

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

**NAME:** Donald J. Leopold

**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:	EFB 336	Dendrology I	3.0	177	6
	EFB 495	Undergrad Exp./College Teach.	3.0	9	

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. 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>
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

<u>Course No.</u>	<u>Title</u>	<u>No. of Lectures</u>
EFB 210	Diversity of Life I	3 (+ two labs)
EFB 404	Natural History Museums and Modern Science	1
ESF 797	Grad Seminar on Information Resources	1
LSA 433/633	Planting Design & Practice	1

## **II. STUDENT ADVISING**

- A. Number of undergraduates for whom you are the student's official advisor 6 and unofficial advisor \_\_\_\_\_
- 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**

1. Matthew Buff, Ph.D., August 2002
2. Patrick Raney, Ph.D., January 2008
3. Jaime Jones, M.S., August 2008
4. Catherine Landis, Ph.D., January 2009
5. Frances More, M.S., August 2010
6. Thomas Brumbelow, M.S., August 2010
7. James Johnson, M.S., August 2010
8. Scott Sveiven, M.S., August 2010
9. BettyJo Jivoff, M.S., August 2011
10. Matthew Regan, M.S., August 2011
11. David Geliebter, M.P.S., August 2011
12. Laura Brown, M.P.S., August 2011
13. Samantha Wason, M.P.S., August 2012
14. Jessica Saville, Ph.D., August 2012
15. Justine Weber, Ph.D., August 2012

### **CO-MAJOR PROFESSOR**

1. Alison Halpern, Ph.D. (with John Farrell)
2. Juliana Quant, M.S. (with Martin Dovciak)

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

1. Jen Gillrich (EFB, M.S.)
2. Juan Carlos Alvarez Yepiz (EFB, Ph.D.)
3. Kathleen Buckler (SUNY-Brockport, M.S.)
4. Stephen Langdon (EFB, M.S.)
5. Andrew Myers (EFB, M.S.)
6. Brent Johnson (EFB, M.S.)
7. Jay Wason (EFB, Ph.D.)
8. Jeremy Discenza (EFB, M.S.)
10. Lisa Gorney (LA, M.L.A.)
11. Cheryl Whritenour (EFB, Ph.D.)

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

## **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)

NYS-DEC, New York Natural Heritage Program; \$3,273,393; July 2012 to June 2017; D.J. Leopold  
Environmental Protection Agency; Development of wetland assessment protocols; \$499,847; Oct. 2012 to March 2015, D.J. Leopold, D.J. Evans, and A. Feldmann.  
NYS Consolidated Funding, SUNY-ESF Gateway Building green roof; \$413,000; January 2011 to December 2013; T. Toland, M. Kelleher, D. Daley, and D.J. Leopold.  
Honeywell, Inc., Restoration of inland salt marsh, marl fen, and select woody species: Short-term goals of the native species component of the SWRS demonstration plan; \$908,754; January 2008 to August 2014; D.J. Leopold.  
Honeywell, Inc., Review of Honeywell Onondaga Lake shoreline restoration projects, \$23,580; July 2010 to June 2013, D.J. Leopold.  
National Science Foundation, Environmental scholars: A scholarship program in Environmental Chemistry, Biology, and Engineering; \$600,000; March 2009 to February 2013; K. Donaghy, D.J. Leopold, J.P. Hassett, J.M. Hassett, and J.E. Turbeville.  
National Science Foundation, ARRA Renovation to wet labs and cyber infrastructure to enhance integrated research and teaching in aquatic sciences; \$1,470,000; October 2010 to September 2013; N. Ringler, K. Schulz, J. Farrell, C. Whipps, and D. Leopold.  
NYS-DEC, Invasive plants program coordinator; \$196,500; January 2010 to June 2014; D.J. Leopold.  
University of New Hampshire, Genetic diversity, morphometrics and habitat analysis of a rare wood fern in the northern forests: Implications for management and long-term survival; \$82,876; July 2011 to September 2013; D.D. Fernando, D.J. Leopold, and S. Bailey.  
USACE, Development of database and algorithms to support the National Wetland Plant List; \$94,419; September 2011 to September 2013; 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 2014; 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..., August 2012 to May 2015, D.J. Leopold and J.P. Gibbs.  
USDA CSREES (SUNY ESF McIntire-Stennis program), Restoring small ephemeral wetlands in forested landscapes of New York State; \$87,817; August 2009 to September 2012; J.P. Gibbs, J.C. Stella, D.J. Leopold, and K.S. Schulz.  
USDA CSREES Biotechnology Risk Assessment Grants (BRAG) program, Evaluating environmental impacts of transgenic American chestnut trees to chestnut trees produced by conventional breeding; \$380,000; September 2008 to August 2012; W.A. Powell, C.A. Maynard, T.R. Horton, D. Parry, and D.J. Leopold.  
USDA Forest Service-NSRC, Importance of calcium-rich substrates for supporting refugia of biodiversity and productivity in an increasingly acidified landscape; \$41,543; July 2008 to June 2013; C. Beier, M. Mitchell, J. Gibbs, D. Leopold, and M. Dovciak.  
Arizona Game and Fish Department; Novel survey methods to increase detectability of rare frogs in the field; \$46,948; May 2010 to May 2013; D.J. Leopold and M. Schlaepfer.  
Ducks Unlimited Inc., Coastal fisheries habitat restoration in the St. Lawrence River; \$274,722; July 1, 2010 to June 30, 2014; J.M. Farrell, D.J. Leopold, J.P. Gibbs, K.L. Schulz, and M.J. Mitchell.

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

- Gibbs, J.P., L.B. Smart, A.E. Newhouse, and D.J. Leopold. 2012. A molecular and fitness evaluation of commercially available versus locally collected blue lupine *Lupinus perennis* L. seeds for use in ecosystem restoration efforts. *Restoration Ecology* 20:456-461.
- Eallonardo Jr., A.S., D.J. Leopold, J.D. Fridley, and J.C. Stella. 2012. Salinity tolerance and the decoupling of resource axis plant traits, *Journal of Vegetation Science* 24:365-374.
- Hunter, E.A., P.A. Raney, J.P. Gibbs, and D.J. Leopold. 2012. Improving wetland mitigation site identification through community distribution modeling and a patch-based ranking scheme. *Wetlands* 32:841-850.
- Riddle, J., N. Pederson, J. Stella, and D.J. Leopold. Shifting climate sensitivity and contrasting growth trends in *Juniperus* species growing together at opposite range margins. *Tree-Ring Research* (accepted pending revision).
- Raney, P.R., J.D. Fridley and D.J. Leopold. Groundwater discharge wetlands as biotic refugia in the face of climate change. *Wetlands* (accepted pending revision).
- Scanga, S.E. and D.J. Leopold. Plant demography and wetland canopy gap dynamics: nonlinear and indirect responses. *Journal of Ecology* (submitted).
- Eallonardo Jr., A.S. and D.J. Leopold. Spatial and temporal variability of inland salt marsh complexes of the northeastern United States. *Wetlands* (submitted).

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)

- Native plants for sustainable landscapes, Audubon Home and Garden Workshop, Montezuma Swamp, June 2012, about 25 people in attendance
- Incorporating native plant species into CNY gardens, Watson's Greenhouses, Lafayette, June 2012, about 25 people in attendance
- Wetland plants of central New York, Cortland-Onondaga Federation of Kettle Lake Associations, Inc., June 2012, about 30 people in attendance.
- Wetland plants of central New York, Great Swamp Conservancy, June 2012, about 30 people in attendance
- Father's Day nature walk, Clark Reservation State Park, June 2012, about 40 people in attendance
- Nature walk in Oakwood Cemetery, Syracuse, June 2012, about 30 people in attendance.
- Nature walk at Nelson Swamp, Cazenovia Preservation Society, June 2012, about 25 people in attendance.
- Native plants of New York, City View Garden Club, Syracuse, NY, July 2012, about 25 people in attendance
- Natural areas and unique native species in central New York, Niagara Frontier Botanical Society, various central New York locations, July 2012, about 15 people in attendance
- Wetland species of upstate New York and use in the landscape, Chittenango Garden Club, Chittenango, NY, September 2012, about 40 people in attendance.
- Invasive species hike, Invasive Species Workshop at Alverna Heights, Fayetteville, NY, October 2012, about 25 people in attendance
- Native plants for sustainable landscapes, Chittenango Lions Club, November 2012, about 75 people in attendance

Trees of New Jersey, Native Plant Society of New Jersey, Medford, NJ, November 2012, about 150 people in attendance.

Christmas trees, live segment on WSYR Bridge Street, December 2012

Flora of southwestern Turkey, Syracuse Botanical Club, E. Syracuse, NY; December 2012, about 25 people in attendance.

Seeing the forest for the trees: Coordinating design and management of canopy and understory layers, 24<sup>th</sup> Annual Symposium, Critical Interactions: Ecological Research into Landscape Design, Connecticut College, January 2013, about 150 people in attendance

Seeing the forest for the trees: Coordinating design and management of canopy and understory layers, 24<sup>th</sup> Annual Symposium, Critical Interactions: Ecological Research into Landscape Design, Haverford College, January 2013, about 200 people in attendance

Natural communities as templates for restoring degraded landscapes and creating sustainable green systems, Dept. of Biology, Old Dominion University, Norfolk, VA, February 2013, about 100 people in attendance.

Natural communities as templates for restoring degraded landscapes and creating sustainable green systems, Dept. of Biology, Temple University, Ambler, PA, February 2013, about 200 people in attendance.

Native plants for sustainable gardens and landscapes, 2013 Ithaca Native Landscape Symposium, Ithaca, March 2013, about 150 people in attendance.

Native plants for sustainable gardens and landscapes, CNY Blooms, Syracuse, March 2013, about 125 people in attendance.

Plant walk with group of boy scouts and their parents in the University area, May 2013, about 25 people in attendance.

Native plants of New York, Onondaga Garden Club, Syracuse, May 2013, about 25 people in attendance.

Native plants – discussion and book signing, Baltimore Woods, May 2013

#### E. Miscellaneous Products of Scholarship

Produced (June 2012), with Christopher Baycura (ITS) about 30 tree videos in HD, each about 2 to 3 minutes in length, and available for downloading and viewing at [www.esf.edu/trees/youtube](http://www.esf.edu/trees/youtube) or [www.esf.edu/trees/itunesu](http://www.esf.edu/trees/itunesu). Tree species include most of the trees included in the outdoor labs for EFB 336 (Dendrology) plus dozens of introduced but commonly planted tree species in CNY. Total number of tree videos produced is now about 135.

### 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.

Member, NYS Biodiversity Research Institute Executive Committee

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.

Fire Island National Seashore Science Team, January to present

Upper Susquehanna Coalition, consulting on various wetland issues

Resource person for OLP and Onondaga Lake NRDAR Trustee Council public forum, July 2012

Frequent contributor, upon request, to the Syracuse Post-Standard, including feature stories this past year on warm spring

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, native plant species; national inquiries include: Marketplace (American Public Media; radio and website), National Geographic website, Our Amazing Planet website, MSNBC website, and CBS news website.

**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>
<i>Northeastern Naturalist</i>	Associate Editor
<u>Other (books, symposia, etc.)</u>	

b. Reviewer

<u>Journal(s)</u>	<u>No. of manuscripts</u>
<i>Northeastern Naturalist</i>	3
<i>Wetlands</i>	2
<i>Biological Conservation</i>	1
New York Academy of Science	1

<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	October 10 – 12	Hanover, NH
USACE National Technical Committee meeting	April 17 – 19	Charleston, SC

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, one administrative assistant, one Keyboard Specialist 2, 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

Assist Provost with special projects as needed

Represent department at all college open houses and other department events

Prepare annual department report

SEFA Coordinator, Fall 2012

### B. College-level

Presenter (twice, on campus trees and shrubs) for annual Alumni, Family, and Friends BBQ, September 2012

Member, Organizing Committee for Hardy L. Shirley Faculty Mentoring Colloquium (held January 2013)

Member, Core Team for Academic Research Building

Member (representing Academic Council as “academic dean”), SUNY ESF Presidential Search Committee

### 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 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.

Of the nearly two dozen invited presentations this past year to a total of about 1500 people, I was especially pleased to give a lecture (Natural communities as templates for restoring degraded landscapes and creating sustainable green systems) at the School of Environmental Design at Temple University (Ambler campus). I am also regularly getting emails from people around the country who have viewed my tree vignettes. So, besides the nearly 200 dendro students last fall, I am happy about the number of people I’ve been able to reach throughout the country about a variety of

topics.

Through a \$3.2+ million grant from the NYS-DEC, the department now hosts the NY Natural Heritage Program, a large group of talented field biologists, data managers, and others who inventory and keep track of the great diversity of life in New York. Now that the formal structure is in place we anticipate much stronger collaborations with this group and ability to pursue research projects that aren't possible without this partnership.

Development activities have become a substantial time commitment. In June a group of us visited the Camp Fire Club in West Chester, NY and were able to provide useful recommendations about management of this unusual property. It was a pleasure in October to help host guests for the Feinstone Awards, which included a day of fishing (not catching) on the Salmon River and evening at the Lucky Star Ranch. In December a group of us was invited to meet in NYC with officers of the Boone and Crockett Club to discuss a possible professorship program at ESF. In early March we recognized the generosity of Dr. Maurice Alexander with a lecture, reception, and dinner. The first Dale L. Travis Lecture was given by James Gibbs in March and was a tremendous success, having over 400 people in attendance. And throughout this past year were meetings with potential donors to EFB programs.

**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 2012

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

2. Fall Semester 2012

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

3. Spring Semester 2013

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