Sam Schurkamp — Curriculum Vitae

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ACADEMIC INTERESTS

- Climate change impacts on coastal wetland ecological dynamics
- Passive acoustic monitoring for ecological analysis of bird communities
- Ecological science and restoration of Great Lakes manoomin (*Zizania* spp.) populations

EDUCATION

University of Michigan — Ann Arbor, MI
PhD in Environment + Sustainability — *exp. 2029*

Loyola University Chicago — Chicago, IL
MS in Environmental Science and Sustainability — *2022*
Thesis title: Influence of biochar, Phragmites australis *and* Typha × glauca *on salinity in simulated wetland systems*

Loyola University Chicago — Chicago, IL
BS in Environmental Science — *2017*
BA in English & Creative Writing
Undergraduate GPA: 3.84

SCIENTIFIC AND ACADEMIC POSITIONS HELD

PhD Student Researcher — Aug 2024 – Present
Global Center for Climate Change Impacts on Transboundary Waters
I study the influence of climate change on the ecological communities of coastal wetlands, with special attention to culturally significant plant and bird species.

Research Associate — Aug 2022 – Aug 24
Loyola University Chicago Team Typha research group

I oversaw the day-to-day operations of our research group by collecting and analyzing field data, running lab equipment, writing results for publication, and mentoring undergraduate research projects.

Research Technician Aug 2020 – Aug 2022

Loyola University Chicago Team Typha research group

I assisted a multi-year project centered on the removal of the invasive plants *Typha x glauca* and *Phragmites australis* from basins along the Illinois Tollway system. I collected field data, harvested in the basins, processed lab samples, and organized and analyzed data.

Admission Counselor Jan 2018 – Aug 2020

Loyola University Chicago

I recruited for Loyola's undergraduate programs by meeting with and presenting to prospective students on-campus and within my territories, read and made decisions on student applications, and served as a point person for Loyola's Environmental Science and Honors programs.

Student Services Contractor Summer 2017

United States Geological Survey

I helped develop a management framework for invasive *Phragmites* in the Great Lakes Basin by leading training sessions throughout the Midwest and Canada, writing a guide for participants, and conducting data collection trials.

Restoration Ecology Intern Summer 2016

Loyola University Retreat and Ecology Campus

I removed invasive flora from fen, woodland, and prairie habitats and developed a database of native plants on the property. I also wrote code that generates repeatable floristic quality indices for each habitat.

Academic Coach Jan 2015 – May 2017

Targeting New Transitions

I provided academic assistance and success coaching for at-risk freshmen at Curie High School in Chicago.

COURSE MANAGEMENT

Ecology Lab for Science Majors (ENVS 286S) 1 credit

As lecturer: **2** sections, **1** semester

Restoration Ecology Lab (ENVS 311) 1 credit

As lecturer: **1** section, **1** semester

Scientific Basis of Environmental Issues (ENVS 101) 3 credits

As lecturer: **2** sections, **1** semester

Wetland Ecology and Invasion (ENVS 399) 1 credit

As co-lead: **2** sections, **2** semesters

Note: I developed the syllabus and readings and led discussions, but was not an instructor of record due to contract limitations.

MENTORING OF UNDERGRADUATE STUDENTS

Alex Risdal (BS 2026; funding $3,000 and $6,000) studied the effect of invasive wetland plants on the growth of wild rice (*Z. palustris*) for a one-year fellowship in 2023, then received a two-year fellowship to study the distribution and habitat requirements of *Utricularia* plants in 2024-25.

Macy Gustafson (BS 2025, funding $3,000) explored the species community composition of Michigan's only salt marsh in 2024.

Megan Wenner (BS 2025, funding $3,000) conducted a plant competition study between manoomin (*Zizania palustris*), *Pontedaria cordata* and *Typha* × *glauca* in 2024.

Clara Copps (BS 2024; funding $1,000) studied the effect of biochar on nutrient availability under variable hydrological conditions in 2024.

Madi Palmquist (BS 2024; funding $3,000) studied the effect of invasive cattail harvest on bird diversity using passive acoustic monitoring techniques for a one-year fellowship in 2023.

Kristina Tsakos (BS 2023; funding $6,000) studied the impact of biochar on salinity in constructed wetland systems for a two-year research fellowship from 2022-23.

PUBLISHED WRITING

Research articles

[1] **Schurkamp, S.**; Lishawa, S.; Ohsowski, B. 2024. Wetland plant species and biochar amendments lead to variable salinity reduction in roadway-associated soils. *Science of the Total Environment* 951, 175801. https://doi.org/10.1016/j.scitotenv.2024.175801

[2] Jochems, L.; Brandt, J.; Kingdon, C.; **Schurkamp, S. J.**; Monks, A.; Lishawa, S. C. 2024. Active remote sensing data and dispersal processes improve predictions for an invasive aquatic plant during a climatic extreme in Great Lakes coastal wetlands. *Journal of Environmental Management* 370, 122610. https://doi.org/10.1016/j.jenvman.2024.122610

[3] Monks, A.; Lishawa, S.; Ohsowski, B.; **Schurkamp, S.;** Lawrence, B. 2023. Complementarity of road salt and heavy metal pollutant removal through invasive *Typha* and *Phragmites* harvest in urban wetland detention basins. *Ecological Engineering* 194(107058). https://doi.org/10.1016/j.ecoleng.2023.107058

Research articles in review

[1] Ohsowski, B.; Michaels, M.; Wenner, M.; **Schurkamp, S.**; Palmquist, M.; Aleladia, B.; Risdal, A.; Dzyacky, S.; Copps, C.; Bednard, E.; Lishawa, S. Standardizing a Data Reporting Framework in Applied Biochar Research: Incongruencies and Opportunities. Submitted to *Science of the Total Environment* March 2025.

Research articles in preparation

[1] St. John, L.; Ohsowski, B.; **Schurkamp, S.**; Lishawa, S. Combined effects of invasive *Typha* × *glauca* and *Hydrocharis morsus-ranae* on aquatic macroinvertebrates in a Lake Huron coastal marsh. Anticipated submission to *Biological Invasions* Summer 2025.

[2] **Schurkamp, S.** & Wisner, A. Sythesizing climate vulnerabilites and research gaps in culturally and ecologically significant manoomin (*Zizania* spp.) Anticipated submission to *Wetlands Ecology and Management* Fall 2025.

Science communications

[1] Seven articles written in 2022 for *Envirobites*, a graduate student-run blog that relates scientific publications to a general audience. These articles are available at https://envirobites.org/author/samschurkamp/

Creative writing

[1] Schurkamp, S. 2017. Deer Run. *Runestone* 3. Hamline University, St. Paul, MN.

SCHOLASTIC RECOGNITION

Awards and scholarships

UMBS Graduate Student Endowment Grant	July 2021
Award amount: $1,077	
Illinois Lakes Management Association Graduate Scholarship	Winter 2021
Award amount: $1,000	
Illinois Water Environment Association Graduate Scholarship	Winter 2021
Award amount: $1,000	
IES Tuition Scholarship	Fall 2020
Award amount: $10,000	
UMBS Graduate Student Endowment Grant	July 2020
Award amount: $762	
Graduate Certificate in Environmental Policy	May 2020
Charles W. Hart Award for Excellence in Literary Study	May 2017
English Honors Program certification	May 2017
Interdisciplinary Honors Program certification	May 2017
Damen Scholarship	Fall 2013
Award amount: $60,000	

Student leadership

Speaker Event Chair, Doctoral Organizing Committee	2025
President, Honors Student Association	2016-17 academic year
Committee Member, Sujack Award Committee	2016-17 academic year
I served on the committee to select recipients for the highest institutional award for College of Arts and Sciences faculty.	
Committee Member, LUC Institutional Priority Committee 3	Fall 2015–Spring 2017
I was the lone student on a committee to implement interdisciplinary STEM research at Loyola.	
Volunteer Coordinator, A Just Harvest	2015–16 academic year
I established a program that connected honors students to elementary students for after-school tutoring.	

PRESENTATIONS, WORKSHOPS, CONFERENCES

Speaking events

[1] [Panelist] Understanding the Impacts of Climate Change on Transboundary Waters, Ecosystems, Communities, and Governance. Water@Michigan 2025: The Water-Climate Nexus. April 4, 2025.

[2] [Workshop] Digital Nature Photography: A Crash Course. Loyola University Retreat and Ecology Campus, May 19, 2024.

[3] [Talk] Harvesting invasive plants to reduce salinization in freshwater wetlands. Joint Aquatic Sciences Meeting, Grand Rapids, MI, May 2022.

[4] [Talk] Impact of biochar on the uptake of salts by invasive wetland plants. UMBS Winter Research Meeting, online.

[5] [Talk] Biomass utilization and runoff remediation through harvesting invasive plants from Illinois Tollway detention basins. UMBS Winter Research Meeting, online.

[6] [Talk] Invasive species harvest as a solution for salt and heavy metal pollution. UMBS Winter Research Meeting, online.

[7] [Featured Poet] Columbia Citywide Undergraduate Poetry Festival. Columbia College Chicago, April 2016.

Posters and attendance

[8] [Attendance] Global Center for Transboundary Waters Arid Southwest Water Resources Workshop 2025. Phoenix, AZ, March 2025.

[9] [Attendance] Obtawaing Biosphere Region First Annual Meeting, University of Michigan Biological Station, Pellston, MI, October 2023.

[10] [Attendance] Michigan Wild Rice Initiative Workshop, Roscommon, MI, August 2023.

[11] [Poster] *with B. Ohsowski.* Impacts of biochar and invasive macrophytes on wetland salinity. Climate Change Conference. Loyola University Chicago, 2022.

[12] [Poster] *with B. Ohsowski, A. Monks, S. Lishawa, B. Lawrence.* Harvesting invasive *Typha* × *glauca* and *Phragmites australis* to reduce salt and heavy metal pollution in Illinois wetland detention basins. Climate Change Conference, Loyola University Chicago, 2020.

[13] [Poster] *with C. Moore, L Loizzo, E. Siverhus.* Compost tea experimentation and viability. Undergraduate Research & Engagement Symposium, Loyola University Chicago, 2016.

[14] [Poster] *with C. Moore, L Loizzo, E. Siverhus.* Drip irrigation installation at Winthrop Garden. 2016 Undergraduate Research & Engagement Symposium, Loyola University Chicago, 2016.

SOCIETY MEMBERSHIP

Ecological Society of America	Fall 2020–Present
Great Lakes chapter	
Society for Ecological Restoration	Fall 2020–Present
Midwest-Great Lakes chapter	
Society of Wetland Scientists	Fall 2020–Present
Central chapter	

SKILLS

- Field identification of plant and bird species; dichotomous key usage
- Ion chromatography and organic elemental analysis of soil, plant, and water samples
- Field water analysis with YSI and EXO multiparameter instrumentation
- R, Markdown, and LaTeX languages
- Project organization with Miro and Obsidian using YAML front matter
- Photography and photo editing with Adobe Lightroom and Photoshop; portfolio available at https://samschurkamp.myportfolio.com
- Woodworking and restoration

CERTIFICATIONS

Boating Safety	May 2023
Michigan Department of Natural Resources	
Wilderness First Aid	March 2023
NOLS/National Outdoor Leadership School	
Hunters Safety	November 2020
Illinois Department of Natural Resources	