

**ANNUAL REPORT: June 1, 2015 – May 31, 2016**  
**(i.e., Summer 2015, AY 2015-2016)**  
**DEPARTMENT OF ENVIRONMENTAL AND FOREST BIOLOGY**  
**SUNY-ESF**

NAME: Donald J. Leopold

**I. INSTRUCTIONAL ACTIVITIES**

1. Regular Course Offerings

	Course No.	Title	Credit Hrs.	No. Students	No. of Lab. Sections
SUMMER:	EFB 327	Adirondack Flora	3.0	6	0
FALL:	EFB 336	Dendrology I	3.0	130	6
	EFB 495	Undergrad Exp./College Teach.	3.0	8	

SPRING:

**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)

Course No.	Title	Credit Hrs.	No. Students
EFB 420	Internship	3.0	1
EFB 498	Research Problems	1 - 3	1
EFB 899	Master's Thesis Research	1 - 9.	7
EFB 999	Doctoral Thesis Research	1 - 9	5

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

4. Guest Lecture Activities

Course No.	Title	No. of Lectures
EFB 210	Diversity of Life I	3
ESF 797	Grad Seminar on Information Resources	1
FOR 481	Introduction to Arboriculture	1
LSA 433/633	Planting Design & Practice	1

**II. STUDENT ADVISING**

A. Number of undergraduates for whom you are the student's official advisor 8 and unofficial 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**

Wason, Samantha. 2015. Master of Professional Studies.

Johnson, James K. 2016. Master of Professional Studies.

Bader, G.L. 2016. Habitat characteristics and mycorrhizal fungi associated with extraordinary populations of native orchid species and *Pyrola asarifolia* (Ericaceae) on a mine tailings wetland in northern New York. M.S. Thesis, 79 p.

Mattingly, K. 2016. Identifying biotic and abiotic factors associated with Leedy's roseroot (*Rhodiola integrifolia* subsp. *leedyi* (Rosend. & J.W. Moore) Kartesz) at Glenora Cliffs, Glenora, New York. M.S. Thesis, 106 p.

1. Catherine Landis, Ph.D., January 2009
2. Matthew Regan, M.S., August 2011
3. Jessica Saville, Ph.D., August 2012
4. Justine Weber, Ph.D., August 2012
5. Kristen Haynes, Ph.D., August 2014
6. Alex Petzke, Ph.D., August 2014
7. Robert Smith, M.S., August 2014
8. Toby Liss, Ph.D., August 2015

**CO-MAJOR PROFESSOR**

1. Alison Halpern, Ph.D. (with John Farrell)

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

1. Kathleen Buckler (SUNY-Brockport, M.S.)
2. Eli Polzer (SUNY-Brockport, M.S.)
3. Jay Wason (EFB, Ph.D.)
4. Camille Warner (EFB, Ph.D.)
5. Elise Hinman (SYR, Ph.D.)
6. Michael Serviss (EFB, M.S.)
7. Chellby Kilheffer (EFB, Ph.D.)

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

1. Byeong Cheol Min (ERE/PBE, Ph.D., chair of defense)

**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)

Honeywell International Inc., Onondaga Lake watershed 1-8: Plant studies; \$37,966; August 2014 to August 2015; D.J. Leopold.

Honeywell International Inc., Onondaga Lake and adjacent lands: Habitat assessment and restoration, vegetation issues; \$19,956; January 2014 to December 2016; D.J. Leopold.

Environmental Protection Agency, Improving vegetation indicators of wetland condition; \$172,070; Oct. 2013 to September 2015; D.J. Evans and D.J. Leopold.

NYS-DEC, New York Natural Heritage Program; \$3,273,393; July 2012 to June 2017; D.J. Leopold.

NYS-DEC, Invasive plants program coordinator; \$500,000; January 2010 to June 2016; D.J. Leopold.  
USFWS (GLRI), Production of genetically diverse American hart's-tongue fern for introduction or reintroduction in the Great Lakes Region, \$99,682; July 2011 to September 2015; D.D. Fernando and D.J. Leopold.  
USFWS (GLRI), Control of Japanese knotweed (*Fallopia japonica* var. *japonica*) on Leedy's roseroot (*Rhodiola integrifolia* subsp. *leedyi*), a federally-threatened plant; \$69,902; September 2011 to August 2015; D.J. Leopold  
USFWS (GLRI), Restoring critical habitat, mitigating multiple threats, and evaluating population statuses for bog turtle, eastern massasauga rattlesnake, and Houghton's goldenrod co-occurring in a single...; \$128,064; August 2012 to April 2016, D.J. Leopold and J.P. Gibbs.  
USFWS (GLRI), Range wide status assessment of Houghton's goldenrod, with a special emphasis on niche limit, demographic transitions, and population stability; \$149,600; February 2016 to December 2017. D.J. Leopold.  
National Park Service, Impacts of hurricane Sandy and white-tailed deer on maritime vegetation recovery at Fire Island National Seashore; \$224,619; July 2014 to July 2016; H.B. Underwood and D.J. Leopold.

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

Fernando, D.D., J.J. Discenza, J.R. Bouchard, and D.J. Leopold. 2015. Genetic analysis of the threatened American hart's-tongue fern (*Asplenium scolopendrium* var. *americanum* [Fernald] Kartesz and Gandhi): Insights into its mating system and implications for conservation. *Biochemical Systematics and Ecology* 62:25-35.

Bouchard JR, Fernando DD, Bailey SB, Weber-Townsend J and Leopold DJ. Contrasting genetic variations between central and peripheral populations of *Dryopteris fragrans* (fragrant wood fern): implications for past and future climate change. Submitted to *Annals of Botany*.

Raney, P.A, D. J. Leopold, M. Dovciak, and C.M. Beier. Hydrologic position mediates sensitivity of tree growth to climate: wetlands as refugia in a warmer world. *Forest Ecology and Management* (in review).

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; all invited).

Father's Day nature walk, Clark Reservation State Park, June 2015, about 40 people in attendance

Gateway Center green roof and campus landscape tour, 2015 NYS Releaf Conference, July 2015, Syracuse, about 40 people in attendance

Oakwood Cemetery tree identification, 2015 NYS Releaf Conference, July 2015, Syracuse, about 40 people in attendance

Native plant alternatives to planting invasive plant species, webinar for New York Invasive Species Research Institute, July 2015, 67 people logged on.

Native plants for sustainable landscapes, 7<sup>th</sup> Annual Midwest Native Plant Conference, July 2015, Dayton, OH (keynote + book signing), about 200 people in attendance

The promise of native plants and their communities for restoring degraded landscapes and creating sustainable green systems, New York Botanical Garden Native Plants Summit, NYBG, New York City, September 2015, about 500 people in attendance (auditorium sold out)

Terrestrial orchids of the New York and New Jersey, North American Rock Garden Society, Watnong Chapter, November 2015, Frelinghuysen Arboretum, Morristown, NJ, about 80 people in attendance  
Terrestrial orchids of New York, Syracuse Botanical Club, December 2015, about 20 people in attendance  
Native plants for sustainable landscapes, Cornell Cooperative Extension Erie County Master Gardeners Education Day, March 2016, Buffalo, about 150 people in attendance  
Invasive species of upstate NY, Syracuse Rose Society, March 2016, Syracuse, about 35 people in attendance  
Tree identification, ecology, and natural history (walk), Cornell Cooperative Extension of Onondaga County, Syracuse, April 2016, about 30 people in attendance (Oakwood Cemetery, Syracuse).  
Native plants for sustainable landscapes, Garden Club of America Zone IV annual meeting, May 2016, Princeton, NY, about 125 people in attendance  
The Importance of Growing Native Plants, Chittenango Garden Club, May 2016, Chittenango, about 50 people in attendance  
Nature walk, Fiddler's Green, May 2016, Jamesville  
Plants of Oakwood Cemetery (walk), Oakwood Cemetery, May 2016, about 50 people in attendance

## V. PUBLIC SERVICE

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

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

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

In June 2015 working with Nelson, Byrd, Woltz Landscape Architects, Dr. James Gibbs and I led a bioblitz on a private estate in Charlottesville, VA, which generated funds for the RWLS, and gave a group of EFB graduate students and alumni an unusual, paid, professional opportunity.

Project (with Dr. James Gibbs) on Long Island for Janice Parker Landscape Architects, on restoring a degraded parcel of land after we made a biological assessment.

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

Co-tour leader for ESF team for Onondaga Lake boat tour, as part of "Capital for a Day", September 2015  
"The botanicals, water, and barrel effect" invited lecture on bus trip to NYC to celebrate Honeywell receiving the Thomas W. Keese Jr. Conservation Award at the Metropolitan Club, November 2015.

Member, Board of Trustees, The Wetland Trust, Inc.

National Technical Committee for Wetland Vegetation, northeastern U.S. representative from academia to this US Army Corp of Engineers advisory committee, January 2007 to present.

Upper Susquehanna Coalition, consulting on various wetland issues

Frequent contributor, upon request, to the Syracuse Post-Standard

Frequently answer questions from city of Syracuse employees regarding city trees, park plantings, and green infrastructure projects

Numerous local and national TV and radio interviews including interviews on fall color, Gateway Building green roof, drought, invasive species, allergy season, and native plant species

## 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 Wetland Scientists

Ecological Society of America  
Society of Conservation Biologists  
New York Flora Association

3. Other Professional Activities

a. Editorial activity

<u>Journal (s)</u>	<u>Responsibility</u>
<u>Other (books, symposia, etc.)</u>	

b. Reviewer

<u>Journal(s)</u>	<u>No. of manuscripts</u>
Wetland Ecology and Management	1
Northeastern Naturalist	1
Restoration Ecology	2

<u>Agency</u>	<u>No. of proposals</u>
<u>Other</u>	

c. Participation (workshops, symposia, etc.)

<u>Name of workshop, etc.</u>	<u>Date</u>	<u>Place</u>
USACE National Technical Committee meeting	July 27-31, 2015	Grand Lake, CO

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

Chair, Department of Environmental and Forest Biology

General Summary of Regular Duties

Supervisor for about 35 faculty, two Secretary 1 positions (incl. my administrative assistant), two Instructional Support Specialists and other staff

Related: promoting faculty and staff within and outside of the department and facilitating the many good ideas that regularly emanate from faculty and staff

Manage allocation of state, Research Foundation (research incentives), and College Foundation accounts

Manage allocation of 40 state graduate teaching assistantships

Convene regular department meetings

Represent department at biweekly Academic Council meetings

Work with Development Office for fundraising

Responsible for making sure that all regular and new undergraduate and graduate courses are offered as listed in the College Catalog or webpage; main contact with Registrar for any course changes.

Work with Physical Plant on all planned renovations and emergency repairs

Represent department at all college open houses and other department events

Prepare annual department report

B. College-level

Member, Core Team for Academic Research Building (since March 2010)

Member, Core Team for Roosevelt Wild Life Education and Research Center in ESF's Gateway Center (since Fall 2014)

Roosevelt Field Ecologist, Roosevelt Wild Life Station, SUNY-ESF

Participant in the Environmental Health undergraduate level curriculum group.

Organizer and Host, Dale L. Travis lectures, twice each year.

Presenter, Graduate Colloquium August 2015, "A Vision of Excellence in Teaching and Scholarship"

Presenter (twice, on campus trees and shrubs) for annual Alumni, Family, and Friends BBQ, September 2015

ESF Fall Field Days Event, Tree identification on campus and in Oakwood Cemetery, two walks, October 2015

Attended E.O. Wilson Half Earth launch at Harvard Club of NYC to assist with College development activities, May 2016.

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.

I finished two M.P.S. and two M.S. students this past year. I thought that one of the M.S. studies, i.e., Grete Bader's on the huge populations of native orchids on abandoned iron mine tailings in the Adirondacks, would have broad appeal so I drafted a press release that when released by our Communications Office generated more social media attention than any other plant-related story at ESF in my career except for the American chestnut research. National Geographic's featuring of this work on their website was especially effective in generating national and international interest. The interest continues as the editor for Adirondack Life is meeting the graduate student on the site in July and plans on running a feature story. I taught EFB 336 Dendrology for the 30<sup>th</sup> year and it was more fun as ever as student interest and engagement were very high.

I will have served as chair of EFB for 11 years this July. Among the administrative highlights were hiring a new Epidemiologist for the department (Dr. Brian Leydet), being responsible for and hosting two very successful Dale L. Travis lecture events, and attending on behalf of the College and department the NY City launch of E.O. Wilson's Half Earth book and project.

Of the 16 invited presentations I made last year, participating in the New York Botanical Garden's Native Plants Summit in September was especially enjoyable as this event was the first one ever at the NYBG that sold out its large auditorium. I was very pleased to be among the collaborating scientists and engineers that Honeywell invited to attend the lunch at the NY City Metropolitan Club last November at which they received the Thomas W. Keese Jr. Conservation Award. A highlight of this event was making an invited presentation "The botanicals, water, and barrel effect" on the private bus during the return trip to Syracuse.

**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 2016

- a. Course(s) to be offered
- b. Proposed research activity
- c. University, professional society, and public service

2. Fall Semester 2016

- a. Course(s) to be offered
- b. Proposed research activity
- c. University, Professional society, and public service

3. Spring Semester 2017

- a. Course(s) to be offered
- b. Proposed research activity
- c. University, professional society, and public service