

ANNUAL REPORT: June 1, 2016 – May 31, 2017
(i.e., Summer 2016, AY 2016-2017)
DEPARTMENT OF ENVIRONMENTAL AND FOREST BIOLOGY
SUNY-ESF

*****PLEASE DO NOT INSERT TABLES FOR ANY CATEGORIES*****

NAME: Christopher M. Whipps

I. INSTRUCTIONAL ACTIVITIES

1. Regular Course Offerings

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

FALL:

EFB453	Parasitology		3cr 20	1
EFB653	Parasitology		3cr 1	1

SPRING:

EFB103	General Biology II: Cell Biology and Genetics		3cr 180	0
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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)

Course No.	Title	Credit Hrs.	No. Students
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FALL 2016:

BTC420	Internship in Biotechnology	3	1
BTC498	Resrch Prob/Biotechnology	3	1
EFB298	Rsrch Internship/Envrn Biology	1	1
EFB420	Prof Internship/Envrn Biology	1	1
EFB420	Prof Internship/Envrn Biology	3	1
EFB420	Prof Internship/Envrn Biology	4	1
EFB498	Independent Research/Envrn Bio	1	1
EFB898	Professional Experience	12	1
EFB899	Masters Thesis Research	1	1
EFB999	Doctoral Thesis Research	1	1
ESF499	Honors Thesis/Project	1	1
ESF499	Honors Thesis/Project	3	1

SPRING 2017:

BTC420	Internship in Biotechnology	2	1
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BTC420	Internship in Biotechnology	3	1
BTC498	Resrch Prob/Biotechnology	2	1
BTC498	Resrch Prob/Biotechnology	3	1
EFB495	Undergrad Exp/Coll Teach	1	1
EFB495	Undergrad Exp/Coll Teach	2	1
EFB498	Independent Research/Envrn Bio	1	1
EFB899	Masters Thesis Research	1	1
EFB999	Doctoral Thesis Research	1	1
ESF499	Honors Thesis/Project	1	2

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>
EFB217	Peoples, Plagues, and Pests	1
EFB797	Graduate Student Core Course	1
BTC132	Biotech Orientation	1

II. STUDENT ADVISING

A. Number of undergraduates for whom you are the student's official advisor 22 and unofficial advisor 5

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

1. Carolyn Chang, PhD sought. Start Jan 2014
2. Cassandra Elliott, MPS. Start Jan 2015. Completed December 2016. Internship option at Upstate Medical University.

CO-MAJOR PROFESSOR

1. Kelly Huffman, MPS. Start Aug 2013. Completed Jun 2016. (co-advise with Dr. John Farrell)
2. Emily Gavard, MPS. Start Sept 2013. Completed Mar 2017. Internship option (co-advise with Dr. Sadie Ryan)
3. Samantha Mello, MS sought. Start Aug 2015 (co-advise with Dr. Jonathan Cohen)

MEMBER, STEERING COMMITTEE (other than those listed above)

Completed in reporting period

Tess Youker, MS sought (MP Ryan)

Ongoing

Andrew MacDuff, MS sought (MP Frair)

Amanda Cheeseman, PhD sought (MP Cohen)

Eric Diefenbacher, PhD sought (MP Gibbs)

Aimée Hudon, MS sought (MP Horton)

CHAIRMAN OR READER ON THESIS EXAMS, ETC.

Chair

Lisa Greenwood, PhD, Fall 2016 (MP Moran)

Tyler Shields, MS, Spring 2017 (MP Teece)

III. RESEARCH COMPLETED OR UNDERWAY

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

Myxozoan parasites of amphibians (boot-legged - 1%)

Parasite fauna of Brazillian and Mexican fishes (boot-legged 2%)

Survey of wild fish parasites in the Great Lakes and Adirondacks (boot-legged 5%)

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)

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

Kent ML, **Whipps CM**, Sanders, J, Sharpton, T. NIH Resource Related Research Projects for Development of Animal Models and Related Materials (R24) (05/1/2017 -04/30/2021) \$1,153,615 (SUNY Subaward \$347,695). Control and Impact of Diseases in Zebrafish. Role: Evaluate infection and treatment in different lines of zebrafish; develop infection model; evaluate non-lethal testing.

Whipps, CM. New York DEC (05/01/17-4/30/18) \$100,785. Increasing Capacity for Genetic Analysis at SUNY ESF.

Cohen, JC, **Whipps, CM**. New York DEC (05/01/17-4/30/18) \$115,024. Factors Limiting England Cottontail Populations in New York.

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

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.

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)

2. Professional Society Membership

American Fisheries Society
American Society of Microbiology
American Society of Parasitologists
American Association for Laboratory Animal Science

3. Other Professional Activities

a. Editorial activity

<u>Journal (s)</u>	<u>Responsibility</u>
Journal of Parasitology	Associate Editor (15 articles handled Jun 1/16-May 31/17)

Other (books, symposia, etc.)

b. Reviewer

<u>Journal(s)</u>	<u>No. of manuscripts</u>
Diseases of Aquatic Organisms	1
Journal of Aquatic Animal Health	1
Journal of Fish Diseases	1
Journal of the American Association for Laboratory Animal Sci.	1
Journal of Visualized Experiments.	1
Parasitology Research	4
<u>Turkish Journal of Zoology</u>	<u>1</u>
	Total = 10

<u>Agency</u>	<u>No. of proposals</u>
Maryland SeaGrant	1
ESF McIntire-Stennis	1

Other

c. Participation (workshops, symposia, etc.)

<u>Name of workshop, etc.</u>	<u>Date</u>	<u>Place</u>
World Register of Parasites of Marine Species.	April 24-25, 2017	Oostende, Belgium

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

B. College-level

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

In Parasitology (EFB453) this year, I incorporated student presentations into the course. This required a multi-step lead up where students gathered research, wrote a summary, outlined a talk, ran through the talk with me, and then presented. Having this be somewhat iterative, I think the students got a lot out of it, and the presentations were fairly well polished when delivered, which was good for the audience too! In EFB103, I continued to use and develop in-class case studies and group work, in addition to using clicker response cards. It does take additional preparation time, but I have found that student engagement has improved with these approaches, and I will continue to explore these and other tools for teaching in a large class (180 this year). In my lab, with the assistance of my grad students and technician, I mentored 4 undergraduate students; two of whom were working on honors theses. I advise students in several majors, but mostly ENB and BTC, and several of these students have pre-health aspirations (e.g., medical or veterinary school). As part of this, I help students set up and oversee various internships and research experiences, either on campus or off. I enjoy hearing about these from the students and the advisors around the country. I am also a CSTEP mentor to 2 students. I am pleased to see the progress that I have from my graduate students, with 2 MPS students finishing their programs, and continued productivity from current and former students (5 of the peer reviewed papers listed in this annual report are directly from the work of these students). In support of both grads and

undergrads, I wrote more than 30 reference letters for current and former students applying to various scholarships, jobs, and graduate programs.

Department/College

I have been chair of the Institutional Animal Care and Use Committee (IACUC) for almost 6 years now, and this past year saw some major changes. Due to new requirements of NSF (and to be compliant with NIH), ESF needed to obtain a Public Health Service Animal Assurance. This was a major effort requiring me to write an entire program for ESF based on templates from Upstate. We also needed to develop an approved Occupational Health program for all animal work. Working with John Wasiel, we wrote up the program and worked with a physician to develop this program. These new requirements have added to the paperwork burden greatly, but overall I now consider our animal care program excellent. The committee is currently overseeing 24 protocols and we have 2 in review. At the SUNY level, I direct the Center for Applied Microbiology, and we are currently looking to develop some key areas for grants and development in the coming years. For example, there are several researchers at ESF working on aspects of ticks and Lyme disease. Given the public interest, this could be an area where the breadth of research at ESF is an incredible asset.

Self

I was very honored to be invited as a speaker to 2 international meetings this year, in Switzerland and Belgium. The meeting in Switzerland was on zebrafish, and I was asked to give an overview of diseases in these important laboratory fish, and how diseases can be controlled. The talk went over well, and I now have several new contacts there, and I was able to help a couple of researchers right away. The meeting in Belgium was a workshop for developing a global database of marine parasites. It was a small group (approximately 20 people) from all over the world (e.g., Australia, England, Czech Republic, Mexico, etc.), each of us representing different parasite groups in which we are considered experts. It was very productive, and we have a goal of launching this global database in the next few years. I continue to enjoy my role as Associate Editor for the Journal of Parasitology, and as I focus on more editorial assignments (15 this year), I have scaled back my other peer review activities (from 16 last year, down to 10 this year). And of course it is difficult to separate the 'self' from the other aspects above, so I am glad to see success in my grad and undergrad student mentees, success of colleagues and collaborators, effective teaching methods coming together, programs that I helped develop play a role in the success of others at ESF, etc.

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 have 3 main grants pending, so I look forward to getting started on those if they come through. Others are at a point where data are ready to be analyzed, and papers written. I have a backlog of papers and hope to get several done this coming year. I plan to work with Brian Leydet on an NIH proposal, for which we need to generate some preliminary data. SUNY RF is developing online tools for the IACUC, so I'll be working with them on a weekly basis to ensure this will work for ESF, and eventually I'll need to teach everyone how to use it. I'll continue with what seems to be working for my classes, with the usual fine tuning. I'm working on some short online supplements for my classes, and hope to add those this year. This allows students to review materials in their own time. I was invited to help teach a class on zebrafish diseases in Portugal this summer, and I hope to make contacts there for future collaborations.

B. PROJECTED ACTIVITIES FOR NEXT YEAR

1. Summer 2017

a. Course(s) to be offered

- b. Proposed research activity
 - Cottontail genetic identification and parasite analysis
 - Zebrafish mycobacteriosis
 - Molecular diagnostics of parasites
 - Myxozoan phylogeny and evolution
 - Baseline data on fish diseases in NY state
 - Northern Pike genomics
 - Apicomplexan blood parasites of turkeys
 - Genetics of deer and other species for DEC

- c. University, professional society, and public service

ESF Institutional Animal Care and Use Committee (Aug 2011-present). **Chair: Christopher Whipps**

ESF Honors Program Faculty Council (Aug 2011-present). Director: William Shields.

ESC Health and the Environment Curriculum Group Participant (Mar 2011-present)

SUNY Center for Applied Microbiology (Feb 2013 – present) **Director: Christopher Whipps**

2. Fall Semester 2017

- a. Course(s) to be offered

EFB453/653 Parasitology

- b. Proposed research activity
 - as above

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

3. Spring Semester 2018

- a. Course(s) to be offered

EFB103 - General Biology II

- b. Proposed research activity
 - as above

- c. University, professional society, and public service
 - as above