

Kathleen P. Schoenberger

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EDUCATION:

- Expected 08/2025: **M.S. Interdisciplinary Ecology with a concentration in Hydrologic Sciences**- *University of Florida, School of Natural Resources and Environment*
- 05/2023: **B.S. Environmental Science**- *University of Florida, School of Natural Resources and Environment*
- Minor: Soil and Water Sciences
 - GPA: 3.87, *Summa Cum Laude*
- 05/2022: **UF Study Abroad Program, Beekeeping in Asia**- *Burapha University in Saen Suk, Thailand*

RESEARCH EXPERIENCE:

- 05/2023- Present: **Master's Thesis**- *University of Florida, Engineering School of Sustainable Infrastructure and Environment, H. T. Odum Center for Wetlands*
- Title: “Hydrodynamics of submerged aquatic vegetation motion: A case study in Florida Springs”
 - Developing novel methods to characterize hydrodynamics and algal cover in Florida spring-fed rivers.
- 2021-2023: **Undergraduate Honors Thesis**- *University of Florida, Soil, Water, and Ecosystem Sciences Department, Urban Ecosystem Ecology Lab*
- Title: “Relative bioavailability of urea and ammonium in benthic biofilms of stream habitats”
 - Conducted a nutrient uptake and isotope analysis project by comparing urea versus ammonium in a local Gainesville urban stream to contribute knowledge to the fertilizer industry.

PROFESSIONAL EXPERIENCE:

- 08/2023- Present: **Graduate Research and Teaching Assistant**- *University of Florida, Watershed Ecology Laboratory*
- Conducting in-depth research on the hydrodynamics of submerged aquatic vegetation to understand the movement and interaction of plant structures with water currents, contributing to environmental conservation efforts.
 - Designed and executed field experiments using scientific diving techniques, collecting data on underwater plant movement across various aquatic sites in Florida.
 - Performed particle image velocimetry (PIV) and optical flow analysis to track and quantify plant movement in underwater videos, contributing to innovative methodologies in aquatic vegetation research.
 - Collaborated with multidisciplinary teams, including environmental scientists, land managers, and engineers to share insights and contribute to collaborative publications and presentations.
 - Assisted in teaching an undergraduate environmental science course, grading assignments, and mentoring students to foster their understanding of environmental concepts and research methods.
- 2021-2023: **Laboratory Technician** – *University of Florida, Urban Ecosystem Ecology Lab*
- Conduct wet chemistry analyses for doctoral students.
 - Traveled to seven field sites in Gainesville to collect and filter water and download sensor data on a bi-weekly basis for a long-term urban stream study.
 - Regularly cleaned and organized all lab equipment and machines.
- 2021: **IFAS Research Internship**- *University of Florida, Urban Ecosystem Ecology Lab*
- Assisted four grad students with their dissertation work by traveling to different field sites across the state of Florida to collect and filter water samples.

CERTIFICATIONS

- Present: **Python for Data Science and Machine Learning Bootcamp**- *Udemy*
- 05/2023: **Geospatial Information Analysis**- *College of Liberal Arts and Sciences*

INVOLVEMENT & VOLUNTEERING

- 12/19/2024: **“Scientist in Every Florida School” Presentation**
- Presented and prepared a 20-minute online presentation to an audience of approximately 100 K-6th graders in Palm Beach County on Florida Springs and what I do for my master’s research.
- 05/24/2024: **“Scientist in Every Florida School” Presentation**
- Presented and prepared a 20-minute online presentation to a 4th grade class in Miami on Florida Springs and what I do for my master’s research. Following the presentation, I designed and hosted a Kahoot game to the class to reinforce Florida Springs topics.
- 04/2024- Present: **President for Natural Resources and Environment Graduate Student Council (NRE-GSC)**

- Responsible for planning and coordinating all NRE-GSC events including hosting tailgates at home football games, developing presentations and workshop events to help SNRE undergraduates get into grad school, and creating and selling SNRE merchandise.
- 03/2024: **“Environmental Science Alliance” Panel Speaker**
 - Requested to sit on a panel of 3 graduate students to provide guidance, answer questions, and explain my research experiences to undergraduate students in the environmental field.
- 2022-2023: **“School of Natural Resources and Environment” Liaison**
 - Met on a biweekly basis with the other liaisons to discuss SNRE events.
 - Volunteer for tabling events.
 - Met with incoming environmental science freshmen and help them get acclimated to college by encouraging them to meet others in the same degree program.
- 2019: **Gator Marching Band- University of Florida**
 - Developed teamwork skills as a saxophone player in the Pride of the Sunshine Gator Marching Band.
 - Learned time management skills by having to balance academics, band practice 5 days a week, and attending every local and away football game.

HONORS & AWARDS

- At-Large Winner for Water Institute Photo Contest, 2024
- University of Florida Graduate Student Council Travel Award, 2024
- School of Natural Resources and Environment Travel Award, 2024
- UF IFAS Travel Award, 2024
- Roy Likins Scholarship awarded from the American Water Works Association- Florida Section, 2022
- Jim Roberts Scholarship awarded by the National Association of Environmental Professionals, 2022
- Ernest F. Lamothe Agricultural Scholarship for studying abroad, 2022
- Doris and Earl and Verna Lowe Scholarship offered from the dean of the College of Agricultural and Life Sciences at the University of Florida, 2021 & 2022

PUBLICATIONS

1. *“Relative bioavailability of urea and ammonium in benthic biofilms of stream habitats”* **Schoenberger, K.**, Siders, A., Reisinger, A.J., *J. of Environmental Quality*, undergraduate honors thesis, manuscript in preparation.

ACKNOWLEDGEMENTS IN PUBLICATIONS

1. Goeckner, A. H., Smyth, A. R., Holgerson, M. A., & Reisinger, A. J. (2024). Subtropical stormwater ponds are more frequently net nitrogen fixing compared to natural ponds. *Biogeochemistry*, 1-18. (Acknowledged for assistance with field and laboratory support).
2. Camacho, C. G., Antonison, A., Oldnettle, A., Costa, K. A., Timshina, A. S., Ditz, H., ... & Bowden, J. A. (2024). Statewide Surveillance and Mapping of PFAS in Florida Surface Water. *ACS ES&T Water*, 4(10), 4343-4355. (Acknowledged for assistance with data collection).

POSTER PRESENTATIONS

1. *“Hydrodynamics of Submerged Aquatic Vegetation Motion: A Case Study in Florida Springs”*, **Schoenberger, K.**, Kaplan, D., Yu, X., Kim, H.D., American Geophysical Union, Washington D.C., **December 2024**
2. *“Dynamic interactions between submerged aquatic vegetation and flow in Florida Springs,”* **Schoenberger, K.**, Kaplan, D., Yu, X., Kim, H.D., Taylor, R., Association of Environmental Engineering and Science Professors Distinguished Lecture Event, poster presentation, Gainesville, FL., **September 2024**
3. *“Dynamic interactions between submerged aquatic vegetation and flow in Florida Springs,”* **Schoenberger, K.**, Kaplan, D., Yu, X., Kim, H.D., Taylor, R., Society of Wetland Scientists South Atlantic Chapter, Pensacola, FL., **June 2024**
4. *“Dynamic interactions between submerged aquatic vegetation and flow in Florida Springs,”* **Schoenberger, K.**, Kaplan, D., Yu, X., Kim, H.D., Taylor, R., Water Institute Symposium, Gainesville, FL., **February 2024**

ORAL PRESENTATIONS

1. *“Hydrodynamics of Submerged Aquatic Vegetation Motion: A Case Study in Florida Springs”*, **Schoenberger, K.**, Kaplan, D., Yu, X., Kim, H.D., School of Natural Resources and Environment 2024 Symposium, Gainesville, FL., **October 2024**

MEDIA FEATURES

[Scientists study how the dance of underwater vegetation can support algae management], *Center for Coastal Solutions*, [August, 2024]. Featured for innovative research on submerged aquatic vegetation hydrodynamics in Florida springs. Available at: <https://ccs.eng.ufl.edu/scientists-study-how-the-dance-of-underwater-vegetation-can-support-algae-management/>

SKILLS:

Instruments and Other Skills

Programs and Languages:

- Certified scientific diver
- Licensed Florida boater
- Trilogy Laboratory Fluorometer
- Seal AQ400
- Acoustic Doppler velocimeter (ADV)
- Electromagnetic flow meter (EMF)
- Barometer
- YSI Pro-DSS
- Processing samples for stable isotope analysis
- Chlorophyll-a extraction
- H₂O sample collection and filtration
- Wet chemistry reagent preparation
- Soil coring and auger use
- Macroinvertebrate sampling and identification
- ArcMap, ArcGIS Pro, ArcGIS Desktop
- ENVI (beginner)
- MATLAB (beginner)
- Python
- R
- Microsoft Office Suite
- Large dataset organization and cleaning
- Intermediate ASL proficiency