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# Mary Alldred

Assistant Professor

Center for Earth and Environmental Science  
State University of New York (SUNY) Plattsburgh  
Phone: (518) 564-4112, (770) 530-2098  
mary.alldred@plattsburgh.edu  
<http://malldred.github.io>

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## Education

PhD Ecology and Evolution, Stony Brook University, 2015

Thesis Advisor: Dr. Stephen Baines

BS Biology, *Magna cum Laude*, University of Notre Dame, 2008

Research Advisors: Dr. Gary Belovsky, Dr. Kristin Shrader-Frechette

## Professional Certification

Professional Wetland Scientist (PWS #3429), 2021

Society of Wetland Scientists Professional Certification Program, Inc.

## Employment

State University of New York (SUNY) Plattsburgh, August 2017-Current

Assistant Professor of Earth and Environmental Science

Baruch College: City University of New York, July 2015-July 2017

Postdoctoral Research Associate and Adjunct Professor of Natural Sciences

Postdoctoral Advisor: Dr. Chester Zarnoch

Brookhaven National Laboratory, September 2014-January 2015

Research Assistant, Laboratory of Global Change Biology and Plant Physiology

Research Advisor: Dr. Alistair Rogers

## Publications

Alldred, Mary. 2021. "Review of *Wading Right In: Discovering the Nature of Wetlands*" by C. O. Koning and S. M. Ashworth, illustrated by C. O. Koning. *The Quarterly Review of Biology* 96(1): 49-50.

Alldred, Mary, Jonathan J. Borrelli, Timothy Hoellein, Denise Bruesewitz, and Chester Zarnoch. 2020. "Marsh plants enhance coastal marsh resilience by changing sediment oxygen and sulfide concentrations in an urban, eutrophic estuary." *Estuaries and Coasts* 43: 801-813.

Zarnoch, Chester B., Noshin Hossain, Erika Fusco, Mary Alldred, Timothy J. Hoellein, and Sophia Perdikaris. 2020. "Size and density of upside-down jellyfish, *Cassiopea* sp., and their impact on benthic fluxes in a Caribbean lagoon." *Marine Environmental Research* 154: 104845.

Zhu, Jennifer\*, Chester Zarnoch, J. Stephen Gosnell, Mary Alldred, and Timothy Hoellein. 2019. "Ribbed mussels *Geukensia demissa* enhance nitrogen-removal services but not plant growth in restored eutrophic salt marshes." *Marine Ecology Progress Series* 631: 67-80.

Alldred, Mary, Anne Liberti\*, and Stephen B. Baines. 2017. "Impacts of salinity and nutrients on salt marsh stability." *Ecosphere* 8(11): e02010.

Alldred, Mary and Stephen B. Baines. 2016. "Effects of wetland plants on denitrification rates: a meta-analysis." *Ecological Applications* 26 (3): 676-685.

Alldred, Mary, Stephen B. Baines, and Stuart Findlay. 2016. "Effects of invasive-plant management on nitrogen-removal services in freshwater tidal marshes." *PLoS ONE* 11 (2): e0149813.

Alldred, Mary and Stephen B. Baines. 2011. "Interactions between invasive-species removal and nitrogen-removal ecosystem services in freshwater tidal marshes." Final Reports of the Tibor T. Polgar Fellowship Program, 2010. Hudson River Foundation. New York, NY.

Allred, Mary and Kristin Shrader-Frechette. 2009. "Environmental injustice in siting nuclear plants."  
*Environmental Justice* 2 (2): 85-96.

### **Publications in Revision**

Morris, Nathan\*, Mary Allred, Chester Zarnoch, and Elizabeth Alter. "Composition of estuarine sediment microbiome from a chronosequence of restored urban salt marshes." In revision.\*\*

Moley, Priscilla\*, Mary Allred, and Stephen B. Baines. "Effects of plants on seasonal cycles of denitrification in tidal wetlands." In revision.\*\*

Allred, Mary, Stoycho Velkovsky\*, and Stephen B. Baines. "Using plant traits to predict denitrification potential in salt marsh ecosystems." In revision.\*\*

Allred, Mary, Stoycho Velkovsky\*, Nawal Ahmed\*, Vashtidevi Mahadeo\*, and Priscilla Moley\*, and Stephen B. Baines. "Plant traits predict the influence of wetland plants on sediment oxygen and denitrification." In revision.\*\*

\*Student author

\*\*Manuscript available upon request

### **Funding**

Coleman, Kimberly, Mark Lesser, Curt Gervich, Mary Allred, Danielle Garneau, Colin Fuss, and Timothy Mihuc. May 2021. Wildfire Planning and Management at the Altona Flat Rock. USDA Forest Service. \$147,500

Allred, Mary, Chester Zarnoch, J. Stephen Gosnell, Timothy J. Hoellein, Denise A. Bruesewitz, and Christopher Girgenti. January 2020. Evaluating the Potential for Mutualistic Species Interactions to Enhance Restoration Success in Urban Salt Marshes. Hudson River Foundation. Hudson River Fund. \$157,224.

Garneau, Danielle, Mary Allred, and Mark Lesser. Natural History Interpretation of Rugar Woods. October 2018. Lake Champlain Basin Program, Champlain Valley Natural Heritage Program, Local Heritage Grant. \$3,911.

Lesser, Mark, Danielle Garneau, Timothy Mihuc, Mary Allred, and Eileen Allen. August 2018. Ecosystem response to fire in a jack pine barren in northeastern New York. SUNY Plattsburgh In-House Mini-Grant. \$2,958

### **Fellowships and Awards**

CUNY Postdoctoral Distinguished Travel Award, \$1,500, June 2017

Science and Resilience Institute of Jamaica Bay Fellowship, \$10,000, June 2016

NSF Travel Award to attend International Meeting of the Royal Society, \$5,000, June 2015

Cedar Brook Award for Best Student Presentation, March 2014

Slobodkin Award for Research in Ecology, \$700, March 2014

Outstanding Department Service Award, March 2014

New York SeaGrant Scholar Fellowship, \$26,000, February 2012

Hudson River Foundation Graduate Fellowship, \$15,000, July 2011

National Science Foundation Graduate Fellowship, Honorable Mention, May 2010

Tibor T. Polgar Fellowship, Hudson River Foundation, \$4,800, April 2010

Robert R. Sokal Award for Research in Statistical Biology, \$500, February 2010

### **Presentations**

Allred, Mary, Jonathan J. Borrelli, Timothy Hoellein, Denise Bruesewitz, and Chester Zarnoch. 21 June 2020. Marsh plants enhance coastal marsh resilience by changing sediment redox conditions in an urban, eutrophic estuary. Online Conference of the Society for Ecological Restoration. Poster Presentation.

Allred, Mary, Jonathan J. Borrelli, Timothy Hoellein, Denise Bruesewitz, and Chester Zarnoch. 19 June 2020. Marsh plants enhance coastal marsh resilience by changing sediment redox conditions in an urban,

eutrophic estuary. Québec RE<sup>3</sup> Conference. Québec City, Québec, Canada. Poster Presentation.

\*Postponed COVID-19.

Aldred, Mary, Jonathan J. Borrelli, Timothy Hoellein, Denise Bruesewitz, and Chester Zarnoch. 28 April 2020. Marsh plants enhance coastal marsh resilience by changing sediment redox conditions in an urban, eutrophic estuary. New York State Wetlands Forum. Clayton, NY. Poster Presentation. \*Canceled COVID-19.

Aldred, Mary, Jonathan J. Borrelli, and Chester Zarnoch. 17 March 2019. Marsh plants enhance coastal marsh resilience by changing sediment redox conditions in an urban, eutrophic estuary. GSA Northeastern Section Meeting. Portland, ME. Poster Presentation.

Aldred, Mary, Timothy Hoellein, Denise Bruesewitz, and Chester Zarnoch. 15 April 2018. Nitrogen-removal services of restored salt marshes in Jamaica Bay (New York, NY). Northeast Natural History Conference. Burlington, VT. Oral Presentation.

Aldred, Mary, Timothy Hoellein, Denise Bruesewitz, and Chester Zarnoch. 20 March 2018. Nitrogen-removal services of restored salt marshes in Jamaica Bay (New York, NY). GSA Northeastern Section Meeting. Burlington, VT. Oral Presentation.

Aldred, Mary, Timothy Hoellein, Denise Bruesewitz, and Chester Zarnoch. 9 August 2017. Restoring coastal marshes: How can we recover nitrogen-removal services in urban estuaries? Ecological Society of America. Portland, OR. Oral Presentation.

Aldred, Mary. 20 July 2017. Measuring nitrogen removal services in natural and restored coastal wetlands. Science and Resilience Institute of Jamaica Bay. Invited Webinar Presentation. Available online at <http://www.srijb.org/jbwebinarseries/>.

Aldred, Mary. 12 July 2017. Using plant traits to predict ecosystem services in natural and restored wetlands. Lake Champlain Sea Grant Site Review. Burlington, VT. Invited Oral Presentation.

Aldred, Mary. 21 April 2017. Using plant traits to predict nitrogen removal ecosystem services in natural and restored coastal wetlands. Adelphi University. Invited Oral Presentation.

Aldred, Mary, Timothy Hoellein, Denise Bruesewitz, and Chester Zarnoch. 18 March 2017. Nitrogen removal services of restored salt marshes in Jamaica Bay (New York, NY). New England Estuarine Research Society. Groton, CT. Oral Presentation.

Aldred, Mary. 27 January 2017. Nitrogen-removal ecosystem services of natural and restored salt marshes in Jamaica Bay (New York, NY). School of Marine and Atmospheric Sciences, Stony Brook University. Invited Oral Presentation.

Aldred, Mary. 4 November 2016. Assessing methods for measuring nitrogen-removal services in natural and restored coastal wetlands. Science and Resilience Institute of Jamaica Bay (SRI-JB) Public Agency Committee Meeting. New York, NY. Invited Oral Presentation.

Aldred, Mary. 22 October 2016. Nitrogen removal services of restored salt marshes in Jamaica Bay. New York Marine Sciences Consortium. Bronx, NY. Oral Presentation.

Aldred, Mary, Stoycho Velkovsky, and Stephen B. Baines. 11 August 2016. Using plant traits to predict denitrification potential in salt marsh ecosystems. Ecological Society of America. Fort Lauderdale, FL. Oral Presentation.

Aldred, Mary, Timothy Hoellein, Denise Bruesewitz, and Chester Zarnoch. 16 June 2016. Recovery of ecosystem services following wetland restoration in Jamaica Bay. State of the Bay Symposium. Brooklyn, NY. Invited Poster Presentation.

Aldred, Mary. 15 April 2016. Using plant traits to predict marsh stability and denitrification in wetland ecosystems. New England Estuarine Research Society. York Harbor, ME. Poster Presentation.

Aldred, Mary. 2 June 2015. Using plant traits to predict denitrification in wetland ecosystems. Theo Murphy Discussion Conference, Elements, genomes and ecosystems: cascading nitrogen and phosphorus impacts across levels of biological organization. Buckinghamshire, U.K. Invited Poster Presentation. *\*Recipient of NSF early-career travel award to attend meeting*

Aldred, Mary, Stephen B. Baines, and Stuart Findlay. 23 July 2014. Impacts of invasive-plant management on nitrogen-removal services in freshwater tidal marshes. Gordon Research Conference: Unifying Ecology across Scales. University of New England, Biddeford, ME. Invited Poster Presentation.

- Allred, Mary, Stephen B. Baines, and Stuart Findlay. 20 May 2014. Impacts of invasive-plant management on nitrogen-removal services in freshwater tidal marshes. Joint Aquatic Sciences Meeting. Portland, OR. Oral Presentation.
- Allred, Mary, Stephen B. Baines, and Stuart Findlay. 8 March 2014. Impacts of invasive-plant management on nitrogen-removal services in freshwater tidal marshes. Ecology and Evolution Annual Retreat. Oral Presentation. *\*Recipient of the Cedar Brook Award for Best Student Presentation.*
- Allred, Mary, Stephen B. Baines, and Stuart Findlay. 6 November 2013. Impacts of invasive-plant management on nitrogen-removal services in freshwater tidal marshes. Coastal and Estuarine Research Federation. San Diego, CA. Oral Presentation.
- Allred, Mary. 17 October 2013. Human impact on the nitrogen cycle. Dawson County Middle School, GA. Invited Oral Presentation, conducted via Skype from Stony Brook University, Stony Brook, NY.
- Allred, Mary, Stephen B. Baines, and Stuart Findlay. 18 June 2013. Impacts of invasive-plant management on nitrogen-removal services in freshwater tidal marshes. Aquatic Ecosystem Health and Management Society International Conference. Victoria, British Columbia, Canada. Oral Presentation.
- Allred, Mary, Stephen B. Baines, and Stuart Findlay. 24 April 2013. Impacts of invasive-plant management on nitrogen-removal services in freshwater tidal marshes. Hudson River Science Symposium: The State of Hudson River Science. New Paltz, NY. Poster Presentation.
- Allred, Mary, and Stephen B. Baines. 7 August 2012. Effects of wetland plant communities on denitrification rates: a meta-analysis. Ecological Society of America. Portland, OR. Oral Presentation.
- Allred, Mary. September 2011. Human impact on the nitrogen cycle. Dawson County Middle School, GA. Invited Oral Presentation.
- Allred, Mary. 26 March 2011. Effects of wetland plant communities on denitrification rates: a meta-analysis. Stony Brook University Department of Ecology and Evolution Retreat, NY. Oral Presentation.
- Allred, Mary. 19 November 2010. Using plant traits to predict denitrification in wetland ecosystems. Brookhaven National Laboratory, NY. Invited Oral Presentation.
- Allred, Mary, Stephen B. Baines. 27 August 2010. Interactions between invasive species removal and nitrogen-removal ecosystem services in freshwater tidal marshes. Final Report to the Hudson River Foundation. Millbrook, NY. Oral Presentation.
- Allred, Mary. 6 June 2010. Effects of wetland plant communities on denitrification rates: a meta-analysis. American Society of Limnology and Oceanography and North American Benthological Society Joint Meeting. Santa Fe, NM. Oral Presentation.

### Student Presentations

- Whaley, Thomas and Mary Allred. 22 June 2021. A meta-analysis reveals context dependence in the *Spartina-Geukensia* mutualism. 22 June 2021. Association for the Science of Limnology and Oceanography (ASLO) Aquatic Sciences Virtual Meeting. Oral Presentation.
- Whaley, Thomas, Chester B. Zarnoch, Patricia Rafferty, Jolene Willis, J. Stephen Gosnell, Timothy J. Hoellein, Denise A. Bruesewitz, Christopher Girgenti, Mary Allred. 21 June 2021. Potential applications of the mutualism between smooth cordgrass (*Spartina alterniflora*) and ribbed mussel (*Geukensia demissa*) for restoration of urban wetlands. Online Conference of the Society for Ecological Restoration. Poster Presentation.
- Lenberger, Brandon and Mary Allred. 29 April 2021. Assessing the nutrient-removal potential of floating treatment wetlands in a mesocosm field experiment. Online Joint Meeting of New England Estuarine Research Society and Atlantic Estuarine Research Society. Lightning Talk.
- Whaley, Thomas, Bethany Freynk, Chester Zarnoch, Patricia Rafferty, Jolene Willis, and Mary Allred. 27 April 2021. *Geukensia* recruitment and population structure in a natural and restored marsh. Online Joint Meeting of New England Estuarine Research Society and Atlantic Estuarine Research Society. Lightning Talk.
- Lenberger, Brandon and Mary Allred. 22 April 2021. Assessing the nutrient-removal potential of floating treatment wetlands in a mesocosm field experiment. CEES Virtual Research Symposium. Plattsburgh, NY. Poster Presentation.

- Whaley, Thomas, Eileen Allen, Bethany Freynk, Chester Zarnoch, Patricia Rafferty, Jolene Willis, and Mary Alldred. 22 April 2021. Recovery of native *Geukensia* populations following restoration of an urban marsh. CEES Virtual Research Symposium. Plattsburgh, NY. Lightning Talk.
- Lenberger, Brandon and Mary Alldred. 15 April 2021. Assessing the nutrient-removal potential of floating treatment wetlands in a mesocosm field experiment. Online Northeast Natural History Conference. Poster Presentation.
- Whaley, Thomas and Mary Alldred. 15 April 2021. A meta-analysis reveals context dependence in the *Spartina-Geukensia* mutualism. Online Northeast Natural History Conference. Recorded Poster Presentation.
- Heyer, Mark and Mary Alldred. 27 October 2020. Using Lidar data to document elevational changes in restored urban coastal wetlands. Online Conference of the Geological Society of America. Poster Presentation.
- Heyer, Mark and Mary Alldred. 21 October 2020. Using Lidar data to document elevational changes in restored urban coastal wetlands. Online Conference of the New England Estuarine Research Society. Lightning Talk.
- Whaley, Thomas and Mary Alldred. 21 October 2020. A meta-analysis reveals context dependence in the *Spartina-Geukensia* mutualism. Online Conference of the New England Estuarine Research Society. Lightning Talk.
- Higgins, Kierstyn, Jesse Pruden, and Mary Alldred. 19 June 2020. Influence of wetlands on short-term and long-term soil carbon storage in a fire-dependent ecosystem. Québec RE<sup>3</sup> Conference. Québec City, Québec, Canada. Poster Presentation. \*Postponed COVID-19.
- Whaley, Thomas, Chester B. Zarnoch, Patricia Rafferty, Jolene Willis, J. Stephen Gosnell, Timothy J. Hoellein, Denise A. Bruesewitz, Christopher Girgenti, Mary Alldred. 19 June 2020. Potential applications of the mutualism between smooth cordgrass (*Spartina alterniflora*) and ribbed mussel (*Geukensia demissa*) for restoration of urban wetlands. Québec RE<sup>3</sup> Conference. Québec City, Québec, Canada. Poster Presentation. \*Postponed COVID-19.
- Cutter, Luke, Linh Le, Michala Hendrick, John O'Connor, and Mary Alldred. 5 May 2020. Every duck has its day: Comparison of waterfowl resource availability following moist-soil management. CEES Virtual Research Symposium. Plattsburgh, NY. Poster Presentation.
- Heyer, Mark and Mary Alldred. 5 May 2020. Wetland stability in Jamaica Bay, NY. CEES Virtual Research Symposium. Plattsburgh, NY. Poster Presentation.
- Higgins, Kierstyn, Jesse Pruden, and Mary Alldred. 5 May 2020. Short-term and long-term dynamics in soil carbon storage in a fire dependent ecosystem. CEES Virtual Research Symposium. Plattsburgh, NY. Poster Presentation.
- Lenberger, Brandon and Mary Alldred. 5 May 2020. Evaluating the potential for floating treatment wetlands to remove excess nutrients. CEES Virtual Research Symposium. Plattsburgh, NY. Poster Presentation.
- Whaley, Thomas, Chester B. Zarnoch, Patricia Rafferty, Jolene Willis, J. Stephen Gosnell, Timothy J. Hoellein, Denise A. Bruesewitz, Christopher Girgenti, Mary Alldred. 5 May 2020. Potential applications of the mutualism between smooth cordgrass (*Spartina alterniflora*) and ribbed mussel (*Geukensia demissa*) for restoration of urban wetlands. CEES Virtual Research Symposium. Plattsburgh, NY. Poster Presentation.
- Cutter, Luke, Linh Le, Michala Hendrick, John O'Connor, and Mary Alldred. 17 April 2020. Every duck has its day: Comparison of waterfowl resource availability following moist-soil management. Northeast Natural History Conference. Stamford, CT. Poster Presentation. \*Canceled COVID-19.
- Higgins, Kierstyn, Jesse Pruden, and Mary Alldred. 17 April 2020. Short-term and long-term dynamics in soil carbon storage in a fire dependent ecosystem. Northeast Natural History Conference. Stamford, CT. Poster Presentation. \*Canceled COVID-19.
- Cutter, Luke, Linh Le, Michala Hendrick, John O'Connor, and Mary Alldred. 28 April 2020. Changes in waterfowl resource availability following water-level management. New York State Wetlands Forum. Clayton, NY. Poster Presentation. \*Canceled COVID-19.
- Higgins, Kierstyn, Jesse Pruden, and Mary Alldred. 28 April 2020. Influence of wetlands on short-term and long-term soil carbon storage in a fire-dependent ecosystem. New York State Wetlands Forum. Clayton, NY. Poster Presentation. \*Canceled COVID-19.

- Lenberger, Brandon and Mary Alldred. 28 April 2020. Evaluating the potential for floating treatment wetlands to remove excess nutrients. New York State Wetlands Forum. Clayton, NY. Poster Presentation. \*Canceled COVID-19.
- Whaley, Thomas, Chester B. Zarnoch, Patricia Rafferty, Jolene Willis, J. Stephen Gosnell, Timothy J. Hoellein, Denise A. Bruesewitz, Christopher Girgenti, Mary Alldred. 28 April 2020. Potential applications of the mutualism between smooth cordgrass (*Spartina alterniflora*) and ribbed mussel (*Geukensia demissa*) for restoration of urban wetlands. New York State Wetlands Forum. Clayton, NY. Poster Presentation. \*Canceled COVID-19.
- Flint, Juliana, Rich Spindler, and Mary Alldred. 16 September 2019. Predicting nitrogen removal in agricultural wetland buffers using traits of the plant community. American Institute of Professional Geologists (AIPG) Annual Conference. Burlington, VT. Poster Presentation. \*Winner of Best Student Poster Presentation.
- Tompkins, Makayla, Troy Tetreault, and Mary Alldred. 13 September 2019. Wetlands as permanent carbon sinks in fire-dependent ecosystems. Flat Rock Fire Workshop. Chazy, NY. Oral Presentation.
- Pruden, Jesse and Mary Alldred. 13 September 2019. Changes in soil carbon following fire in a sandstone pavement pine barren. Flat Rock Fire Workshop. Chazy, NY. Poster Presentation.
- Elliott, Alexandria and Mary Alldred. 22 May 2019. Development of a prototype floating treatment wetland for aquatic nutrient remediation. Annual Conference on the Adirondacks. Lake Placid, NY. Poster Presentation.
- Elliott, Alexandria and Mary Alldred. 9 May 2019. Development of a prototype floating treatment wetland for aquatic nutrient remediation. CEES Undergraduate Research Seminar. Plattsburgh, NY. Poster Presentation.
- Elliott, Alexandria, Sarahana Shrestha, and Mary Alldred. 9 May 2019. Wetland education on the Saranac River Trail Greenway: A collaborative project with the Town of Plattsburgh and the Clinton County Health Department. CEES Undergraduate Research Seminar. Plattsburgh, NY. Poster Presentation.
- Flint, Juliana, Rich Spindler, and Mary Alldred. 9 May 2019. Predicting nitrogen removal in agricultural wetland buffers using traits of the plant community. CEES Undergraduate Research Seminar. Plattsburgh, NY. Poster Presentation.
- Gray, Stephanie, Jennifer Krech, Joshua Domenico, Danielle Garneau, Mary Alldred, Mark Lesser, and Michael Burgess. 9 May 2019. Natural history interpretation of Rugar Woods. CEES Undergraduate Research Seminar. Plattsburgh, NY. Poster Presentation.
- Tetreault, Troy, Makayla Tompkins, and Mary Alldred. 9 May 2019. Wetlands as permanent carbon sinks in a fire-dependent ecosystem. CEES Undergraduate Research Seminar. Plattsburgh, NY. Poster Presentation.
- Flint, Juliana. 3 May 2019. How a geologist entered research on wetland ecology...and then returned to geology. Student Research Showcase. SUNY Plattsburgh, Plattsburgh, NY. Invited Oral Presentation.
- Flint, Juliana, Rich Spindler, and Mary Alldred. 17 April 2019. Predicting nitrogen removal in agricultural wetland buffers using traits of the plant community. Hudson-Mohawk Professional Geologists Association Student Expo. Latham, NY. Poster Presentation.
- Tetreault, Troy, Makayla Tompkins, and Mary Alldred. 13 April 2019. Wetlands as permanent carbon sinks in a fire-dependent ecosystem. Northeast Natural History Conference. Springfield, MA. Poster Presentation.
- Flint, Juliana, Rich Spindler, and Mary Alldred. 17 March 2019. Predicting nitrogen removal in agricultural wetland buffers using traits of the plant community. GSA Northeastern Section Meeting. Portland, ME. Poster Presentation.
- Tompkins, Makayla, Troy Tetreault, and Mary Alldred. 17 March 2019. Wetlands as permanent carbon sinks in a fire-dependent ecosystem. GSA Northeastern Section Meeting. Portland, ME. Oral Presentation. \*Winner of Lake Champlain Institute Best Student Presentation Award.
- Penders, Rachel, Stephen Kramer, and Mary Alldred. 9 May 2018. Influence of surface agricultural runoff on nutrient concentrations in the Little Chazy River. CEES Undergraduate Research Seminar. Plattsburgh, NY. Poster Presentation.
- Facenda, Raul, Chester Zarnoch, Patricia Rafferty, Jolene Willis, and Mary Alldred. 9 May 2018. Recovery of benthic invertebrate community following salt marsh restoration in Jamaica Bay (New York, NY). CEES Undergraduate Research Seminar. Plattsburgh, NY. Poster Presentation.

- Penders, Rachel, Stephen Kramer, and Mary Alldred. 15 April 2018. Influence of surface agricultural runoff on nutrient concentrations in the Little Chazy River. Northeast Natural History Conference. Burlington, VT. Poster Presentation.
- Moley, Priscilla, Mary Alldred, Jonathan Haviland, Hoorann Shah, John Desmond, and Stephen B. Baines. 7 August 2017. Plant traits affect seasonal and spatial variation in denitrification in coastal marshes. Ecological Society of America. Portland, OR. Oral Presentation.
- Moley, Priscilla, Mary Alldred, Jonathan Haviland, John Desmond, Rebecca Reigle, Hoorann Shah, and Stephen B. Baines. 17 March 2017. Plant growth and seasonal denitrification in wetlands. New England Estuarine Research Society. Groton, CT. Poster Presentation. \*Winner of 3 x 3 Poster Award
- Moley, Priscilla, Mary Alldred, Jonathan Haviland, John Desmond, Rebecca Reigle, Hoorann Shah, and Stephen B. Baines. 22 October 2016. Plant growth and seasonal denitrification in wetlands. New York Marine Sciences Consortium. Bronx, NY. Poster Presentation. \*Winner of Best Student Poster Award
- Macolino, Casey, Mary Alldred, and Stephen B. Baines. 22 October 2016. The nitrogen cycle in restored marshes of different age in Jamaica Bay, NY. New York Marine Sciences Consortium. Bronx, NY. Poster Presentation.
- Theodore, Julie, Chester Zarnoch, and Mary Alldred. 12 August 2016. Ecosystem services in restored salt marshes. Rockaway Waterfront Alliance Summer Research Program. Queens, NY. Oral and Poster Presentation.
- Macolino, Casey, Mary Alldred, and Stephen B. Baines. August 2016. Will restored *Spartina* marshes in Jamaica Bay mature into stable ecosystems? Simons Summer Research Program. Stony Brook, NY. Poster Presentation.
- Freynek, Bethany, Chester Zarnoch, Mary Alldred, Patricia Rafferty, and Jolene Willis. 16 June 2016. Abundance and Size Distribution of ribbed mussel, *Geukensia demissa*, at a restored and natural marsh in Jamaica Bay, NY. State of the Bay Symposium. Brooklyn, NY. Invited Poster Presentation.
- Freynek, Bethany, Chester Zarnoch, Mary Alldred, Patricia Rafferty, and Jolene Willis. 19 May 2016. Abundance and Size Distribution of ribbed mussel, *Geukensia demissa*, at a restored and natural marsh in Jamaica Bay, NY. Baruch College Creative Inquiry Day. New York, NY. Poster Presentation.
- Moley, Priscilla, Mary Alldred, Jonathan Haviland, and Stephen B. Baines. 13 May 2016. Plant growth and seasonal denitrification in wetlands. Long Island Sound Research Conference. Bridgeport, CT. Poster Presentation.
- Moley, Priscilla, Jonathan Haviland, John Desmond, Rebecca Reigle, Hoorann Shah, Mary Alldred, Stephen B. Baines. 27 April 2016. Plant growth and seasonal denitrification in wetlands. Stony Brook University Undergraduate Research and Creative Activities Day. Stony Brook, NY. Poster Presentation.
- Rogers, Thomas, Ben Mulholland, Chester Zarnoch, and Mary Alldred. 14 August 2015. Assessing Jamaica Bay marsh restorations using a space-for-time substitution approach. Rockaway Waterfront Alliance Summer Research Program. Queens, NY. Poster Presentation.
- Ahmed, Nawal, Vashtidevi Mahadeo, Priscilla Moley, Mary Alldred, Stoycho Velkovsky, and Stephen B. Baines. 29 April 2015. Plant traits predict influence of wetland plants on sediment O<sub>2</sub> and denitrification. Stony Brook University Undergraduate Research and Creative Activities Day. Stony Brook, NY. Poster Presentation.
- Liberti, Anne, Matthew Sarubbi, Mary Alldred, and Stephen B. Baines. 30 April 2014. Impacts of salinity and nutrients on salt marsh stability. Stony Brook University Undergraduate Research and Creative Activities Day. Stony Brook, NY. Poster Presentation.

## **Courses Taught**

### ***SUNY Plattsburgh***

*CFS 1889 Cardinal Foundation Seminar: The Worth of Water*; Fall 2021

*ENV 304 Ecology Lecture*; Fall 2018, 2019, 2020 (Hybrid)

*ENV 304L Ecology Laboratory*; Fall 2017, Spring 2018, 2019, 2020, 2021 (Hybrid), 2022

*ENV 340 Environmental Science Seminar*; Spring 2018, 2021 (Online)

*ENV 413 Biogeochemical Cycling*; Spring 2018, 2019, 2020, 2022

*ENV 422/522 Environmental Data Analysis*; Spring 2020, 2022

*ENV 439/539 & 439L/539L Wetland Ecology & Management*; Fall 2017, 2018, 2019, 2020 (Hybrid), 2021

Contributes to the Applied Environmental Science Program offered in collaboration with the Miner Institute

*ENV 462/562 Ecosystem Ecology*, Spring 2019, 2021 (Online)

### ***Baruch College CUNY***

*Ecology Laboratory*; Instructor, Fall 2015-Spring 2017

### ***Stony Brook University***

*Ecosystem Ecology*; Teaching Assistant, Stony Brook University; Spring 2010, 2011, 2014, 2015

*General Ecology*; Teaching Assistant, Stony Brook University; Fall 2010

*Introduction to Biology*; Teaching Assistant, Stony Brook University; Fall 2008-Fall 2009

## **Students Mentored or Co-Mentored**

### ***SUNY Plattsburgh***

***Undergraduate students:*** Luke Cutter\*, Alexandria Elliott\*, Raul Facenda\*, Juliana Flint\*, Stephanie Gray\*, Mark Heyer\*, Kierstyn Higgins\*, Robert Kruse, Linh Le\*, Brandon Lenberger\*, Rachel Penders\*, Mark Preston, Jesse Pruden\*, Sarahana Shrestha\*, Makayla Tompkins\*, Troy Tetreault\*, Chase Wojtowecz

***Graduate students:*** Thomas Whaley\* (primary advisor), Kayleen Snyder (co-advisor), Lily Delmarsh\* (committee), Molly Russell\* (committee)

### ***Baruch College CUNY***

***Undergraduate students:*** Ani Coaderaj, Bethany Freynk\*, Jessica Kraker, Kiara Marmolejos, Crystal Mena\* (City College), Steven Nguyen, Nicomedes Rivera, Siena Schickler (Colby College), Joi Simon

***Graduate students:*** Jennifer Zhu\* (external committee)

### ***Stony Brook University***

***Undergraduate students:*** Nawal Ahmed\*, Jordan Bader (Drew University), Diana Lenis, Douglas Lerner, Anne Liberti\*, Steven Lundi, Vashtidevi Mahadeo\*, Priscilla Moley\*, Ashley Moreno, Sangmin Pak, Louis Piscopo (SUNY Oswego), Matthew Sarubbi\*, Jordan Schwartzberg, Michael Tong

\* Presented research

## **Society Memberships**

American Association for the Advancement of Science, Spring 2009-Current

Association for the Sciences of Limnology and Oceanography, Fall 2009-Current

Ecological Society of America, Fall 2010-Current

Geological Society of America, Spring 2018-Current

New England Estuarine Research Society, Spring 2015-Current

New York State Wetlands Forum, Fall 2019-Current

Society of Freshwater Science (formerly North American Benthological Society), Fall 2010-Current

Society of Wetland Scientists, Fall 2017-Current



## **Professional Service**

Elected member of the Board of Directors of the New York Flora Association, September 2021-Current  
Co-Chair of 50<sup>th</sup> Anniversary Joint Meeting of New England Estuarine Research Society and Atlantic Estuarine Research Society, Organized panel discussion, “Frontiers in Coastal Nitrogen Research,” April 2021  
Member of Salt Marsh Working Group to inform salt marsh restoration in Long Island and New York City, May 2020-Current  
Reviewed manuscripts for *Aquatic Sciences*, *Ecology Letters*, *Ecological Applications*, *Environmental Justice*, *Frontiers in Environmental Science*, *International Journal of Phytoremediation*, *PLOS One*, *PeerJ*, *Soil Biology and Biochemistry*, and *Wetland Ecology and Management*  
Reviewed grant proposals for California Department of Fish and Wildlife, NOAA Ecological Effects of Sea Level Rise Program, and Lake Champlain Basin Program

## ***SUNY Plattsburgh***

Organizer for entry of Center for Earth and Environmental Science “Swamp Thing” float into the City of Plattsburgh 2021 superhero-themed holiday parade, Fall 2021  
Co-instructor for HIS 1313 The Halloween Class, a course in which students planned a cultural community event in the City of Plattsburgh on the evening of Halloween, offered in collaboration with the History and Theater Department, Fall 2021  
Presented Alldred-lab research to Plattsburgh High School AP Environmental Science class, Fall 2021  
Presented Alldred-lab research to Plattsburgh High School AP Chemistry class in collaboration with Miner Institute workshop, Fall 2021  
MS Natural Resources & Ecology Committee, Fall 2021-Current  
Co-advisor of summer internship program with City of Plattsburgh in which three Center for Earth and Environmental Sciences students assessed and mapped the trail network at City Beach to inform the City Beach management and development plan, Summer 2021  
Submitted course revisions for ENV 304 and ENV 101 for inclusion in the Natural Science Cardinal Foundation Curriculum, Summer-Fall 2021  
Submitted course proposal for CFS 1889 Cardinal Foundation Seminar: the Worth of Water, Spring 2021  
Recruitment and Retention Committee, Fall 2019-Current  
Curriculum Committee, Fall 2019-Current  
Faculty Sponsor, Center for Earth and Environmental Science Undergraduate Research Showcase, Spring 2019  
Committee to Revise Professional Science Masters Program, Spring 2019-Fall 2021  
Hiring Committee for Assistant Professor of Soil Science, Fall 2018-Spring 2019  
Hiring Committee for Assistant Professor of Soil Science, Fall 2017-Spring 2018  
Rugar Woods Committee, Collaboration with CEES Faculty and Saranac River Trail Greenway Committee to improve educational displays in the Rugar Woods location on campus and to develop the site as a spur of the SRTG, Fall 2017-Current  
Collaboration with the Foundation of Champlain Valley Physicians Hospital and the Town of Plattsburgh to develop educational posters and community activities with SUNY Plattsburgh students for the LaPierre Lane spur of the Saranac River Trail Greenway, Fall 2017-Current  
Applied Environmental Science Program (AESP) Committee, Fall 2017-Current

## ***Baruch College CUNY***

Supervised research projects for underserved high school students through Rockaway Waterfront Alliance and College Now programs, July 2015-August 2016

## ***Stony Brook University***

Co-organized a discussion conference, “Ecosystem Services in Jamaica Bay, NY,” January 2015  
Student Representative on Hiring Committee for Department Chair, Fall 2013  
Treasurer, Ecology and Evolution Club, Fall 2011-Spring 2013  
Organized student-invited speaker events, Fall 2010-Spring 2013  
Student Representative at Monthly Faculty Meetings, Fall 2010-Fall 2011  
Chair of Ecology and Evolution Retreat-Organizing Committees, Spring 2010-Spring 2013