

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

**NAME:** Kimberly L. Schulz

**I. INSTRUCTIONAL ACTIVITIES**

1. Regular Course Offerings

	Course No.	Title	Credit Hrs.	No. Students	No. of Lab. Sections
<b>SUMMER:</b>	EFB 420	Prof Internship/Envrn Biology	3	1	n/a
<b>FALL:</b>	EFB 420	Prof Internship/Envrn Biology	16 tot	4	n/a
	EFB 424	Limnology:Study Inland Waters (UG)	3	50	n/a
	EFB 624	Limnology:Study Inland Waters (Grad)	3	24	n/a
	EFB 495	Undergrad Exp/Coll Teach	1-2	5	n/a
	EFB 498	Independent Research/ Envrn Bio	9 tot	2	n/a
	EFB 525	Limnology Practicum	2	19	1
<b>SPRING:</b>	EFB 298	Research Apprenticeship/Envrn Bio	2	1	n/a
	EFB 420	Prof Internship/Envrn Biology	7 tot	2	n/a
	EFB 423	Marine Ecology (UG)	4	117	7
	EFB 623	Marine Ecology (Grad)	5	6	1
	EFB 495	Undergrad Exp/Coll Teach	1-2	4	n/a
	EFB 498	Independent Research/ Envrn Bio	6 tot	2	n/a
	ENS498	Resrch Prob/Envrn Science	6 tot	2	n/a

**NOTE: PLEASE INDICATE WHICH COURSE(S) HAD A SERVICE-LEARNING COMPONENT AND BRIEFLY EXPLAIN THE NATURE OF THIS COMPONENT.**

EFB 525, Limnology Practicum, had a significant service learning component for the fourth time this year. Students worked with two allied local lake associations (Song Lake Association and COFOLKLA – Cortland Onondaga Federation of Kettle Lake Associations) 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 (when applicable). This culminated in a scientific poster session and reception in 12 Illick Hall during finals week (10 December 2013) that was open to the public and attended by over 50 individuals including other undergraduate and graduate students not in the Practicum, faculty, and members of the Song Lake Association and COFOLKLA, as well as the community. The projects continue to expand a database of water quality and species presence data that will be useful to the homeowners in lake management decisions. Among other projects, the students looked at effects of native unionid mussels versus non-native dreissenid mussels on the kettle lakes, benthic invertebrates in two of the lakes, and the condition of the several game fish in the lakes relative to the state average. Additional projects looked at the effects of flow rate in the salmon river on macroinvertebrate drift, the buildup of foam in Skaneateles lake, indices of biotic integrity for local streams on a urban to rural gradient, changes in water chemistry related to geology on Ninemile Creek, and anthropogenic effect estimations for the Finger Lakes.

After the ESF poster presentation, the students working on the local lakes were invited to present their posters at a COFOLKLA meeting on March 17, 2014 (after the fall term limnology class and during a busy time in the spring term), and students brought the class posters to this meeting and met with the public and regional lake

association members. This service learning component is highly beneficial for both students and the public, and I hope to continue similar efforts in the future with this class.

The interactions with the lake associations have also led to a small research project on lake chubsuckers funded by the Great Lakes Research Consortium as well as several past and current senior projects for Environmental Science students. The data we are compiling and collecting on the lakes will help contribute the management of these lakes for the benefit of homeowners and public users of the lakes with boater access. One of the undergraduates in the class is developing an honors project (working with me and Alex Weir) related to the foam on Skaneateles Lake. The foam has been increasing in recent years and there is a lot of homeowner and drinking water concern about this foam. We are meeting with people from water management, non-profits and home owner associations about the foam issue and ESF involvement in late June.

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>
<b>SUMMER</b>	EFB 496	Aquatic Ecosystems: Adirondacks	3	7
	EFB 899	Masters Thesis Research	1	1
<b>FALL</b>	EFB 899	Masters Thesis Research	3	1
	EFB 999	Doctoral Thesis Research	1	1
<b>SPRING</b>	EFB 899	Masters Thesis Research	2	2

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

- ESF Graduate Colloquium – Laboratory and field trips workshop, co-taught with Art Stipanovich. 21 August 2013

4. Guest Lecture Activities

	<u>Course No.</u>	<u>Title</u>	<u>No. of Lectures</u>
<b>FALL</b>	EFB 415	Ecological Biogeochemistry	1
	ESC 132	Environmental Science Seminar	1
<b>SPRING</b>	EFB 211	Diversity of Life	6

## II. STUDENT ADVISING

A. Number of undergraduates for whom you are the student's official advisor 28 and unofficial advisor 9

**Undergraduate honors and independent projects** completed in 2013-2014 academic year:

### Honors:

- Smith, Ryan G. Factors affecting primary production and respiration in small forested pools, Heiberg Forest, Tully, NY
- Gaskill, Jacob A. Examining the effects of pH and macrophyte diversity on benthic macroinvertebrate assemblages in Adirondack lakes.

### Senior project advisees:

- Russell, Jeffrey. Nutrient analysis in St. Lawrence wetland sediments (Chemistry senior project)

### Reader for honors projects:

- Cowen, Matthew. Use of soil apparent electrical conductance to develop a soil drainage class map for a clearcut plot in Heiberg Forest using geostatistical analysis. Russ Briggs, advisor.
- Jones, Abigail. The impact of human activity on sedimentary stored carbon levels within a mangrove forest. Mark Teece, advisor.

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. Andrew Brainard, Ph.D., January 2010-current; Ph.D. candidate
2. Adam Effler, Ph.D. candidate, GPES; deferred admission to Fall 2014
3. Alex Looi, M.S., August 2012-current
4. Stephanie Figary, Dual degree candidate M.S./MPA Maxwell, August 2009-2013 (M.S. Summer 2013). Defense: 15 July 2014. Dissertation title: Invasive species spread and impacts: A natural experiment with invasive *Cercopagis pengoi* in the New York Finger Lakes.
5. K. Chad Walz, M.P.S., January 2012-current (MPS Summer 2013)

## CO-MAJOR PROFESSOR

1. Daniele Baker, M.S., August 2008-2013 (co-major professor, M. Mitchell) M.S. Fall 2013. Defense: 15 November 2013. Dissertation title: Recovery of a hypereutrophic urban lake (Onondaga Lake, NY): Implications for monitoring water quality and phytoplankton ecology.
2. Ceili Bachman, M.S. August 2011-present (co-major professor, M. Mitchell)
3. Stefan Karkuff, M.S. August 2012-present (co-major professor, J. Stella)

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

1. James Arrigoni (Ph.D., EFB Conservation Biology; James Gibbs, major professor)
2. Nate Barlet (M.S., ERE Ecological Engineering; Stuart Diemont, major professor); completing field portion of dual Peace Corps/MS program

3. Michael Connerton (Ph.D., EFB Fish & Wildlife Biology and Mgt; Neil Ringler, major professor); on leave/inactive
4. James Costello (M.S., EFB Conservation Biology; Robin Kimmerer, major professor); defended M.S. successfully 5 May 2014.
5. Matt Gunderson (M.S., EFB Fish & Wildlife Biology and Mgt; Kevin Kapuscinski, major professor)
6. Alison Halpern (Ph.D., EFB Ecology; John Farrell and Don Leopold, co-major professors); on leave/inactive
7. Chris Holmes (M.S., Carla Cáceres, University of Illinois, major professor); M.S. student at U. Illinois; defended successfully 22 April 2014 and continuing on for Ph.D. at Illinois
8. Matthew Isles (M.S., ESC Water & Wetland Resource Studies; Sharon Moran, Environmental Studies, major professor)
9. Stefanie Kring (Ph.D., Michael Twiss, Clarkson University, major professor); Ph.D. student at Clarkson University; defended Ph.D. successfully 25 April 2014.
10. Suman Maity (Ph.D., M. Sepulveda, Purdue University, major professor); Ph.D. student at Purdue University – serving as external committee member; passed candidacy exam fall 2010.
11. Joie Matillano (Ph.D., EFB Fish & Wildlife Biology and Mgt; Don Stewart, major professor)
12. Jill Mandel (M.S. Ecology, Karin Limburg, major professor); defended M.S. successfully June 2013
13. Ian MacColl (M.P.S., ESC Water & Wetland Resource Studies; Steve Shaw, major professor)
14. Margaret Pavlac (Ph.D.; FCH Environmental Chemistry; Greg Boyer, major professor)
15. Rachel Radicello (M.P.S., ESC Water and Wetland Resource Studies, Greg Boyer, major professor)
16. Marci Savage (Ph.D., FCH Environmental Chemistry; Greg Boyer, major professor)
17. Justine Schmidt (Ph.D., Biochemistry; Greg Boyer, major professor)
18. Jeremy Sullivan (M.S., Biochemistry; Greg Boyer, major professor)
19. Sara Turner (Ph.D., EFB Fish & Wildlife Biology and Mgt; Karin Limburg, major professor); defended Ph.D. successfully 18 April 2014

#### CHAIRMAN OR READER ON THESIS EXAMS, ETC.

- Mingyu Li, FCH Polymer Chemistry, Ph.D. defense to be scheduled summer 2014

### **III. RESEARCH COMPLETED OR UNDERWAY**

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

- Urban pond research as a follow up to a graduate seminar and a Limnology Practicum project. Being pursued with Steve Balough and Andrew Brainard. 2% of time; unsupported.

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:* 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:* Great Lakes Research Consortium  
*Title:* Genetic analysis of potential lake chubsuckers (*Erimyzon sucetta*), a threatened fish in the Lake Ontario watershed  
*PI:* Kimberly L. Schulz, *co-PIs:* C.M. Whipps and D. Stewart  
*Dates:* June 2013-May 2014  
*Amount:* \$3,500

***Additional funded projects as collaborator***

- *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:* 9/2011-8/2014  
This grant supports Ceili Bachman, M.S. student working with Myron Mitchell and me beginning fall 2011 and supported Alex Looi, M.S. student, in Spring 2013 and for summers 2013 and 2014

***Graduate Student Led Grants (on which I am PI of record; other graduate student grants not listed):***

- *Funding Agency:* NOAA  
National Estuarine Research Reserve Fellowship (Estuarine Reserves Division, Office of Ocean and Coastal Resource Management, National Ocean Service, NOAA)  
*PIs:* Andrew Brainard and K.L. Schulz;  
*Amount:* \$60,000;  
*Dates:* May 2012-May 2015  
This grant supports the Ph.D. research of Andrew Brainard
- *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 2014 (extension requested by Gillette and granted to extend to 2014)  
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 2014  
This grant supports the Ph.D. research of Cheryl Whritenour (extension requested by Whritenour and granted to extend to 2014)

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

- None – as stated in last year’s annual report, I will begin submitting proposals again only when I have a serviceable laboratory. This is my first year at SUNY ESF in which I have submitted no major grants.

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

- New York Sea Grant, An integrated assessment of NY’s Great Lakes recreational harbors, Diane Kuehn PI, Malmshemer, Schulz, Boyer, Sciremamanno, Knuth, Connelly co-PIs, \$74,850
- Participated in the college’s effort to obtain a SUNY grant for Water Research Education Center on Onondaga Lake.

**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

- Barlet, N.T., S.A.W. Diemont, M.A. Teece, K.L. Schulz, 2014. Emergent microbial food webs in ecological treatment systems for wastewater: Insight from stable carbon isotopes. *Ecological Engineering*, accepted.
- S. Figary and K.L. Schulz. 2014. Surplus and spines: Impacts of *Cercopagis pengoi*, an invasive predatory zooplankton, may be due to a lack of limiting resources and pre-adaptation of a likely prey species. *Hydrobiologia*; in review.
- Brown, Brandeis L., N.H. Ringler and K.L. Schulz. 2014. Testing mayfly survivorship in an urban lake undergoing remediation (Onondaga Lake, NY). *Lake and Reservoir Management*; in review.
- Gillette, Jacob P., Kimberly L. Schulz, and Mark A. Teece. 2014. Light apparatus for mesocosm photo-manipulation (LAMP): An inexpensive waterproof lighting device for within-lake mesocosm experiments. *Limnology and Oceanography Methods*; in review.
- Schulz, K.L., L.G. Rudstam, X. Ji and K.T. Holeck. 2014. Oligotrophication, water clarity, and ecological stoichiometry – Evaluating food quantity and quality for zooplankton in Oneida Lake. *Oneida Lake Book* (peer-reviewed). Accepted, in revision.

B. Non-refereed Publications

None

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

*Note: I am not including the numerous posters that were presented at SUNY spotlight on student research from both Limnology Practicum and students working in my laboratory group, only posters presented at national or international meetings.*

- Brainard A. and K.L. Schulz. The effect of propagule pressure and disturbance on non-native abundance: A case study in a kettle lake district. Sustainable pathways: Learning from the Past and Shaping the Future, 98<sup>th</sup> Annual Meeting of the Ecological Society of America, Minneapolis, MN, 4-9 August 2013.

- Smith R.G. and K.L. Schulz. Factors affecting primary production and respiration in small forested pools. Sustainable pathways: Learning from the Past and Shaping the Future, 98<sup>th</sup> Annual Meeting of the Ecological Society of America, Minneapolis, MN, 4-9 August 2013.
- Holmes, C.J., K.L. Schulz, S. Figary and C.E. Cáceres. Effects of diversity on colonization dynamics in newly formed ponds. Sustainable pathways: Learning from the Past and Shaping the Future, 98<sup>th</sup> Annual Meeting of the Ecological Society of America, Minneapolis, MN, 4-9 August 2013.
- Wright, H.K., C.J. Holmes, K.L. Schulz, S. Figary and C.E. Cáceres. Linking intraspecific trait variation to community assembly dynamics in newly formed ponds. Sustainable pathways: Learning from the Past and Shaping the Future, 98<sup>th</sup> Annual Meeting of the Ecological Society of America, Minneapolis, MN, 4-9 August 2013.
- Balogh, S., K.L. Schulz, D. Thiele and B. van Ee. Examining the effects of human additions of feed corn on the food web of an urban pond using stable isotope analysis. Sustainable pathways: Learning from the Past and Shaping the Future, 98<sup>th</sup> Annual Meeting of the Ecological Society of America, Minneapolis, MN, 4-9 August 2013.
- Looi, A., C. Bachman, K. Schulz and J.M. Farrell. Algal and zooplankton response to a flood pulse in a drowned river mouth wetland. Bridging genes to ecosystems: Aquatic science at a time of rapid change. Joint Aquatic Sciences Meeting, Portland, Oregon, 18-23 May 2014.
- Bachman, C.E., M.J. Mitchell, J.M. Farrell, and K.L. Schulz. Drowned river mouth wetlands and water level regulation: Effects on water chemistry and plankton communities. Bridging genes to ecosystems: Aquatic science at a time of rapid change. Joint Aquatic Sciences Meeting, Portland, Oregon, 18-23 May 2014.
- Russell, J.M., C.E. Bachman, J.M. Farrell, M.J. Mitchell, and K.L. Schulz. Sediment-water nutrient analysis in the St. Lawrence River wetlands. Bridging genes to ecosystems: Aquatic science at a time of rapid change. Joint Aquatic Sciences Meeting, Portland, Oregon, 18-23 May 2014.
- Brainard, A.S. and K.L. Schulz. The influence of recreational boat traffic on non-native macrophyte biomass and native biodiversity. Bridging genes to ecosystems: Aquatic science at a time of rapid change. Joint Aquatic Sciences Meeting, Portland, Oregon, 18-23 May 2014.
- Figary, S., M.A. Teece, L.G. Rustam and K.L. Schulz. Why are half of the lakes in a lake district invaded by *Cercopagis pengoi*, while the other half have remained non-invaded for well over a decade? Bridging genes to ecosystems: Aquatic science at a time of rapid change. Joint Aquatic Sciences Meeting, Portland, Oregon, 18-23 May 2014.
- Karkuff, S.A., J.C. Stella, K.L. Schulz and M.A. Teece. Quantifying forest subsidies to food webs in woodland ponds. Bridging genes to ecosystems: Aquatic science at a time of rapid change. Joint Aquatic Sciences Meeting, Portland, Oregon, 18-23 May 2014.

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

- SUNY Oneonta Friday Seminar Series in Biology, 7 March 2014. A quest to determine the roles of two spiny predatory invertebrates in aquatic food webs. ~50 attendees.

## V. PUBLIC SERVICE

A. Funded Service (include consulting activities)

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

None this year

2. Industrial and Commercial Groups, etc.

None this year

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

- Upstate Freshwater Institute Board Member October 2011-current
- Onondaga County Water Protection Scientific Advisory Board 2012-current
- Clark Reservation Bioblitz (3 May 2014; plankton sampling and identification)

**VI. PROFESSIONAL DEVELOPMENT**

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

None this year

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

None this year

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 Lake Management Society  
Phycological Society of America  
Sigma Xi  
Society for Freshwater Scientists (formerly North American Benthological Society)  
Xerces Society

3. Other Professional Activities

a. Editorial activity

Journal (s)

Responsibility

n/a

Other (books, symposia, etc.)

n/a

b. Reviewer

Journal(s)

No. of manuscripts

Oikos

1

Agency

No. of proposals

NSF

1



Other

c. Participation (workshops, symposia, etc.)

<u>Name of workshop, etc.</u>	<u>Date</u>	<u>Place</u>
Participated in seminar series on hydrofracking	ongoing 2014	ESF a teleconferencing site
Attended annual Onondaga Lake Forum	28 Feb 2014	SUNY ESF

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

- ESF mentoring colloquium, 8 January 2014
- Attended Onondaga Lake Forum, 28 February 2014

D. Foreign Travel (Where, When, Purpose)

None

**VII. ADMINISTRATIVE AND SERVICE RESPONSIBILITIES (include committee participation)**

A. Department-level

- EFB Course and Curriculum Assessment Committee Chair
- Faculty mentor for Greg McGee, Beth Folta

B. College-level

- 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
- Marine Science Minor proposer and current co-ordinator
- 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
- Roosevelt Wild Life Station Scientist-in-Residence: Roosevelt Aquatic Ecologist
- Faculty representative to the SUNY ESF Presidential Search Committee

C. University-wide, including Research Foundation

None this year

**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**

I had three primary areas of contribution to student success at ESF this year.

First, I invested a lot of effort and believe had generally very good success with formal teaching. I had a heavy teaching load in terms of total enrollment (oversubscribed courses), number of courses, and the amount of preparation and contact time required for teaching some of the field and laboratory intensive classes. I tried some new assignments in classes that were successfully and improved student learning. We developed an optional field trip to Onondaga Lake for students who are only enrolled in the Limnology Lecture, which was attended by 90% of students and very positively received. The Limnology Practicum continues to be fill enrollment limits and students again were able to master a suite of laboratory and field skills that has propelled some of them to permanent jobs after graduation. The student poster session and interactions with homeowners on some of the study lakes have continued to be positive, and students again returned to the lake association meeting in the spring, after class was completed, to present their posters a second time to the Tully and Preble communities. The marine ecology text that I used in past years was out of print, so I had to change to an entirely new textbook, requiring major unexpected revisions to the course. The laboratory sections included more hands on exercises and more basic marine organismal biology, which students also like. I included more emphasis on critical reading of primary literature in the course as well. Despite the large class size, and numerous planning difficulties imposed by college scheduling and administrative hurdles, I successfully took the marine ecology students to a weekend field trip on Cape Cod where we had behind the scenes tours at Woods Hole Oceanographic Institute, the Marine Biological Laboratory Aquarium, and the National Marine Fisheries Service Northeastern Division, as well as a whale watch, tour of an oyster farm on the tidal flats, and some beach organism field exercises. This was the first visit of several students to the ocean.

Second, I was able to substantially increase opportunities at ESF for students interested in marine science. I finalized the affiliation with the Sea Education Association (SEA), including an agreement for substantial fellowships for ESF students, and direct transfer of credit and financial aid. I was able, under short notice on 4-5 October, while teaching several other classes, to bring almost 40 students to Woods Hole for a day sail on one of the SEA sailing research and training vessels. This was a major event to plan in short time, but was an excellent experience. A number of students have already taken advantage of the SEA affiliation. I also was able to finalize the interdisciplinary marine science minor that has been in the works for several years, and a number of graduating seniors were able to petition for the minor in its first time of existence. I would estimate that approximately 20 students total are currently enrolled in the minor.

Third, I was actively involved with undergraduate and graduate research. I served as mentor to two honors students who graduated this year, and was reader of two additional honors theses and mentor to several students performing senior projects in my laboratory. A number of these students (>10) presented posters at the Spotlight for Student Research, and two had posters at national or international meetings. I had three graduate students complete their studies this year (1 MPS and 2 MS). In addition I have submitted 4 manuscripts for publication with students this year.

## **Department/college**

I have served the college in several substantive ways during the past year. I continue to serve as the Chair of the Course and Curriculum Assessment Committee and we passed a number of course proposals and two new minor proposals. We made some progress on assessment, although completion of EFB assessment and revision of assessment plans that will be one of my major efforts this summer and fall (see below).

I have spent a tremendous amount of effort writing reports, overseeing final renovations, and planning for the opening of the CIRTAS (Center for Integrated Research and Teaching in Aquatic Science) facility in Illick Hall. The facility should be ready for occupancy in June and I have been developing the formal center proposal as well as user guidelines, and sustainability/recharge plans that I hope can be finalized and passed in early summer 2014. We already have three initial users lined up for a June start, and this project is a great opportunity for us to bring aquatic science at

ESF to a new level. After so many years of planning, grant writing, report writing and dealing with the minutia of renovations, it's great to finally be able to see the renovations at TIBS and CIRTAS to completion and start doing some science!

Finally, I served as a faculty representative to the Presidential Search Committee at SUNY ESF.

### **Self**

This again been a difficult year. It's been almost two years since I had to vacate my office in Illick Hall due to construction project dust, and my lab has been a very difficult place to work for my students and me. Just when the construction was scheduled to end, the entire lab was flooded and all the tiles had to be replaced due to assessment issues. The graduate students and I had to move almost all the materials out of the lab several times. The continual disruptions to research activities in the lab due to construction for two years have added to difficulties in carrying out research efforts for me and students in my research group, and contributed to general morale problems in the laboratory. The apparent lack of interest or response from administration, as well as the amount of supplies and equipment that have gone missing during the past two years, are disheartening. As I said last year, I will not apply for new grants requiring research or take on new students who need to do research in my lab until I have been provided with safe and functional laboratory facilities. Fortunately, the asbestos abatement is nearly complete, and the construction is nearly done, and we are hopeful that we will be able to move into a clean and safe laboratory in summer 2014 and life as an active aquatic researcher can resume!

I believe I was successful at efforts in teaching, service and scholarship that were available to me during this phase of construction, and not only have submitted a number of manuscripts, but also have a number of others nearing completion. It's great to see current and former graduate students excelling (one of my former students got a permanent faculty position at VIMS and several have also obtained their dream jobs in state or national agencies. I anticipate an excellent year ahead.

## **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)**

### **B. PROJECTED ACTIVITIES FOR NEXT YEAR**

#### 1. Summer 2014

##### a. Course(s) to be offered

- None, however I plan on revising my Limnology Practicum handbook and also on making several instructional films for limnology lecture and practicum

##### b. Proposed research activity

- Skaneateles foam
- Sampling of Lake Erie and invertebrate nutrient release experiments on NOAA project led by A. Brainard
- Sampling of Adirondack lakes for completion of invasive species work of A. Brainard
- One sampling of Heiberg pond to complete field work for vernal pool projects
- Field work and completion of dataset and manuscripts for TIBS NOAA project
- Completion of numerous manuscripts on several former projects
- Revision of website

##### c. University, professional society, and public service

- Will complete the EFB assessment documents and prepare for the assessment review
- Will finalize CIRTAS paperwork and open the facilities for use; finalize and implement CIRTAS website and data procedures
- Work with the COFOKLA and Song Lake associations as well as the

## 2. Fall Semester 2013

### a. Course(s) to be offered

- Limnology (undergraduate) – EFB 424
- Limnology (graduate) – EFB 624
- Limnology Practicum – EFB 525

### b. Proposed research activity

- ongoing project completion and manuscript submission
- submission of pre-proposal at end of semester
- development of sabbatical plan and request

### c. University, Professional society, and public service

- EFB Course and Curriculum Assessment Committee Chair
- Marine Science Minor proposer and current coordinator
- 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
- Roosevelt Wild Life Station Scientist-in-Residence: Roosevelt Aquatic Ecologist
- Upstate Freshwater Institute Board Member October 2011-current
- Onondaga County Water Protection Scientific Advisory Board 2012-current

## 3. Spring Semester 2014

### a. Course(s) to be offered

- Graduate seminar
- Marine Ecology Undergraduate seminar

### b. Proposed research activity

- ongoing project completion and manuscript submission
- submission of at least one full proposal
- potential application for full professor status

### c. University, professional society, and public service

- EFB Course and Curriculum Assessment Committee Chair (hopefully will rotate off as chair this term)
- Marine Science Minor proposer and current coordinator
- 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
- Roosevelt Wild Life Station Scientist-in-Residence: Roosevelt Aquatic Ecologist
- Upstate Freshwater Institute Board Member October 2011-current
- Onondaga County Water Protection Scientific Advisory Board 2012-current