

ANNUAL REPORT: June 1, 2015 – May 31, 2016
(i.e., Summer 2015, AY 2015-2016)
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	146	0
FALL:	EFB 312	Intro. to Env. Interpretation	3	41	3
	EFB 512	Intro. to Env. Interpretation	3	5	1
SPRING:	EFB 417	Non-Personal Envrn Interp Methods	3	17	0
	EFB 617	Non-Personal Envrn Interp Methods	3	4	0
	EFB 560	Electronic Technology in Interpretation & Environmental Education	3	12	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 two community organizations and two ESF groups. The students worked with Beaver Lake Nature Center and the Central Region of NY State Parks, ESF Greenhouses, and the Environmental Health program. 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/open?id=0B5Gq8xMtqyrZbHAzWkRyRnVkJVEE>
- Central Region NY State Parks - <https://drive.google.com/open?id=0Bzu45VkJLEJlSdC16NDIYUkQxcXM>
- ESF Greenhouses - <https://drive.google.com/open?id=0B5Gq8xMtqyrZeUg5Sm9fWWJ4TkU>
- ESF's Environmental Health Program – <https://drive.google.com/open?id=0B5Gq8xMtqyrZdFVwNU5GXzdPY3c>

In total, the students donated over 352 hours to the two community organizations and 359 to the two ESF groups. All of the community organizations have worked with us for before and would like to participate again in the future.

FOR 496 Ecotourism Abroad created interpretive/promotional brochures for the homestays and guide services available in the village of Sontule through the women's cooperative.

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 500	Interpreting Field Biology	3	8
Fall:	EFB 420	Professional Internship	3	1
	EFB 495	Undergrad Exp/Coll Teach	3	3
	EFB 898	Professional Experience	3	2
	EFB 899	Master's Thesis Research	3	4
Spring:	EFB 420	Professional Internship	3	1
	EFB 498	Independent Research/EFB	2	2
	EFB 899	Master's Thesis Research	3	4
	FOR 496	Ecotourism Abroad	3	5

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

Project Learning Tree workshop for SCA's Excelsior Conservation Corps - 2/5/16

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 23 and unofficial advisor 1

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. Jacqueline McCabe, M.S., 8/2014 - current
2. Emma Miniscalco, M.P.S., 8/2014 – 12/2015
3. Brianna Rosamilia, M.S., 8/2014 – 5/2016; defended 4/2015, *Perceptions of Bioblitz Organizers and Participants on Event-related Goals, Interactions, and Motivations: A Way to Understand How a Bioblitz Contributes to Environmental Education*
4. Morgan Smith, M.S., 8/2014 – 8/2016; defended 3/2015, *Determining the Audience at Beaver Lake Nature Center: Who is Attending the Center and How are they using it?*
5. Jason Martin, M.S., 1/2015 – current
6. Thomas Mackey, Ph.D., 8/2015 - current

CO-MAJOR PROFESSOR

1. Stephanie Nick, M.P.S., 8/2014 – 12/2015 (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)
5. Wendy Burgess, M.S. (Diane Kuehn, major professor)
6. Sarah Powers, M.S. (Diane Kuehn, major professor)
7. Shannon Fabiani, M.P.S. (Sharon Moran, major professor)

CHAIRMAN OR READER ON THESIS EXAMS, ETC.

1. Li Kui (John Stella, major professor) - chair

III. RESEARCH COMPLETED OR UNDERWAY

- A. Departmental Research (unsupported, boot-legged; title - % time spent)
- Morgan Smith (M.S. student) – Morgan determined 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 (M.S. student) – Brianna evaluated what planners, scientist, and community participants got out of being involved with a bioblitz. Percent of my time ~4%.
 - Jacqueline McCabe (M.S. student) – 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 ~2%.
 - Jason Martin (M.S. student) – Jason is evaluating the difference between in-person pre-field trip activities and online pre-field trip activities on the overall field trip experience and learning gains of high school students. 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. Environmental Protection Agency (subcontract under Syracuse University); *The Haudenosaunee Thanksgiving Address as a pathway to stewardship education in the Onondaga Lake Watershed*; \$30,938 (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*; \$642,811; 9/1/2015-8/31/2018; R. Kimmerer, S. Diemont, E. Folta, C. Beier, and J. Manno.
3. Research Proposals pending (include information as in B.1., above).
- a. Environmental Protection Agency; *STEM the Tide: Investigating Aquatic Invasive Species in the Mid-Hudson River Watershed with Students*; \$49,326; 8/2016- 6/2018; J. Dean, D. Evans, and E. Folta.
 - b. National Science Foundation; Environmental Scholars: Developing Civically-Endangered Leaders for Environmental Problem Solving; \$971,885; 1/2017-12/2021; G. McGee, K. Donaghy, E. Folta, R. French, and P. Hai.
4. Research Proposals submitted, but rejected (include information as in B.1., above)
- a. National Science Foundation; *Understanding and Using the Genetic Mechanism for Phytoremediation of Chlorinated Solvents? Environmental and Societal Impacts*; \$372,634; 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

Ren, Q. & E. Folta (under review). Evaluating Environmental Interpretation with Mixed Method: A case study at the International Crane Foundation, WI. *Journal of Interpretation Research*.

Velardi, S. H., Folta, E., Rickard, L., & Kuehn, D. (2015). The Components of Effective Professional Development for Science Educators: A Case Study with Environmental Education Program Project Learning Tree. *Applied Environmental Education & Communication*, 14(4), 223-231.

B. Non-refereed Publications

None

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

None

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

<u>Journal(s)</u>	<u>No. of manuscripts</u>
Journal of Interpretation Research	1
International Journal of Phytoremediation	1
Journal of Science Education and Technology	1

<u>Agency</u>	<u>No. of proposals</u>
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Other

c. Participation (workshops, symposia, etc.)

<u>Name of workshop, etc.</u>	<u>Date</u>	<u>Place</u>
• Project Learning Tree Coordinators Conference	6/7 - 6/12/2015	Saratoga Springs, NY
• NAI's Social Interpretation	4/18-4/19	Charlotte, NC

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

D. Foreign Travel (Where, When, Purpose)

1. Nicaragua (multiple locations), March 10-18, 2016, Ecotourism Abroad course that worked with Comunidad Connect (non-profit based out of Nicaragua). We toured ecotourism sites and conducted service learning projects for a women's cooperative in the village of Sontule.

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
- Finalized assessment report for the Natural History and Interpretation major.
 - Pilot tested portfolio review of two graduating seniors with the help of Katie Mulverhill, who designed the rubric and conducted the evaluation.

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* and *Human Dimensions of the Environment*
- EFB representative to the Recreation Resources and Protected Area Management minor.
- Student Life Committee Member.

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 one additional courses that focused on interpretation and ecotourism, which had a total enrollment of a 92 students. I co-taught the Ecotourism Abroad course for the second time with by Diane Kuehn. This year we took 5 students to Nicaragua. Where we worked with the Comunidad Connect (CC), which is a non-profit based in Nicaragua and was co-founded by an ESF alumni. The students experienced a variety of different ecotourism sites including visiting a remote village, Sontule which is located in the Miraflores Reserve. The women's cooperative in Sontule hopes to promote ecotourism to their village as a way to support their cooperative and the village. They use the money they generate from their various endeavors to provide college scholarships for the children of the village and to help the women of the village. The focus of the class was the service learning projects for the women's cooperative. The students participated in two projects 1) mapping various trails, 2) interpretive/promotional brochures for the homestays and guided services offered through the women's cooperative. The students really enjoyed the experience of living with some of the local families. Diane and I are polishing the interpretive brochures to send to CC, who will pass them along to the women's cooperative. We are also working with Dave White to create a video of the experience to help with class promotion. He also created a *Going Green* segment on Ecotourism using the footage from our class. Diane and I formalized the course, which will be offered as FOR 404 starting next spring. Next year we have decided to try something new with the course. We are working with Education First a travel organization instead of a non-profit to arrange everything. We will be heading to Costa Rica next year. The focus of the course will remain the same and Education First is busy figuring out which local organizations would be best for us to work with on the service learning component. As part of EFB 500 Interpreting Field Biology the students conducted reviews of the Adirondack Interpretive Center (AIC) trails and made suggestions for the AIC's new digital trail guide that they are in the process of creating. All of these materials were shared with the staff there. The students also had the opportunity of working with one of the local elementary schools that was on a field trip to the AIC. Two of the students in the class led a nature walk for the elementary school students and then the rest of the class participated in a play for them. It was a last minute addition to the course but one that meant a lot to my students. As for graduate students, I started working with one new PhD student this year, finished up 4 graduate students (2 MPS and 2 MS), and continued working with two other graduate students (2 MS) who should graduate in the fall. The two continuing MS students are actively collecting their data and should have it done by the end of the summer. Finally, I worked with Katie Mulverhill to pilot test a portfolio review of Environmental Education & Interpretation majors. She created the rubric and evaluated the two student portfolios. We plan to meet and discuss the review over the summer to fine tune it some more. There were several issues with the portfolios. Even though we provided a list of materials (all products from required courses) that at minimum the students should include the portfolios were missing some of the items. Katie, knowing the students from previous classes, knew they had more experience and skills than what the portfolio was providing, so we need to figure out how to better represent the missing information in the portfolio. She based the rubric for the portfolios off of the NAAEE required for professional educators, which are the same criteria used in accreditation. In order to move forward with accreditation we need to find a better way to demonstrate that we are meeting the criteria in the portfolios.

Department/College

I served on the CCAC for the fourth year. We reviewed several course proposals and field petitions. As part of the work on the CCAC I finalized the assessment report for the Environmental Education & Interpretation major and pilot tested the proposed portfolio review with two graduating seniors (see previous paragraph for more information). I started serving on the Student Life committee this year. As part of the committee I helped address various issues that Dean Lombard or someone else brought to the committee's attention. Finally, I continued to serve as the advisor for INTERP, which really came to life this year under the strong guidance of the officers. They started off the year by helping a local Webelo Scout troop with one of their badges. The members of the club designed and delivered the program for the scouts. INTERP also helped plan a festival this spring for a local community garden. The president and vice president of the club helped train the Excelsior Conservation Corps – Environmental Education team in how to deliver tableside/festival activities. The club is providing great opportunities for the members to get involved with the local community and practice their interpretation skills.

Self

I was part of two teams that were awarded grants this year. The first was an EPA Environmental Education grant focused on stewardship education using the Haudenosaunee's Thanksgiving Address as a lens to look at the natural world. As part of the team I have been helping review the curriculum materials as they are developed by two graduate students working on the project. I will also be helping with the teacher workshop (open to middle school teachers, high school teachers, and college faculty) that will be offered in early August and the evaluation of the curriculum that will start this coming fall. The National Institute of Food and Agriculture grant will help the grant team design a new graduate program at ESF that will focus on integrating indigenous and scientific knowledge. In addition to the grants received, I was a part of ~\$1.4 million in research proposals this year. One of the proposals was rejected and the others are still under review. I have continued my partnership with NY State Parks this year, which has opened up several opportunities for my students with their research and professional interests. I also had the opportunity to serve on the hiring committee for Beaver Lake Nature Center's new exhibits. We interview 5 design firms in early May. The design process will start this summer and the final exhibits will be finished by August 2017. This is a new experience for me which will help me better teach EFB 404. The Project Learning Tree (PLT) International Coordinators' Conference in Saratoga Springs, NY went off without any major issues. I learned a lot from helping to plan and coordinate the conference. We had participants from 4 countries and all over the United States. We got positive reviews from the conference participants. Finally, I attended NAI's Social Interpretation workshop that focused on social media and interpretive design. It is a workshop I have been wanting to attend for years and finally had the opportunity. The workshop will help me update the materials for EFB 417/617. It also introduced me to new tools that can be used in the course. While, I did not get as much out of the workshop as I had hoped it reinforced my confidence that what I was teaching the students is the best information currently available.

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 2016

- a. Course(s) to be offered
 - EFB 202 – Teach Scientific Journaling Portion (session D)
 - EFB 404 (Maymester 2017) Natural History Museums and Modern Science
- b. Proposed research activity
 - EPA Grant – plan and deliver teacher workshop on August 2, 2016. Continue to help with Thanksgiving Address Environmental Education curriculum development. Submit IRB application for field trip evaluation portion which will start in the fall.
 - NIFA Grant – work on grant as appropriate.
 - 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 facilitator updater workshop (for current facilitators) 8/20/16 – 8/22/16.

2. Fall Semester 2016

- a. Course(s) to be offered
 - EFB 312/512 Introduction to Personal Environmental Interpretation Methods
 - EFB 796 Evaluation of Interpretation and Environmental Education
 - EFB 497/797 Visitor Education as a Wildlife Management Tool

b. Proposed research activity

- EPA Grant – Recruit graduate student to help with project evaluations specifically related to field trips. Start collecting data.
- NIFA Grant – Start planning the program.
- Assuming one or more of the proposed grants (e.g., STEM the Tides or Environmental Scholars) 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.

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.

3. Spring Semester 2017

a. Course(s) to be offered

- EFB 417/617 Non-personal Environmental Interpretive Methods
- EFB 496/696 Advanced Interpretation & Certification
- FOR 404 Ecotourism Abroad – Costa Rica

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.