

ANNUAL REPORT: June 1, 2010 – May 31, 2011
(i.e., Summer 2010, AY 2010-2011)
DEPARTMENT OF ENVIRONMENTAL AND FOREST BIOLOGY
SUNY-ESF

NAME: Kimberly L. Schulz

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 202	Ecological Monitoring and Biodiversity Assessment Session A – assisted with project week; session C, co-taught aquatics/project	3	80	2
FALL:	EFB 424	Limnology: Study of Inland Waters	3	47	1
	EFB 624	Limnology: Study of Inland Waters	3	10	1
	EFB 524	Limnology Practicum	2	24	2
SPRING:	EFB 797	Topics in Aquatic Ecology	1	14	1

Service Learning Components

EFB 524, Limnology Practicum, had a significant service learning component for the first time this year. Students worked with a local lake association (Song Lake Association) to develop their independent projects on topics that were both scientifically relevant and of interest to the homeowners. About half of student time in the course was devoted to developing and performing these independent projects, in co-operation with homeowners, and culminating in a scientific poster session and reception in 12 Illick Hall during finals week that was open to the public and attended by approximately 18 members of the Song Lake Association and community. The projects resulted in a database of water quality and species presence data that will be useful to the homeowners in lake management decisions. The students also preliminarily identified two rare macrophyte (pond weed) plants in the lake as well as an endangered fish, the lake chubsucker, which has not been seen in NY for 60 years (my lab is following up on these discoveries). After the ESF poster presentation, the students were invited by a larger lake association, COFOKLA, of which the Song Lake Association is a member, to present their posters at a meeting in January after the term ended, and 6 students brought the class posters to this kettle lake association's meeting and met with the regional lake association members. This service learning component seemed highly beneficial for both students and the public, and I hope to continue similar efforts in the future with this class.

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 498	Research Problems in EFB	6 total	3
	EFB 899	Masters Thesis Research	7 total	2
	EFF 999	Doctoral Thesis Research	10 total	2

SPRING

EFB 420	Internship in EFB	16 total	4
EFB 498	Research Problems in EFB	28 total	11
EFB 899	Masters Thesis Research	1 total	1
EFF 999	Doctoral Thesis Research	12 total	2

3. Continuing Education and Extension (short courses, workshops, etc.)

Ecology and Management of Aquatic Invasive Species in New York -- I co-taught with John Farrell a 3 hour workshop for DEC personnel on aquatic invasive species, on 9 November 2010. The workshop consisted of hands on activities, interactive lectures, and we developed a CD of references and material for attendees (14 total).

4. Guest Lecture Activities

<u>Course No.</u>	<u>Title</u>	<u>No. of Lectures</u>
EFB 415	Ecological Biogeochemistry	1
ESC 132	Environmental Science Freshman Seminar	1

II. STUDENT ADVISING

A. Number of undergraduates for whom you are the student's official advisor 32 and unofficial advisor 9

In addition, advisor a UMEB student, Jessica Ortiz (2010) and advisor to Cranberry Fellow David Andrews (2010). Assisted 5 of Don Stewart and Colin Beier's Tropical Ecology students with their independent projects, Spring 2011

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

1. Andrew Brainard, Ph.D., January 2010-current
2. Stephanie Figary, Dual degree candidate M.S./MPA Maxwell, August 2009-current.
3. Jacob Gillette, Ph.D., January 2006-current.
4. Cheryl Whritenour, Ph.D. June 2010-current

CO-MAJOR PROFESSOR

1. Daniele Baker, M.S., August 2008-present (co-major professor, M. Mitchell)
2. Madeline Turnquist, M.S., August 2008-May 2011 (co-major professor, M. Schlaepfer). M.S. completed April 2011. Creating a Spatial Model to Predict Locations of Lake Sensitivity to High Aquatic Mercury Levels in New York.

MEMBER, STEERING COMMITTEE (other than those listed above)

1. Michael Amadori (Doug Daley, major professor)
2. James Arrigoni (James Gibbs, major professor)

3. Meredith Atwood (James Gibbs, major professor); defended M.S. successfully 14 April 2011.
4. Heather Baugh-Wall (Linda Ivany, Syracuse University Earth Sciences Department, major professor); on leave
5. Melanie Carter (Jesse Brunner, major professor)
6. Xiaoxia Chen (Charles Driscoll, Syracuse University Civil Engineering Department, major professor)
7. Michael Connerton (Neil Ringler major professor)
8. Dan Geffell (Neil Ringler, major professor)
9. Alison Halpern (John Farrell and Don Leopold, co-major professors); on leave/inactive
10. Matthew Isles (Sharon Moran, Environmental Studies, major professor)
11. Deborah Joseph (John Hassett, Chemistry, major professor); inactive
12. David Kalenak (James Hassett, Environmental Engineering, major professor); defended Ph.D. successfully April 2011.
13. Phil-Goo Kang (Myron Mitchell, major professor)
14. Stefanie Kring (Michael Twiss, Clarkson University, major professor); Ph.D. student at Clarkson University
15. Suman Maity (M. Sepulveda, Purdue University, major professor); Ph.D. student at Purdue University – serving as external committee member; passed candidacy exam fall 2010.
16. Arlen Marmalejo-Hernandez (Don Stewart, major professor)
17. Joie Matillano (Don Stewart, major professor)
18. Rita Oliveira Monteiro (Karin Limburg, major professor)
19. Catherine Peluso (Thomas Amidon and John Fieschko, co-major professors)
20. Sara Turner (Karin Limburg, major professor)
21. Will Wurzel (Mark Teece, major professor); completed MPS May 2011.

CHAIRMAN OR READER ON THESIS EXAMS, ETC.

Reader/Examiner:

1. Geoffrey Eckerlin (John Farrell, major professor) examiner on candidacy exam, spring 2011
2. José Valdez (Bill Shields, major professor) examiner on M.S. defense, 3 December 2010
3. April McEwen (FRNM) reader of MPS final project; June 2011

4. Kevin Kapuscinski (John Farrell, major professor) examiner on Ph.D. defense, spring 2011

III. RESEARCH COMPLETED OR UNDERWAY

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

- Steph Figary (M.S. student) is studying the effects of invasive zooplankton in the Finger Lakes. She is a RA on my NSF EAGER through August 2011. Incidental supplies are bootlegged from cost recovery funds. Percent of my time ~2%
- Daniele Baker (M.S. student working with Mitchell and me) is working on nitrogen cycling in Onondaga Lake and long-term phytoplankton change. Percent of my time ~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)

- *Funding Agency:* National Science Foundation (NSF)
Title:, "Collaborative Research: EAGER – Eco-evolutionary feedback on community assembly,"
PI: K.L. Schulz, *co-PI:* C.E. Cáceres (U. Illinois);
Amount: \$300,000 (\$143,667 to SUNY ESF)
Dates: Sept 2009-Aug 2011.
This grant funds Stephanie Figary, M.S. student EFB
- *Funding Agency:* NSF
Title: REU Collaborative research: Eco-evolutionary feedback on community assembly
PI: K.L. Schulz
Amount: \$8,000
Dates: 1 May 2009-30 June 2012
Supports undergraduate fellow for summer 2011, no graduate students
- *Funding Agency:* NSF
Title: REU Collaborative research: Eco-evolutionary feedback on community assembly
PI: K.L. Schulz
Amount: \$8,000
Dates: 1 July 2009-30 June 2011
Supports undergraduate fellow for summer 2010, no graduate students
- *Funding Agency:* Sustainable Enterprise Partnership
Title: Effectiveness of post-consumer food waste as a means for nutrient recovery and waste reduction when used as fish feed in an aquaponic system"
co-PIs: D. Daley, K.L. Schulz
Amount: \$6,220
Dates: May 2011-June 2012
Supports M. Amadori (M.S. student with Doug Daley)
- *Funding Agency:* NSF
Title: Renovation of wet labs and cyber-infra-structure to enhance integrated research and teaching in aquatic science at SUNY-ESF
PI: Neil Ringler; *co-PIs:* J.M. Farrell, D.J. Leopold, K.L. Schulz (point of contact), C.M. Whipps
Amount: \$1,470,000
Dates: October 2010-September 2013

- *Funding Agency:* NYSERDA
Title: “Conversion of dairy and biodiesel waste products to omega-3 fatty acids and lipids for biodiesel production using mixotrophic algae;”
PI: John Fieschko, *co-PI:* K.L. Schulz;
Amount: \$76,304;
Dates: April 2009-March 2011.
Jake Gillette funded 25% on this grant summer and fall 2009.
- *Source:* NOAA Coastal and Marine Habitat Restoration Project Grants under the American Recovery and Reinvestment Act.
Title: “*Recovery Act – Coastal Fisheries Habitat Restoration in the St. Lawrence River.*”
PI: Farrell, J.M. (with D.J. Leopold, M. Mitchell, J. Gibbs, K.L. Schulz).
Amount: \$202,317 subcontract to ESF of \$1,086,010 Ducks Unlimited
Dates: 9/2011-8/2013
This grant will support a M.S. student working with Myron Mitchell and me beginning fall 2011.

Additional funded projects as collaborator

- Collaborator on Hatch Proposal 2006-07-097. Title: Ecological Indicators and Sustainability of the Lake Ontario Ecosystem: Melding Science and Stakeholder Involvement.. Total of \$23,500 a year (~\$2,500 annually to KLS) for a period of 3 years from CUAES (Hatch research support) and CCE (federal extension). Oct 1, 2006 – Oct 1, 2010. P.I. E. Mills (Cornell); Collaborators: L. Rudstam (Cornell), R. O’Gorman (USGS), D.B. MacNeill and D.G. White (NY Sea Grant). No students are supported on this grant.
- SUNY-ESF McIntire-Stennis Research Program, “Restoring small, ephemeral wetlands in forested landscapes of New York State: Initiating a large-scale, long-term collaborative research program based at Heiberg Forest”
PI: James Gibbs; *coPIs:* John Stella, D.J. Leopold, K. Schulz *Amount:* \$80,000; *Dates:* May 2009-December 2012; no graduate students under my supervision are supported on this grant (J. Arrigoni, MP James Gibbs is supported on this grant).
- Project Participant in successful proposal to form a NIMBioS working group, "Food web dynamics and stoichiometric constraints in meta-ecosystems," with PIs M. Leibold (UT Austin), R.W. Sterner (U. Minnesota), F. Massol (CEMAGREF, France) and C. Klausmeier (Michigan State) to run in three four-day workshops from 2010-2011 (<http://nimbios.org/>); no graduate students are supported on this grant.

Graduate Student Led Grants:

- *Funding Agency:* NSF
Title: Dissertation Research: Quantifying the role of mixotrophic feeding in aquatic food webs
PI: K.L. Schulz; *co-PIs:* Jacob Gillette
Amount: \$15,000
Dates: June 2011-May 2013
This grant gives additional funds for dissertation work (not salary or tuition) to Jacob Gillette
- *Funding Agency:* NOAA
National Estuarine Research Reserve Fellowship (Estuarine Reserves Division, Office of Ocean and Coastal Resource Management, National Ocean Service, NOAA)
Title: “Salt Marsh Restoration: The Importance of a Better Biofilm,”
PIs: Cheryl Whritenour and K.L. Schulz;
Amount: \$60,000;
Dates: June 2010-May 2013
This grant supports the Ph.D. research of Cheryl Whritenour.
- Edna Bailey Sussman Fellowship to Stephanie Figary, summer 2010
- Sigma Xi award to Stephanie Figary, spring 2011

- Edna Bailey Sussman Fellowship to Andrew Brainard, summer 2011

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

Funding Agency: EPA (EPAR5-GL2011-1; Toxic substances and areas of concern)

Title: Assessment of Plankton Populations in the St. Lawrence River

PI: Michael Twiss, Clarkson University; Collaborating coPIs: Greg Boyer and Kimberly Schulz

Proposed amount: \$581,339 (\$260,591 to SUNY ESF)

Proposed dates: 1 August 2011-31 July 2014

This grant would support a graduate student in Schulz's lab

Funding Agency: NSF

Title: Collaborative Research: Acquisition and Incorporation of Nitrogen into the Skeletal Organic Matrix of Reef-Building Corals

PI: Mark Teece; co-PI at ESF: Kim Schulz

Proposed amount: \$470,633

Funding Agency: Department of the Interior

Title: Northeast Climate Science Center Consortium Institutions and Field Stations

PIs: Donald Scavia and Knute Nadelhoffer, University of Michigan

SUNY ESF leads: M. Mitchell, K. Schulz, H. Mao

This proposal would establish a NE Climate Science Center in which SUNY ESF would be a participant

Also am senior personnel MRI proposal by Todd Cowen (Cornell) to NSF for instrumentation in Cayuga Lake

3. Research Proposals submitted, but rejected (include information as in B.1., above)

Agency: NSF

Title: "Collaborative Research: Manipulating dispersal and environmental heterogeneity to assess feedbacks among local adaptation, community assembly and ecosystem processes"

coPIs: Carla Cáceres, University of Illinois, Kimberly L. Schulz, SUNY ESF

Amount: \$574,171

Will resubmit in January 2012

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

Brown, B.L., K.L. Schulz and N.H. Ringler. Testing Survival of a potential mayfly colonist (*Stenonema femoratum*) to an urban lake undergoing remediation (Onondaga Lake, NY); in revision.

Ji, X. and K.L. Schulz. in press. Oligotrophication, water clarity and ecological stoichiometry – Using the Oneida Lake long-term data set to test a zooplankton food quality model. Oneida Lake Book (peer reviewed). E. Mills, L. Rudstam, and D. Stewart editors.

Turnquist, M.A., C.T. Driscoll, K.L. Schulz, and M.A. Schlaepfer. in press. Mercury concentrations in snapping turtles (*Chelydra serpentina*) correlated with environmental and landscape characteristics. Ecotoxicology.

Smith, J.L., K.L. Schulz, P.V. Zimba and G.L. Boyer. 2010. Possible mechanism for the foodweb transfer of

covalently-bound microcystins. *Ecotoxicology and Environmental Safety* 73: 757-761. (**featured paper**)

B. Non-refereed Publications

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

- Figary, S.E., K.L. Schulz, M.A. Teece and L.G. Rudstam. 2011. Investigating the impact of an invasive zooplankton, *Cercopagis pengoi*, on the length of food chains in New York's Finger Lakes. Spotlight-on-Research. April 2011, Syracuse, New York. Poster presentation -- **poster award: tied for first prize for graduate students**
- Andrews, D., and K.L. Schulz. The effects of lime treatment on organisms at multiple trophic levels. Spotlight-on-Research. April 2011. Syracuse, New York. Poster presentation
- Hoover, C., S.E. Figary, and K.L. Schulz. Invasive mussels in New York's Finger Lakes: Are mussel demography, density and species composition correlated with lake nutrient concentrations? Spotlight-on-Research. April 2011. Syracuse, New York. Poster presentation -- **poster award: second prize for undergraduates**
- Atwood, M.A., J.P. Gibbs and K.L. Schulz. 2011. Laying the foundation for freshwater pool construction: the effects of bottom-up factors on amphibian development. Northeastern Natural History Conference, Albany, N.Y. April 8, 2011.
- Figary, S.E., K.L. Schulz, M.A. Teece and L.G. Rudstam. 2011. Investigating the impact of an invasive zooplankton, *Cercopagis pengoi*, on the length of food chains in New York's Finger Lakes. March 2011, Great Lakes Research Colloquium. Syracuse, New York. Poster.
- Schulz, K.L., R.L. Abbott, K.C. Walz, D. Baker, S.E. Figary, and C. Cáceres. 2011. Constructed and existing vernal pools as microcosms for investigating abiotic constraints on plankton communities. Advancing the Science of Limnology and Oceanography, Aquatic Sciences Meeting: Limnology and Oceanography in a Changing World. February 2011, San Juan, Puerto Rico.
- Figary, S.E., K.L. Schulz, M.A. Teece and L.G. Rudstam. 2011. Investigating the impact of an invasive zooplankton, *Cercopagis pengoi*, on the length of food chains in New York's Finger Lakes. Advancing the Science of Limnology and Oceanography, Aquatic Sciences Meeting: Limnology and Oceanography in a Changing World. February 2011, San Juan, Puerto Rico.
- Figary, S.E., K.L. Schulz, M.A. Teece and L.G. Rudstam. 2010. Exploiting a natural experiment: investigating the impact of an invasive zooplankton, *Cercopagis pengoi*, on the food webs of the New York Finger Lakes. December 2010. Finger Lakes Conference, Geneva, New York. Poster.
- Turnquist, M.A., C.T. Driscoll, K.L. Schulz and M.A. Schlaepfer. Mercury concentrations in snapping turtles (*Chelydra serpentina*) correlated with environmental and landscape characteristics. SETAC North America 31st Annual Meeting, Society of Environmental Toxicology and Chemistry, Portland, OR, November 2010.
- Turnquist, M.A., C.T. Driscoll, K.L. Schulz and M.A. Schlaepfer. Factors driving mercury concentrations in snapping turtles. Integrating multimediat measurements of mercury in the Great Lakes Region, Great Lakes Atmospheric Deposition Program, Ann Arbor, MI, July 15, 2010.
- Schulz, K.L., J.P. Gillette, and M.A. Teece. 2010. Effects of PUFAs on life history traits, growth efficiency and fatty acid composition of representative cladoceran, copepod and fish consumers. Joint Meeting of American Society of Limnology and Oceanography and North American Benthological Society, June 2010, Santa Fe, New Mexico.
- Brown, B.L., K.L. Schulz, and N.H. Ringler. 2010. Using field experimentation to assess benthic macroinvertebrate recovery in a highly disturbed lake (Onondaga Lake, NY). Joint Meeting of American

Society of Limnology and Oceanography and North American Benthological Society, June 2010, Santa Fe, New Mexico.

- Baker, D.M., K.L. Schulz, and M.J. Mitchell. 2010. The effects of changing quantity and form of nitrogen loading on the phytoplankton assemblage of a recovering polluted urban lake. Joint Meeting of American Society of Limnology and Oceanography and North American Benthological Society, June 2010, Santa Fe, New Mexico.
- Abbott, R.L. and K.L. Schulz. 2010. The role of polyunsaturated fatty acids in the feeding behavior, fecundity and development of a freshwater calanoid copepod. Joint Meeting of American Society of Limnology and Oceanography and North American Benthological Society, June 2010, Santa Fe, New Mexico.

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

"The Secret Lives of Lakes and Rivers." 6 August 2010. Antique Boat Museum Public Seminar, Clayton, N.Y. ~ 20 attendees

Limnology Poster Session for the Cortland-Onondaga Federation of Kettle Lake Associations, Inc. (COFOKLA). 30 attendees; 24 January 2011

V. PUBLIC SERVICE

A. Funded Service (include consulting activities)

1. Government Agencies (Federal, State, Local):

none

2. Industrial and Commercial Groups, etc.

Identified algae in bottled drinking water for Syracuse University

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

Assisted with phytoplankton identification for Skaneateles Lake twice during the year

Assisted COFOKLA (Cortland Onondaga Federation of Kettle Lake Associations) with water quality evaluations

VI. PROFESSIONAL DEVELOPMENT

A. Professional Honors and Awards (for teaching, research, outreach, etc.)

None

B. 1. Activities in Professional Organizations (offices held, service as chairman, member, participant or consultant)

- Co-Chair of Trophic Linkages Session at ASLO June 2010

- Member of a subcommittee of the Education Committee of the American Society of Limnology and Oceanography. Participating in developing the ASLO Education website – particularly the image library and helping organize the first ASLO photo contest and calendar

2. Professional Society Membership

American Association for the Advancement of Science
 American Institute of Biological Sciences
 American Society of Limnology and Oceanography
 American Society of Naturalists
 Ecological Society of America
 International Association for Great Lakes Research
 International Association of Theoretical and Applied Limnology
 North American Benthological Society
 North American Lake Management Society
 Phycological Society of America
 Sigma Xi
 Xerces Society

3. Other Professional Activities

a. Editorial activity

<u>Journal (s)</u>	<u>Responsibility</u>
None	
<u>Other (books, symposia, etc.)</u>	

b. Reviewer

<u>Journal(s)</u>	<u>No. of manuscripts</u>
Ecosystems	1
Limnology and Oceanography	1
Oecologia	1

<u>Agency</u>	<u>No. of proposals</u>
National Science Foundation	2
Canada Foundation for Innovation, Leaders Opportunity Fund	1

Other

c. Participation (workshops, symposia, etc.)

<u>Name of workshop, etc.</u>	<u>Date</u>	<u>Place</u>
NIMBios	11-15 January 2011	Knoxville, TN

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

DNA barcoding workshop at American Society of Limnology and Oceanography Meeting, June 2010

D. Foreign Travel (Where, When, Purpose)

VII. ADMINISTRATIVE AND SERVICE RESPONSIBILITIES (include committee participation)

A. Department-level

- EFB Course and Curriculum Assessment Committee Chair
- Associate Professor member of EFB Promotion and Tenure Committee
- Faculty mentor for Jacqui Frair, Greg McGee, Beth Folta
- Member of Phyllis Roskin Award Committee
- Substituted for Don Stewart meeting with 2 prospective AFS majors fall 2010; met with accepted students April 25,2011
- Aquatic/Wildlife/Conservation Biology accepted student forum 5 March 2011
- Volunteer to assist with transfer student registration Aug 2010

B. College-level

- Member of the Middles States steering committee
- ESF member on the Slepecky Award Committee for Undergraduate Research Prize at Syracuse University and SUNY ESF
- Coordinating effort to develop CIRTAS – Center for Integrated Research and Teaching in Aquatic Science, to find funding to develop a collaborative aquatic science experimental facility for teaching and research at ESF, and efforts to organize aquatics group in EFB
- Co-ordinate college-wide AquaBreak seminar (formerly AquaLunch) and run seminar with graduate students Jacob Gillette and Cheryl Whritenour
- EFB representative to the Water Resources Minor
- Faculty advisor to the Nautilus Club (student marine science club)
- Environmental Science advisor and Curriculum Group Participant in Division of Environmental Science area of Watershed Science

C. University-wide, including Research Foundation

none

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

I spent a lot of time this year teaching, advising and mentoring undergraduate and graduate students on their research projects. The three aspects of all of this work that I believe are most significant are: (1) The incorporation of a student learning project into Limnology Practicum, where students worked with a local lake association to develop their independent projects and presented professional poster presentations to them. In this process they learned a lot and provided the homeowners with some valuable information, including finding of several rare species. I will be refining this portion of the Limnology Practicum and continuing similar service learning aspects next year. (2) I continued to mentor a moderately-large graduate student laboratory group (6 students), and am pleased that Madeline Turnquist, who arrived at ESF to work with Martin Schlaepfer and has been working in coalition with my lab group since his departure, successfully defended her M.S. dissertations and published one of her two chapters; Jacob Gillette, a Ph.D. student, won a prestigious NSF Dissertation Improvement Grant to support enhanced Ph.D. work here at SUNY-ESF. (3) I have been mentoring a number of very promising undergraduates and am working with three of them to finalize manuscripts for submission to professional journals during this coming year; all have working drafts. These students have already presented posters and talks on their work, and I am excited that so many undergraduates have been able to do research at a high level.

Department/college

My primary service to the department has been as an Associate Professor Representative to the Promotion and Tenure Committee in EFB, and as chair of the Course and Curriculum Assessment Committee for the first time. This was my first time chairing this committee, and I know I can improve my performance; we did accomplish a number of outstanding tasks including numerous (>20) course and curricular proposals passing through the department and college, and the adoption of a new sophomore year Diversity of Life sequence for the EFB majors. We also have made some headway on the development of minors and assessment issues, although these will require additional effort over the summer and next year. In terms of service to the college, I continue to spend a huge amount of time writing quarterly reports, project execution plans and generally organizing the NSF renovation grant for CIRTAS (Center for Integrated Research and Teaching in Aquatic Science) and TIBS to apply for funds to renovate the laboratory spaces in Illick Hall (CIRTAS) and TIBS. This is a great opportunity for us to bring aquatic science at ESF to a new level, and I am looking forward to helping lead these efforts over the next few years. In addition I serve on the college-wide Middle States Steering Committee and am the EFB representative to the Water Resources Minor. I also continued to co-facilitate the college-wide AquaBreak seminar and mentor three early-career faculty members.

Self

This year I focused on improving my Limnology Practicum class, mentoring undergraduates and graduate students, grant writing and research. I continue to run a very active research laboratory that successfully pursues a number of ongoing funded research efforts. My NSF research grant for work at the Heiberg Forest has brought an exciting new direction to my research program and is resulting in a lot of intriguing data that has me quite busy analyzing data and drafting manuscripts. I also am participating in a working group at the National Institute for Mathematical and Biological Synthesis, "Food web dynamics and stoichiometric constraints in meta-ecosystems." Next year I hope to be able to sequester more time for my own research efforts (especially manuscript production).

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)

This coming year I will submit a number of manuscripts on recently completed projects along with my co-PIs and students. In addition my-coPI and I plan to submit a grant for continuation of research on ponds at Heiberg Forest (building on the NSF EAGER) in January 2012. Further I will work on the CIRTAS and TIBS renovation project and group organization. We will resubmit our Major Research Instrumentation grant to NSF for the next call. I also will try to develop a winter field course for either December 2011 or 2012. Finally, I am working to finalize a Marine Science minor and formalize a partnership with the Sea Education Association which would allow students throughout ESF to get more marine science training.

B. PROJECTED ACTIVITIES FOR NEXT YEAR

1. Summer 2011

a. Course(s) to be offered

EFB 496 Aquatic Ecosystems of the Adirondacks (Cranberry)

b. Proposed research activity

- Sample ponds at Heiberg and regionally for zooplankton population genetics
- Continue other funded research
- Assist graduate students with their research projects

c. University, professional society, and public service

- Advise Song Lake homeowners/co-supervise Andrew Brainard's Sussman Project
- Continue to co-ordinate CIRTAS/renovation grant

2. Fall Semester 2011

a. Course(s) to be offered

EFB 424/624 Limnology
EFB 525 Limnology Practicum

b. Proposed research activity

- Continuation of funded research projects
- Continuation of graduate and undergraduate research

c. University, Professional society, and public service

- Continue on Middle States Steering Committee
- Continue as chair of CCAC (if approved by chair)
- Continue to co-ordinate organization of CIRTAS
- Continue as member of Promotion and Tenure Committee

- Continue AquaBreak seminar
- Continue as Nautilus Club advisor
- Serve as EFB representative to Water Resources Minor
- Finalize Marine Science Minor
- Environmental Science faculty

3. Spring Semester 2012

a. Course(s) to be offered

- EFB 423/EFB 623 (Marine Ecology)
- likely will teach a portion of EFB 211

b. Proposed research activity

- Continuation of funded research projects
- Continuation of graduate and undergraduate research
- Resubmit Major Research Instrumentation Grant
- Resubmit grant for work at Heiberg Forest on vernal pools

c. University, professional society, and public service

- Continue to co-ordinate organization of CIRTAS
- Continue as chair of CCAC
- Continue as member on Graduate Program Advisory Committee
- Continue as member of Promotion and Tenure Committee
- Continue AquaBreak seminar
- Continue as Nautilus Club advisor
- Serve as EFB representative to Water Resources Minor
- Environmental Science faculty