

Curriculum Vita for Emily Riffe

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Education

- Appalachian State University; Boone, NC August 2016 to Expected 2018
Master's of Science in Biology
Concentration: Ecology & Evolutionary Biology
Thesis: A study of Autumn Olive (*Elaeagnus umbellata*) phenology and associated physiological traits that may facilitate its invasion of the understory of a Southern Appalachian forest
GPA: 3.96/4.0
- North Carolina State University; Raleigh, NC May 2016
Bachelor's of Science in Plant Biology
Minor: Horticulture Science
GPA: 3.6/4.0
- Rowan Cabarrus Community College; Concord, NC May 2013
Associate's in the Arts
GPA: 3.8/4.0
- Cabarrus-Kannapolis Early College High School; Concord, NC May 2013
GPA Weighted 4.6/4.0 GPA, GPA Unweighted 3.8/4.0

Professional Experience

- Appalachian State University;** Boone, NC August 2016- Present
Graduate Research on *Elaeagnus umbellata*
- ❖ Field work including phenology measurements and gas exchange measurements using the Li-6800, portable gas exchange system
 - ❖ Chlorophyll analysis
 - ❖ Hemispherical Photography
- Appalachian State University;** Boone, NC August 2016- Present
Graduate Teaching Assistant
- ❖ Instructed 4 sections of Biology in Society Laboratory per semester
 - ❖ The course included a background in the fundamentals of the scientific process
 - ❖ Lead students through small hands on experiments in fermentation, plant micropropagation, and DNA extraction

North Carolina State University, Raleigh, NC Spring 2016
Research Assistant in Horticulture Science Laboratory

- ❖ DNA Extraction on Blueberry Genotypes
- ❖ PCR
- ❖ Sequencing and analysis of data using SSR markers

North Carolina State University, Raleigh, NC Fall 2015
Research Assistant in Plant Molecular Laboratory

- ❖ Focused on increasing Artemisinin yields in *Artemisia annua*
- ❖ Administered in vitro propagation
- ❖ Assisted with 5' RACE PCR

Plants for Human Health Institute, Kannapolis, NC Summer 2015
Research Technician in a Plant based Bioinformatics Laboratory

- ❖ Worked with a team of interns on plant genomic projects
- ❖ Conducted DNA and RNA extractions
- ❖ Ran Gel Electrophoresis
- ❖ Literature Review for health aspects of different plant species

GAR Engineering, Concord, NC Summer 2012- 2014
Intern

- ❖ Helped with file keeping and accounting
- ❖ Answered phones and directed clients
- ❖ Assigned small projects using AutoCAD
- ❖ Assisted owner and project manager with project organization

Expertise

Field Work:

- ❖ Use of portable gas exchange systems, Li-6400 and Li-6800
- ❖ Use of LI-COR portable light meter
- ❖ Phenology plant assessments
- ❖ Water Potential Measurements
- ❖ Soil Moisture Readings
- ❖ Hemispherical Photography

Molecular Laboratory:

- ❖ Chlorophyll Extraction
- ❖ Anthocyanin Extraction
- ❖ Gel Electrophoresis

- ❖ Micropropagation
- ❖ DNA Extraction
- ❖ RNA Extraction
- ❖ PCR
- ❖ Microsoft Office
- ❖ Basic Statistical Analysis

Poster Presentations:

- Association of Southeastern Biologists Meeting** 2017
 Montgomery, AL
 “A Study of Autumn Olive (*Elaeagnus umbellata*) and Some Mechanisms involved in its invasion of a Southern Appalachian Forest Understory”
 Emily C. Riffe and Howard S. Neufeld
- Plants for Human Health Institute Summer Research Symposium** 2015
 Kannapolis, NC
 “Discovering Caffeine Pathways in Lesser Known Plants Used by Indigenous Tribes in the Americas”
 Bethany Latham, Emily Riffe, Michael Good, Wilson, Alexis Wilson, Trautman, Aaron Trautman, John Williams, Adam Whaley, De Bernardi Schneider, Adriano De Bernardi Schneider, Robert Reid, Cory Brouwer, Ashley Shawn Chaffin, and Jessica Schlueter

Oral Presentations:

- Association of Southeastern Biologists Meeting** 2018
 Myrtle Beach, SC
 “A study of Autumn Olive (*Elaeagnus umbellata*) phenology and associated physiological traits that may facilitate its invasion of the understory of a Southern Appalachian forest”
 Emily C. Riffe, Ivy C. Culver, and Howard S. Neufeld
- North Carolina Invasive Plant Council Meeting** 2018
 Chapel Hill, NC
 “A phenological study of *Elaeagnus umbellata* and associated physiological traits facilitating its invasion of the understory of a Southern Appalachian forest”
 Emily C. Riffe and Howard S. Neufeld

Funding & Scholarships Received:

Riffe EC and Neufeld HS. 2018 (Expected). A Study of Autumn Olive (*Elaeagnus umbellata*) and the Mechanisms Involved in its Invasion of a Southern Appalachian Forest Understory

North Carolina Invasive Plant Council, 2017, \$1000

Graduate Student Association, Appalachian State University, 2017, \$278.50

Office of Student Research, Appalachian State University, 2017, \$300

Office of Student Research, Appalachian State University, 2016, \$450

Organizations & Outreach:

- ❖ Biology Graduate Student Association- Vice President August 2017 – May 2018
- ❖ Plant Biology Undergraduate Club- Co-president August 2015 - May 2016
- ❖ Raleigh Parks & Recreation Volunteer Fall 2015
- ❖ Science Fiction and Fantasy Club- Treasurer January 2014- May 2015
- ❖ Demonstrations of fruit DNA Extractions to Middle & High School Students Summer 2015
- ❖ Earth Day Volunteer at North Carolina State University April 2015

Personal Interests:

In my spare time, I enjoy yoga and gardening as well as being a proponent for the environment.