

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

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

EFB103	General Biology II: Cell Biology and Genetics	3cr.	148	
EFB453	Parasitology	3cr	20	1
EFB653	Parasitology	3cr	4	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.

2. Non-Scheduled Course Offerings (e.g., 496, 899, 999)

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

BTC298	Rsrch Apprenticeship/Biotech	3	1
BTC498	Resrch Prob/Biotechnology	2	1
EFB298	Rsrch Internship/Envrn Biology	1	1
EFB498	Independent Research/Envrn Bio	3	1
EFB899	Masters Thesis Research	1	1
ESF499	Honors Thesis/Project	2	1

SPRING:

BTC420	Internship in Biotechnology	1	1
BTC420	Internship in Biotechnology	2	1
EFB420	Prof Internship/Envrn Biology	2	1
EFB420	Prof Internship/Envrn Biology	3	1
EFB495	Undergrad Exp/Coll Teach	1	1
EFB495	Undergrad Exp/Coll Teach	3	1
EFB498	Independent Research/Envrn Bio	2	1
EFB899	Masters Thesis Research	2	1
EFB899	Masters Thesis Research	1	2
ESF499	Honors Thesis/Project	3	3

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
BTC132	Orientation Seminar	1
EFB796	Graduate Orientation Seminar	1

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)

1. Eric Bauer, MS. Start Aug 2011. Completed July 2013. Cascades Of Enemy Release: Impacts of An Invasive Species (*Neogobius melanostomus*) on the Parasite Communities of Two Native Predators (*Micropterus dolomieu* and *Micropterus salmoides*).
2. Katrina Alger, MS sought. Start Aug 2013
3. Carolyn Chang, PhD sought. Start Jan 2014

CO-MAJOR PROFESSOR (5)

1. Emily Ogburn, MS (co-advise with Dr. Karin Limburg). Start Aug 2011. Completed January 2014. Banded Killifish (*Fundulus diaphanus*) Parasite Communities of the Hudson River Estuary: A Prelude to Restoration.
2. William Helenbrook, Ph.D. sought. Start Aug 2007 (co-advise with Dr. William Shields)
3. Joelle Chille, MS sought. Start Jan 2012 (co-advise with Dr. Melissa Fierke)
4. Kelly Huffman, MS sought. Start Aug 2013 (co-advise with Dr. John Farrell)
5. Emily Gavard, MS sought. Start Sept 2013 (co-advise 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)

Kent ML, **Whipps CM**, Dolan B, Tanguay R. NIH Resource Related Research Projects for Development of Animal Models and Related Materials (R24) (07/1/2013 -06/30/2017) \$858,720 (SUNY Subaward \$370,950). Control and Impact of Diseases in Zebrafish. Role: Conduct outbreak investigations, characterize *Mycobacterium* species, assess disinfection and treatment options.

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 Woodwasp. (10% AY) Role: Lead development of molecular biology techniques in parasitoid insects.

Supports: Christopher Foelker, PhD Student.

Farrell J, Kapsinski K, **Whipps CM**. NY-DEC (03/31/2013 – 03/31/2016) - \$715,001. St. Lawrence River Fisheries Management and Research. (2% AY) Co-Investigator. Role: Comparative genomics of male and female pike. Development of a sex-specific PCR assay and application to field studies.

Supports: Kelly Huffman, MS Student.

Cohen J, Ryan S, **Whipps CM**. New York DEC (8/1/12-4/30/2016) \$854,516. Factors Limiting New England Cottontail (*Sylvilagus transitionalis*) Populations in New York: Implications for Habitat Restoration. (5% AY) Role: Genotyping cottontail rabbits.

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

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

Alger KE, **Whipps CM**. New York DEC (6/1/14-12/31/15) \$25,500. Lymphoproliferative Disease Virus (LPDV) in Wild Turkeys (*Meleagris gallopavo*) in New York State, U.S.

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

Helenbrook, W.D., Wade, S.E., Shields, W.M., **Whipps, C.M.** (In Review) Gastrointestinal parasites of Ecuadorian mantled howler monkey (*Alouatta palliata aequatorialis*) based on fecal analysis. *Journal of Parasitology*.

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*.

Bauer, E.F., **Whipps, C.M.** (Accepted with Revisions) The bass parasites of Oneida Lake, eighty years later. *Journal of Parasitology*.

Liu, Y., **Whipps, C.M.**, Nie, P., Gu, Z.M. (In Press) *Myxobolus oralis* sp. n. (Myxosporea: Bivalvulida) infecting the palate in the mouth of gibel carp *Carassius auratus gibelio* (Cypriniformes: Cyprinidae). *Folia Parasitologica*.

Whipps, C.M., Moss, L.G., Murray, K.N., Moss, J.B. (2014) Detection of autofluorescent *Mycobacterium chelonae* in living zebrafish. *Zebrafish*. 11(1):76-82.

Schaefer, J.J., Kirchgessner, M.S., **Whipps, C.M.**, Mohammed, H.O., Bunting E.M., Wade, S.E. (2013). *Toxoplasma gondii* seroprevalence in New York State white-tailed deer (*Odocoileus virginianus*) *Journal of Wildlife Diseases*. 49(4):940-945.

Bauer, E.F., **Whipps, C.M.** (2013) Comparative analysis of native fish parasite communities of Adirondack lakes with and without introduced fish species. *Journal of Parasitology*. 99(4):603-609.

Kirchgessner, M.S. Dubovi, E.J., **Whipps, C.M.** (2013) Disease Risk Surface for *Coxiella burnetii* Seroprevalence in White-Tailed Deer. *Zoonoses and Public Health*. 60(7):457-460.

Reeve, B.C., Crespi, E.J., **Whipps, C.M.**, Brunner, J.L. (2013) Natural stressors and ranavirus susceptibility in larval wood frogs (*Rana sylvatica*). *EcoHealth*. 10(2):190-200.

Peterson, T.S., Kent, M.L., Ferguson, J.A., Watral, V.G., **Whipps, C.M.** (2013) Comparison of fixatives and fixation time for PCR detection of *Mycobacterium* in zebrafish *Danio rerio*. *Diseases of Aquatic Organisms*. 104(2):113-120.

Whipps, C.M., Font, W.F. (2013) Interaction of two Myxozoan parasites from naked goby *Gobiosoma bosc*, in Lake Pontchartrain, Louisiana. *Journal of Parasitology*. 99(3):441-447.

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.*

February 9-12, 2014. Aquaculture America 2014. Seattle, WA. *Mycobacteria in zebrafish: Resolving Strain and Isolate Differences with M. marinum.*

January 24, 2014. From Lab to Landscape: Integrated Infectious Disease Research, Syracuse, NY. *Fins, feathers and fur: tracking pathogens in fish and wildlife.*

July 10, 2013. Cornell Biological Field Station, NY. 2013 Summer Seminar Series. *Fish health and the ecology of parasitic diseases in Northeast fishes.*

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 15, 2014. SUNY-ESF Spotlight on Student Research, Syracuse, NY. *Impact of changing landscapes on gastrointestinal parasite communities in people and mantled howler monkeys, Alouatta palliata aequatorialis.* Helenbrook, W.D., Wade, S.E., Stehman, S.V., Shields, W.M., and **Whipps, C.M.** [Poster – 2nd Place Award]

April 15, 2014. SUNY-ESF Spotlight on Research, Syracuse, NY. *Fishy infections: investigating mycobacteriosis in laboratory zebrafish.* Chang, C.T. and **Whipps, C.M.** [Poster]

April 15, 2014. SUNY-ESF Spotlight on Student Research and Outreach, Syracuse, NY. *Exploring the Potential for Parasite-mediated Competition: New England and Eastern Cottontails, Invasive Vegetation and Parasites in the Hudson Valley, NY.* Gavard, E.G., Cohen, J., Ryan, S., and **Whipps, C.M.** [Poster]

April 15, 2014. SUNY-ESF Spotlight on Student Research, Syracuse, NY. *Environmental Determinants of Sex Ratio in St. Lawrence River Northern Pike (Esox lucius): Development of a Molecular Sex Identification Tool and Experimentation with Physical and Chemical Variables.* Huffman, K.A., **Whipps, C.M.**, and Farrell, J.M. [Poster]

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]

April 16, 2014. SUNY-ESF Spotlight on Research, Syracuse, NY. *Population Genetics of the Creek Chubsucker Across a Drainage Divide in Central New York State*. Clark, M.J., Schulz, K.L., Stewart, D. J., and **Whipps, C.M.** [Poster]

April 16, 2014. SUNY-ESF Spotlight on Research, Syracuse, NY. *The Effect of Bleach and Hydrogen Peroxide on Mycobacterium Species*. DiPaola, E.J., Colicino, E.G., Chang, C.T., and **Whipps, C.M.** [Poster]

April 16, 2014. SUNY-ESF Spotlight on Research, Syracuse, NY. *Determining host-parasitoid linkages between Sirex noctilio and Sirex nigricornis through molecular techniques*. Page, S.M., Foelker, C.J., Fierke, M.K., Parry, D., and **Whipps, C.M.** [Poster]

April 16, 2014. SUNY-ESF Spotlight on Research, Syracuse, NY. *Analysis of Disinfectants on Mycobacterium spp.* Colicino, E.G., DiPaola, E.J., and **Whipps, C.M.** [Poster]

March 31 - April 3, 2014. 65th Western Forest Insect Work Conference. Sacramento, CA. *East meets West: Eastern invasive insect species that threaten western forest ecosystems: Sirex woodwasp*. Foelker, C.J., Parry, D., **Whipps, C.M.**, Standley, C.R., Fierke, M.K. [Invited Oral Presentation]

March 31 - April 3, 2014. 65th Western Forest Insect Work Conference. Sacramento, CA. *Clustering of mortality attributed to the European woodwasp, Sirex noctilio*. Foelker, C.J., Parry, D., **Whipps, C.M.**, Fierke, M.K.

January 2014. New York Society of American Foresters. Syracuse, NY. *Establishing host-parasitoid linkages among Sirex noctilio, Sirex nigricornis, and native hymenopteran parasitoids using molecular techniques*. Foelker, C.J., Parry, D., Fierke, M.K., **Whipps, C.M.** [Poster]

January 2014. New York Society of American Foresters. Syracuse, NY. *Spatial aggregation of pine mortality attributed to the European woodwasp, Sirex noctilio*. Foelker, C.J., Parry, D., **Whipps, C.M.**, Fierke, M.K.

January 2014. 2014 USDA Interagency Research Forum on Invasive Species. Annapolis, MD. *Developing molecular techniques to establish host-parasitoid linkages among Sirex noctilio, Sirex nigricornis, and native hymenopteran parasitoids*. Foelker, C.J., Parry, D., Fierke, M.K., **Whipps, C.M.** [Poster]

January 24, 2014. From Lab to Landscape: Integrated Infectious Disease Research. *Exploring the Potential for Parasite-mediated Competition: New England and Eastern Cottontails, Invasive Vegetation and Parasites in the Hudson Valley, NY*. Gavard, E.G., Cohen, J., Ryan, S., and **Whipps, C.M.** [Poster - 3rd Place Award]

January 24, 2014. From Lab to Landscape: Integrated Infectious Disease Research. *Impact of changing landscapes on gastrointestinal parasite communities in people and mantled howler monkeys, Alouatta palliata aequatorialis*. Helenbrook, W.D., Wade, S.E., Stehman, S.V., Shields, W.M., and **Whipps, C.M.** [Poster]

January 24, 2014. From Lab to Landscape: Integrated Infectious Disease Research. *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]

November 10-13, 2013. 61st Annual Entomological Society of America Conference, Austin, TX. *Spatial colonization patterns of the European woodwasp, Sirex noctilio, at a pine plantation in the Adirondacks*. Foelker, C.J., Parry, D., **Whipps, C.M.**, and Fierke, M.K.

October 8-11, 2013. American Museum of Natural History Student Conference on Conservation Science-New York. New York City, NY. *Parasites as indicators of aquatic ecosystem complexity to inform restoration*. Ogburn E.C., Limburg K.E., and **Whipps C.M.**

June 26-29, 2013. The 88th Annual Meeting of the American Society of Parasitologists. Québec City, QC, Canada. *Cascade of Enemy Release: Impacts of an Invasive Species (Neogobius melanostomus) on the Parasite Community of a Native Predator (Micropterus dolomieu)*. Bauer, E.F. and **Whipps, C.M.**

June 26-29, 2013. The 88th Annual Meeting of the American Society of Parasitologists. Québec City, QC, Canada. *Fish Parasites in the Hudson River Estuary's Littoral Habitats: A Prelude to Restoration*. Ogburn E.C., Limburg K.E., and **Whipps C.M.**

June 26-29, 2013. The 88th Annual Meeting of the American Society of Parasitologists. Québec City, Quebec. *Influence of forest structure and human encroachment on parasite communities of mantled howler monkeys, Alouatta palliata*. Helenbrook, W.D., Shields W.M., and **Whipps C.M.**

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

Co-authored

2014 – Cohen, J.B., Cheeseman, A., Gavard, E., Ryan, S.J., Whipps, C.M. New England cottontail. New York Fish and Wildlife Advisory Board meeting, Pulaski, NY. 20 attendees

2014 – Cohen, J.B., Cheeseman, A., Gavard, E., Ryan, S.J., Whipps, C.M. New England cottontail. New York Forest Owner's Association meeting, Syracuse, NY. 40 attendees

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

American Fisheries Society
 American Society of Microbiology
 American Society of Parasitologists

3. Other Professional Activities

a. Editorial activity

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

b. Reviewer

<u>Journal(s)</u>	<u>No. of manuscripts</u>
Acta Protozoologica	1
Estuaries and Coasts	1
European Journal of Protistology	1
Journal of Eukaryotic Microbiology	1
Journal of Parasitology	2
Journal of Visualized Experiments	1
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	TOTAL = 7

<u>Agency</u>	<u>No. of proposals</u>
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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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June 18, 2013. Freshwater and Marine Biotoxins. American Fisheries Society Fish Health Section. Port Townsend, WA.

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 Curriculum Committee (Jan-Feb 2008, Aug 2008-present). Chair: Kim Schulz.
 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**

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

EFB Curriculum Committee (Jan-Feb 2008, Aug 2008-present). Chair: Kim Schulz.
ESF Institutional Animal Care and Use Committee (Aug 2011-present). **Chair: Christopher Whipps**
ESF Honors Program Faculty Council (Aug 2011-present). Chair: William Shields.
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