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CURRENT APPOINTMENT

Woods Hole Oceanographic Institution August 2011-present
Postdoctoral Scholar/Investigator
Biology Department with Dr. Gareth Lawson and Dr. Ann Tarrant

EDUCATION

University of Rhode Island August 2006-August 2011
Ph.D completed in August 2011 with Dr. Brad Seibel
"Ecological physiology of pteropods in relation to climate change"
The consequences of global climate change on the physiology and distribution of pteropods, a group of planktonic oceanic mollusks.

Hiram College, Ohio August 2002-May 2006
B.A. Biology with Honors Magna Cum Laude, Alpha Society, Phi Beta Kappa

PUBLICATIONS

- A.E. Maas**, L.E. Elder, H. Dierssen, B.A. Seibel. (2011). "Metabolic response of Antarctic pteropods (Mollusca: Gastropoda) to food deprivation and regional productivity." *Marine Ecology Progress Series* 441:129-139.
- B.A. Seibel, **A.E. Maas**, H. Dierseen. (2012). "Energetic plasticity underlies a variable response to ocean acidification in the pteropod, *Limacina helicina antarctica*". *PLoS ONE* 7(4): e30464.
- A.E. Maas**, B.A. Seibel, P.J. Walsh (2012a). "Effects of elevated ammonia concentrations on survival, metabolic rates and glutamine synthetase activity in the Antarctic pteropod Mollusc *Clione limacina antarctica*". *Polar Biology* 35: 1123-1128.
- A.E. Maas**, K.F. Wishner, B.A. Seibel. (2012b). "The metabolic response of pteropods to ocean acidification reflects natural CO₂-exposure in oxygen minimum zones". *Biogeosciences* 9: 747-757.
- A.E. Maas**, K.F. Wishner, B.A. Seibel. (2012c). "Metabolic suppression in thecosomatous pteropods as an effect of low temperature and hypoxia in the Eastern Tropical North Pacific". *Marine Biology* 159(9): 1955-1967.
- A.E. Maas**, L. Blanco-Bercial, G.L. Lawson. (2013). "Reexamination of the species assignment of *Diacavolinia* pteropods using DNA barcoding". *PLoS ONE* 8(1): e53889.
- Howes, E.L., N. Bednarsek, J. Büdenbender, S. Comeau, A. Doubleday, S. M. Gallager, R. Hopcroft, S. Lischka, **A. E. Maas**, J. Bijma, J.-P. Gattuso (2014). "Sink and swim, a status review of pteropod culture techniques". *Journal of Plankton Research*. 10.1093/plankt/fbu002

MANUSCRIPTS (available upon request)

- A.E. Maas**, Z. A. Wang and G.L. Lawson. (in revision). "The metabolic response of thecosome pteropods from the North Atlantic and North Pacific Oceans to the interactive stressors of high CO₂ and low O₂". *Journal of Experimental Biology*.
- A.E. Maas**, G.L. Lawson and A.M. Tarrant. (in prep). "Transcriptome-wide response of the thecosome pteropod *Clio pyramidata* to short-term moderate CO₂ exposure (Thecosomata: Mollusca)". *Molecular Ecology*.

A.E. Maas, S. Fraser, D.M. Outram, B.A. Seibel, K.F. Wishner. (in prep). “Vertical distribution of macroplankton and microketon in the Eastern Tropical North Pacific dominated by an oxygen minimum zone”. Deep-Sea Research Part I.

PRESENTATIONS AT SCIENTIFIC MEETINGS

- A.E. Maas, G.L. Lawson, Z.A. Wang and A.M. Tarrant.** Poster Presentation: ““RNA-seq’ing the effects of CO₂ on sea butterflies: Physiology and gene-expression studies of thecosome pteropods” (Sept. 2013) Ocean Acidification Principle Investigators meeting – Washington, D.C.
- A.E. Maas and G.L. Lawson.** Oral Presentation: “The synergistic effect of low O₂ and high CO₂ on the physiology of thecosome pteropods in the Atlantic and Pacific” (Feb. 2013) Aquatic Sciences – New Orleans, LA.
- A.E. Maas.** Oral Presentation: “Impact of ocean basin on pteropod exposure and response to high CO₂ and low O₂” (Oct. 2012) WHOI Postdoctoral Symposium – Woods Hole, MA.
- A.E. Maas.** Oral Presentation: “Evolution of biomineralization in pelagic life stages of gastropods” (Oct. 2012) Future Ocean 2012 selection symposium – Kiel, Germany.
- A.E. Maas, Z. Wang, G.L. Lawson.** Oral Presentation: “Impact of ocean basin on pteropod exposure and response to high CO₂ and low O₂” (Sept. 2012) Third International Symposium on the Ocean in a High CO₂ World – Monterey, CA.
- A.E. Maas, G.L. Lawson, A.M. Tarrant.** Poster: “Exploring the gene expression and physiological response of pteropods to high CO₂ and its synergistic interaction with low O₂” (July 2012) OCB summer workshop – Woods Hole, MA.
- A.E. Maas, K.F. Wishner, B.A. Seibel.** Poster: “Metabolic suppression of pteropods in an oxygen minimum zone – implications for the biological pump” (April 2012) ICES-PICES Early Career Oceans of Change Conference – Mallorca, Spain.
- A.E. Maas, K.F. Wishner, B.A. Seibel.** Poster: “Distribution and physiology of thecosome pteropods in the eastern tropical Pacific: A natural experiment in CO₂ exposure” (Feb. 2012) Ocean Sciences – Salt Lake City, UT.
- A.E. Maas.** Oral Presentation: “The ecophysiology of sea butterflies: Understanding how environment impacts the distribution and metabolism of pteropods” (Jan. 2012) WHOI Biology Department Seminar Series – Woods Hole, MA.
- A.E. Maas, L.E. Elder, H. Dierssen, B.A. Seibel.** Poster: “The metabolic response of Antarctic pteropods (Gastropoda: Mollusca) to food availability” (March 2011) International Zooplankton Production Symposium – Pucon, Chile.
- A.E. Maas, K.F. Wishner, B.A. Seibel.** Oral Presentation: “Pteropod physiology and distribution in the oxygen minimum zone of the eastern tropical Pacific” (Jan. 2010) Ocean Sciences - Portland, OR.
- A.E. Maas, L.E. Elder, V.F. Fabry, B.A. Seibel.** Poster: “The ecological importance of pteropod physiology” (Jan. 2008) Ocean Sciences - Orlando, FL.
- A.E. Maas and B.A. Seibel*.** Poster: “Pteropods: The Animals Behind the Aragonite” (Oct. 2007) Ocean Acidification Research Workshop - La Jolla, CA.
- A.E. Maas, S.I. Madar.** Poster: “Significance of body proportions in the transition to dorsoventral undulatory modes of swimming in archaeocete whales” (May 2005) Evolution of Aquatic Tetrapods Conference - Akron, OH.

INVITED LECTURES AND SEMINARS

A.E. Maas. “The Ecophysiology of Sea Butterflies (Pteropoda): Exploring how CO₂ impacts the distribution and physiology of planktonic calcifiers” (Pending March 2014) Department of Marine Sciences, Avery Point, University of Connecticut, – Groton, CT.

- A.E. Maas.** “The Sea Butterfly Effect: Using the distribution and physiology of pteropods to make predictions about the effects of global climate change” (Oct. 2012) SMAST, University of Massachusetts – Dartmouth, MA.
- A.E. Maas.** “The Sea Butterfly Effect: Using the comparative physiology of pteropods to make predictions about the effects of climate change” (Mar. 2012) Graduate School of Oceanography, University of Rhode Island – Narragansett, RI.
- A.E. Maas.** “Environmental physiological adaptation of pteropods: implications for climate change” (Feb. 2012) Evergreen State College – Olympia, WA.
- A.E. Maas.** “Physiology of Antarctic pteropods in relation to ocean acidification” (Oct. 2011) WHOI Postdoctoral Symposium – Woods Hole, MA.

RESEARCH GRANTS (Awarded only)

- A.M. Tarrant, **A.E. Maas**, G.L. Lawson “Impacts of ocean acidification on pteropod physiology” (Awarded September 2011) Access to the Sea – \$35,000
- Z. Wang, G.L. Lawson, and **A.E. Maas.** “Acidification of the Coastal Ocean: Are Deep Waters of the Gulf of Maine already Corrosive to Pteropods?” (Awarded June 2012) Coastal Ocean Institute – \$74,928
- G.L. Lawson, **A.E. Maas**, A.M. Tarrant “Ocean Acidification: Seasonal and ontogenetic effects of acidification on pteropods in the Gulf of Maine” (Awarded August 2013) NSF Ocean Acidification 2013 – \$492,720

FELLOWSHIPS AND AWARDS

- Accepted to DISCCRS 2013
- Future Oceans “Evolving Ocean” Postdoctoral Fellowship (declined 2013-2016)
- Accepted to Eco-DAS X 2012
- Travel Award to the Third International Symposium on the Ocean in a High CO₂ World 2012
- Participant in the ICES/PICES “Oceans of Change” Conference 2012
- Woods Hole Postdoctoral Scholarship 2011
- UNOLS Chief Scientist Training Cruise 2011
- URI Biology Department Grant 2011
- URI Deans Grant 2011
- Rhode Island Graduate Student Research Grant 2008, 2009, 2010
- EPSCoR Fellowship (Stipend, Fees, Tuition for Fall, Spring, and Summer ‘08-’09)

RESEARCH EXPERIENCE

- January, 2007 – August 2009 University of Rhode Island Kingston, RI
Biology Research Assistant for Dr. Brad Seibel
 Shipboard and field based physiological experiments at McMurdo Station in Antarctica and the Eastern Tropical Pacific.
- October, 2005– July, 2006 NEOMED Rootstown, OH
Biology Research Technician for Dr. Hans Thewissen
 Investigation of the evolution and development of cetacean using fossil comparison and immunohistochemistry
- December 2004 Smithsonian Mammals Dept. Washington, DC
NMNH Intern
 Familiarization with the museum specimen curation system and archival responsibilities.

FIELD EXPERIENCE

- R/V *New Horizon*, **Northeast Pacific**. 2012
- R/V *Tioga*, **Gulf of Maine, Massachusetts**. 2011, 2013 (x3), 2014
- R/V *Wecoma*, **Newport, Oregon**. 2011 (UNOLS Chief Scientist Training Cruise)
- R/V *Oceanus*, **Northwest Atlantic**. 2011

R/V *Knorr*, **Eastern Tropical North Pacific**. 2008
R/V *Seward Johnson*, **Eastern Tropical North Pacific**. 2007
R/V *New Horizon*, **Gulf of California, Mexico**. 2007
Expedition B-069, **Antarctica**. 2007, 2008

TRADITIONAL TEACHING EXPERIENCE

January 2011 – May 2011 University of Rhode Island
Adjunct Professor WMS 220 (Women & Natural Science)
Designed and implemented a course syllabus which integrated guest speakers, University wide programs, textbooks, scientific articles, popular culture articles and in-class discussions to engage students in active multi-disciplinary learning (24 students, 3-credits)

September 2009 – May 2011 University of Rhode Island
Teaching Coordinator/Assistant BIO 120 (Anatomy)
Created an online course resource (Sakai site), extensively revised a laboratory manual, and delivered guest lectures for a course of ~350 students. Coordinated and supervised seven teaching assistants. Created, delivered and graded weekly quizzes, projects, midterms and final lab practicals for up to four 3-hour lab sections with introductory lecture and extensive small-group interaction.

September, 2006 – December, 2006 University of Rhode Island
Teaching Assistant BIO 365 (Marine Biology)
Conducted three two-hour labs a week including introductory lecture, explanation of procedure, and supervision to ensure comprehension and safety. Graded exercises, weekly formal lab reports, assisted in test grading and independently led 4 field trips to local sites.

January 2003-May 2004 Hiram College
Teaching Assistant BIO 142 (Botany)
Assisted in the conduction of laboratory section by answering questions, participation in demonstrations, lab setup and cleanup, quiz and lab report grading.

SCIENCE COMMUNICATION EXPERIENCE

Presented a webinar for the National Ocean Sciences Bowl entitled “Peril of the sea butterfly Pteropods - A case study on the biology of ocean acidification” whose purpose was to train coaches of the 2013 NOSB in the topic of Ocean Acidification

Participant in the National Network for Ocean and Climate Change Interpretation program (2013) which seeks to improve the communication of informal science education programs and to strengthen and clarify the messages delivered to the public about oceans and global change.

Visiting Scientist at the UConn Avery Point OMICS PDI project (2012, 2013) a teacher training workshop which introduces the used of molecular techniques to the questions of global change biology

Volunteer scientist in high school student art and science outreach at WHOI (2012) which resulted in the creation of plankton inspired ceramics projects

Invited plankton expert for the WHOI GLOBE workshop (2012) which introduces teachers (K-12) to a coastal water sampling program, as part of the Global Learning and Observations to Benefit the Environment (GLOBE) Program

Invited speaker and participant in the UConn Avery Point Marine Sciences ECE (Early College Experience) high school teacher workshop (2013) to develop the Oceanography curriculum.

Participant in the October 2011 MIT "Telling Your Story" teacher/scientist training workshop which fosters collaborations between scientists and K-12 teachers.

Outreach speaker for the Roger Williams Zoo, Providence RI, teaching science interpreters about “Extreme Ocean Environments”

Invited lectures for URI 101 Class - Kingston, RI “Life as a graduate student in Marine Biology”

SYNERGISTIC ACTIVITIES

Mentorship of four graduate students, a summer student fellow and three guest students
Reviewer for Deep Sea Research, the ICES Journal of Marine Science, Functional Ecology, PLoS
One, Comparative Biochemistry and Physiology, Biogeosciences, Earth System Science
Data, Polar Biology, International Journal of Molecular Sciences, Philosophical Transactions
of the Royal Society and the National Science Foundation
Session co-chair for “Zooplankton responses to environmental stressors: From individual
responses to larger scale implications” at the 2013 Aquatic Sciences meeting
Member-at-large for the WHOI Postdoctoral Association (2012-2013)
Participation in the NSF EarthCube Ocean Ecosystems Workshop (2013)
Involved in URI’s ADVANCE grant program, and Women In Science initiative
Actively involved in Graduate Student Governance at URI (5 years)
Coordinator and Science Chair of the 2008 URI Interdisciplinary Graduate Conference

PROFESSIONAL SOCIETIES

American Society of Limnology and Oceanography
American Association of University Women
Sigma Xi
Phi Beta Kappa