

ANNUAL REPORT: June 1, 2014 – May 31, 2015
(i.e., Summer 2014, AY 2014-2015)
DEPARTMENT OF ENVIRONMENTAL AND FOREST BIOLOGY
SUNY-ESF

*****PLEASE DO NOT INSERT TABLES FOR ANY CATEGORIES*****

NAME: Elizabeth Folta

I. INSTRUCTIONAL ACTIVITIES

1. Regular Course Offerings

	Course No.	Title	Credit Hrs.	No. Students	No. of Lab. Sections
SUMMER:	EFB 202	Ecological Monitoring & Biodiversity Session A & C – taught Scientific Journaling	3	147	0
FALL:	EFB 312	Intro. to Env. Interpretation	3	44	3
	EFB 512	Intro. to Env. Interpretation	3	6	1
SPRING:	EFB 417	Non-Personal Envrn Interp Methods	3	16	0
	EFB 617	Non-Personal Envrn Interp Methods	3	4	0

NOTE: PLEASE INDICATE WHICH COURSE(S) HAD A SERVICE-LEARNING COMPONENT AND BRIEFLY EXPLAIN THE NATURE OF THIS COMPONENT. For examples of service-learning in courses, see: <http://www.esf.edu/students/service/courses.htm>. Service-learning is a form of structured experiential education in which students engage with the community to be active learners, to enrich their sense of civic responsibility, and to explore practical application for course content. Faculty oversight, reflective thinking, and reciprocity are key components of service-learning.

EFB 417/617 Non-Personal Environmental Interpretative Methods – This year the students worked with four community and ESF Greenhouses. The students worked with Beaver Lake, Central Region of NY State Parks, DEC, ESF Greenhouses, and the Rosamond Gifford Zoo. The students created brochures, waysides, and podcasts for the organizations to use. Not all organizations needed all three projects, so at minimum the students created a brochure and one of the other projects for their organization. Below are links to the podcasts created by the students in EFB 417/617:

- Beaver Lake - <https://drive.google.com/file/d/0B5Gq8xMtqyrZcDJsTmRtMVh1NkE/view?usp=sharing>
- Central Region NY State Parks – <https://drive.google.com/file/d/0B5Gq8xMtqyrZTmZTamJYbGtWbFE/view?usp=sharing>
- DEC - <https://drive.google.com/file/d/0B5Gq8xMtqyrZemtxWEloRnktMHM/view?usp=sharing>
- ESF Greenhouses
 - General Overview - <https://drive.google.com/file/d/0B5Gq8xMtqyrZNDNKZmdpUGpzbDA/view?usp=sharing>
 - Brazilian Pepper Tree - <https://drive.google.com/file/d/0B5Gq8xMtqyrZN2h6ZGowUVFnZFE/view?usp=sharing>
 - Graduate Research - <https://drive.google.com/file/d/0B5Gq8xMtqyrZT1IUWXFObXhld00/view?usp=sharing>
- Rosamond Gifford Zoo - <https://drive.google.com/file/d/0B5Gq8xMtqyrZdFpXQW1rVG1Ya1k/view?usp=sharing>

In total, the students donate over 478 hours to the four different community organizations and the ESF Greenhouses. All of the organizations have worked with us for before and would like to participate again in the future.

EFB 496/796 Advanced Interpretation and Certification offered eight environmental education programs for the public this spring. Four were offered at Green Lakes State Park and four were offered at Clark Reservation State Park. Each was an hour long program designed for families. They ranged in topics from geologic formations of the two parks, wild edibles, and spring adaptations. We had a total of 88 participants.

FOR 496 Nature Tourism and Ecotourism in Panama created interpretive brochures for three ecotourism sites in Panama as well as mapped all the hiking trails on the three properties.

2. Non-Scheduled Course Offerings (e.g., 496, 899, 999)

	<u>Course No.</u>	<u>Title</u>	<u>Credit Hrs.</u>	<u>No. Students</u>
Summer:	EFB 404	Natural History and Modern Science	3	12
Fall:	EFB 796	Research in Interpretation & EE	3	6
	EFB 420	Professional Internship	3	5
	EFB 495	Undergrad Exp/Coll Teach	3	4
	EFB 498	Independent Research/EFB	3	1
	EFB 899	Master's Thesis Research	3	1
Spring:	EFB 495	Undergrad Exp/Coll Teach	2	1
	EFB 496	Advanced Interpretation and Certification	3	7
	EFB 796	Advanced Interpretation and Certification	3	4
	EFB 899	Master's Thesis Research	3	1
	FOR 496	Nature Tourism and Ecotourism in Panama	3	12

3. Continuing Education and Extension (short courses, workshops, etc.)

- Project Learning Tree & Project WILD workshop for the ESF Outreach's Elementary STEM Mentors – 8/19/15 & 8/29/15

4. Guest Lecture Activities

<u>Course No.</u>	<u>Title</u>	<u>No. of Lectures</u>
EFB 132	Freshmen Orientation Seminar	1

II. STUDENT ADVISING

A. Number of undergraduates for whom you are the student's official advisor 22 and unofficial advisor 2

B. Graduate Students: (list name, degree sought, starting date, month & year; if a degree was completed, please give date and full citation for the thesis or dissertation).

MAJOR PROFESSOR

1. Jason Martin, M.S., 1/2015 – current
2. Jacqueline McCabe, M.S., 8/2014 - current
3. Emma Miniscalco, M.P.S., 8/2014 – current
4. Brianna Rosamilia, M.S., 8/2014 - current

5. Morgan Smith, M.S., 8/2014 - current
6. Kyle Teufel, M.P.S., 8/2012 – 6/2014

CO-MAJOR PROFESSOR

1. Emily Van Ness, M.P.S., 1/2013 – 8/2014 (co-major professor, Greg McGee)
2. Rachel Hoppins, M.P.S., 8/2013 – 5/2014 (co-major professor, Laura Rickard)
3. Stephanie Nick, M.P.S., 8/2014 – current (co-major professor, Melissa Fierke)

MEMBER, STEERING COMMITTEE (other than those listed above)

1. Courtney Johnson-Woods, Ph.D. (Andrea Parker, major professor)
2. Kimiharu To, Ph.D. (Andrea Parker/Sharon Moran, major professors)
3. Daniel Collins, Ph.D. (Lee Newman, major professor)
4. Joel Ramtahal, Ph.D. (Diane Kuehn, major professor)

CHAIRMAN OR READER ON THESIS EXAMS, ETC.

1. Kyra Pinsky (David Newman, major professor) – chair

III. RESEARCH COMPLETED OR UNDERWAY

- A. Departmental Research (unsupported, boot-legged; title - % time spent)
 - Morgan Smith (M.S. student) – Morgan is determining who the visitors to Beaver Lake Nature Center are and what activities they participate in while at the center. Percent of my time ~3%.
 - Brianna Rosamilia – Brianna is evaluating what planners, scientist, and community participants get out of being involved with a bioblitz. Percent of my time ~3%.
 - Jacqueline McCabe – Jacqueline is evaluating what park visitors (12-adult) to Green Lakes and Clark Reservation State Parks learn about invasive species from an augmented reality game. Percent of my time ~4%.
 - Rachel Hoppins (M.S. student) - Rachel was working with Seafood Watch to evaluate the role of partnership organizations in environmental campaigns until January 2015. At that point she switched to M.P.S. Percent of my time ~1%.
- B. 1. Grant-supported Research (source, subject, amount - total award and current year, award period starting and ending dates; list graduate research assistants supported by each grant)
 - a. SUNY ESF Seed Grant, One Health for All Visitors? *Exploring the Effects of One Health Messaging in a New York Park*; \$8,000; 6/2013-1/2015; Laura Rickard and Elizabeth Folta.
2. Research Proposals pending (include information as in B.1., above).
 - a. Environmental Protection Agency (subcontract under Syracuse University); *The Haudenosaunee Thanksgiving Address as a pathway to stewardship education in the Onondaga Lake Watershed*; \$30,922 (ESF subcontract portion); 8/1/2015-7/31/2017; R. Kimmerer and E. Folta.
 - b. National Institute of Food and Agriculture; *Sowing Synergy: a graduate program that integrates indigenous and scientific knowledge for sustainability*; \$750,000; 9/1/2015-8/31/2018; R. Kimmerer, S. Diemont, E. Folta, C. Beier, and J. Manno.
 - c. U.S. State Department; *Exchange in Science Education Techniques (RESET): Using Augmented Reality Games in Education*; \$94,761; 9/1/2015 – 8/31/2016; E. Folta and G. Lanza.
3. Research Proposals submitted, but rejected (include information as in B.1, above)
 - a. National Science Foundation – *Research in Service to Practice: A Program of Informal Evolution Education*; \$1,511,464; 7/2015-6/2019; J. Gibbs, D. Bonter, E. Folta, and R. Rundell.

- b. National Science Foundation; *NY SPARC (State Parks Augmented Reality Corridor) – Virtual Pathways to STEM Education and Recreation*; \$289,107; 9/2015-8/2017; E. Folta, and K. Mulverhill.
- c. National Science Foundation; *Understanding and Using the Genetic Mechanism for Phytoremediation of Chlorinated Solvents? Environmental and Societal Impacts*; \$370,662; 8/2015-8/2018; L. Newman and E. Folta.

IV. PUBLICATIONS (Full bibliographic citation, i.e., do not use "with Jones," or "Jones, et al."; please list only publications published, in press, or actually submitted during this reporting period --- **do not list manuscripts in preparation**).

A. Refereed Publications

Velardi, S., E. Folta, L. Rickard, and D. Kuehn (under review). *The Components of Effective Professional Development for Science Educators: A Case Study with Environmental Education Program Project Learning Tree*. Applied Environmental Education & Communication.

B. Non-refereed Publications

None

C. Papers Presented at Science Meetings (give title, date, occasion, and location)

Velardi, S. and Folta, E. (October 9, 2014). *What Constitutes Valuable Professional Development: A Case Study with project Learning Tree*. Paper Presented at the North American Association for Environmental Education 43rd Annual Conference, Ottawa, Canada.

Folta, E., K. Mulverhill, and J. McCabe (May 4, 2015). *Video Games In the Woods? Augmented reality games as an interpretive tool*. Paper Presented at the International Conference on Interpretation, Québec, Canada.

D. Public Service Presentations (lectures, seminars, etc. to and for the public; give group or occasion, date(s), and attendance)

None

V. PUBLIC SERVICE

A. Funded Service (include consulting activities)

1. Government Agencies (Federal, State, Local): None

2. Industrial and Commercial Groups, etc.: None

B. Unfunded Service to Governmental Agencies, Public Interest Groups, etc.

1. Rosamond Gifford Zoo, Education Committee 12/2010 – current

2. Friends of Beaver Lake, Board Member 1/2011 – current

a. Education Task Force Member 8/2011 – current

b. Future Planning Committee 4/2011 – current

3. Project Learning Tree Steering Committee (NY) 7/2011 – current

4. Leopold Education Project State Co-Coordinator 2011 (unofficial) – current (official)

VI. PROFESSIONAL DEVELOPMENT

A. Professional Honors and Awards (for teaching, research, outreach, etc.)

B. 1. Activities in Professional Organizations (offices held, service as chairman, member, participant or consultant)

2. Professional Society Membership

- Association for Science Teacher Education (ASTE)
- North American Association for Environmental Education (NAAEE)
- National Association of Interpretation (NAI)

3. Other Professional Activities

a. Editorial activity

Journal (s)

Responsibility

Other (books, symposia, etc.)

b. Reviewer

Journal(s)

No. of manuscripts

Applied Environmental Education & Communication 2

Agency

No. of proposals

Other

c. Participation (workshops, symposia, etc.)

Name of workshop, etc.

Date

Place

- NAAEE Conference 10/8 – 10/9/2014 Ottawa, Canada
- Association of Nature Center Administrators – New York Regional Meeting 3/5/2015 Baldwinsville, NY
- International Conference on Interpretation 5/3 – 5/7/2015 Québec, Canada

C. Further Education/Re-training Undertaken, Leaves, Workshops, etc.: None

D. Foreign Travel (Where, When, Purpose): None

1. Ottawa, Canada, October 8-9, 2014, NAAEE Conference. Graduate student presented her master's thesis results at the conference.
2. Panama (multiple locations), March 6-15, 2015, Ecotourism and Nature Tourism course that worked with Azuero Earth Project (non-profit based out of NY and Panama). We toured ecotourism sites and conducted service learning projects for three of the locations.
3. Montreal, Canada, May 3-7, 2015, International Conference on Interpretation. Presented the NY State Parks augmented reality project.

VII. ADMINISTRATIVE AND SERVICE RESPONSIBILITIES (include committee participation)

A. Department-level

- Environmental Education & Interpretation Program Coordinator
- EFB Course and Curriculum Assessment Committee Member
- Help with departmental open house: fall
- Finished redesigning the Natural History & Interpretation assessment strategy to make it easier for future assessments of the major.
- Wrote assessment report for the Natural History and Interpretation major.

B. College-level

- Faculty advisor to the INTERP club (student environmental interpretation club)
- Curriculum group participant of Environmental Science area Environmental Communication and Participatory Processes.
- EFB representative to the Recreation Resources and Protected Area Management minor.
- Assisted with the data evaluation for the General Education assessment.
- Recruited volunteers for the Presidential Inauguration Bioblitz at Onondaga Lake.

C. University-wide, including Research Foundation

VIII. SUMMARY OF SIGNIFICANT ACTIVITIES AND ACCOMPLISHMENTS DURING THIS REPORTING PERIOD, ESPECIALLY THOSE MOST NOTEWORTHY AND RELATIVE TO THE COLLEGE'S AND DEPARTMENT'S MISSION.

One paragraph on each of the following (i.e., three paragraphs total) would be most helpful: this past year, what have you done for our students, department/college, and self professionally? NOTE: The information in this section (along with the supporting specific information elsewhere in this report) should be your strongest case for being considered for a discretionary raise (when available), which I'll continue to award based on your contributions to the department and college this reporting period.

Students

This year I taught four interpretive courses and co-taught two additional courses that focused on interpretation and ecotourism, which had a total enrollment of a 111 students. EFB 796 Research in Interpretation and Environmental Education was offered for the third time. This year I altered the course to give the students more practical experience in research and evaluation. The students designed a survey for the Presidential Inauguration Bioblitz at Onondaga Lake and then collected and analyzed data from the event. In addition, they collected data at the local state parks (Green Lakes and Clark Reservation) using the One Health survey. They then analyzed the data they collected. Finally, they worked with the Environmental Educator for the Central Region of the NY State Parks to create an evaluation plan for the region. The hands-on experiences worked well and I am already planning to continue the partnership with NY State Parks next year. The plan is for the students to design an evaluation plan for the new nature play playground at Clark Reservation. I co-taught a new course designed by Diane Kuehn, Nature Tourism and Ecotourism in Panama. We worked with the Azuero Earth Project (AEP), which is a non-profit based in the Azuero Peninsula as well as New York. We took 12 students to Panama where they experienced a variety of different ecotourism sites. The focus of the class was the service learning projects for AEP. The students participated in three projects 1) mapping all trails on three ecotourism sites, 2) mortality counts for trees that AEP had previously planted, and 3) interpretive brochures for the three ecotourism sites. The students really enjoyed the class. Diane and I are polishing the interpretive brochures to send to AEP. We are still waiting to hear if AEP wants to continue this course next year. This spring was the second time I co-taught Advanced Interpretation and Certification with Katie Mulverhill. She is a National Association for Interpretation Certified Interpretive Trainer. Because Katie is now an environmental educator for NY State Parks Central Region we changed the location of the public programs. Previously, we offered them at Beaver Lake and Baltimore Woods Nature Centers, but had low attendance at one of the locations. This year we offered the programs at Green Lakes and Clark Reservation State Parks and attendance

was better. In addition, to changing the location we made the students responsible for publicizing the programs. This part of the course did not work as I had hoped. They ended up relying on Katie and her normal advertising locations which was Facebook and MeetUp. In the future, I will keep the changes but put a percentage of the grade associated with advertising. They are welcome to use social media but they will be expected to find “x” number of different methods (e.g.; flyers around the park and campus, community event calendars, ESF communications office, roving). Another thing that Katie and I learned that the program topic really matters. Specific topics/skill programs (e.g.; geology and wild edibles) did better than general topic programs (e.g.; winter/spring adaptations and signs of spring). This seems to hold true from the previous time the course was offered as well. I like giving the students the freedom of choosing topics they are comfortable with, but we will push a more towards topics that will attract larger audiences. Finally, I started working with six new graduate students this year (4 MS and 2 MPS). The two MPS students will graduate early or on time. Two of the MS students are already actively collecting data and the other two are working on the details of their projects.

Department/College

I served on the CCAC for the fourth year. As part of the work on the CCAC I wrote the assessment report and finalized the new assessment strategy for the Environmental and Interpretation major. I learned this year at the NAAEE conference that they are now accrediting university program in Environmental Education. In order to go up for accreditation we need two years of data following the NAAEE’s *Guidelines for the Preparation and Professional Development of Environmental Educators*. Last year, I started tailoring the new assessment plan using these standards as well as some from NAI. This year I redesigned our assessment to focus on the NAAEE guidelines in the hopes of moving towards accreditation as well as solidifying an assessment plan that can be used for years to come. Accreditation would have to be completed at both the undergraduate and graduate levels. The plan will be to move towards accreditation at the undergraduate level first then the graduate level.

Self

While I continued to focus this year on trying to get some funding for research projects I did take a step back to focus on the assessment for the Environmental Education and Interpretation major. I was a part of \$3 million in research proposals this year. Three of the proposals were rejected and the others are still under review. I have continued my partnership with NY State Parks in hope that this partnership will lead to some funding opportunities. Even though NYSPARC did not get funded we are moving forward with a variation of it with one of my graduate students. They are indirectly paying for part of the research by funding the student over the summer through one of their invasive species positions. She will work part-time on her research and part-time on initiatives. This year I focused on improving how I work with my graduate students and pushing them to be ready for data collection this summer. In the past I have let the students do things in their own time, but this year I have been pushing them to meet more specific deadlines. This year I have been helping to plan the Project Learning Tree (PLT) International Coordinators’ Conference in Saratoga Springs, NY. This is the first conference I have been a part of planning. It has been an invaluable experience and has helped to strengthen my relationship with both the DEC and the National PLT staff. Finally, as I mentioned above I worked on improving two of my courses.

IX. A. FUTURE PLANS, AMBITIONS, AND POTENTIAL CONTRIBUTIONS FOR YOUR OWN PROFESSIONAL DEVELOPMENT AND THE ENHANCEMENT OF THE PROGRAM IN ENVIRONMENTAL AND FOREST BIOLOGY (brief summary)

B. PROJECTED ACTIVITIES FOR NEXT YEAR

1. Summer 2015

- a. Course(s) to be offered
 - EFB 202 – Teach Scientific Journaling Portion
 - EFB 500 (Maymester 2016) Forest Biology Field Trip – Interpretation of Field Biology Adirondacks

- b. Proposed research activity
 - Seed Grant “One Health”– Data analysis and write journal article.
 - Submit additional grant proposals and papers for publication.

- c. University, professional society, and public service
 - Continue service to Rosamond Gifford Zoo’s Education Committee, Project Learning Tree’s Steering Committee, Leopold Education Program, and Friends of Beaver Lake’s board.
 - Project Learning Tree International Coordinator’s Conference June 7-12, 2015 – conference planning committee.

2. Fall Semester 2015

- a. Course(s) to be offered
 - EFB 312/512 Introduction to Personal Environmental Interpretation Methods
 - EFB 796 Evaluation of Interpretation and Environmental Education

- b. Proposed research activity
 - Assuming one or more of the proposed grants (e.g., RESET, Sowing Synergy, or Thanksgiving Address) are funded; preparation for the projects will start this fall.
 - Submit additional grant proposals and papers for publication.
 - Work with graduate and undergraduate research projects.

- d. University, Professional society, and public service
 - Continue service to Rosamond Gifford Zoo’s Education Committee, Project Learning Tree’s Steering Committee, Leopold Education Program, and Friends of Beaver Lake’s board.
 - Continue service on the CCAC.
 - Continue service as INTERP advisor.
 - Serve on the college’s Student Life committee.

3. Spring Semester 2016

- a. Course(s) to be offered
 - EFB 417/618 Non-personal Environmental Interpretive Methods
 - EFB 560 Electronic Technology in Interpretation & Environmental Education

- b. Proposed research activity
 - Continuation on funded research projects.
 - Submit additional grant proposals and papers for publication.
 - Work with graduate and undergraduate research projects.

- c. University, professional society, and public service
 - Continue service to Rosamond Gifford Zoo’s Education Committee, Project Learning Tree’s Steering Committee, Leopold Education Program, and Friends of Beaver Lake’s board.
 - Continue service on the CCAC.
 - Continue service as INTERP advisor.
 - Continue service on the college’s Student Life committee.