APPLICATION COVER PAGE

Edna Bailey Sussman Fund

Applicant's name: Alexandrea Rice

Address: 1312 Westcott St.
Apt. 1
Syracuse, NY 13210

Telephone number: 814-516-7708

Email: arice01@syr.edu

Date: 1/28/2019

ESF program: Forest and Natural Resources Management

Faculty Sponsor: Dr. Ruth D. Yanai

Internship organization and address:
Hubbard Brook Experimental Forest
234 Mirror Lake Road
North Woodstock, NH, 03262

Internship objectives:
The objective of this internship is to validate a model used to determine the source of soil forming parent materials moved by glaciers. I will use rocks previously collected from 14 stands in New Hampshire and add two new stands by excavating quantitative soil pits. Soil and rock analyses will be used to determine the source of the material as well as the nutrient content.

Period of work: May 20 through August 23, 2019

Salary provided by organization: None

Amount requested from Sussman Fund: $7,350.00

Faculty Sponsor

(Signature)

Applicant

(Signature)

PROPOSAL

The soils that support our northern forests were formed in parent materials deposited by glaciers ~10,000 years ago. Clues to the direction and distance of glacial movement, obtained from glacial erratics and striations on bedrock, allowed Scott Bailey, my internship supervisor, to develop a model that predicts the source of the glacial till at any point on the landscape. This till source model is important because traditional methods of determining site fertility require time-consuming and expensive sampling and analysis of soils. Predicting the source of parent materials would enable improved characterization of soil fertility, which is key to sustainable forest production. Forest biomass in the form of renewable biofuels is a key strategy in reducing CO2 release to the atmosphere. Forest productivity can be limited by site fertility as repeated harvesting removes essential nutrients. Validating this model will provide a tool for foresters to determine sustainable rates of harvest removal for specific sites.

Supported by funding from the Edna Bailey Sussman Foundation, I propose to validate the source till model by identifying rocks from 3 soil pits in each of 14 stands previously sampled in the White Mountains of New Hampshire. In addition, I will add 2 stands in a site that is more nutrient rich to extend the gradient of soil fertility represented in this cross-site study. With the assistance of a summer field crew supported by another study, 6 pits at Jeffers Brook will be excavated. A subset of the rocks excavated from all 16 stands will be characterized by mapping unit (e.g. Conway Granite, Rangeley Formation) by cleaning and cutting the rocks. To test the value of the till source model, the till composition will be related to soil properties characterized at all 16 stands. The soils from the 2 new stands will be sequentially extracted to determine nutrient availability, bringing the dataset to the total 16 stands. Thus, we can validate the ability of the model to determine site fertility in addition to parent material.

My internship will be supervised by Dr. Scott Bailey, who is a geologist at the Hubbard Brook Experimental Forest. Dr. Bailey will supervise the excavation of the soil pits as well as provide training and guidance on rock identification. I will have regular meetings with Dr. Bailey to update him on progress and discuss the next steps of the project. This project is related to my M.S. thesis work, in which I will report the analysis of soil nutrients in the entire set of past and proposed soil pits. My thesis work thus contributes to the data set required to test the predictive value of Bailey's till source model. The Edna Bailey Sussman Foundation will be acknowledged in presentations on this work, my master's thesis as well as in the published manuscript.

ESF
State University of New York
College of Environmental Science and Forestry

Department of Forest and Natural Resources Management

January 31, 2019

To the Edna Bailey Sussman Foundation (c/o The Graduate School)

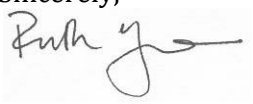
I am writing in support of Alexandrea Rice's application for a Sussman Internship with Dr. Scott Bailey of the Hubbard Brook Experimental Forest. The project is an ideal match of Alex's background and interests and the long-term interests of the internship sponsor. The internship will start on May 20 and run through August 23, 2019.

Alex has a background and interest in soil science. Unfortunately, she spent the first year of her graduate career valiantly rescuing several years of past investment in an ill-fated attempt to characterize differences in tree water use as a function of nutrient treatment. She was able to accurately collect measurements (previous students did not correctly install the sapflow sensors) and analyze them (avoiding errors in establishing baselines and specifying statistical models), but the variability among trees was too high to detect treatment effects. Thus she jumped at the chance last summer to take on a soils project, excavating pits and characterizing soils at two sites in the Hubbard Brook Experimental Forest, where she got to know Scott Bailey, her proposed internship supervisor. The two sites she sampled extended a longstanding data set in the project on Multiple Element Limitation in Northern Hardwood Ecosystems (MELNHE), and this newly expanded dataset forms the basis of her MS thesis project.

Dr. Scott Bailey has a background in geology and has been offering for years to assist with the identification of rocks in the soils previously sampled in the MELNHE study. I am personally very pleased to see this opportunity for that long-standing goal to be fulfilled (the first MELNHE soil pits were excavated in 2004). In addition, Alex is proposing to sample soils at Jeffers Brook, the only location in the MELNHE study that lacks quantitative soil pits. For this reason, the data generated during the Sussman project could contribute directly to Alex's thesis. The internship will be supervised by Dr. Scott Bailey but will also involve participation from the MELNHE field crew, which means that other investigators will be interested in the planning and the execution of the project. The Hubbard Brook community is both extensive and close-knit and there will be no end of opportunities for collaboration and feedback. The best and final evaluation of the project will be conducted by the peer reviewers of the resulting publications. I expect the rock identification to provide verification of Bailey's till-source model, which will contribute to sound decision-making in support of sustainable forest management in northern hardwood ecosystems.

I hope that this exciting project will merit selection by the Sussman Foundation. Please contact me if I can be of any further assistance in this matter.

Sincerely,



Ruth D. Yanai
Professor

United States Department of Agriculture

Forest Service
Northern Research Station
Hubbard Brook Experimental Forest

234 Mirror Lake Rd North
Woodstock, NH 03262
603-726-8902

February 1, 2019

To the Edna Bailey Sussman Foundation (c/o The Graduate School)

Dear Foundation Board Members:

I am writing in support of the application of Alexandrea Mae Rice, Graduate Student at SUNY-ESF. I commit to supervising Alexandrea's Sussman Internship, should her application be chosen for sponsorship.

Alexandrea is working on components of a larger project to study nutrient growth limitation at three sites spanning a range of soil composition on the White Mountain National Forest. In particular, for her Sussman Internship, she would collect rock fragments from sample pits at one site which is thought to represent some of the naturally most calcium-rich soils in New Hampshire. Alexandrea would use a glacial till source model that I developed to predict the rock types that are the source of glacially transported sediments and constitute the parent materials of these soils. This would provide a test of our model. In addition, Alexandrea may use literature search on bedrock chemical and mineralogic composition, potentially bolstered with her own measurements, to interpret soil quality analyses completed during other parts of this overall study.

Our knowledge of the processes that maintain fertility of forest soils is of critical importance to the US Forest Service and others interested in sustainable forest management. In particular, Alexandrea's work will contribute to a larger study to determine how multiple nutrient elements may limit forest growth. Her particular internship project will shed new light on geologic sources of forest soils. Knowing the lithologic composition of these soils will improve our understanding of mineral weathering, the process that buffers acidity and converts many forest nutrients into forms available for plant uptake.

Alexandrea would be stationed at the Bartlett Experimental Forest from May 20 through August 23, 2019. During that time, we would communicate via email and telephone at least weekly, with periodic checks in person and at her field site. Alexandrea will have access to the Hubbard Brook reference rock collection as an aid to identify the rock fragments. She will also have access to the Hubbard Brook lab where we have microscopes and sample processing equipment that will aid her work. In addition, I will have several other graduate students working on similar projects this summer. Alexandrea will be invited to join our group for periodic sharing of progress and discussions of findings and any problems that may come up.

In mid-July, Alexandrea will prepare an oral progress report of her internship work to be presented to the Annual Hubbard Brook Cooperators' Meeting. This conference is attended by about 200 scientists, students and forest managers. At the end of the summer, Alexandrea and I would review her progress and coordinate with her advisors at SUNY-ESF for any continued work on this project during the academic year.
Sincerely,

Scott W Bailey
Research Geologist

THE NAME OF THE COLLEGE IS PRINTED IN WHITE ACROSS THE FACE OF THIS 8 1/2 X 11 INCH TRANSCRIPT

EXPLANATORY LEGEND AND AUTHENTICITY STATEMENT APPEAR ON REVERSE SIDE

State University of New York
College of Environmental Science and Forestry
1 Forestry Drive
Syracuse, New York 13210

Student: Rice,Alexandrea Mae
I.D. No: XXX-XX-7589
Basis for Admission:
Bachelor of Science - Allegheny College
Record of Attendance:
05/16/17 - Entered in MS program

Program: Forest Resources Management
Area of Study: Ecology and Ecosystems

Course Number and Title	Credit Hours	Grade	Grade Pts
Summer Semester 2017			
FOR 899 MASTER'S THESIS RESEARCH	1.0	S	0.00
Fall Semester 2017			
CIE 657 BIOGEOCHEMISTRY	3.0	A	12.00
APM 630 REGRESSION ANALYSIS	3.0	A	12.00
FOR 796 RESEARCH MANAGEMENT	1.0	A	4.00
FOR 798 RSRCH PROB/FSTY & NAT RES	2.0	A	8.00
Spring Semester 2018			
APM 620 ANALYSIS OF VARIANCE	3.0	B+	9.90
FOR 694 WRITING/SCIENTIFIC PUBS	3.0	B	9.00
FOR 796 ECOPHYSIOLOGY OF TREES&FO	3.0	A	12.00
FOR 797 MANAGNG & ARCHIVING/RSRCH	1.0	A	4.00
Fall Semester 2018			
APM 625 SAMPLING METHODS	3.0	A	12.00
FOR 797 QUANT UNCERTAINTY/ECOSYS	1.0	A	4.00
FOR 899 MASTER'S THESIS RESEARCH	5.0	S	0.00
Spring Semester 2019			
FOR 798 RSRCH PROB/FSTY & NAT RES	1.0		0.00

	Hours Carried	Hours Passed	Grade Points	GPA Hrs	Grd Pt Avg
Sem	1.0	1.0	0.00	0.00	0.000
Cum	1.0	1.0	0.00	0.00	0.000
Sem	9.0	9.0	36.00	9.00	4.000
Cum	10.0	10.0	36.00	9.00	4.000
Sem	10.0	10.0	34.90	10.00	3.490
Cum	20.0	20.0	70.90	19.00	3.732
Sem	9.0	9.0	16.00	4.00	4.000
Cum	29.0	29.0	86.90	23.00	3.778
Sem	1.0	0.0	0.00	0.00	0.000
Cum	30.0	29.0	86.90	23.00	3.778

****** End of MS Transcript ******

Print Date: 2/1/2019

AN OFFICIAL SIGNATURE IS WHITE WITH A GREEN BACKGROUND REJECT DOCUMENT IF SIGNATURE BELOW IS ALTERED

This officially sealed and signed transcript is printed on green SCRIP-SAFE® security paper with the name of the college printed in white type across the face of the document. A raised seal is not required. When photocopied the word COPY should appear. A BLACK ON WHITE OR A COLOR COPY SHOULD NOT BE ACCEPTED.

Leslie A Rutkowski, Registrar

Official Academic Transcript

EXPLANATORY LEGEND AND AUTHENTICITY CONFIRMATION PRINTED ON BACK

NAME Alexandrea Mae Rice 1315255 05/23/XXXX

GRADUATED 05/13/17 Alden Scholar 16/17

DEGREE BS HONORS

RANK 208/460

ALLEGHENY COLLEGE

PRINTED 01/03/19

MAJOR Environmental Sci

MINOR Geology

DEPT.	NO.	DESCRIPTION	CREDIT HR.	GRADE
		FALL 2013		
ART	212	ANCIENT EGYPT & MEDITERRANEAN	4.00	B-
FS	101	ACADEMIC DISCOURSE I	4.00	B+
MATH	159	PRECALCULUS	4.00	B
SPAN	130	ACCELERATED BEGINNING SPANISH	4.00	B
SEM-3.00	CUM-3.00	COMPLETED HOURS	16.00	
		SPRING 2014		
FS	102	ACADEMIC DISCOURSE II	4.00	B
MATH	160	CALCULUS I	4.00	B-
CHEM	110	PRINCIPLES OF CHEMISTRY 1	4.00	B+
SPAN	215	INTERMEDIATE SPANISH	4.00	B-
SEM-2.93	CUM-2.96	COMPLETED HOURS	32.00	
Last Attended 05/06/14				
		FALL 2014		
		TRANSFER CREDIT		
		CMTY COLL ALLEGHENY CO ALGHNY		
ENVSC	0TE	ENVIRONMENTL SCIENCE: ELECTIVE	3.00	TR
GEO	0TL	GEOLOGY GENERAL LAB	4.00	TR
PSYCH	110	FOUNDATIONS OF PSYCHOLOGY	3.00	TR
SOCAN	201	INTRODUCTION TO SOCIOLOGY	3.00	TR
		TOTAL TRANSFER HOURS	13.00	
SEM-0.00	CUM-2.96	COMPLETED HOURS	45.00	
		SPRING 2015		
BIO	220	ORGANISMAL PHYSIOLOGY/ECOLOGY	4.00	B-
FSENV	201	ENVIRONMENTAL PROBLEM ANALYSIS	4.00	A
GEO	120	EARTH HISTORY AND EVOLUTION	4.00	A
ENVSC	210	ENVIRONMENTAL RESEARCH METHODS	4.00	B+
SEM-3.50	CUM-3.14	COMPLETED HOURS	61.00	
		FALL 2015		
		MARINE BIO LAB (MBL) PROGRAM		
ENVSC	4TE	400-LEVEL ENV SCI ELECTIVE	4.00	C+
ENVSC	4TE	400-LEVEL ENV SCI ELECTIVE	4.00	C+
ENVSC	4TE	400-LEVEL ENV SCI ELECTIVE	4.00	B+
ENVSC	4TE	400-LEVEL ENV SCI ELECTIVE	3.00	B
ENVSC	4TE	400-LEVEL ENV SCI ELECTIVE	1.00	B
		TOTAL PROGRAM HOURS	16.00	
SEM-2.73	CUM-3.04	COMPLETED HOURS	77.00	
		SPRING 2016		
ENVSC	585	JR SEMINAR: SUSTAINABLE DEVMNT	4.00	A
BIO	221	GENETICS DEVELOPMENT/EVOLUTION	4.00	B
PHYS	101	FUNDAMENTALS OF PHYSICS I	4.00	B
EXL	300	CROSS-CULTURAL LEARNING	1.00	A-
GEO	400	HYDROGEOLOGY	4.00	B
SEM-3.28	CUM-3.09	COMPLETED HOURS	94.00	

DEPT.	NO.	DESCRIPTION	CREDIT HR.	GRADE
		FALL 2016		
ENVSC	600	SENIOR PROJECT I	4.00	A
ENVSC	305	ENVIROMENTAL SPATIAL ANALYSIS	4.00	A-
FSGEO	201	FIELD GEOLOGY	4.00	A-
GEO	410	SEDIMENTOLOGY AND STRATIGRAPHY	4.00	A-
SEM-3.78	CUM-3.20	COMPLETED HOURS	110.00	
		SPRING 2017		
BIO	340	EVOLUTION	4.00	CR
BIO	385	BIOSTATISTICS	4.00	A
ENVSC	526	INTERN: SUSTAINABLE RESOURCES	2.00	A
ENVSC	610	SENIOR PROJECT II	4.00	A
ENVSC	346	WETLANDS	4.00	B+
SEM-3.80	CUM-3.28	COMPLETED HOURS	128.00	
53.20	363.70	QUALITY POINTS		
14.00	111.00	QUALITY POINT HOURS		
----------END OF TRANSCRIPT----------				

Registrar

MBL Biological Discovery in Woods Hole

Semester in Environmental Science

MBL
7 MBL Street
Woods Hole, MA 02543
USA

p: 508.289.7777
f: 508 289.7507
www.mbl.edu

Semester in Environmental Science Academic Credit Information

The Marine Biological Laboratory (MBL) does not itself directly grant academic credit, but has joined into a consortium with a number of colleges that have agreed to provide academic credit for the Semester in Environmental Science. In addition, Brown University grants credit to students from non-affiliated colleges and universities who are enrolled in the SES as guest students at Brown.

This letter certifies that the student has successfully completed the Semester in Environmental Science at the MBL. Recommendations for assigning credit and grades to courses completed by the student during the semester are provided below.

Upon successful completion of the Semester in Environmental Science, this letter, together with a *Certificate of Completion* is issued to the student and to the Office of the Registrar at the student's home institution. If Brown University is issuing credit, the information below is sent to the Registrar at Brown. Institutions requiring official academic transcripts certifying credit for the Semester in Environmental Science should contact the student's home institution or Brown, which ever has granted such credit.

Date: February 4, 2016

Name of Student: Alexandrea Rice **Student ID Number: 1315255**

Home Institution: Allegheny College

Title of Program: Semester in Environmental Science at the Marine Biological Laboratory

Dates Enrolled: September 6 – December 22, 2015

COURSES	SEMESTER CREDITS	MBL GRADE
Terrestrial Ecosystems Core	4	C+
Aquatic Ecosystems Core	4	C+
Independent Research Project	4	B+
Mathematical Modeling Elective	3	B
Science Writing Seminar	1	B
Total Semester Credits Recommended	16	

Certified:

Kenneth H. Foreman, Ph.D. 4 February 2016 **Date**
Director, Semester in Environmental Science

Rae Nishi, Ph.D. 4 February 2016 **Date**
Director of Education, MBL

OFFICIAL COPY HAS RAISED SEAL

Founded in 1888 as the Marine Biological Laboratory

Community College of Allegheny County
Office of the Registrar
800 Allegheny Avenue
Pittsburgh, PA 15233-1095

Official Transcript

01/06/17 Community College of Allegheny County Page 1

Alexandrea M. Rice
1020 Coverdale St
Pittsburgh PA 15220-4603

ID Number: 1271941
SSNO: XXX-XX-7589
Birth Date: 05/23/95
Birth Name:

Status	Program	Specialization
ACTIVE	031.3-BIOLOGY	

Undergraduate Academic Standing: Good Standing - 01/06/15

Course		Title	Grd	R	Hrs Att	Hrs Cmpt	Grade Points	Course Dates
BIO	133	Environmental Sci	A		3.00	3.00	12.00000	09/02/14-12/08/14
GGY	203	Physical Geology	A		4.00	4.00	16.00000	09/02/14-12/08/14
PSY	101	Intro Psychology	A		3.00	3.00	12.00000	08/18/14-12/08/14
SOC	101	Intro Sociology	A		3.00	3.00	12.00000	08/18/14-12/08/14

14FA Totals:	13.00	13.00	52.0000	GPA = 4.0000
Cumulative Totals:	13.00	13.00	52.0000	GPA = 4.0000

TOTALS: CRED.ATT = 13.00 CRED.CPT = 13.00 GRADE.PTS = 52.0000 GPA = 4.0000
INSTITUTIONAL: CRED.CPT = 13.00 GPA = 4.0000

Community College of Allegheny County
REGISTRAR

Alexandrea Rice

Current Address: 1312 Westcott St. Apt.1• Syracuse, NY 13210
(814) 516-7708 • arice01@syr.edu

EDUCATION

Master of Science- Ecosystems and Ecology in Forest and Natural Resources Management (May 2019)
State University of New York School of Environmental Science and Forestry Syracuse, NY
GPA: 3.79/4.0
Major Professor: Dr. Ruth Yanai
Related Coursework:

- Biogeochemistry
- Ecophysiology of trees and forests
- Experimental Design and ANOVA
- Quantifying Uncertainty in Ecosystem Studies
- Regression Analysis
- Research Management
- Sampling Methods Managing and Archiving Research Data
- Sampling Techniques
- Writing for Scientific Publication
- Uncertainty Analysis

Bachelor of Science- Environmental Science May 2017
Allegheny College, Meadville, PA
Minor: Geology
GPA: 3.28/4.0
Related Coursework:

- Biology 1 & 2
- Biostatistics
- Calculus 1
- Chemistry 1
- Environmental Problem Analysis
- Environmental Research Methods
- Geographic Information Systems
- Historical Geology
- Hydrogeology
- Physics 1
- Sedimentology and Stratigraphy

Marine Biological Laboratory Fall 2015
Woods Hole, MA
Related Coursework: Terrestrial Ecosystems, Aquatic Ecosystems, Independent Research Project, Mathematical Modeling, Scientific Writing Seminar

Community College of Allegheny County Fall 2014
Pittsburgh, PA
GPA: 4.0/4.0
Related Coursework: Intro to Environmental Science, Physical Geology, Intro to Psychology, Intro to Sociology

RELEVANT EXPERIENCE

Research Assistant, SUNY-ESF, Syracuse, NY **Spring 2018 & 2019**

- Collected, organized, and analyzed sap flow, leaf fall, and woody debris data
- Submitted annual grant reports for projects I collected and analyzed data
- Mentored high school volunteers and undergraduate students on research projects
- Managed lab meetings, and presented data at conferences

Teaching Assistant, Introduction to Soils, SUNY-ESF, Syracuse, NY **Fall 2017 & 2018**

- Led one lab period each week consisting of a mix of field lectures and laboratory experiments
- Graded weekly lab reports for my lab section, met twice a week for discussion of lab reports

Co-Field Crew Leader SUNY-ESF, Bartlett, NH **Summer 2017 & 2018**

- Interviewed, hired, organized and over sought 12 intern research projects
- Coordinated fertilization and sampling procedures as well as daily work schedules

- Mentored projects involving GIS, circuitry, mushroom identification, predatory simulation, stem mapping, soil cations and respiration, and tree photosynthetic mechanisms

Laboratory Manager and Research Assistant, Allegheny College, Meadville, PA **Fall 2013 – Spring 2017**

- Maintained, collected, and analyzed leaf litter, and soil samples from nutrient addition, and carbon manipulation plots at Allegheny College's Bousson Experimental Research Reserve
- Prepared forest and soil related presentations for middle school and high school students
- Coordinated research projects with community members and organized research assistants

Mushroom Farm Intern, Crawford County Fungi, Cambridge Springs, PA **Spring 2017**

- Inoculated fruiting bags with grain spawn, and grain spawn
- Prepared liquid cultures from fruit spores
- Collected fruit and packaged for sale at the local farmers market and restaurants
- Designed and produced a mushroom grow kit with detailed growing instructions and recipes to be sold at the local markets

Research Assistant, Michigan Technological University, Kotzebue, AK **Summer 2016**

- Assisted in ongoing permafrost thaw research on the effects of nutrient cycling in alpine/ spruce forests and tundra landscapes for Robert Stottlemyer
- Collected and analyzed terrestrial and aquatic samples to measure nitrogen and carbon isotope levels, primary productivity, and stream flow
- Worked in remote areas in Alaska: Selawik National Wildlife Refuge, and the Noatak National Preserve

Independent Research, Marine Biological Laboratory, Woods Hole, MA **Fall 2015**

- Analyzed the effects of long-term nitrogen deposition of ectomycorrhizal fungi between two northeastern United States forests in collaboration with John Hobbie and Jerry Melillo
- Collected soil, tree leaf, and mushroom samples from Harvard Forest, and Bousson Experimental Research Reserve

Avian Hospital Intern, National Aviary, Pittsburgh, PA **May - December 2014**

- Assisted in procedures such as x-ray's, nebulizations, euthanasia, bandaging, and vaccinations
- Created diets, maintained cleanliness of hospitalized birds, and built enrichments

SKILLS

Scientific Equipment- Hydrolab, Proplus, Van Dorn, Autoclave, LiCorr light meter, LiCorr photosynthesis meter, LiCorr chamber respiration, Wiley Mill, Sonicator, Atomic Mass Spectrometer, inductively coupled plasma spectrometer, Zeiss Discovery v.12 SteREO microscope, Cyclops, HOBO data loggers, CR1000 data logger

Computer Software- Microsoft Office (Word, Excel, Powerpoint, Access), ArcGIS, AxioVision, SAS, SigmaPlot

Scientific techniques- seining, tree coring, soil gas, soil cores, plankton tow, primary productivity, dissolved oxygen, soil respiration, stream flow, sap flow, dry ashing, acid digestion, sap flow sensor making, soil chemistry

POSTERS & PRESENTATIONS

Which Soil Nutrient Pools Explain Forest Characteristics **2019**
New York Society of American Foresters 2019 Annual Meeting

Filling in the Gaps in Our Soil Data: It's the Pits **2018**
Hubbard Brook Ecosystem Study 55th Annual Cooperator's Meeting at the Hubbard Brook Experimental Forest, NH

Nutrient Availability Affects Sap Flux in Sugar Maples **2018**
NY Society of American Foresters 2018 Annual Meeting

Nutrient additions increase sap flux in sugar maples. **2017**
27th Annual Forest Ecosystem Monitoring Conference at the University of Vermont, VT

Do nutrient additions affect sap flow in sugar maple trees? **2017**
44th Annual Fall Scientific Paper Session of the Rochester Academy of Science at the St. John Fisher College, NY

Effects of Nutrient Additions on Acer *Saccharum* Sap Flow. **2017**
Hubbard Brook Committee of Scientists Meeting at the Cary Institute of Ecosystem Studies, NY

Nitrogen, Phosphorus, and Sap Flow. And Calcium, Too. **2017**
Hubbard Brook Ecosystem Study 54th Annual Cooperator's Meeting at the Hubbard Brook Experimental Forest, NH

Rice, A. Long-Tern Nitrogen Depositions Decrease Soil Cation Availability in a Mature Hardwood Forest. Sigma Xi 27th Annual Undergraduate Student Research and Creative Accomplishment Conference at Penn State Erie, The Behrend College

Identification and prioritization of nutrient loading contributors into Lake Wilhelm, M.K. Goddard State Park, Pennsylvania **2016**
Class project for the PA DCNR in Crawford county; digitized maps, created a geodatabase for the project, and provided input on appropriate symbology of the results

Utz, S. Improvements and Proposals for Cora Clark Park, Meadville, Pennsylvania **2016**
Class project presented to the Meadville mayor, H. Leroy Stearns; I collected research and analyzed the importance of species diversity and protection of species within the park

Rice, A. Effects of long term nitrogen deposition on ectomycorrhizal fungi communities in forests of the northeastern United States. Unpublished. Semester in Environmental Science Independent Research Symposium **2015**

Co- Author. Recycling at the Wise Center: A Study of the Composition and Perception of Recycling at Allegheny College's Athletic Center. Unpublished **2015**
Project from Environmental Research Methods

DIRT, Creek Connections Symposium **2015**

Forest Education, Creek Connections Symposium **2014**

Rice, A., Rachel Wang, and Bill Chapel. Small Scale Sustainable Agriculture.
Pennsylvania Environmental Research Consortium **2013**

PUBLICATIONS

Bowden, R.D., Wurzbacher, S., Washko, S., Wind, L., **Rice, A.**, Coble, A.E., Baldauf, N., Johnson, B., Wang, J., Simpson, M.,and Lajtha, K. 2019. Long-Term Nitrogen Addition Decreases Organic Matter Decomposition and Increases Forest Soil Carbon. *Soil Science Society of America Journal*. (in review)

GRANTS, HONORS AND AWARDS

Albert & Barbara Cline Silviculture Scholarship from SUNY ESF **2018**
Outstanding Student Award and Scholarship by the Allegheny College Env. Sci. Dept. **2017**
Arbor Grant from Davey Tree Expert Company **2017**
Class of 1939 Senior Research Grant from Allegheny College **2016**
Paraskevi (Evi) Mavrogeorgis, Class of 1997, Memorial Fund from Allegheny College Env. Sci. Dept. **2016**

WORK EXPERIENCE

Server, BRGR, Pittsburgh, PA **May 2015 - Present**
- Opened/Closed the restaurant and provided customer service while on school breaks (~40 hrs/wk)

Concession Attendant, Steamship Authority, Woods Hole, MA **September - December 2015**
- Opened/closed concession stand, and ensured food quality and customer service

Student Gardener, Allegheny College, Meadville, PA **Fall 2013 - Spring 2014**
- Nurtured crops from seed to harvest, and created potting soil from compost to be sold at the farmers market

Admin. Assistant and Car Detailer, Greenwood Automotive, Pittsburgh, PA **June 2012- May 2017**

- Detailed interior and exterior of vehicles, Ordered automobile parts, and provided final overview before delivery

LEADERSHIP AND ACTIVITES

Outing Club Leader and Treasurer **Spring 2015 – Spring 2017**

- Organize and lead weekend outdoor trips such as backpacking, camping, hiking, kayaking, or biking as well as attend trainings in first aid, CPR, and wilderness first aid
- Organize and hold skills clinic such as how to plan a backpacking trip, how to tie various knots, and campfire cooking
- Handle all club expenses such as participant fees, trip fees, motor pool finances, and club budget

PJAS Judge

- Volunteered to judge middle school independent science projects **Spring 2016**

BUDGET JUSTIFICATION

The proposed internship will begin May 20, 2019, and end August 23, 2019. I will work 35 hours per week for the entire 14–week period. I am requesting a salary of $15 per hour.

$15.00/hour x 35 hours/week x 14 weeks = $7,350.00

Total Funds Requested: $7,350.00