

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: Gregory G. McGee

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:	EFB202	Ecol. Monitoring Biodiversity Assess	3	~65	4 days of Plant Ecology
FALL:	EFB102	General Biology Laboratory	1	338	16
	EFB132	EFB Freshman Orientation Seminar	1	89	1
SPRING:	EFB104	General Biology II Laboratory	1	159	11

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>
	EFB298	Research Apprenticeship	1	1 student @ 1 cr; 1 student @ 3 cr
	EFB420	Professional Experience	4	4 students @ 3 cr; 2 students @ 5 cr
	EFB495	College Teaching	3	26
	EFB498	Independent Research	2	2 students @ 1 cr; 1 student @ 2 cr
	EFB899	Masters Thesis Research	3	1
	EFB999	Doctoral Thesis Research	17	1

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>
EFB 132 (ConBio section)	EFB majors	10/20, 11/3
		2

II. **STUDENT ADVISING**

- A. Number of undergraduates for whom you are the student's official advisor **27** and unofficial advisor **3 CSTEP**
- 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

- Geoffrey Griffiths, PhD, start date August 2014.
- Colin Mettey, MS, start date August 2016

CO-MAJOR PROFESSOR

- Marissa Nolan (w/ E. Folta), MS, start date August 2016

MEMBER, STEERING COMMITTEE (other than those listed above)

- Monica Bibiana Berdugo-Moreno, PhD (Dovciak)
- Mariano Arias, PhD (Dovciak)
- Robert Smith, MS (Leopold)
- Dana Brennan MS (Fierke)
- Harrison Goldspiel MS (Gibbs)
- Taylor Patterson PhD (Horton)

CHAIRMAN OR READER ON THESIS EXAMS, ETC.

- Giuseppe Tumminello, MS (Fierke)
- Mathew Von Bargen, MS BPE, defense committee chair.
- Ella Gray, MS FNRM (Bevilacqua)
- David Bullis, PhD examiner (Rundell)

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)

McIntire-Stennis Cooperative Forestry Research Program. (PI, with M.K. Fierke), "Nutrient resources associated with establishment and long-term maintenance of emerald ash borer biocontrol agents." - **\$53,860 total**, \$23,301 current year, 10/15-9/16. Partial support for D. Brennan (MS, started on grant support 5/16).

McIntire-Stennis Cooperative Forestry Research Program, (CoPI with M.K. Fierke), "Restoration of Understory Vascular Plant and Pollinator Assemblages in Post-Agricultural Forests of Central New York." **\$57,669 total**, 8/15-9/17, \$31,376 current year, support G. Griffiths, PhD student.

Mianus River Gorge Preserve Graduate Research Assistant Program. Development of restoration protocols for native herbaceous plant species in post-agricultural second-growth forests. **\$15,000 total**, \$5000 current year, 4/15-4/18. Partial summer support for G. Griffiths, PhD student.

McIntire-Stennis Cooperative Forestry Research Program, (CoPI with S. McNulty, S. Farrell, R. Germain), "The sky is falling: invasive-induced forest biodiversity loss and evaluation of stand rehabilitation." **\$56,604 total**, 8/17-9/19.

Wildlife Conservation Society Climate Adaptation Fund, co-PI w/ G. Sargiss (Nature Conservancy), P. Smallidge (Cornell Cooperative Extension), K. Ferrare (Cornell Cooperative Extension). "Setting northern New York forests on climate-adapted trajectories by improving regeneration and forest structure." **\$166,925**, 11/16-10/18.

*Grants obtained by my graduate students:

Colin Mettey, 2016 ESF Alumni Association Grant, **\$1,000**.

Colin Mettey, Sussman Foundation, "Restoring diversity to northern hardwood forests through mechanical beech removal." **\$6,370**.

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

Hassett, M.R. and G.G. McGee. In press. Negative binomial hurdle models to estimate flower production for native and non-native northeastern shrub taxa. *Forest Science*.

Griffiths, G.R. and G.G. McGee. In press. Lack of herbaceous layer community recovery in post-agricultural forests across three physiographic regions of New York. *Journal of the Torrey Botanical Society*.

McGee, G.G., M.E. Cardon and D.H. Kiernan. In review. Variation in sugar maple (*Acer saccharum* Marshall) bark and stemflow characteristics: implications for epiphytic bryophyte communities. *Northeastern Naturalist*.

B. Non-refereed Publications

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

Brennan, D., J. Gould, G. McGee and M. Fierke. Effects of Sugar Resource Use and Quality on Emerald Ash Borer (*Agrilus planipennis*) Parasitoid Longevity. 28th USDA Interagency Research Forum on Invasive Species, January 10-13, Annapolis, MD.

McGee, G.G. Epiphytic bryophyte and lichen communities of old-growth Adirondack northern hardwood forests. Northeast Natural History Conference, April 21-23, Cromwell, CT.

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

NY Masters Teachers Workshop on Forest Ecology, 10/15/16, w/ Neal Abrams, attendance ~20.

Wild Ones – Habitat Gardening in Central New York, 4/30/17 Restoration of CNY wildflower communities, attendance ~50.

Spring Wildflowers Identification & Discussion of the Wildlife Benefits Associated with Old Forest Structure and Grasslands – NYSAF Central New York Chapter, 5/5/17, attendance ~30.

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.

The Nature Conservancy, Central & Northern NY Chapter, Tug Hill Forest Properties Management Advisory Committee.

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)

2. Professional Society Membership

Society of American Foresters

Association of Biology Laboratory Education

American Bryological and Lichenological Society

3. Other Professional Activities

a. Editorial activity

Journal (s)

Responsibility

Other (books, symposia, etc.)

b. Reviewer

Journal(s)

No. of manuscripts

Agency

No. of proposals

Other

c. Participation (workshops, symposia, etc.)

Name of workshop, etc.

Date

Place

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

EFB Undergraduate Curriculum Director

ENB Curriculum Coordinator

EFB Curriculum Coordination and Assessment Committee

CLBS Advisory Committee

CLBS Reunion, August 5-6.

B. College-level

ESF Academic Standards Sub-Committee

Financial Aid Task Force

CSTEP Advisory Board

- Led 'CONNECTIONS' pre-orientation forest walk at Green Lakes State Park (8/22)

- Workshop on Laboratory Report Writing (9/27)

- Workshop on Metacognition & Study Habits (4/26)

ESF Writing Resource Center – Technical Writing Workshop for Tutors (w/ N. Abrams (9/29)

ESF in the Classroom

- Coordinated and provided instructional support to local high school sections of General Bioly I & II Laboratory.

- Led discussion on careers in Biology/Environmental Science for four separate school groups (10/14, 10/28, 11/18, 12/2)

2016 ESF Graduate Assistant Teaching Colloquium (8/25)

- Facilitated two sessions on grading papers and written work.

C. University-wide, including Research Foundation

Jamesville Community College Environmental Science Department, External Program Review Team.

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.

I served again this year as EFB's Undergraduate Curriculum Director and Curriculum Coordinator for the Environmental Biology major. My ongoing responsibilities as UCD included coordination of undergraduate advising for the department; providing departmental orientation to freshmen and August/January transfer cohorts; pre-registration of all transfer students; representation EFB at two end-of-semester Academic Standards meetings; organization of two departmental open houses and five accepted student receptions, and personal participation in five of these seven events; and maintenance of EFB program catalog descriptions, plan sheets and directed elective offerings for all seven majors. Apart from my own undergrad advisees, I advised numerous other EFB undergraduate students on a variety of curricular matters, provided initial advising for several internal transfer students, and facilitated numerous student petitions. In addition to regular duties associated with this appointment, this year I continued working with the Admissions office to formalize more articulation guidelines for Ranger School students transferring into the ENB, Conservation Biology, Wildlife Science and Forest Health majors. I continued to organize the gathering of assessment data for the department and will be involved this year in the next round of assessment.

This year I prioritized my research program and have had good success reestablishing lines of research in forest ecology and management (post-agricultural forest understory restoration, beech control, rehabilitation silviculture, EAB biocontrol). In collaboration with students and other colleagues I have had two manuscripts accepted for publication, and I personally delivered or collaborated on several talks or posters at professional meetings this year. This year Neal Abrams and I continued to develop and test a couple of STEM laboratory education modules that are just about ready to submit for peer review.

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 year I intend to continue prioritizing my research activities. Neal Abrams, Betsy Hogan and I have several research products (papers, lab modules) from our first-year laboratory and communication curriculum that need to be finalized and submitted for publication, and I have a couple papers from recent MS students (Garmendia, Hassett, Brennan) that need to be finalized. Geoff Griffith's PhD work on pollinator communities in post-agricultural forests is beginning to yield products and I look forward to working with him and a couple excellent undergraduate research students (N. Kiel and K. McLaughlin) to produce some publications. Monitoring of plant and wildlife communities has already begun to ramp up at the AEC in advance of a mechanical beech understory removal research project. I will be working with AEC staff and other ESF faculty to initiate the cuts some time in 2018.

B. PROJECTED ACTIVITIES FOR NEXT YEAR

1. Summer 2017

a. Course(s) to be offered

- Will contribute to EFB202 for one session (5 days).
- Developed a summer course (Field Methods in Forest Ecosystem science) with M. Johnston and J. Wagner however it did not receive sufficient enrollment so we cancelled the offering. May try again next summer.

b. Proposed research activity

- Will write a chapter on old-growth forest biodiversity for upcoming book on eastern old growth.
- Begin field sampling initiatives in advance of mechanical beech control experiment at Huntington Forest "Electric Fence" compartment.
- Continue consulting with Nature Conservancy on rehabilitative cuts on Tug Hill.

c. University, professional society, and public service

- Ongoing service associated with curriculum coordination.

2. Fall Semester 2017

a. Course(s) to be offered

- EFB 102 (16 sections)
- EFB 132 (1 section)

b. Proposed research activity

- Will focus on developing manuscripts and teaching modules from SYNAPSE project w/ N. Abrams and E. Hogan.

c. University, Professional society, and public service

- EFB Curriculum Director
- ENB Curriculum Coordinator
- EFB CCAC

3. Spring Semester 2018

a. Course(s) to be offered

- EFB 104 (11 sections)

b. Proposed research activity

- ongoing from fall.

c. University, professional society, and public service

- EFB Curriculum Director
- ENB Curriculum Coordinator
- EFB CCAC