

JAMES J. LUNDEN

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EDUCATION

- 2013** **Ph.D. in Biology**, Department of Biology, Temple University, Philadelphia, PA
"Ocean acidification and the cold-water coral *Lophelia pertusa* in the Gulf of Mexico."
2007 **B.S. in Biology**, *cum laude*, Temple University, Philadelphia, PA
Minor: Political Science

PROFESSIONAL EXPERIENCE

- 2015-present** **Postdoctoral Research Associate**, Darling Marine Center, University of Maine.
Advisor: Rhian Waller
2015 **Adjunct Assistant Professor**, Department of Biology, Temple University.
2013-2015 **Postdoctoral Scholar**, Department of Ecology, Evolution, and Marine Biology,
University of California, Santa Barbara. Advisor: Gretchen Hofmann.
2008-2013 **Graduate Research Assistant**, Department of Biology, Temple University.
Advisor: Erik Cordes
2007-2012 **Graduate Teaching Assistant**, Department of Biology, Temple University.
Experimental Marine Biology, Intro to Biology I, General Biology I & II, Human Biology

FELLOWSHIPS AND AWARDS

- 2012** **Student Travel Award**, DEep Submergence Science Committee (DESSC)
2012 **Student Travel Award**, Department of Biology, Temple University
2011 **Excellence in Partnership Award**, National Oceanographic Partnership Program (NOPP),
awarded to the members of the Lophelia II team
2011 **Student Travel Award**, Association for the Sciences of Limnology and Oceanography (ASLO)
2011 **Student Travel Award**, Department of Biology, Temple University
2010 **Nathan D. Apple Scholarship for Distinction in Biology**, Temple University
2010 **Student Travel Award**, Census of Marine Life Continental Margin Ecosystems (COMARGE)
2008-2010 **National Science Foundation Bridge to the Doctorate Fellowship**
2008 **Nathan D. Apple Scholarship for Distinction in Biology**, Temple University
2005-2007 **Dean's List**, College of Science & Technology, Temple University
2003-2007 **Temple Scholar Award**, Temple University

RESEARCH FUNDING

- 2014** **NOAA Channel Islands National Marine Sanctuary**, "Co-locating sensors with biology:
Assessing environmental variability among natural populations of planktonic calcifiers in the
Channel Islands National Marine Sanctuary." **Lead PI**. 4 days of ship time and assets.
2011 **Society of Integrative and Comparative Biology**, Grant-in-Aid of Research, "Gene expression
in cold-water corals under acidified conditions." \$1000.00

PUBLICATIONS

- Lunden, J.J., C.G. McNicholl*, C.R. Sears*, C.L. Morrison, & E.E. Cordes. (2014). Acute survivorship of the deep-sea coral *Lophelia pertusa* from the Gulf of Mexico under acidification, warming, and deoxygenation. *Front. Mar. Sci.* 1:78. doi: 10.3389/fmars.2014.00078
- Lunden, J.J., J.M. Turner*, C.G. McNicholl*, C.K. Glynn*, & E.E. Cordes. (2014). Design, development, and implementation of recirculating aquaria for maintenance and experimentation of deep-sea corals and associated fauna. *Limnol. Oceanogr.: Methods.* 12:363-372.
- Lunden, J.J., S.E. Georgian, & E.E. Cordes. (2013). Aragonite saturation states at cold-water coral reefs structured by *Lophelia pertusa* in the Northern Gulf of Mexico. *Limnol. Oceanogr.* 58:354-362.

* indicates undergraduate co-author

MANUSCRIPTS IN PROGRESS

- Dilly, G.F., E.B. Rivest, L. Kapsenberg, A.T. Nguyen, U. Hoshijima, J.J. Lunden, K.M. Johnson, & G. E. Hofmann. Site-specific comparative mussel respirometry during simulated upwelling events using newly designed Acidification Respirometry Chambers (ARCs). **In preparation**, *J. Exp. Biol.*

PRESENTATIONS OF RESEARCH

- 2014 Gordon Research Conference: Ocean Global Change Biology; Waterville Valley, NH; **Poster.**
- 2014 ASLO Ocean Sciences Meeting; Honolulu, HI; **Poster.**
- 2012 5th International Symposium on Deep Sea Corals; Amsterdam, Netherlands; **Oral.**
- 2011 Bureau of Ocean Energy Management, Regulation, and Enforcement Information Transfer Meeting; New Orleans, LA; **Invited oral.**
- 2011 ASLO Aquatic Sciences Meeting; San Juan, PR; **Oral.**
- 2010 2nd Graduate Fellows Research Symposium; Temple University, Philadelphia, PA; **Oral.**
- 2010 12th International Deep Sea Biology Symposium; Reykjavik, Iceland. **Poster.**
- 2010 ASLO Ocean Sciences Meeting; Portland, OR. **Poster.**
- 2009 1st Graduate Fellows Research Symposium; Temple University, Philadelphia, PA; **Oral.**

INVITED SEMINARS

- 2011 Ocean acidification and the cold-water coral *Lophelia pertusa* in the Gulf of Mexico. Marine Biology Group, Department of Biology, Penn State University. 16 Sept.

RESEARCH CRUISES

- 2014 **Chief Scientist**, NOAA Channel Islands Research Cruise for Acidification Studies (CIRCAS), Santa Barbara Channel, R/V *Shearwater*, 4 days.
- 2014 NSF Ocean Acidification: *Acid Horizon*, Gulf of Mexico, R/V *Atlantis*, DSV *Alvin*, AUV *Sentry*, 16 days, 3 submersible dives. Chief Scientist: Erik Cordes.
- 2012 SOI Deep Coral Shakedown, Gulf of Mexico, R/V *Falkor*, ROV *Global Explorer*, 12 days. Chief Scientist: Peter Etnoyer.
- 2012 **Chief Scientist**, BOEM/NOAA-OER *Lophelia II*, Gulf of Mexico, R/V *Brooks McCall*, ROV *Kraken2*, 10 days.
- 2011 E/V *Nautilus* Exploration Program, North Atlantic Ocean, E/V *Nautilus*, ROV *Hercules*, 12 days. Chief Scientist: Jeff Karson.

- 2010** BOEM/NOAA-OER Lophelia II, Gulf of Mexico, NOAA Ship *Ronald H. Brown*, ROV *Jason II*, 21 days. Chief Scientists: Erik Cordes & Chuck Fisher.
- 2009** NSF Symbiosis, Gulf of Mexico, R/V *Seward Johnson*, HOV *Johnson SeaLink*, 5 days, 1 submersible dive. Chief Scientist: Ken Halanych.
- 2009** BOEM/NOAA-OER Lophelia II, Gulf of Mexico, NOAA Ship *Ronald H. Brown*, ROV *Jason II*, 18 days. Chief Scientists: Chuck Fisher & Erik Cordes.
- 2009** BOEM/NOAA-OER Lophelia II, Gulf of Mexico, R/V *Brooks McCall*, AUV *Sentry*, 14 days. Chief Scientist: Ian MacDonald.
- 2008** BOEM/NOAA-OER Lophelia II, Gulf of Mexico, NOAA Ship *Nancy Foster*, ROV *SeaEye Falcon DR*, 12 days. Chief Scientist: Erik Cordes.

FIELD EXPERIENCE

- 2014** **Linking pH variability to zooplankton physiological performance**, United States Antarctic Program, B-134-M, McMurdo Station, Antarctica (7 Oct. - 17 Dec.)
- 2013-2015** **Management of pH sensor network**, Santa Barbara Coastal LTER, Santa Barbara Channel, Santa Barbara, CA

WORKSHOPS

- 2014** **Invited participant**, Telepresence-enabled exploration of the Eastern Pacific Ocean, Ocean Exploration Trust, San Francisco, CA (11-13 Dec.)
- 2014** **Invited participant**, Best practices for pH sensors, Scripps Institution of Oceanography, San Diego, CA (4-8 Aug.)
- 2014** NOAA Effective practices for communicating ocean acidification, Honolulu, HI (26 Feb.)
- 2012** DEep Submergence Science Committee (DESSC) early career scientist workshop, San Francisco, CA. (1-2 Dec.)
- 2010** MMS/NOAA-OER/USGS Deep-sea coral workshop, Shepherdstown, WV. (17-18 Feb.)

TEACHING EXPERIENCE

University Courses

- 2015** **Instructor**, Temple University
Introduction to Biology (BIOL 1111) Skills for Organization and Analytical Reasoning (SOAR)
- 2014** **Co-Instructor**, University of California, Santa Barbara
Field Studies in Marine Ecophysiology (EEMB 165)
Primary Instructor: Gretchen Hofmann
- 2014** **Guest Lecturer**, University of California, Santa Barbara (3 Mar.)
Ecophysiology (EEMB 143)
Lecture: "Ocean Acidification in the Deep Sea"
Instructor: Gretchen Hofmann
- 2012** **Guest Lecturer**, Haverford College (15 Mar.)
Lab in Chemical Structure and Reactivity (CHEMH302B01)
Lecture: "Cold-Water Corals in the Gulf of Mexico and Beyond"
Instructor: Helen White
- 2011** **Guest Lecturer**, University of Pennsylvania (26 Oct.)
Global Climate Change (ENVS 204)
Lecture: "Carbonate Chemistry, Ocean Acidification & Physiological Impacts of OA"
Instructor: Irina Marinov

- 2011** **Guest Lecturer**, Temple University (multiple dates)
 Experimental Marine Biology (BIOL 3196)
 Lectures: "Ocean Acidification"; "Community Ecology"; "Reproduction"
 Instructor: Erik Cordes
- 2007-2012** **Teaching Assistant**, Biology Department, Temple University
 Courses: Experimental Marine Biology (BIOL 3196), 3 semesters; Introduction to Biology I for majors (BIOL 1111), 1 semester; General Biology I (BIOL 1011), 1 semester; General Biology II (BIOL 1012), 1 semester; Human Biology (BIOL 1001), 1 semester

Research Mentoring at Temple University

Jeffrey Turner (2008-2009), Bonnie Evans (2009), Sabatino Campellone (2010), Natasha Remon (2011), Salma el-Ashry (2011), Chris Sears (2011-2012), Conall McNicholl (2011-2013), Chloe Glynn (2012-2013), Holly Fowle (2012-2013)

Research Mentoring at University of California, Santa Barbara

Mark Bitter (2014-2015)

PROFESSIONAL SERVICE

- 2013-present** **Reviewer**, *Biogeosciences*; *Proc. R. Soc. B.*; *Environ. Sci. Technol.*
- 2011-2013** **Vice President & Faculty Liaison**, Biology Graduate Student Society, Temple University
- 2010-2011** **Co-founder and Treasurer**, Biology Graduate Student Society, Temple University
- 2006-2007** **Student Ambassador**, College of Science & Technology, Temple University
- 2006-2007** **President**, Biology Society, Temple University
- 2005-2006** **Public Relations Director**, Biology Society, Temple University
- 2005-2006** **Coordinator**, Alex's Lemonade Stand Benefit Concert; Temple University

OUTREACH, COMMUNITY SERVICE & INFORMAL PUBLIC EDUCATION

- 2012-2014** **Acid Horizon**, www.acidhorizon.com
- 2012** **Composition of website content for NOAA Ocean Explorer**, "Lophelia II 2012: Deepwater Platform Corals." Mission plan, background essay, daily log, and mission summary
- 2011-2012** **Curriculum design and review for ocean acidification and coral lesson plans**, NSF Ridge 2000
- 2010** **Composition of website content for NOAA Ocean Explorer**, "Lophelia II 2010: Oil Seeps and Deep Reefs." Background essay.
- 2009** **Composition of website content for NOAA Ocean Explorer**, "Lophelia II 2009: Deepwater Coral Expedition: Reefs, Rigs, and Wrecks." Background essay and daily log.
- 2008-2010** **Science instructor**, Exxon Mobil Bernard Harris Summer Science Camp; Ambler, PA
- 2008** **Composition of website content for NOAA Ocean Explorer**, "Lophelia II 2008: Deepwater Coral Expedition: Reefs, Rigs, and Wrecks." Daily log.
- 2008** **Co-coordinator**, *Philadelphia EcoRestore 2008*; Philadelphia, PA
- 2005-2006** **Judge**, George Washington Carver Science Fair (Grades 6-12); Philadelphia, PA

MEDIA COVERAGE OF RESEARCH

- 2014** "Underwater Meadows Might Serve as Antacid for Acid Seas"; **NPR Morning Edition**, originally aired 15 July. <http://www.npr.org/2014/07/15/330440072/underwater-meadows-might-serve-as-antacid-for-acid-seas>

FIELD COURSES

2009 **Tropical Marine Biology**, Marine Tropical Research and Education Center, Ambergris Caye, Belize. Instructor: Robert W. Sanders

PROFESSIONAL SOCIETY MEMBERSHIPS

Society for Integrative and Comparative Biology (SICB)
Association of the Sciences for Limnology and Oceanography (ASLO)