Patricia L. Yager, Ph.D.

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EDUCATION

1996 **Doctor of Philosophy.** *Biological Oceanography*. School of Oceanography, University of Washington, Seattle, Washington. Major Professor: J. W. Deming.

1988 **Master of Science.** *Marine Geology and Geophysics*. School of Oceanography, University of Washington, Seattle, Washington. Major Professor: A. R. M. Nowell.

1985 **Bachelor of Science.** *Geology-Biology*. Brown University, Department of Geology, Providence, Rhode Island. Advisor: W. L. Prell.

PROFESSIONAL EXPERIENCE

2022– **Director**, Georgia Climate Project (https://www.georgiaclimateproject.org)

2021–2022 **Co-Director**, Georgia Climate Project (https://www.georgiaclimateproject.org)

2016– **Professor**. Department of Marine Sciences, University of Georgia, Athens, Georgia.

2013–16 **Visiting Professor** *(Ciência sem Fronteiras)*. Federal University of Rio de Janeiro, Rio de Janeiro, Brazil.

2012– **Affiliate Faculty**. Latin American and Caribbean Studies Institute, University of Georgia.

2010– **Director.** Georgia Initiative for Climate and Society. University of Georgia

2007–16 **Associate Professor**. Department of Marine Sciences, University of Georgia.

1999– **Affiliate Faculty**. Institute for Women's Studies (IWS), University of Georgia.

1998–07 **Assistant Professor**. Department of Marine Sciences, University of Georgia.

1996–98 **Assistant Professor**. Department of Oceanography, Florida State University.

1996 **Postdoctoral Fellow.** University Corporation for Atmospheric Research (UCAR) Postdoctoral Program in Ocean Modeling. Advisor: Dr. R. G. Wiegert.

1991–96 **Graduate Fellow.** Department of Energy, Graduate Fellowship for Global Change. University of Washington, Seattle, Washington. Major professor: Dr. J. W. Deming.

1989–91 **Research Scientist** *(Oceanographer I, II).* University of Washington, Seattle, Washington. Laboratory and field research technician for Dr. J. W. Deming.

1986–89 **Teaching Assistant.** School of Oceanography, University of Washington, Seattle, Washington. Drs. A. Duxbury, C. M. Emerick, *A.* R. M. Nowell, and P. A. Jumars.

1985–88 **Research Assistant.** School of Oceanography, University of Washington, Seattle, Washington. Dr. A. R. M. Nowell, P. A. Jumars.

HONORS

2023 **Invited Leader**, Institute for Georgia Environmental Leadership (**IGEL**; https://igeleaders.org)

2022- **Fellow, American Association for the Advancement of Science (AAAS).** Honored *for outstanding work on climate-driven processes and their impact on marine ecosystems.*

2017 **Franklin International Faculty Exchange** Award. University of Georgia - Universidade Federal Fluminense (Niteroi, Brazil). With Alberto Figueiredo (Depto. de Geologia - LAGEMAR). Franklin College of Arts and Sciences, University of Georgia.

2013-2016 **Science without Borders Fellowship** *(Ciência sem Fronteiras)* - Visiting Professorship in Brazil.

2012 **Antarctic Service Medal** of the United States of America. National Science Foundation. For exemplary service as Chief Scientist onboard a two-month, oceanographic expedition to Antarctica.

1999–2023 **Gordon Research Conferences on Polar Marine Sciences.** Elected Chair (2011), elected Vice Chair (2009); invited speaker (2003, 2023), invited discussion leader (1999, 2007). Ventura, California (1999, 2003, 2007, 2011); Il Ciocco, Italy (2009).

1997 **DIALOG II:** Dissertations Initiative for the Advancement of Limnology and Oceanography, invited participant. Bermuda. October 1997.

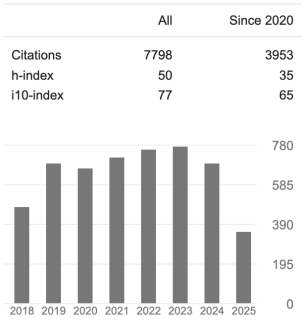
1996 **DISCO XIII:** Dissertations Symposium on Chemical Oceanography, invited participant. Honolulu, Hawaii. May 1996.

RESEARCH EXPERTISE AND PRODUCTIVITY

My research examines the impact of climate and climate-driven processes on marine ecosystems and the global carbon cycle. I work across disciplinary boundaries to synthesize an understanding of complex Earth systems, including human impacts. Research projects have explored the effects of changing rivers, glacial melt, and sea ice melt on net community production and CO_2 uptake by coastal oceans. As primary agents for carbon and nutrient cycling, marine microorganisms are the focus of my work; however, my interests and collaborations extend to ecosystem (e.g., Marine Protected Areas) and statewide levels (Georgia Climate Project). My approach combines observational and experimental fieldwork with numerical simulations to explore climate impacts that influence the global carbon cycle.

PUBLICATIONS

PEER-REVIEWED PAPERS



I am an author of 80 published, peer-reviewed papers. My research is highly collaborative, and I have served as the Lead Principal Investigator of multiple large, international, multidisciplinary field efforts. Papers are in top-tier journals and have been cited nearly 8000 times. My **H-index is 50** (50 of my papers have been cited >50 times), and my **i10-index is 77** (77 papers cited >10 times). The data in the figure to the right was collected from Google Scholar on **July 26, 2025**. Papers listed below are arranged by research topic and then by year. An underlined author indicates a Yager student, research assistant, or postdoc; a dashed-underlined author indicates project students or postdocs.

Antarctic Ice Sheet - Ocean - Sea Ice - Ecosystem interactions (Amundsen Sea, Antarctica)

Exploratory research in 2007 led to my leadership of the NSF-funded Amundsen Sea Polynya International Research Expedition (**ASPIRE**, part of the International Polar Year) in 2010–11. We examined the massive algal bloom and CO_2 sink of the Amundsen Sea polynya, as well as its climate-sensitive drivers. The project generated >20 publications, which motivated **INSPIRE**, a numerical modeling project investigating the glacial meltwater pump mechanism behind iron delivery to the polynya. Hilde Oliver was mentored by this project, as well as Pierre St-Laurent, who progressed from a postdoctoral position to a Research Scientist. Results captured the attention of the West Antarctic Ice Sheet working group and the International Thwaites Glacier Collaboration. Our latest NSF-funded project, **ARTEMIS**, was deployed in 2022. Funding for this work continues with NSF BEACON

2025 Pickup, D. D., Bakker, D. C. E., Heywood, K. J., Glassup, F., Hammermeister, E., Stammerjohn, S. E., Lee, G. A., Loucaides, S., Queste, B. Y., Webber, B. G. M., and Yager, P. L.: Cold lenses in the Amundsen Sea: Impacts of sea ice formation on subsurface pH and carbon, EGUsphere [preprint], https://doi.org/10.5194/egusphere-2025-2441, 2025.

2019 Oliver, H., P. St-Laurent, R. M. Sherrell, and **P. L. Yager** (2019). Modeling iron and light controls on the summer *Phaeocystis antarctica* bloom in the Amundsen Sea Polynya. *Global Biogeochemical Cycles.*

doi:10.1029/2018GB006168

2019 St-Laurent, P., **P. L. Yager**, R. M. Sherrell, H. Oliver, M. S. Dinniman, and S. E. Stammerjohn (2019). Modeling the seasonal cycle of iron and carbon fluxes in the Amundsen Sea Polynya, Antarctica. *J. Geophys. Res: Oceans.* doi: 10.1029/2018JC014773

2019 Richert, I., **P. L. Yager**, J. Dinasquet, R. Logares, L. Riemann, A. Wendeberg, S. Bertilsson, D. G. Scofield (2019). Summer comes to the Southern Ocean: how surface phytoplankton shapes bacterioplankton communities far into the deep dark sea. *Ecosphere 10* (3), e02641. DOI:10.1002/ecs2.2641

2017 Scambos, T. A., R. E. Bell, R. B. Alley, et al. (2017). How much, how fast? A science review and outlook for research on the instability of Antarctica's Thwaites Glacier in the 21st century. *Global and Planetary Change 153:* 16–34. doi: 10.1016/j.gloplacha.2017.04.008.

2017 St-Laurent, P., **P. L. Yager**, R. M. Sherrell, S. E. Stammerjohn, and M. S. Dinniman (2017). Pathways and supply of dissolved iron in the Amundsen Sea (Antarctica). *J. Geophys. Res: Oceans 122*, doi:10.1002/2017JC013162.

2017 Dinasquet, J., I. Richert, R. Logares, **P. L. Yager**, S. Bertilsson, L. Riemann (2017). Mixing of water masses caused by a drifting iceberg affects bacterial activity, community composition and substrate utilization capability in the Southern Ocean. *Environ. Microbiol. 19*(6): 2453–2467. doi: 10.1111/1462-2920.13769.

2016 **Yager, P. L.,** R. M. Sherrell, S. E. Stammerjohn, H. W. Ducklow, O. M. E. Schofield, E. D. Ingall, S. E. Wilson, K. E. Lowry, C. M. Williams, L. Riemann, S. Bertilsson, A. -C. Alderkamp, J. Dinasquet, R. Logares, I. Richert, R. E. Sipler, A. J. Melara, L. Mu, R. G. Newstead, A. F. Post, R. Swalethorp, and G. L. van Dijken (2016). A carbon budget for the Amundsen Sea Polynya, Antarctica; estimating net community production and export in a highly productive polar ecosystem. *Elem. Sci. Anth.* 4(1): 000140. doi: 10.12952/journal.elementa.000140.

2016 Williams, C. M., A. M. Dupont, J. Loevenich, A. F. Post, J. Dinasquet, **P. L. Yager** (2016). Pelagic microbial heterotrophy in response to a highly productive bloom of *Phaeocystis antarctica* in the Amundsen Sea Polynya, Antarctica. *Elem. Sci. Anth.* 4: 000102. doi: 10.12952/journal.elementa.000102.

2015 Sherrell, R. M., M. Lagerström, K. O. Forsch, S. E. Stammerjohn, and **P. L. Yager** (2015). Dynamics of dissolved iron and other bioactive trace metals (Mn, Ni, Cu, Zn) in the Amundsen Sea polynya, Antarctica. *Elem. Sci. Anth.* 3: 000071. doi: 10.12952/journal.elementa.000071.

2015 Schofield, O., T. Miles, A. -C. Alderkamp, S. -H. Lee, C. Haskins, E. Rogalsky, R. Sipler, R. Sherrell, **P. L. Yager** (2015). In situ phytoplankton distributions in the Amundsen Sea polynya measured by autonomous gliders. *Elem. Sci. Anth.* 3: 000073. doi: 10.12952/journal.elementa.000073.

2015 Randall-Goodwin, E., M. P. Meredith, A. Jenkins, **P. L. Yager**, R. M. Sherrell, E. P. Abrahamsen, R. Guerrero, X. Yuan, R. A. Mortlock, K. Gavahan, A. -C. Alderkamp, H. Ducklow, R. Robertson, and S. E. Stammerjohn (2015). Freshwater distributions and water mass structure in the Amundsen Sea Polynya region, Antarctica. *Elem. Sci. Anth.* 3: 000065. doi:10.12952/journal.elementa.000065

2015 Stammerjohn, S. E, T. Maksym, R. A. Massom, K. E. Lowry, K. R. Arrigo, X. Yuan, M. Raphael, E. Randall-Goodwin, R. M. Sherrell, and **P. L. Yager** (2015). Seasonal sea ice changes in the Amundsen Sea, Antarctica, over the period of 1979–2014. *Elem. Sci. Anth.* 3: 000055. doi:10.12952/journal.elementa.000055.

2015 Ducklow, H. W., S. E. Wilson, A. F. Post, S. E. Stammerjohn, M. Erickson, S. -H. Lee, K. E. Lowry, R. M. Sherrell, **P. L. Yager** (2015). Particle flux over the continental shelf in the Amundsen Sea Polynya and Western Antarctic Peninsula. *Elem. Sci. Anth.* 3(1) 000046. doi: 10.12952/journal.elementa.000046.

2015 Richert, I., J. Dinasquet, R. Logares, L. Riemann, **P. L. Yager**, A. Wendeberg, S. Bertilsson (2015). The influence of light and water mass on bacterial population dynamics in the Amundsen Sea Polynya. *Elem. Sci. Anth.* 3(1) 000044. doi: 10.12952/journal.elementa.000044.

2015 Alderkamp, A. -C., G. L. van Dijken, K. E. Lowry, T. L. Connelly, M. Lagerstrom, R. M. Sherrell, T. Haskins, E. Rogalsky, O. Schofield, S. E. Stammerjohn, **P. L. Yager**, K. R. Arrigo. (2015). Fe availability drives phytoplankton photosynthesis rates in the Amundsen Sea Polynya, Antarctica. *Elem. Sci. Anth.* 3(1) 000043. doi: 10.12952/journal.elementa.000043.

2015 Wilson, S. E., R. Swalethrop, S. Kjellerup, M. A. Wolverton, H. W. Ducklow, and **P. L. Yager** (2015).

Meso- and macro-zooplankton community structure of the Amundsen Sea Polynya, Antarctica (Summer 2010–2011). *Elem. Sci. Anth.* 3(1): 000033 doi: 10.12952/journal.elementa.000033.

2014 Delmont, T. O., K. M. Hammar, H. W. Ducklow, **P. L. Yager**, and A.F. Post (2014). *Phaeocystis antarctica* blooms strongly influence bacterial community structures in the Amundsen Sea polynya. *Frontiers in Microbiology* 5: 646. doi: 10.3389/fmicb.2014.00646.

2014 Mu, L., S.E. Stammerjohn, K. E. Lowry, **P. L. Yager** (2014). Spatial variability of surface pCO_2 and air-sea CO_2 flux in the Amundsen Sea Polynya, Antarctica. *Elem. Sci. Anth.* 2: 000036 doi: 10.12952/journal.elementa.000036.

2014 *Garay, L., A. M. Wotkyns, K. E. Lowry, J Warburton, A. -C. Alderkamp, and **P. L. Yager** (2014). ASPIRE: Teachers and researchers working together to enhance student learning. *Elem. Sci. Anth.* 2: 000034 doi: 10.12952/journal.elementa.000034. (*Garay is a middle-school science teacher)

2013 Ingall, E. D., J. M. Diaz, A. F. Longo, M. Oakes, L. Finney, S. Vogt, B. Lai, **P. L. Yager**, B. S. Twining, and J. A. Brandes (2013). Role of biogenic silica in the removal of iron from Antarctic Seas. *Nature Communications*: doi: 10.1038/ncomms2981.

2012 Alonso-Sáez, L., A. S. Waller, D. R. Mende, K. Bakker, H. Farnelid, **P. L. Yager,** C. Lovejoy, J. E. Tremblay, M. Potvin, F. Heinrich, M. Estrada, L. Riemann, P. Bork, C. Pedrós-Alió, S. Bertilsson (2012). Role for urea in nitrification by polar marine Archaea. *Proc. Nat. Acad. Sci.* 109(44): 17989–17994. doi/10.1073/pnas.1201914109.

2012 Ghiglione, J. -F., P. E. Galand, T. Pommier, C. Pedrós-Alió, E. W. Maas, K. Bakker, S. Bertilson, D. L. Kirchman, C. Lovejoy, **P. L. Yager**, A.E. Murray (2012). Pole to pole biogeography of surface and deep marine bacterial communities. *Proc. Nat. Acad. Sci. 109(43)*: 17633–17638. doi/10.1073/pnas.1208160109.

2012 **Yager, P. L.,** R. M. Sherrell, S. E. Stammerjohn, A. -C. Alderkamp, O. Schofield, E. P. Abrahamsen, K. R. Arrigo, S. Bertilsson, D. L. Garay, R. Guerrero, K. E. Lowry, P. -O. Moksnes, K. Ndungu, A. F. Post, E. Randall-Goodwin, L. Riemann, et al. (2012). ASPIRE: The Amundsen Sea Polynya International Research Expedition. *Oceanography* 25(3): 30–43. doi: 10.5670/oceanog.2012.73

2011 Fransson, A., M. Chierici, **P. L. Yager**, and W. O. Smith Jr. (2011) Antarctic sea-ice carbon dioxide system and controls. *Journal Geophysical Res.* 116(C12). doi:10.1029/2010JC006844.

River-Ocean Continuum of the Amazon

My contributions to the 2001–2003 MANTRA-PIRANA project led to the discovery of the Amazon plume as a globally significant CO_2 sink. I then led 15 co-PIs in ANACONDAS/ROCA, funded by NSF-OCE and the Gordon and Betty Moore Foundation, on three international expeditions (2010–2012) to explore the climate-sensitive controls and mechanisms of this massive carbon sink. The effort has generated over 30 papers. Collaborations with Brazilian scientists were critical to the outcome and included the **discovery of a new coral reef near the river mouth**. The project led to a visiting professorship in Brazil, where I mentored and collaborated with Brazilian graduate students. It also led to hosting and collaborating with a visiting scholar from the Chinese Academy of Sciences, S. Zhang, who learned from and translated my approach into her research on the Yangtze River system.

2025 Utsumi, G. S. A., D. He, W. M. Berelson, R. M. Castelao, P. L. Yager, P. M. Medeiros. Influence of the Amazon River on the composition of particulate organic carbon in the western tropical Atlantic Ocean. Geochimica et Cosmochimica Acta 389: 84-99. https://doi.org/10.1016/j.gca.2024.09.011.

2024 Mu, L., B. P. Page, N. D. Ward, A. V. Krusche, A. Montebelo, C. E. de Rezende, P. M. Medeiros, J. E. Richey, and **P. L. Yager** (in revision). Carbonate and nutrient contributions from the Amazon River to the western tropical North Atlantic Ocean. *Global Biogeochemical Cycles*.

2022 Zhang, S., **Yager, P. L**., Liang, C., Shen, Z., & Xian, W. (2022). Distribution and spatial-temporal variation of organic matter along the Yangtze River-ocean continuum. *Elem Sci Anth*, 10(1), 00034. https://doi.org/10.1525/elementa.2021.00034

2021 Mu, L., H. R Gomes, S. M. Burns, J. I. Goes, V. J. Coles, C. E. Rezende, F. L. Thompson, R. L. Moura, B. Page, and **P. L. Yager** (2021). Temporal variability of air–sea CO_2 flux in the western tropical North Atlantic influenced by the Amazon River plume. *Global Biogeochemical Cycles*. GBC21132. doi: 10.1029/2020GB006798.

2021 Araujo, L. A., U. R. Magdalena, T. S. Louzada, P. S. Salomon, F. C. Moraes, B. P. Ferreira, E. T. C. Paes, A. C. Bastos, R. C. Pereira, L. T. Salgado, M. L. Lorini, **P. L. Yager**, R. L. Moura (2021). Growing industrialization and poor conservation planning challenge natural resources' management in the Amazon Shelf off Brazil. *Marine Policy 128:* 104465. doi: 10.1016/j.marpol.2021.104465.

2018 Gomes, H. R., Q. Xu, J. Ishizaka, E. J. Carpenter, **P. L. Yager**, J. I. Goes (2018). The influence of riverine nutrients in niche partitioning of phytoplankton communities–a contrast between the Amazon River Plume and the Changjiang (Yangtze) River diluted water of the East China Sea. *Frontiers Mar. Sci. 5*: 343. doi: 10.3389/fmars.2018.00343

2017 Coles, V. J., M. R. Stukel, M. T. Brooks, A. Burd, B. C. Crump, M. A. Moran, J. H. Paul, B. M. Satinsky, **P. L. Yager**, B. L. Zielinski, R. R. Hood (2017). Ocean biogeochemistry modeled with emergent trait-based genomics. *Science 358* (6367): 1149–1154. doi: 10.1126/science.aan5712.

2017 de O. Silva, B. S., F. H. Coutino, G. B. Gregoracci, L. Leomil, L. S. de Oliveira, A. Fróes, D. Tschoeke, A. C. Soares, A. S. Cabral, N. D. Ward, J. E. Richey, A. V. Krusche, **P. L. Yager**, C. E. Rezende, C. C. Thompson, F. L. Thompson (2017). Virioplankton assemblage structure in the lower river and ocean continuum of the Amazon. *mSphere 2(5).* doi: 10.1128/mSphere.00366-17.

2017 Satinsky B. M., C. B. Smith, S. Sharma, N. D. Ward, A. V. Krusche, J. E Richey, **P. L. Yager**, B. C. Crump, and M. A. Moran (2017). Patterns of bacterial and Archaeal gene expression through the lower Amazon River. *Front. Mar. Sci.* 4:253. doi: 10.3389/fmars.2017.00253.

2017 Doherty, M., **P. L. Yager**, M. A. Moran, V. J. Coles, C. S. Fortunato, A. V. Krusche, P. M. Medeiros, J. P. Payet, J. E. Richey, B. M. Satinsky, H. O. Sawakuchi, N. D. Ward, B. C. Crump (2017). Bacterial biogeography across the Amazon river-ocean continuum. *Front. Microbiol. 8:* 882. doi: 10.3389/fmicb.2017.00882.

2017 Stenegren, M., C. Berg, C. C. Padilla, S. S. David, J. P. Montoya, **P. L. Yager**, R. A. Foster (2017). Piecewise Structural Equation Model (SEM) disentangles the environmental conditions favoring Diatom Diazotroph Associations (DDAs) in the western tropical North Atlantic (WTNA). *Front. Microbiol. 8*: 810. doi: 10.3389/fmicb.2017.00810.

2017 Satinsky, B. M., C. B. Smith, S. Sharma, M. Landa, P. M. Medeiros, V. J. Coles, **P. L. Yager**, B. C. Crump, M. A. Moran (2017). Expression patterns of elemental cycling genes in the Amazon River plume. *ISME J.* doi:10.1038/ismej.2017.46.

2017 Weber, S. C., E. J. Carpenter, V. J. Coles, **P. L. Yager**, J. I. Goes, and J. P. Montoya (2017). Amazon River influence on nitrogen fixation and export production in the western tropical North Atlantic. *Limnology and Oceanography 62(2)*: 618–631. doi: 10.1002/lno.10448.

2016 Seidel, M., T. Dittmar, N. D. Ward, A. V. Krusche, J. E. Richey, **P. L. Yager**, P. M. Medeiros (2016). Seasonal and spatial variability of dissolved organic matter composition in the lower Amazon River. *Biogeochemistry 131(3):* 281-302. doi: 10.1007/s10533–016-0279-4.

2016 Zielinski B. L., A. E. Allen, E. J. Carpenter, V. J. Coles, B. C. Crump, M. Doherty, R. A. Foster, J. I. Goes, H. R. Gomes, R. R. Hood, J. P. McCrow, J. P. Montoya, A. Moustafa, B. M. Satinsky, S. Sharma, C. B. Smith, **P. L. Yager**, J. H. Paul (2016). Patterns of transcript abundance of eukaryotic biogeochemically-relevant genes in the Amazon River plume. *PLoS ONE* 11(9): e0160929. doi: 10.1371/journal.pone.0160929.

2016 Medeiros, P. M., M. Seidel, J. Niggemann, R. G. M. Spencer, P. J. Hernes, **P. L. Yager**, W. L. Miller, T. Dittmar, and D. A. Hansell (2016). A novel molecular approach for tracing terrigenous dissolved organic matter into the deep ocean. *Global Biogeochem. Cyc. 30*:689–699. doi: 10.1002/2015GB005320.

2016 Moura, R. L., et al. (2016). An extensive reef system at the Amazon River mouth. *Science Advances* 2(4):e1501252. doi: 10.1126/sciadv.1501252.

2015 Seidel, M., **P. L. Yager**, N. D. Ward, E. J. Carpenter, H. R. Gomes, A. V. Krusche, J. E. Richey, T. Dittmar, P. M. Medeiros (2015). Molecular-level changes of dissolved organic matter along the Amazon River-to-ocean continuum. *Mar. Chem.* doi:10.1016/j.marchem.2015.06.019.

2015 Satinsky, B. M., C. S. Fortunato, M. Doherty, C. B. Smith, S. Sharma, N. D. Ward, A. V. Krusche, **P. L. Yager**, J. E. Richey, M. A. Moran, B. C. Crump (2015). Metagenomic and metatranscriptomic inventories of the lower Amazon River, May 2011. *Microbiome 3*:39. doi: 10.1186/s40168-015-0099-0.

2015 Ward, N. D., A. V. Krusche, H. O. Sawakuchi, D. C. Brito, A. C. Cunha, J. M. S. Moura, R. da Silva, **P. L.**

Yager, R. G. Keil, J. E. Richey (2015). The compositional evolution of dissolved and particulate organic matter along the lower Amazon River – Óbidos to the Ocean. *Mar. Chem.* doi:10.1016/j.marchem.2015.06.013.

2015 Medeiros, P. M., M. Seidel, N. D. Ward, E. J. Carpenter, H. R. Gomes, J. Niggemann, A. V. Krusche, J. E. Richey, **P. L. Yager** and T. Dittmar (2015). Fate of the Amazon River dissolved organic matter in the tropical Atlantic Ocean. *Global Biogeochemical Cycles* 29(5): 677–690. doi: 10.1002/2015GB005115.

2014 Satinsky, B. M., B. C. Crump, C. B. Smith, S. Sharma, B. L. Zielinski, M. Doherty, J. Meng, S. Sun, P. M. Medeiros, J. H. Paul, V. J. Coles, **P. L. Yager**, and M. A. Moran (2014). Microspatial gene expression patterns in the Amazon River Plume. *Proc. Nat. Acad. Sci.* 111(30): 11085–11090. doi: 10.1073/pnas.1402782111.

2014 Chong, L. S., W. M. Berelson, J. McManus, D. E. Hammond, N. E. Rollins, **P. L. Yager** (2014) Carbon and biogenic silica export influenced by the Amazon River plume: patterns of remineralization in deep-sea sediments. *Deep-Sea Research Part I.* 85: 124–137. doi: 10.1016/j.dsr.2013.12.007.

2014 Goes, J. I., H. R. Gomes, A. M. Chekalyuk, E. J. Carpenter, J. P. Montoya, V. J. Coles, **P. L. Yager**, W. M. Berelson, D. G. Capone, R. A. Foster, D. K. Steinberg, A. Subramaniam, M. A. Hafez (2014). Influence of the Amazon River discharge on the biogeography of phytoplankton communities in the western tropical North Atlantic. *Progress in Oceanography 120:* 29–40. http://dx.doi.org/10.1016/j.pocean.2013.07.010.

2013 Coles, V. J., M. T. Brooks, J. Hopkins, M. R. Stukel, **P. L. Yager**, and R. R. Hood (2013). The pathways and properties of the Amazon River plume in the tropical North Atlantic Ocean. *J. Geophys. Res. 118 (12):* 6894–6913. doi: 10.1002/2013JC008981.

2013 Ward, N. D., R. G. Keil, P. M. Medeiros, D. C. Brito, A. C. Cunha, T. Dittmar, **P. L. Yager**, A. V. Krusche, J. E. Richey (2013). Degradation of terrestrially-derived lignin macromolecules in the Amazon River. *Nature Geoscience 6(7):* 530–533. doi:10.1038/ngeo1817.

2013 Moran, M. A., B. Satinsky, S. M. Gifford, H. Luo, A. Rivers, L. -K. Chan, J. Meng, B. P. Durham, C. Shen, V. A. Varaljay, C. B. Smith, **P. L. Yager**, and B. M. Hopkinson (2013). Sizing up metatranscriptomics. *ISME Journal* 7(2): 237–243. doi:10.1038/ismej.2012.94.

2012 Yeung, L. Y., W. M. Berelson, E. D. Young, M. G. Prokopenko, N. Rollins, V. J. Coles, J. P. Montoya, E. J. Carpenter, D. K. Steinberg, R. A. Foster, D. G. Capone, and **P. L. Yager** (2012). Impact of diatom-diazotroph associations on carbon export in the Amazon River plume. *Geophysical Research Letters. 39:* L18609. doi:10.1029/2012GL053356.

2008 Subramaniam, A., **P. L. Yager**, E. J. Carpenter, C. Mahaffey, K. Björkman, S. Cooley, A. B. Kustka, J. P. Montoya, S. A. Sanudo-Wilhelmy, R. Shipe, and D. G. Capone (2008). Amazon River enhances diazotrophy and carbon sequestration in the tropical North Atlantic Ocean. *Proc. Nat. Acad. Sci. 105(30):* 10460–10465. doi: 10.1073/pnas.0710279105.

2007 Cooley, S. R., V. Coles, A. Subramaniam, and **P. L. Yager** (2007). Seasonal variations in the Amazon plume-related atmospheric carbon sink. *Global Biogeochemical Cycles 21(3)* GB3014, doi: 10.1029/2006GB002831.

2006 Cooley, S. R., and **P. L. Yager** (2006). Physical and biological contributions to the western tropical North Atlantic Ocean carbon sink formed by the Amazon River plume. *Journal of Geophysical Research 111(C8),* C08018, doi: 10.1029/2005JC002954.

Greenland Ice-Sheet meltwater impacts on coastal marine ecosystems

Our NASA-funded Ice Sheet Impact Study (**ISIS**) brought together oceanographers and glaciologists to explore the oceanic fate of Greenland meltwater and its potential impact on phytoplankton offshore. We used remote sensing and numerical models to understand meltwater production and routing. We observed a correlation in time between the arrival of meltwater and increased ocean color in coastal Greenland, and we demonstrated a mechanism for increased fall phytoplankton blooms and community shifts in response to this meltwater. Hilde Oliver received her PhD from UGA in 2019. She is now an Assistant Research Scientist at Woods Hole Oceanographic Institution.

2020 Oliver, H., R. M. Castelao, C. Wang, **P. L. Yager** (2020). Meltwater-enhanced nutrient export from Greenland's glacial fjords: a sensitivity analysis *J. Geophys. Res: Oceans.* doi: 10.1029/2020JC016185.

2019 Castelao, R.M., H. Luo, H. Oliver, A. K. Rennermalm, M. Tedesco, A. Bracco, **P. L. Yager**, T. L. Mote, P. M. Medeiros (2019). Controls on the transport of meltwater from the southern Greenland ice sheet in the Labrador Sea. *J. Geophys. Res: Oceans.* doi:10.1029/2019JC015159

2018 Oliver, H., H. Luo, R. M. Castelao, G. van Dijken, K. S. Mattingly, J. J Rosen, T. L. Mote, K. R. Arrigo, Å. K. Rennermalm, M. Tedesco, **P. L. Yager** (2018). Exploring the potential impact of Greenland meltwater on photosynthetically active radiation and primary production in the Labrador Sea. *J. Geophys. Res: Oceans. 123* (4): 2570-2591. doi: 10.1002/2018JC013802

2017 Arrigo, K. R., G. L. van Dijken, R. M. Castelao, H. Luo, Å. K. Rennermalm, M. Tedesco, T. L. Mote, H. Oliver, **P. L. Yager** (2017). Melting glaciers stimulate large summer phytoplankton blooms in southwest Greenland waters. *Geophys. Res. Lett. 44*. doi: 10.1002/2017GL073583.

2016 Luo, H., R. M. Castelao, A. K. Rennermalm, M. Tedesco, A. Bracco, **P. L. Yager,** T. L. Mote (2016). Oceanic transport of surface meltwater from the southern Greenland Ice Sheet. *Nature Geosciences.* doi: 10.1038/ngeo2708.

Georgia Climate Project (GCP; georgiaclimateproject.org)

The Georgia Climate Project is a state-wide consortium founded in 2016 and led by Emory University, the University of Georgia, and the Georgia Institute of Technology, to improve understanding of climate impacts and solutions in Georgia. In one of our first efforts, a **multi-disciplinary team of experts** developed the "Georgia Climate Research Roadmap," a first-of-its-kind list of 40 key research questions that can help policymakers and practitioners better understand and address climate change in Georgia. I currently serve as the **dDirector** of GCP.

2018 Rudd, M.A., A.F.P. Moore, D. Rochberg, L. Bianchi-Fossati, M.A. Brown, D.D'Onofrio, C.A. Furman, J. Garcia, B. Jordan, J. Kline, L.M. Risse, **P.L. Yager**, J. Abbinett, M. Alber, J.E. Bell, C. Bhedwar, K.M. Cobb, J. Cohen, M. Cox, M. Dormer, N. Dunkley, H. Farley, J. Gambill, M. Goldstein, G. Harris, M. Hopkinson, J.-A. James, S. Kidd, P. Knox, Y. Liu, D. C. Matisoff, M.D. Meyer, J.D. Mitchem, K. Moore, A.J. Ono, J. Philipsborn, K.M. Sendall, F. Shafiei, M. Shepherd, J. Teebken, A.N. Worley (2018). Climate research priorities for policy-makers, practitioners, and scientists in Georgia, USA. *Environmental Management*. doi: 10.1007/s00267-018-1051-4.

ArcticNitro: Climate change impacts on coastal Arctic carbon and nitrogen cycling

This collaborative Arctic field effort explored competition for nitrogen between autotrophic and heterotrophic microorganisms shifting with losses in sea ice cover, ocean warming, and increased terrestrial organic matter, north of Utqiagvik, Alaska during January, April, and August 2010–12.

2017 Sipler, R. E., C. T. E. Kellogg, T. L. Connelly, Q. N. Roberts, **P. L. Yager**, D. A. Bronk (2017). Microbial community response to terrestrially-derived dissolved organic matter in the coastal Arctic. *Front. Microbiol. 8*: 1018. doi.org/10.3389/fmicb.2017.01018.

2017 Baer, S. E., R. E. Sipler, Q. N. Roberts, **P. L. Yager**, M. E. Frischer, D. A. Bronk (2017). Seasonal nitrogen uptake and regeneration in the western coastal Arctic. *Limnology and Oceanography* doi: 10.1002/lno.10580.

2017 Sipler, R. E., S. E. Baer, T. L. Connelly, M. E. Frischer, Q. N. Roberts, **P. L. Yager**, D. A. Bronk (2017). Chemical and photophysiological impact of terrestrially-derived dissolved organic matter on nitrate uptake in the coastal western Arctic. *Limnol. Oceanogr.* doi: 10.1002/lno.10541.

2014 Baer, S. E., T. L. Connelly, R. E. Sipler, **P. L. Yager**, D. A. Bronk (2014). Effect of temperature on rates of ammonium uptake and nitrification in the western coastal Arctic during winter, spring, and summer. *Global Biogeochemical Cycles*. 28(12): 1455–1466. doi: 10.1002/2013GB004765.

Arctic publications prior to 2010

My doctoral research was part of an NSF Arctic System Science effort to understand climate sensitive carbon cycling in the Northeast Water polynya in coastal Greenland. Early career efforts followed up on this research in other Arctic regions such as the Pikialasorsuaq (Northwater Polynya) and the Chukchi Sea.

2006 Connelly, T. L., C. M. Tilburg, and **P. L. Yager** (2006). Evidence for psychrophiles outnumbering psychrotolerant marine bacteria in the springtime coastal Arctic. *Limnology and Oceanography 51(2):* 1205–1210. doi: 10.4319/lo.2006.51.2.1205.

2005 Mei, Z. –P., L. Legendre, J. -E. Tremblay, L. Miller, Y. Gratton, C. Lovejoy, **P. L. Yager**, and M. Gosselin (2005). Carbon to nitrogen (C:N) stoichiometry of the spring-summer phytoplankton bloom in the North Water Polynya (NOW). *Deep Sea Research I.* 52(12): 2301–2314. doi:10.1016/j.dsr.2005.07.001.

2005 Hodges, L. R., N. Bano, J. T. Hollibaugh, and **P. L. Yager** (2005). Illustrating the importance of particulate organic matter to pelagic microbial abundance and community structure – an Arctic case study. *Aquatic Microbial Ecology 40(3):* 217–227. doi: 10.3354/ame040217.

2002 Miller, L. A., **P. L. Yager**, K. A. Erickson, J. Bâcle, J. K. Cochran, M. -È. Garneau, M. Gosselin, D. J. Hirschberg, B. Klein, B. LeBlanc, and W. L. Miller (2002). Carbon distributions and fluxes in the North Water, northern Baffin Bay, 1998 and 1999. *Deep-Sea Research II* 49(22–23): 5151–5170. doi: 10.1016/S0967-0645(02)00183-2.

2001 **Yager, P.L.**, T. L. Connelly, B. Mortazavi, K. E. Wommack, N. Bano, J. E. Bauer, S. Opsahl, and J. T. Hollibaugh (2001). Dynamic bacterial and viral response to an algal bloom at sub-zero temperatures. *Limnology and Oceanography* 46(4): 790 – 801. doi: 10.4319/lo.2001.46.4.0790.

1999 **Yager, P. L.**, and J. W. Deming (1999). Pelagic microbial activity in an Arctic polynya: testing for temperature and substrate interactions using a kinetic approach. *Limnology and Oceanography* 44(8):1882–1893.

1999 Daly, K. L., D. W. R. Wallace, W. O. Smith, Jr., A. Skoog, R. Lara, M. Gosselin, E. Falck, **P. L. Yager** (1999). Non-Redfield carbon and nitrogen cycling in the Arctic: Effects of ecosystem structure and dynamics. *Journal of Geophysical Research* 104(C2): 3185–3199. doi: 10.1029/1998JC900071.

1995 **Yager, P. L.**, D. W. R. Wallace, K. M. Johnson, W. O. Smith, Jr., P. J. Minnett, and J. W. Deming (1995). The Northeast Water Polynya as an atmospheric CO_2 sink: a seasonal rectification hypothesis. *Journal of Geophysical Research* 100(C3): 4389–4398. doi: 10.1029/94JC01962.

Other peer-reviewed publications

2010 Jiang, L.-Q., W.-J. Cai, Y. Wang, J. Diaz, **P. L. Yager**, and X. Hu (2010). Pelagic community respiration on the continental shelf of Georgia, USA. *Biogeochem. 98(1–3):* 101–113. doi: 10.1007/s10533-009-9379-8.

1998 Smith, C. R., H. L. Maybaum, A. R. Baco, R. H. Pope, S. D. Carpenter, **P. L. Yager**, S. A. Macko, and J. W. Deming (1998). Sediment community structure around a whale skeleton in the deep NE Pacific: macrofaunal, microbial, and bioturbation effects. *Deep-Sea Res. II. 45(1–3):* 335–364. doi: 10.1016/S0967-0645(97)00043-X.

1993 Jumars, P. A., J. W. Deming, P. S. Hill, L. Karp-Boss, **P. L. Yager** , and W. B. Dade (1993). Physical constraints on marine osmotrophy in an optimal foraging context. *Marine Microbial Food Webs* 7(2): 121–159.

1993 **Yager, P. L.,** A. R. M. Nowell, and P. A. Jumars (1993). Enhanced deposition to pits: a local food source for benthos. *Journal of Marine Research* 51(1): 209–236. doi: 10.1357/0022240933223819.

PEER REVIEWED BOOK CHAPTERS

2007 Ducklow, H. and **P. L. Yager** (2007). Pelagic bacterial processes in polynyas. In: W. O. Smith Jr. and D. Barber (eds) *Polynyas: Windows to the World.* Elsevier Oceanography Series, 74 (David Halpern, series editor). pp. 323–362. doi: 10.1016/S0422-9894(06)74010-7.

1992 Deming J. W., **P. L. Yager** (1992) Natural bacterial assemblages in deep-sea sediments: towards a global view. In: Rowe G.T., Pariente V. (eds) *Deep-Sea Food Chains and the Global Carbon Cycle.* NATO ASI Series (Series C: Mathematical and Physical Sciences), vol 360. Springer, Dordrecht. pp. 11–27. doi: 10.1007/978-94-011-2452-2_2.

EDITED BOOKS

2019 Cochran, J.K., H. Bokuniewicz, **P. L. Yager** (2019). *Encyclopedia of Ocean Sciences (3rd Edition)*. Academic Press. 4560 pp. ISBN: 9780128130810.

PUBLISHED DATA SETS

2019 **Yager, P. L.,** Sherrell, R M. et al. (2019). ASPIRE station data used to develop 1-D and 3-D numerical models from the *Nathaniel B. Palmer* in the Amundsen Sea from 2010-12-14 through 2011-01-05. 2019-04-17, DOI:10.1575/1912/bco-dmo.765081.1, *https://hdl.handle.net/1912/24030*

2017 Sipler, R. E., D. Bronk, **P. L. Yager** (2017). Nitrogen fixation rates from samples collected in the Chukchi Sea, Arctic Ocean near Barrow, Alaska in August of 2011 (ArcticNITRO project), 2017-06-08, DOI:10.1575/1912/bco-dmo.704528, *https://hdl.handle.net/1912/9027*.

CONTRIBUTIONS TO REPORTS

2021 **Yager, P. L.** (2021). Goal 14 and Ocean Sustainability. In Lynch, A., Sachs, *The United States Sustainable Development Report 2021*. New York: SDSN.

2021 Stanley, R, T Bell, Y Gao, C Gaston, D Ho, D Kieber, K Mackey, N Meskhidze, B Miller, H Potter, P Vlahos, **P Yager**, B Alexander, S Beaupre, S Craig, G Cutter, S Emerson, A Frossard, S Gasso, B Haus, W Keene, W Landing, R Moore, D Ortiz-Suslow, J Palter, Fabien Paulot, E Saltzman, D Thornton, A Wozniak, L Zamora, H Benway. (2021). *US SOLAS Science Report*. 62pp.

RESEARCH GRANTS

Lead PI on collaborative extramural grants (includes non-UGA components): **$13.5 million**
Lead PI on extramural grants to UGA: **$7 million**
Total grants to Yager Lab: $4.5 million

2025 **National Science Foundation** – Office of Polar Programs**.** *Collaborative Research: BEACON: The Bellingshausen Sea, A Carbon and Overturning Nexus.* $381K; Yager is the PI at UGA with 4 other US PIs led by A. Thompson (Caltech). Award # 2332464. Directorate for Geosciences 23 (2332464), 32464

2021 **National Science Foundation.** *NSFGEO-NERC: Collaborative Research: Accelerating Thwaites Ecosystem Impacts for the Southern Ocean (ARTEMIS).* $800K, Yager is lead PI. 5 co-PIs.

2021 **Ray C. Anderson Foundation**. *Georgia Climate Project*. $300K, 3 yr. Yager is the Director of the project and Lead PI for UGA.

2020 **Private donor.** *The Climate Rescue Project Fund.* $100k. Yager is PI. A perpetual fund to motivate and support research, teaching, and service at the University of Georgia on how to solve the global climate crisis. Supports the Georgia Initiative for Climate and Society.

2018 **Ray C. Anderson Foundation**. *Georgia Climate Project*. $100K, 3 yr. Yager is PI for UGA subcontract. Project led by D. Rochberg (Emory University) with 5 co-PIs for a total of $650K;

2017 **National Academy Keck Futures Initiative (NAKFI)**. *Mapping Deep Blue Habitats in a Changing Climate.* $100K, 2 yr. Yager is lead PI with 2 co-PIs: J. Spivey (UGA) and C. Deutsch (UW).

2016 **Gordon and Betty Moore Foundation.** *Supplement to ROCA for special feature in Frontiers Aquatic Microbiology Journal.* $25K, 2 yr. Yager was PI.

2015 **National Science Foundation** – Office of Polar Programs. *Collaborative research: investigating the role of mesoscale processes and ice dynamics in carbon and iron fluxes in a changing Amundsen Sea (INSPIRE; ANT-1443604*). $50K, 3 yr. Project led by P. St-Laurent (ODU) with 5 co-PIs for total of $300K.

2014 **Gordon and Betty Moore Foundation** – Marine Microbiology Initiative. *Supplement to ROCA – High-throughput functional gene fitness measurements for microbial models.* $41K, 2 yr. Project led by M. A. Moran (UGA) with 2 co-PIs for a total of $165K.

2014 **National Aeronautics and Space Administration** – Interdisciplinary Studies. *From the Ice Sheet to the Sea (ISS): An interdisciplinary study of the impact of extreme melt on ocean stratification and productivity near West Greenland (NNH12ZDA001N-IDS*). $150K, 4 yr. Project led by T. Mote (UGA), with 5 co-PIs for total of $1.5 million.

2013 **Gordon and Betty Moore Foundation** – Marine Microbiology Initiative. *Supplement to ROCA for data synthesis meeting.* $25K, 1 yr. Yager was lead PI for the project with 9 co-PIs on subcontracts.

2011 **Gordon and Betty Moore Foundation** – Marine Microbiology Initiative. *Supplement to ROCA for additional sampling effort* (*GBMF-2928)*. $504K, 1 yr. Yager was lead PI for the project with 9 co-PIs on subcontracts.

2010 **Gordon and Betty Moore Foundation** – Marine Microbiology Initiative. *The River Ocean Continuum of the Amazon (ROCA; GBMF-2293)*. $2.4 million, 3 yr. Yager was lead PI for the project with 9 co-PIs on subcontracts.

2009 **National Science Foundation** – Emerging Topics in Biogeochemistry. *Collaborative Research: ETBC: Amazon influence on the Atlantic: carbon export from nitrogen fixation by diatom symbioses (ANACONDAS; OCE-0934095)*. $478K, 4 yr. Yager was lead PI for the project and sole PI at UGA, with 9 co-PIs for a total of $3.2 million.

2009 **National Science Foundation** – Office of Polar Programs. *Collaborative Research: does competition for nitrogen between autotrophs and heterotrophs control carbon fluxes in the western coastal Arctic (ARC-0910252)?* $314K, 3 yr. Yager was lead PI and sole PI at UGA, with 2 co-PIs for a total of $950K.

2009 **National Science Foundation** – Office of Polar Programs. *Collaborative Research onboard Icebreaker Oden: ASPIRE: Amundsen Sea Polynya International Research Expedition (ANT-0839069)*. $290K, 30 mo. Yager was lead PI and sole PI at UGA, with 4 co-PIs for a total of $1.5 million.

2008 **National Science Foundation –** Office of Polar Programs. *Collaborative Research: Controls on climate-active gases by Amundsen Sea ice biota (ANT-0836144; OSO-2008)*. $192K, 2 yr. Yager was lead PI and sole PI at UGA, with 2 co-PIs for a total of $700K.

2007 **National Science Foundation** – Office of Polar Programs. *SGER: Science-of-opportunity aboard Icebreaker Oden - Antarctic bacterial remineralization (ANT-0741409; OSO 2007)*. $80K, 1 yr. Yager was PI.

2007–10 **National Oceanic and Atmospheric Administration** – Oceans and Human Health Initiative. *Georgia Oceans and Health Initiative (GOHI) Graduate Training Consortium*. $518K, 3 yr. PI was E. Lipp (Env. Health), Yager was one of 6 co-PIs.

2002–05 **National Oceanic and Atmospheric Administration** – Office of Global Programs **–** Global Carbon Cycle Program. *Underway pCO_2 measurements in the western equatorial North Atlantic and subtropical North Pacific: The Importance of synchronous supporting measurements* (GC02-373). $127K, 3 yr. Yager was PI.

2002–06 **U.S. Department of Energy –** Ocean Carbon Sequestration Research Program. *The impact of nitrogen fixation on carbon sequestration: a reassessment of the inorganic carbon system in LNLC regions (DE-FG02-02ER63472*). $150K, 3 yr. Yager was PI.

2002–06 **National Aeronautics and Space Administration –** Earth System Science Fellowship**.** *Quantifying the role of the western tropical Atlantic Ocean in global carbon budgets: the intersection of physics, chemistry, and biology.* (*O25074-01–Earth System Science Fellowship to S. Cooley, doctoral student*). $72K, 3 yr. Yager was PI and advisor of the fellow.

2002 **University of Georgia** – Faculty Research Grant. *The microbial fate of anthropogenic dissolved organic nitrogen in Georgia coastal waters: developing a method for combining identification techniques with substrate uptake kinetics.* $5K, 1 yr. Yager was PI.

2001 **University of Georgia** – Faculty Research Grant. *The effects of enhanced marine nitrogen fixation on atmospheric carbon dioxide transport into the tropical Atlantic Ocean.* $10K, plus $1.5K matching from Marine Sciences, 1 yr. Yager was PI.

2000 **University of Georgia** – Faculty Research Grant. *Investigating viral control of bacterial community structure and carbon cycling in Arctic seas.* $6500, 1 yr. Yager was PI.

1997–99 **National Science Foundation –** Professional Opportunities for Women in Research and Education. POWRE, Research Enhancement Award; *An Arctic Ocean time series of dissolved inorganic carbon* (*NSF OCE-9753170*). $85K plus $34K matching, 2 yr. Yager was PI.

1997 **Florida State University** Council on Research and Creativity (CRC) – First-Year Assistant Professor Award. *Arctic Ocean uptake of atmospheric carbon dioxide: using stable carbon isotopes to detect potential feedbacks to global climate change.* $10K, 1 yr. Yager was PI.

1995 **University Corporation for Atmospheric Research** (UCAR) – Postdoctoral fellowship in Ocean

Modeling. $36K, 1 yr. Yager was the postdoctoral fellow.

1991–96 **Department of Energy** – Graduate Fellowship for Global Change. $74K, 4.5 yr. Yager was the graduate fellow.

TEACHING AND MENTORING CONTRIBUTIONS

My appointment is for a 9-month salary, with 0.5 FTE dedicated to research and 0.25 FTE to teaching. I teach 2–4 courses per year, both undergraduate and graduate, to students from within and outside the Marine Sciences program. I am frequently invited to give guest lectures in courses from other departments. An essential component of my instructional program takes place outside the classroom, encompassing mentoring, research, and career development at the undergraduate, graduate, and postdoctoral levels. I also participate in other early-career mentoring programs at AGU and ASLO annual meetings and serve as a supportive senior faculty to junior faculty, including them in larger group proposals and supporting their career development.

COURSES TAUGHT

Biological and Chemical Oceanography (MARS 4200/6200; Fall 2016, 2017, 2018, 2019, 2020, 2021, 2022). 15-35 students and growing. Split graduate/upper-level undergraduate course for Ocean Science and Biology majors. Taught 100% until 2020, when I began to co-teach 50% with D. Ohnemus.

Climate, Oceans, and the Marine Biosphere (MARS 8050; Fall 2009, 2011, 2013, Spring 2015, 2017, 2019, 2022). This lecture-, reading-, and discussion-based graduate course encourages both deep exploration and a broad integration of climate system science for marine science, geography, engineering, environmental health, microbiology, anthropology, education, and ecology students, 10–15 students.

Physical and Geological Processes in the Ocean (MARS 4100/6100; Spring 2000, 2001, 2003, 2021, 2022, 2023) 5- 20 students and growing. Co-taught 50% with C. Edwards (earlier C. Chen, D. Di Iorio). Split graduate/upper-level undergraduate course required for Ocean Science majors. Currently redeveloping to meet needs of our new major.

Biology of the Marine Environment (MARS 1020: Spring 2021, 2022, 2023). 50-100 non-science-major students. Also teaching similar content **online** for MARS 1021e and MARS 7020e (Summer 2023).

Interdisciplinary Approaches to Climate Change (MARS 8990; Fall 2020). Special Topics course for graduate students in Political Science, Geography, Chemistry, and Marine Sciences. Topics included the science of climate change, political theory, psychology, risk communication, philosophy, environmental ethics, journalism and story-telling.

Exploring Representation and Identity Within the Sciences (ECOL 8030; Spring 2020) faculty sponsor of doctoral-student led seminar. 30 students.

Climate Change and the Ocean (August 2013). Short graduate course (1 week - 8 h per day) taught at Federal University of Rio de Janeiro, Rio de Janeiro, Brazil. 20 graduate students and postdocs.

Microbial Ecology (MARS 4620/6620; Fall 2015). Split graduate / upper-level undergraduate course on microbial ecology of the ocean. (50% with S. Joye; 14 students).

Life in Fluids (MARS 3550; Spring 2013). ~10 students. Co-taught with A. Burd and D. Di Iorio.

Biology of the Marine Environment – Honors (MARS 1020H/1025H; Spring 2001, 2002, 2003, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013). Undergraduate introductory course for non- science majors, ~20 students.

The Marine Environment – (MARS 1010; Fall 2007). Undergraduate introductory course for non- science majors, ~300 students.

The Marine Environment – Honors (MARS 1010H; Fall 2000, 2001, 2002, 2003, 2004, 2005). Undergraduate introductory course for non-science majors, ~20 students.

Microbial Biogeochemistry (MARS 4810/6810; Fall 2000). Undergraduate and graduate student course, 15 students, co-taught 50% with S. B. Joye.

Directed Individual Study (BIOL 4960, 4960R, 4960H; MARS 4960, 4960R, MIBO 4900L, MIBO 4960H). Supervised independent research for >50 undergraduates between 1998-2023.

First Year (Freshman Odyssey) Seminar (FRES/FYOS 1010; Spring 2000, 2001, 2002, 2006, 2007, 2012) *Global Change: What do the Data Say?* Small (<15 students) discussion group for freshman.

Honors Proseminar (Fall 2000). *Seminar on Global Change.* Academic Scholarship Identification Program. Sponsored by the University of Georgia Honors Program. Small (<20) reading/discussion group of sophomore and junior undergraduate honors students.

Biological and Chemical Oceanography (MARS 4110; Fall 1999). Undergraduate majors course, 18 students. Co-taught with D. Bronk.

Advanced Topics in Global Change Research (FSU: OCB 5930/OCE 4930; Spring 1998). Graduate and undergraduate Special Topics course, 15 students.

Basic Chemical Oceanography (FSU: OCC 5050; Fall 1997). Graduate-level core course, 14 students.

MENTORING AND DIRECTING INDEPENDENT RESEARCH

UNDERGRADUATE MENTORING AT UGA

Directed independent research for more than 50 undergraduates between 1998-2022 (BIOL 4960, 4960R, 4960H, 4970, 4970R, 4990, 4990R, 4990H; MARS 4960, 4970, 4990, MIBO 4900L, MIBO4960H): J. Levitt, J.G. Harper, R. Nishimuta, B. Glover, N. Harris, J. Bauman, L. Gardner, A. Goodrich, C. Lozo, E. Wright, S. Mitchell, M. Patel, L. Jarrell, M. Camp, J. Diaz, and M. Dhillon, B. Heimlich, C. Barber, W. Spence, M. Shill, J. Loevenich, A. MacDougall, M. Floyd, C. Hammond, K. Karle, C. Young, S. Collins, A. DuPont, P. Cray, D. Goetz, H. Fabian, S. Burns, J. Melara, A. Speese, T. Eberhard, H. Campbell, J. Honeycutt, E. Malsbury, E. Barber, P. Houlihan, J. Wenclawiak, J. Oberlander, E. Smith, L. Bruegger, S. Ghag, K. White, N. Ankisetty, S. Brown, M. Moti, A. Little, M. Hardy, S.A. Sartain, A. Moore, Aiden Schuster, I. Stone, J. Googe, A. Meier, S. Belcher, C. Teichman, S. Castro, M. Teague, E. Fox, J. Massey.

Undergraduate thesis advisor or committee member: A. Goodrich, J. Diaz (honors), M. Shill, D. Goetz, S. Burns (honors), A. Speese, E. Malsbury (honors), S. Ghag, K. White, S. Brown, A. Schuster.

Undergraduate thesis committee member J. Oliver, D. Tamarack.

Mentor to visiting undergraduate summer intern: S. Davis (U. Chicago).

Mentor to visiting undergraduate scholar: F. Gillan (New College).

Faculty sponsor for *Ocean Initiative*, undergraduate club for students interested in marine science.

Faculty sponsor for *Climate and Society Club*, undergraduate club for students interested in climate change.

Supervisor: J. Ebert, computer science and journalism major who programed web app for NAKFI grant.

GRADUATE MENTORING

Master's thesis advisor: Principal advisor: T. Connelly, L. Hodges, E. Romer, A. Mass, K. Bakker, C. Williams, L. Mu. L. Townsell, S. Bartlett, J. Vassy.

Master's thesis committee member: T. Popp, K. Liptay, R. Wong, H. Tian, A. Johnson, J. Green, J. Xiang, J. Wang, M. O'Malley (Environmental Health Science), N. Greenslit (Environmental Health Science).

Doctoral advisor: S. Cooley, H. Oliver, L. Mu, L. Townsell.

Doctoral committee member (UGA Marine Sciences unless otherwise indicated): A. deBoer (FSU), R. Ji, G. LeCleir, C. Burbage, J. Fisher, L.-Q. Jiang, W-J. Huang, B. Chen, C. Shen, J. Westrich (UGA Environ. Health Sci), V. Ramenzoni (UGA Anthropology),), K. Mattingly (UGA Geography), S. Plummer, J. Weger (UGA Anthropology, J. Gambill (Geography), M. Ricci, K. Ducre (UGA Geography), Nashid Mumtaz (UGA Engineering).

Mentor / host for visiting international doctoral student: Ms. S. Zhang (Institute of Oceanology, Chinese Academy of Sciences, PR China).

Mentor to MPH Applied Practice Experience (APE), Gangerosa Department of Environmental Health, Rollins School of Public Health, Emory University: S. Lamb.

POST-DOCTORAL MENTORING: T. Connelly, A. Mehring, Pierre St-Laurent, Lucia Hosekova, Casey Schine.

OTHER MENTORING AND TRAINING ACTIVITIES:

2023 **Mentor**, **Science Research program** at Fox Lane High School in Bedford, NY, Ava Schuster.

2019 **Young Dawgs.** Summer research internships for local high school students. A. Whitford, A. Lewis.

2013-16 **Visiting Professorship in Brazil** (August 2013, Sept 2014, Oct 2016). A visiting professor at UFRJ (and UENF) working with Brazilian graduate and undergraduate students. My grant supported the participation of nine Brazilian graduate students onboard the 2012 Amazon expedition.

2007– **PolarTrec Researcher.** Teacher-researcher partnerships (http://www.polartrec.com) aimed at improving the teaching of K–12 science through research. Teacher partners: Lollie Garay, Jeff Peneston. Peneston went on to win "New York Teacher of the Year" based on his work as part of my team. Garay and I continued to work together on all three of the field efforts, published a paper together, and have chaired several Science Education panels at Ocean Sciences Meetings. I supported Garay's Toyota Tapestry grant that established long distance connections and relationships between Garay's students in Texas and middle school science classrooms in Barrow, Alaska (SMORE).

2001– **Research professionals:** C. Tilburg (EcoSystem Indicator Project, Gulf of Maine Council on the Marine Environment); K. Sines (now working in health sciences); B. Page (now at U. Minnesota), J. Ebert (now developing open data resources for Athens-Clarke County Unified Government).

2001 **UGA Summer Undergraduate Research Program (SURP).** Minority student recruitment program: B. Glover, N. Harris.

PROFESSIONAL SERVICE AND LEADERSHIP

SERVICE TO PROFESSION: LEADERSHIP OF INTERDISCIPLINARY COLLABORATION

2025 Super South Summit for Climate Innovation and Impact, co-founder and co-organizer. Omni Hote and Conference Center, Atlanta, Georgia, April 15-17.

2023 **Georgia Climate Conference**, chair. Statewide climate conference for 550 people held at UGA Center for Continuing Education and Hotel, Athens, Georgia, May 15–17.

2023 **National Academy of Sciences** invited panelist. *Future Directions for Southern Ocean and Antarctic Nearshore and Coastal Research Community Workshop*; Feb 9–10, 2023.

2022- **Director** (2022-), Co-director (2021) and member of **Leadership Team** (since 2017), **Georgia Climate Project** (*georgiaclimateproject.org*): a multi-university consortium of faculty and staff working on climate change in Georgia; with Emory, Georgia Tech, and other university partners around the state.

2022 **Co-chief scientist for international expedition** (with UK counterpart) and lead principal investigator on international expedition to Amundsen Sea, Antarctica. RVIB *Nathaniel B. Palmer*, Jan-Mar 2022.

2021- **Chair, Advisory Board for GRISO** (GReenland Ice Sheet Ocean network) is a 5-year NSF AccelNet project that aims to advance research by facilitating interaction across disciplines, methodologies, and existing networks.

2021- **Invited Participant, Practice of Assessments Working Group**. A sharing of ideas, experiences, and lessons from state and city climate assessment experiences.

2019- **Chair (2021-present) or co-chair (2019-2021)**, Amundsen / Bellingshausen Sea Regional Working Group, **Southern Ocean Observing System (SOOS**; *http://www.soos.aq/activities/rwg/abs*).

2019	**Invited Member, Committee of Visitors (COV).** National Science Foundation, Division of Ocean Sciences (2019), Polar Programs (2006). A COV assesses program operation effectiveness.
2018–21	**Member**, **Subcommittee on Ocean-Atmospheric Interactions**, Ocean Carbon & Biogeochemistry (OCB; *www.us-ocb.org*) program.
2016–19	**Steering committee** member for **West Antarctic Ice Sheet** project and co-author of WAIS Science Plan (2016).
2012	**Antarctic Service Medal** of the United States of America. National Science Foundation. For exemplary service as Chief Scientist of 8-week icebreaker expedition to Antarctica.
2011	**American Academy of Microbiology.** Invited participant. Colloquium: *Incorporating Microbial Processes into Climate Change Models*. February 21–23, 2011. Dallas, Texas.
2010–12	**Chief Scientist** and lead principal investigator on multiple 1-2 month-long multi-disciplinary global-class (~40 scientist) research expeditions to Antarctica and the western tropical North Atlantic Ocean.
2010–	**Director, Georgia Initiative for Climate and Society** (*climateandsociety.uga.edu*), a faculty-driven network of faculty and professional staff working on climate issues at UGA.
2009–11	**Chair** (2011) and **Vice Chair** (2009) of **Gordon Research Conferences** on Polar Marine Sciences. Ventura, California (2011); Il Ciocco, Italy (2009).
2000	**Invited Co-chair,** Arctic Microbial Ecology. American Society of Limnology and Oceanography (ASLO) International Meeting, Copenhagen, Denmark. June 2000.
1998-	**Research planning boards:** American Society for Microbiology: *Incorporating Microbial Processes into Climate Models* (2011). Plenary speaker and working group contributor to National Academy's Polar Research Board report on *Frontiers in Understanding Climate Change and Polar Ecosystems* (2010). Co-author of white paper produced (2006) for the North Pacific Research Board intended to set priorities for future research in the Bering and Chukchi Seas.
1997	**Invited Chair,** Biogeochemical Cycles and Fluxes IV: Oxygen and CO2, American Society of Limnology and Oceanography, Aquatic Sciences Meeting, Santa Fe, New Mexico. February 1997.
1996-	**Frequent reviewer and panelist** for inter- and multi-disciplinary programs at federal agencies: National Science Foundation (Arctic Natural Sciences, Antarctic Organisms and Ecosystems, Polar Postdoctoral Fellowship; Ocean Sciences), NASA (Carbon Cycle, ICESat,ICESat2, postdoctoral fellowships), NOAA Global programs (panelist), NIH Oceans and Human Health, Ocean Frontier Institute (Canada), Natural Sciences and Engineering Research Council (NSERC; Canada), Ocean Research Frontiers (Canada); NOAA National Estuarine Research Reserve System, US Environmental Protection Agency (individual proposals and STAR panelist), Natural Environmental Research Council (NERC; UK), Maryland SeaGrant, Florida SeaGrant, etc.

INCLUSIVE EXCELLENCE

2021-2022	**Organized and led DEI training** for new Marine Science graduate students, with C. Countryman
2021	**UGA Certificate in Diversity and Inclusion** (CDI). Training completed.
2021-2022-	UGA Team Member, **Aspire Summer Institute** on Inclusive Professional Frameworks for STEM faculty. June 7–11.
2020-2023	**Co-chair, Diversity, Equity, and Inclusion Committee**, Department of Marine Sciences, UGA.
2020-	Team Member, UGA's **iCHANGE** initiative for increasing recruitment and retention of faculty from under-represented groups.
2019-	**Board member, Clarke County School District Board of Education,** District 4**.** CCSD is a Title 1 (low-income; majority black) school district with ~14,000 students. Chair of Policy Committee, co-Chair of Government Relations Committee. Appointed to fill vacancy September 2019; elected 2020. Strategic plan to increase equity.

2018- Recruited first graduate student from **Historically Black College** to Marine Science on Athens campus. She is now a student leader in *Black in Marine Science*.

2017 **Member** and instigator (while chair of UC Human Resources Committee), Provost's **Gender Trend – Equity** committee.

FACULTY GOVERNANCE

2024- **Committee member,** Provost's Implementation Committee for **Institute for Sustainability** at UGA.

2024- **Committee member**, Provost's Committee envisioning a new **Institute for Sustainability** at UGA.

2023- **Board member, Franklin College Advisory Board**. Elected faculty representative at monthly meeting with Dean of College. Also serving on Interdisciplinary Activities subcommittee.

2022- **Board member, UGA Sustainability Certificate Program** Advisory Board.

2022- **UGA Accelerate Mentoring,** Convenor. Accelerate is a pilot program to provide first-year assistant professors in STEM with resources to accelerate their success at UGA.

1998- **University Service and Governance:** Integrated Life Sciences program, Climate Change Interdisciplinary Group (Lead); Ad Hoc Committee for President Morehead; Meigs Teaching Award committee; Franklin College of Arts and Sciences, Promotion and Tenure Committee (Life Sciences); Faculty Search Committees (external member for Geography, Music), University Council Executive Committee (involved with Provost search); University Council Human Resources Committee (Chair); University of Georgia Research Foundation Board.

1998- **Marine Science Department Service and Governance**: Marine Sciences Undergraduate Committee; DEI committee co-chair; Marine Sciences Strategic Planning Committee (co-Chair); Faculty Search Committees; Marine Sciences Graduate Affairs Committee.

OTHER EVIDENCE OF NATIONAL AND INTERNATIONAL STATURE

INVITED PRESENTATIONS

International meetings and seminars

2023 **Gordon Research Conference** on Polar Marine Science: Exploring Complex Systems in Polar Marine Science. *Ocean heat, ice melt, and carbon flux: Accelerating ecosystem impacts in the Amundsen Sea.* Ventura, California. March.

2022 **Antarctic Sea Ice and Southern Ocean Seminar Series**. *Ocean heat, ice melt, and carbon flux: initial reports from the RV NB Palmer 2022 Expedition to the Amundsen Sea.* (Virtual) Oct 26.

2022 **Southern Ocean Observing System - Amundsen-Bellingshausen Sea Working Group Seminar Series.** *Initial reports from the RV NB Palmer 2022 Expedition to the Amundsen Sea.* (Virtual) July 20.

2022 **International Thwaites Glacier Collaboration** Workshop. *Accelerating Thwaites Ecosystem Impacts in the Southern Ocean*. Boulder, Colorado. June 13.

2021 **AtlantECO** 2nd Workshop (https://www.atlanteco.eu). *Microbial community structure and activity in the Amazon River Continuum.* Online May 14.

2021 **AtlantECO** 2nd Workshop (https://www.atlanteco.eu). *Contributions from the Amazon River to the carbon and nutrient dynamics of the western tropical North Atlantic Ocean.* Online May 14.

2019 **Southern Ocean Observing System – Amundsen Sea Working Group.** *The effects of glacier-driven upwelling on the Amundsen Sea ecosystem.* Incheon, Korea. May 8–10.

2016 **Gordon Research Conference** on Molecular Basis of Microbial One-Carbon Metabolism: Exploring, Understanding and Applying the Diversity of One-Carbon Metabolism. *Melting ice and green oceans: climate sensitive carbon cycling in the Amundsen Sea Polynya, Antarctica.* Waterville Valley, New Hampshire. July-Aug.

2016 **Ocean Sciences Meeting.** *Climate-sensitive carbon cycling on the western Antarctic continental shelf: results from the Amundsen Sea Polynya International Research Expedition (ASPIRE).* AGU-ASLO-TOS. Abstract #HE54C-1593, Ocean Sciences Meeting, New Orleans, Louisiana. February.

2015 **West Antarctic Ice Sheet workshop**. *Coastal marine ecosystems and the West Antarctic Ice Shelf.* 2015 WAIS Workshop. Loveland, Colorado. September.

2014 **Gordon Research Conference** on Oceans & Human Health: Anthropogenic Impacts on Coastal Communities and Ecosystems. *Climate change and the ocean's health.* Biddeford, Maine. June.

2014 **American Society of Microbiology –** General Meeting. *Climate change and marine microbial ecosystems.* Boston, Massachusetts. May.

2013 **American Geophysical Union** – Fall Meeting. Yager, P. L., J Richey, B Page, N Ward, A Krusche, S Weber, S. Burns, J Montoya, and C Rezende. *Contributions from the Amazon River mouth to the carbonate and nutrient dynamics of the tropical Atlantic Ocean.* Invited abstract #OS51C-05. San Francisco, California. December.

2013 **American Geophysical Union** – Fall Meeting. Crump, B., M. Doherty, C. Fortunato, A. Krusche, D. Brito, A. Cunha, M. Fernandes, B. Satinsky, B. Zielinski, C. Smith, N. Ward, J. Richey, P. L. Yager. *Microbial community structure and metagenomics across the river-to-ocean continuum of the Amazon River.* Invited abstract #OS51C-06. San Francisco, California. December.

2011 **Gordon Research Conference** on Polar Marine Science: Exploring Complex Systems in Polar Marine Science. *Climate and the polar marine biosphere: complex responses and emergent feedbacks.* Ventura, California. March.

2011 **Mathematical Biosciences Institute** – Workshop 6: Ocean Ecologies and Their Physical Habitats in a Changing Climate. Organizers: Ken Golden, Chris Jones, Hans Kaper, and Mary Lou Zeeman. http://mbi.osu.edu/2010/ws6abstracts.html. *Climate connections to marine ecosystems; from Amazon to Antarctica.* June 20–July 1.

2003 **Gordon Research Conference** on Polar Marine Science. *Does shelf depth matter to climate change?* Ventura, California. March.

2000 **ASLO Aquatic Sciences Meeting.** *Microbial ecology of the Arctic Ocean - a tutorial discussion of old boundaries and new insights on low temperature microbial ecosystems.* Copenhagen, Denmark. May.

1997 **Dissertations Initiative for the Advancement of Limnology and Oceanography (DIALOG II).** *The microbial fate of carbon in high-latitude seas: impact of the microbial loop on oceanic uptake of CO_2.* Bermuda. October.

1996 **Dissertations Symposium on Chemical Oceanography (DISCO XIII).** *The microbial fate of carbon in high-latitude seas: impact of the microbial loop on oceanic uptake of CO_2.* Honolulu, Hawaii. May.

National or regional symposia

2021 **National Biodiversity Teach In.** *Melting ice and green oceans.* February 11.

2020 **National Biodiversity Teach In.** *Climate change and polar ecosystems.* February 11, April 17.

2018 **National Academy Keck Futures Initiative** (NAKFI) *Mapping Deep Blue Habitat in a Changing Climate.* Discovering the Deep Blue Sea - mid-project meeting. Irvine, California. June 19–21.

2017 **Amazon Day at the American Museum of Natural History.** *The Amazon River plume and reef ecosystem.* New York, New York. April 8.

2016 **National Academy Keck Futures Initiative** (NAKFI) 2016 Conference Discovering the Deep Blue Sea. *Melting enhances coastal biological productivity.* Irvine, California. November 9–12.

2016 **Portland Public Library** – The Maine Arctic Speaker Series. Sponsored by University of New England. *Climate change impacts on polar marine ecosystems.* Portland, Maine. September 12.

2015 **Rutgers Climate Institute.** Regional Climate Symposium: Climate Change and Polar Regions: Natural and Social System Implications. *Climate connections to polar marine ecosystems.* Rutgers University, New Brunswick, New Jersey. November.

2015 **Barrow Arctic Research Center –** Schoolyard Saturday. *What did we learn during Arctic Nitro?* Barrow,

Alaska. February.

2011 **Institute of Native American Studies** – The Impact of Climate Change on Tribal Resource Management. *Global climate change*. Invited plenary speaker. Organized by Jace Weaver. University of Georgia, Athens, Georgia. August 26.

2010 **U.S. National Academy of Sciences –** Frontiers in Understanding Climate Change and Polar Ecosystems. *Climate and the Polar Marine Biosphere: complex responses and emergent feedbacks*. Plenary talk. Cambridge, Maryland. August.

2010 **Barrow Arctic Science Consortium –** Schoolyard Saturday. *Microbial control on the productivity of Barrow's coastal waters - Will the battle for nitrogen intensify under climate change?* Barrow, Alaska. February.

1996 **Oak Ridge National Laboratory (DOE)** – A Forum for Integrating Multidisciplinary Research to Advance the Science of Global Change. *The high-latitude marine carbon cycle: responses and feedbacks to climate change*. Oak Ridge, Tennessee. October.

University seminars (not UGA)

2023 **National Center for Atmospheric Research**, *Accelerating ecosystem impacts in the Amundsen Sea, a potential area for Marine Protection?* NASA HOT SPOTS research group. April 27. Online.

2021 **University of South Florida**, College of Marine Science. *Melting ice and green oceans*. April 2. Online.

2019 **University of Virginia** - Department of Environmental Sciences. Keynote speaker. *Melting ice sheets impact more than sea level*. 2019 EnviroDay Research Forum and Symposium. February 22.

2018 **University of Southern Mississippi** – Gulf Coast Research Laboratory – Coastal Sciences Speaker Series. *Melting ice sheets and coastal productivity in the Amundsen Sea, Antarctica*. October 25.

2018 **University of Manitoba** - Centre for Earth Observation Science (CEOS). *Melting ice sheets, rivers, and polynyas: how coastal productivity and CO2 sinks are impacted by the intricacies of fresh water cycling in a changing climate*. February 6.

2017 **University of Rhode Island** Vetlesen Distinguished Speaker Series. *Climate change impacts on Antarctic marine ecosystems*. Graduate School of Oceanography. October 18.

2016 **Universidade Federal do Rio de Janeiro**. *A new reef along the river-ocean continuum of the Amazon*. October.

2015 **Old Dominion University** – Center for Coastal Physical Oceanography. *Climate change and the coastal Antarctic ecosystem: results from the ASPIRE project*. Norfolk, Virginia. September.

2015 **University of Alaska, Fairbanks** – Institute of Marine Sciences. *Antarctic connections between climate and the marine carbon cycle: a report from the Amundsen Sea Polynya International Research Expedition (ASPIRE)*. Fairbanks, Alaska. February 18.

2015 **Duke University** – Division of Earth and Ocean Sciences. *Microbes, carbon, and climate change along the River-Ocean Continuum of the Amazon*. Raleigh, North Carolina. January 30.

2014 **Skidaway Institute of Oceanography**. *Climate connections to the marine biosphere: the Amundsen Sea Polynya International Research Expedition*. Savannah, Georgia. September.

2014 **Universidade Estadual do Norte Fluminense.** *Carbon, microbes, and climate change in the river-ocean continuum of the Amazon*. Darcy Ribeiro, Campos dos Goytacazes - Rio de Janeiro, Brazil. August 25.

2014 **Universidade Federal do Rio de Janeiro.** *Microbes, carbon, and climate in the river-ocean continuum of the Amazon*. Rio de Janeiro, Brazil. August 21.

2009 **Skidaway Institute of Oceanography.** *The River Ocean Continuum of the Amazon*. Savannah, Georgia. October.

2000 **University of Maryland** – Chesapeake Biological Laboratories. *A dynamic bacterial and viral response to an Arctic algal bloom – connections to the global carbon cycle*. Solomons, Maryland.

2000 **Rutgers University** – Institute of Marine and Coastal Sciences. *Microbial activities in Arctic seas: links to seasonal primary productivity and the global CO2 cycle*. New Brunswick, New Jersey. April.

1998 **Texas A & M University** – Department of Oceanography. *Carbon cycling in the Arctic: Why go all the way*

to the North Pole to study climate change? College Station, Texas. May.

1998 **Florida A & M University** – Department of Engineering. *The Arctic Ocean carbon cycle: why go all the way to the North Pole to study climate change?* Tallahassee, Florida. January.

UGA and other Georgia venues

2022 **Sustainability Seminar** – *Working on sustainability through the Georgia Climate Project.* October 25.

2022 **Georgia Climate Scholars Network** – *Communicating your research (*webinar). April 13, 2022.

2022 **The Perch.** Comer Community Center– *Climate change impacts and adaptation in Madison County.* April 9, 2022.

2022 **UGA Institute of Ecology** - ECOL 8850 Biogeochemistry. Two guest lectures on *Carbon and nutrient cycling in climate-impacted Antarctic marine ecosystems.*

2021 **Science and Sundry**. USDA Poultry Research Center. *What's happening with Climate Change in Georgia*? November 18.

2021 **Ocean Initiative** – *Climate impacts on polar ecosystems*. January.

2020 **World Affairs Council of Atlanta.** *From Polar Bears to Peaches: 50th Anniversary of Earth Day.* May 5 (by Zoom).

2020 **Elberton Rotary Club.** *Climate change and its effects on Georgia.* Elberton, Georgia. October 13 (by Zoom).

2019 **Georgia College and State University** – Climate Change and Human Health. Environmental Health panel. Milledgeville, Georgia. October 9.

2018 **Ocean Initiative** – Undergraduate Marine Science organization. *Careers Panel.* Athens, Georgia. November 29.

2018 **GA Society for Conservation Biology**. *The Amazon River Plume and Reef Ecosystems.* Athens, Georgia. November 28.

2018 **UGA Institute of Ecology** – Ecology Seminar. *Melting Ice Sheets and Coastal Productivity.* Athens, Georgia. October 16.

2018 **Ocean Initiative** – Undergraduate Marine Science organization. *Climate Change and Antarctic Marine Ecosystems.* Athens, Georgia. October 4.

2018 **Marine Science Graduate Student Association (MSGSA).** *Finding a faculty position after grad school.* Athens, Georgia. April 5.

2017 **UGA Institute of Ecology –** Conservation Seminar Series (ECL 8400). *Climate change impacts on coastal Antarctic ecosystems.* Athens, Georgia. November 1.

2017 **Ciné Athens.** Invited panelist for discussion following the showing of *An Inconvenient Sequel*, a US film about climate change. Athens, Georgia. August 17.

2017 **Georgia Museum of Art –** Healing the World thru the Arts. *The common ground between environmental science and art.* Athens, Georgia. April 28.

2017 **Gwinnett School of Mathematics, Science, and Technology.** *An exciting career in oceanography.* Lawrenceville, Georgia. February 17.

2017 **Ciné Athens.** Invited panelist for discussion following the showing of *Demain*, a French film about sustainability. Athens, Georgia, January 11.

2016 **UGA School of Marine Programs.** *Climate change and the coastal Antarctic ecosystem: results from the Amundsen Sea Polynya.* Athens, Georgia. November 10.

2016 **UGA Institute of Ecology –** EDGE seminar series. *Climate change and the coastal Antarctic ecosystem: results from the Amundsen Sea Polynya.* Athens, Georgia. October 28.

2016 **Osher Lifelong Learning Institute (OLLI) –** Luncheon Program. *Climate, the Ocean, and the Marine Biosphere.* Athens, Georgia. Sept 20.

2016 **Athens Clarke County Library –** Poem-Making and Nature panel. The Big Read: Robinson Jeffers' Observations in nature: eco-poetry and sustainability in today's Georgia. *A climate scientist inspired by*

nature poetry. Athens, Georgia. April 12.

2015 **Women in Science** (WiSci) **Career Symposium –** mapping your path in science. Keynote address: *What would you attempt to do if you knew you could not fail? Cultivating bravery and persistence during a career in science.* Athens, Georgia. November 14.

2015 **UGA Institute of Ecology –** Conservation Seminar Series (ECL 8400). *The effects of climate change on coastal Antarctic ecosystems.* Athens, Georgia.

2015 **UGA Retired Educators Association.** *Climate and the Ocean.* Athens, Georgia.

2013 **UGA Department of Geography.** *Climate connections to the marine biosphere - from the Amazon to Antarctica.* Departmental Seminar. Athens, Georgia. October 22.

2013 **UGA Institute for Women's Studies –** Friday Speaker Series. *Climate Change and the ocean ecosystem: hot spots and cool adventures on the high seas.* Athens, Georgia. November 15.

2013 **UGA Institute of Ecology –** Conservation Seminar Series (ECL 8400). *The effects of climate change on Antarctic ecosystems.* Athens, Georgia. November 20.

2011 **Gainsville Rotary.** *Climate connections to marine ecosystems from the equator to the poles.* Gainsville, Georgia. February 27.

2011 **Georgia Initiative for Climate and Society –** Working Group 1 - Brown Bag Seminar Series. *Climate connections to marine ecosystems; from Amazon to Antarctica.* Athens, Georgia. May

2011 **UGA Department of Comparative Literature**. *Global climate change and feedbacks.* Invited lecture: CMLT 3210. Ecocriticism. Athens, Georgia.

2011 **UGA Department of Geology.** *Climate connections to the marine carbon cycle.* Athens, Georgia. February 24.

2007 **UGA Institute for Women's Studies** *Women in Oceanography – a case study for women in science.* Athens, Georgia. April.

2007 **UGA Department of Geology.** *Climate and the marine biosphere.* Athens, Georgia. April.

2000 **UGA Department of Geology –** Geochemistry Seminar. *The Arctic Ocean: a climate sensitive source or sink for atmospheric CO_2?* Athens, Georgia. April.

1999 **UGA School of Marine Programs.** *Microbial activities in arctic seas: links to seasonal primary productivity and the global CO_2 cycle.* Athens, Georgia. October.

BROADCAST INTERVIEWS:

2023 **WGAU radio**. *Electricity Matters with Tim Echols*. Georgia Climate Conference.

2023 **11Alive**. Melissa Nord. *Georgia Climate Conference. https://www.11alive.com/article/tech/science/climate-science/georgia-climate-conference-2023/85-4efadaa2-cb59-4394-926a-f9c3aa3a7313.*

2022 **Unscripted, with Alan Flurry.** *Ecosystem impact of Antarctic Climate Change*

2021 **From Oil to Soil: the shift.** *Coastal and Ocean Sinks: The Changing Tide.* (https://www.fromoiltosoil.org/podcast-1/episode/343ceb22/episode-7-coastal-and-ocean-sinks-the-changing-tide)

2021 **Science on Screen.** Pre-lecture for *My Octopus Teacher*, Ciné theater, Athens, Georgia.

2020 **Unscripted, with Alan Flurry.** *Exploring the Georgia Bight on the RV Savannah.* (https://podcasts.apple.com/us/podcast/exploring-the-georgia-bight-on-the-rv-savannah/id1480398213?i=1000466774276).

2020 **Of People and Earth** – interview for a documentary film about climate change. August.

2020 **Georgia Public Broadcasting**; Classic City Science; WUGA; April Sorrows and Kodiak Sauer

2019 **Gwen O'Looney** (WXAG). Climate change and social justice.

2018 **Georgia Public Broadcasting** – Savannah Morning Edition. *Research Roadmap Poses Climate Change Questions for Scientists and Public.* E. Jones. June 19.

2016 **SciTech Now**, Corporation for Public Broadcasting / PBS. *Discovering 600 miles of coral reef.* Interviewer:

A. Vasquez. November 1.

2016 **Quirks and Quarks**, CBCradio. *Amazon River hiding a massive reef ecosystem.* Interviewer: B. MacDonald. April 30.

2016 **Radio FM Colombia**. *Amazon Reef.* Interviewer: A. Ruiz. April 29.

2016 **CJAD Radio Montreal**, BellMedia. *Amazon Reef.* Interviewer: D. Spector. April 27.

2016 **Top of Mind**, byuradio. *Climate Change, Amazon Coral Reef, Chinese Pipa Virtuosa.* Interviewer: Julie Rose. April 27.

2016 **Forum**, KQED (San Francisco Public Radio). *As Coral Bleaching Devastates Australia's Great Barrier Reef, Scientists Look for Solutions.* Interviewer: Michael Krasny. April 26.

PRINT INTERVIEWS:

2022 **CNN** – *Antarctica's majestic underwater world is trying to adapt to a warmer planet.* Interviewer - Alison Chinchar. https://www.cnn.com/2022/05/07/weather/antarctica-ice-sheet-climate-ecosystem

2018 **Atlanta Journal-Constitution.** *Floods, fire, and hurricanes: Dire warnings for Georgia in climate report.* Interviewer: Joshua Sharpe. December 1.

2018 **Atlanta Journal-Constitution.** *Georgia needs better research and resources to deal with changes in climate, new report says.* Interviewer: Eric Stirgus. May 23.

2018 **Red and Black.** *Scientist of the Week: Patricia Yager's love for discovery.* K. Meyes. January 21.

2017 **Research Features.** *Exploring the links between melting ice and ecosystems. 121:*14–17. *http://cdn.researchfeatures.com/3d_issues/issue121/html5/index.html*

2016 **Live Science**. *Amazon: Earth's Mightiest River.* T. Pedersen. December 19.

2016 **Revista Piaui.** *O Recife que ninguém viu. Um ecossistema insuspeito sob as águas turvas da foz do Amazonas.* B. Esteves. December 1.

2016 **Oceanography Journal**, Ripple Marks - The story behind the story. *Coral Reef Discovered in an Unlikely Locale.* C.L. Dybas. September 1.

2016 **Interesting Sh!t.** *The Amazon River's Coral Reef Madness.* J. Moon. July 1.

2016 **Voice of America.** *Amazing Amazon Hides Atlantic's Coral Reef.* A. Ball. May 8.

2016 **Upstream.** *Discovery of reef likely to affect permitting process.* G. Chetwynd. May 2.

2016 **How Stuff Works.** *An 'Impossible' Coral Reef System Discovered at Amazon River Mouth.* J. Shields. April 28.

2016 **Cosmos.** *Huge coral reef discovered at mouth of Amazon.* B. Condie. April 26.

2016 **Take Part,** *There Is a Giant Reef Under the Amazon's Muddy Waters.* T. Hill. April 26.

2016 **Washington Post**. *Scientists find a massive coral reef just chilling in the Amazon.* S. Kaplan. April 25.

2016 **Live Science**. *Massive Coral Reef Discovered in the Amazon River.* Ghose T. April 24.

2016 **Science Alert.** *Scientists just discovered a 1,000-km-long coral reef at the mouth of the Amazon. Whoa. Just whoa.* F. Macdonald. April 22.

2016 **Los Angeles Times**. *Scientists discover coral reef near the mouth of the Amazon River.* A. Khan. April 22.

2016 **National Geographic**. *Surprising, Vibrant Reef Discovered in the Muddy Amazon.* C. Welch. April 22.

2016 **The Atlantic**. *Scientists Have Discovered a 600-Mile Coral Reef - It's at the mouth of the Amazon River.* R. Meyer. April 21.

2015 **AGU Blogosphere.** *In Antarctica, melting ice drives unusual phytoplankton growth.* A.F. Takemura.

2014 **University of California Press Blogs.** *Patricia L. Yager Explains the Significance of the ASPIRE Special Feature.*

CONTRIBUTED ABSTRACTS

Chinni, V., K Bu, J Steffen, JN Fitzsimmons, H Oliver, RM Bundy, **PL Yager**, et al. (2024). *Factors driving the uptake of*

bioactive trace metals in the Fe-stressed Amundsen Sea Polynya, West Antarctica. AGU Fall Meeting Abstracts 2024 (676), OS21H-0676

Steffen, J., V Chinni, L Herbert, H Oliver, SE Stammerjohn, **PL Yager**, et al. (2024). *Iron isotopes reveal dissolved iron in the Amundsen Sea, Antarctica.* AGU Fall Meeting Abstracts 2024, B42B-05

Herbert, L., A Ohayon, A Lepp, J Steffen, P St-Laurent, H Oliver, L Miller, **PL Yager**, et al. (2024). *Benthic iron fluxes and trace metal cycling in Antarctic coastal sediments adjacent to the retreating West Antarctic Ice Sheet.* AGU Fall Meeting Abstracts 2024, B42B-04

Helgeson, J., RL Totten, **PL Yager**, CD Hillenbrand, J Wellner, A Leventer (2024). *2022 Phytoplankton Census Data from the Getz Ice Shelf, Antarctica.* AGU Fall Meeting Abstracts 2024 (476), C51D-0476.

Ohayon, A., RM Sherrell, J Wellner, **PL Yager**, J Steffen, JN Fitzsimmons, et al. (2024). *Controlling mechanisms and ecosystem effects of variable sediment redox conditions in the Amundsen Sea, Antarctica.* AGU Fall Meeting Abstracts 2024 (1587), B43E-1587.

Pickup, D, K Heywood, D Bakker, E Hammermeister, S Loucaides, **PL Yager**, et al. (2024). *High-resolution pH measurements at the edge of the Dotson Ice shelf using state-of-the-art autonomous technologies.* EGU General Assembly Conference Abstracts, 609

Bartlett, S, **PL Yager**, H Bik, TJ Pereira, M Barros (2024). *16S rRNA metabarcoding shows distinct bacterial assemblages and functionality along the "iron conveyor belt" in the Amundsen Sea Polynya, Antarctica.* 2024 Ocean Sciences Meeting

Stammerjohn, SE, P St-Laurent, T Maksym, **PL Yager**, RM Sherrell (2024). Sea Ice as Modulator of Ocean-Ice Shelf Interactions. 2024 Ocean Sciences Meeting

Totten, RL, CD Hillenbrand, J Wellner, A Lehrmann, J Smith, E Mawbey, **PL Yager**, et al. (2024). *Microfloral and microfaunal fingerprints of ice-ocean interactions over decades to millennia in the Amundsen Sea, West Antarctica.* 2024 Ocean Sciences Meeting

Yager, PL, C Schine, AJ Schuster, SE Belcher, H Oliver, SE Stammerjohn, et al. (2024). *Air-Sea CO2 Exchange Adjacent to a Melting Ice Shelf (Project ARTEMIS).* 2024 Ocean Sciences Meeting

Steffen, J, H Oliver, L Herbert, V Chinni, J Wellner, SE Stammerjohn, **PL Yager**, et al. (2024). *Iron isotope measurements of seawater in the Amundsen Sea reveal sources of iron in the coastal Southern Ocean.* American Geophysical Union, Ocean Sciences Meeting, HE53A-07

Chinni, C, L Herbert, J Steffen, SE Jenness, K Bu, JN Fitzsimmons, **PL Yager**, et al. (2024). *Iron Sources in the Amundsen Sea: Insights from Soluble, Colloidal, Dissolved and Particulate Fractions.* American Geophysical Union, Ocean Sciences Meeting, HE53A-08

Yager, P.L., plus ARTEMIS Science Team (2022). *The ARTEMIS project.* International Thwaites Glacier Collaboration (ITGC) Meeting. Boulder, Colorado. June 11-17.

Stammerjohn, S.E. P. St-Laurent, T. Maksym, **P.L. Yager**, R.M Sherrell (2022). Sea Ice, Fast Ice, and Icebergs as Modulators of Ocean-Ice Shelf Interactions. Abstract, AGU Fall Meeting Abstracts, C41C-03.

Yager, P. L., H. Oliver, P. St-Laurent, R. M. Sherrell, S. E. Stammerjohn (2020). High-resolution ocean model illustrates how ice-ocean interactions impact the CO2 uptake of an Antarctic coastal polynya. Abstract #HE52A-03. *Ocean Sciences Meeting*, San Diego, California. February 16–21.

Oliver, H., R. M. Castelao, **P. L. Yager** (2020). A sensitivity analysis to determine conditions necessary for meltwater-enhanced nutrient export from Greenland's glacial fjords. Abstract HE1A-01. *Ocean Sciences Meeting*, San Diego, California. February 16–21.

Yager, P. L., J. Spivey, J. Ebert, J. Wenclawiak, C.A. Deutsch (2020). Mapping Deep Blue Habitats. Abstract #ED11B-02 (ePoster available online). *Ocean Sciences Meeting*, San Diego, California. February 16–21.

Bricher, P., P. Gorringe, S. Diggs, **P.L. Yager** (2020). Finding Just the Data You Need: New Developments in Online Oceanographic Data Discovery Tools. Tutorial TT13C. *Ocean Sciences Meeting*, San Diego, California. February 16–21.

Yager, P. L., P. St-Laurent, H. Oliver, R.M. Sherrell, S.E. Stammerjohn, M. Dinniman (2019). How ice-shelf-ocean interactions impact the carbon cycle of an Antarctic coastal polynya. Korea Polar Research Institute *25th International Symposium on Polar Sciences*, Incheon, Republic of Korea, May 13-15.

Yager, P. L., P. St-Laurent, H. Oliver, R. M. Sherrell, S. Stammerjohn, M. Dinniman (2018). High-resolution ocean

model illustrates how ice-sheet ocean interactions impact the biological pump of an Antarctic coastal polynya. #415135. Am. Geophysical Union, Annual Meeting. Washington D.C. December.

Oliver, H., P. St-Laurent, R. M. Sherrell, P. L. Yager (2018). Controls on summer phytoplankton blooms in a highly productive Antarctic coastal polynya. Abstract # OS34B-06. Am. Geophysical Union, Annual Meeting. Washington D.C. December. *Received **AGU Outstanding Student Presentation** Award.

Yager, P. L., P. St-Laurent, R. M. Sherrell, H. Oliver, M. Dinniman, S. Stammerjohn (2018) High-resolution model illustrates how melting ice impacts coastal carbon cycle. West Antarctic Ice Sheet Initiative - Annual Meeting. Stony Point, New York. October.

Dinniman, M., P. St-Laurent, K. Arrigo, E. Hofmann, J. Klinck, R. Sherrell, S. Stammerjohn, and P.L. Yager. Ice shelf meltwater pump contribution to vertical exchange around Antarctica, 2018 SCAR/IASC Open Science Conference, Davos, Switzerland, June 15-26.

Oliver, H., P. St-Laurent, R.M. Sherrell, P.L. Yager, Does light or iron control the Amundsen Sea Polynya phytoplankton bloom? presentation at the Ocean Carbon and Biogeochemistry Summer Workshop, Woods Hole MA, June 25-28.

Oliver, H., P. St-Laurent, R. M. Sherrell, P. L. Yager (2018). What controls the massive phytoplankton bloom in the Amundsen Sea Polynya? Abstract #HE14B-2850, presented at 2018 Ocean Sciences Meeting, Portland, OR, Feb. 12-16.

Sherrell, R. M., P. L. Yager, P. St-Laurent, M. S. Dinniman, S. E. Stammerjohn, M. Lagerstrom, K. M. Harazin (2018). High iron in outflow waters from the Dotson Ice Shelf cavity, Amundsen Sea, West Antarctica: is glacial meltwater really the source? Abstract #CT31A-04, presented at 2018 Ocean Sciences Meeting, Portland, OR, Feb. 12-16.

Dinniman, M.S., P. St-Laurent, K. R. Arrigo, E. E. Hofmann, J. M. Klinck II, R. M. Sherrell, S. E. Stammerjohn, P. L. Yager. The ice shelf meltwater pump contribution to vertical exchange over the open shelf in the Amundsen Sea and elsewhere around Antarctica. Abstract #HE41A-04, presented at 2018 Ocean Sciences Meeting, Portland, OR, Feb. 12-16.

Ward, N.D., I. Joshi, A. de Matos Valerio, E. J. D'Sa, C. L. Osburn, T. S. Bianchi, D. Ko, D. Oveido-Vargas, A. Arellano, H. O. Sawakuchi, A. C. Cunha, J. E. Richey, P. L. Yager (2018). Remote sensing of carbon dioxide fluxes in coastal ecosystems across scales. Abstract # BN41A-03, presented at 2018 Ocean Sciences Meeting, Portland, OR, Feb. 12-16.

Yager, P.L., P. St-Laurent, R.M. Sherrell, M.S. Dinniman and S.E. Stammerjohn (2017). 'Meltwater pump' mechanism directly links the extreme Amundsen Sea phytoplankton bloom to the melting ice shelf, presentation at the WAIS meeting, Coupeville WA, Oct. 8-11.

Oliver, H., P. St-Laurent, R. M. Sherrell, P. L. Yager (2017). Physical and biological controls on phyto-plankton blooms in the Amundsen Sea Polynya. Goldschmidt Conference. Paris, France. August.

Oliver, H., P. St-Laurent, R. M. Sherrell, P. L. Yager (2017). Controls on phytoplankton blooms in an Antarctic coastal polynya. Southeastern Biogeochemistry Symposium, Athens Georgia, March.

Oliver, H., P. St-Laurent, R. M. Sherrell, P. L. Yager (2017). What makes a bloom in the Amundsen Sea Polynya? A 1-D biogeochemical modeling perspective. Gordon Research Conference for Polar Marine Science, Ventura, California, March.

Oliver, H., H. Luo, R. M. Castelao, G. van Dijken, K. S. Mattingly, J. J. Rosen, T. L. Mote, P. L. Yager, et. al. (2016). Extreme surface melting of the Greenland Ice Sheet increases growth potential for light-limited phytoplankton in the Labrador Sea. American Geophysical Union, Annual meeting. San Francisco, California. December.

Rennermalm, AK, M Tedesco, LC Smith, LH Pitcher, TL Mote, P. L. Yager, S Moustafa, MG Cooper, D van As, B Hasholt, AB Mikkelsen (2016). Understanding Greenland Ice Sheet Runoff Losses. American Geophysical Union, Annual meeting. San Francisco, California. December.

Yager, P. L., P. St. Laurent, R. M. Sherrell, H. Oliver, M. Dinniman, E. Hofmann, S. Stammerjohn. Melting ice sheet enhances coastal biological productivity. West Antarctic Ice Sheet Initiative - Annual Meeting. Sterling, Virginia. October.

St-Laurent, P, M. Dinniman, P. L. Yager, et al., (2016). Transport pathways of nutrients in the Amundsen Sea, Antarctica. Ocean Sciences Meeting. New Orleans, Louisiana. February 21–26.

Mu, L, P. L. Yager, P. St Laurent, R. Sherrell, M. Dinniman, E. Hofmann, H. Oliver, S. Stammerjohn (2016). Investigating the role of mesoscale processes and ice dynamics in carbon and iron fluxes in a changing Amundsen Sea (INSPIRE). Abstract #HE44D-1545. Ocean Sciences Meeting. New Orleans, Louisiana. February 21–26.

Oliver, H, H Luo, KS Mattingly, JJ Rosen, P. L. Yager (2016). Modeling the sensitivity of coastal ocean primary production to extreme melting of the Greenland Ice sheet. Ocean Sciences Meeting. New Orleans, Louisiana. February 21–26.

Garay, L., P. L. Yager (2016). The SMORE Project: a model for transforming authentic research into classroom curricula. #ED23A-08, Ocean Sciences Meeting. New Orleans, Louisiana. February 21–26.

Yager, P. L., Garay L, Warburton J (2016). ASPIRE: Teachers and researchers working together to enhance student learning. Ocean Sciences Meeting. New Orleans, Louisiana. February 21–26.

Seidel, M., T. Dittmar, N. Ward, A. Krusche, J. Richey, P. L. Yager, P Medeiros (2016). Molecular transformations of dissolved organic matter in the lower Amazon River. Ocean Sciences Meeting. New Orleans, Louisiana. February 21–26.

Coles, V., R. Hood, M. Stukel, M. A. Moran, J. Paul, B. Satinsky, B. Zielinski, P. L. Yager (2016). Modeling the nitrogen cycle one gene at a time. Abstract #B31B-08, Ocean Sciences Meeting. New Orleans, Louisiana. February 21–26.

He, D., W. Berelson, P. L. Yager, P. M. Medeiros (2018). Influence of the Amazon River on the composition of particulate organic carbon in the western tropical Atlantic Ocean. Abstract #EC43A-07, Ocean Sciences Meeting. New Orleans, Louisiana. February 21–26.

Miles, T., O. Schofield, S. H. Lee, P. L. Yager, H. K. Ha (2016). Glider observations of the Dotson Ice Shelf outflow and its connection to the Amundsen Sea polynya. Abstract #HE44B-1501, Ocean Sciences Meeting. New Orleans, Louisiana. February 21–26.

Goes, J., H. Gomes, K. McKee, T. Galina, T. Chen, M. D. Turkowsky, P. L. Yager (2016). Assessing the impacts of ocean acidification on phytoplankton functional types from space - a case study for the Amazon River plume. Ocean Sciences Meeting. New Orleans, Louisiana. February 21–26.

Yager, P. L, H. Oliver, R. Castelao, H. Luo, K. Mattingly, J. Rosen, G. van Dijken, A. Rennermalm, M. Tedesco, and T. Mote (2016). Ice sheet meltwater impacts on coastal biological productivity - models and remote observations for SW Greenland. 2016 PARCA Meeting. Greenbelt, Maryland. January.

Mote, T., K. Arrigo, R. Castelao, A. Rennermalm, M. Tedesco, P. L. Yager, H. Luo, and G. van Dijken (2016). The impact of extreme melt on ocean stratification and productivity near West Greenland. 2016 PARCA Meeting. Greenbelt, Maryland. January.

Yager, P. L., H. Oliver, R. Sherrell, S. Stammerjohn, P. St-Laurent, E. Hofmann, T. Mote, M. Tedesco, A. Rennermalm, and R. Castelao (2015). Ice sheet meltwater impacts on biological productivity in high-latitude coastal zones - observations and model results for West Antarctica and Southwest Greenland. American Geophysical Union - Fall Meeting. San Francisco, California. December.

Coles, V., R. Hood, M. Stukel, M. A. Moran, J. Paul, B. Satinsky, B. Zielinski, P. L. Yager (2015). Merging marine ecosystem models and genomics. American Geophysical Union - Fall Meeting. San Francisco, California. December.

Oliver, H., R. Castelao, H. Luo, K. Mattingly, J. Rosen, and P. L. Yager, 2015: Coastal ocean primary production sensitivities to extreme melting of the Greenland ice sheet, *Regional Climate Symposium at Rutgers University*: Climate Change and Polar Regions: Natural and Social System Implications. Rutgers Climate Institute, New Brunswick, New Jersey, November 20.

Mote, T., K. Arrigo, R. Castelao, A. Rennermalm, M. Tedesco, P. L. Yager, H. Luo, and E. Noble (2015). The impact of extreme melt on ocean stratification and productivity near West Greenland. Ilulissat Climate Days. Ilulissat, Greenland. June.

P. L. Yager, R. Sherrell, S. Stammerjohn, O. Schofield, H. Ducklow, S. Wilson, A. Alderkamp (2015). An ELEMENTA special feature: The Amundsen Sea Polynya International Research Expedition *(ASPIRE).* Gordon Research Conference on Polar Marine Science. Il Ciocco, Italy. March.

Oliver, H., P. L. Yager, R. Castelao, and H. Luo (2015). Modelling the responses of primary production to extreme

melting of the Greenland Ice Sheet. Gordon Research Conference on Polar Marine Science. Il Ciocco, Italy. March.

Sherrell, R. M., P. L. Yager, S. Stammerjohn, et al., Ocean-Ice shelf interactions in the Amundsen Sea Polynya; implications for Fe supply and C cycling. Gordon Research Conference on Polar Marine Science. Il Ciocco, Italy. March.

Buck, K. R., K. Walz, L. Khunz, P. L. Yager, and J. P. Barry (2015). Deep-sea sediment communities: infaunal and megafaunal biomass and metabolism. ASLO Aquatic Sciences Meeting, Granada, Spain. February.

Sherrell, R., M. Lagerström, M. Séguret, K. M. Harazin, K. Forsch, O. Schofield, S. E. Stammerjohn, P. L. Yager, M. P. Meredith (2014). Fe availability and bioactive metal dynamics in Antarctic shelf systems: Amundsen Sea Polynya vs. western Antarctic Peninsula. Goldschmidt Conference, Sacramento California. June.

Wilson, S. E.; Swalethrop, R.; Kjellerup, S.; Ducklow, H. W.; P. L. Yager (2014); Meso and macro-zooplankton community structure of the Amundsen Sea Polynya, Antarctica (Summer 2010–11). American Geophysical Union/ASLO/TOS Ocean Sci Meeting. Honolulu, Hawaii. #16271. February.

Dinasquet, J, Richert I, P. L. Yager, Bertilsson S, Riemann L (2014). Mixing of water masses caused by a drifting iceberg affects bacterial activity, community composition, and substrate utilization in the Southern Ocean. American Geophysical Union / ASLO/ TOS Ocean Sciences Meeting. Honolulu, Hawaii. Abstract #16279. February.

Sherrell, R. M., M. Lagerström, S. Stammerjohn, P. L. Yager, O. Schofield (2014). Workings of an intense natural iron fertilization region during climate warming: bioactive metal dnamics in Amundsen Sea Polynya, West Antarctica. American Geophysical Union / ASLO/ TOS Ocean Sciences Meeting. Honolulu, Hawaii. Abstract #16434. February.

Ingall, E. D.; Diaz, J. M.; Longo, A. F.; Yager, P. L.; Brandes, J. A. (2014) Role of diatoms in the removal of iron from Antarctic seas. American Geophysical Union / ASLO/ TOS Ocean Sciences Meeting. Honolulu, Hawaii. Abstract #16531. February.

Delmont, T.; Ducklow, H.; Yager, P.; Post, A. (2014). Bacterial community structures in the Amundsen Sea Polynya are shaped by *Phaeocystis antarctica* blooms. American Geophysical Union / ASLO/ TOS Ocean Sciences Meeting. Honolulu, Hawaii. Abstract # 16616. February.

Zielinski, B. L.; Coles, V. J.; Satinsky, B.; Yager, P. L.; Paul, J. H. (2014). Patterns of microeukaryotic gene expression parallel biogeochemical measurements in the Amazon River Plume. American Geophysical Union / ASLO/ TOS Ocean Sciences Meeting. Honolulu, Hawaii. #16925. February.

Yager, P. L., R. M. Sherrell, A. C. Alderkamp, E. D. Ingall, H. W. Ducklow (2014). Net communtity production and export in the Amundsens Sea Polynya (Western Antarctica) with comparisons to Arctic polynyas and a link to climate sensitivity. American Geophysical Union / ASLO/ TOS Ocean Sciences Meeting. Honolulu, Hawaii. Abstract #17007. February.

Coles, V. J.; Hood, R. H.; Stukel, M. R.; Yager, P. L. (2014). Modeling metagenomics and metatranscriptomes along the Amazon River Plume gradient. American Geophysical Union / ASLO/ TOS Ocean Sciences Meeting. Honolulu, Hawaii. Abstract # 17476. February.

Wang, P.; Burd, A. B.; Hood, R. R.; Coles, V. J.; Moran, M. A.; Yager, P. L. (2013). Incorporating genomic and transcriptomic information into a simplified marine biogeochemical model. Association for the Sciences of Limnology and Oceanography, Aquatic Sciences Meeting. New Orleans, Louisiana. Abstract #10691. February.

Baer, S. E., Connelly, T. L., Yager, P. L., Bronk, D. A. (2013). Ammonium uptake and nitrification in a warming arctic. Association for the Sciences of Limnology and Oceanography, Aquatic Sciences Meeting. New Orleans, Louisiana. Abstract #11564. February.

Zielinski, B. L., Sharma, S., Satinsky, B. M.; Smith, C. B.; Doherty, M.; Coles, V.; Crump, B.; Yager, P.; Moran, M.; Paul, J. H. (2013). Using metatranscriptomics to reveal the eukaryotic phytoplankton's response to dynamic environments within the Amazon River Plume. Association for the Sciences of Limnology and Oceanography, Aquatic Sciences Meeting, New Orleans. # 11646. February.

Mu, L., and P.L. Yager (2013). Spatial Variability of sea surface pCO2 in the Amundsen Polynya. Gordon Research Conference on Polar Marine Sciences. Ventura, California, March.

Williams, C., and P.L. Yager (2013). Heterotrophic microbial activity in the Amundsen Sea Polynya. Gordon Research Conference on Polar Marine Sciences. Ventura, California, March.

Zielinski, B. L.; Sharma, S.; Smith, C. B.; Satinsky, B. M.; Fortunato, C.; Doherty, M.; Coles, V.; Crump, B.; Yager, P.; Moran, M. A. (2012). Making the connection between meta-transcriptomics and biogeochemical cycles in the Amazon River plume. *Eos, Transactions American Geophysical Union* 93, Ocean Sci. Meet. Suppl., Abstract #9481. February.

Goes, J., Gomes, H. R.; Chekalyuk, A.; Carpenter, E. J.; Montoya, J. P.; Coles, V.; Yager, P. L.; Hafez, M. (2012). Biogeography and ecophysiology of phytoplankton communities of the Amazon River plume. *Eos, Transactions American Geophysical Union* 93, Ocean Sci. Meet. Suppl., #9907. February.

Medeiros, P. M.; Ward, N.; Niggemann, J.; Yager, P. L.; Krusche, A. V.; Dittmar, T. (2012). Tracking the fate of dissolved organic matter in the Amazon River to ocean continuum. *Eos, Transactions American Geophysical Union* 93, Ocean Sci. Meet. Suppl., Abstract #10321. February.

Yeung, L. Y.; Berelson, W. M.; Young, E. D.; Prokopenko, M. G.; Coles, V. J.; Montoya, J. P.; Carpenter, E. J.; Yager, P. L. (2012). Impact of diatom-diazotroph associations on carbon export in the Amazon River plume. *Eos, Transactions American Geophysical Union* 93, Ocean Sci. Meet. Suppl., Abstract #10484. February.

Coles, V. J.; Brooks, M. T.; Hood, R. R.; Montoya, J. P.; Stukel, M. R.; Yager, P. L. (2012). The role of the Amazon River plume in structuring the upper ocean stratification, biogeochemistry, and biological communities in the western tropical North Atlantic. *Eos, Transactions American Geophysical Union* 93, Ocean Sci. Meet. Suppl., Abstract #11346. February.

Yager, P. L.; Coles, V. J.; Goes, J.; Montoya, J.; Steinberg, D.; Berelson, W.; Hood, R.; Capone, D.; Carpenter, E. (2012). ANACONDAS: Amazon influence on the Atlantic: carbon export from nitrogen fixation by diatom symbioses. *Eos, Transactions AGU* 93, Ocean Sci. Meet. Suppl., # 12013. February.

Connelly, T. L.; Sines, K. A.; Yager, P. L. (2012). A three-season study of heterotrophic microbial activity and the response to short-term warming in a nearshore Arctic environment. *Eos, Transactions American Geophysical Union* 93, Ocean Sci. Meet. Suppl., Abstract #12027. February.

Garay, L. V.; Yager, P. (2012). The broad-spectrum benefits of research partnerships between teachers and marine scientists. *Eos, Transactions AGU* 93, Ocean Sci. Meet. Suppl., #12038. February.

Green, J. L.; Yager, P. L.; Miller, W. L.; Goes, J.; Medeiros, P. (2012). Effects of sunlight on the Amazon River plume: exploring the dynamic relationship between photochemistry and the microbial response. *Eos, Transactions AGU* 93, Ocean Sci. Meet. Suppl., #12076. February.

Page, B. P.; Coles, V. J.; Goes, J.; Yager, P. (2012). Surface measurements of pCO2 in the western tropical North Atlantic: quantifying the influence of the Amazon River plume on gas exchange. *Eos, Transactions American Geophysical Union* 93, Ocean Sci. Meet. Suppl., Abstract #12359. February.

Mu, L.; Yager, P.L. (2012) Atmospheric CO2 uptake by a super-productive Antarctic polynya. *Eos, Transactions American Geophysical Union* 93, Ocean Sci. Meet. Suppl., Abstract #12213. February.

Williams, C. M.; Connelly, T. L.; Sines, K. A.; Yager, P. L. (2012). Pelagic microbial heterotrophy in a highly productive Antarctic polynya. *Eos, Transactions American Geophysical Union* 93, Ocean Sci. Meet. Suppl., Abstract #12236. February.

Alderkamp, A. C.; Van Dijken, G. L.; Lowry, K. E.; Schofield, O.; Sherrell, R. M.; Yager, P. L.; Arrigo, K. R. (2012). Iron and light effects on phytoplankton primary productivity in the Amundsen Sea (Antarctica). *Eos, Transactions AGU* 93, Ocean Sci. Meet. Suppl., #12544. February.

Yeung, L.Y., W.M. Berelson, E.D. Young, M.G. Prokopenko, E. J. Carpenter, P.L. Yager (2011). Oxygen triple-isotope evidence for enhancement of export production efficiency by diatom-diazotroph assemblages in a giant river plume. Goldschmidt 2011 Conference, Prague, Czech Republic. Abstract published online. August.

Coles, V., P. Yager, W. Berelson, et al. (2011). ANACONDAS: Amazon iNfluence on the Atlantic: CarbOn export from Nitrogen fixation by DiAtom Symbioses. Research at the intersection between OCB and CLIVAR. OCB Workshop, Woods Hole, Massachusetts. July.

Yager, P.L., and J.B. Heimlich (2010). Bacterial Growth and Respiration in Polynyas and Sea Ice Communities of the Pacific Sector of the coastal Antarctic: is the Biological Pump Sensitive to Climate? *AGU Ocean Sciences Meeting*, Portland, Oregon. *Eos Trans. AGU, 91*(26), Ocean Sci. Meet. Suppl., Abstract IT44C-08. February.

Bakker, K.M. and P.L. Yager (2010). Bacterial community analysis of the Southern Oceans Amundsen Sea polynya and its surrounding sea ice. *AGU Ocean Sciences Meeting*, Portland, Oregon. *Eos Trans. AGU, 91*(26), Ocean Sci. Meet. Suppl., Abstract IT45I-08. February.

Fransson, A., M. Chierici, P.L. Yager, M. Mattsdotter, M. Nilsson, K. Sines. Sea-ice carbonate system dynamics in the Amundsen and Ross Seas, Antarctica. *AGU Ocean Sciences Meeting*, Portland, Oregon. *Eos Trans. AGU, 91*(26), Ocean Sci. Meet. Suppl. Abstract CO-35C-06. February.

Yager, P.L. (2008). How Amazon River inorganic carbon and nutrient concentrations likely determine the extent of carbon sequestration in the western tropical No Atlantic. *Ocean Sciences Meeting*, Orlando, Florida. March.

Buck, K., J. P. Barry, and P. Yager (2006). Deep-sea respiration rates under the low pH stress of deep CO_2 injection. Deep Sea Biology Symposium, Southampton, UK. July.

Yager, P., S. Cooley, A. Subramaniam, R. Shipe, C. Mahaffey, K. Bjorkman, S. Sanudo-Wilhelmy, A. Tovar-Sanchez, E. Carpenter, and D. Capone (2006). Diatom-Diazotroph Associations in the Amazon River Plume are Linked with Carbon Sequestration in the Western Tropical North Atlantic. *AGU Ocean Sciences Meeting*, Honolulu, Hawaii. February.

Cooley, S. R. and P. L. Yager (2006). Biologically induced seasonality in the Amazon Plume carbon sink. *AGU Ocean Sciences Meeting*, Honolulu, Hawaii. February.

A. Subramaniam, E.J. Carpenter, R. Shipe, P. Yager, D. G. Capone (2005). The diatom express. American Society of Limnology and Oceanography, Santiago, Spain. June.

Cooley, S. R., and P. L. Yager (2005). Intra- and interannual variation in the Western Tropical Atlantic inorganic carbon system. *American Society of Limnology and Oceanography Aquatic Sciences Meeting*, Salt Lake City, UT. February.

Carpenter, E. J., A. Subramaniam, J. Burns, S. Cooley, J. Finzi, T. Gunderson, R. Shipe, P Yager, D. Capone, C. Mahaffey (2005). Carbon and nitrogen fixation in the Western Tropical North Atlantic (WTNA) Ocean. *ASLO Aquatic Sciences Meeting*, Salt Lake City, UT. February.

Cooley, S. R., and P. L. Yager (2003). Distinguishing summertime biological inorganic carbon drawdown from physical effects in the western tropical Atlantic Ocean. *American Society of Limnology and Oceanography Aquatic Sciences Meeting*, Salt Lake City, UT. February.

Fisher, J. C. and P. L. Yager (2003). Temporal and spatial changes in dissolved inorganic carbon and alkalinity in the Arctic halocline during Ice Station SHEBA. *American Society of Limnology and Oceanography Aquatic Sciences Meeting*, Salt Lake City, UT. February.

Yager, P. L., and A. Goodrich (2003). Contributions to the inorganic carbon budget of Arctic Ocean surface waters: implications for freshwater inputs and the balance of autotrophy vs heterotrophy. *American Society of Limnology & Oceanography Aquatic Sciences Meeting*, Salt Lake City, February.

Hodges, L. R., N. Bano, J. T. Hollibaugh, and P. L. Yager (2002). Bacterial community structure in the Chukchi Sea: differences between free-living and particle-associated assemblages in high and low POM environments. *ASLO Aquatic Sciences Meeting*, Victoria, B.C. June.

Cooley, S. R., and P. L. Yager (2002). The dissolved inorganic carbon system during the 2001 MANTRA/PIRANA Expeditions in the Western Tropical Atlantic. Eos. Trans. AGU, 83 (4), Ocean Sciences Meet. Suppl., Abstract OS32E-166.

Yager, P. L. (2002). An Arctic Ocean time series of dissolved inorganic carbon. *AGU/ASLO 2002 Ocean Sciences Meeting.* Honolulu, Hawaii, February.

Miller, L. A., P. L. Yager, K.A. Erickson, J. Bâcle, J.K. Cochran, M.-È. Garneau, M. Gosselin, D.J. Hirschberg, B. Klein, B. LeBlanc, and W.L. Miller (2001). Physical Constraints on Carbon Distributions and Fluxes: The North Water, Northern Baffin Bay, 1998 and 1999. *International Polynya Symposium 2001: Polynyas in Changing Polar Seas.* Quebec City, Canada, September.

Miller, L. A., T. Noji, P. L. Yager (2001). Carbon Sinks in Seasonally Ice-Covered Seas: Physics and Biogeochemistry. *International Geosphere-Biosphere Programme*, Global Change Open Science Conference, Amsterdam, the Netherlands, July.

Yager, P. L. (2000). Microbial Ecology of the Arctic Oceans - a tutorial discussion of old boundaries and new insights on low temperature microbial ecosystems. *American Society of Limnology and Oceanography Aquatic Sciences Meeting*, Copenhagen, Denmark. May.

Yager, P. L., T. L. Connelly, B. Mortazavi, K. F. Wommack, N. Bano, J. E. Bauer, and J. T. Hollibaugh (2000). Dynamic Microbial Response to Springtime Algal Bloom at Sub-Zero Temperatures. *AGU/ASLO 2000 Ocean Sciences Meeting.* San Antonio, Texas, January.

Yager, P. L. (1999). The effects of an Arctic Spring-bloom progression on microbial community activity and composition. Gordon Research Conference on Polar Marine Science. Ventura, CA March.

Wheeler, P.A., B. F. Sherr, E. B. Sherr, and P. L. Yager (1999). Biological Production and Carbon Cycling in the Central Arctic Ocean. SHEBA/FIRE Workshop. Tucson, AZ, January.

Yager, P. L. (1997). A sensitivity analysis of air-sea carbon flux in a marine biosphere model. *ASLO 1997 Aquatic Sciences Meeting.* Santa Fe, New Mexico, February.

Yager, P. L., and J. W. Deming (1996). Microbial activity in the Northeast Water Polynya: testing for temperature and substrate interactions using a kinetic approach. *AGU/ASLO 1996 Ocean Sciences Meeting.* San Diego, California, February.

Yager, P. L., J. W. Deming, T. Sime-Ngando, and K. Juniper (1995). Pelagic microbial activity in the Northeast Water Polynya: implications for the inorganic carbon cycle. *International Northeast Water Polynya Symposium.* Helsingør, Denmark, May.

Yager, P. L., and J. W. Deming (1993). Collaborative research on the Northeast Water polynya (NEW 1992): pelagic microbial dynamics. *International Workshop on Arctic Polynyas.* Seattle. January.

Deming, J. W., and Yager, P. L. (1991). Benthic bacterial populations in the Greenland Sea corridor: response to increased carbon flux and temperature. *Fall Meeting, American Geophysical Union.* San Francisco, California, December.

Yager, P. L., A. R. M. Nowell, and P. A. Jumars (1989). Enhanced deposition to pits: the effect of microtopography on food sources for deposit feeders. *Annual meeting, North American Benthological Society.* Guelph, Ontario, May.

PROFESSIONAL SOCIETIES:

AAAS: American Association for the Advancement of Science

AGU: American Geophysical Union.

ASLO: Association for the Sciences of Limnology and Oceanography.

TOS: The Oceanography Society

ASM: American Society for Microbiology

ISME: International Society for Microbial Ecology

SACNAS: Society for the Advancement of Chicanos/Hispanics and Native Americans in Science

ESWN: Earth Science Women's Network

SWMS: Society for Women in Marine Science

Science Moms

Black in Marine Science

ADDITIONAL EDUCATION:

2020-21 UGA **Certificate in Diversity, Equity, and Inclusion**. Completed.

1997 **Fall 1997 College Teaching Conference.** Program for Instructional Excellence, Office of Graduate Studies, Florida State University. August.

1994 **NASA-NOAA-JPL Summer School for Earth Sciences,** California Institute of Technology, Pasadena, California. Processes of Global Change. Drs. S. K. Ride and D. J. McCleese.

1992–93 **Research practicum** (DOE fellowship program), Brookhaven National Laboratory, Ocean and Atmospheric Sciences Division, Department of Applied Science, Upton, New York. Advisor: Dr. D.W.R. Wallace.

1991–92 **University of Georgia - Institute of Ecology and Department of Microbiology.** Courses in *Microbial Ecology*, *Microbiology*, and *Biochemistry*. Drs. Hodson, Pomeroy, Moran, Wiebe, Whitman, Shimkets, Wiegel, and Dailey. Athens, Georgia.

1991 **Friday Harbor Marine Laboratories**, University of Washington. Summer course: *Climate and the Marine*

Biosphere. Dr. R.H. Gammon. Friday Harbor, Washington.

1989 **Friday Harbor Marine Laboratories**, University of Washington. Summer course: *Polychaetes*. Drs. K. Fauchald, S. Woodin, H. Wilson. Friday Harbor, Washington.

1984 **Friday Harbor Marine Laboratories**. University of Washington. Summer course: *Biological Sedimentary Dynamics*. Drs. A.R.M. Nowell, P.A. Jumars, and R.C. Aller. Friday Harbor, Washington.

1984 **S.E.P.M. Short Course**, Geological Society of America. Course: *Mechanics of Sediment Movement*. Drs. G.V. Middleton and J.B. Southard. Providence, Rhode Island.

1984 **Brown University** - Department of Geology. Micropaleontology Short Course in Benthic Foraminifera. Dr. W. A. Berggren. Providence, Rhode Island.

1983 **Friday Harbor Marine Laboratories,** University of Washington. Summer courses: *Marine Invertebrate Zoology* (Drs. E. Kozloff and T. Suchanek), *Comparative Invertebrate Embryology* (Dr. A. Whiteley). Friday Harbor, Washington.

FIELD EXPERIENCE:

2021-22 **West Antarctic Ice Sheet**, Amundsen Sea, Antarctica. Punta Arenas, Chile to Punta Arenas, Chile. Onboard *Icebreaker Nathaniel B. Palmer*, December 26, 2021–March 12, 2022. Co-chief scientist and Lead Investigator of **ARTEMIS** project, in charge of the carbonate system and microbial biodiversity

2019 **Georgia Bight** – Savannah to the Gulf Stream, onboard *RV Savannah,* April 26–28; September 27–29; November 22–24. Field experience for Marine Science undergraduate and graduate students, including research on coastal carbonate system and ocean acidification.

2010–12 **Western tropical North Atlantic** - Barbados to Barbados, Onboard *RV Knorr*, May 22–June 25, 2010; *RV Melville*, Sept 3–Oct 8, 2011, *RV Atlantis* July 13–29, 2012. Chief Scientist for NSF- and GBMF-funded project investigating biogeochemistry of the Amazon River Plume.

2010–12 **Chukchi and Beaufort Seas,** Coastal Arctic - National Arctic Research Laboratory, Barrow Alaska. Lead investigator of "ArcticNITRO" microbial ecology and carbon cycling.

2010–11 **Amundsen Sea, Antarctica** - Punta Arenas, Chile to McMurdo, Antarctica. Onboard *Icebreaker Nathaniel B. Palmer*, November 26, 2007–January 18, 2011. Chief scientist and Lead Investigator of ASPIRE project, in charge of carbonate system and microbial ecology.

2008–09 **Pacific sector of coastal Antarctica** - Montevideo, Uruguay to McMurdo Station, Antarctica. Onboard *Icebreaker Oden*, November 29, 2008–January 13, 2009. Principal investigator in charge of investigating sea ice microbial ecology and biogeochemistry.

2007–08 **Pacific sector of coastal Antarctica** - Punta Arenas, Chile to McMurdo Station, Antarctica. Onboard *Icebreaker Oden*, November 26, 2007 – January 9, 2008. Principal investigator in charge of investigating pelagic microbial ecology and biogeochemistry.

2006 **Pacific Continental Rise** southwest of Monterey Bay (35.8°N, 122.6°W; 3300 m) aboard the *RV Western Flier* and *ROV Tiburon*, January 2006. Principal investigator collecting deep-sea sediment for analysis of bacterial abundance and activity following deep injection of liquid CO_2. Invited participant in DOE Carbon Sequestration research (Jim Barry, PI).

2001 **Western Equatorial Atlantic** (6–30°N, 41–75°W) aboard *RV Seward Johnson*, January–February 2001. Principal investigator for analysis of seawater for CO_2. Invited participant in NSF-Biocomplexity project to study tropical carbon cycle.

1999 **Northwater Polynya** (72–79°N, 72–79°W)) aboard Canadian Coast Guard icebreaker *Pierre Radisson*, August 21–September 16, 1999. Principal investigator for collection and analysis of seawater for CO_2, other carbon inventories, and microbial activity.

1998 **Ice Station SHEBA, Canada Basin, Arctic Ocean** (75–81°N, 142–168°W) aboard Canadian Coast Guard icebreaker *Des Groseillers,* September 5–October 17, 1998). Principal investigator involved with hydrographic sampling. Collection and analysis of seawater for total dissolved inorganic carbon concentration and microbial activity.

1996–98	**Bering, Chukchi, and Beaufort Seas** (66–76°N, 157–168°W) aboard USCGC *Polar Sea,* May 29–June 25, 1996, June 1–July 7, 1998). Principal investigator in charge of microbial ecology and hydrologic biogeochemistry.
1992–93	**Northeast Water (NEW) Polynya** (77–81°N, 6–17°W), aboard USCGC *Polar Sea,* July–August 1992, 1993. Graduate student, part of interdisciplinary research team (funded by NSF Arctic System Science) studying carbon cycling in arctic polynyas.
1993	**Northeast Water Polynya**, aboard German icebreaker FS *Polarstern*. Collaboration with Canadian and German research team studying Arctic polynyas.
1991	**Santa Catalina Basin, California**, aboard RV *Atlantis II* and DSRV *Alvin*. Effects of whale carcass eutrophication on deep-sea benthic community.
1990	**Norwegian Sea,** aboard German research vessel, FS *Meteor*. Effects of pressure and temperature on deep-sea benthic microbial processes. Collaborated with Drs. G. Graf and L. A. Meyer-Reil.
1987–88	**Hydrodynamics Laboratory** (Lab 7), Friday Harbor Laboratories, San Juan Island, Washington. Master's thesis research: experiments using race-track, straight-through, and annular flumes to study effect of biogenic microtopography on deposition of particles.
1987	**Santa Catalina Basin,** California**.** Onboard research platform using Remote Underwater Manipulator *(RUM II)*. Deep-sea biological-sedimentary interactions.
1987	**Santa Catalina Basin**, California, aboard RV *Atlantis II* and DSRV *Alvin.* Deep-sea biological-sedimentary interactions; *Alvin* dive to 1200 m.
1986	**Northern California continental shelf,** aboard RV *Thomas G. Thompson*. STRESS project: sediment transport and storm effects on continental shelf and slope.
1985	**Hundred Acre Cove,** Barrington, Rhode Island. Fieldwork using canoe and motorized raft. Undergraduate research project: collected estuarine benthic samples using grabs and corers for sediment analysis and hydrodynamics study.
1984	**False Bay, San Juan Island,** Washington. Intertidal fieldwork. Effect of biogenic roughness density on local erosion and deposition.