

Alexa Mainella

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EDUCATION

Master of Environmental Science, Miami University, Oxford, OH Expected: May 2016

- **Major:** Environmental Science **Concentration:** Conservation & Applied Ecology

Bachelor of Arts with University Honors, Miami University, Oxford, OH May 2012

- **Major:** Zoology **Co-Major:** Environmental Science
- **Certification:** Environmental Educator in Ohio; Trimble GPS TerraSync certification; ATV RiderCourse & Safety
- **Honors/Awards:** University Honors Scholarship (2008-2012); Dean's List: Fall 2008, 2009, & 2011; Spring 2010 & 2012; Outstanding Student Award in the Institute for the Environment & Sustainability (2014)

RESEARCH EXPERIENCE

Species Distribution Modelling, Thesis Project for U.S. Fish & Wildlife Service, Miami University August 2014-present

- Developed a species distribution model for the threatened plant species, *Euphorbia telephoides*
- Predicted where additional populations of this species are located & potential areas for future relocation

Field Experience and Data Collection, Environmental Protocols course, Miami University, Oxford, OH August-December 2014

- Seined fish in 2 stream systems to compare fish diversity & calculate Index of Biotic Integrity (IBI)
- Collected soil cores in forest, prairie, & wetland environments to determine organic matter & moisture concentrations
- Conducted water quality analysis to determine BOD, COD, & solids concentrations in ponds on campus

Wetland Delineation, Wetlands: Assessment & Regulations course, Miami University, Oxford, OH January-May 2014

- Performed wetland delineations with an environmental consultant leading the exercise
- Conducted the Ohio Rapid Assessment Method for Wetlands (ORAM) to classify wetland function & quality
- Learned about Ohio & International environmental laws regarding wetland mitigation & regulation

Wetland Restoration, Ecological Restoration course, Miami University, Oxford, OH January-May 2012

- Member of a team restoring 2 wetlands by removing cattails, *Phragmites australis*, & honeysuckle, followed by applying herbicide and planting native Ohio wetland species
- Created potential lesson plans for teaching Talawanda High School students about wetlands and restoration practices
- Generated a project proposal that can be used to assist future restoration groups in conducting their own project

Island Biogeography in Bahamian Coral Reef Systems, Tropical Marine Ecology summer course, Bahamas May 19-June 1, 2014

- Designed, conducted, & presented findings for a group field experiment involving effects of island biogeography theory on fish & coral species
- Collected data along 300m transect in intertidal zone & presented findings on gastropod diversity
- Studied biodiversity of algal, fish, coral, and bird species on San Salvador, Bahamas

Leafcutter Ant Behavior and Hormone Trails, Biodiversity of Costa Rica summer course, Costa Rica May 13-May 28, 2010

- Designed, conducted, & presented findings for a group field experiment involving leafcutter ant behavior & hormone trails
- Collected data along 100 foot transect in mangrove forest & presented data in course journal
- Communicated with native Costa Ricans in Spanish

Field Experience and Data Collection, University of Wollongong, Wollongong, Australia, Study Abroad February-July 2011

- Researched conservation biology, plate tectonics, & biogeography in field camp teams of 3-10 people
- Identified & counted arboreal mammal species at night along a 3km trail based on sight (spot-lighting) & sound
- Collected data in the Illawarra region and presented it in a scientific paper about the endangered plant, *Banksia spinulosa*

PROFESSIONAL EXPERIENCE

Conservation Intern, U.S. Fish & Wildlife Service, Panama City, FL June-August 2014

- Wrote a 5-year status review for a federally threatened plant species while collecting field data
- Used side-scanning sonar to find threatened Gulf Sturgeon fish and caught them with gill nets to collect population data
- Conducted shorebird surveys for a baseline biodiversity study at Tyndall Air Force Base

Preserve Management/Bison Research Technician, The Nature Conservancy, Leola, SD June-September 2015

- Participated in invasive species control, grassland bird & vegetation surveys, & maintenance of Ordway Prairie Preserve
- Worked on a cooperative research project studying bison breeding behavior
- Involved with outreach activities including working with local landowners, conservation partners, & assisting with field trips

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Project Consultant, Professional Service Project, Miami University, Oxford, OH August 2013-May 2014

- Developed a Recycling Outreach and Marketing Plan for Ohio EPA and Brown County Solid Waste Authority
- Worked in a team environment & interacted with project clients to create a high-quality product

GIS Project Consultant, Advanced GIS Client Project, Miami University, Oxford, OH March-May 2015

- Developed methodologies to utilize historical vegetation maps from the Miami University Kuchler map collection
- Photoshopped & georeferenced digital forms of 40+ maps
- Led a team of 3 undergraduate students & interacted with clients to meet their project objectives

Biology Lab Teaching Assistant, Miami University Biology Department, Oxford, OH August 2013-May 2015

- Taught two 100-level biology labs & guiding 40+ students through 6 experiments of various biological fields
- Provided constructive feedback on lab reports and other homework assignments
- Assisted students during office hours to address misunderstandings about the experiments

Marketing Assistant, The Commons Apartments, Oxford, OH August 2011-August 2012

- Worked in a team of five to reach the weekly sales goal & trained two new employees
- Targeted Miami University students & provided information to those looking for housing

VOLUNTEER WORK WITH AUDUBON SOCIETY June-August 2014

- Conducted breeding bird surveys in Panama City, Florida
- Participated in the Coastal Bird Stewardship Program by recording Snowy Plover leg bands & speaking with beach goers
- Monitored an office building during the Least Tern nesting season for fallen nestlings

RELEVANT COURSEWORK

- Advanced GIS & Remote Sensing January-May 2015
- Population & Community Ecology August-December 2014
- Landscape Ecology August-December 2014
- Conservation Education & Community Engagement January-May 2014
- Ornithology January-May 2014
- Conservation Biology February-June 2011

CLUBS/ORGANIZATIONS

Miami University Wildlife Society, Oxford, OH Member (August 2008-May 2012)

- Held leadership roles including President, Vice President, & Secretary
- Studied wolf pack behavior while volunteering twice a year at Red Wolf Wildlife Sanctuary
- Interacted with & cared for 20+ snakes, lizards, & turtles at Arrowhead Reptile Rescue to prepare them for adoption

SKILLS

- R & JMP Statistical Software
- GIS, GPS, & ENVI
- Plant identification
- Grant/technical writing
- Project Management (Microsoft Project)