

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

NAME: ALEX WEIR

I. INSTRUCTIONAL ACTIVITIES

1. Regular Course Offerings

Course No.	Title	Credit Hrs.	No. Students	No. of Lab. Sections
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SUMMER:

EFB 342	Fungal Diversity and Ecology	3	15	1
EFB 500	Forest Biology Field Trip (Ireland)	3	8	

FALL:

EFB210	Diversity of Life I	3	111	5
EFB420	Internship Env. For. Biol	3	1	
EFB440	Mycology	3	42	2
EFB495	Undergrad Exp. College Teach.	1	1	
EFB495	Undergrad Exp College Teach	2	1	
EFB498	Research Probs Env For Biol	3	2	
EFB640	Mycology	3	5	2
EFB798	Research Probs Env For Biol	1	1	

SPRING:

EFB211	Diversity of Life II	3	113	4
EFB420	Internship Env For Biol	3	1	
EFB496	Study Abroad	12	1	
EFB496	Topics in Lichen Biology	1	7	
EFB498	Research Probs Env For Biol	2	1	

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: 416/6/1, 486, 518, 521, 532, 446/646.

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 2011				
	EFB 899	Masters Thesis Research	1	1
	EFB999	Doctoral Thesis Research	7	1
Spring 2012				
	EFB899	Masters Thesis Research	1	1
	EFB999	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>
EFB132	Freshman Orientation Seminar	2
EFB404	Natural History Museums & Modern Science	1

II. STUDENT ADVISING

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

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

Jessica Gibson MS started June 2009; Ultrastructural Studies on the Laboulbeniales, May 2012

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)

CHAIRMAN OR READER ON THESIS EXAMS, ETC.

3 times as Chair/Reader

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.

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 1st January 2006 Ending Date 31st 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.

Two graduate students are currently working on this project. Lauren Goldmann completed her MS (December 2009) and is now continuing in the PhD program. Jessica Gibson (MS) started June 2009 and recently successfully defended her MS thesis.

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

Total Amount unknown

ESF portion \$34,000

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 (in press, Sept/Oct issue 2012). One of our plates from this paper was also chosen as the front cover for the journal.

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).

Goldmann, L., Weir, A., and W. Rossi (submitted). The genus *Hesperomyces*; new species and recognition of multiple species on a single host using molecular data.

Cort, C., Goldmann, L., Benny, G., and A. Weir (to be submitted summer 2012). 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 Cort's 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):
2. Industrial and Commercial Groups, etc.

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

National Science Foundation Grant Application Reviewer (2 applications fall spring 2011)

Continued Liaison with Central New York Mycological Society

Participant NSF funded Assembling the Fungal Tree of Life (AFTOL) Program

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)

Chair, 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>
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Mycologia	2
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Mycological Research	1
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<u>Agency</u>	<u>No. of proposals</u>
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National Science Foundation	1
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Other

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)

Costa Rica, Feb/March 2012, NSF-supported Research with 4 students (1 graduate, 3 undergraduate)

Italy, June 2012, 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, EFB Promotion and Tenure Committee (until spring 2012)

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-

Participant, Middle States Accreditation Review

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 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 took on major additional teaching assignments as instructor/coordinator of the two semester required Diversity of Life sequence. Diversity of Life I had an ending enrollment of 111 students in 5 lab sections and Diversity of Life II had an ending enrollment of 113 students in 4 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 a 1 credit seminar type class entitled "Topics in Lichen Biology" to 7 students in addition to my regular Mycology offering (47 students enrolled). I also took students to Ireland (May/June 2011) and to Costa Rica (February/March 2012) contributing again to the international programs at the College. 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. Cat Cort 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 2011, with similar enrollments expected for the summer 2012 program. Both the teaching and research programs were successful with almost 200 undergraduate students present at the Station during the

summer of 2011, 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. We also held an Alumni weekend at the Station in mid- August (about 55 attendees) and hosted the 2011 New York State Peck Foray for 92 mycologists in September.

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

I also contributed as a member of the EFB Promotion and Tenure Committee. In addition to regular meeting activities, I have also monitored the teaching of two of our beginning faculty and provided feedback to the candidates and to the committee.

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 9th 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 accepted for publication in Mycologia. 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 9 new genera collected during our expedition to Costa Rica in Feb/March 2012.. We now have more than enough results for publication of at least 3 additional manuscripts. My other graduate student, Jessica Gibson, successfully defended her MS thesis and is currently preparing a paper for publication.

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, that I hope I can capitalize upon with potential NSF funding this coming year.

I am excited at the prospect of refining the new Diversity of Life two-semester sequence. Both the Russia and Ireland trips have been enthusiastically received by our undergraduate students, and there is obviously demand for these offerings. I would like to further integrate our international offerings with greater focus on tropical biology, through incorporation of our existing field station in Costa Rica, along with potential use of a station in Namibia.

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 expires 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.

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.

B. PROJECTED ACTIVITIES FOR NEXT YEAR

1. Summer 2012

a. Course(s) to be offered

**EFB-202 Ecological Monitoring and Biodiversity Assessment (1 sections, 71 students enrolled)
Section A – Fungal component,**

b. Proposed research activity

NSF-PEET Award Research – Monograph of Stigmatomycetinae

c. University, professional society, and public service

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

2. Fall Semester 2012

a. Course(s) to be offered

**EFB210 Diversity of Life I (105 students pre-enrolled)
EFB 440 Mycology (36 students pre-enrolled)
EFB 640 Mycology (2 graduate students pre-enrolled)**

b. Proposed research activity

Manuscript preparation from NSF PEET Award

c. University, Professional society, and public service

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

3. Spring Semester 2012

Course(s) to be offered

b. Proposed research activity

Manuscript preparation from NSF PEET Award

c. University, professional society, and public service

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