ANNUAL REPORT: June 1, 2013 – May 31, 2014  
(i.e., Summer 2013, AY 2013-2014)  
DEPARTMENT OF ENVIRONMENTAL AND FOREST BIOLOGY  
SUNY-ESF

NAME: ________ Christopher M. Whipps __________________________

I. INSTRUCTIONAL ACTIVITIES

1. Regular Course Offerings

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Title</th>
<th>Credit</th>
<th>No.</th>
<th>No. of Lab.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EFB103</td>
<td>General Biology II: Cell Biology and Genetics</td>
<td>3cr.</td>
<td>148</td>
<td></td>
</tr>
<tr>
<td>EFB453</td>
<td>Parasitology</td>
<td>3cr</td>
<td>20</td>
<td>1</td>
</tr>
<tr>
<td>EFB653</td>
<td>Parasitology</td>
<td>3cr</td>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>

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)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Title</th>
<th>Credit</th>
<th>No.</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>BTC298</td>
<td>Rsrch Apprenticeship/Biotech</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>BTC498</td>
<td>Rsrch Prob/Biotechnology</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>EFB298</td>
<td>Rsrch Internship/Envrn Biology</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>EFB498</td>
<td>Independent Research/Envrn Bio</td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>EFB899</td>
<td>Masters Thesis Research</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>ESF499</td>
<td>Honors Thesis/Project</td>
<td>2</td>
<td>1</td>
<td></td>
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<tr>
<td>BTC420</td>
<td>Internship in Biotechnology</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>BTC420</td>
<td>Internship in Biotechnology</td>
<td>2</td>
<td>1</td>
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<tr>
<td>EFB420</td>
<td>Prof Internship/Envrn Biology</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>EFB420</td>
<td>Prof Internship/Envrn Biology</td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>EFB495</td>
<td>Undergrad Exp/Coll Teach</td>
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<td>1</td>
<td></td>
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<tr>
<td>EFB495</td>
<td>Undergrad Exp/Coll Teach</td>
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<tr>
<td>EFB498</td>
<td>Independent Research/Envrn Bio</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>EFB899</td>
<td>Masters Thesis Research</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>EFB899</td>
<td>Masters Thesis Research</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>ESF499</td>
<td>Honors Thesis/Project</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>
3. **Continuing Education and Extension** (short courses, workshops, etc.)

4. **Guest Lecture Activities**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Title</th>
<th>No. of Lectures</th>
</tr>
</thead>
<tbody>
<tr>
<td>EFB217</td>
<td>Peoples, Plagues, and Pests</td>
<td>1</td>
</tr>
<tr>
<td>BTC132</td>
<td>Orientation Seminar</td>
<td>1</td>
</tr>
<tr>
<td>EFB796</td>
<td>Graduate Orientation Seminar</td>
<td>1</td>
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</tbody>
</table>

**II. STUDENT ADVISING**

A. Number of undergraduates for whom you are the student’s official advisor __23__ and unofficial advisor __4__

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 (3)**


2. Katrina Alger, MS sought. Start Aug 2013
3. Carolyn Chang, PhD sought. Start Jan 2014

**CO-MAJOR PROFESSOR (5)**


3. Joelle Chille, MS sought. Start Jan 2012 (co-advice with Dr. Melissa Fierke)
4. Kelly Huffman, MS sought. Start Aug 2013 (co-advice with Dr. John Farrell)
5. Emily Gavard, MS sought. Start Sept 2013 (co-advice with Dr. Sadie Ryan)

**MEMBER, STEERING COMMITTEE** (other than those listed above)

*Completed in Review Period (2)*
Mark Leopold, MS complete Fall 2013 (MP Farrell)
Leticia Izquierdo, MPS complete Spring 2014 (MP Nomura)

*Ongoing (7)*
Geoffrey Eckerlin, PhD candidate (MP Farrell)
Lauren Goldmann, PhD candidate (MP Weir)
Andrew MacDuff, MS sought (MP Frair)
Christopher Foelker, PhD candidate (MP Fierke)
Amanda Cheeseman, PhD sought (MP Cohen)
Elaina Burns, MS sought (MP Underwood)
Tess Youker, MS sought (MP Ryan)

**CHAIRMAN OR READER ON THESIS EXAMS, ETC.**
Examiner (1)
Christopher Nack, PhD sought (MP Limburg)

Chair (3)
Byeong Cheol Min, PhD Candidacy Exam, Fall 2013 (MP Ramarao)
Idrissa Hamad, MS, Summer 2013 (MP Smardon)
Xiaole Ni, PhD Candidacy Exam, Summer 2013 (MP Sonnenfeld)

III. RESEARCH COMPLETED OR UNDERWAY

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

Myxozoan parasites of amphibians (boot-legged - 1%)
Survey of wild fish parasites in the Great Lakes and Adirondacks (boot-legged 5%)
Population genetics of Lake and Creek Chubsuckers (internal funds through GLFC – 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)

Supports: Carolyn Chang, PhD Student.

Whipps CM, Fierke MK, Parry D. USDA-CREES/McIntire-Stennis Program (05/01/13-09/30/15) - $52,000. Development of Molecular Techniques to Inform Management of Sirex noctilio, an Introduced Woodwasl. (10% AY) Role: Lead development of molecular biology techniques in parasitoid insects.
Supports: Christopher Foelker, PhD Student.

Supports: Kelly Huffman, MS Student.

Supports: Emily Gavard, MS student & Amanda Cheeseman, PhD student.

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

Supports: Katrina Alger, MS Student.

Whipps CM. New York DEC (4/1/14-3/31/16) $131,487. Increasing Capacity for Genetic Analysis at SUNY ESF.
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

Bauer, E.F., Whipps, C.M. (Accepted with Revisions) Smallmouth bass parasites in the St. Lawrence River, an ecosystem with hyper-abundant invasive prey. Journal of Parasitology.


B. Non-refereed Publications
C. Papers Presented at Science Meetings (give title, date, occasion, and location)

Presentations by Whipps

April 28-May 2, 2014. 39th Annual Eastern Fish Health Workshop, Shepherdstown, WV. Linking Mycobacterium Infections In Zebrafish (Danio rerio) With Surface Biofilms: Does Eradication Work?

April 28-May 2, 2014. 39th Annual Eastern Fish Health Workshop, Shepherdstown, WV. Renal Myxosporidiosis Of Laboratory Zebrafish, Danio rerio.


June 18-20, 2013. 54th Joint Western Fish Disease Workshop & AFS Fish Health Section Meeting, Port Townsend, WA. Efficacy Of Surface Disinfection Of Zebrafish Eggs Against Mycobacterium Species

June 18-20, 2013. 54th Joint Western Fish Disease Workshop & AFS Fish Health Section Meeting, Port Townsend, WA. The Bass Parasites Of Oneida Lake, Eighty Years Later.

Co-Authored Presentations (presenter underlined)

April 26, 2014. Master's Level Graduate Research Conference (MaRC) at The College at Brockport, State University of New York., Brockport, NY. Diagnosis and Surveillance of Lymphoproliferative Disease Virus (LPDV) in wild turkeys (Meleagris gallopavo silvestris) in New York State. Alger, K.E., Bunting, E.M., Schuler, K., Jagne, J.F., Whipps, C.M. [Poster]

April 15, 2014. SUNY-ESF Spotlight on Student Research and Outreach, Syracuse, NY. Diagnosis and Surveillance of Lymphoproliferative Disease Virus (LPDV) in wild turkeys (Meleagris gallopavo silvestris) in New York State. Alger, K.E., Bunting, E.M., Schuler, K., Jagne, J.F., and Whipps, C.M.


April 16, 2014. SUNY-ESF Spotlight on Research, Syracuse, NY. *Strain Typing Mycobacterium marinum from outbreaks at zebrafish research facilities.* Clemons, B.M. and Whipps, C.M. [Poster]


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

Co-authored


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.

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)

American Fisheries Society Fish Health Section (AFS-FHS) Technical Standards Committee (elected position appointment June 2010-June 2014) and Chair (June 2012 – June 2013).

2. Professional Society Membership
3. Other Professional Activities

a. Editorial activity

<table>
<thead>
<tr>
<th>Journal(s)</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other (books, symposia, etc.)</td>
<td></td>
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</tbody>
</table>

b. Reviewer

<table>
<thead>
<tr>
<th>Journal(s)</th>
<th>No. of manuscripts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acta Protozoologica</td>
<td>1</td>
</tr>
<tr>
<td>Estuaries and Coasts</td>
<td>1</td>
</tr>
<tr>
<td>European Journal of Protistology</td>
<td>1</td>
</tr>
<tr>
<td>Journal of Eukaryotic Microbiology</td>
<td>1</td>
</tr>
<tr>
<td>Journal of Parasitology</td>
<td>2</td>
</tr>
<tr>
<td>Journal of Visualized Experiments</td>
<td>1</td>
</tr>
</tbody>
</table>

TOTAL = 7

Agency

No. of proposals

Other

c. Participation (workshops, symposia, etc.)

<table>
<thead>
<tr>
<th>Name of workshop, etc.</th>
<th>Date</th>
<th>Place</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 18, 2013. Freshwater and Marine Biotoxins. American Fisheries Society Fish Health Section. Port Townsend, WA.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

D. Foreign Travel (Where, When, Purpose)

VII. ADMINISTRATIVE AND SERVICE RESPONSIBILITIES (include committee participation)

A. Department-level

EFB Microbiology Search Committee (Oct 2013-present). Chair Lee Newman.

B. College-level

ESF Institutional Animal Care and Use Committee (Aug 2011-present). **Chair: Christopher Whipps**
ESC Health and the Environment Curriculum Group Participant (Mar 2011-present)

C. University-wide, including Research Foundation
SUNY Center for Applied Microbiology (Feb 2013 – present) Director

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 had 2 MS students graduate (Eric Bauer and Emily Ogburn) and I started a new PhD student (Carolyn Chang). From Eric’s work he has a publication and 2 papers accepted with revisions. He is currently in a PhD program at Auburn University. Emily Ogburn is working on 3 papers for submission to journals in the coming year and she is currently working on a research project in North Carolina. I’ve mentored other graduate students as well, serving on 2 committees of students that defended, 3 I served as chair, and I am on 8 ongoing committees. In all of these I have been actively engaged in guidance with lab work, writing, and professional development. I am an advisor to >20 undergraduate students, many of which are pre-health, and from several majors (Biotech, Environmental Biology, Wildlife Biology). I’ve also had 5 undergraduates working in my lab this year (Madeline Clark, Brooke Clemons, Elizabeth DiPaola, Erica Colicino & Samantha Page), with the latter 3 being honors students. Their research included population genetics, molecular biology, and microbiology. All of these students rose to the research challenges they were faced with and I believe had a top notch experience. The work of the 3 honors students will soon be published as some loose ends are completed. Elizabeth has applied to Veterinary School, Erica was accepted to the graduate program at Upstate, Madeline is in summer program a Upstate, and Samantha is currently working on research in my lab this summer. In teaching, I made some subtle modifications to my 2 main classes (Intro Bio and Parasitology). In Parasitology, I incorporated more readings and had students write a short article with peer review. Most students really learn a lot from getting the peer feedback, but also doing the reviews themselves, tend to improve their writing. For Introductory Biology, I had the smallest class ever at 148, so I incorporated group activities throughout the semester. The idea was to increase retention by providing an opportunity for discussion on a particular topic. I will likely continue this in future years, with some minor modifications.

Department/College
I have served on several committees over the years, but have settled in to 3 main things. I am the Institutional Animal Care and Use Committee (IACUC) chair, Director of the Center for Applied Microbiology (CAM), and serve on the EFB curriculum committee (CCAC). This year I also served on the Microbiology Search Committee, and the Webcam Taskforce Committee. As IACUC chair, I am currently handling 40 protocols, with another in review. This exceeds last year’s record and I estimate I spend at least 10% of my time on this essential committee for the university, upon which most vertebrate animal research depends. As CAM director I have initiated a student travel grant program, coordinated member activities, and am developing protocols for ways to more effectively track investment of resources and related deliverables from the CAM members.

Professional
I was pleased to initiate a 4 year grant through the NIH to work on zebrafish diseases this year. This work funds a graduate student and part of a technician, which will be essential in expanding this area of research. I am also working...
with ESF faculty and the DEC to expand the capacity to conduct studies that include a genetic component here at ESF. We are currently doing this with cottontail rabbits. I was invited to give 2 talks at the recent Fish Health meeting in West Virginia. I was also invited to speak at the World Aquaculture Society meeting in February, and the Environmental Health symposium in January at ESF. Eleven papers have been published or submitted in the review period, which like last year, is more in line with where I’d expect myself to be. I believe I have become more effective at time management, having cut back on reviewing papers (only 7 this year versus 17 last year), spending more time getting my own papers out.

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)

Plans for the summer are to complete lab work for a disinfection study, complete DNA sequencing on some parasite samples, set up large experiment once CIRTAS lab is complete. All of these build toward publications. I continue to work on the IACUC, CAM, CCAC. All of these activities are important for the function of the university and department. I will be teaching a new seminar this Fall on fish health, so that will require some development. With expected approval for increasing capacity to do genetics work at ESF for the DEC, I’ll be looking to expand that area of research and it will likely require a lot of focused attention to get up and running with the right personnel. I’ll also be taking a sabbatical this spring semester and my goal is to get a lot of writing done on a variety of papers that need to be completed or will likely need to be completed when that time comes.

B. PROJECTED ACTIVITIES FOR NEXT YEAR

1. Summer 2013
   a. Course(s) to be offered
      Biotechnology Workshop for High School Students
   b. Proposed research activity
      Zebrafish mycobacteriosis
      Myxozoan phylogeny and evolution
      Genome sequencing of myxozoan parasites
      Baseline data on fish diseases in NY state
      Northern Pike genomics
      Cottontail rabbit genetic techniques
      Sirex noctilio molecular biology
   c. University, professional society, and public service
      ESF Institutional Animal Care and Use Committee (Aug 2011-present). Chair: Christopher Whipps
      ESC Health and the Environment Curriculum Group Participant (Mar 2011-present)
      SUNY Center for Applied Microbiology (Feb 2013 – present) Director

2. Fall Semester 2013
   a. Course(s) to be offered
      EFB797 Health and Disease of Captive and Wild Fishes
b. Proposed research activity as above

c. University, Professional society, and public service as above

3. Spring Semester 2014

a. Course(s) to be offered
Sabbatical

b. Proposed research activity

c. University, professional society, and public service