

**ANNUAL REPORT: June 1, 2012 – May 31, 2013**  
**(i.e., Summer 2012, AY 2012-2013)**  
**DEPARTMENT OF ENVIRONMENTAL AND FOREST BIOLOGY**  
**SUNY-ESF**

**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: | None              |                          |                    |                     |                             |
| FALL:   | None              |                          |                    |                     |                             |
| SPRING: | EFB484            | Winter Mammalian Ecology | 3                  | 14                  | 0                           |
|         | EFB684            | Winter Mammalian Ecology | 3                  | 1                   | 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. EFB courses currently listed with service-learning components include: 416/6/1, 486, 518, 521, 532, 446/646.

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 | 1-8                | 5                   |
| EFB498            | Research Prob/EFB        | 5                  | 2                   |

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

None

4. Guest Lecture Activities

| <u>Course No.</u> | <u>Title</u>              | <u>No. of Lectures</u> |
|-------------------|---------------------------|------------------------|
| FTC105            | Ranger School Summer Camp | 1                      |
| EFB496            | CLBS Wildlife Techniques  | 1                      |
| FTC 232           | Wildlife Techniques       | 1                      |
| FTC 234           | Wildlife Conservation     | 1                      |
| FOR232            | Natural Resources Ecology | 1                      |

## **II. STUDENT ADVISING**

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

- Shannon Buckley, MS, January 2011, Rusty Blackbirds in Northeastern U.S. Industrial Forests: A Multi-Scale Study of Nest Habitat Selection and Nest Survival, April 2013
- Tim McCoy, MS, August 2011
- Michael O'Brien, MS, August 2012 (withdrew)

### **CO-MAJOR PROFESSOR**

- Sarah Wilkinson, MS, January 2010, Density Dependence and Stochastic Variation in Overabundant, Un-Managed White-Tailed Deer Herds of Eastern National Parks, May 2013 (co-MP with Underwood)
- Carissa Alza, MS, August 2012 (co-MP with Stella)

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

- Ashley Simpson, MS Nyland
- Natasha Karniski, MS Lomolino

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

- Brigham Whitman, MS Porter (defended 2013)

## **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
3. Climate change and phenology in the Adirondacks – lake ice and other signals of changing climate  
2% time
4. Amphibian population trends and habitat associations in a) vernal pools and b) forested uplands/seeps;  
5% 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)

McNulty, S. and J. Stella. Beaver Influence on Vegetation Structure and Avian Diversity at Local and Landscape Scales. McIntire-Stennis program. \$52,000, \$27,495. 5/1/13-5/31/15. Carissa Alza.

McNulty, S., M. O'Brien, C. Foss, D. Hudnut and S. Flint. Northeastern States Research Cooperative. An Investigation of Rusty Blackbird Foraging Sites: Does Timber Harvesting Influence Site Selection? \$10,000, 5/1/13 – 5/1/14. Michael O'Brien.

Germain, R., C. Nowak, S. McNulty and E. Bevilacqua. Sustaining White Pine on High Quality Sites. McIntire-Stennis program. \$66,220, 2/1/12-9/30/14. Sarah Schoenberg, Alida Mau.

Spada, D., S. McNulty, C. Beier, P. Hai, D. Patrick, and T. Howard. Building a Monitoring Framework for Detecting Climate Change Effects on Wetlands in the Adirondack Park. EPA Wetland Program Development Grant. Year 1: \$865,848, \$227,000 (ESF portion \$81,000). 1/1/12 – 12/31/15.

McNulty, S. and C. Beier. New York State Department of Environmental Conservation, *Application of GIS to Resource Inventory for Unit Management Planning*, \$891,922, \$135,922 6/1/03 – 8/5/13. Steve Signell, Senior Research Support Specialist, Abigail Larkin.

Kimmerer, R. and S. McNulty. National Science Foundation Undergraduate Mentoring in Environmental Biology Program. *Integrating Science and Stewardship in the Adirondacks*. \$591,925, \$150,830. 6/1/06 - 5/31/13. Madeline Turnquist, Meredith Kane, Caitlin Snyder, Tim McCoy.

Hodgman, T. and S. McNulty. A Multi-Scale Study of Rusty Blackbirds, Nest Predation, and Timber Management in the Moosehead Lake Region, Maine. Maine Outdoor Heritage Fund (with match from Maine Dept. Inland Fisheries and Wildlife/USFWS Federal Aid). \$15,480, \$15,480. 1/1/12-12/31/12. Shannon Buckley.

McNulty, S. Comparison of Nesting Rusty Blackbirds in the Adirondacks and New England. Northern New York Audubon Chapter Cullman Grant, \$1,500, \$1,500. May 1, 2012 – August 31, 2013. Shannon Buckley.

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

None

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

Kimmerer, R. and S. McNulty. Research Experience for Undergraduates: Adirondack Climate and Ecosystem. National Science Foundation REU. January 2013 – 2017. \$638,673; \$150,119.

Nyland, R.D., S. A. McNulty, G.G. McGee, R. Davis, E. Bevilacqua, D. Kiernan. Long-term Beech Dynamics in the Northern Forest and the Consequences. Northeastern States Research Cooperative Theme 4: Biodiversity and Protected Area Management. \$88,927, \$48,173. 9/1/13-8/31/15.

**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

LaMere, C. R., S. A. McNulty and J. E. Hurst. 2013. Human-black bear conflicts are related to mast production in the Adirondack Mountains of New York State. Proceedings of the Eastern Black Bear Workshop 2011. <http://www.easternblackbearworkshop.org/past-meetings.html>.

Cale, J., S. McNulty, S. Teale and J. Castello. 2013. The impact of beech thickets on northern hardwood forest biodiversity. *Biological Invasions* 15:699-706.  
<http://www.springerlink.com/openurl.asp?genre=article&id=doi:10.1007/s10530-012-0319-5>

B. Non-refereed Publications

McNulty, S. Beech Nuts, Mice and Bears. Adirondack Almanack, 29 August 2012.  
<http://www.adirondackalmanack.com/2012/08/stacy-mcnulty-beech-nuts-mice-and-bears.html>

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

The All-Taxa Biodiversity Inventory: Progress Report. D. Patrick and S. McNulty. Adirondack Research Consortium, May 15-16, 2013, Lake Placid, NY. Presentation.

A multi-scale study of Rusty Blackbirds, nest predation and forest management in the northeastern United States. Buckley, S., S. McNulty and T. Hodgman. International Rusty Blackbird Technical Working Group and Bird Conservation Conference in the Northeast, 16-19 October, 2012, Plymouth, MA. Presentation.

Using Motion-Triggered Trail Cameras to Document Nest Predation in the Declining Rusty Blackbird (*Euphagus carolinus*): A Novel Nest-Monitoring Technique for Forest Passerines. Buckley, S., S. McNulty and T. Hodgman. North American Ornithological Conference V, Vancouver, British Columbia 15-18 August 2012. Poster.

Habitat Characteristics and Amphibian Reproduction in Adirondack Vernal Pools: Is Wet Enough? McKissick, K.\* and S. McNulty. Northeastern Partners in Amphibian and Reptile Conservation, Crawford Notch, NH 25 July 2012. Poster. \* Undergraduate lead presenter

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

- BioBlitz, July 14-15, Saranac Lake, NY – estimated 250
- Teddy Roosevelt Days Sept. 9, HWF - 32
- Amphibian/vernal pool hike, April 28, HWF - 22

## V. PUBLIC SERVICE

### A. Funded Service (include consulting activities)

#### 1. Government Agencies (Federal, State, Local): None

#### 2. Industrial and Commercial Groups, etc.

Adirondack Museum master exhibition planning consultation, September 28 (educational, non-profit group)

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

Adirondack Biodiversity Project (All-Taxa Biodiversity Project) – an expert-driven, citizen science-based project to inventory all life in the Adirondack region and excite residents of and visitors to Adirondack Park  
Northeastern Partners in Amphibian and Reptile Conservation – co-lead vernal pool working group  
Member, North Country Regional Economic Development Council – Recreation Planning team  
Facilitator, 5-Towns meeting (coordinating Adirondack public lands planning)  
US Forest Service, field visit to discuss beech, hardwood and other forest management, August 8

## 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)

Chair, Human Diversity Committee, Organization of Biological Field Stations  
Board Member-at-Large, Organization of Biological Field Stations  
Board Member, Adirondack Research Consortium

#### 2. Professional Society Membership

Adirondack GIS User's Group  
Ecological Society of America  
Society of Conservation Biology  
The Wildlife Society

#### 3. Other Professional Activities

##### a. Editorial activity

Journal (s)

Responsibility

Other (books, symposia, etc.)

b. Reviewer

| <u>Journal(s)</u>                           | <u>No. of manuscripts</u> |
|---|---------------------------|
| Adirondack Journal of Environmental Studies | 1                         |

| <u>Agency</u> | <u>No. of proposals</u> |
|---------------|-------------------------|
|               |                         |

Other

c. Participation (workshops, symposia, etc.)

| <u>Name of workshop, etc.</u> | <u>Date</u>  | <u>Place</u> |
|-------------------------------|--------------|--------------|
| Safe-Capture Workshop         | 5/21-5/22/13 | Ithaca, NY   |

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

Adirondack Park Invasive Plant Program training, 6/21/12, Bolton Landing, NY

D. Foreign Travel (Where, When, Purpose)

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

A. Department-level

Associate Director, Adirondack Ecological Center  
Organizer, Huntington Lecture Series  
Editor, Spruce Moose newsletter

B. College-level

Council for Geospatial Modeling and Analysis (CGMA)  
Promotion and Tenure Committee (Callan), spring 2013

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 (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, which I'll continue to award**

based on your contributions to the department and college this reporting period.

Students: In 2012-13 I spent significant energy developing new field research opportunities for undergrads. The NSF UMEB program at ESF is phasing out after 7 years of supporting students; several colleagues and I proposed an intensive REU for climate/ecosystem science in the Adirondacks based on best practices from UMEB. While we were not successful in this initial attempt, reviewers were encouraging of our model of a summer-in-residence combined with academic year pre- and post-research training and enrichment activities. I also pursued relationship-building and multiple avenues of funding for students (particularly those from underrepresented groups). Strong partnerships with the ESA SEEDS program, Environmental Consortium of Hudson River Colleges & Universities and directors of programs at other field stations will be invaluable for giving ESF students first-rate research and early career experiences as we reposition in this next year. Finally, I put significant effort into developing a new course (EFB411) as part of the [Adirondack Residential Semester](#) to be offered in Fall 2013 at ESF's Newcomb Campus.

Department/college: Leadership of AEC has been a critical priority this year given the coming transitions at AEC and the college. I spent considerable time in planning with AEC staff and academic administrators working to a) clarify and strengthen AEC's position within the college; b) identify the assets AEC provides to students, faculty and members of the public; and c) identify resources needed to provide high-quality research and teaching support, scientific monitoring, and public outreach services (see AEC annual report). I also heavily participated in recreation/land use planning and Adirondack state land classification via a regional economic development initiative of the governor. The Adirondack Park Regional GIS Consortium and AEC staff were instrumental in a successful Combined Funding Application for an [Adirondack Web Portal](#) linking disparate sources of mappable information. I have led APR-GIS for a decade and am pleased the consortium is evolving into a more interdisciplinary program of ecological, economic and social science. A current focus is the disposition of [new public lands in the "5 Finch Towns"](#) including the Town of Newcomb. I worked with college and APR-GIS partners to ensure agency officials, politicians and other stakeholders have access to ESF's faculty/staff expertise and utilize the Newcomb campus facilities. It is an exciting time in the Adirondacks.

Self: I attended the Safe-Capture workshop, a highly-regarded, international program geared toward professionals using animal immobilization techniques. This is timely given my research and teaching involves capture of animals from mice to turkeys to deer. It was gratifying to note that AEC protocols for handling animals safely are up-to-date and that our teaching reflects this when ESF or other groups visit to learn about wildlife ecology and management. During the workshop I was also able to connect/reconnect with wildlife biologists, wildlife control officers, and other practitioners (e.g., the NYS Dept. of Agriculture and Markets veterinarian) and learn some current opportunities and challenges faced by our Wildlife Science graduates when they enter the job market.

#### **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 am pursuing two lines of research. One is community ecology, both basic research and interactions of species and their environment (e.g., Rusty Blackbird and predation/landscape factors influencing nest success and lack of population recovery). The other is management-oriented (e.g., black bear food ecology, population trends, and human-bear conflicts).

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

## 1. Summer 2013

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

### b. Proposed research activity

- Black Bear Ecology/Beechnuts/Beech Bark Disease – complete modeling/manuscripts
- Boreal bird predation and habitat/land use association – focused on Rusty Blackbird
- Cycles in small mammal, climate, and food study at HWF
- APR-GIS – oversee web-based database, reporting to consortium and data needs assessment, North Country Regional Economic Development Council activity coordination, trail registry database development
- Support collaborative research including use of LiDAR, CFI forest change on HWF, geospatial and other datasets
- Data collection for ALTEMP projects (various, including: terrestrial salamanders, vernal pool amphibian reproduction and survival, songbird survey, phenology, seed survey)
- Summarize and report on several ongoing research projects, including Beech Bark Disease/beechnut production and Phenological data summary, including Northeast Regional Mast Survey and National Phenology Network coordination
- Human and ecological community sustainability in the Adirondacks – Hudson Watershed meeting coordination and identification of research avenues
- Finalize UMEB program reporting to NSF of best practices for mentoring undergraduate research and submit grant proposal for REU site (with Kimmerer, others)

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

- Coordinate linkages between research and education via NFI/AIC
- Co-coordinate ATBI and Adirondack Biodiversity Project – 2013 BioBlitz
- Contribute to Org. of Biological Field Stations, National Phenology Network, Northeast Regional Mast Survey, Northeastern Vernal Pool Working Group, Adirondack Research Consortium among others

## 2. Fall Semester 2013

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

EFB411 - Research Methods: Understanding the Adirondack Ecosystem

### b. Proposed research activity

- Continue from summer
- ALTEMP projects (various, including phenology, terrestrial salamanders, beaver colony activity, seed survey)
- Eastern Wild Turkey radiotelemetry project with National Wild Turkey Federation

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

- Continue from summer
- Represent ESF at Organization of Biological Field Stations meeting



- ALTEMP projects (various, including phenology, terrestrial salamanders, beaver colony activity, seed survey)
- Co-coordinate ATBI and Adirondack Biodiversity Project – plan 2014 BioBlitz

### 3. Spring Semester 2014

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

Winter Mammalian Ecology EFB 484/684

#### b. Proposed research activity

Continue from Fall semester

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

Continue from Fall semester