Amy E. Maas, Ph.D.

Assistant Professor: Arizona State University
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CURRENT APPOINTMENTS

Arizona State University
Assistant Professor — Aug 2022-present

Bermuda Institute of Ocean Sciences
Associate Scientist — April 2020-present
Assistant Scientist — January 2015-March 2020

PREVIOUS APPOINTMENTS

Woods Hole Oceanographic Institution — August 2011-December 2014
Postdoctoral Scholar/Investigator
Guest Investigator — 2015-present
Biology Department with Dr. Gareth Lawson and Dr. Ann Tarrant

University of Connecticut — May 2013-present
Assistant Research Scientist
Marine Science and Technology Center

EDUCATION

University of Rhode Island — August 2006-August 2011
Biological Sciences: Ph.D completed in August 2011 with Dr. Brad Seibel
"Ecological physiology of pteropods in relation to climate change"

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

RESEARCH GRANTS (Awarded and Pending only)

A.E. Maas, K. Noyes. "Collaborative Research: Metabolic habitat barriers imposed on tropical diel vertical migrators" (Awarded August 2021) NSF Bio Oceanography - $297,690.

A.E. Maas, L. Blanco-Bercial, K. Noyes. "Collaborative Proposal: An autonomous profiling vehicle for concurrent acoustic, visual and environmental measurements in the mesopelagic ocean" (Awarded August 2021) NSF OTIC - $185,553.

C. Melrose, L. Barbero, D. Pierrot, P. Fratantoni, H. Walsh, **A.E. Maas**, G. Saba. "Measurement and Synthesis of Water Column Carbonate Chemistry, Nutrients, and Biological Indicators of Ocean Acidification on the Northeast Fisheries Science Center's Ecosystems Monitoring (EcoMon) Cruises" (awarded January 2021) NOAA - $75,000 (BIOS part).

L. Blanco-Bercial, **A.E. Maas**, K. Noyes. "Collaborative Research: Zooplankton mediation of particle formation in the Sargasso Sea" (Awarded June 2020) NSF Bio Oceanography - $407,159.

L. Blanco-Bercial, **A.E. Maas**, K. Noyes, and D. Kinkade. "Quantifying the Drivers of Midwater Zooplankton Community Structure" (Awarded March 2020) NSF Bio Oceanography - $550,795.

A.E. Maas and L. Blanco-Bercial. "Collaborative Research: Diel physiological rhythms in a tropical oceanic copepod" (Awarded July 2018) NSF Biological Oceanography - $535,000.

D. Steinberg and **A.E. Maas.** "Zooplankton-Mediated Export Pathways: Quantifying Fecal Pellet Export and Active Transport by Diel and Ontogenetic Vertical Migration in the North Pacific and Atlantic Oceans" (Awarded July 2017) NASA EXPORTS Proposal - $259,018 BIOS subaward.

SUPPLEMENT (Awarded Sept 2020) - $38,100 BIOS subaward.

A.E. Maas, D. Murphy and S. Newton. "Swimming in Sea-Butterflies: Physics, Physiology, Ecology and Inspiration" (Awarded April 2017) National Academies Keck Futures Initiative - $75,000.

A.E. Maas, P.A. Barnes, R. Parsons Biggs. "Environmental Change Research Facility at BIOS" (Awarded August 2016) NSF FSML - $337,965.

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. *During the transition to BIOS, Maas was removed as a Co-PI to allow for a subaward to be allocated to her new institution (Awarded March 2015).

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

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

FUNDED COLLABORATIONS (Awarded and Pending only)

G. Moncoiffe "The abiotic and biotic factors determining microbial respiration, a key process in ocean carbon storage (MicroRESPIRE)" (Awarded August 2022) NERC - £6,560 (**Maas** is a named project partner)

S-D. Ayata "Trait biogeography and functional diversity of marine mesozooplankton from high throughput data (imaging, omics), machine learning and numerical modelling" (Awarded July 2022) French ANR, AAPG 2022 – Total award 678 k€ (**Maas** is a named project partner)

T. Chalk "ForCry: Analysing frozen Foraminifera by Cryostage LA-ICPMS: Neogene CO_2, patterns, cycles, and climate sensitivity." (Awarded December 2021) European Research Council Starting Grant (**Maas** is a named project partner)

W. Curry "BIOS-SCOPE II- A Collaborative Program for the Study of Microbial Oceanography in the North Atlantic Subtropical Gyre" (Awarded November 2020) Simons Foundation International – Total award $11,059,628, BIOS share $3,869,592 BIOS part (**Maas** is an investigator on the project with 15 months of support over 5 years)

D. Murphy "Aerial and Aquatic Flapping Flight at Low Reynolds Numbers" (Awarded 2019) NSF Career (**Maas** is a named project collaborator with technician time on the grant).

D. Lunt et al. "SWEET: Super-Warm Early Eocene Temperatures and climate: understanding the response of the Earth to high CO_2 through integrated modelling and data" (Awarded October 2017) NERC - £1,109,719 (**Maas** is a named project partner)

W. Curry "Equipment for Sampling Microbes and Larger Plankton in Support of BIOS-SCOPE" (Awarded November 2016) Simons Foundation International - $193,727 (**Maas** shares responsibility for new MOCNESS and ZooScan with Dr. Blanco Bercial)

W. Curry "BIOS-SCOPE: A collaborative program for the study of microbial oceanography in the North Atlantic Subtropical Gyre" (Awarded November 2015) Simons Foundation International - Total award $ 5,976,827, BIOS share $ 2,473,439 BIOS part (**Maas** was an investigator on the project with 15 months of support over 5 years)

FELLOWSHIPS AND AWARDS

Recipient of the 2021 Robert H. Goddard Honor Team Awards for EXPORTS Project Science Team
Accepted to NAKFI Conference: Discovering the Deep Blue Sea 2016
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 CO_2 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)

PUBLICATIONS

(# represents student author, * represents equal authorship)

37. A.M. Tarrant, N. McNamara-Bordewick#, L. Blanco-Bercial, A. Miccoli, **A.E. Maas**. (2021). "Diel metabolic patterns in a migratory oceanic copepod." Journal of Experimental Marine Biology and Ecology. 545. Doi: 10.1016/j.jembe.2021.151643
36. A. Herrera-Amaya#, E.K. Seber#, D.W. Murphy, W.L. Patry, T.S. Knowles, M.M. Bubel, **A.E. Maas**, and M.L. Byron (2021). "Spatiotemporal asymmetry in metachronal rowing at intermediate Reynolds numbers." Integrative and Comparative Biology. Doi: 10.1093/icb/icab179
35. D.A. Siegel et al (2021). "An operational overview of the EXport Processes in the Ocean from RemoTe Sensing (EXPORTS) Northeast Pacific field deployment." Elementa: Science of the Anthropocene. 9(1): 00107. Doi: 10.1525/elementa.2020.00107
34. K. Stamieszkin, D.K. Steinberg, **A.E. Maas.** (2021). "Fecal pellet production by mesozooplankton in the subarctic Northeast Pacific Ocean" Limnology and Oceanography. 66(7): 2585-2597. Doi: 10.1002/lno.11774
33. S. Doherty#, **A.E. Maas,** D.K. Steinberg, B.N. Popp, H.G. Close. (2021). "Distinguishing zooplankton fecal pellets as a component of the biological pump using compound-specific isotope analysis of amino acids." Limnology and Oceanography. 66(7): 2827-2841. Doi: 10.1002/lno.11793
32. **A.E. Maas**, L. Blanco-Bercial, H. Gossner. (2021). "Use of Optical Imaging Datasets to Assess Biogeochemical Contributions of the Mesozooplankton." Journal of Plankton Research. 43(3): 475-491. Doi: 10.1093/plankt/fbab037
31. **A.E. Maas**, A. Miccoli, K.S. Stamieszkin, C.A. Carlson, D.K. Steinberg. (2021) "Allometry and the Calculation of Zooplankton Metabolism in the subarctic Northeast Pacific Ocean." Journal of Plankton Research. 43(3): 413-427. Doi: 10.1093/plankt/fbab026
30. **A.E. Maas**, S. Liu, L. Bolanos, B. Widner, R. Parsons, C. Carlson, E. Kujawinski, L. Blanco-Bercial. (2020). "Migratory Zooplankton Excreta and its Influences on Prokaryotic Communities." Frontiers in Marine Science". 7. Doi: 10.3389/fmars.2020.573268
29. K.T.C.A. Peijnenburg, A.W. Janssen, D.Wall-Palmer, E. Goetze, A.K. Burridge, **A.E. Maas**, J. Todd, F. Marlétaz. (2020). "The origin and diversification of pteropods precede past perturbations in the Earth's carbon cycle" PNAS. Doi: 10.1073/pnas.1920918117
28. F. Karakas#, J. Wingate#, L. Blanco-Bercial, **A.E. Maas,** D.W. Murphy. (2020) "Swimming and Sinking Behavior of Warm Water Pelagic Snails" Frontiers in Marine Science. 7: 749. Doi: 10.3389/fmars.2020.556239
27. R. Kiko, D. Bianchi, C. Grenz, H. Hauss, M. Iversen, S. Kumar, **A.E. Maas**, C. Robinson. (2020) "Editorial: Zooplankton and Nekton: Gatekeepers of the Biological Pump" Frontiers in Marine Science. 7. Doi: 10.3389/fmars.2020.00545
26. F. Karakas#, **A.E. Maas**, D.W. Murphy. (2020). "A Novel Cylindrical Clap-and-Fling Mechanism Used by Sea Butterflies" JEB. 223(15). Doi: 10.1242/jeb.221499
25. P.S. Thibodeau#, D.K. Steinberg, **A.E. Maas.** (2020). "Effects of temperature and food concentration on pteropod metabolism along the Western Antarctic Peninsula" JEMBE. 530-531: 151412. Doi: 10.1016/j.jembe.2020.151412
24. **A.E. Maas**, Z.A. Wang, A.M. Tarrant and G.L. Lawson. (2020). "Seasonal physiology and shell quality of the pteropod *Limacina retroversa* in the Gulf of Maine reflects life cycle and variability

in carbonate chemistry." Progress in Oceanography. 186: 102371. Doi: 10.1016/j.pocean.2020.102371

23. N. Bednaršek, R. Feely, E. Howes, B. Hunt, F. Kessouri, P. León, S. Lischka, **A.E. Maas**, K. McLaughlin, N.P. Nezlin, M. Sutula, and S.B. Weisberg. (2019). "Synthesis of thresholds of ocean acidification effects on calcifying pteropods." Frontiers in Marine Science. Doi: 10.3389/fmars.2019.00227
22. F. Karakas[#], D. D'Oliveira#, **A.E. Maas**, D.W. Murphy. (2018). "Using a Shell as a Wing: Pairing of Dissimilar Appendages in Atlantiid Heteropod Swimming". Journal of Experimental Biology. 221(23) Doi: 10.1242/jeb.192062
21. J.E. Burke[#], W. Renema, M.J. Henehan, L.E. Elder, C.V. Davis, **A.E. Maas**, G.L. Foster, R.Schiebel, P.M. Hull. (2018) "Factors influencing porosity in planktonic foraminifera." Biogeosciences. Doi: 10.5194/bg-2018-222
20. **A.E. Maas**, L. Blanco-Bercial, A. Lo[#], A.M. Tarrant, and E. Timmins-Schiffman. (2018b) "Variations in copepod proteome and respiration rate in association with diel vertical migration and circadian cycle." The Biological Bulletin. 235: 30-42. Doi.org/10.1086/699219
19. L. Blanco Bercial* and **A.E. Maas*** (2018). "A transcriptomic resource for evaluating temperature differences in the gene expression of the northern krill *Meganyctiphanes norvegica*". Molecular Genomics. 38: 25-32. Doi: 10.1016/j.margen.2017.05.013
18. **A.E. Maas**, G.L. Lawson, A.J. Bergan[#] and A.M. Tarrant. (2018a). "Exposure to CO_2 influences metabolism, calcification, and gene expression of the thecosome pteropod *Limacina retroversa*". Journal of Experimental Biology. 221 (3). Doi: 10.1242/jeb.164400
17. A.J. Bergan[#], G.L. Lawson, **A.E. Maas** and Z.A. Wang. (2017). "The effect of elevated carbon dioxide on the sinking and swimming of the shelled pteropod *Limacina retroversa*". ICES Journal of Marine Science. 74: 1893-1905. Doi:10.1093/icesjms/fsx008
16. C. Manno et al. (2017) "Shelled pteropods in peril: Assessing vulnerability in a high CO_2 ocean". Earth-Science Reviews. 169: 132-145. Doi: 10.1016/j.earscirev.2017.04.005
15. A.A. Thabet[#]*, **A.E. Maas***, S.A. Saber, and A.M. Tarrant. (2017). "Assembly of a reference transcriptome for the gymnosome pteropod *Clione limacina* and profiling responses to short-term CO_2 exposure". Marine Genomics. 34: 39-45. Doi:10.1016/j.margen.2017.03.003
14. P.G. Batta-Lona[#], **A.E. Maas**, R.J. O'Neill, P.H. Wiebe, A. Bucklin. (2017). "Transcriptomic profiles of spring and summer populations of the Southern Ocean salp, *Salpa thompsoni*, in the Western Antarctic Peninsula region". Polar Biology. 40 (6): 1261-1276.
13. Z.A. Wang, G.L. Lawson, C. Pilskaln, **A.E. Maas.** (2017). Seasonal controls of aragonite saturation states and impacts on pteropod abundance in the Gulf of Maine". AGU Oceans. 122 (1): 372-389.
12. **A.E. Maas,** Z. A. Wang and G.L. Lawson. (2016b). "The metabolic response of thecosome pteropods from the North Atlantic and North Pacific Oceans to high CO_2 and low O_2". Biogeosciences. 13: 6191-6210.
11. **A.E. Maas**, I.T. Jones[#], A.M. Reitzel and A.M. Tarrant. (2016a). "Daily cycle in oxygen consumption by the sea anemone *Nematostella vectensis* Stephenson". Biology Open. doi: 10.1242/bio.013474
10. A.A. Thabet[#]*, **A.E. Maas***, G.L. Lawson, and A.M. Tarrant. (2015). "Life cycle and early development of the thecosomatous pteropod *Limacina retroversa* in the Gulf of Maine, including the effect of elevated CO_2 levels". Marine Biology. 162 (11): 2235-2249.
9. **A.E. Maas**, G.L. Lawson and A.M. Tarrant. (2015). "Transcriptome-wide response of the thecosome pteropod *Clio pyramidata* to short-term CO_2 exposure". Comparative Physiology and Biochemistry Part D 16:1-9.
8. **A.E. Maas**, S. Fraser[#], D.M. Outram, B.A. Seibel, K.F. Wishner. (2014). "Fine scale vertical distribution of macroplankton and micronekton in the Eastern Tropical North Pacific in association with an oxygen minimum zone". Journal of Plankton Research 36 (6): 1557-1575.

7. 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 36(2): 299-315.
6. **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.
5. **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.
4. **A.E. Maas,** K.F. Wishner, B.A. Seibel. (2012b). "The metabolic response of pteropods to ocean acidification reflects natural CO_2-exposure in oxygen minimum zones". Biogeosciences 9: 747-757.
3. **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.
2. 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.
1. **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.

MANUSCRIPTS (available upon request)

D.K. Steinberg, K. Stamieszkin, **A.E. Maas**, C.A. Durkin, U. Passow, M.L. Estapa, M.M. Omand, A.M.P. McDonnell, L. Karp-Boss, M. Galbraith, D.A. Siegel. (in review) "The outsized role of salps in carbon export in the subarctic Northeast Pacific Ocean during summer." Global Biogeochemical Cycles.

C. H. Shea[#], Wojtal, P.J. [#], Close, H.G., Stamieszkin, K., Cope, J.S., Steinberg, D.K., **Maas, A.E.**, Wallsgrove, N. [#] and Popp, B.N. (in review). "Small particles and heterotrophic protists support the mesopelagic zooplankton food web in the subarctic northeast Pacific Ocean". Limnology and Oceanography

N. Villiot[#], **A.E. Maas**, A.J. Poulton, and L. Blanco-Bercial. (in review) Nutrients modulate taxonomic diversity and trophic strategies of small eukaryotes in oligotrophic oceans. FEMS Microbes

H. McNair, M. Meyer[#], S. Lerch, **A. E. Maas**, B. Stephens, J. Fox, K. N. Buck, S. M. Burns, I. Cetinic, M. Cohn[#], C. Durkin, S. Gifford, W. Gong, J. R. Graff, E. L. Jones[#], A. E. Santoro, C. H. Shea[#], K. Stamieszkin, D. K. Steinberg, A. Marchetti, C. A. Carlson, S. Menden-Deuer, M. A. Brzezinski, D. A. Siegel, T. Rynearson. (in revision) "A quantitative analysis of the food web in the Subarctic Pacific demonstrates dynamics of a regenerative system with low export potential". Elementa

A.E. Maas, E. Timmins-Schiffman, A.M. Tarrant, B. Nunn, J. Park, L. Blanco-Bercial. (in review) "Diel metabolic tuning revealed by in situ transcriptome and proteome in a vertically migratory copepod". Molecular Ecology

J.E. Burke[#], L.E. Elder, **A.E. Maas**, D.E. Gaskell[#], E.G. Clark, A.Y. Hsiang, G.L Foster, P.M. Hull. (in revision) "Low Allometric Scaling of Respiration Rates May Explain Gigantism in Pelagic Protists". Limnology and Oceanography.

PRESENTATIONS AT SCIENTIFIC MEETINGS

(# represents student author, * represents presenting author if other than first author)

A.E. Maas, L. Blanco-Bercial, B. Nunn, E. Timmins-Schiffman, A.M. Tarrant. "Diel patterns in transcriptome and proteome from a wild caught migratory copepod". (Feb 2022) Ocean Sciences – Virtual.

D.K. Steinberg, **A.E. Maas**, K.N. Sharpe[#], K.S. Stamieszkin. "Large, gelatinous pteropods (pelagic snails) as agents of export in the subarctic northeast Atlantic Ocean". (Feb 2022) Ocean Sciences – Virtual.

K.S. Stamieszkin, **A.E. Maas**, D.K. Steinberg, H. Gossner, J.S. Cope, C.A. Carlson. "A comparison of zooplankton active carbon flux between the North Atlantic and North Pacific Oceans during the EXPORTS project". (Feb 2022) Ocean Sciences – virtual.

M. Perhirin[#], J. Godfrey[#], H. Gossner, **A.E. Maas**, R. Johns, S.-D. Ayata, L. Blanco-Bercial. "Impact of copepod diversity on carbon export using imaging and environmental data". (Feb 2022) Ocean Sciences – Virtual.

H. Gossner, **A.E. Maas**, R.B. Rodriguez-Perez[#], K. Yongblah, L. Blanco-Bercial. "Latitudinal and vertical gradients in zooplankton size class and diversity". (Feb 2022) Ocean Sciences – Virtual.

Y. Niimi[#], L. Blanco-Bercial, A.E. Maas, N. Mercado Salas, S. Köhnk, S. Neuer. "Merging integrative taxonomy and the biogeochemical contributions of the Euphausiids in the Sargasso Sea". (Feb 2022) Ocean Sciences – Virtual.

J. Goss[#], J. Godfrey[#], H. Gossner, **A.E. Maas**, L. Blanco-Bercial. "Zooplankton and Image Classification at an extremely diverse location". (Feb 2022) Ocean Sciences – Virtual.

S. Liu, K. Longnecker, E. Kujawinski, K. Vergin, L.M. Bolaños, S.Giovannoni, K. Opalk, E. Halewood, R. Parsons, **A.E. Maas**, H. Gossner, L. Blanco-Bercial, R. Curry, R. Johnson, C.A. Carlson. "Diel variability of DOM composition, microbial activity and specific microbial lineages in the northwestern Sargasso Sea". (June 2021) ASLO – Virtual.

F. Karakas[#], **A.E. Maas**, D.W. Murphy. "Shell Shape and Size Defines the Swimming and Sinking Characteristics of Pelagic Snails" (January 2021) SICB

D.W. Murphy#, F. Karakas[#], A.E. Maas. "Swimming of a Subtropical Soft-bodied Sea Angel at Intermediate Reynolds Number". (November 2020) APS Division of Fluid Dynamics – Virtual.

F. Karakas[#], D.W. Murphy, **A.E. Maas**. "Geometric and Dynamic Scaling of Marine Snail Swimming". (November 2020) APS Division of Fluid Dynamics – Virtual.

J.E. Burke[#], L.E. Elder, **A.E. Maas**, D.E. Gaskell, E.G. Clark, A.Y. Hsiang, G.L Foster, P.M. Hull. ePresentation "Can Low Allometric Scaling of Respiration Rates Explain Gigantism in Pelagic Protists?" (October 2020) Geological Society of America – Virtual.

S. Doherty[#], **A.E. Maas,** D.K. Steinberg, B.N. Popp, H.G. Close. Poster Presentation: "Estimating the Contribution of Zooplankton Fecal Pellets to Marine Suspended Particle Pools" (February 2020) Ocean Sciences – San Diego, CA.

K.S. Stamieszkin, D.K. Steinberg, **A.E. Maas** Oral Presentation: "The role of mesozooplankton community structure in fecal pellet carbon production in the subarctic northeast Pacific Ocean" (February 2020) Ocean Sciences – San Diego, CA.

I.A. Milton#, **A.E. Maas**, L. Blanco-Bercial, A.M. Tarrant. Poster Presentation: "The effects of feeding activity on the bioenergetics of a pelagic calanoid copepod, *Pleuromamma xiphias"*. (February 2020) Ocean Sciences – San Diego, CA.

D.K. Steinberg, K.S. Stamieszkin, **A.E. Maas**, C.A. Durkin, U. Passow, M.L. Estapa, K.O. Buesseler, M.M. Omand Oral Presentation: "Salp-mediated export processes in the northeast subarctic Pacific Ocean" (February 2020) Ocean Sciences – San Diego, CA.

C.H. Shea[#], V. Evrard, N. Wallsgrove, T. Allen, J. Cope, D.K. Steinberg, **A.E. Maas**, K. Stamieszkin, H.G. Close, B.N. Popp. Oral Presentation: "Northeast Pacific mesopelagic zooplankton feed increasingly on small (0.3-53 µm) particles with depth" (February 2020) Ocean Sciences – San Diego, CA.

P.S. Thibodeau[#], D.K. Steinberg, **A.E. Maas.** Oral Presentation: **"**Effects of warming on the ecology and physiology of the Southern Ocean pteropod, *Limacina helicina antarctica*" (February 2020) Ocean Sciences – San Diego, CA.

J. Wingate[#], F. Karakas[#], D.W. Murphy, **A.E. Maas.** Poster Presentation: "Swimming kinematics in "sea butterflies" - Using image tracking software to characterize the 3D swimming of pteropods" (February 2020) Ocean Sciences – San Diego, CA.

H. Gossner, L. Blanco-Bercial, **A.E. Maas.** Poster Presentation: "Allometric estimates of midwater zooplankton metabolism and vertical flux from image data" (February 2020) Ocean Sciences – San Diego, CA.

K. Peijnenburg, A. Jannsssen, D. Wall-Palmer, E. Goetze, A.K. Burridge, **A.E. Maas**, J.A. Todd and F. Marletaz Oral Presentation: "Early Cretaceous Origin of Pteropods Suggests Their Resilience to Ocean Acidification" (February 2020) Ocean Sciences – San Diego, CA.

A.E. Maas, L. Blanco-Bercial, A.M. Tarrant eLightening Presentation: "Biogeochemical implications of diel changes in migratory copepod physiology" (February 2020) Ocean Sciences – San Diego, CA.

N. McNamara-Bordewick[#], **A.E. Maas**, L. Blanco-Bercial, A.M. Tarrant. Poster Presentation: "Metabolic Enzyme Activity over a Daily Cycle in Vertically Migrating Copepods" (January 2020) SICB – Austin, TX.

S. Doherty[#], **A.E. Maas,** D.K. Steinberg, B.N. Popp, H.G. Close. eLightening Presentation: "Compound-Specific Isotope Analysis of Zooplankton Fecal Pellets: Insights into Dietary and Trophic Processes and Characterization of Fecal Pellets as Organic Matter End-Member" (December 2019) AGU – San Francisco, CA.

F. Karakas[#], **A.E. Maas**, D.W. Murphy. Oral Presentation: "A Novel Cylindrical Clap-and-Fling Maneuver by Swimming Marine Snails" (November 2019) APS Division of Fluid Dynamics – Seattle, WA.

K. Stamieszkin, P. Brun, **A.E. Maas**, D.K. Steinberg. Poster Presentation: "Using allometry to model copepod-mediated carbon flux – how well do we estimate key rates and variables?" (August 2019) Trait-Based Approaches to Ocean Life – Buckinghamshire, UK.

H.G. Close, S. Doherty[#], **A.E. Maas**, C. Carlson. Oral Presentation: "Dynamics of particulate organic composition, microbial community, and zooplankton contributions in an oligotrophic water column". (August 2019) Goldschmidt Meeting – Barcelona, Spain.

D.K. Steinberg, K. Stamieszkin, **A.E. Maas.** Oral Presentation: "Active flux by diel & seasonal vertical migration: Some thoughts to 'prime the pump'". (June 2019) BIARRITZ – Southampton, U.K.

A.E. Maas, A. Miccoli, K. Stamieszkin, J. Cope, D.K. Steinberg. Poster Presentation: "Zooplankton Metabolism, Active Flux, and Contribution to AOU in the N.E. Pacific Ocean". (June 2019) OCB Summer Meeting – Woods Hole, MA.

B.N. Cruz[#], S. Neuer*, L. Cunningham[#], R. Parsons, L. Blanco-Bercial and **A.E. Maas.** Poster Presentation: "Investigating Zooplankton Mediation of Sinking Particle Flux in the Sargasso Sea". (June 2019) OCB Summer Meeting – Woods Hole, MA.

D.K. Steinberg, K. Stamieszkin, **A.E. Maas**, J. Cope. "Mesozooplankton community structure and diel vertical migration in the subarctic N.E. Pacific Ocean, Station P". (June 2019) OCB Summer Meeting – Woods Hole, MA.

P.S. Thibodeau, D.K. Steinberg, **A.E. Maas.** Poster Presentation: "Environmental controls on pteropod metabolism along the Western Antarctic Peninsula". (June 2019) OCB Summer Meeting – Woods Hole, MA.

A.E. Maas. Oral Presentation: "Allometric Scaling". (June 2019) OCB Summer Meeting – Woods Hole, MA.

J.E. Burke[#], W. Renema, M.J. Henehan, L.E. Elder, C.V. Davis, **A.E. Maas**, G.L. Foster, R. Shiebel, P.M. Hull. Oral Presentation: "Correlates and Paleoecological Significance of Porosity of Planktonic Foraminifera". (March 2019) Northeast Geobiology Conference – Amherst MA.

A.E. Maas, J. Cope, A. Miccoli, K. Stamieszkin, D.K. Steinberg. Poster Presentation: "Characterization of Zooplankton Active Flux in the N.E. Pacific Ocean". (February 2019) ASLO – San Juan, Puerto Rico.

D.W. Murphy, F. Karakas[#], **A.E. Maas**. Poster Presentation: "Swimming of a pteropod with a conical shell". (January 2019) Microscale Ocean Biophysics – Whistler, Canada.

F. Karakas[#], **A.E. Maas**, D.W. Murphy. Poster Presentation: "Low Reynolds number swimming of sea butterflies with differently shaped shells". (January 2019) Microscale Ocean Biophysics – Whistler, Canada.

F. Karakas[#], **A.E. Maas**, D.W. Murphy. Oral Presentation: "Sea butterfly swimming: the effect of shell shape on pteropod kinematics and hydrodynamics". (January 2019) SICB – Tampa, FL.

F. Karakas[#], D. D'Oliveira[#], **A.E. Maas**, D.W. Murphy. Oral Presentation: "Using a shell as a wing: fluid dynamics and kinematics of atlantiid heteropod swimming." (November 2018) APS Division of Fluid Dynamics – Atlanta, GA.

A.E. Maas, L. Blanco-Bercial, A. Tarrant, E. Timmins-Schiffmann. Poster Presentation: "Circadian Physiology in Zooplankton". (June 2018) OCB Summer Meeting – Woods Hole, MA.

F. Karakas[#], **A.E. Maas**, D.W. Murphy Oral Presentation: "Swimming of an atlantid heteropod". (June 2018) ASLO Summer Meeting – Victoria, B.C., Canada.

A.E. Maas, C. Carlson, E. Kujawinski, S. Liu, R. Parsons, B. Widner. Oral Presentation: "Dissolved Organic Matter Composition Of Migratory Zooplankton Excreta And Its Influences On Prokaryotic Communities". (February 2018) Ocean Sciences – Portland, OR.

D.W. Murphy, F. Karakas[#], **A.E. Maas**. Oral Presentation: "A Comparison of the Swimming of Two Warm Water Pteropod Species with Dissimilar Shell Shapes and Sizes". (February 2018) Ocean Sciences – Portland, OR.

LM. Stewart[#], **A.E. Maas**, L. Blanco-Bercial. Poster Presentation: "Beyond Biodiversity: Metabarcoding As A Tool Of Ecological Exploration". (February 2018) Ocean Sciences – Portland, OR.

D.W. Murphy, **A.E. Maas**, F. Karakas[#]. Oral Presentation: "Swimming of a Tiny Subtropical Sea Butterfly with Coiled Shell". (November 2017) APS Division of Fluid Dynamics – Denver, C.O.

F. Karakas[#], **A.E. Maas**, D.W. Murphy. Poster Presentation: "Swimming of a Sea Butterfly with an Elongated Shell". (November 2017) APS Division of Fluid Dynamics – Denver, C.O.

A.E. Maas. Poster Presentation: "What is the role of zooplankton on the midwater ecology in the Sargasso? Using new technologies and collaborations to answer old questions". (November 2016) NAKFI: Deep Blue Sea – Irvine, C.A.

A.E. Maas, A.M. Tarrant, A.J. Bergan[#], Z.A. Wang and G.L. Lawson. Oral Presentation: "The Response of the Thecosomatous Pteropod *Limacina retroversa* to CO_2 in the Gulf of Maine: Seasonality and Sensitivity". (May 2016) ICES Zooplankton Production Symposium – Bergen, Norway.

A.J. Bergan[#], **A.E. Maas**, G.L. Lawson. Poster Presentation: "Effects of increased CO_2 on the shell condition, swimming, and sinking of the thecosomatous pteropod *Limacina retroversa*". (May 2016) ICES Zooplankton Production Symposium – Bergen, Norway.

A.E. Maas, A.M. Tarrant, A.J. Bergan[#], Z.A. Wang and G.L. Lawson. Poster Presentation: "Seasonality and the Response of the Thecosome Pteropod *Limacina retroversa* to CO_2 in the Gulf of Maine". (February 2016) Ocean Sciences – New Orleans, LA.

G.L. Lawson, A.E. Maas, Z.A. Wang, A.J. Bergan[#], P.H. Wiebe, L. Blanco-Bercial, A.C. Lavery, and N.J. Copley. Oral Presentation: "Pteropod ecology and physiology in relation to natural variability in carbonate chemistry." (February 2016) Ocean Sciences – New Orleans, LA.

A.J. Bergan[#], **A.E. Maas**, G.L. Lawson. Poster Presentation: "The effect of enhanced carbon dioxide on the sinking and swimming of the shelled pteropod *Limacina retroversa*". (February 2016) Ocean Sciences – New Orleans, LA.

E. Maness[#], M.H. Conte, J.C. Weber, and **A.E. Maas**. Oral Presentation: "Seasonality and inter-annual variation in pteropod flux in the Sargasso Sea." (August 2015) MBL Undergraduate Research Symposium – Woods Hole, MA.

G.L. Lawson, **A.E. Maas**, A.M. Tarrant, A.J. Bergan[#], A.A. Thabet[#], L. Blanco-Bercial, P.H. Wiebe, A.C. Lavery, and Z.A. Wang. Oral Presentation: "Field and laboratory studies of pteropod ecology and physiology in relation to natural variability in carbonate chemistry" (June 2015) Ocean Acidification Principle Investigators meeting – Woods Hole, MA.

A.J. Bergan[#], **A.E. Maas**, and G.L. Lawson Poster Presentation: "The Impact of Increased CO_2 on the Sinking and Swimming of *Limacina retroversa* Pteropods" (June 2015) Ocean Acidification Principle Investigators meeting – Woods Hole, MA.

A.E. Maas, A.M. Tarrant*, A.J. Bergan[#], A.A. Thabet[#], Z.A. Wang and G.L. Lawson. Poster Presentation: "Exploring the seasonal response of the thecosome pteropod *Limacina retroversa* to CO_2 in the Gulf of Maine" (June 2015) Ocean Acidification Principle Investigators meeting – Woods Hole, MA.

A.E. Maas, A.M. Tarrant, A.J. Bergan[#], A.A. Thabet[#], Z.A. Wang and G.L. Lawson*. Poster Presentation: "Exploring the seasonal response of the thecosome pteropod *Limacina retroversa* to CO_2 in the Gulf of Maine" (June 2015) Response of Pteropods to Ocean Acidification and Climate Change Workshop – Cambridge, England.

A.E. Maas, A.M. Tarrant, A.A. Thabet[#], A.J. Bergan[#], and G.L. Lawson. Oral Presentation: "An integrative assessment of seasonality in the response of the thecosome pteropod *Limacina retroversa* to CO_2" (Feb. 2015) American Society for Limnology and Oceanography – Grenada, Spain.

A.E. Maas, A.J. Bergan[#], G.L. Lawson, and A.M. Tarrant. Oral Presentation: "Response of the thecosome pteropod *Limacina retroversa* to CO_2 on seasonal time scales" (Jan. 2015) The Society for Integrative and Comparative Biology – West Palm Beach, FL.

A.A. Thabet[#], **A.E. Maas***, P. Alatalo, S.A. Saber, G.L. Lawson, and A.M. Tarrant. Poster Presentation: "Development of the thecosome pteropod *Limacina retroversa*" (Jan. 2015) The Society for Integrative and Comparative Biology – West Palm Beach, FL.

I.T. Jones[#], **A.E. Maas**, and A.M. Tarrant Poster Presentation: "A circadian metabolic rhythm in the cnidarian *Nematostella vectensis*". (Jan. 2015) The Society for Integrative and Comparative Biology – West Palm Beach, FL.

A.M. Tarrant and **A.E. Maas**. Poster Presentation: "Daily cycles in oxygen consumption in *Nematostella vectensis*" (Dec. 2013) The International Conference on Coelenterate Biology - Eilat, Israel.

A.E. Maas, G.L. Lawson, Z.A. Wang and A.M. Tarrant. Poster Presentation: "'RNA-seq'ing the effects of CO_2 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 O_2 and high CO_2 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 CO_2 and low O_2" (Oct. 2012) WHOI Postoctoral 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 CO_2 and low O_2" (Sept. 2012) Third International Symposium on the Ocean in a High CO_2 World – Monterey, CA.

A.E. Maas, G.L. Lawson, A.M. Tarrant. Poster: "Exploring the gene expression and physiological response of pteropods to high CO_2 and its synergistic interaction with low O_2" (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 CO_2 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

"Zooplankton and carbon" (Nov 2022) La Sierra University – Riverside, CA (virtual).

"The Zooplankton Physiology that Drives the Biological Pump" (June 2022) GEOMAR – Kiel, Germany (virtual).

"Pteropods as Bioindicators of Climate Change Along the Eastern Seaboard" (May 2022) MACAN/NECAN/SOCAN joint webinar (virtual).

"The Ecophysiology of Sea Butterflies: What can pteropods tell us about OA in the Gulf of Maine?" (February 2022) University of Vermont - Burlington, Vermont (virtual).

"Pteropods as Bioindicators of Climate Change in New England Waters." (February 2022) Darwin Festival, Salem State University – Salem, Massachusetts (virtual).

"Embedding zooplankton physiology into our understanding of the Biological Pump." (March 2019) University of South Florida – St. Petersburg, Florida.

"Zooplankton physiology: Driving the Biological Pump." (September 2018) Johns Hopkins University – Baltimore, Maryland.

"CO_2 seasonality in the Gulf of Maine and its influence on the thecosomatous pteropod *Limacina retroversa*." (December 2016) Alfred-Wegener-Insitut – Bremerhaven, Germany.

"A Physiologist's Interest in Biodiversity: Of Pteropods, Flux and Climate Change." (December 2016) German Center for Marine Biodiversity (DZMB), Senckenberg – Wilhemshaven, Germany.

"An integrative assessment of the biological consequences of CO_2 seasonality in the Gulf of Maine for the thecosomatous pteropod *Limacina retroversa*." (March 2016) Laboratoire d'Océanographie de Villefranche – Villefranche-sur-Mer, France.

"Biological consequences of CO_2 seasonality in the Gulf of Maine using an integrative assessment of thecosome pteropod response" (February 2015) MBL Ecosystems Center Seminar Series– Woods Hole, MA.

"Biological consequences of CO_2 seasonality in the Gulf of Maine using an integrative assessment of thecosome pteropod response" (February 2015) Bermuda Institute of Ocean Sciences Seminar Series – St. George's, Bermuda.

"Increasing the complexity in our understanding of the effect of ocean acidification on thecosome pteropods" (December 2014) WHOI Biology Department – Woods Hole, MA.

"The Ecophysiology of Sea Butterflies (Pteropoda): Exploring how CO_2 impacts the distribution and physiology of planktonic calcifiers" (March 2014) Department of Marine Sciences, Avery Point, University of Connecticut, – Groton, CT.

"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.

"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.

"Environmental physiological adaptation of pteropods: implications for climate change" (Feb. 2012) Evergreen State College – Olympia, WA.

"The Ecophysiology of Sea Butterflies: Understanding how climate change impacts the distribution and function of pteropods" (Jan. 2012) WHOI Biology Department – Woods Hole, MA.

FIELD EXPERIENCE

R/V *James Cook*, **Porcupine Abyssal Plain**. 2021
R/V *Atlantic Explorer*, **Bermuda**. 2016, 2018 (x2), 2019 (x2), 2021(x2)
R/V *Tioga*, **Gulf of Maine, Massachusetts**. 2011, 2013 (x3), 2014 (x5)
R/V *New Horizon*, **Northeast Pacific**. 2012
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

August-December 2022 — Arizona State University
Professor — Marine Plankton Ecology and Diversity
Adapted and co-taught a 3 credit fall semester course (15 weeks), leveraging ASUs remote learning platforms, detailing modern approaches and understanding of the distribution, ecology, physiology and taxonomy of marine plankton (virus to mesozooplankton).

July 2019 — Bermuda Institute of Ocean Sciences
Professor — Marine Plankton Ecology (3 week course)
Co-created and taught a 3 credit equivalent short course (35 h/week) with lectures, labs, and field trips detailing modern approaches and understanding of the distribution, ecology, physiology and taxonomy of marine plankton (virus to mesozooplankton).

January 2015 – present — Bermuda Institute of Ocean Sciences
Lecturer — Visiting high school and undergraduate groups
Teach a number of lectures on ocean acidification, plankton, and my own research to various visiting groups and courses (~ 6 lectures per year).

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.

MENTORSHIP AND ADVISING ([*]denotes co-authorship, [#]presentations at conferences**)**

Postdocs

Karen Stamieszkin	EXPORTS project	2018-2021

Ph.D. committees

Patricia Thibodeau[*#]	(VIMS, advisor Deb Steinberg)	2016-2019
Ferhat Karakas[*#]	(USF, advisor David Murphy)	2017-2020
Shannon Doherty[*#]	(U. Miami, advisor Hilary Close)	2019-2021
Teresa Schwemmer	(Stony Brook, advisor Janet Nye)	2019-present
Yuuki Niimi	(ASU, advisor Susanne Neuer)	2021-present
Andrea Brenner	(ASU, advisor Susanne Neuer)	2022-present
Alice Sansonetti	(ASU, advisor Leah Gerber)	2022-present

Other undergraduate research

Ian Jones[*#]	(REU, WHOI, Co-mentor)	summer 2014
Kelvin Santana-Rodriguez	(REU, BIOS, Co-mentor)	fall 2015
Jennifer Tuomisto	(REU, BIOS, Co-mentor)	fall 2015
Elijah Rodda	(REU, BIOS, Co-mentor)	fall 2016
Jordan Wingate[*#]	(REU, BIOS)	fall 2017
Harvey Castillo	(REU, BIOS)	fall 2018
Gaile Greene	(REU, BIOS)	fall 2020
Maisie Smith[*]	BIOS intern	fall 2020
Jessica Godfrey[#]	Bermuda Program Intern	summer 2020
Jihad Muhammad	Bermuda Program Intern	summer 2022

High School Mentoring

Luke Stewart[#]	BIOS intern	summer 2017-19
Marcus Rewan	Bermuda Program Intern	spring 2019
Gloria Simons	Bermuda Program Intern	summer 2020

Visiting graduate students

Rachel Shuttleworth	(Southampton, Sponsor)	fall 2017
Daniel Gaskell[*]	(Yale, Sponsor)	fall 2017
Janet Burke[*#]	(Yale, Sponsor)	fall 2017
Bianca Cruz[#]	(ASU, Sponsor)	2018-2019
Naomi Villot[*#]	(Heriot-Watt U., Co-Sponsor)	fall 2020
Joanna Tavares	(UCI, Sponsor)	fall 2021

SCIENCE COMMUNICATION EXPERIENCE

Collaborator on “In Dark Seas: Swimming with Sea Butterflies” an art exhibition in the Bermuda National Gallery: https://www.bermudanationalgallery.com/exhibitions/in-dark-seas/

Worked with StoriesXFutures on an outreach project as part of 2020 World oceans day (Tiny Plankton & Ocean Innovation with Dr. Amy Maas: https://youtu.be/xxCS9QrMfdc)

Collaborated with filmmakers (Alexa Elliot and Liz Smith – Changing Seas: (http://www.changingseas.tv/) the Water Brothers: http://thewaterbrothers.ca/acid-ocean) and journalists (Tony Bartelme: http://data.postandcourier.com/saga/plankton/longread) to

communicate the importance of plankton and the influence of ocean acidification on the Marine System.

Science Fellow of the National Network for Ocean and Climate Change Interpretation program (NNOCCI: 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. Ongoing participation includes giving webinars about OA (2015).

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 2014 NOSB in the topic of Ocean Acidification

Visiting Scientist at the UConn Avery Point OMICS PDI project (2012, 2013) a teacher training workshop

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”

UNIVERSITY SERVICE

Co-Chair of the BIOS safety committee	(2020-present)
Faculty representative for the BIOS Diversity, Equity and Inclusivity committee	(2021-2022)
Member-at-large for the WHOI Postdoctoral Association	(2012-2013)
Involved in URI’s ADVANCE grant program, and Women In Science initiative	(2006-2011)
Graduate Student Governance at URI (AAUP; 3 member, 1 VP, 2 P)	(2006-2011)

SYNERGISTIC ACTIVITIES

Associate Editor for Global Biogeochemical Cycles (October 2021- present)

Guest Associate Editor for Frontiers in Marine Science “Zooplankton and Nekton: Gatekeepers of the Biological Pump” volumes I and II (2019-2022)

Panel reviewer for NOAA (2018; 2022) and NSF (2019)

Reviewer for various journals, NOAA and the National Science Foundation

Organizing Committee for the 5th Trait-Based Approaches to Ocean Life meeting (Jan 2022)

Member of the Ocean Carbon and Biogeochemistry Scientific Steering Committee (2018-2020), organizer for two 2020 seminars, including the 2-h EXPORTS seminar and organizer for the summer 2021 virtual session “Optical biogeochemistry: Above and below the waterline”

Member of ICES WGIMT (2012-present)

Organizer for the 4th U.S. Ocean Acidification Principle Investigators Meeting (Feb 2018)

Session co-chair for “Zooplankton and Nekton: Gatekeepers of the Biological Pump” and “Multiple stressors and multiple disciplines: Understanding the consequences of global ocean change for marine species” at the 2018 Ocean Sciences, “Expanding the spatial and temporal scales of marine animal response to global change” at the 2016 Ocean Sciences meeting and for “Zooplankton responses to environmental stressors: From individual responses to larger scale implications” at the 2013 Aquatic Sciences meeting

Coordinator and Science Chair of the 2008 URI Interdisciplinary Graduate Conference

Participation in the NSF EarthCube Ocean Ecosystems Workshop (2013)