

# Heather M. Benway

## Curriculum Vita

Department of Marine Chemistry and Geochemistry, MS #25  
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### Education

Ph.D., Oceanography, Oregon State University, Corvallis, OR 2005  
M.S., Earth Sciences, University of New Hampshire, Durham, NH 1997  
B.S., Environmental Sciences, University of Rochester, Rochester, NY 1994

### Professional Experience

Executive Officer, [Ocean Carbon and Biogeochemistry](#) Project Office (current level: Research Specialist, Woods Hole Oceanographic Institution) (*May 2007 – present*)

Comer-Steele Postdoctoral Scholar, Dept. of Geology and Geophysics, Woods Hole Oceanographic Institution (*Oct. 2005 – May 2007*)

Graduate Research Assistant, College of Oceanic and Atmospheric Sciences, Oregon State University (*2000 – 2005*)

Program Manager, Paleoclimatology Program, National Oceanic and Atmospheric Administration (subcontractor with UCAR), Office of Global Programs (currently the NOAA Climate Program Office) (*1998 – 2000*)

National Sea Grant Federal Fellows Program/Dean John A. Knauss Marine Policy Fellow, National Oceanic and Atmospheric Administration, Office of Global Programs (*1997 – 1998*)

Graduate Research Assistant, Estuarine/Coastal Chemistry Laboratory, Institute for the Study of Earth, Oceans, and Space, University of New Hampshire (*1995 - 1996*)

Graduate Teaching Assistant, Introductory Oceanography, Department of Earth Sciences, University of New Hampshire (*1994*)

Undergraduate Research Assistant, Department of Biology, University of Rochester (*1993 - 1994*)

### **Recent Teaching, Mentoring, and Outreach**

Presenter on ocean acidification to junior high students, [WHOI Ocean Science Journalism fellows](#), and general public (2011-2013)

Exhibitor and presenter (all age ranges) on oceanography and ocean acidification at the [USA Science and Engineering Festival](#) (Washington, DC, October 2010)

Presenter at teacher workshop on ocean acidification in Woods Hole, MA (December 2009)

Coordinator and convener of 2-week [short course on ocean acidification](#) in Woods Hole, MA (November 2009)

Lecturer on paleoclimatology for the [Woods Hole Partnership Education Program](#) (June 2009, 2010)

Coordinator of summer educational programs for [MS PHDS \(Minorities Striving and Pursuing Higher Degrees of Success in Earth System Science\)](#) students in Woods Hole, MA (2007-2009)

Guest lecturer for graduate-level marine geology class, Woods Hole Oceanographic Institution (2005) and introductory oceanography class, Univ. of New Hampshire (2006)

Volunteer and judge, 4<sup>th</sup> annual high school ROV competition (Massachusetts Maritime Academy, Marine Advanced Technology Education Center) (2006)

Annual High School Science Fair Judge (Falmouth, MA, 2006-2013)

### **Recent Professional and Community Service**

Reviewer for *Quaternary Science Reviews*, *Marine Micropaleontology*, *Geophysical Research Letters*, *Geochemistry Geophysics Geosystems*, *Earth and Planetary Science Letters*, *Paleoceanography*, *Deep-Sea Research*, *Bulletin of Marine Science*, National Science Foundation, European Research Council

Member of external advisory committee for newly funded ocean change IGERT (Integrative Graduate Education and Research Traineeship) program (University of Washington) (2011- )

Member of WHOI Women's Committee (2010- 2012)

Panelist for NOAA Global Carbon Cycle Program proposal review panel (2009)

President and Department Representative, Woods Hole Oceanographic Institution Postdoctoral Association (2006-2007)

Postdoctoral representative, Woods Hole Oceanographic Institution Gender Equity Committee (2006-2007)

### **Professional Interests**

Carbon and climate change science (paleoceanography, micropaleontology, sedimentology, isotope geochemistry, marine biogeochemistry, ocean acidification), environmental geochemistry (water quality indicators), science communication and outreach

### **Honors and Awards**

Comer-Steele Postdoctoral Scholar, Woods Hole Oceanographic Institution (2005)

USGS Mendenhall Postdoctoral Research Fellowship (2005 – declined)

Schlanger Ocean Drilling Program Fellow (2002)

IMAGES Most Outstanding Student Poster Prize, International Conference on Paleooceanography VII, Sapporo, Japan (2001)

National Sea Grant Federal Fellows Program/Dean John A. Knauss Marine Policy Fellow (1997)

### **Seagoing Experience**

Sedimentologist, Ocean Drilling Program Leg 202, D/V *JOIDES Resolution*, Valparaiso, Chile - Balboa, Panama (April-June 2002)

Geochemist, NEMO Expedition, Leg 3, R/V *Melville*, Manzanillo, Mexico – Puntarenas, Chile (May-June 2000)

Chief Scientist, R/V *Gulf Challenger*, three (seasonal) one-day expeditions, hydrographic sampling (CTD casts, Niskin sampling), Gulf of Maine (August 1994 – December 1996)

### **Peer-Reviewed Publications**

Benway, H. M., J. F. McManus, D. W. Oppo, and J. L. Cullen (2010). Hydrographic changes in the eastern subpolar North Atlantic during the last deglaciation. *Quaternary Science Reviews* 29, 3336-3345.

Waelbroeck, C. and [MARGO](#) Project Members (2009). Constraints on the magnitude and patterns of ocean cooling at the Last Glacial Maximum. *Nature Geoscience* 2, 127-132, 10.1038/NCEO411.

Benway, H. M., A. C. Mix, B. A. Haley, and G. P. Klinkhammer (2006). Eastern Pacific Warm Pool paleosalinity and global climate variability: 0-30 kyr. *Paleoceanography*, 21, PA3008, doi: 10.1029/2005PA001208.

Benway, H. M. (2005). Modern and past climate variability in the Eastern Pacific Warm Pool. Ph.D. Dissertation: Oregon State University, Corvallis, OR. 116 pp.

Barker, S., I. Cacho, H. M. Benway, and K. Tachikawa (2005). Planktonic foraminiferal Mg/Ca as a proxy for past oceanic temperatures: A methodological overview and data compilation for the Last Glacial Maximum. MARGO (Multiproxy Approach for the Reconstruction of the Glacial Ocean surface) Special Volume, *Quaternary Science Reviews*, 24: 821-834.

Klinkhammer, G. P., B. A. Haley, A. C. Mix, H. M. Benway, M. Cheseby (2004). Evaluation of automated flow-through time-resolved analysis of foraminifera for Mg/Ca paleothermometry. *Paleoceanography*, 19, PA4030, doi:10.1029/2004PA001050.

Benway, H. M. and A. C. Mix (2004). Oxygen isotopes, upper-ocean salinity, and precipitation sources in the eastern tropical Pacific. *Earth and Planetary Science Letters* 224(3-4): 493-507.

ODP Leg 202 Shipboard Scientific Party (2003). Leg 202 Summary. In Mix, A. C., Tiedemann, R., Blum P., et al., *Proceedings of the Ocean Drilling Program, Initial Reports 202*: College Station TX (Ocean Drilling Program), 145 pp.

Benway, H. M., B. A. Haley, G. P. Klinkhammer, and A. C. Mix (2003). Adaptation of a flow-through leaching procedure for Mg/Ca paleothermometry. *Geochemistry Geophysics Geosystems* 4(2), 8403, doi: 10.1029/2002GC000312.

Benway, H. M. (1997). An investigation of the nutrient dynamics of Jeffreys Basin: A seasonal nutrient trap. M.S. Thesis: University of New Hampshire, Durham, NH. 137 pp.

Ballabeni, P., H. M. Benway, and J. Jaenike (1995). Lack of behavioral fever in nematode-parasitized *Drosophila*. *Journal of Parasitology*. 81: 670-674.

Jaenike, J., H. M. Benway, and G. Stevens (1995). Parasite-induced mortality in mycophagous *Drosophila*. *Ecology*. 76: 383-391.

### **Communication and Outreach Materials**

Lorenzoni, L., Benway, H. (2013). Global inter-comparability in a changing ocean: An international time-series methods workshop. Workshop report. (In preparation)

Benway, H. M., Doney, S. C. (2013). Addressing biogeochemical knowledge gaps. *International Innovations* (In press).

Benway, H. M., M. Telszewski, and L. Lorenzoni (2013), Improving Intercomparability of Marine Biogeochemical Time Series, *Eos Trans. AGU* 94(17), 160.

Benway, H. M. (2011). Quantifying the coastal contribution to the North American carbon budget: A Coastal Interim Synthesis Workshop, San Francisco, California, 11-12 December 2010. *Eos Trans. AGU* 92 (23).

Benway, H. M., S. C. Doney (2010). Ecosystems and Biogeochemical Cycling in a Changing Ocean: Fifth annual Ocean Carbon and Biogeochemistry (OCB) Summer Science Workshop. *Eos Trans. AGU* 91 (44).

Benway, H. M., S. C. Doney, and the OCB Scientific Steering Committee (2010). [OCB Policies and Procedures: A community guide on OCB's programmatic mission, objectives, and operating procedures](#). 17 pp.

Benway, H. M., S. R. Cooley, S. C. Doney (2010). A Catalyst for Ocean Acidification Research and Collaboration: Ocean Carbon and Biogeochemistry Short Course on Ocean Acidification; Woods Hole, Massachusetts, 2–13 November 2009. *Eos Trans. AGU* 91 (12).

Benway, H. M. (2010). Ocean fertilization informational website for scientists, educators, policy makers, media, and the general public: <http://www.whoi.edu/ocb-fert>

Cooley, S. R., H. M. Benway (2010). Linking introductory chemistry and the geosciences through ocean acidification. *The Earth Scientist* (quarterly publication of the National Earth Science Teachers Association) 26(1), 39-42.

Benway, H. M., S. C. Doney (2009). Multidisciplinary perspectives in marine biogeochemistry and ecology: Fourth annual Ocean Carbon and Biogeochemistry (OCB) summer science workshop. *Eos Trans. AGU* 90 (45).

Benway, H. M., Cooley, S. R. (2009). Ocean acidification informational website for scientists, educators, policy makers, media, and the general public: <http://www.whoi.edu/OCB-OA/>

Benway, H. M. and S. C. Doney (2008). Ocean carbon cycling and climate impacts on marine ecosystems: Third annual Ocean Carbon and Biogeochemistry summer science workshop. *Eos Trans. AGU* 89 (47).

Benway, H. M. (Ed.). [OCB News](#), Ocean Carbon & Biogeochemistry scientific newsletter.

Benway, H. M. and S. C. Doney (2007). Advancing the integration of marine ecosystem dynamics and biogeochemistry: Second annual Ocean Carbon and Biogeochemistry summer workshop. *Eos Trans. AGU* 88 (47).

Doney, S. C. and H. M. Benway (2007). Ocean Carbon and Biogeochemistry: An eye toward integrated research. *Limnology and Oceanography Bulletin* 16(3): 69.

Benway, H. M. (2005). Eastern Pacific temperature and  $d^{18}O_{sw}$  during the closure of the Panama Isthmus. Joint Oceanographic Institutions/U.S. Science Advisory Committee Newsletter, Winter 2005, Schlanger Ocean Drilling Fellowship Profile.

Benway, H. M. (1997). Coral Paleoclimatology: What can corals tell us about climate?  
Educational website: <http://www.ngdc.noaa.gov/paleo/outreach/coral/coralintro.html>.