

**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: Stacy McNulty

**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:					
FALL:					
SPRING:	EFB484	Winter Mammalian Ecology	3	16	0

**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)

	<u>Course No.</u>	<u>Title</u>	<u>Credit Hrs.</u>	<u>No. Students</u>	
	EFB899	Master's Thesis Research		1-9	1
	EFB420	Internship in Environmental and Forest Biology		1-2	2

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

4. Guest Lecture Activities

<u>Course No.</u>	<u>Title</u>	<u>No. of Lectures</u>
EFB345	Forest Pathology	1
-----	Wildlife Class, McGill University, QC	1
-----	Biology, St. Lawrence University	1
FOR232	Natural Resources Ecology	1
-----	Adirondack Semester, Clarkson University	1

## II. STUDENT ADVISING

- A. Number of undergraduates for whom you are the student's official advisor   0   and unofficial advisor   2
- 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

- Amanda Pachomski, MS, August 2013. Foraging habitat characteristics, prey availability, and detectability of Rusty Blackbirds: implications for land and wildlife management in the Northern Forest. 2017.
- Robinson, C.J. MS, August 2014. Relationship between intensity of recreational land use, elevation, and the distribution and prevalence of the fungal pathogen *Batrachochytrium dendrobatidis*. 2016.

### CO-MAJOR PROFESSOR

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

- Ashley Simpson, MS
- Leah Nagel, MS
- Megan Gallagher, MS

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

## III. RESEARCH COMPLETED OR UNDERWAY

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

1. Adirondack Long-Term Environmental Monitoring Program (ALTEMP) – a variety of ecological projects occurring at Huntington Wildlife Forest (ESF Newcomb Campus); 20% time
2. Adirondack Biodiversity Project (ATBI, All-taxa Biodiversity Inventory); 2% time  
Public BioBlitz and survey of western Adirondack region (Indian River Lakes Conservancy)
3. Climate change and phenology in the Adirondacks – lake ice; signals of changing climate; 10% time
4. Amphibian population trends and habitat associations in a) vernal pools and b) forested uplands/seeps; 5% time
5. Forest Management/Beech Ecology research – 5% time
6. Aquatic/Watershed Science research – 2% time

- 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)

Schlesinger, M., J. P. Gibbs and S. McNulty. Determining the importance of vernal pools across geophysical and urbanization gradients to inform regulation, conservation, and management. EPA Wetland Program Development Grant. \$324,515. 1/1/16 - 12/31/18. Leah Nagel.

McNulty, S. and J. Stella. McIntire-Stennis program. Beaver Influence on Vegetation Structure and Avian Diversity at Local and Landscape Scales. \$52,027. 5/1/13 – 9/30/18. Patrick Oelschlager.

Rooks, M., S. McNulty, C. Beier, P. Hai, D. Patrick, and T. Howard. EPA Wetland Program Development Grant. Building a Monitoring Framework for Detecting Climate Change Effects on Wetlands in the Adirondack Park: Phase II. \$865,848, \$340,000 (ESF portion \$73,527). 1/1/12 – 12/31/16. Samouel Beguin.

Beier, C., S. McNulty, P. Hirsch and A. Parker. New York State Department of Environmental Conservation, Application of GIS to Resource Inventory for Unit Management Planning, \$1,300,000, \$125,313, 6/1/03 – 8/31/16. Abigail Larkin, Dan Rockefeller, Erin Swallow, Becky Walker.

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

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

**IV. PUBLICATIONS** (Full bibliographic citation, i.e., do not use "with Jones," or "Jones, et al."; please list only publications published, in press, or actually submitted during this reporting period --- **do not list manuscripts in preparation**).

A. Refereed Publications

B. Non-refereed Publications

McNulty, S. 2017. Phenology: tracking the natural events occurring all around us. New York State Conservationist Magazine, February 2017:24-26.

Langdon, S.F., G.J. Edinger, S. McNulty, E. Snizek and L. Walrath. 2017. Detecting Climate Change in Wetlands in the Adirondack Park: No-Cost Extension 2016. EPA Wetland Program Development Grant CD#96295000. Final Report and Addendum.

[https://www.apa.ny.gov/Research/DetectingClimateChangeAdirondacks\\_96295000\\_FinalAddendum\\_20170321.pdf](https://www.apa.ny.gov/Research/DetectingClimateChangeAdirondacks_96295000_FinalAddendum_20170321.pdf)

Langdon, S.F., G.J. Edinger, P.B. Hai, S. McNulty, S. Beguin, D. Patrick, E. Snizek and L. Walrath. 2017. Detecting Climate Change in Wetlands in the Adirondack Park: Phase II. Report to US Environmental Protection Agency.

[https://www.apa.ny.gov/Research/DetectingClimateChangeAdirondacks\\_96295000\\_FinalReport\\_20170321.pdf](https://www.apa.ny.gov/Research/DetectingClimateChangeAdirondacks_96295000_FinalReport_20170321.pdf)

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

Rusty Blackbirds in the Northern Forest: Breeding Season Status and Habitat Associations at Local and Landscape Scales. Vermont Monitoring Cooperative meeting, December 2016, Burlington VT.

Gladiator Salamanders as Biological Indicators of Climate Change. Lewis, J., S. McNulty and D. Kiernan. ESF Spotlight on Research Poster Session, Syracuse, NY, April 2017.

Comparing the Diversity of Small Mammal Communities and Habitat in the central Adirondack Mountains, NY. Lee, J. and S. McNulty. ESF Spotlight on Research Poster Session, Syracuse, NY, April 2017.

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):

NSF-funded panel reviewer, February 2017

2. Industrial and Commercial Groups, etc.

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

Cohosted Tyumen University (Siberia) field station delegation visit to Newcomb  
Various presentations on field science, research and monitoring to visiting school groups

## 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)

Secretary, Organization of Biological Field Stations  
Board Member, Northern New York Audubon  
Working Group Co-Chair, Northeastern Partners in Amphibian and Reptile Conservation

2. Professional Society Membership

Adirondack GIS User's Group  
Ecological Society of America  
Northeast Partners in Amphibian and Reptile Conservation

Society of Conservation Biology  
The Wildlife Society

3. Other Professional Activities

a. Editorial activity

<u>Journal (s)</u>	<u>Responsibility</u>
<u>Other (books, symposia, etc.)</u>	
<i>Wildlife and landscapes: principles and applications for landscape management</i>	Chapter Reviewer

b. Reviewer

<u>Journal(s)</u>	<u>No. of manuscripts</u>
<u>Agency</u>	<u>No. of proposals</u>
National Science Foundation	15
<u>Other</u>	

c. Participation (workshops, symposia, etc.)

<u>Name of workshop, etc.</u>	<u>Date</u>	<u>Place</u>
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C. Further Education/Re-training Undertaken, Leaves, Workshops, etc.

Completed EST796, Nature, Recreation and Society, Fall 2016  
Completed FOR999, Doctoral Dissertation Research, Spring 2017

D. Foreign Travel (Where, When, Purpose)

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

A. Department-level

Associate Director, Adirondack Ecological Center

B. College-level

Council for Geospatial Modeling and Analysis (CGMA)

C. University-wide, including Research Foundation

## **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** – My tenth Master's student graduated this spring with honors. I assisted two undergraduate independent researchers with projects involving 1) long-term salamander demographics and trends relating to climate data and 2) small mammal and habitat characteristics. Both students presented posters at the Spotlight on Research and expressed the experience was a formative step in their education. Finally, I taught EFB484, Winter Mammalian Ecology, for the seventh time and received a mean 9.4 out of 10 on course evaluations. Upperclassmen commented that the course should be required for wildlife science majors (while their enthusiasm is appreciated, the logistics of a larger winter field course would compromise the experience).

For the **department/college**, it was gratifying to be awarded funding for a project on invasive-induced forest biodiversity loss and evaluation of stand rehabilitation. This project was the culmination of a multi-year, team effort across the EFB and FNRM departments, Forest Operations and AEC staff, and it represents a larger cumulative effort of forest research and management at ESF. The project is designed to meet the challenge of retaining and encouraging a desirable mix of forest species and structure for both ecosystem function and economic value.

**Self** - My doctoral research proposal in Graduate Program in Environmental Science on natural resource governance has progressed and I continue to find the process a rich, rewarding experience. I am finding the interdisciplinary inquiry (including learning new lines of theory, research tools, techniques and software) has revitalized my interest in academic and professional scholarship in ecology and policy. Still without a solution is the limitation of having only 24 hours in a day.

## **IX. A. FUTURE PLANS, AMBITIONS, AND POTENTIAL CONTRIBUTIONS FOR YOUR OWN PROFESSIONAL DEVELOPMENT AND THE ENHANCEMENT OF THE PROGRAM IN ENVIRONMENTAL AND FOREST BIOLOGY (brief summary)**

I'm working with colleagues on leveraging the long-term datasets collected at AEC and around the region toward looking at broader environmental change and will continue this work from the past summer and fall. I am also establishing protocols for wider dissemination of these data.

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

### 1. Summer 2017

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

- b. Proposed research activity
  - Beech, nuts, Beech Bark Disease – develop collaborative forest ecology/management research
  - Publish boreal bird habitat/land use association – including Adirondack soundscapes
  - Publish amphibian disease ecology – Bd/recreation study
  - Data collection for ALTEMP projects (various, including: terrestrial salamanders, vernal pool amphibian reproduction and survival, songbird survey, phenology, seed survey)
  - Human and ecological community sustainability in the Adirondacks – Hudson Watershed research coordination and identification of research avenues, in particular aquatic science
  
- c. University, professional society, and public service
  - Coordinate linkages between research and education via AEC and Northern Forest Institute/Adirondack Interpretive Center
  - Co-coordinate ATBI and Adirondack Biodiversity Project – 2016 BioBlitz
  - Contribute to Org. of Biological Field Stations, National Phenology Network, Northeastern Vernal Pool Working Group among others

## 2. Fall Semester 2017

- a. Course(s) to be offered
  
- b. Proposed research activity
  - Continue from summer
  - ALTEMP projects (various, including phenology, terrestrial salamanders, beaver colony activity, seed survey)
  - Publish beaver influence on avian biodiversity
  
- c. University, Professional society, and public service
  - Continue from summer

## 3. Spring Semester 2018

- a. Course(s) to be offered

Winter Mammalian Ecology EFB 484/684
  
- b. Proposed research activity
  - Continue from summer
  
- c. University, professional society, and public service
  - Continue from summer