

CANDICE BROTHERS

Toledo OH 43607 440-223-3074 candice.brothers@utoledo.edu

EDUCATION:

Master of Science: Geology, University of Toledo, Toledo Ohio, Degree Expected: August 2014

Bachelor of Science: Environmental Science; Minor: German, Heidelberg University, Tiffin Ohio, 2012

SKILLS:

- Computer Programs: Visual MINTEQ, Sigma Plot, Arc GIS
- Interpretation of ground penetrating radar (GPR), seismology, electrical resistivity, and well logs
- Assembling, organizing, interpreting and summarizing large data
- Disseminating research to non-scientific persons
- Experienced with RCRA and EPCRA legislation
- Public speaking
- Experienced with interpreting low temperature geochemical data
- Conversational German

ACADEMIC AND PROFESSIONAL EXPERIENCE

Graduate Assistant

Department of Environmental Sciences, University of Toledo

August 2012-present

Collected water samples and analyzed for water quality parameters for the US EPA Reduction of Sediment and Bacteria Loadings to Public Beaches at Maumee Bay State Park via Enhanced Riparian Habitat Project. Conducted adsorption studies for phosphorus uptake by soil and biochar.

Teaching Assistant

Department of Environmental Sciences, University of Toledo

August 2012-present

Currently independently teaching introductory geology to undergraduate students using activities such as stream tables, topographic maps, and ground water simulation models. Grading lab assignments such as rock and mineral identification, daily quizzes, and exams while providing tutoring as necessary.

Subsurface Geophysical profiling of Two Preserves within the Oak Openings Region

Department of Environmental Science, University of Toledo

Fall 2012

- Interpretation of ground penetrating radar (GPR), seismology, electrical resistivity, and well logs to characterize Irwin Prairie and Kitty Todd in the Oak Openings Preserve.

Undergraduate Thesis: Decomposition of Shredded Paper in Two Common Composting Environments

Department of Environmental Science, Heidelberg University

May 2012

Conducted a study on the efficiency of using vermicomposting methods versus aerobic composting methods in the biodegradation of paper. Worked with dining staff to develop options for composting food waste on campus.

Achievements:

- Developed own method of measuring biodegradation.
- Poster presentation at the Geology Society of America Northeast Regional Conference, Dayton Convention Center, May 2012.
- Oral presentation at Meeting of the Minds Undergraduate Research Conference, Heidelberg University, February 2012.
- Presented affordable food waste composting program options to Board of Trustees and President.

Majors Biology Lab Assistant
Department of Environmental Science, Heidelberg University
August 2011-December 2011

Graded lab quizzes and assignments, assisted lab professor in demonstrations and students during lab assignments.

Camp Counselor
Franciscan Earth Literacy Center
May 2011-August 2011

Provided a safe and fun environment for children (ages 5-12) while educating them about nature, science, and the environment.

Achievements:

- Designed own environmental camp by obtaining donations of materials from local businesses for activities, coordinating transportation for a field trip, organizing lesson plans, games and crafts.

Map of Schools within a Five-Mile Range of Site for Waste-To-Energy Plant in Cleveland, OH
Department of Environmental Science, Heidelberg University
November 2011

Determined how many schools, hospitals, and elderly homes (populations vulnerable to air pollution) surrounded the proposed plant site.

Achievements:

- Created maps using ArcGIS program.

Biology and Math Tutor
Department of Academic Support, Heidelberg University
August 2010-December 2010

Coordinated weekly one-on-one meetings with students, aiding their understanding of the class materials, and providing techniques to improve their study skills.

Achievements:

- Helped a student raise her grade in Pre-Calculus from a C to a B by the end of the semester.

Growth of Microcystis at Two Cardinal Temperatures
Department of Environmental Science, Heidelberg University
February 2010

Experimental comparison of the growth of algae (*Microcystis sp.*) exposed to different temperatures of 30 °C and 40 °C for one week.

Achievements:

- Oral presentation at Meeting of the Minds Undergraduate Research Conference, Heidelberg University.

Lab Assistant
National Center for Water Quality Research
January 2009- December 2009

Collected, identified and cataloged biological samples for the Honey Creek Targeted Watershed project and prepared water samples for phosphorus and nitrogen testing, and measured filters for suspended solids for the Ohio DNR Ohio Tributary Monitoring Program.

GRANTS, HONORS & AWARDS

A.G. McQuate Award in Field Biology—awarded to students who show promise in the field of conservation biology.

Heidelberg University
May 2012

Pepsi Research Grant—\$80
April 2011

PROFESSIONAL MEMBERSHIPS

National Geological Association—Environmental Geology Section
American Association of Professional Geologists
Association for Women Geologists

CONFERENCES:

Geological Society of America National Conference
October 2013

Geological Society of America North Central Conference
May 2013

Lake Erie Water Keeper Conference
March 2013

Western Lake Erie Basin regional meeting
May 2013

Geological Society of America North Central Conference
April 2012

REFERENCES:

Dr. Daryl Dwyer
Professor of Ecology
Director of Environmental Remediation and Restoration Lab
419-530-2661 daryl.dwyer@utoledo.edu

Dr. Alison Spongberg
Professor of Geology
419-530-2986 alison.spongberg@utoledo.edu

Dr. Ken Krieger
Professor of Biology, Director of the National Center for Water Quality Research
419-448-2226 kkrieger@heidelberg.edu

Dr. Amy Berger
Professor of Geology
419-448-2292 aberger@heidelberg.edu