

ANNUAL REPORT: June 1, 2012 – May 31, 2013
(i.e., Summer 2012, AY 2012-2013)
DEPARTMENT OF ENVIRONMENTAL AND FOREST BIOLOGY
SUNY-ESF

NAME: Elizabeth Folta

I. INSTRUCTIONAL ACTIVITIES

1. Regular Course Offerings

	Course No.	Title	Credit Hrs.	No. Students	No. of Lab. Sections
SUMMER:	EFB 404	Natural History Museums & Modern Science	3	13	0
	EFB 202	Ecological Monitoring & Biodiversity Session A & C – taught Scientific Journaling	3	141	0
FALL:	EFB 404	Natural History Museums & Modern	3	16	0
	EFB 496*	Intro. to Env. Interpretation	3	31	3
	EFB 796*	Intro. to Env. Interpretation	3	3	1
SPRING:	EFB 417	Non-Personal Envrn Interp Methods	3	23	0
	EFB 617	Non-Personal Envrn Interp Methods	3	4	0

*Previously EFB 416/616 because of course number change to EFB 312/512 was temporarily listed as EFB 496/796

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 496/796 Introduction to Environmental Interpretation and EFB 498 - Nine students volunteered to give a plant program at Wheeler Elementary School. One student as part of her independent research project (EFB 498) designed the plant program and then led students from EFB 496/796 as they presented the program to each of the three 4th grade classes. Each student volunteered approximately 5 hours of his or her time to this project. This is the second year we have partnered with Wheeler Elementary.

EFB 417/617 Non-Personal Environmental Interpretative Methods – The students worked with Baltimore Woods, NYS Project Learning Tree (managed by the Department of Environmental Conservation), Clark Reservation State Park, Green Lakes State Park, Franciscan Earth Corps, Rosamond Gifford Zoo, New York State Outdoor Education Association, and NY State Parks – Albany Office. The students created brochures and podcasts for the organizations to use. A couple of the hiring organizations also asked students to create waysides exhibits for them. Below are links to the podcasts created by the students in EFB 417/617:

- Baltimore Woods Nature Center - <https://docs.google.com/file/d/0B5Gq8xMtqyrZTWM5QU5Ub0czZU0/edit?usp=sharing>
- Clark Reservation State Park (Augmented Reality) - <https://docs.google.com/file/d/0B5Gq8xMtqyrZREppT283cjFOems/edit?usp=sharing>
- Clark Reservation State Park (Nature Play) - <https://docs.google.com/file/d/0B5Gq8xMtqyrZYWVRUTIXX1RjZWM/edit?usp=sharing>

- Franciscan Earth Corp - <https://docs.google.com/file/d/0B5Gq8xMtqyrZUU9FaFRONGhMcTQ/edit?usp=sharing>
- Rosamond Gifford Zoo (FrogWatch USA) - <https://docs.google.com/file/d/0B5Gq8xMtqyrZNC1BUS1sUkJwTTO/edit?usp=sharing>
- New York State Parks (Great Lakes) - <https://docs.google.com/file/d/0B5Gq8xMtqyrZQWFFQmphNk1tLWM/edit?usp=sharing>
- New York State Outdoor Education Association – <https://docs.google.com/file/d/0B5Gq8xMtqyrZR0FTeFJTT3V0S28/edit?usp=sharing>
- New York State Project Learning Tree - <https://docs.google.com/file/d/0B5Gq8xMtqyrZSmVRNTVpNUFsMkU/edit?usp=sharing>

In total, the students donate over 788 hours to the eight different community organizations. The majority of the organizations have worked with us for several years now and would like to participate again in the future.

EFB 496/796 Advance Interpretation & Certification – This was a trial course that was offered for the first time this year. As part of this course, the students created and delivered programs at Baltimore Woods Nature Center and Beaver Lake Nature Center. Each group of students had to present the same program at both locations to gain experience in adapting their programs for different locations and different audiences. Students presented six different programs focusing on the following topics: bird watching, wildlife tracks and signs, Leave No Trace, tree life cycle, and nature journaling. The students contributed over 120 hours to the development and delivery of these programs.

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

	Course No.	Title	Credit Hrs.	No. Students
Summer:	EFB 420	Professional Internship	3	1
Fall:	EFB 420	Professional Internship	3	5
	EFB 495	Undergrad Exp/Coll Teach	3	3
	EFB 496	Study Abroad	12	1
	EFB 498	Independent Research/Envrn Bio	3	4
	EFB 798	Research Prob/Env & For Bio	4	1
	EFB 898	Professional Experience	1/3	2
	EFB 899	Master’s Thesis Research	1/4	2
Spring:	EFB 420	Professional Internship	1/3	4
	EFB 496	Adv. Envrn Interp & Certification	3	19
	EFB 498	Independent Research/Envrn Bio	1/2/3	8
	EFB 796	Adv. Envrn Interp & Certification	3	4
	EFB 898	Professional Experience	1/2/6	3
	EFB 899	Master’s Thesis Research	2/4	2
	ESF 499	Honors Thesis/Project	3	1

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

Facilitated

- Project Learning Tree Focus on Forests at ESF April 2013 – 15 participants
- National Association for Interpretation Certified Interpretive Guide Workshop at Beaver Lake Nature Center March 2013 – 8 participants
- Project WILD at Beaver Lake Nature Center May 2013 – 11 participants

Co-Facilitated

- National Association for Interpretation Certified Interpretive Guide Workshop at Baltimore Woods Nature Center November 2012 – 7 participants
- Project Learning Tree at SUNY-Cortland March 2013 – 15 participants

4. Guest Lecture Activities

<u>Course No.</u>	<u>Title</u>	<u>No. of Lectures</u>
EFB 132	Freshmen Orientation Seminar	1 (per section)
EFB 482	Ornithology	1
EST 496	Science Communication	1

II. **STUDENT ADVISING**

A. Number of undergraduates for whom you are the student's official advisor 24 and unofficial advisor N/A

In addition, co-advised two students in Honor's theses Kristin Pasquino (2013, co-advisor Paul Hai) and Joshua Enck (2014, co-advisors Chris Whipps and Sadie Ryan) and advised several other students in senior capstone projects or independent projects. Six of these students created exhibits for the Roosevelt Wild Life Station and CIRTAS located on the second floor of Illick.

INTERP club advisor

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. Hua Cai, M.S., 8/2011 - current
2. Sarah Maldonado, M.P.S., 1/2012 - current
3. Kelley Purcell, M.P.S., 8/2011 – current
4. Qing Ren, M.S., 8/2012 - current
5. Anjoli Suci, M.S., 1/2011 – defended November 2012, “Environmental Literacy and Youth Development Outcomes of an Environmental Action Research Program with Underachieving High School Students”
6. Kyle Teufel, M.S., 8/2012 – current
7. Sara Velardi, M.S., 8/2012 - current
8. Tiferet Zimmern-Kahan, M.P.S., 8/2011 - current

CO-MAJOR PROFESSOR

1. Michele Maciejewski, M.P.S., 8/2012 – current (co-major professor, Valerie Luzadis)
2. Emily Van Ness, M.P.S., 1/2013 – current (co-major professor, Greg McGee)

MEMBER, STEERING COMMITTEE (other than those listed above)

1. Elisabeth Holmes, M.P.S. (Tom Horton, major professor)
2. Courtney Johnson-Woods, Ph.D. (Andrea Parker, major professor)
3. Kimiharu To, Ph.D. (Andrea Parker/Sharon Moran, major professors)
4. Patrick Dawes, Ph.D. at Syracuse University (John Tillotson, Syracuse University major professor)

CHAIRMAN OR READER ON THESIS EXAMS, ETC.

1. Alan Shupe (Shijie Liu, major professor) - chair

III. **RESEARCH COMPLETED OR UNDERWAY**

A. Departmental Research (unsupported, boot-legged; title - % time spent)

- Qing Ren (M.S. student) is working with the International Crane Foundation to evaluate the knowledge and attitude changes of adult visitors after participating in personal and non-personal interpretation. Percent of my time ~3%.

- 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, *Plugging-in the Outdoors: Engaging Visitors in Nature through Augmented Reality Games*; \$3000.00; 6/2012 – 6/2013; E. Folta. Partially supported M.S. research of Hua Cai.
 - b. Project Learning Tree Model Program Initiative Grant, *Evaluation of Project Learning Tree Workshop Formats and Correlation of Use in New York*; \$10,000; 1/2013-5/2014; Tom Shimalla, Mike Jabot, & Elizabeth Folta. This grant will fund Sara Velardi's M.S. research.*
 - c. 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.

*Please note with the Project Learning Tree (PLT) grant that Mike and I were both supposed to have graduate students funded/working on the grant. Since we received the grant Mike has stepped back from the project and will help when needed, but my graduate student and I are now taking the lead on the project. Tom Shimalla is the coordinator for PLT in NY and will be working on the grant but not as the primary investigator.

2. Research Proposals pending (include information as in B.1., above).
 - a. National Science Foundation; *Serious Educational Games with Augmented Reality for Youth (SEGWAY)*; \$791,012.00 (ESF portion); 9/2013 – 8/2017; L. Annetta, E. Folta, and R. Beal.
 - b. National Science Foundation; *Understanding and Using the Genetic Mechanism for Phytoremediation of Chlorinated Solvents – Environmental and Societal Impacts*; \$374,503.00; 8/2013 – 8/2016; L. Newman and E. Folta.
 - c. National Science Foundation; *SquirrelMapper – An Informal Evolution Education Opportunity for the Urban and Rural Public*; \$1,744,047.00 (ESF portion); 1/2014-1/2018; Gibbs, J., Shrimpton, N., Folta, E., & Bonter, D.
 - d. National Fish and Wildlife Foundation Five Star restoration Program; *Stream of Schools*; \$50,000; Smith, S., Smardon, R., Folta, E., Parker, A.
3. Research Proposals submitted, but rejected (include information as in B.1., above)
 - a. National Science Foundation; *Serious Educational Games with Augmented Reality for Youth (SEGWAY)*; \$2,345,290.00; 9/2012 – 8/2016; L. Annetta, E. Folta, and R. Beal.
 - b. National Science Foundation; *Understanding and Using the Genetic Mechanism for Phytoremediation of Chlorinated Solvents – Environmental and Societal Impacts*; \$363,131.00; 9/2012 – 8/2015; L. Newman and E. Folta.
 - c. National Science Foundation; *DREAMS: Design Research Exploring Augmented Modular Science*; \$753,424.00 (ESF portion); 9/2012 – 8/2016; L. Annetta, E. Folta, and R. Beal.
 - d. National Science Foundation; *DREAMS: Design Research Exploring Augmented Modular Science*; \$1,192,562; 10/2013 – 10/2016; L. Annetta, E. Folta, and R. Beal.

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
None

B. Non-refereed Publications

None

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

Folta, E. (November 14, 2012). Interpretive Podcasts: Teaching Tool and Creative Outlet. Paper Presented at the National Association for Interpretation National Workshop, Hampton, VA.

Folta, E., Cai, H., Muller, S., & Rendon, C. (October, 2012). Connecting People and Nature with Augmented Reality. New York State Outdoor Education Association Conference, Long Island, NY.

Folta, E. (June 22, 2012) Geocaching for Education-Connecting the Dots! Session presented at the Leopold Education Project (LEP) national conference, Peninsula, OH.

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

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)
5. New York State Outdoor Education Association, Board Member, 9/2012 - current

VI. PROFESSIONAL DEVELOPMENT

A. Professional Honors and Awards (for teaching, research, outreach, etc.): None

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)
- New York State Outdoor Education Association (NYSOEA)

3. Other Professional Activities

a. Editorial activity

Journal (s)

Responsibility

Other (books, symposia, etc.)

b. Reviewer

Journal(s)

No. of manuscripts

Journal of Environmental Education

2

Journal of Environmental and Science Education

1

Journal of Interpretation Research

1

Agency

No. of proposals

Social Science and Humanities Research Council of Canada

1

Other

c. Participation (workshops, symposia, etc.)

Name of workshop, etc.

Date

Place

C. Further Education/Re-training Undertaken, Leaves, Workshops, etc.

Invited Participant - Project Learning Tree Northeast Region Training, October 23-25, 2012, Newport RI

D. Foreign Travel (Where, When, Purpose)

None

VII. ADMINISTRATIVE AND SERVICE RESPONSIBILITIES (include committee participation)

A. Department-level

- Natural History & Interpretation Program Coordinator
- EFB Course and Curriculum Assessment Committee Member
- Help with departmental open houses: fall & spring; accepted student visitations: spring
- Completed assessment of the Natural History and Interpretation Program
- Submitted request for name change for Natural History & Interpretation to Environmental Education & Interpretation. Approved at university level, but still needs to be approved by SUNY.

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

C. University-wide, including Research Foundation

None

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 continued to focus mainly on the students. I taught five interpretive courses, which had a total enrollment of a 113 students. EFB 404 Natural History Museums and Modern Science was offered twice this year so it could be moved to its new schedule of Maymester without penalizing any of the students who needed it to graduate. It was offered in the fall with the hope of visiting the American Museum of Natural History in New York City over a long weekend but unfortunately, the planned weekend was the same weekend Hurricane Sandy hit New York City. EFB 404 was offered again for the first time this year as a Maymester course changing the format of the class. As part of the class, we visited Washington, DC again. The trip exposed the students to a variety of educational settings that house different types of collections including the National Museum of Natural History, the U.S. Botanic Gardens, and the National Zoo. The students in both sections of EFB 404 redesigned five of the lobby exhibits and the three display cases in Illick 12. This was also the first year that a recitation section was added to what used to be EFB 416/616, now EFB 312/512. The recitation allowed the students to experience more hands-on activities including training in Project WILD, Project Learning Tree, and Project WET and take a field trip to Beaver Lake Nature Center to evaluate programs delivered by their interpretive staff. The recitation still needs work to get it to the level that I am hoping for, but it is off to a good start. I offered a new course Advanced Interpretation & Certification. The new course exposed students to the business side of interpretation, allowed them to obtain the Certified Interpretive Guide certification (CIG), and to gain more experience giving programs to the public. Katie Mulverhill from Baltimore Woods Nature Center helped teach the CIG portion of the course. This certification is an entry-level certification in the field of interpretation. Once again, this course is a work in progress, but the students appreciated the certification and the chance to present public programs. All 23 students successfully completed the certification process. Finally, I continued to work with my graduate students on their various research projects. My first master's student successfully defended this past fall and has moved on to be the education director of a zoo here in New York. Of my remaining nine graduate students, three are moving along with their research projects. Two of the three were able to find funding on their own with international and state agencies to help fund their research projects. Eight of the nine students should be finishing up next academic year allowing for more recruitment into the program.

Department/College

In addition to teaching, I served on the CCAC for the second year and completed the assessment of Natural History and Interpretation program. I also worked with Bob French and Don Leopold to change the name of the Natural History and Interpretation program to Environmental Education and Interpretation. This change has been approved at the college-level and will be submitted this summer for SUNY approval. The purpose of the change is to help improve recruitment into the major from outside of ESF. We continue to have students from within the college transfer into the program, but the hope is to create a sustainable program that does not rely on these transfers. In addition, the term "Natural History" continues to confuse prospective students, so we are updating the terminology to reflect what is currently being used in the industry.

Self

This year was the first year for many of the changes to the Natural History and Interpretation program that were approved last summer, which was exciting but also meant putting the changes into place and making sure students were not left behind. I focused on the new recitation during the fall. I recruited three undergraduate teaching assistants to help with the recitations. Together with the graduate teaching assistant, they prepared materials and ran most of the recitation periods. I learned very quickly that a totally separate graduate recitation would not work because of the number of people in the section was too small to be completely beneficial. The activities did not work well with three

people, but the reading discussions were beneficial. I will change this next year by offering the graduate section at the same time as one of the undergraduate sections so when appropriate they can participate with the larger group. During the spring, I focused on the new Advanced Interpretation and Certification course. One of my focuses of this course was the CIG certification, which I officially approved to teach this past fall. I am now a Certified Interpretive Trainer for NAI. With this certification came a couple of requests to certify local interpreters. I assisted Katie Mulverhill (the only other CIT in this area) with her first workshop at Baltimore Woods Nature Center and conducted a second CIG course during Spring Break at Beaver Lake Nature Center. Between the two CIG courses and the Advanced Interpretation & Certification Course Katie and I certified 38 interpreters in the local area. I had my first experience serving as a co-advisor for two students working on their honor's thesis. Both successfully completed their projects. I continued to work with many of the environmental interpretation organizations in the local area and the state. I was one of two people invited by the DEC to attend the PLT Northeast Region Training along with the state coordinators. During this training, we created a draft action plan for Project Learning Tree in New York State and brought it back to be approved by the entire Steering Committee. It was also a chance to meet and talk with the national PLT staff. I participated in four large grant proposals totaling \$4,102,124 and three smaller grant proposals totaling \$68,000. The status of most of these grants is still unknown, but the most important thing is they led to new partnerships that will be beneficial for future projects.

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 2013

- a. Course(s) to be offered
 - EFB 202 – Teach Scientific Journaling Portion
 - EFB 418/618 (Maymester 2014) Interpreting Field Biology
- b. Proposed research activity
 - PLT MPI Grant - Develop, submit for IRB approval, and distribute initial survey for PLT facilitators in NY with Sara Velardi and NYPLT coordinators.
 - Seed Grant “One Health”– Plan grant with the AIC and start developing initial messaging and delivery formats for pilot testing in the fall.
 - 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, NYSOEA, and Friends of Beaver Lake’s board.
 - Complete paperwork to submit Natural History & Interpretation program name change to SUNY.

2. Fall Semester 2013

- a. Course(s) to be offered
 - EFB 312 Introduction to Personal Environmental Interpretation Methods
 - EFB 796 Research in Interpretation and Environmental Education
- b. Proposed research activity

- Assuming one or more of the proposed grants (e.g., SEGWAY, Stream of Schools, or Understanding and Using Genetic Mechanism) are funded; preparation for the projects will start this fall.
 - Seed Grant “One Health”– Finalize One Health messaging and pilot test messages/formats at the Adirondack Interpretive Center.
 - PLT MPI Grant – Analyze results from initial facilitator survey follow-up by developing survey for PLT workshop participants. Results from the second survey will be analyzed and interviews will be conducted.
 - 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.
 - Start serving on the college’s Public Service and Outreach committee.

3. Spring Semester 2014

- 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 Public Service and Outreach committee.