

Andrea J. Tirrell

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Education:

M.Sc. in Ecology and Environmental Science

Anticipated graduation: 2022

University of Maine, Orono ME

B.A. in BIOLOGY/Plant Ecology & Photography

14 May, 2017

Marlboro College, Marlboro VT

Plan of Concentration Title: “The Ecology, Conservation, and Land Use Changes Surrounding Vulnerable Plant Mutualisms and Natural Community Types from Temperate to Tropical Ecosystems” & “Stewards of Our Land: A Photographic Exhibition Examining Small-Scale New England Farming”

Plan Sponsors: Dr. Jennifer Ramstetter & John Willis

Outside Evaluator: Dr. Seeta Sistla, Hampshire College

Overall GPA: 3.4

Experience:

Seasonal Conservation Nursery Assistant

New England Wetland Plants, INC., Amherst MA

April 2019-Sept 2019

- Propagation and transplanting of New England native plant species
- Data collecting and inventory of plant species

ACE Interagency Botany Intern

NPS Desert Research and Learning Center, Tucson AZ

July-December 2017

- Conducted rare plant surveys for a reroute along the Arizona Trail
- Performed invasive species manual removal and mapping using ArcPad as a part of the BAER Forest Service program (Burned Area Emergency Response)
- Collected and documented native plant seeds for later propagation at the Borderlands Restoration Native Plant Nursery
- Propagated native plants at the Borderlands Restoration nursery

- Performed out-planting of native plants at various National Park locations
- Aided in the data collection and implementation of transects for BAER soil erosion analysis

REU in Tropical Ecology

El Verde Field Station, University of Puerto Rico-Rio Piedras May-August 2016

*Project Title: “The Achlorophyllous Orchid *Wulshlaegelia calcarata* and its Relationship with Leaf Litter Mats and Fungi”*

- Collected data relating to plant reproductive output including the counting of orchid seeds
- Collected physical data relating to the location of plants, size of leaf litter mats, etc.
- Performed DNA extraction & ITS sequencing to identify fungal species
- Used visual analysis of hyphae roots as another way to identify fungi
- Used R for statistical analysis

Farm Assistant Manager

Marlboro College Farm, Marlboro VT May-October 2015

- Started crop plants from seed
- Tended to crops in the field and in the farm greenhouse
- Provided the Marlboro College kitchen with fresh produce weekly

Science Building Assistant

Marlboro College Science Building, Marlboro VT Sept 2014-May 2017

- Fed and took care of animals living in the college’s science building
- Tended to plants in the science building greenhouse
- Kept lab spaces organized and clean

Honors & Awards:

The Buck Turner Prize for Excellence in the Natural Sciences 2017

Marlboro College, Marlboro VT

- A prize awarded to a student who demonstrates excellence in the natural sciences, who uses interdisciplinary approaches, and who places his or her work in the context of larger questions

The Robert E. Engel Prize

2016

Marlboro College, Marlboro VT

- A prize established in 2011 in honor of Bob Engel, Marlboro faculty member for 36 years, and is awarded to a student who demonstrates Bob's passion for the natural world and his keen powers of observation and inquiry as a natural historian

The Robert H. MacArthur Prize

2016

Marlboro College, Marlboro VT

- This prize was established in 1973 in memory of Robert MacArthur, Class of 1951, and recently rededicated to Robert and John, and John and Robert's parents, John and Olive MacArthur, who founded the science program at Marlboro College. The contest for the prize is in the form of a question or challenge offered to the entire student community

Grants:

Environmental Internship Grant, Marlboro College (\$2,000) 2016

University Service:

Marlboro College Farm Committee Elected Member 2015-2016

Presentations:

Poster Presentations:

Tirrell, A., Lodge, D. (August 2016). The Achlorophyllous Orchid Wullshlaegelia calcarata and its Relationship with Leaf Litter Mats and Fungi. REU Poster Presentations, San Juan, Puerto Rico.