42, doi:10.1002/2015GL063488.
10. Saunders M. I., C. J. Brown, M. M. Foley, C. M. Febria, **R. Albright**, M. G. Mehling, M. T. Kavanaugh, D. D. Burfeind (2015) Human impacts on connectivity in marine and freshwater ecosystems assessed using graph theory: a review. *Marine and Freshwater Research* 66, 1-14, doi:10.1071/MF14358.
9. Edmunds, P.J., R. Steneck, **R. Albright**, R. C. Carpenter, A. P. Y. Chui, T-Y. Fan, S. Harii, H. Kitano, H. Kurihara, L. Legendre, S. Mitarai, S. Muko, Y. Nozawa, J. Padilla-Gamino, N. N. Price, K. Sakai, G. Suzuki, M. J. H. van Oppen, A. Yarid, and R. D. Gates. (2014) Geographic variation in long-term trajectories of change in coral recruitment: a global-to-local perspective. *Marine and Freshwater Research*. doi: 10.1071/MF14139.
8. Uthicke S., D. Pecorino, **R. Albright**, A. P. Negri, N. Cantin, M. Liddy, S. Dworjanyn, P. Kamya, M. Byrne, and M. Lamare (2013) Impacts of ocean acidification on early life-history stages and settlement of the coral-eating sea star *Acanthaster planci*. *PLoS ONE* 8(12): e82938. doi:10.1371/journal.pone.0082938.
7. **Albright R.**, C. Langdon, K. Anthony (2013) Dynamics of seawater carbonate chemistry, production, and calcification of a coral reef flat, Central Great Barrier Reef, *Biogeosciences*, 10: 6747-6758.
6. **Albright R.**, B. Mason (2013) Projected near-future levels of temperature and $p\text{CO}_2$ reduce coral fertilization success. *PLoS One*, 8(2): e56468.
5. **Albright R.**, C. Bland, P. Gillette, J. Serafy, C. Langdon, T. Capo (2012) Juvenile growth of the tropical sea urchin *Lytechinus variegatus* exposed to near-future ocean acidification scenarios. *Journal of Experimental Marine Biology and Ecology*, 426-427: 12-17.
4. **Albright R.** (2011) Reviewing the effects of ocean acidification on sexual reproduction and early life history stages of reef-building corals. *Journal of Marine Biology*, doi:10.1155/2011/473615.
3. **Albright R.**, C. Langdon (2011) Ocean acidification impacts multiple early life history processes of the Caribbean coral *Porites astreoides*. *Global Change Biology* doi: 10.1111/j.1365-2486.2011.02404.x.
2. **Albright R.**, B. Mason, M. Miller, C. Langdon (2010) Ocean acidification compromises recruitment success of the threatened coral *Acropora palmata*. *Proceedings of the National Academy of Sciences*, 107(47): 20400-20404.
1. **Albright R.**, B. Mason, C. Langdon (2008) Effect of aragonite saturation state on settlement and post-settlement growth of *Porites astreoides* larvae. *Coral Reefs* 27:485-490.

SUBMITTED MANUSCRIPTS

Cyronak, T., A.J. Andersson, C. Langdon, **R. Albright**, N.R. Bates, K. Caldeira, R. Carlton, J.E. Corredor, R.B. Dunbar, I. Enochs, J. Erez, B.D. Eyre, J.-P. Gattuso, D. Gledhill, H. Kayanne, D.I. Kline, D.A. Koweek, C.

Lantz, B. Lazar, D. Manzello, A. McMahon, M. Melendez, H. Page, I.R. Santos, K.G. Shulz, E. Shaw, J. Silverman, A. Suzuki, L. Teneva, A. Watanabe, S. Yamamoto (in review) Taking the pulse of the world's coral reefs. *Science Advances*.

Price, N., R. **Albright**, R. C. Carpenter, A. Chuie, P.J. Edmunds, et al. (in review) Coral reefs on the move: worldwide recruitment declines and expansion to higher latitudes. *Current Biology*.

PROCEEDINGS PAPERS AND INVITED REPORTS

Albright R. (in prep) "A solutions-based approach for coral reefs under ocean acidification: adaptation and mitigation", invited report, Monaco Scientific Centre and the International Atomic Energy Agency.

Albright R. (2013) "Ocean Acidification and Coral Reefs: Linking Science to Solutions", discussion paper, Great Barrier Reef Foundation.

Torres R., R. Garza-Perez, I. Morgan, Y. Leon, **R. Albright**, R. Ginsburg (2005) "Dominican Republic Coral Reefs Condition Assessment Using the Atlantic and Gulf Rapid Reef Assessment (AGRRA) Protocol", V Congress of Caribbean Biodiversity, Santo Domingo, Dominican Republic.

ACADEMIC EXPERIENCE

Editorial Service

Manuscript reviews for:

Aquatic Biology, Biogeosciences, Coral Reefs, Global Change Biology, ICES Journal of Marine Science, Marine Biology, Marine Environmental Research, Oceanography, Proceedings of the Royal Society B, Science Advances

Grant reviews for:

*National Science Foundation – Biological Oceanography
Sea Grant*

Teaching Experience

Grant Writing Workshop, grant coach for nine-week course, Stanford University, Fall 2015.

MSC 101, Survey of Oceanography, Graduate Teaching Assistant, University of Miami, Spring 2011.

Invited Lecturer, Florida International University, 2010.

Middle and High School Teacher, Subjects taught: Biology, Chemistry, Environmental Science, Health, Reading New Horizons Colegio Bilingue, Dominican Republic, 2003-2005.

Student Supervision

<u>Committee Member</u>	<u>Degree, Year</u>	<u>Institution</u>
Barbara Pinheiro	Ph.D., 2013	Universidade Federal de Pernambuco, Brazil

Guest Lectures

2015	Coral Reefs and Ocean Acidification. Eckerd College, Florida.
2015	Reversing ocean acidification enhances coral reef calcification. University of California Davis
2013	Drivers of seawater carbonate chemistry, calcification, and primary production of coral reef flats ARC Centre of Excellence, Townsville, Australia.
2010	Effects of ocean acidification on early life stages of corals. Australian Institute of Marine Science,
2010	Effects of ocean acidification on early life stages of corals. James Cook University.
2010	Effects of ocean acidification on early life stages of corals. Centre Scientifique de Monaco.
2009	Effects of ocean acidification on early life stages of corals. Smithsonian, Florida.

Advisory Positions

Monaco Scientific Centre and the International Atomic Energy Agency, Consultant, 2016-2017.
Great Barrier Reef Foundation, Scientific Advisor, 2012-2014.

Symposium Organization

Organized a session on “Metabolism Studies/Observations of Coral Reef Communities” during the 13th International Coral Reef Symposium, Hawaii, USA, 2016.

Institutional Activities

Co-Chair of Postdoc Association, Carnegie Institution for Science, 2015-2016.
Board of Directors (S. Florida Chapter), Duke University Alumni Association, 2005-2008.

SELECTED CONFERENCE PRESENTATIONS

Invited

- 2016 XIII International Coral Reef Symposium. **Albright, R.** Reversal of ocean acidification enhances net coral reef calcification, Honolulu, Hawaii, June 2016.
- 2016 ASLO Ocean Sciences Meeting. **Albright, R.** Reversal of ocean acidification enhances net coral reef calcification, New Orleans, LA, March 2016.
- 2015 American Geophysical Union Meeting. **Albright, R.** Reversal of ocean acidification enhances net coral reef calcification, San Francisco, CA, December 2015.
- 2015 Coastal and Estuarine Research Federation, **Albright, R.** Reversal of ocean acidification enhances net coral reef calcification. Portland, OR, November 2015.
- 2013 Australia-Japan Marine Science Workshop, **Albright, R.** Drivers of seawater carbonate chemistry, calcification, and primary production of a coral reef flat, Central Great Barrier Reef, Tokyo, Japan, 2013.
- 2013 Joint US-Japan-Taiwan Workshop, **Albright, R.** Biogeographic Trends in Coral Recruitment, Okinawa, Japan, 2013.
- 2012 III International Symposium on the Oceans in a High CO₂ World. **Albright R.** Drivers of seawater carbonate chemistry on the Davies Reef flat, Central Great Barrier Reef. Monterey, CA, 2012.
- 2012 XII International Coral Reef Symposium, **Albright R.** Drivers of seawater carbonate chemistry on the Davies Reef flat, Central Great Barrier Reef. Cairns, Australia 2012.
- 2010 International Society for Reef Studies. **Albright R.** Ocean acidification compromises recruitment success of the threatened Caribbean coral *Acropora palmata*. Wageningen. 2010.
- 2010 Benthic Ecology Meeting. **Albright R.** Ocean acidification compromises the recruitment success of the threatened Caribbean coral *Acropora palmata*. University of North Carolina Wilmington. 2010.
- 2009 NCORE Symposium. **Albright R.** The effect of elevated CO₂ on fertilization, embryogenesis, and development of *Acropora palmata*, Miami, FL. 2009.
- 2008 XI International Coral Reef Symposium. **Albright R.** Effect of elevated carbon dioxide on settlement and post-settlement growth of *Porites astreoides* larvae. Ft. Lauderdale, FL. 2008.
- 2008 ASLO Ocean Sciences Meeting. **Albright R.** Effect of depressed saturation state on settlement, post-settlement survivorship, and growth of *Porites astreoides* and *Montastraea faveolata* larvae, Orlando, FL. 2008.
- 2005 V Congress of Caribbean Biodiversity. **Albright R.** Dominican Republic Coral Reefs Condition Assessment Using the AGRRA Protocol, Santo Domingo, Dominican Republic. 2005.

Contributed

2016 IV International Symposium on the Oceans in a High CO₂ World.

2013 NCCARF Conference, Pears R., R. Beeden, E. Abal, R. Albright, K. Anthony, Changing science needs for different management paradigms on a protection–restoration spectrum, Sydney Australia, 2013.

OUTREACH AND SYNERGISTIC ACTIVITIES

Media Appearances

Radio, film, and/or newspaper interviews/appearances in:

USA Today, NY Times, Huffington Post, The Guardian, ABC news, NBC news, KQED (NPR), The BBC, The Verge, Christian Science Monitor, Climate Central, BBC The Naked Scientist, Scientific American, Reuters, Science Magazine, Science News, E&E News, NBC Universal, Daily Mail, Popular Science, The Conversation AU,

Documentaries:

Heirs to Our Ocean, Spine Films, 2016

One Ocean Documentary, Merit Motion Pictures, 2009

Op-Ed Articles:

Science Breakers, 2016

INVITED WORKSHOPS (SELECTED)

Advancing the Science and Practice of Caribbean Coral Restoration, NOAA, Ft. Lauderdale, FL, November 2016.

Coral Conservation Meeting, Bloomberg Philanthropies, New York, NY, July 2016.

CONTINUING EDUCATION

2016 Faculty Success Program, National Center for Faculty Development & Diversity

2015 Science Communication Workshop, Alan Alda Center for Communicating Science

2015 Coupled Earth System Model (CESM) Workshop, NCAR

2015 Transitioning to Faculty Workshop, Stanford University

2015 Mentoring in Research Workshop, Stanford University

2015 Grant Writing Training Workshop, Stanford University

2014 Best Practices pH Sensor Workshop, Scripps Institute of Oceanography

2013 Career Coaching Program, Learning Partnerships

2013 Ocean Acidification Methods Course, Friday Harbor Laboratories

2013 Conflict Management for Women Workshop, Townsville, QLD

2012 International Ocean Acidification Workshop, Seattle WA, USA

2012 Scientific Writing Workshop (AIMS), Townsville, QLD

2011 Dallas Murphy Scientific Writing Workshop

2010 Ecological Dissertations in the Aquatic Sciences (Eco-DAS IX), Participant

2009 Judith Swan Scientific Writing Workshop

2009 Motorboat Operator Certification Course, Crew Chief Program

2007 NOAA Think Tank #5, A Strategic Planning Session for Ocean Acidification Research

- 2006 American Academy of Underwater Sciences (AAUS) Scientific Diving Certification
- 2004 Atlantic and Gulf Rapid Reef Assessment (AGRRA), Dominican Republic
- 2003 Dr. Douglas A. Marchuk, Duke University Genetics Laboratory, Intern

PROFESSIONAL MEMBERSHIPS

International Society for Reef Studies
American Association for the Advancement of Science