

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

NAME:    ALEX WEIR   

**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 & Biodiv	3	150	both sections on Fungi
FALL:	EFB 210	Diversity of Life I	3	175	7
	EFB 420	Internship Env. For. Biol.	3	1	
	EFB 440	Mycology	3	34	2
	EFB 495	Undergrad Exp. Coll. Teaching	3	1	
	EFB 495	Undergrad Exp. Coll. Teaching	3	1	
	EFB 498	Research Probs Env. For. Biol	2	1	
SPRING:	EFB 211	Diversity of Life II	3	153	6
	EFB 420	Prof. Internship Env. For. Biol	3	3	

**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.

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 2012	EFB 499	Honors Thesis/Project	3	1
	EFB 999	Doctoral Thesis Research	1	1

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

4. Guest Lecture Activities

<u>Course No.</u>	<u>Title</u>	<u>No. of Lectures</u>
EFB 132	Freshman Orientation Seminar	2

**II. STUDENT ADVISING**

A. Number of undergraduates for whom you are the student's official advisor 21 and unofficial advisor 6

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

Lauren Goldmann, PhD, started January 2010

CO-MAJOR PROFESSOR

1. Ohnmar Myo Aung, PhD, 05/05 (co-MP with Kevin Hyde), Mushroom Research Foundation, Chang Mai, Thailand.

MEMBER, STEERING COMMITTEE (other than those listed above)

Maureen Durkin, MS, Jonathan Cohen MP

CHAIRMAN OR READER ON THESIS EXAMS, ETC.

**III. RESEARCH COMPLETED OR UNDERWAY**

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

Curation and examination of Thaxter's arthropod hosts – supported in kind through Harvard University Museum of Comparative Zoology - \$1000 per year for supplies. We have now prepared a database of this material for distribution to other specialists and have received loan requests during the past year. This year we returned all curated specimens back to Harvard.

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)

National Science Foundation – Monographic Approaches to the Laboulbeniales, Subtribe Stigmatomycetinae and the Genus Stigmatomyces. NSF PEET (Partnerships for Enhancing Expertise in Taxonomy) Program.

Total Amount \$750,000,

Current Year \$150,000

Starting Date 1<sup>st</sup> January 2006 Ending Date 31<sup>st</sup> December 2011. One year no-cost extension approved by NSF during 2011 and then another 6 month no cost extension approved December 2011-30 June 2012.

One graduate student, Lauren Goldmann, is currently finishing up her PhD and was supported by the above.

National Science Foundation – Macrofungi Collections Consortium – Grants to Advance Digitization of Biological Collections.

Total Amount unknown

ESF portion \$34,000

One undergraduate student, Holly Faulkner, will be supported through this grant.

2. Research Proposals pending (include information as in B.1., above).

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

**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

Goldmann, L. and A. Weir (2012). Position specificity in *Chitonomyces* (Ascomycota, Laboulbeniomycetes) on *Laccophilus* - . Mycologia 104(5): 1143-1158. One of our plates from this paper was also chosen as the front cover for the journal.

Goldmann, L., Weir, A., and Rossi, W. (in review). Molecular analysis reveals two new dimorphic species of *Hesperomyces* (Ascomycota, Laboulbeniomycetes) parasitic on the ladybird *Coleomegilla maculate* (Coleoptera, Coccinellidae). Submitted to Fungal Diversity.

Thompson, L. and A. Weir (submitted). Laboulbeniales on Elateridae (Coleoptera); a review. Submitted to Mycologia (in review)

Goldmann, L. and A. Weir (submitted). Two new species of *Ilyomyces* from New York. Submitted to Mycologia (in review).

Cort, C., Goldmann, L., Benny, G., and A. Weir (to be submitted summer 2013). A phylogenetic analysis of Heterocephalum: Using Molecular Tools to Reassess the Taxonomic Placement of and Unusual and Infrequently Collected Fungus. This work formed the basis for Cat Corts' Honors Thesis.

B. Non-refereed Publications

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

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):

National Science Foundation Grant Application Reviewer (1 application spring 2013)

Continued Liaison with Central New York Mycological Society

2. Industrial and Commercial Groups, etc.

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

## 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)

Member, Mycological Society of America Distinctions Committee

2. Professional Society Membership

Member, Mycological Society of America

Member, British Mycological Society

Member, International Mycological Association

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>
Mycologia	1
Nova Hedwigia	1

<u>Agency</u>	<u>No. of proposals</u>
National Science Foundation	1
<u>Other</u>	

c. Participation (workshops, symposia, etc.)

<u>Name of workshop, etc.</u>	<u>Date</u>	<u>Place</u>
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C. Further Education/Re-training Undertaken, Leaves, Workshops, etc.

D. Foreign Travel (Where, When, Purpose)

June 2012 – Italy - collaboration with Professor Walter Rossi

**VII. ADMINISTRATIVE AND SERVICE RESPONSIBILITIES (include committee participation)**

A. Department-level

Director, Cranberry Lake Biological Station, 08/06 –

Curator of the EFB Herbaria appointed 09/03-

Member, Field Programs Committee EFB

Active participant in EFB majors for Forest Health, Conservation Biology and Natural History and Interpretation.

Member, Lowe-Wilcox Award Committee, Zabel Award Committee, Morrell Award Committee

B. College-level

Director, Cranberry Lake Biological Station, 08/06-

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 continued my second year as instructor/coordinator of the two semester required Diversity of Life sequence. Diversity of Life I had an ending enrollment of 175 students in 7 lab sections and Diversity of Life II had an ending enrollment of 153 students in 6 lab sections. Although there were some initial problems on the whole this 2-semester course was well-received and I am already working on a number of refinements for the upcoming year. I also taught my regular Mycology offering (34 students enrolled). I have continued to serve students in my capacity as Director of the Cranberry Lake Biological Station, answering many questions and queries throughout the year. At the graduate level I finished one MS and have one PhD student who successfully passed her Candidacy Exam and is now making good progress toward obtaining her degree. Rae Devan also successfully completed an undergraduate Honors thesis in my lab and is currently preparing her work for publication.

DEPARTMENT/COLLEGE

My major contribution to EFB/ESF this past year has been my leadership role as Director of the Cranberry Lake Biological Station. Enrollments at the Station are still rising and we ran at almost full capacity for the summer of 2012, with similar enrollments expected for the summer 2013 program. Both the teaching and research programs were successful with almost 200 undergraduate students present at the Station during the summer of 2012, and research groups from Indiana State University, Cornell University as well as our own Grober Research Fellow (graduate) and one Cranberry Lake Fellowship awardee (undergraduate) in residence.

Another important assignment this past year was my continued development and coordination of the new required two-semester sequence in Diversity of Life (see above).

I have also continued to serve the Department as Curator of the Herbaria, and as the contact point for international opportunities for our students.

SELF

This has been another good year on the NSF PEET grant with resolution of the phenomenon of "position specificity" arising from Lauren Goldmann's MS work. Lauren presented the results of this work at the 9<sup>th</sup> International Mycological Congress in Edinburgh, Scotland in August 2010 and was one of 18 award winners (out of 1092 entries). This research has now been formally written up and published in Mycologia. Discovery of additional levels of position specificity in the genus *Hesperomyces* (Goldmann, Weir, and Rossi, in review) was surprising and has led to the conclusions that 1/ a thorough systematic revision of the Laboulbeniales is urgently needed and 2/ that the theory of "position specificity" needs to be revised in light of our findings that link a morphotype and not a species to specific

body parts of host insects. In addition to this, we have also added many new sequences to our growing database for a phylogenetic overview of the order, including at least 5 new genera. We now have more than enough results for publication of at least 3 additional manuscripts..

#### **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)**

I would like to further develop my teaching and research interests over the coming years. I remain committed to the Cranberry Lake Biological Station program and will continue to expand and broaden our offerings here. The recent acquisition of new equipment, and major moves towards stimulating the further integration of research and teaching at the Station represent exciting ventures. Directing this facility has been a major contribution over the past several years. However, the lack of continuity in secretarial (registration and enrollment), CLBS Office Administration (Business Manager) food service (we have now just hired our 4<sup>th</sup> Food Service Manager since I took over as Director in 2005), and maintenance/physical plant staff have proved to be major sinks in terms of time management.

Another major input has been the development and coordination of the new Diversity of Life two-semester sequence. I have now completed the two years (4 semesters) that I originally offered in order to get this class off the ground. The development and initial handling of the course included writing more than half the labs for the fall semester and attending all 7 lab sections on a weekly basis. This was a huge task that was taken on without any additional compensation in addition to my regular duties. In the future I would suggest that this position carry additional assignment or be part of a core teaching load.

I will continue for one additional semester (Fall 2013) and would like to continue to give some lectures in EFB 210 in the future. As with many large, team-taught classes the Diversity of Life series has suffered from inconsistencies in approach, expectations, TA assignment, and grading in addition to a lack of financial investment. Ideally, these sorts of classes need the very best TAs and some continuity in TA assignment from semester to semester. We have also reached the point where many of our other offerings need to be re-evaluated based on the fact that our students will have had basic coverage in this required sequence. On the positive side the class has allowed students to experience many of our faculty teaching the subjects in which they are most expert and passionate. This may account for the large increase in enrollment in Mycology this coming fall for example (fall 2012 – 34 students, fall 2013 – 54 students). I remain convinced that this sequence is a necessary component of our core curriculum and that it provides opportunities to refine and advance our upper division classes across many taxonomic groups.

My research program and particularly the NSF PEET project continues to develop with a great deal of new and interesting results this year. This grant expired at the end of June 2012. This should facilitate preparation of additional manuscripts and will set the stage for further grant submissions in the near future. I am also working hard on attracting two new PhD-level students who will hopefully be starting in our graduate program fall 2013.

In summary, I am very excited at the possibilities for further growth in teaching, and scholarship and research available here at ESF. In future years I would be interested in contributing to a potential General Education course centered around microbes and fungi and in offering some more advanced mycology topics. The core of my research interests continue to be well-supported by NSF and I am beginning to branch out into other potential areas that could attract funding from different sources. I remain committed to further enhancing opportunities for research and teaching at the Cranberry Lake Biological Station and to our International Program with planned visits to Costa Rica, Russia, and potentially Ireland next year.

#### **B. PROJECTED ACTIVITIES FOR NEXT YEAR**

1. Summer 2013

a. Course(s) to be offered

**EFB-202 Ecological Monitoring and Biodiversity Assessment (1 sections, 75 students enrolled)  
Section C – Fungal component,**

b. Proposed research activity

Manuscript preparation from recently finished NSF PEET grant.

c. University, professional society, and public service

**Director, Cranberry Lake Biological Station  
Curator, EFB Herbaria**

2. Fall Semester 2013

a. Course(s) to be offered

**EFB210 Diversity of Life I (175 students pre-enrolled)  
EFB 440 Mycology (51 students pre-enrolled)  
EFB 640 Mycology (3 graduate students pre-enrolled)**

b. Proposed research activity

Manuscript preparation from recently finished NSF PEET grant  
Initiation of Digital Imaging of ESF Fungal Herbarium collections as part of the recently funded NSF project in conjunction with the New York Botanic Garden  
Potentially starting two new PhD students

c. University, Professional society, and public service

**Director, Cranberry Lake Biological Station  
Curator, EFB Herbaria**

Planned participant, Entomological Society of America Annual Meeting  
Potential trip to Moscow, Russia to discuss future collaborations between ESF and Moscow State University (MSU).

3. Spring Semester 2014

a. Course(s) to be offered

Potential overseas courses to Costa Rica, Ireland and Russia

b. Proposed research activity



Manuscript preparation from recently finished NSF PEET grant  
Initiation of Digital Imaging of ESF Fungal Herbarium collections as part of the recently funded NSF project in conjunction with the New York Botanic Garden

c. University, professional society, and public service

**Director, Cranberry Lake Biological Station**  
**Curator, EFB Herbaria**