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Research Focus:

Climate Change, Biomineralization, Ocean Acidification, Coral Reefs, Ocean Ecosystems

Current Lab Group:

Dr Kathryn Shamberger (PhD), *Post-Doctoral Fellow*

Ms Hannah Barkley, *PhD Candidate*

Ms Alice Alpert, *PhD Candidate*

Ms Sara Bosshart, *PhD Candidate*

Ms Elizabeth Drenkard, *PhD Candidate*

Dr George P. Lohmann (PhD), *Director of Field Operations*

Ms Kathryn Rose (MSc.) *Research Associate III, Lab Manager*

Undergraduate Research Opportunities:

Summer Student Fellowship

Winter Internship Fellows

Sea Education Association

Woods Hole Diversity Initiative

BIOS-Princeton Summer Internship

Publications (*students and post-docs):

* Holcomb, M., Cohen, A. L., and McCorkle, D. C. (2012) An investigation of the calcification response of the scleractinian coral *Astrangia poculata* to elevated $p\text{CO}_2$ and the effects of nutrients, zooxanthellae and gender, *Biogeosciences*, 9, 29-39, doi:10.5194/bg-9-29-2012

Cohen A.L. and Andersson A. (2011) *Synthesis Plenary IV-2: Impacts of ocean acidification for individual organisms: the state of knowledge, key uncertainties, and the way forward*, In: The IPCC Workshop Report on Impacts of Ocean Acidification on Marine Biology and Ecosystems. Eds: Christopher B. Field, Vicente Barros, Thomas F. Stocker, Qin Dahe, Katharine J. Mach, Gian-Kasper Plattner, Michael D. Mastrandrea, Melinda Tignor, Kristie L. Ebi. Published by: IPCC Working Group II Technical Support Unit, Carnegie Institution, Stanford, California, USA.

Munday P. and Cohen A.L. (2011) *Spatial and temporal scales of variability and rates of change*. In: The IPCC Workshop Report on Impacts of Ocean Acidification on Marine Biology and Ecosystems. Eds: Christopher B. Field, Vicente Barros, Thomas F. Stocker, Qin Dahe, Katharine J. Mach, Gian-Kasper Plattner, Michael D. Mastrandrea, Melinda Tignor, Kristie L. Ebi. Published by: IPCC Working Group II Technical Support Unit, Carnegie Institution, Stanford, California, USA.

*Sayani H., Cobb K., Cohen A.L., Crawford E., Nurhati I., Rose R., Zaunbrecher L (2011). Effects of Diagenesis on Paleoclimate Reconstructions from Modern and Young Fossil Corals, *Geochimica et Cosmochimica Acta*, 75 (21) 6361-6373

*Saenger, Casey, Came, Rosemarie E., Oppo, Delia W., Keigwin, Lloyd D., Cohen, Anne L. (2011) Regional climate variability in the western subtropical North Atlantic during the past two millennia, *Paleoceanography* 26, PA2206, doi:10.1029/2010PA002038

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- Gaetani G.A., Cohen A.L., Wang Z.A. and Cruisius, J. (2011). A Rayleigh-based, multi-element approach to coral paleothermometry, *Geochimica et Cosmochimica Acta*, 75(7) 1920-1932.
- Gabitov, R.I., Schmitt, A.K., Rosner, M., McKeegan, K.D., Gaetani, G.A., Cohen, A.L., Watson, E.B., and Harrison T.M. (2011).). In situ $\delta^7\text{Li}$, Li/Ca, and Mg/Ca analyses of synthetic aragonites, *Geochem. Geophys. Geosyst.*, 12, Q03001, doi:10.1029/2010GC003322.
- De Putron S., McCorkle D.C., Cohen A.L. and Dillon, A. (2011) The impact of seawater saturation state and bicarbonate ion concentration on coral calcification. *Coral Reefs*, Volume 30, Number 2, 321-328, DOI: 10.1007/s00338-010-0697-z.
- *Ries J.B., Cohen A.L. and McCorkle D.C. (2010) The zooxanthellate temperate coral *Oculina arbuscula* exhibits a nonlinear calcification response to $p\text{CO}_2$ -induced ocean acidification. *Coral Reefs*, DOI 10.1007/s00338-010-0632-3.
- *Holcomb, M., McCorkle, D.C., Cohen, A.L. 2010. Long-term effects of nutrient and CO_2 enrichment on the temperate coral *Astrangia poculata*. *Journal of Experimental Marine Biology and Ecology* 386: 27-33.
- Cohen A.L. and Gaetani G.A. (2010) Ion Partitioning and the Geochemistry of Coral Skeletons: Solving the Mystery of the “Vital Effect”. IN: “*On partitioning in low temperature aqueous systems: from fundamentals to applications in climate proxies and environmental geochemistry*” Editors: Manolo Prieto and Heather Stoll, European Mineralogical Union, Notes in Mineralogy, Volume 10 Chapter 11, pp 377–397.
- *Cantin N.C., Cohen, A.L., Karnauskus K., Tarrant A.M, McCorkle D.C. (2010) Coral growth declines as temperatures rise in the central Red Sea, *Science*, 2010;329(5989):322-325
- *Saenger C.P., Cohen A.L., Oppo D.W. (2009), Atlantic sea surface temperature trends and variability since 1552, *Nature Geoscience*, doi:10.1038/ngeo552
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- *Ries J.B., Cohen A.L. and McCorkle D.C. (2009), Marine calcifiers exhibit mixed responses to CO_2 -induced ocean acidification. *Geology*, no. 12; p. 1131–1134; doi: 10.1130/G30210A.
- *Holcomb M, Cohen A.L., Gabitov R, Hutter J. (2009), Compositional and morphological features of aragonite precipitated experimentally from seawater and biogenically by corals, *Geochimica Cosmochimica Acta* 73: 4166-4179 doi:10.1016/j.gca.2009.04.015
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