

Corey Ruder

CURRICULUM VITAE
NOVEMBER 2016

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EDUCATION

Washington State University Vancouver, Vancouver, WA
Ph.D. in Environment and Natural Resource Sciences

Anticipated graduation date: May 2020

St. Olaf College, Northfield, MN
Bachelor of Arts in Environmental Studies

August 2012 – May 2016
summa cum laude, GPA: 3.91/4.00

HONORS

National Science Foundation Graduate Research Fellow, competitive five-year fellowship supporting graduate studies in STEM fields with over \$138,000 in funding and additional resources

Beckman Scholar, \$20,000 nationwide grant to fund independently-designed undergraduate research

Buntrock Scholar, St. Olaf College merit-based \$96,000 academic scholarship

Finstad Entrepreneurial Grant, \$3,000 seed money for the formation of a small business

Phi Beta Kappa, prestigious academic honor society member

INTERNATIONAL STUDIES

Environmental Science in Australia

February 2014 – May 2014

- Traveled with one professor and 21 St. Olaf students throughout Australia for four months
- Discussed issues of marine biology, terrestrial ecology, cultural anthropology, and environmental policy
- Collaborated with St. Olaf peers and Australian scientists on a series of ecological research projects

Environmental Sustainability in Japan

January 2015

- Lived with a group of St. Olaf students at the Asian Rural Institute (ARI) in Nasushiobara, Japan
- Joined residents in the daily schedule of farm work, coursework, and community gathering time
- Studied areas of environmental interest such as the Ashio Copper Mine, Fukushima, and the Naha River

RESEARCH

Biogeochemical Implications of Lakeshed Land Use, St. Olaf College

June 2014 – May 2016

- Developed a long-term study exploring the impacts of agricultural runoff on lake ecosystems
- Applied for and received funding from the Arnold and Mabel Beckman Foundation's Scholars Program
- Collected and examined sediment cores, water samples, and Chironomidae (Diptera) from eight lakes
- Presented results at the 2015 Beckman Symposium in Irvine, CA

Nitrous Oxide Production in Lake Sediments, St. Olaf College

September 2015 – Present

- Proposed an independently designed study examining the controls on nitrous oxide production in lakes
- Coordinated fieldwork to collect gas, sediment, and water samples from lakes with and without ice cover
- Performed laboratory analyses, including sediment incubations, nutrient analyses, and gas chromatography
- Will present final results at the American Geophysical Union meeting in December 2016

Cesium Transport in Forest Soils, Asian Rural Institute, Nasushiobara, Japan

January 2016

- Returned to the Asian Rural Institute with a small team of students to complete farm work and research
- Collaborated with staff members at the ARI Becquerel Center to analyze samples for cesium radioisotopes
- Designed a project exploring the effects of erosion and testing the efficiency of radiation containment bags
- Presented results to Asian Rural Institute staff to inform forest utilization strategies

Polaris Project Research Assistant, Cherskiy, Russia

July 2016

- Investigated effects of permafrost thaw on Arctic carbon storage and greenhouse gas fluxes in Siberia
- Assisted a multinational team in several long-term studies through intensive field and laboratory work
- Built and operated three flux chambers to measure respiration and photosynthesis in boreal forest burn scars

Nitrogen Cycling in Reservoir Internal Shorelines , WSU Vancouver	August 2016 – Present
<ul style="list-style-type: none"> • Designing a study to elucidate the impacts of physical mixing processes on nitrogen cycling in reservoirs • Examining internal shorelines as a potential hotspot of denitrification and greenhouse gas production • Collaborating with researchers from the University of Bath on an intensive three-week field campaign 	

TEACHING EXPERIENCE

Biogeochemistry (BIO/ES 350) Teaching Assistant , St. Olaf College	September 2015 – December 2015
<ul style="list-style-type: none"> • Aided in 20 individual research projects by identifying appropriate instrumentation and analyzing samples • Developed laboratory analysis standard operating procedures for class distribution • Trained four students in operating a SmartChem 200 discrete wet chemistry analyzer 	
Hawaii Nature Center Intern , Hawaii Nature Center, Oahu, HI	June 2013 – Aug 2013
<ul style="list-style-type: none"> • Created lesson plans and activities centered on Hawaiian culture, marine biology, and island sustainability • Led educational excursions for 80+ students to destinations around the island • Taught and participated in daily lesson plans with groups of 20-30 students at a time 	

PROFESSIONAL EXPERIENCE

Ole Thrift Shop LLC Founder/Project Manager , St. Olaf College	November 2012 – Present
<ul style="list-style-type: none"> • Developed a business plan and successfully competed for the Finstad Entrepreneurial Grant • Founded and maintained a Limited Liability Corporation with an annual revenue of approximately \$9000 • Coordinated 10 staff and 60+ volunteers to collect donations of gently-used items from residence halls • Directed biannual Thrift Shop sales to combat campus waste and promote sustainable lifestyle choices • Overseeing transition from a Limited Liability Corporation to a Nonprofit Organization • Advising both students and staff at other colleges on how to establish similar programs on their campuses 	
Admissions Fellow, Lunch Host Coordinator , St. Olaf College	August 2012 – May 2016
<ul style="list-style-type: none"> • Presented 45-minute college information sessions to groups of 35+ prospective students and family members • Interviewed college applicants for admission and made informed recommendations to Admission Officers • Conducted internal research evaluating factors that affect application and matriculation rates • Coordinated lunch visits between approximately 15 current and prospective students a week 	

SKILLS

Sampling Procedures: Sediment microprofiler assembly, calibration, operation, and maintenance; Swedish drop coring; funnel trap gas sampling; SUNA (Submersible Ultraviolet Nitrate Analyzer) V2 calibration and operation; Van Dorn water sampler operation; multiparameter water quality Sonde operation; YSI multimeter calibration and operation; LI-COR operation and maintenance in both terrestrial and aquatic settings; permafrost core drilling; GPS navigation; insect exuviae collection; tree coring; electrofishing; radiotelemetry; owl and songbird banding; ice auger operation; snake handling

Technical Procedures: Conflo IV + Costech EA IRMS (Isotope-ratio mass spectrometry), SmartChem 200 Discrete Wet Chemistry Analyzer (aqueous nitrates, phosphates, ammonium), Shimadzu TOC/TN Analyzer, MIMS (Membrane-inlet mass spectrometry) analysis for N₂ and Ar, gas chromatography

Computer Programs: ArcGIS, R, Google Earth, Endnote, Microsoft Office

Miscellaneous: Japanese language (3 semesters), certified boat operator, PADI Open Water Diver certified