

CURRICULUM VITAE

MICHELLE SCLAFANI

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EDUCATION

Idaho State University

M.S. Geology

Pocatello, ID

Expected Graduation: December 2024

North Carolina State University

B.S. Geology

Raleigh, NC

May 2014

B.S. Biological Sciences

Minor in Environmental Science

EXPERIENCE

Graduate Research Assistant, Lohse Lab

Idaho State University

2022-2024

- Designed, planned, organized, and managed six experimental analysis sampling campaigns consisting of a 5-person team to study the hydrologic and ecological impacts of prescribed fire on stream nutrients.
- Directed work efforts in mobilizing team sampling campaigns by maintaining planning documentation to ensure preparation of sampling equipment to collect environmental stream sediment and water samples.
- Mentored two undergraduate Summer Academic Research Experience interns in academic poster development by editing writing, assisting in figure development, and providing data analysis guidance
- Instructed undergraduate interns and post-baccalaureate scholars on water chemistry sampling field methods and associated laboratory procedures
- Developed an automated quality control/quality assurance process for unvented pressure transducer sensors (HOBO, Onset) and produced a standardized operating procedure and R script for the NSF funded Aquatic Intermittency effects on Microbiomes in Streams project to improve sensor correction efficiency.

- Maintained an equipment budget from awarded grant funds for materials to build thermocouple sensors, protective sensor housings, and chemicals to conduct nitrification incubations. Developed and configured thermocouple sensors from loggers (Lascar), cable raw materials, and raw sensor housing materials.

Engineering Specialist

2019-2022

City of Raleigh

Division of Stormwater Management

- Utilized geomorphic and pedologic information to evaluate, research, and characterize streams in Raleigh, North Carolina. Prepared technical reports describing the conditions of these streams and recommendations to property owners.
- Analyzed program data using business intelligence software (PowerBI) to create visual and interactive reports representing program performance, allowing management to better track key performance indicators across all programs within the division.
- Managed the implementation of business intelligence software (Power BI) use within the Division of Stormwater Management, which allowed Stormwater Management to more effectively coordinate with Transportation Field Services.
- Provided customer service to Raleigh citizens and property owners within Raleigh city limits by assisting them in determining if their property qualified for drainage assistance through Stormwater Management.
- Organized and hosted a Science Seminar Series by inviting graduate students from southeastern universities to present on their stormwater related research over Zoom.
- Served as Secretary in the Employee Committee from 2021-2022, with duties including planning and organizing stormwater employee social events, which improved team morale.

Environmental Specialist

2016-2019

North Carolina Department of Environmental Quality

Underground Storage Tank Section

- Performed inspections, both routine and installation, of UST systems to ensure compliance with state and federal UST regulations.

- Researched site histories and documented findings for potential enforcement action. Research required knowledge of county records, deed requests, and coordination with permitting engineers and regional offices.
- Redesigned educational brochures for underground storage tank owners and operators, translating regulatory language for everyday reference.
- Wrote and designed newsletters as part of the NCDEQ Sustainability Team.

Environmental Technician

2014-2016

Solid Waste Section

North Carolina Department of Environment and Natural Resources

- Researched monitored natural attenuation uses throughout all fifty states to assist compliance hydrogeologists with rule drafting efforts that would integrate monitored natural attenuation as an approved corrective action in North Carolina.
- Managed and prepared documents and groundwater monitoring data for upload to public database.
- Reviewed and prepared annual septage permits, yard waste notifications, and backyard composting permits for final approval.
- Provided technical guidance and training to both new and current septage, yard waste facility, and small-scale composting operators. Guidance involved rule interpretation and prompt customer service to communicate business owners with a wide range of backgrounds.

Undergraduate Researcher, Ksepka Lab

2011-2014

North Carolina State University

Department of Marine, Earth, and Atmospheric Science

- Segmented brain cavities to isolate the sagittal eminence and floccular lobe of living and extinct diving birds in 3-D imaging software.
- Prepared bone histology slides to compare values of long bone compactness between extinct and living diving birds. Research improved phylogenetic understanding of the evolution of diving mechanisms within aquatic bird lineages.

Lab Assistant, Camcore

2010-2014

Gene Conservation Forestry Organization

North Carolina State University

- Prepared seed and leaf samples for exportation to members, germination studies, Near Infrared Resonance (NIR) spectroscopy tests.
- Conducted NIR and germination counts.
- Watered and tended to greenhouse plants.

PROFESSIONAL ORGANIZATIONS

American Fisheries Society-Portneuf Student Subunit 2024-present
 Promoting knowledge of the aquatic sciences through macroinvertebrate identification outreach at the Pocatello Environmental Fair, and volunteering during the Portneuf River cleanup.

Secretary 2021-2022
Groundwater Professionals of North Carolina (GWPNC)
 Assisted the GWPNC President with the scheduling of organization meetings and recording board meeting minutes. Initiated transfer of HTML website version to Wordpress platform.

CERTIFICATONS

- National Association of State Boards of Geology, Fundamentals of Geology Exam, December 2015
- Wilderness First Aid, April 2023

COURSES ATTENDED OUTSIDE OF ACADEIMIC INSTRUCTION

North Carolina Compost Operators' Course
 Instruction provided by North Carolina Composting Council on how to safely and legally operate an industrial and permitted backyard compost operation based on current scientific understanding.

Vermiculture Conference
 Instruction and hands on training provided by North Carolina State University Extension on how to safely and legally compost using worms in indoor and outdoor venues.

Streambank Stabilization Workshop
 Hands on training provided by North Carolina State University Extension on best practices stabilizing stream banks with native vegetation.

RESEARCH GRANTS

2024

Idaho State University Research Travel Grant, \$1000

Geological Society of America Rocky Mountain Section Travel Grant, \$300

Geological Society of America Graduate Research Grant, \$2500

Jeff Geslin Geoscience Research Grant, \$1000

American Fisheries Society Travel Grant, \$500

2023

Jeff Geslin Geoscience Research Grant, \$1436

Center for Ecological Research and Education Graduate Research Grant, \$2504

National Airborne Center for Airborne Laser Mapping Seed Grant, No-cost LiDAR Flight

2013-2012

NCSU Undergraduate Research Travel Award

NCSU Undergraduate Research Grant

PUBLICATIONS

Ksepka, D.T., S. Werning, **M. Sclafani**, and Z. Boles. 2015. Bone histology in extant and fossil penguins (Aves: Sphenisciformes). *Journal of Anatomy* 227: 611-630.

Sclafani, M. 2013. "From Wings to Flippers". *DIG Magazine* 15: 18-19.

CONFERENCE ABSTRACTS

Sclafani, M., D. T. Ksepka, and A. Smith. 2013. Evolutionary Patterns in Bone Thickness and Compactness in Diving Birds. 32nd Meeting of the Society of Vertebrate Paleontology Abstracts: 209

Early, C.M., **M. Sclafani**, A.M. Balanoff and D.T. Ksepka. 2012. Comparative neuroanatomy of fossil and living waterbirds. 31st Meeting of the Society of Vertebrate Paleontology Abstracts: 89

TEACHING EXPERIENCE

GEOL 1100, The Dynamic Earth: lecture support and grading

GEOL 1100L, The Dynamic Earth Lab

Pocatello High School Guest Lecture, December 2023

VOLUNTEER EXPERIENCE

Friends of Zoo Idaho

May 2024

Participated in a team to stain and paint a children's play treehouse.

SPCA of Wake County

2020-2022

Animal Shelter

Launched and washed dishes, bedding materials, and toys for adoptable pets.

Provided cat care for adoptable cats.

Volunteer Tutor

2018-2019

Avent West Children's Mentoring Program

Tutored and mentored middle and high school students after school, particularly in math and science.

Volunteer Fossil Preparator, Nature Research Center

2012-2014

North Carolina Museum Of Natural Science

Aided in the preparation of fossils with pneumatic and hand tools.