

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: Neil H. Ringler

I. INSTRUCTIONAL ACTIVITIES

1. Regular Course Offerings

	Course No.	Title	Credit Hrs.	No. Students	No. of Lab. Sections
SUMMER:					
FALL:	EFB 554	Aquatic Entomology	3	9	1
SPRING:	EFB 385	Comparative Vertebrate Anatomy	4	27	2
	EFB 797	Onondaga Lake Seminar	1	5 (and about 20 others from Chemistry and Engineering)	

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.

None of these courses had a service learning component this year

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

	Course No.	Title	Credit Hrs.	No. Students
<u>Fall</u>	EFB 899	Master's Thesis	4	2
	EFB 999	Doctoral Dissertation	1	1

<u>Spring</u>	EFB 495	Exp. College Teaching	9	5
	EFB 798	Independent Research	2	1
	EFB 899	Master's Thesis	4	8
	EFB 999	Doctoral Dissertation	1	1

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

Hill Collaboration and Institute for Environmental Health and Environmental Medicine: The Paths Forward: Plenary Session, Biotechnology Symposium May 18, 2017 Syracuse NY with David Amberg UMU

Concurrent Session Chair: Hill Collaboration in Environmental Medicine. Biotechnology Symposium May 18, 2017 Syracuse NY

4. Guest Lecture Activities

<u>Course No.</u>	<u>Title</u>	<u>No. of Lectures</u>
EFB 210	Diversity of Life Biology of Aquatic Insects	1 March 23, 2017

II. STUDENT ADVISING

A. Number of undergraduates for whom you are the student's official advisor _____ and unofficial advisor 3

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

Erik Hazelton, M.S. Completed May 2017. Discovering the source and characteristics of an unmanaged population of Walleye (*Sander vitreus*) in a recovering urban lake. Master's Thesis. State University of New York College of Environmental Science and Forestry. 74 pp.

Harold Nugent, M.S. May 2014 (target completion December 2017)

Caryanne Pershyn, M.S. 2015

Elizabeth Stieber, M.S. May 2015

Deborah Hummel, M.S. May 2016

Greg Kronisch, M.S. January 2017

Michael Connerton, Ph.D. December 1996 (NYDEC Biologist)

CO-MAJOR PROFESSOR

MEMBER, STEERING COMMITTEE (other than those listed above)

Caitlin Slife
Thomas Evans
Hajar Faal-Mohammad-Ali

CHAIRMAN OR READER ON THESIS EXAMS, ETC.

Chair, M.S. Defense. Casey Chamberlain, Environmental Studies

III. RESEARCH COMPLETED OR UNDERWAY

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

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)

Current Awards

U.S. Geological Survey

Restoration of Lake Ontario Native Fish Species.
2% CY PI
\$378,580 (flow through to USGS Cortland)
7/30/14 – 8/31/17

NYDEC

Biological Condition Estimation for New York Lakes: Application and Evaluation of Lake Assessment Biological Metrics
2% CY PI
\$86,000
8/24/17 – 8/23/17

NYS Economic Development (NYSTAR)

Hi-Tech Match for Grant Acquisition: Cryo-Field Emission Transmission Electron Microscope
1% CY PI
\$215,000
9/1/15 -8-31/18

Honeywell International Inc.

Onondaga Lake Biological Assessment and Monitoring
10% CY PI
\$128,893
7/01/16 – 6/30/17

USDA Forest Service

Enhanced Effectiveness of Planning and Managing (Moon Library lease)
7.5% CY
\$13,500; 9/22/16 – 12/31/17

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

Pending Awards

USEPA

Expansion of Great Lakes Invertebrate Barcode Libraries
2% AY Co-PI
\$396,495
9/1/2017 – 8/31/19

NYDEC

Biological Condition Estimation for New York state Lakes: Application and Evaluation of Lake Assessment Biological Metrics
1% CY PI
\$86,000
9/1/17 – 8/31/19

Honeywell International Incorporated

Onondaga Lake Biological Assessment and Monitoring
10% CY PI
\$155,000
7/1/17 – 6/30/18

NOAA NY Sea Grant (Pre-proposal accepted; full proposal due June 12, 2017)

Ensuring Success of Atlantic salmon Restoration in Great Lakes Tributaries
10 % CY PI
\$240,000
2/17/18 – 1/31/20

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

Submitted but rejected

Great Lakes Research Consortium

Habitat Evaluation of the Onondaga Lake and its tributaries and adjoining landscapes
2% CY PI
\$25,000
9/1/16 – 12/30/17

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

Johnson, J.H. and N.H. Ringler. 2016. Comparative diets of subyearling Atlantic Salmon and subyearling Coho Salmon in Lake Ontario Tributaries. *J. Great Lakes Research* 42:854-860.

Kirby, L.J., S.L. Johnson and N.H. Ringler. 2017. Diel movement and home range estimation of Walleye (*Sander vitreus*) within a no-take urban fishery. *Journal of Freshwater Ecology*. 32(1): 49-64.

Kroll, S.A., N.H. Ringler, M.C. Cano Costa, and J. Delas Heras. 2017. Aquatic insects on the front lines: projected community response to temperature and precipitation changes in Mediterranean streams. *J. Freshwater Ecology* (In Press).

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.)

Commendation from State University of New York expressing “gratitude and appreciation for contributions and service to the State University of New York.” presented by Alex Cartwright, Provost and

Executive Vice Chancellor, and Grace Wang, Vice Chancellor for Research and Economic Development.
March 8, 2017, Syracuse, New York

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

2. Professional Society Membership

AAAS (Fellow)
Sigma Xi
American Fisheries Society
American Institute of Fishery Research Scientists

3. Other Professional Activities

a. Editorial activity

<u>Journal (s)</u>	<u>Responsibility</u>
Ecology of Freshwater Fish	Associate Editor

Other (books, symposia, etc.)

b. Reviewer

<u>Journal(s)</u>	<u>No. of manuscripts</u>
<u>Agency</u>	<u>No. of proposals</u>
Great Lakes Research Consortium	8

c. Participation (workshops, symposia, etc.)

<u>Name of workshop, etc.</u>	<u>Date</u>	<u>Place</u>
Biotechnology Symposium	5/18-19/17	ESF

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

Ex-officio Committee on Research
McIntire-Stennis Authorized Technical Representative
Vice Provost and Executive Director Onondaga Lake Science Center

C. University-wide, including Research Foundation

SUNY/RF Research Council
SUNY/RF Vice Presidents for Research/Officers
SUNY/RF Network of Excellence Co-leader with SUNY Stony Brook, Albany, Binghamton
SUNY Distinguished Academy; SUNY Senate Committee on Research and Graduate Education
Co-Director Hill Collaboration Environmental Medicine with UMU, SU, ESF, VA
Advisory Council, Biotechnology Accelerator
Planning Team, Center of Excellence Biofuels Laboratory
Planning Team, Institute for Environmental Health and Environmental Medicine (2020 Challenge Grant)
Planning Team Worldwide Canal Conference (scheduled Sept 24-28 2017 Syracuse NY)

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?

EFB

Course contributions were Comparative Vertebrate Anatomy, Aquatic Entomology and a lively new seminar (jointly with Chemistry and Engineering) on Onondaga Lake. Research funding by NYDEC and Honeywell International continues to nurture the graduate program. Of seven graduate students, one graduated (M.S.) and two more are targeted to complete in the summer. Three publications were completed this year, along with success in reintroduction of Atlantic salmon to Onondaga Lake tributaries: several fast-growing individuals appeared in angler catches this spring. Our NOAA NY Sea Grant pre-proposal on Atlantic Salmon restoration was accepted and the full proposal will be submitted June 12, 2017.

ESF

Our Hill Collaboration in Environmental Medicine completed its fourth year of funding collaborative projects among ESF, UMU, SU and Syracuse VA. Results were presented at the 9th Biotechnology Symposium in Syracuse May 18th. The bright futures of the Hill Collaboration and the Institute for Environmental Health and Environmental Medicine were outlined at the Biotechnology Symposium by Dave Amberg and Neil Ringler. These initiatives connect closely to our new academic program in Environmental Health. Similarly, the new TEM and SEM scopes, funded by NSF and

NYSTAR, are up and running; these will be among the highlights of the 10th Biotechnology symposium. The equipment in the ESF Biofuels lab within the Syracuse Center of Excellence is now fully functional and ready for instruction and start-up company utilization.

On January 19th 2017 I was named Vice Provost and Executive Director of the Onondaga Lake Science Center, funded by a SUNY 2020 Challenge Grant. Construction of the science building, boathouse and floating classroom for the Center awaits finalization of appropriate land. Programmatic planning has been active, particularly with regard to actual research endeavors on the lake and its tributaries. Planning especially has entailed preparations for the Worldwide Canal Conference September 24-28 based on the Lake and venues in downtown Syracuse, our canal system, and the Inner Harbor.

SUNY RF

I participated actively in meetings of the SUNY/RF Research Council and the Vice Presidents for Research. We welcomed Dr. Grace Wang as the new Vice Chancellor for Research and Economic Development, and presented to her an outline of ESF's Research portfolio. I was honored (and surprised!) on March 8, 2017 with a commendation from SUNY/RF, presented at the Syracuse RF Meeting by Provost/Executive Vice Chancellor Alexander Cartwright and Vice Chancellor Grace Wang.

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)

Next year three graduate students are scheduled to complete their studies, and two new students are slated to begin with us. Funding is assured with NYDEC and Honeywell to support them. In addition to the courses in CVA and Aquatic entomology, and possibly the Onondaga Lake Seminar, I am working on a potential new course/seminar in Animal Flight, last taught in 2004. Work on the Onondaga Lake Science Center will entail interactions with VP Maureen Fellows with regard to the siting of the physical facilities, finalizing building designs, working with partners originally scheduled to share in the endeavor (e.g., Onondaga Community College, NYWEA, et. al), development of formal policies for off-campus operations and seeking additional long-term financial support for the programs.

B. PROJECTED ACTIVITIES FOR NEXT YEAR

1. Summer 2017
 - a. Course(s) to be offered
 - b. Proposed research activity

Onondaga Lake and tributaries studies including biomonitoring of fish, plant distribution surveys and Atlantic Salmon assessment (5-6 students on team). A major emphasis will be on assessing fish responses to structures to be placed in the littoral zone or already existing there. While hundreds of such structures are planned, our work will not await all of the intended placements (scheduled for December 2017).
Completion of NY Sea Grant proposal (\$240K)

c. University, professional society, and public service

2. Fall Semester 2017

a. Course(s) to be offered

EFB 554 Aquatic Entomology

b. Proposed research activity

Onondaga Lake and tributaries as outlined above

c. University, Professional society, and public service

Planning team Hill Collaboration and Institute for Environmental Health and Environmental Medicine

3. Spring Semester 2018

a. Course(s) to be offered

EFB 385 Comparative Vertebrate Anatomy

EFB 795 (tentative) Animal Flight

b. Proposed research activity

Onondaga Lake data analysis and, if funded, laboratory work on Atlantic Salmon (NOAA/NY Sea Grant)

c. University, professional society, and public service

Biotechnology Advisory team

Planning team Hill Collaboration and Institute for Environ. Health and Environ. Medicine