

THOMAS DECARLO

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EDUCATION

CURRENT POSITION: PH.D. STUDENT

MIT / WOODS HOLE OCEANOGRAPHIC INSTITUTION

JOINT PROGRAM IN OCEANOGRAPHY

June 2012 – Present

GPA: 5.0 / 5.0

UNIVERSITY OF SAN DIEGO

BA in Marine Science: Earth Systems: Magna cum laude

May 2012

Major GPA: 4.0 / 4.0

PEER-REVIEWED JOURNAL ARTICLES

DeCarlo T.M., Gaetani G.A., Cohen A.L., Foster G.L., Alpert A.E., & J. Stewart (in review). Sr-U Coral Thermometry. *Paleoceanography*.

Alpert A.E., Cohen A.L., Oppo W.D., **DeCarlo T.M.**, Gove J.M., & C.W. Young (in review). Comparison of equatorial Pacific sea surface variability and trends with Sr/Ca records from multiple corals. *Paleoceanography*.

Barkley H.C., Cohen A.L., Golbuu Y., Starczak V.R., **DeCarlo T.M.**, & K.E.F. Shamberger (2015). Changes in coral reef communities across a natural gradient in seawater pH. *Science Advances* 1, e1500328

DeCarlo T.M., Gaetani G.A., Holcomb M. & A.L. Cohen (2015). Experimental determination of factors controlling U/Ca of aragonite precipitated from seawater: implications for interpreting coral skeleton. *Geochimica et Cosmochimica Acta* 162, 151-165.

Holcomb M., **DeCarlo T.M.**, Schoepf V., Dissard D., Tanaka K., & M. McCulloch. (2015). Cleaning and pre-treatment procedures for biogenic and synthetic calcium carbonate powders for determination of elemental and boron isotopic compositions. *Chemical Geology* 398, 11-21.

DeCarlo T.M., Karnauskas K.B., Davis K.A., & G.T.F. Wong. (2015). Climate modulates internal wave activity in the Northern South China Sea. *Geophysical Research Letters* 42, 831-838.

DeCarlo T.M., Cohen A.L., Barkley H.C., Cobban Q., Young C., Shamberger K.E., Brainard R.E., & Y. Golbuu. (2015). Coral macrobioerosion is accelerated by ocean acidification and nutrients. *Geology* 43, 7-10.

AWARDS, FELLOWSHIPS, ACADEMIC POSITIONS

WOODS HOLE OCEANOGRAPHIC INSTITUTION

- Joint Program Student Representative *October 2014-Present*
- Teaching Assistant: Numerical Modeling and Data Analysis for Geochemistry *Fall Semester 2014*
- MIT award for best TA in department *Fall Semester 2014*
- Coastal Ocean Institute \$2,000 research grant *November 2015*
- Coastal Ocean Institute \$1,500 research grant *December 2013*
- Ocean Ventures Fund \$5,000 research grant *May 2013*
- Summer Student Fellowship *Summer 2011*

NSF GRADUATE RESEARCH FELLOWSHIP PROGRAM

- Awarded Fellowship *March 2013-Present*
- Honorable Mention *April 2012*

PHI BETA KAPPA NATIONAL HONOR SOCIETY

May 2012-Present

SAN DIEGO ASSOCIATION OF GEOLOGISTS UNDERGRADUATE SCHOLARSHIP

December 2011

UNIVERSITY OF SAN DIEGO

- Marine Science and Environmental Studies Departmental Honors *May 2012*
- Marine Science and Environmental Studies Outstanding Research Award *May 2012*
- Social Innovation Challenge \$1500 Grant Award Winner *April 2012*
- Summer Undergraduate Research Experience Grant *June-August 2010*
- Presidential Scholarship *2008-2012*
- Deans List, First Honors *Fall 2008-Fall 2011*

CONFERENCES AND PRESENTATIONS

UNIVERSITY OF CALIFORNIA, IRVINE, OCEAN BIOGEOCHEMISTRY SEMINAR

(Invited, Talk) DeCarlo T.M., Cohen A.L., Davis K.A., Lentz S., & K.E.F. Shamberger (2015) Rapid calcification on a coral atoll nourished by internal waves

ACADEMIA SINICA, TAIWAN, OCEAN ACIDIFICATION WORKSHOP

(Talk) DeCarlo T.M., Cohen A.L., Davis K.A., Lentz S., & K.E.F. Shamberger (2015) Community production and calcification rates on Dongsha Atoll: physical and ecological drivers

AMERICAN GEOPHYSICAL UNION FALL MEETING 2014

(Talk) DeCarlo T.M., Gaetani G.A., Holcomb M. & A.L. Cohen (2014) Experimental determination of factors controlling U/Ca of aragonite precipitated from seawater: implications for interpreting coral skeleton. American Geophysical Union Fall Meeting, San Francisco, California

INDONESIAN ASSOCIATION OF OCEANOLOGISTS 2014

(Talk) DeCarlo T.M., Cohen A.L., Barkley H.C., Cobban, Q., Young C., Shamberger K.E., Brainard R.E., Golbuu Y. (2014) Coral Reef Bioerosion Rates. Annual meeting Balikpapan, Indonesia

NANYANG TECHNOLOGICAL UNIVERSITY GEOLOGY DEPARTMENT SEMINAR

(Invited, Talk) DeCarlo T.M., Cohen A.L., Barkley H.C., Cobban, Q., Young C., Shamberger K.E., Brainard R.E., Golbuu Y. (2014) Coral reef bioerosion is accelerated by ocean acidification and nutrients

ACADEMIA SINICA, TAIWAN, PI MEETING ON SOUTH CHINA SEA RESEARCH

(Talk) DeCarlo T.M., and A.L. Cohen (2014) Calcification rates on Dongsha Atoll, South China Sea: initial results and future research

OCEAN SCIENCES MEETING 2014

(Poster) DeCarlo T.M., Cohen A.L., Barkley H.C., Cobban, Q., Young C., Shamberger K.E., Brainard R.E., Golbuu Y. (2014) Coral reef bioerosion is accelerated by ocean acidification and nutrients. Ocean Sciences Meeting, Honolulu, Hawaii

GRADUATE CLIMATE CONFERENCE 2013

(Poster) DeCarlo T.M., Gaetani G.A., Cohen A.L., Holcomb M. (2013) Climate signals recorded in coral skeletons: from proxy development to paleoclimate interpretation. Graduate Climate Conference, Woods Hole, Massachusetts

WOODS HOLE OCEANOGRAPHIC INSTITUTION PALEO LUNCH

(Invited, Talk) DeCarlo T.M., Gaetani G.A., Cohen A.L., Holcomb M. (2013) Reconstructing ocean temperature with multiple element ratios in coral skeletons

INTERNATIONAL CONFERENCE ON PALEOCEANOGRAPHY 2013

(Poster) DeCarlo T.M., Gaetani G.A., Cohen A.L., Holcomb M. (2013) Coral skeleton U/Ca as a proxy for the carbonate chemistry of the calcifying fluid. International Conference on Paleooceanography, Barcelona, Spain

AMERICAN GEOPHYSICAL UNION FALL MEETING 2011

(Talk) DeCarlo T.M., Gaetani G.A., Cohen A.L., Zinke J., Grove C. (2011) Rayleigh-Based Multi-Element (RBME) Coral Paleothermometry: New Developments and Applications. American Geophysical Union Fall Meeting, San Francisco, California