

ANNUAL REPORT: June 1, 2011 – May 31, 2012
(i.e., Summer 2011, AY 2011-2012)
DEPARTMENT OF ENVIRONMENTAL AND FOREST BIOLOGY
SUNY-ESF

NAME: Elizabeth Folta

I. INSTRUCTIONAL ACTIVITIES

1. Regular Course Offerings

	<u>Course No.</u>	<u>Title</u>	<u>Credit Hrs.</u>	<u>No. Students</u>	<u>No. of Lab. Sections</u>
SUMMER:	EFB 202	Ecological Monitoring and Biodiversity Session A & C – taught Scientific Journaling	3	138	0
FALL:	EFB 416/616	Intro. To Env. Interpretation*	3	53	0
SPRING:	EFB 404	Natural History Museums & Modern Science	3	12	0
	EFB 417/617	Interpretive Design*	3	28	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 courses currently listed with service-learning components include: 416/616, 486, 518, 521, 532, 446/646.

EFB 416/616 Sixteen students volunteered to give a plant program at Wheeler Elementary School. The students scouted out the location, designed the program, and then presented it 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 first time that I had an outreach component to EFB 416/616. It is something I hope to continue next year with the addition of the recitation sections.

EFB 417/617 The students worked with Baltimore Woods, Beaver Lake Nature Center, Friends of Beaver Lake, Montezuma Audubon Center, Green Lakes State Park, Clarks Reservation State Park, ESF Greenhouses, Leopold Education Project, and Rosamond Gifford Zoo. The students created brochures and waysides exhibits for the organization to use. Several of the groups are seeking funding to create the wayside exhibits the students created.

Three groups also created podcasts for their organizations. Below are links to two of the podcasts created by the students in EFB 417/617. In addition, each student volunteered at an event hosted by his or her organization or another community organization.

- Rosamond Gifford Zoo – <http://youtu.be/-lgiJoB7-9Q>
- Experience Your Syracuse - <http://youtu.be/WPDhOJSLIPc>

In total, the students donate over 489 hours of service to the nine community organizations. The majority of the organizations would like to participate again next year. Recruitment of organizations is based on enrollment in the class. I try to have no more than 3-4 students working with an organization, so that projects are not a burden to anyone community group.

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>
FALL:	EFB 420	Internship/EFB	3	12
	EFB 498	Research Prob/ EFB	1	5
	EFB 796	Research in Interp. & EE	3	5
	EFB 798	Research Prob/ EFB	1	1
	EFB 899	Master's Thesis Research	1	1
SPRING:	EFB 420	Internship/EFB	3	1
	EFB 495	Undergrad Exp/Coll Teach	3	2
	EFB 496/796	Tech/Interpretation & EE	3	11
	EFB 898	Professional Experience	1	1
	EFB 899	Master's Thesis Research	2	1
	EST 400	Senior Paper	3	1
SUMMER:	EFB 496/696	Interpretation/Field Bio	3	6

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

Arranged for three workshops to be offered on campus this year:

- *Focus on Solar* offered by NYSERDA
- *Planning of Wetlands* offered by Environmental Concerns
- *Food, Land, & People* offered by NY Agriculture in the Classroom

Co-Facilitated

- *Project Learning Tree* workshop at the NYSAF conference in Syracuse, NY
- *Project Learning Tree Early Childhood Experiences* workshop in Courtland, NY

4. Guest Lecture Activities

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

II. STUDENT ADVISING

A. Number of undergraduates for whom you are the student's official advisor 31
 In addition, served as UMEB advisor to Melissa Santos (fall semester).

B. Graduate Students: (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

- Hua Cai, M.S., 8/2011 - current
- Sarah Hofer, M.P.S., 1/2012 - current
- Kelley Purcell, M.S., 8/2011 - current
- Anjoli Suci, M.S., 1/2011 - current
- Tiferet Zimmern-Kahan, M.P.S., 8/2011 - current

MEMBER, STEERING COMMITTEE (other than those listed above)

- Elisabeth Holmes, M.P.S., 1/2011 - current
- Chris McCarthy (LSA), M.S. 1/2011-5/2012

CHAIRMAN OR READER ON THESIS EXAMS, ETC.

- Bonnie Gale (LSA), M.S., Chair 12/2011

III. RESEARCH COMPLETED OR UNDERWAY

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

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. ESF Seed Grant, *Plugging-in the Outdoors: Engaging Visitors in Nature through Augmented Reality Games*; \$3000.00; 6/2012 – 12/2012; E. Folta.

2. Research Proposals pending (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.

3. Research Proposals submitted, but rejected (include information as in B.1., above)

- a. National Science Foundation; *FUTURE: Fusing Ubiquitous Technologies in Urban and Rural Education*; \$398,762 (ESF portion); 9/2011 – 8/2014; L. Annetta, K. Clark, and E. Folta.
- b. National Science Foundation; *EXP: Quantifying the Outdoors – Mobile Technology Enhanced Field-based STEM Education*; \$548,500; 9/2011 – 8/2013; R. Beal, E. Folta, and C. Spuches.

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

Annetta, L.A., Frazier, W.M., **Folta, E.**, Holmes, S.Y., Lamb, R., & Cheng, M.T. (in press). *Science teacher efficacy toward professional development using video games in a design-based research model: The next generation of STEM Learning*. Journal of Science Education and Technology.

Folta, E. (submitted for review 6-1-2012). *Black Bears of North Carolina: From the Mountains to the Coast*. Learn NC. The University of North Carolina at Chapel Hill. <http://www.learnnc.org>.

B. Non-refereed Publications

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

Annetta, L.A., Lamb, R., Minogue, J., Cheng, R., Vallett, D.B., Holmes, S.Y. & **Folta, E.** (March 26, 2012). *Immersing preservice science teachers in Serious Educational Games*. Paper presented at the annual meeting of the National Association for the Research in Science Teaching (NARST), Indianapolis, IN.

Folta, E. (November 9, 2011). *Interpreting Nature through Augmented Reality Games*. Paper presented at the national workshop of the National Association for Interpretation (NAI), Saint Paul, MN.

Folta, E. & Cheng, R. (October 14, 2011). *How can Augmented Reality games be used in Environmental Education?* Paper presented at the annual conference of the North American Association of Environmental Education (NAAEE), Raleigh, NC.

Folta, E. (October 11, 2011). *Red Wolf Caper: Designing MSEGs for Middle School Students' Environmental Literacy*. Paper presented at the research symposium of the North American Association of Environmental Education (NAAEE), Raleigh, NC.

Folta, E. (July 29, 2011). *"Plugging-In" the Outdoors: Using Augmented Reality Games to Connect People to Nature*. Session presented at the Leopold Education Project (LEP) national conference, Albuquerque, NM.

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
 - c. Programs subcommittee 6/2011 – 4/2012
3. Project Learning Tree Steering Committee (NY) 7/2011 – current
4. Leopold Education Project State Coordinator 2011 (unofficial) – current (official)

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)
- National Association for Research in Science Teaching (NARST)
- North American Association for Environmental Education (NAAEE)
- National Association of Interpretation (NAI)

3. Other Professional Activities

a. Editorial activity

Journal (s)

None

Responsibility

Other (books, symposia, etc.)

None

b. Reviewer

Journal(s)

Journal of Environmental Education

Journal of Science Education and Technology

No. of manuscripts

2

1

Agency

Other

NAAEE

No. of proposals

8 conference proposals

c. Participation (workshops, symposia, etc.)

<u>Name of workshop, etc.</u>	<u>Date</u>	<u>Place</u>
None		
C. <u>Further Education/Re-training Undertaken, Leaves, Workshops, etc.</u>		
NAI: Certified Interpretive Trainer	August 2012	Kirkwood, MO
NYSERDA Focus on Solar	9/17/2011	Syracuse, NY
NYSOEA Annual Conference	10/21/2011	Callicoon, NY
Planning of Wetlands	11/6/2012	Syracuse, NY
Food, Land, and People	3/31/2012	Syracuse, NY
Wilderness First Aid	Spring 2012	Syracuse, NY
Project WET facilitator workshop	4/27/2012	Buffalo, NY
Project WILD & Aquatic WILD facilitator workshop	4/28/2012	Buffalo, NY
D. <u>Foreign Travel (Where, When, Purpose):</u> None		

VII. ADMINISTRATIVE AND SERVICE RESPONSIBILITIES (include committee participation)

A. Department-level

- Open Houses: Fall & Spring
- Program coordinator for Natural History and Interpretation major
- Updated the Natural History and Interpretation curriculum with EFB faculty.
- Member of the Course and Curriculum Assessment Committee (CCAC; starting Spring semester)

B. College-level

- Search committee member for Environmental Studies - Environmental Communications Faculty Position
- Worked with six students during the fall semester to form the INTERP club, which became an official club at ESF 12/2011. I am currently, serving as their advisor.

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 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, which I'll continue to award based on your contributions to the department and college this reporting period.

Students

This year I focused mainly on the students through a number of different avenues. I taught five interpretive courses, which had a total enrollment of 109 students. Two of the courses were offered for the first time, EFB 796 Research in Interpretation and Environmental Education and EFB 496/796 Technology in Environmental Interpretation and Environmental Education. The students had a chance to present activities at the NY Society of American Foresters conference as part of the class. In EFB 416/616, I added a service learning opportunity. The students designed and presented a program on plants to the entire 4th grade at Wheeler Elementary school in Nedrow, NY. I taught EFB 404 for the first time including taking the students to Washington, D.C. over spring break. The students of EFB 404 and INTERP redesigned five of the Illick lobby exhibits this year. I had four new graduate students who started this year,

who have taken a lot of time to help focus their research interests. I arranged for a number of different educational workshops to be offered on campus allowing students a chance to interact with other educators in the local community as well as receive further education in a variety of specific topics. Finally, I worked with six students to start the INTERP club in the hopes that we can get other students involved in environmental interpretation.

Department/College

In addition to teaching, I worked with the CCAC members to complete the Natural History and Interpretation curriculum changes. The changes have been approved at the department level and currently are under review at the college-level. These changes included the removal of three courses (EFB 406 Great Naturalist Seminar, EFB 405 Literature of Nature, and EFB 215 Interpreting Science through Art), the addition of new directed elective options, the addition of EWP 390 Introduction to the Literature of Nature, the addition of a new Outdoor Recreation directed elective requirement, and updates to all the existing interpretive courses. I joined the CCAC committee this spring, which is helping me become more acquainted with procedures related to courses at ESF. I also served on the search committee for the Environmental Studies – Environmental Communication position. It was another good learning experience for me and allowed me to get to know some of the Environmental Studies faculty members.

Self

This is my first whole year serving as a graduate advisor. It has been an interesting experience working with the graduate students and helping them figure out their areas of interests. In addition to helping the graduate students with starting to establish their research, I have recruited two Natural History and Interpretation students to pursue the honors program in hopes of establishing the start of undergraduate research in interpretation. I continued to work with many of the environmental interpretation organizations in the local area and the state. I joined the Project Learning Tree steering committee for New York. Besides attending the advisory meetings, I have reviewed grant applications the DEC submitted for PLT, and helped with professional workshops. I have also been asked to serve with Benette Whitmore as the regional representative for the New York State Outdoor Education Association, which I will learn more about over the summer. I took part in three grant proposals totaling \$3,461,845. I presented papers at three national conferences. It was my first time attending all three conferences. Finally, I started working on the National Association for Interpretation Certified Interpretive Trainer certification. This certification will allow me to provide the Certified Interpretive Guide (CIG) certification to students. The CIG is an introductory level certification in the field of interpretation.

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)

During 2012-2013 academic year, I plan to get more involved at a college-level, continue to improve the interpretation courses, and work to get both undergraduate and graduate students more involved with research and the professional organizations in the interpretive field. In the fall, my focus will be on getting the recitation portion of Introduction to Environmental Interpretation underway. The new recitation will allow students more of an opportunity to create, present, and evaluate programs. The hope is to offer service learning opportunities, as well as professional workshops as part of the recitation. I will continue to offer professional development workshops for the students and local educators. The plan is to expand these offerings to include the AIC. Two graduate students will be presenting for the first time at two conferences in the fall on research projects on which they are currently working. I also have three new incoming graduate students. I will continue to seek funding and work on my own research in augmented reality games.

B. PROJECTED ACTIVITIES FOR NEXT YEAR

1. Summer 2012

- a. Course(s) to be offered
 - EFB 202 – Teach Scientific Journaling Portion
 - Mentor two honors projects that are starting this summer. One is at the AIC evaluating the use of QR codes for trailside interpretation. The other one will be an evaluation of the ESF Science Corps.
- b. Proposed research activity
 - Seed grant project – working with the Rosamond Gifford Zoo on an augmented reality game designed to engage the zoo visitors on a nontraditional level. The game will be tested in the fall.
 - Submit additional grant proposals and papers for publication.
- c. University, professional society, and public service
 - Work on Natural History & Interpretation assessment plan.
 - Possibly attend Leopold Education Project National Conference, June 20-23, 2012 in Peninsula, OH including the pre-conference workshop - LEP facilitation training.
 - 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.
 - Coordinate and facilitate curriculum workshops (e.g., Project WILD, Project WET, and Project Learning Tree) at Adirondack Interpretive Center and Beaver Lake for late summer/early fall.

2. Fall Semester 2012

- a. Course(s) to be offered
 - EFB 496/796 Introduction to Environmental Interpretation – First time undergraduate and graduate level recitations will be added to the course.
 - EFB 404 Natural History Museums and Modern Science
- b. Proposed research activity
 - Assuming one or more of the proposed grants (e.g., SEGWAY, DREAMS, or Understanding and Using Genetic Mechanism) are funded; preparation for the projects will start this fall.
 - Seed Grant – test the augmented reality game at the Rosamond Gifford Zoo. Collect, analyze, and present the results at the New York State Outdoor Education Association conference.
 - Submit additional grant proposals and papers for publication.
 - Work with graduate and undergraduate research projects.
- c. University, Professional society, and public service
 - Presenter – New York State Outdoor Education Association Conference, October 18-21, Holtsville, New York.
 - Presenter – National Association of Interpretation National Workshop, November 13-17, Hampton, Virginia.
 - 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.

3. Spring Semester 2013

a. Course(s) to be offered

- EFB 417/617 Interpretive Design
- EFB 494/696 Advanced Environmental Interpretation

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.