
Education

AUGUST 2021 – PRESENT, EXPECTED 2025

Doctor of Philosophy – Department of Zoology & Physiology/ University of Wyoming
Program in Ecology

Advisor: Dr. Sarah Collins • Research topic: Freshwater nutrient dynamics across spatial scales
NSF EPSCoR Track II program STOICH (stoichiometric traits of organisms in their chemical habitats)

AUGUST 2021

Master of Science – Department of Integrative Biology/ University of Wisconsin
Center for Limnology

Advisor: Dr. Hilary Dugan • Research topic: chloride loading in the Upper Yahara River Watershed.

MAY 2015

Bachelor of Science in Biology/ University of Wisconsin
Certificate in Environmental Studies/ University of Wisconsin
Certificate in Scandinavian Studies/ University of Wisconsin

Experience

FALL 2019

Instructor of Record/ University of Wisconsin

Instructor of Zoology 316: Limnology Laboratory. Goal to impart knowledge and application of limnology principles. Managed classroom and laboratory including preparation and implementation of in-class work and fieldwork. Participated in restructuring and rewriting of laboratory exercises for online instruction during COVID-19 pandemic.

APRIL 2017 – AUGUST 2019

Water Resources Management Specialist & Executive Staff Assistant/ Wisconsin Department of Natural Resources

Integrated Reporting Specialist: Data management for preparation of Wisconsin's biennial Integrated Report to the U.S. EPA in accordance with the federal Clean Water Act. The Integrated Report includes all of Wisconsin's assessed waters, causes and effects of impairments, and actions for restoration.

- Assisted with compilation of statewide water quality data and summaries, including analysis of biological, chemical, and physical waterbody data.
- Quality assurance of data and database management.
- Surface waterbody use policy improvements.

Water Quality Planning Specialist: Coordination of Wisconsin's Areawide Water Quality Management Planning Program.

- Reviewed and edited Water Quality Management and Urban Sewer Service Area plans and amendments.
- Collaborated with regional planning commissions under contract with DNR.
- Ensured certification of program with U.S. EPA.

Executive Staff Assistant: Provided high-level assistance to executive administration in two DNR Divisions: Environmental Management and External Services. Departmental group involvement included: Wisconsin River Basin TMDL Project Team, Groundwater Coordinating Council, Act 70 Pilot Advisory Group, Quality Management Plan Revision Team.

- Reviewed and edited Wisconsin River Basin TMDL Report and allocation tables and collaborated with technical staff to develop roll-out of TMDL.

- Coordinated Groundwater Coordinating Council meetings and summarized the state's groundwater issues for presentation at meetings.

OCTOBER 2015 – AUGUST 2016

Program Leader & Environmental Education Coordinator/ Madison School & Community Recreation

Developed and implemented hands-on natural world experiences to teach and inspire students. Managed logistics of the program including financial data monitoring, scheduling, curriculum development, and staff training.

- Conducted aquatic biotic index study in Madison, WI's lakes using UW Extension protocols with students.

NOVEMBER 2015 – MAY 2016

Volunteer Scientist/ Clean Wisconsin

Conducted background research and reported on how pharmaceutical waste in water affects wildlife and human health and the impacts of using treated wastewater to irrigate crops. This report presented facts to stakeholders and helped Clean Wisconsin develop a team to continue research.

MAY 2013 – MAY 2015

Ecological Restoration Assistant/ University of Wisconsin

Year-round restoration of southern Wisconsin ecosystems. Studied ecosystem challenges and invasive species in a variety of Wisconsin ecosystems.

Mentoring

SPRING 2021

Biology 152 Student/ Topic: Agricultural sources of chloride in the Upper Yahara River Watershed

Advising undergraduate in development, implementation, and completion of independent research project and paper.

SPRING 2020

Biology 152 Student/ Topic: Chloride & conductivity in Willow Creek

Advised undergraduate in development, implementation, and completion of independent research project and paper.

ACADEMIC YEAR 2019 - 2020

Undergraduate Research Assistant

Trained and supervised undergraduate in field and laboratory techniques related to my research topic.

Public Education

SPRING 2024

Colorado State University – Guest lecture for undergraduate/graduate Land Use and Water Quality Course / Freshwater salinization

FALL 2023

University of Wyoming – Guest lecture for undergraduate Limnology Course / Freshwater salinization

Colorado University – Guest lecture for undergraduate Limnology Course/ Freshwater salinization

WINTER 2021

First United Methodist Church – Public outreach/ Salt: what's the big deal?

Badger Talks – Public outreach/ Wisconsin's freshwater is getting salty (<https://youtu.be/1S5qwiUkj5Y>)

SPRING 2020

2020 Lakes & Rivers Convention/ Wisconsin's lakes and rivers are getting salty

FALL 2020

Video Interview/ Pollution in Madison lakes (<https://youtu.be/Yd9OV7w3pGc>)

Podcast Interview/ Lake Mendota

Publications

Rock, L. A. & Collins, S.M. (2024). A Broad-Scale Look at Nutrient Limitation and a Shift Toward Co-limitation in U.S. Lakes. *Environmental Science & Technology*. <https://doi.org/10.1021/acs.est.4c03135>

Rock, L. A. & Dugan, H.A. (2023). Lakes protect downstream riverine habitats from chloride toxicity. *Limnology and Oceanography*, lol2.12340. <https://doi.org/10.1002/lno.12340>

Barbosa, C.C., **Rock, L.A.**, Curtis, A.N., Sharitt, C.A. and Rogers, P. (2023), Conducting Communication, Research, and Education from Climate Change Perspectives. *Limnology and Oceanography Bulletin*, lol2.10542. <https://doi.org/10.1002/lob.10542>

Rogers, P., Barbosa, C.C., Curtis, A.N., **Rock, L.A.** and Sharitt, C.A. (2023), Uncited Science in the Global South: Striving Toward Inclusivity and Bettering our Understanding of Global Climate Change. *Limnology and Oceanography Bulletin*, lol2.10545. <https://doi.org/10.1002/lob.10545>

Curtis, A.N., Barbosa, C.C., **Rock, L.A.**, Rogers, P. and Sharitt, C.A. (2023), Optimism for the Future Use of Environmental DNA (eDNA) to Study Global Climate Change. *Limnology and Oceanography Bulletin*, lol2.10546. <https://doi.org/10.1002/lob.10546>

Sharitt, C.A., Barbosa, C.C., Curtis, A.N., **Rock, L.A.** and Rogers, P. (2023), Teaching Climate Change Science with the Humanities and Global Perspectives. *Limnology and Oceanography Bulletin*, lol2.10547. <https://doi.org/10.1002/lob.10547>

Dugan, H.A., **Rock, L.A.**, Kendall, A.D. and Mooney, R.J. (2021), Tributary chloride loading into Lake Michigan. *Limnology and Oceanography Letters*, lol2.10228. <https://doi.org/10.1002/lob.10228>

Ladwig, R., **Rock, L. A.**, & Dugan, H.A. (2021). Impact of salinization on lake stratification and spring mixing. *Limnology and Oceanography Letters*, lol2.10215. <https://doi.org/10.1002/lob.10215>

Dugan, H. A., & **Rock, L. A.** (2021). The slow and steady salinization of Sparkling Lake, Wisconsin. *Limnology and Oceanography Letters*, lol2.10191. <https://doi.org/10.1002/lob.10191>

Rock, L. (2016). Dangerous Women or Obedient Vessels? *The Cross Section*, Vol. 3, 45-58.

Rock, L. (2016). Old Norse Women of Inspiration. *The Cross Section*, Vol. 3, 83-94.

Rock, L. (2015). Inchelina's Bildung Journey. *The Cross Section*, Vol. 2, 30-41.

Awards & Grants

SUMMER 2024

Department of Zoology and Physiology Scott Walter Foundation Fund/ \$200 travel funding

FALL 2023

Program in Ecology Travel Fund/ \$500 travel funding

SPRING 2023

Best poster presentation at 2023 Conference on Biological Stoichiometry/ \$100 honorarium

Department of Zoology and Physiology Scott Walter Foundation Fund/ \$510 travel funding

SPRING 2022

Program in Ecology Travel Fund/ \$500 travel funding

Department of Zoology and Physiology Scott Walter Foundation Fund/ \$500 travel funding

2020-2021

College of Letters & Science Community of Research Scholars Fellowship/ Advanced Opportunity Fellow
Full tuition and living stipend for one year of graduate school.

Service

Reviewed manuscript for Inland Waters (2022) • Member of STOICH DEI ad-hoc group (2022-present) • Member of STOICH Metadata Committee (2021-present) • Member of 2023 COBS-STDA planning committee (2022-2023) • Departmental Graduate Student Ombudsperson (Fall 2021) • Co-reviewed manuscript for Nature Sustainability (2021) • Limnology and Fisheries Society Chairperson (2020-2021) • Co-reviewed manuscript for Inland Waters (2020) • Clean Lakes Alliance Frozen Assets volunteer (UW 2020 Winter Carnival) • Member of Wisconsin Salt Wise Planning Committee (2019-2021) • Coordinated statewide WI DNR Water Quality Bureau conference (2019) • Volunteer at Wisconsin Public Radio (2015-2020)