

## Kevin H. Wyatt

School of Environment and Natural Resources, The Ohio State University  
414C Kottman Hall, 2021 Coffey Road, Columbus, OH 43210  
email: wyatt.268@osu.edu; tel: 614-292-2265; fax: 614-292-7432; webpage: wyattlab.org

### EDUCATION

Ph.D. Integrative Biology, Michigan State University, 2010  
Certification in Teaching College Science and Mathematics, Michigan State University, 2010  
M.S. Environmental Biology, University of Southern Mississippi, 2005  
B.S. Environmental Biology, University of Southern Mississippi, 2003

### PROFESSIONAL APPOINTMENTS

Professor, School of Environment and Natural Resources, The Ohio State University, 2024 –  
Professor of Biology, Department of Biology, Ball State University, 2022 – 2024  
Associate Professor of Biology, Department of Biology, Ball State University, 2017 – 2022  
Assistant Professor of Biology, Department of Biology, Ball State University, 2012 – 2017  
Adjunct Faculty in Environmental Science, Saginaw Chippewa Tribal College, Mt. Pleasant Michigan, Spring 2011  
Postdoctoral Fellow, Faculty Institutes for Reforming Science Teaching Program, National Science Foundation, 2011 – 2012  
Postdoctoral Research Associate, Institute for Great Lakes Research, Central Michigan University, 2010 – 2012  
Future Academic Scholars in Teaching Fellow, Michigan State University, 2010  
Graduate Research and Teaching Assistant, Department of Integrative Biology, Michigan State University, 2005 – 2010  
Research Associate, U.S. Fish and Wildlife Service, Yukon Flats National Wildlife Refuge, Fairbanks, Alaska, 2006  
Graduate Research and Teaching Assistant, Department of Biological Sciences, University of Southern Mississippi, 2003 – 2005

### AWARDS & FELLOWSHIPS

Graduate Faculty for Inclusive Excellence Award, Ball State University, 2022  
Teacher-Scholar Program Fellow, Ball State University, 2021 – 2024  
Natural Sciences Faculty Fellow for the Skills Infusion Program, Ball State University, 2020  
Scholarship of Teaching and Learning Fellow, Ball State University, 2014  
Faculty Institutes for Reforming Science Teaching Fellow, National Science Foundation, 2011 – 2012

SCHOLARSHIP**Peer-review Publications (\* indicates student author)**

31. \*Araujo, C.R., **K.H. Wyatt**, and A.R. Rober. 2025. For richer or poorer: diatom indicators of biological condition in northern peatlands. *Hydrobiologia* DOI: 10.1007/s10750-024-05581-8. (Special issue on Advances in Freshwater Algal Ecology – Celebrating Professor R. Jan Stevenson’s retirement and achievement).
30. **Wyatt, K.H.**, J. Cieslik\*, C.M. Dieleman, E.S. Kane, A.R. Rober, B. Sullivan\*, and M.R. Turetsky. 2024. Legacy effects of plant community structure are manifested in microbial biofilm development with consequences for ecosystem CO<sub>2</sub> emissions. *Global Change Biology* 30: e17603. DOI: 10.1111/GCB.17603.
29. Rober, A.R., A.J. Lankford\*, E.S. Kane, M.R. Turetsky, and **K.H. Wyatt**. 2023. Structuring life after death: plant leachates promote CO<sub>2</sub> uptake by regulating microbial biofilm interactions in a northern peatland ecosystem. *Ecosystems* DOI: 10.1007/s10021-023-00820-w.
28. \*Hamilton, V.A., S.S. Lee, A.R. Rober, P.C. Furey, K.M. Manoylov, and **K.H. Wyatt**. 2023. A voucher flora of diatoms from fens in the Tanana River floodplain, Alaska. *Water* 5: 2803 DOI: 10.3390/w15152803. (Special issue on Freshwater and Brackish Diatoms: Ecology and Bioindication).
27. Rober A.R., K.S. McCann, M.R. Turetsky, and **K.H. Wyatt**. 2022. Cascading effects of predators on algal size structure. *Journal of Phycology* 58:308-317.
26. **Wyatt K.H.**, K.S. McCann, A.R. Rober, and M.R. Turetsky. 2021. Trophic interactions regulate peatland carbon cycling. *Ecology Letters* 24: 781-790.
25. \*Ferguson H.M., E.J. Slagle\*, A.A. McCann\*, J.T. Walls\*, **K.H. Wyatt** and A.R. Rober. 2021. Greening of the boreal peatland food web: periphyton support secondary production in northern peatlands. *Limnology and Oceanography* 66: 1743-1758.
24. \*Myers J.M., K.A. Kuehn and **K.H. Wyatt**. 2021. Carbon subsidies shift a northern peatland biofilm community towards heterotrophy in low but not high nutrient conditions. *Freshwater Biology* 66: 589-598.
23. Kane E.S., C.M. Dieleman, D. Rupp\*, **K.H. Wyatt**, A.R. Rober, M.R. Turetsky. 2021. Consequences of increased variation in peatland hydrology for carbon storage: legacy effects of drought and flood in a boreal fen ecosystem. *Frontiers in Earth Science* 8: 577746. DOI: 10.3389/feart.2020.577746.
22. Halvorson, H.M., **K.H. Wyatt**, and K.A. Kuehn. 2020. Ecological significance of autotrophic-heterotrophic microbial interactions in freshwaters. *Freshwater Biology* 65: 1183-1188.
21. \*Seballos R.C., **K.H. Wyatt**, R.J. Bernot, S.P. Brown, S. Chandra, and A.R. Rober. 2020. Nutrient availability and organic matter quality shape bacterial community structure in a lake biofilm. *Aquatic Microbial Ecology* 85: 1-18.

20. **Wyatt K.H.** and A.R. Rober. 2020. Warming enhances the stimulatory effect of algal exudates on dissolved organic carbon decomposition. *Freshwater Biology* 65: 1288-1297. (research highlighted on cover).
19. **Wyatt K.H.**, R.C. Seballos\*, M.N. Shoemaker\*, S.P. Brown, S. Chandra, K.A. Kuehn, A.R. Rober, and S. Sadro. 2019. Resource constraints highlight complex microbial interactions during lake biofilm development. *Journal of Ecology* 107: 2737-2746.
18. \*Walls, J., **K.H. Wyatt**, J.C. Doll, E.M. Rubenstein, and A.R. Rober. 2018. Hot and toxic: temperature regulates microcystin release from cyanobacteria. *Science of the Total Environment* 610-611: 786-795.
17. \*DeColibus D., A.R. Rober, A.M. Sampson\*, A.C. Shurzinske\*, J.T. Walls\*, M.R. Turetsky, and **K.H. Wyatt**. 2017. Legacy effects of drought alters the aquatic food web of a northern boreal peatland. *Freshwater Biology* 62: 1377- 1388.
16. Pyron M., J.C. Becker, K.J. Broadway, L. Etchison, M. Minder, D. DeColibus\*, M. Chezem\*, **K.H. Wyatt**, and B.A. Murry. 2017. Are long-term fish assemblage changes in a large U.S. river related to the Asian Carp invasion? Test of the hostile take-over and opportunistic dispersal hypotheses. *Aquatic Sciences* 79: 631-642.
15. \*Gu Y. and **K.H. Wyatt**. 2016. Light availability limits the response of algae and heterotrophic bacteria to elevated nutrient levels and warming in a northern peatland. *Freshwater Biology* 61: 1442-1453.
14. **Wyatt K.H.** and M.R. Turetsky. 2015. Algae alleviate carbon limitation of heterotrophic bacteria in boreal peatland. *Journal of Ecology* 103:1165-1171.
13. Rober A.R., R.J. Stevenson, and **K.H. Wyatt**. 2015. The role of light availability and herbivory on algal responses to nutrient enrichment in a riparian wetland, Alaska. *Journal of Phycology* 51: 528-535.
12. **Wyatt K.H.**, J.S. Bange\*, A.S. Fitzgibbon\*, M.R. Bernot, and A.R. Rober. 2015. Nutrients and temperature interact to regulate algae and heterotrophic bacteria in an Alaskan poor fen peatland. *Canadian Journal of Fisheries and Aquatic Sciences* 72:447-453.
11. **Wyatt K.H.**, A.R. Rober, N. Schmidt\*, and I.R. Davison. 2014. Effects of desiccation and rewetting on the release and decomposition of dissolved organic carbon from benthic macroalgae. *Freshwater Biology* 59: 407-416.
10. Rober A.R., **K.H. Wyatt**, M.R. Turetsky, and R.J. Stevenson. 2014. Spatial and temporal variability of algal community dynamics and productivity in lateral floodplain wetlands along the Tanana River, Alaska. *Freshwater Science* 33: 765-777.
9. Linton D.L., W.M. Pangle, **K.H. Wyatt**, K.N. Powell\*, and R.E. Sherwood\*. 2014. Identifying key features of active learning: the effects of writing and peer discussion. *CBE-Life Sciences Education* 13: 469-477.
8. **Wyatt K.H.**, E. Tellez\*, R.L. Woodke\*, R.J. Bidner\*, and I.R. Davison. 2014. Effects of nutrient limitation on the release and use of dissolved organic carbon from benthic algae in Lake Michigan. *Freshwater Science* 33: 557-567.

7. Rober A.R., **K.H. Wyatt**, M.R. Turetsky, and R.J. Stevenson. 2013. Algal community responses to experimental and interannual variation in hydrology in an Alaskan boreal fen. *Freshwater Science* 32:1-11.
6. **Wyatt K.H.**, M.R. Turetsky, A.R. Rober, E.S. Kane, D. Giroldo, and R.J. Stevenson. 2012. Contributions of algae to GPP and DOC production in an Alaskan fen: effects of historical water table manipulations on ecosystem responses to a natural flood. *Oecologia* 169:821-832.
5. Rober A.R., **K.H. Wyatt**, and R.J. Stevenson. 2011. Regulation of algal structure and function by nutrients and grazing in a boreal wetland. *Journal of the North American Benthological Society* 30: 787-796.
4. **Wyatt K.H.**, R.J. Stevenson, and M.R. Turetsky. 2010. The importance of nutrient co-limitation in regulating algal community composition, productivity, and algal-derived DOC in an oligotrophic marsh in interior Alaska. *Freshwater Biology* 55: 1845-1860.
3. **Wyatt K.H.** and R.J. Stevenson. 2010. Effects of acidification and alkalization on a periphytic algal community in an Alaskan wetland. *Wetlands* 30: 1193-1202.
2. Kasischke E.S., L.L. Bourgeau-Chavez, A.R. Rober, **K.H. Wyatt**, J.M. Waddington, and M.R. Turetsky. 2009. Effects of soil moisture and water depth on ERS SAR backscatter measurements from an Alaskan wetland complex. *Remote Sensing of Environment* 113: 1868-1873.
1. **Wyatt K.H.**, F.R. Hauer, and G.F. Pessoney. 2008. Benthic algal response to hyporheic-surface water exchange in an alluvial river. *Hydrobiologia* 607: 151-161.

### Research Grants

National Science Foundation, Division of Environmental Biology – Ecosystem Science Cluster: “Does plant-microbial interactions determine the direction of carbon flux during the wet phase of northern peatlands?” (PI with one other). 2022-2025. \$199,895

ASPiRE Research Grant, Ball State University. “What are the consequences of climate-driven alterations to plant community structure on microbial biofilm development?” (PI). 2022. \$15,000

National Science Foundation, Long-term Research in Environmental Biology (LTREB): Collaborative Research: “Long-term changes in peatland carbon fluxes and the interactive role of altered hydrology, vegetation, and redox supply in a changing climate”. (Co-PI with five others). 2020-2025. \$600,000.

National Science Foundation, Division of Environmental Biology – Ecosystem Science Cluster, Early-concept Grants for Exploratory Research (EAGER): “Assessing the role of trophic interactions on peatland carbon cycling under varied nutrient availability.” (PI with one other). 2017-2021. \$297,879

ASPiRE Research Grant, Ball State University. “Evaluating how nutrients and organic matter interact to influence the associations between autotrophic and heterotrophic microorganisms during aquatic biofilm development.” (PI). 2018. \$15,000

- Indiana Water Resources Research Consortium, United States Geological Survey. “Predicting toxic cyanobacterial blooms in the Wabash River Watershed.” (Co-PI with one other). 2016. \$49,856
- Senior Research Grant, Indiana Academy of Sciences. “Effects of temperature on toxin release by Cyanobacteria.” (PI). 2015. \$3,000
- Office of Educational Excellence Creative Teaching Grant, Ball State University. “Pathways to scientific teaching: Improving STEM education through graduate training in science education.” (Co-PI with one other). 2015. \$7,025
- Discovery Collaborative Philanthropic Award. “Pathways to scientific teaching: Improving STEM education through graduate training in science education.” (Co-PI with one other). 2015. \$16,097
- ASPiRE Research Grant, Ball State University. “The role of algae in the wetland food web: a potential missing link in the study of ecosystem responses to environmental change.” (PI). 2015. \$15,000
- Indiana Water Resources Research Consortium, United States Geological Survey. “Developing a predictive model for algae-bacterial associations in the Wabash River Watershed.” (PI). 2015. \$45,451
- Winona Welch Award for Botanical Biodiversity Research, Indiana Academy of Sciences. “Substrate controls on decomposition in conditions of enhanced algal production in temperate wetlands.” (PI). 2014. \$500
- Senior Research Grant, Indiana Academy of Sciences. “Substrate controls on decomposition in conditions of enhanced algal production in temperate wetlands.” (PI). 2013. \$3,000
- ASPiRE Junior Faculty Research Grant, Ball State University. “Enhanced algal production and altered carbon cycling in boreal peatlands.” (PI). 2013. \$7,750
- Senior Research Grant, Indiana Academy of Sciences. “Effects of nutrients and light on the release and use of DOC from benthic algae in Lake Michigan.” (PI). 2012. \$2,554
- Faculty Research and Creative Endeavors Grant, Institute for Great Lakes Research, Central Michigan University. “Evaluating DOC release in the macroalga *Cladophora glomerata* in Lake Michigan.” (PI). 2012. \$7,500

### **Research Grants, Fellowships, and Awards as a Graduate Student**

- Dissertation Completion Fellowship, Michigan State University. 2010
- Sigma Xi Grant-in-Aid of Research, Sigma Xi Scientific Research Society. 2009
- Marvin Hensley Endowed Research Fellowship, Michigan State University. 2009
- Field Research Grant, The Wetland Foundation. 2009
- Dissertation Continuation Fellowship, Michigan State University. 2009
- President’s Award, Society for Freshwater Science, 2008
- Biogeochemistry Environmental Research Award, Michigan State University, 2008
- Grant-in-Aid of Research in Phycology, Phycological Society of America. 2007, 2008
- College of Natural Science Summer Fellowship, Michigan State University. 2008

Graduate School Research Enhancement Award, Michigan State University. 2007  
 John R. Shaver Research Fellowship, Michigan State University. 2006, 2007  
 Conservation & Environmental Issues Research Award, Society for Freshwater Science, 2007  
 Ecology, Evolutionary Biology, & Behavior Fellowship, Michigan State Univ. 2007  
 Iowa Lakeside Laboratory Merit Scholarship, University of Iowa. 2004, 2005  
 Best Oral Presentation, Graduate Student Research Symposium, Univ. of S. Mississippi. 2005  
 Hannah T. Croasdale Research Fellowship, Phycological Society of America. 2005  
 Matthew Levitan Fellowship, Flathead Lake Biological Station, Univ. of Montana. 2004  
 Charles Levitan Fellowship, Flathead Lake Biological Station, Univ. of Montana. 2003

### ADVISING AND MENTORING

#### **Graduate Students:**

Samantha Hormiga (Ph.D., Ohio State, beginning fall 2025)

Hunter Heyden (M.S., Ohio State, beginning summer 2025)

Cassie Araujo (M.S., 2021 – 2024)

- ASPiRE Graduate Travel Award, Ball State University, 2024
- ASPiRE Graduate Research Award, Ball State University, 2023
- Charles W. Reimer Scholarship, Iowa Lakeside Laboratory, 2021

Veronica Hamilton (M.S., 2021 – 2023)

- Outstanding Graduate student in the Field Sciences, Ball State University, 2023
- Dr. Robert R. and Mrs. Harriet M. Pinger Award for Student Travel, Ball State, 2023
- Grant-in-Aid of Research in Phycology, Phycological Society of America, 2022
- Best Poster Presentation (Graduate Award), Student Research Symposium, 2022
- McComish Scholarship in Aquatic Biology, Ball State University, 2022
- Russell E. Siverly Environmental Biology Research Award, Department of Biology, Ball State University, 2021
- ASPiRE Graduate Research Award, Ball State University, 2021

Hannah Ferguson (M.S., 2018 – 2020)

- Best Poster Presentation (Content Award), Student Research Symposium

Jordan Myers (M.S., 2018 – 2020)

- Russell E. Siverly Environmental Biology Research Award, Department of Biology, Ball State University
- ASPiRE Graduate Research Award, Ball State University

Josh Kessler (M.A., 2016 – 2018)

Jeremy Walls (M.S., 2015 – 2017)

- Aquatic Biology & Fisheries Graduate Student of the Year, Ball State University

- Best Poster Presentation (Content Award), Ball State Student Research Symposium
- Hannah T. Croasdale Fellowship, Phycological Society of America
- Sigma Xi Student Research Grant, Ball State University Chapter
- ASPiRE Graduate Research Award, Ball State University
- Grant-in-Aid of Research, Phycological Society of America
- Pinger Travel Award, Ball State University

Adam Ares (M.A., 2015 – 2017)

- ASPiRE Graduate Research Award, Ball State University

Yiru (Lily) Gu (M.S., 2014 – 2016)

- Achievement Rewards for College Scientists Fellowship, University of California Berkeley (presented to Berkeley's top admitted doctoral students)
- The Wetland Foundation Field Grant
- Sigma Xi Student Research Grant, Ball State University Chapter
- Grant-in-Aid of Research, Phycological Society of America
- ASPiRE Graduate Research Award, Ball State University
- Best Poster Presentation (Content Award), Ball State Student Research Symposium

Matthew Stillwagon (M.S., 2013 – 2015)

- Sigma Xi Student Research Grant, Ball State University Chapter
- ASPiRE Student Research Award, Ball State University

Dawn DeColibus (M.S., 2013 – 2014)

- Sigma Xi Student Research Grant, Ball State University Chapter
- ASPiRE Graduate Research Award, Ball State University
- Grant-in-Aid of Research, Phycological Society of America
- Charles W. Reimer Scholarship, Iowa Lakeside Laboratory
- Iowa Lakeside Laboratory Merit Scholarship
- Hannah T. Croasdale Fellowship, Phycological Society of America

Andrea Fitzgibbon (M.S., 2012 – 2014)

- Aquatic Biology & Fisheries Graduate Student of the Year, Ball State University
- Outstanding Teaching by a Graduate Assistant in Biology, Ball State University
- Winona Welch Award for Botanical Research, Indiana Academy of Science
- ASPiRE Student Research Grant, Ball State University

### **Undergraduate Students:**

Jenna Malloy – The Ohio State University, 2025 – current

Craig Upton – The Ohio State University, 2025 – current

Maddie Pitzer – The Ohio State University, Honors student, 2024 – current

Ethan Staffiera – The Ohio State University, 2024 – current

Audrey Zeng – The Ohio State University, 2024 – current

Sophia Kinsler – The Ohio State University, 2024 – current

Alana Modugno – Keuka College, New York, Spring 2023

- Visiting Undergraduate Research Assistant from Keuka College in upstate New York.
- Recipient of the Margaret Neville Sand '53 and Barbara Neville Malatesta '56 Experiential Education Scholarship from Keuka College to cover expenses associated with traveling to Ball State for Spring research experience.

Sara Carsey – Teacher-Scholar Program mentee, Ball State University, 2023 – 2024

Peyton Rodgers – Ball State University, 2022 – 2024

Katelin Holaday – Ball State University, 2021 – 2022

Lia Keadle – Ball State University, 2021 – 2022

Alli McCrady – Ball State University, 2021 – 2022

Chamese Brewer – Teacher-Scholar Program mentee, Ball State University, 2021 – 2022

Sarah Schmidt – Ball State University, 2021 – 2022

Cloe Nolan – Ball State University, 2020 – 2022

Alexis Miracle – Ball State University, 2020 – 2022

Katelyn Harris – Ball State University, 2020 – 2022

Maia Campbell – Ball State University, 2019 – 2022

- Honors Thesis
- Best Poster Presentation (Content Award), Ball State Student Research Symposium (out of > 100 posters), 2021

Isaac Kipfer – Ball State University, 2019 – 2021

- Honors Thesis

Ally Lankford – Ball State University, 2019 – 2022

- Newell C. Cook Sr. and Jr. Scholarship in Microbiology, Ball State University
- Best Poster Presentation (Content Award), Ball State Student Research Symposium (out of > 100 posters), 2021

Mary Reams – Ball State University, 2019 – 2020

Kaylee Ferguson – Ball State University, 2019 – 2020

Josh Metcalf – Ball State University, 2019 – 2020

Jake King – Ball State University, 2017 – 2018

Betsy Kemp – Ball State University, 2017 – 2019

- Newell C. Cook Sr. and Jr. Scholarship in Microbiology, Ball State University
- Best Poster Presentation (Content Award), Ball State Student Research Symposium (out of > 100 posters), 2018

Amanda Shurzinske – Ball State University, 2015 – 2017

- American Society of Plant Biologists Research Fellowship, 2016

Caroline Tegeler – Ball State University, 2016 – 2018

- Best Poster Presentation (Content Award), Student Research Symposium, 2017
- Maria Shoemaker – Ball State University, 2016 - 2018
- Taylorann Smith – Ball State University, 2016 - 2018
- Marine Science and Conservation Scholarship, Duke University Marine Lab, 2018
- Jeremy Walls – Ball State University, 2014 – 2015
- Honors Thesis
- Avery Sampson – Ball State University, 2013 – 2016
- Honors Thesis
  - Sigma Xi Research Grant, Ball State University Chapter
- Jill Bange – Ball State University, 2013 – 2015
- Honors Thesis
  - Outstanding Undergraduate in Laboratory Sciences, Ball State University
  - Robert H. and Esther L. Cooper Award in Biology, Ball State University
  - Newell C. Cook Sr. and Jr. Scholarship in Microbiology, Ball State University
  - Outstanding Senior in Biology Award, Ball State University

## TEACHING AND CURRICULUM DEVELOPMENT

### **Teaching Experience**

#### *Instructor-of-Record*

- Water Quality Management (ENR 3280, 1 semester 56 students), The Ohio State University  
 Course designed to explore the physical, chemical, and biological aspects of water quality. We discuss how natural watershed processes drive the functioning of lakes and rivers and how human processes alter water quality. The course explores critical water quality issues in North America and the world, their impacts on human health, and ways they are managed.
- Aquatic Microbiology (BIO 482/582, 8 semesters, 16-20 students), Ball State University  
 Course designed to study microorganisms indigenous to aquatic ecosystems. The course emphasizes nutrient cycling and the use of microorganisms as indicators of pollution.
- Ecology (BIO 216, 18 semesters, 80-100 students), Ball State University  
 Conducted lecture and active learning exercises to identify relevant relationships among the environment, individuals, populations, communities, and ecosystems to identify information needs required to address current ecological issues. (I developed and taught an online version of this course for 2 semesters).
- Methods in Ecology (BIO 316, 14 semesters, 16-25 students), Ball State University  
 This is a University Core Curriculum “writing intensive” course. Students implement a research study, write a proposal, collect data, perform a literature search, analyze data for the purposes of hypothesis testing, and present results in written and oral formats. (I developed and taught an online version of this course for 1 semester).

Biology Undergraduate Symposium (BIO 499, 2 semesters, 20 students), Ball State University  
This seminar prepares students for further studies or employment in the profession by developing a career plan, examining professional ethics, and establishing a professional identity. Evaluates student proficiency in the biological sciences.

Concepts of Biology (BS 110, 2 semesters, 140 students), Central Michigan University  
Conducted both lecture and active learning exercises to help biology majors develop a foundational understanding of concepts of biology including the chemical basis of life, cell structure and function, molecular and transmission genetics, evolution, and ecology.

Environmental Science (EVS 120, 1 semester, 7 students), Saginaw Chippewa Tribal College  
Used lecture and laboratory exercises to explore the relations between organisms and their environment. Students investigated the impact of local and global human activities on the environment along with a survey of environmental planning, policy, and law.

*Laboratory Instructor (as a Graduate Teaching Assistant):*

Honors Organismal Biology (BS 158H), Michigan State University

Organisms and Populations (BS 110), Michigan State University

Ecology (ZOL 355), Michigan State University

Phycology (BSC 427), University of Southern Mississippi

Principles of Biological Science I (BSC 110), University of Southern Mississippi

Principles of Biological Science II (BSC 111), University of Southern Mississippi

Biology and Society (BSC 103), University of Southern Mississippi

### **Professional Development in Teaching**

Natural Sciences Faculty Fellow for the Skills Infusion Program, Ball State University, 2020  
Completed a semester-long program aimed to provide faculty with professional development related to mapping course outcomes to the National Association of Colleges and Employer's (NACE) transferrable skills. This program is aimed to ensure that students are empowered to articulate the transferable skills they learned in concert with the course content.

Bootcamp for Multimodal Teaching and Learning, Ball State University, Summer 2020  
This five-day bootcamp covered embracing inclusive teaching pedagogy, clarifying course expectations, using videos to communicate empathy and tone, using authentic assessments, and creating a communication plan. Participants engaged daily with peers in discussion boards and develop Tasks to implement in online or HyFlex courses.

Scholarship of Teaching and Learning (SoTL) Fellowship, Ball State University, 2014  
Participated in a week-long workshop that introduced the basics of SoTL and educational research. Developed a research proposal to examine aspects of teaching and to identify relevant campus resources to support teaching research.

Faculty Institutes for Reforming Science Teaching (FIRST) Fellowship, NSF 2011-2012  
Completed a program designed to reform undergraduate science education through professional development of post-docs. I worked with a team to design an inquiry-based, student-centered undergraduate biology course that included active learning activities.

Certification in Teaching College Science and Mathematics, Michigan State University 2010

This program provided training on the teaching of science and mathematics at the college level. Participants demonstrated knowledge and competency in core areas of adult students as learners, assessment of learning, and use of technology in the classroom.

Future Academic Scholars in Teaching (FAST) Fellowship, Michigan State University 2010

Participated in a one-year program aimed to provide doctoral students with mentored teaching experience and familiarity with assessment techniques. Instruction focused on active learning in the classroom and data collection and analysis for education research.

Teaching of College Science (SME 870), Michigan State University 2009

Completed a 16-week course on the philosophies of education, including ethnic, gender, and cultural issues, instruction on course design, dealing with problems of class size, using instructional technologies, and teaching assessment.

Pathways to Scientific Teaching in Biology, Michigan State University 2009

Completed an eight-week course to examine the theory, instructional design, and assessment needed to build a learner-centered undergraduate science course. Worked in a team to design a framework for an introductory biology course and an instructional module for the course.

Workshop Participation

*Learning in Large Lecture Classes; Cooperative Inquiry-Based Learning: Teamwork Essentials; Building and Managing Successful Teams for Cooperative Learning; Teaching Across Cultures; Understanding and Handling Classroom Incivility; Developing Authentic Feedback and Assessment Strategies; Managing Student Conversations About Diversity; Climate Change Education Symposium; Active/Collaborative and Problem-Based Learning; Great Lakes Conference on Teaching & Learning.*

## PROFESSIONAL SERVICE AND PUBLIC OUTREACH

**Manuscript Reviewer:** (25 journals, >100 manuscripts)

- African Journal of Microbiology Research; Annales de Limnologie - International Journal of Limnology; Aquatic Sciences; Ecohydrology; Ecology; Ecology Letters; Ecosystems; Ecotoxicology; Environmental Research Letters; Freshwater Biology; Freshwater Science; Global Change Biology; Hydrobiologia; Limnology and Oceanography; Marine and Freshwater Research; Nature Climate Change; Nature, Scientific Reports; Oecologia; Oikos; Phycological Research; Polar Research; Science of the Total Environment; Water; Water Resources Research; Wetlands
- Associate Editor for Freshwater Biology, 2018-2020

**Proposal Reviewer:**

- Phycological Society of America Student Grants (Hoshaw Award, Hannah T. Croasdale Fellowship, Grants-in-Aid of Research in Phycology); NOAA Sea Grant - New York; NOAA Sea Grant College Program; National Science Foundation – Division of Environmental Biology

**Professional Committee Participation:**

- Grants and Fellowships Committee, Phycological Society of America
- Education and Diversity Committee, Society for Freshwater Science
- Program Committee, North American Diatom Symposium

- Program Committee, Phycological Society of America
- Education Committee, Phycological Society of America

**School of Environment and Natural Resources, The Ohio State University:**

- Graduate Studies Committee, 2024 - current

**Biology Department Committee Participation at Ball State University:**

- Curriculum Committee, 2017-18, 2020-21(Chair), 2021-22
- Safety Committee, 2017-18, 2021-22
- Search and Selection Committee, 2016-17, 2021 (Chair)
- Assessment Committee, 2016-17
- Salary and Merit Committee, 2014-15, 2015-16, 20-21
- Graduate and Research Programs Committee, 2013-14, 2016-17 (Chair), 2019-20, 2023-24 (Secretary)
- Promotion and Tenure Committee, 2013-14, 2019-20
- Student Alumni Relations Committee, 2012-13

**University Committee Participation at Ball State University:**

- University Research Committee, Ball State University, 2023-24
- Graduate Education Committee, College of Natural Sciences, Ball State University, 2023
- College of Natural Sciences Faculty Fellow, Skills Infusion Program (representative from the Biology Department), Ball State University, 2020-2021
- Dean's Search Committee (representative from the Biology Department), College of Natural Sciences, Ball State University, 2016-2017

**Professional Memberships:**

- Association for the Sciences of Limnology and Oceanography
- Sigma Xi Scientific Research Society
- Ecological Society of America
- Phycological Society of America
- Society for Freshwater Science

**SCHOLARILY PRESENTATIONS (select of > 100) \*undergraduate \*\*graduate student**

Rapnouil, T.L., et al. (The Mapp consortium, 44 others). 2024. Bacterial diversity in Northern Hemisphere Sphagnum peatlands by means of 16s metabarcoding. Annual Meeting of the British Ecological Society, Liverpool, UK, 12 December.

Turetsky M.R., J. Baltzer, C. Dieleman, E. Euskirchen, E.S. Kane, A.R. Rober, and **K.H. Wyatt**. 2024. Novel Disturbance Regimes Impacting Northern Peatlands: Flooding, Drought, and Zombie Fires. American Geophysical Union, Washington, D.C., 9-13 December.

Rober, A.R., Dieleman, C., Kane, E.S., Turetsky, M. R., and **K.H. Wyatt**. 2024. Legacy effects of plant community structure are manifested in microbial biofilm development with consequences for ecosystem CO<sub>2</sub> fluxes. Association for the Sciences of Limnology and Oceanography (ASLO) Aquatic Sciences Meeting, Madison, Wisconsin 2 -7 June.

- \*\*Araujo, C.R., Rober, A.R., and **K.H. Wyatt**. 2024. For richer or poorer: Diatom indicators of biological condition in northern peatlands. 15<sup>th</sup> Annual European Diatom Meeting, Macedonian Diatom Society, Ohrid, North Macedonia, 6-10 May.
- \*Cieslik, J., **Wyatt, K.H.**, Rubenstein, E.M., and Rober, A.R. 2024. Cyanotoxin degradation is influenced by temperature-dependent bacterial community composition. Ball State University Student Symposium, April 16.
- \*\*Hamilton, V.A., Lee, S.S., Rober, A.R., Furey, P.C., Manoylov, K.M. and **K.H. Wyatt**. 2023. A voucher flora of diatoms from fens in the Tanana River floodplain, Alaska. Diatom Web Academy, September 12.
- \*Rodgers, P., J, Cieslik, B. Sullivan, C. Brewer, **K. Wyatt**, and A. Rober. 2023, Preserving plant organic matter as a method to evaluate the effects of altered plant community structure on biofilm development. 2023 Corteva DELTA symposium, August 7.
- \*\*Hamilton, V.A., Lee, S.S., Rober, A.R., Furey, P.C., Manoylov, K.M. and **K.H. Wyatt**. 2023. A voucher flora of diatoms from fens in the Tanana River floodplain, Alaska. 14<sup>th</sup> European Diatom Meeting, May 9 – 11, Brussels, Belgium (Winner 1<sup>st</sup> place poster presentation award).
- \*Cieslik, J., P. Rodgers\*, B. Sullivan\*\*, C. Brewer\*, **K.H. Wyatt**, and A.R. Rober. 2023. Preserving plant organic matter as a method to evaluate the effects of altered plant community structure on biofilm development. Ball State University Student Symposium, Ball State University, Muncie, IN. **Best Poster Presentation (Content Award)**
- Turetsky M.R., W. Cox, C. Dielman, E. Euskirchen, E.S. Kane, J. Keller, A.R. Rober, H. Webb, and **K.H. Wyatt**. 2023. The Alaska Peatland Experiment: two decades of hydrologic experiments show resilience in peatland CO<sub>2</sub> respiration. Annual Meeting of the European Geosciences Union, Vienna Austria, 23-28 April.
- Wyatt, K.H.** 2022. The ecological significance of plant-microbial interactions in freshwaters. Invited presentation for the PhD in Environmental Science Program at Ball State University, Muncie, IN April 11.
- \*\*Hamilton, V.A., S.S. Lee, S.S., A.R. Rober, and **K.H. Wyatt**. 2022. A voucher flora of diatoms from fens in the Tanana River floodplain, Alaska. 26<sup>th</sup> North American Diatom Symposium, Brazil, IN.
- \*\*Hamilton, V.A., S.S. Lee, A.R. Rober, and **K.H. Wyatt**. 2022. A floristic study of diatoms from peatlands on the Tanana River floodplain, Alaska. Joint Aquatic Sciences Meeting, Grand Rapids, MI, May 14-20.
- Wyatt, K.H.**, A.J. Lankford\*\*, E.S. Kane, A.R. Rober, and M.R. Turetsky. 2022. Plant exudates accelerate CO<sub>2</sub> uptake by promoting phototrophic microbes in a northern peatland. 18<sup>th</sup> International Symposium on Microbial Ecology, August, 14-19, Lausanne, Switzerland
- \*\*Hamilton, V.A., S.S. Lee, A.R. Rober, **K.H. Wyatt**. 2022. A floristic study revealing the biodiversity of Alaskan peatland diatoms. Ball State University Student Symposium, Ball State University, Muncie, IN. **Best Poster Presentation (Content Award)**

- Wyatt K.H.**, K.S. McCann, A.R. Rober, and M.R. Turetsky. 2021. Trophic interactions regulate peatland carbon cycling. 75<sup>th</sup> Annual Meeting of the Phycological Society of America, July 13-22.
- Rober, A.R. K.S., McCann, M.R. Turetsky, and **K.H. Wyatt**. 2021. Trophic regulation of algal size structure. 75<sup>th</sup> Annual Meeting of the Phycological Society of America, July 13-22.
- \*\*Myers, J.M., A.R. Rober and **K.H. Wyatt**. 2020. Nutrients and carbon alter microbial interactions during peatland biofilm development. Midwest Evolution and Ecology Conference, Western Illinois University, Macomb, IL. 28 February.
- Wyatt, K.H.** 2019. The ecological significance of microbial interactions in freshwaters. Ball State University Department Seminar, Ball State University, Muncie, IN October 25.
- \*\*Ferguson, H.M., A.R. Rober, and **K.H. Wyatt**. 2019. Biomass and composition of macroinvertebrate communities across a gradient of peatland types: implications for boreal peatland food web dynamics. Indiana Water Resource Association Symposium, Syracuse, Indiana 26-28 June.
- \*\*Seballos R.C., **K.H. Wyatt**, and A.R. Rober. 2019. Resource controls on bacterial community structure during freshwater biofilm development. Ball State University Student Symposium, Ball State University, Muncie, IN April 9. \*Best Poster Presentation (Content Award)
- \*\*Ferguson H.M., A.R. Rober, and **K.H. Wyatt**. 2019. Biomass and composition of macroinvertebrate communities across a gradient of peatland types: implications for boreal peatland food web dynamics. Ball State University Student Symposium, Ball State University, Muncie, IN April 9. \*Best Poster Presentation (Content Award)
- Wyatt K.H.** and A.R. Rober. 2019. The algae energy pathway: an emerging mechanism for heterotrophic consumers to breakdown organic matter in northern peatlands. 15<sup>th</sup> European Ecological Congress, Lisbon, Portugal, 29 July – 2 August.
- \*\*Ferguson H.M., J. M. Myers\*\*, R.C. Seballos\*\*, **K.H. Wyatt**, and A.R. Rober 2018. Green is the new brown: biofilm dynamics determine ecosystem responses to climate change in northern peatlands. 5th Annual Conference on Climate Change and Human Health. March 15-16. Loyola University, Chicago, IL.
- Wyatt, KH.** 2017. Interactions between algae and heterotrophic bacteria in a rapidly changing aquatic microbial landscape. Biology Department Seminar, University of Southern Mississippi, Hattiesburg, MS. Invited Seminar.
- Wyatt, KH.** 2017. Temperature and nutrients interact to influence the associations between producers and consumers within the microbial landscape of boreal peatlands. 15<sup>th</sup> Symposium on Aquatic Microbial Ecology, Zagreb, Croatia.
- \*\*Walls, JT, **KH Wyatt**, JC Doll, EM Rubenstein, and AR Rober. 2017. Temperature Regulates Microcystin Release from Toxin-Producing Cyanobacteria. Annual meeting of the Society for Freshwater Science, Raleigh, NC.
- \*Tegeler, CG, JT Walls\*\*, AC Shurzinske\*, T Smith\*, AR Rober, and **KH Wyatt**. 2017. Interactions among temperature, cyanobacteria, and heterotrophic bacteria in a eutrophic

lake. Ball State University Student Symposium, Ball State University, Muncie, IN. \*Best Poster Presentation (Content Award)

- Wyatt, KH**, AM Sampson\*, AC Shurzinske\*, K Meingast\*\*, ES Kane, AR Rober, MR Turetsky. 2017. Warming enhances the synergistic effect of algal exudates on organic matter decomposition in northern peatlands. Annual Meeting for the Society for the Sciences of Limnology and Oceanography, Honolulu, HI.
- Wyatt, KH**, D DeColibus\*\*, MR Turetsky and AR Rober. 2016. Variable hydrology alters the aquatic community structure of a boreal peatland. Annual Meeting of the Society for Freshwater Science, Sacramento, CA.
- Pyron M, J Becker, **KH Wyatt**, \*\*D DeColibus, I Chaubey, R Logsdon, B Murry,\*\* L Etchison and \*\*M Minder. 2015. Regime change in a large river ecosystem: historical and recent food-web comparisons. Annual meeting of the Society for Freshwater Science, Milwaukee, WI.
- Wyatt KH**, AR Rober and MR Turetsky. 2015. Algae promote heterotrophic metabolism through the release of carbon subsidies in a boreal peatland. Annual Meeting of the Association for the Sciences of Limnology and Oceanography, Granada, Spain.
- \*\*Gu, L and **KH Wyatt**. 2015. Light and temperature interact to regulate the response of algae and heterotrophic bacteria to elevated nutrient levels in a boreal peatland. Annual meeting of the Society for Freshwater Science, Milwaukee, WI.
- \*\*Stillwagon M, IR Davison, and **KH Wyatt**. 2015. Effects of temperature on the release of dissolved organic carbon from the benthic macroalga *Cladophora glomerata* in an Indiana stream. Annual meeting of the Society for Freshwater Science, Milwaukee, WI.
- Wyatt KH**, J Bange\*, AS Fitzgibbon\*\*, AM Sampson\*, AR Rober and MR Turetsky. 2014. Release of nutrient constraints on algal productivity promotes heterotrophic metabolism in an Alaskan peatland. Annual meeting of the Society for Freshwater Science, Portland, OR.
- Davison IR and **KH Wyatt**. 2014. Short-term responses to nutrient enrichment in the green macroalga *Cladophora glomerata*. Annual meeting of the Phycological Society of America, Portland, OR.
- Rober AR, J Bange\*, D. DeColibus\*\*, and **KH Wyatt**. 2014. Warming regulates algal response to enrichment in a boreal peatland. Annual meeting of the Society for Freshwater Science, Portland, OR.
- \*\*Fitzgibbon AS, MR Bernot, and **KH Wyatt**. 2014. Comparison of algal and ecosystem metabolism and nutrient dynamics in a central Indiana Stream. Annual meeting of the Society for Freshwater Science, Portland, OR.
- \*\*DeColibus D, AR Rober, MR Turetsky, and **KH Wyatt**. 2014. Increased frequency of drying-rewetting events alters algal community dynamics in a boreal rich fen peatland. Annual meeting of the Phycological Society of America, Portland, OR.

- \*\*Fitzgibbon AS, MR Bernot, and KH Wyatt.** 2013. Influence of algal production on dissolved oxygen, pH and nutrient dynamics in a stream ecosystem. Annual meeting of the Society for Freshwater Science, Jacksonville, FL.
- \*Hersley C, KH Wyatt, AR Rober, and IR Davison.** 2013. Algae support heterotrophic bacteria through the release of carbon exudates following desiccation in Lake Michigan. 128<sup>th</sup> annual meeting of the Indiana Academy of Sciences, Indianapolis, IN.
- Davison IR, E Tellez\*, RL Woodke\*, RJ Bidner\* and KH Wyatt.** 2013. Regulation and fate of dissolved organic carbon released by the green algae *Cladophora glomerata*. Annual meeting of the American Society for Limnology and Oceanography New Orleans, LA.
- Wyatt KH, IR Davison, E Tellez\*, RL Woodke\*, RJ Bidner\* and D Giroldo.** 2012. Effects of nutrients on the release and utilization of DOC from *Cladophora glomerata* in Lake Michigan. Annual meeting of the International Association for Great Lakes Research, Cornwall, Ontario, Canada.
- Linton D L, W Pangle, KH Wyatt, K Powell and R Sherwood.** 2012. Does student writing improve student learning? Annual Meeting of the Society for the Advancement of Biology Education Research (SABER). Minneapolis, MN.
- \*Woodke R, KH Wyatt and IR Davison.** 2012. Bacterial decomposition of exudates from *Cladophora glomerata* in Lake Michigan. West Michigan Regional Undergraduate Science Research Conference, Grand Rapids, MI.
- Wyatt KH, IR Davison, E Tellez\*, RL Woodke\*, RJ Bidner\* and D Giroldo.** 2012. Effects of nutrients on the release and utilization of DOC from *Cladophora glomerata* in Lake Michigan. Annual meeting of the Society for Freshwater Science, Louisville, KY.
- \*Schmidt N, AR Rober, KH Wyatt and IR Davison.** 2012. Desiccation effects on photosynthetic rates in *Cladophora*. Central Michigan University's Posters-at-the-Capitol-Undergraduate Research Symposium, Lansing, MI.
- Rober AR, MR Turetsky, K H Wyatt and RJ Stevenson.** 2011. Algal community response to experimental and interannual variation in hydrology in an Alaskan boreal fen. Annual Meeting of the North American Benthological Society, Providence, RI.
- \*Tellez E, KH Wyatt and IR Davison.** 2011. Nutrient controls on dissolved organic carbon release in *Cladophora glomerata*. Biology Department Undergraduate Research Symposium, University of Dallas, Irving, TX.
- Wyatt KH, IR Davison and DG Uzarski.** 2011. Annual productivity and extracellular release of dissolved organic carbon by the algal community of a Great Lakes coastal wetland. Annual meeting of the North American Benthological Society, Providence, RI.
- Wyatt KH, MR Turetsky, AR Rober, ES Kane, D Giroldo and RJ Stevenson.** 2010. Algal responses to water table manipulation in an Alaskan peatland: implications for carbon cycling in the boreal forest. Annual meeting of the North American Benthological Society and the American Society for Limnology and Oceanography, Santa Fe, NM.

- Rober AR, **KH Wyatt** and RJ Stevenson. 2010. Regulation of algal structure and function by nutrients and grazing in a boreal wetland. Annual Meeting of the North American Benthological Society and the American Society for Limnology and Oceanography, Santa Fe, NM.
- Wyatt KH** and D Ebert-May. 2010. Assessing students' attitudes towards environmental issues after completing a cascading food-web case study to understand complex ecological interactions. Future Academic Scholars in Teaching Symposium, East Lansing, MI.
- Wyatt KH**, RJ Stevenson and MR Turetsky. 2009. Nutrient-limitation status of benthic algae in a boreal wetland, Alaska. International meeting of the American Society for Limnology and Oceanography, Nice, France.
- Wyatt KH** and RJ Stevenson. 2008. Effects of experimental nutrient enrichment on benthic algae and algal derived DOC in a boreal wetland, Alaska. 62<sup>nd</sup> annual meeting of the Phycological Society of America, New Orleans, LA.
- Wyatt KH** and RJ Stevenson. 2008. Effects of experimental nutrient enrichment on benthic algae and algal derived DOC in a boreal wetland, Alaska. 56<sup>th</sup> annual meeting of the North American Benthological Society, Salt Lake City, UT.
- Wyatt KH**, JK Roach, AR Rober, RJ Stevenson and MR Turetsky. 2007. Do algae facilitate wetland development in high latitude regions? 92<sup>nd</sup> annual meeting of the Ecological Society of America, San Jose, CA.
- Wyatt KH** and RJ Stevenson. 2006. Comparison of diatom indicators of nutrient conditions in streams. Annual meeting of the North American Benthological Society, Anchorage, AK.
- Rober, AR, **KH Wyatt** and RJ Stevenson. 2006. Using paleo diatoms to understand temporal changes in watershed characteristics. Annual Meeting of the North American Benthological Society, Anchorage, AK.
- Wyatt KH**, FR Hauer and GF Pessoney. 2005. The influence of hyporheic water influx on benthic algae in an alluvial river. 18<sup>th</sup> North American Diatom Symposium, Mobile, AL.
- Capello, HE, **KH Wyatt**, B Podritske, NJ Smucker, MM Lersch, J Schmieder, SA Spaulding and MB Edlund. 2005. Searching for Miocene mammal deposits: diatoms in paleo watering holes. 18<sup>th</sup> North American Diatom Symposium, Mobile, AL.
- Wyatt KH**, FR Hauer, GF Pessoney and M Gligora. 2005. The influence of hyporheic surface water exchange on the spatial distribution of benthic algal biomass and community composition in an alluvial river. Annual meeting of the North American Benthological Society, New Orleans, LA.
- Wyatt KH**, GF Pessoney, NR Anzola and CL Hernandez. 2004. Effects of chemical and nutrient manipulation on algal growth in a South Mississippi lake. 26<sup>th</sup> Annual Southeastern Phycological Colloquy, Dauphin Island, AL.