Emily Mullins

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EDUCATION

UNIVERSITY OF TEXAS RIO GRANDE VALLEY
M.S. Agricultural, Environmental, and, Sustainability Sciences
Graduation: Fall 2020

METROPOLITAN STATE UNIVERSITY OF DENVER
B.S. Environmental Science : Ecological Restoration
GPA: 3.62 | Graduated: 2017

COURSEWORK

GRADUATE
Restoration Ecology, Novel Ecosystems, Sustainable Agriculture, Comp. Sci., Systems Science, Plant Phys.

UNDERGRADUATE
Ecology: Plant, Stream, Tropical, and Field methods in Ecology
Biology: Botany, Vertebrate, Microbiology
Geo-spacial: Map Use, GIS
Environmental: Policy, Planning, Global Challenges, EIS, Statistics
Geology: Physical, Soils, Mountains

SKILLS

PROGRAMMING LANGUAGES
- R
- Python (learning)

TOOLS
- ArcMap
- Excel

MOOCS

DATA SCIENCE
- R Basics
- Visualization
- Inference and Modeling
- Probability

EXPERIENCE

UNIVERSITY OF TEXAS RGV | Graduate Research Assistant
JAN 2019 – Present | Brownsville, Texas
- Survey native plant species for allelopathic potential.
- Test impacts of allelochemicals on AMF infection and growth of invasive grasses.
- Examine the efficacy of native plant allelopathy for use in ecological restoration

U.S. GEOLOGICAL SURVEY | Research Assistant
AUG 2018 – MAR 2019 | Boulder, Colorado
- Perform routine maintenance of probes located at USGS stream gaging sites
- Program CR1000 to run multiple probes concurrently and set up new field sites for measurement of CO_2, O_2, light, SPC and temperature
- Calibrate and perform quality assurance and quality control for field equipment
- Write and implement procedures for commonly used programs and equipment
- Run model to estimate stream metabolism and generate figures using R and Excel

MSU DENVER | Research Assistant
FEB 2016 – DEC 2017 | Denver, Colorado
- Collected field data and samples of soil, water, and plants for laboratory analysis
- Performed laboratory testing for water, soil quality, and heavy metal content in plants
- Generated statistical data and compiled information for presentation at conferences
- Used Hach meters, Li-COR, TOC, IC, ICPMS for analysis
- Surveyed vegetation for percent cover ans species composition
- Assisted students with laboratory work and research projects

INTERNSHIPS

NATIONAL BUTTER CENTER | Zizotes Milkweed Restoration
JUL 2019 - AUG-2019 | Mission, Texas
Collected seeds from wild zizotes and started plants for a 10,000 plant restoration project.

VOLUNTEER WORK

TEAM BROWNSVILLE : 2019
Provide food and necessities to asylum seekers in Matamoros, MX who are awaiting entrance to the US

WILDLAND RESTORATION VOLUNTEERS : FALL 2018
Rocky Mountain National Park Habitat Restoration: seeded and mulched a degraded area with native seed and built two erosion prevention structures out of rock.
St. Vrain flood restoration: replanted vegetation

EDUCATIONAL OUTREACH : SPRING 2017
Instructed elementary school teachers on ways to bring STEM projects into the classroom.
Lead water quality, and ecology experiments with second grade and high school students

LANGAUGES SPOKEN

(to communicate)
• English • Some Spanish

CURRENT LOCATION

BROWNSVILLE, TX, USA

LINKS

LinkedIn:// **emily-mullins-116a6787**
GitHub : emullins1

UNDERGRADUATE RESEARCH

CARBON CYCLING AND NUTRIENT PROFILES IN HIGH ALPINE SOILS

FEB 2016- DEC 2017 | Rocky Mountain National Park
Measure soil carbon flux, temperature, and soil moisture with Li-COR
Take soil core samples for analysis of total carbon, moisture, nitrate, ammonia, and phosphate concentrations
Perform vegetation surveys for percent cover and species composition
Voucher specimen collection

WATER QUALITY OF THE SOUTH PLATTE RIVER

MAY 2016- APR 2017 | Greater Denver Metropolitan Area
Measure pH, temperature, and dissolved oxygen at 14 sites
Collect water samples and test them for dissolved heavy metals, nitrate, phosphate, ammonia, and biochemical oxygen demand
Data entry and analysis for trends along the length of the study area and through time

PRESENTATIONS

Mullins, Emily A., Schliemann, Sarah. 2017. Controls on soil respiration in a high elevation alpine system. Poster Presentation. Rocky Mountain National Park Biennial Research Conference: "People and Stewardship: Using Research for Management.". Estes Park, Colorado.
Mullins, Emily A., et al. 2017. Characterizing water quality of the South Platte River, from Waterton Canyon through Brighton, CO. Poster Presentation. Universities Council on Water Resources Conference. Fort Collins, Colorado.
Schliemann, Sarah, Mullins, Emily. 2017. Controls on soil respiration in high elevation alpine and subalpine systems. Ecological Society of America Conference, Portland, Oregon.
Mullins, Emily A., et al. 2017. Urban water quality and bacterial loading in the South Platte River. Poster Presentation. Ecological Society of America Conference, Portland, Oregon.

AWARDS

STUDENT RESEARCHER OF THE YEAR | 2017

Earth and Atmospheric Sciences Department | MSU Denver