

KRISTIN E. DITZLER STROCK

Environmental Studies Department
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RESEARCH INTERESTS

Freshwater and ecosystem ecology and paleoecology, ecosystem response to changes in climate and atmospheric deposition, watershed biogeochemistry, algal ecology, food-web interactions, freshwater resource management

EDUCATION

- 2013 Ph.D. Ecology and Environmental Science, University of Maine (4.0 GPA)
Project title: Deciphering climate-mediated changes in boreal lake ecosystems
Advisor: Dr. Jasmine E. Saros
- 2010 M.S. Ecology and Environmental Science, University of Maine (3.9 GPA)
Project title: Effects of White Perch introductions on food web dynamics:
combining paleolimnological and whole-lake biomanipulation approaches
Advisors: Dr. Kevin Simon and Dr. Jasmine E. Saros
- 2006 B.S. Biology, James Madison University, *magna cum laude* (3.7 GPA)

PROFESSIONAL EXPERIENCE

- 2024-2026 Director of the Dickinson in England Program at the University of East Anglia
- 2014 Associate Professor, Environmental Science & Studies, Dickinson College
- 2012 Research Assistant, EPA Clean Air Act trends research, University of Maine
- 2010 Research Assistant, Portland Water District paleolimnological research,
University of Maine
- 2006-2008 Biologist, Watershed Assessment and Protection, Susquehanna River Basin
Commission

PUBLICATIONS

*Indicates an undergraduate student **Indicates a graduate student

Strock, K.E., R. Krewson*, N. Hayes, B. Deemer. 2024. Getting out from under the ice: Oxidation as a methane sink in glacial runoff. *Nature Scientific Reports*. 14, 23389 (2024).

Deemer, B.R., C.M. Andrews, **K.E. Strock**, N. Voichick, J. Hensleigh, J.R. Beaver. 2023. Over half a century record of limnology data from Lake Powell, a desert southwest United States: From reservoir filling to present day (1964-2021). *Limnology and Oceanography Letters*. 8, 2023, 580-594.

Edlund, M.G., J.M. Ramstack Hobbs, A. Heathcote, D.R. Engstrom, J.E. Saros, **K.E. Strock**, W.O. Hobbs, N.A. Andresen, D.D. VanderMeulen. 2022. Physical characteristics of

northern forested lakes predict sensitivity to climate change. *Hydrobiologia*. 849, 12 (2022): 2705-2729.

Pilla, R.M. Williamson, C.E., Adamovich, B.V., Adrian, R., Anneville, O., Chandra, S., Colom-Montero, W., Devlin, S.P., Dix, M.A., Dokulil, M.T., Gaiser, E.E., Girdner, S.F., Hambright, D., Hamilton, D.P., Havens, K., Hessen, D.O., Higgins, S.N., Huttula, T.H., Huuskonen, H., Isles, P.D.F., Joehnk, K.D., Jones, I.D., Keller, W.B., Knoll, L.B., Korhonen, J., Kraemer, B.M., Leavitt, P.R., Lepori, F., Luger, M.S., Maberly, S.C., Melack, J.M., Melles, S.J., Muller-Navaarra, D.C., Pierson, D.C., Pislegina, H.V., Plisnier, P., Richardson, D.C., Rimmer, A., Rogora, M., Rusak, J.A., Sadro, S., Salmaso, N., Saros, J.E., Saulnier-Talbot, E., Schindler, D.E., Schmid, M., Shimaraeva, S.V., Silow, E.A., Sitoki, L.M., Sommaruga, R., Straile, D., **Strock, K.E.**, Thiery, W., Timofeyev, M.A., Verburg, P., Vinebrooke, R.D., Weyhenmeyer, G.A., Zadereev, E. 2019. Global trends in lake thermal structure: Deep waters are warming less consistently than surface waters and thermal stability. *Nature Scientific Reports*. 10 (20514) <https://doi.org/10.1038/s41598-020-76873-x>.

Pilla, R.M. Williamson, C.E., Adamovich, B.V., Adrian, R., Anneville, O., Chandra, S., Colom-Montero, W., Devlin, S.P., Dix, M.A., Dokulil, M.T., Gaiser, E.E., Girdner, S.F., Hambright, D., Hamilton, D.P., Havens, K., Hessen, D.O., Higgins, S.N., Huttula, T.H., Huuskonen, H., Isles, P.D.F., Joehnk, K.D., Jones, I.D., Keller, W.B., Knoll, L.B., Korhonen, J., Kraemer, B.M., Leavitt, P.R., Lepori, F., Luger, M.S., Maberly, S.C., Melack, J.M., Melles, S.J., Muller-Navaarra, D.C., Pierson, D.C., Pislegina, H.V., Plisnier, P., Richardson, D.C., Rimmer, A., Rogora, M., Rusak, J.A., Sadro, S., Salmaso, N., Saros, J.E., Saulnier-Talbot, E., Schindler, D.E., Schmid, M., Shimaraeva, S.V., Silow, E.A., Sitoki, L.M., Sommaruga, R., Straile, D., **Strock, K.E.**, Thiery, W., Timofeyev, M.A., Verburg, P., Vinebrooke, R.D., Weyhenmeyer, G.A., Zadereev, E. 2019. 2021. Global data set of long-term summertime vertical temperature profiles in 153 lakes. *Scientific data*. 8(1): 200.

Somers, D.J., **K.E. Strock**, J.E. Saros. 2019. Environmental controls on microbial diversity in Arctic Lakes of West Greenland. *Microbial Ecology*. 80(1):60-72. doi: 10.1007/s00248-019-01474-9

Strock, K.E., J.E. Saros, S. McGowan, M. Edlund, D.R. Engstrom. 2019. Response of Boreal Lakes to Changing Wind Strength: Coherent Physical Changes Across Two Large Lakes but Varying Effects on Primary Producers Over the 20th Century. *Limnology and Oceanography*. 64: 2237-2251 doi:10.1002/lno.11181.

Gavin, A.L.**, S.J. Nelson, A.J. Klemmer, I.J. Fernandez, **K.E. Strock**, and W.H. McDowell. 2018. Acidification and Climate Linkages to Increased Dissolved Organic Carbon in High Elevation Lakes. *Water Resources Research*. 54(8): 5376-5393 doi: 10.1029/2017WR020963.

Richardson, D.C., S.J. Melles, R.M. Pilla, A.L. Hetherington, L.B. Knoll, C.E. Williamson, B.M. Kraemer, J.R. Jackson, E.C. Long, K. Moore, L.G. Rudstam, J.A. Rusak, J.E. Saros, S. Sharma, **K.E. Strock**, K.C. Weathers, C.R. Wigdahl-Perry. 2017.

Transparency, geomorphology, and mixing regime explain variability in trends in lake temperature and stratification across northeastern North America (1975 - 2012). *Water*. 9 (442) doi: 10.3390/w9060442.

Strock, K.E., N. Theodore, W. Gawley, A.C. Ellsworth, and J.E. Saros. 2017. Increasing dissolved organic carbon concentrations in northern boreal lakes: implications for lake water transparency and thermal structure. *Journal of Geophysical Research: Biogeosciences*. 122, doi:10.1002/2017JG003767.

Hayes, N., Deemer, B., Corman, J., Razavi, R., **Strock, K.E.** 2017. Key differences between lakes and reservoirs modify climate signals: a case for a new conceptual model. *Limnology and Oceanography Letters*. 2: 47–62. doi:10.1002/lol2.10036

Corman, J.; Deemer, B.; **Strock, K.E.**; Hayes, N.; Razavi, R. 2016. Geographically paired lake-reservoir dataset derived from the 2007 USA EPA National Lakes Assessment. Long Term Ecological Research Network Information System. <http://dx.doi.org/10.6073/pasta/17cb7958c74f8bfc135f3e7f04ee944e>

Corman, J.R., Deemer, B.R., Hayes, N.M., Razavi, N.R., **Strock, K.E.**, Turgeon, K. 2016. Lake and reservoir management made a splash at the 2016 ASLO Summer Meeting. *Limnology and Oceanography Bulletin*. 25.4: 133-134.

Coble, A., Asch, R.G., Rivero-Calle, S., Heerhartz, S., Holding, J., Kremer, C.T., Finiguerra, M., **Strock, K.E.** 2016. Climate is variable, but is our science? *Limnology and Oceanography Bulletin*. 25:71-76 doi: 10.1002/lob.10115.

Strock, K.E., S.J. Nelson, S. Birkel, and J.E. Saros. 2016. Extreme weather years drive episodic changes in lake chemistry: Implications for recovery from sulfate deposition and long-term trends in dissolved organic carbon. *Biogeochemistry*. 127(2): 353 - 365 doi: 10.1007/s10533-016-0185-9

Boeff, K., **K.E. Strock**, J.E. Saros. 2016. Evaluating planktonic diatom response to climate change using a stratification index across three lakes with differing morphometry. *Journal of Paleolimnology*. 56(1): 33-47 doi: 10.1007/s10933-016-9889-z.

Hobbs W.O., B.M. Lafrancois, R. Stottlemeyer, D. Toczydlowski, D.R. Engstrom, M.B. Edlund, **K.E. Strock**, J.E. Saros. 2016. Nitrogen deposition to lakes in national parks of the western Great Lakes region: isotopic signatures, watershed retention, and algal shifts. *Global Biogeochemical Cycles*. 30(3): 514 – 533 doi: 10.1002/2015GB005228.

Strock, K.E., S.J. Nelson, J.E. Saros, J.S. Kahl, W. McDowell. 2014. Trends in biogeochemical recovery from acidification in the Northeastern U.S.: new insights from three decades of lake monitoring. *Environmental Science and Technology*. 48(9): 4681-4689.

Saros, J.E., **K.E. Strock**, J. McCue, E. Hogan, and N.J. Anderson. 2014. Response of *Cyclotella* species to nutrients and incubation depth in Arctic lakes. *Journal of Plankton Research*. 36(2): 450 - 460.

Strock, K.E., J.E. Saros, K.S. Simon, S. McGowan, M.T. Kinnison. 2013. Cascading effects of generalist fish introduction in oligotrophic lakes. *Hydrobiologia*. 711(1): 99 - 113.

Lake, B.A., C.R. Salm, **K.E. Strock**, J.E. Saros and A. Amirbahman. 2011. Multi-proxy paleolimnological assessment of biogeochemical versus food web controls on the trophic states of two shallow, mesotrophic lakes. *Journal of Paleolimnology* 46: 45 – 57.

PUBLISHED REPORTS

Nelson, S.J., A.J. Baumann, A. Coffin, K. Johnson, C. Schmitt, **K. Strock**. 2013. Lake Site Assessments: US EPA TIME-New England Lakes. Report to US-EPA.

Hamilton, S., C. Holdren, E. Stets, **K. Strock**, T. Tietjan. 2018. Grand Canyon Monitoring and Research Center Water-Quality Program Review. Report to United States Geological Survey.

NON-PEER REVIEWED ARTICLES

Strock, K.E. 2017. Better Understanding Through Better Communication. Dickinson College Vantage Points Series: Coming to Consensus on Climate Change.

RESEARCH GRANTS – FUNDED EXTERNAL AWARDS

*Indicates an undergraduate student

2022 North, R.L., Oleksy, I.A., Morales-Williams, A.M., Holgerson, M.A., Richardson, D., **Strock, K.E.**, Collaborative Research: MRA: On thin ice: implications of shorter winters for the future of freshwater phytoplankton phenology and function. National Science Foundation Division of Environmental Biology Macrosystems Biology. (\$3,075,091). Awarded in 2023, I declined involvement due to re-location to the UK in 2024.

2021 Norman, B. Carroll, E., Fischer, J., Knose, L., Princiotta, S., **Strock, K.E.**, Yokota, K. PLEON's Lake School: Empowering evidence-based lake stewardship in Northeastern Pennsylvania. Pennsylvania Department of Environmental Protection Environmental Education General Grant. \$19,983. Completed 2023.

2019 **Strock, K.E.** Developing High-Frequency Sensor Monitoring Tools for Managing Harmful Algal Blooms. Pennsylvania Department of Environmental Protection Growing Greener Plus Grants Program. (\$171,624.86). Ongoing.

2018 **Strock, K.E.**, Hayes, N.M., Deemer, B.R. Thermal Controls on Methane Dynamics in Icelandic Lakes: In-Situ Incubations Across A Geothermal Temperature Gradient. National Geographic. (\$42,613). Completed 2021.

2014 **Strock, K.E.**, Thorpe, E., Egener, M.*, and Benson, S. Protecting and Managing Laurel Lake in the Face of Environmental Change. South Mountain Partnership Grant Program (\$10,000)

2013 **Strock, K.E.D.** Understanding climate-driven change in the boreal lakes of Isle Royale National Park. Churchill Exploration Fund (\$1,226)

- 2012 **Strock, K.E.D.** Understanding climate-driven change in lake habitat structure in Isle Royale National Park. National Park Service George Melendez Wright Climate Change Fellowship Program (\$18,065)
- 2011 Saros, J.E., **Strock, K.E.D.**, Nelson, S., Birkel, S.D. Analyzing legacy data in a climate context to decipher modern changes in lake water chemistry. Maine USGS Water Research Resources Institute - Water Resources Research Grants Program (\$25,369)
- 2011 **Strock, K.E.D.** Exploring climate-induced changes in West Greenland lakes. Churchill Exploration Fund (\$3,830)
- 2009 **Ditzler, K.E.** Impacts of White Perch introductions on trophic dynamics: paleolimnological record of zooplankton grazing and nutrient cycling. Senator George J. Mitchell Center Water Resource Research Institute Grant Program (\$4,497)

RESEARCH GRANTS – FUNDED DICKINSON COLLEGE AWARDS

- 2023 **Strock, K.E.** Managing Harmful Algal Blooms in Pennsylvania Reservoirs. Student-Faculty Research Dickinson College Research and Development Committee. (\$17,648)
- 2022 **Strock, K.E.** Managing Harmful Algal Blooms in Pennsylvania Reservoirs. Student-Faculty Research Dickinson College Research and Development Committee. (\$12,131)
- 2020 **Strock, K.E., D. Somers.** Thermal Controls on Microbial Activity and Methane Dynamics in Icelandic Lakes. Scholarly and Creative Research Dickinson College Research and Development Committee. (\$5,780)
- 2019 **Strock, K.E.** Environmental controls on methane dynamics in Icelandic lakes. Student-Faculty Research Dickinson College Research and Development Committee. (\$12,900)
- 2017 **Strock, K.E.** A comparative study of long-term change and short-term variability in lake ecosystems. Student-Faculty Research Dickinson College Research and Development Committee. (\$12,591)
- 2016 **Strock, K.E.** Exploring climate-induced changes in West Greenland lakes. Student-Faculty Research Dickinson College Research and Development Committee. (\$3,014)
- 2015 **Strock, K.E.** Response of Reservoir Ecosystems to Extreme Rain Events. Dickinson College Center for Sustainability Education Sustainability Education Fund for Student Faculty Research. Student research investigator: Max Egener, class of 2016. (\$9,317)
- 2014 **Strock, K.E.** Reconstructing lake response to changes in multiple stressors. Dickinson College Center for Sustainability Education Sustainability Education Fund for Student Faculty Research (\$4,970)

EDUCATIONAL AND PROFESSIONAL DEVELOPMENT GRANTS

*Indicates an undergraduate student

- 2023 **Strock, K.E.** Environmental Problem Solving through Inquiry and Dialogue Dialogue Across Difference course development grant (\$3,000)
- 2023 **Strock, K.E.** Difficult Choices: Ethics & Case Based Reasoning in Senior Seminars (\$1,000)

- 2022 **Strock, K.E.** Developing resources for communities experiencing harmful algal blooms. Dickinson College Center for Civic Learning and Action Civic Engagement Fund Engaged Pedagogy Award. (\$4,600)
- 2019 **Strock, K.E.** Thermal Controls on Methane Dynamics in Icelandic Lakes: In-Situ Incubations Across A Geothermal Temperature Gradient. Churchill Research Expedition. Student Investigators: Rachel Krewson, class of 2020; Hiba Aoid, class of 2021; Clara Roth, class of 2022. (\$10,000)
- 2018 **Strock, K.E.**, Hayes, N., Deemer, B. Support for Women and Dependent Care National Geographic. (\$9,995). Not funded.
- 2018 **Strock, K.E.**, Arashiro, M., Douglas, M. Developing pedagogy for ENST 162: Integrative Environmental Science, a new introductory, gateway course for environmental science and studies majors. Dickinson College Center for Sustainability Education. (\$890)
- 2018 **Strock, K.E.** Thermal Controls on Methane Dynamics in Icelandic Lakes: In-Situ Incubations Across A Geothermal Temperature Gradient. Churchill Research Expedition. Student Investigators: Madie Ritter, class of 2019; Josie Verter, class of 2019; Rachel Krewson, class of 2020. (\$11,000)
- 2017 **Strock, K.E.** Quantifying long-term trends in dissolved oxygen concentration in Acadia lakes and evaluating the potential effects on lake productivity. Churchill Research Expedition. Student Investigators: Lydia Fox, class of 2019; Madie Ritter, class of 2019; Josie Verter, class of 2019; Nathaniel Rines, class of 2020. (\$3,147)
- 2015 Chin, T.*, **Strock, K.E.** Seasonal Changes in the Algal Community of Lake Lacawac. Lacawac Sanctuary and Biological Field Station Watres Student Research Fund. (\$200)
- 2015 **Strock, K.E.** Exploring Climate-Induced Changes in West Greenland Lakes. Churchill Research Expedition. Student Investigators: Helen Schlimm, class of 2017; Max Egner, class of 2016. (\$7,600)
- 2015 **Strock, K.E.** Understanding Climate-driven change in the boreal lakes of Isle Royale National Park. DANA Research Assistantship, Dickinson College Research and Development Committee. Student Research Assistant: Tabea Zimmermann, class of 2015. (\$3,513)
- 2014 **Strock, K.E.** Going to the Extremes: Aquatic Ecosystem Response to Extreme Weather. National Science Foundation Ecological Dissertations in the Aquatic Sciences Symposium. Honolulu, Hawaii. (\$2,500)
- 2014 **Strock, K.E.** Deciphering the effects of climate change on Pennsylvania lake ecosystems. DANA Research Assistantship, Dickinson College Research and Development Committee. Student Research Assistant: Max Egner, class of 2016. (\$4,358)

INVITED ORAL PRESENTATIONS

*Indicates an undergraduate student

- 2024 **Strock, K.E.** Tracking Harmful Algal Blooms in Pennsylvania Lakes. Pennsylvania Association of Lake Managers Annual Meeting. State College, Pennsylvania USA.
- 2023 **Strock, K.E.**, Stern, O*. All Things Green: Harmful Algal Blooms. Mid-Atlantic volunteer monitoring conference. Carlisle, Pennsylvania USA.

- 2023 **Strock, K.E.**, Trombley, O.*, Kuehn, R.* Harmful Algal Bloom Research Update to Inform Management of Marsh Creek Reservoir: Pennsylvania Growing Greener Grant Program Outcomes. Pennsylvania Department of Conservation and Natural Resources Headquarters Marsh Creek State Park Downingtown, Pennsylvania.
- 2023 **Strock, K.E.**, Trombley, O.* Harmful Algal Bloom Research Update to Inform Management of Gifford Pinchot Lake Reservoir: Pennsylvania Growing Greener Grant Program Outcomes. Pennsylvania Department of Conservation and Natural Resources Headquarters Gifford Pinchot State Park Lewisberry, Pennsylvania.
- 2023 **Strock, K.E.**, Stern, O.* Methods for assessing harmful algal bloom development in Pennsylvania. Reservoirs. Pennsylvania Department of Environmental Protection HAB technical committee
- 2023 **Strock, K.E.** Challenges to Lake Management. Pocono Lake Ecological Observatory Network's Lake School: Empowering evidence-based lake stewardship in Northeastern Pennsylvania.
- 2022 Panelists: Mearns, L., Ruane, A., Abrams, J. Moderator: **Strock, K.E.** Climate Change Evidence and Causes. Science-Based Choices for Climate Action: Insights from the IPCC 6th Assessment Report. Symposium at Dickinson College Carlisle, Pennsylvania USA.
- 2022 Panelists: **Strock, K.E.**, Underwood, A., Hayes, J. Moderator: Pawley, E. Teaching Climate Change in the Liberal Arts Curriculum. Science-Based Choices for Climate Action: Insights from the IPCC 6th Assessment Report. Symposium at Dickinson College Carlisle, Pennsylvania USA.
- 2022 **Strock, K.E.**, Trombley, O.*, Kuehn, R.* When Good Algae Go Bad. Dickinson College Founders' Society Reception. Carlisle, Pennsylvania.
- 2022 **Strock, K.E.** Environmental Controls on Methane Dynamics in Icelandic Lakes. Franklin and Marshall College Biology Department Seminar Series.
- 2021 **Strock, K.E.** Environmental Controls on Methane Dynamics in Lakes. Northeastern Ecology Conference. Lake Ariel, Pennsylvania USA.
- 2021 **Strock, K.E.** Raining and Pouring: How Changing Rainfall Patterns Affect Lake Ecology and Management Pocono Lake Ecological Observatory Network
- 2020 **Strock, K.E.** Pennsylvania Water Resources: Lakes. Cumberland County Master Watershed Steward Training Program
- 2019 **Strock, K.E.** Extreme rain events alter physical and chemical characteristics of lakes in Pennsylvania and throughout the Northeastern United States. Pennsylvania Association of Lake Managers annual meeting State College, Pennsylvania.
- 2019 Deemer, B.R., N. Hayes, **K.E. Strock**, J.R. Corman, N.R. Razavi, K.L. Dibble, C.B. Yackulic. Catchment and management characteristics are key in determining reservoir response to climate change. Association for the Sciences of Limnology and Oceanography Annual Meeting San Juan, Puerto Rico.
- 2018 **Strock, K.E.** Deciphering Climate-Mediated Changes in the Algal Communities of Arctic, Boreal, and Temperate Lakes. Drexel University Department of Biodiversity, Earth & Environmental Science Seminar Series. Philadelphia, Pennsylvania.
- 2018 **Strock, K.E.**, J. Verter*, M. Ritter*, R. Krewson*. Understanding Methane Cycling in Icelandic Lakes and Other Sabbatical Adventures with Professor Strock. Dickinson College Department of Environmental Studies Earth Issues Seminar Series.

- 2017 **Strock, K.E.** Understanding Dissolved Organic Carbon Dynamics Environmental Protection Agency Long-Term Monitoring Cooperator's Meeting. Schoodic Peninsula, Maine.
- 2017 **Strock, K.E.**, Reiner, T., Leavitt, P., Maher, C. Climate Change: What Counts as Truth in an Age of Alternative Facts? Presentation and roundtable discussion sponsored by Office of Academic Advising Dickinson College.
- 2017: **Strock, K.E.** From South Mountain to Your Glass: Preserving and Improving Our Water Supply. South Mountain Speaker Series. Penn State Mont Alto.
- 2016: **Strock, K.E.** Protecting and Managing Laurel Lake in the Face of Environmental Change. South Mountain Partnership Meeting. Kings Gap State Park, Pennsylvania USA.
- 2016: **Strock, K.E.**, Hayes, N., Deemer, B., Corman, J., Razavi, N.R. What to do with reservoirs: Assessing the applicability of current climate change conceptual models for manmade reservoirs. Association for the Sciences of Limnology and Oceanography Annual Meeting. Santa Fe, New Mexico USA
- 2015: **Strock, K.E.** Deciphering climate-mediated changes in diatom communities. Pennsylvania State University Huck Institutes of the Life Sciences Ecology Seminar Series.
- 2015: **Strock, K.E.**, J.E. Saros, M.B. Edlund, D.R. Engstrom. Response of boreal lakes to changing wind strength: Coherent long-term changes in physical lake habitat but varying short-term effects on primary producers. Association for the Sciences of Limnology and Oceanography Meeting. Granada, Spain.
- 2014: **Strock, K.E.** US Government Policy and the Problem of Clean Water. Yunnan Academy of Social Sciences. Kunming, China.
- 2013: **Strock, K.E.** Understanding climate-driven change in lake habitat structure in Isle Royale National Park. Climate Change Research from the Next Generation: George Melendez Wright Climate Change Fellowship Science in Parks. National Park Service Webinar.
- 2013: **Strock, K.E.** What can algae tell us about centuries of climate change in the Great Lakes region? Dickinson College Earth Issues Seminar. Carlisle, PA.
- 2013: **Strock, K.E.** Using EPA long-term monitoring to explore the effects of extreme weather on surface water chemistry. Environmental Protection Agency Long-Term Monitoring Cooperator's Meeting Troy, New York.
- 2010: Lake, B.A., **K.E. Ditzler**, C. Wigdahl, J.E. Saros, A. Amirbahman. Multi-proxy paleolimnological assessment of biogeochemical versus food web controls on the trophic states of East and North Ponds, Maine USA. Colby College Sustainability Solutions Partners Meeting. Waterville, Maine.
- 2009: **Ditzler, K.E.**, J.E. Saros, K.S. Simon. Impacts of White Perch introductions on food web dynamics: paleolimnological record of zooplankton grazing and nutrient cycling. University of Nottingham Environmental and Geomorphological Sciences Research Seminar Series. Nottingham, United Kingdom.

OTHER ORAL PRESENTATIONS

*Indicates an undergraduate student

- 2024 Rabaey, J., Lewis, A., ..., **Strock, K.E.**, ... et al. Patterns and drivers of bottom-water greenhouse gas concentrations across 518 lakes

- Worldwide. American Geophysical Union Annual Meeting. Washington D.C., USA.
- 2023 **Strock, K.E.** Combining High-Frequency Sensor Monitoring Tools with In-Situ Monitoring for Managing Harmful Algal Blooms. North American Lake Management Society Annual Meeting. Erie, Pennsylvania, USA.
- 2022 **Strock, K.E.** Coping with Climate Anxiety. Interactive presentation and dialogue for Dickinson College Let's Talk Climate Seminar Series.
- 2022 **Strock, K.E.**, Decker, A. Encouraging More Diverse Climate Discussions. Interactive presentation and dialogue for Dickinson College Let's Talk Climate Seminar Series.
- 2021 Ruff, I.*, **Strock, K.E.** Extreme Rain Events Drive Temperature Shifts and Anoxia in Pennsylvania Reservoirs. Northeastern Ecology Conference. Lake Ariel, Pennsylvania USA.
- 2018 Edwards, B., **Strock, K.E.** Summer Fieldwork in Iceland. Earth Sciences Lunch and Learn Seminar Series Dickinson College
- 2017 **Strock, K.E.**, Saros, J.E. Interactive effects of extreme weather and reduced sulfate deposition: Accelerated recovery from acidification and increased brownification in lakes of the Northeast U.S. American Geophysical Union Annual Meeting. New Orleans, Louisiana USA.
- 2017 Edwards, B., **Strock, K.E.** Summer Fieldwork in Iceland. Earth Sciences Lunch and Learn Seminar Series Dickinson College
- 2017: **Strock, K.E.**, Egner, M.* The Effects of Extreme Rain Events on Water Transparency and Stratification in Central Pennsylvania Reservoirs. Association for the Sciences of Limnology and Oceanography Annual Meeting. Honolulu, Hawaii USA
- 2017: Edlund, M.B., Ramstack Hobbs, J.M., Heathcote, A.J., Engstrom, D.R., Saros, J.E., **Strock, K.E.**, Hobbs, W.O., VanderMeulen, D.D. Historical diatom community and productivity shifts help predict the sensitivity of boreal lakes to climate change. Association for the Sciences of Limnology and Oceanography Annual Meeting. Honolulu, Hawaii USA
- 2015: Zimmermann, T.K.*, **Strock, K.E.** Diatoms from the deep: What paleolimnology can tell us about lakes and environmental change in Pennsylvania. Dickinson College Rush Hour Seminar Series Carlisle, Pennsylvania.
- 2014: Hill, A., Bruno, M., Marcus, K., Niemitz, J., **Strock, K.**, Feldman, S., Pfister, H. Valley and Ridge Goes to China - Finding the Local in New Environments. Dickinson College Library FaculTea seminar.
- 2014: **Strock, K.E.D.** Deciphering Climate-Mediated Changes in Lake Ecosystems Using Integrated Temporal Perspectives. National Science Foundation-supported symposia for ecological dissertations in the aquatic sciences (Eco-DAS). Honolulu, Hawaii.
- 2014: **Strock, K.E.**, J.E. Saros, S.J. Nelson, S.D. Birkel. Interactive effects of extreme weather and reduced sulfate deposition: Accelerated recovery from acidification and increased brownification in lakes of the northeast U.S. Joint Aquatic Sciences Meeting. Portland, Oregon.
- 2014: Saros, J.E., **K.E. Strock.** Wind-driven changes in lake thermal structure in the Lake Superior region. 22nd Annual Harold W. Borns Symposium. University of Maine, Maine.
- 2013: **Strock, K.E.D.**, J.E. Saros, M.B. Edlund, D.R. Engstrom. Using centric diatoms as indicators of climate-mediated changes in lake thermal structure in the great lakes region. 22nd North American Diatom Symposium. Bar Harbor, Maine.

- 2013: **Strock, K.E.D.**, J.E. Saros, N. Whalen, C. Thompson, K. Boeff, P.T. Hunt. Reconstructing hundreds of years of water quality in Sebago Lake: Implications for the management of Maine's largest drinking water source. Annual meeting of the New England Chapter to the North American Lake Management Society. Standish, Maine.
- 2013: Saros, J.E., **K.E. Strock**, H. Malik. Exploring Climate-Induced Changes in West Greenland Lakes. 21st Annual Harold W. Borns Symposium. University of Maine, Maine.
- 2013: **Strock, K.E.D.**, J.E. Saros, S. Birkel, S.J. Nelson. Exploring the effects of extreme hydrologic events in the northeastern U.S.: Implications for brownification and episodic acidification in Maine Lakes. 21st Annual Harold W. Borns Symposium. University of Maine, Maine.
- 2013: **Strock, K.E.D.**, J.E. Saros, S. Nelson. The effects of extreme climate events on lakewater chemistry: Implications for "brownification" in Maine lakes. Maine Water Conference. Augusta, Maine.
- 2013: **Strock, K.E.D.**, J.E. Saros, S.J. Nelson, S.D. Birkel. The effects of extreme climate events on lakewater chemistry: implications for dissolved organic carbon trends in the northeast U.S. Association for the Sciences of Limnology and Oceanography Meeting. New Orleans, Louisiana.
- 2013: Saros, J.E., **K.E. Strock**, J.R. Stone. Climate-induced changes in lake thermal structure and productivity inferred from paleolimnological reconstructions. Association for the Sciences of Limnology and Oceanography Meeting. New Orleans, Louisiana.
- 2012: **Strock, K.E.D.**, J.E. Saros, S. Nelson. Why climate matters in recovery from acidification in northeastern US surface waters. Maine Water Conference. Augusta, Maine.
- 2011: **Strock, K.E.D.**, A. Ellsworth, B. Gawley, J.E. Saros. Quality air and water at Acadia National Park. Northeast Region Air Quality Committee Meeting. Roosevelt Campobello International Park, New Brunswick.
- 2011: **Strock, K.E.D.**, J.E. Saros, B. Gawley, A. Ellsworth. Understanding the interactive effects of climate change and air pollution on lake ecosystems: implications for declining water clarity in Acadia National Park. 19th Annual Harold W. Borns Symposium. University of Maine, Maine.
- 2011: **Strock, K.E.D.**, J.E. Saros, B. Gawley, A. Ellsworth. Understanding the interactive effects of climate change and air pollution on lake ecosystems: implications for declining water clarity in Acadia National Park. Maine Water Conference. Augusta, Maine.
- 2010: **Ditzler, K.E.**, J.E. Saros, K.S. Simon, M. T. Kinnison, S. McGowan. Impacts of White Perch introductions on food web dynamics: paleolimnological and whole-lake biomanipulation approaches. Joint meeting of the Association for the Sciences of Limnology and Oceanography and the North American Benthological Society. Santa Fe, New Mexico.
- 2010: **Ditzler, K.E.**, J.E. Saros, K.S. Simon, M. T. Kinnison, S. McGowan. Impacts of White Perch introductions on food web dynamics: paleolimnological and whole-lake biomanipulation approaches. 18th Annual Harold W. Borns Symposium. University of Maine, Maine.

- 2010: **Ditzler, K.E.**, J.E. Saros, K.S. Simon, M. T. Kinnison. Impacts of White Perch introductions on food web dynamics: paleolimnological and experimental analysis of zooplankton grazing and nutrient cycling. Maine Water Conference. Augusta, Maine.
- 2009: **Ditzler, K.E.**, J.E. Saros, K.S. Simon. Impacts of White Perch introductions on food web dynamics: paleolimnological record of zooplankton grazing and nutrient cycling. 17th Annual Harold W. Borns Symposium. Climate Change Institute University of Maine, Maine.
- 2007: Gavin, A.J. **K.E. Ditzler**. Paxton Creek Stormwater Project: Development of an innovative and cooperative stormwater management approach for Pennsylvania communities. National Fish and Wildlife Foundation Targeted Watershed Grants Project Roundtable. Staunton, Virginia.

POSTER PRESENTATIONS

*Indicates an undergraduate student **Indicates a graduate student

- 2023 Kuehn, R.* **Strock, K.E.** The Downstream and Reservoir Effects of a Hypolimnetic Dam in Carlisle, PA. North American Lake Management Society Annual Meeting. Erie, Pennsylvania, USA.
- 2023 Trombley, O*. **Strock, K.E.** Using a High-Frequency Sensor Network to Characterize Reservoir Responses to Increasing Frequency and Severity of Rain Events. North American Lake Management Society Annual Meeting. Erie, Pennsylvania, USA.
2023. Stern, O*. **Strock, K.E.** Relating Algal Toxin Occurrence to Environmental Cues: Can Visual Indicators Predict Toxin Formation? North American Lake Management Society Annual Meeting. Erie, Pennsylvania, USA.
- 2023 Patil, P*. **Strock, K.E.** The Role of Iron in Cyanobacterial Growth and Toxin Formation in Freshwater Ecosystems: Management Implications for Harmful Algal Blooms. North American Lake Management Society Annual Meeting. Erie, Pennsylvania, USA.
- 2023 **Strock, K.E.**, Trombley, O*. Collaborative Sensor Network in Pennsylvania Reservoirs Northeastern meeting of the Global Lake Ecological Observatory Network.
- 2023 Patil, P.*, **Strock, K.E.** Iron enrichment strengthens the effects of nitrogen on cyanobacterial growth and toxin formation in a eutrophic freshwater reservoir. Limnology and Oceanography Aquatic Sciences Meeting. Palma de Mallorca, Spain.
- 2020 Thibodeau, A.M., Bonsey, K.*, Curley, A.*, Barber, D.C., **Strock, K.E.** Investigation mercury burial in two small lakes undergoing browning in northeastern Pennsylvania. Northeastern and Southeastern Geological Society of America Joint Meeting. Reston, Virginia USA.
- 2019 Aoid, H.*, **Strock, K.E.**, Hayes, N., Deemer, B. The Effects of Light Availability and Dissolved Organic Carbon Concentration on Methane Dynamics in Icelandic Lakes. American Geophysical Union Annual Meeting. San Francisco, California USA.
- 2019 Marinelli, M.*, **Strock, K.E.**, Deemer, B. Shifting Phytoplankton and Zooplankton Phenology in Recent Decades in Lake Powell Reservoir, Southwestern USA. Ecological Society of America Meeting. Louisville, Kentucky USA.
- 2019 Fox, L.*, **Strock, K.E.** Relating Diatom Community Shifts to Environmental Change in Icelandic Freshwater Lakes. Northeastern Geological Society of America Meeting. Portland, Maine USA.

- 2019 Verter, L.J.*, **Strock, K.E.**, Deemer, B., Hayes, N. The role of methanotrophs in fueling aquatic food webs and resulting effects on methane cycling in Icelandic lakes. Mid-Atlantic Ecological Society of America Meeting. Baltimore, Maryland USA.
- 2019 Ritter, M.B*., **Strock, K.E.**, Deemer, B., Hayes, N. The Role of Dissolved Organic Carbon and other Environmental Controls on Methane Processes in Icelandic Lakes. Society of Freshwater Science Annual Meeting. Salt Lake City, Utah. USA.
- 2018 Bonsey, K.*, Curley, A.N.*, **Strock, K.E.**, Thibodeau, A.M. Investigation of lead isotopes and trace metal fluxes as particulate contaminant tracers and chronostratigraphic markers for lake sediments in northeastern Pennsylvania. Geological Society of America Annual Meeting. Indianapolis, Indiana USA.
- 2018 Gavin, A. L.**., Nelson, S. J., Klemmer, A. J., Fernandez, I.J., **Strock, K.E.**, J. E. Saros, McDowell, W.H., Funk, C., Lynch, J.A. Acidification and climate linkages to increased dissolved organic carbon in high elevation lakes. American Geophysical Union Annual Meeting. Washington D.C. USA.
- 2018 Ritter, M.B*., **Strock, K.E.**, Deemer, B., Hayes, N. The effects of DOC quantity and quality on methane production, oxidation, and emission in Icelandic lakes. American Geophysical Union Annual Meeting. Washington D.C. USA.
- 2018 Verter, L.J.*, **Strock, K.E.**, Deemer, B., Hayes, N. The role of methanotrophs in fueling aquatic food webs and resulting effects on methane cycling in Icelandic lakes. American Geophysical Union Annual Meeting. Washington D.C. USA.
- 2018 Krewson, R*., **Strock, K.E.**, Deemer, B., Hayes, N. The effect of lake temperature on rates of methane production and oxidation in two sub-Arctic lakes. American Geophysical Union Annual Meeting. Washington D.C. USA.
- 2018 **Strock, K.E.**, Deemer, B., Hayes, N. Environmental Controls on Methane Dynamics in Icelandic Lakes. American Geophysical Union Annual Meeting. Washington D.C. USA.
- 2018 Gavin, A.L.**., Nelson, S.J., Fernandez, I.J., Saros, J.E., Klemmer, A.J., **Strock, K.E.**, McDowell, W.H. Assessing Dissolved Organic Carbon Trends in Maine Lakes. Maine Water Conference. Augusta, Maine USA.
- 2017 Greco, A.*., Strock, K.E., Edwards, B. Patterns in the physical, chemical, and biological composition of Icelandic lakes and the dominant factors controlling variability across watersheds. American Geophysical Union Annual Meeting. New Orleans, Louisiana USA.
- 2017 Ritter, M.*, Strock, K.E., Edwards, B. Effects of accelerated deglaciation on chemical characteristics of sub-arctic lakes and rivers in south and west Iceland. American Geophysical Union Annual Meeting. New Orleans, Louisiana USA.
- 2017 Day, D.*, Strock, K.E., Hayes, N., Deemer, B., Corman, J., Razavi, R. Reduced water clarity in United States reservoirs as compared to lakes: Implications for mediating mass transport from continents to coasts. Society of Freshwater Sciences Meeting Raleigh, North Carolina.
- 2017 Gavin, A.L.**., Nelson, S., A. Klemmer, **K. Strock**, I. Fernandez. Linking climate variability to population wide increases of dissolved organic carbon in acid-sensitive high elevation lakes. BIOGEOMON Litomyšl, Czech Republic.
- 2017 Schlimm, H.*, **Strock, K.E.**, Wigdahl-Perry, C., Saros, J.E. Long-term records of climate-induced changes in the zooplankton of West Greenland lakes. Dickinson College Student Research Symposium Carlisle, Pennsylvania.

- 2017 Schlimm, H.*, **Strock, K.E.**, Wigdahl-Perry, C., Saros, J.E. Long-term records of climate-induced changes in the zooplankton of West Greenland lakes. Association for the Sciences of Limnology and Oceanography Meeting Honolulu, Hawaii.
- 2016 Egener, M.*, **Strock, K.E.** The effects of extreme rain events on water transparency and stratification in central Pennsylvania reservoir ecosystems. Association for the Sciences of Limnology and Oceanography Meeting Santa Fe, New Mexico.
- 2016 Chin, T.*, **Strock, K.E.**, Knoll, L., Williamson, C.E. Differing seasonal succession of phytoplankton in lakes with high and low dissolved organic carbon concentrations: Implications for long-term community shifts. Association for the Sciences of Limnology and Oceanography Meeting Santa Fe, New Mexico.
- 2016 Diamond, S.*, Plascencia, E.A.*, Kochtitzky, W.*, Edwards, B., Marino, J., **Strock, K.E.** Diatom community shifts in response to volcanic activity and long-term climatic change in a high altitude South American lake. Association for the Sciences of Limnology and Oceanography Meeting Santa Fe, New Mexico.
- 2016 Egener, M.*, **Strock, K.E.** The effects of extreme rain events on water transparency and stratification in central Pennsylvania reservoir ecosystems. Dickinson College Student Research Symposium Carlisle, Pennsylvania.
- 2016 Chin, T.*, **Strock, K.E.**, Knoll, L., Williamson, C.E. Differing seasonal succession of phytoplankton in lakes with high and low dissolved organic carbon concentrations: Implications for long-term community shifts. Dickinson College Student Research Symposium Carlisle, Pennsylvania.
- 2016 Diamond, S.*, Plascencia, E.A.*, Kochtitzky, W.*, Edwards, B., Marino, J., **Strock, K.E.** Diatom community shifts in response to volcanic activity and long-term climatic change in a high altitude South American lake. Dickinson College Student Research Symposium Carlisle, Pennsylvania.
- 2015: Plascencia, E.A.*, Kochtitzky, W.*, **Strock, K.E.**, Edwards, B., Marino, J., Manrique, N. Analysis of sediment and ash from Lao Pallarcocha, Nevado Coropuna, Peru. The Geological Society of America annual meeting Baltimore, Maryland.
- 2015: Zimmermann, T.K.*, **Strock, K.E.** Reconstructing the effects of multiple stressors on algal communities in lakes with differing concentrations of dissolved organic carbon. Dickinson College Student Research Symposium Carlisle, Pennsylvania.
- 2015: Zimmermann, T.K.*, **Strock, K.E.**, Knoll, L., Williamson, C.E. Reconstructing the effects of multiple stressors on algal communities in lakes with differing concentrations of dissolved organic carbon. Association for the Sciences of Limnology and Oceanography Meeting Granada, Spain.
- 2014: Warner, K.A.**, **K.E. Strock**, M.F. Teisl, J.E. Saros. Ecological and economic vulnerability of Maine drinking water resources to increased frequency of extreme storm events. Joint Aquatic Sciences Meeting Portland, Oregon.
- 2012: **Strock, K.E.D.**, J.E. Saros, M.B. Edlund, D.R. Engstrom. Climate-mediated changes in boreal lakes: A diatom-based reconstruction of changes in lake thermal stratification. International Paleolimnology Symposium. Glasgow, Scotland.
- 2012: **Strock, K.E.D.**, J.E. Saros, S. Nelson. Analyzing legacy data in a climate context to decipher modern changes in lakewater chemistry. BIOGEOMON. Northport, Maine.
- 2011: Hargreaves, B., J. Brentrup, K. Rose, **K. Strock**, L. Knoll, J. Saros, C. Williamson. Lakes as sentinels of change: DOC signals from terrestrial watersheds. Northeastern Ecosystem Research Cooperative. Durham, New Hampshire.

- 2011: **Strock, K.E.D.**, J.E. Saros. Exploring the interactive effects of climate change and declining sulfur deposition as drivers of synchronous changes in water clarity across lakes in Acadia National Park. Global Lake Ecological Observatory Network. Lake Sunapee, New Hampshire.
- 2011: Saros, J.E., **K.E.D. Strock**, B. Gawley, A. Ellsworth. Declining water clarity in Acadia's lakes: Trends and possible causes. Acadia National Park Science Symposium. Bar Harbor, Maine.
- 2009: **Ditzler, K.E.**, J.E. Saros, K.S. Simon, M. T. Kinnison. Impacts of White Perch introductions on food web dynamics: paleolimnological and experimental analysis of zooplankton grazing and nutrient cycling. 29th International Symposium of the North American Lake Management Society. Hartford, Connecticut.