

ANNUAL REPORT: June 1, 2010 – May 31, 2011
(i.e., Summer 2010, AY 2010-2011)
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 342	3	Fungal Diversity and Ecology	11	01	
FALL:					
EFB 420	3	Internship/Env. Forest Biology	1	01	
EFB 440	3	Mycology	51	02	
EFB 640	3	Mycology	1	01	
SPRING:					
EFB 500	3	Forest Biology Field Trip – Natural History and Nature Conservation in Ireland	8	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: 416/6/1, 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				
EFB 420	Internship	Env. Forest Biology	3	1
EFB 498	Research Probs	Env. Forest Biology	3	1
EFB 796	Teaching Exp./	Mycology	1	1
EFB 899	Masters Thesis	Research	6	1

EFB 999	Doctoral Thesis Research	6	1
SPRING			
EFB 420	Internship Env. Forest Biology	4	1
EFB 420	Internship Env. Forest Biology	2	1
EFB 498	Research Probs Env. Forest Biology	2	1
EFB 498	Research Probs Env. Forest Biology	1	1
EFB 498	Research Probs Env. Forest Biology	2	1
EFB 899	Masters Thesis Research	5	1
EFB 999	Doctoral Thesis Research	12	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>
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EFB 132	Freshman Orientation Seminar	2
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II. STUDENT ADVISING

A. Number of undergraduates for whom you are the student's official advisor 28 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

Lauren Goldmann, PhD, started January 2010

CO-MAJOR PROFESSOR

- 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.

At least 2-3 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

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 2010 and is making good progress with her use of Transmission Electron Microscopy in Laboulbeniales fungi.

National Science Foundation – Undergraduate Mentoring in Environmental Biology (UMEB) Program – Integrating Science and Stewardship in the Adirondacks. PIs Robin Kimmerer and Stacy McNulty. My dual role will be as Mentor and Facilitator during use of the Cranberry Lake Biological Station by students in this program.

Total Amount \$600,000

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

Rossi, W., and A. Weir (2011). New species of Stigmatomyces from Asia. *Mycologia* 103: 131-134.

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. and A. Weir (submitted). Sex, longevity, and sex: resolution of the phenomenon of position specificity in the genus Chitonomyces (Laboulbeniales) on Laccophilus (Dytiscidae) in North America. Submitted to Mycologia May 2011.

B. Non-refereed Publications

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

Position specificity of Laboulbeniales: a molecular approach to resolution of a century-old debate. Accepted poster, 9th INTERNATIONAL MYCOLOGICAL CONGRESS, Edinburgh, Scotland August 2010. This poster was one of 18 selected for an award (out of 1092 posters submitted).

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.

Poison Control Center, consultation with local physicians re: identification and treatment of mushroom poisonings (1 case Fall 10)

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)

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

<u>Journal (s)</u>	<u>Responsibility</u>
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<u>Other (books, symposia, etc.)</u>	
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b. Reviewer

<u>Journal(s)</u>	<u>No. of manuscripts</u>
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Mycologia	3
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<u>Agency</u>	<u>No. of proposals</u>
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National Science Foundation	2
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<u>Other</u>	
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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, April 2011, NSF-supported Research with 3 students (2 graduate, 1 undergraduate)

Ireland, May/June 2011, Overseas Feld Trip with 8 students

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

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

Chair, Zabel Award Committee

Chair, 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 have again spent much time on the coordination and execution of international field experiences for our students with trips to Costa Rica (3 students) and Ireland (8 students) completed. I also spent time organizing the annual exchange program with Moscow State University but had to formally cancel this trip in April 2011 as a couple of our students had to withdraw. My regular Mycology (EFB 440/640) class also attracted a beginning enrollment of 54 students during Fall 10, again a significant enrollment for this class, making it the highest enrollment introductory

mycology class in the country. In addition to these regular teaching assignments, I have also had an increase in advising load, with more students enrolled in internships, study abroad opportunities, college teaching experiences, and independent research activities, than ever before. In addition, 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 have one MS and one PhD student both making good progress toward obtaining their respective degrees.

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 2010, with similar enrollments expected for the summer 2011 program. Both the teaching and research programs were successful with almost 200 undergraduate students present at the Station during the summer of 10, and research groups from Indiana State University, as well as our own Grober Research Fellow (graduate) three Cranberry Lake Fellowship awardees (all undergraduate), and four UMEB participants (all undergraduate). The summer 2011 season shows an increase in research usage with the Indiana State University group (7 students), Cornell University Research Group (2 students), along with one Cranberry Lake Fellowship awardee, UMEB participants, and another graduate "Grober Research Fellowship".

Another important assignment this past year has been my membership 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. A major undertaking this year has been the development of a new class entitled Diversity of Life that will be a required two-semester class for all biology majors. I have agreed to coordinate this team-taught course and will begin teaching in August 2011.

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).. 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 April 2011.. We now have more than enough results for publication of at least 3 manuscripts and will begin these in Fall 2011. My other graduate student, Jessica Gibson, has also made much headway with her TEM investigation of these fungi and we are hopeful that this fine-structure work will complement the results from our molecular investigations.

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 coordinating the new Diversity of Life two-semester sequence and will personally teach a major component of the first semester offerings covering fungi. 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. In this regard I was recently invited (along with Scott Turner) to present ideas on ESF International Programs to the ESF Board of Trustees.

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 2011 allowing for the one year no-cost extension. 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 2011

a. Course(s) to be offered

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

EFB 342 Fungal Diversity and Ecology (14 students enrolled)

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 2011

a. Course(s) to be offered

EFB 440 Mycology (51 students pre-enrolled)

EFB 640 Mycology (4 graduate students pre-enrolled)

EFB 496 Diversity of Life I (22 students pre-enrolled)

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**

3. Spring Semester 2011

a. Course(s) to be offered

EFB 496 Diversity of Life II

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**